



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding





Brass, Composite and Thermoplastic Fittings and Valves

Catalog 3501E USA | April 2013



Parker

ENGINEERING YOUR SUCCESS.





ANNEMASSE, FRANCE



ALBION, INDIANA



LAKEVIEW, MICHIGAN



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MESA, ARIZONA

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Parker Hannifin Corporation
Fluid Connectors Group
Otsego, Michigan

Parker's Motion & Control Product Groups

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 1 800 C-Parker (1 800 272 7537).



Aerospace

Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes



Automation

Key Markets

Alternative energy
Conveyor & material handling
Factory automation
Food & beverage
Life sciences & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery
Primary metals
Safety & security
Semiconductor & electronics
Transportation & automotive

Key Products

AC/DC drives & systems
Air preparation
Electric actuators, gantry robots & slides
Human machine interfaces
Inverters
Manifolds
Miniature fluidics
Pneumatic actuators & grippers
Pneumatic valves & controls
Rotary actuators
Stepper motors, servo motors, drives & controls
Structural extrusions
Vacuum generators, cups & sensors



Climate & Industrial Controls

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves



Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems



Fluid Connectors

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings



Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors



Instrumentation

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves



Seal

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical device fabrication & assembly
Metal & plastic retained composite seals
Shielded optical windows
Silicone tubing & extrusions
Thermal management
Vibration dampening

Parker

ENGINEERING YOUR SUCCESS.

Parker Fluid Connectors Group
North American Divisions & Distribution Service Centers

Your complete source for quality tube fittings, hose & hose fittings, brass & composite fittings, quick-disconnect couplings, valves and assembly tools, locally available from a worldwide network of authorized distributors.

Fittings:
Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

Hose, Tubing and Bundles:
Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability:
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For information, call toll free...

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Parflex Division
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PNEUMATIC

Push-to-Connect Pneumatic:
Prestolok PLP Brass, Prestolok Composite, Prestolok PLM, Prestolok PLS, Oscillating Elbows

Integrated Fittings: Compact Flow Controls, Miniature Flow Controls, Swivel Outlet Flow Controls, Plug-in Flow Controls, In-line Flow Controls, Metal Flow Controls, Check Valves, Blocking Valves, Mini Ball Valves, Threshold Sensors

A

B

WATER & BEVERAGE

Thermoplastic Fittings and Valves: Liquifit Thermoplastic Push-in Fittings, TrueSeal Thermoplastic Push-in Fittings, Fast & Tite Thermoplastic Fittings, Par-Barb Thermoplastic fittings, Liquifit Thermoplastic Ball Valves, TrueSeal Thermoplastic Ball Valves

C

TRANSPORTATION

Push-to-Connect Transportation:
Prestomatic, PTC, Metric Prestomatic

D

Compression Style Transportation:
NTA, Air Brake, Transmission Fittings, Air Brake Hose Ends, Vibra-Lok, Truck Valves, Lanyard Valves

E

Cartridges & Manifolds:
SAE Cartridges, Manifolds

F

INDUSTRIAL

Compression Style Pneumatic:
Compression, Compress-Align, Poly-Tite, Hi-Duty, Metrulok

G

Flare: 45°
Flare, Inverted Flare, Access Valves

H

Barbed Fittings:
Dubl-Barb, Hose Barb

I

Adapters:
Pipe, Metric Adapters, ISO Adapters, Garden Hose

J

Valves:
Ball Valves, Plug Valves, Needle Valves, Shutoff Cocks, Drain Cocks

K

MISCELLANEOUS

Accessories:
Blow Guns, Bins, Bags, Copper Tubing

L

Tube Fabricating Equipment:
Tube Cutters, Benders, Flaring Tools, Deburring Tools

M

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Tubing Compatibility, Thread Specifications, SAE Standards, Flow Charts, Thread Profiles, Conversions, Fluid Compatibility

N

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Automotive


Industrial Equip.


Marine


Transportation Water &


Plumbing


Agriculture


Forestry


Military


Oil & Gas


Power Generation

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Automotive


Industrial Equip.


Marine


Transportation Water &


Plumbing


Agriculture


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Military


Oil & Gas


Power Generation

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Pneumatic:
Push-to-Connect



Prestolok Metal
Swivels on Shaped Male Threads
Pre-applied Sealant
Inch & Metric Sizes
Metal Bodies



Prestolok Composite
Swivels on Shaped Male Threads
Pre-applied Sealant
Inch & Metric Sizes
Composite Bodies



Prestolok PLM
Materials conform to FDA
Electroless Nickel Plated
Inch & Metric Sizes
Silicone Free



Prestolok PLS
316L Stainless Body
303L Stainless Collet
Materials Conform to FDA
Silicone Free



Oscillating Elbows
Low Friction Washers
Pre-applied Sealant
Inch & Metric Sizes
Stainless Steel Grab Ring



Tube to Male NPTF

68PLPR
Male Connector
Round Body



p. A7

W169PLP
Male Elbow Swivel



p. A10

W169PLPNS
Male Elbow



p. A11

W171PLP
Male Run Tee Swivel



p. A12

W172PLP
Male Branch Tee Swivel



p. A13

W68PLP
Male Connector



p. A6

W68LF
Male Connector



p. A6

Tube to Tube

164PLP
Union Tee



p. A9

165PLP
Union Elbow



p. A10

62PLP
Union



p. A5

Tube to Female NPTF

66PLP
Female Connector



p. A6

Bulkhead Unions

62PLPBH
Bulkhead Union



p. A5

66PLPBH
Female Bulkhead Union



p. A5

Tube to Straight Thread

68PLP
Male Connector



p. A6

68LFR
Male Connector



p. A7

Tube to Male BSPT

W68LF
Male Connector



p. A7

Tube to Male BSPP

PLPHBF4-B
Male Connector



p. A7

Metric Tube to Male BSPT

C3PB
Male Elbow Swivel



p. A12

C63LPB
Extended Male Elbow



p. A12

C63PB
Male Elbow Swivel



p. A11

F23PB
Male Connector



p. A8

F3PB
Male Connector



p. A8

R63PB
Male Run Tee Swivel



p. A12

S63PB
Male Branch Tee Swivel



p. A13

W68LF
Male Connector



p. A8

Metric Tube to Male BSPP

C64PB
Male Elbow Swivel



p. A11

C64SPB
Male Elbow Swivel



p. A11

F4PB
Male Connector



p. A9

R64PB
Male Run Tee Swivel



p. A13

S64PB
Male Branch Tee Swivel



p. A13

68LF
Male Connector



p. A9

G4PB
Female Connector



p. A6

Metric Tube to Metric Straight Thread

C68PB
Male Elbow Swivel



p. A11

C68SPB
Male Elbow Swivel



p. A12

F8PB
Male Connector



p. A8

F28PB
Male Connector



p. A9

R68PB
Male Run Tee Swivel



p. A12

S68PB
Male Branch Tee Swivel



p. A14

68LFR
Male Connector



p. A7

Metric Tube to Metric Tube

EPB
Union Elbow



p. A10

HPB
Union



p. A5

JPB
Union Tee



p. A10

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Metric Tube to Male NPTF

C6PB
Male Elbow



p. A11

FPB
Male Connector



p. A7

W68LF
Male Connector



p. A8

Metric Bulkhead Unions

WBMPB
Bulkhead Union



p. A5

WE6PB
Bulkhead Elbow



p. A10

WG4PB
Female Bulkhead



p. A5

WPB
Bulkhead Union



p. A5

Metric Banjo Fittings

COR8PB/ COR4PB
Single Banjo



p. A14

COR8PBD/ COR4PBD
Double Banjo



p. A14

CORPB
Single Banjo Body



p. A14

CORPBD
Double Banjo body



p. A14

SC8U/SC4U
Single Banjo Bolt



p. A14

SC8UD/SC4UD
Double Banjo Bolt



p. A14

Metric Auxiliary Components

FNPB
Plug



p. A15

TEPB
Tube Expander



p. A15

TRPB
Tube Reducer



p. A15

Prestolok Metal Fittings

MATERIALS OF CONSTRUCTION	
NICKEL PLATED BODIES:	NICKEL PLATED BRASS
O-RING:	NITRILE (OTHER COMPOUNDS AVAILABLE ON REQUEST)
RELEASE BUTTON:	POLYACETAL
GRAB RING:	STAINLESS STEEL
NOTE:	FOR BRASS BODY PRESTOLOK REPLACE PLP WITH PLN

NOMENCLATURE	
EXAMPLE: W68PLP-4-2	**ATTRIBUTE:**
W	WHITE ARCYLIC THREAD SEALANT
68	MALE CONNECTOR
PLP	PRESTOLOK
4	1/4" (4/16) TUBE O.D.
2	1/8" (2/16) PIPE THREAD

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 300 PSI DEPENDING ON TUBING
TEMPERATURE RANGE:	0° TO +200°F
NOTE:	VACUUM APPLICATIONS ARE DEPENDENT UPON TEMPERATURE AND TYPE OF TUBING USED.

TUBING SIZES	
TUBE O.D.:	1/8, 3/16, 5/32, 1/4, 5/16, 3/8, 1/2
TUBE O.D. (MM):	4,6,8,10,12,14

Recommended Tubing

Prestolok nickel plated and composite fittings are designed to be used with the following Parker Hannifin Parflex Division tubing.

TUBING SERIES	TUBING MATERIAL
E	LINEAR LOW DENSITY POLYETHYLENE
PP	POLYPROPYLENE
N	PLASTICIZED POLYAMIDE (NYLON)
NR	UNPLASTICIZED POLYAMIDE (RIGID NYLON)
U	POLYURETHANE 90 DUROMETER SHORE A
HU	POLYURETHANE 95 DUROMETER SHORE A

Other materials for Prestolok inch sized nickel plated fittings: Polyurethane 85 Durometer Shore A



A compact one-piece push-to-connect fitting. Designed for low pressure circuits where assembly, disassembly and reassembly is important. Stainless steel grab ring grips the tubing to provide retention. Swivels are featured on all male pipe threaded shapes for installation in tight places and for precise positioning. Prestolok should not be used for live swivel applications. Prestolok fittings come with a pre-applied white acrylic sealant.

CAUTION: All current manufacturers of 85A PU tubing do not approve the use of push-to-connect fittings with their product.

Testing has shown acceptable use with certain O.D – I.D. combinations. Applications and service conditions vary and therefore the use of a tube support may be required for any 85A PU tubing.

The following commercially available O.D. – I.D. 85A tubing sizes require the use of a tube support regardless of application.

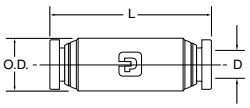
5/32" – 3/32"	3/16" – 1/8"	1/4" - .170"	1/4" – 3/16"
5/16" – 1/4"	3/8" – 5/16"	1/2" – 3/8"	

Assembly Instructions

1. Cut thermoplastic tubing squarely, using Parker Tube Cutter PTC-001. Be certain the port or mating part is clean and free of debris.
2. Insert tubing into fitting until it bottoms. A slight twisting motion will ease the insertion. Pull on tubing to verify it is properly retained in the fitting.
3. To disassemble, simply push the release button against the body and remove tubing.
4. It is recommended to trim the tubing after every disassembly to insure a proper seal.

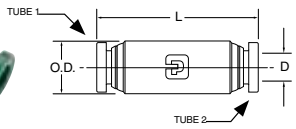
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

A

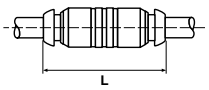
62PLP Union

PART NO.	TUBE SIZE	O.D.	L	FLOW DIA. D
62PLP-2	1/8	.375	1.40	.094
62PLP-3	3/16	.437	1.41	.156
62PLP-5/32	5/32	.375	1.41	.125
62PLP-4	1/4	.500	1.43	.188
62PLP-5	5/16	.562	1.65	.250
62PLP-6	3/8	.625	1.66	.312
62PLP-8	1/2	.750	1.82	.375

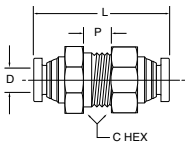
62PLP Unequal Union

PART NO.	TUBE 1 SIZE (IN)	TUBE 2 SIZE (IN)	O.D.	L	FLOW DIA. D
62PLP-5/32-2	5/32	1/8	.375	1.41	.094
62PLP-4-2	1/4	1/8	.500	1.43	.094
62PLP-4-5/32	1/4	5/32	.500	1.43	.125
62PLP-4-6	1/4	3/8	.625	1.66	.188
62PLP-6-8	3/8	1/2	.750	1.82	.312

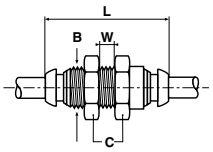
HPB Equal Union

PART NO.	TUBE SIZE (MM)	L
HPB4	4	33.0
HPB5	5	34.5
HPB6	6	36.0
HPB8	8	38.0
HPB10	10	48.0
HPB12	12	48.0
HPB14	14	54.0

62PLPBH Bulkhead Union

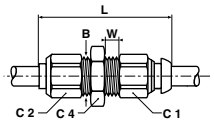
PART NO.	TUBE SIZE (IN)	BULKHEAD HOLE DIA. B	C HEX	P MAX.	L	D
62PLPBH-2	1/8	7/16	9/16	.39	1.40	.094
62PLPBH-5/32	5/32	7/16	9/16	.39	1.41	.125
62PLPBH-4	1/4	9/16	11/16	.29	1.43	.188
62PLPBH-5	5/16	5/8	3/4	.60	1.65	.250
62PLPBH-6	3/8	3/4	7/8	.54	1.66	.312
62PLPBH-8	1/2	7/8	1	.66	2.04	.375

WPB Bulkhead Union

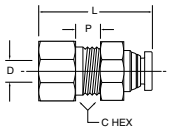
PART NO.	TUBE SIZE (MM)	B-MM THREAD	C HEX	L	W	BULKHEAD HOLE DIA.
WPB4	4	M11X0.75	16	33	6	11MM
WPB6	6	M13X1	19	35	6	13MM
WPB8	8	M15X1.25	22	36	6	16MM
WPB10	10	M18X1	22	43	8	18MM
WPB12	12	M23X1.5	27	46	10	23MM
WPB14	14	M24X1.5	30	52	10	24MM

Jam nut is supplied loose in box

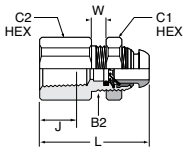
WBMPB Mixed Bulkhead Union

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	B-MM THREAD	C1	C2	C4	L	W	BULKHEAD HOLE DIA.
WBMPB4	4	4	M8X1	10	10	12	34	5	8MM
WBMPB6	6	6	M10X1	12	10	12	37	5	10MM
WBMPB8	8	8	M12X1	14	14	16	39	5	12MM
WBMPB10	10	10	M14X1	17	17	19	45	5	14MM
WBMPB12	12	12	M16X1	22	19	22	49	5	16MM

66PLPBH Female Bulkhead

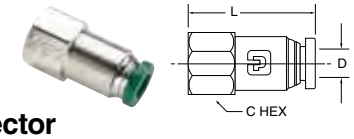
PART NO.	TUBE SIZE (IN)	PIPE THD (NPTF)	C HEX	P MAX.	L	FLOW DIA. D	BKHD HOLE DIA.
66PLPBH-5/32-4	5/32	1/4	11/16	.19	1.39	.125	1/2
66PLPBH-4-4	1/4	1/4	11/16	.24	1.35	.188	9/16
66PLPBH-6-6	3/8	3/8	1	.22	1.47	.312	7/8
66PLPBH-8-6	1/2	3/8	1	.35	1.56	.344	7/8

WG4PB Bulkhead Union Female BSPP

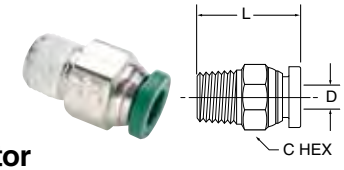
PART NUMBER	TUBE SIZE (MM)	BSPP	C1 HEX	C2 HEX	J	L	W
WG4PB4-1/8	4	1/8	14	14	8	25.0	6
WG4PB6-1/8	6	1/8	17	17	8	25.0	6
WG4PB6-1/4	6	1/4	17	19	12	29.5	6
WG4PB8-1/4	8	1/4	19	19	12	30.0	6
WG4PB10-3/8	10	3/8	22	22	12	34.0	8
WG4PB12-3/8	12	3/8	27	24	12	35.0	10
WG4PB12-1/2	12	1/2	27	27	14	40.0	10
66LFBH-16M-6G	16	3/8	29	29	12	45	10.5
66LFBH-16M-8G	16	1/2	28	29	15	49.5	10.5

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66PLP Female Connector

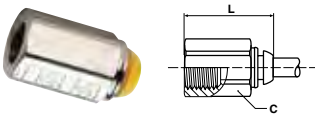
PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
66PLP-2-2	1/8	1/8	9/16	1.17	.094
66PLP-2-4	1/8	1/4	11/16	1.34	.094
66PLP-3-2	3/16	1/8	9/16	1.13	.156
66PLP-5/32-2	5/32	1/8	9/16	1.17	.125
66PLP-5/32-4	5/32	1/4	11/16	1.38	.125
66PLP-4-2	1/4	1/8	9/16	1.17	.188
66PLP-4-4	1/4	1/4	11/16	1.38	.188
66PLP-5-2	5/16	1/8	9/16	1.25	.250
66PLP-5-4	5/16	1/4	11/16	1.45	.250
66PLP-6-4	3/8	1/4	11/16	1.46	.312
66PLP-6-6	3/8	3/8	13/16	1.51	.312



W68PLP Male Connector

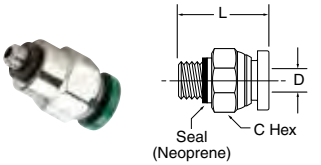
PART NO.	TUBE SIZE (IN)	PIPE THD (NPTF)	C HEX	L	FLOW DIA. D
W68PLP-2-1	1/8	1/16	3/8	.79	.094
W68PLP-2-2	1/8	1/8	7/16	.79	.094
W68PLP-2-4	1/8	1/4	9/16	1.02	.094
W68PLP-3-2	3/16	1/8	7/16	.85	.156
W68PLP-3-4	3/16	1/4	9/16	1.01	.156
W68PLP-5/32-1	5/32	1/16		.88	.940
W68PLP-5/32-2	5/32	1/8	7/16	.80	.125
W68PLP-5/32-4	5/32	1/4	9/16	1.03	.125
W68PLP-4-1	1/4	1/16	1/2	1.07	.141
W68PLP-4-2	1/4	1/8	1/2	.89	.188
W68PLP-4-4	1/4	1/4	9/16	1.00	.188
W68PLP-4-6	1/4	3/8	3/4	1.04	.188
W68PLP-5-2	5/16	1/8	9/16	1.18	.250
W68PLP-5-4	5/16	1/4	9/16	1.04	.250
W68PLP-5-6	5/16	3/8	11/16	1.04	.250
W68PLP-6-2	3/8	1/8	5/8	1.21	.250
W68PLP-6-4	3/8	1/4	5/8	1.08	.312
W68PLP-6-6	3/8	3/8	11/16	1.02	.312
W68PLP-6-8	3/8	1/2	7/8	1.28	.312
W68PLP-8-4	1/2	1/4	13/16	1.44	.344
W68PLP-8-6	1/2	3/8	13/16	1.24	.344
W68PLP-8-8	1/2	1/2	7/8	1.35	.375
68PLP-5/32-4LT*	5/32	1/4-28	7/16	.88	.093

*SAE-LTThreads



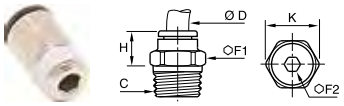
G4PB Female Connector BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	L
G4PB4-1/8	4	1/8	14	26.0
G4PB6-1/8	6	1/8	14	27.5
G4PB6-1/4	6	1/4	17	33.0
G4PB8-1/8	8	1/8	17	29.0
G4PB8-1/4	8	1/4	17	33.0
66LF-16M-8G	16	1/2	27	49



68PLP-X-0 Male Connector

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
68PLP-2-0	1/8	10X32	3/8	.92	.094
68PLP-5/32-0	5/32	10X32	3/8	.90	.090
68PLP-4-0	1/4	10X32	1/2	.96	.094

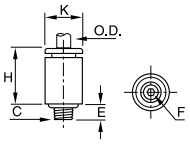


W68LF Male Connector Tube to NPT

PART NO.	TUBE SIZE	C NPT	F1 MM	F2 IN	H IN	K IN
W68LF-2-1	1/8	1/16	10	.07	.413	.433
W68LF-2-2	1/8	1/8	11	.07	.283	.472
W68LF-2-4	1/8	1/4	14	.07	.315	.591
W68LF-5/32-2	5/32	1/8	11	.11	.334	.472
W68LF-5/32-4	5/32	1/4	14	.11	.275	.590
W68LF-3-2	3/16	1/8	11	.12	.610	.510
W68LF-3-4	3/16	1/4	14	.16	.590	.650
W68LF-4-2	1/4	1/8	11	.16	.472	.472
W68LF-4-4	1/4	1/4	14	.16	.374	.590
W68LF-4-6	1/4	3/8	18	.19	.295	.767
W68LF-5-2	5/16	1/8	13	.19	.787	.551
W68LF-5-4	5/16	1/4	14	.25	.661	.590
W68LF-5-6	5/16	3/8	18	.25	.464	.767
W68LF-6-2	3/8	1/8	16	.16	.894	.689
W68LF-6-4	3/8	1/4	16	.28	.807	.689
W68LF-6-6	3/8	3/8	18	.28	.689	.767
W68LF-6-8	3/8	1/2	22	.28	.610	.945
W68LF-8-4	1/2	1/4	22	.25	1.100	.945
W68LF-8-6	1/2	3/8	22	.28	1.100	.945
W68LF-8-8	1/2	1/2	22	.28	1.100	.945

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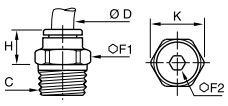



68LFR Male Connector UNF

PART NO.	TUBE SIZE	C UNF	E IN	F MM	H IN	K IN
68LFR-2-0	1/8	10-32	.13	2.0	.49	.32
68LFR-5/32-0	5/32	10-32	.13	2.0	.54	.34
68LFR-4-1	1/4	1/16	-	3.0	.63	.42
68LFR-4-0	1/4	10-32	.13	2.0	.64	.46
68LFR-4-M5	1/4	M5	.14	2.5	.65	.41
68LFR-4-M7	1/4	M7	.18	4.0	.65	.41

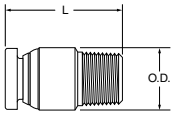
68LFR Male Connector Metric Straight Thread

PART NO.	TUBE SIZE	C UNF	E MM	F MM	H MM	K MM
68LFR-4M-M7	4	M7X1	4.6	3	14	9.95
68LFR-6M-M7	6	M7X1	4.6	3	16	9.90

W68LF Male Connector BSPT

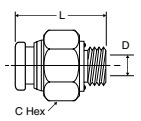
PART NO.	TUBE SIZE	C BSPT	F1 MM	F2 MM	H IN	K IN
W68LF-2-2R	1/8	1/8	10	2	.335	.433
W68LF-5/32-2R	5/32	1/8	10	3	.370	.430
W68LF-5/32-4R	5/32	1/4	14	3	.260	.590
W68LF-3-2R	3/16	1/8	11	3	.610	.510
W68LF-3-4R	3/16	1/4	14	3	.590	.650
W68LF-4-2R	1/4	1/8	11	4	.472	.472
W68LF-4-4R	1/4	1/4	14	4	.374	.591
W68LF-5-2R	5/16	1/8	13	5	.790	.550
W68LF-5-4R	5/16	1/4	14	6	.670	.590
W68LF-5-6R	5/16	3/8	17	6	.510	.730
W68LF-5-8R	5/16	1/2	21	6	.470	.910
W68LF-6-4R	3/8	1/4	16	7	.807	.689
W68LF-6-6R	3/8	3/8	17	7	.650	.728
W68LF-6-8R	3/8	1/2	21	7	.551	.906
W68LF-8-4R	1/2	1/4	22	6	1.060	.945
W68LF-8-6R	1/2	3/8	22	7	1.020	.945
W68LF-8-8R	1/2	1/2	24	7	.807	1.020

68PLPR Round Body Male Connector

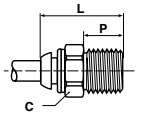
PART NO.	TUBE SIZE	THREAD SIZE NPTF	INTERNAL HEX BROACH	BODY DIA. O.D.	L	FLOW DIA.
68PLPR-2-0*	1/8	10-32	3/32	3/8"	.89	.094
68PLPR-5/32-0*	5/32	10-32	3/32	3/8"	.91	.094
68PLPR-4-0*	1/4	10-32	3/32	1/2"	.95	.094
W68PLPR-5/32-1	5/32	1/16	1/8	7/16"	.87	.125
W68PLPR-5/32-2	5/32	1/8	1/8	7/16"	.79	.125
W68PLPR-4-1	1/4	1/16	5/32	1/2"	1.06	.156
W68PLPR-4-2	1/4	1/8	3/16	1/2"	.88	.188
W68PLPR-4-4	1/4	1/4	3/16	5/8"	.99	.188

*10-32 seal is neoprene

PLPHBF4-B Male Connector BSPP

PART NO.	TUBE SIZE (IN)	PIPE THD BSPP	C HEX	L	FLOW DIA. D
3-1/8PLPHBF4-B	3/16	1/8-28	11/16	.96	.156
3-1/4PLPHBF4-B	3/16	1/4-19	3/4	.97	.156
4-1/8PLPHBF4-B	1/4	1/8-28	11/16	1.13	.188
4-1/4PLPHBF4-B	1/4	1/4-19	3/4	1.13	.188
4-3/8PLPHBF4-B	1/4	3/8-19	7/8	1.13	.188
6-1/4PLPHBF4-B	3/8	1/4-19	3/4	1.26	.256
6-3/8PLPHBF4-B	3/8	3/8-19	7/8	1.26	.312
6-1/2PLPHBF4-B	3/8	1/2-14	1-1/16	1.26	.312
8-3/8PLPHBF4-B	1/2	3/8-19	7/8	1.41	.452
8-1/2PLPHBF4-B	1/2	1/2-14	1-1/16	1.37	.452

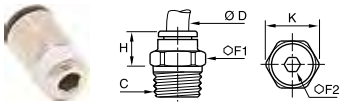



FPB Male Connector NPT

PART NO.	TUBE SIZE (MM)	NPT	C HEX	L	P	INT. HEX
W68PLP-5/32-2*	4	1/8-27	7/16"	21.7	9.7	-
W68PLP-5/32-4*	4	1/4-18	9/16"	28.1	14.2	-
FPB6-1/8	6	1/8-27	14	26.0	10.1	4
FPB6-1/4	6	1/4-18	14	28.5	14.6	4
FPB10-1/4	10	1/4-18	19	40.0	14.6	8
FPB10-3/8	10	3/8-18	19	34.0	14.6	8
FPB12-3/8	12	3/8-18	22	36.5	14.6	10

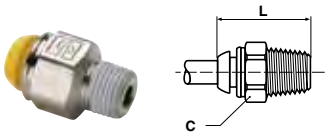
*Comes with green release button

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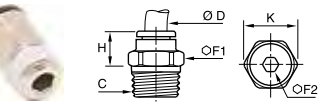
W68LF Male Connector Metric Tube to NPT

PART NO.	TUBE SIZE (MM)	C NPT	F1 MM	F2 IN	H IN	K IN
W68LF-4M-2	4	1/8	11	3	.33	.47
W68LF-4M-4	4	1/4	14	3	.28	.59
W68LF-6M-2	6	1/8	11	4	.45	.47
W68LF-6M-4	6	1/4	14	4	.33	.59
W68LF-8M-2	8	1/8	13	5	.79	.55
W68LF-8M-4	8	1/4	14	6	.66	.59
W68LF-8M-6	8	3/8	18	6	.46	.77
W68LF-10M-4	10	1/4	16	7	.79	.69
W68LF-10M-6	10	3/8	18	8	.65	.77
W68LF-10M-8	10	1/2	22	8	.55	.95
W68LF-12M-6	12	3/8	19	9	.95	.83
W68LF-12M-8	12	1/2	22	10	.77	.95



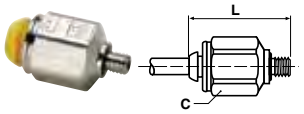
F3PB Male Connector BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	L
F3PB4-1/8	4	1/8	10	18.4
F3PB4-1/4	4	1/4	14	20.0
F3PB5-1/8	5	1/8	11	22.0
F3PB5-1/4	5	1/4	14	23.0
F3PB6-1/8	6	1/8	12	20.7
F3PB6-1/4	6	1/4	14	20.8
F3PB8-1/8	8	1/8	14	27.5
F3PB8-1/4	8	1/4	14	26.5
F3PB8-3/8	8	3/8	17	22.5
F3PB10-1/4	10	1/4	17	32.3
F3PB10-3/8	10	3/8	17	26.3
F3PB10-1/2	10	1/2	22	26.3
F3PB12-1/4	12	1/4	20	34.3
F3PB12-3/8	12	3/8	20	29.3
F3PB12-1/2	12	1/2	22	27.3
F3PB14-3/8	14	3/8	22	38.0
F3PB14-1/2	14	1/2	22	33.0



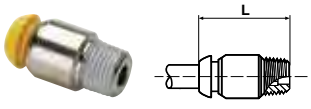
W68LF Male Connector Metric Tube to BSPT

PART NO.	TUBE SIZE (MM)	C BSPT	F1 MM	F2 MM	H MM	K MM
W68LF-4M-2R	4	1/8	10	3	9.5	11.0
W68LF-4M-4R	4	1/4	14	3	6.5	15.0
W68LF-4M-6R	4	3/8	17	3	8.0	18.5
W68LF-6M-2R	6	1/8	11	4	11.5	11.0
W68LF-6M-4R	6	1/4	14	4	8.5	15.0
W68LF-6M-6R	6	3/8	17	4	8.5	18.5
W68LF-6M-8R	6	1/2	21	4	9.0	23.0
W68LF-8M-2R	8	1/8	13	5	20.0	14.0
W68LF-8M-4R	8	1/4	14	6	17.0	15.0
W68LF-8M-6R	8	3/8	17	6	13.0	18.5
W68LF-8M-8R	8	1/2	21	6	12.0	23.0
W68LF-10M-2R	10	1/8	16	5	22.5	17.5
W68LF-10M-4R	10	1/4	16	7	20.0	17.5
W68LF-10M-6R	10	3/8	17	8	16.5	18.5
W68LF-10M-8R	10	1/2	21	8	14.0	23.0
W68LF-12M-4R	12	1/4	19	7	26.5	21.0
W68LF-12M-6R	12	3/8	19	9	24.0	21.0
W68LF-12M-8R	12	1/2	21	9	19.5	23.0
W68LF-14M-6R	14	3/8	22	9	28.5	24.0
W68LF-14M-8R	14	1/2	24	10	23.5	26.0



F8PB Male Connector Metric Straight Thread

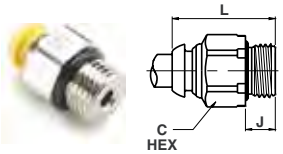
PART NO.	TUBE SIZE (MM)	MM THREAD	C HEX	L
F8PB4M5	4	M5X0.8	10	26.6
F8PB4M10	4	M10X1	14	24.0
F8PB6M5	6	M5X0.8	12	27.8
F8PB6M10	6	M10X1	14	28.0
F8PB6M12	6	M12X1.5	17	23.5
F8PB8M12	8	M12X1.5	17	27.0
F8PB8M16	8	M16X1.5	22	28.0
F8PB8M22	8	M22X1.5	27	30.0



F23PB Male Connector BSPT

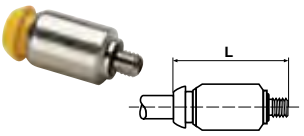
PART NO.	TUBE SIZE (MM)	BSPT	L
F23PB4-1/8	4	1/8	21
F23PB6-1/8	6	1/8	24
F23PB6-1/4	6	1/4	28
F23PB8-1/8	8	1/8	28
F23PB8-1/4	8	1/4	28

This fitting has been designed for use where space is at a premium. It is assembled using the internal hexagon and an allen key.



F4PB Compact Male Connector BSPP

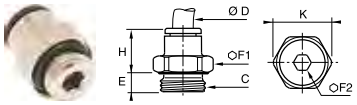
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	J	L
F4PB4-1/8	4	1/8	13	4.7	19.9
F4PB4-1/4	4	1/4	16	6.0	20.3
F4PB6-1/8	6	1/8	13	4.7	23.4
F4PB6-1/4	6	1/4	16	6.0	22.2
F4PB8-1/4	8	1/4	16	6.0	23.8
F4PB8-1/8	8	1/8	14	4.7	25.1
F4PB8-3/8	8	3/8	20	6.5	23.5
F4PB10-1/4	10	1/4	17	6.0	31.3
F4PB10-3/8	10	3/8	20	6.5	26.8
F4PB10-1/2	10	1/2	24	7.5	26.1
F4PB12-1/4	12	1/4	20	6.0	31.9
F4PB12-3/8	12	3/8	20	6.5	31.8
F4PB12-1/2	12	1/2	24	7.5	27.8
F4PB14-3/8	14	3/8	22	6.5	35.0
F4PB14-1/2	14	1/2	24	7.5	30.0



F28PB Male Connector Metric Straight Thread

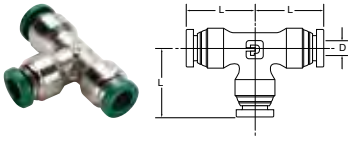
PART NO.	TUBE SIZE (MM)	MM THREAD	L
F28PB4M3	4	M3X0.5	24
F28PB4M5	4	M5X0.8	25
F28PB6M5	6	M5X0.8	25

This fitting has been designed for use where space is at a premium. It is assembled using the internal hexagon and an allen key.



68LF Male Connector Metric Tube to BSPP

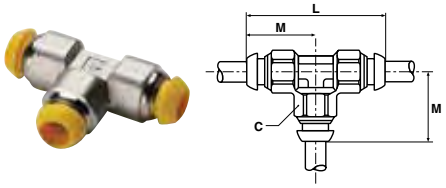
PART NO.	TUBE SIZE (MM)	C BSPP	E MM	F1 MM	F2 MM	H MM	K MM
68LF 3M-M3	3	M3X0.5	2.50	8	-	12.5	8.5
68LF-3M-M5	3	M5X0.8	3.50	8	2.5	12.5	8.5
68LF-4M-M3	4	M3X0.5	2.50	8	-	14.5	8.5
68LF-4M-M5	4	M5X0.8	3.50	8	2.5	14.0	8.5
68LF-4M-M7	4	M7X1	5.00	10	2.5	14.0	11.0
68LF-4M-2G	4	1/8	4.50	13	3.0	11.5	14.0
68LF-4M-4G	4	1/4	5.50	16	3.0	10.5	17.5
68LF-6M-M5	6	M5X0.8	3.50	10	2.5	16.0	11.0
68LF-6M-M7	6	M7X1	5.00	10	3.0	16.0	11.0
68LF-6M-M10	6	M10X1	5.00	13	4.0	13.0	14.0
68LF-6M-M12	6	M12X1.5	5.50	15	4.0	13.0	16.0
68LF-6M-2G	6	1/8	4.50	13	4.0	13.0	14.0
68LF-6M-4G	6	1/4	5.50	16	4.0	12.5	17.5
68LF-6M-6G	6	3/8	5.50	20	4.0	13.0	22.0
68LF-6M-8G	6	1/2	7.50	24	4.0	20.0	26.0
68LF-8M-M10	8	M10X1	5.00	13	5.0	21.0	14.0
68LF-8M-M12	8	M12X1.5	5.50	15	5.0	21.0	16.0
68LF-8M-2G	8	1/8	4.50	13	5.0	20.5	14.0
68LF-8M-4G	8	1/4	5.50	16	6.0	19.5	17.5
68LF-8M-6G	8	3/8	5.50	20	6.0	18.0	22.0
68LF-8M-8G	8	1/2	7.50	24	6.0	16.5	26.0
68LF-10M-4G	10	1/4	5.50	16	7.0	23.0	17.5
68LF-10M-6G	10	3/8	5.50	20	8.0	19.5	22.0
68LF-10M-8G	10	1/2	7.50	24	8.0	18.5	26.0
68LF-12M-4G	12	1/4	5.50	19	7.0	27.5	21.0
68LF-12M-6G	12	3/8	5.50	20	9.0	27.0	22.0
68LF-12M-8G	12	1/2	7.00	24	10.0	22.5	26.0
68LF-14M-6G	14	3/8	5.50	22	9.0	29.5	24.0
68LF-14M-8G	14	1/2	7.00	24	11.0	28.0	26.0



164PLP Union Tee

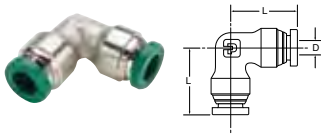
PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
164PLP-2	1/8	.74	.094
164PLP-3	3/16	.82	.156
164PLP-5/32	5/32	.77	.125
164PLP-4	1/4	.85	.188
164PLP-5	5/16	.97	.250
164PLP-6	3/8	1.01	.250
164PLP-8	1/2	1.15	.375

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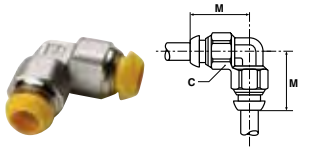
JPB Union Tee

PART NO.	TUBE SIZE (MM)	C	L	M
JPB4	4	10	36	18
JPB5	5	12	41	21
JPB6	6	12	40	20
JPB8	8	14	44	22
JPB10	10	17	56	28
JPB12	12	22	60	30
JPB14	14	25	68	34



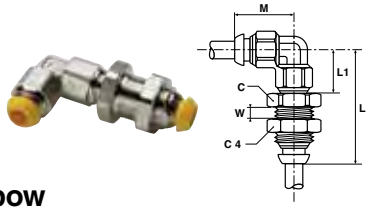
165PLP Union Elbow

PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
165PLP-2	1/8	.74	.094
165PLP-5/32	5/32	.77	.125
165PLP-4	1/4	.85	.188
165PLP-5	5/16	.97	.250
165PLP-6	3/8	1.01	.312
165PLP-8	1/2	1.15	.375



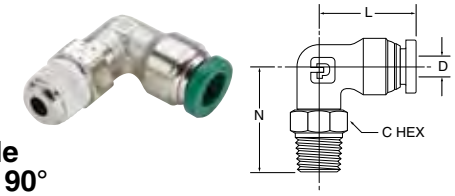
EPB 90° Union Elbow

PART NO.	TUBE SIZE (MM)	C HEX	M
EPB4	4	10	18.0
EPB5	5	12	20.5
EPB6	6	12	20.0
EPB8	8	14	22.0
EPB10	10	17	28.0
EPB12	12	22	30.0
EPB14	14	25	35.0



WE6PB Adjustable Bulkhead Union Elbow

PART NO.	TUBE SIZE (MM)	THREAD B (MM)	C HEX	C4 HEX	L	L1	M	W	BKHD HOLE DIA.
WE6PB4	4	M11X0.75	14	16	37	18.0	18.0	6	11MM
WE6PB6	6	M13X1	17	17	39	19.5	20.5	6	13MM
WE6PB8	8	M15X1.25	19	19	43	21.5	22.5	6	15MM
WE6PB10	10	M18X1	22	22	54	22.8	28.5	8	18MM
WE6PB12	12	M23X1.5	27	27	59	30.0	30.0	10	23MM



W169PLP Male Elbow Swivel 90°

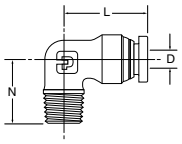
PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W169PLP-2-1	1/8	1/16	3/8	.74	.93	.160
W169PLP-2-2	1/8	1/8	7/16	.74	.92	.094
169PLP-2-0*	1/8	10-32	3/8	.74	.74	.080
W169PLP-2-4	1/8	1/4	9/16	.74	1.10	.094
W169PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W169PLP-5/32-1	5/32	1/16	3/8	.84	.93	.160
W169PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W169PLP-5/32-4	5/32	1/4	9/16	.77	1.10	.125
169PLP-5/32-0*	5/32	10-32	3/8	.85	.74	.080
W169PLP-4-1	1/4	1/16	3/8	.84	.93	.160
W169PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W169PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W169PLP-4-6	1/4	3/8	11/16	.85	1.19	.156
169PLP-4-0*	1/4	10-32	3/8	.85	.74	.080
W169PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W169PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W169PLP-6-2	3/8	1/8	9/16	1.01	1.02	.250
W169PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W169PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W169PLP-6-8	3/8	1/2	7/8	1.01	1.48	.250
W169PLP-8-4	1/2	1/4	9/16	1.15	1.28	.312
W169PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W169PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312

*10-32 seal is neoprene

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

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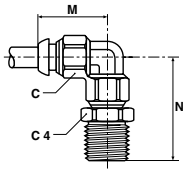
W169PLPNS Male Elbow 90°

PART NO.	TUBE (IN)	PIPE THD (NPTF)	L	N	FLOW DIA. D
W169PLPNS-2-2	1/8	1/8	.74	.67	.094
W169PLPNS5/32-2	5/32	1/8	.77	.67	.125
W169PLPNS5/32-4	5/32	1/4	.77	.87	.125
W169PLPNS-4-2	1/4	1/8	.85	.67	.188
W169PLPNS-4-4	1/4	1/4	.85	.87	.188
W169PLPNS-5-2	5/16	1/8	.97	.75	.234
W169PLPNS-5-4	5/16	1/4	.97	.94	.250
W169PLPNS-6-4	3/8	1/4	1.01	.94	.312
W169PLPNS-6-6	3/8	3/8	1.01	1.01	.312
W169PLPNS-6-8	3/8	1/2	1.01	1.27	.312
W169PLPNS-8-6	1/2	3/8	1.15	1.00	.375
W169PLPNS-8-8	1/2	1/2	1.15	1.27	.375
169PLPNS532-4LT*	5/32	1/4-28	.60	.48	.090

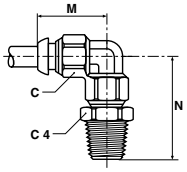
* SAE-LT Threads

C6PB Adjustable Male Elbow NPT

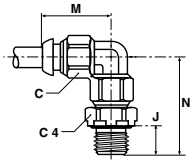
PART NO.	TUBE SIZE (MM)	NPT	C HEX	C4 HEX	M	N
C6PB6-1/4	6	1/4-18	12	14	20	36.0
C6PB6-3/8	6	3/8-18	12	19	20	36.5
C6PB10-1/4	10	1/4-18	17	16	28	41.5
C6PB10-3/8	10	3/8-18	17	19	28	41.5
C6PB12-1/2	12	1/2-14	22	22	30	47.5

C63PB Adjustable Male Elbow BSPT

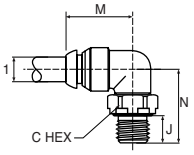
PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	M	N
C63PB4-1/8	4	1/8	10	10	18	26.5
C63PB4-1/4	4	1/4	10	14	18	30.0
C63PB6-1/8	6	1/8	12	11	20	28.0
C63PB6-1/4	6	1/4	12	14	20	31.0
C63PB8-1/8	8	1/8	14	14	22	30.0
C63PB8-1/4	8	1/4	14	14	22	33.0
C63PB8-3/8	8	3/8	14	17	22	34.5
C63PB10-1/4	10	1/4	17	17	28	40.0
C63PB10-3/8	10	3/8	17	17	28	39.0
C63PB12-1/4	12	1/4	22	19	30	42.0
C63PB12-3/8	12	3/8	22	19	30	41.0
C63PB12-1/2	12	1/2	22	22	30	44.5
C63PB14-3/8	14	3/8	25	22	34	46.0
C63PB14-1/2	14	1/2	25	22	34	48.5

C64PB Adjustable Male Elbow BSPP

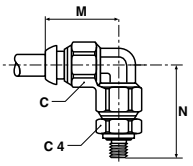
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	J	M	N
C64PB4-1/8	4	1/8	10	13	4.7	18	23.4
C64PB4-1/4	4	1/4	10	16	6.0	18	25.2
C64PB6-1/8	6	1/8	12	13	4.7	20	26.1
C64PB6-1/4	6	1/4	12	16	6.0	20	26.4
C64PB8-1/8	8	1/8	14	13	4.7	22	28.1
C64PB8-1/4	8	1/4	14	16	6.0	22	28.4
C64PB8-3/8	8	3/8	14	20	6.5	22	30.6
C64PB10-1/4	10	1/4	17	16	6.0	28	34.9
C64PB10-3/8	10	3/8	17	20	6.5	28	37.4
C64PB12-1/4	12	1/4	22	19	6.0	30	36.5
C64PB12-3/8	12	3/8	22	22	6.5	30	39.0
C64PB12-1/2	12	1/2	22	24	7.5	30	38.5
C64PB14-3/8	14	3/8	25	22	6.5	34	44.7
C64PB14-1/2	14	1/2	25	24	7.5	34	44.3

C64SPB Compact Adjustable Male Elbow BSPP

PART NUMBER	TUBE SIZE (MM)	BSPP	C HEX	J	M	N
C64SPB4-1/8	4	1/8	13	4.7	17	17.3
C64SPB6-1/8	6	1/8	13	4.7	22	17.3
C64SPB6-1/4	6	1/4	16	6.0	22	19.1
C64SPB8-1/8	8	1/8	13	4.7	24	16.9
C64SPB8-1/4	8	1/4	16	6.0	24	18.7
C64SPB8-3/8	8	3/8	20	6.5	24	20.7
C64SPB10-1/4	10	1/4	16	6.0	29	20.5
C64SPB10-3/8	10	3/8	20	6.5	29	22.5
C64SPB12-1/4	12	1/4	16	6.0	31	20.5
C64SPB12-3/8	12	3/8	20	6.5	31	23.2
C64SPB12-1/2	12	1/2	24	7.5	31	25.2

C68PB Adjustable Male Elbow Metric Straight Thread

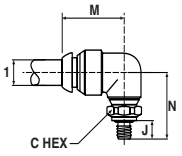
PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	M	N
C68PB4M5	4	M5X0.8	11	10	17	18
C68PB6M5	6	M5X0.8	11	10	17	18

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C68SPB Compact Adjustable Male Elbow Metric Straight Thread

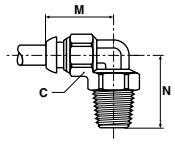




PART NUMBER	TUBE SIZE (MM)	THREAD (MM)	C HEX	J	M	N
C68SPB4M5	4	M5X0.8	12.5	5	17	18
C68SPB6M5	6	M5X0.8	12.5	5	17	18

C3PB Compact Elbow BSPT

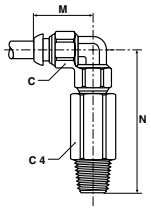




PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
C3PB4-1/8	4	1/8	14	18	21
C3PB6-1/8	6	1/8	14	20	21
C3PB6-1/4	6	1/4	14	20	21
C3PB8-1/8	8	1/8	14	22	23
C3PB8-1/4	8	1/4	14	22	23
C3PB10-1/4	10	1/4	17	28	26
C3PB10-3/8	10	3/8	17	28	26
C3PB12-3/8	12	3/8	17	30	27
C3PB12-1/2	12	1/2	17	30	31

C63LPB Adjustable Extended Male Elbow BSPT

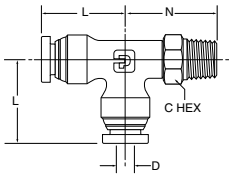




PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	M	N
C63LPB4-1/8	4	1/8	10	10	18	42.0
C63LPB4-1/4	4	1/4	10	14	18	46.0
C63LPB6-1/8	6	1/8	12	11	20	45.5
C63LPB6-1/4	6	1/4	12	14	20	49.5
C63LPB8-1/8	8	1/8	14	14	22	50.0
C63LPB8-1/4	8	1/4	14	14	22	52.5

W171PLP Male Run Tee Swivel

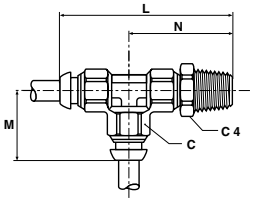




PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W171PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W171PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W171PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W171PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W171PLP-4-6	1/4	3/8	11/16	.85	1.24	.156
W171PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W171PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W171PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W171PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W171PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W171PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312

R63PB Swivel Male Run Tee BSPT

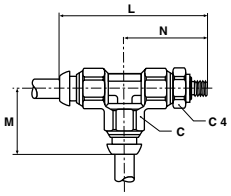




PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
R63PB4-1/8	4	1/8	10	10	44.5	18	26.5
R63PB4-1/4	4	1/4	10	14	48.0	18	30.0
R63PB6-1/8	6	1/8	12	11	48.0	20	28.0
R63PB6-1/4	6	1/4	12	14	51.0	20	31.0
R63PB8-1/8	8	1/8	14	14	52.0	22	30.0
R63PB8-1/4	8	1/4	14	14	55.0	22	33.0
R63PB8-3/8	8	3/8	14	17	56.5	22	34.5
R63PB10-1/4	10	1/4	17	17	68.0	28	40.0
R63PB10-3/8	10	3/8	17	17	67.0	28	39.0
R63PB12-1/4	12	1/4	22	19	72.0	30	42.0
R63PB12-3/8	12	3/8	22	19	71.0	30	41.0
R63PB12-1/2	12	1/2	22	22	74.5	30	44.5
R63PB14-3/8	14	3/8	25	22	80.0	34	46.0
R63PB14-1/2	14	1/2	25	22	82.5	34	48.5

R68PB Adjustable Male Run Tee Metric Straight Thread



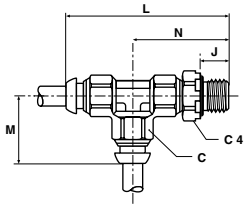


PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	L	M	N
R68PB4M3	4	M3X0.5	10	10	41.0	18	23.0
R68PB4M5	4	M5X0.8	10	10	42.5	18	24.5
R68PB6M5	6	M5X0.8	12	11	45.5	20	25.5

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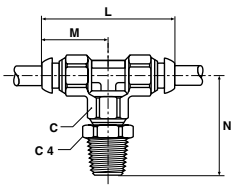




R64PB Swivel Male Branch Run Tee BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	J	L	M	N
R64PB4-1/8	4	1/8	10	13	4.7	41.4	18	23.4
R64PB4-1/4	4	1/4	10	16	6.0	43.2	18	25.2
R64PB6-1/8	6	1/8	12	13	4.7	46.1	20	26.1
R64PB6-1/4	6	1/4	12	16	6.0	46.4	20	26.4
R64PB8-1/8	8	1/8	14	13	4.7	50.1	22	28.1
R64PB8-1/4	8	1/4	14	16	6.0	50.4	22	28.4
R64PB8-3/8	8	3/8	14	20	6.5	52.6	22	30.6
R64PB10-1/4	10	1/4	17	16	6.0	62.9	28	34.9
R64PB10-3/8	10	3/8	17	20	6.5	65.4	28	37.4
R64PB12-1/4	12	1/4	22	19	6.0	65.5	29	36.5
R64PB12-3/8	12	3/8	22	22	6.5	68.0	29	39.0
R64PB14-1/2	14	1/2	25	24	7.5	78.3	34	44.3

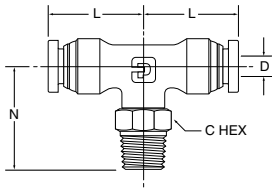




S63PB Swivel Male Branch Tee BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
S63PB4-1/8	4	1/8	10	10	36	18	26.5
S63PB4-1/4	4	1/4	10	14	36	18	30.0
S63PB6-1/8	6	1/8	12	11	40	20	28.0
S63PB6-1/4	6	1/4	12	14	40	20	31.0
S63PB8-1/8	8	1/8	14	14	44	22	30.0
S63PB8-1/4	8	1/4	14	14	44	22	33.0
S63PB8-3/8	8	3/8	14	17	44	22	34.5
S63PB10-1/4	10	1/4	17	17	56	28	40.0
S63PB10-3/8	10	3/8	17	17	56	28	39.0
S63PB12-1/4	12	1/4	22	19	60	30	42.0
S63PB12-3/8	12	3/8	22	19	60	30	41.0
S63PB12-1/2	12	1/2	22	22	60	30	44.5
S63PB14-3/8	14	3/8	25	22	68	34	46.0
S63PB14-1/2	14	1/2	25	22	68	34	48.5

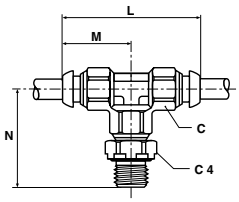




W172PLP Male Branch Tee Swivel

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W172PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W172PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W172PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W172PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W172PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W172PLP-4-6	1/4	3/8	11/16	.85	1.10	.156
W172PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W172PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W172PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W172PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W172PLP-6-8	3/8	1/2	7/8	1.00	1.48	.250
W172PLP-8-4	1/2	1/4	9/16	1.15	1.30	.312
W172PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W172PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312



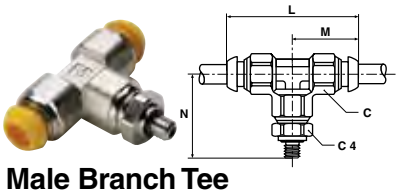


S64PB Swivel Ma Branch Tee BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	L	M	N
S64PB4-1/8	4	1/8	10	13	36	18	23.4
S64PB4-1/4	4	1/4	10	16	36	18	25.2
S64PB6-1/8	6	1/8	12	13	40	20	26.1
S64PB6-1/4	6	1/4	12	16	40	20	26.4
S64PB8-1/8	8	1/8	14	13	44	22	28.1
S64PB8-1/4	8	1/4	14	16	44	22	28.4
S64PB8-3/8	8	3/8	14	20	44	22	30.6
S64PB10-1/4	10	1/4	17	16	56	28	34.9
S64PB10-3/8	10	3/8	17	20	56	28	37.4
S64PB12-1/4	12	1/4	22	19	58	29	36.5
S64PB12-3/8	12	3/8	22	22	58	29	39.0
S64PB14-3/8	14	3/8	25	22	68	34	44.7
S64PB14-1/2	14	1/2	25	24	68	34	44.3

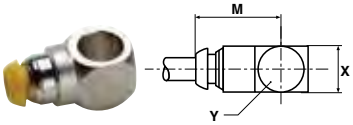
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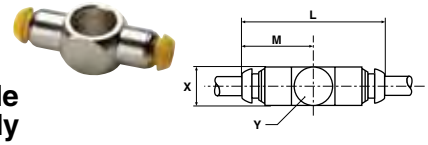
S68PB Adjustable Male Branch Tee Metric Straight Thread

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	L	M	N
S68PB4M3	4	M3X0.5	10	10	36	18	23.0
S68PB4M5	4	M5X0.8	10	10	36	18	24.5
S68PB6M5	6	M5X0.8	12	11	40	20	25.5



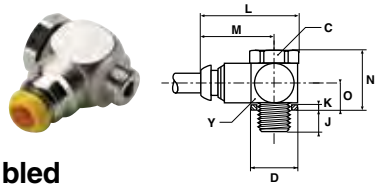
CORPB Single Banjo Body Only

PART NO.	TUBE SIZE (MM)	SINGLE BOLT PART NO.	.STACKING BOLT PN.	M	X	Y
CORPB4-5	4	SC8UM5-4	SC8UDM5-4	19.0	10	10
CORPB4-10	4	SC4U1/8-4	SC4UD1/8-4	22.5	14	14
CORPB6-10	6	SC4U1/8-4	SC4UD1/8-4	23.0	14	14
CORPB6-13	6	SC4U1/4-6	SC4UD1/4-6	24.5	14	17
CORPB8-10	8	SC4U1/8-4	SC4UD1/8-4	24.0	14	14
CORPB8-13	8	SC4U1/4-6	SC4UD1/4-6	25.5	14	17
CORPB10-17	10	SC4U3/8-10	SC4UD3/8-10	32.0	17	22



CORPBD Double Banjo Body Only

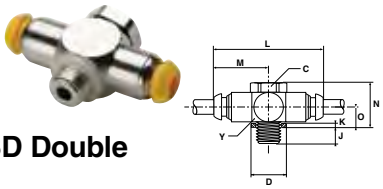
PART NO.	TUBE SIZE (MM)	SINGLE BOLT PN.	STACKING BOLT PN.	L	M	X	Y
CORPB4D5	4	SC8UM5-4	SC8UDM5-4	38	19.0	10	10
CORPB4D10	4	SC4U1/8-4	SC4UD1/8-4	45	22.5	14	14
CORPB6D13	6	SC4U1/4-6	SC4UD1/4-6	49	24.5	14	17
CORPB8D10	8	SC4U1/8-4	SC4UD1/8-4	48	24.0	14	14



COR8PB/COR4PB Single Banjo Assembled

PART NO.	TUBE (MM)	BSPP	C HEX	D	J	K	L	M	N	0	Y
COR8PB4M5	4	M5X0.8	8	8.2	4.5	1.0	24.0	19.0	13.5	6.0	10
COR4PB4-1/8	4	1/8	14	14.4	6.0	1.5	29.5	22.5	19.5	8.5	14
COR4PB6-1/8	6	1/8	14	14.4	6.0	1.5	30.0	23.0	19.5	8.5	14
COR4PB6-1/4	6	1/4	17	18.4	9.0	2.0	33.0	24.5	21.0	9.0	17
COR4PB8-1/8	8	1/8	14	14.4	6.0	1.5	31.0	34.0	19.5	8.5	14
COR4PB8-1/4	8	1/4	17	18.4	9.0	2.0	34.0	25.5	21.0	9.0	17
COR4PB10-3/8	10	3/8	22	21.6	9.0	2.5	43.0	32.0	25.5	11.0	22

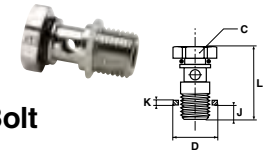
These parts are delivered complete with sealing washer.



COR8PBD/COR4PBD Double Banjo Assembled

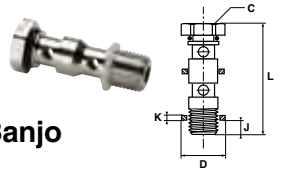
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	D	J	K	L	M	N	0	Y
COR8PB4DM5	4	M5X0.8	8	8.2	4.5	1.0	38	19.0	13.5	6.0	10
COR4PB4D1/8	4	1/8	14	14.4	6.0	1.5	45	22.5	19.5	8.5	14
COR4PB6D1/8	6	1/8	14	14.4	6.0	1.5	46	23.0	19.5	8.5	14
COR4PB6D1/4	6	1/4	17	18.4	9.0	2.0	49	24.5	21.0	9.0	17
COR4PB8D1/8	8	1/8	14	14.4	6.0	1.5	48	24.0	19.5	8.5	14

These parts are delivered complete with sealing washer.



SC8U/SC4U Single Banjo Bolt with Seals BSPP

PART NO.	BSPP	C HEX	D	J	K	L
SC8UM5-4	M5X0.8	8	8.2	4.5	1.0	18.5
SC4U1/8-4	1/8	14	14.4	6.0	1.5	25.5
SC4U1/4-6	1/4	17	18.4	9.0	2.0	30.0
SC4U3/8-10	3/8	22	21.6	9.0	2.5	34.5

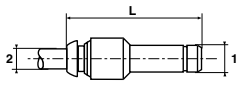


SC8UD/SC4UD Stacking Banjo Bolt with Seals BSPP

PART NO.	BSPP	C HEX	D	J	K	L
SC8UDM5-4	M5X0.8	8	8.2	4.5	1.0	29.5
SC4UD1/8-4	1/8	14	14.4	6.0	1.5	41.0
SC4UD1/4-6	1/4	17	18.4	9.0	2.0	46.0

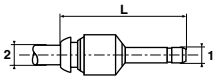
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Otsego, Michigan

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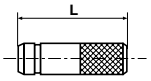
TRPB Tube End Reducer

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
TRPB6-4	6	4	40.0
TRPB8-4	8	4	39.5
TRPB8-6	8	6	41.5
TRPB10-4	10	4	37.0
TRPB10-6	10	6	43.0
TRPB10-8	10	8	47.5
TRPB12-6	12	6	38.0
TRPB12-8	12	8	44.0
TRPB12-10	12	10	52.0
TRPB14-8	14	8	41.0
TRPB14-10	14	10	51.0
TRPB14-12	14	12	55.0

TEPB Tube End Expander

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
TEPB4-6	4	6	39

FNPB Plug

PART NO.	TUBE SIZE (MM)	L
FNPB4	4	27
FNPB6	6	27
FNPB8	8	30
FNPB10	10	30
FNPB12	12	35
FNPB14	14	36

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

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Tube to Male NPTF

W369PLP
Male Elbow

p. A20

W369PLPX
Extended Male Elbow

p. A21

W379PLP
45° Male Elbow

p. A22

W372PLP
Male Branch Tee

p. A23

W371PLP
Male Run Tee

p. A24

W368PLP
Male Y Connector

p. A26

W369PLPBJ
Single Banjo

p. A27

W369PLPTJ
Twin Banjo

p. A29

Tube to Male BSPT

W369PLP
Male Elbow

p. A20

W372PLP
Male Branch Tee

p. A23

W369PLPBJ
Single Banjo

p. A27

Tube to Female NPTF

377PLP
Female Branch Tee

p. A24

370PLP
Female Elbow

p. A27

Tube to Tube

32PLP
Union

p. A30

365PLP
Union Elbow

p. A30

364PLP
Union Tee

p. A31

362PLP
Union Y

p. A31

362PLPD
Double Y

p. A32

24PLP
Multiple Tee

p. A32

24PLPD
Double Multiple Tee

p. A33

347PLP
Cross

p. A33

32PLPRC
Connector for 2 Tubes

p. A37

32PLPDRC
Connectoer for 3 Tubes

p. A37

Tube to Metric Tube

32PLP
Converter

p. A30

Bulkhead Unions

32PLPBH
Bulkhead Union

p. A32

365PLPBH
Bulkhead Elbow

p. A32

32PLPBHP
Plug-in Bulkhead Union

p. A38

Standpipes

W68PLPSP
Male Standpipe NPTF

p. A25

W68PLPSP
Male Standpipe BSPT

p. A25

W68PLPSP
Male Standpipe BSPP

p. A25

Plug-ins

369PLPSP
Plug-In Elbow

p. A33

369PLPSPX
Extended Plug-In Elbow

p. A34

379PLPSP
Plug-In 45° Elbow

p. A34

372PLPSP
Plug-In Branch Tee

p. A34

371PLPSP
Plug-In Run Tee

p. A34

362PLPSP
Plug-In Y

p. A35

67PLP
Tube Reducer

p. A36

32PLPSP
Tube Expander

p. A36

322PLPSP
Barbed Connector

p. A37

Auxiliary Component

63PLP
Double Male Union

p. A35

639PLP
Plug

p. A36

Metric Tube to Male BSPT

W369PLP
Male Elbow

p. A20

W369PLPX
Extended Male Elbow

p. A21

W379PLP
45° Male Elbow

p. A22

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Fluid System Connectors
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W372PLP
Male Branch Tee

p. A23

W371PLP
Male Run Tee

p. A24

W368PLP
Male Y Connector

p. A26

W368PLPD
Double Y Male Connector

p. A26

W369PLPBJ
Single Banjo

p. A27

Metric Tube to Male BSPP

369PLP
Male Elbow

p. A21

369PLPX
Extended Male Elbow

p. A22

379PLP
45° Male Elbow

p. A22

372PLP
Male Branch Tee

p. A24

371PLP
Male Run Tee

p. A25

368PLP
Male Y Connector

p. A26

368PLPD
Double Y Male Connector

p. A27

Metric Tube to NPTF

W369PLP
Male Elbow

p. A20

W372PLP
Male Branch Tee

p. A23

Metric Tube to Female BSPP

370PLP
Female Elbow

p. A27

Metric Tube to Metric Tube

32PLP
Union

p. A30

365PLP
Union Elbow

p. A30

364PLP
Union Tee

p. A31

362PLP
Union Y

p. A31

362PLPD
Double Union Y

p. A32

24PLP
Multiple Tee

p. A32

24PLPD
Double Multiple Tee

p. A33

347PLP
Cross

p. A33

32PLPRC
Connector for 2 Tubes

p. A37

32PLPDRC
Connectoer for 3 Tubes

p. A37

Metric Bulkhead Unions

32PLPBH
Bulkhead Union

p. A32

365PLPBH
Bulkhead Elbow

p. A32

Metric Plug-ins

369PLPSP
Plug-In Elbow

p. A33

369PLPSPX
Extended Plug-In Elbow

p. A34

379PLPSP
Plug-In 45° Male Elbow

p. A34

372PLPSP
Plug-In Branch Tee

p. A34

371PLPSP
Plug-In Run Tee

p. A35

362PLPSP
Plug-In Y

p. A35

362PLPSPD
Double Plug-In Y

p. A35

67PLP
Tube Reducer

p. A36

32PLPSP
Tube Expander

p. A36

32PLPSP
Tube Converter

p. A36

322PLPSP
Barbed Connector

p. A37

Metric Banjo Fittings

369PLPBJ
Single Banjo

p. A28

369PLPBJB
Single Banjo Body

p. A28

32PLPDJB
Double Banjo Body

p. A28

369PLPTJB
Twin Banjo Body

p. A28

68BJB
Single Banjo Bolt

p. A28

68BJBD
Double Banjo Bolt

p. A29

68BJBT
Triple Banjo Bolt

p. A29

66BJB
Female Banjo Bolt

p. A29

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

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376PLPBJ
Banjo with Female Bolt



p. A29

369PLPTJ
Twin Banjo



p. A29

32PLPDJ
Double Banjo



p. A29

Auxiliary Component

63PLP
Double Male Union



p. A35

639PLP
Plug



p. A37

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Prestolok Composite Fittings

MATERIALS OF CONSTRUCTION	
BODY:	GLASS REINFORCED NYLON 6.6
COLLAR:	NYLON
GRIPPING RING:	STAINLESS STEEL
D SEAL:	NITRILE
O-RINGS:	NITRILE
BASE:	NICKEL PLATED BRASS WITH THREAD SEALANT ON TAPERED COMPONENTS AND CAPTIVE SEAL ON PARALLEL THREADS.

NOMENCLATURE	
EXAMPLE: W369PLP-4-2	**ATTRIBUTE:**
W	WHITE THREAD SEALANT
3	COMPOSITE BODY
69	MALE ELBOW
PLP	PRESTOLOK
4	1/4" (4/16) TUBE O.D.
2	1/8" (2/16) PIPE THREAD

PRESSURE AND TEMPERATURE RANGE	
GRIPPING RING:	-4°F TO +175°F AT UP TO 290 PSI DEPENDING ON TUBING
COLLET TECHNOLOGY (3/16" SIZE ONLY):	+5°F TO +155°F AT UP TO 260 PSI DEPENDING ON TUBING
VACUUM CAPABILITY:	28" HG

APPLICABLE TUBE	
TUBE O.D.:	1/8, 5/32, 3/16, 1/4, 5/16, 3/8, 1/2
TUBE O.D. (MM):	3, 4,6,8,10,12,14



A compact one piece push-to-connect fitting. All items in the Prestolok composite range are silicone free. The stainless steel gripping ring ensures excellent tube retention while the D seal within the fitting provides a positive seal on the O.D. of the tube, in both static and dynamic positions, due to an optimized design of the fitting cavity. Prestolok composite should not be used for live swivel applications.

Recommended Tubing

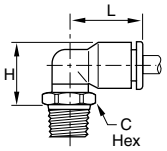
Prestolok composite fittings are designed to be used with the following tubing.

- Nylon Semi-Rigid
- Polyurethane
- Nylon
- Fluoropolymer

Assembly Instructions

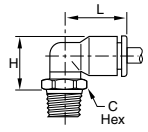
1. Achieve a square cut edge with a tube cutter
2. Simply push the tubing until it can go no further. Holding and sealing is accomplished instantaneously.
3. Pull on the tubing to verify gripping action
4. To disassemble make sure there is no air flow
5. Depress the manual push button, then pull the tube out.

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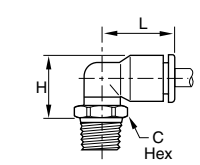
W369PLP Male Elbow Swivel 90° - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	L	H
369PLP-2-0	1/8	10-32	8	0.57	0.52
W369PLP-2-1	1/8	1/16	10	0.57	0.53
W369PLP-2-2	1/8	1/8	11	0.57	0.53
W369PLP-2-4	1/8	1/4	14	0.57	0.55
369PLP-5/32-0	5/32	10-32	8	0.55	0.53
W369PLP-5/32-2	5/32	1/8	11	0.55	0.53
W369PLP-5/32-4	5/32	1/4	14	0.55	0.55
W369PLP-3-2	3/16	1/8	11	0.85	0.67
369PLP-4-0	1/4	10-32	11	0.71	0.63
W369PLP-4-2	1/4	1/8	11	0.71	0.67
W369PLP-4-4	1/4	1/4	14	0.71	0.63
W369PLP-4-6	1/4	3/8	18	0.71	0.65
W369PLP-5-2	5/16	1/8	11	0.91	0.75
W369PLP-5-4	5/16	1/4	14	0.91	0.71
W369PLP-5-6	5/16	3/8	18	0.91	0.73
W369PLP-6-2	3/8	1/8	15	1.08	0.91
W369PLP-6-4	3/8	1/4	15	1.08	0.91
W369PLP-6-6	3/8	3/8	18	1.08	0.87
W369PLP-6-8	3/8	1/2	22	1.08	0.91
W369PLP-8-4	1/2	1/4	20	1.38	1.22
W369PLP-8-6	1/2	3/8	20	1.38	1.22
W369PLP-8-8	1/2	1/2	24	1.38	1.12

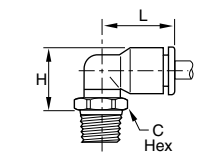
W369PLP Male Elbow Swivel 90° - BSPT

PART NO.	TUBE SIZE (IN)	THREAD BSPT	C HEX (MM)	L	H
W369PLP-2-2R	1/8	1/8	10	0.57	0.53
W369PLP-5/32-2R	5/32	1/8	10	0.55	0.53
W369PLP-5/32-4R	5/32	1/4	14	0.55	0.55
W369PLP-3-2R	3/16	1/8	11	0.85	0.67
W369PLP-4-2R	1/4	1/8	10	0.71	0.67
W369PLP-4-4R	1/4	1/4	14	0.71	0.63
W369PLP-5-2R	5/16	1/8	10	0.91	0.75
W369PLP-5-4R	5/16	1/4	14	0.91	0.71
W369PLP-5-6R	5/16	3/8	17	0.91	0.71
W369PLP-5-8R	5/16	1/2	21	0.91	0.77
W369PLP-6-4R	3/8	1/4	15	1.04	0.87
W369PLP-6-6R	3/8	3/8	17	1.04	0.87
W369PLP-8-4R	1/2	1/4	20	1.38	1.22
W369PLP-8-6R	1/2	3/8	20	1.38	1.22
W369PLP-8-8R	1/2	1/2	24	1.38	1.12

W369PLP Male Elbow - NPT

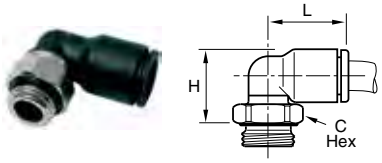
PART NO.	TUBE SIZE (MM)	THREAD NPT	C HEX (MM)	H	L
W369PLP-4M-2	4	1/8	11	.53	.55
W369PLP-4M-4	4	1/4	14	.55	.55
W369PLP-6M-2	6	1/8	11	.61	.63
W369PLP-6M-4	6	1/4	14	.63	.63
W369PLP-8M-2	8	1/8	11	.75	.91
W369PLP-8M-4	8	1/4	14	.71	.91
W369PLP-8M-6	8	3/8	18	.73	.91
W369PLP-10M-4	10	1/4	15	.91	1.04
W369PLP-10M-6	10	3/8	18	.87	1.04
W369PLP-10M-8	10	1/2	22	.91	1.04
W369PLP-12M-6	12	3/8	18	.98	1.22
W369PLP-12M-8	12	1/2	22	1.02	1.22

W369PLP Male Elbow - BSPT

PART NO.	TUBE SIZE (MM)	THREAD BSPT	C HEX (MM)	H	L
W369PLP-4M-2R	4	1/8	10	13.5	14.0
W369PLP-4M-4R	4	1/4	14	14.0	14.0
W369PLP-4M-6R	4	3/8	17	13.5	14.0
W369PLP-6M-2R	6	1/8	10	15.5	16.0
W369PLP-6M-4R	6	1/4	14	16.0	16.0
W369PLP-6M-6R	6	3/8	17	16.0	16.0
W369PLP-6M-8R	6	1/2	21	16.5	16.0
W369PLP-8M-2R	8	1/8	10	19.0	23.0
W369PLP-8M-4R	8	1/4	14	18.0	23.0
W369PLP-8M-6R	8	3/8	17	18.0	23.0
W369PLP-8M-8R	8	1/2	21	19.5	23.0
W369PLP-10M-2R	10	1/8	15	23.0	26.5
W369PLP-10M-4R	10	1/4	15	22.0	26.5
W369PLP-10M-6R	10	3/8	17	22.0	26.5
W369PLP-10M-8R	10	1/2	21	22.0	26.5
W369PLP-12M-4R	12	1/4	15	25.0	31.0
W369PLP-12M-6R	12	3/8	17	25.0	31.0
W369PLP-12M-8R	12	1/2	21	25.0	31.0
W369PLP-14M-6R	14	3/8	20	30.5	35.5
W369PLP-14M-8R	14	1/2	24	28.5	35.5
W369PLP-16M-6R	16	3/8	27	53	39.0
W369PLP-16M-8R	16	1/2	27	53	39.0

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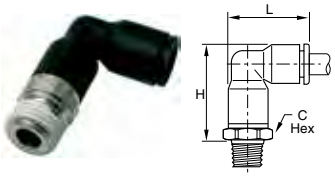
369PLP Male Elbow - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / METRIC	C HEX (MM)	H	L
369PLP-3M-M3	3	M3X0.5	8	15.0	14.5
369PLP-3M-M5	3	M5X0.8	8	13.5	14.5
369PLP-4M-M3	4	M3X0.5	8	15.0	14.5
369PLP-4M-M5	4	M5X0.8	8	13.5	14.0
369PLP-4M-M7	4	M7X1	10	15.0	14.0
369PLP-4M-2G	4	1/8	13	13.0	14.0
369PLP-4M-4G	4	1/4	16	13.0	14.0
369PLP-6M-M5	6	M5X0.8	8	15.5	16.0
369PLP-6M-M7	6	M7X1	10	17.5	16.0
369PLP-6M-M10	6	M10X1	13	15.0	14.0
369PLP-6M-M12	6	M12X1.5	15	15.0	16.0
369PLP-6M-2G	6	1/8	13	15.0	16.0
369PLP-6M-4G	6	1/4	16	15.0	16.0
369PLP-6M-6G	6	3/8	20	15.5	16.0
369PLP-6M-8G	6	1/2	24	16.0	16.0
369PLP-8M-M10	8	M10X1	13	20.5	23.0
369PLP-8M-M12	8	M12X1.5	15	19.5	23.0
369PLP-8M-2G	8	1/8	13	20.5	23.0
369PLP-8M-4G	8	1/4	16	18.5	23.0
369PLP-8M-6G	8	3/8	20	18.5	23.0
369PLP-8M-8G	8	1/2	24	19.0	23.0
369PLP-10M-4G	10	1/4	16	23.5	26.5
369PLP-10M-6G	10	3/8	20	22.0	26.5
369PLP-10M-8G	10	1/2	24	22.0	26.5
369PLP-12M-4G	12	1/4	16	26.5	31.0
369PLP-12M-6G	12	3/8	20	25.0	31.0
369PLP-12M-8G	12	1/2	24	25.0	31.0
369PLP-14M-6G	14	3/8	20	32.5	35.5
369PLP-14M-8G	14	1/2	24	27.0	35.5
369PLP-16M-6G	16	3/8	27	54.5	39
369PLP-16M-8G	16	1/2	27	54.5	39



W369PLPX Extended Male Elbow - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	H	L
369PLPX-2-0	1/8	10-32	8	.91	.75
W369PLPX-2-2	1/8	1/8	11	.91	.75
W369PLPX-2-4	1/8	1/4	14	.93	.75
369PLPX-5/32-0	5/32	10-32	8	.91	.75
W369PLPX-5/32-2	5/32	1/8	11	.91	.75
W369PLPX-5/32-4	5/32	1/4	14	.93	.75
369PLPX-4-0	1/4	10-32	11	1.10	.93
369PLPX-4-M7	1/4	M7	9	1.17	.93
W369PLPX-4-2	1/4	1/8	11	1.12	.93
W369PLPX-4-4	1/4	1/4	14	1.08	.93
W369PLPX-4-6	1/4	3/8	17	1.12	.93
W369PLPX-5-2	5/16	1/8	13	1.32	1.16
W369PLPX-5-4	5/16	1/4	14	1.28	1.16
W369PLPX-6-2	3/8	1/8	17	1.40	1.34
W369PLPX-6-4	3/8	1/4	17	1.41	1.33
W369PLPX-6-6	3/8	3/8	18	1.45	1.33

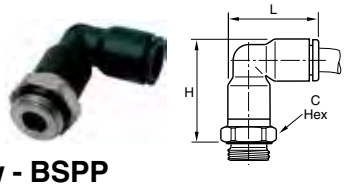


W369PLPX Extended Male Elbow - BSPT

PART NO.	TUBE SIZE (MM)	THREAD BSPT	C HEX (MM)	H	L
W369PLPX-4M-2R	4	1/8	10	23.0	19.0
W369PLPX-4M-4R	4	1/4	14	23.5	19.0
W369PLPX-6M-2R	6	1/8	10	27.0	22.5
W369PLPX-6M-4R	6	1/4	14	27.5	22.5
W369PLPX-8M-2R	8	1/8	13	34.5	29.5
W369PLPX-8M-4R	8	1/4	14	32.5	29.5
W369PLPX-8M-6R	8	3/8	17	33.0	29.5
W369PLPX-10M-4R	10	1/4	15	39.5	34.5
W369PLPX-10M-6R	10	3/8	17	39.5	34.5
W369PLPX-10M-8R	10	1/2	21	39.5	34.5
W369PLPX-12M-4R	12	1/4	19	45.5	40.5
W369PLPX-12M-6R	12	3/8	19	45.5	40.5
W369PLPX-12M-8R	12	1/2	21	45.5	40.5
W369PLPX-14M-6R	14	3/8	21	51.5	46.5
W369PLPX-14M-8R	14	1/2	21	51.5	46.5

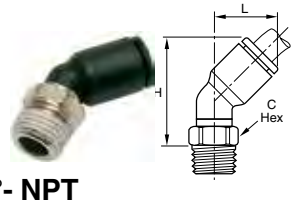
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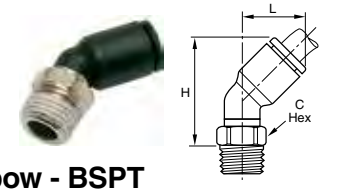
369PLPX Male Elbow - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / METRIC	C HEX (MM)	H
369PLPX-4M-M5	4	M5X0.8	8	23.0
369PLPX-4M-M7	4	M7X1	10	22.5
369PLPX-4M-2G	4	1/8	13	22.5
369PLPX-4M-4G	4	1/4	16	22.5
369PLPX-6M-M5	6	M5X0.8	10	27.5
369PLPX-6M-M7	6	M7X1	10	26.0
369PLPX-6M-2G	6	1/8	13	27.0
369PLPX-6M-4G	6	1/4	16	27.0
369PLPX-8M-2G	8	1/8	13	36.0
369PLPX-8M-4G	8	1/4	16	33.0
369PLPX-8M-6G	8	3/8	20	33.0
369PLPX-10M-4G	10	1/4	16	40.5
369PLPX-10M-6G	10	3/8	20	40.5
369PLPX-10M-8G	10	1/2	24	40.5
369PLPX-12M-4G	12	1/4	19	44.5
369PLPX-12M-6G	12	3/8	20	42.0
369PLPX-12M-8G	12	1/2	24	42.0
369PLPX-14M-6G	14	3/8	22	51.0
369PLPX-14M-8G	14	1/2	24	48.5



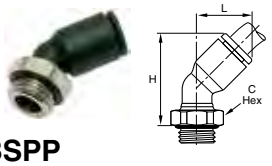
W379PLP Male Elbow 45°- NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	H	L
379PLP-2-0	1/8	10-32	8	.91	.49
W379PLP-2-2	1/8	1/8	11	.81	.49
W379PLP-4-2	1/4	1/8	11	.98	.57
W379PLP-4-4	1/4	1/4	14	.98	.57
W379PLP-4-M7	1/4	M7	9	1.14	.57
W379PLP-6-4	3/8	1/4	17	1.36	.91
W379PLP-6-6	3/8	3/8	18	1.36	.91



W379PLP 45° Male Elbow - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	L
W379PLP-4M-2R	4	1/8	10	24.5	13.0
W379PLP-6M-2R	6	1/8	10	28.0	14.5
W379PLP-6M-4R	6	1/4	14	30.0	14.5
W379PLP-8M-2R	8	1/8	10	33.5	19.5
W379PLP-8M-4R	8	1/4	14	33.5	19.5
W379PLP-8M-6R	8	3/8	17	33.5	19.5
W379PLP-10M-4R	10	1/4	15	38.5	23.0
W379PLP-10M-6R	10	3/8	17	39.0	23.0
W379PLP-10M-8R	10	1/2	21	40.5	23.0
W379PLP-12M-4R	12	1/4	15	44.0	26.0
W379PLP-12M-6R	12	3/8	17	44.0	26.0
W379PLP-12M-8R	12	1/2	21	46.0	26.0

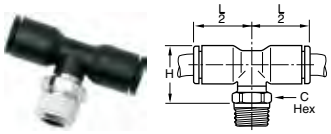


379PLP 45° Male Elbow - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L
379PLP-4M-M5	4	M5X0.8	8	23.0	13.0
379PLP-4M-2G	4	1/8	13	25.0	13.0
379PLP-6M-M5	6	M5X0.8	8	30.0	14.5
379PLP-6M-2G	6	1/8	13	28.5	14.5
379PLP-6M-4G	6	1/4	16	29.5	14.5
379PLP-8M-2G	8	1/8	13	36.0	19.5
379PLP-8M-4G	8	1/4	16	34.5	19.5
379PLP-8M-6G	8	3/8	20	34.5	19.5
379PLP-10M-4G	10	1/4	16	40.5	23.0
379PLP-10M-6G	10	3/8	20	39.0	23.0
379PLP-10M-8G	10	1/2	24	41.0	23.0
379PLP-12M-4G	12	1/4	16	46.0	26.0
379PLP-12M-6G	12	3/8	20	44.5	26.0
379PLP-12M-8G	12	1/2	24	46.0	26.0

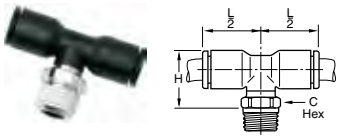
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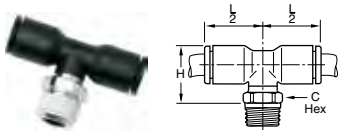
W372PLP Male Branch Tee Swivel - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	L/2	H
372PLP-2-0	1/8	10-32	8	.57	.61
W372PLP-2-1	1/8	1/16	10	.57	.61
W372PLP-2-2	1/8	1/8	11	.57	.61
W372PLP-2-4	1/8	1/4	14	.57	.63
372PLP-5/32-0	5/32	10-32	8	.55	.71
W372PLP-5/32-2	5/32	1/8	11	.55	.61
W372PLP-5/32-4	5/32	1/4	14	.55	.63
W372PLP-3-2	3/16	1/8	11	.85	.67
W372PLP-4-2	1/4	1/8	11	.71	.67
W372PLP-4-4	1/4	1/4	14	.71	.63
W372PLP-4-6	1/4	3/8	18	.71	.65
W372PLP-5-2	5/16	1/8	11	.91	.87
W372PLP-5-4	5/16	1/4	14	.91	.83
W372PLP-5-6	5/16	3/8	18	.91	.85
W372PLP-6-2	3/8	1/8	15	1.04	.99
W372PLP-6-4	3/8	1/4	15	1.04	.99
W372PLP-6-6	3/8	3/8	18	1.04	.95
W372PLP-6-8	3/8	1/2	22	1.04	.98
W372PLP-8-4	1/2	1/4	20	1.38	1.22
W372PLP-8-6	1/2	3/8	20	1.38	1.22
W372PLP-8-8	1/2	1/2	24	1.38	1.21



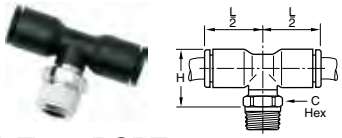
W372PLP Male Branch Tee - BSPT

PART NO.	TUBE SIZE (IN)	THREAD BSPT	C HEX (MM)	L/2	H
W372PLP-2-2R	1/8	1/8	10	.55	.61
W372PLP-5/32-2R	5/32	1/8	10	.55	.61
W372PLP-5/32-4R	5/32	1/4	14	.55	.63
W372PLP-3-2R	3/16	1/8	11	.85	.67
W372PLP-3-4R	3/16	1/4	14	.85	.67
W372PLP-4-2R	1/4	1/8	10	.71	.67
W372PLP-4-4R	1/4	1/4	14	.71	.63
W372PLP-5-2R	5/16	1/8	10	.91	.87
W372PLP-5-4R	5/16	1/4	14	.91	.83
W372PLP-5-6R	5/16	3/8	17	.91	.83
W372PLP-6-4R	3/8	1/4	15	1.04	.95
W372PLP-6-6R	3/8	3/8	17	1.04	.95
W372PLP-8-4R	1/2	1/4	20	1.38	1.24
W372PLP-8-6R	1/2	3/8	20	1.38	1.22



W372PLP Male Branch Tee - NPT

PART NO.	TUBE SIZE (MM)	NPT	C HEX (MM)	H	L/2
W372PLP-4M-2	4	1/8	11	.61	.55
W372PLP-4M-4	4	1/4	14	.63	.55
W372PLP-6M-2	6	1/8	11	.69	.63
W372PLP-6M-4	6	1/4	14	.71	.63
W372PLP-8M-2	8	1/8	11	.87	.91
W372PLP-8M-4	8	1/4	14	.83	.91
W372PLP-8M-6	8	3/8	18	.85	.91
W372PLP-10M-4	10	1/4	15	.98	1.04
W372PLP-10M-6	10	3/8	18	.95	1.04
W372PLP-10M-8	10	1/2	22	.98	1.04
W372PLP-12M-6	12	3/8	18	1.06	1.22
W372PLP-12M-8	12	1/2	22	.98	1.22

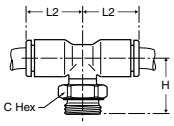


W372PLP Male Branch Tee - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	L/2
W372PLP-4M-2R	4	1/8	10	15.5	14.0
W372PLP-4M-4R	4	1/4	14	16.0	14.0
W372PLP-6M-2R	6	1/8	10	17.5	16.0
W372PLP-6M-4R	6	1/4	14	18.0	16.0
W372PLP-8M-2R	8	1/8	10	22.0	23.0
W372PLP-8M-4R	8	1/4	14	21.0	23.0
W372PLP-8M-6R	8	3/8	17	21.0	23.0
W372PLP-10M-4R	10	1/4	15	24.0	26.5
W372PLP-10M-6R	10	3/8	17	24.0	26.5
W372PLP-10M-8R	10	1/2	21	24.0	26.5
W372PLP-12M-4R	12	1/4	15	27.0	31.0
W372PLP-12M-6R	12	3/8	17	27.0	31.0
W372PLP-12M-8R	12	1/2	21	27.0	31.0
W372PLP-14M-6R	14	3/8	20	30.5	35.5
W372PLP-14M-8R	14	1/2	24	28.5	35.5
W372PLP-16M-6R	16	3/8	27	53.0	38.5
W372PLP-16M-8R	16	1/2	27	53.0	38.5

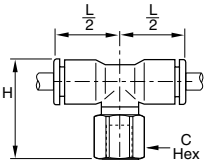
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Fluid System Connectors
Otsego, Michigan

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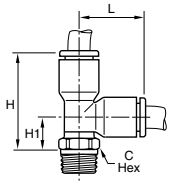
372PLP Male Branch Tee - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L/2
372PLP-4M-M5	4	M5X0.8	8	17.5	14.0
372PLP-4M-2G	4	1/8	13	15.0	14.0
372PLP-4M-4G	4	1/4	16	15.0	14.0
372PLP-6M-M5	6	M5X0.8	8	19.5	16.0
372PLP-6M-2G	6	1/8	13	17.0	16.0
372PLP-6M-4G	6	1/4	16	17.0	16.0
372PLP-8M-2G	8	1/8	13	23.5	23.0
372PLP-8M-4G	8	1/4	16	21.5	23.0
372PLP-8M-6G	8	3/8	20	21.5	23.0
372PLP-10M-4G	10	1/4	16	26.0	26.5
372PLP-10M-6G	10	3/8	20	24.0	26.5
372PLP-10M-8G	10	1/2	24	24.0	26.5
372PLP-12M-4G	12	1/4	16	29.0	31.0
372PLP-12M-6G	12	3/8	20	27.0	31.0
372PLP-12M-8G	12	1/2	24	27.0	31.0
372PLP-14M-6G	14	3/8	20	32.5	35.5
372PLP-14M-8G	14	1/2	24	27.0	35.5
372PLP-16M-6G	16	3/8	27	54.5	38.5
372PLP-16M-8G	16	1/2	27	54.5	38.5

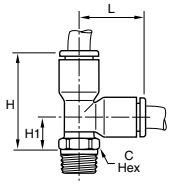
377PLP Female Branch Tee Swivel - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	L/2	H
377PLP-2-2	1/8	1/8	13	.57	.99
377PLP-5/32-2	5/32	1/8	13	.55	.91
377PLP-5/32-4	5/32	1/4	16	.55	1.08
377PLP-4-2	1/4	1/8	13	.71	1.02
377PLP-4-4	1/4	1/4	16	.71	1.18
377PLP-5-2	5/16	1/8	13	.91	1.24
377PLP-5-4	5/16	1/4	16	.91	1.40
377PLP-6-4	3/8	1/4	16	1.04	1.60
377PLP-8-6	1/2	3/8	22	1.38	1.88

W371PLP Male Run Tee Swivel - NPT

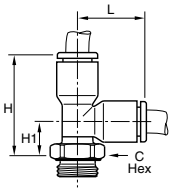
PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	L	H	H1
371PLP-2-0	1/8	10-32	8	.57	.92	.35
W371PLP-2-1	1/8	1/16	10	.57	.93	.35
W371PLP-2-2	1/8	1/8	11	.57	.93	.35
371PLP-5/32-0	5/32	10-32	8	.57	1.02	.45
W371PLP-5/32-2	5/32	1/8	11	.57	.93	.53
W371PLP-5/32-4	5/32	1/4	14	.57	.94	.37
W371PLP-3-2	3/16	1/8	11	.85	1.31	.45
W371PLP-4-2	1/4	1/8	11	.69	1.16	.45
W371PLP-4-4	1/4	1/4	14	.69	1.12	.41
W371PLP-4-6	1/4	3/8	18	.69	1.14	.43
W371PLP-5-2	5/16	1/8	11	.91	1.38	.49
W371PLP-5-4	5/16	1/4	14	.91	1.34	.45
W371PLP-5-6	5/16	3/8	18	.91	1.36	.47
W371PLP-6-2	3/8	1/8	15	1.04	1.63	.60
W371PLP-6-4	3/8	1/4	15	1.04	1.63	.60
W371PLP-6-6	3/8	3/8	18	1.04	1.60	.55
W371PLP-6-8	3/8	1/2	22	1.04	1.63	.59
W371PLP-8-4	1/2	1/4	20	1.38	2.17	.79
W371PLP-8-6	1/2	3/8	20	1.38	2.17	.79
W371PLP-8-8	1/2	1/2	24	1.38	2.07	.79

W371PLP Male run Tee - BSPT

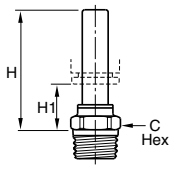
PART NO.	TUBE SIZE (MM)	THREAD BSPT	C HEX (MM)	H	H1	L
W371PLP-4M-2R	4	1/8	10	23.5	9.0	14.5
W371PLP-4M-4R	4	1/4	14	24.0	9.5	14.5
W371PLP-6M-2R	6	1/8	10	27.5	10.0	17.5
W371PLP-6M-4R	6	1/4	14	28.0	10.5	17.5
W371PLP-8M-2R	8	1/8	10	35.0	12.0	23.0
W371PLP-8M-4R	8	1/4	14	34.0	11.0	23.0
W371PLP-8M-6R	8	3/8	17	34.0	11.0	23.0
W371PLP-10M-4R	10	1/4	15	40.5	14.0	26.5
W371PLP-10M-6R	10	3/8	17	40.5	14.0	26.5
W371PLP-10M-8R	10	1/2	21	40.5	14.0	26.5
W371PLP-12M-4R	12	1/4	15	46.5	15.5	31.0
W371PLP-12M-6R	12	3/8	17	46.5	15.5	31.0
W371PLP-12M-8R	12	1/2	21	46.5	15.5	31.0
W371PLP-14M-6R	14	3/8	20	55.0	19.5	35.5
W371PLP-14M-8R	14	1/2	24	52.5	17.5	35.5
W371PLP-16M-6R	16	3/8	27	38.5	78	39.5
W371PLP-16M-8R	16	1/2	27	38.5	78	39.5

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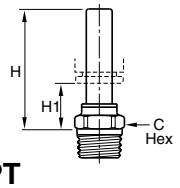
371PLP Male Run Tee - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	H1	L
371PLP-4M-M5	4	M5X0.8	8	26.0	11.5	14.5
371PLP-4M-2G	4	1/8	13	23.0	8.5	14.5
371PLP-4M-4G	4	1/4	16	23.0	8.5	14.5
371PLP-6M-M5	6	M5X0.8	8	29.5	12.5	17.5
371PLP-6M-2G	6	1/8	13	27.0	10.0	17.5
371PLP-6M-4G	6	1/4	16	27.0	10.0	17.5
371PLP-8M-2G	8	1/8	13	36.5	14.0	23.0
371PLP-8M-4G	8	1/4	16	34.5	12.0	23.0
371PLP-8M-6G	8	3/8	20	34.5	12.0	23.0
371PLP-10M-4G	10	1/4	16	42.0	15.5	26.5
371PLP-10M-6G	10	3/8	20	40.5	14.0	26.5
371PLP-10M-8G	10	1/2	24	40.5	14.0	26.5
371PLP-12M-4G	12	1/4	16	48.0	17.0	31.0
371PLP-12M-6G	12	3/8	20	46.5	15.5	31.0
371PLP-12M-8G	12	1/2	24	46.5	15.5	31.0
371PLP-14M-6G	14	3/8	20	56.5	21.5	35.5
371PLP-14M-8G	14	1/2	24	51.0	16.0	35.5
371PLP-16M-6G	16	3/8	27	38.5	79.5	41
371PLP-16M-8G	16	1/2	27	38.5	79.5	41

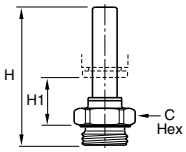
W68PLPSP Male Standpipe - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	H	H1
68PLPSP-5/32-0	5/32	10-32	8	1.24	
W68PLPSP-5/32-2	5/32	1/8	11	1.02	.57
W68PLPSP-5/32-4	5/32	1/4	14	1.04	.59
W68PLPSP-4-2	1/4	1/8	11	1.18	.61
W68PLPSP-4-4	1/4	1/4	14	1.12	.57
W68PLPSP-5-2	5/16	1/8	11	1.16	.43
W68PLPSP-5-4	5/16	1/4	14	1.12	.39
W68PLPSP-6-2	3/8	1/8	15	1.75	.65
W68PLPSP-6-4	3/8	1/4	15	1.42	.67
W68PLPSP-6-6	3/8	3/8	17	1.42	.61
W68PLPSP-8-6	1/2	3/8	17	1.44	.37
W68PLPSP-8-8	1/2	1/2	21	1.46	.39

W68PLPSP Male Standpipe - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	H1
W68PLPSP-4M-2R	4	1/8	10	26.0	14.0
W68PLPSP-4M-4R	4	1/4	14	26.5	14.5
W68PLPSP-6M-2R	6	1/8	10	28.0	14.0
W68PLPSP-6M-4R	6	1/4	14	28.5	14.5
W68PLPSP-8M-2R	8	1/8	10	29.5	11.0
W68PLPSP-8M-4R	8	1/4	14	28.5	10.0
W68PLPSP-8M-6R	8	3/8	17	28.5	10.0
W68PLPSP-10M-4R	10	1/4	15	36.0	15.5
W68PLPSP-10M-6R	10	3/8	17	36.0	15.5
W68PLPSP-10M-8R	10	1/2	21	36.0	15.5
W68PLPSP-12M-6R	12	3/8	17	36.5	12.0
W68PLPSP-12M-8R	12	1/2	21	36.5	12.0
W68PLPSP-14M-8R	14	1/2	21	41.0	13.5

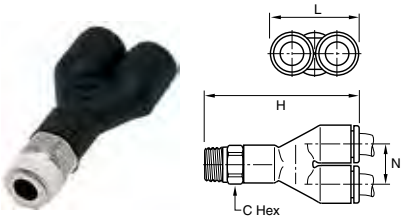



68PLPSP Male Standpipe - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX (MM)	H	H1
68PLPSP-4M-M5	4	M5X0.8	8	31.0	16.0
68PLPSP-4M-2G	4	1/8	13	30.0	13.5
68PLPSP-4M-4G	4	1/4	16	31.0	13.5
68PLPSP-6M-2G	6	1/8	13	32.0	13.5
68PLPSP-6M-4G	6	1/4	16	33.0	13.5
68PLPSP-8M-2G	8	1/8	13	35.5	12.5
68PLPSP-8M-4G	8	1/4	16	34.5	10.5
68PLPSP-8M-6G	8	3/8	20	34.5	10.5
68PLPSP-10M-4G	10	1/4	16	43.5	17.5
68PLPSP-10M-6G	10	3/8	20	41.5	15.5
68PLPSP-10M-8G	10	1/2	24	41.5	15.5
68PLPSP-12M-6G	12	3/8	20	42.0	12.0
68PLPSP-12M-8G	12	1/2	24	43.5	12.0
68PLPSP-14M-6G	14	3/8	20	46.5	14.0
68PLPSP-14M-8G	14	1/2	24	48.0	13.5

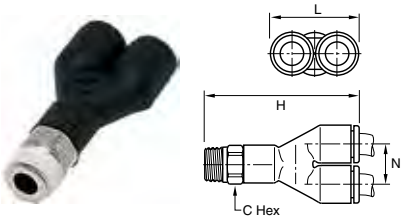
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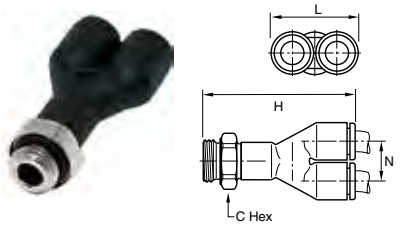
W368PLP Male Y Connector - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT	C HEX (MM)	H	L	N
W368PLP-5/32-2	5/32	1/8	11	1.28	.69	.35
W368PLP-5/32-4	5/32	1/4	14	1.30	.69	.35
W368PLP-4-2	1/4	1/8	11	1.61	.87	.45
W368PLP-4-4	1/4	1/4	14	1.56	.87	.45
W368PLP-6-4	3/8	1/4	17	2.24	1.30	.67
W368PLP-6-6	3/8	3/8	18	2.28	1.30	.67



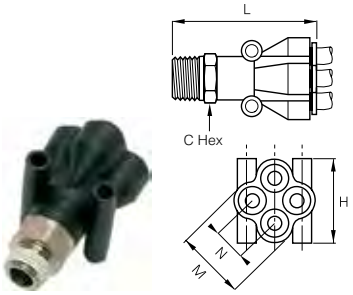
W368PLP Male Y Connector - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	L	N
W368PLP-4M-2R	4	1/8	10	32.5	17.5	9.0
W368PLP-4M-4R	4	1/4	14	33.0	17.5	9.0
W368PLP-6M-2R	6	1/8	10	39.5	21.5	1.0
W368PLP-6M-4R	6	1/4	14	40.0	21.5	1.0
W368PLP-8M-2R	8	1/8	13	56.5	28.0	14.5
W368PLP-8M-4R	8	1/4	14	55.5	28.0	14.5
W368PLP-8M-6R	8	3/8	16	48.5	28.0	14.5
W368PLP-10M-4R	10	1/4	14	60.0	39.0	20.0
W368PLP-10M-6R	10	3/8	16	60.5	39.0	20.0
W368PLP-10M-8R	10	1/2	24	61.0	39.0	20.0
W368PLP-12M-6R	12	3/8	19	66.0	39.0	20.0
W368PLP-12M-8R	12	1/2	21	66.0	39.0	20.0



368PLP Male Y Connector - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L	N
368PLP-4M-M5	4	M5X0.8	8	32.5	17.5	9.0
368PLP-4M-2G	4	1/8	13	32.0	17.5	9.0
368PLP-4M-4G	4	1/4	16	32.0	17.5	9.0
368PLP-6M-M5	6	M5X0.8	10	39.5	21.5	11.0
368PLP-6M-2G	6	1/8	13	39.0	21.5	11.0
368PLP-6M-4G	6	1/4	16	39.0	21.5	11.0
368PLP-8M-2G	8	1/8	13	56.0	28.0	14.5
368PLP-8M-4G	8	1/4	16	55.0	28.0	14.5
368PLP-8M-6G	8	3/8	19	54.0	28.0	14.5
368PLP-10M-4G	10	1/4	16	63.5	33.0	17.0
368PLP-10M-6G	10	3/8	20	63.5	33.0	17.0
368PLP-10M-8G	10	1/2	20	65.0	33.0	17.0
368PLP-12M-6G	12	3/8	19	68.0	39.0	20.0
368PLP-12M-8G	12	1/2	24	70.0	39.0	20.0



W368PLPD Double Y Male Connector - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	L	M	N	MOUNTING HOLE DIA
W368PLPD-4M-2R	4	1/8	13	25.5	41.5	21.0	10.0	3.7
W368PLPD-4M-4R	4	1/4	14	25.5	43.5	21.0	10.0	3.7
W368PLPD-6M-2R	6	1/8	19	31.5	54.5	26.5	12.0	3.7
W368PLPD-6M-4R	6	1/4	19	31.5	57.5	26.5	12.0	3.7

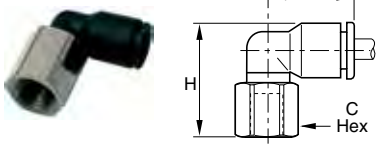
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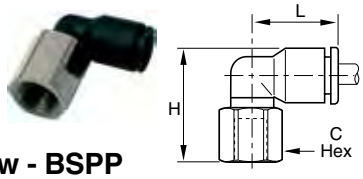
368PLPD Double Y Male Connector - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX (MM)	H	L	M	N	MOUNTING HOLE DIA
368PLPD-4M-2G	4	1/8	13	25.5	41.0	21.0	10.0	3.7
368PLPD-4M-4G	4	1/4	16	25.5	40.0	21.0	10.0	3.7
368PLPD-6M-2G	6	1/8	19	31.5	52.5	26.5	12.0	3.7
368PLPD-6M-4G	6	1/4	19	31.5	53.5	26.5	12.0	3.7



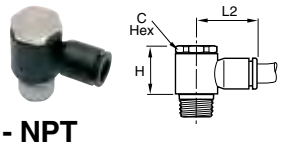
370PLP Female Elbow Swivel - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT	C HEX (MM)	L	H
370PLP-2-2	1/8	1/8	13	.57	.91
370PLP-5/32-2	5/32	1/8	13	.55	.91
370PLP-5/32-4	5/32	1/4	16	.55	1.08
370PLP-4-2	1/4	1/8	13	.71	1.02
370PLP-4-4	1/4	1/4	16	.71	1.18
370PLP-5-2	5/16	1/8	13	.91	1.12
370PLP-5-4	5/16	1/4	16	.91	1.28
370PLP-6-4	3/8	1/4	16	1.04	1.52
370PLP-8-6	1/2	3/8	22	1.38	1.88



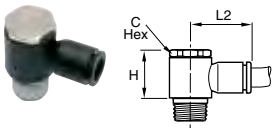
370PLP Female Elbow - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	C HEX (MM)	H	L
370PLP-4M-2G	4	1/8	13	23.0	14.0
370PLP-4M-4G	4	1/4	16	27.0	14.0
370PLP-6M-2G	6	1/8	13	25.0	16.0
370PLP-6M-4G	6	1/4	16	29.0	16.0
370PLP-8M-2G	8	1/8	13	28.0	23.0
370PLP-8M-4G	8	1/4	16	32.0	23.0
370PLP-8M-6G	8	3/8	19	33.0	23.0
370PLP-10M-4G	10	1/4	16	34.5	26.5
370PLP-10M-6G	10	3/8	19	35.0	26.5
370PLP-10M-8G	10	1/2	24	41.0	26.5
370PLP-12M-4G	12	1/4	16	38.0	30.5
370PLP-12M-6G	12	3/8	19	38.5	30.5
370PLP-12M-8G	12	1/2	24	43.5	30.5



W369PLPBJ Single Banjo - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	H	L2
369PLPBJ-2-0	1/8	10-32		.79	.65
369PLPBJ-5/32-0	5/32	10-32		.79	.65
W369PLPBJ-5/32-2	5/32	1/8	13	.73	.73
369PLPBJ-4-0	1/4	10-32		.79	.73
W369PLPBJ-4-2	1/4	1/8	13	.73	.83
W369PLPBJ-4-4	1/4	1/4	17	.89	.91
W369PLPBJ-4-6	1/4	3/8	21	1.04	1.12
W369PLPBJ-6-4	3/8	1/4	17	.89	1.12
W369PLPBJ-6-6	3/8	3/8	21	1.04	1.20

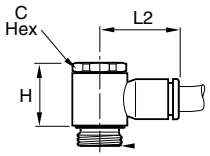


W369PLPBJ Banjo - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX (MM)	H	L2
W369PLPBJ-4M-2R	4	1/8	13	18.5	18.5
W369PLPBJ-6M-2R	6	1/8	13	18.5	20.0
W369PLPBJ-6M-4R	6	1/4	17	22.5	22.0
W369PLPBJ-8M-2R	8	1/8	13	18.5	25.0
W369PLPBJ-8M-4R	8	1/4	17	22.5	27.0
W369PLPBJ-8M-6R	8	3/8	21	26.5	29.0
W369PLPBJ-10M-4R	10	1/4	17	22.5	29.0
W369PLPBJ-10M-6R	10	3/8	21	26.5	31.0
W369PLPBJ-12M-4R	12	1/4	21	26.5	34.5
W369PLPBJ-12M-6R	12	3/8	21	26.5	34.5
W369PLPBJ-12M-8R	12	1/2	25	30.0	37.0

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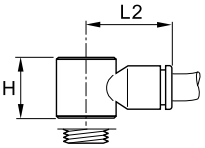
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369PLPBJ Banjo - BSPP

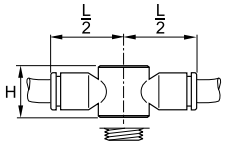
PART NO.	TUBE SIZE (MM)	BSPP / METRIC	C HEX (MM)	H	L2
369PLPBJ-3M-M3*	3	M3X0.5		13.0	16.0
369PLPBJ-3M-M5*	3	M5X0.8		13.0	16.0
369PLPBJ-4M-M5*	4	M5X0.8		13.0	16.0
369PLPBJ-4M-2G	4	1/8	13	17.0	18.5
369PLPBJ-6M-M5*	6	M5X0.8		13.0	18.5
369PLPBJ-6M-2G	6	1/8	13	17.0	20.0
369PLPBJ-6M-4G	6	1/4	17	21.0	22.0
369PLPBJ-8M-2G	8	1/8	13	16.5	25.0
369PLPBJ-8M-4G	8	1/4	17	21.0	27.0
369PLPBJ-8M-6G	8	3/8	20	24.5	29.0
369PLPBJ-10M-4G	10	1/4	17	21.0	29.0
369PLPBJ-10M-6G	10	3/8	20	24.5	31.0
369PLPBJ-10M-8G	10	1/2	25	27.5	36.5
369PLPBJ-12M-6G	12	3/8	20	24.5	34.5
369PLPBJ-12M-8G	12	1/2	25	27.5	36.5

*With screwdriver slot

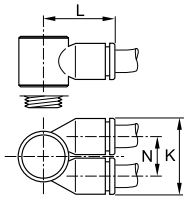
369PLPBJB Single Banjo Bodies

PART NO.	TUBE SIZE (MM)	BSPP / M5	H	L2
369PLPBJB-3M-M5	3	M5X0.8	13.0	16.0
369PLPBJB-4M-M5	4	M5X0.8	13.0	16.0
369PLPBJB-4M-2G	4	1/8	14.5	18.5
369PLPBJB-6M-M5	6	M5X0.8	13.0	18.5
369PLPBJB-6M-2G	6	1/8	14.5	20.0
369PLPBJB-6M-4G	6	1/4	18.0	22.0
369PLPBJB-8M-2G	8	1/8	14.5	25.0
369PLPBJB-8M-4G	8	1/4	18.0	27.0
369PLPBJB-8M-6G	8	3/8	21.5	29.0
369PLPBJB10M-4G	10	1/4	18.0	29.0
369PLPBJB10M-6G	10	3/8	21.5	31.0
369PLPBJB10M-8G	10	1/2	22.5	36.5
369PLPBJB12M-6G	12	3/8	21.5	34.5
369PLPBJB12M-8G	12	1/2	22.5	36.5

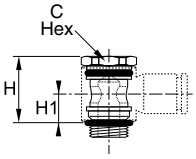
32PLPDJB Double Banjo Bodies

PART NO.	TUBE SIZE (MM)	BSPP / M5	H	L/2
32PLPDJB-4M-M5	4	M5X0.8	13.0	16.0
32PLPDJB-4M-2G	4	1/8	14.4	20.0
32PLPDJB-6M-2G	6	1/8	14.4	20.0
32PLPDJB-6M-4G	6	1/4	18.0	26.0
32PLPDJB-8M-4G	8	1/4	18.0	27.0
32PLPDJB-8M-6G	8	3/8	21.5	30.5
32PLPDJB-10M-6G	10	3/8	21.5	31.0

369PLPTJB Twin Banjo Bodies

PART NO.	TUBE SIZE (MM)	BSPP / M5	K	L	N
369PLPTJB-4M-M5	4	M5X0.8	17.5	15.5	9.0
369PLPTJB-4M-2G	4	1/8	22.5	20.0	12.0
369PLPTJB-4M-4G	4	1/4	28.0	25.0	14.5
369PLPTJB-6M-2G	6	1/8	22.5	20.5	12.0
369PLPTJB-6M-4G	6	1/4	28.0	25.0	14.5
369PLPTJB-6M-6G	6	3/8	33.0	28.5	17.0
369PLPTJB-8M-4G	8	1/4	28.0	26.0	14.5
369PLPTJB-8M-6G	8	3/8	33.0	29.5	17.0
369PLPTJB10M-6G	10	3/8	33.0	29.5	17.0

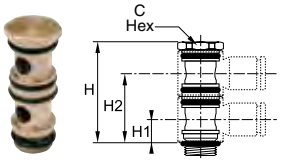
68BJB Single Banjo Bolt

PART NO.	BSPP / M5	C HEX (MM)	H	H1
68BJB-M5*	M5X0.8		17.0	7.5
68BJB-2G	1/8	13	17.0	7.5
68BJB-4G	1/4	17	21.0	9.5
68BJB-6G	3/8	20	24.5	11.0
68BJB-8G	1/2	25	27.5	11.5

*With screwdriver slot

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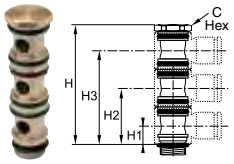
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68BJBD Double Banjo Bolt

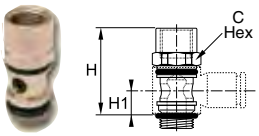
PART NO.	BSPP / M5	C HEX (MM)	H	H1	H2
68BJBD-M5*	M5X0.8		24.5	7.5	18.5
68BJBD-2G	1/8	13	31.0	7.5	22.0
68BJBD-4G	1/4	17	39.0	9.5	27.5
68BJBD-6G	3/8	20	46.0	11.0	32.5

*With screwdriver slot



68BJBT Triple Banjo Bolt

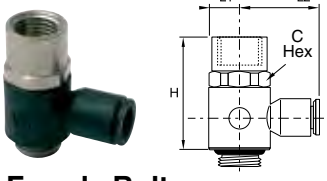
PART NO.	BSPP	C HEX (MM)	H	H1	H2	H3
68BJBT-2G	1/8	13	45.5	7.5	22.0	36.0
68BJBT-4G	1/4	17	54.0	9.5	27.5	45.5
68BJBT-6G	3/8	20	67.5	11.0	32.5	54.0



66BJB Female Threaded Banjo Bolt

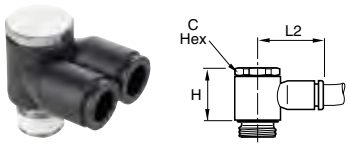
PART NO.	1 BSPP / M5	2 BSPP / M5	C HEX (MM)	H	H1
66BJB-M5*	M5X0.8	M5X0.8	8	17.0	7.5
66BJB-2G	1/8	1/8	13	24.5	7.5
66BJB-4G	1/4	1/4	17	33.0	9.5
66BJB-6G	3/8	3/8	20	37.5	11.0
66BJB-8G	1/2	1/2	25	42.0	11.5

*With screwdriver slot



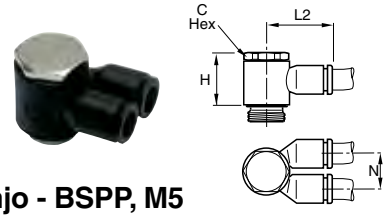
376PLPBJ Banjo with Female Bolt

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L1	L2
376PLPBJ-4M-M5	4	M5X0.8	8	19.0	5.0	16.0
376PLPBJ-4M-2G	4	1/8	13	25.5	7.0	18.5
376PLPBJ-6M-4G	6	1/4	17	33.0	9.0	22.0
376PLPBJ-8M-6G	8	3/8	20	37.5	11	29.0



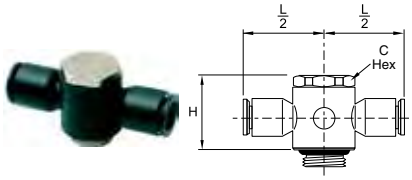
W369PLPTJ Twin Banjo - NPT

PART NO.	TUBE SIZE (IN)	THREAD NPT / UNF	C HEX (MM)	H	L2
369PLPTJ-5/32-0	5/32	10-32		.63	.61
W369PLPTJ-5/32-2	5/32	1/8	13	.73	.73
W369PLPTJ-4-2	1/4	1/8	13	.73	.73
W369PLPTJ-4-4	1/4	1/4	17	.89	1.04
W369PLPTJ-6-4	3/8	1/4	21	1.04	1.22
W369PLPTJ-6-6	3/8	3/8	21	1.04	1.22



369PLPTJ Twin Banjo - BSPP, M5

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L2	N
369PLPTJ-4M-M5	4	M5X0.8		13.0	16.0	9.0
369PLPTJ-4M-2G	4	1/8	13	16.5	18.5	11.5
369PLPTJ-6M-2G	6	1/8	13	16.5	18.5	11.5
369PLPTJ-6M-4G	6	1/4	17	21.0	27.0	14.5
369PLPTJ-8M-4G	8	1/4	17	21.0	27.0	14.5
369PLPTJ-8M-6G	8	3/8	20	24.5	31.0	17.0
369PLPTJ-10M-6G	10	3/8	20	24.5	31.0	17.0

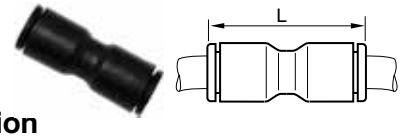


32PLPDJ Double Banjo - BSPP, M5

PART NO.	TUBE SIZE (MM)	BSPP / M5	C HEX (MM)	H	L/2
32PLPDJ-4M-M5	4	M5X0.8		13.0	16.0
32PLPDJ-4M-2G	4	1/8	13	17.0	20.0
32PLPDJ-6M-2G	6	1/8	13	17.0	20.0
32PLPDJ-6M-4G	6	1/4	17	21.0	26.5
32PLPDJ-8M-4G	8	1/4	17	21.0	27.0
32PLPDJ-8M-6G	8	3/8	20	24.5	30.5
32PLPDJ-10M-6G	10	3/8	20	24.5	31.0

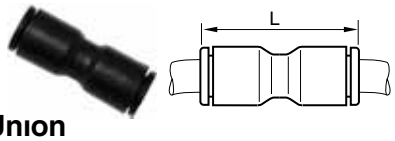
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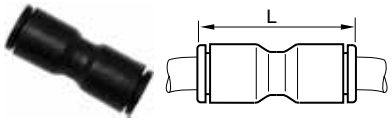
32PLP Equal Union

PART NO.	TUBE SIZE (IN)	L
32PLP-2	1/8	.97
32PLP-5/32	5/32	.98
32PLP-3	3/16	1.44
32PLP-4	1/4	1.16
32PLP-5	5/16	1.50
32PLP-6	3/8	1.65
32PLP-8	1/2	2.17



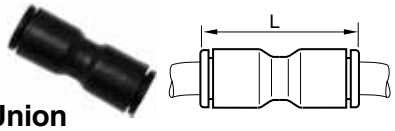
32PLP Unequal Union

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L
32PLP-5/32-2	5/32	1/8	0.96
32PLP-5/32-4	5/32	1/4	1.16
32PLP-4-2	1/4	1/8	1.32
32PLP-5-4	5/16	1/4	1.44
32PLP-6-4	3/8	1/4	1.61
32PLP-6-8	3/8	1/2	2.17



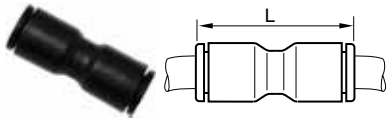
32PLP Union

PART NO.	TUBE SIZE (MM)	L
32PLP-3M	3	25.0
32PLP-4M	4	25.0
32PLP-6M	6	28.5
32PLP-8M	8	38.0
32PLP-10M	10	42.0
32PLP-12M	12	50.5
32PLP-14M	14	56.0
32PLP-16M	16	60.5



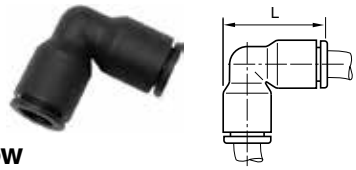
32PLP Unequal Union

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	L
32PLP-3M-4M	3	4	25.0
32PLP-6M-4M	6	4	28.0
32PLP-8M-4M	8	4	28.0
32PLP-8M-6M	8	6	38.0
32PLP-10M-6M	10	6	42.0
32PLP-10M-8M	10	8	42.0
32PLP-12M-10M	12	10	50.5
32PLP-12M-14M	12	14	56.0
32PLP-12M-8M	12	8	50.5
32PLP-16M-12M	16	12	61.0



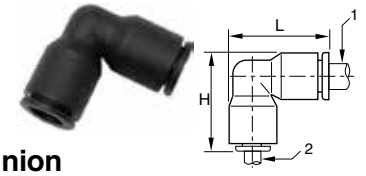
32PLP Converter

PART NO.	TUBE SIZE (IN)	TUBE SIZE (MM)	L
32PLP-6M-4	1/4	6	1.18
32PLP-10M-6	3/8	10	1.99
32PLP-12M-8	1/2	12	2.25



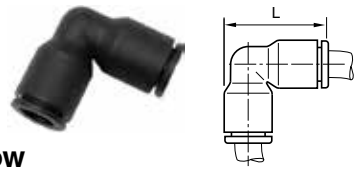
365PLP Union Elbow

PART NO.	TUBE SIZE (IN)	L
365PLP-2	1/8	.71
365PLP-5/32	5/32	.75
365PLP-3	3/16	1.07
365PLP-4	1/4	.93
365PLP-5	5/16	1.16
365PLP-6	3/8	1.33
365PLP-8	1/2	1.38



365PLP Unequal Union

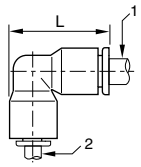
PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L	H
365PLP-2-4	1/8	1/4	.93	.93
365PLP-5/32-4	5/32	1/4	.93	.93
365PLP-6-4	3/8	1/4	1.33	1.30
365PLP-6-8	3/8	1/2	1.81	1.81



365PLP Union Elbow

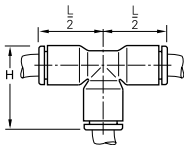
PART NO.	TUBE SIZE (MM)	L
365PLP-4M	4	19.0
365PLP-6M	6	22.5
365PLP-8M	8	29.5
365PLP-10M	10	34.5
365PLP-12M	12	40.5
365PLP-14M	14	46.5
365PLP-16M	16	52.0

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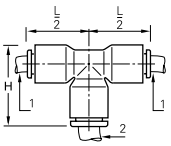
365PLP Unequal Union Elbow

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	L
365PLP-4M-6M	4	6	22.5
365PLP-6M-8M	6	8	29.5
365PLP-8M-10M	8	10	34.5
365PLP-10M-12M	10	12	40.5

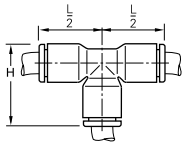
364PLP Union Tee

PART NO.	TUBE SIZE (IN)	L/2	H
364PLP-2	1/8	.57	.75
364PLP-5/32	5/32	.57	.75
364PLP-3	3/16	.85	1.07
364PLP-4	1/4	.93	.89
364PLP-5	5/16	.91	1.16
364PLP-6	3/8	1.02	1.34
364PLP-8	1/2	1.38	1.81

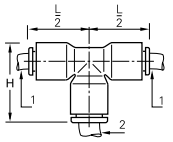
364PLP Unequal Union Tee

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L/2	H
364PLP-2-4	1/8	1/4	.71	.93
364PLP-5/32-4	5/32	1/4	.71	.93
364PLP-4-2	1/4	1/8	.73	.93
364PLP-4-5/32	1/4	5/32	.73	.93
364PLP-4-6	1/4	3/8	.96	1.32
364PLP-6-4	3/8	1/4	1.00	1.28
364PLP-6-8	3/8	1/2	1.38	1.81
364PLP-8-4	1/2	1/4	1.38	1.81
364PLP-8-6	1/2	3/8	1.38	1.81

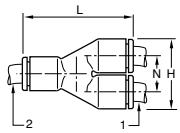
364PLP Union Tee

PART NO.	TUBE SIZE (MM)	H	L/2
364PLP-3M	3	19.0	14.5
364PLP-4M	4	19.0	14.5
364PLP-6M	6	23.5	18.0
364PLP-8M	8	29.5	23.0
364PLP-10M	10	34.5	26.5
364PLP-12M	12	40.5	31.0
364PLP-14M	14	46.0	35.5
364PLP-16M	16	52.0	39.0

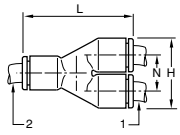
364PLP Unequal Union Tee

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	L/2
364PLP-4M-6M	4	6	22.5	17.5
364PLP-6M-4M	6	4	22.5	17.5
364PLP-6M-8M	6	8	29.5	23.0
364PLP-8M-6M	8	6	29.5	23.0
364PLP-8M-10M	8	10	34.5	26.5
364PLP-10M-12M	10	12	34.5	26.5
364PLP-10M-8M	10	8	40.5	31.0
364PLP-12M-10M	12	10	40.5	31.0
364PLP-14M-8M	14	8	46.0	35.5
364PLP-16M-12M	16	12	39.0	

362PLP Union Y Connector

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L	H	N
362PLP-2	1/8	1/8	1.12	.69	.35
362PLP-2-4	1/8	1/4	1.42	.87	.45
362PLP-5/32	5/32	5/32	1.12	.69	.35
362PLP-5/32-4	5/32	1/4	1.42	.87	.45
362PLP-4	1/4	1/4	1.42	.87	.45
362PLP-4-6	1/4	3/8	1.31	1.30	.67
362PLP-5	5/16	5/16	1.77	1.10	.57
362PLP-6	3/8	3/8	2.09	1.30	.67

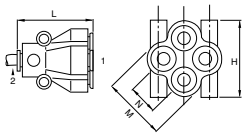



362PLP Union Y Connector

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	H	L	N
362PLP-4M	4	4	17.5	28.5	9.0
362PLP-6M	6	6	21.5	35.0	11.0
362PLP-8M	8	8	28.0	45.0	14.5
362PLP-10M	10	10	33.0	53.0	17.0
362PLP-12M	12	12	39.0	57.0	20.0
362PLP-4M-6M	4	6	17.5	33.0	9.0
362PLP-6M-8M	6	8	22.5	41.0	11.5
362PLP-8M-10M	8	10	28.0	47.0	14.5
362PLP-10M-12M	10	12	33.0	57.0	17.0

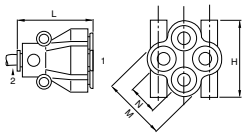
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Otsego, Michigan

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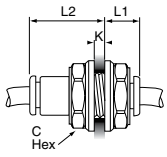
362PLPD Double Y Connector

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	L	M	N	MOUNTING HOLE DIA.
362PLPD-5/32	5/32	5/32	1.00	1.20	.83	.39	.15
362PLPD-5/32-4	5/32	1/4	1.00	1.18	.83	.39	.15

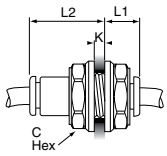
362PLPD Double Y Connector

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	L	M	N	MOUNTING HOLE DIA
362PLPD-4M	4	4	25.5	30.5	21.0	10.0	3.7
362PLPD-6M	6	6	31.5	37.5	26.5	12.0	3.7
362PLPD-4M-6M	4	6	25.5	30.5	21.0	10.0	3.7
362PLPD-6M-8M	6	8	31.5	38.0	26.5	12.0	3.7

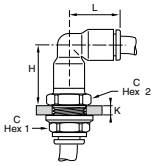
32PLPBH Bulkhead Union

PART NO.	TUBE SIZE (IN)	C HEX (MM)	K MAX	L1	L2
32PLPBH-2	1/8	13	.22	.37	.61
32PLPBH-5/32	5/32	13	.22	.59	.39
32PLPBH-4	1/4	16	.35	.37	.81
32PLPBH-5	5/16	18	.57	.98	.53
32PLPBH-6	3/8	22	.57	.51	1.18
32PLPBH-8	1/2	29	.81	.67	1.61

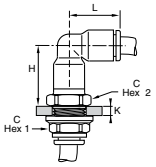
32PLPBH Bulkhead Union

PART NO.	TUBE SIZE (MM)	C HEX (MM)	K MAX	L1	L2
32PLPBH-4M	4	13	5.5	15.0	10.0
32PLPBH-6M	6	15	8.5	18.0	10.5
32PLPBH-8M	8	18	14.5	25.0	13.5
32PLPBH-10M	10	22	14.5	27.5	15.5
32PLPBH-12M	12	26	18.5	33.0	18.0
32PLPBH-14M	14	29	20.5	37.5	20.5

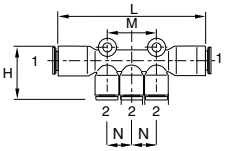
365PLPBH Equal Bulkhead Elbow

PART NO.	TUBE SIZE (IN)	C1 HEX	C2 HEX	K MAX	H	L
365PLPBH-2	1/8	13	13	.28	.71	.57
365PLPBH-5/32	5/32		13	.26	.83	.67
365PLPBH-4	1/4	18	17	.32	.87	.71
365PLPBH-5	5/16		18	.31	1.22	.94
365PLPBH-6	3/8	22	22	.33	1.08	1.00
365PLPBH-8	1/2	29	27	.41	1.54	1.38

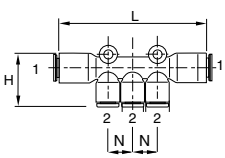
365PLPBH Equal Bulkhead Elbow

PART NO.	TUBE SIZE (MM)	C1 HEX	C2 HEX	K MAX	H	L
365PLPBH-4M	4	13	13	6.5	21.0	17.0
365PLPBH-6M	6	15	15	7.0	24.5	19.5
365PLPBH-8M	8	18	18	8.0	31.0	24.0
365PLPBH-10M	10	22	22	8.5	36.0	28.0
365PLPBH-12M	12	26	26	8.5	42.0	33.0

24PLP Multiple Tee

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	L	M	N	MOUNTING HOLE DIA.
24PLP-4-5/32	1/4	5/32	0.97	2.81	.90	.45	.17
24PLP-4-4	1/4	1/4	1.22	3.14	1.21	.61	.17
24PLP-5-5/32	5/16	5/32	0.96	2.91		.45	.17
24PLP-6-4	3/8	1/4	1.34	3.21	1.22	.61	.17

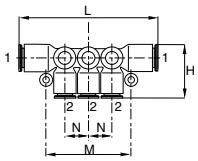



24PLP Multiple Tee

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	H	L	N	MOUNTING HOLE DIA.
24PLP-6M-4M	6	4	24.5	74	11.5	4.2
24PLP-8M-4M	8	4	24.5	74	11.5	4.2
24PLP-8M-6M	8	6	24.5	74	11.5	4.2
24PLP-10M-6M	10	6	36.0	81	14.5	4.2
24PLP-10M-8M	10	8	36.0	81	14.5	4.2

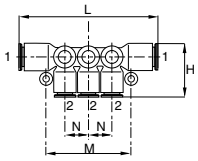
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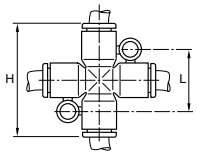
24PLPD Double Multiple Tee

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	L	M	N	MOUNTING HOLE DIA.
24PLPD-4-5/32	1/4	5/32	.73	2.84	1.69	.45	.17
24PLPD-4-4	1/4	1/4	.73	2.84	1.69	.45	.17
24PLPD-5-5/32	5/16	5/32	.77	2.87	1.69	.45	.17
24PLPD-6-4	3/8	1/4	.91	3.31	2.05	.57	.17

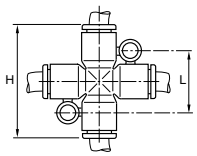
24PLPD Double Multiple Tee

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	L	M	N	MOUNTING HOLE DIA.
24PLPD-6M-4M	6	4	18.5	72.0	43.0	11.5	4.2
24PLPD-8M-4M	8	4	18.5	73.0	43.0	11.5	4.2
24PLPD-8M-6M	8	6	18.5	73.0	43.0	11.5	4.2
24PLPD-10M-6M	10	6	23.0	84.0	52.0	14.5	4.2
24PLPD-10M-8M	10	8	23.5	84.0	52.0	14.5	4.2

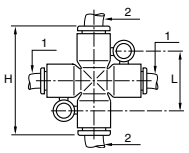
347PLP Equal Cross

PART NO.	TUBE SIZE (IN)	H	L	MOUNTING HOLE DIA.
347PLP-5/32	5/32	1.42	.79	.17
347PLP-4	1/4	1.40	.79	.17
347PLP-5	5/16	1.81	.89	.17

347PLP Equal Cross

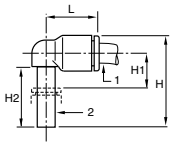
PART NO.	TUBE SIZE (MM)	H	L	MOUNTING HOLE DIA.
347PLP-4M	4	36	20.0	4.2
347PLP-6M	6	36	20.0	4.2
347PLP-8M	8	46	22.5	4.2

347PLP Unequal Cross

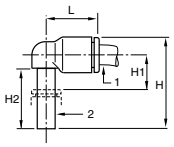
PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	L	MOUNTING HOLE DIA.
347PLP-4M-6M	4	6	36	20.0	4.2
347PLP-4M-6M*	4	6	36	20.0	4.2
347PLP-6M-8M	6	8	46	22.5	4.2
347PLP-6M-8M*	6	8	46	22.5	4.2

*This model provides 3 outlines of "TUBE1" and 1 outlet of "TUBE 2".

369PLPSP Plug-In Elbow

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	H1	H2	L
369PLPSP-2	1/8	1/8	.92	.31	.64	.57
369PLPSP-5/32	5/32	5/32	.91	.24	.61	.55
369PLPSP-5/32-4	5/32	1/4	1.08	.30	.71	.71
369PLPSP-4	1/4	1/4	1.20	.43	.83	.73
369PLPSP-4-6	1/4	3/8	1.52	.35	.96	.98
369PLPSP-5	5/16	5/16	1.32	.32	.85	.91
369PLPSP-6	3/8	3/8	1.52	.35	.96	1.02
369PLPSP-8	1/2	1/2	2.00	.51	1.12	1.38

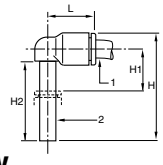



369PLPSP Plug-In Elbow

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	H	H1	H2	L
369PLPSP-4M	4	4	23.0	6.0	15.5	14.0
369PLPSP-6M	6	6	26.5	7.0	17.0	16.0
369PLPSP-8M	8	8	33.5	8.0	21.5	23.0
369PLPSP-10M	10	10	39.0	9.5	24.5	23.5
369PLPSP-12M	12	12	44.5	10.0	27.5	31.0
369PLPSP-4M-6M	4	6	26.5	7.0	17.0	16.0
369PLPSP-6M-4M	6	4	24.5	7.0	15.5	16.0
369PLPSP-6M-8M	6	8	33.5	8.0	21.5	22.0
369PLPSP-8M-10M	8	10	39.0	8.5	24.5	26.5
369PLPSP10M-12M	10	12	44.5	10.0	27.5	31.0

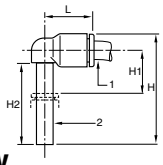
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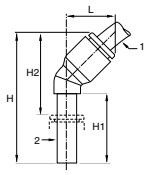
369PLPSPX Extended Plug-In Elbow

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	H1	H2	L
369PLPSPX-2	1/8	1/8	1.26	.65	.98	.57
369PLPSPX-5/32	5/32	5/32	1.28	.61	.98	.55
369PLPSPX-4	1/4	1/4	1.56	.77	1.18	.71
369PLPSPX-5	5/16	5/16	1.93	.93	1.46	.91
369PLPSPX-6	3/8	3/8	2.19	1.02	1.63	1.02

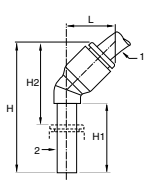
369PLPSPX Extended Plug-In Elbow

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	H1	H2	L
369PLPSPX-4M	4	4	32.5	15.5	25.0	14.0
369PLPSPX-6M	6	6	38.5	19.0	29.0	16.0
369PLPSPX-8M	8	8	49.0	23.5	37.0	23.0
369PLPSPX-10M	10	10	56.0	26.5	41.5	26.5
369PLPSPX-12M	12	12	62.5	28.0	45.5	31.0
369PLPSPX-4M-6M	4	6	38.5	19.0	29.0	16.0
369PLPSPX-6M-8M	6	8	49.0	23.5	37.0	23.0
369PLPSPX-8M10M	8	10	56.0	26.5	41.5	26.5
369PLPSPX-1012M	10	12	62.5	28.0	45.5	31.0

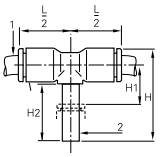
379PLPSP 45° Plug-In Elbow

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	H1	H2	L
379PLPSP-2	1/8	1/8	1.14	.59	.69	.47
379PLPSP-5/32	5/32	5/32	1.32	.75	.83	.51
379PLPSP-4	1/4	1/4	1.44	.71	.87	.57
379PLPSP-5	5/16	5/16	1.73	.85	1.00	.77
379PLPSP-6	3/8	3/8	2.00	.96	1.16	.91

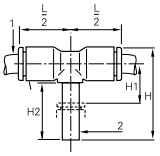
379PLPSP 45° Plug-In Elbow

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	H1	H2	L
379PLPSP-4M	4	4	33.5	19.0	21.0	13.0
379PLPSP-6M	6	6	39.0	21.0	25.0	14.5
379PLPSP-8M	8	8	44.0	21.5	25.5	19.5
379PLPSP-10M	10	10	53.0	27.0	32.5	23.0
379PLPSP-12M	12	12	58.5	27.5	34.0	26.5

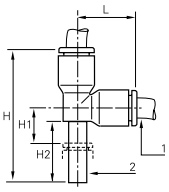
372PLPSP Plug-In Branch Tee

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	H1	H2	L/2
372PLPSP-2	1/8	1/8	.95	.26	.59	.57
372PLPSP-5/32	5/32	5/32	.91	.24	.61	.57
372PLPSP-4	1/4	1/4	.98	.43	.77	.73
372PLPSP-5	5/16	5/16	1.32	.32	.85	.91
372PLPSP-6	3/8	3/8	1.61	.35	.96	.98
372PLPSP-8	1/2	1/2	2.01	.51	1.12	1.38

372PLPSP Plug-In Branch Tee

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	H	H1	H2	L/2
372PLPSP-4M	4	4	23.0	6.0	15.5	14.5
372PLPSP-6M	6	6	26.5	7.0	17.0	16.0
372PLPSP-8M	8	8	33.5	8.0	21.5	23.0
372PLPSP-10M	10	10	39.0	9.5	24.5	26.5
372PLPSP-12M	12	12	44.5	10.0	27.5	31.0
372PLPSP-4M-6M	4	6	26.5	7.0	17.0	16.0
372PLPSP-6M-8M	6	8	33.5	8.0	21.5	23.0
372PLPSP-8M-10M	8	10	39.0	9.5	24.5	26.5
372PLPSP10M-12M	10	12	44.5	10.0	27.5	31.0

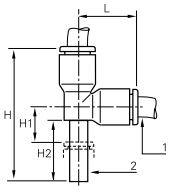



371PLPSP Plug-In Run Tee

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	H	H1	H2	L
371PLPSP-5/32	5/32	5/32	1.30	.24	.61	.57
371PLPSP-4	1/4	1/4	1.69	.43	.83	.73
371PLPSP-5	5/16	5/16	1.93	.32	.85	.91
371PLPSP-6	3/8	3/8	2.23	.33	.96	1.00
371PLPSP-8	1/2	1/2	2.86	.51	1.12	1.38

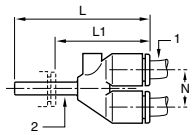
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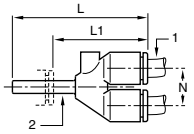
371PLPSP Plug-In Run Tee

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	H	H1	H2	L
371PLPSP-4M	4	4	33.0	6.0	15.5	14.5
371PLPSP-6M	6	6	38.5	7.0	17.0	17.5
371PLPSP-8M	8	8	49.0	8.0	21.5	23.0
371PLPSP-10M	10	10	57.0	10.5	24.5	26.5
371PLPSP-12M	12	12	65.5	10.5	27.5	31.0
371PLPSP-4M-6M	4	6	10.5	7.0	17.0	17.5
371PLPSP-6M-8M	6	8	13.5	8.0	21.5	23.0
371PLPSP-8M-10M	8	10	16.0	10.5	24.5	26.5
371PLPSP-1012M	10	12	19.0	10.5	27.5	31.0

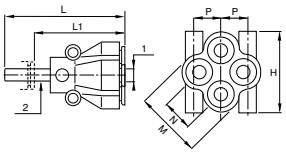
362PLPSP Plug-In Y

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L	L1	N
362PLPSP-2	1/8	1/8	1.36	1.00	.35
362PLPSP-5/32	5/32	5/32	1.34	.85	.35
362PLPSP-4	1/4	1/4	1.60	1.02	.45
362PLPSP-5	5/16	5/16	2.00	1.26	.57
362PLPSP-6	3/8	3/8	2.23	1.42	.67

362PLPSP Plug-In Y

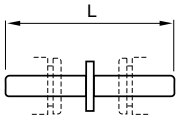
PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	L	L1	N
362PLPSP-4M	4	4	34.0	21.5	9.0
362PLPSP-6M	6	6	39.5	25.5	11.0
362PLPSP-8M	8	8	50.5	32.0	14.5
362PLPSP-10M	10	10	57.5	36.0	17.0
362PLPSP-12M	12	12	66.0	41.0	20.0
362PLPSP-4M-6M	4	6	35.5	21.5	9.0
362PLPSP-6M-8M	6	8	44.0	25.5	11.0
362PLPSP-8M-10M	8	10	53.5	32.0	14.5
362PLPSP10M-12M	10	12	60.0	35.0	17.0

362PLPDSP Plug-In Multiple Y

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (M)	H	L	L1	M	N
362PLPDSP-6M-4M	4	6	25.5	45.0	31.0	21.0	10.0
362PLPDSP-8M-4M	4	8	25.5	49.5	31.0	21.0	10.0
362PLPDSP-8M-6M	6	8	31.5	59.5	41.0	26.5	12.0

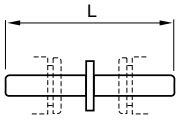
*Aluminum tail piece

63PLP Double Male Union

PART NO.	TUBE SIZE (IN)	L
63PLP-5/32	5/32	1.36
63PLP-4	1/4	1.52
63PLP-5	5/16	1.61
63PLP-6	3/8	2.03
63PLP-8*	1/2	2.13

*Nickel-plated brass

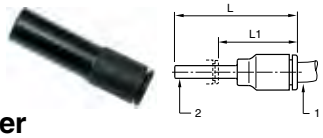



63PLP Double Male Union

PART NO.	TUBE SIZE (MM)	L
63PLP-4M	4	34 1/2
63PLP-6M	6	38 1/2
63PLP-8M	8	41
63PLP-10M	10	51 1/2
63PLP-12M	12	60
63PLP-14M	14	69 1/2

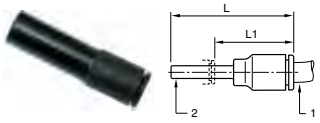
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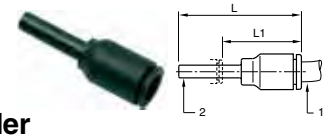
67PLP Tube End Reducer

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L	L1
67PLP-2-5/32	1/8	5/32	1.79	1.32
67PLP-2-3	1/8	3/16	1.79	1.14
67PLP-2-4	1/8	1/4	1.79	1.22
67PLP-5/32-3	5/32	3/16	1.48	.83
67PLP-5/32-4	5/32	1/4	1.48	.91
67PLP-5/32-5	5/32	5/16	1.48	.75
67PLP-5/32-6	5/32	3/8	1.61	.81
67PLP-3-5	3/16	5/16	1.79	1.06
67PLP-3-4	3/16	1/4	1.79	1.22
67PLP-4-5	1/4	5/16	1.61	.89
67PLP-4-6	1/4	3/8	1.61	.81
67PLP-4-8	1/4	1/2	1.97	.98
67PLP-5-6	5/16	3/8	1.93	1.12
67PLP-5-8	5/16	1/2	2.01	1.02
67PLP-6-8	3/8	1/2	2.01	1.04



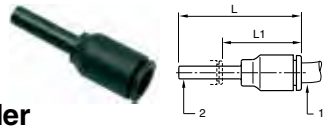
67PLP Tube Reducer

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	L	L1
67PLP-6M-4M	4	6	37.5	23.5
67PLP-8M-4M	4	8	37.5	19.0
67PLP-8M-6M	6	8	36.0	20.5
67PLP-10M-4M	4	10	44.0	22.5
67PLP-10M-6M	6	10	38.0	17.5
67PLP-10M-8M	8	10	49.0	28.5
67PLP-12M-10M	10	12	56.5	33.5
67PLP-12M-6M	6	12	46.0	23.0
67PLP-12M-8M	8	12	49.0	24.5
67PLP-14M-10M	10	14	58.5	33.5
67PLP-14M-12M	12	14	58.5	33.5
67PLP-14M-6M	6	14	48.0	23.0
67PLP-14M-8M	8	14	48.0	23.0



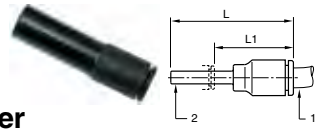
32PLPSP Tube Expander

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	L	L1
32PLPSP-4-2	1/4	1/8	1.61	1.16
32PLPSP-4-6M	1/4	6M	1.75	1.02
32PLPSP-4-5/32	1/4	5/32	1.61	1.14
32PLPSP-4-3	1/4	3/16	1.61	1.00
32PLPSP-6-4	3/8	1/4	1.58	1.00



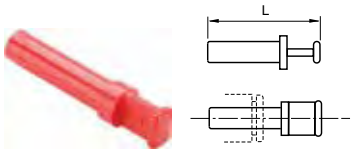
32PLPSP Tube Expander

PART NO.	1 TUBE SIZE (MM)	2 TUBE SIZE (MM)	L	L1
32PLPSP-6M-4M	6	4	35.0	23.0
32PLPSP-8M-6M	8	6	45.0	31.5
32PLPSP-10M-8M	10	8	42.5	21.0
32PLPSP-12M-10M	12	10	49.0	24.5



32PLPSP Tube Converter

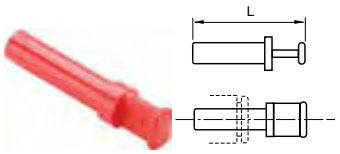
PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (MM)	L	L1
32PLPSP-4M-2	1/8	4M	1.61	1.16
32PLPSP-8M-4	1/4	8M	1.58	1.00



639PLP Plug

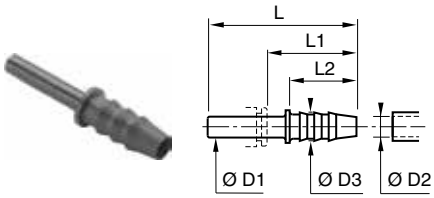
PART NO.	TUBE SIZE (IN)	L
639PLP-2	1/8	1.30
639PLP-5/32	5/32	1.18
639PLP-3	3/16	1.36
639PLP-4	1/4	1.44
639PLP-5	5/16	1.38
639PLP-6	3/8	1.67
639PLP-8	1/2	1.91

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639PLP Plug

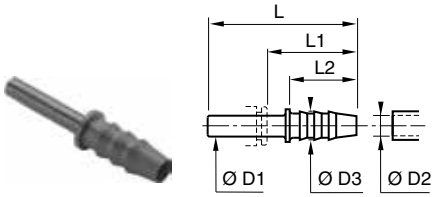
PART NO.	TUBE SIZE (MM)	L
639PLP-3M	3	25
639PLP-4M	4	30
639PLP-6M	6	33
639PLP-8M	8	33
639PLP-10M	10	42
639PLP-12M	12	45
639PLP-14M	14	49
639PLP-16M	16	57



322PLPSP Barbed Connector

PART NO.	OD 1	OD 2	OD 3	L	L1	L2
322PLPSP-2-5/32	5/32	.12	.20	1.46	.98	.67
322PLPSP5M-5/32	5/32	.20	.28	1.46	.98	.67
322PLPSP-3-4*	1/4	3/16		1.65	1.00	
322PLPSP-4-5	5/16	.25	.34	1.55	.83	.67
322PLPSP-5-5	5/16	.32	.39	1.75	1.02	.87
322PLPSP-5-6	3/8	.32	.39	1.97	1.16	.87

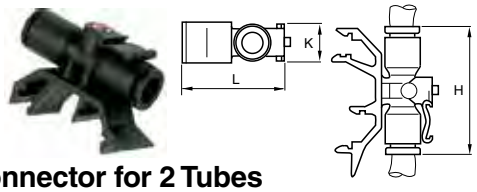
*Nickel-plated brass. Dimensions for OD2 are I.D. of the tube.



322PLPSP Barbed Connector

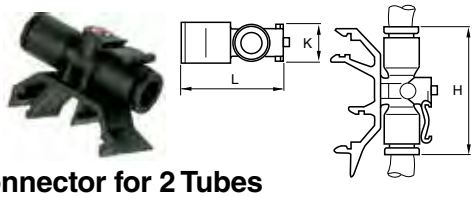
PART NO.	OD 1	OD 2	OD 3	L	L1	L2
322PLPSP-3M-4M	4	3.2	5.0	37.0	25.0	17.0
322PLPSP-5M-4M	4	5.0	7.0	37.0	25.0	17.0
322PLPSP-5M-6M	6	5.0	7.0	39.0	25.0	17.0
322PLPSP-6M-8M	8	6.3	8.5	39.5	21.0	17.0
322PLPSP-8M-8M	8	8.0	10.0	44.5	26.0	22.0
322PLPSP-6M-10M	10	6.3	8.0	45.0	24.5	17.0
322PLPSP-8M-10M	10	8.0	10.0	50.0	29.5	22.0
322PLPSP-8M-12M	12	8.0	10.0	50.0	26.0	22.0
322PLPSP-1012M	12	10.0	12.0	48.5	25.5	22.5
322PLPSP-1212M	12	12.5	14.5	57.0	34.0	22.5
322PLPSP-1214M	14	12.5	14.5	59.5	34.5	22.5
322PLPSP-1414M*	14	14.0	16.0	59.5	34.5	22.5

*Nickel-plated brass. Dimensions for OD2 are I.D. of the tube.



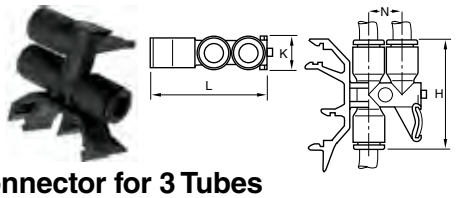
32PLPRC Connector for 2 Tubes

PART NO.	TUBE SIZE (IN)	H	K	L
32PLPRC-5/32	5/32	1.44	.47	1.18
32PLPRC-4	1/4	1.44	.47	1.18
32PLPRC-5	5/16	1.81	.51	1.28



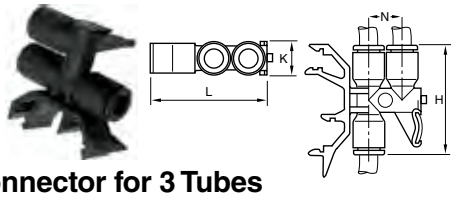
32PLPRC Connector for 2 Tubes

PART NO.	TUBE SIZE (MM)	H	K	L
32PLPRC-4M	4	36.5	11.0	39.5
32PLPRC-6M	6	36.5	11.0	39.5
32PLPRC-8M	8	46.0	13.0	44.5



32PLPDRC Connector for 3 Tubes

PART NO.	TUBE SIZE (IN)	H	K	L	N
32PLPDRC-5/32	5/32	1.44	.43	1.56	.45
32PLPDRC-5	5/16	1.81	.51	1.75	.57



32PLPDRC Connector for 3 Tubes

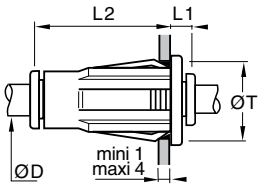
PART NO.	TUBE SIZE (MM)	H	K	L	N
32PLPDRC-4M	4	36.5	11.0	39.5	
32PLPDRC-6M	6	36.5	11.0	39.5	
32PLPDRC-8M	8	46.0	13.0	14.5	

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32PLPBHP Plug-in Bulkhead Union

PART NO.	TUBE SIZE (IN)	L1	L2	ØT
32PLPBHP-5/32	5/32	.26	1.080	.62
32PLPBHP-4	1/4	.26	1.240	.75
32PLPBHP-5	5/16	.30	1.280	.87
32PLPBHP-6	3/8	.30	1.630	1.12
32PLPBHP-8	1/2	.30	1.710	1.25

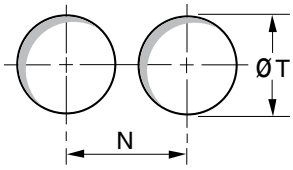




Fixing Hole

D		5/32	1/4	5/16	3/8	1/2
T	inches	5/8”	3/4”	7/8”	1 1/8”	1 1/4”
	mm	15.87	19.05	22.22	28.57	31.75
N	in	.89	1.00	1.08	1.34	1.50

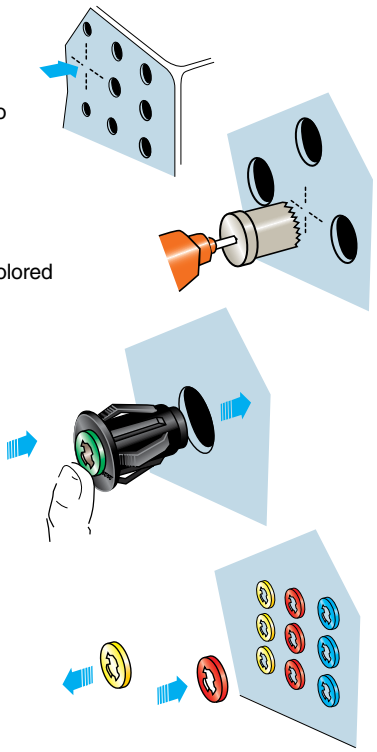
Tolerance T: +0.3 -0.1



Minimum distance between fittings.
Diameter of fixing hole.

Installation

1. Mark out the fixing hole
2. Make hole in panel
3. Simply push the fitting into place
4. To complete the installation
5. To identify circuits simply remove the black release button and replace with colored one



A

Tube to Male NPT

68PLM Male Connector

p. A41

169PLM Male Elbow

p. A42

171PLM Male Run Tee

p. A43

172PLM Male Branch Tee

p. A44

Tube to Tube

62PLM Union

p. A45

165PLM Union Elbow

p. A46

164PLM Union Tee

p. A46

Bulkhead Union

62PLMBH Bulkhead Union

p. A45

Male Standpipes

68PLMSP Male Standpipe to BSPT

p. A42

68PLMSP Male Standpipe to BSPP

p. A42

Metric Tube to Male BSPT

68PLM Male Connector

p. A41

169PLM Male Elbow

p. A42

169PLMX Extended Male Elbow

p. A43

171PLM Male Run Tee

p. A44

172PLM Male Branch Tee

p. A44

Metric Tube to Male BSPP

68PLM Male Connector

p. A41

169PLM Male Elbow

p. A43

169PLMX Extended Male Elbow

p. A43

171PLM Male Run Tee

p. A44

172PLM Male Branch Tee

p. A45

Metric Tube to Female BSPP

66PLM Female Connector

p. A41

Metric Tube to Metric Tube

62PLM Union

p. A45

165PLM Union Elbow

p. A46

164PLM Union Tee

p. A46

Metric Bulkhead Unions

62PLMBH Bulkhead Union

p. A45

66PLMBH Female Bulkhead

p. A45

165PLMBH Bulkhead Union

p. A46

Metric Plug-in

67PLM Tube Reducer

p. A46

62PLMSP Tube Expander

p. A47

62PLMSP Tube Converter

p. A47

122PLMSP Barbed Connector

p. A47

Metric Banjo Fitting

169PLMBJ Single Banjo

p. A47

Metric Auxiliary Components

639PLM Plug

p. A47

PLMC Cartridge

p. A47

63PLM Double Male Union

p. A47

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Prestolok PLM All Metal Push-to-Connect Fittings

MATERIALS OF CONSTRUCTION	
BODIES:	HIGH PHOSPHORUS FDA CHEMICAL NICKEL-PLATED BRASS
O-RING:	FKM (FPM) FLUOROELASTOMER
Backup Washer:	HIGH PHOSPHORUS FDA CHEMICAL NICKEL-PLATED BRASS
Collet:	
Base:	

NOMENCLATURE	
EXAMPLE: 169PLM-4-6	**ATTRIBUTE:**
169	MALE ELBOW
PLM	PLM PUSH-TO-CONNECT
4	1/4 TUBE SIZE
6	3/8 THREAD SIZE

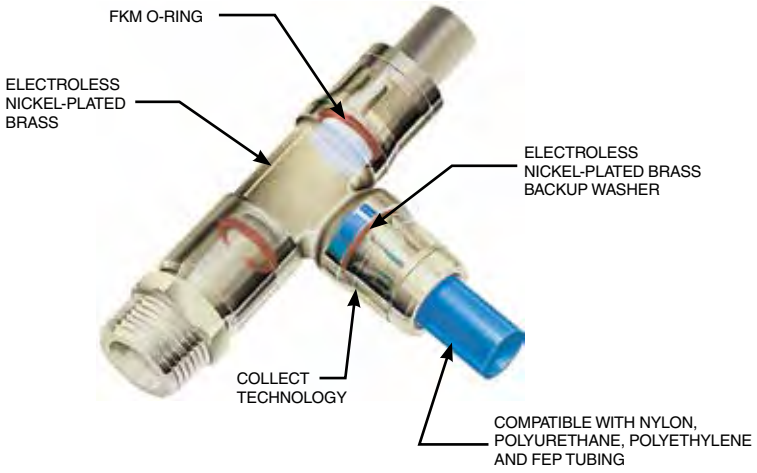
APPLICABLE TUBE	
TUBE O.D.:	5/32, 1/4, 5/16, 3/8, 1/2
TUBE O.D. (MM):	4, 6, 8, 10, 12, 14

SPECIFICATIONS	
WORKING PRESSURE	7 TO 290 PSI. .
TEMPERATURE	-4° TO 250° F
NOTE: MAX. PRESSURE AND TEMP. DEPEND ON THE TUBE USED	



PLM push-to-connect forged fittings are nickel-plated and have an FKM seal making them suitable for use with liquids and gaseous fluids compatible with these components. PLM fittings are plated with a high phosphorus FDA nickel-plate allowing these fittings to be used in applications where exposure to aggressive environments is present.

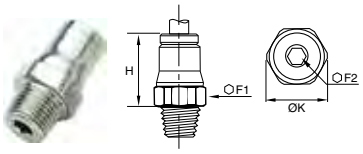
The high phosphorus FDA nickel-plate is resistant to water, harsh detergents and other aggressive fluids and environments resulting in a superior chemical, corrosion and abrasive resistant push-to-connect fitting line. All items in the PLM range are silicone free.



MAXIMUM TIGHTENING TORQUE FOR, BSPP THREADS AND M5 WITH 0602 SEALING WASHER.					
PARALLEL THREAD	M5X0.8	G1/8	G1/4	G3/8	G1/2
IN. LB	14	70	100	266	300

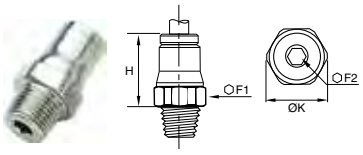
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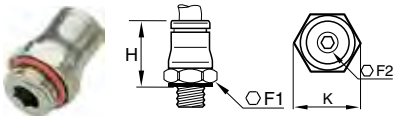
68PLM Male Connector Inch Tube to NPT/UNF

PART NO.	TUBE SIZE IN	NPT/UNF	F1 MM	F2 MM	H IN	K IN
68PLM-5/32-0	5/32	10-32	10	2.5	.61	.43
68PLM-5/32-2	5/32	1/8	11	3.0	.59	.47
68PLM-5/32-4	5/32	1/4	14	3.0	.59	.59
68PLM-4-0	1/4	10-32	13	2.5	.75	.55
68PLM-4-2	1/4	1/8	13	4.0	.67	.55
68PLM-4-4	1/4	1/4	14	4.0	.67	.59
68PLM-4-6	1/4	3/8	18	5.0	.67	.77
68PLM-6-2	3/8	1/8	18	4.0	.97	.77
68PLM-6-4	3/8	1/4	18	7.0	.95	.77
68PLM-6-6	3/8	3/8	18	8.0	.91	.77
68PLM-6-8	3/8	1/2	22	8.0	.95	.94
68PLM-8-6	1/2	3/8	22	9.0	.95	.94
68PLM-8-8	1/2	1/2	22	10.0	.95	.94



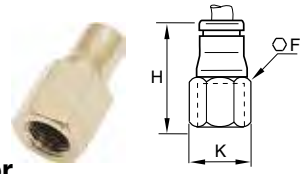
68PLM Male Connector Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F1 MM	F2 MM	H MM	K MM
68PLM-4M-2R	4	1/8	10	3	15.00	11.00
68PLM-4M-4R	4	1/4	14	3	15.00	15.00
68PLM-6M-2R	6	1/8	13	4	17.00	14.00
68PLM-6M-4R	6	1/4	14	4	17.00	15.00
68PLM-8M-2R	8	1/8	15	5	19.00	16.00
68PLM-8M-4R	8	1/4	15	6	18.00	16.00
68PLM-8M-6R	8	3/8	17	6	18.50	18.50
68PLM-10M-4R	10	1/4	18	7	23.00	19.50
68PLM-10M-6R	10	3/8	18	8	22.50	19.50
68PLM-10M-8R	10	1/2	22	8	22.50	24.00
68PLM-12M-4R	12	1/4	20	7	25.50	22.00
68PLM-12M-6R	12	3/8	20	9	24.00	22.00
68PLM-12M-8R	12	1/2	22	10	23.00	24.00
68PLM-14M-6R	14	3/8	22	9	27.00	24.00
68PLM-14M-8R	14	1/2	24	11	26.00	26.00



68PLM Male Connector Tube to UNF, BSPP or Metric

PART NO.	TUBE SIZE MM	BSPP/ METRIC	F1 MM	F2 MM	H MM	K MM
68PLM-4M-M5	4	M5X0.8	10	2.50	15.50	11.00
68PLM-4M-M6	4	M6X1	13	3.00	14.50	14.00
68PLM-4M-2G	4	1/8	10	3.00	16.00	11.00
68PLM-4M-4G	4	1/4	16	3.00	14.50	17.50
68PLM-4M-M8	4	M8X1	11	3.00	14.50	12.00
68PLM-6M-M5	6	M5X0.8	13	2.50	19.00	14.00
68PLM-6M-2G	6	1/8	13	4.00	17.50	14.00
68PLM-6M-M10	6	M10X1	13	4.00	17.50	14.00
68PLM-6M-4G	6	1/4	16	4.00	17.00	17.50
68PLM-8M-2G	8	1/8	15	5.00	20.00	16.00
68PLM-8M-4G	8	1/4	16	6.00	18.00	17.50
68PLM-8M-6G	8	3/8	20	6.00	19.00	22.00
68PLM-10M-4G	10	1/4	18	7.00	25.00	19.50
68PLM-10M-6G	10	3/8	20	8.00	22.50	22.00
68PLM-10M-8G	10	1/2	24	8.00	22.50	26.00
68PLM-12M-4G	12	1/4	20	7.00	27.00	22.00
68PLM-12M-6G	12	3/8	20	9.00	26.00	22.00
68PLM-12M-8G	12	1/2	24	10.00	23.50	26.00
68PLM-14M-6G	14	3/8	22	9.00	28.00	24.00
68PLM-14M-8G	14	1/2	24	11.00	26.50	26.00

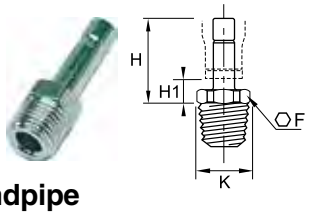


66PLM Female Connector Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM
66PLM-4M-M5	4	M5X0.8	10	22.00	11.00
66PLM-4M-2G	4	1/8	14	25.00	15.00
66PLM-4M-4G	4	1/4	17	29.00	18.50
66PLM-6M-2G	6	1/8	14	27.50	15.00
66PLM-6M-4G	6	1/4	17	31.50	18.50
66PLM8M-2G	8	1/8	15	28.50	16.00
66PLM-8M-4G	8	1/4	17	32.50	18.50
66PLM-10M-6G	10	3/8	22	38.00	24.00
66PLM-12M-6G	12	3/8	22	39.00	24.00
66PLM-12M-8G	12	1/2	24	43.50	26.00

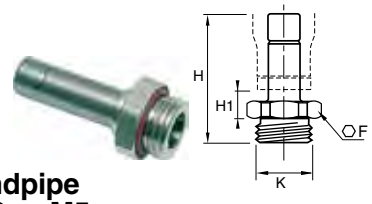
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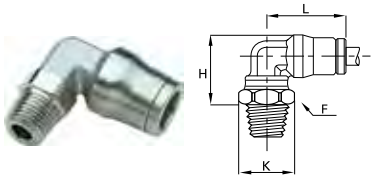
68PLMSP Male Stud Standpipe Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	H1 MM	K MM
68PLMSP-4M-2R	4	1/8	10	21.00	7.00	11.00
68PLMSP-6M-2R	6	1/8	10	23.50	6.50	11.00
68PLMSP-6M-4R	6	1/4	10	23.50	6.50	15.00
68PLMSP-8M-2R	8	1/8	10	24.00	6.50	11.00
68PLMSP-8M-4R	8	1/4	14	24.00	6.50	15.00
68PLMSP-10M-4R	10	1/4	14	22.00	6.50	15.00
68PLMSP-10M-6R	10	3/8	17	30.00	7.50	18.50
68PLMSP-12M-6R	12	3/8	17	31.00	7.50	18.50
68PLMSP-12M-8R	12	1/2	22	38.00	7.50	24.00
68PLMSP-14M-8R	14	1/2	22	33.00	8.00	24.00



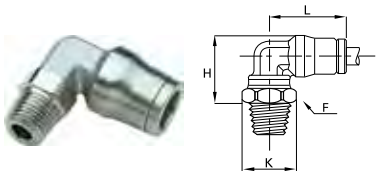
68PLMSP Male Standpipe Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	H1 MM	K MM
68PLMSP-4M-M5	4	M5X0.8	13	25.50	7.00	14.00
68PLMSP-4M-2G	4	1/8	16	26.50	7.00	17.50
68PLMSP-4M-4G	4	1/4	8	25.00	7.50	8.70
68PLMSP-6M-2G	6	1/8	13	28.00	6.50	14.00
68PLMSP-6M-4G	6	1/4	16	29.00	6.50	17.50
68PLMSP-8M-2G	8	1/8	13	28.50	6.50	14.00
68PLMSP-8M-4G	8	1/4	16	29.50	6.50	17.50
68PLMSP-8M-6G	8	3/8	20	30.50	7.50	22.00
68PLMSP-10M-4G	10	1/4	16	34.50	6.50	17.50
68PLMSP-10M-6G	10	3/8	20	35.50	7.50	22.00
68PLMSP-10M-8G	10	1/2	24	37.00	7.50	26.00
68PLMSP-12M-6G	12	3/8	20	36.50	7.50	22.00
68PLMSP-12M-8G	12	1/2	24	38.00	7.50	26.00
68PLMSP-14M-8G	14	1/2	24	40.00	8.00	26.00



169PLM Male Elbow Inch Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT/UNF	F MM	H IN	K IN	L IN
169PLM-5/32-0	5/32	10-32	10	0.71	0.43	.71
169PLM-5/32-2	5/32	1/8	11	.59	.47	.71
169PLM-5/32-4	5/32	1/4	14	.67	.60	.71
169PLM-4-2	1/4	1/8	11	.69	.47	.87
169PLM-4-4	1/4	1/4	14	.75	.60	.87
169PLM-4-6	1/4	3/8	18	.75	.77	.87
169PLM-6-4	3/8	1/4	15	.93	.63	1.14
169PLM-6-6	3/8	3/8	18	1.02	.77	1.14
169PLM-6-8	3/8	1/2	22	1.06	.94	1.14
169PLM-8-6	1/2	3/8	18	1.14	.77	1.22
169PLM-8-8	1/2	1/2	22	1.14	.94	1.22



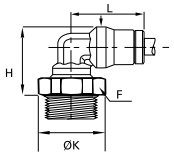
169PLM Male Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
169PLM-4M-2R	4	1/8	11	15.00	12.00	18.00
169PLM-4M-4R	4	1/4	14	17.00	15.00	18.00
169PLM-6M-2R	6	1/8	11	17.50	12.00	21.50
169PLM-6M-4R	6	1/4	14	19.00	15.00	21.50
169PLM-8M-2R	8	1/8	11	19.50	12.00	23.50
169PLM-8M-4R	8	1/4	14	21.00	15.00	23.50
169PLM-8M-6R	8	3/8	17	21.00	18.50	23.50
169PLM-10M-4R	10	1/4	15	23.50	16.00	29.00
169PLM-10M-6R	10	3/8	17	25.50	18.50	29.00
169PLM-12M-4R	12	1/4	15	26.00	16.00	31.00
169PLM-12M-6R	12	3/8	17	28.50	18.50	31.00
169PLM-12M-8R	12	1/2	21	28.50	23.00	31.00
169PLM-14M-6R	14	3/8	19	29.00	21.00	34.00
169PLM-14M-8R	14	1/2	24	30.00	26.00	34.00

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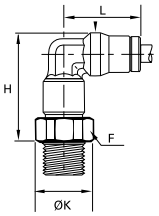




169PLM Male Elbow Tube to BSPP, Metric

PART NO.	TUBE SIZE MM	BSPP/ METRIC	F MM	H MM	K MM	L MM
169PLM-4M-M5	4	M5X0.8	10	18.00	11.00	18.00
169PLM-4M-2G	4	1/8	13	17.00	14.00	18.00
169PLM-4M-M6	4	M6X1	10	18.00	11.00	18.00
169PLM-4M-4G	4	1/4	16	17.50	17.50	18.00
169PLM-4M-M8	4	M8X1	11	18.00	12.00	18.00
169PLM-6M-2G	6	1/8	13	19.00	14.00	21.50
169PLM-6M-M10	6	M10X1	13	19.00	14.00	21.50
169PLM-6M-4G	6	1/4	16	19.50	17.50	21.50
169PLM-8M-2G	8	1/8	13	20.50	14.00	23.50
169PLM-8M-4G	8	1/4	16	21.50	17.50	23.50
169PLM-8M-6G	8	3/8	20	21.50	22.00	23.50
169PLM-10M-4G	10	1/4	16	27.00	17.50	29.00
169PLM-10M-6G	10	3/8	20	25.50	22.00	29.00
169PLM-12M-4G	12	1/4	16	29.50	17.50	31.00
169PLM-12M-6G	12	3/8	20	28.50	22.00	31.00
169PLM-12M-8G	12	1/2	24	28.50	26.00	31.00
169PLM-14M-6G	14	3/8	20	29.00	22.00	34.00
169PLM-14M-8G	14	1/2	24	29.50	26.00	34.00

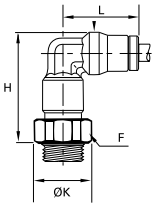




169PLMX Extended Male Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
169PLMX-4M-2R	4	1/8	10	24.50	11.00	18.00
169PLMX-6M-2R	6	1/8	13	29.50	14.00	21.50
169PLMX-6M-4R	6	1/4	14	30.50	15.00	21.50
169PLMX-8M-2R	8	1/8	14	32.50	15.00	23.50
169PLMX-8M-4R	8	1/4	14	34.00	15.00	23.50
169PLMX-10M-4R	10	1/4	18	39.00	19.50	29.00

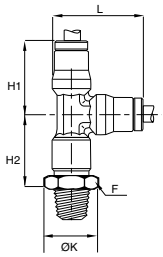




169PLMX Extended Male Elbow Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM	L MM
169PLMX-4M-M5	4	M5X0.8	10	27.50	11.00	18.00
169PLMX-4M-2G	4	1/8	13	25.50	14.00	18.00
169PLMX-6M-2G	6	1/8	13	31.00	14.00	18.00
169PLMX-6M-4G	6	1/4	16	30.50	17.50	21.50
169PLMX-8M-2G	8	1/8	14	33.50	15.00	23.50
169PLMX-8M-4G	8	1/4	16	34.00	17.50	23.50
169PLMX-10M-4G	10	1/4	18	42.00	19.50	29.00
169PLMX-10M-6G	10	3/8	20	41.00	22.00	29.00
169PLMX-12M-4G	12	1/4	20	47.00	22.00	31.00
169PLMX-12M-6G	12	3/8	20	46.00	22.00	31.00
169PLMX-14M-8G	14	1/2	24	49.00	26.00	34.00





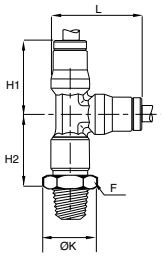
171PLM Male Run Tee Inch Tube to Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT/ UNF	F MM	H1 IN	H2 IN	K IN	L IN
171PLM-5/32-0	5/32	10-32	10			.47	.91
171PLM-5/32-2	5/32	1/8	11	.71	.77	.47	.91
171PLM-5/32-4	5/32	1/4	14	.71	.85	.59	.91
171PLM-4-2	1/4	1/8	13	.87	.93	.55	1.12
171PLM-4-4	1/4	1/4	14	.87	.97	.59	1.12
171PLM-6-4	3/8	1/4	18	1.14	1.20	.77	1.48
171PLM-6-6	3/8	3/8	18	1.14	1.28	.77	1.48
171PLM-6-8	3/8	1/2	22	1.14	1.28	.94	1.48
171PLM-8-6	1/2	3/8	22	1.22	1.46	.94	1.61
171PLM-8-8	1/2	1/2	22	1.22	1.50	.94	1.61

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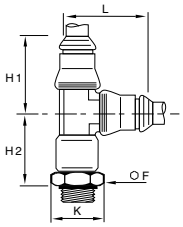




171PLM Male Run Tee
Metric Tube To Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H1 MM	H2 MM	K MM	L MM
171PLM-4M-2R	4	1/8	10	18.00	19.50	11.00	23.00
171PLM-6M-2R	6	1/8	13	21.50	23.50	14.00	28.00
171PLM-6M-4R	6	1/4	14	21.50	24.50	15.00	28.00
171PLM-8M-2R	8	1/8	14	23.50	25.00	15.00	31.00
171PLM-8M-4R	8	1/4	14	23.50	26.50	15.00	31.00
171PLM-10M-4R	10	1/4	18	29.00	30.50	19.50	37.50
171PLM-10M-6R	10	3/8	18	29.00	32.50	19.50	37.50
171PLM-12M-6R	12	3/8	21	31.00	36.50	23.00	40.50
171PLM-14M-8R	14	1/2	22	34.00	40.00	24.00	45.00

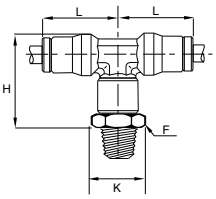




171PLM Male Run Tee
Tube To Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/ M5	F MM	H1 MM	H2 MM	K MM	L MM
171PLM-4M-M5	4	M5X0.8	10	18.00	22.50	11.00	23.00
171PLM-4M-2G	4	1/8	13	18.00	20.50	14.00	23.00
171PLM-6M-2G	6	1/8	13	21.50	25.00	14.00	28.00
171PLM-6M-4G	6	1/4	16	21.50	24.50	17.50	28.00
171PLM-8M-2G	8	1/8	14	23.50	26.50	15.00	31.00
171PLM-8M-4G	8	1/4	16	23.50	26.50	17.50	31.00
171PLM-10M-4G	10	1/4	18	29.00	33.00	19.50	37.50
171PLM-12M-6G	12	3/8	21	31.00	36.50	23.00	40.50
171PLM-14M-8G	14	1/2	24	34.00	38.50	26.00	45.00

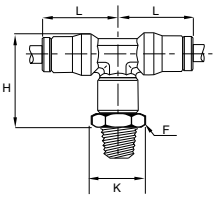




172PLM Male Branch Tee
Inch Tube to NPT to tube

PART NO.	TUBE SIZE IN	NPT/UNF	F MM	H IN	K IN	L IN
172PLM-5/32-0	5/32	10-32	10.00	1.00	.47	.71
172PLM-5/32-2	5/32	1/8	11	.87	.47	.71
172PLM-5/32-4	5/32	1/4	14	1.04	.59	.71
172PLM-4-2	1/4	1/8	13	1.18	.55	.87
172PLM-4-4	1/4	1/4	14	1.22	.59	.87
172PLM-4-6	1/4	3/8	18	1.22	.77	.87
172PLM-6-4	3/8	1/4	18	1.54	.77	1.14
172PLM-6-6	3/8	3/8	18	1.61	.77	1.14
172PLM-6-8	3/8	1/2	22	1.61	.94	1.14
172PLM-8-6	1/2	3/8	22	1.85	.94	1.22
172PLM-8-8	1/2	1/2	22	1.89	.94	1.22



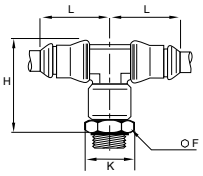


172PLM Male Branch Tee
Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
172PLM-4M-2R	4	1/8	10	24.50	11.00	18.00
172PLM-6M-2R	6	1/8	13	29.50	14.00	21.50
172PLM-6M-4R	6	1/4	14	30.50	15.00	21.50
172PLM-8M-2R	8	1/8	14	32.50	15.00	23.50
172PLM-8M-4R	8	1/4	14	34.00	15.00	23.50
172PLM-10M-4R	10	1/4	18	39.00	19.50	29.00
172PLM-10M-6R	10	3/8	18	41.00	19.50	29.00
172PLM-12M-6R	12	3/8	21	46.50	23.00	31.00
172PLM-14M-8R	14	1/2	22	50.50	24.00	34.00

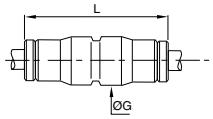
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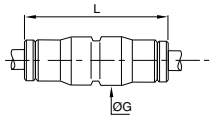
172PLM Male Branch Tee Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM	L MM
172PLM-4M-M5	4	M5X0.8	10	27.50	11.00	18.00
172PLM-4M-2G	4	1/8	13	25.50	14.00	18.00
172PLM-6M-2G	6	1/8	13	31.00	14.00	21.50
172PLM-6M-4G	6	1/4	16	30.50	17.50	21.50
172PLM-8M-2G	8	1/8	14	33.50	15.00	23.50
172PLM-8M-4G	8	1/4	16	34.00	17.50	23.50
172PLM-10M-4G	10	1/4	18	42.00	19.50	29.00
172PLM-12M-6G	12	3/8	21	46.00	23.00	31.00
172PLM-14M-8G	14	1/2	24	49.00	26.00	34.00

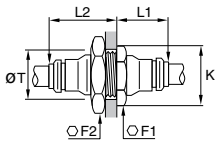
62PLM Straight Union Inch Tube to Tube

PART NO.	TUBE SIZE IN	G IN	L IN
62PLM-5/32	5/32	.39	1.20
62PLM-4	1/4	.49	1.44
62PLM-5	5/16	.59	1.48
62PLM-6	3/8	.67	1.87
62PLM-8	1/2	.79	1.89

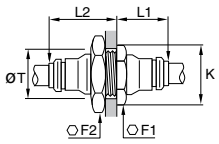
62PLM Straight Union Metric Tube to Tube

PART NO.	TUBE SIZE MM	G MM	L MM
62PLM-4M	4	10.00	30.50
62PLM-6M	6	12.00	36.50
62PLM-8M	8	15.00	37.50
62PLM-10M	10	17.50	47.50
62PLM-12M	12	19.50	50.00
62PLM-14M	14	21.50	52.50

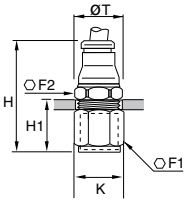
62PLMBH Bulkhead Connector Inch Tube to Tube

PART NO.	TUBE SIZE IN	F1 MM	F2 MM	K IN	L1 IN	L2 IN	T IN
62PLMBH-5/32	5/32	13	14	.55	.55	.79	.49
62PLMBH-4	1/4	16	17	.69	.67	.89	.59
62PLMBH-5	5/16	18	19	.77	.73	.93	.67
62PLMBH-6	3/8	22	27	.95	.87	1.10	.85
62PLMBH-8	1/2	24	24	1.16	.89	1.14	1.04

62PLMBH Bulkhead Connector Metric Tube to Tube

PART NO.	TUBE SIZE MM	F1 MM	F2 MM	K MM	L1 MM	L2 MM	T MM
62PLMBH-4M	4	13	14	14.00	14.00	20.00	12.50
62PLMBH-6M	6	16	17	17.50	17.00	22.00	15.00
62PLMBH-8M	8	18	19	19.50	18.50	23.50	17.00
62PLMBH-10M	10	22	27	24.00	21.50	26.50	21.00
62PLMBH-12M	12	24	24	26.00	23.00	27.00	23.00
62PLMBH-14M	14	27	27	29.50	25.50	29.50	25.00

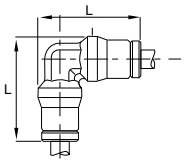



66PLMBH Female Bulkhead Connector Metric Tube to BSPP

PART NO.	TUBE SIZE MM	BSPP	F1 MM	F2 MM	H MM	H1 MM	K MM	T MM
66PLMBH-4M-2G	4	1/8	14	14	30.50	11.00	15.00	13
66PLMBH-6M-2G	6	1/8	17	17	32.50	11.00	18.50	15
66PLMBH-6M-4G	6	1/4	17	17	37.00	15.00	18.50	15
66PLMBH-8M-2G	8	1/8	19	19	34.00	10.50	21.00	17
66PLMBH-8M-4G	8	1/4	19	19	38.00	14.50	21.00	17
66PLMBH-10M-6G	10	3/8	22	27	42.50	16.00	24.00	21
66PLMBH-12M-6G	12	3/8	24	24	43.00	16.00	26.00	23
66PLMBH-12M-8G	12	1/2	27	24	48.50	21.50	29.50	23

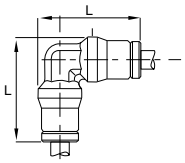
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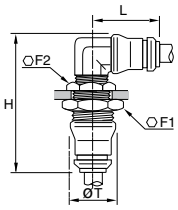
165PLM Union Elbow Inch Tube

PART NO.	TUBE SIZE IN	L IN
165PLM-5/32	5/32	.91
165PLM-4	1/4	1.12
165PLM-5	5/16	1.22
165PLM-6	3/8	1.48
165PLM-8	1/2	1.61

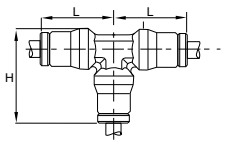
165PLM Union Elbow Metric Tube

PART NO.	TUBE SIZE MM	L MM
165PLM-4M	4	23.00
165PLM-6M	6	28.00
165PLM-8M	8	31.00
165PLM-10M	10	37.50
165PLM-12M	12	40.50
165PLM-14M	14	45.00

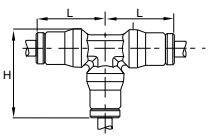
165PLMBH Bulkhead Elbow Metric Tube

PART NO.	TUBE SIZE MM	F1 MM	F2 MM	H MM	L MM	T MM
165PLMBH-4M	4	13	14	35.00	18.00	12.50
165PLMBH-6M	6	16	17	40.50	21.50	15.00
165PLMBH-8M	8	18	19	44.00	23.50	17.00
165PLMBH-10M	10	22	27	51.00	29.00	21.00
165PLMBH-12M	12	24	24	55.00	31.00	23.00
165PLMBH-14M	14	27	27	59.00	34.00	25.00

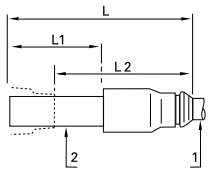
164PLM Union Tee Inch Tube

PART NO.	TUBE SIZE IN	H IN	L IN
164PLM-5/32	5/32	.91	.71
164PLM-4	1/4	1.12	.87
164PLM-5	5/16	1.22	.93
164PLM-6	3/8	1.48	1.14
164PLM-8	1/2	1.61	1.22

164PLM Union Tee Metric Tube

PART NO.	TUBE SIZE MM	H MM	L MM
164PLM-4M	4	23.00	18.00
164PLM-6M	6	28.00	21.50
164PLM-8M	8	31.00	23.50
164PLM-10M	10	37.50	29.00
164PLM-12M	12	40.50	31.00
164PLM-14M	14	45.00	34.00

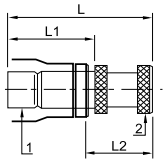



67PLM Plug-In Reducer Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L MM	L1 MM	L2 MM
67PLM-4M-6M	4	6	34.50	19.00	17.50
67PLM-4M-8M	4	8	35.50	20.00	18.00
67PLM-6M-8M	6	8	37.00	20.00	19.50
67PLM-6M-10M	6	10	43.50	25.00	21.00
67PLM-8M-10M	8	10	44.00	25.00	21.50
67PLM-8M-12M	8	12	45.00	26.00	21.50
67PLM-10M-12M	10	12	50.00	26.00	26.50
67PLM-12M-14M	12	14	53.00	28.00	28.50

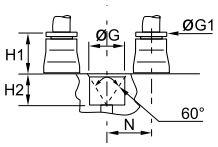
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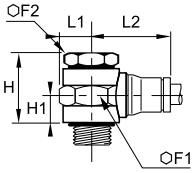
639PLM Plug Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L MM	L1 MM	L2 MM
639PLM-4M	4	6	25.50	17.00	11.50
639PLM-6M	6	8	30.50	19.50	13.50
639PLM-8M	8	10	33.00	20.00	16.00
639PLM-10M	10	12	40.00	25.00	18.00
639PLM-12M	12	14	43.00	26.00	20.00
639PLM-14M	14	16	47.00	28.00	22.50

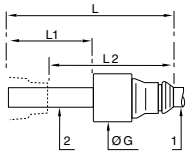
PLMC Cartridge

PART NO.	TUBE SIZE MM	G +.1 - 0	H1 MM	H2 MM	N MM
PLMC-4M	4	10.00	9.00	8.50	11.00
PLMC-6M	6	12.00	11.00	8.50	13.50
PLMC-8M	8	15.00	12.50	8.50	16.00
PLMC-10M	10	17.50	14.50	10.50	20.00
PLMC-12M	12	19.50	15.00	10.50	22.50
PLMC-14M	14	21.50	16.50	12.00	25.00

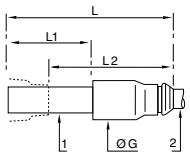
169PLMBJ Single Banjo Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/ M5	F1 MM	F2 MM	H MM	H1 MM	L1 MM	L2 MM
169PLMBJ-4M-M5	4	M5X0.8	10	8	14.50	6.50	6.00	18.50
169PLMBJ-4M-2G	4	G1/8	17	14	23.00	9.50	10.00	20.50
169PLMBJ-6M-M5	6	M5X0.8	10	8	15.00	7.00	6.00	22.50
169PLMBJ-6M-2G	6	G1/8	17	14	23.00	9.50	10.00	23.50
169PLMBJ-6M-4G	6	G1/4	22	17	22.00	9.00	13.00	25.50
169PLMBJ-8M-2G	8	G1/8	17	14	23.00	9.50	10.00	26.00
169PLMBJ-8M-4G	8	G1/4	22	17	22.00	9.00	13.00	27.50
169PLMBJ-10M-6G	10	G3/8	22	22	33.00	14.00	13.00	32.00

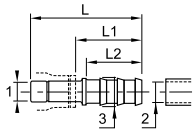
62PLMSP Plug-In Expander Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	G MM	L MM	L1 MM	L2 MM
62PLMSP-4-6	6	4	17	42	22	28

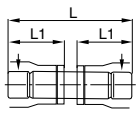
62PLMSP Plug-In Metric/Inch Adapter

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	G MM	L MM	L1 MM	L2 MM
62PLMSP-6M-4	6	1/4	12.50	38.00	19.00	20.50
62PLMSP-10M-6	10	3/8	17.00	49.50	25.00	27.00
62PLMSP-12M-8	12	1/2	20.00	51.00	26.00	27.50

122PLMSP Plug-In Barbed Connector Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	TUBE 3 SIZE MM	L MM	L1 MM	L2 MM
122PLMSP-4M-3M	4	3.20	5.00	40.50	27.00	22.50
122PLMSP-4M-5M	4	5.00	7.00	40.50	27.00	22.50
122PLMSP-6M-5M	6	5.00	7.00	43.00	27.00	22.50
122PLMSP-8M-6M	8	6.30	8.30	42.00	25.00	22.50
122PLMSP-8M-8M	8	8.00	10.00	44.00	27.00	22.50
122PLMSP-10M-6M	10	6.30	10.00	47.50	25.50	22.50
122PLMSP-10M-8M	10	8.00	8.30	47.50	25.50	22.50
122PLMSP-12M-8M	12	8.00	10.00	48.50	25.50	22.50
122PLMSP-12M10M	12	10.00	12.00	48.50	25.50	22.50
122PLMSP-12M12M	12	12.50	14.50	57.00	34.00	29.50
122PLMSP-14M12M	14	12.50	14.50	57.50	33.00	29.50
122PLMSP-14M14M	14	14.00	16.00	59.50	35.00	29.50

63PLM Double Male Union Metric

PART NO.	TUBE SIZE MM	L MM	L1 MM
63PLM-4M	4	31.00	14.00
63PLM-6M	6	36.50	17.00
63PLM-8M	8	37.50	17.50
63PLM-10M	10	47.50	22.50
63PLM-12M	12	49.50	23.50
63PLM-14M	14	53.00	25.00

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Tube to Male NPT

68PLS Male Connector

p. A50

169PLS Male Elbow

p. A52

171PLS Male Run Tee

p. A53

172PLS Male Branch Tee

p. A54

Tube to Tube

62PLS Union

p. A55

165PLS Union Elbow

p. A56

164PLS Union Tee

p. A56

Bulkhead Union

62PLSBH Bulkhead Union

p. A56

Standpipe to NPT

68PLSSP Male Standpipe

p. A51

Metric Tube to Male BSPT

68PLS Male Connector

p. A50

169PLS Male Elbow

p. A52

169PLSX Extended Male Elbow

p. A53

171PLS Male Run Tee

p. A54

172PLS Male Branch Tee

p. A55

Metric Tube to Male BSPP

68PLS Male Connector

p. A50

169PLS Male Elbow

p. A52

169PLSX Extended Male Elbow

p. A53

171PLS Male Run Tee

p. A54

172PLS Male Branch Tee

p. A55

Metric Tube to Male NPT

68PLS Male Connector

p. A50

169PLS Male Elbow

p. A52

169PLSX Extended Male Elbow

p. A53

171PLS Male Run Tee

p. A54

172PLS Male Branch Tee

p. A55

Metric Tube to Metric Tube

62PLS Union

p. A55

165PLS Union Elbow

p. A56

164PLS Union Tee

p. A56

Metric Bulkhead Union

62PLSBH Bulkhead Union

p. A56

Metric Standpipes

68PLSSP Male Standpipe to NPT

p. A51

68PLSSP Male Standpipe to BSPT

p. A51

68PLSSP Male Standpipe to BSPP

p. A51

Metric Plugin

67PLS Tube Reducer

p. A57

Metric Auxiliary Components

639PLS Plug

p. A57

PLSC Cartridge

p. A57

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Prestolok PLS Push-to-Connect

MATERIALS OF CONSTRUCTION	
BODY:	STAINLESS STEEL 316L
WASHER:	STAINLESS STEEL 316L
COLLET:	STAINLESS STEEL 303L
"O"-RING:	FKM
BASE:	STAINLESS STEEL 316F

NOMENCLATURE	
EXAMPLE: 169PLS-4-2	**ATTRIBUTE:**
169	MALE ELBOW
PLS	PRESTOLOK STAINLESS
4	1/4" (4/16) TUBE SIZE
2	1/8" (2/16) THREAD SIZE

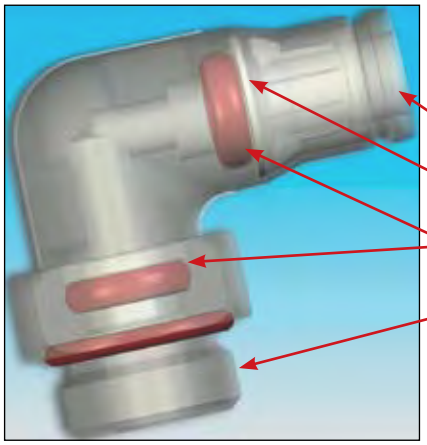
APPLICABLE TUBING	
TUBE O.D.:	5/32, 3/16, 1/4, 5/16, 3/8, 1/2
TUBE O.D. MM:	4, 6, 8, 10, 12

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 290 PSI DEPENDING ON TUBE
TEMPERATURE RANGE:	-4° TO +245°F DEPENDING ON THE TYPE AND SIZE OF TUBE
VACUUM:	99% 28" HG

Shapes with threads are swivels



The all stainless steel construction of the Prestolok PLS fittings with FKM seals offer excellent resistance to aggressive environments and fluids. The nutriment grade materials and USDA NSF H1 grease conforming to FDA and 1934/2004 standards permits permanent contact with food. The smooth surface design of the PLS fitting is aimed at reducing retention zones for safe and easy cleaning. The Prestolok PLS fittings are suitable for applications in markets such as chemical, food, packaging and medical. All items in the PLS range are silicone free.



Collet in stainless steel 303L

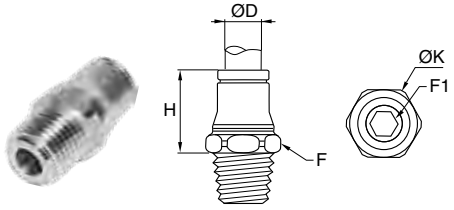
Protection washer in stainless steel 316L

FKM seals

Sub-base in stainless steel 316L

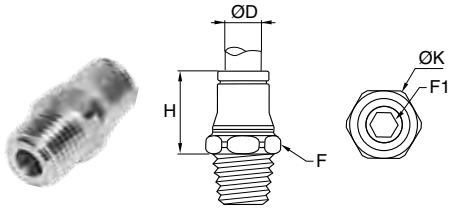
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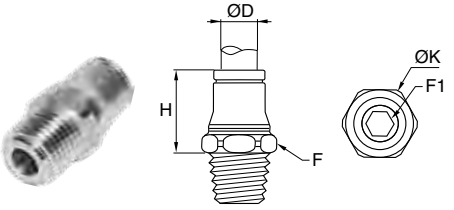
68PLS Male Connector - Inch Tube to NPT,UNF

PART NO.	TUBE SIZE IN	NPT / UNF	F MM	F1 MM	H IN	K IN
68PLS-5/32-0	5/32	10-32	10	2.5	.59	.43
68PLS-5/32-2	5/32	1/8	10	3	.61	.43
68PLS-3-2	3/16	1/8	10	3	.61	.43
68PLS-3-4	3/16	1/4	14	3	.61	.59
68PLS-4-2	1/4	1/8	13	4	.75	.55
68PLS-4-4	1/4	1/4	14	4	.69	.59
68PLS-5-2	5/16	1/8	15	4	.79	.65
68PLS-5-4	5/16	1/4	15	6	.79	.65
68PLS-6-4	3/8	1/4	19	6	.98	.83
68PLS-6-6	3/8	3/8	19	7	.94	.83
68PLS-8-4	1/2	1/4	22	7	1.02	.94
68PLS-8-6	1/2	3/8	22	8	.98	.94
68PLS-8-8	1/2	1/2	22	10	.98	.94



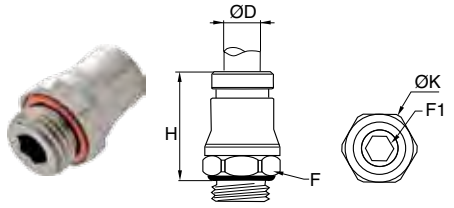
68PLS Male Connector - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	F1 MM	H MM	K MM
68PLS-4M-2	4	1/8	11	3	14.50	12.00
68PLS-6M-2	6	1/8	13	4	18.00	14.00
68PLS-6M-4	6	1/4	14	4	16.50	15.00
68PLS-8M-2	8	1/8	15	5	19.00	16.50
68PLS-8M-4	8	1/4	15	6	18.00	16.50
68PLS-10M-4	10	1/4	19	6	24.00	21.00
68PLS-10M-6	10	3/8	19	7	22.50	21.00
68PLS-12M-4	12	1/4	22	7	25.00	24.00
68PLS-12M-6	12	3/8	22	8	24.00	24.00
68PLS-12M-8	12	1/2	22	10	23.00	24.00



68PLS Male Connector - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	F1 MM	H MM	K MM
68PLS-4M-2R	4	1/8	10	3	14.50	11.00
68PLS-4M-4R	4	1/4	14	3	14.50	15.00
68PLS-6M-2R	6	1/8	13	4	18.00	14.00
68PLS-6M-4R	6	1/4	14	4	16.50	15.00
68PLS-8M-2R	8	1/8	15	5	20.50	16.50
68PLS-8M-4R	8	1/4	15	5	19.00	16.50
68PLS-8M-6R	8	3/8	17	6	19.00	18.50
68PLS-10M-4R	10	1/4	19	6	24.00	21.00
68PLS-10M-6R	10	3/8	19	7	22.50	21.00
68PLS-12M-4R	12	1/4	22	7	25.00	24.00
68PLS-12M-6R	12	3/8	22	8	24.00	24.00
68PLS-12M-8R	12	1/2	22	10	23.00	24.00

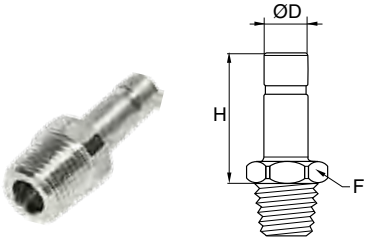


68PLS Male Connector - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	F1 MM	H MM	K MM
68PLS-4M-M5	4	M5X0.8	10	2.5	16.00	11.00
68PLS-4M-2G	4	1/8	13	3	15.00	14.00
68PLS-6M-M5	6	M5X0.8	13	2.5	20.50	14.00
68PLS-6M-2G	6	1/8	13	4	18.00	14.00
68PLS-6M-4G	6	1/4	17	4	18.00	18.50
68PLS-8M-2G	8	1/8	15	5	19.00	16.50
68PLS-8M-4G	8	1/4	17	5	20.50	18.50
68PLS-8M-6G	8	3/8	21	6	20.00	23.00
68PLS-10M-4G	10	1/4	18	7	25.00	19.50
68PLS-10M-6G	10	3/8	21	7	25.00	23.00
68PLS-12M-4G	12	1/4	21	7	27.00	23.00
68PLS-12M-6G	12	3/8	21	9	26.50	23.00

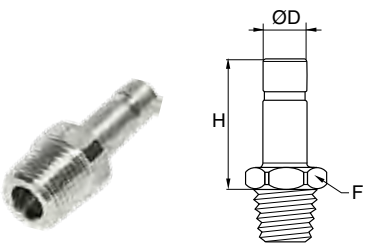
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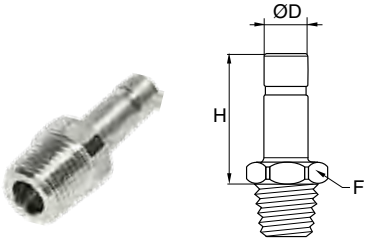
68PLSSP Male Standpipe - Inch Tube to NPT

PART NO.	TUBE SIZE IN	NPT	F IN	H IN
68PLSSP-5/32-2	5/32	1/8	0.39	0.98
68PLSSP-3-2	3/16	1/8	0.39	0.98
68PLSSP-4-2	1/4	1/8	0.39	1.02
68PLSSP-4-4	1/4	1/4	0.55	1.06
68PLSSP-5-2	5/16	1/8	0.43	1.06
68PLSSP-5-4	5/16	1/4	0.55	1.06
68PLSSP-6-4	3/8	1/4	0.75	1.26
68PLSSP-6-6	3/8	3/8	0.75	1.26
68PLSSP-8-4	1/2	1/4	0.75	1.42
68PLSSP-8-6	1/2	3/8	0.75	1.46
68PLSSP-8-8	1/2	1/2	0.87	1.46



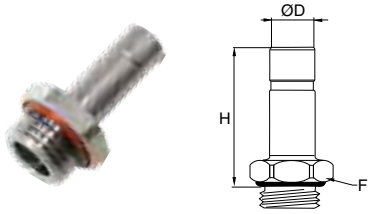
68PLSSP Male Standpipe - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM
68PLSSP-4M-2R	4	1/8	10	21
68PLSSP-6M-2R	6	1/8	10	23
68PLSSP-6M-4R	6	1/4	14	24
68PLSSP-8M-2R	8	1/8	10	24
68PLSSP-8M-4R	8	1/4	14	25
68PLSSP-10M-4R	10	1/4	14	30
68PLSSP-10M-6R	10	3/8	17	30
68PLSSP-12M-4R	12	1/4	14	31
68PLSSP-12M-6R	12	3/8	17	31
68PLSSP-12M-8R	12	1/2	22	32



68PLSSP Male Standpipe - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM
68PLSSP-4M-2	4	1/8	11	21
68PLSSP-6M-2	6	1/8	11	23
68PLSSP-6M-4	6	1/4	14	24
68PLSSP-8M-2	8	1/8	14	24
68PLSSP-8M-4	8	1/4	14	25
68PLSSP-10M-4	10	1/4	14	30
68PLSSP-10M-6	10	3/8	17	30
68PLSSP-12M-4	12	1/4	14	31
68PLSSP-12M-6	12	3/8	17	31
68PLSSP-12M-8	12	1/2	22	32

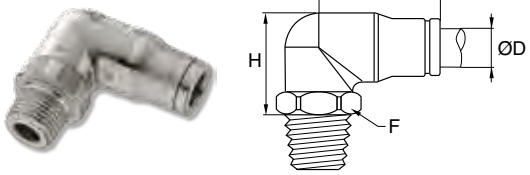


68PLSSP Male Standpipe - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM
68PLSSP-4M-M5	4	M5X0.8	7	23.50
68PLSSP-4M-2G	4	1/8	13	22.00
68PLSSP-6M-2G	6	1/8	13	24.00
68PLSSP-6M-4G	6	1/4	17	24.00
68PLSSP-8M-2G	8	1/8	13	25.00
68PLSSP-8M-4G	8	1/4	17	27.00
68PLSSP-8M-6G	8	3/8	21	27.00
68PLSSP-10M-4G	10	1/4	17	32.00
68PLSSP-10M-6G	10	3/8	21	27.00
68PLSSP-12M-4G	12	1/4	17	33.00
68PLSSP-12M-6G	12	3/8	21	33.00

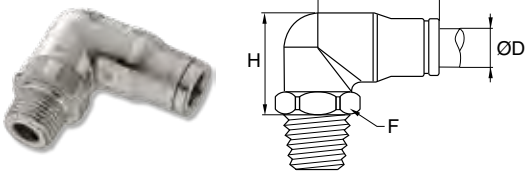
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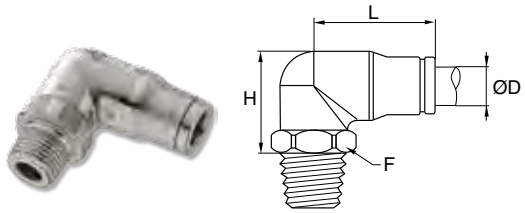
169PLS Male Elbow - Inch Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT / UNF	F MM	H IN	L IN
169PLS-5/32-0	5/32	10-32	10	.98	.77
169PLS-5/32-2	5/32	1/8	13	.77	.77
169PLS-3-2	3/16	1/8	10	.81	.77
169PLS-3-4	3/16	1/4	14	.81	.77
169PLS-4-2	1/4	1/8	13	.85	.91
169PLS-4-4	1/4	1/4	14	.85	.91
169PLS-5-2	5/16	1/8	15	1.00	.98
169PLS-5-4	5/16	1/4	15	1.00	.98
169PLS-6-4	3/8	1/4	17	1.12	1.20
169PLS-6-6	3/8	3/8	19	1.12	1.20
169PLS-8-4	1/2	1/4	22	1.34	1.30
169PLS-8-6	1/2	3/8	22	1.34	1.30
169PLS-8-8	1/2	1/2	22	1.34	1.30



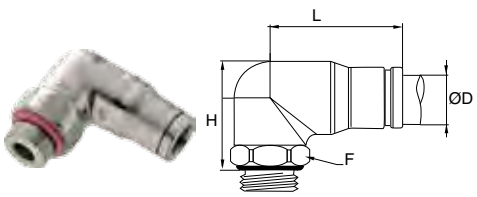
169PLS Male Elbow - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	L MM
169PLS-4M-2R	4	1/8	13	18.00	19.00
169PLS-4M-4R	4	1/4	14	18.00	19.00
169PLS-6M-2R	6	1/8	13	20.00	24.00
169PLS-6M-4R	6	1/4	14	20.00	23.00
169PLS-8M-2R	8	1/8	13	24.50	32.00
169PLS-8M-4R	8	1/4	14	23.50	24.00
169PLS-8M-6R	8	3/8	19	23.00	25.00
169PLS-10M-4R	10	1/4	17	27.00	31.00
169PLS-10M-6R	10	3/8	19	26.00	31.00
169PLS-12M-4R	12	1/4	22	31.50	33.00
169PLS-12M-6R	12	3/8	22	32.50	33.00
169PLS-12M-8R	12	1/2	22	27.50	33.00



169PLS Male Elbow - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L MM
169PLS-4M-2	4	1/8	13	17.50	19.00
169PLS-6M-2	6	1/8	13	20.00	22.50
169PLS-6M-4	6	1/4	14	20.00	22.50
169PLS-8M-2	8	1/8	13	25.00	24.00
169PLS-8M-4	8	1/4	14	24.00	24.00
169PLS-10M-4	10	1/4	17	27.50	27.50
169PLS-10M-6	10	3/8	19	28.50	26.50
169PLS-12M-4	12	1/4	22	31.50	32.50
169PLS-12M-6	12	3/8	22	32.50	32.50
169PLS-12M-8	12	1/2	22	27.50	32.50



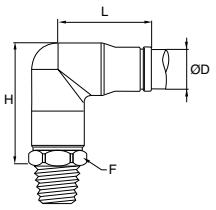
169PLS Male Elbow - Metric Tube to BSPP

PART NO.	TUBE SIZE MM	BSPP	F MM	H MM	L MM
169PLS-4M-2G	4	1/8	10	22	19
169PLS-4M-4G	4	1/4	17	20	19
169PLS-6M-2G	6	1/8	13	24	24
169PLS-6M-4G	6	1/4	17	22	24
169PLS-8M-2G	8	1/8	13	25	25
169PLS-8M-4G	8	1/4	17	25	25
169PLS-8M-6G	8	3/8	21	23	25
169PLS-10M-4G	10	1/4	18	43	31
169PLS-10M-6G	10	3/8	21	40	31
169PLS-12M-4G	12	1/4	17	33	33
169PLS-12M-6G	12	3/8	21	33	33
169PLS-12M-8G	12	1/2	24	30	33

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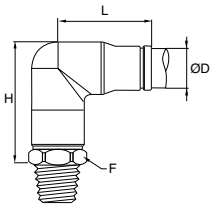




169PLSX Extended Male Elbow - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L MM
169PLSX-4M-2	4	1/8	11	25.5	18.5
169PLSX-6M-2	6	1/8	13	29	22.5
169PLSX-6M-4	6	1/4	14	29	22.5
169PLSX-8M-2	8	1/8	14	34	24
169PLSX-8M-4	8	1/4	14	34	24
169PLSX-10M-4	10	1/4	19	39.5	30
169PLSX-10M-6	10	3/8	19	39.5	30

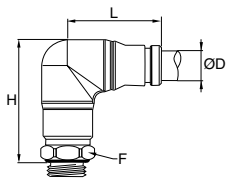




169PLSX Extended Male Elbow - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	L MM
169PLSX-4M-2R	4	1/8	10	25	19.00
169PLSX-4M-4R	4	1/4	14	26	19.00
169PLSX-6M-2R	6	1/8	13	30	24.00
169PLSX-6M-4R	6	1/4	14	30	24.00
169PLSX-8M-2R	8	1/8	14	34	24.90
169PLSX-8M-4R	8	1/4	14	34	24.90
169PLSX-10M-4R	10	1/4	19	39	31.00
169PLSX-10M-6R	10	3/8	19	39	31.00

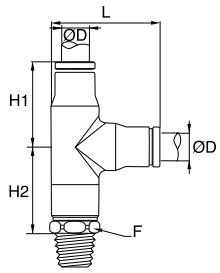




169PLSX Extended Male Elbow - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM	L MM
169PLSX-4M-M5	4	M5X0.8	10	27.00	19
169PLSX-4M-2G	4	1/8	13	27.00	19
169PLSX-4M-4G	4	1/4	17	27.00	19
169PLSX-6M-M5	6	M5X0.8	13	33.00	24
169PLSX-6M-2G	6	1/8	13	33.00	24
169PLSX-6M-4G	6	1/4	17	32.00	24
169PLSX-8M-2G	8	1/8	14	35.00	25
169PLSX-8M-4G	8	1/4	17	35.00	25
169PLSX-8M-6G	8	3/8	21	34.50	25
169PLSX-10M-4G	10	1/4	18	43.00	31
169PLSX-10M-6G	10	3/8	21	42.00	31



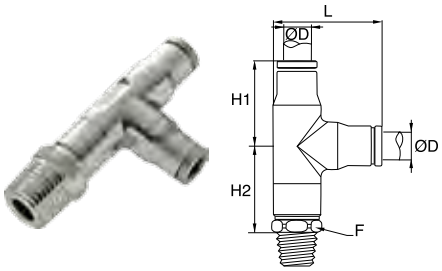


171PLS Male Run Tee - Inch Tube to NPT

PART NO.	TUBE SIZE IN	NPT	F MM	H1 IN	H2 IN	L IN
171PLS-5/32-2	5/32	1/8	10	.69	.71	.89
171PLS-5-2	5/16	1/8	14	.94	1.04	1.20
171PLS-5-4	5/16	1/4	14	.94	1.04	1.20

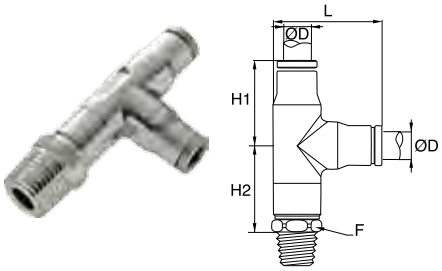
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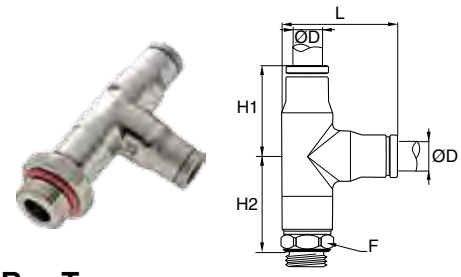
171PLS Male Run Tee - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H1 MM	H2 MM	L MM
171PLS-4M-2	4	1/8	11	19.00	21.00	25.00
171PLS-6M-2	6	1/8	13	21.00	24.00	27.00
171PLS-6M-4	6	1/4	14	21.00	24.00	27.50
171PLS-8M-2	8	1/8	14	24.00	26.50	30.50
171PLS-8M-4	8	1/4	14	24.00	26.50	30.50
171PLS-10M-4	10	1/4	19	29.50	31.00	37.50
171PLS-10M-6	10	3/8	19	29.50	31.00	37.50



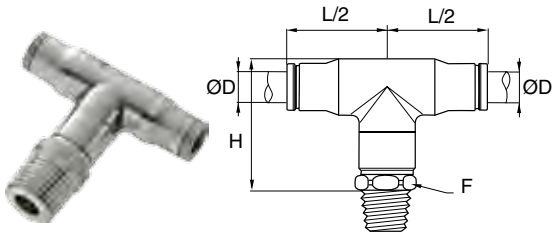
171PLS Male Run Tee - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H1 MM	H2 MM	L MM
171PLS-4M-2R	4	1/8	10	19.00	20.00	24.50
171PLS-4M-4R	4	1/4	14	19.00	20.00	26.50
171PLS-6M-2R	6	1/8	13	24.00	24.00	30.00
171PLS-6M-4R	6	1/4	14	24.00	24.00	30.00
171PLS-8M-2R	8	1/8	14	25.00	27.00	32.00
171PLS-8M-4R	8	1/4	14	25.00	27.00	32.00
171PLS-8M-6R	8	3/8	19	25.00	26.00	34.50
171PLS-10M-4R	10	1/4	19	31.00	31.00	39.00
171PLS-10M-6R	10	3/8	19	31.00	31.00	39.00



171PLS Male Run Tee - Metric Tube to BSPP, M5

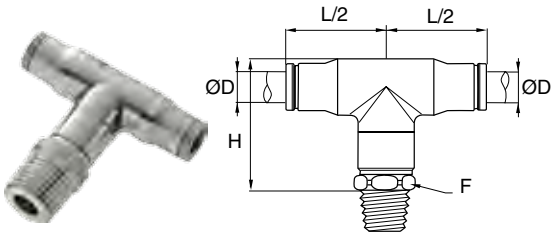
PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H1 MM	H2 MM	L MM
171PLS-4M-M5	4	M5X0.8	10	19.00	21.50	24.50
171PLS-4M-2G	4	1/8	13	19.00	21.50	25.50
171PLS-4M-4G	4	1/4	17	19.00	21.50	28.30
171PLS-6M-2G	6	1/8	13	24.00	26.50	30.00
171PLS-6M-4G	6	1/4	17	24.00	25.90	32.00
171PLS-8M-2G	8	1/8	14	25.00	27.50	32.00
171PLS-8M-4G	8	1/4	17	25.00	28.20	33.50
171PLS-8M-6G	8	3/8	21	25.00	27.30	35.50
171PLS-10M-4G	10	1/4	18	31.00	35.60	39.60
171PLS-10M-6G	10	3/8	21	31.00	33.60	41.00



172PLS Male Branch Tee - Inch Tube to NPT

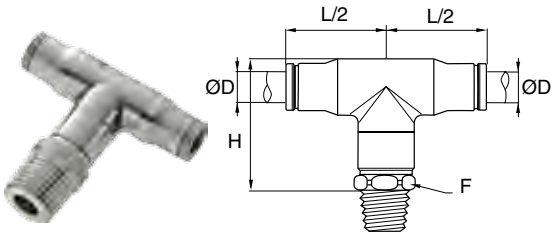
PART NO.	TUBE SIZE IN	NPT	F MM	H IN	L/2 IN
172PLS-5/32-2	5/32	1/8	10	.91	.69
172PLS-5-2	5/16	1/8	14	1.34	.94
172PLS-5-4	5/16	1/4	14	1.34	.94

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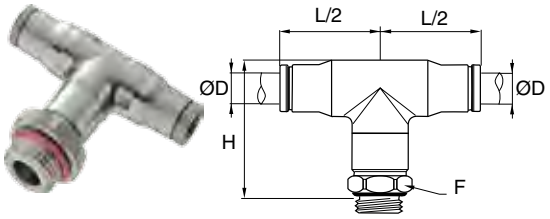
172PLS Male Branch Tee - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L/2 MM
172PLS-4M-2	4	1/8	11	22.00	19.50
172PLS-6M-2	6	1/8	13	30.00	22.50
172PLS-6M-4	6	1/4	14	30.00	22.50
172PLS-8M-2	8	1/8	14	34.00	24.00
172PLS-8M-4	8	1/4	14	34.00	24.00
172PLS-10M-4	10	1/4	19	40.00	29.50
172PLS-10M-6	10	3/8	19	40.00	29.50



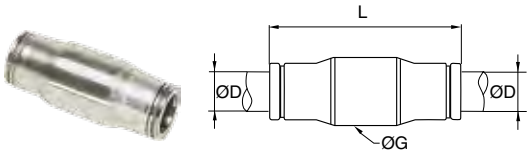
172PLS Male Branch Tee - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	L/2 MM
172PLS-4M-2R	4	1/8	11	25.00	19.00
172PLS-4M-4R	4	1/4	14	26.00	19.00
172PLS-6M-2R	6	1/8	13	30.00	24.00
172PLS-6M-4R	6	1/4	14	30.00	24.00
172PLS-8M-2R	8	1/8	14	34.00	25.00
172PLS-8M-4R	8	1/4	14	34.00	25.00
172PLS-8M-6R	8	3/8	19	33.00	25.00
172PLS-10M-4R	10	1/4	19	39.00	31.00
172PLS-10M-6R	10	3/8	19	39.00	31.00



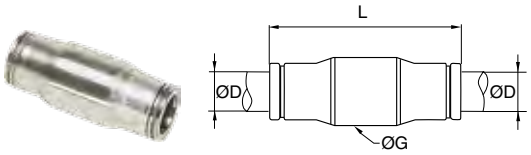
172PLS Male Branch Tee - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM	L/2 MM
172PLS-4M-M5	4	M5X0.8	10	26.80	19
172PLS-4M-2G	4	1/8	13	27.30	19
172PLS-4M-4G	4	1/4	17	27.30	19
172PLS-6M-M5	6	M5X0.8	13	33.50	24
172PLS-6M-2G	6	1/8	13	32.70	24
172PLS-6M-4G	6	1/4	17	32.00	24
172PLS-8M-2G	8	1/8	14	34.80	25
172PLS-8M-4G	8	1/4	17	35.00	25
172PLS-8M-6G	8	3/8	21	34.50	25
172PLS-10M-4G	10	1/4	18	43.20	31
172PLS-10M-6G	10	3/8	21	41.20	31



62PLS Union - Inch Tube

PART NO.	TUBE SIZE IN	G IN	H IN
62PLS-5/32	5/32	.39	1.18
62PLS-3	3/16	.39	1.18
62PLS-4	1/4	.47	1.38
62PLS-5	5/16	.59	1.46
62PLS-6	3/8	.69	1.81
62PLS-8	1/2	.79	1.89

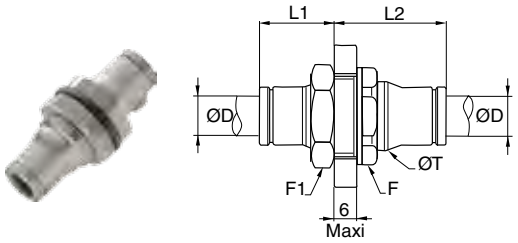


62PLS Union - Metric Tube

PART NO.	TUBE SIZE MM	G MM	H MM
62PLS-4M	4	10.00	30.00
62PLS-6M	6	12.00	37.00
62PLS-8M	8	15.00	38.00
62PLS-10M	10	17.00	49.00
62PLS-12M	12	19.50	49.50

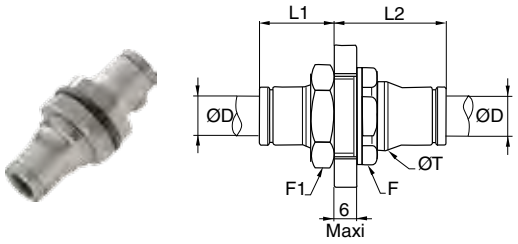
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Otsego, Michigan

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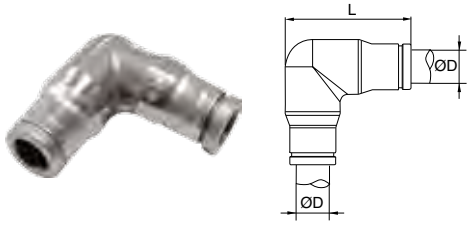
62PLSBH Bulkhead Union - Inch Tube

PART NO.	TUBE SIZE IN	F MM	F1 MM	L1 IN	L2 IN	T IN
62PLSBH-5/32	5/32	13	14	.59	.83	.49
62PLSBH-3	3/16	17	13	.59	.83	.49
62PLSBH-4	1/4	19	17	.67	.89	.57
62PLSBH-5	5/16	19	19	.75	.94	.65
62PLSBH-6	3/8	27	22	.87	1.08	.81
62PLSBH-8	1/2	27	27	.94	1.14	.79



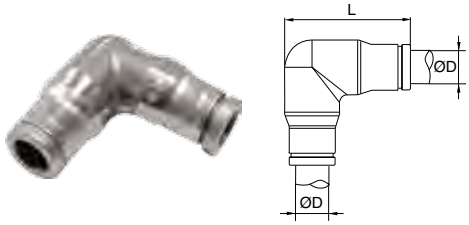
62PLSBH Bulkhead Union - Metric Tube

PART NO.	TUBE SIZE MM	F MM	F1 MM	L1 MM	L2 MM	T MM
62PLSBH-4M	4	14	13	15	18	13
62PLSBH-6M	6	17	17	19	21	15
62PLSBH-8M	8	19	19	20	22	17
62PLSBH-10M	10	22	22	24	26	21
62PLSBH-12M	12	24	24	25	26	23



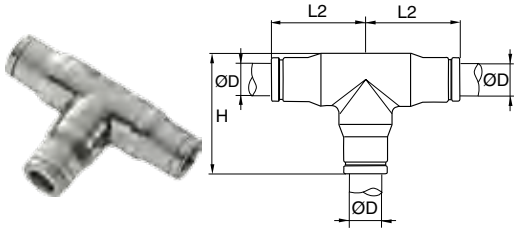
165PLS Union Elbow - Inch Tube

PART NO.	TUBE SIZE IN	L IN
165PLS-5/32	5/32	.96
165PLS-3	3/16	.96
165PLS-4	1/4	1.14
165PLS-5	5/16	1.28
165PLS-6	3/8	1.56
165PLS-8	1/2	1.61



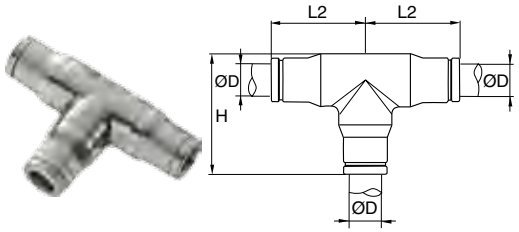
165PLS Union Elbow - Metric Tube

PART NO.	TUBE SIZE MM	L MM
165PLS-4M	4	24.00
165PLS-6M	6	30.00
165PLS-8M	8	32.20
165PLS-10M	10	39.00
165PLS-12M	12	43.00



164PLS Union Tee - Inch Tube

PART NO.	TUBE SIZE IN	H IN	L2 IN
164PLS-5/32	5/32	.89	.69
164PLS-3	3/16	.89	.69
164PLS-4	1/4	1.06	.83
164PLS-5	5/16	1.20	.91
164PLS-6	3/8	1.48	1.12
164PLS-8	1/2	1.61	1.22

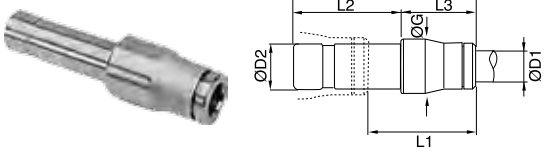


164PLS Union Tee - Metric Tube

PART NO.	TUBE SIZE MM	H MM	L2 MM
164PLS-4M	4	24	19
164PLS-6M	6	30	24
164PLS-8M	8	32	25
164PLS-10M	10	39	31
164PLS-12M	12	43	33

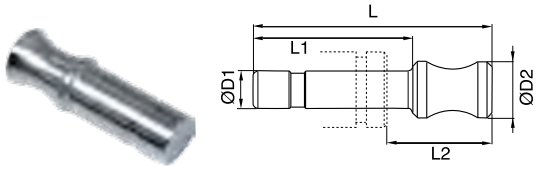
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Fluid System Connectors
Otsego, Michigan

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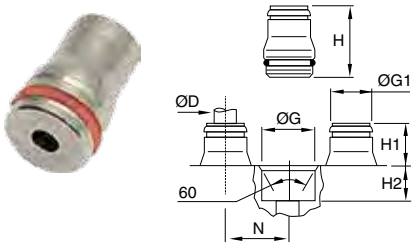
67PLS Tube Reducer - Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	G MM	L MM	L1 MM	L2 MM	L3 MM
67PLS-4M-6M	4	6	10	35	19.0	19	16
67PLS-4M-8M	4	8	10	34	17.0	20	14
67PLS-6M-8M	6	8	12	42	24.0	23	19
67PLS-6M-10M	6	10	12	42	19.0	25	17
67PLS-8M-10M	8	10	15	45	22.5	25	19
67PLS-8M-12M	8	12	15	43	20.0	26	17
67PLS-10M-12M	10	12	17	51	23.0	26	25



639PLS Plug - Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L MM	L1 MM	L2 MM
639PLS-4M	4	6	25.40	17.00	11.10
639PLS-6M	6	8	30.40	19.50	13.50
639PLS-8M	8	10	33.00	20.00	14.40
639PLS-10M	10	12	40.00	25.00	17.00
639PLS-12M	12	14	43.00	26.00	18.70



PLSC Cartridge - Metric

PART NO.	TUBE SIZE MM	G +.1 - 0 MM	G1 MM	H MM	H1 MM	H2 MM	N MM
PLSC-4M	4	9.80	8	18.00	9.50	8.50	11.00
PLSC-6M	6	12.10	10	20.00	11.50	8.50	13.50
PLSC-8M	8	14.80	13	22.00	13.50	8.50	16.00
PLSC-10M	10	17.50	15	25.50	15.00	10.50	20.00
PLSC-12M	12	20.00	17	26.00	15.50	10.50	22.50

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Tube to Male NPT	Metric Tube to Male BSPT	Metric Tube to Male BSPP
W369PLPO Male Elbow  p. A60	**W369PLPO** Male Elbow  p. A60	**369PLPO** Male Elbow  p. A60

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Otsego, Michigan

Oscillating Elbows

MATERIALS OF CONSTRUCTION	
BODY:	"GLASS REINFORCED NYLON 6.6"
COLLAR:	NYLON
GRIPPING RING:	STAINLESS STEEL
D SEAL:	NITRILE
O-RING:	NITRILE
BASE:	NICKEL PLATED BRASS

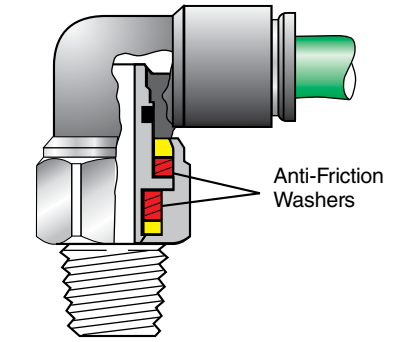
NOMENCLATURE	
EXAMPLE: W369PLPO-4-4	ATTRIBUTE:
W	THREAD SEALANT
3	COMPOSITE BODY
69	MALE ELBOW
PLP	PRESTOLOK
O	OSCILLATING
4	1/4" TUBE O.D.
4	1/4" PIPE THREAD

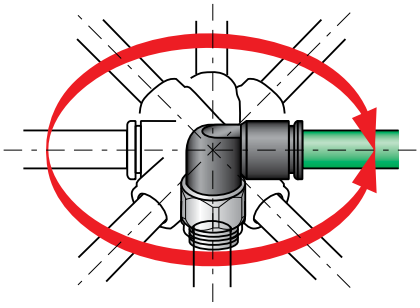
SPECIFICATIONS	
PRESSURE	290 PSI
TEMPERATURE	-4°F TO +175°F



Parker oscillating fittings are designed to satisfy the requirements of industrial automation and robotics. The oscillating fitting features low-friction washers enabling the fitting to rotate in conjunction with the stroke of the cylinder piston. This prevents premature tube wear due to excessive flexing.

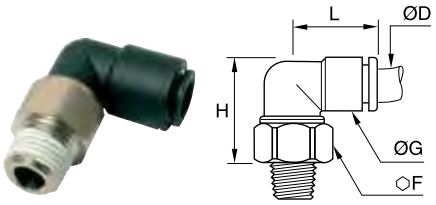
To achieve longevity of the tubing the tube should be designed to move in the same plane as the tube-exit from the fitting. Recoil tubing should not be used with this fitting.





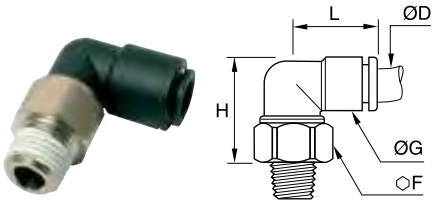
O.D. Tube Inch & mm	5/32 & 4	1/4 & 6	8	10	12
"Maximum rotation speed in radian/second"	190	160	120	90	80

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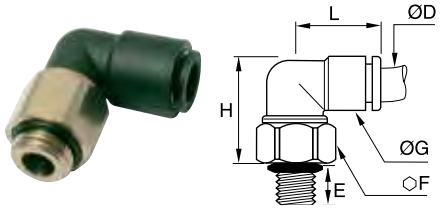
W369PLPO Oscillating Compact Elbow - NPT

PART NO.	TUBE SIZE (IN)	NPT	F	G	H	L
W369PLPO-5/32-2	5/32	1/8	12	.43	.85	.69
W369PLPO-4-2	1/4	1/8	14	.55	1.04	.81
W369PLPO-4-4	1/4	1/4	14	.55	1.04	.81



W369PLPO Oscillating Compact Elbow - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	F	G	H	L
W369PLPO-4M-2R	4	1/8	12	11.0	22.0	17.5
W369PLPO-6M-2R	6	1/8	14	14.0	26.5	20.5
W369PLPO-6M-4R	6	1/4	14	14.0	23.5	20.5
W369PLPO-8M-2R	8	1/8	17	16.0	32.0	23.5
W369PLPO-8M-4R	8	1/4	17	16.0	29.0	23.5
W369PLPO-8M-6R	8	3/8	17	16.0	25.0	23.5
W369PLPO-10M-4R	10	1/4	19	19.5	37.5	29.0
W369PLPO-10M-6R	10	3/8	19	19.5	33.5	29.0
W369PLPO-12M-4R	12	1/4	21	22.0	44.5	33.5
W369PLPO-12M-6R	12	3/8	21	22.0	41.0	33.5



369PLPO Oscillating Compact Elbow - BSPP, M5

PART NO.	TUBE SIZE (MM)	M5/ BSPP	E	F	G	H	L
369PLPO-4M-M5	4	M5X0.8	3.0	12	11.0	24.5	17.5
369PLPO-4M-2G	4	1/8	5.0	13	11.0	23.0	17.5
369PLPO-6M-M5	6	M5X0.8	3.0	12	14.0	27.5	20.5
369PLPO-6M-2G	6	1/8	5.0	14	14.0	27.0	20.5
369PLPO-6M-4G	6	1/4	5.5	16	14.0	25.5	20.5
369PLPO-8M-2G	8	1/8	5.0	17	16.0	33.5	23.5
369PLPO-8M-4G	8	1/4	5.5	17	16.0	31.0	23.5
369PLPO-8M-6G	8	3/8	5.5	20	16.0	29.5	23.5
369PLPO-10M-4G	10	1/4	5.5	19	19.5	50.0	29.0
369PLPO-10M-6G	10	3/8	5.5	20	19.5	37.0	29.0
369PLPO-12M-4G	12	1/4	5.5	21	22.0	46.5	33.5
369PLPO-12M-6G	12	3/8	5.5	21	22.0	45.5	33.5

Pneumatic:
Integrated Fittings



Flow Controls
Compact & Miniature Styles
Brass & Composite Bodies
Right Angle & In-line
Inch & Metric Sizes
Direct Mounting



Check Valves
Compact & light weight
Inch & Metric sizes
NPT, BSPT, BSPP



Blocking Valves
Safe & Immediate
Stopping of Piston Rod
Push-in or Threaded
Terminations
Direct Mounting



Slow Start Fittings
Mount to FRL or Power Unit
Permits Gradual Increase in
Pressure
Prevents Shocks to System



Mini Ball Valves
In-line opening and closing
of a pneumatic circuit



Threshold Sensor Valves
Senses the end of the stroke
Use with air or
solenoid piloted valve
No limit switch
Compact



Compact Flow Controls

FCC731
Meter Out

p. B5

FCC731
Meter Out - BSPT

p. B5

FCC731
Meter Out - BSPP

p. B5

FCCI731
Meter In

p. B5

FCCI731
Meter In - BSPT

p. B5

FCCI731
Meter In - BSPP

p. B5

FCCB731
Bi-Directional

p. B6

FCCB731
Bi-Directional - BSPT

p. B6

FCCB731
Bi-Directional - BSPP

p. B6

FCKC731
Meter Out Knobless

p. B6

FCKC731
Meter Out Knobless - BSPP

p. B6

FCKCI731
Meter In Knobless

p. B7

FCKCI731
Meter In Knobless - BSPP

p. B7

FCKCB731
Bi-directional Knobless - BSPP

p. B7

FCK701C
Knobless Compression Metal - BSPP

p. B7

Miniature Flow Controls

FCM731
Meter Out

p. B9

FCMI731
Meter In

p. B9

FCM731
Meter Out - BSPT

p. B9

FCMI731
Meter In - BSPT

p. B9

FCM731
Meter Out - BSPP

p. B9

FCMI731
Meter In - BSPP

p. B10

FCMB731
Bi-directional - BSPP

p. B10

FCMK731
Meter Out Knobless

p. B10

Swivel Outlet Flow Controls

FCCS731
Meter Out

p. B12

FCCS731
Meter Out - BSPT

p. B12

FCCSI731
Meter In - BSPP

p. B12

FCMS731
Meter Out Miniature

p. B13

FCMS731
Meter Out Miniature - BSPT

p. B13

FCMS731
Meter Out Miniature - BSPP

p. B13

FCMSI731
Meter In Miniature - BSPP

p. B13

FCCS731
Meter Out - BSPP

p. B13

Plug-In Flow Controls

FCMSP731
Meter Out miniature

p. B15

FCMSPI731
Meter In Miniature

p. B15

FCMSP701
Meter Out miniature

p. B15

FCMSPI731
Meter In Miniature

p. B15

FCCSP731
Meter Out Compact

p. B15

FCCSPI731
Meter In Compact

p. B15

In-Line Flow Controls

FC832
In-Line

p. B17

FCB832
Bi-directional

p. B17

FC832
In-Line Metric

p. B17

FCB832
Bi-directional Metric

p. B17

FCPM832
Panel Mountable

p. B18

FC836
Threaded In-Line

p. B18

FC836
Threaded In-Line Metric

p. B18

Metal Flow Controls

FC705
Meter Out

p. B20

FC701
Meter Out - BSPP

p. B20

FCI701
Meter In - BSPP

p. B20

FC708
Meter Out

p. B20

FC702
Meter Out - BSPP

p. B20

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FCI702 Meter In - BSPP  p. B20	**Check Valves**	**32PLCK** In-Line  p. B22	**32PLCK** In-Line - Metric  p. B22	**W68PLCK** Meter Out  p. B22	**W68PLCKI** Meter In  p. B22	**W68PLCK** Meter Out - BSPT  p. B22
W68PLCKI Meter In - BSPT  p. B22	**68PLCK** Meter Out - BSPP  p. B23	**68PLCKI** Meter In - BSPP  p. B23	**VC** Check Valve  p. B23	**Blocking Valves**	**FC601** Lock Out  p. B25	**FC601** Lock Out - BSPT  p. B25
FC601 Lock Out - BSPP  p. B25	**FC602** Lock Out  p. B25	**FC608** Lock Out - BSPT  p. B25	**FC608** Lock Out - BSPP  p. B25	**Slow Start Valves**	**FC908** System Isolating  p. B27	**FC908** Isolated Component - BSPP  p. B27
FCIC908 Isolated Component - BSPP  p. B27	**Threshold Sensor**	**PSBJ731** Pneumatic 5/32 Pilot  p. B31	**PSBJ731** Pneumatic 4mm Pilot  p. B31	**PSPJ731** Pneumatic 10-32 Pilot  p. B31	**PSBJ708** Pneumatic M5 Pilot  p. B31	**PSPE731** Pneumatic / Electric - BSPP  p. B31
Mini Ball Valve	**MVV309** Push-to-Connect Ports  p. B29	**MV308** Male BSPP  p. B29	**MV309** Push-to-Connect Ports, Vented  p. B29	**MVV308** Male BSPP, Vented  p. B29	**MVV308** Male NPT, Vented  p. B29	

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Fluid System Connectors
Otsego, Michigan

Compact Flow Control Valves

MATERIALS OF CONSTRUCTION	
BODY (DEPENDING UPON THE MODEL):	• GLASS REINFORCED NYLON 6.6 • BRASS
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
BASE:	NICKEL-PLATED BRASS

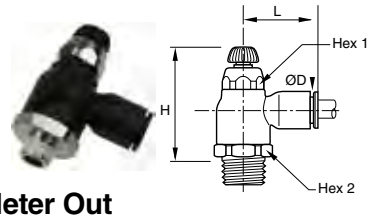
NOMENCLATURE	
EXAMPLE:FCC731-4-2	**ATTRIBUTE:**
FC	FLOW CONTROL
C	COMPACT
7	RIGHT ANGLE
3	NYLON BODY
1	TUBE X PIPE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

APPLICABLE TUBE	
TUBE O.D.	1/8, 5/32, 1/4, 3/8
TUBE O.D. (MM)	4, 6, 8, 10, 12

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR

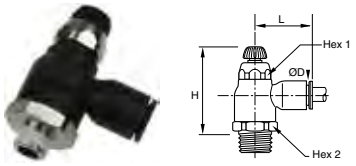


Compact flow control regulators ensure excellent performance of flow and are perfectly suited for reduced spaces due to their small size. The sensitivity of the adjustment screw provides very precise air flow control and regulation. A locking nut guarantees stability of adjustment against vibration tampering of the flow setting.



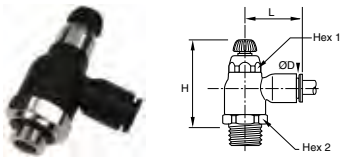
FCC731 Compact Meter Out

PART NO.	TUBE SIZE (IN)	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCC731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-5/32-4	5/32	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-6-4	3/8	1/4	0.91	0.67	2.03	1.71	1.22
FCC731-6-6	3/8	3/8	0.91	0.67	2.03	1.71	1.22
FCC731-6-8	3/8	1/2	.67	.91	2.03	1.71	1.22



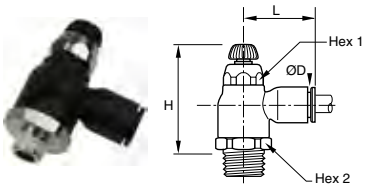
FCC731 Compact Meter Out - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCC731-6M-2R	6	1/8	16	10	36.5	42.5	22.0
FCC731-8M-2R	8	1/8	19	14	40.0	45.0	27.0
FCC731-8M-4R	8	1/4	19	14	40.0	45.0	27.0
FCC731-10M-4R	10	1/4	23	17	43.5	51.5	31.5
FCC731-10M-6R	10	3/8	23	17	43.5	51.5	31.5
FCC731-10M-8R	10	1/2	23	17	43.5	51.5	31.5
FCC731-12M-4R	12	1/4	23	17	43.5	51.5	35.0
FCC731-12M-6R	12	3/8	23	17	43.5	51.5	35.0
FCC731-12M-8R	12	1/2	23	17	43.5	51.5	35.0



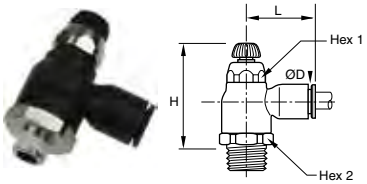
FCC731 Compact Meter Out - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCC731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCC731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCC731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCC731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCC731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCC731-8M-6G	8	3/8	14	19	41.5	48.0	28.0
FCC731-10M-4G	10	1/4	17	23	45.5	53.5	31.5
FCC731-10M-6G	10	3/8	17	23	45.5	54.0	31.5
FCC731-12M-6G	12	3/8	17	23	45.5	54.0	35.0
FCC731-12M-8G	12	1/2	17	24	45.5	54.0	35.0



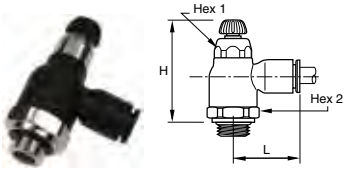
FCCI731 Compact Meter In Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCCI731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCCI731-5/32-4	5/32	1/4	0.63	0.39	1.67	1.44	0.85
FCCI731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCCI731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85



FCCI731 Compact Meter In Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCI731-10M-4R	10	1/4	23	17	43.5	51.5	31.5
FCCI731-10M-6R	10	3/8	23	17	43.5	51.5	31.5
FCCI731-10M-8R	10	1/2	23	17	43.5	51.5	31.5
FCCI731-12M-4R	12	1/4	23	17	43.5	51.5	35.0
FCCI731-12M-6R	12	3/8	23	17	43.5	51.5	35.0
FCCI731-12M-8R	12	1/2	23	17	43.5	51.5	35.0

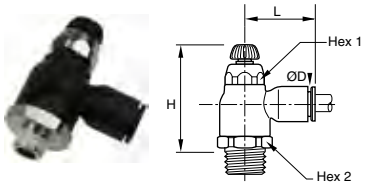


FCCI731 Compact Meter In Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCI731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCCI731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCCI731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCCI731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCCI731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCCI731-8M-6G	8	3/8	14	19	41.5	48.0	28.0
FCCI731-10M-4G	10	1/4	17	23	45.5	53.5	31.5
FCCI731-10M-6G	10	3/8	17	23	45.5	54.0	31.5
FCCI731-12M-8G	12	1/2	17	24	45.5	54.0	35.0

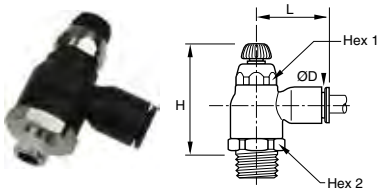
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Otsego, Michigan

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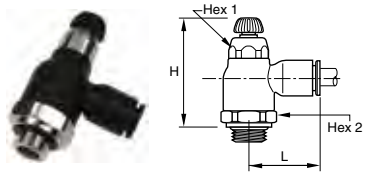
FCCB731 Compact Bi-Directional Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCCB731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85



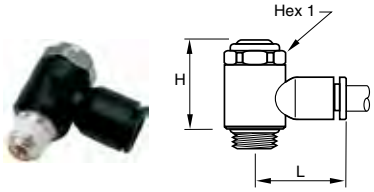
FCCB731 Compact Bi-directional Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCB731-4M-2R	4	1/8	16	10	36.5	42.5	22.0
FCCB731-6M-2R	6	1/8	16	10	36.5	42.5	22.0
FCCB731-6M-4R	6	1/4	16	10	36.5	42.5	22.0
FCCB731-8M-2R	8	1/8	19	14	40.0	45.0	27.0
FCCB731-8M-4R	8	1/4	19	14	40.0	45.0	27.0
FCCB731-8M-6R	8	3/8	19	14	40.0	45.0	27.0



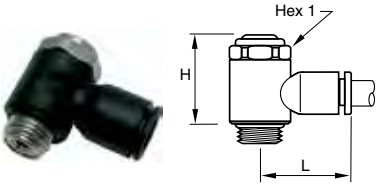
FCCB731 Compact Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCB731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCCB731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCCB731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCCB731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCCB731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCCB731-8M-6G	8	3/8	14	19	41.5	48.0	28.0



FCKC731 Knobless Meter Out Flow Control

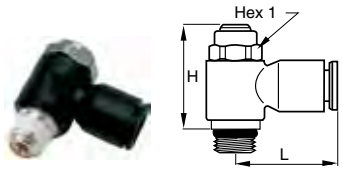
ART NO.	TUBE SIZE (IN)	NPT / UNF	HEX 1 MM	H	L
FCKC731-2-0	1/8	10-32		0.69	0.65
FCKC731-2-2	1/8	1/8	13	0.79	0.75
FCKC731-5/32-0	5/32	10-32		0.69	0.65
FCKC731-5/32-2	5/32	1/8	13	0.79	0.75
FCKC731-4-0	1/4	10-32		0.69	0.77
FCKC731-4-2	1/4	1/8	13	0.79	0.85
FCKC731-4-4	1/4	1/4	17	1.04	0.89
FCKC731-5-2	5/16	1/8	13	0.79	1.02
FCKC731-5-4	5/16	1/4	17	1.04	1.06
FCKC731-6-4	3/8	1/4	17	1.04	1.14
FCKC731-6-6	3/8	3/8	20	1.14	1.36



FCKC731 Knobless Compact Flow Control - BSPP

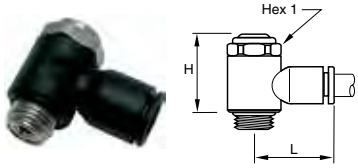
PART NO.	TUBE SIZE (MM)	BSPP / M5	HEX 1	H	L
FCKC731-4M-M5	4	M5X0.8	8.0	17.5	17.0
FCKC731-4M-2G	4	1/8	13.0	25.0	19.0
FCKC731-6M-M5	6	M5X0.8	8.0	17.5	19.0
FCKC731-6M-2G	6	1/8	13.0	25.0	21.0
FCKC731-6M-4G	6	1/4	17.0	26.5	22.0
FCKC731-8M-2G	8	1/8	13.0	25.0	26.0
FCKC731-8M-4G	8	1/4	17.0	26.5	27.0
FCKC731-8M-6G	8	3/8	20.0	37.5	29.0
FCKC731-10M-4G	10	1/4	17.0	26.5	29.0
FCKC731-10M-6G	10	3/8	20.0	37.5	31.0
FCKC731-10M-8G	10	1/2	23.0	43.0	37.0
FCKC731-12M-6G	12	3/8	20.0	37.5	6.8
FCKC731-12M-8G	12	1/2	23.0	43.0	37.0

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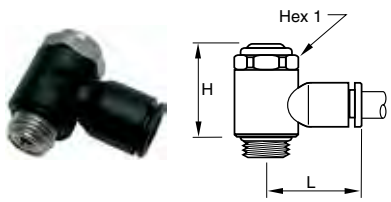
FCKCI731 Knobless Meter In Flow Control

PART NO.	TUBE SIZE (IN)	NPT / UNF	HEX 1 MM	H	L
FCKCI731-5/32-0	5/32	10-32	8	0.69	0.65
FCKCI731-5/32-2	5/32	1/8	13	0.79	0.75
FCKCI731-4-0	1/4	10-32	8	0.69	0.77
FCKCI731-4-2	1/4	1/8	13	0.79	0.85
FCKCI731-4-4	1/4	1/4	17	1.04	0.89



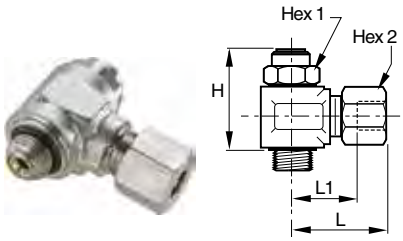
FCKCI731 Knobless Compact Meter In Flow Control-BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	HEX 1	H	L
FCKCI731-4M-M5	4	M5X0.8	8.0	17.5	17.0
FCKCI731-4M-2G	4	1/8	13.0	25.0	19.0
FCKCI731-6M-M5	6	M5X0.8	8.0	17.5	19.0
FCKCI731-6M-2G	6	1/8	13.0	25.0	21.0
FCKCI731-6M-4G	6	1/4	17.0	26.5	22.0
FCKCI731-8M-2G	8	1/8	13.0	25.0	26.0
FCKCI731-8M-4G	8	1/4	17.0	26.5	27.0
FCKCI731-8M-6G	8	3/8	20.0	37.5	29.0
FCKCI731-10M-4G	10	1/4	17.0	26.5	29.0
FCKCI731-10M-6G	10	3/8	20.0	37.5	31.0



FCKCB731 Knobless Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP / M5	HEX 1	H	L
FCKCB731-4M-M5	4	M5X0.8	8	17.5	17.0
FCKCB731 -4M-2G	4	1/8	13	25.0	19.0
FCKCB731 -6M-M5	6	M5X0.8	8	17.5	19.0
FCKCB731 -6M-2G	6	1/8	13	25.0	21.0
FCKCB731 -6M-4G	6	1/4	17	26.5	22.0
FCKCB731 -8M-2G	8	1/8	13	25.0	26.0
FCKCB731 -8M-4G	8	1/4	17	26.5	27.0
FCKCB731 -8M-6G	8	3/8	20	37.5	29.0



FCK701C Knobless Compression Metal Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H	L	L1
FCK701C-4M-2G	4	1/8	13	10	26.0	25.5	14.5
FCK701C-6M-2G	6	1/8	13	13	26.0	25.5	14.5
FCK701C-6M-4G	6	1/4	17	13	31.5	28.5	17.5
FCK701C-8M-2G	8	1/8	13	14	26.0	29.5	15.5
FCK701C-8M-4G	8	1/4	17	14	31.5	31.0	17.0
FCK701C-10M-4G	10	1/4	17	19	31.5	35.0	19.0
FCK701C-10M-6G	10	3/8	20	19	44.5	37.5	19.0
FCK701C-10M-8G	10	1/2	23	19	50.0	37.5	19.0
FCK701C-12M-6G	12	3/8	20	22	44.5	38.0	21.5
FCK701C-12M-8G	12	1/2	23	22	50.0	38.0	21.5

Flow Controls Miniature

MATERIALS OF CONSTRUCTION	
BODY (DEPENDING UPON THE MODEL):	• GLASS REINFORCED NYLON 6.6 • BRASS
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
BASE:	NICKEL-PLATED BRASS

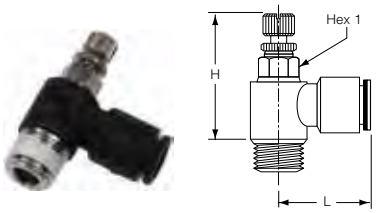
NOMENCLATURE	
EXAMPLE: FCM731-4-2	**ATTRIBUTE:**
FC	FLOW CONTROL
M	MINIATURE
7	RIGHT ANGLE
3	NYLON BODY
1	TUBE X PIPE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

APPLICABLE TUBE	
TUBE O.D.	1/8, 5/32, 1/4
TUBE O.D. (MM)	3, 4, 6, 8

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR

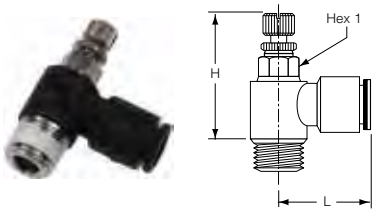


The miniature flow control regulator is especially adapted for all very small sized pneumatic applications (micro-pneumatic in particular). They are specifically designed for use with small bore cylinders (pancake / flat cylinders). Miniature flow control regulators are available in meter out, meter in and bi-directional versions.



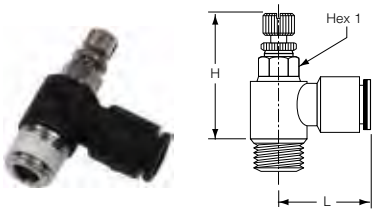
FCM731 Miniature Meter Out Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCM731-2-0	1/8	10-32	6	1.14	0.91	0.67
FCM731-2-2	1/8	1/8	7	1.41	1.26	0.69
FCM731-5/32-0	5/32	10-32	6	1.02	0.93	0.67
FCM731-5/32-2	5/32	1/8	7	1.16	1.06	0.71
FCM731-4-0	1/4	10-32	6	1.02	0.93	0.73
FCM731-4-2	1/4	1/8	7	1.16	1.06	0.75
FCM731-4-4	1/4	1/4	8	1.28	1.18	0.77



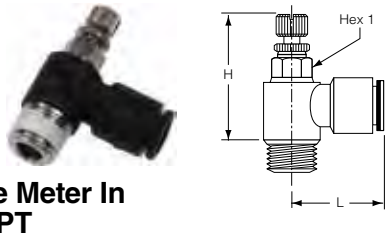
FCMI731 Miniature Meter In Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCMI731-2-0	1/8	10-32	6	1.14	0.91	0.67
FCMI731-5/32-0	5/32	10-32	6	1.02	0.93	0.67
FCMI731-5/32-2	5/32	1/8	7	1.16	1.06	0.71
FCMI731-4-0	1/4	10-32	6	1.02	0.93	0.73
FCMI731-4-2	1/4	1/8	7	1.16	1.06	0.75
FCMI731-4-4	1/4	1/4	8	1.28	1.18	0.77



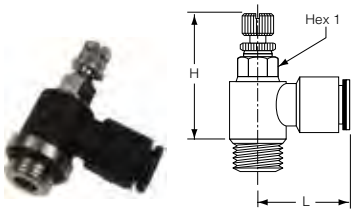
FCM731 Miniature Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	H CLOSED	H OPEN	L
FCM731-4M-2R	4	1/8	7	25.0	27.5	18.0
FCM731-6M-2R	6	1/8	7	25.0	27.5	18.5
FCM731-6M-4R	6	1/4	8	27.5	30.0	19.0
FCM731-6M-6R	6	3/8	17	31.5	34.0	19.0
FCM731-8M-2R	8	1/8	13	28.5	33.0	26.0
FCM731-8M-4R	8	1/4	16	31.0	35.0	27.5
FCM731-8M-6R	8	3/8	20	36.0	42.0	29.0



FCMI731 Miniature Meter In Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	H CLOSED	H OPEN	L
FCMI731-4M-2R	4	1/8	7	25.0	27.5	18.0
FCMI731-6M-2R	6	1/8	7	25.0	27.5	18.5
FCMI731-6M-4R	6	1/4	8	27.5	30.0	19.0
FCMI731-8M-2R	8	1/8	13	28.5	33.0	26.0
FCMI731-8M-4R	8	1/4	16	31.0	35.0	27.5
FCMI731-8M-6R	8	3/8	20	36.0	42.0	29.0

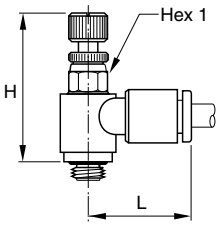


FCM731 Miniature Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	L
FCM731-3M-M3	3	M3X0.5	6	23.5	26.0	17.0
FCM731-3M-M5	3	M5X0.8	6	23.5	26.0	17.0
FCM731-4M-M3	4	M3X0.5	6	23.5	26.0	16.5
FCM731-4M-M5	4	M5X0.8	6	23.5	26.0	17.0
FCM731-4M-2G	4	1/8	7	27.0	29.5	18.0
FCM731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCM731-6M-2G	6	1/8	7	27.0	29.5	18.5
FCM731-6M-4G	6	1/4	8	30.0	32.5	19.0
FCM731-8M-2G	8	1/8	13	26.5	31.0	26.0
FCM731-8M-4G	8	1/4	16	29.0	34.0	27.5
FCM731-8M-6G	8	3/8	20	36.0	42.0	29.0

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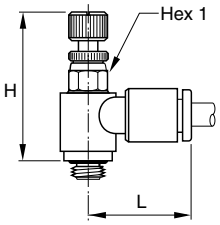




FCMI731 Miniature Meter In Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	L
FCMI731-3M-M3	3	M3X0.5	6	23.5	26.0	17.0
FCMI731-3M-M5	3	M5X0.8	6	23.5	26.0	17.0
FCMI731-4M-M5	4	M5X0.8	6	23.5	26.0	17.0
FCMI731-4M-2G	4	1/8	7	27.0	29.5	18.0
FCMI731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCMI731-6M-2G	6	1/8	7	27.0	29.5	18.5
FCMI731-6M-4G	6	1/4	8	30.0	32.5	19.0
FCMI731-8M-2G	8	1/8	13	26.5	31.0	26.0
FCMI731-8M-4G	8	1/4	16	29.0	34.0	27.5
FCMI731-8M-6G	8	3/8	20	36.0	42.0	29.0

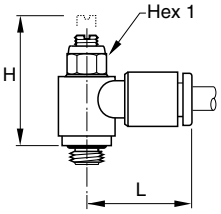




FCMB731 Miniature Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	L
FCMB731-4M-M5	4	M5X0.8	6	23.5	26.0	16.5
FCMB731-4M-2G	4	1/8	7	27.0	29.5	17.0
FCMB731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCMB731-6M-2G	6	1/8	7	27.0	29.5	18.0
FCMB731-6M-4G	6	1/4	8	30.0	32.5	18.5





FCMK731 Knobless Mini Meter Out Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCMK731-2-0	1/8	10-32	6	0.79	0.65	0.65
FCMK731-2-2	1/8	1/8	6	0.85	0.71	0.71
FCMK731-5/32-0	5/32	10-32	6	0.79	0.65	0.65
FCMK731-5/32-2	5/32	1/8	6	0.85	0.71	0.71
FCMK731-4-0	1/4	10-32	6	0.79	0.65	0.65
FCMK731-4-2	1/4	1/8	6	0.85	0.71	0.73
FCMK731-4-4	1/4	1/4	6	0.97	0.83	0.73

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Flow Controls Swivel Outlet

MATERIALS OF CONSTRUCTION	
BODY:	GLASS REINFORCED NYLON 6.6
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
BASE:	NICKEL-PLATED BRASS

NOMENCLATURE	
EXAMPLE: FCMS731-5/32-2	**ATTRIBUTE:**
FC	FLOW CONTROL
M	MINIATURE
S	SWIVEL OUTLET
7	RIGHT ANGLE
3	NYLON BODY
1	TUBE X PIPE
5/32	5/32 TUBE O.D.
2	1/8 PIPE THREAD

APPLICABLE TUBE	
TUBE O.D.	5/32, 1/4, 3/8
TUBE O.D. (MM)	4, 6, 8, 10, 12

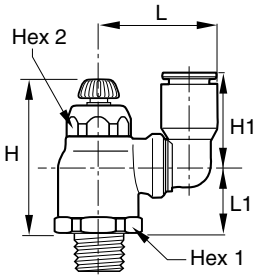
SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR



Flow control regulators with “swivel outlet” are especially designed to allow a vertical or angled tube exit where access is restricted. The swivel outlet comes with instant push-in connection to ease installation. Flow control regulators with swivel outlet are available in meter out and meter in versions.

B

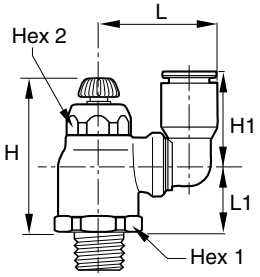




FCCS731 Compact Swivel Outlet Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	H1	L	L1
FCCS731-4-2	1/4	1/8	19	10	1.87	2.09	0.63	0.93	0.65
FCCS731-4-4	1/4	1/4	19	14	1.79	1.99	0.73	1.00	0.89
FCCS731-6-4	3/8	1/4	23	17	1.93	2.20	1.04	1.34	0.97
FCCS731-6-6	3/8	3/8	23	17	1.93	2.20	1.04	1.34	0.97

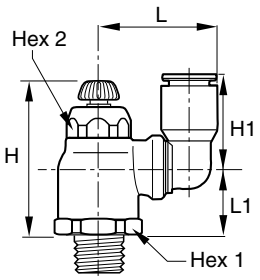




FCCS731 Compact Swivel Outlet Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	H1	L	L1
FCCS731-6M-4R	6	1/4	16	10	36.5	42.5	16.0	23.5	16.5
FCCS731-8M-2R	8	1/8	19	14	40.0	46.0	23.0	28.0	17.5
FCCS731-8M-4R	8	1/4	19	14	40.0	46.0	23.0	28.0	17.5

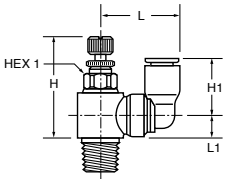




FCCSI731 Compact Swivel Outlet Meter In - BSPP

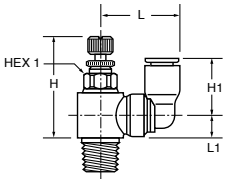
PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	H1	L	L1
FCCSI731-8M-2G	8	1/8	19	14	41.5	48.0	23.0	28.0	19.0
FCCSI731-8M-4G	8	1/4	19	14	41.5	48.0	23.0	28.0	19.5

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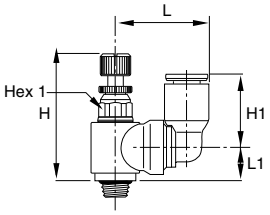
FCMS731 Mini Swivel Outlet Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	H CLOSED	H OPEN	H1	L	L1
FCMS731-5/32-0	5/32	10-32	6	0.96	1.08	0.55	0.73	0.26
FCMS731-5/32-2	5/32	1/8	8	1.08	1.20	0.55	0.73	0.33

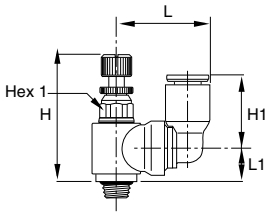
FCMS731 Miniature Swivel Outlet Flow Control - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMS731-4M-2R	4	1/8	7	25	28.5	14.5	11.5	6.0
FCMS731-6M-2R	6	1/8	7	25	28.5	16.0	11.5	6.0

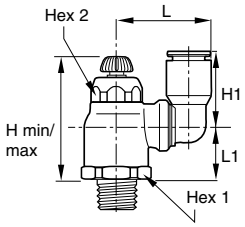
FCMS731 Miniature Swivel Outlet - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMS731-4M-M5	4	M5X0.8	6	24.5	27.5	14.5	19.5	6.5
FCMS731-4M-2G	4	1/8	7	27.5	31.0	14.5	20.0	8.5
FCMS731-6M-M5	6	M5X0.8	6	24.5	27.5	16.0	21.5	6.5
FCMS731-6M-2G	6	1/8	7	27.5	31.0	16.0	22.0	8.5

FCMSI731 Miniature Swivel Outlet Meter In - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMSI731-4M-M5	4	M5X0.8	6	24.5	27.5	14.5	19.5	6.5
FCMSI731-4M-2G	4	1/8	7	27.5	31.0	14.5	20.0	8.5
FCMSI731-6M-M5	6	M5X0.8	6	24.5	27.5	16.0	21.5	6.5
FCMSI731-6M-2G	6	1/8	7	27.5	31.0	16.0	22.0	8.5

FCCS731 Compact Swivel Outlet - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	H1	L	L1
FCCS731-6M-2G	6	1/8	16	10	38.0	44.0	16.0	23.5	18.0
FCCS731-6M-4G	6	1/4	16	10	36.5	42.5	16.0	23.5	16.5
FCCS731-8M-2G	8	1/8	19	14	41.5	48.0	23.0	28.0	19.0
FCCS731-8M-4G	8	1/4	19	14	41.5	48.0	23.0	28.0	19.5
FCCS731-8M-6G	8	3/8	19	14	41.5	48.0	23.0	28.0	17.5
FCCS731-10M-4G	10	1/4	23	17	45.5	53.5	26.5	35.0	21.0
FCCS731-10M-6G	10	3/8	23	17	45.5	54.0	26.5	35.0	21.5
FCCS731-12M-6G	12	3/8	23	17	45.5	54.0	31.0	38.0	21.5
FCCS731-12M-8G	12	1/2	23	17	45.5	54.0	31.0	38.0	21.0

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Flow Controls Plug-In

MATERIALS OF CONSTRUCTION	
BODY:	GLASS REINFORCED NYLON 6.6
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
TAILPIECE:	NICKEL-PLATED BRASS

NOMENCLATURE	
EXAMPLE: FCM731-4-2	**ATTRIBUTE:**
FC	FLOW CONTROL
M	MINIATURE
7	RIGHT ANGLE
3	NYLON BODY
1	TUBE X PIPE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

APPLICABLE TUBE	
TUBE O.D.	1/8, 5/32, 1/4
TUBE O.D. (MM)	4, 6, 8, 10, 12

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR

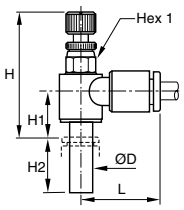


Plug-in flow control regulators can be directly mounted into existing fittings and allow very compact installations. They are particularly suited for mounting in manifolds using cartridges. Their design and function give equal performance to that of flow control regulators with threaded connections.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

B

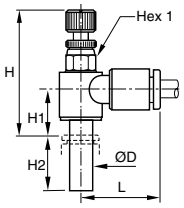




FCMSP731 Plug-In Mini Flow Control

PART NO.	TUBE SIZE (IN)	HEX 1 MM	H OPEN	H CLOSED	H1	H2	L
FCMSP731-2	1/8	6	1.04	0.94	0.12	0.59	0.67
FCMSP731-5/32	5/32	6	1.10	1.00	0.37	0.61	0.67
FCMSP731-4	1/4	7	1.18	1.08	0.12	0.73	0.73

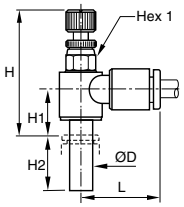




FCMSPI731 Plug-In Mini Meter In Flow Control

PART NO.	TUBE SIZE (IN)	HEX 1 MM	H OPEN	H CLOSED	H1	H2	L
FCMSPI731-2	1/8	6	1.04	0.94	0.12	0.59	0.67
FCMSPI731-5/32	5/32	6	1.10	1.00	0.37	0.61	0.67
FCMSPI731-4	1/4	7	1.18	1.08	0.12	0.73	0.73

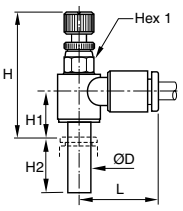




FCMSP731 - Plug-In Miniature Flow Control

PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCMSP731-4M	4	6	25.5	28.0	9.5	15.5	17.0
FCMSP731-6M	6	7	27.5	29.0	10.5	17.0	18.5

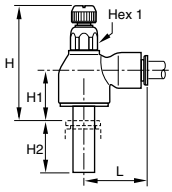




FCMSPI731 Plug-In Mini Meter In Flow Control

PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCMSPI731-4M	4	6	25.5	28.0	9.5	15.5	17.0
FCMSPI731-6M	6	7	27.5	29.0	10.5	17.0	18.5

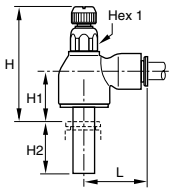




FCCSP731 Plug-In Compact Flow Control

PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCCSP731-6M	6	10	35.0	41.0	14.0	17.0	22.0
FCCSP731-8M	8	14	39.5	46.5	16.0	21.5	28.0
FCCSP731-10M	10	17	43.5	51.5	17.5	24.5	31.5
FCCSP731-12M	12	17	43.0	51.0	17.0	27.0	31.5





FCCSPI731 Plug-In Compact Meter-In Flow Control

PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCCSPI731-6M	6	10	35.0	41.0	14.0	17.0	22.0
FCCSPI731-8M	8	14	39.5	46.5	16.0	21.5	28.0
FCCSPI731-10M	10	17	43.5	51.5	17.5	24.5	31.5
FCCSPI731-12M	12	17	43.0	51.0	17.0	27.0	31.5

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Otsego, Michigan

Flow Controls In-Line

MATERIALS OF CONSTRUCTION	
BODY:	GLASS REINFORCED NYLON 6.6
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
BASE:	NICKEL-PLATED BRASS

NOMENCLATURE	
EXAMPLE:FC832-4	**ATTRIBUTE:**
FC	FLOW CONTROL
8	IN-LINE
3	NYLON BODY
2	TUBE X TUBE
4	1/4 TUBE O.D.

APPLICABLE TUBE	
TUBE O.D.	5/32, 1/4, 5/16, 3/8, 1/2
TUBE O.D. (MM)	4, 6, 8, 10, 12

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR



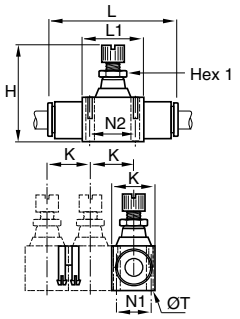
In-line flow controls are unidirectional flow control valves. Intake air flows freely through the flow control; exhaust air is metered out through a specially designed adjustment screw. An arrow on the body of the valve indicates the direction of controlled flow. They can be easily added to existing circuitry. Simply splice it into the cylinder port line.

They can be used individually or they may be stacked together using two joining clips.

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B

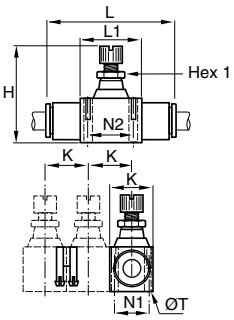




FC832 In-Line Flow Control

PART NO.	TUBE SIZE (IN)	HEX 1 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FC832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13
FC832-6	3/8	14	2.03	2.38	0.94	2.87	1.29	0.62	1.01	1.60
FC832-8	1/2	14	2.24	2.63	1.09	3.35	1.37	0.78	1.07	0.16

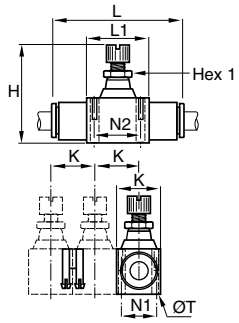




FCB832 In-Line Bi-directional Flow Control

PART NO.	TUBE SIZE (IN)	HEX 1 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FCB832-5/32	5/32	5	1.15	1.31	0.47	1.52	0.59	0.31	0.43	0.09
FCB832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FCB832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13

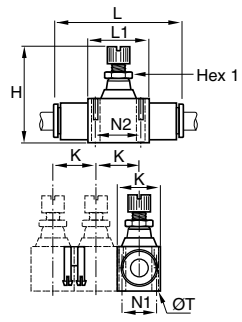




FC832 In-Line Flow Control

PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC832-6M	6	8	39.5	44.5	17.0	54.0	23.0	11.0	17.0	3.2
FC832-8M	8	11	44.0	50.0	18.5	60.5	26.0	12.5	20.0	3.2
FC832-10M	10	14	52.0	61.0	24.0	76.0	33.0	16.0	26.0	4.2
FC832-12M	12	14	57.5	67.5	28.0	86.0	35.0	20.0	27.5	4.2





FCB832 In-Line Bi-directional Flow Control

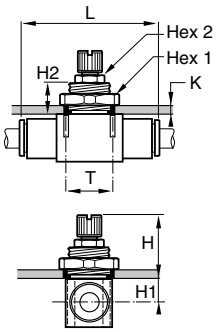
PART NO.	TUBE SIZE (MM)	HEX 1	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FCB832-4M	4	5	29.5	33.5	12.0	39.0	15.0	8.0	11.0	2.2
FCB832-6M	6	8	39.5	44.5	17.0	54.0	23.0	11.0	17.0	3.2
FCB832-8M	8	11	44.0	50.0	18.5	60.5	26.0	12.5	20.0	3.2

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B

FCPM832 In-Line Panel Mountable Flow Control

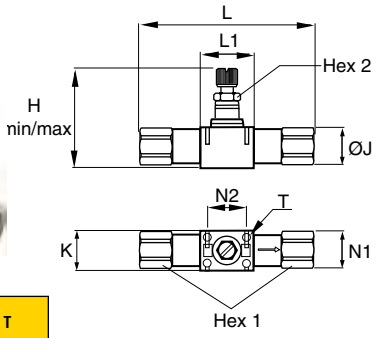




PART NO.	TUBE SIZE (MM)	HEX 1	HEX 2	H CLOSED	H OPEN	K	L	H1	H2	T
FCPM832-4M	4	14		21.5	25.5	6.0	39.0	6.5	11.0	10.5
FCPM832-6M	6	19		27.5	32.5	7.0	54.0	7.5	13.5	16.5
FCPM832-8M	8	24	11	28.5	34.5	7.0	60.5	9.0	13.5	18.5
FCPM832-10M	10	30	14	29.5	38.5	7.0	76.0	11.5	13.5	24.5
FCPM832-12M	12	32	14	32.0	42.0	8.0	86.0	12.5	15.5	27.5

FC836 Threaded In-Line Flow Control

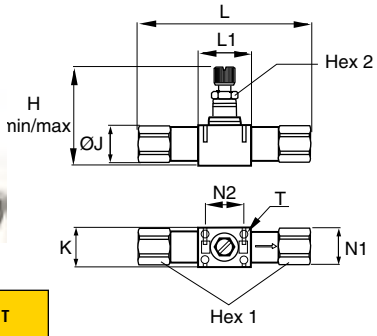




PART NO.	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC836-2	1/8	13	8.00	1.56	1.75	0.67	2.70	0.91	0.43	0.67	0.12
FC836-4	1/4	16	11.00	1.73	1.97	0.73	3.27	1.02	0.49	0.79	0.12
FC836-6	3/8	22	14.00	2.05	2.40	0.94	3.82	1.30	0.63	1.02	0.16
FC836-8	1/2	24	14.00	2.26	2.66	1.10	4.76	1.38	0.79	1.08	0.16

FC836 Threaded In-Line Flow Control - BSPP





PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	K	L	N1	N2	T
FC836-2G	1/8	13	8	39.5	44.5	17.0	68.5	11.0	17.0	3.2
FC836-4G	1/4	16	11	44.0	50.0	18.5	83.0	12.5	20.0	3.2
FC836-6G	3/8	19	14	52.0	61.0	24.0	97.0	16.0	26.0	4.2
FC836-8G	1/2	24	14	57.5	67.5	28.0	121.0	20.0	27.5	4.2

Compact Metal Flow Control Valves

MATERIALS OF CONSTRUCTION	
BODY:	TREATED BRASS
GRIPPING RING:	STAINLESS STEEL
ADJUSTMENT SCREWS	NICKEL-PLATED BRASS
LOCKING NUT:	NICKEL-PLATED BRASS
BASE:	NICKEL-PLATED BRASS

NOMENCLATURE	
EXAMPLE:FC705-4-2	ATTRIBUTE:
FC	FLOW CONTROL
7	RIGHT ANGLE
0	BRASS BODY
5	TUBE X PIPE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

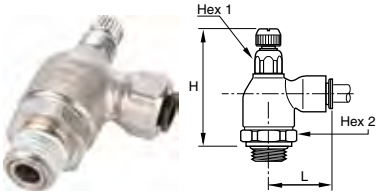
APPLICABLE TUBE	
TUBE O.D.	1/8, 5/32, 1/4, 3/8
TUBE O.D. (MM)	4, 6, 8, 10, 12, 14

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	30° TO 160°F
WORKING FLUID:	COMPRESSED AIR



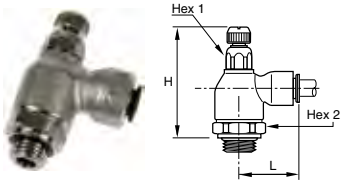
Metal flow control regulators are suited for use in severe conditions (temperatures, sparks, abrasion, etc). The screw and locking nut have been designed for easy manipulation, by hand. Adjustment can be made with a screwdriver and locking by use of a wrench.

B



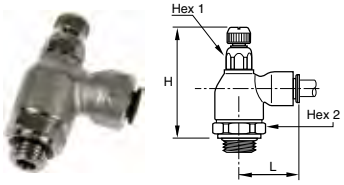
FC705 Push-to-Connect Meter Out Metal Flow Control

PART NO.	TUBE SIZE (IN)	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	L
FC705-5/32-2	5/32	1/8	19	10	1.79	2.01	0.85
FC705-4-2	1/4	1/8	19	10	1.79	2.01	0.97
FC705-4-4	1/4	1/4	19	10	1.79	2.01	0.97
FC705-6-4	3/8	1/4	19	14	1.91	2.11	1.14
FC705-6-6	3/8	3/8	25	17	2.15	2.40	1.40



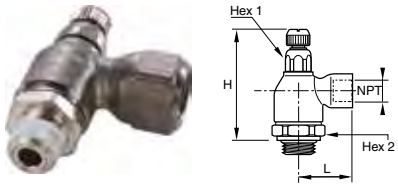
FC701 Push-to-Connect Meter Out Metal Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FC701-4M-2G	4	1/8	10	19	47.0	53.0	21.0
FC701-6M-2G	6	1/8	10	19	47.0	53.0	24.5
FC701-6M-4G	6	1/4	10	19	47.5	53.0	24.5
FC701-8M-2G	8	1/8	14	19	50.0	55.0	29.0
FC701-8M-4G	8	1/4	14	19	50.0	56.0	29.0
FC701-8M-6G	8	3/8	17	25	56.0	62.0	30.5
FC701-10M-4G	10	1/4	14	19	50.0	56.0	35.0
FC701-10M-6G	10	3/8	17	25	56.0	62.0	35.0
FC701-12M-6G	12	3/8	17	25	56.0	62.0	38.0
FC701-12M-8G	12	1/2	17	25	55.0	62.0	38.0
FC701-14M-8G	14	1/2	17	25	55.0	62.0	41.0



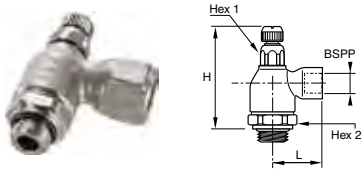
FCI701 Push-to-Connect Meter In Metal Flow Control - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCI701-4M-2G	4	1/8	10	19	47.0	53.0	21.0
FCI701 -6M-2G	6	1/8	10	19	47.0	53.0	24.5
FCI701 -6M-4G	6	1/4	10	19	47.5	53.0	24.5
FCI701 -8M-2G	8	1/8	14	19	50.0	55.0	29.0
FCI701 -8M-4G	8	1/4	14	19	50.0	56.0	29.0
FCI701 -8M-6G	8	3/8	17	25	56.0	62.0	30.5



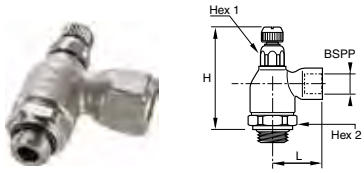
FC708 Threaded Port Meter Out Flow Control

PART NO.	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	L
FC708-2	1/8	19	10	1.79	2.01	0.89
FC708-4	1/4	19	14	1.91	2.11	1.28
FC708-6	3/8	25	17	2.15	2.40	1.36
FC708-8	1/2	25	17	2.15	2.40	1.50



FC702 Threaded Port Meter Out Metal Flow Control - BSPP

PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FC702-2G	1/8	10	19	47.0	52.5	22.5
FC702-4G	1/4	14	19	50.5	55.5	32.0
FC702-6G	3/8	17	25	56.0	62.0	34.5
FC702-8G	1/2	17	25	55.0	62.0	37.5



FCI702 Threaded Port Meter In Metal Flow Control - BSPP

PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCI702-2G	1/8	10	19	47.0	52.5	22.5
FCI702-4G	1/4	14	19	50.5	55.5	32.0

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Flow Control Check Valves

MATERIALS OF CONSTRUCTION	
BODY:	• 32PLCK: NYLON/NICKEL PLATED BRASS • 68PLCK: NYLON BODY WITH NICKEL-PLATED BRASS BASE • VC: ACETAL
GRIPPING RING:	STAINLESS STEEL
O-RING:	• NITRILE (32PLCK & 68PLCK) • EPDM (VC)

NOMENCLATURE	
EXAMPLE: W68PLCK-4-2	**ATTRIBUTE:**
W	WHITE THREAD SEALANT
68	TUBE X PIPE
PL	PRESTOLOK
CK	CHECK VALVE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

NOMENCLATURE	
EXAMPLE: A4VC4-MG	**ATTRIBUTE:**
A	ACETAL
4	1/4 TUBE O.D.
VC	VALVE, CHECK
4	1/4 TUBE O.D.
MG	METAL GRIPPING RING

APPLICABLE TUBE	
TUBE O.D.	• PLCK: 5/32, 1/4, 5/16, 3/8 • VC: 1/4, 5/16, 3/8
TUBE O.D. (MM)	PLCK: 4, 6, 8, 10, 12

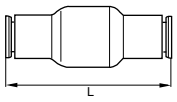
SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	34°F TO 150°F
CRACKING PRESSURE:	• PLCK: 7 PSI • VC: 1/3 PSI
WORKING FLUID:	COMPRESSED AIR



These in-line check valves allows air to pass in one direction while blocking flow in the other direction. Their extreme compactness and light weight make them suitable as a safety item in compressed air circuits. The body of the fitting contains an arrow to indicate the direction of flow.

B

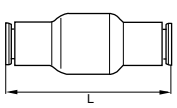




32PLCK In-Line Check Valve

PART NO.	TUBE SIZE (IN)	L
32PLCK-5/32	5/32	1.52
32PLCK-4	1/4	1.61
32PLCK-5	5/16	2.03
32PLCK-6	3/8	2.50

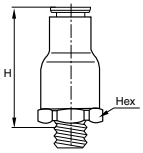




32PLCK In-Line Check Valve

PART NO.	TUBE SIZE (MM)	L
32PLCK-4M	4	38.5
32PLCK-6M	6	41.0
32PLCK-8M	8	51.5
32PLCK-10M	10	63.5
32PLCK-12M	12	66.5

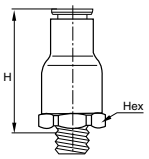




W68PLCK Male Check Valve

PART NO.	TUBE SIZE (IN)	NPT / UNF	HEX MM	H
68PLCK-5/32-0	5/32	10-32	9	1.26
W68PLCK-5/32-2	5/32	1/8	16	1.12
W68PLCK-4-2	1/4	1/8	19	1.42
W68PLCK-4-4	1/4	1/4	19	1.42
W68PLCK-6-4	3/8	1/4	23	1.65
W68PLCK-6-6	3/8	3/8	23	1.65

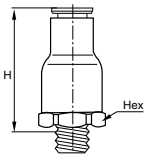




W68PLCKI Male Check Valve Meter In

PART NO.	TUBE SIZE (IN)	NPT / UNF	HEX MM	H
68PLCKI-5/32-0	5/32	10-32	9	1.26
W68PLCKI-5/32-2	5/32	1/8	16	1.12
W68PLCKI-4-2	1/4	1/8	19	1.42
W68PLCKI-4-4	1/4	1/4	19	1.42
W68PLCKI-6-4	3/8	1/4	23	1.65
W68PLCKI-6-6	3/8	3/8	23	1.65

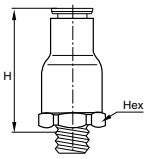




W68PLCK Male Check Valve Meter Out - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	H
W68PLCK-4M-2R	4	1/8	16	28.5
W68PLCK -6M-2R	6	1/8	16	30.5
W68PLCK -6M-4R	6	1/4	16	30.5
W68PLCK -8M-2R	8	1/8	19	36.0
W68PLCK -8M-4R	8	1/4	19	36.0
W68PLCK -10M-6R	10	3/8	23	42.0
W68PLCK -12M-6R	12	3/8	23	42.0
W68PLCK -12M-8R	12	1/2	23	44.0



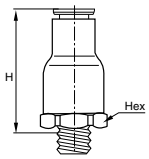


W68PLCKI Male Check Valve Meter In - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX 1	H
W68PLCKI-4M-2R	4	1/8	16	28.5
W68PLCKI -6M-2R	6	1/8	16	30.5
W68PLCKI -6M-4R	6	1/4	16	30.5
W68PLCKI -8M-2R	8	1/8	19	36.0
W68PLCKI -8M-4R	8	1/4	19	36.0

B

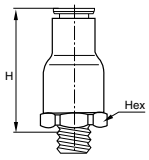




68PLCK Male Check Valve Meter Out - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H
68PLCK-4M-M5	4	M5X0.8	9	32.0
68PLCK-4M-2G	4	1/8	16	28.5
68PLCK-6M-2G	6	1/8	16	30.5
68PLCK-6M-4G	6	1/4	16	30.5
68PLCK-8M-2G	8	1/8	19	36.0
68PLCK-8M-4G	8	1/4	19	36.0

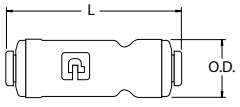




68PLCKI Male Check Valve Meter In - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H
68PLCKI-4M-M5	4	M5X0.8	9	32.0
68PLCKI-6M-2G	6	1/8	16	30.5
68PLCKI-8M-2G	8	1/8	19	36.0
68PLCKI-8M-4G	8	1/4	19	36.0
68PLCKI-10M-6G	10	3/8	23	42.0
68PLCKI-12M-6G	12	3/8	23	42.0
68PLCKI-12M-8G	12	1/2	23	44.0





VC – Check Valve

PART NO.	TUBE SIZE	L	O.D.
A4VC4-MG	1/4	2.00	.66
A5VC5-MG	5/16	2.10	.70
A6VC6-MG	3/8	2.15	.80

Flow Control Blocking Valves

MATERIALS OF CONSTRUCTION	
BODY:	TREATED BRASS
GRIPPING RING:	STAINLESS STEEL
SEALS, DIAPHRAGM:	NITRILE

NOMENCLATURE	
EXAMPLE: FC601-4-2	**ATTRIBUTE:**
FC	FLOW CONTROL
6	BLOCKING
0	BRASS BODY
1	TUBE X PIPE
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

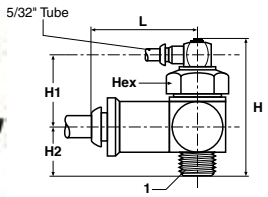
APPLICABLE TUBE	
TUBE O.D.	1/8, 5/32, 1/4, 3/8
TUBE O.D. (MM)	4, 6, 8, 10, 12, 14

SPECIFICATIONS	
PRESSURE RANGE:	15 TO 145 PSI
TEMPERATURE RANGES:	-4° TO 160°F
NUMBER OF CYCLES:	>10 MILLION AT 68°F AND 1 HZ
LEAK RATE:	<3.2 CCM
WORKING FLUID:	COMPRESSED AIR



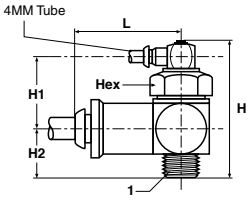
Blocking valves prevents damage to work and equipment in the event of a loss of pressure. Blocking valves which are mounted in pairs on a cylinder lock the piston by simultaneously cutting off the supply and exhaust. Functional locks are more precise and rapid when blocking valves are located on the cylinder: the volume of air in the pipework no longer needs to be taken into consideration.

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Otsego, Michigan

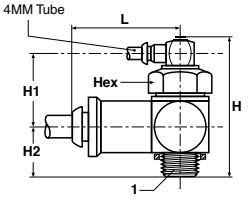
FC601 Push-to-Connect Lock Out Valves

PART NO.	TUBE SIZE (IN)	NPT	HEX MM	H	H1	H2	L
FC601-4-2	1/4	1/8	21	2.03	1.24	0.79	1.10
FC601-4-4	1/4	1/4	21	2.03	1.24	0.79	1.10
FC601-6-6	3/8	3/8	24	2.19	1.14	1.04	1.38
FC601-8-8	1/2	1/2	24	2.19	1.14	1.04	1.69

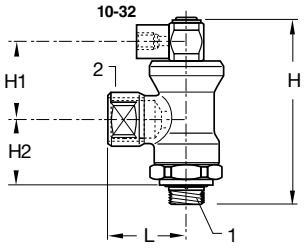
FC601 Push-to-Connect Lock-Out Valve - BSPT

PART NO.	TUBE SIZE (MM)	BSPT	HEX	H	H1	H2	L
FC601-6M-2R	6	1/8	21	53	24.5	21.0	28.0
FC601-6M-4R	6	1/4	21	53	24.5	21.0	28.0
FC601-8M-4R	8	1/4	21	53	24.5	21.0	28.0
FC601-8M-6R	8	3/8	24	56	25.0	23.0	34.5
FC601-10-6R	10	3/8	24	56	25.0	23.0	35.0
FC601-12M-8R	12	1/2	24	56	25.0	23.0	37.5

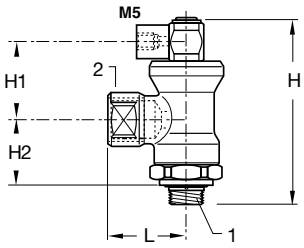
FC601 Push-to-Connect Lock-Out Valve - BSPP

PART NO.	TUBE SIZE (MM)	BSPP	HEX	H	H1	H2	L
FC601-6M-2G	6	1/8	21	53	24.5	21.0	28.0
FC601-6M-4G	6	1/4	21	53	24.5	21.0	28.0
FC601-8M-4G	8	1/4	21	53	24.5	21.0	28.0
FC601-8M-6G	8	3/8	24	56	25.0	23.0	34.5
FC601-10M-6G	10	3/8	24	56	25.0	23.0	35.0
FC601-12M-8G	12	1/2	24	56	25.0	23.0	37.5

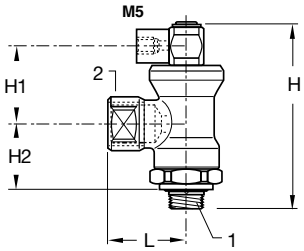
FC602 Threaded Port Lock Out Valves

PART NO.	1 NPT	2 NPT	HEX MM	H	H1	H2	L
FC602-2	1/8	1/8	21	2.03	1.24	0.79	1.04
FC602-4	1/4	1/4	21	2.03	1.24	0.79	1.04
FC602-6	3/8	3/8	24	2.19	1.14	1.04	1.34
FC602-8	1/2	1/2	24	2.19	1.14	1.04	1.57

FC608 Threaded Port Lock-Out Valve - BSPT

PART NO.	BSPT 1	BSPT 2	HEX	H	H1	H2	L
FC608-4R-2R	1/4	1/8	21	51.5	31.5	20.0	26.5
FC608-4R-4R	1/4	1/4	21	51.5	31.5	20.0	26.5
FC608-6R-6R	3/8	3/8	24	55.5	29.0	26.5	34.0
FC608-8R-8R	1/2	1/2	24	55.5	29.0	26.5	40.0

FC608 Threaded Port Lock-Out Valve - BSPP

PART NO.	BSPP 1	BSPP 2	HEX	H	H1	H2	L
FC608-4G-2G	1/8	1/4	21	53	24.5	21.0	28.0
FC608-4G-4G	1/4	1/4	21	53	24.5	21.0	28.0
FC608-6G-6G	3/8	3/8	24	56	25.0	23.0	34.0
FC608-8G-8G	1/2	1/2	24	56	25.0	23.0	41.0

Slow Start Flow Control Valve

MATERIALS OF CONSTRUCTION	
BODY:	NICKEL-PLATED BRASS
SEALS:	NITRILE
THREADS:	NICKEL-PLATED BRASS

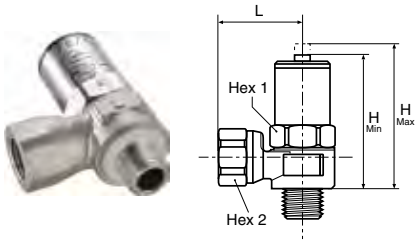
NOMENCLATURE	
EXAMPLE: FC908-6	**ATTRIBUTE:**
FC	FLOW CONTROL
9	SLOW START
0	BRASS BODY
8	PIPE X PIPE
6	3/8 PIPE THREAD

SPECIFICATIONS	
PRESSURE RANGE:	40 TO 150 PSI
TEMPERATURE RANGES:	5° TO 140°F
WORKING FLUID:	COMPRESSED AIR



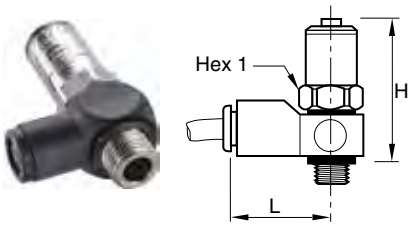
Slow start valves enables you to control the rate supply pressures introduced into your system after it has been vented (e.g. at the end of the work day, emergency stops, or adjustments). This gradual increase in pressure or “slow start”, prevents harmful mechanical shock which may occur when full system pressure is immediately introduced into a system. When the slow start valve is used, it gradually returns cylinders to the position they were in before the system air was vented.

B



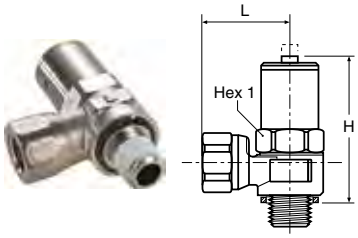
FC908 Slow Start Valve for System Isolating

PART NO.	NPT	HEX 1 MM	HEX 2 MM	H MIN	H MAX	L
FC908-4	1/4	7/8	3/4	2.17	2.44	1.22
FC908-6	3/8	7/8	3/4	2.17	2.44	1.36



FC908 Push-to-Connect Slow Start Valve - BSPP for Isolated Component

PART NO.	TUBE SIZE (MM)	BSPP	HEX 1	H CLOSED	H OPEN	L
FC908-8M-4G	8	1/4	17	54	61	35
FC908-10M-4G	10	1/4	22	55	62	41
FC908-10M-6G	10	3/8	22	55	62	41



FCIC908 Slow Start Valve - BSPP for Isolated Component

PART NO.	BSPP	HEX 1	H CLOSED	H OPEN	L
FCIC908-6G	3/8	22	55	62	31

Mini Ball Valves

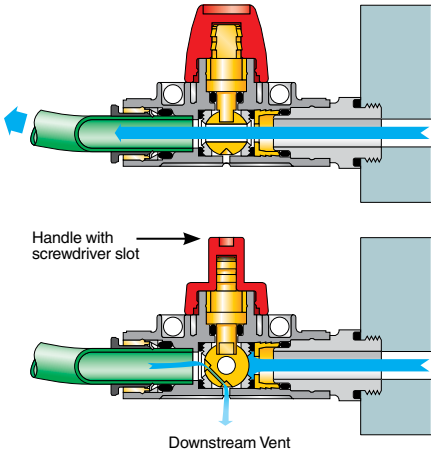
MATERIALS OF CONSTRUCTION	
BODY:	NYLON
STEM:	BRASS
STEM SEAL:	NBR
O-RING:	NBR
HANDLE:	NYLON
GRIPPING RING:	STAINLESS STEEL

NOMENCLATURE	
EXAMPLE: MVV308-4-2	**ATTRIBUTE:**
MV	MINI VALVE
V	VENTED
308	TUBE TO PIPE THREAD
4	1/4" TUBE O.D.
2	1/8" PIPE THREAD

SPECIFICATIONS	
WORKING PRESSURE:	145 PSI
TEMPERATURE:	-4°F TO +175°F
VACUUM:	28" HG (99% OF VACUUM)



Parker mini ball valves enable in-line opening and closing of a pneumatic circuit. The screwdriver slot allows opening and closing, even when access is difficult. Depending on the model, the handle is differentiated by color and marked with the corresponding pneumatic symbol, in order to enable immediate identification by the user.

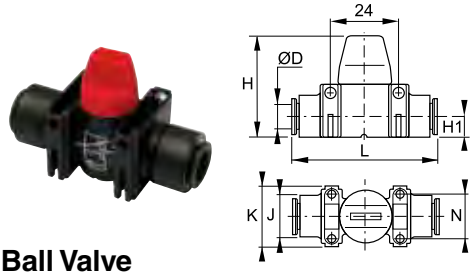


Mounting Hole Diameter



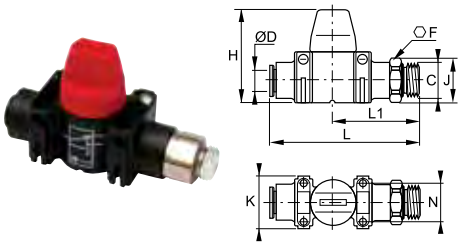
BLUE HOLES	YELLOW HOLES	PART NUMBERS	
3.2	4.2	MVV309-5/32 MVV309-4 MVV309-5 MVV309-6 MVV309-4M MVV309-6M MVV309-8M MVV308-5/32-2 MVV308-4-2 MVV308-4-4 MVV308-5-4	MVV308-6M-2G MVV308-8M-4G MV309-5/32 MV309-4 MV309-5 MV309-6 MV309-4M MV309-6M MV309-8M MV308-6M-2G
4.2	4.2	MVV309-10M MVV309-12M MVV308-6-4 MVV308-6-6 MVV308-10M-6G	MV309-10M MV309-12M MV308-10M-6G MV308-12M-8G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



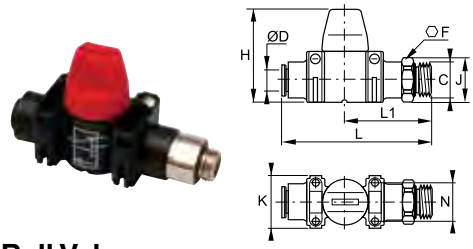
MVV309 Mini Ball Valve
Vented Push-To-Connect Ports

PART NO.	TUBE SIZE (IN)	H	H1	J	K	L	N
MVV309-5/32	5/32	1.46	.30	.59	.87	2	.64
MVV309-4	1/4	1.46	.30	.59	.87	2	.64
MVV309-5	5/16	1.46	.30	.59	.87	2	.64
MVV309-6	3/8	1.69	.43	.79	1.18	2.6	.87
METRIC							
MVV309-4M	4	37.00	7.50	15.00	22.00	51	16.20
MVV309-6M	6	37.00	7.50	15.00	22.00	52	16.20
MVV309-8M	8	37.00	7.50	15.00	22.00	52	16.20
MVV309-10M	10	43.00	11.00	20.00	30.00	66	22.00
MVV309-12M	12	43.00	11.00	20.00	30.00	66	22.00



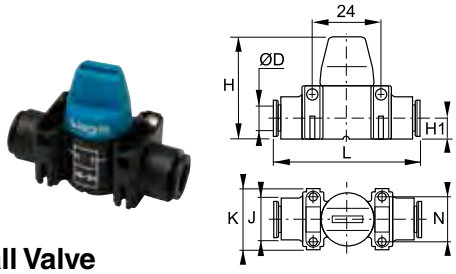
MVV308 Mini Ball Valve
Vented NPT to Push-To-Connect Port

PART NO.	TUBE SIZE (IN)	NPT	F	H	J	K	L	L1	N
MVV308-5/32-2	5/32	1/8	13	1.46	.55	.87	2.44	1.46	.64
MVV308-4-2	1/4	1/8	13	1.46	.55	.87	2.44	1.46	.64
MVV308-4-4	1/4	1/4	14	1.46	.59	.87	2.44	1.38	.64
MVV308-5-4	5/16	1/4	14	1.46	.59	1.18	2.40	1.61	.64
MVV308-6-4	3/8	1/4	16	1.69	.69	1.18	2.40	1.65	.87
MVV308-6-6	3/8	3/8	18	1.69	.77	1.18	2.91	1.65	.87



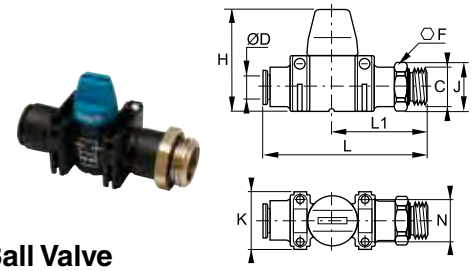
MVV308 Mini Ball Valve
Vented BSPP to Push-To-Connect Port

PART NO.	TUBE SIZE (MM)	BSPP	F	H	J	K	L	L1	N
MVV308-6M-2G	6	G1/8	13	37	14.00	22	62	37	16.20
MVV308-8M-4G	8	G1/4	16	37	17.50	22	61	35	16.20
MVV308-10M-6G	10	G3/8	20	43	22.00	30	74	41	22.00



MV309 Mini Ball Valve
Push-To-Connect Ports

PART NO.	TUBE SIZE (IN)	H	H1	J	K	L	N
MV309-5/32	5/32	1.46	.30	.59	.87	2.01	.64
MV309-4	1/4	1.46	.30	.59	.87	2.05	.64
MV309-5	5/16	1.46	.30	.59	.87	2.05	.64
MV309-6	3/8	1.69	.43	.79	1.18	2.60	.64
METRIC							
MV309-4M	4	37.00	7.50	15.00	22.00	51.00	16.20
MV309-6M	6	37.00	7.50	15.00	22.00	52.00	16.20
MV309-8M	8	37.00	7.50	15.00	22.00	52.00	16.20
MV309-10M	10	43.00	11.00	20.00	30.00	66.00	16.20
MV309-12M	12	43.00	11.00	20.00	30.00	66.00	16.20



MV308 Mini Ball Valve
BSPP to Push-To-Connect Port

PART NO.	TUBE SIZE (MM)	BSPP	F	H	J	K	L	L1	N
MV308-6M-2G	6	G1/8	13	37	14	22	62	37	16.20
MV308-10M-6G	10	G3/8	20	43	22	30	74	41	16.20
MV308-12M-8G	12	G1/2	24	43	26	30	75	42	16.20

Threshold Sensor

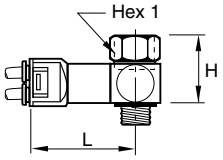
SPECIFICATIONS: MODELS PSBJ, PSPJ	
WORKING TEMPERATURE	5° TO 140°F
WORKING PRESSURE	45 TO 115 PSI
BREAKING PRESSURE	8.5 PSI
RESPONSE TIME	3 MS

SPECIFICATIONS: MODEL PSPE	
WORKING PRESSURE	45 TO 115 PSI
BREAKING PRESSURE	7 PSI
CURRENT RATING	5A/250VAC – 5W/48VDC

UL LISTED COMPONENT	
RESET PRESSURE	10 PSI

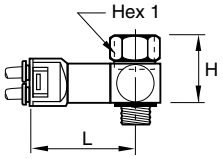


The sensor fitting detects the absence of pressure and translates it to a high pressure pneumatic output. When used to monitor the decaying or exhausting side of a pneumatic cylinder's piston, it emits a positive output. When the cylinder comes to the end of its stroke, wherever that may be, the signal emitted from the sensor can then be used to pilot the next step.

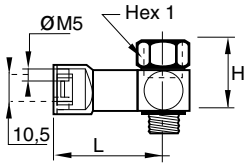
PSBJ731 Pneumatic Threshold Sensor - 5/32 Pilot

PART NO.	NPT / UNF	HEX MM	H	L
PSBJ731-0	10-32	5/16	0.62	1.70
PSBJ731-2	1/8	9/16	0.90	1.74
PSBJ731-4	1/4	5/8	1.09	1.81
PSBJ731-6	3/8	7/8	1.13	1.91
PSBJ731-8	1/2	1	1.17	2.05

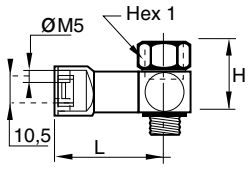
PSBJ731 Pneumatic Threshold Sensor - 4mm Pilot

PART NO.	BSPP	HEX 1	H	L
PSBJ731-M5	M5X0.8	8	16	43.5
PSBJ731-2G	1/8	14	23	44.5
PSBJ731-4G	1/4	17	28	46.5
PSBJ731-6G	3/8	22	29	49.0
PSBJ731-8G	1/2	27	30	52.5

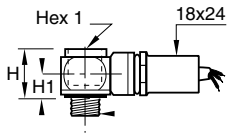
PSPJ731 Pneumatic Threshold Sensor - 10-32 Pilot

PART NO.	NPT	HEX 1 MM	H	L
PSPJ731-2	1/8	9/16	0.90	1.58
PSPJ731-4	1/4	5/8	1.09	1.66
PSPJ731-6	3/8	7/8	1.13	1.76

PSBJ708 Pneumatic Threshold Sensor - M5 Pilot

PART NO.	BSPP	HEX 1	H	L
PSBJ708-2G	1/8	14	23	40.5
PSBJ708-4G	1/4	17	28	42.5

PSPE731 Pneumatic / Electric Threshold Sensor - BSPP

PART NO.	BSPP	HEX 1	H	H1	L
PSPE731-M5	M5X0.8	8	20	10	49
PSPE731-2G	1/8	6	20	10	52
PSPE731-4G	1/4	8	20	10	54
PSPE731-6G	3/8	10	22	12	57
PSPE731-8G	1/2	12	26	14	58

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

B

Notes

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Water & Beverage: Thermoplastic Fittings and Valves



LIQUIfit

Suitable for water, beverages, co2
High chemical resistance
Approved for contact with food
Mechanical resistance over time



TrueSeal™

Acetal Fittings meet NSF-61
All Plastic Body Designs
FDA Compliant
NSF-51 Listed



Fast & Tite®

Stainless Steel Grab Ring
FDA Compliant
NSF-51 Listed
O-ring Seal



Par-Barb®

FDA Compliant
NSF-51 Listed
High Strength,
Chemically Inert



C

Tube to Male NPTF

6548 Male Y Connector  p. C11

6505 Male Connector  p. C5

6579 Male Elbow  p. C6

6521 Male Standpipe  p. C6

6509 Male Elbow Swivel  p. C6

6508 Branch Tee Swivel  p. C7

6503 Run Tee Swivel  p. C7

Tube to Male BSPT

6505 Male Connector  p. C5

6579 Male Elbow  p. C6

6521 Male Standpipe  p. C6

6509 Male Elbow Swivel  p. C7

6508 Branch Tee Swivel  p. C7

6503 Run Tee Swivel  p. C8

Tube to Female Connector

6325 Faucet Connector - UNS  p. C6

6315 Female Connector - NPTF  p. C5

6315 Female Connector - BSPT  p. C5

Tube to Tube

6306 Union  p. C8

6304 Union Tee  p. C8

6302 Union Elbow  p. C9

6340 Union Y  p. C9

Bulkhead Union

6316 Bulkhead Union  p. C5

Plug-ins

6366 Tube Reducer  p. C9

6388 Plug-In Branch Tee  p. C10

6382 Plug-In Elbow  p. C10

6383 Plug-In Run Tee  p. C10

Auxiliary Components

6351 End Cap  p. C10

6326 Plug  p. C11

6322 Barbed Connector  p. C11

Metric Tube to Metric Tube

6306 Union  p. C8

6404 Union Tee  p. C8

6302 Union Elbow  p. C9

6340 Union Y  p. C9

6307 Cross  p. C11

Metric Bulkhead Union

6316 Metric Bulkhead Union  p. C5

Metric Plug-Ins

6366 Tube Reducer  p. C9

6388 Plug-In Branch Tee  p. C10

6382 Plug-In Elbow  p. C10

6383 Plug-In Run Tee  p. C11

6380 Plug-In 45° Elbow  p. C11

Metric Auxiliary Components

6351 End Cap  p. C10

6326 Plug  p. C11

6322 Barbed Connector  p. C11

Liquifit Ball Valves

VME Male Elbow  p. C12

Parker Hannifin Corporation
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VFE
Female Elbow



p. C12

VUC
Union Connector



p. C12

VEU
Elbow Union



p. C13

VMC
Male Connector



p. C13

VFC
Female Connector



p. C13

VUCPB
Union Connector



p. C13

C

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Fluid System Connectors
Otsego, Michigan

LIQUIfit Fittings

C

MATERIALS OF CONSTRUCTION	
BODIES:	ENGINEERED POLYMER NYLON 11
GRIPPING RING:	STAINLESS STEEL
"D" SEAL:	EPDM

SPECIFICATIONS	
WORKING PRESSURE	MAXIMUM 230 PSI
TEMPERATURE	35° TO 200° F
NOTE: THE WORKING SPECIFICATION DEPENDS ON THE TYPE AND WALL THICKNESS OF THE TUBE, THE TYPE OF FLUID, FLUID TEMPERATURE, AND AMBIENT TEMPERATURE.	

NOMENCLATURE	
EXAMPLE: 6505 56 11WP2	ATTRIBUTE:
6505	MALE CONNECTOR
56	1/4 TUBE SIZE
11	1/4 THREAD SIZE
W	WHITE
P2	PACKAGE TYPE

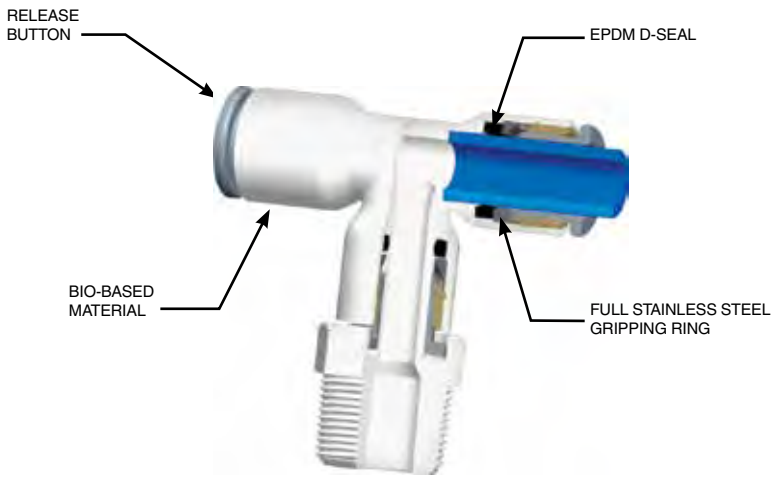
NSF ≤0.25% lead



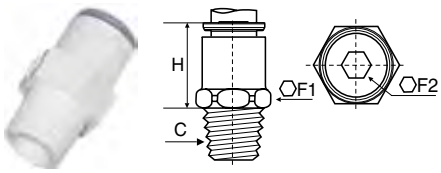
The LIQUIfit body is manufactured from a unique bio-based, high performance polymer produced from renewable plants, to expand the use of non-fossil-based resources.

Renewable bio-based high performance materials

- Suitable for: water, beverages, co2
- High chemical resistance (chlorine, cleaning agents, uv)
- Approved for contact with food: FDA, NSF51, NSF61, WRAS inch
- Mechanical resistance over time
- All items in the LIQUIfit range are SILICONE FREE

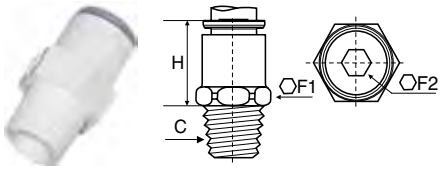


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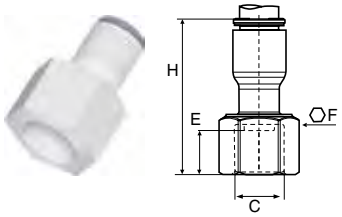
6505 Male Connector Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	F1	F2	H
6505 56 11WP2	1/4	1/8	1/2	5/32	.67
6505 56 14WP2	1/4	1/4	9/16	5/32	.67
6505 56 18WP2	1/4	3/8	3/4	1/4	.85
6505 60 11WP2	3/8	1/8	3/4	5/32	.87
6505 60 14WP2	3/8	1/4	3/4	1/4	.87
6505 60 18WP2	3/8	3/8	3/4	1/4	.87
6505 60 22WP2	3/8	1/2	15/16	1/4	1.06
6505 62 18WP2	1/2	3/8	15/16	3/8	1.10
6505 62 22WP2	1/2	1/2	15/16	3/8	1.10



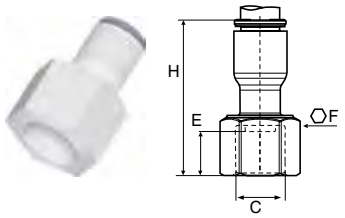
6505 Male Connector Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F1	F2	H
6505 04 10WP2	4	1/8	11	3	18.00
6505 04 13WP2	4	1/4	14	3	18.00
6505 06 10WP2	6	1/8	11	4	18.00
6505 06 13WP2	6	1/4	14	4	18.00
6505 08 10WP2	8	1/8	17	6	20.00
6505 08 13WP2	8	1/4	17	6	20.00
6505 08 17WP2	8	3/8	17	6	20.00
6505 10 13WP2	10	1/4	17	7	21.50
6505 10 17WP2	10	3/8	19	7	21.50
6505 10 21WP2	10	1/2	22	7	21.50
6505 12 17WP2	12	3/8	19	9	24.50
6505 12 21WP2	12	1/2	22	9	24.50



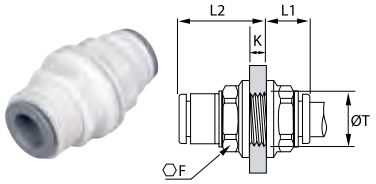
6315 Female Connector Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	E	F	H
6315 56 14WP2	1/4	1/4	14	11/16	1.18
6315 60 18WP2	3/8	3/8	14	3/16	1.42



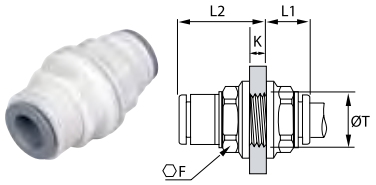
6315 Female Connector Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	E	F	H
6315 06 10WP2	6	1/8	11	13	32.00
6315 06 13WP2	6	1/4	14	16	33.00
6315 08 13WP2	8	1/4	14	16	33.50
6315 08 17WP2	8	3/8	14	20	36.00



6316 Bulkhead Union Inch Tube

PART NO.	TUBE SIZE IN	F	K MAX	L1	L2	T MIN
6316 04 00WP2	5/32	.51	.22	.41	.61	.41
6316 56 00WP2	1/4	.59	.33	.39	.79	.49
6316 08 00WP2	5/16	.71	.57	.41	1.06	.61
6316 60 00WP2	3/8	.87	.57	.49	1.16	.73
6316 62 00WP2	1/2	1.41	.81	.67	1.59	1.00



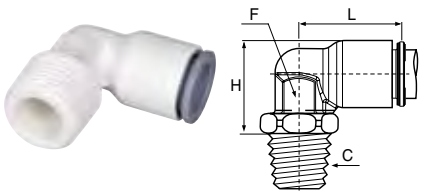
6316 Bulkhead Union Metric Tube

PART NO.	TUBE SIZE MM	F	K MAX	L1	L2	T MIN
6316 04 00WP2	4	13	5.50	10.50	15.50	10.50
6316 06 00WP2	6	15	8.50	10.00	20.00	12.50
6316 08 00WP2	8	18	14.50	10.50	27.00	15.50
6316 10 00WP2	10	22	14.50	13.00	30.00	18.50
6316 12 00WP2	12	26	18.50	15.50	35.00	22.50

C

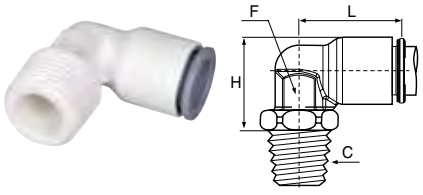
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Fluid System Connectors
Otsego, Michigan

C



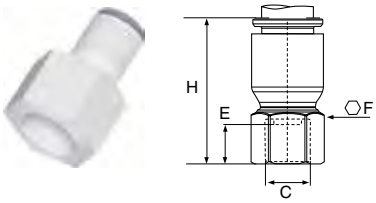
6579 Fixed Elbow Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	F	H	L
6579 56 11WP2	1/4	1/8	3/8	.87	.71
6579 56 14WP2	1/4	1/4	3/8	1.03	.71
6579 56 18WP2	1/4	3/8	3/8	1.04	.71
6579 60 14WP2	3/8	1/4	1/2	1.26	1.02
6579 60 18WP2	3/8	3/8	1/2	1.26	1.02



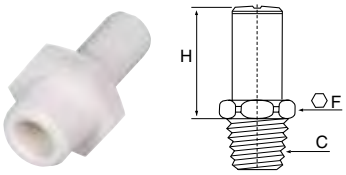
6579 Fixed Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F	H	L
6579 06 10WP2	6	1/8	10	14	19
6579 06 13WP2	6	1/4	10	14	19
6579 06 17WP2	6	3/8	10	14	19



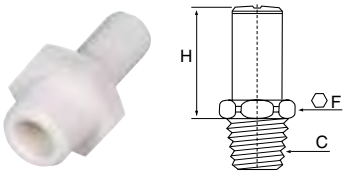
6325 Faucet Connector Inch Tube to UNS

PART NO.	TUBE SIZE IN	C UNS	E	F	H
6325 56 133WP2	1/4	7/16-24	27	9/16	1.22
6325 60 133WP2	3/8	7/16-24	27	9/16	1.26



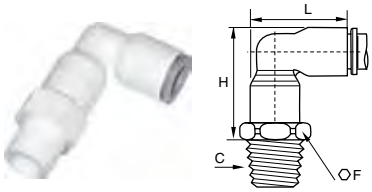
6521 Stem Adapter Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	F	H
6521 56 11WP2	1/4	1/8	1/2	.75
6521 56 14WP2	1/4	1/4	1/2	.75
6521 56 18WP2	1/4	3/8	3/4	.77
6521 60 14WP2	3/8	1/4	3/4	.98
6521 60 18WP2	3/8	3/8	3/4	.98
6521 62 18WP2	1/2	3/8	15/16	1.22
6521 62 22WP2	1/2	1/2	15/16	1.28



6521 Stem Adapter Metric Tube to BSPT

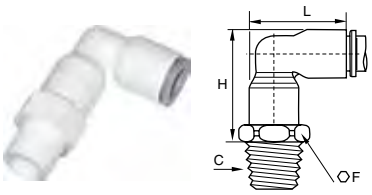
PART NO.	TUBE SIZE MM	C BSPT	F	H
6521 06 10WP2	6	1/8	13	19
6521 06 13WP2	6	1/4	14	19
6521 06 17WP2	6	3/8	17	19
6521 08 10WP2	8	1/8	19	23
6521 08 13WP2	8	1/4	19	23
6521 08 17WP2	8	3/8	19	23
6521 10 13WP2	10	1/4	19	25
6521 10 17WP2	10	3/8	19	25
6521 10 21WP2	10	1/2	22	25
6521 12 17WP2	12	3/8	22	28
6521 12 21WP2	12	1/2	22	28



6509 Swivel Elbow Inch Tube to NPTF

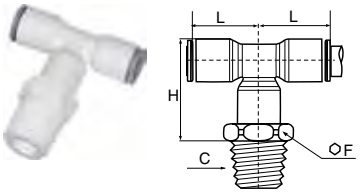
PART NO.	TUBE SIZE IN	C NPTF	F	H	L
6509 56 11WP2	1/4	1/8	1/2	1.10	.93
6509 56 14WP2	1/4	1/4	9/16	1.10	.93
6509 56 18WP2	1/4	3/8	3/4	1.12	.93
6509 60 14WP2	3/8	1/4	3/4	1.50	1.34
6509 60 18WP2	3/8	3/8	3/4	1.50	1.34
6509 62 18WP2	1/2	3/8	15/16	1.99	1.83
6509 62 22WP2	1/2	1/2	15/16	1.99	1.83

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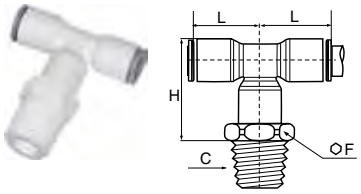
6509 Swivel Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F	H	L
6509 06 10WP2	6	1/8	13	28	24.00
6509 06 13WP2	6	1/4	14	28	24.00
6509 06 17WP2	6	3/8	17	28	24.00
6509 08 10WP2	8	1/8	19	34	29.50
6509 08 13WP2	8	1/4	19	34	29.50
6509 08 17WP2	8	3/8	19	34	29.50
6509 10 13WP2	10	1/4	19	38	34.50
6509 10 17WP2	10	3/8	19	38	34.50
6509 10 21WP2	10	1/2	22	38	34.50
6509 12 17WP2	12	3/8	22	44	40.00
6509 12 21WP2	12	1/2	22	44	40.00



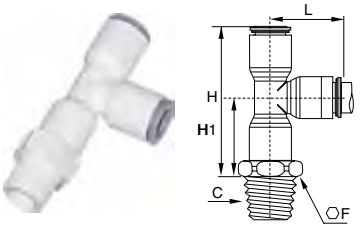
6508 Swivel Branch Tee Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F	H	L
6508 06 10WP2	6	1/8	13	28.00	18.00
6508 06 13WP2	6	1/4	14	28.00	18.00
6508 06 17WP2	6	3/8	17	28.00	18.00
6508 08 10WP2	8	1/8	19	34.00	23.00
6508 08 13WP2	8	1/4	19	34.00	23.00
6508 08 17WP2	8	3/8	19	34.00	23.00
6508 10 13WP2	10	1/4	19	38.00	26.50
6508 10 17WP2	10	3/8	19	38.00	26.50
6508 10 21WP2	10	1/2	22	38.00	26.50
6508 12 17WP2	12	3/8	22	44.00	31.00
6508 12 21WP2	12	1/2	22	44.00	31.00



6508 Swivel Branch Tee Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	F	H	L
6508 56 11WP2	1/4	1/8	1/2	1.10	.71
6508 56 14WP2	1/4	1/4	9/16	1.10	.71
6508 56 18WP2	1/4	3/8	3/4	1.10	.71
6508 60 14WP2	3/8	1/4	3/4	1.50	1.02
6508 60 18WP2	3/8	3/8	3/4	1.50	1.02
6508 62 18WP2	1/2	3/8	15/16	1.97	1.40
6508 62 22WP2	1/2	1/2	15/16	2.00	1.40



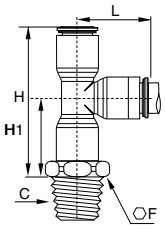
6503 Swivel Run Tee Inch Tube to NPTF

PART NO.	TUBE SIZE IN	C NPTF	F	H	H1	L
6503 56 11WP2	1/4	1/8	1/2	1.60	.88	.71
6503 56 14WP2	1/4	1/4	9/16	1.60	.88	.71
6503 56 18WP2	1/4	3/8	3/4	1.63	.90	.71
6503 60 14WP2	3/8	1/4	3/4	1.63	1.18	1.02
6503 60 18WP2	3/8	3/8	3/4	1.63	1.18	1.02
6503 62 18WP2	1/2	3/8	15/16	2.29	1.55	1.40
6503 62 22WP2	1/2	1/2	15/16	2.99	1.59	1.40

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Fluid System Connectors
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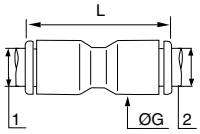




6503 Swivel Run Tee Metric Tube to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F	H	H1	L
6503 06 10WP2	6	1/8	13	40.00	22.00	18.50
6503 06 13WP2	6	1/4	14	40.00	22.00	18.50
6503 06 17WP2	6	3/8	17	40.00	22.00	18.50
6503 08 10WP2	8	1/8	19	50.00	27.00	23.00
6503 08 13WP2	8	1/4	19	50.00	27.00	23.00
6503 08 17WP2	8	3/8	19	50.00	27.00	23.00
6503 10 13WP2	10	1/4	19	56.50	30.00	26.50
6503 10 17WP2	10	3/8	19	56.50	30.00	26.50
6503 10 21WP2	10	1/2	22	56.50	30.00	26.50
6503 12 17WP2	12	3/8	22	65.50	34.50	31.00
6503 12 21WP2	12	1/2	22	65.50	34.50	31.00

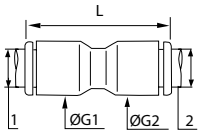




6306 Union Connector Inch Tube

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	G	L
6306 56 00WP2	1/4	1/4	.43	1.18
6306 08 00WP2	5/16	5/16	.53	1.46
6306 60 00WP2	3/8	3/8	.63	1.65
6306 62 00WP2	1/2	1/2	.87	2.24
6306 56 60WP2	1/4	3/8	.63	1.61
6306 56 08WP2	1/4	5/16	.53	1.46
6306 08 60WP2	5/16	3/8	.63	1.65
6306 08 62WP2	5/16	1/2	.87	2.16
6306 60 62WP2	3/8	1/2	.87	2.20

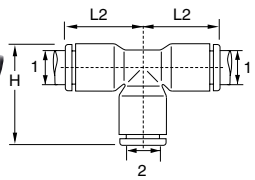




6306 Union Connector Metric Tube

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	G1	G2	L
6306 04 00WP2	4	4	8.50	8.50	26.50
6306 06 00WP2	6	6	10.50	10.50	30.00
6306 08 00WP2	8	8	13.50	13.50	37.00
6306 10 00WP2	10	10	16.00	16.00	42.00
6306 12 00WP2	12	12	19.00	19.00	50.50
6306 04 06WP2	4	6	8.50	10.50	29.00
6306 04 08WP2	4	8	13.50	13.50	37.00
6306 06 08WP2	6	8	13.50	13.50	37.00
6306 06 10WP2	6	10	16.00	16.00	42.00
6306 08 10WP2	8	10	16.00	16.00	42.00
6306 08 12WP2	8	12	19.00	19.00	50.00
6306 10 12WP2	10	12	19.00	19.00	50.00

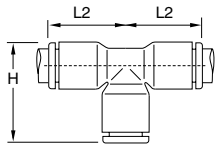




6304 Union Tee Inch Tube

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	H	L2
6304 04 00WP2	5/32	5/32	.79	.61
6304 56 00WP2	1/4	1/4	.94	.71
6304 08 00WP2	5/16	5/16	1.14	.89
6304 60 00WP2	3/8	3/8	1.34	1.02
6304 62 00WP2	1/2	1/2	1.85	1.42
6304 60 56WP2	3/8	1/4	1.34	1.02
6304 62 60WP2	1/2	3/8	1.85	1.42

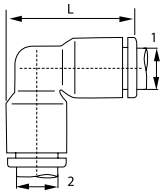




6304 Union Tee Metric Tube

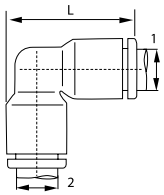
PART NO.	TUBE SIZE MM	H	L2
6304 04 00WP2	4	20.00	15.50
6304 06 00WP2	6	23.00	18.00
6304 08 00WP2	8	29.00	22.50
6304 10 00WP2	10	34.50	26.50
6304 12 00WP2	12	40.00	31.00

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Otsego, Michigan

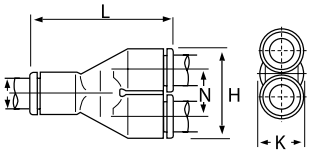
6302 Union Elbow Inch Tube

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	L
6302 04 00WP2	5/32	5/32	.75
6302 56 00WP2	1/4	1/4	.94
6302 08 00WP2	5/16	5/16	1.16
6302 60 00WP2	3/8	3/8	1.34
6302 62 00WP2	1/2	1/2	1.83
6302 56 08WP2	1/4	5/16	1.16
6302 08 60WP2	5/16	3/8	1.34
6302 56 60WP2	3/8	1/4	1.30
6302 60 62WP2	3/8	1/2	1.83

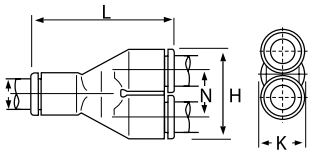
6302 Union Elbow Metric Tube

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L
6302 04 00WP2	4	4	19.50
6302 06 00WP2	6	6	24.00
6302 08 00WP2	8	8	29.50
6302 10 00WP2	10	10	34.50
6302 12 00WP2	12	12	40.50
6302 04 06WP2	4	6	24.00
6302 06 08WP2	6	8	29.50
6302 08 10WP2	8	10	34.50
6302 10 12WP2	10	12	40.50

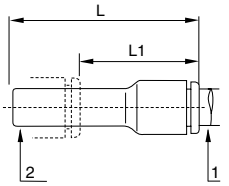
6340 Union Y Connector Inch Tube

PART NO.	TUBE SIZE IN	H	K	L	N
6340 04 00WP2	5/32	.69	.33	1.18	.35
6340 56 00WP2	1/4	.87	.43	1.42	.45
6340 08 00WP2	5/16	1.10	.53	1.75	.57
6340 60 00WP2	3/8	1.30	.63	2.08	.67
6340 62 00WP2	1/2	1.77	.87	2.64	.91

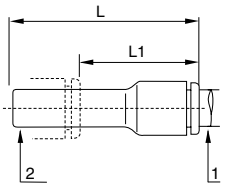
6340 Union Y Connector Metric Tube

PART NO.	TUBE SIZE MM	H	K	L	N
6340 04 00WP2	4	17.50	8.50	30.00	9.00
6340 06 00WP2	6	21.50	10.50	36.50	11.00
6340 08 00WP2	8	28.00	13.50	44.50	14.50
6340 10 00WP2	10	33.00	16.00	53.00	17.00
6340 12 00WP2	12	39.00	19.00	60.50	20.00

6366 Reducer Inch Tube to Stem

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	L	L1
6366 56 08WP2	1/4	5/16	1.61	.89
6366 56 60WP2	1/4	3/8	1.61	.81
6366 08 60WP2	5/16	3/8	1.91	1.14
6366 08 62WP2	5/16	1/2	1.91	.87
6366 60 62WP2	3/8	1/2	2.01	1.18

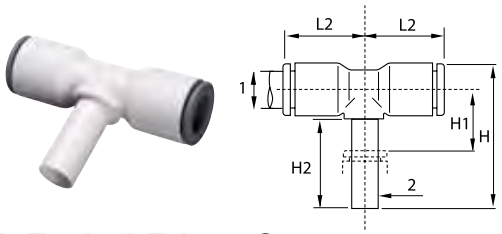
6366 Reducer Metric Tube to Stem

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L	L1
6366 04 06WP2	4	6	38.00	23.50
6366 04 08WP2	4	8	38.00	19.00
6366 06 08WP2	6	8	38.00	20.00
6366 06 10WP2	6	10	39.00	17.50
6366 08 10WP2	8	10	48.50	28.50
6366 08 12WP2	8	12	48.50	24.50
6366 10 12WP2	10	12	52.00	33.50
6366 10 14WP2	10	14	53.00	33.50
6366 12 14WP2	12	14	55.50	33.50

C

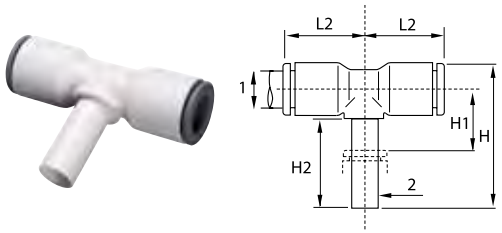
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

C



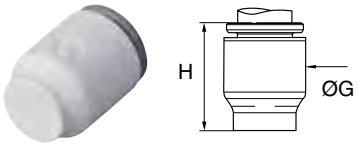
6388 Plug-In Tee Inch Tube to Stem

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	H	H1	H2	L2
6388 56 00WP2	1/4	1/4	1.20	.43	.79	.71
6388 08 00WP2	5/16	5/16	1.32	.31	.85	.90
6388 60 00WP2	3/8	3/8	1.65	.49	.98	.98
6388 62 00WP2	1/2	1/2	2.01	.51	1.14	1.26



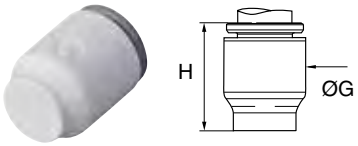
6388 Plug-In Tee Metric Tube to Stem

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	H	H1	H2	L2
6388 04 00WP2	4	4	25.00	6.00	15.50	15.00
6388 06 00WP2	6	6	28.50	7.00	17.00	16.00
6388 08 00WP2	8	8	33.50	8.00	21.50	23.00
6388 10 00WP2	10	10	41.00	9.50	24.50	26.50



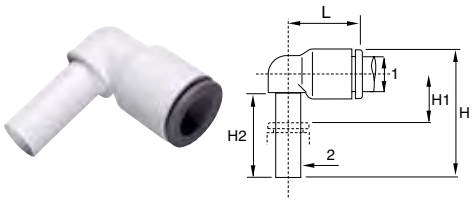
6351 End Stop Inch Tube

PART NO.	TUBE SIZE IN	G	H
6351 04 00WP2	5/32	.33	.59
6351 56 00WP2	1/4	.43	.63
6351 08 00WP2	5/16	.53	.85
6351 60 00WP2	3/8	.63	.88



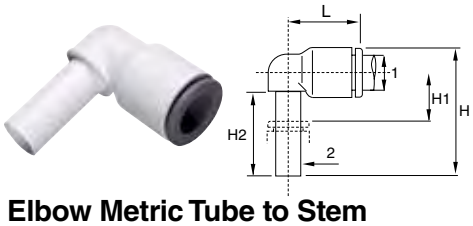
6351 End Stop Metric Tube

PART NO.	TUBE SIZE MM	G	H
6351 04 00WP2	4	8.50	15.00
6351 06 00WP2	6	10.50	17.00
6351 08 00WP2	8	13.50	21.50
6351 10 00WP2	10	16.00	22.00
6351 12 00WP2	12	19.00	27.50



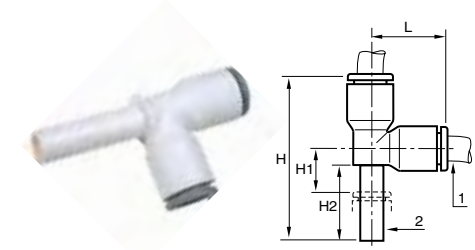
6382 Plug-In Elbow Inch Tube to Stem

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	H	H1	H2	L
6382 56 00WP2	1/4	1/4	1.20	.43	.71	.71
6382 08 00WP2	5/16	5/16	1.32	.31	.85	.88
6382 60 00WP2	3/8	3/8	1.53	.35	.96	1.04
6382 56 60WP2	1/2	1/2	1.93	.51	1.12	1.42
6382 60 56WP2	3/8	1/4	1.26	.43	.71	1.04



6382 Plug-In Elbow Metric Tube to Stem

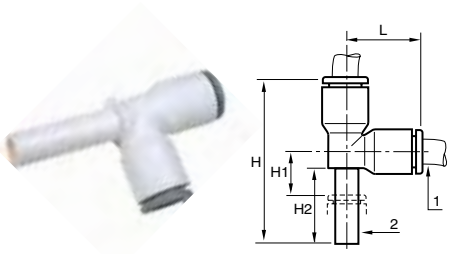
PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	H	H1	H2	L
6382 04 00WP2	4	4	23.00	6.00	15.50	15.00
6382 06 00WP2	6	6	26.50	7.00	17.00	17.00
6382 08 00WP2	8	8	33.00	8.00	21.50	22.50
6382 10 00WP2	10	10	39.00	9.50	24.50	26.50
6382 12 00WP2	12	12	44.50	10.00	27.00	31.00
6382 04 06WP2	4	6	26.50	7.00	17.00	16.50
6382 06 04WP2	6	4	25.00	7.00	15.50	17.00
6382 06 08WP2	6	8	33.50	8.00	21.50	22.50
6382 08 10WP2	8	10	39.00	9.50	24.50	26.00
6382 10 12WP2	10	12	44.50	10.00	27.00	30.00



6383 Plug-In Run Tee Inch Tube to Stem

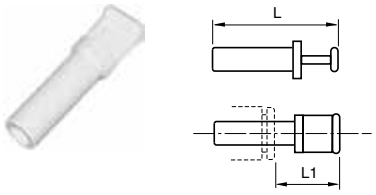
PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	H	H1	H2	L
6382 56 00WP2	1/4	1/4	1.20	.43	.71	.71
6382 56 60WP2	1/4	3/8	1.55	.43	.96	1.00
6382 60 00WP2	3/8	3/8	1.55	.43	.96	1.04
6382 62 00WP2	1/2	1/2	1.93	.71	1.12	1.42

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



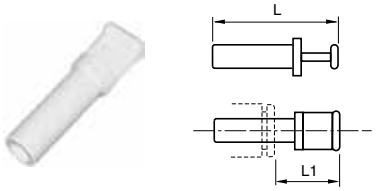
6383 Plug-In Run Tee Metric Tube to Stem

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	H	H1	H2	L
6383 04 00WP2	4	4	33.00	6.00	15.50	15.00
6383 06 00WP2	6	6	38.50	7.00	17.00	18.00
6383 08 00WP2	8	8	49.00	8.00	21.50	23.00
6383 10 00WP2	10	10	57.00	10.50	25.50	26.50



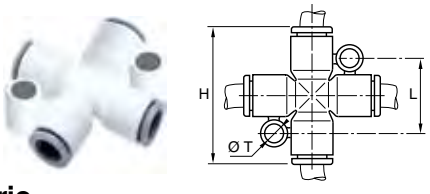
6326 Plug Inch

PART NUMBER	STEM SIZE IN	L	L1
6326 56 00WP2	1/4	1.44	.87
6326 08 00WP2	5/16	1.38	.69
6326 60 00WP2	3/8	1.67	.87
6326 62 00WP2	1/2	1.91	.85



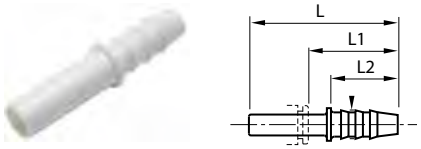
6326 Plug Metric

PART NUMBER	STEM SIZE MM	L	L1
6326 04 00WP2	4	30	15.5
6326 06 00WP2	6	33	16.5
6326 08 00WP2	8	33	17.5
6326 10 00WP2	10	42	21.0
6326 12 00WP2	12	45	22.0



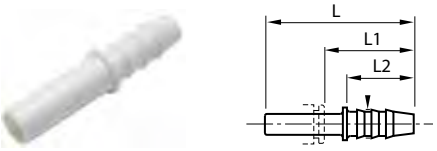
6307 Cross Metric

PART NUMBER	TUBE SIZE MM	H	L	T
6307 06 00WP2	6	46	22.5	4.2
6307 08 00WP2	8	46	22.5	4.2



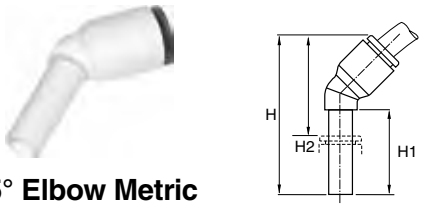
6322 Stem to Hose Barb Inch

PART NUMBER	STEM SIZE IN	HOSE BARB	L	L1	L2
6322 56 56WP2	1/4	1/4	1.65	1.00	.67
6322 60 56WP2	3/8	1/4	1.97	1.16	.87
6322 60 08WP2	3/8	5/16	1.97	1.16	.87
6322 60 60WP2	3/8	3/8	1.97	1.16	.87
6322 62 60WP2	1/2	3/8	2.05	1.30	1.07



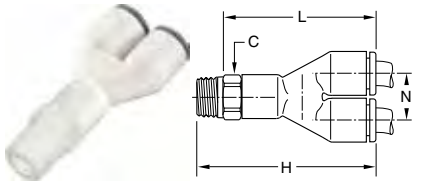
6322 Stem to Hose Barb Metric

PART NUMBER	STEM SIZE MM	HOSE BARB	L	L1	L2
6322 06 00WP2	6	4	37.0	25.0	17
6322 08 00WP2	8	6	39.5	21.0	17
6322 10 00WP2	10	7	50.0	29.5	22



6380 Plug-in 45° Elbow Metric

PART NUMBER	TUBE SIZE MM	STEM SIZE MM	H	H1	H2
6380 04 00WP2	4	4	33.5	19.0	13.0
6380 06 00WP2	6	6	39.0	21.0	14.5
6380 08 00WP2	8	8	44.0	21.5	19.5
6380 10 00WP2	10	10	53.0	27.0	23.0
6380 12 00WP2	12	12	58.5	27.5	26.5



6548 Swivel Y Connector Inch Tube to NPTF

PART NUMBER	TUBE SIZE IN	NPTF	C HEX	L	H	N
6548 56 11WP2	1/4	1/8	1/2	1.59	.88	.45
6548 56 14WP2	1/4	1/4	1/2	1.59	.88	.45
6548 56 18WP2	1/4	3/8	3/4	1.62	.88	.45
6548 60 14WP2	3/8	1/4	3/4	2.24	1.30	.66
6548 60 18WP2	3/8	3/8	3/4	2.24	1.30	.66
6548 62 18WP2	1/2	3/8	15/16	2.80	1.78	.91
6548 62 22WP2	1/2	1/2	15/16	2.84	1.78	.91

C

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

LIQUIfit Polypropylene Ball Valves

This range of valves offers an innovative solution in the treatment of water and the handling of beverages while protecting health. LIQUIfit's corrosion-resistant, all plastic design makes them ideal for water filtration units, coffee and beverage machines and a wide variety of other fluid applications. The polypropylene material meets all FDA and NSF-51 requirements for food contact.

C

Features/Benefits:

- Full-flow self-cleaning ball maintains the cleanliness of the circuit
- Sealing technology using EPDM D seal
- High temperature, scale-resistant Polysulfone ball
- Tube retention with gripping ring prevents pumping effect
- Push-in connection and disconnection
- FDA compliant

Specifications:

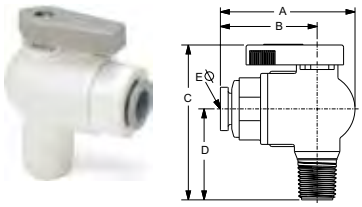
- Temperature range: +35°F to +200°F (1°C to 93°C)
- O-ring seal material: EPDM
- NSF-51 Listed
- Pressure rated to 150 psi

Advantages:

- Reduce costs – Built-in LIQUIfit connection eliminates the need for a secondary fitting
- Save space – Low profile design allows for easy assembly and access where space is at a premium.

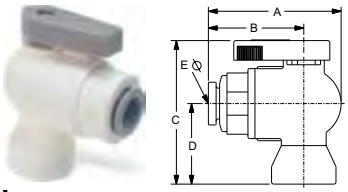
Assembly Instructions:

1. Inspect the mating threads for debris or damage. Remove any old fluoropolymer tape or sealant on previously used threads. If threads are damaged, replace with new adapter before proceeding.
2. Apply 2 to 3 wraps of fluoropolymer tape, or an NSF/FDA approved silicone sealant. Do not use Plumbers Putty or Pipe Dope. These chemically react with plastic materials and could cause a failure.
3. Align ball valve onto mating thread to ensure cross threading does not occur.
4. Screw ball valve onto mating thread 3 to 5 turns. This should be sufficient to properly seal the threads.
5. Pressurize system and check for leaks.



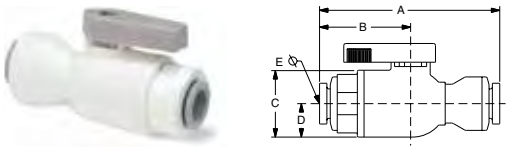
VME - Valve Male Elbow

PART NO.	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VME2	1/4	1/8	1.74	1.21	2.00	1.10	.19
LFPP4VME4	1/4	1/4	1.74	1.21	2.18	1.28	.19
LFPP4VME6	1/4	3/8	1.74	1.21	2.18	1.28	.19
LFPP4VME8	1/4	1/2	1.74	1.21	2.37	1.47	.19
LFPP6VME2	3/8	1/8	1.85	1.32	2.00	1.10	.25
LFPP6VME4	3/8	1/4	1.85	1.32	2.18	1.28	.25
LFPP6VME6	3/8	3/8	1.85	1.32	2.18	1.28	.25
LFPP6VME8	3/8	1/2	1.85	1.32	2.37	1.47	.25



VFE - Valve Female Elbow

PART NO.	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VFE2	1/4	1/8	1.74	1.21	1.82	.92	.19
LFPP4VFE4	1/4	1/4	1.74	1.21	2.05	1.15	.19
LFPP4VFE6	1/4	3/8	1.74	1.21	2.18	1.28	.19
LFPP6VFE2	3/8	1/8	1.85	1.32	1.82	.92	.25
LFPP6VFE4	3/8	1/4	1.85	1.32	2.05	1.15	.25
LFPP6VFE6	3/8	3/8	1.85	1.32	2.18	1.28	.25

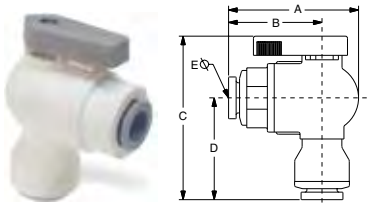


VUC - Valve Union Connector

PART NO.	1 TUBE SIZE	2 TUBE SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VUC4	1/4	1/4	2.55	1.22	1.0	.5	.19
LFPP4VUC6	1/4	3/8	2.57	1.30	1.0	.5	.19
LFPP6VUC6	3/8	3/8	2.67	1.32	1.4	.5	.25

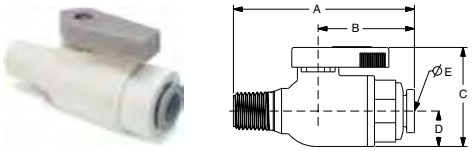
NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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Otsego, Michigan



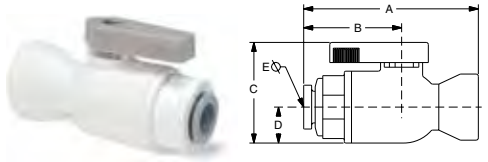
VEU - Valve Elbow Union

PART NO.	1 TUBE SIZE	2 TUBE SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VEU4	1/4	1/4	1.75	1.22	2.33	1.42	.19
LFPP4VEU6	1/4	3/8	1.75	1.22	2.33	1.42	.11
LFPP6VEU4	3/8	1/4	1.83	1.30	2.32	1.40	.19
LFPP6VEU6	3/8	3/8	1.85	1.32	2.34	1.44	.25



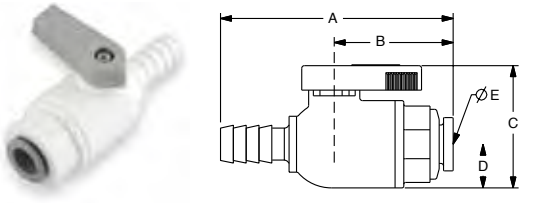
VMC - Valve Male Connector

PART NO.	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VMC2	1/4	1/8	2.22	1.21	1.4	.5	.19
LFPP4VMC4	1/4	1/4	2.40	1.21	1.4	.5	.19
LFPP4VMC6	1/4	3/8	2.40	1.21	1.4	.5	.19
LFPP4VMC8	1/4	1/2	2.59	1.21	1.4	.5	.19
LFPP6VMC2	3/8	1/8	2.33	1.32	1.4	.5	.25
LFPP6VMC4	3/8	1/4	2.51	1.32	1.4	.5	.25
LFPP6VMC6	3/8	3/8	2.51	1.32	1.4	.5	.25
LFPP6VMC8	3/8	1/2	2.70	1.32	1.4	.5	.25



VFC - Valve Female Connector

PART NO.	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VFC2	1/4	1/8	2.04	1.21	1.4	.5	.19
LFPP4VFC4	1/4	1/4	2.27	1.21	1.4	.5	.19
LFPP4VFC6	1/4	3/8	2.40	1.21	1.4	.5	.19
LFPP6VFC2	3/8	1/8	2.15	1.32	1.4	.5	.25
LFPP6VFC4	3/8	1/4	2.38	1.32	1.4	.5	.25
LFPP6VFC6	3/8	3/8	2.51	1.32	1.4	.5	.25



VUCPB - Valve Union Connector Barbed x Tube

PART NO.	HOSE ID	TUBE OD	OD	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VUCPB4	1/4	1/4	.31	2.40	1.08	1.42	.50	.15
LFPP6VUCPB6	3/8	3/8	.43	2.63	1.32	1.42	.50	.19

C

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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Fluid System Connectors
Otsego, Michigan

C

Tube to NPTF

MC Male Connector

p. C16

MES Male Elbow Swivel

p. C17

MRS Male Run Tee Swivel

p. C17

MTS Male Branch Tee Swivel

p. C17

TMC Male Standpipe

p. C18

ME Male Elbow

p. C20

Tube to Female UNS

FA Faucet Adapter

p. C18

Tube to Female NPTF

FC Female Connector

p. C18

FE Female Elbow

p. C19

Tube to Straight Thread

ST Straight Thread

p. C20

Tube to Female Flare

FF 45° Female Flare

p. C18

Tube to Tube

EU Union Elbow

p. C16

TU Union Tee

p. C16

WY Union Y

p. C16

UC Union

p. C17

CU Cross

p. C18

Bulkhead Union

BU Bulkhead Union

p. C19

Plug-ins

TEU Tube Elbow Union

p. C19

RD Tube Reducer

p. C19

Check Valve

VC Check Valve

p. C21

Auxiliary Components

CAP Cap

p. C19

TCB Barbed Connector

p. C20

TEB Barbed Connector

p. C20

TPL Plug

p. C20

TFA Faucet Adapter

p. C18

TAF Faucet Adapter

p. C18

SC Safety Clip

p. C24

TS Tube Support

p. C24

AQRT Release Tool

p. C24

TSC Cartridge

p. C21

Ball Valves

VME Male Elbow

p. C22

VFE Female Elbow

p. C22

VUC Union Connector

p. C23

VEU Elbow Union

p. C23

VMC Male Connector

p. C23

VFC Female Connector

p. C23

VTEU Elbow Union

p. C23

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

TrueSeal™ Thermoplastic Push-In Fittings

MATERIALS OF CONSTRUCTION		
MATERIAL	FITTING COLOR	O-RING
ACETAL	GRAY	EPDM
POLYPROPYLENE	WHITE	EPDM
KYNAR®	NATURAL	FLUOROCARBON

NOMENCLATURE	
EXAMPLE: A4MC4-MG-V	ATTRIBUTE:
A	FITTING BODY MATERIAL (A = ACETAL, PP = POLYPROPYLENE, F = KYNAR® (PVDF))
4	TUBE O.D. IN SIXTEENTHS OF AN INCH
MC	BODY STYLE
4	END TERMINATION SIZE
MG	METAL GRIPPER COLLET
V	O-RING MATERIALS (BLANK = REFERENCE STANDARD MATERIALS, EPDM = ETHYLENE PROPYLENE, N = NITRILE, V = FLUOROCARBON)

WORKING PRESSURE AND TEMPERATURE			
FITTING SIZE	ACETAL	POLYPROPYLENE	KYNAR®
1/4"	300	150	300
5/16"	300		
3/8"	300	150	300
1/2"	250	150	
TEMP. RANGE	-20°F (-29°C) TO +180°F (85°C)	0°F (-18°C) TO +225°F (110°C)	0°F (-18°C) TO +275°F (135°C)

SPECIFICATIONS	
TUBE MATERIAL:	POLYETHYLENE, POLYPROPYLENE, NYLON, VINYL, FLUOROPOLYMER, POLYURETHANE. 3/8" AND ½" SIZES OF POLYURETHANE AND ALL SIZES OF VINYL SHOULD USE TUBE SUPPORTS.
TUBE O.D.:	1/4, 5/16, 3/8, 1/2
OPERATING FLUID:	AIR, WATER, SOFT DRINKS, BEER, WINE, DYES
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY

NSF ≤0.25% lead



An all plastic push-to-connect fitting manufactured from FDA compliant materials and are NSF-51 listed for contact with food. Gray acetal fittings meet NSF-61 requirements for drinking water (potable water) system components. Fittings are light weight, field attachable and connect to tubing without the use of tools. Black nitrile o-rings and colored collets in black, white, red, blue, green, yellow and orange are also available. Consult Division. KYNAR® is a registered trademark of Atochem North America, Inc.

Assembly Instructions

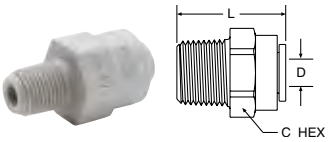
1. Cut tubing square and clean. (Use a Parker plastic tube cutter, Part No. PTC.)
2. Mark from end of tube the length of insertion (see table right).
3. Push tube into the fitting until it bottoms out.
4. To remove, depress collet and pull tubing out.
5. Use TrueSealant™ (Part No. PTS) on threads.

TUBE SIZES	O.D. TOLERANCE	INSERTION DEPTH
5/32"	±005"	9/16"
1/4"	±005"	11/16"
5/16"	±005"	13/16"
3/8"	±005"	3/4"
1/2"	±005"	7/8"

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Fluid System Connectors
Otsego, Michigan

C

MC - Male Connector

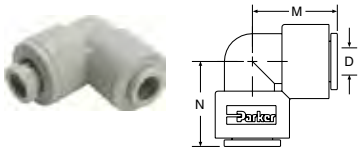


Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM TUBE O.D.	NPTF THD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A4MC2-MG	PP4MC2	F4MC2	1/4	1/8	11/16	1.28	.175
A4MC4-MG	PP4MC4	F4MC4	1/4	1/4	11/16	1.14	.175
A4MC6-MG	PP4MC6	F4MC6	1/4	3/8	11/16	1.18	.175
A5MC2-MG			5/16	1/8	13/16	1.46	.175
A5MC4-MG			5/16	1/4	13/16	1.41	.188
A5MC6-MG			5/16	3/8	13/16	1.27	.188
A6MC2-MG		F6MC2	3/8	1/8	13/16	1.46	.175
A6MC4-MG	PP6MC4	F6MC4	3/8	1/4	13/16	1.41	.250
A6MC6-MG	PP6MC6	F6MC6	3/8	3/8	13/16	1.27	.250
A6MC8-MG		F6MC8	3/8	1/2	15/16	1.45	.250
A8MC6-MG	PP8MC6		1/2	3/8	15/16	1.65	.360
A8MC8-MG	PP8MC8		1/2	1/2	15/16	1.46	.375

For nonstandard plastic collet, remove -MG suffix.

EU - Elbow Union

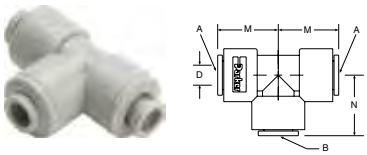


Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	M	N	D THRU HOLE MIN.
A4EU4-MG	PP4EU4	F4EU4	1/4	0.87	.87	.175
A5EU4-MG			5/16-1/4	1.052	.90	.175
A5EU5-MG			5/16	1.02	1.02	.188
A6EU4-MG	PP6EU4	F6EU4	3/8-1/4	1.02	.90	.212
A6EU5-MG			3/8-5/16	1.02	1.02	.175
A6EU6-MG	PP6EU6	F6EU6	3/8	1.02	1.02	.250
A8EU6-MG			1/2-3/8	1.20	1.20	.250
A8EU8-MG	PP8EU8		1/2	1.20	1.20	.375

For nonstandard plastic collet, remove -MG suffix.

TU - Tee Union

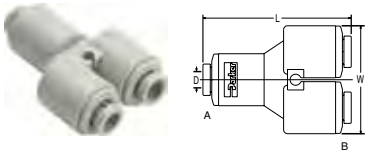


Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.		M	N	D THRU HOLE MIN.
			TUBE A RUN	TUBE B STEM			
A4TU4-MG	PP4TU4	F4TU4	1/4	1/4	.81	0.85	.175
A5TU5-MG			5/16	5/16	1.02	1.02	.188
A6TU4-MG	PP6TU4	F6TU4	3/8	1/4	1.02	1.03	.175
A6TU6-MG	PP6TU6	F6TU6	3/8	3/8	1.02	1.02	.290
A8TU8-MG	PP8TU8		1/2	1/2	1.20	1.20	.375

For nonstandard plastic collet, remove -MG suffix.

WY - "Y" Union

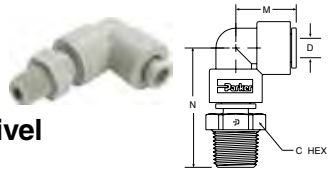


Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.		L	W	D THRU HOLE MIN.
			INLET TUBE A RUN	OUTLET TUBE B STEM			
A5WY5-MG			5/16	5/16	2.250	1.75	0.190
A6WY4-MG			3/8	1/4	2.100	1.43	0.190
A6WY5-MG			3/8	5/16	2.200	1.75	0.190
A6WY6-MG			3/8	3/8	2.175	1.75	0.250

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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Otsego, Michigan

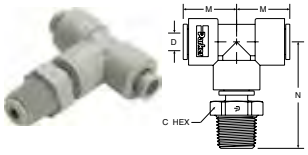


MES - Male Elbow Swivel

Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
A4MES2-MG	PP4MES2	F4MES2	1/4	1/8	9/16	.87	1.60	.175
A4MES4-MG	PP4MES4	F4MES4	1/4	1/4	11/16	.87	1.71	.175
A4MES6-MG	PP4MES6	F4MES6	1/4	3/8	13/16	.90	1.91	.212
A5MES2-MG			5/16	1/8	9/16	1.02	1.78	.188
A5MES4-MG			5/16	1/4	11/16	1.02	1.90	.188
A5MES6-MG			5/16	3/8	13/16	1.02	1.90	.188
A6MES2-MG		F6MES2	3/8	1/8	9/16	1.02	1.65	.175
A6MES4-MG	PP6MES4	F6MES4	3/8	1/4	13/16	1.02	1.90	.250
A6MES6-MG	PP6MES6	F6MES6	3/8	3/8	13/16	1.02	1.90	.250
A8MES4-MG			1/2	1/4	13/16	1.20	2.10	.240
A8MES6-MG	PP8MES6		1/2	3/8	13/16	1.20	2.10	.375
A8MES8-MG	PP8MES8		1/2	1/2	1	1.20	2.32	.375

* Part consists of elbow union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.

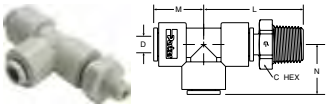


MTS - Male Tee Swivel

Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
A4MTS2-MG	PP4MTS2	F4MTS2	1/4	1/8	9/16	.81	1.60	.175
A4MTS4-MG	PP4MTS4	F4MTS4	1/4	1/4	11/16	.81	1.71	.175
A5MTS2-MG			5/16	1/8	9/16	1.02	1.78	.188
A5MTS4-MG			5/16	1/4	11/16	1.02	1.90	.188
A5MTS6-MG			5/16	3/8	13/16	1.02	1.90	.188
A6MTS2-MG		F6MTS2	3/8	1/8	9/16	1.02	1.75	.175
A6MTS4-MG	PP6MTS4	F6MTS4	3/8	1/4	13/16	1.02	1.90	.250
A6MTS6-MG	PP6MTS6	F6MTS6	3/8	3/8	13/16	1.02	1.90	.250
A8MTS4-MG			1/2	1/4	13/16	1.20	2.10	.240
A8MTS6-MG	PP8MTS6		1/2	3/8	13/16	1.20	2.10	.375
A8MTS8-MG	PP8MTS8		1/2	1/2	1	1.20	2.32	.375

* Part consists of tee union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.

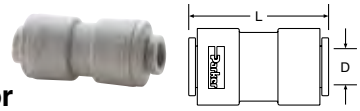


MRS - Male Run Swivel

Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM TUBE O.D.	NPTF THD SIZE	C HEX	L	M	N	D THRU HOLE MIN.
A4MRS2-MG	PP4MRS2	F4MRS2	1/4	1/8	9/16	1.55	0.81	0.85	.175
A4MRS4-MG	PP4MRS4	F4MRS4	1/4	1/4	11/16	1.67	0.81	0.85	.175
A5MRS2-MG			5/16	1/8	9/16	1.78	1.02	1.02	.188
A5MRS4-MG			5/16	1/4	11/16	1.90	1.02	1.02	.188
A5MRS6-MG			5/16	3/8	13/16	1.90	1.02	1.02	.188
A6MRS4-MG	PP6MRS4	F6MRS4	3/8	1/4	13/16	1.90	1.02	1.02	.250
A6MRS6-MG	PP6MRS6	F6MRS6	3/8	3/8	13/16	1.90	1.02	1.02	.250
A8MRS4-MG			1/2	1/4	13/16	2.10	1.20	1.20	.240
A8MRS6-MG	PP8MRS6		1/2	3/8	13/16	2.10	1.20	1.20	.375
A8MRS8-MG	PP8MRS8		1/2	1/2	1	2.32	1.20	1.20	.375

*Part consists of tee union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.



UC - Union Connector

Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	L OVERALL LENGTH	D THRU HOLE MIN.
A4UC4-MG	PP4UC4	F4UC4	1/4	1.49	.175
A5UC4-MG			5/16-1/4	1.70	.175
A5UC5-MG			5/16	1.70	.188
A6UC4-MG	PP6UC4	F6UC4	3/8-1/4	1.70	.175
A6UC5-MG			3/8-5/16	1.70	.188
A6UC6-MG	PP6UC6	F6UC6	3/8	1.70	.250
A8UC5-MG			1/2-5/16	1.90	.188
A8UC6-MG	PP8UC6		1/2-3/8	1.90	.250
A8UC8-MG	PP8UC8		1/2	1.91	.375

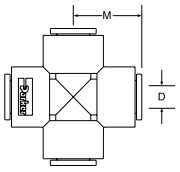
For nonstandard plastic collet, remove -MG suffix.

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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C

CU - Cross Union

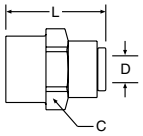



Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	M	D THRU HOLE MIN.
A4CU4-MG			1/4	.91	.175
A6CU6-MG			3/8	1.08	.250

For nonstandard plastic collet, remove -MG suffix.

FA - Faucet Adapter

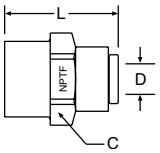



Tube-to-Faucet

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	UNS-2B THREAD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A4FA7-MG	PP4FA7	F4FA7	1/4	7/16-24	23/32	1.32	.190
A5FA7-MG			5/16	7/16-24	13/16	1.41	.190
A6FA7-MG	PP6FA7	F6FA7	3/8	7/16-24	13/16	1.41	.190

For nonstandard plastic collet, remove -MG suffix.

FC - Female Connector

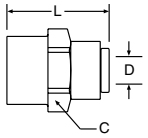
Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	NPTF THREAD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A4FC2-MG	PP4FC2	F4FC2	1/4	1/8	11/16	1.20	.175
A4FC4-MG	PP4FC4	F4FC4	1/4	1/4	23/32	1.32	.175
A5FC4-MG			5/16	1/4	13/16	1.41	.188
A5FC6-MG			5/16	3/8	1	1.50	.188
A6FC4-MG	PP6FC4	F6FC4	3/8	1/4	13/16	1.41	.250
A6FC6-MG	PP6FC6	F6FC6	3/8	3/8	1	1.50	.250
A6FC8-MG			3/8	1/2	1-1/8	1.52	.250
A8FC6-MG	PP8FC6		1/2	3/8	1-1/8	1.60	.375
A8FC8-MG	PP8FC8		1/2	1/2	1-1/8	1.75	.375

For nonstandard plastic collet, remove -MG suffix.

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

FF - 45° Female Flare

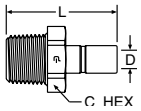



Tube-to-Flare

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	UNF-2B THREAD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A4FF4-MG	PP4FF4	F4FF4	1/4	7/16-20	23/32	1.32	.190
A6FF4-MG		F6FF4	3/8	7/16-20	13/16	1.41	.190
A6FF6-MG	PP6FF6	F6FF6	3/8	5/8-18	1	1.50	.250

For nonstandard plastic collet, remove -MG suffix.

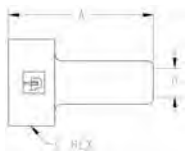
TMC - Tube Stem Adapter

Tube Stem-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	NPTF THREAD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A4TMC2	PP4TMC2	F4TMC2	1/4	1/8	9/16	1.44	.175
A4TMC4	PP4TMC4	F4TMC4	1/4	1/4	11/16	1.56	.175
A5TMC2			5/16	1/8	9/16	1.5	.188
A5TMC4			5/16	1/4	11/16	1.67	.188
A5TMC6			5/16	3/8	13/16	1.67	.188
A6TMC4	PP6TMC4	F6TMC4	3/8	1/4	13/16	1.70	.250
A6TMC6	PP6TMC6	F6TMC6	3/8	3/8	13/16	1.70	.250
A8TMC4			1/2	1/4	13/16	1.82	.240
A8TMC6	PP8TMC6		1/2	3/8	13/16	1.82	.375
A8TMC8	PP8TMC8		1/2	1/2	1	2.04	.375

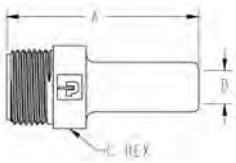
TFA - Tube Faucet Adapter

(Female Thread)

WHITE ACETAL	TUBE STEM O.D.	THREAD SIZE	A	C HEX	D MIN.
AW6TFA7-MG	3/8	7/16-24	1.25	.69	.17
AW6TFA8-MG	3/8	1/2-14 NPSM	1.45	1.06	.22
AW6TFA9-MG	3/8	9/16-24	1.25	.75	.22

TAF - Tube Faucet Adapter

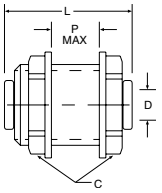
(Male Thread)

WHITE ACETAL	TUBE STEM O.D.	THREAD SIZE	A	C HEX	D MIN.
AW6TAF7-MG	3/8	7/16-24	1.41	.50	.22
AW6TAF8-MG	3/8	1/2-14 NPSM	1.65	.88	.22
AW6TAF9-MG	3/8	9/16-24	1.45	.63	.22

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BU - Bulkhead Union





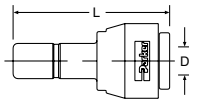
Tube-to-Tube

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	C1 HEX	C2 HEX	L OVERALL LENGTH	P MAX. WALL THK.	D THRU HOLE MIN.	BKHD HOLE DRILL SIZE
A4BU4-MG	PP4BU4	F4BU4	1/4	15/16	15/16	1.50	.50	.175	7/8
A5BU5-MG			5/16	1-1/16	1-1/16	1.75	.62	.188	1
A6BU4-MG	PP6BU4		3/8-1/4	1-1/16	1-1/16	1.75	.62	.175	1
A6BU6-MG	PP6BU6	F6BU6	3/8	1-1/16	1-1/16	1.75	.62	.250	1
A8BU8-MG			1/2	1-1/4	1-1/4	2.04	.70	.375	1-1/8

For nonstandard plastic collet, remove -MG suffix.

RD - Tube Reducer





Tube-to-Tube Stem

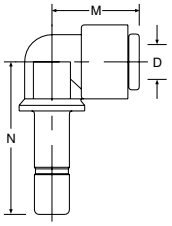
GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	TUBE STEM O.D.	L	D THRU HOLE MIN.
A4RD5-MG	PP4RD5		1/4	5/16	1.62	.18
A4RD6-MG	PP4RD6		1/4	3/8	1.62	.18
A5RD6-MG			5/16	3/8	1.78	.25
A5RD8-MG			5/16	1/2	1.90	.25
A6RD8-MG			3/8	1/2	1.90	.25

For nonstandard plastic collet, remove -MG suffix.

C

TEU - Tube Elbow Union





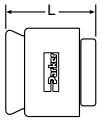
Tube-to-Tube Stem

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	TUBE STEM O.D.	M	N	D THRU HOLE MIN.
A4TEU4-MG	PP4TEU4	F4TEU4	1/4	1/4	.84	1.21	.125
A4TEU6-MG		F4TEU6	1/4	3/8	.84	1.35	.125
A5TEU5-MG			5/16	5/16	1.03	1.40	.188
A6TEU4-MG		F6TEU4	3/8	1/4	1.03	1.29	.125
A6TEU6-MG	PP6TEU6	F6TEU6	3/8	3/8	1.03	1.64	.250
A8TEU8-MG	PP8TEU8		1/2	1/2	1.21	1.64	.380

For nonstandard plastic collet, remove -MG suffix.

CAP - Tube Cap



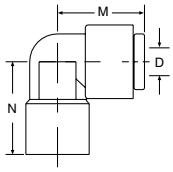


GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	L OVERALL LENGTH
A4CAP-MG	PP4CAP	F4CAP	1/4	.77
A6CAP-MG	PP6CAP		3/8	0.88

For nonstandard plastic collet, remove -MG suffix.

FE - Female Elbow





Tube-to-Pipe

GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	NPTF THREAD SIZE	M	N	D THRU HOLE MIN.
A4FE4-MG			1/4	1/4	0.84	1.00	.18
A6FE4-MG			3/8	1/4	1.03	1.00	.25
A6FE6-MG			3/8	3/8	1.03	1.00	.25

For nonstandard plastic collet, remove -MG suffix.

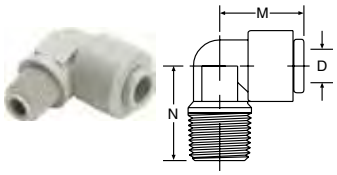
NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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ME - Male Elbow

Tube-to-Pipe

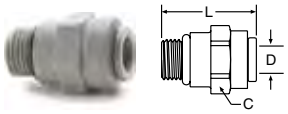


GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	NPTF THD SIZE	M	N	D THRU HOLE MIN.
A4ME2-MG	PP4ME2	F4ME2	1/4	1/8	.84	.94	.175
A4ME4-MG	PP4ME4	F4ME4	1/4	1/4	.84	.94	.175
A4ME6-MG	PP4ME6	F4ME6	1/4	3/8	.84	1.04	.175
A5ME4-MG			5/16	1/4	1.03	1.08	.175
A5ME6-MG			5/16	3/8	1.03	1.06	.188
A6ME4-MG	PP6ME4	F6ME4	3/8	1/4	1.03	1.08	.250
A6ME6-MG	PP6ME6	F6ME6	3/8	3/8	1.03	1.06	.250

For nonstandard plastic collet, remove -MG suffix.

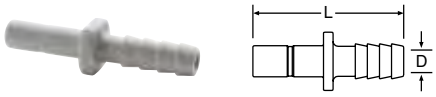
ST - Straight Thread

Tube-to-Male O-Ring Boss



GRAY ACETAL EPDM SEAL	WHITE PPL EPDM SEAL	NATURAL KYNAR FCB SEAL	NOM. TUBE O.D.	UNF-2B THD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
A6ST9-MG		F6ST9 (+)	3/8	9/16-18	13/16	1.39	.250

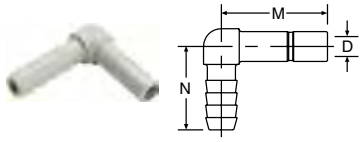
For nonstandard plastic collet, remove -MG suffix.



TCB - Tube-to-Barb Connector

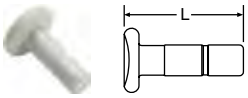
GRAY ACETAL	WHITE PPL	NATURAL KYNAR	TUBE STEM O.D.	TUBE I.D.	L OVERALL LENGTH	D THRU HOLE MIN.
A4TCB4	PP4TCB4	F4TCB4	1/4	1/4	1.67	.140
A6TCB4		F6TCB4	3/8	1/4	1.82	.140
A6TCB6	PP6TCB6	F6TCB6	3/8	3/8	1.98	.250
A8TCB6			1/2	3/8	2.10	.250
A8TCB8			1/2	1/2	2.10	.375

TEB - Tube Elbow Barb Connector



GRAY ACETAL	WHITE PPL	NATURAL KYNAR	TUBE STEM O.D.	TUBE I.D.	M	N	D THRU HOLE MIN.
A4TEB4	PP4TEB4	F4TEB4	1/4	1/4	.89	1.00	.140
A6TEB6	PP6TEB6	F6TEB6	3/8	3/8	1.34	1.21	.250
A8TEB8			1/2	1/2	1.30	1.30	.390

TPL - Plug



GRAY ACETAL	WHITE PPL	NATURAL KYNAR	FITTING SIZE	L OVERALL LENGTH
A4TPL	PP4TPL	F4TPL	1/4	0.88
A6TPL	PP6TPL	F6TPL	3/8	1.45
A8TPL	PP8TPL		1/2	1.50

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

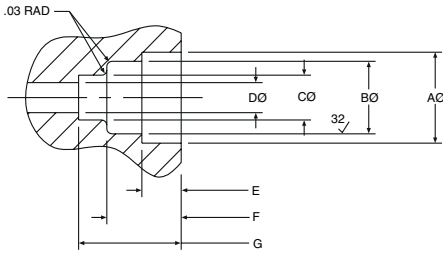
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Otsego, Michigan

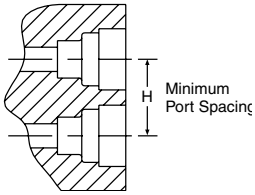


TSC - Cartridge Insert

PART NUMBER WITH EPDM SEAL	NOM. TUBE O.D.	A* DIAMETER ±002	B DIAMETER ±003	C DIAMETER ±003	D DIAMETER MAXIMUM	E DEPTH ±002	F DEPTH ±002	G DEPTH ±002	H* CENTERLINE OF PORTS MINIMUM
ATSC4-MG	1/4	.528	.421	.260	.19	.230	.435	.600	.670
ATSC6-MG	3/8	.632	.545	.385	.31	.280	.455	.705	.790
ATSC8-MG	1/2	.774	.668	.510	.41	.315	.510	.810	1.250

C





Parker TrueSeal™ Cartridge Inserts:

Allow you to machine or mold a tube connection into your equipment or components. By using cartridge inserts, you will reduce your material and assembly costs, reduce potential leak paths, and give your equipment a new, clean profile by eliminating the need for threaded connections. TSC Cartridge Inserts consist of 1 o-ring, 1 cartridge, and 1 collet.

*Cartridge inserts are rated at 150 psi in ports dimensioned as above and having Noryl as the receiving material. Other materials may have different ratings and require different port dimensions. Consult the Fluid System Connectors Division when using polypropylene, unfilled polypropylene, ABS or Nylon.

NORYL® is a registered trademark of the General Electric Co.

Assembly Instructions:

Step 1—Machine or mold the receiving orifice as per the above dimensions.

Step 2—Place the cartridge insert squarely onto the prepared port opening making sure that the barbs of the cartridge are going into the hole and the lettering on the face of the cartridge is visible.

Step 3—Using a rubber mallet or press, insert the cartridge into the first gland orifice until its face is flush with the top surface of the port.

Step 4—Insert the o-ring into the cartridge and seat it evenly into the second gland orifice.

Step 5—Insert the collet into the cartridge opening.

Step 6—Insert tubing.

TrueSeal Check Valves

Push-to-Connect check valves that ensures protection against reversal of flow. The valves have an arrow molded into the body to indicate the direction of flow. Valves are designed for connection with either thermoplastic or soft metal tubing and are intended for use with liquids only.

Materials of Construction

Body: Acetal

O-ring: EPDM

Metal Grip Edge: 300 Stainless

Working Pressure

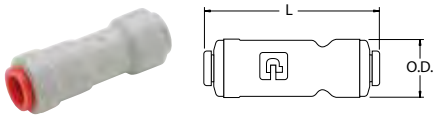
Up to 150 PSI depending on tubing being used

Temperature Range

+34°F (1° C) to +150°F (65°C)

Cracking Pressure

1/3 PSI



VC – Check Valve

PART NO.	TUBE SIZE	L	O.D.
A4VC4-MG	1/4	2.00	.66
A5VC5-MG	5/16	2.10	.70
A6VC6-MG	3/8	2.15	.80

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Polypropylene Ball Valves

For proven leak-free performance, specify **Polypropylene Ball Valves**. Their corrosion-resistant, all-plastic design makes them ideal for water filtration units, coffee and beverage machines and a wide variety of other fluid applications. Polypropylene material meets all FDA and NSF-51 requirements for food contact.

Features/Benefits:

- Precision molded, all-plastic design is leak free and corrosion resistant.
- Polypropylene material offers a wider chemical acceptance range, as well as a wide temperature range.
- Bi-directional flow maximizes productivity.
- Full flow design reduces pressure drop across the valve.
- Special o-ring seal ensures a reliable leak-tight connection.
- TrueSeal™ connection reduces potential leaks.

Specifications:

- Temperature range: 0°F to 225°F (-18°C to 107°C).
- O-ring seal material: EPDM.
- NSF-51 listed.
- Pressure rated to 150 PSI with a 600 PSI burst pressure. Actual working pressures with be lower at elevated temperatures

Advantages:

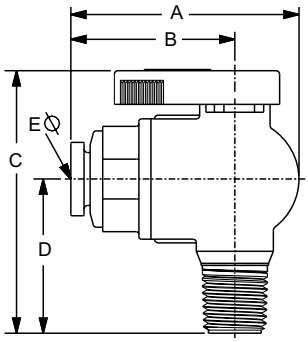
- Reduce costs—Built-in TrueSeal™ connection eliminates the need for a secondary fitting.
- Save space—Low-profile design allows for easy assembly and access where space is at a premium.

Assembly Instructions:

1. Inspect the mating threads for debris or damage. Remove any old fluoropolymer tape or sealant on previously used threads. If threads are damaged, replace with new adapter before proceeding.
2. Apply 2 to 3 wraps of fluoropolymer tape, or an NSF/FDA approved silicon sealant. Do not user Plumbers Putty or Pipe Dope. These chemically react with plastic materials and could cause a failure.
3. Align ball valve to mating thread to ensure cross threading does not occur.
4. Screw ball valve onto mating thread 3 to 5 turns. This should be sufficient to properly seal the threads.
5. Pressurize system and check for leaks.

VME - Valve Male Elbow

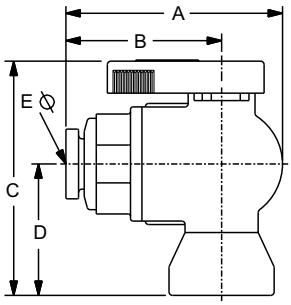




PART NUMBER	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VME2-MG (+)	1/4	1/8	1.74	1.21	2.00	1.10	.19
PP4VME4-MG	1/4	1/4	1.74	1.21	2.18	1.28	.19
PP4VME6-MG	1/4	3/8	1.74	1.21	2.18	1.28	.19
PP4VME8-MG (+)	1/4	1/2	1.74	1.21	2.37	1.47	.19
PP6VME2-MG (+)	3/8	1/8	1.85	1.32	2.00	1.10	.25
PP6VME4-MG	3/8	1/4	1.85	1.32	2.18	1.28	.25
PP6VME6-MG	3/8	3/8	1.85	1.32	2.18	1.28	.25
PP6VME8-MG	3/8	1/2	1.85	1.32	2.37	1.47	.25

VFE - Valve Female Elbow



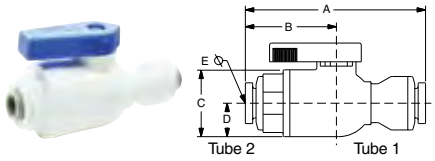


PART NUMBER	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VFE2-MG (+)	1/4	1/8	1.74	1.21	1.82	.92	.19
PP4VFE4-MG	1/4	1/4	1.74	1.21	2.05	1.15	.19
PP4VFE6-MG	1/4	3/8	1.74	1.21	2.18	1.28	.19
PP6VFE2-MG (+)	3/8	1/8	1.85	1.32	1.82	.92	.25
PP6VFE4-MG	3/8	1/4	1.85	1.32	2.05	1.15	.25
PP6VFE6-MG	3/8	3/8	1.85	1.32	2.18	1.28	.25

(+) Non Standard.

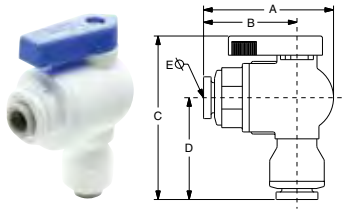
NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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Fluid System Connectors
Otsego, Michigan



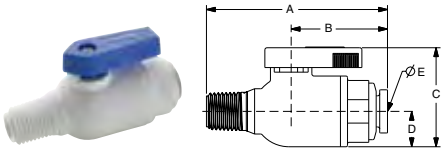
VUC - Valve Union Connector

PART NUMBER	1 TUBE SIZE	2 TUBE SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VUC4-MG	1/4	1/4	2.55	1.22	1.0	.5	.19
PP4VUC6-MG	1/4	3/8	2.55	1.22	1.0	.5	.19
PP6VUC4-MG	3/8	1/4	2.57	1.30	1.0	.5	.19
PP6VUC6-MG	3/8	3/8	2.67	1.32	1.4	.5	.25



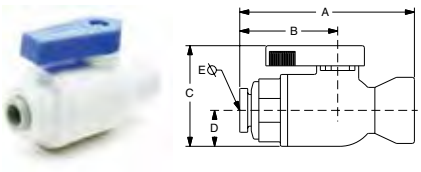
VEU - Valve Elbow Union

PART NUMBER	1 TUBE SIZE	2 TUBE SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VEU4-MG	1/4	1/4	1.75	1.22	2.33	1.42	.19
PP4VEU6-MG	1/4	3/8	1.75	1.22	2.33	1.42	.11
PP6VEU4-MG	3/8	1/4	1.83	1.30	2.32	1.40	.19
PP6VEU6-MG	3/8	3/8	1.85	1.32	2.34	1.44	.25



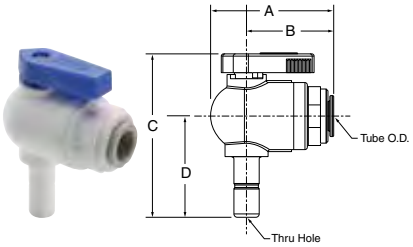
VMC - Valve Male Connector

PART NUMBER	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VMC2-MG (+)	1/4	1/8	2.22	1.21	1.4	.5	.19
PP4VMC4-MG	1/4	1/4	2.40	1.21	1.4	.5	.19
PP4VMC6-MG	1/4	3/8	2.40	1.21	1.4	.5	.19
PP4VMC8-MG (+)	1/4	1/2	2.59	1.21	1.4	.5	.19
PP6VMC2-MG (+)	3/8	1/8	2.33	1.32	1.4	.5	.25
PP6VMC4-MG	3/8	1/4	2.51	1.32	1.4	.5	.25
PP6VMC6-MG	3/8	3/8	2.51	1.32	1.4	.5	.25
PP6VMC8-MG (+)	3/8	1/2	2.70	1.32	1.4	.5	.25



VFC - Valve Female Connector

PART NUMBER	NOM. TUBE O.D.	NPTF THREAD SIZE	A	B	C	D	ØE THRU HOLE MIN.
PP4VFC2-MG	1/4	1/8	2.04	1.21	1.4	.5	.19
PP4VFC4-MG	1/4	1/4	2.27	1.21	1.4	.5	.19
PP4VFC6-MG	1/4	3/8	2.40	1.21	1.4	.5	.19
PP6VFC2-MG	3/8	1/8	2.15	1.32	1.4	.5	.25
PP6VFC4-MG	3/8	1/4	2.38	1.32	1.4	.5	.25
PP6VFC6-MG	3/8	3/8	2.51	1.32	1.4	.5	.25



VTEU - Valve Tube Elbow Union

PART NUMBER	NOM. TUBE O.D.	STEM	A	B	C	D	ØE THRU HOLE MIN.
PP4VTEU6-MG	1/4	3/8	1.75	1.22	2.43	1.50	.17
PP6VTEU6-MG	3/8	3/8	1.83	1.30	2.43	1.50	.25

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

C

SC - Safety Clip



(Patent No. 6,065,779)

PART NUMBER	PART NUMBER	FOR NOMINAL TUBE O.D.
SC-4	SC-4-B	1/4
SC-5	SC-5-B	5/16
SC-6	SC-6-B	3/8
SC-8	SC-8-B	1/2

TS - Tube Supports



NYLON PART NUMBER	PPL PART NUMBER
N4TS3	P4TS3
N5TS3	P5TS3
N6TS4	P6TS4
N8TS6	P8TS6

To be used with soft durometer tubing.

AQRT - Quick Release Tool



Makes disconnection of tube adapters and tubing a breeze.

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Tube to NPTF

MC
Male Connector



p. C27

ME
Male Elbow



p. C27

MR
Male Run Tee



p. C28

MT
Male Branch Tee



p. C28

Tube to Female NPTF

FE
Female Elbow



p. C28

FC
Female Connector



p. C28

Tube to Tube

UC
Union



p. C27

EU
Union Elbow



p. C27

TU
Union Tee



p. C28

Bulkhead Union

BU
Bulkhead Union



p. C28

Auxiliary Components

GR
Grab Ring



p. C29

NS
Nut & Spacer



p. C29

TS
Tube Support



p. C29

OR
O-Ring



p. C29

C

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Fast & Tite®
Thermoplastic Fittings

C

MATERIALS OF CONSTRUCTION	
BODIES:	WHITE POLYPROPYLENE, BLACK POLYPROPYLENE, WHITE NYLON
NUT & SPACERS:	WHITE POLYPROPYLENE, BLACK POLYPROPYLENE, WHITE NYLON
GRAB RING:	302 STAINLESS STEEL
O-RING:	NITRILE

AIR-OIL-WATER PRESSURE IN PSI			
TUBE O. D., IN.	UP TO 75°F	76° TO 125°F	126° TO 175°F
1/4	300	300	300
5/16	300	300	300
3/8	250	250	150
1/2	200	200	150
5/8	150	100	50

TEMPERATURE RANGE	
BLACK / WHITE POLYPROPYLENE:	0°F (-18°C) TO +212°F (+100°C)
WHITE NYLON:	-40°F (-40°C) TO +200°F (+93°C)

APPLICABLE TUBE	
TUBE MATERIAL:	THERMOPLASTIC TUBING, GLASS, SOFT METAL
TUBE O.D.:	1/4, 5/16, 3/8, 1/2, 5/8

SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, OTHER FLUIDS COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY

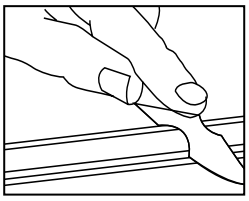
INSERTION LENGTH		
TUBE O.D. (IN.)	INSERTION LENGTH WITH TUBE SUPPORT (IN.)	INSERTION LENGTH WITHOUT TUBE SUPPORT (IN.)
1/4	5/8	9/16
5/16	5/8	9/16
3/8	13/16	3/4
1/2	7/8	13/16
5/8	1	15/16

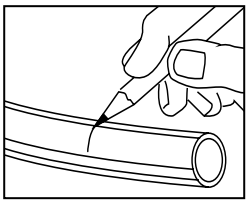
Note: Provide adequate fail-safe mechanisms such as leakage detection sensors, automatic shut-off controls or other industry and code appropriate fail-safe devices in the design of your water-handling appliance to protect against personal injury and property damage. Plastic fittings containing an o-ring have a finite life depending on the environment, media and severity of the application. Frequent inspections and replacement of the fitting when anomalies are found is recommended.



A compression style fitting that installs in seconds without tools and provides a tight, sure, leak proof seal without clamps or adjustments. A unique grab ring for tube retention, coupled with a Nitrile O-ring creates a positive seal and assures good tube retention with only hand tight assembly. Fast & Tite® fittings meet FDA and NSF-51 requirements for food contact.

Assembly Instructions





1. Cut the tube squarely and remove any burrs.
2. Mark from end of tube the length of insertion. If using a tube support, insert fully into tube and then mark from end of tube support length of insertion. (See insertion length table left)
3. Loosen nut on fitting until three threads are visible. Fittings for glass tubes must be disassembled and the grab ring removed. If the fitting has been disassembled the components are to be placed in the following order: fitting body, o-ring, spacer, grab ring and nut. Assemble the nut until three threads are showing on the body before inserting tube.
4. Moisten end of the tube with water. Push the tube Straight into fitting until it bottoms on the fitting's shoulder. Tighten nut by hand. Additional tightening should not be necessary, but 1/4 additional turn may be added if desired. Do not overtighten nut as the threads will strip and the fitting will not function properly. A proper assembly will not show the insertion mark extending beyond the nut. If the insertion mark is visible, then steps 1 thru 4 must be repeated.

   Whenever a Fast & Tite® fitting is assembled for service or reuse the stainless steel grab ring should be replaced for maximum tubing retention.

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Fluid System Connectors
Otsego, Michigan

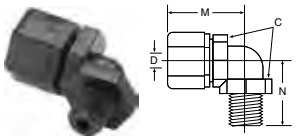
MC - Male Connector



Tube to male pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM TUBE O.D.	NPTF THREAD SIZE	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
W4MC2	P4MC2	N4MC2	1/4	1/8	11/16	1.28	.170
W4MC4	P4MC4	N4MC4	1/4	1/4	11/16	1.51	.170
W4MC6 (+)	P4MC6 (+)	N4MC6 (+)	1/4	3/8	11/16	.148	.170
W5MC2 (+)	P5MC2	N5MC2	5/16	1/8	11/16	1.38	.170
W5MC4 (+)	P5MC4	N5MC4	5/16	1/4	11/16	1.50	.250
W6MC2 (+)	P6MC2	N6MC2	3/8	1/8	13/16	1.50	.170
W6MC4	P6MC4	N6MC4	3/8	1/4	13/16	1.67	.250
W6MC6	P6MC6	N6MC6	3/8	3/8	13/16	1.67	.250
W6MC8 (+)	P6MC8	N6MC8	3/8	1/2	1	1.78	.250
W6MC12	P6MC12	N6MC12	3/8	3/4	1	1.84	.250
W8MC2 (+)	P8MC2	N8MC2	1/2	1/8	1	1.61	.170
W8MC4 (+)	P8MC4	N8MC4	1/2	1/4	1	1.74	.250
W8MC6	P8MC6	N8MC6	1/2	3/8	1	1.74	.375
W8MC8	P8MC8	N8MC8	1/2	1/2	1	1.87	.375
W8MC12 (+)	P8MC12	N8MC12	1/2	3/4	1	1.89	.375
W10MC2 (+)	P10MC2	N10MC2	5/8	1/8	1-1/8	1.75	.170
W10MC4 (+)	P10MC4	N10MC4	5/8	1/4	1-1/8	1.90	.250
W10MC6 (+)	P10MC6	N10MC6	5/8	3/8	1-1/8	1.90	.375
W10MC8 (+)	P10MC8	N10MC8	5/8	1/2	1-1/8	2.01	.500
W10MC12 (+)	P10MC12	N10MC12	5/8	3/4	1-1/8	2.04	.500

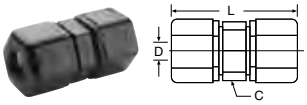
ME - Male Elbow



Tube to male pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
W4ME2	P4ME2	N4ME2	1/4	1/8	3/4	1.06	0.81	.170
W4ME4	P4ME4	N4ME4	1/4	1/4	3/4	1.06	1.02	.170
W4ME6	P4ME6	N4ME6	1/4	3/8	3/4	1.06	1.02	.170
W5ME2 (+)	P5ME2	N5ME2	5/16	1/8	3/4	1.06	0.81	.193
W5ME4 (+)	P5ME4	N5ME4	5/16	1/4	3/4	1.06	1.02	.193
W5ME6 (+)	P5ME6	N5ME6	5/16	3/8	3/4	1.06	1.02	.193
W6ME4	P6ME4	N6ME4	3/8	1/4	7/8	1.28	1.12	.250
W6ME6	P6ME6	N6ME6	3/8	3/8	7/8	1.28	1.12	.250
W6ME8	P6ME8	N6ME8	3/8	1/2	1	1.28	1.34	.250
W6ME12 (+)	P6ME12	N6ME12	3/8	3/4	1-3/16	1.59	1.40	.250
W8ME4 (+)	P8ME4	N8ME4 (+)	1/2	1/4	1-1/16	1.48	1.22	.250
W8ME6	P8ME6	N8ME6	1/2	3/8	1-1/16	1.56	1.21	.375
W8ME8	P8ME8	N8ME8	1/2	1/2	1-1/16	1.56	1.34	.375
W8ME12 (+)	P8ME12 (+)	N8ME12 (+)	1/2	3/4	1-1/8	1.50	1.40	.375
W10ME8 (+)	P10ME8	N10ME8	5/8	1/2	1-3/16	1.72	1.40	.500

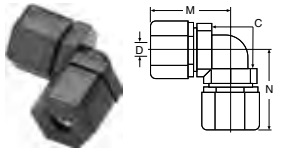
UC - Union Connector



Tube to tube

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM. TUBE O.D.	C HEX	L OVERALL LENGTH	D THRU HOLE MIN.
W4UC4	P4UC4	N4UC4	1/4	11/16	1.62	.170
W5UC4 (+)	P5UC4	N5UC4	5/16-1/4	11/16	1.62	.170
W5UC5 (+)	P5UC5	N5UC5	5/16	11/16	1.62	.190
W6UC4	P6UC4	N6UC4	3/8-1/4	13/16	1.80	.170
W6UC5 (+)	P6UC5	N6UC5	3/8-5/16	13/16	1.80	.190
W6UC6	P6UC6	N6UC6	3/8	13/16	1.92	.250
W8UC6	P8UC6	N8UC6	1/2-3/8	1	1.95	.250
W8UC8	P8UC8	N8UC8	1/2	1	2.03	.375
W10UC6 (+)	P10UC6	N10UC6	5/8-3/8	1-1/8	2.19	.250
W10UC8 (+)	P10UC8	N10UC8	5/8-1/2	1-1/8	2.24	.375
W10UC10 (+)	P10UC10	N10UC10	5/8	1-1/8	2.40	.500

EU - Elbow Union



Tube to tube

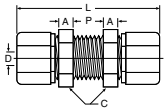
WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM. TUBE O.D.	C HEX	M	N	D THRU HOLE MIN.
W4EU4	P4EU4	N4EU4	1/4	3/4	1.06	1.06	.170
W5EU4 (+)	P5EU4	N5EU4	5/16-1/4	3/4	1.06	1.06	.170
W5EU5 (+)	P5EU5	N5EU5	5/16	3/4	1.06	1.06	.193
W6EU4	P6EU4	N6EU4	3/8-1/4	7/8	1.06	1.28	.170
W6EU5 (+)	P6EU5	N6EU5	3/8-5/16	7/8	1.06	1.28	.170
W6EU6	P6EU6	N6EU6	3/8	7/8	1.28	1.28	.250
W8EU6	P8EU6	N8EU6	1/2-3/8	1-1/16	1.37	1.56	.250
W8EU8	P8EU8	N8EU8	1/2	1-1/16	1.56	1.56	.375
W10EU10 (+)	P10EU10	N10EU10	5/8	1-3/16	1.72	1.72	.500

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

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Otsego, Michigan

C

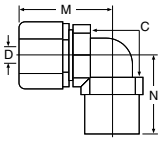
BU - Bulkhead Union

Tube to tube

WHITE PPL PART NUMBER	BLACK PPL PART NO.	WHITE NYLON PART NO.	NOM TUBE O.D.	A REF.	C HEX	L OVERALL LENGTH	P MAX	D THRU HOLE MIN.	BLKHD HOLE DRILL SIZE
W4BU4	P4BU4	N4BU4	1/4	1/4	13/16	2-11/64	3/8	.170	21/32
W5BU5 (+)	P5BU5	N5BU5	5/16	1/4	13/16	2-11/64	3/8	.187	21/32
W6BU6	P6BU6	N6BU6	3/8	9/32	15/16	2-39/64	1/2	.250	25/32
W8BU8	P8BU8	N8BU8	1/2	5/16	1-5/32	2-3/4	1/2	.375	31/32

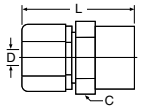
FE - Female Elbow

Tube to female pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
W4FE2	P4FE2	N4FE2	1/4	1/8	11/16	1.10	0.84	.170
W4FE4	P4FE4	N4FE4	1/4	1/4	11/16	1.10	0.94	.170
W5FE2 (+)	P5FE2	N5FE2	5/16	1/8	11/16	1.10	0.84	.193
W6FE4	P6FE4	N6FE4	3/8	1/4	13/16	1.30	1.06	.250
W6FE6	P6FE6	N6FE6	3/8	3/8	13/16	1.30	1.03	.250
W8FE6 (+)	P8FE6	N8FE6	1/2	3/8	1	1.50	1.16	.375
W8FE8	P8FE8	N8FE8	1/2	1/2	1	1.50	1.27	.375
W10FE8 (+)	P10FE8	N10FE8	5/8	1/2	1-1/8	1.70	1.34	.500

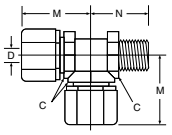
FC - Female Connector

Tube to female pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM TUBE O.D.	NPTF THREAD SIZE	C HEX	L	D THRU HOLE MIN.
W4FC2	P4FC2	N4FC2	1/4	1/8	11/16	1.31	.170
W4FC4	P4FC4	N4FC4	1/4	1/4	11/16	1.44	.170
W6FC4	P6FC4	N6FC4	3/8	1/4	13/16	1.61	.250
W6FC6	P6FC6	N6FC6	3/8	3/8	13/16	1.64	.250
W6FC8	P6FC8	N6FC8	3/8	1/2	13/16	1.75	.250
W8FC6 (+)	P8FC6	N8FC6	1/2	3/8	1	1.70	.375
W8FC8	P8FC8	N8FC8	1/2	1/2	1	1.85	.375
W10FC8 (+)	P10FC8	N10FC8	5/8	1/2	1-1/8	1.96	.500

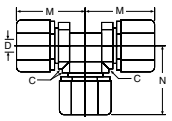
MR - Male Run Tee

Tube to male pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
W4MR2	P4MR2	N4MR2	1/4	1/8	11/16	1.09	0.89	.170
W6MR4	P6MR4	N6MR4	3/8	1/4	13/16	1.30	1.17	.250
W8MR6	P8MR6	N8MR6	1/2	3/8	1	1.46	1.28	.375
W10MR8 (+)	P10MR8	N10MR8	5/8	1/2	1-1/8	1.68	1.50	.500

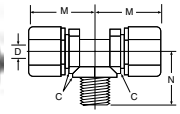
TU - Tee Union

Tube to tube

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM. TUBE O.D.	C HEX	M	N	D THRU HOLE MIN.
W4TU4	P4TU4	N4TU4	1/4	11/16	1.09	1.09	.170
W5TU5 (+)	P5TU5	N5TU5	5/16	11/16	1.09	1.09	.187
W6TU6	P6TU6	N6TU6	3/8	13/16	1.30	1.30	.250
W8TU6 (+)	P8TU6	N8TU6	1/2-3/8	1	1.46	1.39	.250
W8TU8	P8TU8	N8TU8	1/2	1	1.46	1.46	.375
W10TU6 (+)	P10TU6	N10TU6	5/8-3/8	1-1/8	1.68	1.46	.250
W10TU10 (+)	P10TU10	N10TU10	5/8	1-3/16	1.68	1.68	.500

MT - Male Branch Tee

Tube to male pipe

WHITE PPL PART NUMBER	BLACK PPL PART NUMBER	WHITE NYLON PART NUMBER	NOM. TUBE O.D.	NPTF THD SIZE	C HEX	M	N	D THRU HOLE MIN.
W4MT2	P4MT2	N4MT2	1/4	1/8	11/16	1.09	0.89	.170
W4MT4	P4MT4	N4MT4	1/4	1/4	11/16	1.09	1.06	.170
W5MT2 (+)	P5MT2	N5MT2	5/16	1/8	11/16	1.09	0.89	.170
W5MT4 (+)	P5MT4	N5MT4	5/16	1/4	11/16	1.09	1.06	.187
W6MT4	P6MT4	N6MT4	3/8	1/4	13/16	1.30	1.12	.250
W6MT6	P6MT6	N6MT6	3/8	3/8	13/16	1.30	1.10	.250
W8MT6	P8MT6	N8MT6	1/2	3/8	1	1.46	1.22	.375
W8MT8	P8MT8	N8MT8	1/2	1/2	1	1.46	1.43	.375
W10MT8 (+)	P10MT8	N10MT8	5/8	1/2	1-1/8	1.68	1.41	.500

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

C

GR - Grab Ring



(Stainless or Plastic)

STAINLESS GRAB RING PART NUMBER	PLASTIC GRAB RING PART NUMBER	FOR NOM. TUBE O.D.
4GR	4GRP	1/4
5GR	5GRP	5/16
6GR	6GRP	3/8
8GR	8GRP	1/2
10GR	10GRP	5/8

NS - Nut and Spacer Sets



WHITE POLYPROPYLENE PART NUMBER	BLACK POLYPROPYLENE PART NUMBER	WHITE NYLON PARTNUMBER	FOR NOM. TUBE O.D.
W4NS	P4NS	N4NS	1/4
W5NS	P5NS	N5NS	5/16
W6NS	P6NS	N6NS	3/8
W8NS	P8NS	N8NS	1/2
W10NS	P10NS	N10NS	5/8

TS - Tube Support



POLYPROPYLENE PART NUMBER	NYLON PART NUMBER	FOR TUBE PART NUMBER
P4TS3	N4TS3	PV43
P5TS3	N5TS3	PV53
P6TS4	N6TS3	PV64
P8TS6	N8TS6	PV86
P10TS8	N10TS8	PV108

OR - O-Ring



O-RING PART NUMBER	FOR NOM. TUBE O.D.
4OR	1/4
5OR	5/16
6OR	3/8
8OR	1/2
10OR	5/8

NOTE: PPL refers to Polypropylene. FCB refers to Fluorocarbon.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

C

Tube to Male NPTF	**325HB** Male Connector  p. C33	**372HB** Male Branch Tee  p. C34	**329HB** Male Elbow  p. C34	**Tube to Female NPTF**	**326HB** Female Connector  p. C33	**370HB** Female Elbow  p. C34
Tube to Tube	**322HB** Union  p. C32	**364HB** Union Tee  p. C32	**365HB** Union Elbow  p. C32	**362HB** Union Y  p. C34		
Pipe Fittings	**318P** Hex Plug  p. C32	**309P** Bushing  p. C32	**316P** Nipple  p. C33	**Garden Hose Fitting**	**316GH** Garden Hose Adapter  p. C35	**325GH** Garden Hose Connector  p. C35
Auxiliary Component	**328HB** Hose Barb Stem  p. C35	**31HB** Hose Barb Swivel Nut  p. C35	**325GHSV** Swivel Hose Barb Stem  p. C35	**31GH** Garden Hose Nut  p. C35	**313GH** Garden Hose Cap  p. C35	**30GH** Garden Hose Washer  p. C35
Ball Valves	**VFC** Female Connector  p. C36	**VFE** Female Elbow  p. C36	**VMC** Male Connector  p. C36	**VME** Male Elbow  p. C36	**VUC** Union Connector  p. C36	**VUCPM** Union Connector  p. C36

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Par-Barb® Thermoplastic Fittings

MATERIALS OF CONSTRUCTION	
BODIES:	WHITE NYLON, BLACK POLYPROPYLENE
WASHER:	UNIPRENE

NOMENCLATURE	
EXAMPLE: 325HB-4-6N	**ATTRIBUTE:**
325	PLASTIC MALE PIPE CONNECTOR
HB	HOSE BARB
4	1/4 HOSE I.D.
6	3/8 NPT
N	WHITE NYLON

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 125 PSI.
TEMPERATURE RANGE:	BLACK POLYPROPYLENE: 10°F (-12°C) TO +220°F (+104°C)
	WHITE NYLON: -40°F (-40°C) TO +200°F (+93°C)
TUBE MATERIAL:	VINYL, POLYURETHANE, RUBBER HOSE
TUBE I.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2
OPERATING FLUID:	AIR, WATER, OTHER FLUIDS COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY



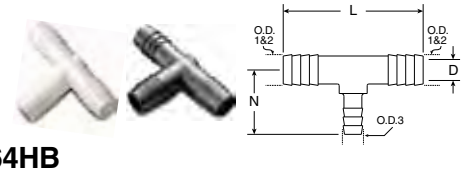
Par-Barb® fittings are injection molded from high strength, chemically inert , thermoplastic materials. These fittings meet FDA and NSF-51 specifications for food contact. The multiple barb design generates the maximum gripping and sealing power when combined with a hose clamp.

C



Union Connector 322HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D. 1	TUBE OR HOSE I.D. 2	O.D. 1	O.D. 2	L	FLOW DIA. D
322HB-2N	322HB-2PP	1/8	1/8	.18	.18	.66	.09
322HB-3N	322HB-3PP	3/16	3/16	.25	.25	1.61	.12
322HB-4-2N	322HB-4-2PP	1/4	1/8	.31	.21	1.61	.08
322HB-4-3N	322HB-4-3PP	1/4	3/16	.31	.25	1.61	.13
322HB-4N	322HB-4PP	1/4	1/4	.31	.31	1.61	.16
322HB-5N	322HB-5PP	5/16	5/16	.37	.37	1.61	.22
322HB-6-4N	322HB-6-4PP	3/8	1/4	.43	.31	1.61	.15
322HB-6-5N	322HB-6-5PP	3/8	5/16	.43	.37	1.62	.22
322HB-6N	322HB-6PP	3/8	3/8	.43	.43	1.61	.25
322HB-8-4N	322HB-8-4PP	1/2	1/4	.55	.31	1.73	.15
322HB-8-6N	322HB-8-6PP	1/2	3/8	.55	.43	1.73	.25
322HB-8N	322HB-8PP	1/2	1/2	.56	.56	1.74	.38
322HB-10-6N	322HB-10-6PP	5/8	3/8	.66	.43	1.73	.25
322HB-10-8N	322HB-10-8PP	5/8	1/2	.66	.55	1.73	.37
322HB-10N	322HB-10PP	5/8	5/8	.67	.67	1.73	.47
322HB-12-8N	322HB-12-8PP	3/4	1/2	.81	.55	2.99	.38
322HB-12N	322HB-12PP	3/4	3/4	.80	.80	2.97	.58
322HB-16N		1	1	1.08	1.08	3.12	.82
322HB-20N		1– 1/4	1– 1/4	1.26	1.26	3.58	1.00
322HB-24N		1–1/2	1–1/2	1.51	1.51	3.58	1.25



Union Tee 364HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D. 1- 2	TUBE OR HOSE I.D. 3	O.D. 1 - 2	O.D. 3	L	N	FLOW DIA. D
364HBM-2N		1/8	1/8	.15	.15	1.19	.60	.08
364HB-3N	364HB-3PP	3/16	3/16	.25	.25	1.49	.75	.12
364HB-4N	364HB-4PP	1/4	1/4	.32	.32	1.92	.96	.16
364HB-4-6N		1/4	3/8	.32	.44	1.92	1.18	.16
364HB-5N	364HB-5PP	5/16	5/16	.36	.36	2.22	1.17	.22
364HB-6-3N	364HB-6-3PP	3/8	3/16	.43	.24	2.23	1.04	.09
364HB-6-4N	364HB-6-4PP	3/8	1/4	.44	.32	1.92	1.18	.16
364HB-6N	364HB-6PP	3/8	3/8	.43	.43	2.22	1.18	.25
364HB-6-8N	364HB-6-8PP	3/8	1/2	.43	.56	2.22	1.27	.25
364HB-8-6N	364HB-8-6PP	1/2	3/8	.55	.43	2.52	1.27	.25
364HB-8N	364HB-8PP	1/2	1/2	.56	.56	2.52	1.27	.37
364HB-10N	364HB-10PP	5/8	5/8	.66	.66	2.74	1.37	.46
364HB-12N		3/4	3/4	.81	.81	2.98	1.50	.58
364HB-16N		1	1	1.06	1.06	3.10	1.55	.81
364HB-20N		1– 1/4	1– 1/4	1.25	1.25	5.29	2.64	1.00
364HB-24N		1–1/2	1–1/2	1.51	1.51	5.48	2.74	1.25



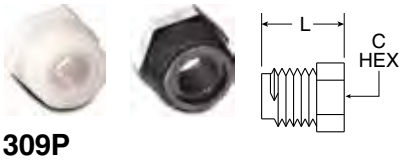
Union Elbow 365HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D. 1	TUBE OR HOSE I.D. 2	O.D. 1	O.D. 2	M	N	FLOW DIA. D
365HB-3N	365HB-3PP	3/16	3/16	.25	.25	.75	.75	.12
365HB-4N	365HB-4PP	1/4	1/4	.31	.31	1.13	1.13	.15
365HB-5N	365HB-5PP	5/16	5/16	.38	.37	1.19	1.19	.22
365HB-6N	365HB-6PP	3/8	3/8	.43	.43	1.26	1.26	.25
365HB-8-4N	365HB-8-4PP	1/2	1/4	.55	.31	1.26	1.24	.16
365HB-8-6N	365HB-8-6PP	1/2	3/8	.55	.43	1.26	1.27	.25
365HB-8N	365HB-8PP	1/2	1/2	.55	.55	1.26	1.26	.37
365HB-10N	365HB-10PP	5/8	5/8	.66	.66	1.37	1.37	.46
365HB-12N	365HB-12PP	3/4	3/4	.80	.80	1.48	1.48	.57
365HB-16N		1	1	1.07	1.07	1.50	1.50	.81
365HB-20N		1– 1/4	1– 1/4	1.25	1.25	2.63	2.63	1.00
365HB-24N		1–1/2	1–1/2	1.50	1.50	2.74	2.74	1.25



Hex Plug 318P

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	NPT PIPE THREAD	C HEX	L
318P-2N	318P-2PP	1/8	7/16	.62
318P-4N	318P-4PP	1/4	9/16	.75
318P-6N	318P-6PP	3/8	11/16	.74
318P-8N	318P-8PP	1/2	7/8	.87
318P-12N	318P-12PP	3/4	1– 1/8	.86
318P-16N	318P-16PP	1	1– 3/8	1.05
318P-20N	318P-20PP	1–1/4	1–1/2	1.44
318P-24N	318P-24PP	1–1/2	1– 3/4	1.61

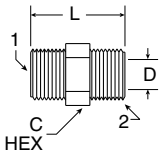


Reducer Bushing 309P

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	EXTERNAL NPT PIPE THREAD	INTERNAL NPT PIPE THREAD	C HEX	L
309P-4-2N	309P-4-2PP	1/4	1/8	9/16	.75
309P-6-2N	309P-6-2PP	3/8	1/8	11/16	.74
309P-6-4N	309P-6-4PP	3/8	1/4	11/16	.75
309P-8-2N	309P-8-2PP	1/2	1/8	7/8	.88
309P-8-4N	309P-8-4PP	1/2	1/4	7/8	.87
309P-8-6N	309P-8-6PP	1/2	3/8	7/8	.87
309P-12-2N	309P-12-2PP	3/4	1/8	1– 1/8	.86
309P-12-4N	309P-12-4PP	3/4	1/4	1– 1/8	.75
309P-12-6N	309P-12-6PP	3/4	3/8	1– 1/8	.85
309P-12-8N	309P-12-8PP	3/4	1/2	1– 1/8	.87

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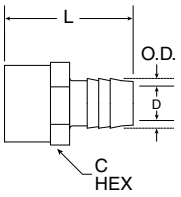




Hex Nipple 316P

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	NPT PIPE THREAD SIDE 1	NPT PIPE THREAD SIDE 2	C HEX	L	FLOW DIA. D
316P-2N	316P-2PP	1/8	1/8	7/16	.99	.22
316P-4-2N	316P-4-2PP	1/4	1/8	9/16	1.13	.22
316P-4N	316P-4PP	1/4	1/4	9/16	1.24	.31
316P-6-2N	316P-6-2PP	3/8	1/8	11/16	1.11	.22
316P-6-4N	316P-6-4PP	3/8	1/4	11/16	1.25	.31
316P-6N	316P-6PP	3/8	3/8	11/16	1.23	.43
316P-8-2N	316P-8-2PP	1/2	1/8	7/8	1.23	.22
316P-8-4N	316P-8-4PP	1/2	1/4	7/8	1.36	.31
316P-8-6N	316P-8-6PP	1/2	3/8	7/8	1.35	.43
316P-8N	316P-8PP	1/2	1/2	7/8	1.45	.59
316P-12-6N	316P-12-6PP	3/4	3/8	1– 1/8	1.36	.43
316P-12-8N	316P-12-8PP	3/4	1/2	1– 1/8	1.47	.59
316P-12N	316P-12PP	3/4	3/4	1– 1/8	1.48	.74
316P-16N	316P-16PP	1	1	1– 3/8	1.85	.98

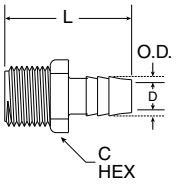




Female Connector 326HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	NPT PIPE THREAD	O.D.	C HEX	L	FLOW DIA. D
326HB-3-2N	326HB-3-2PP	3/16	1/8	.25	5/8	1.29	.12
326HB-3-4N	326HB-3-4PP	3/16	1/4	.25	3/4	1.31	.13
326HB-4-2N	326HB-4-2PP	1/4	1/8	.31	5/8	1.51	.16
326HB-4-4N	326HB-4-4PP	1/4	1/4	.31	3/4	1.52	.15
326HB-4-6N	326HB-4-6PP	1/4	3/8	.31	1	1.73	.15
326HB-4-8N	326HB-4-8PP	1/4	1/2	.31	1-1/8	1.74	.15
326HB-6-2N	326HB-6-2PP	3/8	1/8	.44	5/8	1.51	.25
326HB-6-4N	326HB-6-4PP	3/8	1/4	.43	3/4	1.52	.25
326HB-6-6N	326HB-6-6PP	3/8	3/8	.43	1	1.73	.25
326HB-6-8N	326HB-6-8PP	3/8	1/2	.43	1-1/8	1.74	.25
326HB-8-4N	326HB-8-4PP	1/2	1/4	.55	3/4	1.52	.37
326HB-8-6N	326HB-8-6PP	1/2	3/8	.55	1	1.74	.37
326HB-8-8N	326HB-8-8PP	1/2	1/2	.56	1– 1/8	1.74	.37
326HB-10-6N	326HB-10-6PP	5/8	3/8	.66	1	1.61	.46
326HB-10-8N	326HB-10-8PP	5/8	1/2	.66	1– 1/8	1.73	.46
326HB-12-8N	326HB-12-8PP	3/4	1/2	.80	1– 1/8	1.86	.62
326HB-12-12N	326HB-12-12PP	3/4	3/4	.80	1– 1/8	1.85	.62





Male Connector 325HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	NPT PIPE THD.	O.D.	C HEX	L	FLOW DIA. D
325HB-3-2N	325HB-3-2PP	3/16	1/8	.25	7/16	1.49	.12
325HB-3-4N	325HB-3-4PP	3/16	1/4	.25	9/16	1.61	.13
325HB-4-2N	325HB-4-2PP	1/4	1/8	.31	7/16	1.50	.15
325HB-4-4N	325HB-4-4PP	1/4	1/4	.31	9/16	1.60	.16
325HB-4-6N		1/4	3/8	.31	11/16	1.62	.16
325HB-4-8N	325HB-4-8PP	1/4	1/2	.31	7/8	1.73	.15
325HB-4-12N		1/4	3/4	.31	1– 1/8	1.74	.16
325HB-5-2N		5/16	1/8	.37	7/16	1.50	.22
325HB-5-4N		5/16	1/4	.37	9/16	1.62	.22
325HB-5-6N	325HB-5-6PP	5/16	3/8	.37	11/16	1.60	.21
325HB-6-2N	325HB-6-2PP	3/8	1/8	.43	7/16	1.49	.25
325HB-6-4N	325HB-6-4PP	3/8	1/4	.43	9/16	1.62	.25
325HB-6-6N	325HB-6-6PP	3/8	3/8	.43	11/16	1.61	.25
325HB-6-8N	325HB-6-8PP	3/8	1/2	.43	7/8	1.73	.25
325HB-6-12N	325HB-6-12PP	3/8	3/4	.43	1– 1/8	1.72	.25
325HB-8-4N	325HB-8-4PP	1/2	1/4	.55	9/16	1.61	.35
325HB-8-6N	325HB-8-6PP	1/2	3/8	.55	11/16	1.60	.37
325HB-8-8N	325HB-8-8PP	1/2	1/2	.55	7/8	1.73	.37
325HB-8-12N	325HB-8-12PP	1/2	3/4	.55	1– 1/8	1.72	.37
325HB-10-6N	325HB-10-6PP	5/8	3/8	.66	11/16	1.61	.46
325HB-10-8N	325HB-10-8PP	5/8	1/2	.66	7/8	1.73	.46
325HB-10-12N	325HB-10-12PP	5/8	3/4	.67	1– 1/8	1.82	.46
325HB-12-8N	325HB-12-8PP	3/4	1/2	.80	7/8	1.86	.62
325HB-12-12N	325HB-12-12PP	3/4	3/4	.80	1– 1/8	1.85	.62
325HB-12-16N		3/4	1	.82	1– 3/8	2.35	.59
325HB-12-20N		3/4	1– 1/4	.86	1– 1/2	3.47	.59
325HB-12-24N		3/4	1– 1/2	.86	1– 3/4	3.66	.59
325HB-16-8N		1	1/2	1.08	1– 1/8	2.49	.77
325HB-16-12N		1	3/4	1.07	1– 1/8	2.30	.81
325HB-16-16N		1	1	1.07	1– 3/8	2.35	.81
325HB-16-20N		1	1– 1/4	1.11	1– 1/2	3.45	.78
325HB-16-24N		1	1– 1/2	1.11	1– 3/4	3.63	.78
325HB-20-20N		1– 1/4	1– 1/4	1.36	1– 1/2	3.47	1.04
325HB-20-24N		1– 1/4	1– 1/2	1.36	1– 3/4	3.64	1.04
325HB-24-20N		1– 1/2	1– 1/4	1.60	1– 1/2	3.45	1.28
325HB-24-24N		1– 1/2	1– 1/2	1.61	1– 3/4	3.63	1.28

C

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

C



Male Branch Tee 372HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	NPT PIPE THD.	O.D.	C HEX	L	N	FLOW DIA. D
372HB-3-2N		3/16	1/8	.25	7/16	1.94	1.06	.13
372HB-3-4N		3/16	1/4	.24	9/16	1.93	1.17	.13
372HB-4-2N	372HB-4-2PP	1/4	1/8	.32	7/16	1.92	1.06	.16
372HB-4-4N	372HB-4-4PP	1/4	1/4	.32	9/16	1.92	1.16	.16
372HB-4-6N	372HB-4-6PP	1/4	3/8	.32	11/16	1.92	1.18	.16
372HB-6-4N	372HB-6-4PP	3/8	1/4	.43	9/16	2.22	1.18	.25
372HB-6-6N	372HB-6-6PP	3/8	3/8	.43	11/16	2.22	1.17	.25
372HB-6-8N	372HB-6-8PP	3/8	1/2	.43	7/8	2.22	1.29	.25
372HB-8-4N	372HB-8-4PP	1/2	1/4	.55	9/16	2.52	1.17	.37
372HB-8-6N	372HB-8-6PP	1/2	3/8	.56	11/16	2.52	1.17	.37
372HB-8-8N	372HB-8-8PP	1/2	1/2	.55	7/8	2.52	1.30	.37
372HB-12-12N	372HB-12-12PP	3/4	3/4	.81	1– 1/8	2.97	1.92	.58
372HB-16-8N		1	1/2	1.07	7/8	3.10	1.74	.81
372HB-16-12N		1	3/4	1.07	1– 1/8	3.10	1.92	.81
372HB-16-16N		1	1	1.07	1– 3/8	3.11	1.98	.81



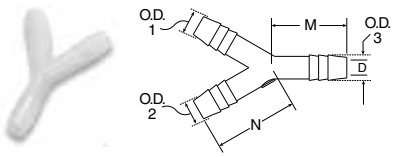
Female Elbow 370HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	NPT PIPE THD.	O.D.	C HEX	M	N	FLOW DIA. D
370HB-4-2N	370HB-4-2PP	1/4	1/8	.31	5/8	1.19	1.07	.16
370HB-4-4N	370HB-4-4PP	1/4	1/4	.31	3/4	1.18	1.08	.16
370HB-4-6N	370HB-4-6PP	1/4	3/8	.31	1	1.16	1.30	.16
370HB-4-8N	370HB-4-8PP	1/4	1/2	.31	1– 1/8	1.18	1.30	.15
370HB-6-2N	370HB-6-2PP	3/8	1/8	.43	5/8	1.18	1.06	.25
370HB-6-4N	370HB-6-4PP	3/8	1/4	.44	3/4	1.18	1.06	.25
370HB-6-6N	370HB-6-6PP	3/8	3/8	.43	1	1.18	1.29	.25
370HB-6-8N	370HB-6-8PP	3/8	1/2	.43	1– 1/8	1.18	1.29	.25
370HB-8-4N	370HB-8-4PP	1/2	1/4	.55	3/4	1.25	1.22	.37
370HB-8-6N	370HB-8-6PP	1/2	3/8	.55	1	1.25	1.44	.37
370HB-8-8N	370HB-8-8PP	1/2	1/2	.55	1– 1/8	1.25	1.45	.37
370HB-8-12N	370HB-8-12PP	1/2	3/4	.55	1– 3/8	1.26	1.72	.37
370HB-12-12N	370HB-12-12PP	3/4	3/4	.80	1– 3/8	1.38	1.84	.59



Male Elbow 329HB

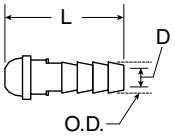
WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	NPT PIPE THD.	O.D.	C HEX	M	N	FLOW DIA. D
329HB-3-2N	329HB-3-2PP	3/16	1/8	.25	7/16	.76	1.06	.12
329HB-3-4N		3/16	1/4	.25	9/16	.76	1.17	.13
329HB-4-2N	329HB-4-2PP	1/4	1/8	.31	7/16	1.18	1.04	.16
329HB-4-4N	329HB-4-4PP	1/4	1/4	.31	9/16	1.18	1.16	.22
329HB-4-6N	329HB-4-6PP	1/4	3/8	.31	11/16	1.18	1.17	.15
329HB-4-8N	329HB-4-8PP	1/4	1/2	.32	7/8	1.18	1.30	.15
329HB-5-2N		5/16	1/8	.37	7/16	1.18	1.06	.22
329HB-6-2N	329HB-6-2PP	3/8	1/8	.43	7/16	1.18	1.05	.25
329HB-6-4N	329HB-6-4PP	3/8	1/4	.43	9/16	1.18	1.16	.25
329HB-6-6N	329HB-6-6PP	3/8	3/8	.43	11/16	1.17	1.17	.25
329HB-6-8N	329HB-6-8PP	3/8	1/2	.43	7/8	1.18	1.28	.25
329HB-8-4N	329HB-8-4PP	1/2	1/4	.55	9/16	1.27	1.16	.37
329HB-8-6N	329HB-8-6PP	1/2	3/8	.56	11/16	1.26	1.16	.37
329HB-8-8N	329HB-8-8PP	1/2	1/2	.55	7/8	1.25	1.29	.37
329HB-8-12N	329HB-8-12PP	1/2	3/4	.55	1– 1/8	1.30	1.89	.37
329HB-10-6N		5/8	3/8	.67	11/16	1.27	1.18	.47
329HB-10-8N	329HB-10-8PP	5/8	1/2	.68	7/8	1.30	1.73	.48
329HB-10-12N	329HB-10-12PP	5/8	3/4	.69	1– 1/8	1.32	1.92	.49
329HB-12-8N	329HB-12-8PP	3/4	1/2	.81	7/8	1.51	1.74	.58
329HB-12-12N	329HB-12-12PP	3/4	3/4	.81	1– 1/8	1.50	1.91	.58
329HB-12-16N		3/4	1	.82	1– 3/8	1.49	1.98	.58
329HB-12-20N		3/4	1– 1/4	.86	1– 1/2	1.52	2.39	.59
329HB-12-24N		3/4	1– 1/2	.85	1– 1/2	2.26	3.09	.59
329HB-16-8N		1	1/2	1.12	7/8	1.58	1.78	.86
329HB-16-12N		1	3/4	1.11	1– 1/8	1.58	1.93	.86
329HB-16-16N		1	1	1.08	1– 3/8	1.55	1.98	.81
329HB-16-20N		1	1– 1/4	1.12	1– 1/2	2.28	2.93	.84
329HB-16-24N		1	1– 1/2	1.12	1– 1/2	2.27	3.11	.84
329HB-20-20N		1– 1/4	1– 1/4	1.25	1– 1/2	2.63	2.94	1.00
329HB-20-24N		1– 1/4	1– 1/2	1.36	1– 1/2	2.63	3.11	1.08
329HB-24-20N		1– 1/2	1– 1/4	1.60	1– 1/2	2.77	2.93	1.30
329HB-24-24N		1– 1/2	1– 1/2	1.60	1– 1/2	2.77	3.10	1.30



Union Y 362HB

WHITE NYLON PART NO.	TUBE OR HOSE I.D. 1 & 2	TUBE OR HOSE I.D. 3	O.D. 1 & 2	O.D. 3	M	N	FLOW DIA. D
362HB-4N	1/4	1/4	.31	.31	1.13	1.13	.16
362HB-6N	3/8	3/8	.43	.43	1.25	1.40	.25
362HB-8N	1/2	1/2	.55	.55	1.25	1.50	.38

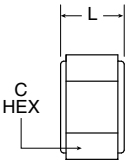
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Ball Nose Hose Barb Stem 328HB

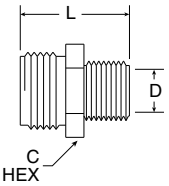
WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	TUBE OR HOSE I.D.	SWIVEL NUT NPT PIPE THREAD	O.D.	L	FLOW DIA. D
328HB-4BN	328HB-4BPP	1/4	1/4 *	.30	1.19	.19
328HB-4-8BN	328HB-4-8BPP	1/4	1/2 *	.30	1.29	.15
328HB-6BN	328HB-6BPP	3/8	3/8 *	.56	1.41	.25
328HB-8BN	328HB-8BPP	1/2	1/2 *	.67	1.30	.37

*Use with hose barb swivel nut (31HB-XX) for desired NPT thread.

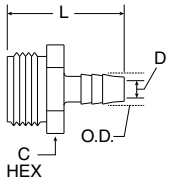
Hose Barb Swivel Nut 31HB

WHITE NYLON PART NO.	BLACK POLYPROPYLENE PART NO.	NPT PIPE THREAD	C HEX	L
31HB-4N	31HB-4PP	1/4	3/4	.62
31HB-6N	31HB-6PP	3/8	7/8	.63
31HB-8N	31HB-8PP	1/2	1– 1/16	.75

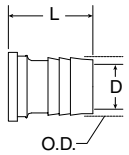
Male Garden Hose - Male Pipe Adapter 316GH

WHITE NYLON PART NO.	GARDEN HOSE THREAD	NPT PIPE THREAD	C HEX	L	FLOW DIA. D
316GH-12-6N	3/4	3/8	1– 1/8	1.33	.44
316GH-12-8N	3/4	1/2	1– 1/8	1.44	.59
316GH-12-12N	3/4	3/4	1– 1/8	1.48	.75

Male Garden Hose - Hose Barb 325GH

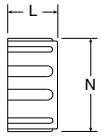
WHITE NYLON PART NO.	TUBE OR HOSE I.D.	GARDEN HOSE THREAD	O.D.	C HEX	L	FLOW DIA. D
325GH-4-12N	1/4	3/4	.31	1– 1/8	1.70	.16
325GH-6-12N	3/8	3/4	.44	1– 1/8	1.69	.25
325GH-8-12N	1/2	3/4	.55	1– 1/8	1.68	.38
325GH-10-12N	5/8	3/4	.64	1– 1/8	1.70	.47
325GH-12-12N	3/4	3/4	.81	1– 1/8	1.70	.62

Garden Hose Swivel Hose Barb Stem 325GHSV

WHITE NYLON PART NO.	TUBE OR HOSE I.D.	GARDEN HOSE THREAD	O.D.	L	FLOW DIA. D
325GHSV-4-12BN+	1/4	3/4	.31	1.16	.16
325GHSV-6-12BN+	3/8	3/4	.44	1.17	.25
325GHSV-8-12BN+	1/2	3/4	.56	1.17	.38
325GHSV-10-12BN+	5/8	3/4	.64	1.18	.47
325GHSV-12-12BN+	3/4	3/4	.81	1.18	.62

+Use with Garden Hose washer (30GH-12) and Garden Hose Nut (31GH-12N)

Garden Hose Nut 31GH

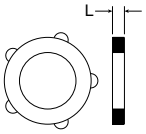
WHITE NYLON PART NO.	GARDEN HOSE THREAD	L	DIA. N
31GH-12N	3/4	.74	1.38




Garden Hose Cap 313GH

WHITE NYLON PART NO.	GARDEN HOSE THREAD	L	DIA. N
313GH-12N**	3/4	.74	1.38

**Use with Garden Hose Washer (30GH-12)

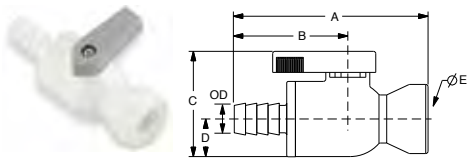
Garden Hose Washer 30GH

WHITE TPE PART NO.	GARDEN HOSE THREAD	L
30GH-12	3/4	.13

C

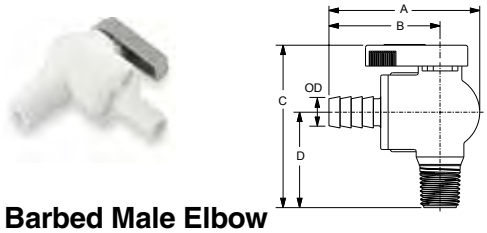
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

C



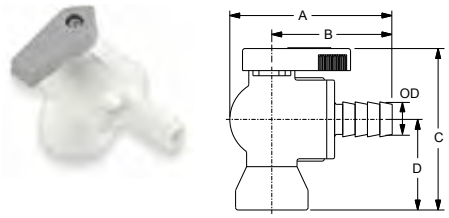
VFC - Valve Barbed Female Connector

PART NO.	HOSE I.D.	NPTF THD.	O.D.	A	B	C	D	ØE THRU HOLE MIN.
PBPP4VFC4	1/4	1/4	.31	2.76	1.60	1.41	.50	.15
PBPP6VFC6	3/8	3/8	.43	2.79	1.60	1.41	.50	.19



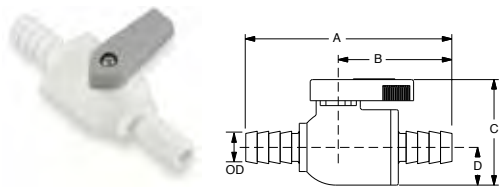
VME - Valve Barbed Male Elbow

PART NO.	HOSE I.D.	NPTF THD.	O.D.	A	B	C	D	ØE THRU HOLE MIN.
PBPP4VME4	1/4	1/4	.31	2.13	1.60	2.18	1.28	.15
PBPP6VME6	3/8	3/8	.43	2.13	1.60	2.18	1.28	.19



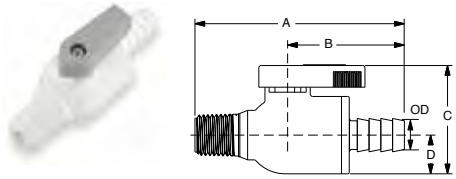
VFE - Valve Barbed Female Elbow

PART NO.	HOSE I.D.	NPTF THD.	O.D.	A	B	C	D	ØE THRU HOLE MIN.
PBPP4VFE4	1/4	1/4	.31	2.13	1.60	2.05	1.15	.15
PBPP6VFE4	3/8	1/4	.43	2.13	1.60	2.05	1.15	.15
PBPP6VFE6	3/8	3/8	.43	2.13	1.60	2.18	1.28	.19



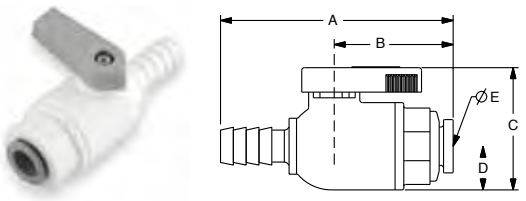
VUC - Valve Barbed Union Connector

PART NO.	HOSE I.D.	O.D.	A	B	C	D	ØE THRU HOLE MIN.
PBPP4VUC4	1/4	.31	2.91	1.60	1.42	.50	.15
PBPP6VUC6	3/8	.43	2.91	1.60	1.42	.50	.19
PBPP8VUC8	1/2	.55	2.91	1.60	1.42	.50	.25



VMC - Valve Barbed Male Connector

PART NO.	HOSE I.D.	NPTF THD.	O.D.	A	B	C	D	ØE THRU HOLE MIN.
PBPP4VMC4	1/4	1/4	.31	2.79	1.60	1.42	.50	.15
PBPP6VMC6	3/8	3/8	.43	2.79	1.60	1.42	.50	.19



VUCPB - Valve Union Connector Barbed x Tube

PART NO.	HOSE ID	TUBE OD	OD	A	B	C	D	ØE THRU HOLE MIN.
LFPP4VUCPB4	1/4	1/4	.31	2.40	1.08	1.42	.50	.15
LFPP6VUCPB6	3/8	3/8	.43	2.63	1.32	1.42	.50	.19

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Transportation:
Push-to-Connect



Photo Courtesy of US Army

Prestomatic
Stainless Steel Tube support
Meets D.O.T. FMVSS 571.106
Meets SAE J2494



PTC
Composite Light Weight Bodies
Meets D.O.T. FMVSS 571.106
Meets SAE J2494 – 3
Brass componentry



Metric Prestomatic
Stainless Steel Tube Support
Meets DIN 74324
Meets D.O.T. FMVSS 571.106
when used with SAE J844
Metric Tubing



D

Tube to Male NPT

68PMT Male Connector

p. D6

169PMT Male Elbow

p. D7

169PMTR Male Elbow Positional

p. D7

169PMTL Male Elbow Long

p. D7

169PMTNS Male Elbow Rigid

p. D7

171PMT Run Tee Swivel

p. D8

171PMTNS Run Tee Rigid

p. D8

172PMT Branch Tee Swivel

p. D8

172PMTNS Branch Tee Rigid

p. D8

179PMT 45° Male Elbow Swivel

p. D9

179PMTR 45° Male Elbow Positional

p. D9

179PMTNS 45° Male Elbow Rigid

p. D9

189PMTR Dual Port Elbow Positional

p. D9

369PTC Male Elbow

p. D11

368PTC Male Y Connector

p. D11

371PTC Run Tee

p. D12

372PTC Branch Tee

p. D12

379PTC 45° Male Elbow

p. D12

Tube to Female NPT

66PMT Female Connector

p. D5

170PMT Female Elbow Swivel

p. D8

170PMTNS Female Elbow Rigid

p. D8

370PTC Female Elbow

p. D11

377PTC Female Branch Tee

p. D12

Tube to Metric Thread

68PMT-X-M Male Connector

p. D6

169PMTNS-X-M Male Elbow Rigid

p. D7

Tube to Tube

62PMT Union

p. D5

164PMT Union Tee

p. D6

165PMT Union Elbow

p. D6

32PTC Union

p. D11

362PTC Union Y

p. D11

364PTC Union Tee

p. D11

365PTC Union Elbow

p. D11

Bulkhead Union

62PMTBHR Retaining Ring Bulkhead

p. D5

62PMTBH Bulkhead Union

p. D5

66PMTBH Female Bulkhead Union

p. D6

68PMTBH Male Bulkhead Union

p. D6

165PMTBH Elbow Union Bulkhead

p. D6

169PMTBH Male Elbow Bulkhead

p. D7

Plug-ins

37PTCSP Adapter

p. D12

369PTCSP Male Elbow

p. D12

372PTCSP Branch Tee

p. D13

371PTCSP Run Tee

p. D13

Auxiliary Component

ERHD External Retainer

p. D5

ES External Seal

p. D5

639PMT Plug

p. D9

Metric Tube to Male BSPT

F3PMTB Male Connector

p. D15

C3PMTB Male Elbow

p. D16

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Metric Tube to Metric Straight Thread

F8UPMTB
Male Connector



p. D15

C8UPMTB
Male Elbow



p. D16

S8UPMTB
Branch Tee



p. D16

Metric Tube to Metric Tube

HPMTB
Union



p. D15

JPMTB
Union Tee



p. D15

Metric Tube to NPT

F2PMTB
Male Connector



p. D15

C2PMTB
Male Elbow



p. D16

D

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Prestomatic† Air Brake Push-In Fittings

D

MATERIALS OF CONSTRUCTION	
FITTING BODIES:	BRASS
COLLET:	BRASS
TUBE SUPPORT:	STAINLESS STEEL
O-RING:	BUNA N

NOMENCLATURE	
EXAMPLE: 68PMT-6-4	**ATTRIBUTE:**
68	MALE CONNECTOR
PMT	AIR BRAKE PUSH-IN FITTING
6	3/8" (6/16) TUBE SIZE
4	1/4" (4/16) PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	SAE J844 TYPE A & B NYLON TUBING
TUBE O.D.:	5/32, 1/4, 3/8, 1/2, 5/8, 3/4

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 250 PSI
TEMPERATURE RANGES:	-40° TO +200°F

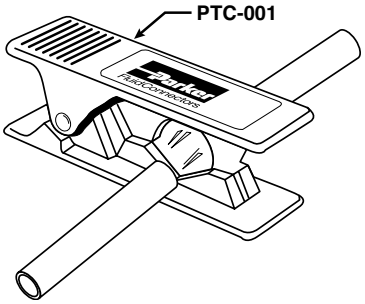


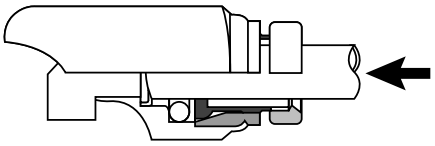
Patented design of sizes 1/4" and above meet SAE J2494 and D.O.T. FMVSS 571.106 air brake performance specifications. Stainless steel tube support in sizes 1/4" and above assures maximum flow and performance requirements of SAE J2494-3. 5/32" size has a brass tube support and meets SAE J2494 and DOT FMVSS 571.106 air brake performance specifications.

Assembly Instructions

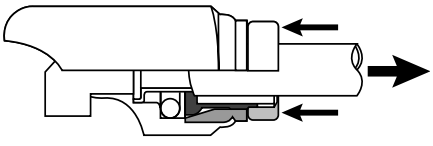
1. Cut tubing squarely–maximum of 15° angle allowable.
   • Use of Parker tube cutter PTC-001 is recommended.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing into fitting until it bottoms.
   • Push twice to verify that tubing is inserted past collet and O-Ring.
4. Pull on tubing to verify it is fully inserted.
5. To disassemble, simply press release button, hold against body, and pull tubing out of fitting.

Note: in order to pass hot pull requirements of
DOT FMVSS 571.106 and SAE J2494-3 a tube support
must be present in the end of the fitting before final fitting assembly.





Insert tubing until it bottoms



Depress button to remove tubing

† U.S. Pstent No. 5,683,120

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

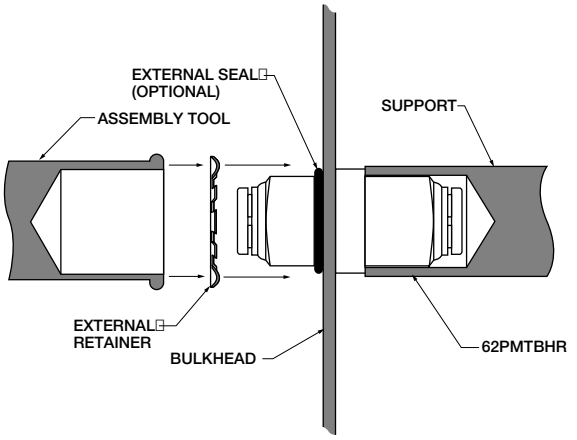
Prestomatic† Retaining Ring Bulkhead Unions

Prestomatic† retaining ring bulkhead unions feature a unique design that provides the user with an economical method to install and assemble a union connection through a bulkhead.

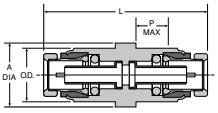
The retaining ring bulkhead unions feature a smaller envelope size than standard bulkhead union connectors and do not require a wrench to mount or assemble in cramped areas.

The external seal feature provides a moisture barrier and can also prevent external contamination from entering into an enclosed area.

To install, simply support the bulkhead union from behind and apply the external seal. Then push the external retainer against the external seal with an assembly tool and you have a reliable bulkhead connection in a confined area.

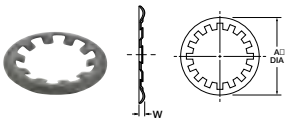






Retaining Ring Bulkhead 62PMTBHR

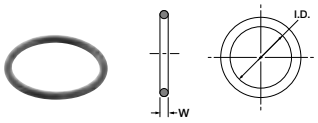
PART NO.	TUBE SIZE	O.D.	REC. HOLE SIZE	L	P MAX	A DIA
62PMTBHR-4	1/4	.500	.512	1.53	.26	.625
62PMTBHR-6	3/8	.750	.762	1.92	.36	.875
62PMTBHR-8	1/2	.875	.887	2.15	.43	1.000
62PMTBHR-10	5/8	1.000	1.012	2.54	.62	1.250



External Retainer ERHD*

PART NO.	TUBE SIZE	BULKHEAD UNION O.D.	A DIA.	W
ERHD-50	1/4	.500	.83	.05
ERHD-75	3/8	.750	1.08	.05
ERHD-87	1/2	.875	1.20	.05
ERHD-100	5/8	1.000	1.33	.06

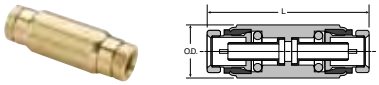
*Material Carbon Spring Steel



External Seal ES*

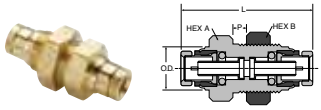
PART NO.	TUBE SIZE	BULKHEAD UNION O.D.	I.D.	W
ES-50	1/4	.500	.489	.07
ES-75	3/8	.750	.739	.07
ES-87	1/2	.875	.864	.07

*Material is Nitrite (Buna N), 70 Durometer



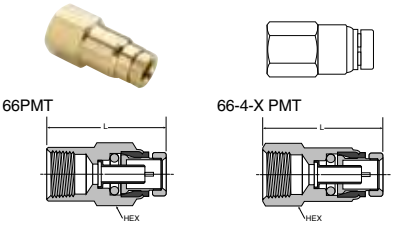
Union 62PMT

PART NO.	TUBE SIZE	L	O.D.
62PMT-4	1/4	1.48	.50
62PMT-6	3/8	1.87	.75
62PMT-6-4	3/8-1/4	1.68	.75
62PMT-8	1/2	2.03	.88
62PMT-10	5/8	2.42	1.00



Bulkhead Union 62PMTBH

PART NO.	TUBE SIZE	O.D.	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
62PMTBH-4	1/4	.56	1.69	.25	11/16	3/4	9/16
62PMTBH-6	3/8	.88	1.93	.44	1-1/16	1-1/16	7/8
62PMTBH-8	1/2	1.00	2.02	.58	1-1/4	1-1/4	1
62PMTBH-10	5/8	1.12	2.92	.81	1-1/4	1-3/8	1-1/8



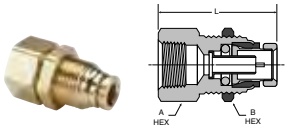
Female Connector 66PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
66PMT-4-2	1/4	1/8	1.22	9/16
66PMT-4-4	1/4	1/4	1.43	11/16
66PMT-6-2	3/8	1/8	1.37	3/4
66PMT-6-4	3/8	1/4	1.58	3/4
66PMT-6-6	3/8	3/8	1.62	13/16
66PMT-8-4	1/2	1/4	1.69	7/8
66PMT-8-6	1/2	3/8	1.68	7/8
66PMT-8-8	1/2	1/2	1.91	1

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

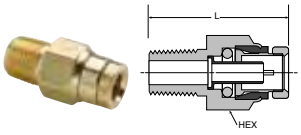
D

Bulkhead Female Connector 66PMTBH



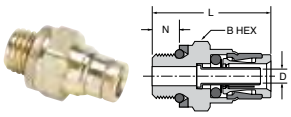
PART NO.	TUBE SIZE	PIPE THREAD	L	HEX A	HEX B	BULKHEAD HOLE DIA.
66PMTBH-4-4	1/4	1/4	1.62	11/16	3/4	9/16
66PMTBH-6-6	3/8	3/8	1.87	1.06	1.06	7/8
66PMTBH-8-8	1/2	1/2	2.02	1-1/4	1-1/4	1

Male Connector 68PMT



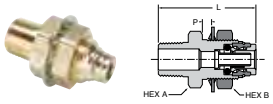
PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
68PMT-4-2	1/4	1/8	1.06	1/2
68PMT-4-4	1/4	1/4	1.19	9/16
68PMT-4-6	1/4	3/8	1.27	3/4
68PMT-6-2	3/8	1/8	1.37	3/4
68PMT-6-4	3/8	1/4	1.43	3/4
68PMT-6-6	3/8	3/8	1.33	3/4
68PMT-6-8	3/8	1/2	1.38	7/8
68PMT-8-4	1/2	1/4	1.72	7/8
68PMT-8-6	1/2	3/8	1.52	7/8
68PMT-8-8	1/2	1/2	1.44	7/8
68PMT-10-6	5/8	3/8	1.88	1
68PMT-10-8	5/8	1/2	1.88	1
68PMT-12-8	3/4	1/2	2.03	1 3/16
68PMT-12-12	3/4	3/4	2.03	1 1/8

Male Connector to Metric Adapter 68PMT-X-M



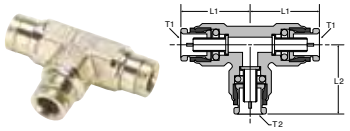
PART NO.	TUBE SIZE	METRIC THREAD	L	B HEX	N
68PMT-4-M12	1/4	M12X1.5	1.19	11/16	.29
68PMT-4-M16	1/4	M16X1.5	1.29	7/8	.39
68PMT-6-M12	3/8	M12X1.5	1.40	3/4	.29
68PMT-6-M16	3/8	M16X1.5	1.35	7/8	.39
68PMT-6-M22	3/8	M22X1.5	1.23	1 1/16	.40
68PMT-8-M12	1/2	M12X1.5	1.45	7/8	.29
68PMT-8-M16	1/2	M16X1.5	1.52	7/8	.39
68PMT-8-M22	1/2	M22X1.5	1.31	1 1/16	.37
68PMT-10-M16	5/8	M16X1.5	1.78	1	.39

Bulkhead Male Connector 68PMTBH



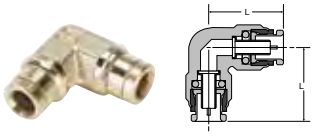
PART NO.	TUBE SIZE	PIPE THREAD	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
68PMTBH-6-8	3/8	1/2	2.37	.33	1-1/4	1-1/4	1
68PMTBH-8-8	1/2	1/2	2.38	.33	1-1/4	1-1/4	1

Union Tee 164PMT



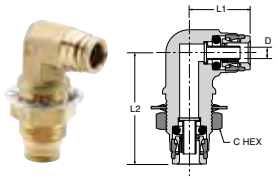
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	L1	L2
164PMT-4	1/4	1/4	.85	.85
164PMT-6	3/8	3/8	1.21	1.21
164PMT-6-6-4	3/8	1/4	1.21	.93
164PMT-8	1/2	1/2	1.27	1.27
164PMT-10	5/8	5/8	1.63	1.62

Union Elbow 165PMT



PART NO.	TUBE SIZE	L
165PMT-4	1/4	.85
165PMT-6	3/8	1.11
165PMT-8	1/2	1.24
165PMT-10	5/8	1.57

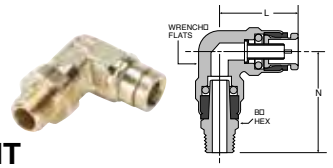
Union Bulkhead Elbow 165PMTBH



PART NO.	TUBE SIZE	L1	L2	C HEX	FLOW DIA. D	BULKHEAD HOLE DIA.
165PMTBH-8	1/2	1.29	2.45	1 1/4	.34	1

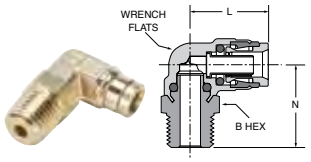
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male Elbow 90° 169PMT



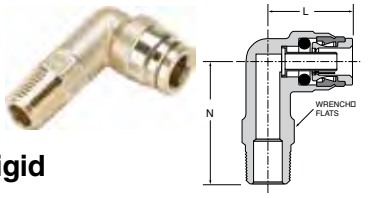
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS	B HEX
169PMT-4-2	1/4	1/8	.84	1.01	1/2	9/16
169PMT-4-4	1/4	1/4	.84	1.23	1/2	9/16
169PMT-4-6	1/4	3/8	.84	1.23	1/2	11/16
169PMT-6-2	3/8	1/8	1.11	1.18	9/16	11/16
169PMT-6-4	3/8	1/4	1.11	1.30	9/16	11/16
169PMT-6-6	3/8	3/8	1.11	1.33	9/16	11/16
169PMT-6-8	3/8	1/2	1.11	1.54	9/16	7/8
169PMT-8-4	1/2	1/4	1.27	1.73	11/16	5/8
169PMT-8-6	1/2	3/8	1.27	1.81	11/16	3/4
169PMT-8-8	1/2	1/2	1.27	1.96	11/16	7/8
169PMT-10-6	5/8	3/8	1.53	2.03	7/8	3/4
169PMT-10-8	5/8	1/2	1.53	2.18	7/8	7/8

Male Elbow Positional 90° 169PMTR



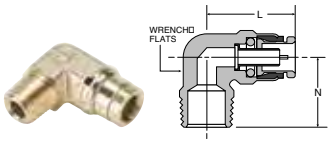
PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	N	WRENCH FLATS
169PMTR-4-4	1/4	1/4	9/16	0.84	1.13	1/2
169PMTR-6-6	3/8	3/8	3/4	1.12	1.19	9/16
169PMTR-10-8	5/8	1/2	7/8	1.54	1.50	7/8

Male Elbow Long Rigid 90° 169PMTL



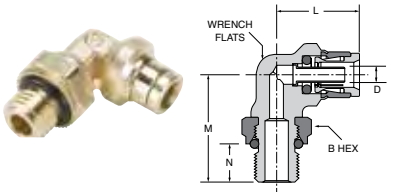
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
169PMTL-6-4	3/8	1/4	1.06	1.63	9/16
169PMTL-6-8	3/8	1/2	1.19	2.50	7/8
169PMTL-6-6	3/8	3/8	1.19	2.50	7/8
169PMTL-8-8	1/2	1/2	1.22	2.50	7/8
169PMTL-10-8	5/8	1/2	1.46	2.50	7/8

Male Elbow Rigid 90° 169PMTNS/269PMT



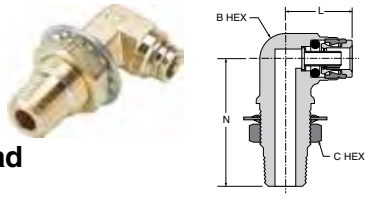
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
169PMTNS-4-2	1/4	1/8	.84	.72	1/2
169PMTNS-4-4	1/4	1/4	.84	.90	1/2
169PMTNS-4-6	1/4	3/8	.84	1.06	1/2
169PMTNS-6-2	3/8	1/8	1.05	.75	9/16
169PMTNS-6-4	3/8	1/4	1.05	.94	9/16
169PMTNS-6-6	3/8	3/8	1.05	.94	3/4
169PMTNS-6-8	3/8	1/2	1.12	1.26	11/16
169PMTNS-8-4	1/2	1/4	1.17	1.06	11/16
169PMTNS-8-6	1/2	3/8	1.22	1.06	11/16
169PMTNS-8-8	1/2	1/2	1.22	1.26	11/16
169PMTNS-10-6	5/8	3/8	1.46	1.11	7/8
169PMTNS-10-8	5/8	1/2	1.46	1.32	7/8
169PMTNS-12-8	3/4	1/2	1.81	1.44	1

Male Elbow to Metric Adjustable 169PMTNS-X-M



PART NO.	TUBE SIZE	METRIC THREAD	WRENCH FLATS (MM)	HEX (MM)	L	M	N
169PMTNS-4-MI2	1/4	M12X1.5	10	17	.84	1.11	.37
169PMTNS-4-M16	1/4	M16X1.5	11	24	.96	1.27	.41
169PMTNS-4-M22	1/4	M22X1.5	19	30	1.09	1.53	.41
169PMTNS-6-M12	3/8	M12X1.5	16	17	1.10	1.15	.66
169PMTNS-6-M16	3/8	M16X1.5	19	24	1.23	1.27	.41
169PMTNS-8-M12	1/2	M12X1.5	16	17	1.21	1.31	.37
169PMTNS-8-M16	1/2	M16X1.5	16	24	1.26	1.34	.41
169PMTNS-8-M22	1/2	M22X1.5	19	30	1.26	1.59	.41

Male Elbow Bulkhead 169PMTBH



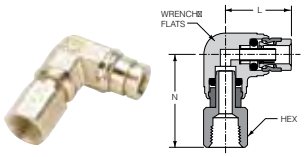
PART NO.	TUBE SIZE	PIPE THREAD	L	N	B HEX	C HEX	BULKHEAD HOLE DIA.
169PMTBH6-8	3/8	1/2	1.19	2.50	1-1/4	7/8	1
169PMTBH8-8	1/2	1/2	1.29	2.50	1-1/4	7/8	1

D

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Fluid System Connectors
Otsego, Michigan

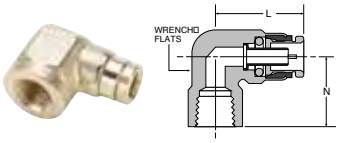
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Female Elbow Swivel 90° 170PMT



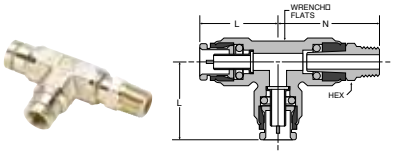
PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
170PMT-4-2	1/4	1/8	.84	1.06	1/2	1/2

Female Elbow Rigid 90° 170PMTNS



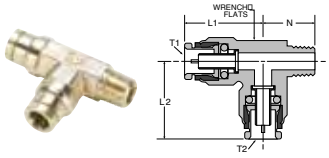
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
170PMTNS-4-2	1/4	1/8	.84	.56	11/16
170PMTNS-4-4	1/4	1/4	1.00	.67	11/16
170PMTNS-6-2	3/8	1/8	1.12	.64	9/16
170PMTNS-6-4	3/8	1/4	1.25	1.00	11/16
170PMTNS-6-6	3/8	3/8	1.25	1.00	13/16
170PMTNS-8-4	1/2	1/4	1.25	.75	11/16
170PMTNS-8-6	1/2	3/8	1.32	.88	11/16
170PMTNS-8-8	1/2	1/2	1.70	.98	1

Male Run Tee Swivel 171PMT



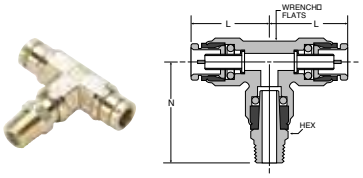
PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
171PMT-4-2	1/4	1/8	.85	1.01	9/16	1/2
171PMT-4-4	1/4	1/4	.85	1.23	9/16	1/2
171PMT-4-6	1/4	3/8	.85	1.23	11/16	1/2
171PMT-6-4	3/8	1/4	1.21	1.42	11/16	5/8
171PMT-6-6	3/8	3/8	1.21	1.45	11/16	5/8
171PMT-8-4	1/2	1/4	1.27	1.74	5/8	7/8
171PMT-8-6	1/2	3/8	1.27	1.83	3/4	7/8
171PMT-8-8	1/2	1/2	1.27	1.99	7/8	7/8

Male Run Tee Rigid 171PMTNS



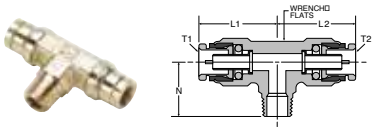
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N	WRENCH FLATS
171PMTNS-4-2	1/4	1/4	1/8	.91	.91	.77	15/32
171PMTNS-4-4	1/4	1/4	1/4	.91	.91	.94	15/32
171PMTNS-4-6-4	1/4	3/8	1/4	.93	1.21	.97	5/8
171PMTNS-6-4	3/8	3/8	1/4	1.21	1.21	.97	5/8
171PMTNS-6-4-4	3/8	1/4	1/4	1.21	.93	.97	5/8
171PMTNS-6-4-6	3/8	1/4	3/8	1.22	.97	.93	5/8
171PMTNS-6-6	3/8	3/8	3/8	1.21	1.21	.97	5/8
171PMTNS-6-8	3/8	3/8	1/2	1.17	1.17	1.26	5/8
171PMTNS-8-4	1/2	1/2	1/4	1.28	1.28	1.06	7/8

Male Branch Tee Swivel 172PMT



PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
172PMT-4-2	1/4	1/8	.85	1.01	9/16	1/2
172PMT-4-4	1/4	1/4	.85	1.23	9/16	1/2
172PMT-6-2	3/8	1/8	1.22	1.30	11/16	5/8
172PMT-6-4	3/8	1/4	1.22	1.42	11/16	5/8
172PMT-6-6	3/8	3/8	1.22	1.45	11/16	5/8
172PMT-8-4	1/2	1/4	1.27	1.73	5/8	7/8
172PMT-8-6	1/2	3/8	1.27	1.79	3/4	7/8
172PMT-8-8	1/2	1/2	1.27	1.97	7/8	7/8

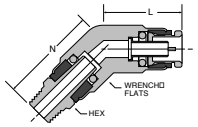
Male Branch Tee Rigid 172PMTNS



PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N	WRENCH FLATS
172PMTNS-4-2	1/4	1/4	1/8	.91	.91	.78	1/2
172PMTNS-6-4	3/8	3/8	1/4	1.21	1.21	.97	5/8
172PMTNS-6-4-4	3/8	1/4	1/4	1.21	.93	.97	5/8
172PMTNS-6-6	3/8	3/8	3/8	1.21	1.21	.97	5/8
172PMTNS-6-8	3/8	3/8	1/2	1.17	1.17	1.26	7/8
172PMTNS-8-6	1/2	1/2	3/8	1.28	1.28	1.06	7/8
172PMTNS-8-6-8	1/2	3/8	1/2	1.25	1.25	1.25	7/8
172PMTNS-8-8	1/2	1/2	1/2	1.34	1.34	1.25	7/8

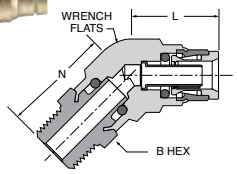
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Otsego, Michigan

Male Elbow Swivel 45° 179PMT

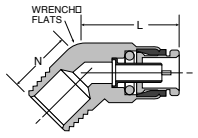
PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
179PMT-4-2	1/4	1/8	.79	.92	9/16	9/16
179PMT-4-4	1/4	1/4	.79	1.14	9/16	9/16
179PMT-6-2	3/8	1/8	.99	1.02	11/16	3/4
179PMT-6-4	3/8	1/4	.99	1.14	11/16	3/4
179PMT-6-6	3/8	3/8	.99	1.17	11/16	3/4
179PMT-8-4	1/2	1/4	1.20	1.70	5/8	7/8
179PMT-8-6	1/2	3/8	1.20	1.78	3/4	7/8
179PMT-8-8	1/2	1/2	1.20	1.93	7/8	7/8

Male Elbow Positional Swivel 45° 179PMTR

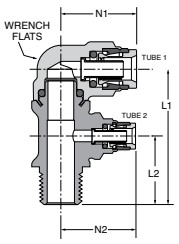
PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	N	WRENCH FLATS
179PMTR-4-4	1/4	1/4	9/16	0.79	1.18	9/16
179PMTR-8-8	1/2	1/2	7/8	1.17	1.35	7/8

Male Elbow Rigid 45° 179PMTNS

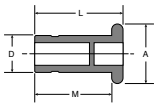
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
179PMTNS-4-2	1/4	1/8	.80	.56	9/16
179PMTNS-4-4	1/4	1/4	.80	.75	9/16
179PMTNS-6-2	3/8	1/8	.99	.55	3/4
179PMTNS-6-4	3/8	1/4	.99	.73	3/4
179PMTNS-6-6	3/8	3/8	.99	.73	3/4
179PMTNS-8-4	1/2	1/4	1.28	.81	13/16
179PMTNS-8-6	1/2	3/8	1.28	.81	13/16
179PMTNS-8-8	1/2	1/2	1.28	1.06	13/16
179PMTNS-10-6	5/8	3/8	1.22	.88	7/8
179PMTNS-10-8	5/8	1/2	1.22	1.00	7/8
179PMTNS-12-8	3/4	1/2	1.41	1.25	1

Dual port 90 Male Elbow Positional 189PMTR

PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N1	N2	WRENCH FLATS
189PMTR6-4-6	3/8	1/4	3/8	2.12	1.05	1.21	1.19	11/16
189PMTR6-6-4	3/8	3/8	1/4	2.06	.98	1.12	1.20	9/16
189PMTR6-6-6	3/8	3/8	3/8	2.06	.98	1.12	1.20	9/16
189PMTR10-4-6	5/8	1/4	3/8	2.18	1.05	1.54	1.19	7/8
189PMTR10-6-6	5/8	3/8	3/8	2.31	1.12	1.54	1.18	7/8

Push-To-Connect Fitting Plug 639PM/639PMT

PART NO.	TUBE SIZE	L	M	A	D
639PMT-4	1/4	1.14	.96	.48	.250
639PMT-6	3/8	1.33	1.15	.67	.375
639PMT-8	1/2	1.33	1.15	.81	.500

Specify color when ordering Black (BL) or Blue (BU), example 639PMT-4BU
Note: use appropriate PM/PMT style connection as determined by part number.

D

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

PTC Composite Push-In Air Brake Fittings

D

MATERIALS OF CONSTRUCTION	
FITTING BODY:	COMPOSITE
COLLET:	BRASS
TUBE SUPPORT:	STAINLESS STEEL
O-RING:	BUNA N
THREADS:	BRASS

NOMENCLATURE	
EXAMPLE: 369PTC-6-4	**ATTRIBUTE:**
396	MALE ELBOW 90°
PTC	COMPOSITE PUSH-IN AIR BRAKE FITTING
6	3/8" (6/16) TUBE SIZE
4	1/4" (4/16) PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	SAE J844 TYPE A & B NYLON TUBING
TUBE O.D.:	1/4, 3/8, 1/2, 5/8, 3/4

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 250 PSI
TEMPERATURE RANGES:	-40° TO +200°F

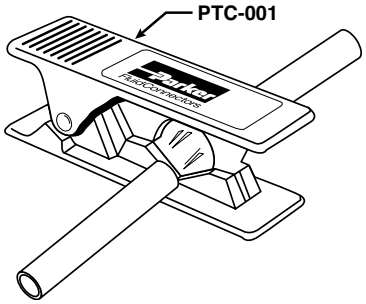


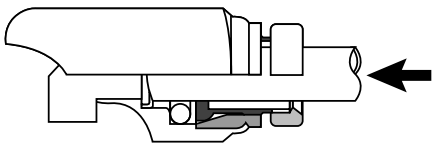
Design of the PTC composite air brake fitting complies with the performance requirements of D.O.T. FMVSS 571.106, SAE J1131 and SAE J2494-3. Tube support design assures maximum flow.

Assembly Instructions

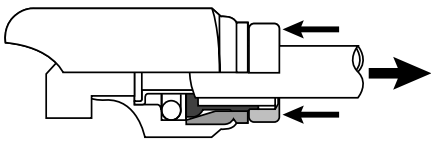
1. Cut tubing squarely–maximum of 15° angle allowable.
   • Use of Parker tube cutter PTC-001 is recommended.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing into fitting until it bottoms.
   • Push twice to verify that tubing is inserted past collet and O-Ring.
4. Pull on tubing to verify it is fully inserted.
5. To disassemble, simply press release button, hold against body, and pull tubing out of fitting.

Note: in order to pass hot pull requirements of SAE FMVSS 571.106 and SAE J2494-3 a tube support must be present in the end of the fitting before final fitting assembly.



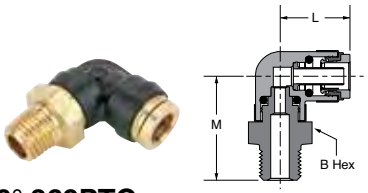


Insert tubing until it bottoms



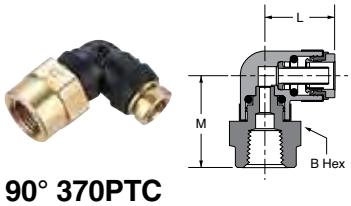
Depress button to remove tubing

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Otsego, Michigan



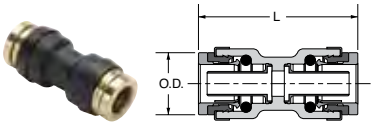
Male Elbow Swivel 90° 369PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
369PTC-4-2	1/4	1/8	9/16	.69	1.05
369PTC-4-4	1/4	1/4	9/16	.69	1.20
369PTC-4-6	1/4	3/8	3/4	.69	1.20
369PTC-6-2	3/8	1/8	3/4	.99	1.13
369PTC-6-4	3/8	1/4	3/4	.99	1.28
369PTC-6-6	3/8	3/8	3/4	.99	1.28
369PTC-6-8	3/8	1/2	7/8	.99	1.47
369PTC-8-4	1/2	1/4	15/16	1.11	1.39
369PTC-8-6	1/2	3/8	15/16	1.11	1.39
369PTC-8-8	1/2	1/2	15/16	1.11	1.58
369PTC-10-6	5/8	3/8	1-1/16	1.33	1.60
369PTC-10-8	5/8	1/2	1-1/16	1.33	1.79
369PTC-12-8	3/4	1/2	1-3/16	1.52	1.89
369PTC-12-12	3/4	3/4	1-3/16	1.52	1.99



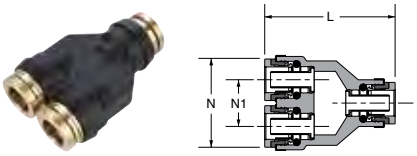
Female Elbow Swivel 90° 370PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
370PTC-4-2	1/4	1/8	5/8	.69	.89
370PTC-4-4	1/4	1/4	3/4	.69	1.05
370PTC-6-2	3/8	1/8	3/4	.99	.90
370PTC-6-4	3/8	1/4	3/4	.99	1.13
370PTC-6-6	3/8	3/8	13/16	.99	1.19
370PTC-8-6	1/2	3/8	15/16	1.11	1.30
370PTC-8-8	1/2	1/2	1-1/16	1.11	1.49



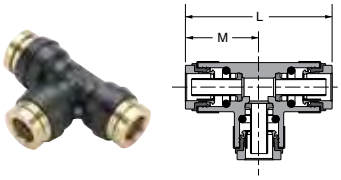
Union 32PTC

PART NO.	TUBE SIZE	L	O.D.
32PTC-4	1/4	1.33	..53
32PTC-6	3/8	1.61	.73
32PTC-8	1/2	1.75	.88
32PTC-10	5/8	2.15	1.02
32PTC-12	3/4	2.50	1.17



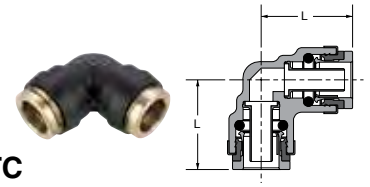
Union Y 362PTC

PART NO.	TUBE SIZE	L	N	N1
362PTC-4	1/4	1.52	1.06	.50
362PTC-6	3/8	2.03	1.43	.68
362PTC-8	1/2	2.20	1.74	.84



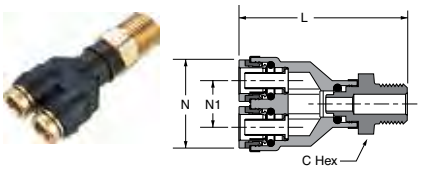
Union Tee 364PTC

PART NO.	TUBE SIZE	L	M
364PTC-4	1/4	1.42	.71
364PTC-6	3/8	1.99	.99
364PTC-8	1/2	2.25	1.13
364PTC-10	5/8	2.88	1.44



Union Elbow 365PTC

PART NO.	TUBE SIZE	L
365PTC-6	3/8	.99
365PTC-8	1/2	1.11



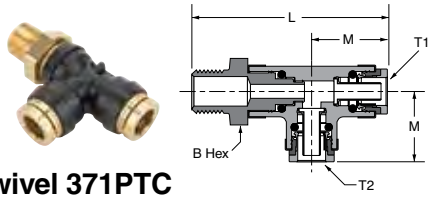
Union Y Male Connector 368PTC

PART NO.	TUBE SIZE	PIPE THREAD	L	C HEX	N	N1
368PTC-4-2	1/4	1/8	1.96	9/16	1.03	.50
368PTC-4-4	1/4	1/4	2.12	9/16	1.03	.50
368PTC-6-4	3/8	1/4	2.56	3/4	1.41	.68

D

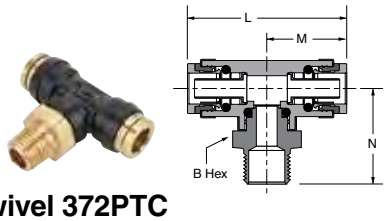
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Fluid System Connectors
Otsego, Michigan

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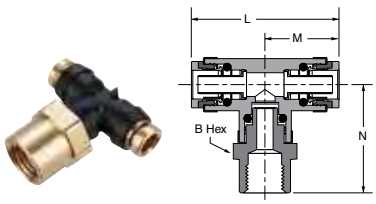
Male Run Tee Swivel 371PTC

PART NO.	TUBE SIZE 1	TUBE SIZE 2	PIPE THREAD	B HEX	L	M
371PTC-4-2	1/4	1/4	1/8	9/16	1.93	.71
371PTC-4-4	1/4	1/4	1/4	9/16	2.08	.71
371PTC-4-6	1/4	1/4	3/8	3/4	2.08	.71
371PTC-6-4	3/8	3/8	1/4	3/4	2.27	.99
371PTC-6-4-4	3/8	1/4	1/4	3/4	2.27	1.08
371PTC-6-6	3/8	3/8	3/8	3/4	2.27	.99
371PTC-8-4	1/2	1/2	1/4	15/16	2.55	1.13
371PTC-8-6	1/2	1/2	3/8	15/16	2.55	1.13
371PTC-8-8	1/2	1/2	1/2	15/16	2.74	1.13
371PTC-10-8	5/8	5/8	1/2	1-1/16	3.24	1.44



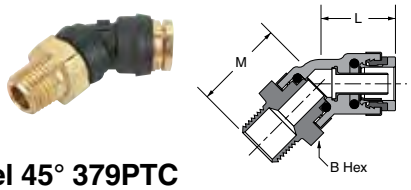
Male Branch Tee Swivel 372PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M	N
372PTC-4-2	1/4	1/8	9/16	1.42	.73	1.22
372PTC-4-4	1/4	1/4	9/16	1.42	.71	1.37
372PTC-4-6	1/4	3/8	3/4	1.42	.71	1.37
372PTC-6-2	3/8	1/8	3/4	1.99	.99	1.17
372PTC-6-4	3/8	1/4	3/4	1.99	.99	1.32
372PTC-6-6	3/8	3/8	3/4	1.99	.99	1.32
372PTC-8-4	1/2	1/4	15/16	2.30	1.15	1.43
372PTC-8-4-8	1/2X1/4	1/2	15/16	2.28	1.14	1.58
372PTC-8-6	1/2	3/8	15/16	2.25	1.13	1.39
372PTC-8-8	1/2	1/2	15/16	2.25	1.13	1.58
372PTC-10-8	5/8	1/2	1-1/16	2.82	1.41	1.81



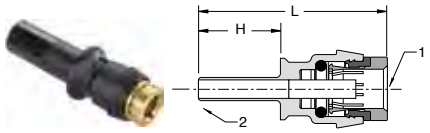
Female Branch Tee Swivel 377PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M	N
377PTC-4-4	1/4	1/4	3/4	1.48	0.74	1.27



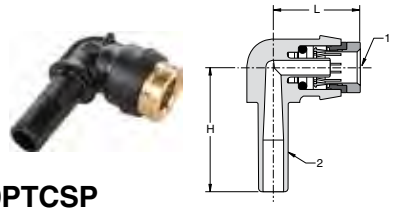
Male Elbow Swivel 45° 379PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
379PTC-4-2	1/4	1/8	9/16	.64	.97
379PTC-4-4	1/4	1/4	9/16	.64	1.12
379PTC-4-6	1/4	3/8	3/4	.64	1.12
379PTC-6-2	3/8	1/8	3/4	.87	1.01
379PTC-6-4	3/8	1/4	3/4	.87	1.16
379PTC-6-6	3/8	3/8	3/4	.87	1.16
379PTC-6-8	3/8	1/2	15/16	.89	1.40
379PTC-8-4	1/2	1/4	15/16	1.01	1.20
379PTC-8-6	1/2	3/8	15/16	1.01	1.20
379PTC-8-8	1/2	1/2	15/16	1.01	1.39
379PTC-10-6	5/8	3/8	1-1/16	1.18	1.42
379PTC-10-8	5/8	1/2	1-1/16	1.18	1.61
379PTC-12-8	3/4	1/2	1-3/16	1.35	1.69
379PTC-12-12	3/4	3/4	1-3/16	1.35	1.79



Plug-In Adapter 37PTCSP

PART NO.	TUBE SIZE 1	TUBE SIZE 2	H	L
37PTCSP-4-6	1/4	3/8	.90	1.71
37PTCSP-6-4	3/8	1/4	.76	1.66
37PTCSP-10-8	5/8	1/2	1.10	2.44

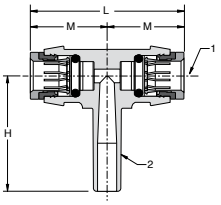


Plug-In Elbow 369PTCSP

PART NO.	TUBE SIZE 1	TUBE SIZE 2	H	L
369PTCSP-4-4	1/4	1/4	1.06	.74
369PTCSP-4-6	1/4	3/8	1.20	.74
369PTCSP-6-4	3/8	1/4	1.18	.96
369PTCSP-6-6	3/8	3/8	1.32	0.96
369PTCSP-6-8	3/8	1/2	1.52	.96
369PTCSP-8-4	1/2	1/4	1.16	1.12
369PTCSP-10-8	5/8	1/2	1.57	1.36

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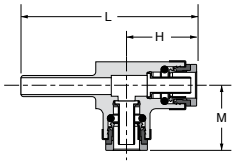




Plug-In Branch Tee 372PTCSP

PART NO.	TUBE SIZE 1	TUBE SIZE 2	H	L	M
372PTCSP-4-4	1/4	1/4	1.06	1.48	.74
372PTCSP-4-6	1/4	3/8	1.20	1.48	.74
372PTCSP-6-4	3/8	1/4	1.18	2.02	1.01
372PTCSP-6-6	3/8	3/8	1.32	2.02	1.01





Plug-In Run Tee 371PTCSP

PART NO.	TUBE SIZE 1	TUBE SIZE 2	TUBE SIZE 3	H	L	M
371PTCSP-4-4	1/4	1/4	1/4	.78	1.84	.76
371PTCSP-4-6	1/4	1/4	3/8	.78	1.98	.76
371PTCSP-6-4	3/8	3/8	1/4	1.01	2.11	1.01
371PTCSP-6-6	3/8	3/8	3/8	1.01	2.25	1.01
371PTCSP-6-4-6	3/8	1/4	3/8	0.76	2.24	1.01
371PTCSP-8-4-8	1/2	1/4	1/2	0.96	2.58	1.15

D

Metric Prestomatic Air Brake Push-In Fittings

D

MATERIALS OF CONSTRUCTION	
FITTING BODIES:	BRASS
COLLET:	BRASS
TUBE SUPPORT:	STAINLESS STEEL
O-RING:	BUNA N

NOMENCLATURE	
EXAMPLE: F8UPMTB8M22	**ATTRIBUTE:**
F	STRAIGHT MALE CONNECTOR
8	METRIC PARALLEL
U	UNIVERSAL STUD
PMTB	AIR BRAKE PUSH-IN FITTING–BRASS BODY
8	8MM TUBE SIZE
M22	22MM PORT THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	DIN 73378 VIRGIN NYLON, SAE J844 TUBING
TUBE O.D. (MM):	6, 8, 10, 12, 16

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 250 PSI
TEMPERATURE RANGES:	-40° TO +200°F

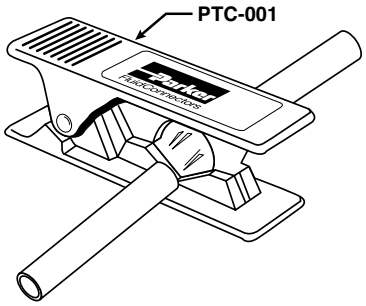


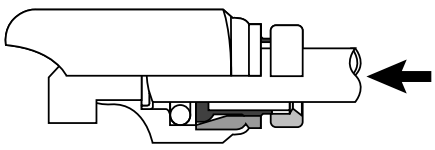
Patented design of sizes 6mm and above meet DIN 74324 and D.O.T. FMVSS 571.106 air brake performance specifications. Just bottom the tubing in the fitting body for a positive seal.

Assembly Instructions

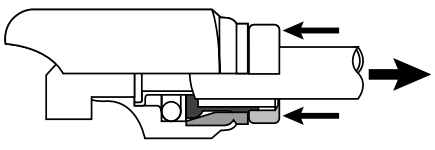
1. Cut tubing squarely–maximum of 15° angle allowable.
   • Use of Parker tube cutter PTC-001 is recommended.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing into fitting until it bottoms.
   • Push twice to verify that tubing is inserted past collet and O-Ring.
4. Pull on tubing to verify it is fully inserted.
5. To disassemble, simply press release button, hold against body, and pull tubing out of fitting.

Note: in order to pass hot pull requirements of SAE FMVSS 571.106 and SAE J2494-3 a tube support must be present in the end of the fitting before final fitting assembly.



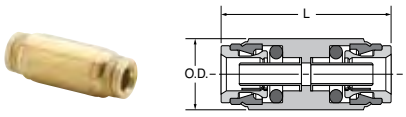


Insert tubing until it bottoms



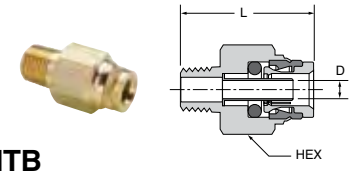
Depress button to remove tubing

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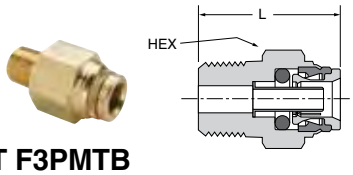
Union HPMTB

PART NO.	TUBE SIZE (MM)	L (MM)	O.D. (MM)
HPMTB6	6	45.2	15.9
HPMTB8	8	45.3	17.5
HPMTB10	10	51.7	22.2
HPMTB12	12	51.7	22.2



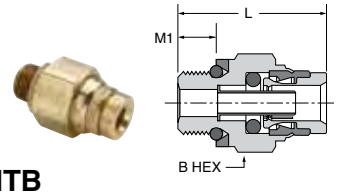
Male Connector F2PMTB

PART NO.	TUBE (MM)	PIPE THREAD	L (MM)	HEX (MM)	FLOW DIA. D(MM)
F2PMTB8-1/8	8	1/8	33.79	19	4.90
F2PMTB8-1/4	8	1/4	38.38	19	4.90
F2PMTB10-1/4	10	1/4	36.83	20	6.35



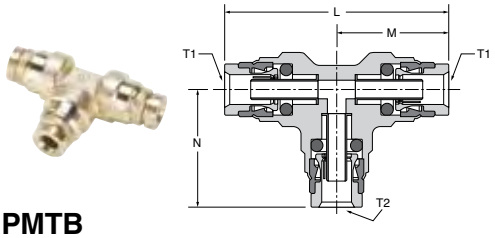
Male Connector BSPT F3PMTB

PART NO.	TUBE (MM)	BSPT THREAD	L (MM)	HEX (MM)
F3PMTB8-1/2	8	1/2	35.1	22
F3PMTB10-1/4	10	1/4	39.9	22
F3PMTB10-1/2	10	1/2	39.6	22
F3PMTB12-1/4	12	1/4	40.6	22
F3PMTB12-3/8	12	3/8	40.4	22
F3PMTB12-1/2	12	1/2	40.4	22



Male Connector Metric Straight Thread F8UPMTB

PART NO.	TUBE SIZE (mm)	METRIC THREAD	L (mm)	B HEX (MM)	M1 (MM)
F8UPMTB6-M10	6	M10X1	29.7	17	6.4
F8UPMTB6-M12	6	M12X1.5	29.1	17	7.5
F8UPMTB6-M14	6	M14X1.5	29.1	22	7.5
F8UPMTB6-M22	6	M22X1.5	29.7	27	9.5
F8UPMTB8-M10	8	M10X1	31.4	22	6.4
F8UPMTB8-M12	8	M12X1.5	33.0	22	7.5
F8UPMTB8-M14	8	M14X1.5	33.0	22	7.5
F8UPMTB8-M16	8	M16X1.5	31.0	22	10.0
F8UPMTB8-M22	8	M22X1.5	28.8	27	9.5
F8UPMTB10-M10	10	M10X1	34.8	22	6.4
F8UPMTB10-M12	10	M12X1.5	36.9	22	7.5
F8UPMTB10-M14	10	M14X1.5	36.8	22	7.5
F8UPMTB10-M16	10	M16X1.5	37.5	22	10.0
F8UPMTB10-M22	10	M22X1.5	31.1	27	9.5
F8UPMTB12-M12	12	M12X1.5	37.3	22	7.5
F8UPMTB12-M14	12	M14X1.5	36.8	22	7.5
F8UPMTB12-M16	12	M16X1.5	39.7	22	10.0
F8UPMTB12-M22	12	M22X1.5	33.4	27	9.5
F8UPMTB16-M22	16	M22X1.5	33.3	27	9.5



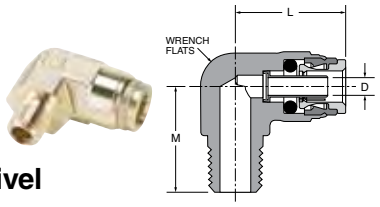
Union Tee JPMTB

PART NO.	TUBE 1 (MM)	TUBE 2 (MM)	L (MM)	M (MM)	N (MM)
JPMTB6	6	6	51.3	25.6	26.7
JPMTB10	10	10	60.4	30.2	31.4
JPMTB12	12	12	63.3	31.7	35.0
JPMTB12-12-6	12	6	63.3	31.7	28.1

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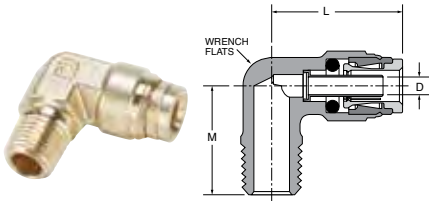
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Fluid System Connectors
Otsego, Michigan

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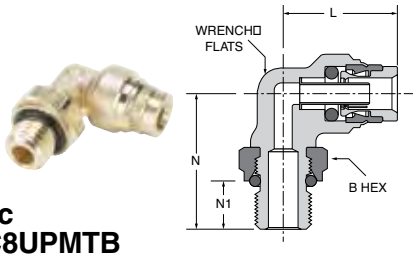
Male Elbow Non-Swivel BSPT C3PMTB

TUBE PART NO.	SIZE (MM)	BSPT THREAD	WRENCH FLATS (MM)	L (MM)	M (MM)
C3PMTB6-1/4	6	1/4	11	27.9	23.1
C3PMTB10-1/4	10	1/4	17	31.8	25.4
C3PMTB12-1/4	12	1/4	22	34.3	28.5
C3PMTB12-1/2	12	1/2	22	34.3	33.5



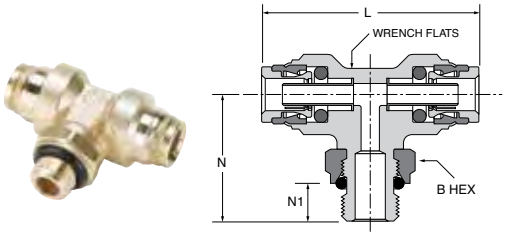
Male Elbow Non-Swivel C2PMTB

TUBE PART NO.	SIZE (MM)	PIPE THREAD	FLATS (MM)	L (MM)	M (MM)	FLOW DIA. (MM)
C2PMTB8-1/4	8	1/4	16	28.5	26.9	4.83



Male Elbow Metric Straight Thread C8UPMTB

PART NO.	TUBE SIZE (MM)	B METRIC THREAD	WRENCH FLATS (MM)	HEX (MM)	L (MM)	N (MM)	N1 (MM)
C8UPMTB6-M10	6	M10X1	10	14	24.8	26.0	7.5
C8UPMTB6-M12	6	M12X1.5	10	17	24.8	28.2	9.5
C8UPMTB6-M16	6	M16X1.5	11	24	25.0	34.0	10.5
C8UPMTB6-M22	6	M22X1.5	19	30	28.1	41.4	10.5
C8UPMTB8-M12	8	M12X1.5	16	17	27.5	33.0	9.5
C8UPMTB8-M14	8	M14X1.5	16	19	26.7	33.5	9.5
C8UPMTB8-M16	8	M16X1.5	16	24	27.5	34.0	10.5
C8UPMTB8-M22	8	M22X1.5	19	30	32.0	40.4	10.5
C8UPMTB10-M16	10	M16X1.5	19	24	30.3	33.5	10.5
C8UPMTB10-M22	10	M22X1.5	19	30	32.0	38.4	10.5
C8UPMTB12-M16	12	M16X1.5	16	24	31.2	35.6	10.5
C8UPMTB12-M22	12	M22X1.5	16	30	32.9	38.4	10.5
C8UPMTB16-M16	16	M16X1.5	19	24	30.6	36.4	10.5
C8UPMTB16-M22	16	M22X1.5	25	30	31.7	40.4	10.5



Male Branch Tee Swivel Metric Straight Thread S8UPMTB

PART NO.	TUBE SIZE (MM)	METRIC THREAD	WRENCH FLATS (MM)	HEX (MM)	L (MM)	N (MM)	N1 (MM)
S8UPMTB12-M16	12	M16X1.5	19	24	65.9	37.6	10.5

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Transportation:
Compression Style



NTA Fittings
Meets D.O.T. FMVSS 571.106
Meets SAE J246 & J1131
Staked in Tube Support
Pre-applied Sealant



Transmission Fittings
For Use in Pressure Protected Applications
Slotted Sleeve Prevents Over Torque
Use with SAE J844 Tubing



Air Brake Fittings
Meets SAE J246
Use with Copper Tubing
Reusable



Air Brake Hose Ends
Meets D.O.T. FMVSS 571.106
Use with SAE J1402 Air Brake Hose



Vibra-Lok
Excellent Vibration Resistance
Viton Sleeve for High Temp
Wide Range of Tubing
Elastomeric Seal



Truck Valves & Lanyard Valves
All Brass Construction
Metal to Metal Seats



E

Tube to Male NPTF

VS68NTA Male Connector

p. E6

VS176NTA Adapter

p. E6

VS269NTA Male Elbow

p. E7

VS271NTA Male Run Tee

p. E7

VS272NTA Male Branch Tee

p. E7

VS279NTA 45° Male Elbow

p. E7

68TF Male Connector

p. E9

269TF Male Elbow

p. E10

68PTC Male Connector

p. E9

169PTCNS Male Elbow

p. E10

171PTCNS Male Run Tee

p. E10

172PTCNS Male Branch Tee

p. E10

VS68AB Male Connector

p. E12

VS269AB Male Elbow

p. E13

VS271AB Male Run Tee

p. E13

VS272AB Male Branch Tee

p. E13

VS279AB 45° Male Elbow

p. E13

68RB Male Connector

p. E15

68RB Male Connector Body Only

p. E15

68RBSG Male Connector

p. E15

76RB Adapter

p. E15

68VL Male Connector

p. E18

169VL Male Elbow

p. E19

682VL Tank Fitting

p. E19

171VL Male Run Tee

p. E19

172VL Male Branch Tee

p. E19

179VL 45° Male Elbow

p. E19

Tube to Female NPTF

66NTA Female Connector

p. E6

270NTA Female Elbow

p. E7

66AB Female Connector

p. E12

66PTC Female Connector

p. E9

270AB Female Elbow

p. E13

207ACBH Anchor Coupling

p. E13

66RBSV Female Connector

p. E15

66VL Female Connector

p. E18

170VL Female Elbow

p. E19

Tube to Straight Thread

685VLV Male Connector

p. E18

1695VL Male Elbow

p. E19

Tube to Metric Straight Thread

68NTA-X-MIX Male Connector

p. E6

Tube to Tube

62NTA Union

p. E5

264NTA Union Tee

p. E6

265NTA Union Elbow

p. E6

62TF Union

p. E9

62PTC Union

p. E9

164PTC Union Tee

p. E9

165PTC Union Elbow

p. E9

62AB Union

p. E12

264AB Union Tee

p. E12

265AB Union Elbow

p. E12

62RB Union

p. E15

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

62VL
Union

p. E18

164VL
Union Tee

p. E19

Bulkhead Union

62ANBH
Bulkhead Union

p. E5

62NBH
Bulkhead Union

p. E5

62NFBH
Bulkhead Union

p. E5

66NBH
Bulkhead Union

p. E5

62ABH
Bulkhead Union

p. E12

Tube to Male Pipe

V408NTA
Tube - Pipe

p. E21

V410NTA
Tube - Pipe

p. E21

V412F
Tube - Flare

p. E21

Hose to Male Pipe

V404P
Hose - Pipe

p. E21

V404PH
Hose - Pipe

p. E21

SV404P
Hose - Pipe

p. E21

Flare to Male Pipe

V409F
Flare - Pipe

p. E21

Female Pipe to Male Pipe

V405P
Female - Male

p. E21

Lanyard Valve

LV91
Lanyard Valve

p. E21

Auxiliary Component

60NTA
Sleeve

p. E5

61NTA
Nut

p. E5

63NTA
Tube Support

p. E5

60TF
Sleeve

p. E9

61TF
Nut

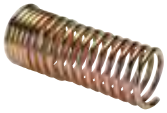
p. E9

60AB
Sleeve

p. E12

61AB
Nut

p. E12

56RBSG
Spring

p. E15

60RB
Sleeve

p. E15

61RB
Nut

p. E15

61RBSG
Spring Guard Nut

p. E15

67RBSG
Nut & Spring

p. E15

60VL
Sleeve

p. E18

60VLV
Sleeve

p. E18

61VL
Nut

p. E18

E

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Air Brake–NTA® Fittings

E

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS
SLEEVE:	BRASS
THREAD SEALANT:	LOCTITE VIBRA-SEAL 516

NOMENCLATURE	
EXAMPLE: VS68NTA-10-8	**ATTRIBUTE:**
VS	LOCITE VIBRA SEAL 516
68	MALE CONNECTOR
NTA	NYLON TUBE AIR BRAKE FITTING
10	5/8" (10/16) TUBE SIZE
8	1/2" (8/16) PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	SAE J844 TYPE A & B NYLON TUBING
TUBE O.D.:	3/16, 1/4, 3/8, 1/2, 5/8, 3/4

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 150 PSI
TEMPERATURE RANGES:	-40° TO +200°F

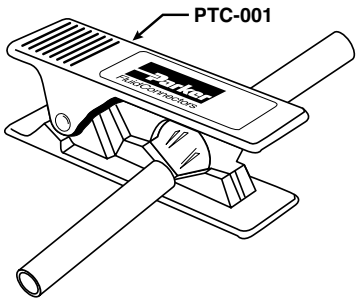
Assembly Instructions

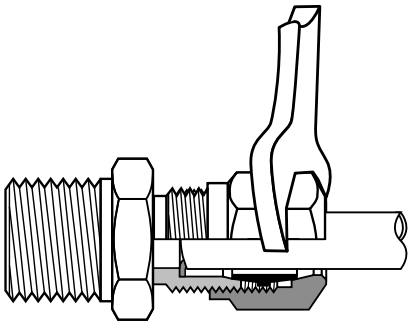
1. Cut tubing squarely–maximum of 15° angle allowable. (Use of Parker tube cutter PTC-001 is recommended.)
2. Check that port or mating part is clean and free of debris.
3. Insert tubing into fitting until it bottoms on seat.
4. Tighten nut with wrench until one thread remains visible on the fitting body; (this will allow for a number of remakes) or, the nut should be screwed down finger tight, then the wrench-tightened as indicated in the following table.

TUBE SIZE	ADDITIONAL NUMBER OF TURNS FROM HAND-TIGHT
3/16	2-1/2
1/4	3
3/8 &1/2	4
5/8 &3/4	3-1/2



Fittings meet D.O.T. FMVSS 571.106 air brake specifications. Fittings utilize a ribbed sleeve for compression and positive grip. Fittings are pre-applied with thread sealant. Meets functional requirements of the SAE automotive tube fitting standards: SAE J246 and SAE J1131. Electroless nickel plated bodies can be used with bio-diesel.

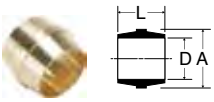




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Fluid System Connectors
Otsego, Michigan

Sleeve 60NTA

REF. SAE 100115

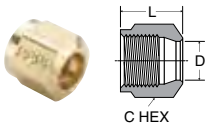


PART NO.	TUBE SIZE	A	D	L
60NTA-3*	3/16	.255	.194	.23
60NTA-4	1/4	.359	.256	.30
60NTA-6	3/8	.479	.384	.39
60NTA-8	1/2	.624	.509	.43
60NTA-10	5/8	.746	.634	.49
60NTA-12	3/4	.922	.760	.54

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

Nut 61NTA

REF. SAE 100110

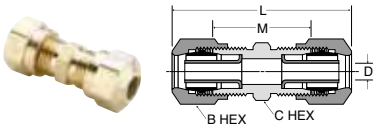


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61NTA-3*	3/16	5/16-24	7/16	.194	.40
61NTA-4	1/4	7/16-24	9/16	.256	.45
61NTA-6	3/8	17/32-24	5/8	.384	.63
61NTA-8	1/2	11/16-20	13/16	.509	.72
61NTA-10	5/8	13/16-18	15/16	.634	.77
61NTA-12	3/4	1-18	1-1/8	.760	.81

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

Union 62NTA

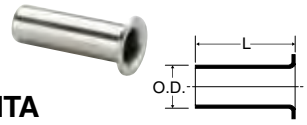
REF. SAE 100101 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D
62NTA-4	1/4	7/16-24	9/16	7/16	1.49	.83	.137
62NTA-6	3/8	17/32-24	5/8	9/16	2.00	1.08	.217
62NTA-8	1/2	11/16-20	13/16	11/16	2.32	1.29	.338
62NTA-10	5/8	13/16-18	15/16	13/16	2.39	1.41	.398
62NTA-12	3/4	1-18	1-1/8	1	2.60	1.58	.523

Stainless Steel Insert 63NTA

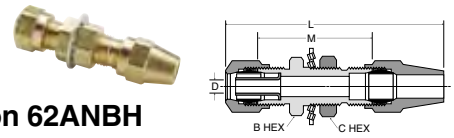
(FOR SAE J844 TUBING)



PART NO.	TUBE SIZE	L	O.D.
63NTA-4	1/4	.53	.163
63NTA-6	3/8	.64	.245
63NTA-8	1/2	.81	.370
63NTA-10	5/8	.86	.434
63NTA-12	3/4	1.04	.559

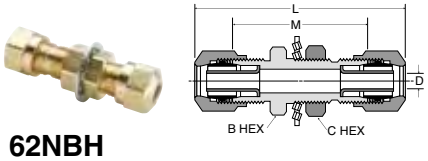
Bulkhead Union 62ANBH

(NTA® & AIR BRAKE)



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62ANBH-4	1/4	7/16-24	9/16	9/16	2.28	1.38	.137	7/16
62ANBH-6	3/8	17/32-24	11/16	3/4	2.97	1.62	.217	17/32
62ANBH-8	1/2	11/16-20	13/16	1	3.36	1.88	.338	11/16

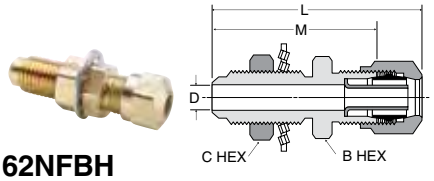
Bulkhead Union 62NBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62NBH-3*	3/16	5/16-24	7/16	7/16	1.80	1.21	.087	5/16
62NBH-4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
62NBH-6	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	17/32
62NBH-8	1/2	11/16-20	13/16	1	2.92	1.88	.338	11/16
62NBH-10	5/8	13/16-18	15/16	1	2.99	2.01	.398	13/16

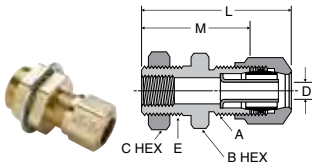
*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

Bulkhead Union 62NFBH



PART NO.	TUBE SIZE	FLARE SIZE	STGHT THD	B HEX	C HEX	L	M	FLOW DIA. D	BKHD HOLE DIA.
62NFBH-4	1/4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
62NFBH-6	3/8	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	5/8
62NFBH-8	1/2	1/2	11/16-20	13/16	1	2.92	1.88	.338	3/4
62NFBH-10	5/8	5/8	13/16-18	15/16	1	3.04	2.02	.398	7/8
62NFBH-10-8	5/8	1/2	13/16-18	7/8	7/8	2.90	2.40	.400	3/4

Bulkhead Union 66NBH



PART NO.	TB SZ	PIPE THD	A STGHT THD	E STGHT THD	B HEX	C HEX	L	M	FLOW DIA. D	BKHD HOLE DIA.
66NBH-8-6	1/2	3/8	11/16-20	7/8-14	1-1/16	1-1/16	1.94	1.42	.338	7/8

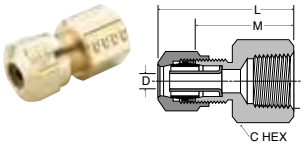
E

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

E

Female Connector 66NTA

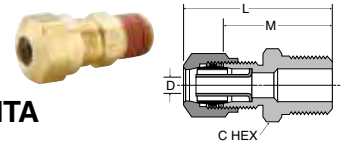
REF. SAE 100103 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66NTA-4-2	1/4	1/8	7/16-24	9/16	1.17	.84	.137
66NTA-4-4	1/4	1/4	7/16-24	11/16	1.40	1.07	.137
66NTA-6-2	3/8	1/8	17/32-24	9/16	1.46	1.00	.217
66NTA-6-4	3/8	1/4	17/32-24	11/16	1.64	1.18	.217
66NTA-6-6	3/8	3/8	17/32-24	7/8	1.64	1.18	.217
66NTA-8-6	1/2	3/8	11/16-20	7/8	1.79	1.27	.338
66NTA-8-8	1/2	1/2	11/16-20	1-1/16	1.96	1.44	.338
66NTA-10-6	5/8	3/8	13/16-18	7/8	1.80	1.31	.398
66NTA-10-8	5/8	1/2	13/16-18	1-1/16	1.99	1.50	.398

Male Connector VS68NTA

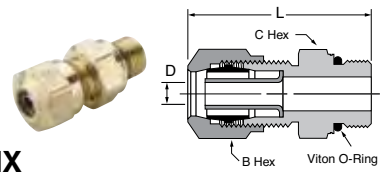
Ref. SAE 100102 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
VS68NTA-3-1*	3/16	1/16	5/16-24	3/8	1.16	.87	.087
VS68NTA-3-2*	3/16	1/8	5/16-24	7/16	1.15	.86	.087
VS68NTA-3-4*	3/16	1/4	5/16-24	9/16	1.35	1.05	.087
VS68NTA-4-2	1/4	1/8	7/16-24	7/16	1.22	.89	.137
VS68NTA-4-4	1/4	1/4	7/16-24	9/16	1.43	1.10	.137
VS68NTA-4-6	1/4	3/8	7/16-24	11/16	1.47	1.14	.137
VS68NTA-6-2	3/8	1/8	17/32-24	9/16	1.49	1.03	.217
VS68NTA-6-4	3/8	1/4	17/32-24	9/16	1.67	1.21	.217
VS68NTA-6-6	3/8	3/8	17/32-24	11/16	1.70	1.24	.217
VS68NTA-6-8	3/8	1/2	17/32-24	7/8	1.89	1.43	.217
VS68NTA-8-4	1/2	1/4	11/16-20	11/16	1.85	1.33	.338
VS68NTA-8-6	1/2	3/8	11/16-20	11/16	1.85	1.33	.338
VS68NTA-8-8	1/2	1/2	11/16-20	7/8	2.04	1.52	.338
VS68NTA-10-6	5/8	3/8	13/16-18	13/16	1.88	1.39	.398
VS68NTA-10-8	5/8	1/2	13/16-18	7/8	2.10	1.58	.398
VS68NTA-12-6	3/4	3/8	1-18	1	2.00	1.49	.440
VS68NTA-12-8	3/4	1/2	1-18	1	2.19	1.68	.523
VS68NTA-12-12	3/4	3/4	1-18	1-1/8	2.22	1.71	.523

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

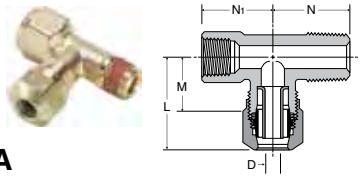
NTA® to Metric Adaptor 68NTA-X-MIX



PART NO.	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
68NTA-4-MI10	1/4	M10 X 1.0	9/16	9/16	1.33	.140

Note: Fluorocarbon o-ring is standard

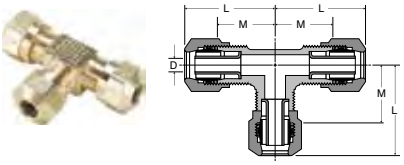
Adapter Tee VS176NTA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
VS176NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.75	.66	.137

Union Tee 264NTA

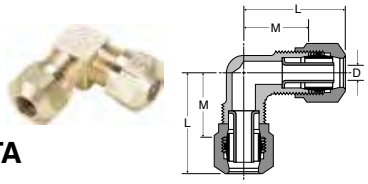
REF. SAE 100401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
264NTA-4	1/4	7/16-24	.95	.62	.137
264NTA-6	3/8	17/32-24	1.24	.78	.217
264NTA-8	1/2	11/16-20	1.45	.93	.338
264NTA-10	5/8	13/16-18	1.58	1.09	.398

Union Elbow 265NTA

REF. SAE 100201 BA

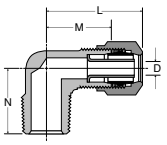


PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
265NTA-4	1/4	7/16-24	.95	.62	.137
265NTA-6	3/8	17/32-24	1.25	.79	.217
265NTA-8	1/2	11/16-20	1.45	.93	.338
265NTA-10	5/8	13/16-18	1.58	1.09	.398

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male Elbow VS269NTA





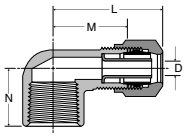
REF. SAE 100202 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS269NTA-3-2*	3/16	1/8	5/16-24	.90	.60	.67	.087
VS269NTA-3-4*	3/16	1/4	5/16-24	.91	.62	.87	.087
VS269NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
VS269NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
VS269NTA-4-6	1/4	3/8	7/16-24	1.16	.73	.86	.137
VS269NTA-6-2	3/8	1/8	17/32-24	1.19	.73	.75	.217
VS269NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
VS269NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
VS269NTA-6-8	3/8	1/2	17/32-24	1.40	.94	1.10	.217
VS269NTA-8-4	1/2	1/4	11/16-20	1.38	.86	.99	.338
VS269NTA-8-6	1/2	3/8	11/16-20	1.44	.92	.99	.338
VS269NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
VS269NTA-10-6	5/8	3/8	13/16-18	1.49	1.00	1.05	.398
VS269NTA-10-8	5/8	1/2	13/16-18	1.58	1.09	1.24	.398
VS269NTA-10-12	5/8	3/4	13/16-18	1.76	1.25	1.32	.400
VS269NTA-12-8	3/4	1/2	1-18	1.70	1.19	1.33	.523
VS269NTA-12-12	3/4	3/4	1-18	1.77	1.26	1.32	.523

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

Female Elbow 270NTA





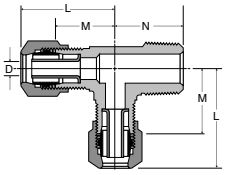
REF. SAE 100203 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
270NTA-3-2*	3/16	1/8	5/16-24	.96	.67	.52	.087
270NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.52	.137
270NTA-4-4	1/4	1/4	7/16-24	1.11	.78	.71	.137
270NTA-6-2	3/8	1/8	17/32-24	1.29	.83	.59	.217
270NTA-6-4	3/8	1/4	17/32-24	1.35	.89	.77	.217
270NTA-6-6	3/8	3/8	17/32-24	1.39	.93	.77	.217
270NTA-8-6	1/2	3/8	11/16-20	1.55	1.03	.82	.338
270NTA-8-8	1/2	1/2	11/16-20	1.65	1.13	1.01	.338
270NTA-10-8	5/8	1/2	13/16-18	1.70	1.19	1.07	.398

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

Male Run Tee VS271NTA



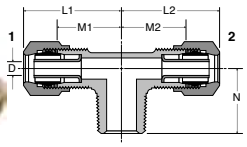


REF. SAE 100424 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS271NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
VS271NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
VS271NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
VS271NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
VS271NTA-8-6	1/2	3/8	11/16-20	1.45	.93	.99	.338
VS271NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
VS271NTA-10-8	5/8	1/2	13/16-18	1.60	1.09	1.24	.398

Male Branch Tee VS272NTA





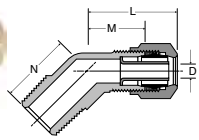
REF. SAE 100425 BA

PART NO.	TB 1	TB 2	PIPE THD	STGHT THD	L1	L2	M1	M2	N	FLOW DIA. D
VS272NTA-3-2*	3/16	3/16	1/8	7/16-24	.90	.90	.61	.61	.66	.087
VS272NTA-4-2	1/4	1/4	1/8	7/16-24	.95	.95	.62	.62	.66	.137
VS272NTA-4-4	1/4	1/4	1/4	7/16-24	1.00	1.00	.68	.68	.87	.137
VS272NTA-6-2	3/8	3/8	1/8	17/32-24	1.18	1.18	.72	.72	.75	.217
VS272NTA-6-4	3/8	3/8	1/4	17/32-24	1.25	1.25	.91	.91	.92	.217
VS272NTA-6-4-4	3/8	1/4	1/4	7/16-24 17/32-24	.99	1.25	.67	.79	.91	.137
VS272NTA-6-6	3/8	3/8	3/8	17/32-24	1.30	1.30	.84	.84	.91	.217
VS272NTA-8-4	1/2	1/2	1/4	11/16-20	1.41	1.41	.89	.89	.99	.338
VS272NTA-8-6	1/2	1/2	3/8	11/16-20	1.45	1.45	.93	.93	.99	.338
VS272NTA-8-8	1/2	1/2	1/2	11/16-20	1.55	1.55	1.03	1.03	1.18	.338
VS272NTA-10-8	5/8	5/8	1/2	13/16-18	1.60	1.60	1.09	1.09	1.24	.398

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

45° Elbow VS279NTA





REF. SAE 100302 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS279NTA-4-2	1/4	1/8	7/16-24	.81	.49	.63	.137
VS279NTA-4-4	1/4	1/4	7/16-24	.93	.60	.85	.137
VS279NTA-6-2	3/8	1/8	17/32-24	1.17	.71	.68	.217
VS279NTA-6-4	3/8	1/4	17/32-24	1.17	.71	.85	.217
VS279NTA-6-6	3/8	3/8	17/32-24	1.21	.75	.94	.217
VS279NTA-6-8	3/8	1/2	17/32-24	1.24	.78	1.16	.217
VS279NTA-8-4	1/2	1/4	11/16-20	1.36	.84	.94	.338
VS279NTA-8-6	1/2	3/8	11/16-20	1.36	.84	.94	.338
VS279NTA-8-8	1/2	1/2	11/16-20	1.39	.87	1.16	.338
VS279NTA-10-6	5/8	3/8	13/16-18	1.43	.94	.98	.398
VS279NTA-10-8	5/8	1/2	13/16-18	1.42	.93	1.16	.398
VS279NTA-12-8	3/4	1/2	1-18	1.61	1.10	1.18	.523

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Transmission Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
SLEEVE:	BRASS
NUTS:	BRASS

NOMENCLATURE	
EXAMPLE: 68TF-2-2	**ATTRIBUTE:**
68	MALE CONNECTOR
TF	TRANSMISSION FITTING
2	1/8" TUBE SIZE
2	1/8" PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	SAE J844 TYPE A & B NYLON TUBING
TUBE O.D.:	1/8, 5/32

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 150 PSI
TEMPERATURE RANGES:	-40° TO +220°F

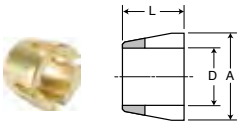
Assembly Instructions

1. Cut tubing squarely.
2. Insert tubing into fitting until bottomed.
3. Tighten nut 1 1/2 turns from finger tight.



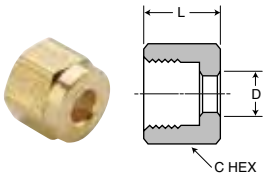
Fitting utilizes a specially designed slotted sleeve to help eliminate notch stress related to over-torque. The fitting design is ideally suited for use in pressure protected air transmission applications. Electroless nickel plated bodies can be used with bio-diesel.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



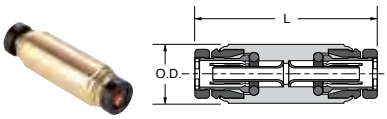
Sleeve 60TF

PART NO.	TUBE SIZE	A	D	L
60TF-2	1/8	.235	.130	0.17
60TF-5/32	5/32	.251	.165	0.18



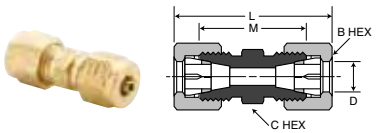
Nut 61TF

PART NO.	TUBE SIZE	D	L	STRT THD	C HEX
61TF-2	1/8	.133	.32	5/16-24	3/8
61TF-5/32	5/32	.163	.32	5/16-24	3/8



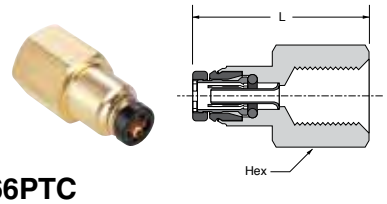
Union 62PTC

PART NO.	TUBE SIZE	L	O.D.
62PTC-5/32	5/32	1.37	.41
62PTC-3	3/16	1.36	.44



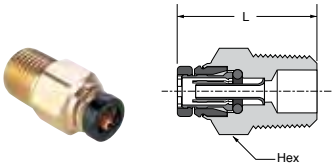
Union 62TF

PART NO.	TUBE SIZE	D	L	STRT THD	M	C HEX	B HEX
62TF-2	1/8	0.109	1.04	5/16-24	.68	5/16	3/8
62TF-5/32	5/32	0.068	1.04	5/16-24	.68	5/16	3/8



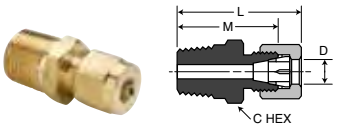
Female Connector 66PTC

PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
66PTC-5/32-2	5/32	1/8	1.17	9/16
66PTC-5/32-4	5/32	1/4	1.34	11/16
66PTC-3-2	3/16	1/8	1.17	9/16



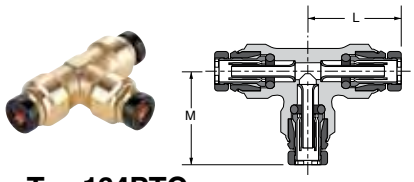
Male Connector 68PTC

PART NO.	TUBE SIZE	PIPE THREAD	HEX	L
68PTC-5/32-1	5/32	1/16	3/8	.85
68PTC-5/32-2	5/32	1/8	7/16	.92
68PTC-5/32-4	5/32	1/4	9/16	1.02
68PTC-3-1	3/16	1/16	7/16	.92
68PTC-3-2	3/16	1/8	7/16	.85
68PTC-3-4	3/16	1/4	9/16	1.02



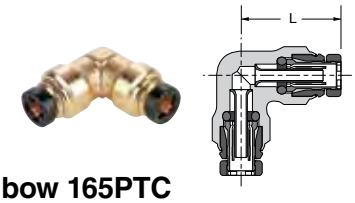
Male Connector 68TF

PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	C HEX
68TF-2-1	1/8	1/16	.109	.96	5/16-24	.78	11/32
68TF-2-2	1/8	1/8	.109	.96	5/16-24	.78	7/16
68TF-5/32-1	5/32	1/16	.068	.84	5/16-24	.66	11/32
68TF-5/32-2	5/32	1/8	.068	.96	5/16-24	.78	7/16



Tube to Tube Union Tee 164PTC

PART NO.	TUBE SIZE	L	M
164PTC-5/32	5/32	.77	.77
164PTC-3	3/16	.77	.77



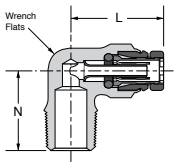
Tube to Tube Union Elbow 165PTC

PART NO.	TUBE SIZE	L
165PTC-5/32	5/32	.77
165PTC-3	3/16	.77

E

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



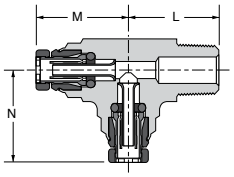


Tube to Male NPT Male Elbow Rigid 90°
169PTCNS

PART NO.	TUBE SIZE	PIPE THREAD	WRENCH FLATS	L	N
169PTCNS-5/32-1	5/32	1/16	.40	.77	.62
169PTCNS-5/32-2	5/32	1/8	.40	.77	.65
169PTCNS-5/32-4	5/32	1/4	.50	.77	.85
169PTCNS-3-2	3/16	1/8	.40	.77	.65
169PTCNS-3-4	3/16	1/4	.49	.77	.85

E

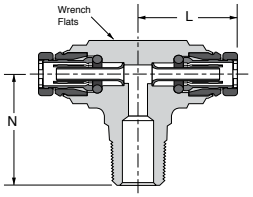




Tube to Male NPT Male Run Tee Rigid
171PTCNS

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N
171PTCNS-5/32-2	5/32	1/8	.75	.78	.78
171PTCNS-5/32-4	5/32	1/4	.88	.78	.78
171PTCNS-3-2	3/16	1/8	.75	.77	.77

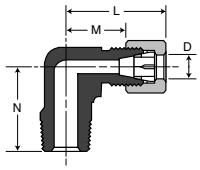




Tube to Male NPT Male Branch Tee Rigid
172PTCNS

PART NO.	TUBE SIZE	PIPE HREAD	L	N	WRENCH FLATS
172PTCNS-5/32-2	5/32	1/8	.78	.75	.47
172PTCNS-5/32-4	5/32	1/4	.78	.88	.47
172PTCNS-3-2	3/16	1/8	.77	.75	.47





Male Elbow 269TF

PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	N
269TF-2-2	1/8	1/8	.109	.79	5/16-24	.61	.66
269TF-5/32-2	5/32	1/8	.068	.79	5/16-24	.61	.66

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Air Brake – AB Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS
SLEEVES:	BRASS

NOMENCLATURE	
EXAMPLE: VS68AB-10-8	**ATTRIBUTE:**
VS	LOCITE VIBRA SEAL® 516
68	MALE CONNECTOR
AB	AIR BRAKE
10	5/8 TUBE SIZE
8	1/2 PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	ANNEALED COPPER
TUBE O.D.:	1/4, 3/8, 1/2, 5/8, 3/4

SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
PRESSURE RANGE:	UP TO 400 PSI
TEMPERATURE RANGES:	FROM -65° TO +250°F.



Fittings meet functional requirements of SAE J246 for spherical sleeve tube fittings.

Assembly Instructions

1. Cut tubing squarely and remove burrs.
2. Slide nut and sleeve onto tubing.
3. Insert tubing into fitting until bottomed on seat. The nut should be screwed down finger-tight, then wrench-tightened as indicated below (This will allow a number of remakes):

TUBE SIZE	TURNS REQUIRED TO SEAL FROM HAND-TIGHT
1/4, 3/8, 1/2	2
5/8, 3/4	3

E

Sleeve 60AB

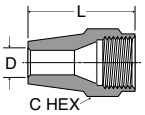
REF. SAE 120115




PART NO.	TUBE SIZE	A	D	L
60AB-4	1/4	.322	.255	.250
60AB-6	3/8	.461	.382	.310
60AB-8	1/2	.594	.507	.380
60AB-10	5/8	.734	.632	.440
60AB-12	3/4	.874	.758	.500

Nut 61AB

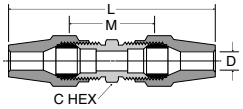
REF. SAE 120111

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61AB-4	1/4	7/16-24	9/16	.256	.75
61AB-6	3/8	17/32-24	5/8	.384	1.13
61AB-8	1/2	11/16-20	13/16	.509	1.25
61AB-10	5/8	13/16-18	15/16	.634	1.38
61AB-12	3/4	1-18	1-1/8	.760	1.56

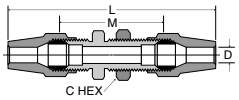
Union 62AB

REF. SAE 120101 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62AB-4	1/4	7/16-24	7/16	1.98	.83	.189
62AB-6	3/8	17/32-24	9/16	2.87	1.08	.314
62AB-8	1/2	11/16-20	11/16	3.21	1.29	.405
62AB-10	5/8	13/16-18	13/16	3.59	1.41	.531
62AB-12	3/4	1-18	1	4.08	1.59	.656

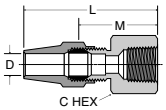
Bulkhead Union 62ABH

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62ABH-4	1/4	7/16-24	9/16	2.53	1.38	.188	7/16
62ABH-6	3/8	17/32-24	3/4	3.41	1.62	.314	17/32
62ABH-8	1/2	11/16-20	1	3.80	1.88	.408	11/16

Female Connector 66AB

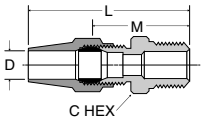
REF. SAE 120103 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66AB-4-2	1/4	1/8	7/16-24	9/16	1.42	.84	.188
66AB-4-4	1/4	1/4	7/16-24	11/16	1.65	1.07	.188
66AB-6-2	3/8	1/8	17/32-24	9/16	1.89	1.00	.314
66AB-6-4	3/8	1/4	17/32-24	11/16	2.07	1.18	.314
66AB-6-6	3/8	3/8	17/32-24	7/8	2.07	1.18	.314
66AB-8-6	1/2	3/8	11/16-20	7/8	2.23	1.27	.408
66AB-8-8	1/2	1/2	11/16-20	1-1/16	2.40	1.44	.408
66AB-10-6	5/8	3/8	13/16-18	7/8	2.40	1.31	.533
66AB-10-8	5/8	1/2	13/16-18	1-1/16	2.59	1.50	.533

Male Connector VS68AB

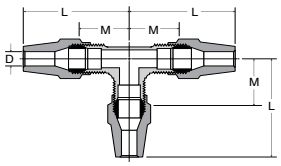
REF. SAE 120102 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
VS68AB-4-2	1/4	1/8	7/16-24	7/16	1.47	.89	.189
VS68AB-4-4	1/4	1/4	7/16-24	9/16	1.68	1.10	.189
VS68AB-4-6	1/4	3/8	7/16-24	11/16	1.72	1.14	.189
VS68AB-6-2	3/8	1/8	17/32-24	9/16	1.92	1.03	.189
VS68AB-6-4	3/8	1/4	17/32-24	9/16	2.10	1.21	.314
VS68AB-6-6	3/8	3/8	17/32-24	11/16	2.13	1.24	.314
VS68AB-6-8	3/8	1/2	17/32-24	7/8	2.32	1.43	.314
VS68AB-8-4	1/2	1/4	11/16-20	11/16	2.29	1.33	.314
VS68AB-8-6	1/2	3/8	11/16-20	11/16	2.29	1.33	.408
VS68AB-8-8	1/2	1/2	11/16-20	7/8	2.48	1.52	.408
VS68AB-10-6	5/8	3/8	13/16-18	13/16	2.48	1.39	.408
VS68AB-10-8	5/8	1/2	13/16-18	7/8	2.67	1.58	.533
VS68AB-12-8	3/4	1/2	1-18	1	2.92	1.68	.533
VS68AB-12-12	3/4	3/4	1-18	1-1/8	2.95	1.71	.658

Union Tee 264AB

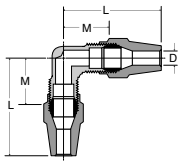
REF. SAE 120401 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
264AB-4	1/4	7/16-24	1.20	.62	.189
264AB-6	3/8	17/32-24	1.67	.78	.314
264AB-8	1/2	11/16-20	1.89	.93	.408
264AB-10	5/8	13/16-18	2.18	1.09	.533

Union Elbow 265AB

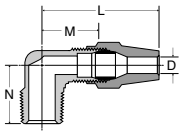
REF. SAE 120201 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
265AB-4	1/4	7/16-24	1.20	.62	.189
265AB-6	3/8	17/32-24	1.68	.79	.314
265AB-8	1/2	11/16-20	1.89	.93	.408
265AB-10	5/8	13/16-18	2.18	1.09	.533

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



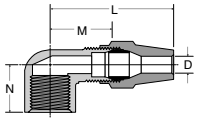


Male Elbow VS269AB

REF. SAE 120202 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS269AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS269AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS269AB-4-6	1/4	3/8	7/16-24	1.31	.73	.86	.189
VS269AB-6-2	3/8	1/8	17/32-24	1.62	.73	.75	.189
VS269AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS269AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS269AB-6-8	3/8	1/2	17/32-24	1.83	.94	1.10	.314
VS269AB-8-4	1/2	1/4	11/16-20	1.82	.86	.99	.314
VS269AB-8-6	1/2	3/8	11/16-20	1.88	.93	.99	.408
VS269AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS269AB-10-6	5/8	3/8	13/16-18	2.09	1.00	1.05	.408
VS269AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533
VS269AB-12-8	3/4	1/2	1-18	2.33	1.19	1.32	.533
VS269AB-12-12	3/4	3/4	1-18	2.50	1.26	1.32	.533



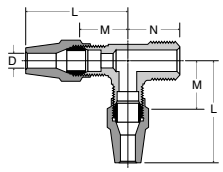


Female Elbow 270AB

REF. SAE 120203 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
270AB-4-2	1/4	1/8	7/16-24	1.27	.69	.52	.189
270AB-4-4	1/4	1/4	7/16-24	1.36	.78	.71	.189
270AB-6-2	3/8	1/8	17/32-24	1.72	.83	.59	.314
270AB-6-4	3/8	1/4	17/32-24	1.78	.89	.77	.314
270AB-6-6	3/8	3/8	17/32-24	1.82	.93	.77	.314
270AB-8-6	1/2	3/8	11/16-20	1.99	1.03	.82	.408
270AB-8-8	1/2	1/2	11/16-20	2.09	1.13	1.01	.408
270AB-10-8	5/8	1/2	13/16-18	2.28	1.19	1.07	.533



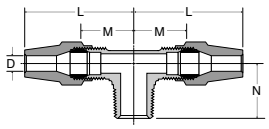


Male Run Tee VS271AB

REF. SAE 120424 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS271AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS271AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS271AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS271AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS271AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
VS271AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS271AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533



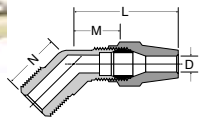


Male Branch Tee VS272AB

REF. SAE 120425 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS272AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS272AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS272AB-6-2	3/8	1/8	17/32-24	1.61	.72	.75	.189
VS272AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS272AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS272AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
VS272AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS272AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533



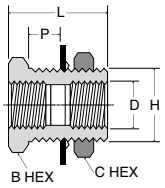


45° Elbow VS279AB

REF. SAE 120302 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS279AB-4-2	1/4	1/8	7/16-24	1.07	.49	.63	.189
VS279AB-4-4	1/4	1/4	7/16-24	1.18	.60	.85	.189
VS279AB-6-2	3/8	1/8	17/32-24	1.60	.71	.68	.189
VS279AB-6-4	3/8	1/4	17/32-24	1.64	.71	.85	.314
VS279AB-6-6	3/8	3/8	17/32-24	1.64	.75	.94	.314
VS279AB-6-8	3/8	1/2	17/32-24	1.67	.78	1.16	.314
VS279AB-8-6	1/2	3/8	11/16-20	1.80	.84	.94	.408
VS279AB-8-8	1/2	1/2	11/16-20	1.83	.87	1.16	.408
VS279AB-10-6	5/8	3/8	13/16-18	2.03	.94	.98	.408
VS279AB-10-8	5/8	1/2	13/16-18	2.13	1.05	1.16	.533
VS279AB-12-8	3/4	1/2	1-18	2.34	1.10	1.18	.533





Anchor Coupling 207ACBH

PART NO.	FEMALE PIPE THREAD	STRAIGHT THREAD	MAX .BKHD P	B HEX	C HEX	L	BKHD HOLE DIA. H	FLOW DIA. D
207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Air Brake Hose Ends Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS
SLEEVES:	BRASS

NOMENCLATURE	
EXAMPLE: 68RBSG-6-8	**ATTRIBUTE:**
68	MALE CONNECTOR
RB	AIR BRAKE HOSE END
SG	SPRING GUARD
6	3/8 HOSE I.D.
8	1/2 PIPE THREAD

APPLICABLE TUBE	
HOSE MATERIAL:	PARKER 271
HOSE SIZE:	3/8, 1/2

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 225 PSI
TEMPERATURE RANGES:	-50° TP +212°F

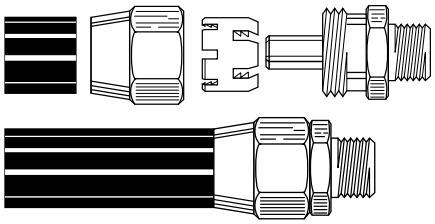


Fittings will meet D.O.T. FMVSS 571.106 standards when used with SAE J1402 air brake hose.

Assembly Instructions

1. Slide nut onto hose.
2. Slide sleeve onto hose with tapered edge toward fitting body .
3. Bottom hose into fitting.
4. Tighten nut until it contacts body hex.

Note: When reassembling fitting, body and nut should be inspected. Only reuse if parts are in proper condition. Sleeves should never be reused.

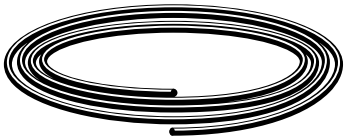


Parker 271

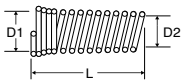
MEETS OR EXCEEDS THE REQUIREMENTS OF SAE J1402 TABLE A, AND DEPT. OF TRANSPORTATION FMVSS 106-74, TYPE A2.

SPECIFICATIONS	
CONSTRUCTION	TUBE - SYNTHETIC RUBBER. REINFORCEMENT - ONE OR MORE FABRIC BRAIDS OR SPIRALS. COVER - ABRASION, OIL AND AGE RESISTANT SYNTHETIC RUBBER.
IDENTIFICATION	PARKER, PART NUMBER, AND APPROPRIATE SAE AND DOT MARKINGS.
APPLICATION	AIR BRAKE SYSTEMS.
TEMPERATURE RANGE	-50°F THRU +212°F (-46°C THRU +100°C)

PART NO.	HOSE SIZE	HOSE I.D.	HOSE O.D.	MIN. BURST PRESS.	MAX. WORKING PRESS.	MIN. BEND RADUS	APPROX. WT. LBS./FT.
271-6	-6	3/8	.750	900	225	1.75	.200
271-8	-8	1/2	.875	900	225	2.00	.260

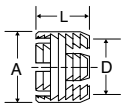


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Otsego, Michigan

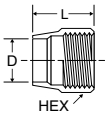
Spring 56RBSG

PART NO.	HOSE SIZE	L	D1	D2
56RBSG-6	3/8	2.75	.84	.78
56RBSG-8	1/2	3.00	1.03	.91

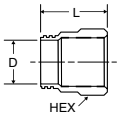
Sleeve 60RB

PART NO.	HOSE SIZE	L	A	D
60RB-6	3/8	.69	.90	.78
60RB-8	1/2	.69	1.03	.92

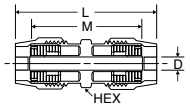
Nut 61RB

PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RB-6	3/8	31/32-20	1-1/16	1.12	.80
61RB-8	1/2	1-3/32-20	1-1/4	1.12	.93

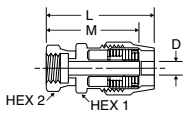
Spring Guard Nut 61RBSG

PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RBSG-6	3/8	31/32-20	1-1/16	1.22	.80
61RBSG-8	1/2	1-3/32-20	1-1/4	1.19	.92

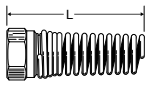
Union 62RB

PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	D
62RB-6	3/8	31/32-20	31/32	2.98	2.56	.281
62RB-8	1/2	1-3/32-20	1-1/8	2.99	2.55	.390

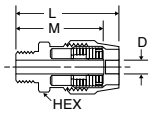
Female Swivel Connector 66RBSV

PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX1	HEX2	L	M	D
66RBSV-6-3/4	3/8	3/4-20	31/32	7/8	2.30	2.09	.281
66RBSV-8-7/8	1/2	7/8-20	1-1/8	1"	2.36	2.14	.390

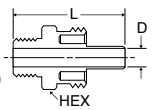
Air Brake Hose Nut & Attached Spring 67RBSG

PART NO.	L
67RBSG-6	3.50
67RBSG-8	3.75

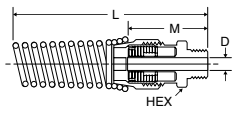
Male Connector 68RB

PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	M	D
68RB-6-4	3/8	31/32-20	1/4	31/32	2.24	1.91	.281
68RB-6-6	3/8	31/32-20	3/8	31/32	2.24	1.91	.281
68RB-6-8	3/8	31/32-20	1/2	31/32	2.38	2.06	.281
68RB-8-6	1/2	1-3/32-20	3/8	1-1/8	2.24	1.91	.390
68RB-8-8	1/2	1-3/32-20	1/2	1-1/8	2.29	2.07	.390

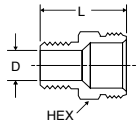
Male Connector Body Only 68RB

PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	D
68RB-6-4B	3/8	31/32-20	1/4	31/32	1.91	.281
68RB-6-6B	3/8	31/32-20	3/8	31/32	1.91	.281
68RB-6-8B	3/8	31/32-20	1/2	31/32	2.06	.281
68RB-8-6B	1/2	1-3/32-20	3/8	1-1/8	1.91	.390
68RB-8-8B	1/2	1-3/32-20	1/2	1-1/8	2.07	.390

Male Connector with Spring Guard 68RBSG

PART NO.	HOSE SIZE	PIPE THREAD	HEX	L	M	D
68RBSG-6-4	3/8	1/4	31/32	4.8	1.91	.281
68RBSG-6-6	3/8	3/8	31/32	4.8	1.91	.281
68RBSG-6-8	3/8	1/2	31/32	4.9	2.06	.281
68RBSG-8-6	1/2	3/8	1-1/8	5.0	1.91	.390
68RBSG-8-8	1/2	1/2	1-1/8	5.2	2.07	.390

Adapter 76RB

PART NO.	PIPE THREAD	STRAIGHT THREAD	HEX	L	D
76RB-3/4-4	1/4	3/4-20	3/4	1.06	.310
76RB-3/4-6	3/8	3/4-20	3/4	1.12	.422
76RB-7/8-6	3/8	7/8-20	7/8	1.25	.440
76RB-7/8-8	1/2	7/8-20	7/8	1.47	.500

E

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Fluid System Connectors
Otsego, Michigan

Vibra-Lok Fittings

MATERIALS OF CONSTRUCTION	
FITTING BODIES:	BRASS
NUTS:	BRASS
SLEEVES:	BUNA N, FLUOROCARBON

NOMENCLATURE	
EXAMPLE: 68VLV-4-2	**ATTRIBUTE:**
68	MALE CONNECTOR
VL	VIBRA-LOK
V	FLUOROCARBON SLEEVE
4	1/4" (4/16) TUBE O.D.
2	1/8" (2/16) PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, ALUMINUM, STEEL (BUNDY), STAINLESS STEEL, GLASS
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4

SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, GASOLINE, OIL, DIESEL FUEL, LUBRICANTS
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY

TEMPERATURE RANGE	
-15° TO +450°F	WITH FLUOROCARBON SLEEVE. SLEEVE IS MARKED WITH RED STRIPE
-30° TO +275°F	WITH BUNA N SLEEVE. SLEEVE IS MARKED WITH GREEN STRIPE

PRESSURE CHART

CONDITION	TUBE O.D.	TUBE NOT BELLED	TUBE BELLED OR FLARED
STATIC PRESSURE	3/16" 1/4" 5/16" 3/8" 1/2" 5/8"	500 500 450 350 200	1000 1000 900 700 500 400
MINOR SURGES AND/OR VIBRATIONS	3/16" 1/4" 5/16" 3/8" 1/2" 5/8"	400 400 325 225 150	800 800 700 500 375 300
SEVERE VIBRATIONS OR SHOCK	3/16" 1/4" 5/16" 3/8" 1/2" 5/8"	300 300 225 175 100	600 600 500 400 250 100

In high pressure applications and sizes larger than 1/2" O.D., the tube end should be belled or flared.



Fitting provides a positive reliable seal under vibration conditions, mechanical shock or tube movement. The sleeve cushions the tubing permitting the tube to flex back and forth in the fitting. Positive nut stop bottoms nut on body requiring only visual inspection.

SAE J1926 straight threads and NPTF pipe threads are standard. Optional threads include ISO 6149 straight threads and British pipe threads.

Assembly Instructions

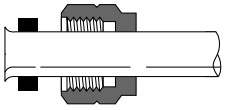
1. Cut the tube cleanly and squarely removing all burrs.
2. Slip tube nut and sleeve over tube.
3. Insert tubing in fitting body as far as it will go and tighten nut until stop is reached. The elastic sleeve ordinarily will extrude slightly around the tube at the end of the nut. This extrusion further aids in isolating the tube from the nut.

Assembly Instructions for Higher Pressure Applications

4. Consult pressure chart to determine if tubing should be belled for your particular application.
5. Slip the nut and sleeve over tubing. The sleeve should be positioned near end of tubing just behind the surface to be belled.
6. Bell tubing with standard 45° flaring tool or 90° punch. The size of bell should be approximately that shown.

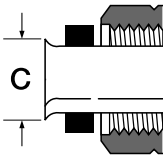
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Otsego, Michigan

Sleeve Position



Recommended Size of Bell

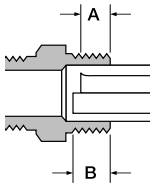
TUBE O.D.	BELL DIA. C
1/8"	.190-.160
3/16"	.255-.225
1/4"	.318-.288
5/16"	.381-.351
3/8"	.444-.414
1/2"	.569-.539
5/8"	.694-.664
3/4"	.819-.789
7/8"	.944-.914



Tube Length Calculator

This table shows distance tube extends beyond face of Vibra-Lok fitting body on installation with bell on tubing and without bell on tubing.

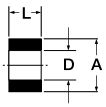
O.D. OF TUBE	A WITH BELL	B WITHOUT BELL
1/8"	3/16"	3/16"
3/16"	3/16"	7/32"
1/4"	3/16"	1/4"
5/16"	3/16"	1/4"
3/8"	3/16"	1/4"
1/2"	3/16"	11/32"
5/8"	3/16"	TUBING SHOULD BE BELLED
3/4"	3/16"	
7/8"	1/4"	



E

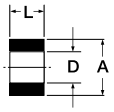
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Sleeve 60VL

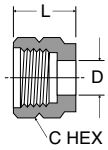
PART NO.	TUBE SIZE	A	D	L
60VL-2	1/8	.306	.100	.20
60VL-3	3/16	.359	.156	.20
60VL-4	1/4	.422	.219	.21
60VL-5	5/16	.484	.281	.24
60VL-6	3/8	.547	.344	.25
60VL-8	1/2	.688	.469	.36
60VL-10	5/8	.875	.594	.48
60VL-12	3/4	1.000	.720	.59

Sleeve (Fluorocarbon) 60VLV

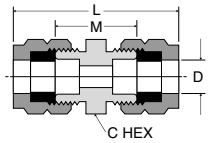
PART NO.	TUBE SIZE	A	D	L
60VLV-3	3/16	.359	.156	.20
60VLV-4	1/4	.422	.219	.21
60VLV-5	5/16	.484	.281	.24
60VLV-6	3/8	.547	.344	.25
60VLV-8	1/2	.688	.469	.36
60VLV-10	5/8	.875	.594	.48
60VLV-12	3/4	1.000	.720	.59

Nut 61VL

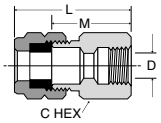
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61VL-2	1/8	3/8-24	7/16	.156	.44
61VL-3	3/16	7/16-24	1/2	.218	.47
61VL-4	1/4	1/2-24	9/16	.281	.50
61VL-5	5/16	9/16-24	5/8	.344	.53
61VL-6	3/8	5/8-24	3/4	.406	.53
61VL-8	1/2	13/16-18	15/16	.531	.67
61VL-10	5/8	1-18	1-1/8	.656	.88
61VL-12	3/4	1-1/8-18	1-1/4	.781	.98

Union 62VL

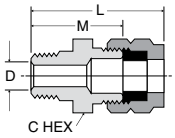
PART NO.	TUBE SIZE	C HEX	L	M	FLOW DIA. D
62VL-4	1/4	9/16	1.39	.77	.188
62VL-5	5/16	5/8	1.49	.81	.250
62VL-6	3/8	11/16	1.49	.80	.312
62VL-8	1/2	7/8	1.90	.94	.437

Female Connector 66VL

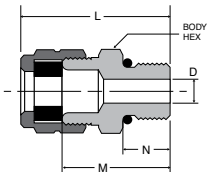
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
66VL-4-2	1/4	1/8	9/16	1.09	.78	.188
66VL-5-4	5/16	1/4	11/16	1.32	.97	.250

Male Connector 68VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68VL-2-2	1/8	1/8	7/16	1.12	.81	.093
68VL-3-2	3/16	1/8	1/2	1.10	.81	.125
68VL-4-2	1/4	1/8	9/16	1.15	.84	.188
68VL-4-4	1/4	1/4	9/16	1.34	1.03	.188
68VL-5-4	5/16	1/4	5/8	1.41	1.06	.250
68VL-6-2	3/8	1/8	11/16	1.22	.87	.235
68VL-6-4	3/8	1/4	11/16	1.41	1.06	.312
68VL-6-6	3/8	3/8	11/16	1.41	1.06	.312
68VL-8-6	1/2	3/8	7/8	1.64	1.16	.406
68VL-8-8	1/2	1/2	7/8	1.64	1.35	.406
68VL-10-8	5/8	1/2	1-1/16	2.10	1.44	.560
68VL-12-8	3/4	1/2	1-3/16	2.26	1.50	.530
68VL-12-12	3/4	3/4	1-3/16	2.26	1.50	.688

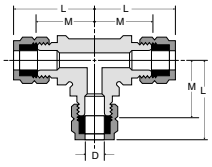
Male Connector 685VLV

PART NO.	TUBE SIZE	STRAIGHT THREAD	BODY HEX	L	M	N	D
685VLV-4-4	1/4	7/16-20	9/16	1.14	.83	.36	.18
685VLV-5-4	5/16	7/16-20	5/8	1.18	.83	.36	.18
685VLV-6-4	3/8	7/16-20	11/16	1.18	.83	.36	.18
685VLV-6-6	3/8	9/16-18	11/16	1.25	.90	.39	.30
685VLV-8-8	1/2	3/4-16	7/8	1.52	1.04	.44	.39
685VLV-10-10	5/8	7/8-14	1 1/16	1.84	1.20	.50	.50
685VLV-12-12	3/4	1 1/16-12	1 1/4	2.10	1.34	.59	.62

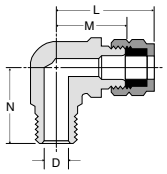
Note: Fluorocarbon seal & o-ring standard

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Otsego, Michigan

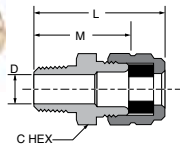
Union Tee 164VL

PART NO.	TUBE SIZE	BODY HEX	L	M	FLOW DIA. D
164VL-3	3/16	3/8	.98	.69	.160
164VL-4	1/4	1/2	1.06	.75	.190
164VL-5	5/16	15/32	1.22	.88	.250
164VL-8	1/2	13/16	1.64	1.16	.406

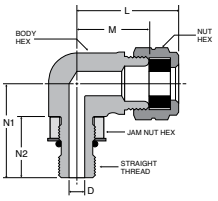
Male Elbow 169VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
169VL-3-2	3/16	1/8	.98	.69	.75	.156
169VL-4-2	1/4	1/8	1.00	.69	.78	.188
169VL-4-4	1/4	1/4	1.16	.84	1.00	.188
169VL-5-4	5/16	1/4	1.16	.81	1.00	.252
169VL-6-2	3/8	1/8	1.19	.84	.91	.235
169VL-6-4	3/8	1/4	1.19	.84	1.06	.312
169VL-6-6	3/8	3/8	1.29	.94	1.13	.312
169VL-8-6	1/2	3/8	1.48	1.00	1.06	.406
169VL-8-8	1/2	1/2	1.54	1.06	1.44	.406
169VL-10-8	5/8	1/2	1.92	1.28	1.47	.565

Straight Through Tank Fitting 682VL

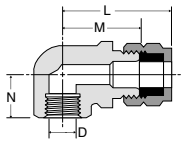
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
682VL-4-2	1/4	1/8	9/16	1.15	.84	.265
682VL-4-4	1/4	1/4	9/16	1.34	1.03	.265
682VL-5-4	5/16	1/4	5/8	1.41	1.06	.328
682VL-6-6	3/8	3/8	11/16	1.41	1.06	.406

Male Elbow 1695VLV

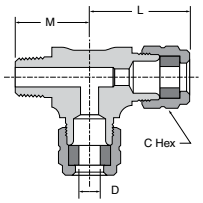
PART NO.	TUBE SIZE	STRAIGHT THREAD	NUT HEX	BODY HEX	JAM NUT HEX	L	M	N1	N2	D
1695VLV-4-4	1/4	7/16-20	9/16	9/16	9/16	1.15	.84	1.07	.71	.18
1695VLV-5-4	5/16	7/16-20	5/8	9/16	9/16	1.16	.81	1.07	.71	.18
1695VLV-6-4	3/8	7/16-20	3/4	5/8	9/16	1.19	.84	1.10	.71	.18
1695VLV-6-6	3/8	9/16-18	3/4	5/8	11/16	1.29	.94	1.17	.78	.30
1695VLV-8-8	1/2	3/4-16	15/16	3/4	7/8	1.54	1.06	1.44	.89	.39
1695VLV-10-10	5/8	7/8-14	1 1/8	1.00	1.00	1.92	1.28	1.68	1.03	.50
1695VLV-12-12	3/4	1 1/16-12	1 1/4	1.00	1 1/4	2.04	1.28	1.82	1.17	.62

Note: Fluorocarbon seal & o-ring standard

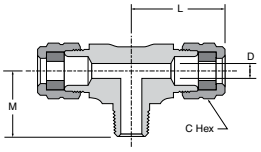
Female Elbow 170VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
170VL-4-2	1/4	1/8	.96	.65	.50	.188
170VL-5-4	5/16	1/4	1.16	.81	.70	.250

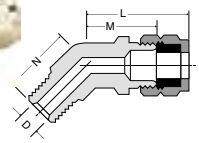
Male Run Tee 171VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
171VL-4-2	1/4	1/8	9/16	1.03	.76	.188
171VL-4-4	1/4	1/4	9/16	1.12	1.03	.188

Male Branch Tee 172VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
172VL-4-2	1/4	1/8	9/16	1.06	.75	.188

45° Elbow 179VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
179VL-4-2	1/4	1/8	1.06	.75	.69	.188
179VL-6-4	3/8	1/4	1.07	.72	.84	.315

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Truck Valves & Lanyard Valve

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS
STEM:	BRASS

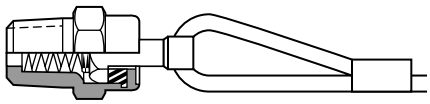
TRUCK VALVE NOMENCLATURE	
EXAMPLE: V404P-6-6	**ATTRIBUTE:**
V	VALVE
404	HOSE TO MALE PIPE
P	PIPE
6	3/8" TUBE O.D.
6	3/8" PIPE THREAD

LANYARD VALVE NOMENCLATURE	
EXAMPLE: LV91-4-060	**ATTRIBUTE:**
LV91	LANYARD VALVE
4	1/4" PIPE THREAD
060	LENGTH OF CABLE IN INCHES

SPECIFICATIONS	
PRESSURE RANGE	VALVES UP TO 150 PSI UNLESS OTHERWISE NOTED
TEMPERATURE RANGE	SEE SPECIFIC PART NUMBER FOR TEMPERATURE RANGE



Truck valves have metal-to-metal seats with fine thread screwdown. The lanyard valves' compact design is ideally suited for releasing condensate from air tanks. Brass construction with specially formulated low temperature seal which remains elastic to temperature as low -40°F.

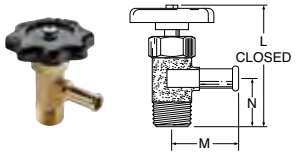


Lanyard Valve Operating Instructions

A pulling action exerted on the cable cocks the stem, allowing condensate to pass through the valve. Releasing the cable resets the stem which returns the valve to its closed position.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

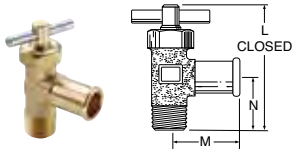
Truck Valve V404P



Hose to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404P-6-6	3/8	3/8	.281	2.35	1.36	.94
V404P-10-6	5/8	3/8	.406	2.75	1.31	1.15

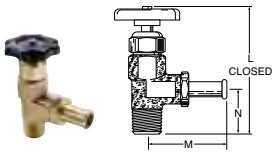
Truck Valve V404PH



Hose to Male Pipe with Pin Handle
Temperature Range: -30° to +250° F

PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404PH-10-6	5/8	3/8	.406	2.47	1.31	1.09

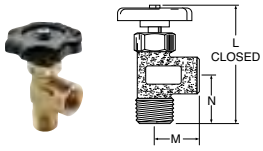
Truck Valve SV404P



Hose to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
SV404P-10-8	5/8	1/2	.468	3.71	2.31	1.34
SV404P-12-6	3/4	3/8	.438	3.73	2.31	1.34
SV404P-12-8	3/4	1/2	.562	3.73	2.31	1.34

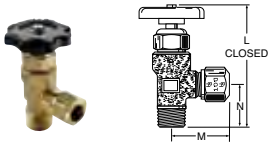
Truck Valve V405P



Female Pipe to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	FEMALE PIPE THREAD	MALE PIPE THREAD	FLOW	L	M	N
V405P-6-6	3/8	3/8	.406	2.72	.91	1.19
V405P-6-8	3/8	1/2	.406	2.95	.91	1.31
V405P-8-8	1/2	1/2	.562	3.15	1.17	1.34

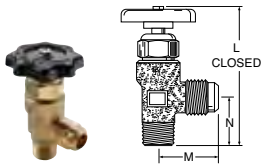
Truck Valve V408NTA



Tube to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V408NTA-8-8	1/2	1/2	.328	3.28	1.15	1.19

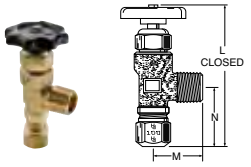
Truck Valve V409F



Flare to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V409F-8-6	1/2	3/8	.406	3.07	1.31	1.00
V409F-8-8	1/2	1/2	.406	3.28	1.31	1.19
V409F-10-8	5/8	1/2	.500	3.47	1.50	1.25
V409F-12-8	3/4	1/2	.562	3.70	2.31	1.34

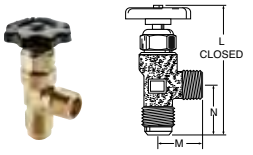
Truck Valve V410NTA



Tube to Male Pipe
Temperature Range: -30° to +250°

F PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V410NTA-8-8	1/2	1/2	.328	3.58	1.38	1.31

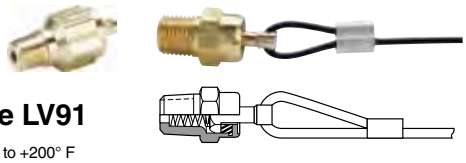
Truck Valve V412F



Tube to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V412F-10-8	5/8	1/2	.500	3.60	1.38	1.31

LV91HF-4-SUB



Lanyard Valve LV91

Temperature Range: -40° to +200° F

PART NO.	PIPE THREAD	CABLE LENGTH INCHES
LV91-4-036	1/4	36
LV91-4-048	1/4	48
LV91-4-060	1/4	60
LV91HF-4-SUB	1/4	--

E

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Otsego, Michigan

Notes

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Transportation
Cartridges & Manifolds



SAE Encapsulated Cartridge

Meets Performance Requirements of D.O.T. FMVSS 571.106
Meets Dimensional Standards of SAE J2494-4 in 6061-T6 Aluminum
Eliminate the space and labor costs associated with pipe threads.
Weight Reduction
3 barb design



Manifolds

Push to Connect Ports
Light Weight Body
O-ring Seal



Cartridge	Manifold	
PMTCE Encapsulated  p. F3	**255MP** Brass Manifold  p. F5	**24M** Composite Manifold  p. F6

F

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Fluid System Connectors
Otsego, Michigan

Prestomatc SAE Encapsulated Cartridges

MATERIALS OF CONSTRUCTION	
CARTRIDGE:	BRASS
TUBE SUPPORT:	BRASS
O-RING:	BUNA N

NOMENCLATURE	
EXAMPLE: PMTCE-4	**ATTRIBUTE:**
PMTCE	PRESTO SAE CARTRIDGE
4	1/4 TUBE SIZE

PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE:	UP TO 250 PSI
TEMPERATURE RANGES:	-40° TO +200°F



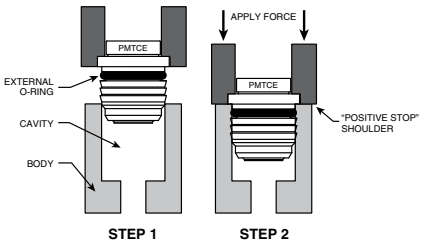
The SAE Encapsulated cartridge allows the user to eliminate the space and labor required to install and assemble a conventional pipe thread fitting connection. The cartridge is retained in the cavity by 3 barbs versus the normal 2 barbs for better performance over a wider diameter tolerance range.

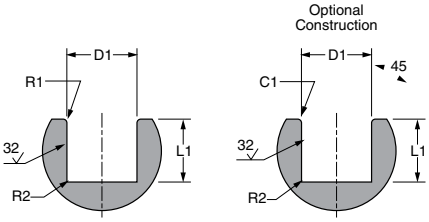
Cavity Specifications

Dimensions are per the proposed SAE Standard J2494-4. The SAE Encapsulated Cartridge is thoroughly tested to meet or exceed the performance requirements of D.O.T. FMVSS 571.106 and SAE J2231 and the proposed dimensional standards of SAE J2494-4 in 6061-T6 aluminum. Cavity dimensions specified by SAE J2494-4 need tp be adjusted slightly for optimum performance in material other than 6061-T6.

Installation

Apply force evenly over the top surface of the cartridge body until the cartridge shoulder bottoms out on the top of the cavity. The amount of force required will vary depending on the cartridge size and the material of the cavity.





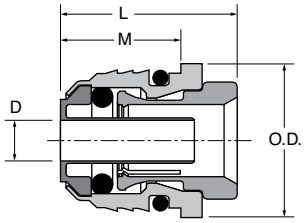
NOMINAL TUBE OD (IN)	D1 (MM) ±.05	D1 (IN) ±.002	L1 (MM) MIN	L1 (IN) MIN	R1 (MM) ±.05	R1 (IN) ±.002	R2 (MM) ±.05	R2 (IN) ±.002	C1 (MM) ±.05	C1 (IN) ±.002
5/32	8.8	0.346	11.4	0.45	0.5	0.02	0.5	0.02	0.5	0.02
1/4	12.8	0.504	12.7	0.5	0.5	0.02	0.5	0.02	0.5	0.02
3/8	16.5	0.65	16.5	0.65	0.5	0.02	0.5	0.02	0.5	0.02
1/2	19.7	0.775	19.8	0.78	0.5	0.02	0.5	0.02	0.5	0.02
5/8	23.5	0.925	22.4	0.88	0.8	0.03	0.5	0.02	0.8	0.03
3/4	27.1	1.067	23.9	0.94	0.8	0.03	0.5	0.02	0.8	0.03

Cavity material is to be 6061 T6 aluminum

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Prestomatic SAE Encapsulated Cartridge PMCE/PMTCE

PART NO.	TUBE SIZE	CAVITY SIZE ±.002	L	M	O.D.	FLOW DIA. D
PMTCE-4	1/4	.504	.64	.44	.56	.140
PMTCE-4-8	1/4	.775	.66	.42	.87	.140
PMTCE-6	3/8	.650	.84	.64	.75	.217
PMTCE-6-8	3/8	.775	.84	.64	.87	.217
PMTCE-8	1/2	.775	.98	.77	.87	.338
PMTCE-10	5/8	.925	1.07	.86	1.00	.398





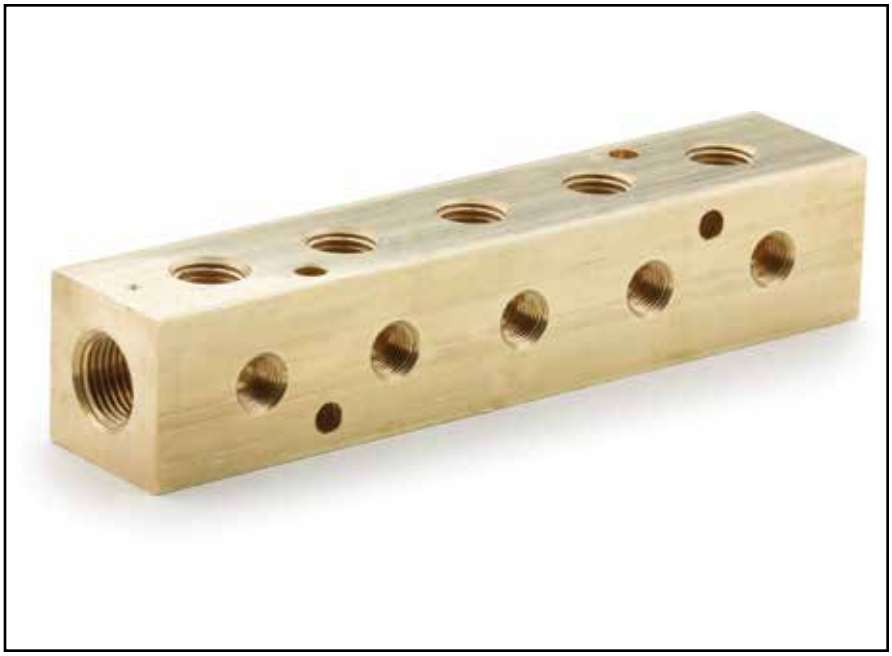
F

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Brass Manifold

NOMENCLATURE	
EXAMPLE: 255MP-6-4-2	ATTRIBUTE:
2	2 ENDS
5	5 TOP PORTS
5	5 SIDE PORTS
M	MANIFOLD
P	PIPE THREAD
6	3/8" END PORTS
4	1/4" TOP PORTS
2	1/8" SIDE PORTS

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 1,000 PSI
TEMPERATURE RANGES:	-65° TO +250°F
OPERATING FLUID:	AIR, WATER, HYDRAULIC FLUIDS

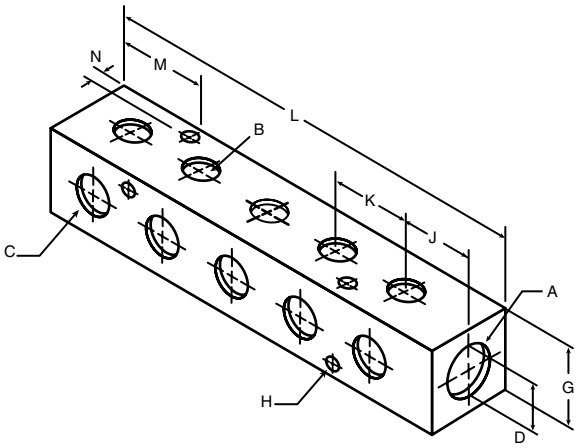


F

This brass manifold provides a convenient junction for the hook-up of multi-branch distribution lines. Porting is easy with five 1/8” and five 1/4” side ports. Two 3/8” inlet ports allow for maximum flow.

Brass Manifold 255M

PART NO.	PIPE THREAD A	PIPE THREAD B	PIPE THREAD C	G	MOUNTING HOLE DIA. H	J	K	L	M	N	D
255MP-6-4-2	3/8	1/8	1/4	1.25	.22	.88	1.13	6.25	1.45	.25	.25



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Fluid System Connectors
Otsego, Michigan

Presto Manifold

MATERIALS OF CONSTRUCTION	
MANIFOLD BODY:	GLASS FILLED NYLON
COLLET:	BRASS
O-RING:	BUNA N

NOMENCLATURE	
EXAMPLE: 24M-6-4	**ATTRIBUTE:**
24M	PRESTO MANIFOLD
6	INLET TUBE 6/16
4	OUTLET TUBE 4/16

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 150 PSI
TEMPERATURE RANGES:	-40° TO +200°F

APPLICABLE TUBE	
TUBE MATERIAL:	NYLON, SAE J844 TYPE A & B NYLON TUBING
TUBE O.D.:	1/4, 3/8, 1/2



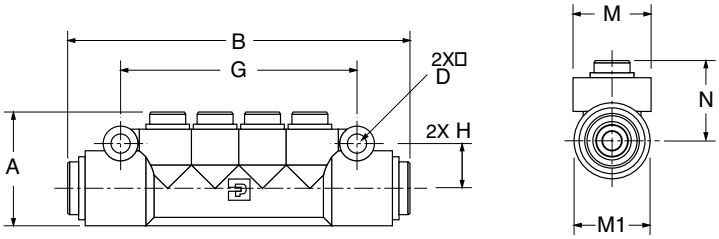
The Presto manifold provides a convenient junction to connect multiple tubing lines.

Assembly Instructions

1. Cut tubing squarely with Parker tube cutter PTC-001. Be certain that Manifold ports are clean and free of debris.
2. Insert tubing into port until it bottoms. Pull on tubing to verify that it is properly retained in the manifold.
3. To disassemble, simply hold release button against the manifold body and remove the tubing.
4. To reassemble, make certain that the Manifold ports are clean and free of debris and lubricate leading end of the tubing with light oil or petroleum jelly.

Presto Manifold 24M

PART NO.	TUBE O.D. INLET	TUBE O.D. OUTLET	A	B	D	G	H	M	M1	N
24M-4-4	1/4	1/4	1.33	3.98	.21	2.75	.53	.90	.88	.89
24M-6-4	3/8	1/4	1.33	4.00	.21	2.75	.53	.90	.88	.89
24M-6-6	3/8	3/8	1.65	6.49	.22	4.55	.60	1.02	1.02	1.33
24M-8-8	1/2	1/2	1.65	6.49	.22	4.55	.60	1.02	1.02	1.33
24M-8-6446	1/2	3/8 - 1/4	1.65	6.49	.22	4.55	.64	1.02	1.02	1.17



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Industrial:
Compression Style Pneumatic



Compression
Thermoplastic / Soft Metal Tubing
Economical
UL Listed



Compress-Align®
Pre-assembled
Captive Sleeve
Two piece



Metru-Lok™
NPT, BSPT, BSPP, Metric Threads
Captive Sleeve
Metric Tubing



Poly-Tite
Built-in Tube Support
Captive Sleeve
Knurled Nut



Hi-Duty
Higher Pressure Rating
Two Piece Design
Easy Assembly



Tube to Male NPTF

68C Male Connector

p. G7

168C Gauge Tee

p. G8

169C-269C Male Elbow

p. G8

171C Male Run Tee

p. G9

172C Male Branch Tee

p. G9

176C Adaptor

p. G9

179C 45° Male Elbow

p. G9

682C Tank Fitting

p. G9

68CA Male Connector

p. G12

168CA Gauge Tee

p. G13

169CA-269CA Male Elbow

p. G13

171CA Male Run Tee

p. G13

172CA Male Branch Tee

p. G13

176CA Adaptor

p. G14

179CA 45° Male Elbow

p. G14

682CA Tank Fitting

p. G14

68P Male Connector

p. G26

169P-269P Male Elbow

p. G28

169LP Long Elbow

p. G28

169PS Male Elbow Swivel

p. G28

171P Male Run Tee

p. G29

172P Male Branch Tee

p. G29

NV311P Needle Valve

p. G29

NV312P Needle Valve

p. G29

68HD Male Connector

p. G32

169HD Male Elbow

p. G32

171HD Male Run Tee

p. G32

172HD Male Branch Tee

p. G32

179HD 45° Male Elbow

p. G32

Tube to Female NPT

66C Female Connector

p. G7

170C-270C Female Elbow

p. G9

177C Female Branch Tee

p. G9

66CA Female Connector

p. G12

170CA-270CA Female Elbow

p. G13

177CA Female Branch Tee

p. G14

66P Female Connector

p. G25

170P Female Elbow

p. G29

177P Female Branch Tee

p. G29

66HD Female Connector

p. G31

170HD Female Elbow

p. G32

177HD Female Branch Tee

p. G33

Tube to Tube

62C Union

p. G6

164C-264C Union Tee

p. G8

165C-265C Union Elbow

p. G8

62CA Union

p. G11

62PCA Union

p. G11

164CA-264CA Union Tee

p. G12

165CA-265CA Union Elbow

p. G12

62P Union

p. G24

62PCA Union

p. G25

97P Tube Reducer

p. G26

164P Union Tee

p. G28

62HD Union

p. G31

G

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Fluid System Connectors
Otsego, Michigan

164HD
Union Tee

p. G31

165HD
Union Elbow

p. G31

Bulkhead Union

62CBH
Bulkhead Union

p. G7

62CABH
Bulkhead Union

p. G11

62PCABH
Bulkhead Union

p. G11

62PBH
Bulkhead Union

p. G25

62PCABH
Bulkhead Union

p. G25

62PTBH
Bulkhead Union

p. G25

62HDBH
Bulkhead Union

p. G31

Couplers

391P
Coupler Body

p. G26

391PSS
Coupler Body

p. G26

392P
Bulkhead Body

p. G26

392PSS
Bulkhead Body

p. G26

393P
Through Insert

p. G26

393PSS
Through Insert

p. G26

393PD
Shutoff Insert

p. G27

393PDSS
Shutoff Insert

p. G27

394P
Single Shutoff

p. G27

394PSS
Single Shutoff

p. G27

394PD
Double Shutoff

p. G27

394PDSS
Double Shutoff

p. G27

398P
Single Shutoff

p. G27

398PSS
Single Shutoff

p. G27

398PD
Double Shutoff

p. G28

398PDSS
Double Shutoff

p. G28

Auxiliary Component

60C
Sleeve

p. G6

60PT
Plastic Sleeve

p. G8 & G24

61C
Nut

p. G6

61CL
Long Nut

p. G6

63PT
Tube Support

p. G7,G11, G25

639C
Seal Plug

p. G9

59CA
Plug

p. G11

61CA
Nut/Sleeve

p. G11

639CA
Seal Plug

p. G14

56PSG
Spring guard

p. G24

59P
Plug

p. G24

60P
Plastic Sleeve

p. G24

60PB
Brass Sleeve

p. G24

61P
Nut/Plastic Sleeve

p. G24

61PB
Nut/Brass Sleeve

p. G24

61PN
Nut Only

p. G24

61PSGN
Spring Guard Nut

p. G24

61HD
Nut

p. G31

59HD
Plug

p. G33

Metric Tube to NPT

FBMB
Male Connector

p. G16

CBMB
Male Elbow

p. G17

RBMB
Male Run Tee

p. G18

SBMB
Male Branch Tee

p. G19

T2HFB
Male Standpipe

p. G20

Metric Tube to Female NPT

GBMB
Female Connector

p. G17

G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Metric Tube to BSPT

F3BMB
Male Connector

p. G16

C3BMB
Male Elbow

p. G18

R3BMB
Male Run Tee

p. G19

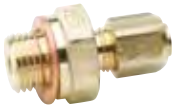
S3BMB
Male Branch Tee

p. G19

T23HFB
Male Standpipe

p. G20

Metric Tube to BSPP

F4BMB
Male Connector

p. G16

G4BMB
Female Connector

p. G17

Metric Tube to Metric Straight Thread

F8BMB
Male Connector

p. G16

C8BMB
Male Elbow

p. G18

T28HFB
Male Standpipe

p. G20

Metric Tube to Female NPT

T2HGB
Female Standpipe

p. G20

Metric Tube to Female BSPP

T24HGB
Female Standpipe

p. G21

Metric Tube to Metric Tube

HBMB
Union

p. G16

EBMB
Union Elbow

p. G18

JBMB
Union Tee

p. G18

Metric Bulkhead Union

WBMB
Bulkhead Union

p. G17

WBMPB
Bulkhead Union

p. G17

Metric Banjo

COR4BMB
Banjo

p. G19

Metric Auxiliary Component

BMB
Nut

p. G21

BTMB
Nut/Sleeve

p. G21

FNMB
Cap

p. G21

PNMB
Plug

p. G21

TMB
Sleeve

p. G22

TRBMB
Tube Reducer

p. G22

T23UB
Tube Support

p. G22

G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Compression Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS
SLEEVES:	BRASS OR ACETAL

NOMENCLATURE	
EXAMPLE: 169C-6-4	**ATTRIBUTE:**
1	FORGING
2 (NOT SHOWN)	EXTRUSION (2)
69	MALE ELBOW
C	COMPRESSION
6	3/8 TUBE O.D.
4	1/4 PIPE THREAD

PRESSURE RANGE @73°F		
PSI	**TUBE O.D. (IN.)**	**TUBE WALL (IN.)**
400	1/8	.030
400	9/16	.030
300	1/4	.030
300	5/16	.032
200	3/8	.032
200	1/2	.032
150	5/8	.035
100	3/4	.035
75	7/8	.035

1. PRESSURE RATING IS BASED ON USE WITH SOFT METAL TUBING @ 73° F.
2. THERMOPLASTIC TUBES USING ACETAL SLEEVE 60PT AND BRASS INSERT 63PT HAVE PRESSURE RANGES UP TO THE TUBE'S RATED WORKING PRESSURE.

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, ALUMINUM, THERMOPLASTIC TUBING
TUBE O.D.:	1/8, 3/16, ¼, 5/16, 3/8, ½, 5/8, ¾, 7/8

SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
TEMPERATURE RANGES:	FROM -65° TO +250°F.
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY



No flaring, soldering or other preparation of tubing necessary to assemble. Listed with Underwriter's Laboratories for flammable liquid. Compression fittings meet functional requirements of SAE J-512.

Assembly Instructions

1. Slide nut, then sleeve onto tubing. The thread end of the nut must face out.
2. Insert the tube into the fitting. Be sure the tube is bottomed on the fitting shoulder.
3. Assemble nut to body, and tighten "hand-tight." Then follow the number of wrench turns as indicated in the following table.

FITTING SIZE	TUBE SIZE	TURNS REQUIRED TO SEAL FROM HAND-TIGHT	
		60C WITH SOFT METAL TUBING	60PT WITH THERMOPLASTIC TUBING
2	1/8	1-1/4	—
3	3/16	1-1/4	—
4	1/4	1-1/4	2
5	5/16	1-1/4	2
6	3/8	2-1/4	2
8	1/2	2-1/4	2
10	5/8	2-1/4	2
12	3/4	2-1/4	2
14	7/8	2-1/4	—

G

Sleeve 60C



REF. SAE 060115

PART NO.	TUBE SIZE	A	D	L
60C-2	1/8	.187	.130	.19
60C-3	3/16	.266	.192	.22
60C-4	1/4	.344	.255	.25
60C-5	5/16	.406	.318	.25
60C-6	3/8	.469	.382	.25
60C-7	7/16	.531	.444	.31
60C-8	1/2	.594	.507	.38
60C-10	5/8	.719	.632	.38
60C-12	3/4	.875	.758	.44
60C-14	7/8	1.000	.883	.41

Acetal Sleeve 60PT



PART NO.	PLASTIC TUBE WALL	TUBE WALL	A	D	L
60PT-4	1/4	.040	.375	.254	.19
60PT-5	5/16	.062	.438	.317	.19
60PT-6	3/8	.062	.500	.379	.19
60PT-8	1/2	.062	.631	.507	.25
60PT-10	5/8	.062	.747	.632	.22

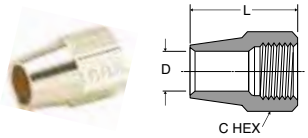
Nut 61C



REF. SAE 060110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61C-2	1/8	5/16-24	3/8	.130	.38
61C-3	3/16	3/8-24	7/16	.192	.41
61C-4	1/4	7/16-24	1/2	.255	.44
61C-5	5/16	1/2-24	9/16	.318	.44
61C-6	3/8	9/16-24	5/8	.382	.47
61C-7	7/16	5/8-24	11/16	.444	.50
61C-8	1/2	11/16-20	13/16	.507	.62
61C-10	5/8	13/16-18	15/16	.632	.62
61C-12	3/4	1-18	1-3/16	.758	.69
61C-14	7/8	1-1/8-18	1-1/4	.890	.62

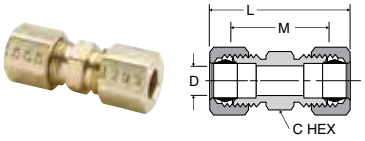
Long Nut 61CL



REF. SAE 060111

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CL-4	1/4	7/16-24	1/2	.255	.75
61CL-5	5/16	1/2-24	9/16	.318	.84
61CL-6	3/8	9/16-24	5/8	.382	.97
61CL-8	1/2	11/16-20	13/16	.507	1.06
61CL-10	5/8	13/16-18	15/16	.632	1.19
61CL-12	3/4	1-18	1-3/16	.758	1.38

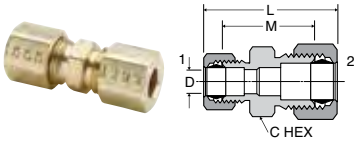
Union 62C



REF. SAE 060101 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-2	1/8	5/16-24	5/16	1.05	.64	.094
62C-3	3/16	3/8-24	3/8	1.21	.72	.125
62C-4	1/4	7/16-24	7/16	1.33	.79	.188
62C-5	5/16	1/2-24	1/2	1.39	.85	.250
62C-6	3/8	9/16-24	9/16	1.52	.97	.312
62C-7	7/16	5/8-24	5/8	1.70	1.02	.312
62C-8	1/2	11/16-20	11/16	1.90	1.08	.406
62C-10	5/8	13/16-18	13/16	2.06	1.23	.500
62C-12	3/4	1-18	1	2.37	1.41	.562
62C-14	7/8	1-1/8-18	1-1/8	2.07	1.19	.766

Union Reducers 62C



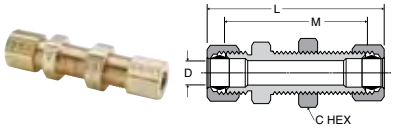
REF. SAE 060101 BA

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.29	.78	.125
62C-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.46	.91	.188
62C-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.71	1.03	.312
62C-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.82	1.13	.312

G

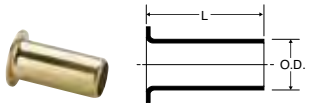
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Bulkhead Union 62CBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CBH-4	1/4	7/16-24	9/16	2.29	1.75	7/16	.188
62CBH-6	3/8	9/16-24	11/16	2.42	1.88	9/16	.312

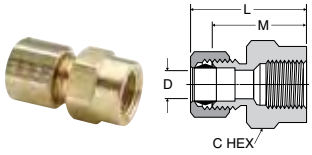
Brass Insert 63PT



PART NO.	TUBE O.D.	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-2-32	1/8	.032	.31	.061
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483

Female Connector 66C

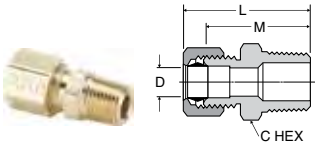
REF. SAE 060103 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66C-2-2	1/8	1/8	5/16-24	9/16	.95	.75	.094
66C-3-2	3/16	1/8	3/8-24	9/16	1.02	.78	.125
66C-3-4	3/16	1/4	3/8-24	11/16	1.20	.96	.125
66C-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66C-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66C-5-2	5/16	1/8	1/2-24	9/16	1.07	.81	.250
66C-5-4	5/16	1/4	1/2-24	11/16	1.29	1.03	.250
66C-6-2	3/8	1/8	9/16-24	9/16	1.06	.78	.312
66C-6-4	3/8	1/4	9/16-24	11/16	1.34	1.06	.312
66C-6-6	3/8	3/8	9/16-24	13/16	1.34	1.06	.312
66C-6-8	3/8	1/2	9/16-24	1	1.54	1.27	.312
66C-7-6	7/16	3/8	5/8-24	13/16	1.43	1.09	.312
66C-8-4	1/2	1/4	11/16-20	11/16	1.49	1.09	.406
66C-8-6	1/2	3/8	11/16-20	13/16	1.52	1.12	.406
66C-8-8	1/2	1/2	11/16-20	1	1.71	1.31	.406
66C-10-8	5/8	1/2	13/16-18	1	1.80	1.38	.500

Male Connector 68C

REF. SAE 060102 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68C-2-1	1/8	1/16	5/16-24	3/8	.99	.78	.095
68C-2-2	1/8	1/8	5/16-24	7/16	.97	.77	.094
68C-3-1	3/16	1/16	3/8-24	3/8	1.08	.84	.125
68C-3-2	3/16	1/8	3/8-24	7/16	1.08	.84	.125
68C-3-4	3/16	1/4	3/8-24	9/16	1.27	1.03	.125
68C-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68C-4-4	1/4	1/4	7/16-24	9/16	1.30	1.06	.188
68C-4-6	1/4	3/8	7/16-24	11/16	1.27	1.03	.188
68C-4-8	1/4	1/2	7/16-24	7/8	1.55	1.31	.188
68C-5-2	5/16	1/8	1/2-24	1/2	1.15	.89	.234
68C-5-4	5/16	1/4	1/2-24	9/16	1.33	1.07	.250
68C-6-2	3/8	1/8	9/16-24	9/16	1.25	.97	.250
68C-6-4	3/8	1/4	9/16-24	9/16	1.42	1.14	.312
68C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.312
68C-6-8	3/8	1/2	9/16-24	7/8	1.53	1.25	.312
68C-7-4	7/16	1/4	5/8-24	5/8	1.50	1.17	.312
68C-8-4	1/2	1/4	11/16-20	11/16	1.60	1.20	.312
68C-8-6	1/2	3/8	11/16-20	11/16	1.60	1.20	.406
68C-8-8	1/2	1/2	11/16-20	7/8	1.71	1.31	.406
68C-10-6	5/8	3/8	13/16-18	13/16	1.73	1.31	.406
68C-10-8	5/8	1/2	13/16-18	7/8	1.90	1.48	.500
68C-10-12	5/8	3/4	13/16-18	1-1/16	1.98	1.56	.500
68C-12-8	3/4	1/2	1-18	1	2.05	1.60	.562
68C-12-12	3/4	3/4	1-18	1-1/16	2.08	1.63	.656
68C-14-12	7/8	3/4	1-1/8-18	1-1/8	1.76	1.41	.750

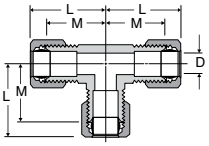
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Union Tee 164C-264C

REF. SAE 060401 BA



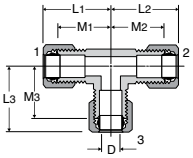


PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164C-2	1/8	5/16-24	.82	.61	.094
264C-3	3/16	3/8-24	.84	.60	.125
164C-4	1/4	7/16-24	.86	.63	.188
264C-4	1/4	7/16-24	.84	.60	.188
164C-5	5/16	1/2-24	.98	.71	.250
164C-6	3/8	9/16-24	1.03	.74	.312
164C-8	1/2	11/16-20	1.34	.93	.406
164C-10	5/8	13/16-18	1.54	1.08	.500
164C-12	3/4	1.00-18	1.65	1.17	.563

Union Tee 164C-264C Combination Sizes

REF. SAE 060401 BA



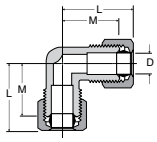


PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164C-6-4-4	3/8	1/4	1/4	1.03	.96	.96	.75	.72	.72	.188
164C-6-6-4	3/8	3/8	1/4	1.03	.96	.96	.75	.75	.72	.188
164C-8-8-6	1/2	1/2	3/8	1.34	1.16	1.16	.94	.94	.88	.312

Union Elbow 165C-265C

REF. SAE 060201 BA

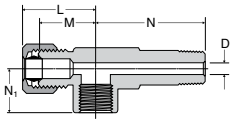




PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165C-2	1/8	5/16-24	.82	.61	.094
165C-3	3/16	3/8-24	.87	.61	.125
165C-4	1/4	7/16-24	.88	.61	.188
265C-4	1/4	7/16-24	.84	.60	.188
165C-5	5/16	1/2-24	.95	.71	.250
165C-6	3/8	9/16-24	1.03	.74	.312
165C-7	7/16	5/3-24	1.16	.82	.312
165C-8	1/2	11/16-20	1.34	.93	.406
165C-10	5/8	13/16-18	1.48	1.05	.500
165C-12	3/4	1-18	1.65	1.17	.563

Compression Gage Tee 168C



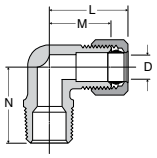


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
168C-4-2	1/4	1/8	7/16-24	.96	.72	1.41	.56	.188

Male Elbow 169C-269C

REF. SAE 060202 BA





PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169C-2-1	1/8	1/16	5/16-24	.81	.60	.67	.095
269C-2-2	1/8	1/8	5/16-24	.80	.60	.67	.094
169C-3-1	3/16	1/16	3/8-24	.85	.61	.67	.126
169C-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269C-3-2	3/16	1/8	3/8-24	.84	.60	.67	.125
169C-3-4	3/16	1/4	3/8-24	.86	.64	.93	.125
169C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
269C-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169C-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269C-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169C-4-6	1/4	3/8	7/16-24	.93	.68	1.00	.188
169C-5-2⁺	5/16	1/8	1/2-24	.88	.61	.74	.234
269C-5-2⁺	5/16	1/8	1/2-24	.86	.60	.73	.250
169C-5-4	5/16	1/4	1/2-24	.95	.71	.93	.250
269C-5-4	5/16	1/4	1/2-24	.93	.67	.82	.250
169C-5-6	5/16	3/8	1/2-24	1.01	.75	1.00	.250
169C-6-2⁺	3/8	1/8	9/16-24	1.03	.74	.74	.234
269C-6-2⁺	3/8	1/8	9/16-24	.97	.69	.75	.220
169C-6-4	3/8	1/4	9/16-24	1.03	.74	.93	.312
269C-6-4	3/8	1/4	9/16-24	1.01	.73	.92	.312
169C-6-6	3/8	3/8	9/16-24	1.03	.75	1.00	.312
269C-6-6	3/8	3/8	9/16-24	1.12	.84	.97	.312
169C-6-8	3/8	1/2	9/16-24	1.22	.94	1.27	.312
269C-7-6	7/16	3/8	5/8-24	1.16	.82	.98	.312
169C-8-4⁺	1/2	1/4	11/16-20	1.34	.94	1.00	.312
169C-8-6	1/2	3/8	11/16-20	1.34	.93	1.11	.406
169C-8-8	1/2	1/2	11/16-20	1.48	1.00	1.37	.406
169C-10-8	5/8	1/2	13/16-18	1.48	1.06	1.31	.500
169C-12-8	3/4	1/2	1-18	1.64	1.18	1.49	.562
169C-12-12	3/4	3/4	1-18	1.70	1.27	1.58	.562

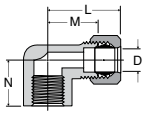
⁺ For these parts the pipe thread through hole is smaller than the through hole on the flare end.

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female Elbow 170C-270C



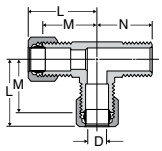


REF. SAE 060203 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170C-2-2	1/8	1/8	5/16-24	.89	.69	.56	.094
170C-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170C-4-2	1/4	1/8	7/16-24	.93	.69	.56	.188
270C-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170C-4-4	1/4	1/4	7/16-24	1.02	.78	.67	.188
170C-6-4	3/8	1/4	9/16-24	1.06	.79	.73	.312
170C-6-6	3/8	3/8	9/16-24	1.22	.89	.69	.312
170C-7-4	7/16	1/4	5/8-24	1.27	.93	.73	.312
170C-8-6	1/2	3/8	11/16-20	1.34	1.00	.69	.406
170C-8-8	1/2	1/2	11/16-20	1.56	1.15	.97	.408
170C-12-12	3/4	3/4	1-18	2.06	1.58	1.58	.563

Male Run Tee 171C



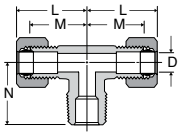


REF. SAE 060424 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
171C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
171C-4-2	1/4	1/8	7/16-24	.90	.64	.75	.188
171C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171C-6-4	3/8	1/4	9/16-24	1.09	.81	1.03	.312

Male Branch Tee 172C



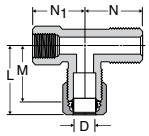


REF. SAE 060425 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
172C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
172C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
172C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172C-6-2	3/8	1/8	9/16-24	1.03	.75	.75	.234
172C-6-4	3/8	1/4	9/16-24	1.09	.77	.92	.312
172C-6-6	3/8	3/8	9/16-24	1.09	.81	1.00	.312
172C-8-6	1/2	3/8	11/16-20	1.34	.93	1.10	.406

Adapter Tee 176C

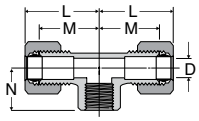




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176C-4-2	1/4	1/8	7/16-24	.93	.69	.75	.66	.188

Female Branch Tee 177C

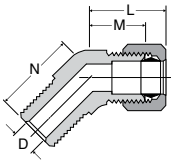




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177C-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188

45° Elbow 179C



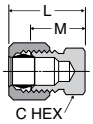


Compression to male pipe

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179C-4-2	1/4	1/8	7/16-24	.90	.66	.56	.188
179C-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179C-6-2	3/8	1/8	9/16-24	.90	.63	.65	.234
179C-6-4	3/8	1/4	9/16-24	.90	.63	.84	.312
179C-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179C-8-6	1/2	3/8	11/16-24	1.15	.81	.95	.406

Seal Plug 639C

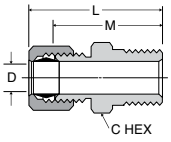




PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639C-4	1/4	7/16-24	7/16	.74	.50

Straight Through Tank Fitting 682C





PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682C-3-2	3/16	1/8	3/8-24	7/16	1.06	0.84	.195
682C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.387
682C-8-8	1/2	1/2	11/16-20	7/8	1.90	1.31	.516

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Compress-Align® Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS

NOMENCLATURE	
EXAMPLE: 269CA-6-4	**ATTRIBUTE:**
1 (NOT SHOWN)	FORGING (1)
2	EXTRUSION
69	MALE ELBOW
CA	COMPRESS-ALIGN
6	3/8 TUBE O.D.
4	1/4 PIPE THREAD

PRESSURE RANGE		
PSI	**TUBE O.D. (IN.)**	**TUBE WALL (IN.)**
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035
350	1	.035

1. PRESSURE RATING IS BASED ON USE WITH SOFT METAL TUBING @ 73° F.
2. THERMOPLASTIC TUBES USING BRASS INSERT 63PT HAVE PRESSURE RANGES UP TO THE TUBE'S RATED WORKING PRESSURE.

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, ALUMINUM, TFE, FEA, PFA, THERMOPLASTIC TUBING
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 1

SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
TEMPERATURE RANGES:	FROM -65° TO +250°F.
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY

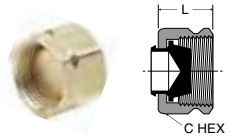


No flaring, soldering or other preparation of tubing is necessary. Preassembled fitting, with captive sleeve. Sleeve is always oriented for correct installation, visible for inspection before and after installation.

Assembly Instructions

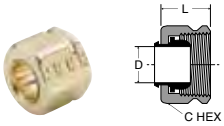
With nut finger tight on fitting body, insert tubing until it bottoms in the fitting. Complete the seal with one wrench turn on all sizes.

Plug 59CA



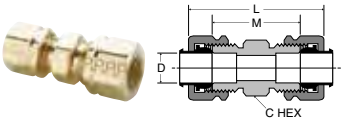
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
59CA-4	1/4	7/16-24	1/2	.40
59CA-6	3/8	9/16-24	5/8	.45
59CA-8	1/2	11/16-20	13/16	.50

Nut and Sleeve Assembly 61CA



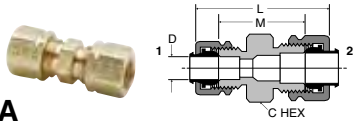
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CA-2	1/8	5/16-24	3/8	.130	.36
61CA-3	3/16	3/8-24	7/16	.194	.38
61CA-4	1/4	7/16-24	1/2	.255	.40
61CA-5	5/16	1/2-24	9/16	.318	.45
61CA-6	3/8	9/16-24	5/8	.382	.45
61CA-8	1/2	11/16-20	13/16	.507	.50
61CA-10	5/8	13/16-18	15/16	.632	.53
61CA-12	3/4	1-18	1-3/16	.760	.56
61CA-14	7/8	1-1/8-18	1-3/8	.885	.68
61CA-16	1	1-1/4-18	1-1/2	1.012	.63

Union 62CA



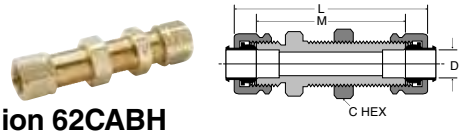
PART NO.	SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-2	1/8	5/16-24	5/16	1.12	.64	.094
62CA-3	3/16	3/8-24	3/8	1.19	.72	.125
62CA-4	1/4	7/16-24	7/16	1.26	.79	.188
62CA-5	5/16	1/2-24	1/2	1.32	.85	.250
62CA-6	3/8	9/16-24	9/16	1.42	.97	.312
62CA-8	1/2	11/16-20	11/16	1.53	1.08	.406
62CA-10	5/8	13/16-18	13/16	1.71	1.23	.500
62CA-12	3/4	1-18	1	2.20	1.41	.562
62CA-14	7/8	1-1/8-18	1-1/8	2.08	1.19	.766

Union Reducers 62CA



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.25	.78	.125
62CA-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.37	.91	.188
62CA-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.48	1.03	.312
62CA-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.59	1.13	.312

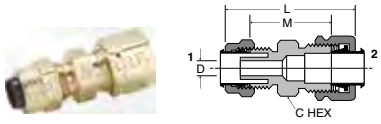
Bulkhead Union 62CABH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CABH-4	1/4	7/16-24	9/16	2.22	1.75	7/16	.188
62CABH-6	3/8	9/16-24	11/16	2.32	1.88	9/16	.312

Union 62PCA

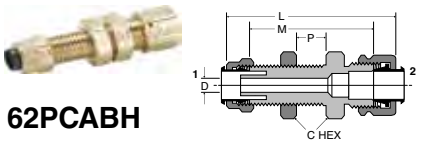
(Poly-Tite to Compress-Align)



PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.24	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.26	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.32	.98	.204

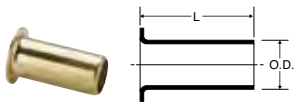
Bulkhead Union 62PCABH

(Poly-Tite to Compress-Align)



PART NO.	TUBE SIZE	1 STR THD	2 STR THD	C HEX	P MAX	L	M	FLOW BKHD DIA.	FLOW DIA. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	.38	1.80	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	1.98	1.64	1/2	.204

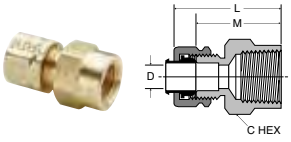
Brass Insert 63PT



PART NO.	TUBE SIZE	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-2-32	1/8	.032	.31	.061
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483

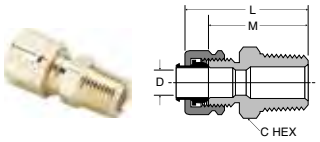
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



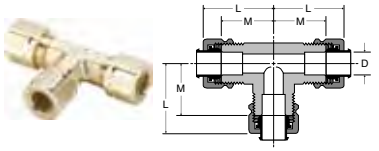
Female Connector 66CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66CA-2-2	1/8	1/8	5/16-24	9/16	.99	.75	.094
66CA-3-2	3/16	1/8	3/8-24	9/16	1.01	.78	.125
66CA-3-4	3/16	1/4	3/8-24	11/16	1.19	.96	.125
66CA-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66CA-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66CA-5-2	5/16	1/8	1/2-24	9/16	1.05	.81	.250
66CA-5-4	5/16	1/4	1/2-24	11/16	1.27	1.03	.250
66CA-6-2	3/8	1/8	9/16-24	9/16	1.00	.78	.312
66CA-6-4	3/8	1/4	9/16-24	11/16	1.28	1.06	.312
66CA-6-6	3/8	3/8	9/16-24	13/16	1.29	1.06	.312
66CA-6-8	3/8	1/2	9/16-24	1	1.49	1.27	.312
66CA-8-4	1/2	1/4	11/16-20	11/16	1.32	1.09	.406
66CA-8-6	1/2	3/8	11/16-20	13/16	1.35	1.12	.406
66CA-8-8	1/2	1/2	11/16-20	1	1.54	1.31	.406
66CA-10-8	5/8	1/2	13/16-18	1	1.62	1.38	.500



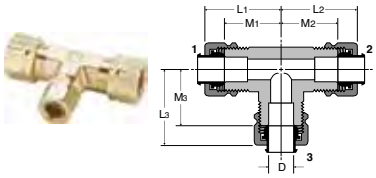
Male Connector 68CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68CA-2-1	1/8	1/16	5/16-24	3/8	1.02	.78	.095
68CA-2-2	1/8	1/8	5/16-24	7/16	1.01	.77	.094
68CA-3-1	3/16	1/16	3/8-24	3/8	1.07	.84	.125
68CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.125
68CA-3-4	3/16	1/4	3/8-24	9/16	1.26	1.03	.125
68CA-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68CA-4-4	1/4	1/4	7/16-24	9/16	1.31	1.06	.188
68CA-4-6	1/4	3/8	7/16-24	11/16	1.28	1.03	.188
68CA-4-8	1/4	1/2	7/16-24	7/8	1.56	1.31	.188
68CA-5-2	5/16	1/8	1/2-24	1/2	1.13	.89	.234
68CA-5-4	5/16	1/4	1/2-24	9/16	1.35	1.07	.250
68CA-6-2	3/8	1/8	9/16-24	9/16	1.19	.97	.250
68CA-6-4	3/8	1/4	9/16-24	9/16	1.36	1.14	.312
68CA-6-6	3/8	3/8	9/16-24	11/16	1.43	1.16	.312
68CA-6-8	3/8	1/2	9/16-24	7/8	1.52	1.25	.312
68CA-8-4	1/2	1/4	11/16-20	11/16	1.45	1.22	.312
68CA-8-6	1/2	3/8	11/16-20	11/16	1.43	1.20	.406
68CA-8-8	1/2	1/2	11/16-20	7/8	1.54	1.31	.406
68CA-10-6	5/8	3/8	13/16-18	13/16	1.55	1.31	.406
68CA-10-8	5/8	1/2	13/16-18	7/8	1.72	1.48	.500
68CA-10-12	5/8	3/4	13/16-18	1-1/16	1.80	1.56	.500
68CA-12-8	3/4	1/2	1-18	1	1.99	1.60	.562
68CA-12-12	3/4	3/4	1-18	1-1/16	2.02	1.63	.656
68CA-14-12	7/8	3/4	1-1/8-18	1-1/8	1.85	1.41	.750
68CA-16-12	1	3/4	1-1/4-18	1-1/4	1.83	1.39	.750
68CA-16-16	1	1	1-1/4-18	1-3/8	2.02	1.58	.875



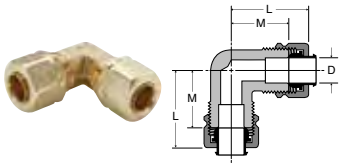
Union Tee 164CA-264CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164CA-2	1/8	5/16-24	.84	.61	.093
264CA-3	3/16	3/8-24	.83	.60	.125
164CA-4	1/4	7/16-24	.84	.63	.188
264CA-4	1/4	7/16-24	.84	.60	.188
164CA-5	5/16	1/2-24	.95	.71	.250
164CA-6	3/8	9/16-24	.96	.74	.312
164CA-8	1/2	11/16-20	1.15	.93	.406
164CA-10	5/8	13/16-18	1.32	1.08	.500
164CA-12	3/4	1.00-18	1.56	1.17	.562



Union Tee 164CA combination sizes

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164CA-6-4-4	3/8	1/4	1/4	.97	.96	.96	.75	.72	.72	.188
164CA-6-6-4	3/8	3/8	1/4	.97	.97	.96	.75	.75	.72	.188
164CA-8-8-6	1/2	1/2	3/8	1.17	1.17	1.10	.94	.94	.88	.312



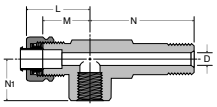
Union Elbow 165CA-265CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165CA-2	1/8	5/16-24	.84	.61	.094
165CA-3	3/16	3/8-24	.84	.61	.125
165CA-4	1/4	7/16-24	.84	.61	.188
265CA-4	1/4	7/16-24	.84	.60	.188
165CA-5	5/16	1/2-24	.94	.71	.250
165CA-6	3/8	9/16-24	.96	.74	.312
165CA-8	1/2	11/16-20	1.15	.93	.406
165CA-10	5/8	13/16-18	1.29	1.05	.500
165CA-12	3/4	1-18	1.56	1.17	.562
165CA-16	1	1-1/4-18	1.63	1.19	.877

G

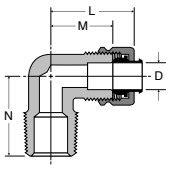
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Fluid System Connectors
Otsego, Michigan

Gage Tee 168CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
168CA-4-2	1/4	1/8	7/16-24	.96	.72	1.41	.56	.188

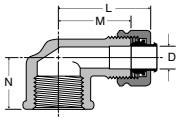
Male Elbow 169CA-269CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169CA-2-1	1/8	1/16	5/16-24	.84	.60	.67	.095
269CA-2-2	1/8	1/8	5/16-24	.84	.60	.67	.094
169CA-3-1	3/16	1/16	3/8-24	.84	.61	.67	.126
169CA-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269CA-3-2	3/16	1/8	3/8-24	.83	.60	.67	.125
169CA-3-4	3/16	1/4	3/8-24	.87	.64	.93	.125
169CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
269CA-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169CA-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269CA-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169CA-4-6	1/4	3/8	7/16-24	.92	.68	1.00	.188
169CA-5-2 +	5/16	1/8	1/2-24	.84	.61	.74	.234
269CA-5-2 +	5/16	1/8	1/2-24	.84	.60	.73	.250
169CA-5-4	5/16	1/4	1/2-24	.94	.71	.93	.250
269CA-5-4	5/16	1/4	1/2-24	.91	.67	.82	.250
169CA-5-6	5/16	3/8	1/2-24	.99	.75	1.00	.250
169CA-6-2 +	3/8	1/8	9/16-24	.96	.74	.74	.234
269CA-6-2 +	3/8	1/8	9/16-24	.96	.69	.75	.220
169CA-6-4	3/8	1/4	9/16-24	.96	.74	.93	.312
269CA-6-4	3/8	1/4	9/16-24	.95	.73	.92	.312
169CA-6-6	3/8	3/8	9/16-24	.97	.75	1.00	.312
269CA-6-6	3/8	3/8	9/16-24	1.06	.84	.97	.312
169CA-6-8	3/8	1/2	9/16-24	1.16	.94	1.27	.312
169CA-8-4 +	1/2	1/4	11/16-20	1.17	.94	1.00	.312
169CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.11	.406
169CA-8-8	1/2	1/2	11/16-20	1.23	1.00	1.37	.406
169CA-10-6 +	5/8	3/8	13/16-18	1.30	1.06	1.15	.406
169CA-10-8	5/8	1/2	13/16-18	1.30	1.06	1.31	.500
169CA-12-8	3/4	1/2	1-18	1.57	1.18	1.49	.562
169CA-12-12	3/4	3/4	1-18	1.66	1.27	1.58	.562
169CA-16-12 +	1	3/4	1-1/4-18	1.63	1.19	1.60	.875

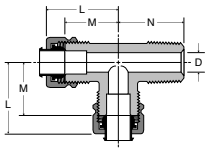
+ For these parts the pipe thread through hole is smaller than the through hole on the tube end.

Female Elbow 170CA-270CA

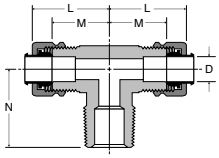
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170CA-2-2	1/8	1/8	5/16-24	.93	.69	.56	.094
170CA-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170CA-4-2	1/4	1/8	7/16-24	.98	.69	.56	.188
270CA-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170CA-4-4	1/4	1/4	7/16-24	1.02	.78	.67	.188
170CA-6-4	3/8	1/4	9/16-24	1.09	.79	.73	.312
170CA-6-6	3/8	3/8	9/16-24	1.16	.89	.69	.312
170CA-8-6	1/2	3/8	11/16-20	1.23	1.00	.69	.406
170CA-8-8	1/2	1/2	11/16-20	1.38	1.15	.97	.408
170CA-12-12	3/4	3/4	1-18	1.97	1.58	1.58	.563

Male Run Tee 171CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171CA-2-2	1/8	1/8	5/16-24	.84	.61	.67	.094
171CA-3-2	3/16	1/8	3/8-24	.83	.61	.67	.125
171CA-4-2	1/4	1/8	7/16-24	.88	.64	.75	.188
171CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171CA-6-4	3/8	1/4	9/16-24	1.03	.81	1.03	.312

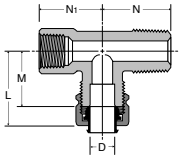
Male Branch Tee 172CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172CA-2-2	1/8	1/8	5/16-24	.84	.61	.67	.093
172CA-3-2	3/16	1/8	3/8-24	.83	.61	.67	.125
172CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
172CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172CA-6-2	3/8	1/8	9/16-24	.97	.75	.75	.234
172CA-6-4	3/8	1/4	9/16-24	.99	.77	.92	.312
172CA-6-6	3/8	3/8	9/16-24	1.03	.81	1.00	.312
172CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.10	.406
172CA-12-12	3/4	3/4	1-18	1.67	1.27	1.50	.562

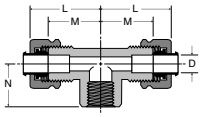
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Otsego, Michigan

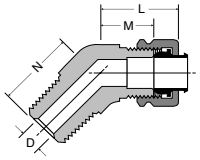
Adapter Tee 176CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176CA-4-2	1/4	1/8	7/16-24	.92	.69	.75	.66	.188

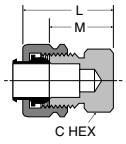
Female Branch Tee 177CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177CA-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188

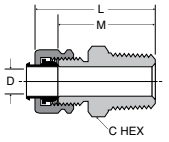
45° Elbow 179CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179CA-4-2	1/4	1/8	7/16-24	.89	.66	.56	.188
179CA-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179CA-6-2	3/8	1/8	9/16-24	.85	.63	.65	.234
179CA-6-4	3/8	1/4	9/16-24	.85	.63	.84	.312
179CA-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179CA-8-6	1/2	3/8	11/16-20	1.03	.81	.95	.406

Seal Plug 639CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639CA-4	1/4	7/16-24	7/16	.74	.50

Straight Through Tank Fitting 682CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.194

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Metru-Lok™

MATERIALS OF CONSTRUCTION	
FITTING:	BRASS
NUT:	BRASS
FERRULE:	BRASS

SPECIFICATIONS	
TEMPERATURE RANGE:	FROM -65° TO +250°F
TUBE MATERIAL:	COPPER, ALUMINUM, THERMOPLASTIC TUBING
TUBE O.D.(MM):	4,6,8,10,12,14,16,18,20,22
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY

Assembly Instructions

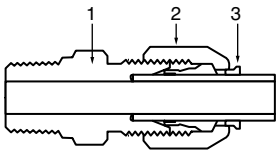
1. Cut the tube square.
2. De-burr (copper tube).
3. Insert the tube through the nut and ferrule until it bottoms.
4. Finger tighten the nut.
5. Wrench tighten the nut one turn, or one and one half turns, according to size.



A one piece, ready to use, bite type fitting. Preassembled fitting with captive ferrule. No presetting of the ferrule is necessary. Visible ferrule allows for visual inspection before and after assempbly.

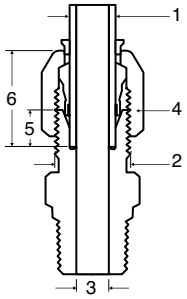
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Technical Features



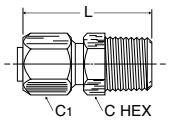
MATERIAL			WORKING TEMP.	WORKING PRESSURE* DEPENDING ON TUBE O.D.							
1	2	3									
BODY BRASS	NUT BRASS	FERRULE BRASS	FROM -65° TO +250° F	TUBE O.D. MM PSI	4 2600	6 2600	8 1800	10 1500	12 1300	14 1000	16 TO 20 800

Fitting Dimensions



1 TUBE O.D. MM	2 METRIC STRAIGHT THREAD	3 INSIDE DIAMETER MM	4 HEX OF NUT MM	5 TUBE ENTRY BODY MM	6 TUBE ENTRY COMPL. FITTING MM	WRENCH TIGHTENING IN TURNS
4	M8X1	2	10	4	12	1 1/2
6	M10X1	4	12	5	13	1 1/2
8	M12X1	6	14	6	14	1 1/2
10	M14X1	8	17	6	14	1 1/2
12	M16X1	10	19	7	15	1 1/2
14	M18X1	12	22	8	16	1 1/2
16	M22X1.50	14	27	8	16	1
18	M24X1.50	16	30	9	21	1
20	M26X1.50	18	32	9	21	1
22	M28X1.50	20	36	10	22	1

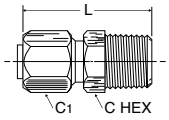
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Otsego, Michigan

FBMB
Male Connector NPT

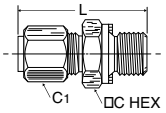
PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
FBMB4-1/16	4	1/16	8	10	26
FBMB4-1/8	4	1/8	11	10	27
FBMB6-1/8	6	1/8	11	12	28
FBMB6-1/4	6	1/4	14	12	32
FBMB8-1/8	8	1/8	12	14	29
FBMB8-1/4	8	1/4	14	14	33
FBMB10-1/4	10	1/4	14	17	33
FBMB10-3/8	10	3/8	19	17	34
FBMB12-3/8	12	3/8	19	19	35
FBMB12-1/2	12	1/2	22	19	40
FBMB14-3/8	14	3/8	19	22	36
FBMB14-1/2	14	1/2	22	22	41
FBMB16-1/2	16	1/2	22	27	40
FBMB18-1/2	18	1/2	24	30	46
FBMB20-3/4	20	3/4	27	32	47
FBMB22-3/4	22	3/4	30	36	49

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F3BMB
Male Connector BSPT

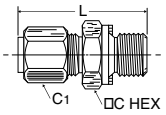
PART NO.	TUBE SIZE	BSPT THREAD	C HEX	C1	L
F3BMB4-1/8	4	1/8	10	10	24.0
F3BMB6-1/8	6	1/8	11	12	26.0
F3BMB6-1/4	6	1/4	14	12	29.5
F3BMB8-1/8	8	1/8	12	14	27.5
F3BMB8-1/4	8	1/4	14	14	30.5
F3BMB10-1/4	10	1/4	14	17	30.5
F3BMB10-3/8	10	3/8	17	17	31.0
F3BMB12-3/8	12	3/8	17	19	32.4
F3BMB12-1/2	12	1/2	22	19	35.5
F3BMB14-3/8	14	3/8	19	22	33.2
F3BMB14-1/2	14	1/2	22	22	36.2
F3BMB16-3/8	16	3/8	22	27	34.2
F3BMB16-1/2	16	1/2	22	27	36.4
F3BMB18-1/2	18	1/2	24	30	42.3
F3BMB20-3/4	20	3/4	27	32	43.0
F3BMB22-3/4	22	3/4	30	36	45.0

F4BMB Male Connector BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C HEX	C1	L
F4BMB4-1/8	4	1/8	14	10	29
F4BMB6-1/8	6	1/8	14	12	30
F4BMB6-1/4	6	1/4	19	12	32
F4BMB8-1/4	8	1/4	19	14	33
F4BMB10-1/4	10	1/4	19	17	33

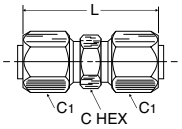
These parts are supplied with a copper seal.

F8BMB Male Connector
Metric Straight Thread

PART NO.	TUBE SIZE	MM THREAD	C HEX	C1	L
F8BMB4M5	4	M5X0.8	8	10	24
F8BMB12M16	12	M16X1.5	22	19	37
F8BMB12M22	12	M22X1.5	27	19	40
F8BMB14M16	14	M16X1.5	22	22	38
F8BMB16M16	16	M16X1.5	22	27	37
F8BMB16M22	16	M22X1.5	27	27	40

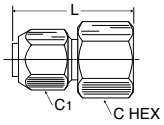
These parts are supplied with a copper seal.

HBMB Equal Union

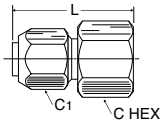
PART NO.	TUBE SIZE	C HEX	C1	L
HBMB4	4	8	10	31
HBMB6	6	10	12	34
HBMB8	8	12	14	37
HBMB10	10	14	17	37
HBMB12	12	17	19	39
HBMB14	14	19	22	41
HBMB16	16	22	27	41
HBMB18	18	24	30	51
HBMB22	22	30	36	54

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

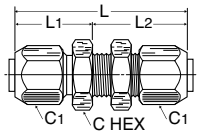
GBMB Female Connector NPT

PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
GBMB6-1/8	6	1/8	14	12	29
GBMB6-1/4	6	1/4	19	12	32
GBMB8-1/8	8	1/8	14	14	30
GBMB8-1/4	8	1/4	19	14	33
GBMB10-1/4	10	1/4	19	17	33
GBMB10-3/8	10	3/8	22	17	35
GBMB12-3/8	12	3/8	22	19	36
GBMB12-1/2	12	1/2	27	19	38
GBMB14-3/8	14	3/8	22	22	37
GBMB14-1/2	14	1/2	27	27	39
GBMB16-1/2	16	1/2	27	27	39

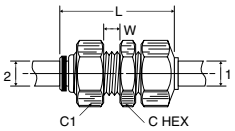
G4BMB Female Connector BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C HEX	C1	L
G4BMB4-1/8	4	1/8	14	10	26
G4BMB6-1/8	6	1/8	14	12	27
G4BMB6-1/4	6	1/4	19	12	29
G4BMB8-1/8	8	1/8	14	14	28
G4BMB8-1/4	8	1/4	19	14	30
G4BMB10-1/4	10	1/4	19	17	30
G4BMB10-3/8	10	3/8	22	17	32
G4BMB12-3/8	12	3/8	22	19	33
G4BMB12-1/2	12	1/2	27	19	36
G4BMB14-3/8	14	3/8	22	22	34
G4BMB14-1/2	14	1/2	27	22	37
G4BMB16-1/2	16	1/2	27	27	37
G4BMB18-1/2	18	1/2	27	30	41

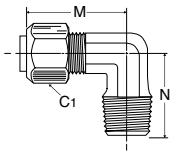
WBMB Bulkhead Union

PART NO.	TUBE SIZE	MM THREAD	C HEX	C1	L	L1	L2	BULKHEAD HOLE DIA.
WBMB4	4	M8X1	12	10	47	19	28	8MM
WBMB6	6	M10X1	14	12	49	20	29	10MM
WBMB8	8	M12X1	16	14	52	21	31	12MM
WBMB10	10	M14X1	19	17	53	22	31	14MM
WBMB12	12	M16X1	22	19	56	24	32	16MM
WBMB14	14	M18X1	24	22	60	26	34	18MM
WBMB16	16	M22X1.5	27	27	58	25	33	22MM
WBMB18	18	M24X1.5	30	30	70	31	39	24MM
WBMB20	20	M26X1.5	32	32	70	31	39	26MM
WBMB22	22	M28X1.5	36	36	74	33	41	28MM

WBMPB Mixed Bulkhead Union

PART NO.	TUBE SIZE 1	TUBE SIZE 2	MM THREAD	C1	C HEX	L	W	BULKHEAD HOLE DIA.
WBMPB4	4	4	M8X1	10	12	34	5	8MM
WBMPB6	6	6	M10X1	12	12	37	5	10MM
WBMPB8	8	8	M12X1	14	16	39	5	12MM
WBMPB10	10	10	M14X1	17	19	45	5	14MM
WBMPB12	12	12	M16X1	19	22	49	5	16MM

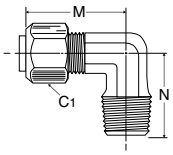



CBMB 90° Male Elbow NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	M	N
CBMB4-1/8	4	1/8	10	22	17
CBMB6-1/8	6	1/8	12	24	18
CBMB6-1/4	6	1/4	12	24	22
CBMB8-1/8	8	1/8	14	26	19
CBMB8-1/4	8	1/4	14	26	23
CBMB10-1/4	10	1/4	17	27	24
CBMB10-3/8	10	3/8	17	28	25
CBMB12-3/8	12	3/8	19	32	27
CBMB12-1/2	12	1/2	19	32	31
CBMB14-3/8	14	3/8	22	32	26
CBMB14-1/2	14	1/2	22	33	31
CBMB16-1/2	16	1/2	27	35	34
CBMB18-1/2	18	1/2	30	41	35
CBMB22-3/4	22	3/4	36	46	40

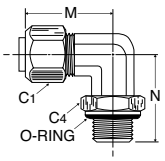
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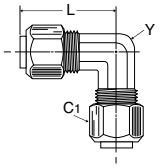
C3BMB 90° Male Elbow BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	M	N
C3BMB4-1/8	4	1/8	10	22	17.0
C3BMB6-1/8	6	1/8	12	24	17.0
C3BMB6-1/4	6	1/4	12	24	20.5
C3BMB8-1/8	8	1/8	14	26	18.0
C3BMB8-1/4	8	1/4	14	26	21.5
C3BMB10-1/4	10	1/4	17	27	22.5
C3BMB10-3/8	10	3/8	17	28	22.1
C3BMB12-3/8	12	3/8	19	32	25.1
C3BMB12-1/2	12	1/2	19	32	27.8
C3BMB14-3/8	14	3/8	22	32	24.1
C3BMB14-1/2	14	1/2	22	32	27.3
C3BMB16-1/2	16	1/2	27	35	30.8
C3BMB18-1/2	18	1/2	30	41	31.8
C3BMB22-3/4	22	3/4	36	46	36.5

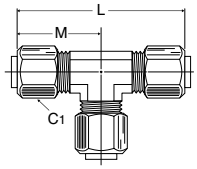
C8BMB 90° Adjustable Male Elbow Metric Straight Thread

PART NO.	TUBE SIZE	MM THREAD	C1	C4	M	N
C8BMB12M22	12	M22X1.5	19	30	35	39
C8BMB14M16	14	M16X1.5	22	22	32	33
C8BMB14M22	14	M22X1.5	22	30	35	39
C8BMB16M16	16	M16X1.5	24	22	35	36
C8BMB16M22	16	M22X1.5	27	30	36	39

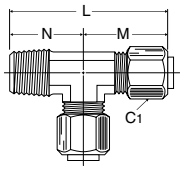
EBMB 90° Union Elbow

PART NO.	TUBE SIZE	C1	L	Y
EBMB4	4	10	22	7
EBMB6	6	12	24	8
EBMB8	8	14	26	10
EBMB10	10	17	27	12
EBMB12	12	19	32	14
EBMB14	14	22	32	16

JBMB Union Tee

PART NO.	TUBE SIZE	C1	L	M
JBMB4	4	10	47	23.5
JBMB6	6	12	48	24.0
JBMB8	8	14	52	26.0
JBMB10	10	17	54	27.0
JBMB12	12	19	63	31.5
JBMB14	14	22	63	31.5
JBMB16	16	27	69	34.5
JBMB20	20	32	89	44.5
JBMB22	22	36	91	45.5

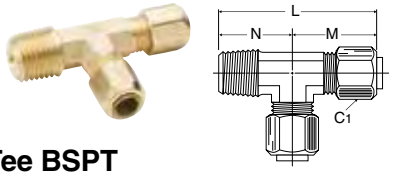



RBMB Male Run Tee NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
RBMB6-1/4	6	1/4	12	48	25	23
RBMB8-1/8	8	1/8	14	45	26	19
RBMB8-1/4	8	1/4	14	49	26	23
RBMB12-3/8	12	3/8	19	59	32	27
RBMB12-1/2	12	1/2	19	63	32	31
RBMB14-3/8	14	3/8	22	60	33	28
RBMB14-1/2	14	1/2	22	64	33	31
RBMB16-1/2	16	1/2	22	69	35	34

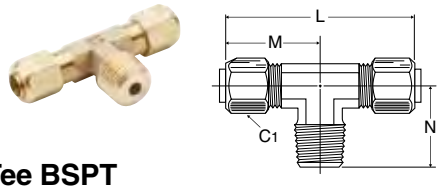
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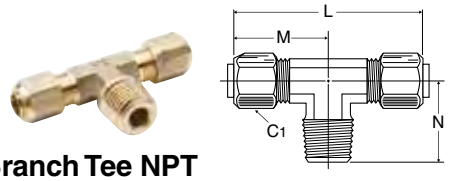
R3BMB Male Run Tee BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	L	M	N
R3BMB6-1/8	6	1/8	12	42	24	18
R3BMB6-1/4	6	1/4	12	48	25	23
R3BMB8-1/8	8	1/8	14	45	26	19
R3BMB8-1/4	8	1/4	14	49	26	23
R3BMB10-3/8	10	3/8	17	52	28	24
R3BMB12-3/8	12	3/8	19	59	32	27
R3BMB12-1/2	12	1/2	19	63	32	31
R3BMB14-3/8	14	3/8	22	59	32	28
R3BMB14-1/2	14	1/2	22	63	33	31
R3BMB16-1/2	16	1/2	27	69	35	34



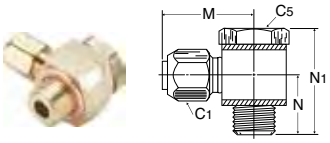
S3BMB Male Branch Tee BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	L	M	N
S3BMB6-1/8	6	1/8	12	48	24.0	18
S3BMB6-1/4	6	1/4	12	49	24.5	23
S3BMB8-1/8	8	1/8	14	52	26.0	19
S3BMB8-1/4	8	1/4	14	52	26.0	23
S3BMB10-1/4	10	1/4	17	54	27.0	24
S3BMB10-3/8	10	3/8	17	56	28.0	24
S3BMB12-3/8	12	3/8	19	63	31.5	27
S3BMB12-1/2	12	1/2	19	63	31.5	31
S3BMB14-3/8	14	3/8	22	63	31.5	28
S3BMB14-1/2	14	1/2	22	65	32.5	31
S3BMB16-1/2	16	1/2	27	69	34.5	34



SBMB Male Branch Tee NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
SBMB6-1/8	6	1/8	12	48	24.0	18
SBMB6-1/4	6	1/4	12	50	25.0	23
SBMB8-1/4	8	1/4	14	52	26.0	23
SBMB10-1/4	10	1/4	17	56	28.0	24
SBMB12-3/8	12	3/8	19	63	31.5	25



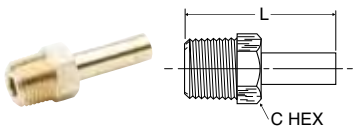
COR4BMB Single Banjo BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C1	C5	M	N	N1
COR4BMB4-1/8	4	1/8	10	14	23	15	27
COR4BMB6-1/4	6	1/4	12	19	26	18	29
COR4BMB8-1/4	8	1/4	14	19	27	20	35
COR4BMB14-1/2	14	1/2	22	27	34	27	48
COR4BMB16-1/2	16	1/2	27	27	33	27	48
COR4BMB20-3/4	20	3/4	32	32	41	33	60

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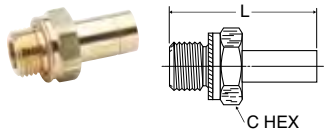
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T2HFB Tube End Male Adapter NPT



PART NO.	TUBE SIZE	NPT THREAD	C HEX	L
T2HFB6-1/8	6	1/8	11	31
T2HFB6-1/4	6	1/4	14	36
T2HFB8-1/4	8	1/4	14	36
T2HFB10-1/4	10	1/4	14	37
T2HFB12-3/8	12	3/8	19	38
T2HFB12-1/2	12	1/2	22	43
T2HFB14-3/8	14	3/8	19	39
T2HFB14-1/2	14	1/2	22	44
T2HFB16-1/2	16	1/2	22	46
T2HFB18-1/2	18	1/2	22	50

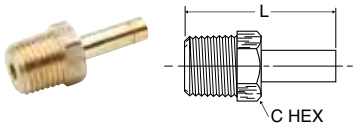
T28HFB Tube Adapter Metric Straight Thread



PART NO.	TUBE SIZE	MM THREAD	C HEX	L
T28HFB12M14	12	M14X1.5	19	39
T28HFB12M16	12	M16X1.5	22	40
T28HFB12M18	12	M18X1.5	24	40
T28HFB12M22	12	M22X1.5	27	43
T28HFB14M16	14	M16X1.5	22	41

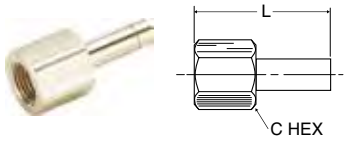
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T23HFB Tube End Male Adapter BSPT



PART NO.	TUBE SIZE	BSPT THREAD	C HEX	L
T23HFB6-1/8	6	1/8	10	30
T23HFB6-1/4	6	1/4	14	34
T23HFB8-1/8	8	1/8	10	30
T23HFB8-1/4	8	1/4	14	35
T23HFB10-1/4	10	1/4	14	36
T23HFB10-3/8	10	3/8	17	36
T23HFB14-3/8	14	3/8	17	38
T23HFB14-1/2	14	1/2	22	41
T23HFB16-1/2	16	1/2	22	43
T23HFB18-1/2	18	1/2	22	47
T23HFB20-3/4	20	3/4	27	49
T23HFB22-3/4	22	3/4	27	51

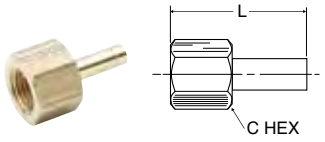
T2HGB Tube End Female Adapter NPT



PART NO.	TUBE SIZE	NPT THREAD	C HEX	L
T2HGB6-1/8	6	1/8	14	32
T2HGB6-1/4	6	1/4	19	35
T2HGB8-1/4	8	1/4	19	36
T2HGB10-1/4	10	1/4	19	37
T2HGB12-3/8	12	3/8	22	39
T2HGB12-1/2	12	1/2	27	41
T2HGB14-3/8	14	3/8	22	40
T2HGB16-1/2	16	1/2	27	44
T2HGB18-1/2	18	1/2	27	48
T2HGB20-3/4	20	3/4	32	49
T2HGB22-3/4	22	3/4	32	51

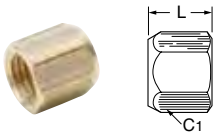
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T24HGB Tube End Female Adapter BSPP



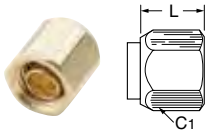
PART NO.	TUBE SIZE	BSPP THREAD	C HEX	L
T24HGB6-1/8	6	1/8	14	30
T24HGB6-1/4	6	1/4	19	32
T24HGB8-1/8	8	1/8	14	31
T24HGB8-1/4	8	1/4	19	33
T24HGB10-1/4	10	1/4	19	34
T24HGB10-3/8	10	3/8	22	36
T24HGB12-3/8	12	3/8	22	36
T24HGB12-1/2	12	1/2	27	40
T24HGB14-3/8	14	3/8	22	37
T24HGB16-1/2	16	1/2	27	42
T24HGB18-1/2	18	1/2	27	46
T24HGB20-3/4	20	3/4	32	47
T24HGB22-3/4	22	3/4	32	49

BMB Nut



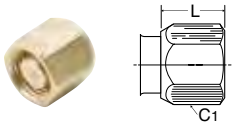
PART NO.	TUBE SIZE	C1	L
BMB4	4	10	11
BMB6	6	12	12
BMB8	8	14	13
BMB10	10	17	13
BMB12	12	19	14
BMB14	14	22	15
BMB18	18	30	19
BMB22	22	36	20

BTMB Nut and Ferrule



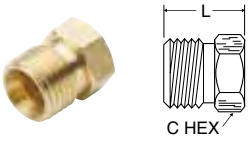
PART NO.	TUBE SIZE	C1	L
BTMB4	4	10	12
BTMB6	6	12	13
BTMB8	8	14	14
BTMB10	10	17	14
BTMB12	12	19	15
BTMB14	14	22	16
BTMB16	16	27	16
BTMB18	18	30	21
BTMB20	20	32	21
BTMB22	22	36	22

FNMB Fitting Body Cap



PART NO.	TUBE SIZE	C1	L
FNMB4	4	10	14
FNMB6	6	12	15
FNMB8	8	14	16
FNMB16	16	27	18
FNMB18	18	30	23
FNMB20	20	32	23
FNMB22	22	36	24

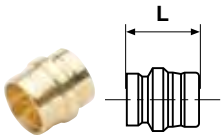
PNMB Tube Plug



PART NO.	TUBE SIZE	C HEX	L
PNMB8	8	12	15
PNMB10	10	14	15
PNMB12	12	17	16
PNMB14	14	19	17
PNMB16	16	22	18
PNMB18	18	24	20
PNMB20	20	27	20
PNMB22	22	30	22

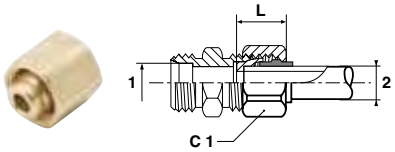
G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



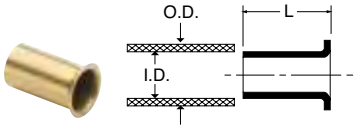
TMB Ferrule

PART NO.	TUBE SIZE	L
TMB4A	4	10
TMB6A	6	10
TMB8A	8	10
TMB10A	10	10
TMB12A	12	10
TMB14A	14	10
TMB16A	16	10
TMB18A	18	14
TMB20A	20	14
TMB22A	22	14



TRBMB
Tube End Reducer

PART NO.	TUBE 1	TUBE 2	C1	L
TRBMB6-4	6	4	12	14
TRBMB8-4	8	4	14	15
TRBMB8-6	8	6	14	15
TRBMB10-6	10	6	17	16
TRBMB10-8	10	8	17	16
TRBMB12-8	12	8	19	16
TRBMB12-10	12	10	19	16
TRBMB14-10	14	10	22	18
TRBMB14-12	14	12	22	18
TRBMB16-14	16	14	27	19
TRBMB18-14	18	14	30	21
TRBMB20-16	20	16	32	21
TRBMB22-18	22	18	36	21



T23UB Tube Insert

PART NO.	TUBE I.D.	TUBE O.D.	L
T23UB4	4	6	10
T23UB6	6	8	15
T23UB8	8	10	15
T23UB10	10	12	15
T23UB12	12	14	15

Poly-Tite Fittings

MATERIALS OF CONSTRUCTION	
BODIES & NUTS:	CA377, CA360, CA345, 316 STAINLESS STEEL
PLASTIC SLEEVES:	ACETAL COPOLYMER
O-RINGS:	BUNA N ON CHROME PLATED COUPLINGS FLUOROCARBON ON STAINLESS STEEL COUPLINGS

NOMENCLATURE	
EXAMPLE: 66P-4-2	**ATTRIBUTE:**
66	FEMALE CONNECTOR (TUBE TO FEMALE PIPE)
P	POLY-TITE
4	1/4" TUBE O.D.
2	1/8" PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	THERMOPLASTIC TUBING,
TUBE O.D.:	¼, 5/16, 3/8, ½

PRESSURE AND TEMPERATURE RANGE	
THERMOPLASTIC TUBING	UP TO 150 PSI FROM 0° TO +150°F



A preassembled compact compression fitting. An exclusive acetal copolymer sleeve has superior resilience to resist creeping and stress caused from compression. Poly-Tite nuts will rotate around the sleeve as it tightens to prevent twisting and weakening of the plastic tubing.

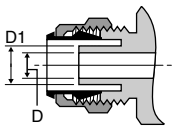
Assembly Instructions

Polyethylene, polypropylene and vinyl tubing:

1. Cut tubing squarely–maximum of 15° angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tube end until it bottoms in the Poly-Tite fitting and tighten knurl/hex nut finger-tight — plus one wrench turn.

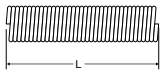
Tube Support O.D.

TUBE SIZE INCHES	* D1 TUBE SUPPORT O.D.
1/4	.168
5/16	.185
3/8	.248
1/2	.373



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Fluid System Connectors
Otsego, Michigan

Spring Guard 56PSG

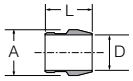
PART NO.	TUBE O.D.	L
56PSG-4	1/4	3.000
56PSG-5	5/16	3.000
56PSG-6	3/8	3.000

Plastic Cap 59P



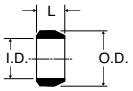

PART NO.	TUBE SIZE	A	L
59P-4	1/4	.247	.50
59P-5	5/16	.307	.53
59P-6	3/8	.372	.56
59P-8	1/2	.497	.63

Acetal Plastic Sleeve 60P

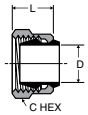
PART NO.	TUBE SIZE	A	D	L
60P-4	1/4	.334	.261	.338
60P-5	5/16	.405	.321	.340
60P-6	3/8	.465	.381	.367
60P-8	1/2	.628	.514	.399

Sleeve 60PB

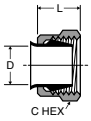
PART NO.	L	O.D.	I.D.
60PB-4	.187	.336	.255
60PB-5	.187	.400	.318
60PB-6	.218	.460	.382
60PB-8	.250	.620	.507

Nut and Plastic Sleeve Assembly 61P

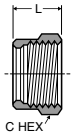
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61P-4	1/4	3/8-24	7/16	.261	.38
61P-5	5/16	7/16-24	1/2	.321	.34
61P-6	3/8	1/2-24	9/16	.380	.38
61P-8	1/2	11/16-20	3/4	.514	.44

Nut and Brass Sleeve Assembly 61PB

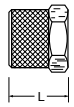
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61PB-4	1/4	3/8-24	7/16	.255	.38
61PB-5	5/16	7/16-24	1/2	.318	.34
61PB-6	3/8	1/2-24	9/16	.382	.38
61PB-8	1/2	11/16-20	3/4	.507	.44

Nut 61PN

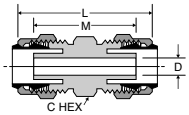
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
61PN-4	1/4	3/8-24	7/16	.38
61PN-5	5/16	7/16-24	1/2	.34
61PN-6	3/8	1/2-24	9/16	.38
61PN-8	1/2	11/16-20	3/4	.44

Nut only for use with Spring Gaurd 61PSGN

PART NO.	TUBE O.D.	L	C HEX
61PSGN-4	1/4	.625	.437
61PSGN-5	5/16	.625	.500
61PSGN-6	3/8	.656	.562

Union 62P

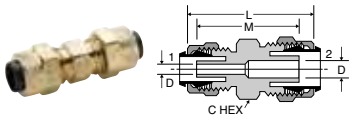



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62P-4	1/4	3/8-24	3/8	1.17	.96	.125
62P-5	5/16	7/16-24	7/16	1.16	.96	.144
62P-6	3/8	1/2-24	1/2	1.23	.99	.204
62P-8	1/2	11/16-20	11/16	1.47	1.24	.323

G

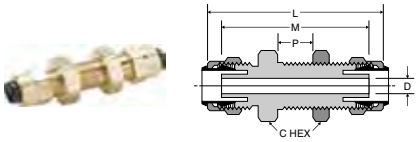
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Union Reducer 62P



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62P-6-4	1/4	3/8	3/8-24	1/2-24	1/2	1.22	.99	.125

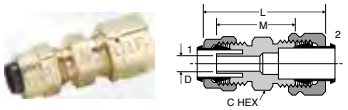
Bulkhead Union 62PBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62PBH-4	1/4	3/8-24	9/16	.38	1.75	1.53	3/8	.125
62PBH-5	5/16	7/16-24	5/8	.38	1.71	1.52	7/16	.144
62PBH-6	3/8	1/2-24	11/16	.47	1.89	1.65	1/2	.204
62PBH-8	1/2	11/16-20	7/8	.63	2.28	2.05	11/16	.323

Union 62PCA

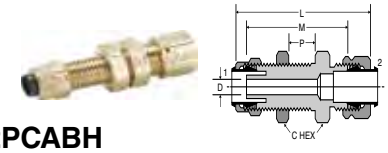
(Tube to Compress-Align)



PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.25	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.30	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.37	.98	.204

Bulkhead Union 62PCABH

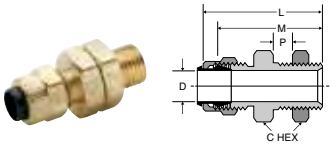
(Tube to Compress-Align)



PART NO.	TUBE SIZE	1 STR THD	2 STR THD	C HEX	P MAX	L	M	BLKHD HOLE DIA.	FLOW DIA. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	.38	1.81	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	2.03	1.64	1/2	.204

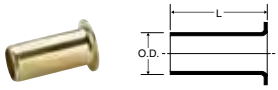
Bulkhead Union 62PTBH

(Straight Through)



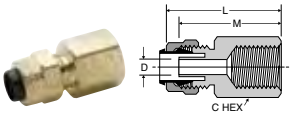
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62PTBH-4	1/4	3/8-24	9/16	.31	1.19	.93	3/8	.260
62PTBH-5	5/16	7/16-24	5/8	.31	1.19	.93	7/16	.323
62PTBH-6	3/8	1/2-24	11/16	.34	1.26	.99	1/2	.387

Brass Insert 63PT



PART	TUBE SIZE	L	O.D.
63PT-2-16	1/8	.46	.080
63PT-2-32	1/8	.31	.061
63PT-3-25	3/16	.45	.135
63PT-3-40	3/16	.52	.095

Female Connector 66P



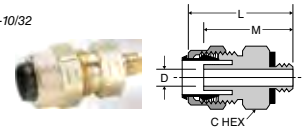
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66P-4-2	1/4	1/8	3/8-24	9/16	.97	.86	.125
66P-4-4	1/4	1/4	3/8-24	5/8	1.18	1.07	.125
66P-5-2	5/16	1/8	7/16-24	9/16	.97	.86	.144
66P-6-4	3/8	1/4	1/2-24	5/8	1.18	1.07	.204
66P-8-6	1/2	3/8	11/16-20	13/16	1.31	1.20	.323

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

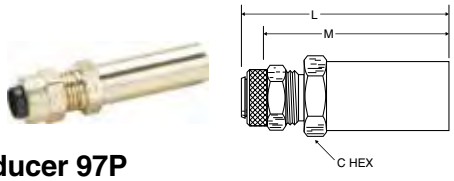


68P-X-10/32



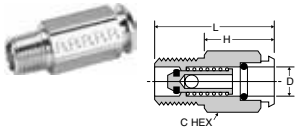
Male Connector 68P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68P-4-1	1/4	1/16	3/8-24	3/8	1.06	.95	.125
68P-4-10X32	1/4	10-32	3/8-24	3/8	.86	.75	.094
68P-4-2	1/4	1/8	3/8-24	7/16	1.06	.95	.125
68P-4-4	1/4	1/4	3/8-24	9/16	1.25	1.14	.125
68P-4-6	1/4	3/8	3/8-24	11/16	1.28	1.17	.125
68P-5-2	5/16	1/8	7/16-24	7/16	1.05	.95	.144
68P-5-4	5/16	1/4	7/16-24	9/16	1.24	1.14	.144
68P-6-2	3/8	1/8	1/2-24	1/2	1.10	.98	.204
68P-6-4	3/8	1/4	1/2-24	9/16	1.29	1.17	.204
68P-6-6	3/8	3/8	1/2-24	11/16	1.29	1.17	.204
68P-8-4	1/2	1/4	11/16-20	11/16	1.46	1.29	.320
68P-8-6	1/2	3/8	11/16-20	11/16	1.37	1.29	.323



Tube End Reducer 97P

PART NO.	TUBE O.D.	L	M	C HEX
97P-4-6	3/8 X 1/4	1.718	1.625	.437
97P-6-8	1/2 X 3/8	1.875	1.781	.562

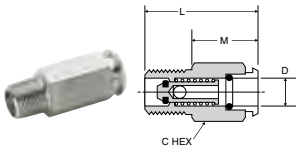


Pipe Coupler Body 391P

(Chrome Plated)

PART NO.	D-INSERT DIA.	PIPE THREAD	C HEX	H	L
391P-4-2	1/4	1/8	1/2	.91	1.29
391P-4-4	1/4	1/4	9/16	.73	1.29
391P-6-4	3/8	1/4	5/8	.85	1.41

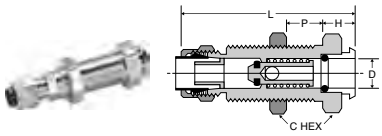
Pipe Coupler Body 391PSS



(Stainless Steel)

PART NO.	D INSERT DIA.	PIPE THREAD	L	C HEX	M
391PSS-4-2	1/4	1/8	1.271	.500	.900
391PSS-4-4	1/4	1/4	1.271	.562	.710
391PSS-6-4	3/8	1/4	1.40	.625	.840

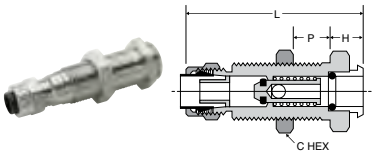
Bulkhead Coupler Body 392P



(Chrome Plated)

PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C HEX	P MAX.	H	L	BULKHEAD HOLE DIA.
392P-4-4	1/4	1/4	1/2-24	5/8	.84	.39	2.13	1/2
392P-6-6	3/8	3/8	11/16-24	13/16	.93	.37	2.01	11/16

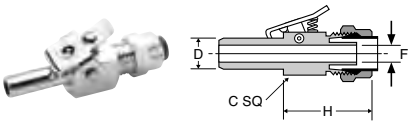
Bulkhead Coupler Body 392PSS



(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	C HEX	H	P MAX	BULKHEAD HOLE DIA.
392PSS-4-4	1/4	1/2-24	2.03	.625	.28	.84	1/2
392PSS-6-6	3/8	11/16-24	2.20	.812	.31	.93	11/16

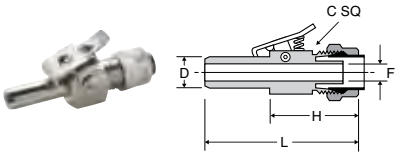
Through Type Insert 393P



(Chrome Plated)

PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393P-4-4	1/4	1/4	3/8-24	7/16	1.12	.125
393P-6-6	3/8	3/8	1/2-24	1/2	1.34	.203

Through Type Insert 393PSS



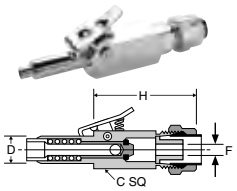
(Stainless Steel)

PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PSS-4-4	1/4	1/4	1.677	7/16	.99	.125
393PSS-6-6	3/8	3/8	2.030	1/2	1.27	.203

G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

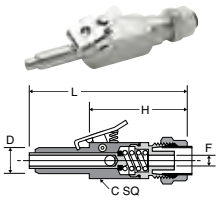
Shutoff Type Insert 393PD



(Chrome Plated)

PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393PD-4-4	1/4	1/4	3/8-24	7/16	1.61	.110
393PD-6-6	3/8	3/8	1/2-24	1/2	1.45	.187

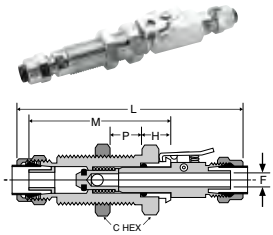
Shut-Off Type Insert 393PDSS



(Stainless Steel)

PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PDSS-4-4	1/4	1/4	2.46	.500	1.62	.116
393PDSS-6-6	3/8	3/8	2.60	.500	1.67	.157

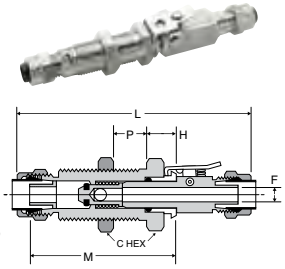
Single End Shutoff Bulkhead Quick Coupler 394P



(Chrome Plated)

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA.F
394P-4-4	1/4	1/2-24	5/8	.84	.39	3.28	2.13	1/2	.125
394P-6-6	3/8	11/16-24	13/16	.93	.37	3.41	2.01	11/16	.203

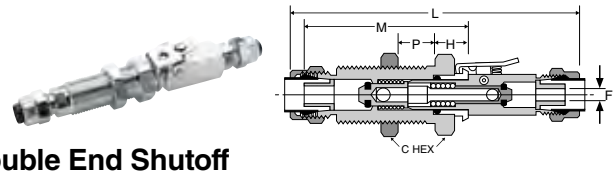
Coupler Single End Shut-Off Bulkhead 394PSS



(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PSS-4-4	1/4	1/2-24	3.05	2.06	.625	.31	.84	.125
394PSS-6-6	3/8	11/16-24	3.50	2.23	.812	.34	.93	.203

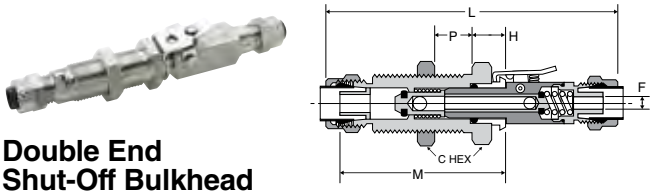
Double End Shutoff Bulkhead Quick Coupler 394PD



(Chrome Plated)

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA.F
394PD-4-4	1/4	1/2-24	5/8	.84	.39	3.77	2.13	1/2	.125
394PD-6-6	3/8	11/16-24	13/16	.93	.37	3.48	2.01	11/16	.204

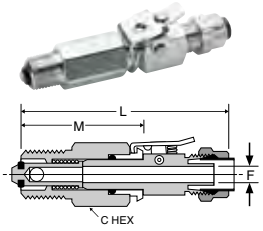
Double End Shut-Off Bulkhead Quick Coupler 394PDSS



(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PDSS-4-4	1/4	1/2-24	3.69	2.67	.625	.32	.84	.125
394PDSS-6-6	3/8	11/16-24	3.91	2.24	.812	.34	.93	.203

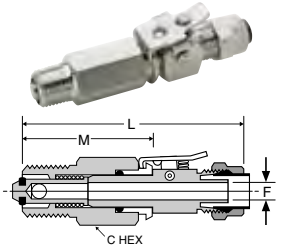
Single End Shutoff Pipe Connector Quick Coupler 398P



(Chrome Plated)

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.F
398P-4-2	1/4	1/8	3/8-24	1/2	2.45	1.32	.125
398P-4-4	1/4	1/4	3/8-24	9/16	2.45	1.32	.125
398P-6-4	3/8	1/4	1/2-24	5/8	2.80	1.46	.203

Single End Shut-Off Connector Quick Coupler 398PSS



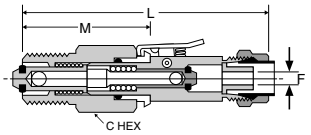
(Stainless Steel)

PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. F
398PSS-4-2	1/4	1/8	2.30	1.32	.500	.125
398PSS-4-4	1/4	1/4	2.30	1.32	.562	.125
398PSS-6-4	3/8	1/4	2.70	1.43	.625	.203

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



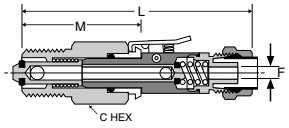


Double End Shutoff Pipe Connector Quick Coupler 398PD

(Chrome Plated)

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.F
398PD-4-2	1/4	1/8	3/8-24	1/2	2.93	1.31	.125
398PD-4-4	1/4	1/4	3/8-24	9/16	2.93	1.32	.125
398PD-6-4	3/8	1/4	1/2-24	5/8	2.88	1.43	.204



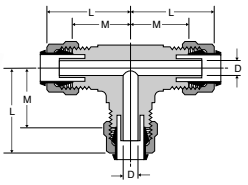


Double End Shut-Off Pipe Connector Quick Coupler 398PDSS

(Stainless Steel)

PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. D
398PDSS-4-2	1/4	1/8	2.93	1.31	.500	.125
398PDSS-4-4	1/4	1/4	2.93	1.31	.562	.125
398PDSS-6-4	3/8	1/4	3.10	1.43	.625	.125

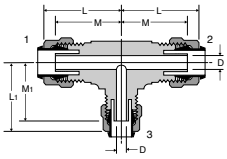




Union Tee 164P

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA.D
164P-4	1/4	3/8-24	.84	.73	.125
164P-5	5/16	7/16-24	.83	.73	.144
164P-6	3/8	1/2-24	.98	.86	.203
164P-8	1/2	11/16-20	1.12	1.04	.323

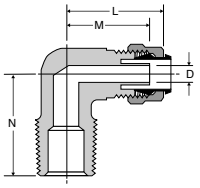




Union Tee 164P combination size

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	L1	M	M1	FLOW DIA.D
164P-6-4	3/8	3/8	1/4	.98	.90	.86	.79	.125

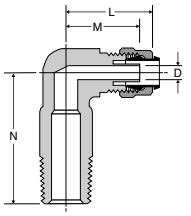




Male Elbow 169P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
169P-4-1	1/4	1/16	3/8-24	.92	.58	.67	.130
169P-4-2	1/4	1/8	3/8-24	.84	.73	.75	.121
169P-4-4	1/4	1/4	3/8-24	.90	.79	.92	.125
169P-4-6	1/4	3/8	3/8-24	.93	.84	1.08	.125
169P-5-2	5/16	1/8	7/16-24	.87	.73	.68	.144
169P-6-2	3/8	1/8	1/2-24	.93	.81	.73	.203
169P-6-4	3/8	1/4	1/2-24	.98	.86	1.05	.203
169P-6-6	3/8	3/8	1/2-24	.98	.86	1.08	.203
169P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

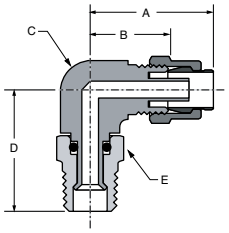




Long Male Elbow 169LP

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
169LP-4-4	1/4	1/4	3/8-24	.90	.79	1.38	.125





Male Elbow Swivel 169PS

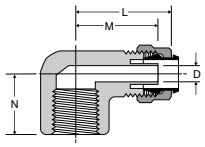
PART NO.	TUBE O.D.	PIPE THREAD	A	B	C HEX	D	E
169PS-4-2	1/4	1/8	.812	.594	.375	.862	.437
169PS-4-4	1/4	1/4	.906	.688	.562	1.218	.562
169PS-6-2	3/8	1/8	.875	.625	.437	.904	.437
169PS-6-4	3/8	1/4	.937	.685	.562	1.218	.562
169PS-6-6	3/8	3/8	.859	.602	.562	1.190	.687
169PS-8-6	1/2	3/8	1.031	.782	.500	1.218	.687

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female Elbow 170P

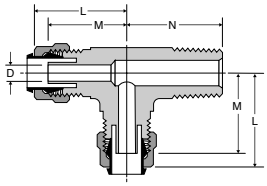




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
170P-4-2	1/4	1/8	3/8-24	.90	.79	.56	.125
170P-4-4	1/4	1/4	3/8-24	1.00	.89	.69	.125
170P-6-4	3/8	1/4	1/2-24	1.01	.89	.69	.204
170P-8-6	1/2	3/8	11/16-20	1.19	1.11	1.13	.323

Male Run Tee 171P

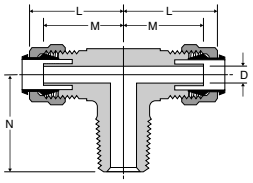




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
171P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
171P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
171P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
171P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.203
171P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

Male Branch Tee 172P

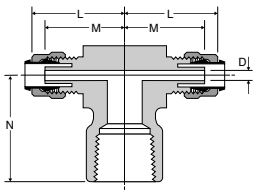




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
172P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
172P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
172P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
172P-6-2	3/8	1/8	1/2-24	.88	.86	.74	.204
172P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.204
172P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

Female Branch Tee 177P

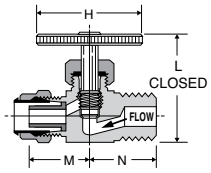




PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
177P-4-2	1/4	1/8	3/8-24	.92	.81	.88	.125
177P-4-4	1/4	1/4	3/8-24	.92	.81	1.03	.125
177P-4-6	1/4	3/8	3/8-24	1.03	.92	1.13	.125

Needle Valve NV311P

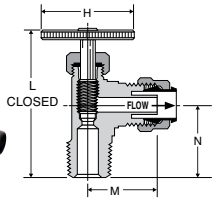




PART NO.	TUBE SIZE	PIPE THREAD	H	L OPEN	L CLOSED	M	N
NV311P-4-2	1/4	1/8	1.06	1.36	1.16	.64	.63
NV311P-4-4	1/4	1/4	1.06	1.38	1.18	.64	.72
NV311P-6-4	3/8	1/4	1.06	1.38	1.18	.64	.72

Angle Needle Valve NV312P





PART NO.	TUBE SIZE	PIPE THREAD	H	L OPEN	L CLOSED	M	N
NV312P-4-2	1/4	1/8	1.06	1.70	1.50	.63	.68
NV312P-4-4	1/4	1/4	1.06	2.07	1.82	.71	.86
NV312P-6-4	3/8	1/4	1.06	2.00	1.75	.74	.86

G

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Hi-Duty Flareless Tube Fittings

MATERIALS OF CONSTRUCTION	
FITTING:	BRASS
NUT:	BRASS
SLEEVE:	BRASS

NOMENCLATURE	
EXAMPLE: 169HD-6-4	**ATTRIBUTE:**
1	FORGING
69	MALE ELBOW
HD	HI-DUTY
6	3/8" TUBE O.D.
4	1/4" PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	• COPPER, BRASS, SEAMLESS STEEL, THERMOPLASTIC TUBING • STEEL TUBING MUST BE COLD DRAWN AND ANNEALED SEAMLESS LOW-CARBON PER SAE J524 WITH A MAXIMUM HARDNESS OF ROCKWELL B 65.
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8

MAXIMUM RECOMMENDED WORKING PRESSUE	
TUBE O.D.	**PSI**
1/8	4,300
3/16	2,850
1/4	2,100
5/16	1,800
3/8	1,500
1/2	1,150
5/8	1,000

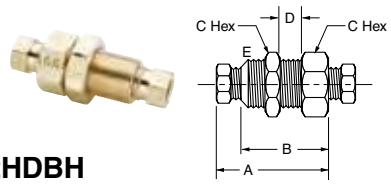
SPECIFICATIONS	
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY



A preassembled brass fitting, with sleeve machined onto nut. During assembly sleeve breaks away from nut and creates a seal on the tubing. No flaring, soldering or other tube preparation of tubing is necessary.

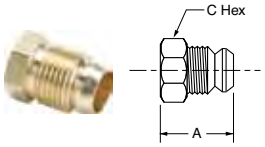
Assembly Instructions

1. Cut tube squarely and cleanly removing all burrs.
2. Grasp fitting. Do not remove nut.
3. Insert tube in fitting through nut until tube seats firmly against tube shoulder in body.
4. Grip tube firmly to prevent turning and tighten nut to finger-tight. Continue to tighten nut for one and three-quarter additional turns (one and one-half turns for 1/2" size tube fittings) for a positive, leak proof seal. During tightening a slight "give" will be felt. This "give" indicates the sleeve has been sheared from the nut. It is not necessary to tighten the nut all the way down.



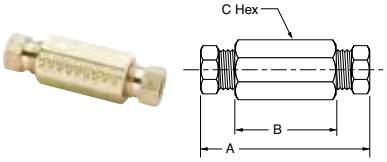
Bulkhead Union 62HDBH

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C	D	E
62HDBH-2	1/8	.093	1.781	1.156	.562	.625	7/16-24
62HDBH-4	1/4	.187	1.968	1.156	.687	.625	9/16-24



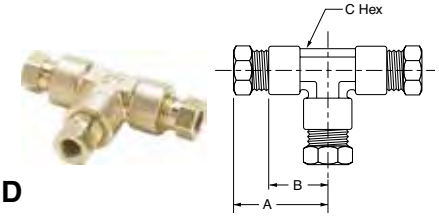
Nut/Sleeve 61HD

PART NO.	TUBE SIZE	PIPE THREAD	A	C
61HD-2	1/8	5/16-24	.656	.312
61HD-3	3/16	3/8-24	.687	.375
61HD-4	1/4	7/16-24	.734	.437
61HD-5	5/16	1/2-20	.765	.500
61HD-6	3/8	9/16-20	.843	.562
61HD-8	1/2	11/16-16	.921	.688
61HD-10	5/8	7/8-18	1.078	.875



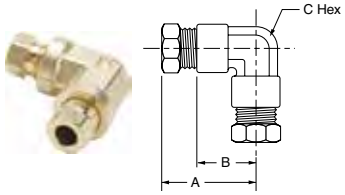
Union 62HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C
62HD-2	1/8	.093	1.687	1.062	.375
62HD-3	3/16	.125	1.781	1.031	.437
62HD-4	1/4	.187	1.906	1.093	.562
62HD-6	3/8	.312	2.187	1.375	.625
62HD-8	1/2	.437	2.437	1.562	.812
62HD-10	5/8	.500	2.937	1.812	1.062



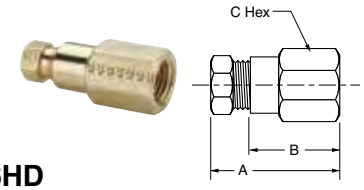
Union Tee 164HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
164HD-4	1/4	.187	1.082	.687	.500
164HD-6	3/8	.312	1.357	.970	.562
164HD-8	1/2	.437	1.481	1.060	.750



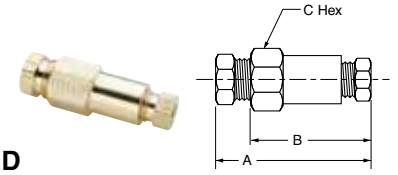
Union Elbow 165HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
165HD-4	1/4	.187	1.084	.690	.552
165HD-6	3/8	.312	1.376	.970	.615
165HD-8	1/2	.437	1.546	1.060	.750



Female Connector 66HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX
66HD-2-2	1/8	1/8	.093	1.312	1.000	.500
66HD-4-2	1/4	1/8	.187	1.406	1.000	.562
66HD-4-4	1/4	1/4	.187	1.593	1.187	.687
66HD-6-2	3/8	1/8	.312	1.531	1.125	.625
66HD-6-4	3/8	1/4	.312	1.718	1.312	.625
66HD-6-6	3/8	3/8	.312	1.750	1.343	.812

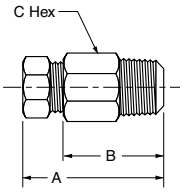


Reducing Union 62HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
62HD-6-4	3/8 X 1/4	.187	2.000	1.187	.625
62HD-8-4	1/2 X 1/4	.187	2.125	1.281	.812
62HD-8-6	1/2 X 3/8	.312	2.656	1.406	.812

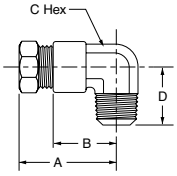
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

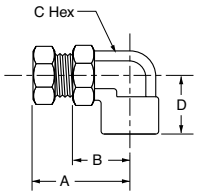
Male Connector 68HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX
68HD-2-2	1/8	1/8	.093	1.062	.750	.437
68HD-3-2	3/16	1/8	.125	1.140	.765	.437
68HD-4-2	1/4	1/8	.187	1.343	.937	.562
68HD-4-4	1/4	1/4	.187	1.468	1.062	.562
68HD-4-6	1/4	3/8	.187	1.343	.937	.687
68HD-4-8	1/4	1/2	.187	1.531	1.125	.875
68HD-5-2	5/16	1/8	.218	1.406	1.000	.562
68HD-5-4	5/16	1/4	.218	1.500	1.093	.562
68HD-6-2	3/8	1/8	.218	1.531	1.125	.625
68HD-6-4	3/8	1/4	.312	1.656	1.250	.625
68HD-6-6	3/8	3/8	.312	1.531	1.125	.687
68HD-6-8	3/8	1/2	.312	1.531	1.125	.875
68HD-8-4	1/2	1/4	.312	1.813	1.375	.812
68HD-8-6	1/2	3/8	.406	1.750	1.312	.812
68HD-8-8	1/2	1/2	.437	1.812	1.375	.875
68HD-8-12	1/2	3/4	.437	1.625	1.187	1.062
68HD-10-6	5/8	3/8	.406	2.031	1.468	1.062
68HD-10-8	5/8	1/2	.500	2.156	1.593	1.062

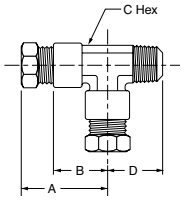
Male Elbow 169HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
169HD-2-2	1/8	1/8	.093	.975	.656	.438	.720
169HD-3-2	3/16	1/8	.125	1.056	.687	.437	.750
169HD-4-2	1/4	1/8	.187	1.084	.687	.500	.750
169HD-4-4	1/4	1/4	.187	1.144	.750	.500	.937
169HD-5-2	5/16	1/8	.218	1.144	.750	.562	.810
169HD-5-4	5/16	1/4	.250	1.206	.812	.562	1.000
169HD-6-2	3/8	1/8	.218	1.281	.875	.562	.875
169HD-6-4	3/8	1/4	.312	1.281	.875	.562	1.000
169HD-6-6	3/8	3/8	.312	1.376	.970	.615	1.031
169HD-6-8	3/8	1/2	.312	1.526	1.120	.687	1.310
169HD-8-4	1/2	1/4	.312	1.421	1.000	.678	1.062
169HD-8-6	1/2	3/8	.406	1.421	1.000	.678	1.062
169HD-8-8	1/2	1/2	.437	1.481	1.060	.740	1.420
169HD-10-6	5/8	3/8	.406	1.818	1.270	.875	1.340
169HD-10-8	5/8	1/2	.500	1.818	1.270	.875	1.480

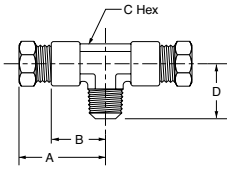
Female Elbow 170HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
170HD-2-2	1/8	1/8	.093	1.005	.690	.500	.750
170HD-4-2	1/4	1/8	.187	1.084	.687	.500	.750
170HD-4-4	1/4	1/4	.187	1.234	.843	.562	.875
170HD-6-2	3/8	1/8	.312	1.281	.875	.562	.937
170HD-6-4	3/8	1/4	.312	1.376	.970	.615	1.093
170HD-6-6	3/8	3/8	.312	1.526	1.120	.690	1.150
170HD-8-6	1/2	3/8	.437	1.481	1.062	.740	1.281

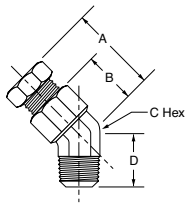
Male Run Tee 171HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
171HD-4-2	1/4	1/8	.187	1.144	.750	.500	.780
171HD-4-4	1/4	1/4	.187	1.207	.812	.500	.937
171HD-6-4	3/8	1/4	.312	1.376	.970	.562	1.000

Male Branch Tee 172HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
172HD-4-2	1/4	1/8	.187	1.082	.687	.500	.780
172HD-4-4	1/4	1/4	.187	1.269	.875	.500	.937
172HD-6-6	3/8	3/8	.312	1.406	1.000	.562	1.125

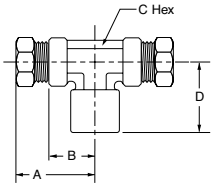
45° Male Elbow 179HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
179HD-4-2	1/4	1/8	.187	1.093	.687	.562	.750
179HD-6-4	3/8	1/4	.280	1.138	.710	.550	.850

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

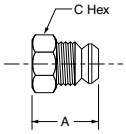




Female Branch Tee 177HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
177HD-4-2	1/4	1/8	.187	1.082	.687	.500	.750
177HD-4-4	1/4	1/4	.187	1.144	.750	.562	1.093
177HD-6-4	3/8	1/4	.312	1.376	.970	.562	1.093





Plug 59HD

PART NO.	TUBE SIZE	A	C
59HD-4	1/4	.734	.437
59HD-6	3/8	.843	.625

G

Notes

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Industrial:
Flare Fittings



SAE 45˚ Flare

Resists Mechanical Pull-out
Meets SAE Functional Requirements
Resists Vibration
UL Listed



Inverted Flare

Steel Nut option
Economical
UL Listed



Access Valves

Finger Tight Quick Seal Cap
Machined to ARI Standards
Teflon Seal on Valve core



Flare to Male NPT

48F Male Connector

p. H7

145F Branch Tee

p. H8

149F-249F Male Elbow

p. H8

151F Run Tee

p. H9

159F-259F 45° Male Elbow

p. H9

256F Adapter Tee

p. H10

48IFHD Male Connector

p. H12

245IFHD Branch Tee

p. H13

249IFHD-249IF Male Elbow

p. H13

251IFHD Run Tee

p. H13

259IFHD 45° Male Elbow

p. H13

AVU1 Male Connector

p. H15

AVE1 Male Elbow

p. H15

AVT3 Run Tee

p. H15

AVC1 Cross

p. H15

Flare to Straight Thread

485F Male Connector

p. H7

1495F Male Elbow

p. H9

1595F 45° Male Elbow

p. H10

AVUIFI Male Connector

p. H15

Flare to Metric Straight Thread

48F-X-MIX Male Connector

p. H7

149F-X-MIX Male Elbow

p. H9

159F-X-MIX 45° Male Elbow

p. H10

Flare to Solder

US5 Flare Adapter

p. H5

43F Connector

p. H6

AVUSE Extended Copper Tube

p. H15

AVTS Solder Tee

p. H15

AVTSL Extended Solder Tee

p. H15

AVUS3 3 Way Solder

p. H16

AVUS Solder Connector

p. H16

Flare to Female NPT

46F Female Connector

p. H7

150F Female Elbow

p. H9

166FSV Swivel Elbow

p. H10

46IFHD Female Connector

p. H12

250IFHD Female Elbow

p. H13

252IFHD Branch Tee

p. H13

Flare to Flare

14FSV Swivel Nut Connector

p. H5

42F Union

p. H6

144F-244F Union Tee

p. H8

147F Cross

p. H8

155F Union Elbow

p. H9

660FHD Union

p. H10

42IFHD Union

p. H12

244IFHD Union Tee

p. H12

255IFHD Branch Tee

p. H13

AVU2 Union

p. H15

AVT2 Union Tee

p. H15

AVCS4D Cross

p. H16

AVUR3 Female Connector

p. H16

AVUS4D Swivel Connector

p. H16

AVTS4 Run Tee

p. H16

H

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

AVTS6
Branch Tee



p. H16

Bulkhead Union

AVU2BH
Bulkhead Union



p. H15

AVUS3BH
Bulkhead Union



p. H15

Adapter

1F
Refrigerant Drum



p. H5

661FHD
Reducer



p. H10

664FHD
Female Flare - Pipe



p. H10

88AC
Refrigerant Adapter



p. H16

880AC
Refrigerant Adapter



p. H16

881AC
Refrigerant Adapter



p. H16

Auxiliary Component

2GF
Flare Gasket



p. H5

3GF
Seal Bonnet



p. H5

14FL
Long forged Nut



p. H5

14FSX
Short Forged Nut



p. H5

41FL
Long Nut



p. H6

41FS
Short Nut



p. H6

639F
Seal Plug



p. H10

640F
Cap Nut



p. H10

41IF
Inverted Flare Nut



p. H12

41IFS
Inverted Flare Nut
Steel



p. H12

41IFF
Inverted Flare
Piloted Nut



p. H12

640QSF
Seal Cap



p. H16

640QSFCR
Seal Cap with Core
Remover



p. H16

CR
Core Remover



p. H16

VC
Valve Core



p. H16

H

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

45° Flare Fittings

MATERIALS OF CONSTRUCTION	
BODIES:	BRASS
NUTS:	BRASS
O-RINGS:	VITON

NOMENCLATURE	
EXAMPLE: 149F-6-4	**ATTRIBUTE:**
1 (2)	FORGING (1) EXTRUSION (2)
49	FLARE TO EXTERNAL PIPE, 90° ELBOW
F	FLARE FITTING
6	3/8 TUBE O.D..
4	1/4 PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, ALUMINUM, WELDED STEEL HYDRAULIC TUBING THAT CAN BE FLARED.
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8

H

PRESSURE RANGE		
PSI	**TUBE O.D. (IN.)**	**TUBE WALL (IN.)**
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

SPECIFICATIONS	
TEMPERATURE RANGE	FROM -65° TO +250°F
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES, FLAMMABLE LIQUID, FREON,
NOTE:	FOR OTHER TYPES OF FLUID OR GASSES, PLEASE CONSULT FACTORY



Economical fitting that resists mechanical pullout. Can be assembled and disassembled repeatedly. Listed with Underwriter's Laboratories for flammable liquid, marine and gas applications. Meets functional requirements of SAE J512 and J513.

Assembly Instructions

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. Flare tube end with flaring tool to provide 45° flare.
4. Clamp tube flare between nut and nose of fitting body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 to 1/2 turn past finger tight for a metal-to-metal seal.

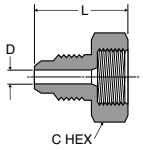
Flare fittings are easy to disassemble and may be reassembled repeatedly, for a leak-proof connection.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Refrigerant Drum Adapter 1F

Ref. SAE 010165





PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
1F-4-8	1/4	1/2	1-1/8	1.12	.189
1F-4-12*	1/4	3/4	1-1/4	1.12	.189
1F-6-12*	3/8	3/4	1-1/4	1.24	.282
1F-8-12*	1/2	3/4	1-1/4	1.37	.407

Gasket Furnished with each 1F adapter

Copper Flare Gasket 2GF

REF. SAE 010113



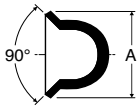


PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.36
2GF-5	5/16	.43
2GF-6	3/8	.56
2GF-8	1/2	.67
2GF-10	5/8	.78
2GF-12	3/4	.97

Seal Bonnet 3GF

REF. SAE 010114



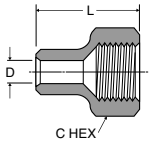


PART NO.	TUBE SIZE	A
3GF-3	3/16	.32
3GF-4	1/4	.37
3GF-5	5/16	.43
3GF-6	3/8	.56
3GF-8	1/2	.67
3GF-10	5/8	.78
3GF-12	3/4	.97

Long Forged Nut 14FL

REF. SAE 010167



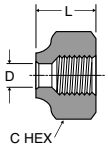


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FL-4	1/4	7/16-20	5/8	.257	.94
14FL-6	3/8	5/8-18	13/16	.382	1.06
14FL-8	1/2	3/4-16	15/16	.507	1.19
14FL-10	5/8	7/8-14	1-1/16	.632	1.44

Short Forged Nut 14FSX

REF. SAE 010166

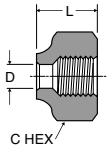




PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FSX-4	1/4	7/16-20	5/8	.257	.63
14FSX-5	5/16	1/2-20	11/16	.320	.67
14FSX-6	3/8	5/8-18	13/16	.382	.74
14FSX-8	1/2	3/4-16	15/16	.507	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12	3/4	1-1/16-14	1-5/16	.757	1.17

Short Forged Reducing Nuts 14FS



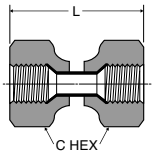


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FS-6-4	3/8 TO 1/4	5/8-18	13/16	.257	.74
14FS-8-6	1/2 TO 3/8	3/4-16	15/16	.382	.86
14FS-10-8	5/8 TO 1/2	7/8-14	1-1/16	.507	.99

Swivel Nut Valve Connector 14FSV

REF. SAE 010108

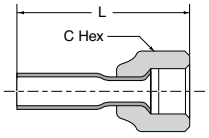




PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L MIN.
14FSV-4	1/4	7/16-20	5/8	1.31
14FSV-6	3/8	5/8-18	13/16	1.50
14FSV-8	1/2	3/4-16	15/16	1.75
14FSV-10	5/8	7/8-14	1-1/16	2.00

Flare Adapter US5





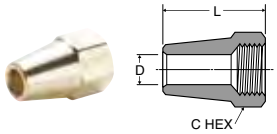
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
US5-4	1/4	7/16-20	5/8	1.50
US5-6	3/8	5/8-18	13/16	1.58
US5-8	1/2	3/4-16	15/16	1.80
US5-10	5/8	7/8-14	1-1/16	2.18

H

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Long Nut 41FL

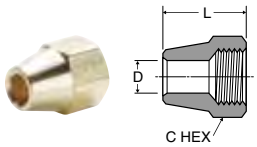
REF. SAE 010111



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FL-2	1/8	5/16-24	3/8	.133	.75
41FL-3	3/16	3/8-24	7/16	.195	.81
41FL-4	1/4	7/16-20	9/16	.257	.94
41FL-5	5/16	1/2-20	5/8	.320	1.12
41FL-6	3/8	5/8-18	3/4	.382	1.31
41FL-8	1/2	3/4-16	7/8	.507	1.62
41FL-10	5/8	7/8-14	1-1/16	.632	1.88
41FL-12	3/4	1-1/16-14	1-1/4	.757	2.19

Short Nut 41FS / Shorter Nut 41FX

REF. SAE 010110

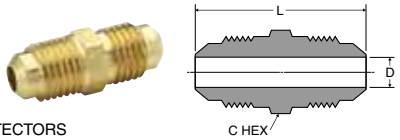


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-2	1/8	5/16-24	3/8	.132	.50
41FS-3	3/16	3/8-24	7/16	.195	.62
41FS-4	1/4	7/16-20	9/16	.257	.75
41FS-5	5/16	1/2-20	5/8	.320	.88
41FS-6	3/8	5/8-18	3/4	.382	1.00
41FX-6	3/8	5/8-18	3/4	.382	.91
41FS-8	1/2	3/4-16	7/8	.507	1.12
41FX-8	1/2	3/4-16	7/8	.507	1.00
41FS-10	5/8	7/8-14	1-1/16	.632	1.31
41FX-10	5/8	7/8-14	1-1/16	.632	1.06
41FX-12	3/4	1-1/16-14	1-1/4	.757	1.17
41FS-12	3/4	1-1/16-14	1-1/4	.757	1.50
41FS-14	7/8	1-1/4-12	1-1/2	.882	1.62

*Comes standard with thread protectors

Union 42F

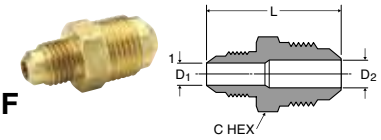
REF. SAE 010101 *THREAD PROTECTORS



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42F-2	1/8	5/16-24	5/16	.90	.079
42F-3	3/16	3/8-24	3/8	1.04	.125
42F-4	1/4	7/16-20	7/16	1.17	.189
42F-5	5/16	1/2-20	1/2	1.32	.220
42F-6	3/8	5/8-18	5/8	1.48	.282
42F-8	1/2	3/4-16	3/4	1.79	.407
42F-10	5/8	7/8-14	7/8	2.10	.501
42F-12*	3/4	1-1/16-14	1-1/16	2.42	.626
42F-14*	7/8	1-1/4-12	1-1/4	2.72	.751

Union Reducers 42F

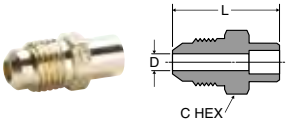
REF. SAE 010101



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D1	FLOW DIA. D2
42F-6-4	1/4	3/8	7/16-20	5/8-18	5/8	1.36	.189	.282
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.220	.282
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.189	.407
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.282	.407
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.282	.501
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.407	.501

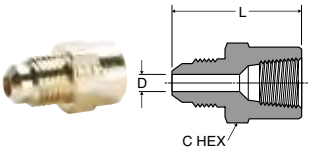
Flare to Solder 43F

REF. SAE 010104



PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.282
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.282
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.282
43F-8-6	1/2	3/8	3/4-16	3/4	1.36	.314
43F-8-8	1/2	1/2	3/4-16	3/4	1.42	.407
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.407
43F-10-8	5/8	1/2	7/8-14	7/8	1.60	.440
43F-10-10	5/8	5/8	7/8-14	7/8	1.73	.501
43F-10-12*	5/8	3/4	7/8-14	7/8	1.86	.501
43F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.04	.626
43F-12-14*	3/4	7/8	1-1/16-14	1-1/16	2.17	.626

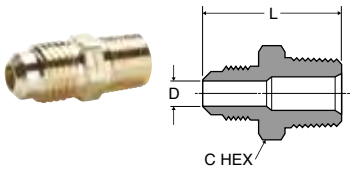
Female Connector 46F



REF. SAE 010103

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46F-2-2	1/8	1/8	5/16-24	9/16	.91	.078
46F-3-2	3/16	1/8	3/8-24	9/16	.95	.125
46F-4-2	1/4	1/8	7/16-20	9/16	1.01	.189
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.189
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.189
46F-5-2	5/16	1/8	1/2-20	9/16	1.05	.220
46F-5-4	5/16	1/4	1/2-20	11/16	1.26	.220
46F-6-2	3/8	1/8	5/8-18	5/8	1.10	.282
46F-6-4	3/8	1/4	5/8-18	11/16	1.29	.282
46F-6-6	3/8	3/8	5/8-18	13/16	1.36	.282
46F-6-8	3/8	1/2	5/8-18	1	1.60	.282
46F-8-4	1/2	1/4	3/4-16	3/4	1.39	.407
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.407
46F-8-8	1/2	1/2	3/4-16	1	1.73	.407
46F-8-12*	1/2	3/4	3/4-16	1-1/4	1.79	.407
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.501
46F-10-8	5/8	1/2	7/8-14	1	1.80	.501
46F-10-12*	5/8	3/4	7/8-14	1-1/4	1.89	.501

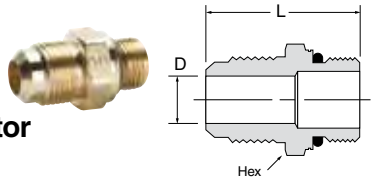
Male Connector 48F



REF. SAE 010102

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48F-2-2	1/8	1/8	5/16-24	7/16	.91	.078
48F-3-2	3/16	1/8	3/8-24	7/16	.98	.125
48F-3-4	3/16	1/4	3/8-24	9/16	1.17	.125
48F-4-2	1/4	1/8	7/16-20	7/16	1.04	.189
48F-4-4	1/4	1/4	7/16-20	9/16	1.23	.189
48F-4-6	1/4	3/8	7/16-20	11/16	1.29	.189
48F-4-8	1/4	1/2	7/16-20	7/8	1.54	.189
48F-5-2	5/16	1/8	1/2-20	1/2	1.14	.220
48F-5-4	5/16	1/4	1/2-20	9/16	1.32	.220
48F-5-6	5/16	3/8	1/2-20	11/16	1.36	.220
48F-6-2	3/8	1/8	5/8-18	5/8	1.23	.220
48F-6-4	3/8	1/4	5/8-18	5/8	1.42	.282
48F-6-6	3/8	3/8	5/8-18	11/16	1.42	.282
48F-6-8	3/8	1/2	5/8-18	7/8	1.67	.282
48F-6-12*	3/8	3/4	5/8-18	1-1/16	1.79	.282
48F-8-4	1/2	1/4	3/4-16	3/4	1.60	.407
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.407
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.407
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.407
48F-10-4	5/8	1/4	7/8-14	7/8	1.79	.313
48F-10-6	5/8	3/8	7/8-14	7/8	1.79	.408
48F-10-8	5/8	1/2	7/8-14	7/8	1.98	.501
48F-10-12*	5/8	3/4	7/8-14	1-1/16	2.04	.501
48F-12-8*	3/4	1/2	1-1/16-14	1-1/16	2.17	.563
48F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.17	.626
48F-14-12*	7/8	3/4	1-1/4-12	1-1/4	2.35	.751

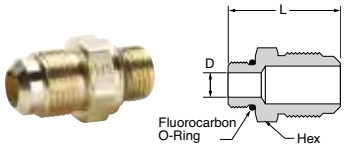
Flare to Metric Adaptor 48F-X-MIX



PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	HEX	L	D
48F-8-MII6	1/2	M16 X 1.5	3/4-16	7/8	1.60	.35
48F-10-MI27	5/8	M27 X 2.0	7/8-14	1 1/4	1.87	.50
48F-12-MI27*	3/4	M27 X 2.0	1 1/16-14	1 1/4	1.99	.63

Note: Fluorocarbon o-ring is standard

Flare to SAE Straight Thread 485F



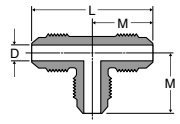
PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	FLOW DIA. D
485F-12-8*	3/4	3/4-16	1 1/16-14	1 1/16	1.80	.397
485F-12-12*	3/4	1 1/16-12	1 1/16-14	1 1/4	2.03	.615

*Comes standard with thread protectors

H

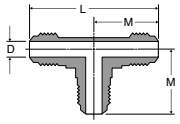
144F





244F



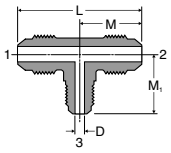


Union Tee 144F-244F

REF. SAE 010401

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
144F-3	3/16	3/8-24	1.46	.73	.125
144F-4	1/4	7/16-20	1.72	.86	.189
244F-4	1/4	7/16-20	1.72	.86	.189
144F-5	5/16	1/2-20	1.82	.91	.220
144F-6	3/8	5/8-18	2.08	1.04	.282
144F-8	1/2	3/4-16	2.46	1.23	.407
144F-10	5/8	7/8-14	2.78	1.39	.501

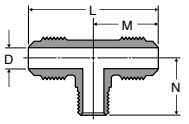




Union Tee 144F combination sizes

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	M1	FLOW DIA. D
144F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
144F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.282



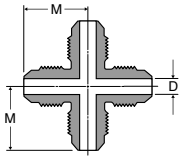


Male Branch Tee 145F

REF. SAE 010425

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
145F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
145F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
145F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.189
145F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
145F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.282
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.282
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.282
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.407
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.407
145F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501





Cross 147F

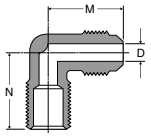
REF. SAE 010501

PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
147F-6	3/8	5/8-18	1.04	.282

*Comes standard with thread protectors

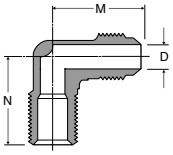
149F





249F



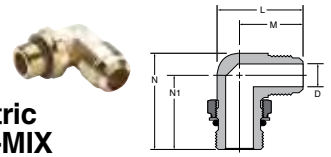


Male Elbow 149F-249F

REF. SAE 010202

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.69	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.125
249F-3-2	3/16	1/8	3/8-24	.73	.73	.125
149F-4-2	1/4	1/8	7/16-20	.79	.76	.189
249F-4-2	1/4	1/8	7/16-20	.79	.76	.189
149F-4-4	1/4	1/4	7/16-20	.89	.92	.189
249F-4-4	1/4	1/4	7/16-20	.89	.92	.189
149F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
249F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
149F-4-8	1/4	1/2	7/16-20	1.02	1.26	.189
149F-5-2	5/16	1/8	1/2-20	.90	.79	.220
249F-5-2	5/16	1/8	1/2-20	.89	.77	.220
149F-5-4	5/16	1/4	1/2-20	.95	.95	.220
249F-5-4	5/16	1/4	1/2-20	.95	.92	.220
149F-5-6	5/16	3/8	1/2-20	.98	1.01	.220
149F-6-2⁺	3/8	1/8	5/8-18	1.01	.90	.220
249F-6-2⁺	3/8	1/8	5/8-18	1.01	.89	.220
149F-6-4	3/8	1/4	5/8-18	1.01	1.05	.282
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.282
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
149F-6-8	3/8	1/2	5/8-18	1.15	1.26	.282
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.282
149F-6-12*	3/8	3/4	5/8-18	1.25	1.38	.282
149F-8-4⁺	1/2	1/4	3/4-16	1.20	1.17	.314
149F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.407
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.407
149F-8-12*	1/2	3/4	3/4-16	1.38	1.38	.407
149F-10-4⁺	5/8	1/4	7/8-14	1.41	1.25	.314
149F-10-6⁺	5/8	3/8	7/8-14	1.41	1.25	.407
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.501
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501
149F-10-12*	5/8	3/4	7/8-14	1.42	1.48	.501
149F-12-8*⁺	3/4	1/2	1-1/16-14	1.60	1.48	.563
149F-12-12*	3/4	3/4	1-1/16-14	1.60	1.62	.626
149F-14-12*	7/8	3/4	1-1/4-12	1.73	1.67	.751

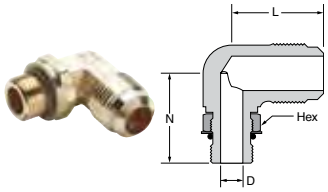
⁺ For these parts the pipe thread through hole is smaller than the through hole on the flare end.



Flare Elbow to SAE Metric Straight Thread 149F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	L	M	N	N1	D
149F-10-MI27	5/8	M27 X 2.0	7/8-14	1.95	1.46	2.12	1.63	.501

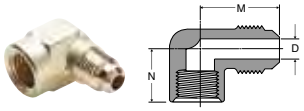
Note: Fluorocarbon o-ring is standard



Flare Elbow to SAE Straight Thread 1495F

PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	N	FLOW DIA. D
1495F-12-8*	3/4	3/4-16	1 1/16-14	7/8	1.60	1.60	.398
1495F-12-12*	3/4	1-1/16-12	1 1/16-14	1 1/4	1.59	2.12	.616

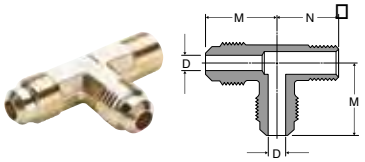
Note: Fluorocarbon o-ring is standard



Female Elbow 150F

REF. SAE 010203

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189
150F-4-4	1/4	1/4	7/16-20	.95	.67	.189
150F-5-4	5/16	1/4	1/2-20	1.01	.67	.220
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.282
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.282
150F-6-6	3//8	3/8	5/8-18	1.14	.67	.282
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.282
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.407
150F-8-8	1/2	1/2	3/4-16	1.36	.92	.407
150F-8-12	1/2	3/4	3/4-16	1.51	.92	.407
150F-10-8*	5/8	1/2	7/8-14	1.48	.98	.501
150F-10-12*	5/8	3/4	7/8-14	1.64	.98	.501

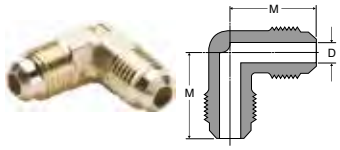


Male Run Tee 151F

REF. SAE 010424

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
151F-4-2	1/4	1/8	7/16-20	.86	.76	.189
151F-4-4	1/4	1/4	7/16-20	.89	.92	.189
151F-5-4	5/16	1/4	1/2-20	.95	.92	.220
151F-6-4	3/8	1/4	5/8-18	1.04	1.04	.282
151F-6-6	3/8	3/8	5/8-18	1.00	.98	.282
151F-6-8	3/8	1/2	5/8-18	1.16	1.26	.282
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
151F-8-8	1/2	1/2	3/4-16	1.23	1.36	.407
151F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501

*Comes standard with thread protectors

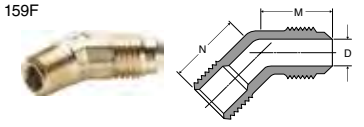


Union Elbow 155F

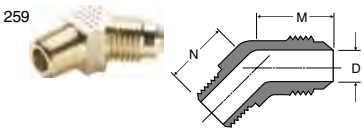
REF. SAE 010201

PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
155F-2	1/8	5/16-24	.64	.079
155F-3	3/16	3/8-24	.73	.125
155F-4	1/4	7/16-20	.86	.189
155F-5	5/16	1/2-20	.92	.220
155F-6	3/8	5/8-18	1.04	.282
155F-8	1/2	3/4-16	1.20	.407
155F-10	5/8	7/8-14	1.39	.501
155F-12*	3/4	1-1/16-14	1.64	.626

159F



259



45° Elbow 159F-259F

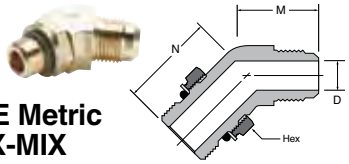
REF. SAE 010302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
159F-4-2	1/4	1/8	7/16-20	.78	.56	.189
259F-4-2	1/4	1/8	7/16-20	.65	.62	.189
159F-4-4	1/4	1/4	7/16-20	.75	.84	.189
259F-4-4	1/4	1/4	7/16-20	.73	.84	.189
159F-5-2	5/16	1/8	1/2-20	.76	.65	.220
159F-5-4	5/16	1/4	1/2-20	.75	.81	.220
159F-6-2+	3/8	1/8	5/8-18	.89	.67	.220
159F-6-4	3/8	1/4	5/8-18	.89	.86	.282
259F-6-4	3/8	1/4	5/8-18	.91	.86	.282
159F-6-6	3/8	3/8	5/8-18	.91	.93	.282
259F-6-6	3/8	3/8	5/8-18	.91	.93	.282
159F-8-4+	1/2	1/4	3/4-16	1.06	.95	.314
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.407
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.407
159F-8-8	1/2	1/2	3/4-16	1.12	1.16	.407
159F-10-6+	5/8	3/8	7/8-14	1.13	.95	.407
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.501
159F-12-8*+	3/4	1/2	1-1/16-14	1.28	1.16	.560

+ For these parts the pipe thread through hole is smaller than the through hole on the flare end.

H

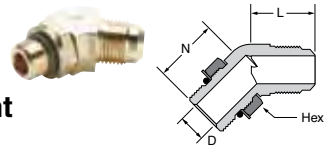
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



45° Flare Elbow to SAE Metric Straight Thread 159F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	HEX	M	N	D
159F-8-MII6	1/2	M16 X 1.5	3/4-16	22MM	1.10	1.16	.36
159F-10-MI27	5/8	M27 X 2.0	7/8-14	1 1/4	1.21	1.50	.50

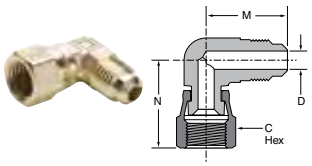
Note: Fluorocarbon o-ring is standard



45° Flare to SAE Straight Thread 1595F

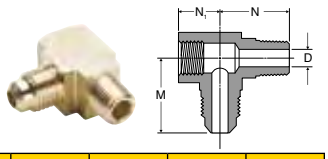
PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	N	FLOW DIA. D
1595F-8-8	1/2	3/4-16	3/4-16	7/8	1.00	1.16	.398
1595F-12-8*	3/4	3/4-16	1 1/16-14	7/8	1.41	1.30	.398
1595F-12-12*	3/4	1 1/16-12	1 1/16-14	1 1/4	1.41	1.45	.615

Note: Fluorocarbon o-ring is standard



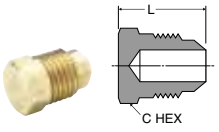
90° Swivel Elbow 166FSV

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	M	N	FLOW DIA. D
166FSV-4-4	1/4	7/16-20	9/16	.86	.93	.189
166FSV-6-6	3/8	5/8-18	3/4	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	7/8	1.20	1.29	.407
166FSV-10-10	5/8	7/8-14	1	1.39	1.50	.501
166FSV-12-12*	3/4	1-1/16-14	1-1/4	1.60	1.83	.626



Adapter Tee 256F

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	N1	FLOW DIA. D
256F-4-2	1/4	1/8	7/16-20	.86	.77	.47	.220

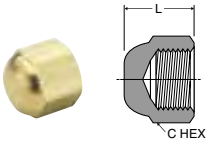


Flared Seal Plug 639F

REF. SAE 010109

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19

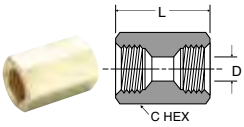
*Comes standard with thread protectors
†Should be used with 2GF flare gasket



Cap Nut 640F

REF. SAE 010112

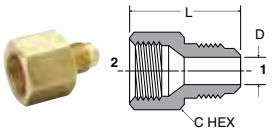
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
640F-3†	3/16	3/8-24	1/2	.47
640F-4†	1/4	7/16-20	9/16	.53
640F-5†	5/16	1/2-20	5/8	.62
640F-6†	3/8	5/8-18	3/4	.69
640F-8†	1/2	3/4-16	7/8	.84
640F-10†	5/8	7/8-14	1-1/16	.97



Flared Union–Female Flare to Female Flare 660FHD

REF. SAE 010107

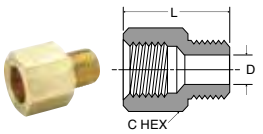
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
660FHD-4†	1/4	7/16-20	5/8	.98	.251
660FHD-6†	3/8	5/8-18	13/16	1.24	.376
660FHD-8†	1/2	3/4-16	15/16	1.43	.501
660FHD-10†	5/8	7/8-14	1-1/16	1.67	.626



Male Flare to Female Flare 661FHD

REF. SAE 010105

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D
661FHD-4-6†	1/4	3/8	7/16-20	5/8-18	13/16	1.20	.189
661FHD-4-8†	1/4	1/2	7/16-20	3/4-16	15/16	1.36	.189
661FHD-6-4†	3/8	1/4	5/8-18	7/16-20	5/8	1.10	.282
661FHD-6-8†	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.282
661FHD-8-6†	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.407
661FHD-8-10†	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.407
661FHD-10-8†	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.501
661FHD-10-12*†	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.501
661FHD-12-10*†	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626



Female Flare to Male Pipe Thread 664FHD

REF. SAE 010106

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
664FHD-4-2†	1/4	1/8	7/16-20	5/8	.91	.220
664FHD-4-4†	1/4	1/4	7/16-20	5/8	1.01	.252
664FHD-6-4†	3/8	1/4	5/8-18	13/16	1.28	.345
664FHD-8-6†	1/2	3/8	3/4-16	15/16	1.31	.407

H

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Inverted Flared Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS AND ZINC CHROMATE STEEL

NOMENCLATURE	
EXAMPLE: 48IFHD-4-2	**ATTRIBUTE:**
48	HALF UNION
IF	INVERTED FLARE
HD	HEAVY DUTY
6	3/8 TUBE O.D..
4	1/4 PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, ALUMINUM, WELDED STEEL HYDRAULIC TUBING THAT CAN BE FLARED.
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4

PRESSURE RANGE		
PSI	**TUBE O.D. (IN.)**	**TUBE WALL (IN.)**
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

SPECIFICATIONS	
TEMPERATURE RANGE	FROM -65° TO +250°F
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY



Built to resist mechanical pullout this fitting can be assembled and disassembled repeatedly. Listed with Underwriter's Laboratories for flammable liquid and gas. Meets functional requirements of SAE J512.

Assembly Instructions

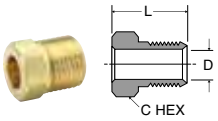
1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Note: The seat dimensions are predicated on practical threading limitations and use of these fittings with double flared tubing.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Nut 41IF

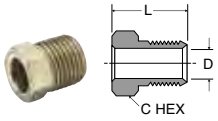
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IF-2	1/8	5/16-28	5/16	.52	.133
41IF-3	3/16	3/8-24	3/8	.56	.196
41IF-4	1/4	7/16-24	7/16	.56	.259
41IF-5	5/16	1/2-20	1/2	.62	.321
41IF-6	3/8	5/8-18	5/8	.66	.384
41IF-8	1/2	3/4-18	3/4	.74	.508

Steel Nut–Zinc Chromate 41IFS

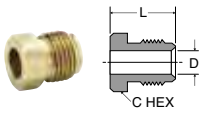
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFS-3	3/16	3/8-24	3/8	.56	.196
41IFS-4	1/4	7/16-24	7/16	.56	.259
41IFS-5	5/16	1/2-20	1/2	.62	.321
41IFS-6	3/8	5/8-18	5/8	.66	.384
41IFS-8	1/2	3/4-18	3/4	.74	.508
41IFS-10	5/8	7/8-18	7/8	.80	.633
41IFS-12	3/4	1-1/16-16	1-1/16	.88	.759

Piloted Nut 41IFF for Single Flared Tubing

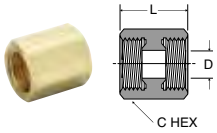
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFF-2	1/8	5/16-28	5/16	.52	.133
41IFF-3	3/16	3/8-24	3/8	.56	.196
41IFF-4	1/4	7/16-24	7/16	.56	.259
41IFF-5	5/16	1/2-20	1/2	.62	.321
41IFF-6	3/8	5/8-18	5/8	.66	.384
41IFF-8	1/2	3/4-18	3/4	.74	.508

Union 42IFHD

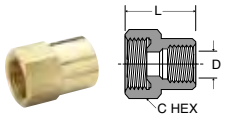
REF. SAE 040101



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42IFHD-2	1/8	5/16-28	13/32	.60	.078
42IFHD-3	3/16	3/8-24	15/32	.63	.125
42IFHD-4	1/4	7/16-24	17/32	.63	.189
42IFHD-5	5/16	1/2-20	19/32	.71	.220
42IFHD-6	3/8	5/8-18	3/4	.81	.282
42IFHD-8	1/2	3/4-18	29/32	.92	.407

Female Connector 46IFHD

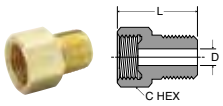
REF. SAE 040103



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
46IFHD-4-2	1/4	1/8	7/16-24	17/32	.78	.189
46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.282
46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.407

Male Connector 48IFHD

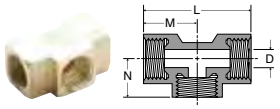
REF. SAE 040102



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48IFHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
48IFHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
48IFHD-4-2	1/4	1/8	7/16-24	17/32	.74	.189
48IFHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
48IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
48IFHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
48IFHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
48IFHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.282
48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.282
48IFHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
48IFHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.407
48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.407
48IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
48IFHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.626

Union Tee 244IFHD

REF. SAE 040401

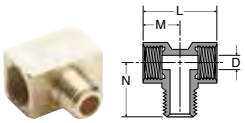


PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
244IFHD-6	3/8	5/8-18	1.48	.74	.56	.282
244IFHD-8*	1/2	3/4-18	1.76	.88	.67	.407

*Does not meet UL or SAE.

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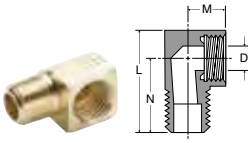
Male Branch Tee 245IFHD



REF. SAE 040425

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.282

Male Elbow 249IFHD–249IF

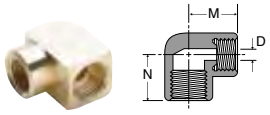


REF. SAE 040202

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
249IFHD-2-2	1/8	1/8	5/16-28	.79	.27	.58	.078
249IFHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
249IFHD-4-2	1/4	1/8	7/16-24	.92	.33	.65	.189
249IFHD-4-4	1/4	1/4	7/16-24	1.10	.28	.82	.189
249IFHD-5-4	5/16	1/4	1/2-20	1.16	.45	.86	.220
249IFHD-6-2	3/8	1/8	5/8-18	1.13	.53	.76	.220
249IF-6-4†	3/8	1/4	5/8-18	1.26	.45	.92	.282
249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.282
249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.282
249IFHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.407
249IF-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.407
249IFHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.407
249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.407
249IFHD-10-6	5/8	3/8	7/8-18	1.62	.67	1.09	.531
249IFHD-10-8	5/8	1/2	7/8-18	1.82	.67	1.29	.533

†Light Duty Series

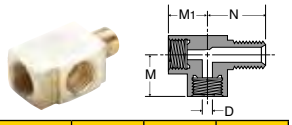
Female Elbow 250IFHD



REF. SAE 040203

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
250IFHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
250IFHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
250IFHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
250IFHD-6-4	3/8	1/4	5/8-18	.67	.68	.282

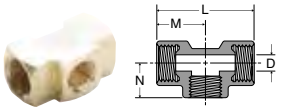
Male Run Tee 251IFHD



REF. SAE 040424

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
251IFHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
251IFHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
251IFHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.282

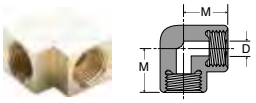
Female Branch Tee 252IFHD



REF. SAE 040427

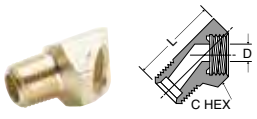
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
252IFHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
252IFHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.282

Union Elbow 255IFHD



PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
255IFHD-4	1/4	7/16-24	.55	.189

45° Elbow 259IFHD



REF. SAE 040302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
259IFHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
259IFHD-4-2	1/4	1/8	7/16-24	9/16	.94	.189
259IFHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
259IFHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
259IFHD-6-4*	3/8	1/4	5/8-18	13/16	1.34	.282
259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.407
259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533

*DOES NOT MEET SAE OR UL

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Access Valves

MATERIALS OF CONSTRUCTION	
STRAIGHT BODIES:	CA360, CA345
SHAPE BODIES:	CA377

NOMENCLATURE	
EXAMPLE: XAVT1-2	**ATTRIBUTE:**
X	PACKAGED
AV	ACCESS VALVE
T1	MALE BRANCH TEE
-2	1/8 PIPE THREAD

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 500 PSI
TEMPERATURE RANGES:	-20° TO +220°F
OPERATING FLUID:	FLOROCARBON REFRIGERANTS
VALVE CORE:	MEETS ARI STANDARD 720



Designed to offer convenient low cost access ports for refrigeration service. All fittings feature 1/4" SAE male flare access ports and are furnished with a finger tight quick seal cap. Access valves with pipe connections have internal ODS solder cups.

Access valve products with a solder cup are shipped with the valve core loose. Valve cores should be torqued after brazing to ARI 720 Standard.

Access Valves may be installed in any position on either high or low side for quick testing, pressure checking, purging or charging.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



Extended Copper Tube AVUSE

PART NO.	CONNECTION SIZE
AVUSE-2	1/8" O.D. TUBE
AVUSE-3	3/16" O.D. TUBE
AVUSE-4	1/4" O.D. TUBE
AVUSE-5	5/16" O.D. TUBE
AVUSE-6	3/8" O.D. TUBE
AVUSE-8	1/2" O.D. TUBE
AVUSE-9	1/8" O.D. TUBE; ADDITIONAL STEPS ON BODY FOR 3/16", 1/4", 5/16", 3/8"O.D. TUBE. 3/16", 1/4", OR 5/16" SOLDER FITTING/SWAGED TUBE.
AVUSE-11	3/16" O.D. TUBE; ADDITIONAL STEPS ON BODY FOR 1/4" OR 3/8" SOLDER FITTINGS/SWAGED TUBES 5/16" O.D. TUBE.

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Solder Tee AVTS

PART NO.	CONNECTION SIZE
AVTS-4	1/4" O.D. TUBE OR 3/8" SOLDER FITTING/SWAGED TUBE
AVTS-5	5/16" O.D. TUBE OR 3/8" SOLDER FITTING/SWAGED TUBE
AVTS-6	3/8" O.D. TUBE OR 1/2" SOLDER FITTING/SWAGED TUBE
AVTS-8	1/2" O.D. TUBE

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Extended Solder Tee AVTSL

PART NO.	CONNECTION SIZE
AVTSL-6	3/8" O.D. TUBE/SOLDER 5/16", 3/8" & 7/16" TUBE

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Full Union AVU2

PART NO.	CONNECTION SIZE
AVU2-4	1/4" O.D. FLARE TUBE WITH FORGED FLARE NUT



Bulkhead Union AVU2BH

PART NO.	CONNECTION SIZE
AVU2BH-4	1/4" BULKHEAD ACCESS X 1/4" SAE WITH FORGED NUT



Bulkhead Solder Union AVUS3BH

PART NO.	CONNECTION SIZE
AVUS3BH-4	1/4" BULKHEAD ACCESS X 3 WAY ODS

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Forged Union Tee AVT2

PART NO.	CONNECTION SIZE
AVT2-4	1/4" ACCESS ALL ENDS WITH 2 FORGED FLARE NUTS AND ONE CORE AND CAP



Male Connector AVU1

PART NO.	CONNECTION SIZE
AVU1-2	1/8" MALE PIPE OR 1/4" O.D. SOLDER
AVU1-4	1/4" MALE PIPE OR 5/16" O.D. SOLDER

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Access Valve Assembly AVUIFI

PART NO.	CONNECTION SIZE
AVUIFI-4	7/16-20 SAE STRAIGHT THREAD O-RING PORT

Note: Standard o-ring is neoprene. Consult Brass Products Division for optional o-rings



Forged Male Elbow AVE1

PART NO.	CONNECTION SIZE
AVE1-2	1/8" MALE PIPE OR 1/4" O.D. SOLDER

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Forged Male Run Tee AVT3

PART NO.	CONNECTION SIZE
AVT3-2	1/8" MALE PIPE OR 1/4" O.D. SOLDER ON RUN X 1/4" ACCESS ON RUN AND BRANCH WITH ONE CORE AND CAP
AVT3-4	1/4" MALE PIPE OR 5/16" O.D. SOLDER ON RUN X 1/4" ACCESS ON RUN AND BRANCH WITH ONE CORE AND CAP

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Forged Male Cross AVC1

PART NO.	CONNECTION SIZE
AVC1-4	1/4" MALE PIPE OR 5/16" O.D. SOLDER X 1/4" ACCESS ON ALL FLARE ENDS WITH ONE CORE AND CAP

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Swivel Cross AVCS4D-4



PART NO.	CONNECTION SIZE
AVCS4D-4	1/4" FORGED FEMALE FLARE SWIVEL WITH DEPRESSOR X 1/4" ACCESS ON ALL FLARE ENDS WITH ONE CORE AND CAP

Female Connector AVUR3



PART NO.	CONNECTION SIZE
AVUR3-4	1/4" FEMALE FLARE WITH COPPER GASKET

3 Way Solder Connector AVUS3



PART NO.	CONNECTION SIZE
AVUS3-40	FOR 3/16" O.D. TUBE OR 1/4" AND 3/8" SOLDER FITTING/SWAGED TUBE

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

Straight Solder Connector AVUS



PART NO.	CONNECTION SIZE
AVUS-42	1/8" O.D. TUBE OR 1/4" SOLDER FITTING/SWAGED TUBE
AVUS-43	3/16" O.D. TUBE OR 1/4" SOLDER FITTING/SWAGED TUBE
AVUS-44	1/4" O.D. TUBE OR 3/8" SOLDER FITTING/SWAGED TUBE
AVUS-45	5/16" O.D.TUBE OR 1/2" SOLDER FITTING/SWAGED TUBE
AVUS-46	3/8" O.D. TUBE OR 1/2" SOLDER FITTING/SWAGED TUBE

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

Swivel Connector AVUS4D



PART NO.	CONNECTION SIZE
AVUS4D-4	1/4" FORGED FEMALE FLARE SWIVEL NUT WITH DEPRESSOR

Forged Female Run Swivel Tee AVTS4



PART NO.	CONNECTION SIZE
AVTS4-4	1/4" FEMALE FLARE SWIVEL X 1/4" ACCESS ON BOTH RUN AND BRANCH
AVTS4D-4	1/4" FEMALE FLARE SWIVEL ON RUN WITH DEPRESSOR X 1/4" ACCESS ON BOTH RUN AND BRANCH

Forged Female Branch Tee AVTS6



PART NO.	CONNECTION SIZE
AVTS6-4	1/4" FEMALE FLARE SWIVEL X 1/4" ACCESS ON BOTH ENDS
AVTS6D-4	1/4" FEMALE FLARE SWIVEL ON BRANCH WITH DEPRESSOR X 1/4" ACCESS ON BOTH ENDS

Quick Seal Caps 640QSF



PART NO.	CONNECTION SIZE
640QSF-4	1/4" SAE SEAL CAP WITH SEAL GASKET
640QSF-6	3/8" SAE SEAL CAP WITH SEAL GASKET

Quick Seal Cap with Core Remover 640QSFCR



PART NO.	CONNECTION SIZE
640QSFCR-4	1/4" SAE SEAL CAP CORE REMOVER WITH INTERNAL SEAL GASKET

Core Remover CR



PART NO.	CONNECTION SIZE
CR-001	STANDARD CORE REMOVER

Valve Cores VC



PART NO.	CONNECTION SIZE
VC-001	REPLACEMENT VALVE CORES FOR ALL 1/4" ACCESS VALVES

Refrigerant adapter 88AC



PART NO.	CONNECTION SIZE
88AC-8-2	1/8" MALE PIPE TO SAE J2197 ACME THREADED MALE CONNECTOR

Refrigerant adapter 880AC



PART NO.	CONNECTION SIZE
880AC-8-4	1/4" FEMALE SAE FLARE TO SAE J2197 ACME THREADED MALE CONNECTOR

Refrigerant adapter 881AC



PART NO.	CONNECTION SIZE
881AC-8-4	1/4" SAE MALE FLARE TO SAE J2197 ACME THREADED FEMALE CONNECTOR

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Industrial:
Barbed Fittings



Dubl-Barb Fittings

Use with Polyethylene Tubing
Economical
One-piece
Compact
Reusable



Hose Barb Fittings

Beaded & Standard Hose Barbs
Straight and Metric Threads
All Brass Construction
Use with Hose Clamp
Reusable



Barb to Male NPT

28 Male Connector

p. I4, I5

228 Gauge Tee

p. I5

229 Male Elbow

p. I5

231 Run Tee

p. I6

232 Branch Tee

p. I6

68HB Male Connector

p. I8

125HB Male Connector

p. I8

125HBL Male Connector

p. I8

125HBLSV Swivel Connector

p. I9

127HB Ball-End Adapter

p. I9

129HB Male Elbow

p. I9

139HB 45° Male Elbow

p. I10

171HB Run Tee

p. I10

179HB 45° Male Elbow

p. I10

269HB Male Elbow

p. I11

279HB 45° Male Elbow

p. I11

Barb to Straight Thread

27 Male Connector

p. I4

685HB Male Connector

p. I8

1295HB Male Elbow

p. I9

1695HB Male Elbow

p. I10

1725HB Tee

p. I10

1795HB 45° Male Elbow

p. I10

Barb to Metric Straight Thread

68HB-X-MIX Male Connector

p. I8

169HB-X-MIX Male Elbow

p. I10

179HB-X-MIX 45° Male Elbow

p. I11

Barb to Female NPT

26 Female Connector

p. I4

230 Female Elbow

p. I6

237 Female Tee

p. I6

126HBL Female Connector

p. I9

Barb to Barb

22 Union

p. I4

224 Union Tee

p. I5

225 Union Elbow

p. I5

122HBL Union

p. I8

Bulkhead Union

22BH Bulkhead Union

p. I4

22CABH Bulkhead Union

p. I4

Swivel

128HBLSV Female Ball-End

p. I9

146HBLFSV 45° Female Flare

p. I10

Adapters

22CA Mixed Union

p. I4

220 Adapter Tee

p. I5

233 Mixed Tee

p. I6

238 Solder Connector

p. I6

Auxiliary Component

20 Plug

p. I4

97HC Clamp

p. I8

Dubl-Barb® Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	CA345, CA360

NOMENCLATURE	
EXAMPLE: 231-8-6	**ATTRIBUTE:**
231	RUN TEE
8	1/2 TUBE O.D.
6	3/8 PIPE THREAD

PRESSURE AND TEMPERATURE RANGE	
SIZES 1/4 TO 3/8:	UP TO 150 PSI -65° TO +90°F
SIZE 1/2:	UP TO 100 PSI -65° TO +75°F

APPLICABLE TUBE	
TUBE MATERIAL:	POLYETHYLENE
TUBE O.D.:	1/8, 5/32, 1/4, 3/8, 1/2

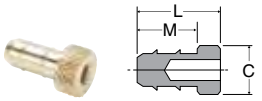


A compact one piece, push-on hose barbed fitting for a quick, economical way to connect polyethylene tubing.

Because of the many available variations in qualities of polyethylene tubing, Dubl-Barb® fittings are recommended for use with Parker Parflex® polyethylene tubing (or an equal grade). Parker Parflex® tubing is highly resistant to environmental stress cracking which is necessary for long life when coupled with expansion fittings.

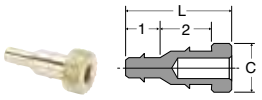
Assembly Instructions

Cut tube squarely and simply push tube over the two barbs



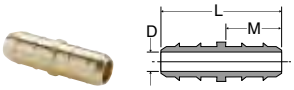
Plug 20

PART NO.	TUBE O.D.	TUBE I.D.	C DIA.	L	M
20-4	1/4	.170	.290	.56	.41
20-6	3/8	.250	.390	.68	.44
20-8	1/2	.377	.577	.81	.56



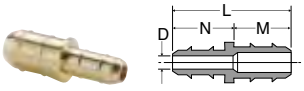
Plug Adapter 20

PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	C DIA.	L
20-4-5/32	5/32	.096	1/4	.170	.290	.65



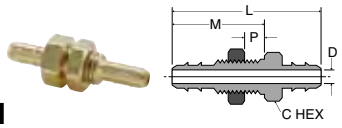
Union 22

PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
22-5/32	5/32X5/32	.096X.096	.59	.28	.062
22-4	1/4X1/4	.170X.170	.84	.41	.120
22-6	3/8X3/8	.250X.250	.94	.44	.187
22-8	1/2X1/2	.375X.375	1.19	.56	.312



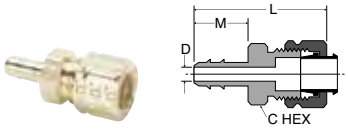
Union Reducer 22

PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D
22-4-5/32	1/4X5/32	.170X.096	.72	.41	.28	.062
22-4-6	1/4X3/8	.170X.250	.88	.44	.41	.120
22-4-8	1/4X1/2	.170X.375	1.06	.56	.41	.120
22-6-8	3/8X1/2	.250X.375	1.06	.56	.44	.187



Bulkhead Union 22BH

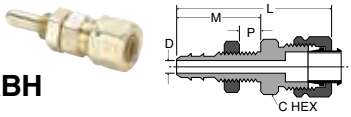
PART NO.	TUBE O.D.	TUBE I.D.	ST. THD.	C HEX	P MAX.	L	M	FLOW DIA. D	BLKHD HOLE DIA.
22BH-4-4	1/4	.170	5/16-24	7/16	.219	1.38	.78	.120	5/16
22BH-6-6	3/8	.250	3/8-24	7/16	.375	1.63	1.00	.187	3/8



Union 22CA

Tube to Compress-Align

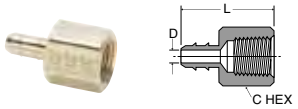
PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	C HEX	L	M	FLOW DIA. D
22CA-4-4	1/4	.170	1/4	7/16	1.15	.41	.120



Bulkhead Union 22CABH

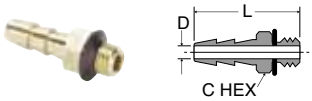
Tube to Compress-Align

PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	ST. THD.	C HEX	P MAX	L	M	FLW DIA. D	BKHD HOLE DIA.
22CABH-4-4	1/4	.170	1/4	5/16-24	7/16	.219	1.53	.78	.120	5/16
22CABH-6-6	3/8	.250	3/8	3/8-24	9/16	.375	1.87	1.00	.187	3/8



Female Connector 26

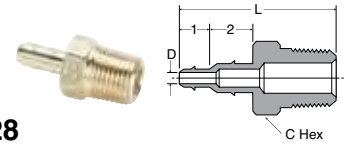
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
26-5/32-2	5/32	.096	1/8	1/2	.79	.062
26-4-2	1/4	.170	1/8	1/2	.91	.120
26-6-2	3/8	.250	1/8	1/2	.93	.187
26-6-4	3/8	.250	1/4	11/16	1.06	.187



Male Connector 27

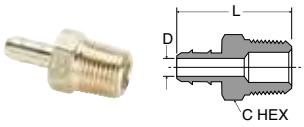
PART NO.	TUBE O.D.	TUBE I.D.	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
27-1*	1/8	.062	10-32	1/4	.61	.052
27-2*	1/4	.125	10-32	1/4	.74	.093

*For vinyl tubing only.



Barb-to-Pipe Adapter 28

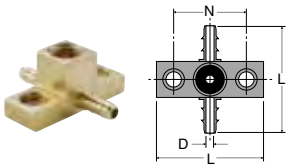
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THD.	C HEX	L	FLOW DIA. D
28-4-5/32-2	5/32	.096	1/4	.170	1/8	7/16	1.07	.062



Male Connector 28

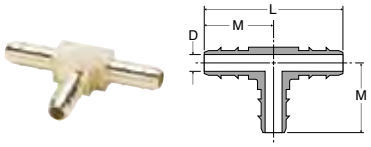
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
28-5/32-2	5/32	.096	1/8	7/16	.84	.062
28-4-1	1/4	.170	1/16	3/8	.93	.120
28-4-2	1/4	.170	1/8	7/16	.97	.120
28-4-4	1/4	.170	1/4	9/16	1.09	.120
28-4-10X32*	1/4	.170	10-32	1/4	.71	.093
28-6-2	3/8	.250	1/8	7/16	1.00	.187
28-6-4	3/8	.250	1/4	9/16	1.13	.187
28-8-4	1/2	.375	1/4	9/16	1.25	.312
28-8-6	1/2	.375	3/8	11/16	1.28	.312
28-8-8	1/2	.375	1/2	7/8	1.44	.312

*Straight thread



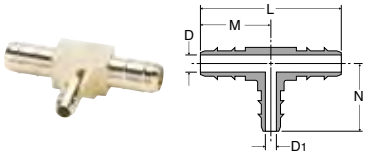
Adapter Tee 220

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	N	FLOW DIA. D
220-4-2	1/4	.170	1/8	1.50	1.00	.120



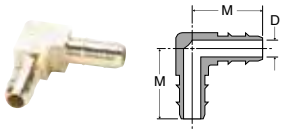
Union Tee 224

PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
224-5/32	5/32	.096	1.00	.50	.062
224-4	1/4	.170	1.25	.63	.120
224-6	3/8	.250	1.38	.69	.187
224-8	1/2	.375	1.63	.81	.312



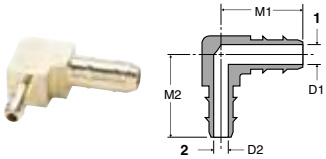
Union Tee 224 Combination Sizes

PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D	FLOW DIA. D1
224-4-4-5/32	1/4X5/32	.170X.096	1.25	.63	.50	.120	.062
224-6-6-5/32	3/8X5/32	.250X.096	1.38	.69	.50	.187	.062
224-6-6-4	3/8X1/4	.250X.170	1.38	.69	.62	.187	.120
224-8-8-4	1/2X1/4	.375X.170	1.62	.81	.65	.312	.120
224-8-8-6	1/2X3/8	.375X.250	1.62	.81	.69	.312	.187



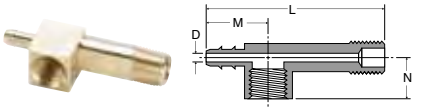
Union Elbow 225

PART NO.	TUBE O.D.	TUBE I.D.	M	FLOW DIA. D
225-5/32	5/32	.096	.50	.062
225-4-4	1/4	.170	.63	.120
225-6-6	3/8	.250	.63	.187
225-8-8	1/2	.375	.81	.312



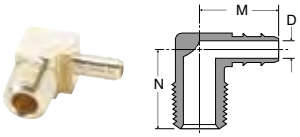
Union Elbow 225 Combination Size

PART NO.	TUBE O.D. 1	TUBE O.D. 2	TUBE I.D. 1	TUBE I.D. 2	M1	M2	FLOW DIA. D1	FLOW DIA. D2
225-4-5/32	1/4	5/32	.170	.096	.63	.50	.120	.062



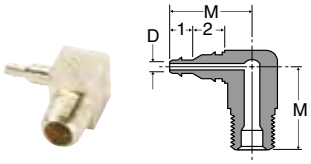
Gauge Tee 228

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
228-4-2	1/4	.170	1/8	1.91	.66	.44	.120



Male Elbow 229

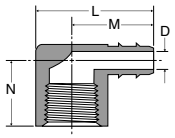
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	M	N	FLOW DIA. D
229-5/32-2	5/32	.096	1/8	.56	.63	.062
229-4-1	1/4	.170	1/16	.62	.60	.120
229-4-2	1/4	.170	1/8	.69	.63	.120
229-4-4	1/4	.170	1/4	.72	.72	.120
229-6-2	3/8	.250	1/8	.69	.69	.187
229-6-4	3/8	.250	1/4	.75	.75	.187
229-8-4	1/2	.375	1/4	.94	.74	.312
229-8-6	1/2	.375	3/8	.94	.81	.312



90° Elbow Barb Adapter 229

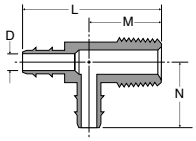
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THREAD	M	FLOW DIA. D
229-4-5/32-2	5/32	.096	1/4	.170	1/8	.78	.062

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

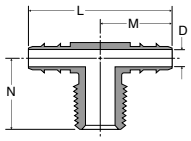
Female Elbow 230

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
230-4-2	1/4	.170	1/8	.91	.66	.44	.120
230-6-4	3/8	.250	1/4	1.12	.78	.63	.187

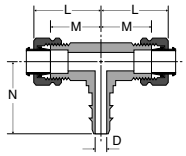
Male Run Tee 231

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
231-4-2	1/4	.170	1/8	1.28	.66	.69	.120
231-6-2	3/8	.250	1/8	1.38	.69	.69	.187
231-6-4	3/8	.250	1/4	1.44	.75	.75	.187

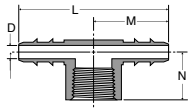
Male Branch Tee 232

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
232-4-1	1/4	.170	1/16	1.33	.66	.65	.120
232-4-2	1/4	.170	1/8	1.38	.69	.66	.120
232-6-2	3/8	.250	1/8	1.38	.69	.69	.187
232-6-4	3/8	.250	1/4	1.50	.75	.75	.187

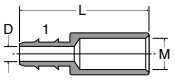
Tee 233

PART NO.	TUBE O.D.	TUBE I.D.	COMB. TUBE	L	M	N	FLOW DIA. D
233-4-4-4	1/4	.170	1/4	.73	.53	.74	.120
233-6-6-4	1/4	.170	3/8	.87	.59	.80	.120

Female Branch Tee 237

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
237-5/32-2	5/32	.096	1/8	1.06	.53	.44	.062
237-4-2	1/4	.170	1/8	1.34	.67	.49	.120

Solder Connector 238

PART NO.	TUBE O.D. 1	TUBE I.D. 1	L	M	FLOW DIA. D
238-4-4	1/4	.170	.91	.25	.120

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Hose Barb Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
O-RING:	FLUOROCARBON

NOMENCLATURE	
EXAMPLE: 125HBL-6-4	**ATTRIBUTE:**
125	HOSE BARB TO MALE PIPE
HBL	HOSE BARB
6	3/8 HOSE I.D.
4	1/4 NPTF/PTF

APPLICABLE TUBE	
TUBE MATERIAL:	RUBBER HOSE, GPH HOSE
HOSE I.D.:	1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 1

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 150 PSI
TEMPERATURE RANGES:	-40° TO +160°F
NOTE:	THESE FITTINGS ARE INTENDED FOR USE WITH 97HC HOSE CLAMPS, SIMILAR TYPE CLAMP OR A CRIMPED FERRULE.

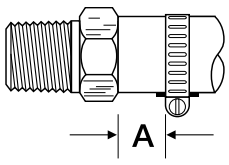


Manufactured in both regular hose barb and beaded hose barb styles. Thread ends include NPTF, SAE straight thread and metric threads.

Assembly Instructions

1. Cut hose cleanly and squarely to length.
2. Slide clamp on hose.
3. Lubricate hose. Push hose on fitting until hose bottoms against stop ring or hex.
4. Position hose clamp as shown below and secure with a screwdriver or wrench. Maintain "A" dimension noted below for proper clamp positioning.

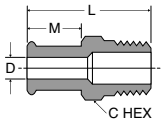
HOSE SIZE	HOSE CLAMP	A
3/16"	97 HC-3	1/4"
1/4"	97 HC-3	1/4"
5/16"	97 HC-6	1/4"
3/8"	97 HC-6	1/8"
1/2"	97 HC-8	1/8"
5/8"	97 HC-12	1/8"
3/4"	97 HC-12	1/8"



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Beaded Hose Barb to Male Pipe 68HB

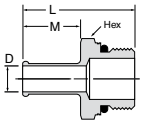




PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68HB-6-6	3/8	3/8	11/16	1.53	.78	.281
68HB-8-4	1/2	1/4	5/8	1.56	.78	.375
68HB-8-6	1/2	3/8	11/16	1.53	.78	.406
68HB-8-8	1/2	1/2	7/8	1.73	.78	.406
68HB-10-6	5/8	3/8	3/4	1.62	.88	.501
68HB-10-8	5/8	1/2	7/8	1.92	.88	.501
68HB-12-8	3/4	1/2	7/8	1.98	.88	.564
68HB-12-12	3/4	3/4	1 1/16	2.04	.97	.625
68HB-16-12	1	3/4	1 1/8	2.12	1.00	.750
68HB-16-16	1	1	1.38	2.31	1.00	.812

Beaded Hose Barb to SAE Straight Thread 685HB



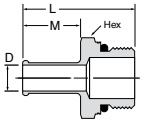


PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.D
685HB-4-4	1/4	7/16-20	9/16	1.40	.78	.18
685HB-6-4	3/8	7/16-20	9/16	1.39	.78	.18
685HB-8-8	1/2	3/4-16	7/8	1.48	.78	.40
685HB-10-8	5/8	3/4-16	7/8	1.56	.78	.40
685HB-12-8	3/4	3/4-16	7/8	1.75	.97	.40
685HB-12-12	3/4	1 1/16-12	1 1/4	1.82	.97	.62
685HB-16-8	1	3/4-16	1 1/8	1.79	.97	.40
685HB-16-12	1	1 1/16-12	1 1/4	1.99	.97	.62

Note: Fluorocarbon o-ring is standard

Hose Barb to Metric Adaptor 68HB-X-MIX

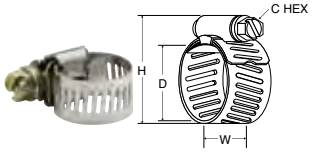




PART NUMBER	I.D. HOSE SIZE	METRIC THREAD	HEX	L	M	D
68HB-6-MI12	3/8	M12 X 1.5	11/16	1.50	.78	.24
68HB-6-MI14	3/8	M14 1.5	3/4	1.51	.78	.29
68HB-8-MI12	1/2	M12 X 1.5	11/16	1.50	.78	.24

Note: Fluorocarbon o-ring is standard

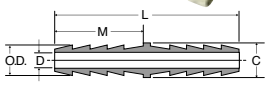
Stainless Steel Worm Drive Clamp 97HC



PART NO.	D MAX.	D MIN.	C HEX	H MAX.	W
97HC-3	.62	.25	.25	1.00	.31
97HC-6	.87	.38	.31	1.40	.50
97HC-8	1.00	.44	.31	1.53	.50
97HC-12	1.25	.50	.31	1.80	.50

Hose Mender 122HBL

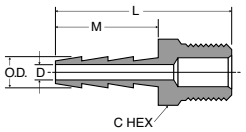




PART NO.	I.D. HOSE SIZE	C DIA.	L	M	O.D.	FLOW DIA. D
122HB-3	3/16	5/16	1.44	.69	.227	.125
122HBL-4	1/4	3/8	2.00	.97	.290	.187
122HBL-5	5/16	7/16	2.00	.97	.353	.250
122HBL-6	3/8	1/2	2.00	.97	.415	.281
122HBL-8	1/2	5/8	2.00	.97	.530	.375
122HBL-12	3/4	7/8	2.00	.97	.790	.562

Hose Barb to Male Pipe 125HB

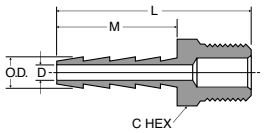




PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HB-2-2	1/8	1/8	7/16	1.07	.50	.185	.093
125HB-3-2	3/16	1/8	7/16	1.25	.69	.227	.125
125HB-3-4	3/16	1/4	9/16	1.44	.69	.227	.125

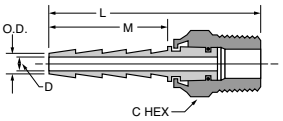
Hose Barb to Male Pipe 125HBL





PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBL-4-2	1/4	1/8	7/16	1.54	.97	.290	.187
125HBL-4-4	1/4	1/4	9/16	1.72	.97	.290	.187
125HBL-4-6	1/4	3/8	11/16	1.77	.97	.290	.187
125HBL-5-2	5/16	1/8	7/16	1.54	.97	.353	.250
125HBL-5-4	5/16	1/4	9/16	1.72	.97	.353	.250
125HBL-5-6	5/16	3/8	11/16	1.77	.97	.353	.250
125HBL-6-2	3/8	1/8	7/16	1.54	.97	.415	.281
125HBL-6-4	3/8	1/4	9/16	1.72	.97	.415	.281
125HBL-6-6	3/8	3/8	11/16	1.77	.97	.415	.281
125HBL-6-8	3/8	1/2	7/8	1.97	.97	.415	.281
125HBL-8-4	1/2	1/4	9/16	1.72	.97	.530	.375
125HBL-8-6	1/2	3/8	11/16	1.77	.97	.530	.375
125HBL-8-8	1/2	1/2	7/8	1.97	.97	.530	.375
125HBL-8-12	1/2	3/4	1-1/16	1.98	.97	.530	.375
125HBL-10-6	5/8	3/8	11/16	1.77	.97	.645	.468
125HBL-10-8	5/8	1/2	7/8	1.97	.97	.645	.468
125HBL-10-12	5/8	3/4	1-1/16	1.98	.97	.645	.468
125HBL-12-8	3/4	1/2	7/8	1.97	.97	.790	.562
125HBL-12-12	3/4	3/4	1-1/16	1.98	.97	.790	.562
125HBL-16-12	1	3/4	1-1/16	2.18	1.17	1.02	.750
125HBL-16-16	1	1	1-3/8	2.36	1.17	1.02	.875

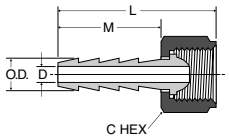




Male Swivel Hose Barb 125HBLSV

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBLSV-4-4	1/4	1/4	11/16	2.14	.97	.290	.187
125HBLSV-6-4	3/8	1/4	11/16	2.14	.97	.415	.250
125HBLSV-6-6	3/8	3/8	11/16	2.14	.97	.415	.250
125HBLSV-8-8	1/2	1/2	7/8	2.48	.97	.530	.375

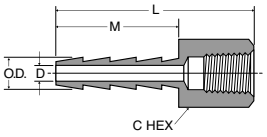




Hose Barb to Swivel Female Ball-End 128HBLSV

PART NO.	I.D. HOSE SIZE	FEMALE N.P.S.M. THREAD	C HEX	L	M	O.D.	FLOW DIA. D
128HBLSV-4-4	1/4	1/4	5/8	1.50	.97	.290	.187
128HBLSV-5-4	5/16	1/4	5/8	1.50	.97	.353	.250
128HBLSV-6-4	3/8	1/4	5/8	1.63	.97	.415	.250
128HBLSV-6-6	3/8	3/8	3/4	1.50	.97	.415	.281
128HBLSV-8-8	1/2	1/2	29/32	1.52	.97	.530	.375

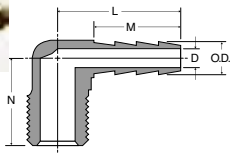




Hose Barb to Female Pipe 126HBL

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
126HBL-4-2	1/4	1/8	1/2	1.47	.97	.290	.187
126HBL-4-4	1/4	1/4	11/16	1.58	.97	.290	.187
126HBL-5-4	5/16	1/4	11/16	1.58	.97	.353	.250
126HBL-6-2	3/8	1/8	1/2	1.47	.97	.415	.281
126HBL-6-4	3/8	1/4	11/16	1.58	.97	.415	.281
126HBL-6-6	3/8	3/8	13/16	1.63	.97	.415	.281
126HBL-8-6	1/2	3/8	13/16	1.69	.97	.530	.375
126HBL-8-8	1/2	1/2	1	1.73	.97	.530	.375
126HBL-12-12	3/4	3/4	1-1/4	1.92	.97	.790	.562

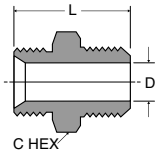




Hose Barb 90° Elbow to Male Pipe 129HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
129HB-3-2	3/16	1/8	.97	.69	.66	.227	.173
129HB-4-2	1/4	1/8	1.04	.76	.66	.290	.187
129HB-4-4	1/4	1/4	1.06	.76	.86	.290	.187
129HB-4-6	1/4	3/8	1.19	.76	.84	.290	.187
129HB-5-2	5/16	1/8	1.06	.76	.66	.353	.234
129HB-5-4	5/16	1/4	1.12	.76	.84	.353	.234
129HB-5-6	5/16	3/8	1.19	.76	.84	.353	.234
129HB-6-2	3/8	1/8	1.32	.97	.94	.415	.281
129HB-6-4	3/8	1/4	1.32	.97	.94	.415	.281
129HB-6-6	3/8	3/8	1.50	.97	1.06	.415	.281
129HB-6-8	3/8	1/2	1.52	.97	1.25	.415	.281
129HB-8-4	1/2	1/4	1.53	.97	1.06	.530	.375
129HB-8-6	1/2	3/8	1.53	.97	1.06	.530	.375
129HB-8-8	1/2	1/2	1.53	.97	1.25	.530	.375
129HB-12-12	3/4	3/4	1.33	.79	1.27	.790	.562



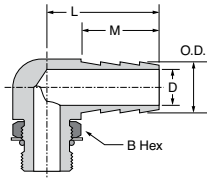


Ball-End Joint Adapter to Male Pipe 127HB

For use with 128HBLSV

PART NO.	MALE N.P.S.M. THREAD	MALE N.P.T. THREAD	C HEX	L	FLOW FLOW DIA. D
127HB-4-2	1/4	1/8	9/16	.91	.219
127HB-4-4	1/4	1/4	9/16	1.10	.281
127HB-6-4	3/8	1/4	11/16	1.10	.312
127HB-6-6	3/8	3/8	11/16	1.15	.406
127HB-8-6	1/2	3/8	7/8	1.25	.406
127HB-8-8	1/2	1/2	7/8	1.50	.531



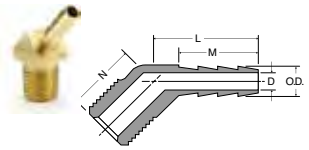


Hose Barb Elbow to SAE Straight Thread 1295HB

PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1295HB-6-6	3/8	9/16-18	11/16	1.10	1.11	.410	.270

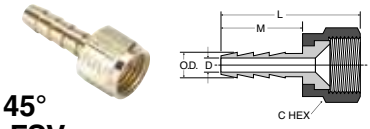
Note: Fluorocarbon o-ring is standard

Hose Barb 45° Elbow to Male Pipe 139HB



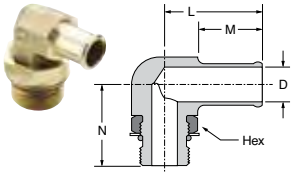
PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
139HB-4-2	1/4	1/8	.91	.76	.68	.290	.187
139HB-4-4	1/4	1/4	1.00	.76	.68	.290	.187
139HB-6-4	3/8	1/4	1.00	.76	.68	.415	.281

Hose Barb to Swivel 45° Female Flare 146HBLFSV



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	O.D.	FLOW DIA. D
146HBLFSV-4-4	1/4	7/16-20	9/16	1.55	.97	.290	.187
146HBLFSV-4-6	1/4	5/8-18	3/4	1.72	.97	.290	.187
146HBLFSV-6-6	3/8	5/8-18	3/4	1.72	.97	.415	.281

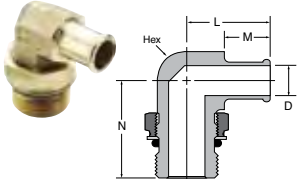
Beaded Hose Barb Elbow to SAE Straight Thread 1695HB



PART NUMBER	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	N	D
1695HB-6-4	3/8	7/16-20	9/16	1.09	.78	1.10	.18
1695HB-8-6	1/2	9/16-18	9/16	1.10	.78	1.11	.30
1695HB-8-8	1/2	3/4-16	7/8	1.28	.78	1.47	.40
1695HB-10-8	5/8	3/4-16	7/8	1.47	.88	1.47	.40
1695HB-10-10	5/8	7/8-14	1	1.41	.88	1.60	.50
1695HB-12-8	3/4	3/4-16	7/8	1.47	.97	1.47	.40
1695HB-12-10	3/4	7/8-14	1	1.60	.97	1.62	.50
1695HB-12-12	3/4	1 1/16-12	1	1.60	.97	1.64	.62
1695HB-16-12	1	1 1/16-12	1 1/4	1.60	.97	1.75	.60

Note: Fluorocarbon o-ring is standard

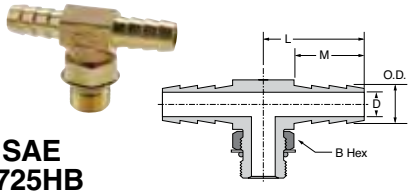
Beaded Elbow to Metric Adaptor 169HB-X-MIX



PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-MI27	5/8	M27 X 2.0	7/8	1.41	.78	1.63	.50
169HB-16-MI27	1	M27 X 2.0	1	1.67	.97	1.68	.71
169HB-16-MI33	1	M33 X 2.0	1 5/16	1.75	.97	1.90	.84

Note: Fluorocarbon o-ring is standard

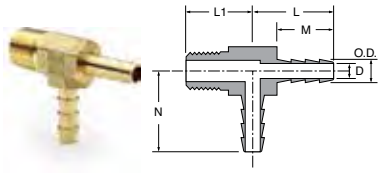
Hose Barb Tee to SAE Straight Thread 1725HB



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1725HB-6-6	3/8	9/16-18	11/16	1.10	.76	.420	.280

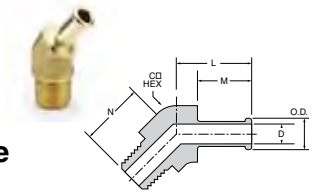
Note: Fluorocarbon o-ring is standard

Hose Barb Tee to Male Pipe 171HB



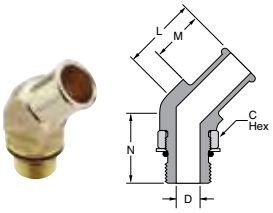
PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	L1	M	N	O.D.	FLOW DIA. D
171HB-4-4	1/4	1/4	1.10	.85	.76	1.10	.290	.187

Beaded Hose Barb 45° Elbow Tube to Male Pipe 179HB



PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
179HB-6-4	3/8	1/4-18	.75	1.09	.78	.93	.45	.28
179HB-6-6	3/8	3/8-18	.75	1.09	.78	.93	.45	.28
179HB-10-8	5/8	1/2-14	.81	1.19	.78	1.13	.70	.50
179HB-12-8	3/4	1/2-14	.81	1.19	.78	1.13	.83	.56

Beaded Hose Barb 45° Elbow Tube to Straight Thread 1795HB

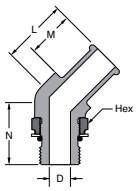


PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	N	FLOW DIA. D
1795HB-8-8	1/2	3/4-16	7/8	1.12	.78	1.16	.400
1795HB-10-8	5/8	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-8	3/4	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-12	3/4	1 1/16-12	1 1/4	1.35	.97	1.65	.620
1795HB-16-12	1	1 1/16-12	1 1/4	1.38	.97	1.47	.620
1795HB-16-14	1	1 3/16-12	1 3/8	1.25	.97	1.80	.720

Note: Fluorocarbon o-ring is standard

Beaded Hose Barb 45 Elbow to Metric Thread 179HB-X-MIX



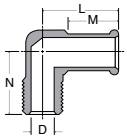


PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 X 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 X 2.0	1 1/16	1.51	.97	1.71	.71

Note: Fluorocarbon o-ring is standard

Beaded Hose Barb 90° Elbow Tube to Male Pipe 269HB

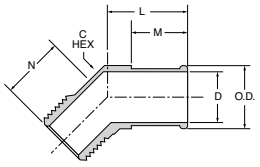




PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	FLOW DIA. D
269HB-6-6	3/8	3/8	1.19	.78	.88	.281
269HB-8-4	1/2	1/4	1.16	.78	.99	.310
269HB-8-6	1/2	3/8	1.16	.78	1.08	.406
269HB-8-8	1/2	1/2	1.28	.78	1.25	.406
269HB-10-4	5/8	1/4	1.13	.78	.99	.312
269HB-10-6	5/8	3/8	1.16	.78	.99	.406
269HB-10-8	5/8	1/2	1.28	.78	1.25	.501
269HB-12-8	3/4	1/2	1.28	.78	1.25	.563
269HB-12-12	3/4	3/4	1.33	.78	1.27	.625

Beaded Hose Barb 45° Elbow Tube to Male Pipe 279HB





PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
279HB-16-12	1	3/4-14	1.12	1.38	.97	1.13	1.06	.720

Notes

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Industrial: Adapters



Pipe Fittings
Forgings & Extrusions
Dryseal Threads
SAE Standards



Metric Adapters
Forgings & Extrusions
Economical
Reusable



ISO Port Adapters
Meets SAE 2244-3 Requirements
Meets ISO 6149-3 Requirements
Viton O-rings Standard



Garden Hose Fittings
Heavy Duty Construction
Use with Hose Clamp
Coupler option



Male Pipe to Male Pipe

215PN Close Nipple

p. J6

215PNL Long Nipple

p. J6

216P Hex Nipple

p. J6

1204P Male Elbow

p. J8

Male Pipe to Female Pipe

209P Bushing

p. J5

222P Adapter

p. J7

1202P-2202P Street Elbow

p. J7

2224P Male Branch tee

p. J8

2225P Street Tee

p. J8

2214P 45° Street Elbow

p. J8

Male BSPT to Female BSPP

CD43 Street Elbow

p. J10

FG43 Adapter - Male BSPT

p. J11

MMS443 Branch Tee

p. J12

MRO434 Run Tee

p. J12

PTR34 Reducer

p. J12

Male NPT to Male BSPT

F3HF Hex Nipple - NPTF/ BSPT

p. J10

Male NPT to Female BSPP

FHG4 Female - BSPP

p. J11

Male BSPT to Female NPT

F3HG Adapter - Male BSPT

p. J10

Male BSPT

FF33 Hex Nipple - BSPT

p. J10

Male BSPP

FF44 Hex Nipple - BSPP

p. J11

Tube to Metric Straight Thread

68NTA-X-MIX Male Connector

p. J14

Female Pipe to Female Pipe

207ACBH Anchor Coupling

p. J5

207P Coupling

p. J5

208P Reducer Coupling

p. J5

212P Union

p. J5

1200P-2200P Union Elbow

p. J7

1203P-2203P Union Tee

p. J7

2200PDE Drop-Ear Elbow

p. J8

1201-2201P 45° Female Elbow

p. J8

2205P Cross

p. J8

Female BSPP

DD44 Elbow

p. J10

GG44 Coupling BSPP

p. J11

KMMOO4 Cross - BSPP

p. J12

MMO444 Tee - BSPP

p. J12

WGG44 Bulkhead union

p. J12

Flare to Metric Straight Thread

48F-X-MIX Male Connector

p. J14

149F-X-MIX Male Elbow

p. J14

159F-X-MIX 45° Male Elbow

p. J14

Flare to Female Garden Hose

50GHSV Swivel Connector

p. J16

J

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Female Pipe to Metric Straight Thread

222P-X-MIX
Adapter



p. J11, J14

Hose to Metric Straight Thread

68HB-X-MIX
Male Connector



p. J14

169HB-X-MIX
Male Elbow



p. J14

179HB-X-MIX
45° Male Elbow



p. J14

Male Pipe to Male Garden Hose

69GH-70GH-71GH
Male Pipe



p. J16

Garden Hose to Garden Hose

75GH
Connector



p. J16

Garden Hose to Female Pipe

79GH-80GH-81GH
Female Pipe



p. J16

Female Garden Hose to Male Pipe

82GH-83GH
Female Hose



p. J16

88GH
Swivel Connector



p. J16

Female Garden Hose to Female Pipe

98GH-99GH
Hose to Pipe



p. J17

98GHSV-99GHSV
Swivel Connector



p. J17

Female Garden Hose

101GHSV
Swivel Nut Connector



p. J17

Barb to Male Garden Hose

54GH-55GH
Hose Barb



p. J16

Barb to Female Garden Hose

90GH
Swivel Connector



p. J16

Adapter

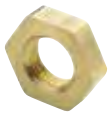
84GH
Filter Adapter



p. J16

Auxiliary Component

210P
Lock Nut



p. J5

211P
Square Head Plug



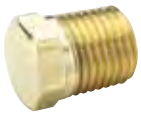
p. J5

213P
Cap



p. J6

218P
Hex Head Plug



p. J6

219P
Countersunk Plug



p. J6

220P
Slotted Head Plug



p. J7

HHP3
Plug - BSPT



p. J11

HP3
Plug - BSPT



p. J12

112
Copper Ring



p. J12

94GH
Hose Nut



p. J16

95GH
Hose Nut Reducer



p. J17

96GH
Hose Cap



p. J17

901GH
Washer



p. J17

1163-60-BPD
Coupler



p. J17

1163-61-BPD
Nipple



p. J17

J

Pipe Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	CA345, CA360, CA377

NOMENCLATURE	
EXAMPLE: 2214P–2–2	**ATTRIBUTE:**
2	EXTRUSION
1 (NOT SHOWN)	FORGING
214	45° STREET ELBOW
P	PIPE
2	1/8" PIPE THREAD
2	1/8" PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, IRON PIPE
THREAD SIZE:	1/8, 1/4, 3/8, 1/2, 3/4, 1

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 1,000 PSI
TEMPERATURE RANGES:	-65° TO +250°F



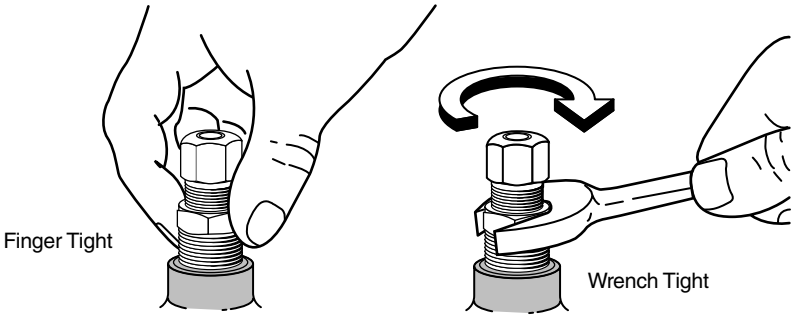
All pipe fittings meet functional requirements of SAE J530 and SAE J531. Threads are made to Dryseal standards.

J

Pipe thread assembly guide (turns method) for Dryseal threads with pre-applied Vibra Seal

Straight Fittings

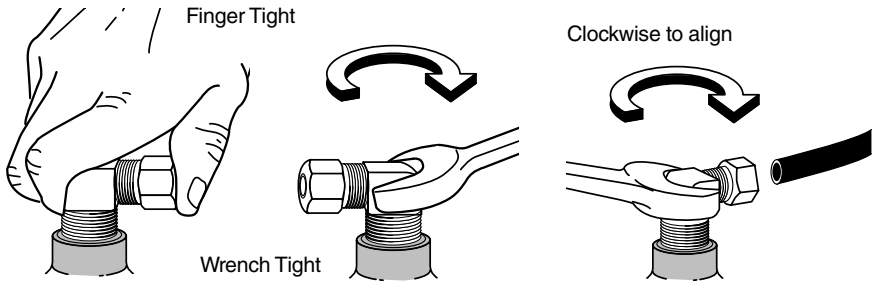
1. Tighten external thread into the internal thread.
1. Tighten an additional 2 revolutions with a wrench up to 1⁄2 in. male pipe thread. Above 1⁄2 in., 11⁄2 to 21⁄2 revolutions.



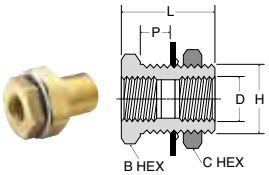
Elbow or Tee Fittings

2. Tighten external thread into the internal thread.
3. Tighten an additional 1 to 11⁄2 revolutions with a wrench.
4. Tighten fitting, Clockwise, to Align with Tubing (never counter clockwise).

Note: To minimize the possibility of a leaking threaded joint after assembling male to female pipe threads, neither end should be backed out (loosened) once the assembly has been made.



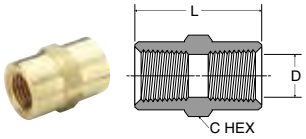
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Otsego, Michigan



Anchor Coupling 207ACBH

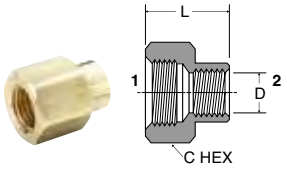
PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX . BULK HEAD P	B HEX	C HEX	L	BLKHD HOLE DIA. H	FLOW DIA. D
207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available



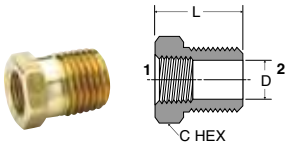
Coupling 207P

PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
207P-2	1/8	9/16	.75	.339
207P-4	1/4	3/4	1.12	.441
207P-6	3/8	7/8	1.12	.571
207P-8	1/2	1-1/16	1.50	.703
207P-12	3/4	1-3/8	1.53	.906



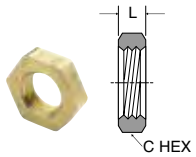
Reducer Coupling 208P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
208P-4-2	1/4	1/8	3/4	.97	.339
208P-6-4	3/8	1/4	7/8	1.16	.441
208P-8-4	1/2	1/4	1-1/16	1.28	.441
208P-8-6	1/2	3/8	1-1/16	1.38	.571
208P-12-6	3/4	3/8	1-3/8	1.32	.571
208P-12-8	3/4	1/2	1-3/8	1.50	.703



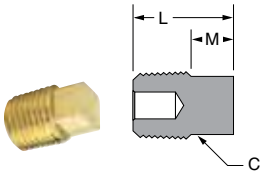
Bushing 209P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
209P-4-2	1/8	1/4	9/16	.75	.339
209P-6-2	1/8	3/8	11/16	.75	.339
209P-6-4	1/4	3/8	3/4	.75	.441
209P-8-2	1/8	1/2	7/8	1.00	.339
209P-8-4	1/4	1/2	7/8	1.00	.441
209P-8-6	3/8	1/2	7/8	1.00	.571
209P-12-2	1/8	3/4	1-1/8	1.00	.339
209P-12-4	1/4	3/4	1-1/8	1.00	.441
209P-12-6	3/8	3/4	1-1/8	1.00	.571
209P-12-8	1/2	3/4	1-1/8	1.00	.703
209P-16-8	1/2	1	1-3/8	1.31	.703
209P-16-12	3/4	1	1-3/8	1.31	.906



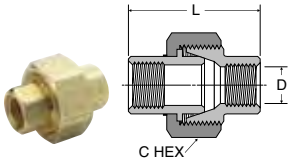
Lock Nut 210P

PART NO.	PIPE THREAD	C HEX	L
210P-2	1/8 NPSL	11/16	.19
210P-4	1/4 NPSL	7/8	.25
210P-6	3/8 NPSL	1	.25
210P-8	1/2 NPSL	1-1/8	.25



Square-Head Plug 211P

PART NO.	PIPE THREAD	C	L	M
211P-2	1/8	9/32	.59	.25
211P-4	1/4	3/8	.80	.29
211P-6	3/8	7/16	.83	.32
211P-8	1/2	9/16	1.07	.39
211P-12	3/4	5/8	1.14	.45



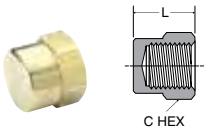
Union 212P

PART NO.	PIPE THREAD	C HEX	L	D
212P-4	1/4	1-3/16	1.54	.441
212P-6	3/8	1-1/4	1.76	.571

J

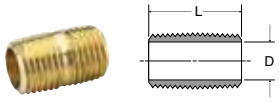
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Otsego, Michigan

Cap 213P



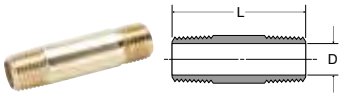
PART NO.	PIPE THREAD	C HEX	L
213P-2	1/8	9/16	.50
213P-4	1/4	11/16	.63
213P-6	3/8	13/16	.63
213P-8	1/2	1-1/16	.87
213P-12	3/4	1-1/4	.89

Close Nipple 215PN



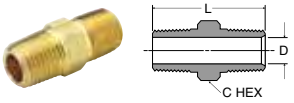
PART NO.	PIPE THREAD	L	FLOW DIA.D
215PN-2	1/8	.75	.281
215PN-4	1/4	.88	.375
215PN-6	3/8	1.00	.500
215PN-8	1/2	1.13	.625
215PN-12	3/4	1.31	.750

Long Nipple 215PNL



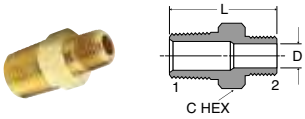
PART NO.	PIPE THREAD	L	FLOW DIA.D
215PNL-2-15	1/8	1-1/2	.250
215PNL-4-15	1/4	1-1/2	.375
215PNL-6-15	3/8	1-1/2	.500
215PNL-8-15	1/2	1-1/2	.625
215PNL-2-20	1/8	2	.250
215PNL-4-20	1/4	2	.375
215PNL-6-20	3/8	2	.500
215PNL-8-20	1/2	2	.625
215PNL-2-25	1/8	2-1/2	.250
215PNL-4-25	1/4	2-1/2	.375
215PNL-6-25	3/8	2-1/2	.500
215PNL-8-25	1/2	2-1/2	.625
215PNL-2-30	1/8	3	.250
215PNL-4-30	1/4	3	.375
215PNL-6-30	3/8	3	.500
215PNL-8-30	1/2	3	.625
215PNL-2-35	1/8	3-1/2	.250
215PNL-4-35	1/4	3-1/2	.375
215PNL-6-35	3/8	3-1/2	.500
215PNL-8-35	1/2	3-1/2	.625

Hex Nipple 216P



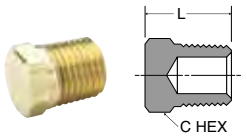
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA.D
216P-2	1/8	7/16	.97	.220
216P-4	1/4	9/16	1.38	.314
216P-6	3/8	11/16	1.41	.440
216P-8	1/2	7/8	1.81	.564
216P-12	3/4	1-1/16	1.81	.752

Hex Nipple Reducers 216P



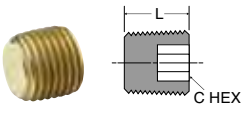
PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
216P-4-2	1/4	1/8	9/16	1.19	.220
216P-6-2	3/8	1/8	11/16	1.22	.220
216P-6-4	3/8	1/4	11/16	1.41	.314
216P-8-4	1/2	1/4	7/8	1.62	.314
216P-8-6	1/2	3/8	7/8	1.62	.440
216P-12-8	3/4	1/2	1-1/16	1.80	.564

Hex-Head Plug 218P



PART NO.	PIPE THREAD	C HEX	L
218P-2	1/8	7/16	.560
218P-4	1/4	9/16	.747
218P-6	3/8	11/16	.780
218P-8	1/2	7/8	.970
218P-12	3/4	1-1/16	1.054

Countersunk Hex-Head Plug 219P

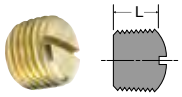


PART NO.	PIPE THREAD	C HEX	L
219P-2	1/8	3/16	.30
219P-4	1/4	1/4	.46
219P-6	3/8	5/16	.46
219P-8	1/2	3/8	.61
219P-12	3/4	9/16	.62

J

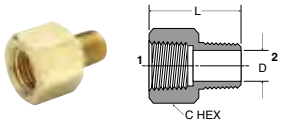
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Slotted-Head Plug 220P



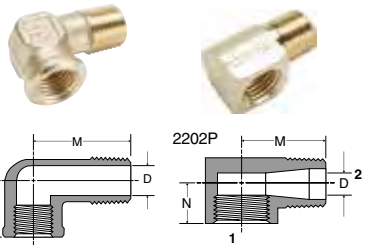
PART NO.	PIPE THREAD	L
220P-2	1/8	.31
220P-4	1/4	.42
220P-6	3/8	.43

Adapter 222P



PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
222P-2-2	1/8	1/8	9/16	.88	.220
222P-4-2	1/4	1/8	3/4	1.06	.220
222P-4-4	1/4	1/4	3/4	1.25	.314
222P-6-2	3/8	1/8	7/8	1.10	.220
222P-6-4	3/8	1/4	7/8	1.25	.314
222P-6-6	3/8	3/8	7/8	1.25	.440
222P-8-4	1/2	1/4	1	1.47	.314
222P-8-6	1/2	3/8	1-1/16	1.47	.440
222P-8-8	1/2	1/2	1-1/16	1.66	.564
222P-12-6	3/4	3/8	1-3/8	1.50	.440
222P-12-8	3/4	1/2	1-3/8	1.69	.564
222P-12-12	3/4	3/4	1-3/8	1.69	.752

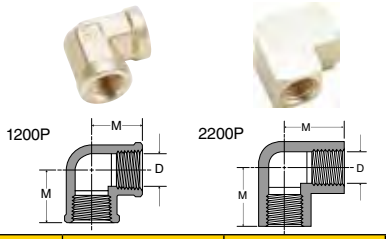
90° Street Elbow 1202P-2202P



PART NO.	1 PIPE THREAD	2 PIPE THREAD	M	N	FLOW DIA. D
1202P-2-2	1/8	1/8	.81	.56	.22
2202P-2-2	1/8	1/8	.62	.48	.22
2202PA-2-2*	1/8	1/8	.66	.48	.22
2202P-4-2	1/4	1/8	.72	.45	.23
1202P-4-4	1/4	1/4	1.08	.69	.31
2202P-4-4	1/4	1/4	.91	.45	.34
2202PA-4-4*	1/4	1/4	.91	.72	.31
2202P-4-6	1/4	3/8	.97	.78	.43
1202P-6-4	3/8	1/4	1.25	.78	.31
1202P-6-6	3/8	3/8	1.25	.78	.42
2202P-6-6	3/8	3/8	.98	.54	.41
2202PA-6-6*	3/8	3/8	.97	.78	.43
1202P-6-8	3/8	1/2	1.53	1.01	.56
1202P-8-6	1/2	3/8	1.25	.97	.42
2202P-8-8	1/2	1/2	1.25	1.03	.56
2202P-12-8	3/4	1/2	1.39	1.10	.56
2202P-12-12	3/4	3/4	1.39	1.10	.75

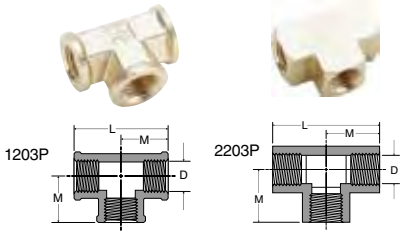
*Meets SAE Dimensions

90° Union Elbow 1200P-2200P



PART NO.	PIPE THREAD	M	FLOW DIA. D
1200P-2-2	1/8	.56	.329
2200P-2-2	1/8	.55	.339
1200P-4-4	1/4	.81	.441
2200P-4-4	1/4	.78	.441
1200P-6-6	3/8	.84	.571
2200P-6-6	3/8	.84	.571
2200P-8-8	1/2	1.07	.703

Union Tee 1203P-2203P

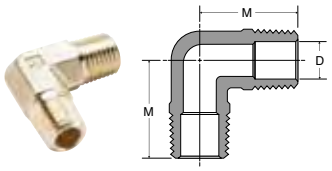


PART NO.	PIPE THREAD	L	M	FLOW DIA.D
1203P-2	1/8	1.12	.56	.339
2203P-2	1/8	1.06	.53	.339
1203P-4	1/4	1.38	.69	.441
2203P-4	1/4	1.52	.76	.441
2203P-6	3/8	1.68	.84	.571
1203P-8	1/2	2.14	1.07	.703
2203P-8	1/2	2.14	1.07	.703
2203P-12	3/4	2.28	1.14	.906

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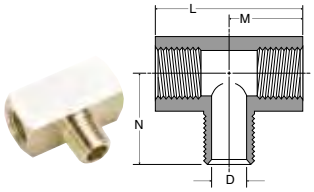
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Otsego, Michigan

Male Elbow 1204P



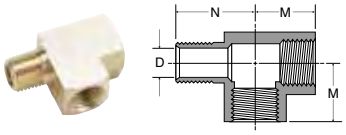
PART NO.	PIPE THREAD	M	FLOW DIA.D
1204P-2	1/8	.71	.220
1204P-4	1/4	1.09	.312
1204P-6	3/8	1.09	.408
1204P-8	1/2	1.41	.502

Male Branch Tee 2224P



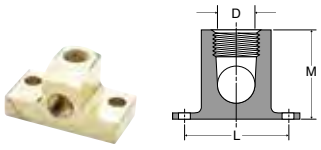
PART NO.	PIPE THREAD	L	M	N	FLOW DIA.D
2224P-2	1/8	1.06	.53	.66	.220
2224P-4	1/4	1.52	.76	.91	.314
2224P-6	3/8	1.68	.84	.97	.440
2224P-8	1/2	2.18	1.09	1.25	.564
2224P-12	3/4	2.32	1.16	1.38	.752

Street Tee 2225P



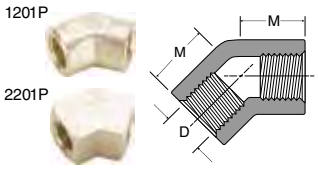
PART NO.	PIPE THREAD	M	N	DIA.D
2225P-2	1/8	.53	.66	.220
2225P-4	1/4	.76	.91	.314
2225P-6	3/8	.84	.98	.440
2225P-8	1/2	1.07	1.26	.564
2225P-12	3/4	1.14	1.38	.752

Drop-ear 90° Elbow 2200PDE



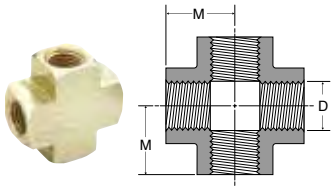
PART NO.	PIPE THREAD	L	M	FLOW DIA.D
2200PDE-2	1/8	1.38	1.00	.339

45° Female Elbow 1201P-2201P



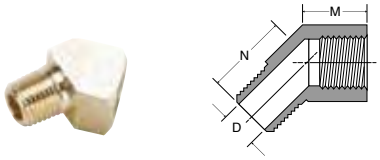
PART NO.	PIPE THREAD	M	FLOW DIA. D
2201P-2-2	1/8	.43	.339
1201P-8-8	1/2	.89	.703

Cross 2205P



PART NO.	PIPE THREAD	M	FLOW DIA. D
2205P-2	1/8	.53	.339
2205P-4	1/4	.75	.441
2205P-6	3/8	.81	.571
2205P-8	1/2	1.07	.703
2205P-12	3/4	1.14	.906

45° Street Elbow 2214P



PART NO.	PIPE THREAD	M	N	FLOW DIA.D
2214P-2-2	1/8	.38	.50	.220
2214P-4-4	1/4	.54	.70	.314
2214P-6-6	3/8	.56	.78	.440
2214P-8-8	1/2	.73	1.00	.564

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Otsego, Michigan

Brass Metric Adapters

MATERIALS OF CONSTRUCTION	
ADAPTERS:	BRASS

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, IRON PIPE
NPT:	1/8, 1/4, 3/8, 1/2
BSPT:	1/8, 1/4, 3/8, 1/2, 3/4, 1
BSPP:	1/8, 1/4, 3/8, 1/2, 3/4, 1

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 1,000 PSI
TEMPERATURE RANGES:	-65° TO +250°F

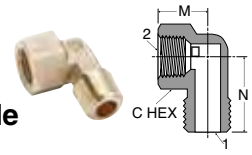


A comprehensive range of adapters for NPT, BSPT and BSPP pipe threads. Produced in both forgings and extrusions. Parker brass adapters are produced from forgings and extrusions to meet exacting requirements. The hot forging process increases the density of the material, refines the grain structure and improves material strength.

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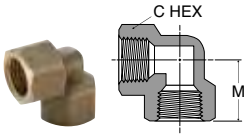
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CD43 90° Elbow Male-Female BSPT-BSPP



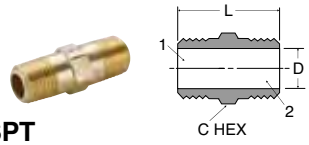
PART NO.	BSPT 1	BSPP 2	C HEX	M	N
1/8CD43B	1/8	1/8	14	14	20
1/4CD43B	1/4	1/4	17	18	25
3/8CD43B	3/8	3/8	22	19	29
1/2CD43B	1/2	1/2	27	24	37

DD44 Pipe 90° Elbow BSPP



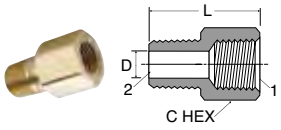
PART NO.	BSPP	C HEX	M
1/8DD44B	1/8	14	15
1/4DD44B	1/4	17	18
3/8DD44B	3/8	22	22
1/2DD44B	1/2	27	29

F3HF Hex Nipple NPTF BSPT



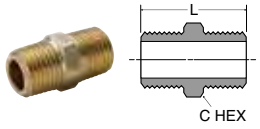
PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HF-B	1/8	1/8	7/16	1.07	.22
1/4F3HF-B	1/4	1/4	9/16	1.58	.31
3/8F3HF-B	3/8	3/8	11/16	1.61	.44
1/2F3HF-B	1/2	1/2	7/8	2.01	.56

F3HG Adapter NPTF Male BSPT



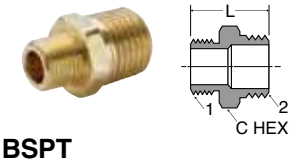
PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HG-B	1/8	1/8	9/16	0.93	.22
1/4F3HG-B	1/4	1/4	3/4	1.35	.31
3/8F3HG-B	3/8	3/8	7/8	1.35	.44
1/2F3HG-B	1/2	1/2	1-1/16	1.76	.56

FF33 Pipe Nipples BSPT



PART NO.	BSPT	C HEX	L
1/8FF33B	1/8	10	19
1/4FF33B	1/4	14	27
3/8FF33B	3/8	17	28
1/2FF33B	1/2	22	36
3/4FF33B	3/4	27	40
1FF33B	1	36	46

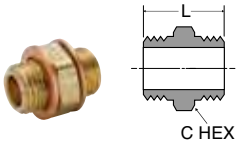
FF33 Unequal Pipe Nipples BSPT



PART NO.	BSPT 1	BSPT 2	C HEX	L
1/8X1/4FF33B	1/8	1/4	14	23
1/8X3/8FF33B	1/8	3/8	17	24
1/8X1/2FF33B	1/8	1/2	22	28
1/4X3/8FF33B	1/4	3/8	17	28
1/4X1/2FF33B	1/4	1/2	22	31
3/8X1/2FF33B	3/8	1/2	22	32
3/8X3/4FF33B	3/8	3/4	27	35
1/2X3/4FF33B	1/2	3/4	27	38
3/4X1FF33B	3/4	1	36	43

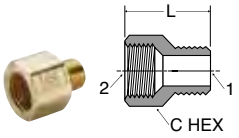
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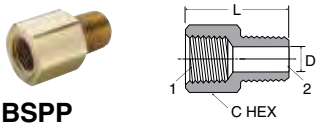
FF44 Pipe Nipples BSPP

PART NO.	BSPP	C HEX	L
1/8FF44B	1/8	14	19
1/4FF44B	1/4	17	22
3/8FF44B	3/8	22	24
1/2FF44B	1/2	27	31



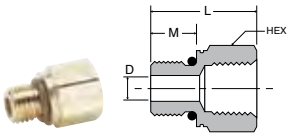
FG43 Reducing Connector Female-Male BSPP-BSPT

PART NO.	BSPT 1	BSPP 2	C HEX	L
1/4X1/8FG43B	1/8	1/4	17	23
3/8X1/8FG43B	1/8	3/8	22	25
3/8X1/4FG43B	1/4	3/8	22	28
1/2X1/8FG43B	1/8	1/2	27	29
1/2X1/4FG43B	1/4	1/2	27	32
1/2X3/8FG43B	3/8	1/2	27	31
3/4X1/2FG43B	1/2	3/4	32	39
1X3/4FG43B	3/4	1	41	38



FHG4 Adapter Male NPTF BSPP

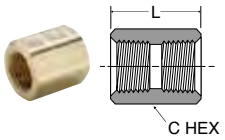
PART NO.	BSPP 1	NPTF 2	C HEX	L	FLOW D
1/8FHG4-B	1/8	1/8	0.562	0.87	.22
1/4FHG4-B	1/4	1/4	0.750	1.33	.31
3/8FHG4-B	3/8	3/8	0.875	1.44	.44
1/2FHG4-B	1/2	1/2	1.062	1.74	.56



Pipe to Metric Adaptor 222P-X-MIX

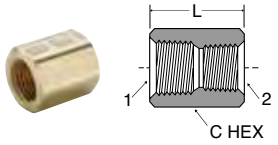
PART NUMBER	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 X 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 X 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 X 1.5	11/16	1.09	.43	.24
222P-6-MI16	3/8-18	M16 X 1.5	7/8	1.10	.45	.35
222P-6-MI22	3/8-18	M22 X 1.5	1 1/16	1.05	.37	.47
222P-8-MI27	1/2-14	M27 X 2.0	1 1/4	1.32	.63	.60

Note: Fluorocarbon o-ring is standard



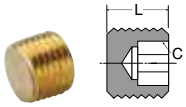
GG44 Pipe Connector BSPP

PART NO.	BSPP	C HEX	L
1/8GG44B	1/8	14	16
1/4GG44B	1/4	17	20
3/8GG44B	3/8	22	24
1/2GG44B	1/2	27	28
3/4GG44B	3/4	32	32
1GG44B	1	41	36



GG44 Unequal Pipe Connector BSPP

PART NO.	BSPP 1	BSPP 2	C HEX	L
1/8X1/4GG44B	1/8	1/4	17	18
1/8X3/8GG44B	1/8	3/8	22	20
1/8X1/2GG44B	1/8	1/2	27	22
1/4X3/8GG44B	1/4	3/8	22	22
1/4X1/2GG44B	1/4	1/2	27	24
3/8X1/2GG44B	3/8	1/2	17	26



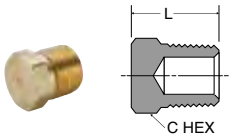
HHP3 Hollow Hex Head Plug BSPT

PART NO.	BSPT	C HEX	L
1/8HHP3B	1/8	5	8
1/4HHP3B	1/4	6	10
3/8HHP3B	3/8	8	11
1/2HHP3B	1/2	10	13

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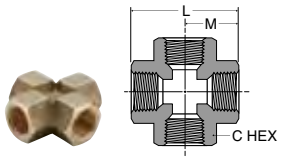
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HP3 Hex Plug BSPT



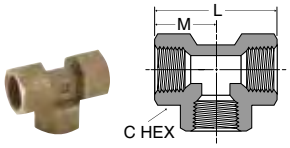
PART NO.	BSPT	C HEX	L
1/8HP3B	1/8	10	12
1/4HP3B	1/4	14	16
3/8HP3B	3/8	17	17
1/2HP3B	1/2	22	21
3/4HP3B	3/4	27	24
1HP3B	1	36	27

KMMOO4 Pipe Cross BSPP



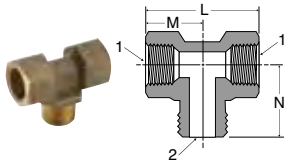
PART NO.	BSPP	C HEX	L	M
1/4KMMOO4B	1/4	17	36	18.0
3/8KMMOO4B	3/8	22	44	22.0
1/2KMMOO4B	1/2	27	58	29.0

MMO444 Pipe Tee BSPP



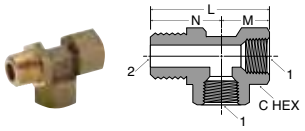
PART NO.	BSPP	C HEX	L	M
1/8MMO444B	1/8	14	29	14.5
1/4MMO444B	1/4	17	36	18.0
3/8MMO444B	3/8	22	44	22.0
1/2MMO444B	1/2	27	58	29.0
3/4MMO444B	3/4	32	62	31.0

MMS443 Branch Tee Female-Male-Female BSPP-BSPT-BSPP



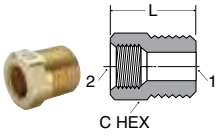
PART NO.	BSPP 1	BSPT 2	L	M	N
1/8MMS443B	1/8	1/8	29	14.5	17
1/4MMS443B	1/4	1/4	36	18.0	22
3/8MMS443B	3/8	3/8	48	24.0	25
1/2MMS443B	1/2	1/2	62	31.0	32

MRO434 Run Tee Female-Female-Male BSPP-BSPP-BSPT



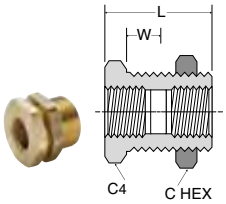
PART NO.	BSPP 1	BSPT 2	C HEX	L	M	N
1/8MRO434B	1/8	1/8	14	32	15	17
1/4MRO434B	1/4	1/4	17	40	18	22
3/8MRO434B	3/8	3/8	24	49	24	25
1/2MRO434B	1/2	1/2	30	63	31	32

PTR34 Pipe Thread Reducer Male-Female BSPT-BSPP



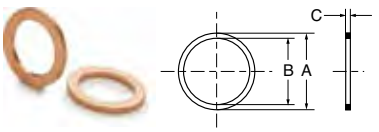
PART NO.	BSPT 1	BSPP 2	C HEX	L
1/4X1/8PTR34B	1/4	1/8	14	16
3/8X1/8PTR34B	3/8	1/8	17	17
3/8X1/4PTR34B	3/8	1/4	17	17
1/2X1/8PTR34B	1/2	1/8	22	22
1/2X1/4PTR34B	1/2	1/4	22	22
1/2X3/8PTR34B	1/2	3/8	22	22
3/4X3/8PTR34B	3/4	3/8	27	23
3/4X1/2PTR34B	3/4	1/2	27	23
1X1/2PTR34B	1	1/2	36	27
1X3/4PTR34B	1	3/4	36	27

WGG44 Bulkhead Female Union BSPP



PART NO.	BSPP	STRAIGHT THREAD	C HEX	C4	L	W
1/8WGG44B	1/8	M16X1.5	19	22	21.5	12
1/4WGG44B	1/4	M20X1.5	24	24	22.0	12
3/8WGG44B	3/8	M23X1.5	27	27	24.0	12
1/2WGG44B	1/2	M27X1.5	32	32	28.0	14
3/4WGG44B	3/4	M34X1.5	41	41	31.0	13
1WGG44B	1	M45X2	55	55	36.0	12

112 Copper Rings for BSPP



PART NO.	BSPP	A	B	C
112-5-10	1/8	16.0	9.9	1.5
112-8-13	1/4	19.0	13.5	1.5
112-12-17	3/8	24.0	16.9	1.5
112-15-21	1/2	27.0	21.2	2.0

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

ISO Port Adapters

MATERIALS OF CONSTRUCTION	
ADAPTERS:	BRASS
O-RING:	FLUOROCARBON

NOMENCLATURE	
EXAMPLE: 159F-10MI-27	**ATTRIBUTE:**
1	FORGING
59	45° MALE ELBOW
F	45° FLARE
10	5/8 TUBE SIZE
MI	METRIC ISO PORT
27	27 MM PORT THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, J844 TYPE A & B NYLON TUBING

PRESSURE AND TEMPERATURE RANGE	
NOTE:	DEPENDENT ON TUBING OR HOSE END CONNECTION



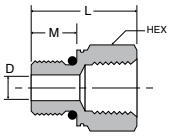
Adapters meet dimensional requirements of ISO 6149-3 and SAE 2244-3 end configurations include NPTF, flare, hose barb and NTA.

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Otsego, Michigan

Pipe to Metric Adaptor 222P-X-MIX



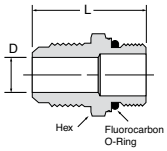


PART NUMBER	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 X 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 X 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 X 1.5	11/16	1.09	.43	.24
222P-4-MI14	1/4-18	M14 X 1.5	3/4	1.09	.43	.30
222P-6-MI16	3/8-18	M16 X 1.5	7/8	1.16	.45	.35
222P-6-MI22	3/8-18	M22 X 1.5	1 1/16	1.05	.51	.47
222P-8-MI27	1/2-14	M27 X 2.0	1 1/4	1.32	.63	.60

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Metric Adapters Section

Flare to Metric Adaptor 48F-X-MIX



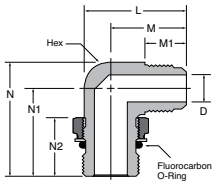


PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MII6	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 X 2.0	1 1/4	1.87	.50
48F-12-MI27	3/4	M27 X 2.0	1 1/4	1.99	.63

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section

Flare Elbow to Metric Adaptor 149F-X-MIX



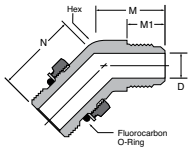


PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	M1	N	N1	N2	D
149F-10-MI27	5/8	M27 X 2.0	7/8	1.95	1.46	.88	2.12	1.63	1.09	.50

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section

45° Flare Elbow to Metric Adaptor 159F-X-MIX



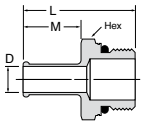


PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-MII6	1/2	M16 X 1.5	13/16	1.10	.75	1.16	.36
159F-10-MI27	5/8	M27 X 2.0	1 1/8	1.21	.88	1.50	.50

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section

Hose Barb to Metric Adaptor 68HB-X-MIX



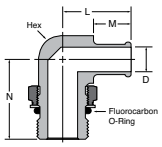


PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	D
68HB-6-M12	3/8	M12 X 1.5	11/16	1.50	.78	.24
68HB-6-MI14	3/8	M14 1.5	3/4	1.51	.78	.30
68HB-8-MI12	1/2	M12 X 1.5	11/16	1.50	.78	.24
68HB-10-MI27	5/8	M27 X 2.0	1 1/4	1.77	.78	.50

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Hose Barb Section

Beaded Elbow to Metric Adaptor 169HB-X-MIX



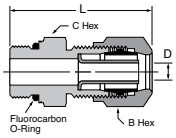


PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-MI27	5/8	M27 X 2.0	7/8	1.41	.78	1.63	.50
169HB-16-MI27	1	M27 X 2.0	1	1.67	.97	1.68	.71

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Hose Barb Section

NTA to Metric Adaptor 68NTA-X-MIX



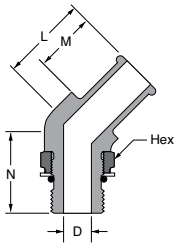


PART NUMBER	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
68NTA-4-MI10	1/4	M10 X 1.0	9/16	9/16	1.33	.140

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Air Brake-NTA Section

Beaded Hose Barb 45° Elbow to Metric Thread 179HB-X-MIX





PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 X 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 X 2.0	1 1/16	1.51	.97	1.71	.71

Note: Fluorocarbon o-ring is standard

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Garden Hose Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
WASHER:	RUBBER

NOMENCLATURE	
EXAMPLE: 50GHSV-6-12	**ATTRIBUTE:**
50	FLARE TO FEMALE HOSE
GH	GARDEN HOSE
SV	SWIVEL CONNECTOR
6	3/8" TUBE O.D.
12	3/4" HOSE THREAD

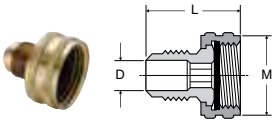
SPECIFICATIONS	
PRESSURE RANGE:	UP TO 150 PSI
TEMPERATURE RANGE:	+35°F TO +100°F AT 75 PSI
NOTE:	90GH IS INTENDED FOR USE WITH THE 97HC HOSE CLAMP OR CRIMPED FERRULE ALL FEMALE CONNECTOR ENDS SHOULD HAVE A RUBBER WASHER (901GH-12) INSERTED PRIOR TO USAGE.



Connect garden hose to other garden hose, to pipe, or to tubing with these solid brass fittings. Hose-end threads are 3/4” garden hose thread. Swivel connectors allow hose to twist without kinking.

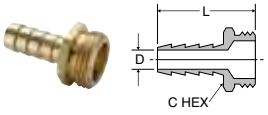
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Swivel Connector SAE Flare to Female Hose Thread 50GHSV



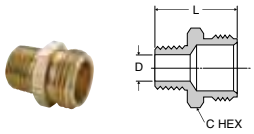
PART NO.	TUBE SIZE	HOSE THREAD	L	M	FLOW DIA.D
50GHSV-6-12	3/8	3/4	1.25	1.15	.297
50GHSV-8-12	1/2	3/4	1.34	1.15	.406

Hose Barb to Male Hose Thread 53GH, 54GH & 55GH



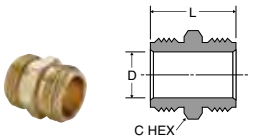
PART NO.	I.D. HOSE SIZE	HOSE THREAD	C HEX	L	FLOW DIA.D
53GH-8-12	1/2	3/4	1-1/16	1.88	.375
54GH-10-12	5/8	3/4	1-1/16	1.88	.500
55GH-12-12	3/4	3/4	1-1/16	1.88	.625

Male Hose to Male Pipe 69GH, 70GH, 71GH



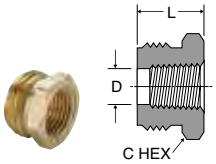
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
69GH-12-4	3/4	1/4	1-1/16	1.25	.410
69GH-12-6	3/4	3/8	1-1/16	1.25	.406
70GH-12-8	3/4	1/2	1-1/16	1.39	.531
71GH-12-12	3/4	3/4	1-1/16	1.41	.750

Male Hose to Male Hose 75GH



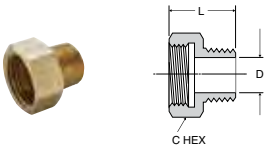
PART NO.	HOSE THREAD	C HEX	L	FLOW DIA.D
75GH-12	3/4	1-1/16	1.25	.750

Male Hose to Female Pipe 78GH, 79GH, 80GH & 81GH



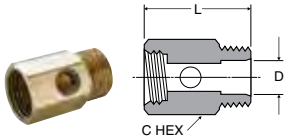
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
78GH-12-4	3/4	1/4	1-1/16	.75	.422
79GH-12-6	3/4	3/8	1-1/16	.75	.562
80GH-12-8	3/4	1/2	1-1/16	.75	.687
81GH-12-12	3/4	3/4	1-3/16	1.28	.719

Female Hose to Male Pipe 82GH & 83GH



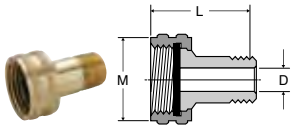
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
82GH-12-8	3/4	1/2	1-3/16	1.20	.562
83GH-12-12	3/4	3/4	1-3/16	1.22	.750

Special Filter Adapter 84GH



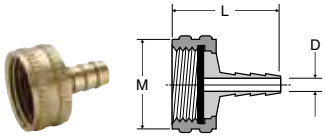
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
84GH-8-8	1/2	1/2	15/16	1.53	.530

Swivel Connector Female Garden Hose to Male Pipe 88GH



PART NO.	HOSE THREAD	PIPE THREAD	L	M	FLOW DIA.D
88GH-12-4	3/4	1/4	1.69	1.15	.312
88GH-12-6	3/4	3/8	1.69	1.15	.406

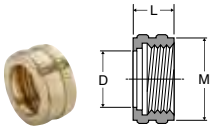
Swivel Connector Female Garden Hose to Hose Barb 90GH



PART NO.	HOSE THREAD	I.D. HOSE SIZE	L	M	FLOW DIA.D
90GH-12-3	3/4	3/16	1.29	1.15	.125
90GH-12-4	3/4	1/4	1.21	1.15	.187
90GH-12-6	3/4	3/8	1.21	1.15	.281
90GH-12-8	3/4	1/2	1.21	1.15	.375
90GH-12-10*	3/4	5/8	1.93	1.19	.500
90GH-12-12*	3/4	3/4	1.93	1.19	.625

*Denotes hex body

Knurled Hose Nut 94GH

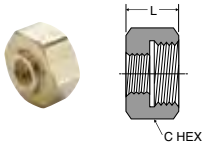


PART NO.	HOSE THREAD	L	M	FLOW DIA.D
94GH-12	3/4	.57	1.15	.808

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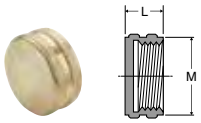
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Hose Nut Reducer 95GH



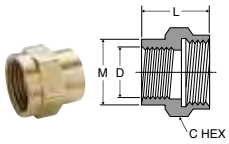
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L
95GH-12-2	3/4	1/8	1-1/8	.63

Hose Cap Nut 96GH



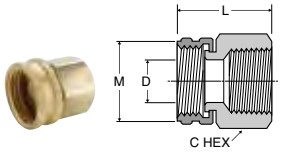
PART NO.	HOSE THREAD	L	M
96GH-12	3/4	.50	1.15

Female Hose to Female Pipe 98GH & 99GH



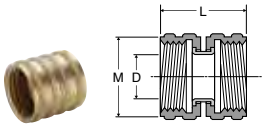
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	M	FLOW DIA.D
98GH-12-8	3/4	1/2	1-3/16	1.14	1.01	.687
99GH-12-12	3/4	3/4	1-3/16	1.25	1.17	.750

Swivel Connector Female Hose to Female Pipe 98GHSV & 99GHSV



PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	M	FLOW DIA.D
98GHSV-12-8	3/4	1/2	1	1.27	1.21	.687
99GHSV-12-12	3/4	3/4	1-3/16	1.34	1.21	.687

Swivel Nut Connector 101GHSV



PART NO.	HOSE THREAD	L	M	FLOW DIA.D
101GHSV-12	3/4	1.25	1.15	.625

Rubber Garden Hose Coupling Washer 901GH



PART NO.	HOSE THREAD
901GH-12	3/4

NOTE: All female connector ends should have this rubber washer

Hydraulic Quick Couplings/ High Flow Couplings

Applications

Parker Water Service Couplings are used anywhere water hoses are connected and disconnected frequently. They are used on a wide variety of applications including garden hoses, wash down systems, and mobile water tank lines. The unvalved design permits maximum flow with minimum pressure drop.

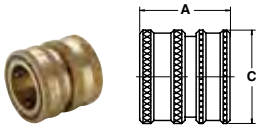
Features

- Brass and stainless steel construction for heavy duty service.
- Durable 4-ball locking mechanism for secure connections.
- Quality, temperature-resistant nitrile seals for a leak-free service life.

Specifications

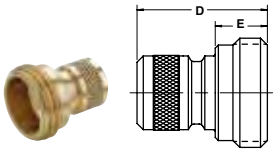
- Body Size 3/4"
- Rated Pressure (PSI) 200
- Rated Flow (GPM) 28
- Temperature Range (std seals) -40°F to +250°F

High Flow Coupler 1163-60-BPD



PART NO.	BODY SIZE	THREAD SIZE NH	A	C
1163-60-BPD	3/4	3/4-11 1/2	1.12	1.21

High Flow Nipple 1163-61-BPD



PART NO.	BODY SIZE	THREAD SIZE NH	D	E
1163-61-BPD	3/4	3/4-11 1/2	1.25	.5

J

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Fluid System Connectors
Otsego, Michigan

Notes

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Industrial: Valves



Ball Valves

Brass, Carbon Steel & Stainless Steel
Padlocking & Vented Options
Handle Options
Inch & Metric
UL Listed
90˚ Valves
Actuators



Needle Valves

Fine Threaded for control and positive seal
All Brass construction
Metal to Metal Seats



Ground Plug Shutoff / Drain Cocks

External & Internal Seat
Metal to Metal Seats
Economical





Female Ports

XV500P
Female-Female

p. K6

XV502P
Panel Mount

p. K11

XV520P
Economy Series

p. K17

XV533P
3 Way Diversion

p. K19

XV540P
4 Way

p. K19

XV600P
6 Port Diversion

p. K24

XV633P
6 Port Diversion

p. K24

XV500CS
Carbon Steel

p. K26

XV502CS
Panel Mount
Carbon Steel

p. K26

XV502SS
Panel Mount
Stainless

p. K34

MV709
Micro Valve

p. K47

MV200
Mini Valve

p. K52

MV609
Mini Valve

p. K52

PV609
Plug Valve

p. K54

Male-Female Ports

XV501P
Male-Female

p. K9

XV590P
90° Valve

p. K21

XV590P-X-04
90° Valve

p. K21

XV501SS
Stainless Steel

p. K32

MV708
Micro Valve

p. K47

MV608
Mini Valve

p. K52

PV608
Plug Valve

p. K54

Solder Ports

XV509P
Solder - Solder

p. K14

Male-Male Ports

XV591P
90° Valve

p. K21

XV591P-X-04
90° Valve

p. K21

PV607
Plug Valve

p. K54

Straight Thread Ports

XV506P
Female - Female

p. K13

XV510P
Male - Female

p. K16

XV506CS
Carbon Steel

p. K28

Straight Thread Ports-High Pressure

XV506HP
Straight Thread

p. K31

Female Ports-High Pressure

XV500HP
Female Ports

p. K30

Female Ports-Padlocking-High Pressure

XVP500HP
Female Ports-Padlocking

p. K30

Barb to Female Port

XV500HB
Barb to Female Port

p. K22

Padlocking

XVP500P
Female Ports

p. K6

XVP501P
Male - Female

p. K9

XVP502P
Panel Mount

p. K11

XVP510P
Straight Thread

p. K16

XVP500CS
Carbon Steel

p. K26

XVP502CS
Panel Mount

p. K26

XVP502SS
Stainless Steel

p. K34

Straight Thread Ports-Padlocking-High Pressure

XVP506HP
Straight Thread

p. K31

Vented

XVV500P
Female Ports

p. K6

XVV501P
Male-Female

p. K9

XVV502P
Panel Mount

p. K11

K

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Fluid System Connectors
Otsego, Michigan

Vented-Padlocking

XVVP500P
Female Ports

p. K6

XVVP501P
Male-Female

p. K9

XVVP502P
Panel Mount

p. K11

Tee Handle

XV500P-X-04
Female Ports

p. K7

XV501P-X-04
Male - Female

p. K9

XV502P-X-04
Panel Mount

p. K11

XV510P-X-04
Straight Thread

p. K16

XV500CS-X-04
Carbon Steel

p. K26

Oval Handle

XV500P-X-21
Female Ports

p. K7

XV501P-X-21
Male - Female

p. K9

XV502P-X-21
Panel Mount

p. K11

XV510P-X-21
Straight Thread

p. K16

XV500CS-X-21
Carbon Steel

p. K27

XV502CS-X-21
Panel Mount - Carbon Steel

p. K27

XV502SS-X-21
Oval Handle

p. K34

Short Handle

XV502SS-X-20
Panel Mount

p. K34

Metric Female Ports

BVGC
Female Ports

p. K39

BVGTC
Female Ports

p. K39

BVGL
Female Ports Long

p. K41

BVGTL
Female Ports Long

p. K41

MBVG
Compact

p. K45

Metric Padlocking

BVG4PLOCK
Female Ports

p. K43

Needle Valves

NV101F
Female - Male

p. K56

NV102F
Flare

p. K56

NV103F
Flare - Male Pipe

p. K56

NV104C-NV104CA
Compression - Pipe

p. K56

NV105C-NV105CA
Compression

p. K56

NV106C-NV106CA
Compression - Pipe

p. K57

NV107P
Pipe

p. K57

NV108P
Female - Male

p. K57

NV109P
Female

p. K57

NV311P
Poly-Tite

p. K57

NV312P
Poly-Tite

p. K57

Shutoff Valves

V203F
Flare

p. K59

V204F
Flare - Pipe

p. K59

V303C-V303CA
Compression

p. K59

V304C-V304CA
Compression - Pipe

p. K59

V401P
Pipe

p. K59

V402P
Female - Pipe

p. K59

V403P
Female

p. K59

V406P
3 Way

p. K59

V407P
4 Way

p. K59

DC601
Pipe

p. K59

Drain Cocks

DCR601
Internal Seal

p. K60

DC602
Internal Seal

p. K60

K

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

DC603
Internal Seal



p. K60

DC604
External Seal



p. K60

DC606
External Seal



p. K60

DC607
Bib Drain



p. K60

Auxiliary

XV502P-X-ACT
Actuator



p. K36

XV502SS-X-ACT
Actuator



p. K36

XV502P-X-SUB
Sub-Assembly



p. K37

XV502SS-X-SUB
Sub-Assembly



p. K37

ACT-P-X-KIT
Brass Actuator kit



p. K37

ACT-SS-X-KIT
Stainless Actuator Kit



p. K37

STX-P
Stem Extension



p. K50

PVMB-001
Mounting Bracket



p. K54

HV104C-KIT
Humidifier Valve Kit



p. K56

SPV104C-KIT
Self Piercing Kit



p. K56

HV104C
Humidifier Valve



p. K56

K

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Brass Ball Valves Series 500

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	500	P	-4	-00
STYLE	• V-VALVE* • VP-VALVE, PADLOCKING HANDLE* • VV-VALVE, VENTED • VVP-VALVE, VENTED, PADLOCKING HANDLE			
TYPE	500-FEMALE/FEMALE PTF PORTS 500-FEMALE/FEMALE NPT PORTS*			
MATERIAL	P- BRASS* PN-NICKEL PLATED			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"			
OPTIONS	• 01-STAINLESS STEEL BALL & STEM • 02-STAINLESS STEEL HANDLE & NUT* • 03-STAINLESS STEEL BALL, STEM, HANDLE & NUT • 04-TEE HANDLE* • 08-UNMARKED YELLOW VINYL HANDLE COVER* • 21-OVAL HANDLE			

SPECIFICATIONS	
OPERATING INSTRUCTIONS:	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG. • VENTED UP TO 250 PSI
TEMPERATURE RANGES:	0° TO +350°F
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

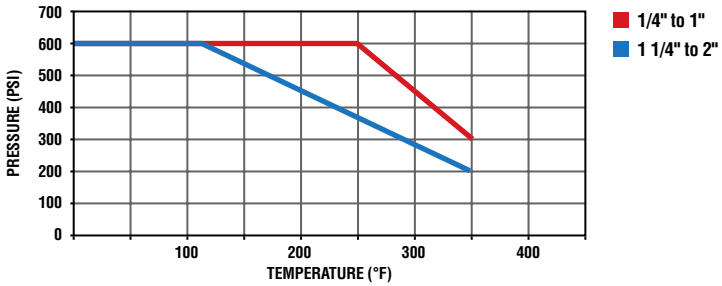
FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0
1-1/4*	57.0
1-1/2*	92.0
2*	224.0

*For these part numbers only the * options are available.



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

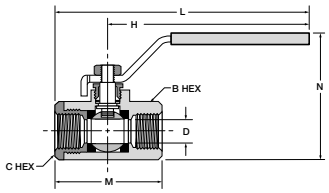


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Female-Female Pipe Ends XV500P

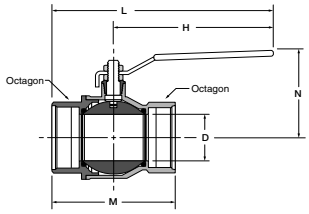
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	FLOW DIA.D
XV500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
XV500P-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
XV500P-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875





Female-Female Pipe Ends XV500P-20, XV500P-24, XV500P-32

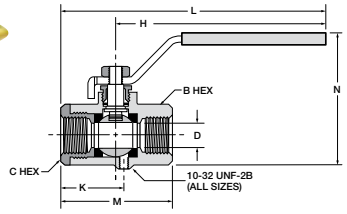
PART NO.	PIPE THREAD [NPT]	OCTAGON	H	L	M	N	FLOW DIA.D
XV500P-20	1-1/4	1.93	6.22	8.05	3.66	3.01	1.18
XV500P-24	1-1/2	2.13	6.22	8.23	4.02	3.25	1.50
XV500P-32	2	2.69	6.22	8.58	4.76	3.52	1.89



Vented, Female Pipe Ends XVV500P

PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVV500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVV500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVV500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875

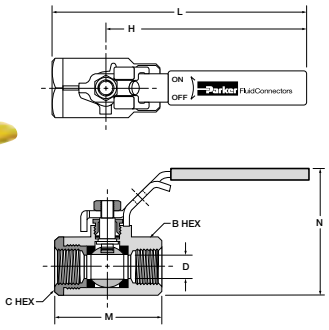




Locking Handle, Female Pipe Ends XVP500P

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
XVP500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
XVP500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
XVP500P-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
XVP500P-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875
FOR USE WITH 5/16" Ø SHANK LOCK; .33Ø								
XVP500P-20	1-1/4	1-15/16	1-15/16	6.22	8.05	3.66	4.04	1.180
XVP500P-24	1-1/2	2-1/8	2-1/8	6.22	8.23	4.02	4.52	1.500
XVP500P-32	2	2-11/16	2-11/16	6.22	8.60	4.76	5.07	1.890
FOR USE WITH 9/32" Ø SHANK LOCK; .31Ø								

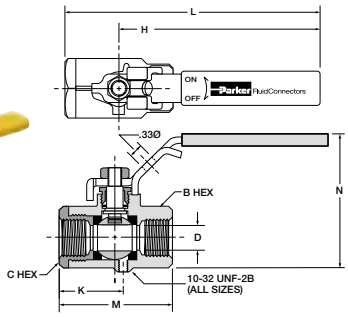




OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends XVVP500P

PART NO.	PIPE THD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVVP500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVVP500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVVP500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875
FOR USE WITH 5/16" Ø SHANK LOCK									



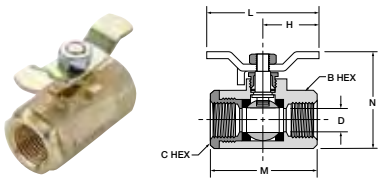


*PTF Special Short. **PTF Special Extra Short

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Fluid System Connectors
Otsego, Michigan

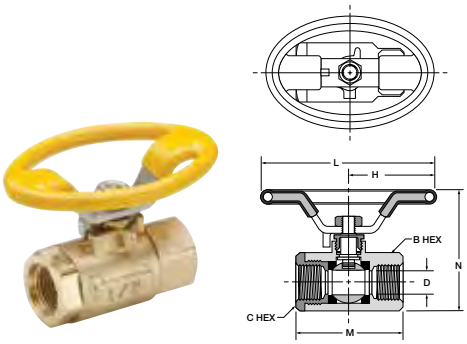
Tee Handle, Female Pipe Ends XV500P-X-04

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500P-4-04	1/4	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-6-04	3/8	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.20	1.98	.500
XV500P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	2.42	2.20	.685
XV500P-16-04	1**	1-1/2	1-9/16	1.25	2.50	2.75	2.48	.875



Oval Handle, Female Pipe Ends XV500P-X-21

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500P-4-21	1/4	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV500P-6-21	3/8	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV500P-8-21	1/2*	1-1/16	1-1/16	1.74	3.49	2.20	2.49	.500
XV500P-12-21	3/4**	1-1/4	1-5/16	1.74	3.48	2.42	2.71	.685
XV500P-16-21	1**	1-1/2	1-9/16	1.74	3.48	2.75	2.99	.875



*PTF Special Short. **PTF Special Extra Short

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male /Female Brass Ball Valves Series 501

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	501	P	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE • VV-VALVE, VENTED • VVP-VALVE, VENTED, PADLOCKING HANDLE			
TYPE	501-MALE/FEMALE PTF PORTS			
MATERIAL	P- BRASS PN-NICKEL PLATED			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			
OPTIONS	• 01-STAINLESS STEEL BALL & STEM • 02-STAINLESS STEEL HANDLE & NUT • 03-STAINLESS STEEL BALL, STEM, HANDLE & NUT • 04-TEE HANDLE • 08-UNMARKED YELLOW VINYL HANDLE COVER • 21-OVAL HANDLE			

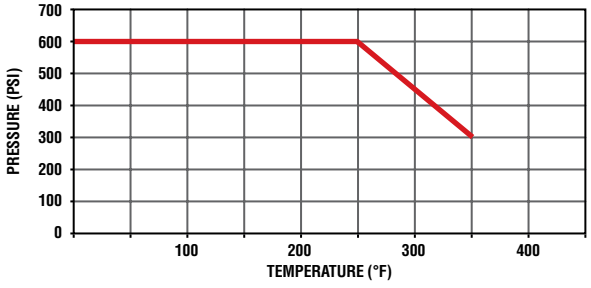
SPECIFICATIONS	
OPERATING INSTRUCTIONS:	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG. • VENTED UP TO 250 PSI
TEMPERATURE RANGES:	0° TO +350°F
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

FLOW DATA	
VALVE SIZE	CV
1/4	6.3
3/8	5.7
1/2	10.0
3/4	25.0
1	35.0



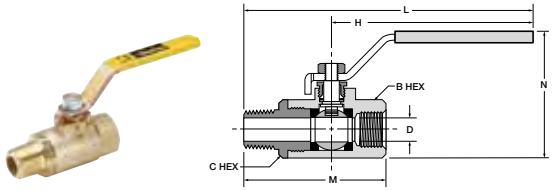
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.



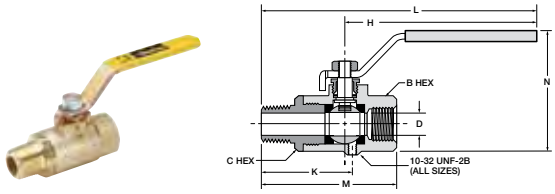
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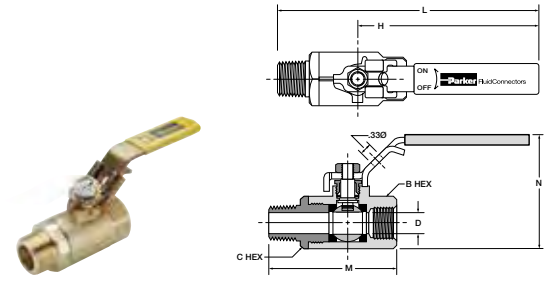
Male-Female Pipe Ends XV501P

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4	1/4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
XV501P-6	3/8	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
XV501P-8	1/2*	1/2	1-1/16	1-1/16	3.96	5.75	2.94	2.58	.500
XV501P-12	3/4**	3/4*	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
XV501P-16	1**	1*	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875



Vented, Male-Female Pipe Ends XVV501P

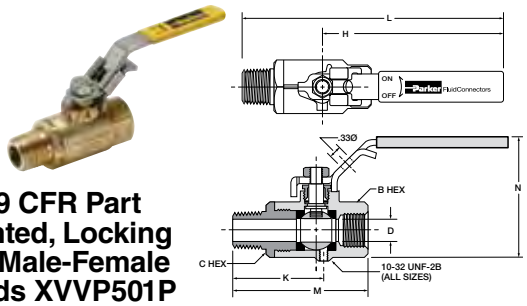
PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVV501P-4	1/4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
XVV501P-6	3/8	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
XVV501P-8	1/2*	1/2	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
XVV501P-12	3/4**	3/4*	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
XVV501P-16	1**	1*	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875



Locking Handle, Male-Female Pipe Ends XVP501P

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP501P-4	1/4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
XVP501P-6	3/8	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
XVP501P-8	1/2*	1/2	1-1/16	1-1/16	3.96	5.75	2.95	2.58	.500
XVP501P-12	3/4**	3/4*	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
XVP501P-16	1**	1*	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875

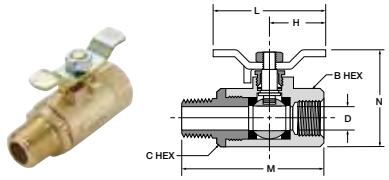
For use with 5/16" Ø shank lock



OSHA 29 CFR Part 1910 Vented, Locking Handle, Male-Female Pipe Ends XVVP501P

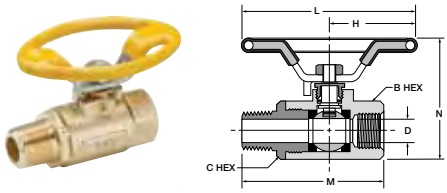
PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVVP501P-4	1/4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
XVVP501P-6	3/8	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
XVVP501P-8	1/2*	1/2	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
XVVP501P-12	3/4**	3/4	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
XVVP501P-16	1**	1	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875

For use with 5/16" Ø shank lock



Tee Handle, Male-Female Pipe Ends XV501P-X-04

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4-04	1/4	1/4	15/16	15/16	1.25	2.50	2.59	1.87	.344
XV501P-6-04	3/8	3/8	15/16	15/16	1.25	2.50	2.59	1.87	.375
XV501P-8-04	1/2*	1/2	1-1/16	1-1/16	1.25	2.50	2.95	1.98	.500
XV501P-12-04	3/4**	3/4	1-1/4	1-5/16	1.25	2.50	3.00	2.20	.685
XV501P-16-04	1**	1	1-1/2	1-9/16	1.25	2.50	3.60	2.48	.875



Oval Handle, Male-Female Pipe Ends XV501P-X-21

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4-21	1/4	1/4	15/16	15/16	1.74	3.49	2.59	2.38	.344
XV501P-6-21	3/8	3/8	15/16	15/16	1.74	3.49	2.59	2.38	.375
XV501P-8-21	1/2*	1/2	1-1/16	1-1/16	1.74	3.49	2.95	2.49	.500
XV501P-12-21	3/4**	3/4	1-1/4	1-5/16	1.74	3.48	3.00	2.71	.685
XV501P-16-21	1**	1	1-1/2	1-9/16	1.74	3.48	3.60	2.99	.875

K

*PTF Special Short. **PTF Special Extra Short

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Panel Mount Ball Valves
Series 502

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	502	P	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE • VV-VALVE, VENTED • VVP-VALVE, VENTED, PADLOCKING HANDLE			
TYPE	502-FEMALE/FEMALE PTF PORTS			
MATERIAL	P- BRASS PN-NICKEL PLATED			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			
OPTIONS	• 01-STAINLESS STEEL BALL & STEM • 02-STAINLESS STEEL HANDLE & NUT • 03-STAINLESS STEEL BALL, STEM, HANDLE & NUT • 04-TEE HANDLE • 08-UNMARKED YELLOW VINYL HANDLE COVER • 21-OVAL HANDLE			

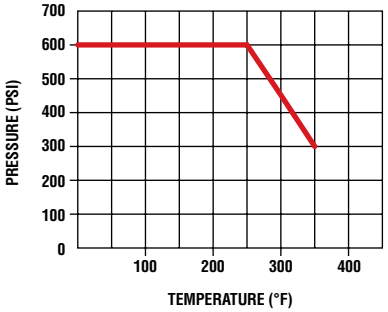
SPECIFICATIONS	
OPERATING INSTRUCTIONS:	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG. • VENTED UP TO 250 PSI
TEMPERATURE RANGES:	0° TO +350°F
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0

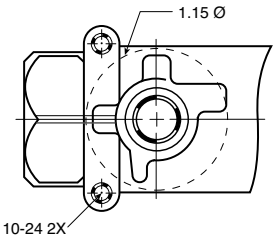


Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

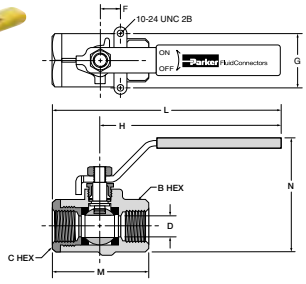


Mounting detail for all sizes



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

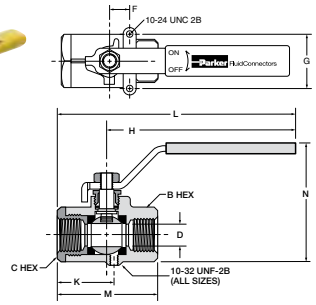




Female-Female Pipe Ends, Panel Mount XV502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502P-4	1/4	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-6	3/8	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	3.96	5.00	2.20	2.58	.500
XV502P-12	3/4**	1-1/4	1-5/16	.87	1.37	3.96	5.25	2.42	2.81	.685
XV502P-16	1**	1-1/2	1-9/16	.87	1.37	3.96	5.34	2.75	3.08	.875

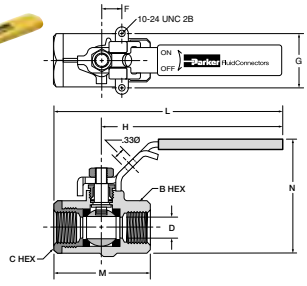




Vented, Female-Female Pipe Ends, Panel Mount XVV502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVV502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVV502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	5.25	2.42	2.81	.685
XVV502P-16	1**	1-1/2	1-9/16	.87	1.37	1.58	3.96	5.34	2.75	3.08	.875





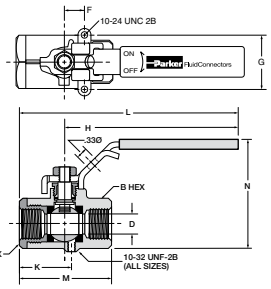
Locking Handle, Female Pipe Ends, PanelMount XVP502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	D FLOW Ø
XVP502P-4	1/4	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XVP502P-6	3/8	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XVP502P-8	1/2*	1-1/16	1-1/16	.50	1.12	3.96	5.00	2.20	2.58	.500
XVP502P-12	3/4**	1-1/4	1-5/16	.87	1.37	3.96	5.25	2.42	2.81	.685
XVP502P-16	1**	1-1/2	1-9/16	.87	1.37	3.96	5.34	2.75	3.08	.875

For use with 5/16" Ø shank lock

*PTF Special Short. **PTF Special Extra Short



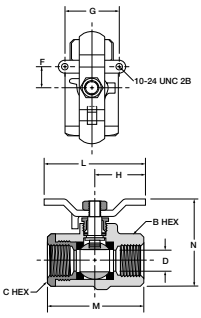


OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends, Panel Mount XVVP502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVVP502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVVP502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	5.25	2.42	2.81	.685
XVVP502P-16	1**	1-1/2	1-9/16	.87	1.37	1.58	3.96	5.34	2.75	3.08	.875

For use with 5/16" Ø shank lock

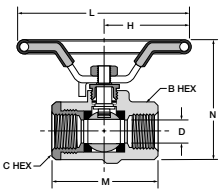




Tee Handle, Female Pipe Ends, Panel Mount XV502P-X-04

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	D FLOW Ø
XV502P-4-04	1/4	15/16	15/16	.50	1.12	1.25	2.50	2.03	1.87	.375
XV502P-6-04	3/8	15/16	15/16	.50	1.12	1.25	2.50	2.03	1.87	.375
XV502P-8-04	1/2*	1-1/16	1-1/16	.50	1.12	1.25	2.50	2.20	1.98	.500
XV502P-12-04	3/4**	1-1/4	1-5/16	.87	1.37	1.25	2.50	2.42	2.20	.685
XV502P-16-04	1**	1-1/2	1-9/16	.87	1.37	1.25	2.50	2.75	2.48	.875





Oval Handle, Female Pipe Ends, Panel Mount XV502P-X-21

PART NO.	PIPE THD.	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV502P-4-21	1/4	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV502P-6-21	3/8	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV502P-8-21	1/2*	1-1/16	1-1/16	1.74	3.49	2.20	2.49	.500
XV502P-12-21	3/4**	1-1/4	1-5/16	1.74	3.48	2.42	2.71	.685
XV502P-16-21	1**	1-1/2	1-9/16	1.74	3.48	2.75	2.99	.875

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female/Female Straight Thread Brass Ball Valve Series 506

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	506	P	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE			
TYPE	506 FEMALE/FEMALE SAE J1926-1 PORTS			
MATERIAL	P- BRASS			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"			
OPTIONS	• 01-STAINLESS STEEL BALL & STEM • 02-STAINLESS STEEL HANDLE & NUT* • 03-STAINLESS STEEL BALL, STEM, HANDLE & NUT • 04-TEE HANDLE* • 08-UNMARKED YELLOW VINYL HANDLE COVER* • 21-OVAL HANDLE			

SPECIFICATIONS	
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	0° TO +350°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF". (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

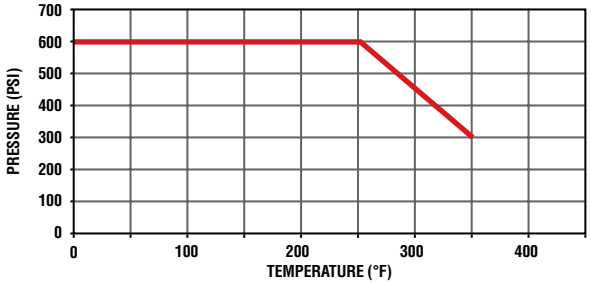
FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0
1-1/4*	57.0
1-1/2*	92.0
2*	224.0

*For these part numbers only the * options are available.



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps and specialized industrial machinery requiring total shut-off capability.



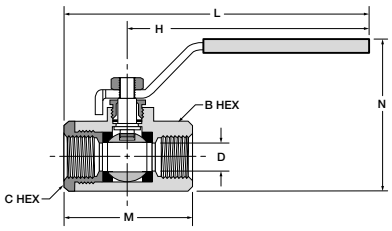
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female/Female, Straight Thread O-Ring Port XV506P

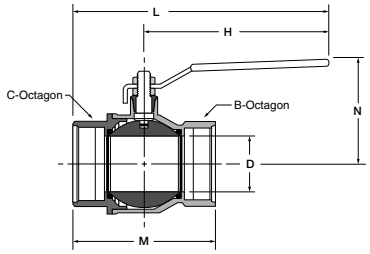
PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506P-4	7/16-20	15/16	15/16	3.96	5.01	2.20	2.47	.375
XV506P-6	9/16-18	15/16	15/16	3.96	5.07	2.26	2.47	.375
XV506P-8	3/4-16	1-1/16	1-1/16	3.96	5.18	2.42	2.60	.500
XV506P-12	1-1/16-12	1-1/4	1-5/16	3.96	5.87	3.46	2.81	.685
XV506P-16	1-5/16-12	1-1/2	1-9/16	3.96	5.96	3.68	3.08	.875





Female/Female, Straight Thread O-Ring Port XV506P-20, XV506P-24, XV506P-32

PART NO.	STRT. THREAD	B OCT	C OCT	H	L	M	N	D FLOW Ø
XV506P-20	1 5/8-12	1.93	1.93	6.22	8.05	3.66	3.01	1.18
XV506P-24	1 7/8-12	2.13	2.13	6.22	8.23	4.02	3.25	1.50
XV506P-32	2 1/2-12	2.85	2.85	6.22	8.60	4.76	3.52	1.89



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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Solder End Ball Valves
Series 509

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	600 WOG, COLD NON-SHOCK SATURATED STEAM UP TO 150 PSI
TEMPERATURE RANGE	0° TO +350°F SOLDER TEMPERATURE NOT TO EXCEED 470°F

STYLE	TYPE	MATERIAL	SIZE
V	509	P	-4
STYLE	V-VALVE		
TYPE	509-SOLDER ENDS		
MATERIAL	P-BRASS		
SIZE	8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"		

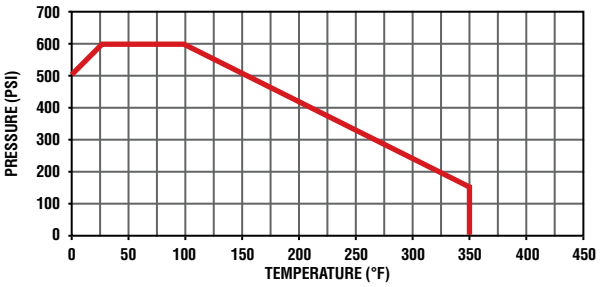
	MELTING RANGE	WORKING TEMP.	MAX. WORKING PRESSURE (PSI)	
JOINING MATERIAL	°F	°F	SIZE 1/2 - 1"	SIZE 1-1/4" - 2"
50-50 TIN-LEAD SOLDER	361-421	100 150 200 250	200 150 100 85	175 125 90 75
95-5 TIN ANTIMONY SOLDER	450-464	100 150 200 250	400 400 300 200	400 350 250 175

SPECIFICATIONS	
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

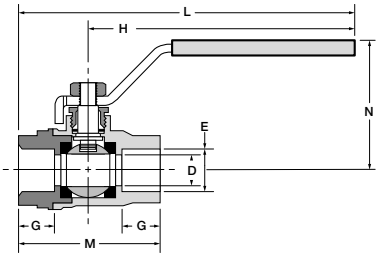
These valves are ideal for water and air service lines on capital equipment and plant design plumbing that require total shut-off capability. Use with ASTM B88 copper water tubing.



FLOW DATA	
VALVE SIZE	CV
1/2"	26
3/4"	69
1"	91
1 1/4"	127
1 1/2"	299
2"	425

Solder Cup Ends XV509P

PART NO.	TUBE SIZE	E	G	H	L	M	N	FLOW DIA. D
XV509P-8	1/2	.630	.49	3.94	5.00	2.24	1.69	.55
XV509P-12	3/4	.877	.75	4.72	6.10	2.85	1.97	.75
XV509P-16	1	1.128	.90	4.72	6.40	3.35	2.13	.94
XV509P-20	1 1/4	1.378	.96	6.22	8.13	3.82	3.01	1.18
XV509P-24	1 1/2	1.628	1.10	6.22	8.46	4.49	3.25	1.50
XV509P-32	2	2.128	1.34	6.22	8.94	5.43	3.52	1.89



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male/Female Straight Thread Ball Valves Series 510

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	510	P	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE			
TYPE	510 MALE/FEMALE STRAIGHT THREAD O-RING SAE J1926			
MATERIAL	P- BRASS			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			
OPTIONS	• 01-STAINLESS STEEL BALL & STEM • 02-STAINLESS STEEL HANDLE & NUT • 03-STAINLESS STEEL BALL, STEM, HANDLE & NUT • 04-TEE HANDLE • 08-UNMARKED YELLOW VINYL HANDLE COVER • 21-OVAL HANDLE			

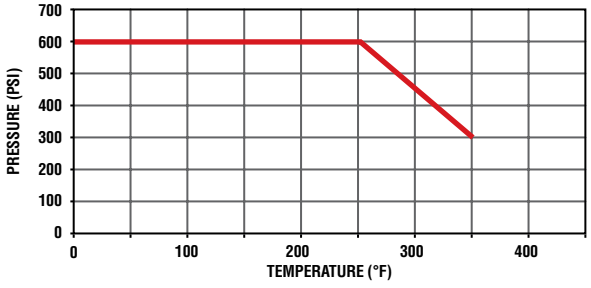
SPECIFICATIONS	
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG. • VENTED UP TO 250 PSI
TEMPERATURE RANGES:	0° TO +350°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF". (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

FLOW DATA	
VALVE SIZE	CV
1/4	.8
3/8	2.1
1/2	5.3
5/8	7.6
3/4	13.0
1	33.0



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps and specialized industrial machinery requiring total shut-off capability.



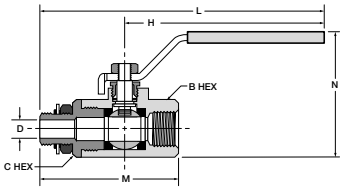
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male-Female, Straight Thread O-Ring Port XV510P

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XV510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XV510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XV510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XV510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656
XV510P-16	1-5/16-12	1-1/2	1-9/16	3.96	6.56	4.28	3.08	.875



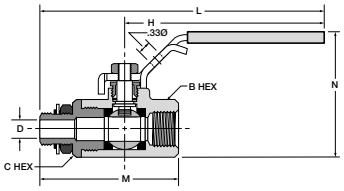


Locking Handle, Straight Thread O-Ring Port XVP510P

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XVP510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XVP510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XVP510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XVP510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656

For use with 5/16" Ø shank lock

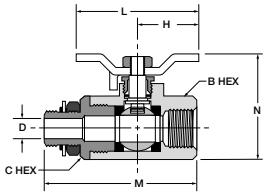




Tee Handle, Straight Thread O-Ring Port XV510P-X-04

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV510P-4-04	7/16-20	15/16	15/16	1.25	2.50	2.85	1.87	.188
XV510P-6-04	9/16-18	15/16	15/16	1.25	2.50	2.92	1.87	.281
XV510P-8-04	3/4-16	1-1/16	1-1/16	1.25	2.50	3.17	1.98	.422
XV510P-10-04	7/8-14	1-1/4	1-5/16	1.25	2.50	3.90	2.20	.500
XV510P-12-04	1-1/16-12	1-1/4	1-5/16	1.25	2.50	4.03	2.20	.656
XV510P-16-04	1-5/16-12	1-1/2	1-9/16	1.25	2.50	4.28	2.48	.875

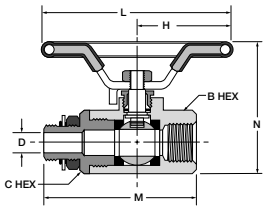




Oval Handle, Straight Thread O-Ring Port XV510P-X-21

PART NO.	STRT. THREAD	B & C HEX	H	L	M	N	D FLOW Ø
XV510P-4-21	7/16-20	15/16	1.74	3.49	2.85	2.38	.188
XV510P-6-21	9/16-18	15/16	1.74	3.49	2.92	2.38	.281
XV510P-8-21	3/4-16	1 1/16	1.74	3.49	3.17	2.49	.422
XV510P-12-21	1-1/16-12	1-1/4 (B) 1-5/16 (C)	1.75	3.49	4.03	2.71	.656





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

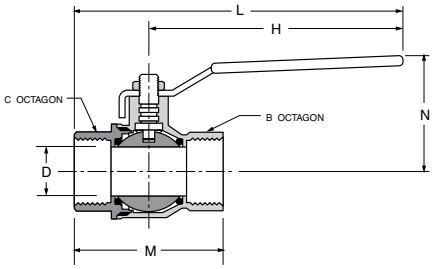
Brass Ball Valves Series 520

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
STEM O-RINGS:	VITON
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	520	P	-4	-00
STYLE	V-VALVE			
TYPE	520-FEMALE/FEMALE NPT PORTS			
MATERIAL	P- BRASS			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"			
OPTIONS	04-TEE HANDLE			

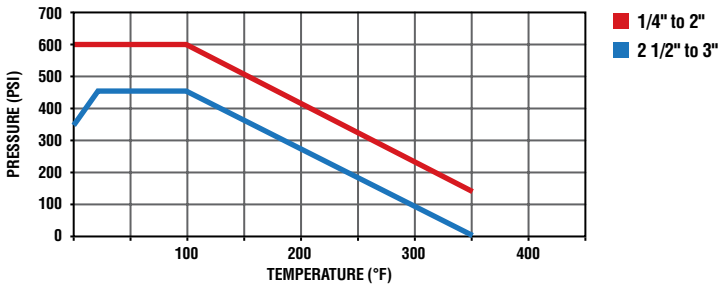
SPECIFICATIONS	
OPERATING INSTRUCTIONS:	QUARTER TURN IS "ON" OR "OFF". (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
PRESSURE RANGE:	• 600 WOG, COLD NON-SHOCK – SIZES 1/4" – 2" • 450 WOG, COLD NON-SHOCK – SIZES 2 1/2" – 3" • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	0° TO +350°F
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

U.L. LISTED	
CATEGORY	
YSDT	LP-GAS SHUT-OFF VALVES
YRBX	FLAMMABLE LIQUID SHUT-OFF VALVES
YRPV	GAS SHUT-OFF VALVES
YQNZ	COMPRESSED GAS SHUT-OFF VALVES





Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle. For use as shutoffs for highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.



Brass Ball Valve XV520P

PART NO.	PIPE THREAD	B OCTAGON	C OCTAGON	H	L	M	N	D FLOW Ø
XV520P-4	1/4-18	.79	.79	3.94	4.83	1.77	1.50	.310
XV520P-6	3/8-18	.79	.79	3.94	4.83	1.77	1.50	.400
XV520P-8	1/2-14	.98	.98	3.94	5.10	2.32	1.69	.600
XV520P-12	3/4-14	1.22	1.22	4.72	5.98	2.52	1.97	.790
XV520P-16	1-11.5	1.57	1.57	4.72	6.32	3.19	2.13	1.000
XV520P-20	1-1/4	1.93	1.93	6.22	8.05	3.66	2.82	1.250
XV520P-24	1-1/2	2.13	2.13	6.22	8.23	4.02	3.06	1.570
XV520P-32	2	2.69	2.69	6.22	8.58	4.76	3.33	2.000
XV520P-40	2-1/2	3.35	3.35	10.04	13.11	6.14	5.20	2.520
XV520P-48	3	3.89	3.89	10.04	13.52	6.97	5.51	3.000

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Brass Ball Valves Series 533
3-Way Diversion / Series 540 4-Way

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	533	P	-4	-00
STYLE	V-VALVE P-LOCK			
TYPE	533 3-WAY DIVERSION, 540 4-WAY			
MATERIAL	P- BRASS			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			
OPTIONS	• 02-STAINLESS STEEL HANDLE & NUT • 08-UNMARKED YELLOW VINYL HANDLE COVER			

SPECIFICATIONS	
PRESSURE RANGE:	• 400 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	-20° F TO 350°F
NOTE:	DIVERSION VALVES DO NOT HAVE OFF POSITIONS, THEREFORE, THE CENTER PORT CAN NOT BE USED FOR SHUT-OFF PURPOSES.
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

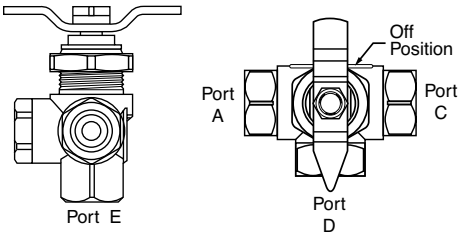
XV540P FLOW INFORMATION	
POINTER OVER	FLOW PATH
A	A TO E
OFF	CLOSED
C	C TO E
D	D TO E

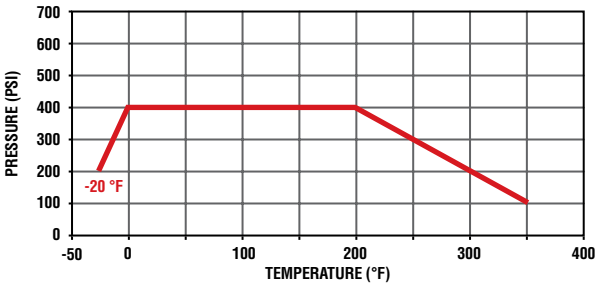


Designed for applications requiring flow diversion making tank selection and fluid transfer easy. For use on construction equipment, chemical processing, pumps and specialized industrial machinery.

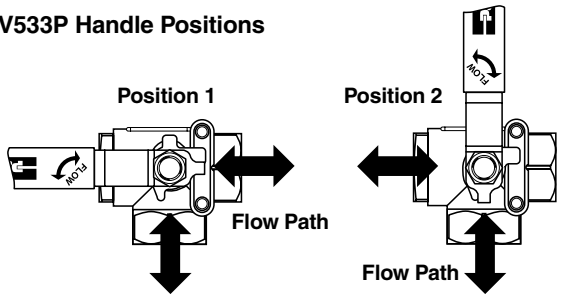
NOTE: 3-way diversion valves do not have off positions, therefore, the center port can not be used for shut-off purposes.

XV540P Handle Positions





XV533P Handle Positions

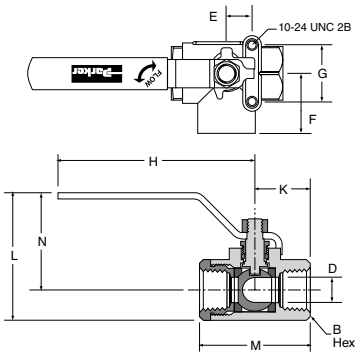


Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female-Female-Female Pipe Ends XV533P

PART NO.	PIPE THD (PTF)	B HEX	E	F	G	H	K	L	M	N	FLOW DIA. D
XV533P-4	1/4	15/16	.50	1.08	1.12	3.96	1.03	2.47	2.03	1.94	.375
XV533P-6	3/8	15/16	.50	1.08	1.12	3.96	1.03	2.47	2.03	1.94	.375
XV533P-8	1/2	1-1/16	.50	1.18	1.12	3.96	1.11	2.58	2.20	1.98	.500
XV533P-12	3/4	1-1/4	.87	1.43	1.37	3.96	1.42	2.90	2.83	2.17	.685
XV533P-16	1	1-9/16	.87	1.62	1.37	3.96	1.58	3.21	3.16	2.32	.875

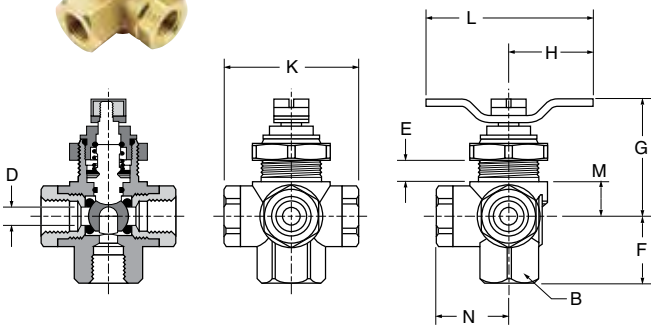




Female-Female-Female-Female Pipe Ends XV540P

PART NO.	PIPE THD (PTF)	B HEX	E	F	G	H	K	L	M	N	FLOW DIA. D
XV540P-4	1/4	7/8	.32	1.00	1.76	1.25	1.98	2.49	.52	1.07	.250





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

90° Ball Valves
Series 590/591

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	590	P	-8	-00
STYLE	V-VALVE			
TYPE	590-90 MALE/FEMALE 591-90 MALE/MALE			
MATERIAL	P- BRASS			
SIZE	4-1/4", 6-3/8", 8-1/2"			
OPTIONS	• 04-LEVER HANDLE • 08-UNMARKED YELLOW VINYL HANDLE COVER			

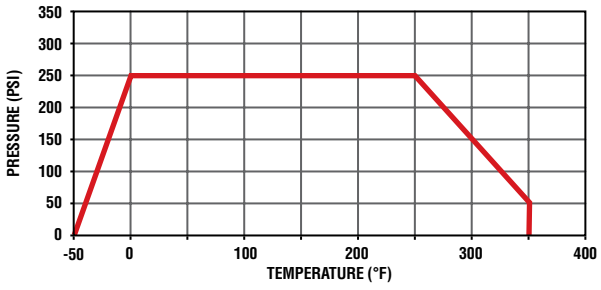
SPECIFICATIONS	
PRESSURE RANGE:	• 250 PSI • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	-50°F TO 350°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF". (PROVIDES POSITIVE STOP ACTION FOR FULL SHUT-OFF.)
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.



Note: 90° Ball Valve Series 590/591 has a tee handle as standard. A Lever Handle is available as option 04.

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shut-off capability.

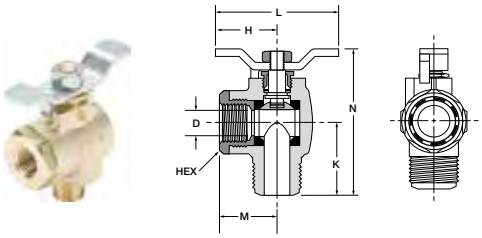


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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

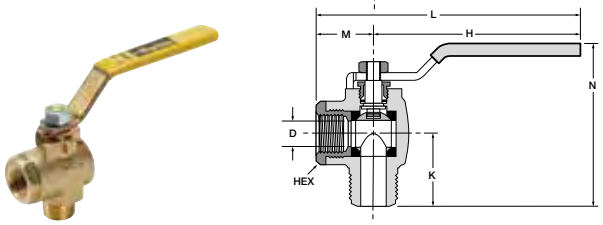
90° Flow, Male-Female Pipe Ends XV590P

PART NO.	PIPE PTF THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4	1/4	15/16	1.25	1.08	2.50	1.00	2.42	.375
XV590P-6	3/8	15/16	1.25	1.09	2.50	1.00	2.43	.375
XV590P-8	1/2*	1-1/16	1.25	1.30	2.50	1.08	2.67	.500
XV590P-16	1**	1-9/16"	1.30	1.90	2.60	1.38	3.62	.750



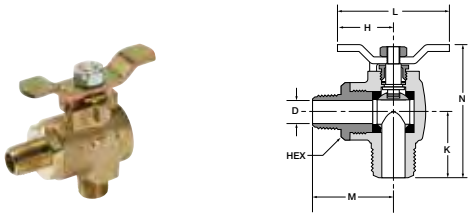
Lever Handle, 90° Flow, Male-Female Pipe Ends XV590P-X-04

PART NO.	PIPE PTF THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4-04	1/4	15/16	3.96	1.08	4.96	1.00	3.02	.375
XV590P-6-04	3/8	15/16	3.96	1.09	4.96	1.00	3.03	.375
XV590P-8-04	1/2*	1-1/16	3.80	1.30	4.88	1.08	2.95	.500
XV590P-16-04	1**	1-9/16"	3.96	1.90	5.34	1.38	4.17	.750



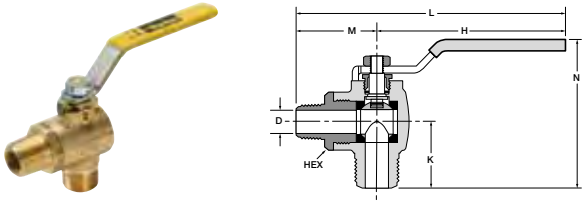
90° Flow, Male-Male Pipe Ends XV591P

PART NO.	PIPE THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV591P-4	1/4	15/16	1.25	1.08	2.50	1.56	2.42	.375
XV591P-6	3/8	15/16	1.25	1.09	2.50	1.56	2.43	.375
XV591P-8	1/2	1-1/16	1.25	1.30	2.50	1.84	2.67	.500



Lever Handle, 90° Flow, Male-Male Pipe Ends XV591P-X-04

PART NO.	PIPE THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV591P-4-04	1/4	15/16	3.96	1.08	5.52	1.56	3.02	.375
XV591P-6-04	3/8	15/16	3.96	1.09	5.52	1.56	3.03	.375
XV591P-8-04	1/2	1-1/16	3.80	1.30	5.64	1.84	2.95	.500



*PTF Special Short. **PTF SPL Extra Short

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Brass Hose Barb Ball Valves
Series 500HB

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
HANDLE:	STEEL

SPECIFICATIONS	
PRESSURE RANGE:	• 150 PSI WOG, COLD NON-SHOCK • SATURATED STEAM UP TO 150 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	0° TO +350°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF". (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.



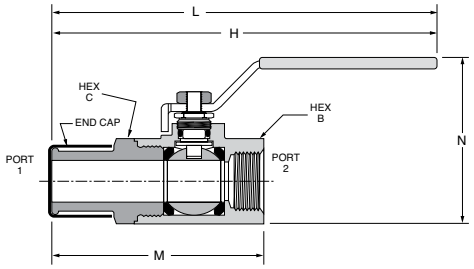
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle. For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps, power units, and specialized industrial machinery requiring total shut-off capability.

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Brass Hose Barb Ball Valve XV500P-HB

PART NO.	PORT 1	PORT 2 PTF	B HEX	C HEX	H	L	M	N	FLOW DIA. D
XV500P-12-16HB	1	3/4*	1-1/4	1-5/16	3.96	6.25	3.41	2.81	.685

*PTF special extra short



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Brass Ball Valves Series 600
Six Port Diversion

MATERIALS OF CONSTRUCTION	
VALVE BODY:	FORGED BRASS
BALL:	CHROME PLATED BRASS
SEATS / SEALS:	PTFE
O-RINGS:	FLUOROCARBON
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	600	P	-8	-00
STYLE	V-VALVE			
TYPE	600 - THREE POSITION 633 - TWO POSITION			
MATERIAL	P- BRASS			
SIZE	8-1/2"			

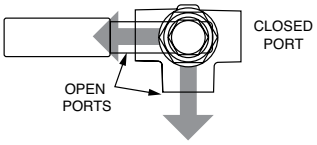
SPECIFICATIONS	
PRESSURE RANGE:	• 150 PSI • VACUUM SERVICE TO 29 INCHES HG.
TEMPERATURE RANGES:	0° TO +250°F
OPERATING INSTRUCTIONS	POSITION HANDLE IN QUARTER-TURN INCREMENTS TO DESIRED FLOW CONFIGURATION. DETENT MECHANISM ASSITS IN ACCURATELY POSITIONING HANDLE.



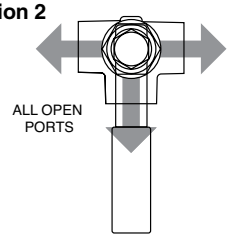
This valve can be used on applications where a fluid return or spillback is required. For use on construction equipment, chemical processing, diesel engines, filter banks, pumps and specialized industrial machinery.

Series 600 Handle Positions

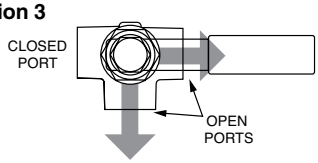
Position 1



Position 2

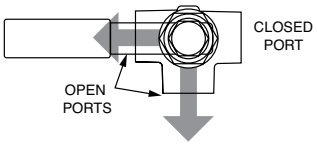


Position 3

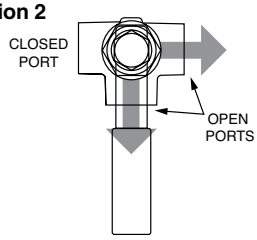


Series 633 Handle Positions

Position 1



Position 2

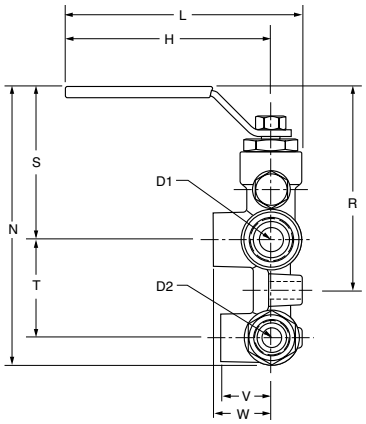


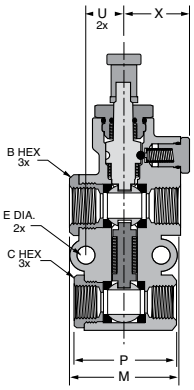
NOTE: Diversion valves do not have off positions, therefore, the center ports can not be used for shut-off purposes.

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



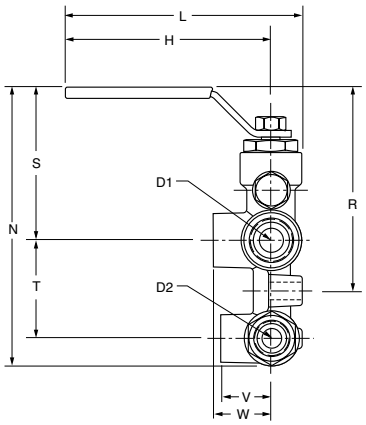


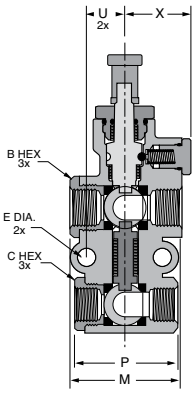


Six Port Diversion Brass Valve XV600P

PIPE THD. PART NO.	PIPE THD. TOP PORT SPL SHORT	BOTTOM PORT PTF	B HEX	C HEX	D1 FLOW	D2 FLOW	E	H	L	M	N	P	R	S	T	U	V	W	X
XV600P-8-6	1/2	3/8	1 1/16	15/16	.500	.375	.34	3.96	4.56	2.20	5.43	2.03	3.98	2.99	1.91	.73	.98	1.12	1.31







Six Port Diversion Brass Valve XV633P

PIPE THD. PART NO.	PIPE THD. TOP PORT SPL SHORT	BOTTOM PORT PTF	B HEX	C HEX	D1 FLOW	D2 FLOW	E	H	L	M	N	P	R	S	T	U	V	W	X
XV633P-8-6	1/2	3/8	1 1/16	15/16	.500	.375	.34	3.96	4.56	2.20	5.43	2.03	3.98	2.99	1.91	.73	.98	1.12	1.31

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*PTF Special Short. **PTF Special Extra Short

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Carbon Steel Ball Valves
Series 500CS/502CS

MATERIALS OF CONSTRUCTION	
VALVE BODY:	CARBON STEEL PHOSPHATE COATED
BALL:	STEEL
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	500	CS	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE			
TYPE	500 FEMALE/FEMALE PTF PORTS			
MATERIAL	CS-CRARBON STEEL			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"			
OPTIONS	• 04-TEE HANDLE • 21-OVAL HANDLE			

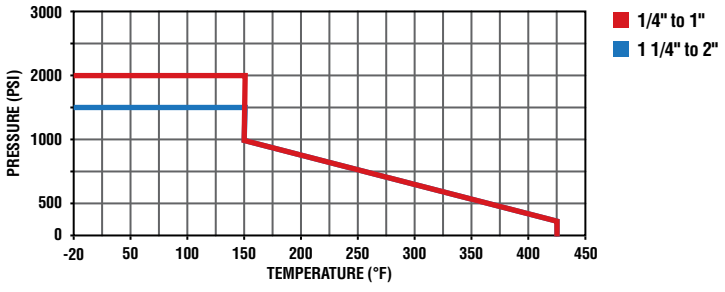
SPECIFICATIONS	
PRESSURE RANGE:	• 2,000 PSI SIZES: 1/4" – 1" • 1,500 PSI SOZES: 1 1/4" – 2" • SATURATED STEAM UP TO 150 PSI
TEMPERATURE RANGES:	-20°F TO 425°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)
NOTE:	PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

FLOW DATA	
VALVE SIZE	CV
1/4	6.0
3/8	12.8
1/2	15.0
3/4	23.0
1	36.0
1-1/4	44.0
1-1/2	64.0
2	114.0



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Hydraulic and general industrial applications on capital equipment and plant design plumbing that require total shutoff capability.



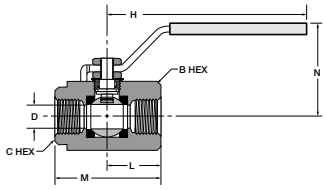
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female-Female Pipe Ends XV500CS

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4	1/4	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-6	3/8	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-8	1/2	1-1/4	1-1/16	3.78	1.25	2.37	1.73	.540
XV500CS-12	3/4	1-5/8	1-3/8	5.10	1.50	2.90	2.08	.680
XV500CS-16	1	2	1-5/8	5.10	1.76	3.41	2.30	.880

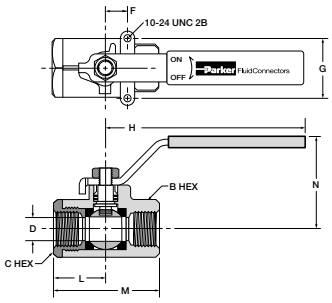




Female-Female Pipe Ends, Panel Mount XV502CS

PART NO.	PIPE THD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502CS-20	1-1/4	2	2-1/4	.94	1.50	6.10	1.87	3.80	2.76	1.000
XV502CS-24	1-1/2	2-5/16	2-1/2	.94	1.50	6.10	2.27	4.55	2.98	1.250
XV502CS-32	2	2-3/4	3	1.03	2.00	8.60	2.42	4.83	3.54	1.500

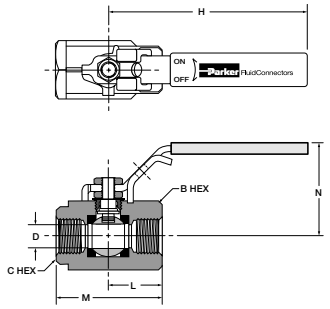




Locking Handle, Female Pipe Ends XVP500CS

PART NO.	PIPE THD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP500CS-4	1/4	1-1/16	15/16	4.13	1.00	2.00	2.23	.400
XVP500CS-6	3/8	1-1/16	15/16	4.13	1.00	2.00	2.23	.400
XVP500CS-8	1/2	1-1/4	1-1/16	4.13	1.25	2.37	2.33	.540
XVP500CS-12	3/4	1-5/8	1-3/8	5.00	1.50	2.90	2.80	.680
XVP500CS-16	1	2	1-5/8	5.00	1.76	3.41	2.97	.880

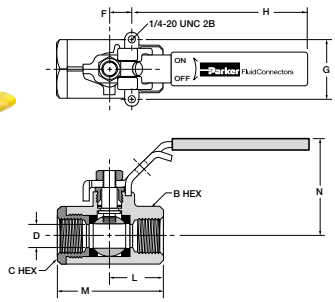




Locking Handle, Female Pipe Ends, Panel Mount XVP502CS

PART NO.	PIPE THD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XVP502CS-20	1-1/4	2	2-1/4	.94	1.50	7.50	1.87	3.80	3.15	1.000
XVP502CS-24	1-1/2	2-5/16	2-1/2	.94	1.50	7.50	2.27	4.55	3.37	1.250
XVP502CS-32	2	2-3/4	3	1.03	2.00	8.75	2.42	4.83	3.46	1.500

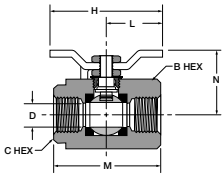




Tee Handle, Female Pipe Ends XV500CS-X-04

PART NO.	PIPE THD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4-04	1/4	1-1/16	15/16	2.16	1.08	2.00	1.41	.400
XV500CS-6-04	3/8	1-1/16	15/16	2.16	1.08	2.00	1.41	.400
XV500CS-8-04	1/2	1-1/4	1-1/16	2.90	1.45	2.37	1.66	.540
XV500CS-12-04	3/4	1-5/8	1-3/8	3.63	1.81	2.90	2.06	.680
XV500CS-16-04	1	2	1-5/8	3.63	1.81	3.41	2.23	.880



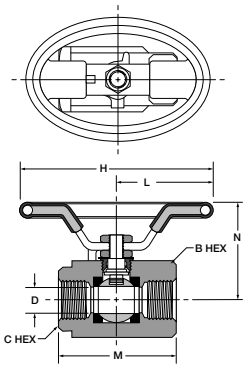


Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Oval Handle, Female Pipe Ends XV500CS-X-21

PART NO.	PIPE THD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4-21	1/4	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-6-21	3/8	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-8-21	1/2	1-1/4	1-1/16	3.50	1.13	2.37	1.76	.540
XV500CS-12-21	3/4	1-5/8	1-3/8	5.00	1.46	2.90	2.13	.680
XV500CS-16-21	1	2	1-5/8	5.00	1.58	3.41	2.29	.880

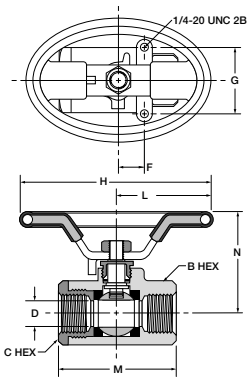




Oval Handle, Female Pipe Ends, Panel Mount XV502CS-X-21

PART NO.	PIPE THD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502CS-20-21	1-1/4	2	2-1/4	.94	1.50	5.07	2.53	3.80	3.04	1.000
XV502CS-24-21	1-1/2	2-5/16	2-1/2	.94	1.50	5.07	2.53	4.55	3.26	1.250
XV502CS-32-21	2	2-3/4	3	1.03	2.00	6.50	3.25	4.83	3.57	1.500





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Carbon Steel Ball Valves
Series 506CS

MATERIALS OF CONSTRUCTION	
VALVE BODY:	CARBON STEEL PHOSPHATE COATED
BALL:	STEEL
SEATS / SEALS:	PTFE
HANDLE:	STEEL

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	506	CS	-4	-00
STYLE	• V-VALVE • VP-VALVE, PADLOCKING HANDLE			
TYPE	506-FEMALE/FEMALE SAE STRAIGHT THREAD PORTS			
MATERIAL	CS-CRARBON STEEL			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			

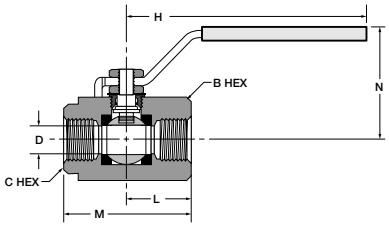
SPECIFICATIONS	
PRESSURE RANGE:	• 3,000 PSI • SATURATED STEAM UP TO 150 PSI
TEMPERATURE RANGES:	-20°F TO 425°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)

FLOW DATA	
VALVE SIZE	CV
1/4	6.0
3/8	12.0
1/2	15.0
3/4	34.0
1	54.0



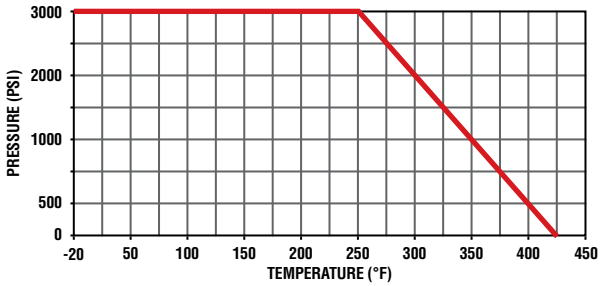
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Hydraulic and general industrial applications on capital equipment and plant design plumbing that require total shutoff capability.



Female-Female SAE Straight Thread Ports XV506CS

PART NO.	STRAIGHT THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506CS-4	7/16-20	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV506CS-6	9/16-18	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV506CS-8	3/4-16	1-5/8	1-1/4	4.78	1.32	2.84	2.16	.500
XV506CS-12	1-1/16-12	1-7/8	1-5/8	4.78	1.66	3.71	2.35	.750
XV506CS-16	1-5/16-12	2-1/2	2-1/8	6.10	1.88	4.15	2.85	1.000



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

High Pressure Carbon Steel Ball Valves Series 500HP, 506HP, 507HP

MATERIALS OF CONSTRUCTION	
VALVE BODY:	CARBON STEEL
BALL:	STEEL
SEATS:	DELRIN WITH MOLYBDENUM DISULPHIDE
STEM SEALS:	NITRILE O-RINGS
HANDLE:	STEEL

SPECIFICATIONS	
PRESSURE RANGE:	6,000 PSI
TEMPERATURE RANGES:	-10° TO +210°F
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)

STYLE	TYPE	MATERIAL	SIZE
V	590	HP	-4
STYLE	V-VALVE VP-VALVE, PADLOCKING HANDLE		
TYPE	500-FEMALE/FEMALE NPT PORTS		
MATERIAL	HP-HIGH PRESSURE CARBON STEEL		
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"		

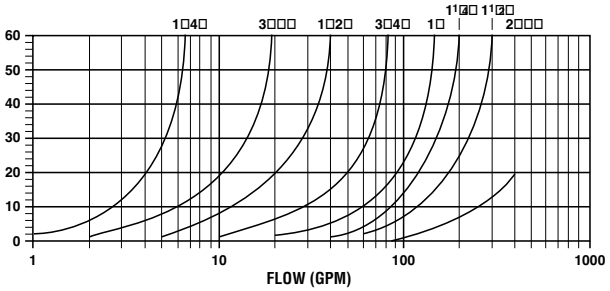
STYLE	TYPE	MATERIAL	SIZE
V	506	HP	-4
STYLE	V-VALVE VP-VALVE, PADLOCKING HANDLE		
TYPE	506-FEMALE/FEMALE SAE STRAIGHT THREAD PORTS		
MATERIAL	HP-HIGH PRESSURE CARBON STEEL		
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1 1/4", 24-1 1/2", 32-2"		

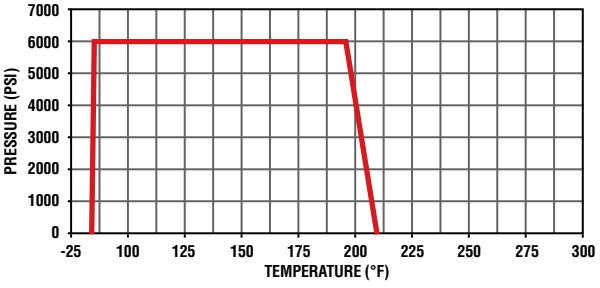
STYLE	TYPE	MATERIAL	SIZE
V	507	HP	-M18
STYLE	V-VALVE		
TYPE	507-FEMALE / FEMALE ISO 6149 PORTS		
MATERIAL	HP-HIGH PRESSURE CARBON STEEL		
SIZE	M18X1.5, M27X2		



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Pressure Drop (PSI)





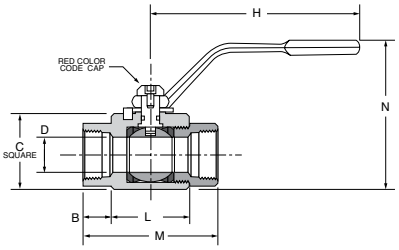
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

6000 PSI Female-Female Pipe Ends XV500HP-X

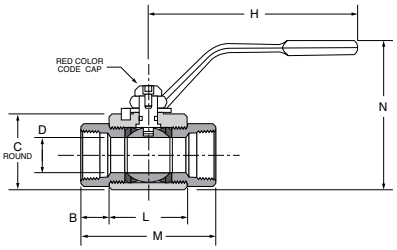
PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XV500HP-4	1/4-18	.69	1.38	4.50	1.44	2.75	2.94	.240
XV500HP-6	3/8-18	.56	1.50	4.50	1.69	2.88	3.06	.390
XV500HP-8	1/2-14	.75	1.63	4.50	1.88	3.38	3.19	.510
XV500HP-12	3/4-14	.69	2.25	7.00	2.41	3.81	4.69	.790
XV500HP-16	1-11.5	.94	2.50	7.00	2.56	4.50	4.94	.950





6000 PSI Female-Female Pipe Ends XV500HP-X (LARGE)

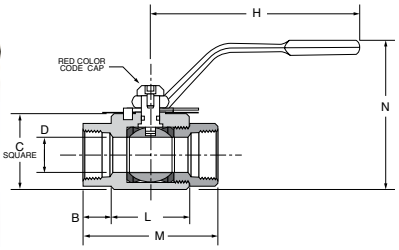
PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XV500HP-20	1 1/4-11.5	.85	3.25	10.00	3.15	4.84	6.31	1.26
XV500HP-24	1 1/2-11.5	.99	3.75	10.00	3.35	5.33	6.76	1.50
XV500HP-32	2-11.5	1.30	4.50	10.00	3.94	6.54	7.42	1.89



6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-4	1/4-18	.69	1.38	4.50	1.44	2.75	2.94	.240
XVP500HP-6	3/8-18	.56	1.50	4.50	1.69	2.88	3.06	.390
XVP500HP-8	1/2-14	.75	1.63	4.50	1.88	3.38	3.19	.510
XVP500HP-12	3/4-14	.69	2.25	7.00	2.41	3.81	4.69	.790
XVP500HP-16	1-11.5	.94	2.50	7.00	2.56	4.50	4.94	.950

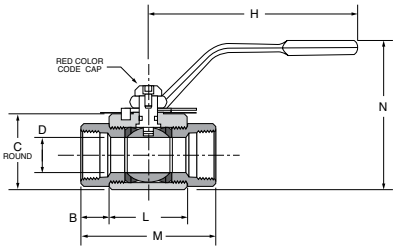




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6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X (LARGE)

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-20	1 1/4-11.5	.85	3.25	10.00	3.15	4.84	6.31	1.26
XVP500HP-24	1 1/2-11.5	.99	3.75	10.00	3.35	5.33	6.76	1.50
XVP500HP-32	2-11.5	1.30	4.50	10.00	3.94	6.54	7.42	1.89

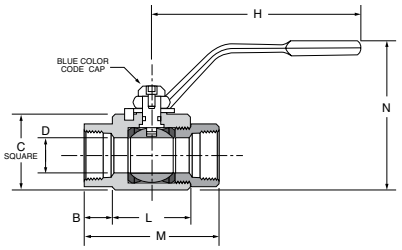


Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

6000 PSI Female-Female Straight Thread Ends XV506HP-X

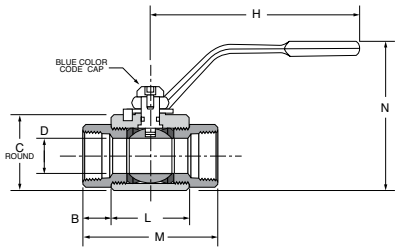
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XV506HP-4	7/16-20 UNF	.69	1.38	4.50	1.44	2.75	2.94	.240
XV506HP-6	9/16-18 UNF	.56	1.50	4.50	1.69	2.88	3.06	.390
XV506HP-8	3/4-16 UNF	.75	1.63	4.50	1.88	3.38	3.19	.510
XV506HP-12	1 1/16-12 UNF	.69	2.25	7.00	2.41	3.81	4.69	.790
XV506HP-16	1 5/16-12 UNF	.94	2.50	7.00	2.56	4.50	4.94	.950





6000 PSI Female-Female Straight Thread Ends XV506HP-X (LARGE)

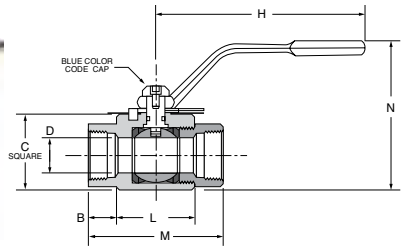
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XV506HP-20	1 5/8-12 UNF	.85	3.25	10.00	3.15	4.84	6.31	1.26
XV506HP-24	1 7/8-12 UNF	.99	3.75	10.00	3.35	5.33	6.76	1.50
XV506HP-32	2 1/2-12 UNF	1.30	4.50	10.00	3.94	6.54	7.42	1.89



6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X

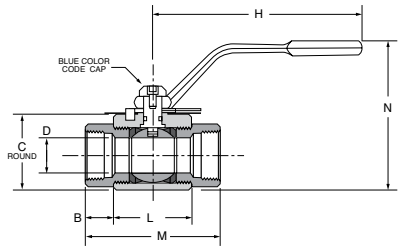
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XVP506HP-4	7/16-20 UNF	.69	1.38	4.50	1.44	2.75	2.94	.240
XVP506HP-6	9/16-18 UNF	.56	1.50	4.50	1.69	2.88	3.06	.390
XVP506HP-8	3/4-16 UNF	.75	1.63	4.50	1.88	3.38	3.19	.510
XVP506HP-12	1 1/16-12 UNF	.69	2.25	7.00	2.41	3.81	4.69	.790
XVP506HP-16	1 5/16-12 UNF	.94	2.50	7.00	2.56	4.50	4.94	.950





6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X (LARGE)

PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XVP506HP-20	1 5/8-12 UNF	.85	3.25	10.00	3.15	4.84	6.31	1.26
XVP506HP-24	1 7/8-12 UNF	.99	3.75	10.00	3.35	5.33	6.76	1.50
XVP506HP-32	2 1/2-12 UNF	1.30	4.50	10.00	3.94	6.54	7.42	1.89



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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Stainless Steel Ball Valves
Series 501SS

MATERIALS OF CONSTRUCTION	
VALVE BODY:	CF-8M STAINLESS STEEL
BALL:	STAINLESS STEEL
SEATS / SEALS:	PTFE
HANDLE:	STAINLESS STEEL

PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	2,000 PSI
VACUUM SERVICE	28 INCHES HG
TEMPERATURE RANGE	0° TO +400°F

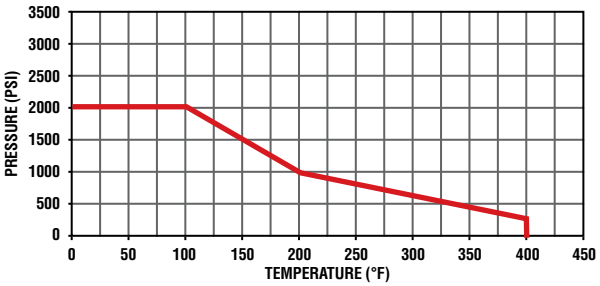
STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	501	SS	-4	-00
STYLE	V-VALVE			
TYPE	501-MALE/FEMALE NPT PORTS			
MATERIAL	SS-STAINLESS STEEL			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1"			

APPROVALS
MEETS MATERIAL REQUIREMENTS OF NACE MR-01-75

Note: Periodically check the adjustable packing nut and tighten as required.

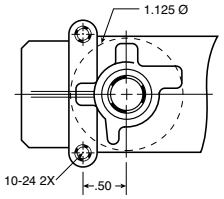


Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.



Applications include chemical plants, refineries, steel mills, industrial fuel lines and agricultural equipment. Meets material requirements of NACE MR-01-75.

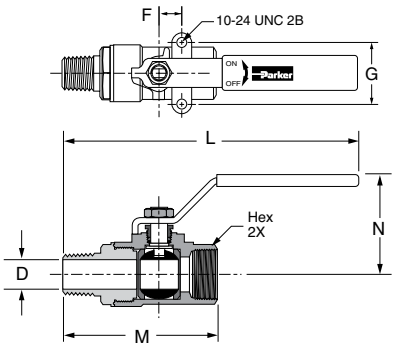
Mounting Detail



Male-Female Pipe Ends XV501SS

PART NO.	PIPE THREAD [NPT]	HEX	F	G	L	M	N	D FLOW Ø
XV501SS-4	1/4	15/16	.50	1.12	5.60	2.65	1.97	.280
XV501SS-6	3/8	15/16	.50	1.12	5.60	2.65	1.97	.375
XV501SS-8	1/2	1-1/16	.50	1.12	5.85	3.05	2.00	.500
XV501SS-12	3/4	1-3/8	.88	1.37	7.27	3.85	2.55	.720
XV501SS-16	1	1-5/8	.88	1.37	7.48	4.25	2.68	.940

FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Stainless Steel Ball Valves
Series 502SS

MATERIALS OF CONSTRUCTION	
VALVE BODY:	CF-8M STAINLESS STEEL
BALL:	STAINLESS STEEL
SEATS / SEALS:	PTFE
HANDLE:	STAINLESS STEEL

PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	2,000 PSI SIZES: 1/4" – 1" 1,500 PSI SIZES: 1-1/4" – 2"
VACUUM SERVICE	28 INCHES HG
TEMPERATURE RANGE	0° TO +400°F

STYLE	TYPE	MATERIAL	SIZE	OPTIONS
V	502	SS	-4	-00
STYLE	V-VALVE VP-VALVE, PADLOCKING HANDLE			
TYPE	502-PANEL MOUNT FEMALE/FEMALE NPT PORTS			
MATERIAL	SS-STAINLESS STEEL			
SIZE	4-1/4", 6-3/8", 8-1/2", 12-3/4", 16-1", 20-1-1/4", 24-1-1/2", 32-2"			
OPTIONS	20-SHORT HANDLE 21-OVAL HANDLE 35-WELDED RETAINER NUT			

APPROVALS
MEETS MATERIAL REQUIREMENTS OF NACE MR-01-75

FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0
1 1/4	74.0
1 1/2	120.0
2	226.0

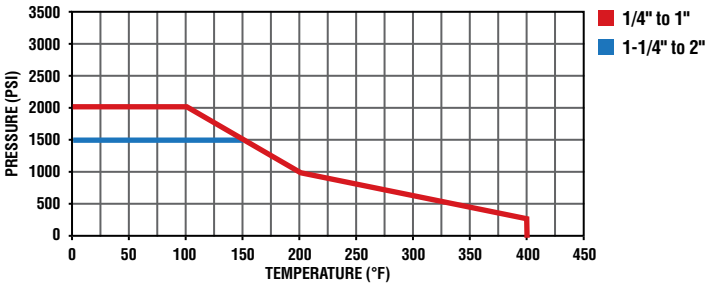
MOUNTING HOLE DIAMETER	
VALVE SIZE	DIA. IN.
1/4	1.125
3/8	1.125
1/2	1.125
3/4	1.500
1	1.500
1 1/4	1.875
1 1/2	1.875
2	1.875



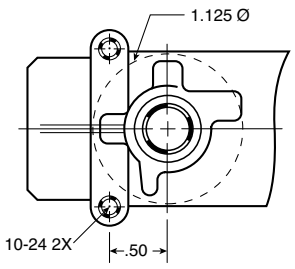
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Applications include chemical plants, refineries, steel mills, industrial fuel lines and agricultural equipment. Meets material requirements of NACE MR-01-75.

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Mounting Detail



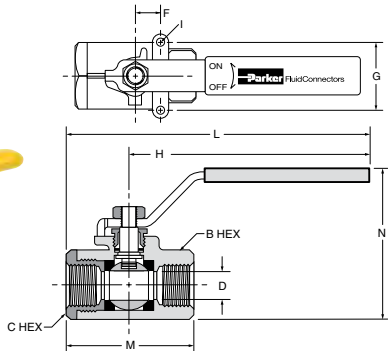
Note: Periodically check the adjustable packing nut and tighten as required.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Female Pipe Ends, Panel Mount XV502SS

PART NO.	PIPE THD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	PANEL FLOW DIA. D	HOLE DIA.
XV502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XV502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XV502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
XV502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
XV502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
XV502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
XV502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
XV502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000

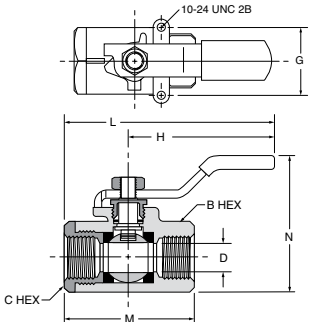




Short Handle, Female Pipe Ends, Panel Mount XV502SS-X-20

PART NO.	PIPE THREAD [NPT]	B/C HEX	G	H	L	M	N	FLOW DIA. D
XV502SS-4-20	1/4	15/16	1.12	2.28	3.32	2.07	2.53	.375
XV502SS-6-20	3/8	15/16	1.12	2.28	3.32	2.07	2.53	.375
XV502SS-8-20	1/2	1-1/16	1.12	2.22	3.37	2.25	2.63	.500

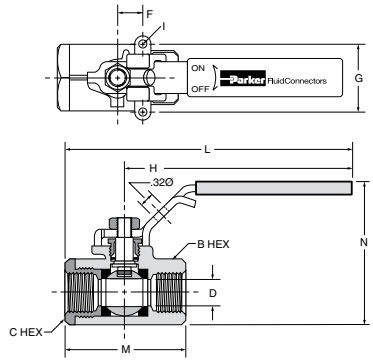




Locking Handle, Female Pipe Ends, Panel Mount XVP502SS

PART NO.	PIPE THD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	PANEL FLOW DIA. D	HOLE DIA.
XVP502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XVP502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XVP502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
XVP502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
XVP502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
XVP502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
XVP502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
XVP502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000

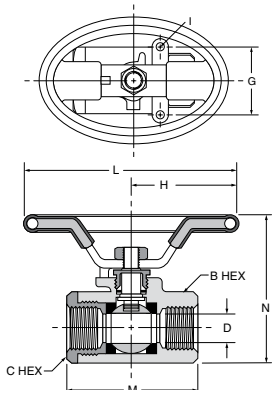




Oval Handle, Female Pipe Ends, Panel Mount XV502SS-X-21

PART NO.	PIPE THD (NPT)	B/C HEX	G	H	L	I THREAD	M	N	PANEL FLOW DIA. D	HOLE DIA.
XV502SS-4-21	1/4	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
XV502SS-6-21	3/8	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
XV502SS-8-21	1/2	1-1/16	1.125	1.74	3.48	10-24 UNC	2.27	2.54	.500	1.125
XV502SS-12-21	3/4	1-3/8	1.375	2.68	5.36	10-24 UNC	3.35	3.45	.790	1.500
XV502SS-16-21	1	1-5/8	1.375	2.68	5.36	10-24 UNC	3.54	3.74	1.000	1.500
XV502SS-20-21	1-1/4	2	1.500	3.27	6.53	1/4-20 UNC	4.00	4.54	1.250	2.000
XV502SS-24-21	1-1/2	2-3/8	1.500	3.27	6.53	1/4-20 UNC	4.38	4.93	1.500	2.000
XV502SS-32-21	2	3	1.500	3.27	6.53	1/4-20 UNC	5.50	5.67	2.000	2.000





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Rotary Actuator Ball Valves Series ACT

PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	150 PSI maximum air pressure to actuator
TEMPERATURE RANGE	Ambient temperature -40° to +180°F



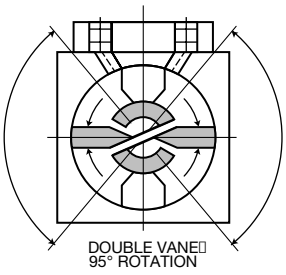
How Do Vane Actuators Work?

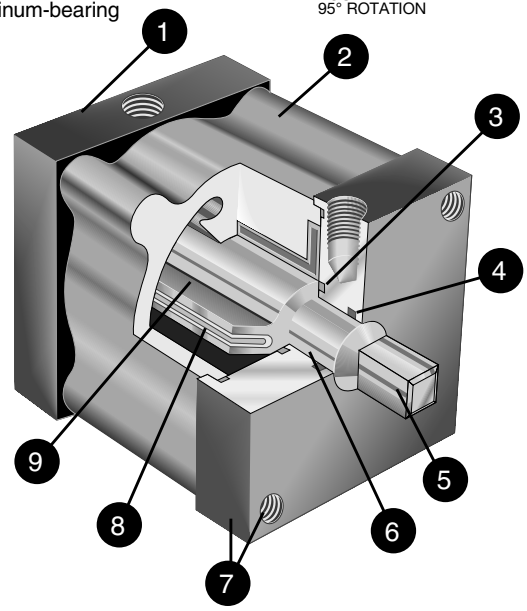
Parker vane actuators provide the maximum amount of output torque from the smallest possible envelope size. They convert fluid power pressure into rotary motion for a wide variety of industrial applications. Double vane units produce twice the torque output of single vane actuators from identical envelope dimensions and have a maximum rotation of 95°.

A short cylindrical chamber encloses a vane attached to a central shaft. Fluid pressure differential is applied through a stationary barrier (stator) within the cylinder to one side of the vane. The opposite side of the vane is connected to exhaust through the stator. This pressure differential produces rotation of the vane and central shaft. Due to vane actuator design there will always be some internal bypass in these units.

Rotary Actuator Series ACT Features

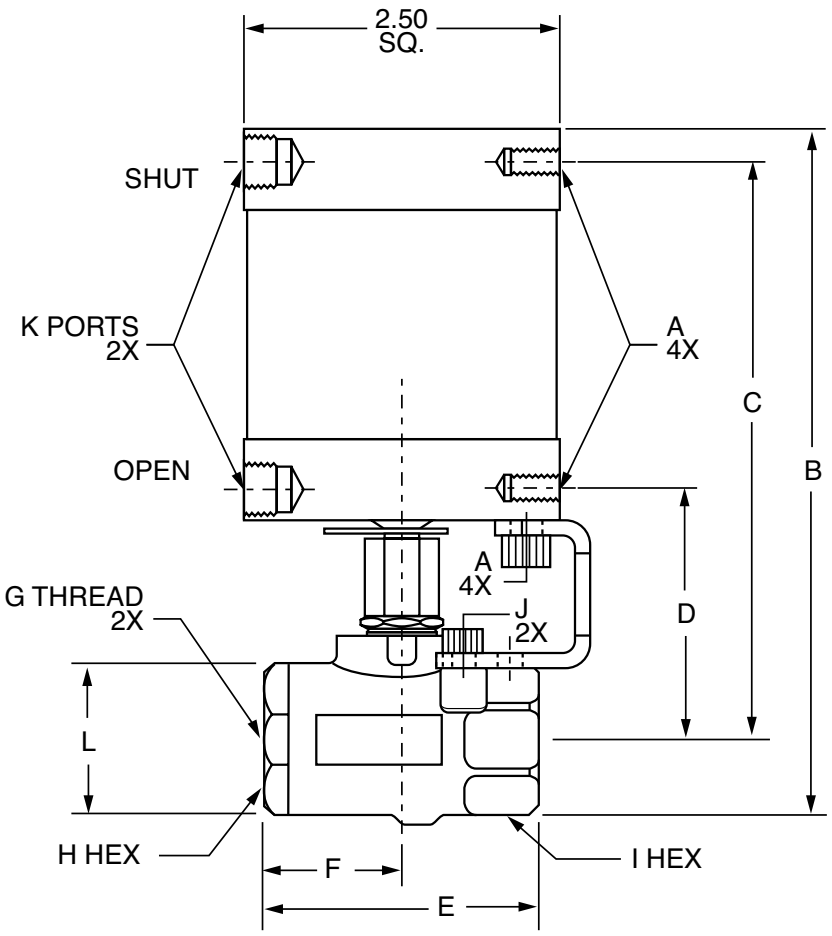
1. **Heads**-are precision machined from aluminum, then hard-coat anodized and PTFE impregnated to ensure long seal life and low breakaway pressure.
2. **Body** - is machined from a one-piece aluminum extrusion that incorporates the stator for superior rigidity. The extrusion is hard-coat anodized and PTFE impregnated, resulting in a smooth, slick seal surface which guarantees long seal life and low breakaway pressure.
3. **Shoulder Seal** - a nitrile-energized, PTFE seal is used to reduce bypass flow and friction, providing superior performance and long life.
4. **Shaft Seal** - the high-quality, self-lubricated, abrasion-resistant nitrile seal is a multiple lobe construction for leakfree operation and greater reliability.
5. **Shaft** - stainless steel provides high strength and corrosion resistance for the most demanding applications.
6. **Bearings** - hard-coat anodized aluminum-bearing surface with permanent solid film lubricant provides substantial shaft support and wear resistance, ensuring continuous lubrication, high performance, and long life.
7. **Mounting** - combination face and base mounting offer flexibility in application and design.
8. **Vane Seal** - a special self-lubricated, abrasion-resistant nitrile compound is molded into a one-piece vane seal, providing low breakaway pressure and long life, even with no lubrication. The vane seal is also removable so that field repairs can be made, if necessary.
9. **Vane** - a hard-coat anodized aluminum extrusion permanently affixed to shaft, forming a structurally sound assembly. The light weight also reduces inertia allowing faster operating speeds.





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



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Rotary Actuator, Female Pipe Ends XV502P-X-ACT

PART NO.	SIZE	A MTG. HOLES	B	C	D	E	F	G	H HEX	I HEX	J UNC	K NPTF	L	FLOW DIA.	FLOW CV	MIN. ACT PRESSURE (PSI)
XV502P-4-ACT	1/4	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	1/4-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	4.0	50
XV502P-6-ACT	3/8	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	3/8-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	5.8	50
XV502P-8-ACT	1/2	1/4-20 UNC	5.38	4.54	1.98	2.20	1.09	1/2-14PTF*	1-1/16	1-1/16	10-24	1/8-27	1.19	.500	12.0	50
XV502P-12-ACT	3/4	1/4-20 UNC	5.57	4.63	2.07	2.42	1.29	3/4-14PTF**	1-5/16	1-1/4	10-24	1/8-27	1.38	.685	25.0	75
XV502P-16-ACT	1	1/4-20 UNC	5.85	4.76	2.20	2.75	1.38	1-11.5PTF**	1-9/16	1-1/2	10-24	1/8-27	1.67	.875	35.0	75

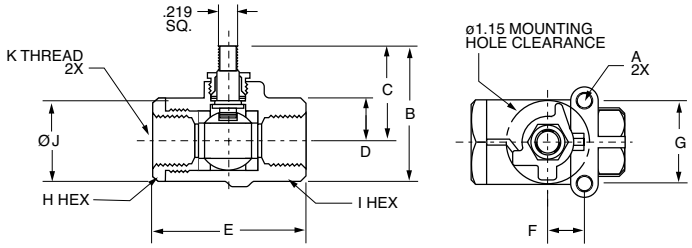
Stainless Steel Rotary Actuator, Female Pipe Ends XV502SS-X-ACT

PART NO.	SIZE	A MTG. HOLES	B	C	D	E	F	G	H / I HEX	J	K NPTF	L	FLOW DIA.	FLOW CV
XV502SS-4-ACT	1/4	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	1/4-18 NPT	15/16	10-24	1/8-27	1.10	.375	4.0
XV502SS-6-ACT	3/8	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	3/8-18 NPT	15/16	10-24	1/8-27	1.10	.375	6.0
XV502SS-8-ACT	1/2	1/4-20 UNC	5.53	4.64	2.08	2.27	1.17	1/2-14 NPT	1 1/16	10-24	1/8-27	1.28	.500	14.0

*Ptf Special Short. **Ptf Special Extra Short

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



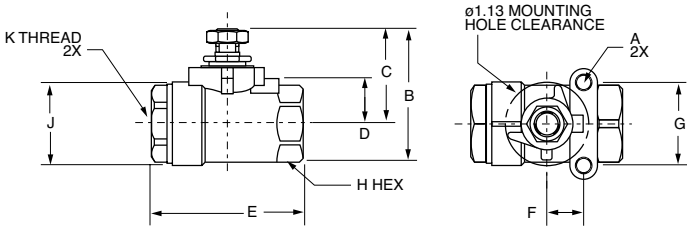


Actuator Sub-Assembly XV502P-X-SUB

PART . NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	I HEX	J	K
XV502P-4-SUB	1/4	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	1/4-18 PTF
XV502P-6-SUB	3/8	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	3/8-18 PTF
XV502P-8-SUB	1/2	10-24	1.78	1.19	.565	2.20	.50	1.12	1-1/16	1-1/16	1.19	1/2-14 PTF*
XV502P-12-SUB	3/4	10-24	2.09	1.40	.655	2.42	.87	1.37	1-5/16	1-1/4	1.38	3/4-14 PTF**
XV502P-16-SUB	1	10-24	2.38	1.54	.785	2.75	.87	1.37	1-9/16	1-1/2	1.67	1-11.5 PTF**

* PTF Special Short
** PTF Special Extra Short

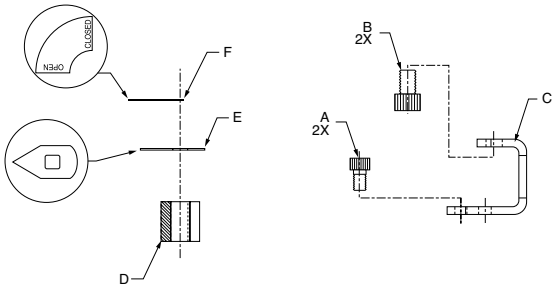




Actuator Sub-Assembly XV502SS-X-SUB

PART . NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	J	K
XV502SS-4-SUB	1/4	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	1/4-18 NPT
XV502SS-6-SUB	3/8	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	3/8-18 NPT
XV502SS-8-SUB	1/2	10-24	2.00	1.35	.66	2.27	.50	1.12	1-1/16	1.28	1/2-14 NPT

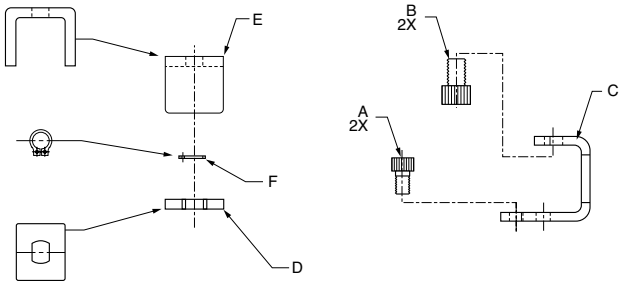




ACT-P-X-KIT

PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-P-1-KIT	XV502P-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.60 LONG COUPLING	POSITION INDICATOR	POSITION LABEL
ACT-P-2-KIT	XV502P-12, 16-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.55 LONG COUPLING	POSITION INDICATOR	POSITION LABEL





ACT-SS-X-KIT

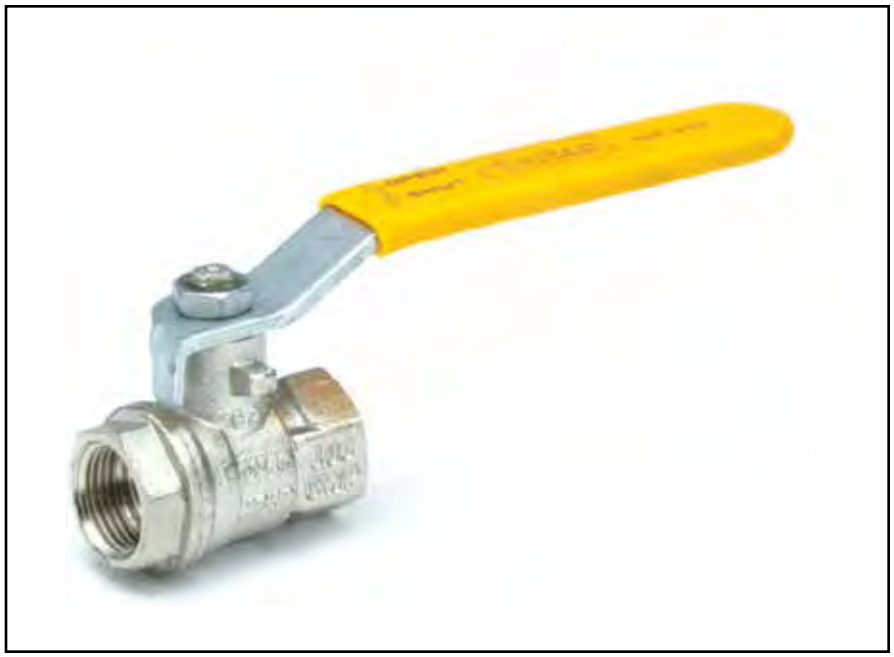
PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-SS-1-KIT	XV502SS-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	CLIP	HANDLE YOKE	SNAP RING

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

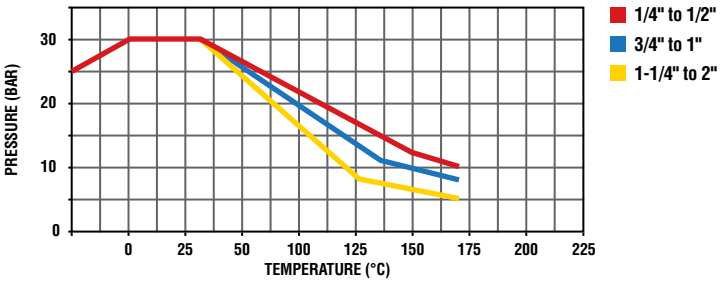
Parker Metric Ball Valve Series BVGC

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS NICKEL PLATED TO DIN 17660 AND UNI 5705
BALL:	BRASS CHROME PLATED
SEATS / SEALS:	PTFE WITH SILICONE FREE LUBRICANT
PACKING GLAND:	PTFE
HANDLE:	LEVER – CARBON STEEL COMPACT – ALUMINUM

SPECIFICATIONS
FEMALE BSPP SHORT THREADS MANUFACTURED IN ACCORDANCE TO ISO 228 / DIN 259

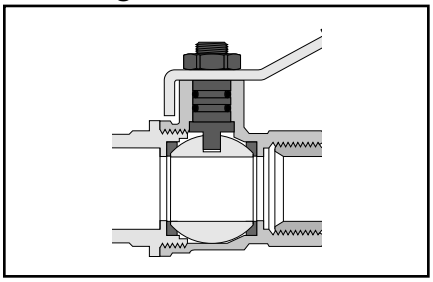


Operating pressures and temperatures



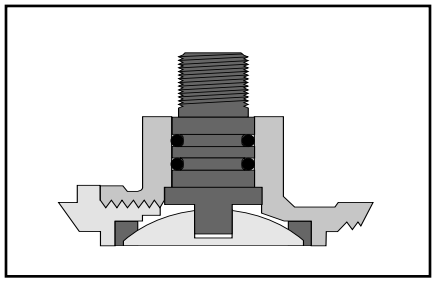
N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Advantages



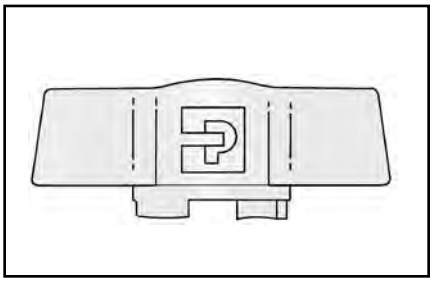
Adjustable packing

The PTFE packing gland and adjustable washer are designed to give longer service life and lower operating torques.



Anti extrusion stem

The BVGC series ball valves are fitted with an anti-extrusion stem to prevent blow out in the case of pressure peaks.



Compact handle

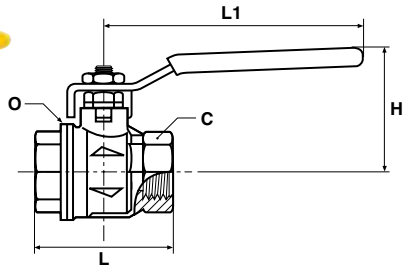
For applications where space is at a premium, the BVGC series valve is available with a compact handle in sizes up to 1".

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

BVGC BSPP Female/Female Valve With Lever Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4C	8	1/4	20	39.5	39	82	25.0
BVG4-3/8C	10	3/8	20	39.5	39	82	25.0
BVG4-1/2C	15	1/2	25	44.0	50	100	32.5
BVG4-3/4C	20	3/4	31	50.0	54	120	39.0
BVG4-1C	25	1	38	54.0	67	120	47.5
BVG4-1.1/4C	32	1.1/4	48	76.5	77	158	59.0
BVG4-1.1/2C	40	1.1/2	54	82.5	90	158	71.5
BVG4-2C	50	2	66	89.5	106	158	86.0

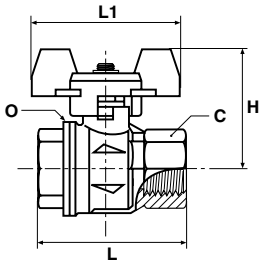




BVGTC BSPP Female/Female Valve with Compact Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVGT4-1/4C	8	1/4	20	40	39	50	25.0
BVGT4-3/8C	10	3/8	20	40	39	50	25.0
BVGT4-1/2C	15	1/2	25	44	50	50	32.5
BVGT4-3/4C	20	3/4	31	49	54	60	39.0
BVGT4-1C	25	1	38	53	67	60	47.5





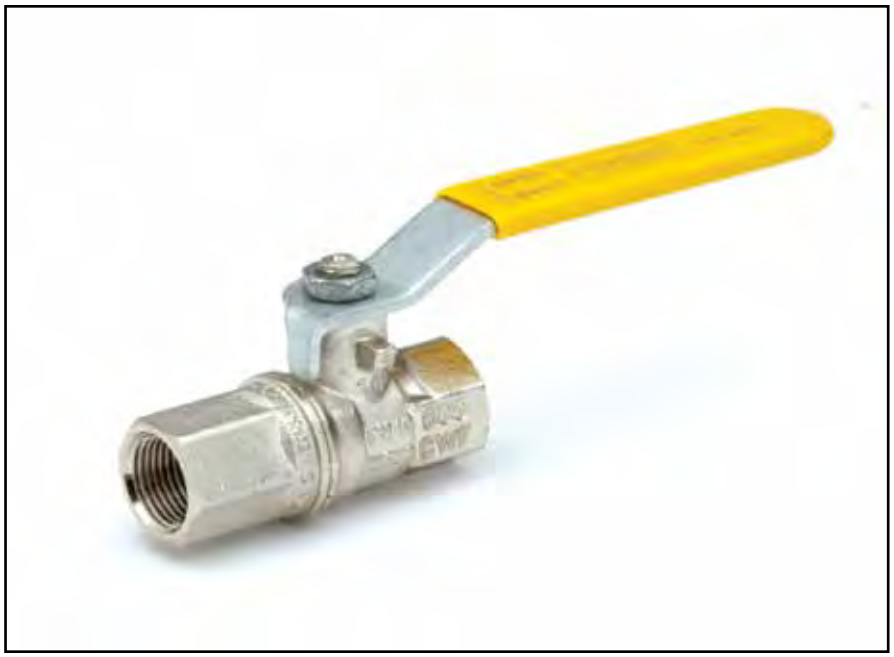
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

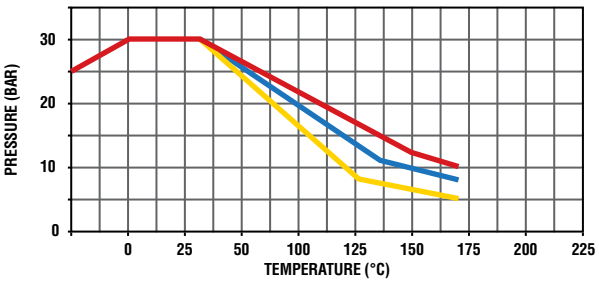
Parker Metric Ball Valve Series BVGL

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS NICKEL PLATED TO DIN 17660 AND UNI 5705
BALL:	BRASS CHROME PLATED
SEATS / SEALS:	PTFE WITH SILICONE FREE LUBRICANT
STEM SEAL:	FLUOROCARBON O-RINGS
HANDLE:	LEVER – CARBON STEEL COMPACT – ALUMINUM

SPECIFICATIONS
FEMALE THREADS MANUFACTURED IN ACCORDANCE TO DIN 2999/ISO 228.



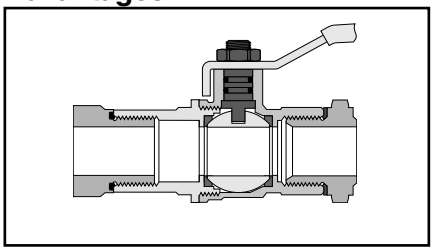
Operating pressures and temperatures



N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

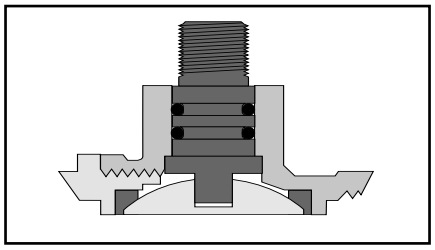
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Advantages



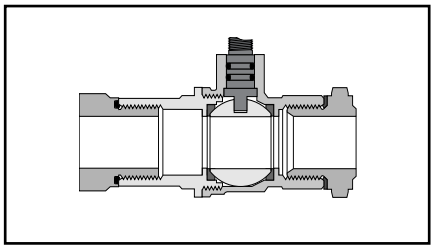
Long female threads

BVGL series valves are manufactured with long female threads in accordance to DIN 2999/ISO 228. This enables the valves to be used with Prestolok, Metru-Lok and brass adaptors but also Parker's range of steel hydraulic fittings, e.g. Triple-Lok, O-Lok, EO, and BSPP coned adaptors.



Anti extrusion stem

The BVGL series ball valves are fitted with an anti extrusion stem to prevent blow out in the case of pressure peaks. The stem is sealed with two Fluorocarbon O-rings for maximum safety and performance.



Full flow

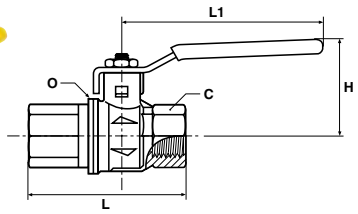
All BVGL series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

BVGL BSPP Female/Female Valve with Lever Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4L	8	1/4	20	38	50	82	25.0
BVG4-3/8L	10	3/8	20	38	60	82	25.0
BVG4-1/2L	15	1/2	25	43	75	100	32.5
BVG4-3/4L	20	3/4	32	50	80	120	39.0
BVG4-1L	25	1	41	54	90	120	47.5
BVG4-1.1/4L	32	1 1/4	50	73	110	158	59.0
BVG4-1.1/2L	40	1 1/2	55	79	120	158	71.5
BVG4-2L	50	2	70	86	140	158	86.0

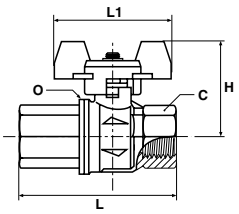




BVGTL BSPP Female/Female Valve with Compact Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVGT4-1/4L	8	1/4	20	39	50	50	25.0
BVGT4-3/8L	10	3/8	20	39	60	50	25.0
BVGT4-1/2L	15	1/2	25	43	75	50	32.5
BVGT4-3/4L	20	3/4	32	47	80	60	39.0
BVGT4-1L	25	1	41	51	90	60	47.5





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Parker Metric Ball Valve Series BVGLOCK

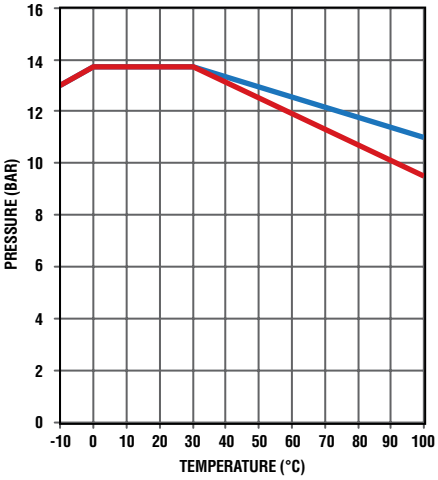
MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS NICKEL PLATED TO DIN 17660 AND UNI 5705
BALL:	BRASS CHROME PLATED
SEATS / SEALS:	PTFE WITH SILICONE FREE LUBRICANT
PACKING GLAND:	PTFE
HANDLE:	CARBON STEEL

SPECIFICATIONS

MEETS THE REQUIREMENTS OF EUROPEAN DIRECTIVE DI 89/392/CEE RELATING TO THE ISOLATION OF POWER SUPPLY AND TO MEET THE HEALTH AND SAFETY REQUIREMENTS FOR MACHINES AND MATERIALS IN PARAGRAPHS L233-5 OF THE CODE DU TRAVAIL.



Operating pressures and temperatures



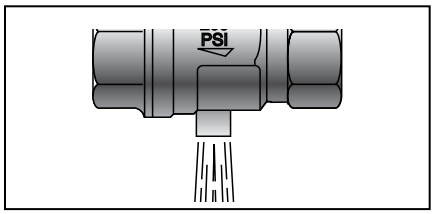
1/4" to 1/2"
3/4" to 2"

N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

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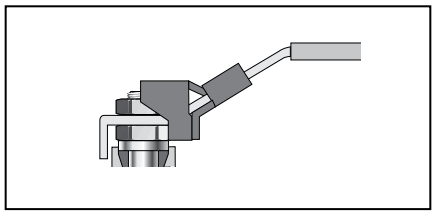
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Advantages



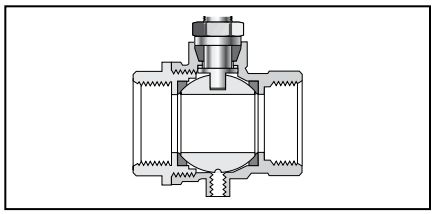
Threaded Exhaust

BVGPLOCK series ball valves are manufactured with an exhaust port, this safety feature enables the downstream air pressure to be vented when the valve is closed. 1/4-1" have M5 thread. 1.1/4 and larger are not threaded.



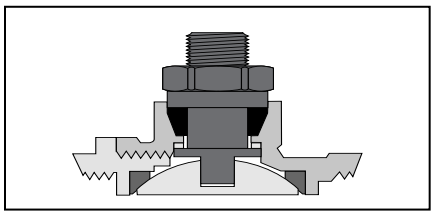
Lockable Handle

The BVGPLOCK series ball valves are fitted with a handle that can be locked in the closed position with a padlock. This safety feature ensures the valve cannot be accidentally opened, and only authorized personnel can operate the valve. Sizes 1.1/4 and larger can be locked in both the open and closed positions.



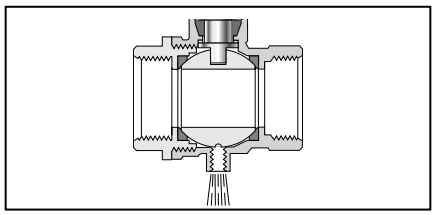
DIN 2999 / ISO 228 Female Threads

BVGPLOCK series valves are manufactured with long female threads in accordance to DIN2999/ISO228. This enables the valves to be used with Prestolok, Metrulok and brass adaptors but also Parker's range of steel hydraulic fittings and EO-fittings form "A" or "C" to DIN 3852.



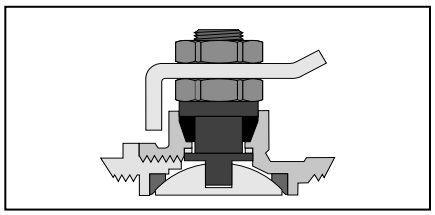
Anti Extrusion Stem

The BVGPLOCK series ball valves are fitted with an anti-extrusion stem to prevent blow out in the case of pressure peaks.



Full Flow

All BVGPLOCK series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

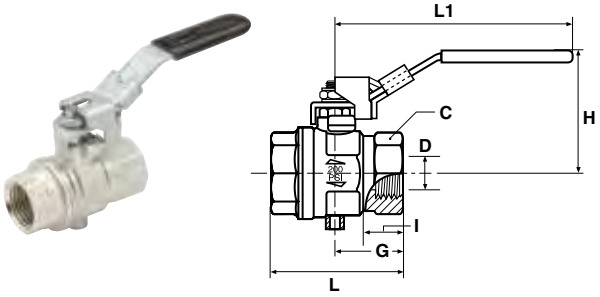


Adjustable Packing

The PTFE packing gland and adjustable washer are designed to give longer service like and lower operating torques.

BVG4PLOCK BSPP Female/Female, Vented, Locking Handle

PART NO.	D FLOW Ø	THREAD BSPP	C	G	H	I	L	L1
BVG4P-1/4 LOCK	8.0	1/4	20	22.5	47.5	12.0	45	96
BVG4P-3/8 LOCK	9.5	3/8	20	22.5	47.5	12.0	45	96
BVG4P-1/2 LOCK	15.0	1/2	25	29.5	52.0	15.5	59	96
BVG4P-3/4 LOCK	19.0	3/4	31	32.0	59.5	17.0	64	117
BVG4P-1 LOCK	24.0	1	40	40.5	63.5	21.0	81	117
BVG4P-1.1/4LOCK	32.0	1-1/4	49	46.5	76.5	23.0	93	158
BVG4P-1.1/2LOCK	40.0	1-1/2	54	51.0	82.5	23.0	102	158
BVG4P-2LOCK	50.0	2	69	60.5	89.5	26.5	121	158



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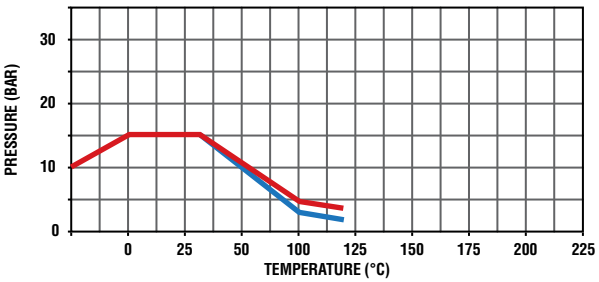
Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Parker Metric Ball Valve Series MBVG

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS CHROMIUM PLATED
BALL:	BRASS CHROME PLATED
SEATS/SEALS:	PTFE
STEM SEAL:	FLUOROCARBON
HANDLE:	POLYAMIDE



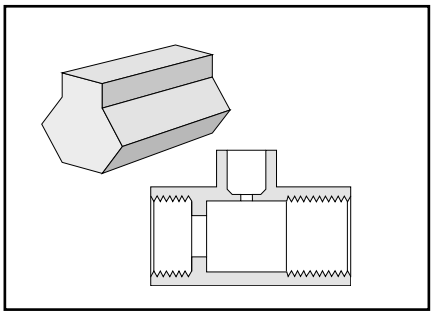
Operating pressures and temperatures



N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

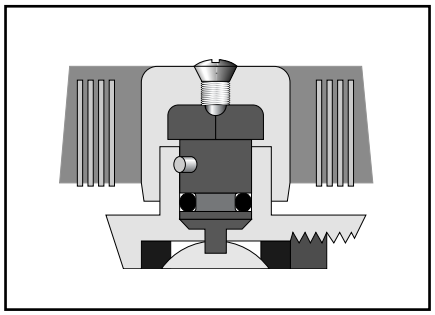
K

Advantages



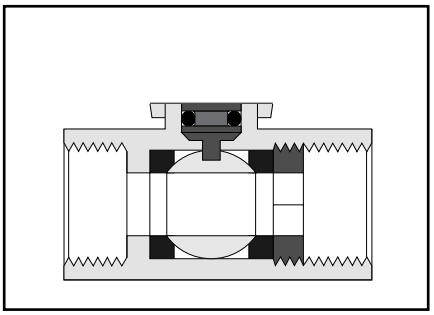
Design of the body

The valve is manufactured from a solid section which incorporates the stem housing in the body. This design allows excellent guidance of the stem, which increases its lifespan.



Stem tightness

A Fluorocarbon O-Ring assembled under compression automatically compensates for minute friction wear. Thus a high standard of seal is attained.



Tightness of the seals

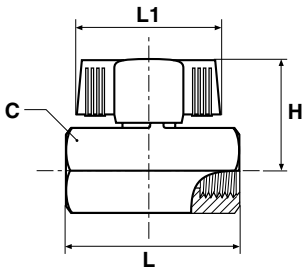
The perfect tightness of the seals on the casing is obtained by the preset force of the nut, adjusted during assembly.

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

MBVG BSPP Female/Female Valve

PART NO.	DN MM	THREAD BSPP	C	H	L	L1
MBVG4-1/4	8	1/4	21	31.5	41.5	39
MBVG4-3/8	8	3/8	21	31.5	41.5	39
MBVG4-1/2	10	1/2	25	33.5	48.0	39





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Micro Ball Valves
Series 708/709

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS
BALL:	BRASS CHROME PLATED
SEATS/SEALS:	PTFE
STEM SEAL:	NITRILE
HANDLE:	CHROME PLATED STEEL

SPECIFICATIONS	
PRESSURE RANGE	UP TO 500 PSI VACUUM SERVICE TO 29" OF HG
TEMPERATURE RANGE	-35° TO +300°F
OPERATING INSTRUCTIONS	Quarter turn is "ON" or "OFF". (Provides positive stop action for full shutoff.)

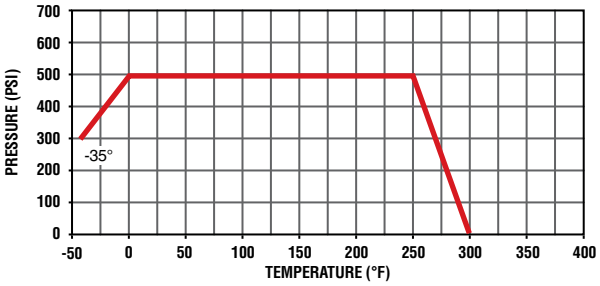
STYLE	TYPE	SIZE
MV	**708 / 709**	**-2, -4**
STYLE	MV-MICRO VALVE	
TYPE	708 - MALE / FEMALE 709 - FEMALE / FEMALE	
SIZE	4-1/4"	

FLOW DATA		
VALVE SIZE	MV708 CV	MV709 CV
1/4	.95	.95



Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and / or inability to turn the valve handle.

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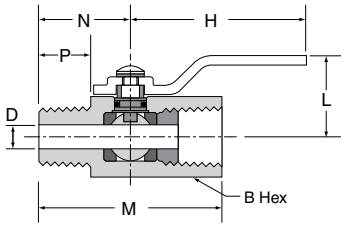


Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male-Female Pipe Ends, Mini Ball Valve MV708

PART NO.	PIPE THREAD	B HEX	H	L	M	N	P	FLOW DIA. D
MV708-2	1/8	9/16	1.18	.63	1.62	.93	.38	.180
MV708-4	1/4	11/16	1.52	.70	1.57	.79	.50	.210

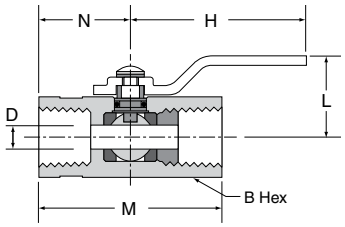




Female Pipe Ends, Mini Ball Valve MV709

PART NO.	PIPE THREAD	B HEX	H	L	M	N	FLOW DIA. D
MV709-2	1/8	9/16	1.18	.63	1.52	.68	.180
MV709-4	1/4	11/16	1.52	.70	1.57	.76	.210





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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Replacement Handles

	VALVE	PLATED STEEL LEVER W/COVER	S.S. LEVER (NO COVER)	S.S. LEVER W/COVER	TEE (NO COVER)	OVAL (W/COVER)	SHORT LEVER (NO COVER)	PLATED STEEL LKG. LEVER W/COVER	S.S. LOCKING LEVER W/COVER
XV500P (501, 502, 506, 510, 590, 591)	-4	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-6	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-8	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-10	2560-10097	2566-00178		2566-00179			2566-10100	
	-12	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
	-16	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
	-20	2566-00143	2566-00153		2566-00281	—	2566-00142	2566-00135	—
	-24	2566-00143	2566-00153		2566-00281	—	2566-00142	2566-00135	—
	-32	2566-00143	2566-00153		2566-00281	—	2566-00142	2566-00135	—
XV501SS & XV502SS	-4	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-6	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-8	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-12	—		2566-00133	—	2566-00109	—	—	2566-00184
	-16	—		2566-00133	—	2566-00109	—	—	2566-00184
XV502SS	-20	—		2566-00134	—	2566-00110	—	—	2566-00185
	-24	—		2566-00134	—	2566-00110	—	—	2566-00185
	-32	—		2566-00134	—	2566-00110	—	—	2566-00185
XV500CS & XV502CS	-4	2566-00158			2566-00170	2566-00166		2566-00162	
	-6	2566-00158			2566-00170	2566-00166		2566-00162	
	-8	2566-00158			2566-00171	2566-00166		2566-00162	
	-12	2566-00159			2566-00172	2566-00167		2566-00163	
	-16	2566-00159			2566-00172	2566-00167		2566-00163	
	-20	2566-00160				2566-00168		2566-00164	
	-24	2566-00160				2566-00168		2566-00164	
	-32	2566-00161				2566-00169		2566-00165	
XV506CS	-4	2566-00158			2566-00170	2566-00166		2566-00162	
	-6	2566-00158			2566-00170	2566-00166		2566-00162	
	-8							2566-00234	
	-12	—						2566-00235	
	-16	—						2566-00236	
XV533P	-4	2560-10152	2566-00105		2566-00147	2566-00215	2566-00231	2560-10160	
	-6	2560-10152	2566-00105		2566-00147	2566-00215	2566-00231	2560-10160	
	-8	2560-10152	2566-00105		2566-00147	2566-00215	2566-00231	2560-10160	
	-12	2560-10153	2566-00178		2566-00179	2566-00180		2560-10168	
	-16	2560-10153	2566-00178		2566-00179	2566-00180		2560-10168	
XV520P	-4				2566-00277			2566-00262	
	-6				2566-00277			2566-00262	
	-8				2566-00277			2566-00262	
	-12				2566-00280			2566-00261	
	-16				2566-00280			2566-00261	
	-20	2566-00143	2566-00153		2566-00281			2566-00135	
	-24	2566-00143	2566-00153		2566-00281			2566-00135	
	-32	2566-00143	2566-00153		2566-00281			2566-00135	
	40	2566-00253							
	48	2566-00253							
XV500HP, XV506HP, XV507HP	-4							BVHPLK-1[A]	
	-6							BVHPLK-1[A]	
	-8							BVHPLK-1[A]	
	-12							BVHPLK-2[A]	
	-16							BVHPLK-2[A]	
	-20							BVHPLK-3[A]	
	-24							BVHPLK-3[A]	
	-32							BVHPLK-3[A]	

[A] Locking kit for use with standard handles

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Replacement Handle Nuts

VALVE	PLATED STEEL	STAINLESS STEEL
XV500P-4	2567-00020	2567-00023
XV500P-6	2567-00020	2567-00023
XV500P-8	2567-00020	2567-00023
XV500P-12	2567-00055	2567-00057
XV500P-16	2567-00055	2567-00057
XV500P-20	2567-00051	2567-00052
XV500P-24	2567-00051	2567-00052
XV500P-32	2567-00051	2567-00052

Replacement Handle Covers

VALVE	LEVER	SHORT LEVER	TEE
XV500P-4	2569-00108	2569-00342	2569-00155
XV500P-6	2569-00108	2569-00342	2569-00155
XV500P-8	2569-00108	2569-00342	2569-00155
XV500P-12	2569-00296		2569-00155
XV500P-16	2569-00296		2569-00155
XV500P-20	2569-00229	2569-00234	
XV500P-24	2569-00229	2569-00234	
XV500P-32	2569-00229	2569-00234	
XV502SS-4		2569-00203	
XV502SS-6		2569-00203	
XV502SS-8		2569-00203	

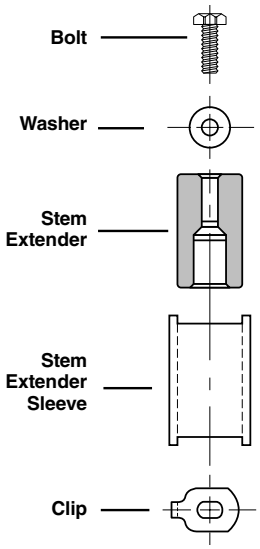
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STX	Stem Extension Kit
P	For use on Brass Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

STX	Stem Extension Kit
SS	For use on Stainless Steel Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves 3: 1-1/4"-2" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

All stem extension kit componentry is made from high quality, corrosion resistant stainless steel

Note: Stem extensions cannot be used with series 509 and series 520.

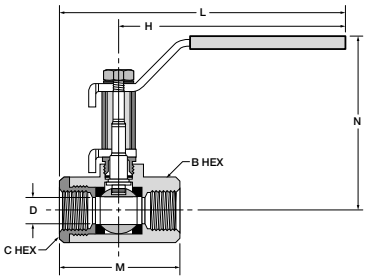


Brass Valve Extension Dimensions STX-P-1-125

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-125	1/4	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	3/8	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	1/2	1-1/16	1-1/16	3.96	5.05	2.20	3.84	.500
STX-P-2-125	3/4	1-1/4	1-5/16	3.96	5.25	2.42	4.06	.685
STX-P-2-125	1	1-1/2	1-9/16	3.96	5.89	2.75	4.33	.875

Note: Drawing shows STX-P assembled to XV500P series-not included



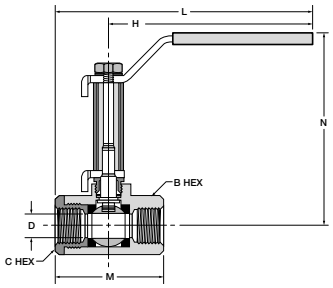


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Brass Valve Extension Dimensions STX-P-1-225

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-225	1/4	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	3/8	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	1/2	1-1/16	1-1/16	3.96	5.05	2.20	4.84	.500
STX-P-2-225	3/4	1-1/4	1-5/16	3.96	5.25	2.42	5.06	.685
STX-P-2-225	1	1-1/2	1-9/16	3.96	5.89	2.75	5.33	.875

Note: Drawing shows STX-P assembled to XV500P series-not included



Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Mini Ball Valves
Series 200/608/609

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS CHROME PLATED
BALL:	BRASS CHROME PLATED
SEATS/SEALS:	PTFE
STEM SEAL:	FLUOROCARBON
HANDLE:	608/609 – POLYAMIDE WEDGE 200 – POLYAMIDE LEVER

MV200 PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	200 PSI
TEMPERATURE RANGE	0° TO +200°F

MV 608/609 PRESSURE AND TEMPERATURE RANGE	
PRESSURE RANGE	450 PSI
TEMPERATURE RANGE	0° TO +200°F

STYLE	TYPE	SIZE
MV	608 / 609	-2
STYLE	MV-MINI VALVE	
TYPE	608 - MALE / FEMALE 609 - FEMALE / FEMALE	
HANDLE COLOR	MV200 FEATURES A BLACK LEVER HANDLE MV608/MV609 FEATURES-YELLOW WEDGE HANDLES	
SIZE	2-1/8", 4-1/4", 6-3/8", 8-1/2"	

STYLE	TYPE	SIZE
MV	200	-2
STYLE	MV-MINI VALVE	
TYPE	200 - FEMALE / FEMALE LEVER HANDLE	
SIZE	2-1/8", 4-1/4", 6-3/8", 8-1/2"	

FLOW DATA			
VALVE SIZE	MV200 CV	MV608 CV	MV609 CV
1/8	1.3	1.2	1.4
1/4	4.0	5.8	4.3
3/8	3.7	3.9	3.6
1/2	5.8	5.6	6.0

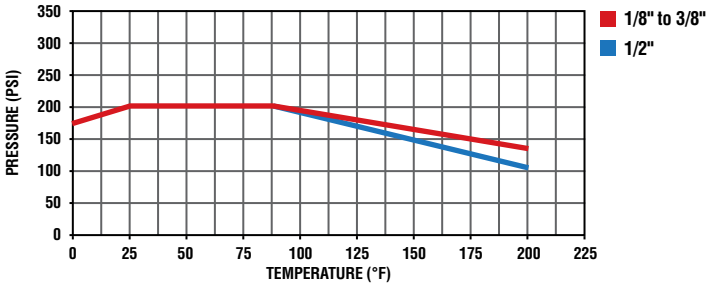
SPECIFICATIONS	
OPERATING INSTRUCTIONS	QUARTER TURN IS "ON" OR "OFF." (PROVIDES POSITIVE STOP ACTION FOR FULL SHUTOFF.)



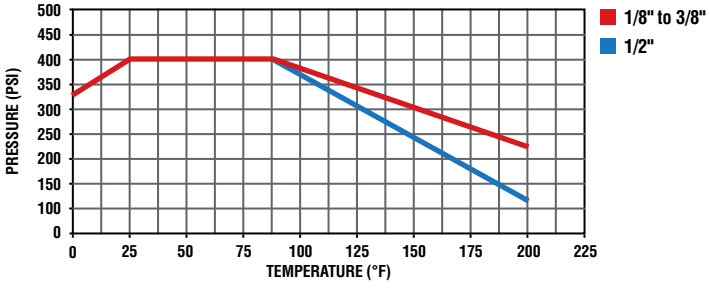
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

MV200 Pressure and Temperature



MV608/609 Pressure and Temperature

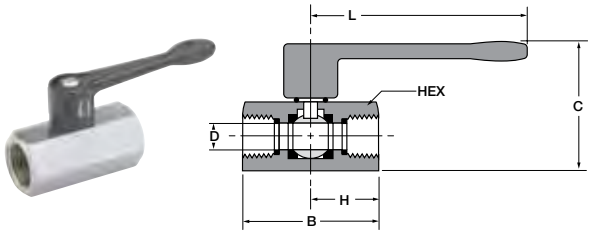


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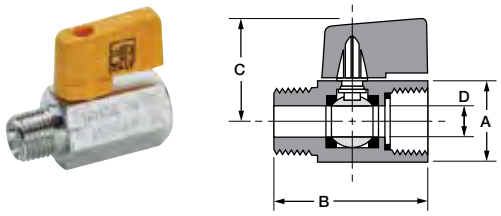
Female Pipe Ends, Lever Handle, Mini Ball Valve MV200

PART NO.	PIPE THREAD	HEX	B	C	H	L	FLOW DIA.D
MV200-2	1/8	.83	1.71	1.20	.91	2.83	.31
MV200-4	1/4	.83	1.71	1.20	.91	2.83	.31
MV200-6	3/8	.83	1.71	1.20	.91	2.83	.31
MV200-8	1/2	.98	2.11	1.28	1.10	2.83	.39



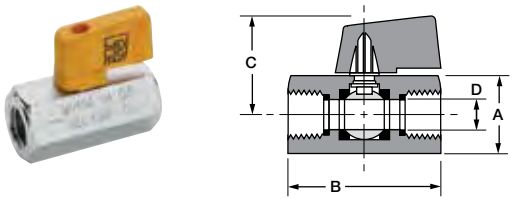
Male-Female Pipe Ends, Compact Handle, Mini Ball Valve MV608

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV608-2	1/8	.83	1.72	1.22	.20
MV608-4	1/4	.83	1.72	1.22	.31
MV608-6	3/8	.83	1.72	1.22	.31
MV608-8	1/2	.98	2.11	1.30	.39



Female Pipe Ends, Compact Handle, Mini Ball Valve MV609

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV609-2	1/8	.83	1.71	1.22	.24
MV609-4	1/4	.83	1.71	1.22	.31
MV609-6	3/8	.83	1.71	1.22	.31
MV609-8	1/2	.98	2.11	1.30	.39
MV609-6-4	3/8X1/4	.83	1.71	1.22	.31



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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Plug Valves Series PV

MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS
VALVE STEM:	ACETAL

NOMENCLATURE	
EXAMPLE: PV607-2-OPTIONS	**ATTRIBUTE:**
PV	PLUG VALVE
607	MALE TO MALE
2	1/8" MALE
N (NOT SHOWN)	NEOPRENE (BROWN)
V (NOT SHOWN)	FLOROCARBON (RED)

SPECIFICATIONS	
PRESSURE RANGE	UP TO 250 PSI
TEMPERATURE RANGE	-40° TO +175°F

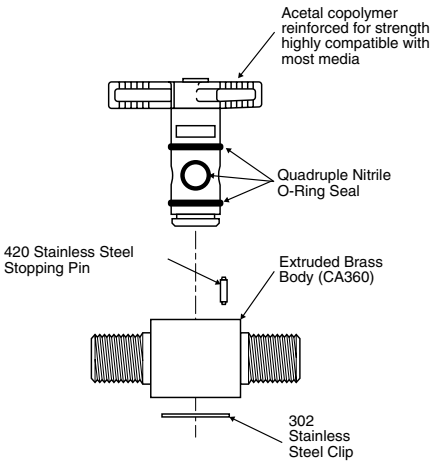


Compact design features internal nitrile seats and a one-piece extruded brass body, offering compatibility with a wide range of media. The one-piece stem/handle combination is constructed of glass reinforced acetal copolymer. All plug valves are 100% leak tested and are certified to be leak free to one SCCM.

Installation Instructions

To assure sealability and reliable performance, the valve must be installed so that the flow media travels in the direction of the arrow on the valve handle.

Valve Components



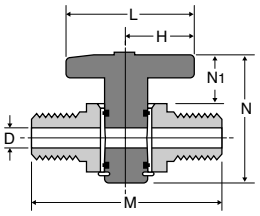
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Male Pipe to Male Pipe Plug Valve PV607

PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV607-2	1/8	.67	1.34	1.66	1.38	.51	.200
PV607-4	1/4	.67	1.34	2.02	1.38	.51	.200

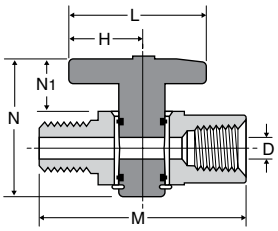




Female Pipe to Male Pipe Plug Valve PV608

PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV608-2	1/8	.67	1.34	1.67	1.38	.51	.200
PV608-4	1/4	.67	1.34	2.06	1.38	.51	.200

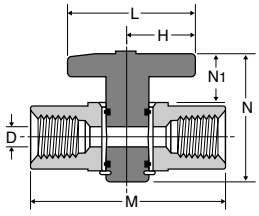




Female Pipe to Female Pipe Plug Valve PV609

PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV609-2	1/8	.67	1.34	1.68	1.38	.51	.200
PV609-4	1/4	.67	1.34	2.10	1.38	.51	.200



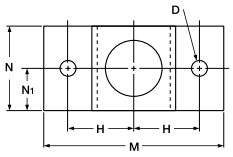


Mounting Bracket PVMB-001

PART NO.	H	M	N	N1	D
PVMB-001	.68	1.86	.90	.45	.135

Note: 1" diameter hole required in panel when using mounting bracket





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Fluid System Connectors
Otsego, Michigan

Needle Valves

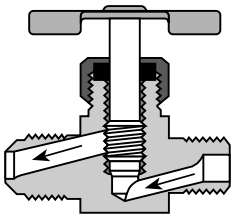
MATERIALS OF CONSTRUCTION	
VALVE BODY:	BRASS
STEM:	BRASS

NEEDLE VALVE NOMENCLATURE	
EXAMPLE: NV101F-4-2	**ATTRIBUTE:**
NV	NEEDLE VALVE
101	ANGLE NEEDLE VALVE
F	FLARED TO MALE PIPE
4	1/4" TUBE O.D.
2	1/8" PIPE THREAD

SPECIFICATIONS	
PRESSURE RANGE	VALVES UP TO 150 PSI UNLESS OTHERWISE NOTED
TEMPERATURE RANGE	SEE SPECIFIC PART NUMBER FOR TEMPERATURE RANGE



Needle valves have metal-to-metal seats with fine thread screwdown. Brass construction with specially formulated low temperature seal which remains elastic to temperature as low -40°F.



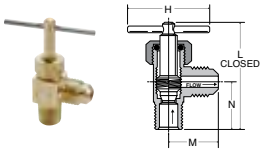
Needle Valves Installation Instructions

Series NV valves should always be installed with the pressure against the seat. Refer to drawing to determine correct direction of flow.

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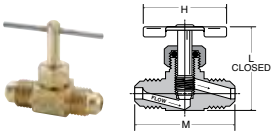
Angle Needle Valve NV101F



Flare to Male Pipe
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV101F-4-2	1/4	1/8	1.50	1.58	.75	.66
NV101F-6-4	3/8	1/4	1.38	1.86	.95	.90

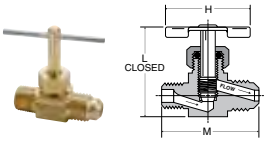
Needle Valve NV102F



Flare to Flare *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	H	L	M
NV102F-4*	1/4	1.50	1.34	1.50
NV102F-6	3/8	1.38	1.55	1.86

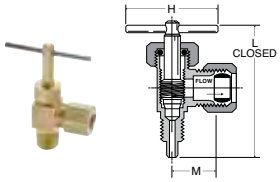
Needle Valve NV103F



Flare to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
NV103F-4-2*	1/4	1/8	1.50	1.33	1.35
NV103F-6-4	3/8	1/4	1.38	1.56	1.73

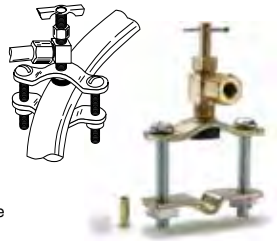
Humidifier Valve HV104C



Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
HV104C-4-2	1/4	1/8	1.50	1.89	.53

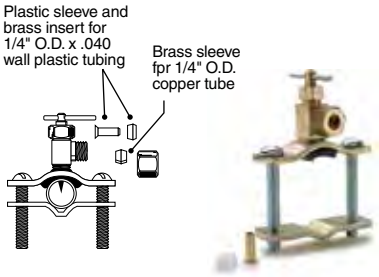
Humidifier Valve clamp kit HV104C-kit



Temperature Range: -30° to +250° F
Clamp fits 3/8" O.D. through 1.315" O.D. tube or pipe. Kit includes 60PT-4 and 63PT-4 for assembly with plastic or nylon tubing. For complete kit, specify entire part number as shown below:

PART NO.	TUBE SIZE	PIPE THREAD
HV104C-4-2 KIT	1/4	1/8

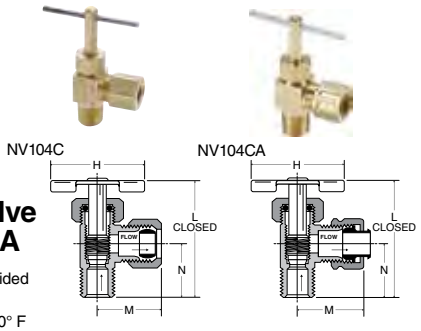
Self-Piercing Humidifier Valve clamp kit SPV104C-kit



Temperature Range: -30° to +250° F
Clamp fits 3/8" O.D. through 1.315" O.D. tube or pipe. Kit includes 60PT-4 and 63PT-4 for assembly with plastic or nylon tubing. For complete kit, specify entire part number as shown below:

PART NO.	TUBE SIZE	PIPE THREAD
SPV104C KIT	1/4	1/8

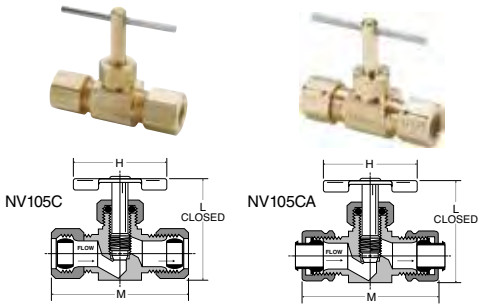
Angle Needle Valve NV104C-NV104CA



Compression to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV104C-4-2*	1/4	1/8	1.50	1.54	.88	.67
NV104CA-4-2*	1/4	1/8	1.50	1.49	.77	.66
NV104C-4-4	1/4	1/4	1.38	1.80	.93	.75
NV104C-5-2*	5/16	1/8	1.50	1.63	.88	.68
NV104C-6-4	3/8	1/4	1.38	1.76	.94	.81

Needle Valve NV105C-NV105CA

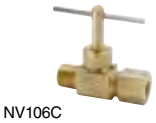


Compression to Compression
*Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	H	L	M
NV105C-4*	1/4	1.50	1.41	1.75
NV105C-5*	5/16	1.50	1.35	1.73
NV105C-6	3/8	1.38	1.55	1.93
NV105CA-4*	1/4	1.50	1.41	1.64
NV105CA-6	3/8	1.38	1.55	1.78

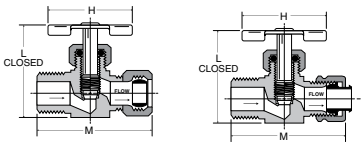
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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan



Needle Valve NV106C-NV106CA

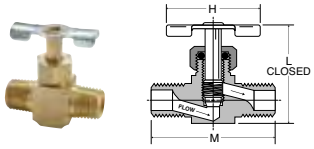
Compression to Male Pipe
*Provided with Pin Handle
Temperature Range: -45° to +250° F



PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
NV106C-4-2*	1/4	1/8	1.50	1.41	1.53
NV106C-4-4*	1/4	1/4	1.50	1.40	1.55
NV106C-5-2*	5/16	1/8	1.50	1.35	1.50
NV106C-6-4	3/8	1/4	1.38	1.56	1.75
NV106CA-4-2	1/4	1/8	1.50	1.41	1.47
NV106CA-4-4*	1/4	1/4	1.50	1.33	1.52
NV106CA-6-4	3/8	1/4	1.38	1.53	1.78

Needle Valve NV107P

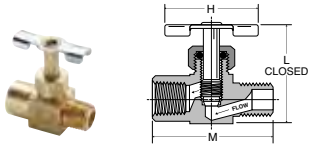
Male Pipe to Male Pipe
*Provided with Pin Handle
Temperature Range: -45° to +250° F



PART NO.	PIPE THREAD	H	L	M
NV107P-2*	1/8	1.50	1.35	1.25
NV107P-4	1/4	1.38	1.54	1.65

Needle Valve NV108P

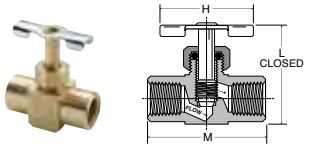
Female Pipe to Male Pipe
*Provided with Pin Handle
Temperature Range: -45° to +250° F



PART NO.	PIPE THREAD	H	L	M
NV108P-2*	1/8	1.50	1.36	1.25
NV108P-4	1/4	1.38	1.56	1.61

Needle Valve NV109P

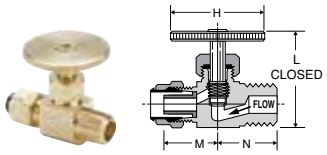
Female Pipe to Female Pipe
*Provided with Pin Handle
Temperature Range: -45° to +250° F



PART NO.	PIPE THREAD	H	L	M
NV109P-2*	1/8	1.50	1.35	1.25
NV109P-4	1/4	1.38	1.53	1.60

Needle Valve NV311P

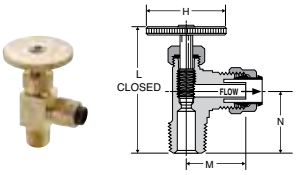
Poly-Tite to Male Pipe
Temperature Range: 0° to +150° F



PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV311P-4-2	1/4	1/8	1.07	1.17	.50	.63
NV311P-4-4	1/4	1/4	1.07	1.18	.50	.72
NV311P-6-4	3/8	1/4	1.07	1.19	.56	.72

Angle Needle Valve NV312P

Poly-Tite to Male Pipe
Temperature Range: 0° to +150° F



PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV312P-4-2	1/4	1/8	1.07	1.53	.48	.68
NV312P-4-4	1/4	1/4	1.07	1.72	.56	.86
NV312P-6-4	3/8	1/4	1.07	1.68	.64	.86

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Drain Cocks/ Ground Plug Shutoff

DRAIN COCK NOMENCLATURE	
EXAMPLE: DC604-2	**ATTRIBUTE:**
DC	DRAIN COCK
604	EXTERNAL SEAT
2	1/8 PIPE THREAD

GROUND PLUG SHUTOFF NOMENCLATURE	
EXAMPLE: V204F-4-2	**ATTRIBUTE:**
V	VALVE
204	FLARED TO MALE PIPE
F	FLARED
4	1/4 TUBE O.D.
2	1/8 PIPE THREAD

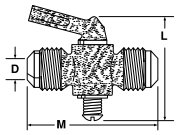
SPECIFICATIONS	
GROUND PLUG SHUTOFF:	30 PSI
DRAIN COCKS	150 PSI
TEMPERATURE RANGES:	SEE SPECIFIC PART NUMBER FOR TEMPERATURE RANGE
OPERATING FLUID:	AIR, WATER, GAS AND CERTAIN OTHER FLUIDS.
NOTE:	LUBRICANT MAY NOT BE COMPATIBLE WITH SOME FLUIDS, CONTACT FACTORY FOR SPECIAL FLUID REQUIREMENTS



Drain cocks are manufactured in both external and internal seats. Ground plug shutoffs are manufactured from castings or forged bodies for extra strength. Hand tightening provides a metal - to - metal seal.

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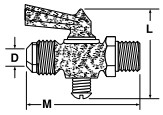
Ground Plug Shutoff V203F

Flare to Flare
T0emperature Range: +32° to +125° F

PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V203F-6-6	3/8	2.26	2.13	.220
V203F-8-8	1/2	2.26	2.50	.281

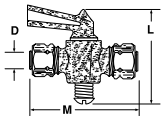
Ground Plug Shutoff V204F

Flare to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V204F-4-2	1/4	1/8	1.85	2.00	.188
V204F-6-4	3/8	1/4	1.85	2.18	.218

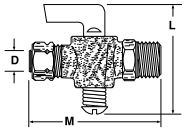
Ground Plug Shutoff V303C / V303CA

Compression to Compression
Temperature Range: +32° to +125° F

PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V303C-4-4	1/4	1.88	2.33	.188
V303CA-4-4	1/4	1.90	1.75	.188
V303C-6-6	3/8	2.26	2.45	.218
V303CA-6-6	3/8	1.76	1.60	.218

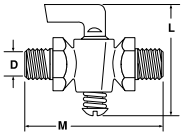
Ground Plug Shutoff V304C / V304CA

Compression to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V304C-4-2	1/4	1/8	1.90	2.29	.188
V304CA-4-2	1/4	1/8	1.88	2.00	.188
V304C-4-4	1/4	1/4	1.90	2.15	.188
V304C-6-4	3/8	1/4	1.83	2.24	.218
V304CA-6-4	3/8	1/4	1.83	2.11	.218

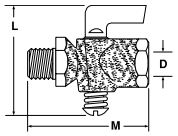
Ground Plug Shutoff V401P

Male Pipe to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	PIPE THREAD	L	M	FLOW DIA. D
V401P-2-2	1/8	1.90	2.25	.188
V401P-4-4	1/4	1.90	1.98	.188

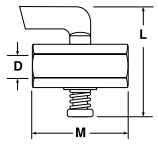
Ground Plug Shutoff V402P

Female Pipe to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	FEMALE PIPE THREAD	PIPE THREAD	L	M	FLOW DIA. D
V402P-2-2	1/8	1/8	1.85	1.78	.218
V402P-4-4	1/4	1/4	1.86	2.26	.218
V402P-6-6	3/8	3/8	2.34	2.21	.245

Ground Plug Shutoff V403P

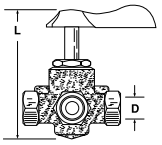



Female Pipe to Female Pipe
Temperature Range: +32° to +125° F

PART NO.	FEMALE PIPE THREAD	L	M	FLOW DIA. D
V403P-2-2	1/8	1.90	1.51	.218
V403P-4-4	1/4	1.90	1.65	.188
V403P-6-6*	3/8	2.25	2.00	.250

*Made from extruded bar stock

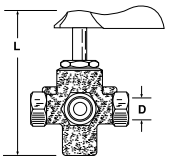
Three-way valve V406P

Female Pipe three ends
Temperature Range: -40° to +180° F

PART NO.	PIPE THREAD	L	FLOW DIA. D
V406P-4	1/4	3.10	.281

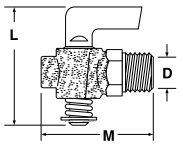
Four-way valve V407P

Female Pipe four ends
Temperature Range: -40° to +180° F

PART NO.	PIPE THREAD	L	FLOW DIA. D
V407P-4	1/4	3.30	.281

Ground Plug Shutoff DC601

Temperature Range: +32° to +125° F

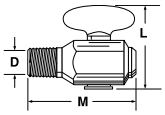
PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DC601-2	1/8	1.90	1.40	.170
DC601-4	1/4	1.90	1.52	.170
DC601-6	3/8	2.26	1.74	.281
DC601-8	1/2	2.29	1.82	.281

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Drain Cock DCR601



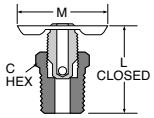


Temperature Range: -30° to +250° F

PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DCR601-4	1/4	1.41	1.73	.156

Internal Seal Drain Cock DC602



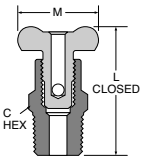


Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC602-2	1/8	13/32	.92	1.25
DC602-4	1/4	9/16	.94	1.25

Drain Cock DC603



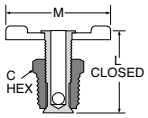


Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M M
DC603-2	1/8	5/8	1.41	1.00
DC603-4	1/4	5/8	1.54	1.16
DC603-6	3/8	11/16	1.63	1.16

External Seal Drain Cock DC604





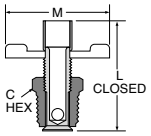
Temperature Range: -25° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC604-2*	1/8	7/16	.85	1.25
DC604-4	1/4	9/16	1.00	1.38
DC604-6*	3/8	11/16	1.22	1.68

*When assembled handle wings are down facing

External Seal Drain Cock DC606



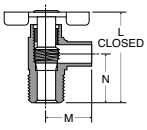


Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC606-4	1/4-18	9/16	1.50	1.38

Bib Drain Valve DC607





Temperature Range: -65° to +250° F

PART NO.	HOSE SIZE	PIPE THREAD	FLOW	L	M	N N
DC607-4	3/8	1/4	.31	1.32	.67	.71

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Accessories and Blow Guns



Blow Guns
Controlled Pressure
Full Pressure
BG Series



Bins
Prime cold rolled steel construction
Compartment and drawer style
Durable gray powder coat finish



Bags
Clear Polyethylene
Zip-lock style
Reusable



Copper Tubing
Refrigeration Service
Meets A.S.T.M. B-280
50 ft. coils



Blow Guns

410-S
Controlled Pressure

p. L3

410-SV
Controlled Pressure

p. L3

415-S
Controlled Pressure

p. L3

400-S-TIP
Replacement Tip

p. L3

410
Full Pressure

p. L3

410-N
Full Pressure

p. L3

415-N
Full Pressure

p. L3

BG441-NBL
BG Series

p. L4

BG442-SBL
BG Series

p. L4

BG443-NBL
BG Series

p. L4

BG444-SBL
BG Series

p. L4

Bins

16-CB
16 Compartment

p. L5

24-CB
24 Compartment

p. L5

ADJ-CB
Adjustable Compartments

p. L5

4CB-SR
Slide Rack

p. L5

LSR-STAND
Stand

p. L6

9-DC
9 Drawer

p. L6

18-DC
18 Drawer

p. L6

24B-CABINET
24 Opening

p. L6

40B-CABINET
40 Opening

p. L7

PNEU-CAB
Mobile Cabinet

p. L7

Bags

4X6PSB
Clear Plastic Bag

p. L7

6X8PSB
Clear Plastic Bag

p. L7

Copper Tubing

X50CT
Coiled Copper Tubing

p. L7

L

Controlled Pressure Blow Guns

Parker Controlled Pressure Blow Guns meet OSHA requirements (section 29 CFR 1910.242 paragraph b), and directive #100-1. "Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment."

Parker Controlled Pressure Blow Guns have a black epoxy coated zinc body and vented nozzles to prevent pressure build-up when dead ending occurs up to 150 psi.

SPECIFICATIONS		
PART NO.	MAXIMUM PRESSURE PSI	WT. (LB) P/PIECE
410-S	150	.50
410-SV	150	.53
415-S	150	.48



410-S

Parker Controlled Pressure Blow Guns features thumb lever valve actuator and brass nozzle. Inlet port is 1/4" NPT.



410-SV

Parker Venturi Nozzle Controlled Pressure Blow Gun with thumb lever valve and large venturi side ports for high volume flow. Inlet port is 1/4" NPT.



415-S

Parker Controlled Pressure Blow Guns features push button valve actuator and brass nozzle. Inlet port is 1/4" NPT.



400-S-TIP

Blow Gun Replacement Tip

Full Pressure Blow Guns

The following Parker Blow Guns must have a pressure regulator setting below 30 psi to conform to OSHA safety requirements 29 CFR 1910.242 Paragraph b.

SPECIFICATIONS		
PART NO.	MAXIMUM PRESSURE PSI	WT. (LB) P/PIECE
410	150	.48
410-N	150	.51
415-N	150	.49



410

Parker two way thumb lever valve has an zinc body with 1/4" NPT inlet and 1/8" NPSF outlet.

Note: Standard Gun without nozzle.



410-N

Parker thumb lever style Blow Gun features a zinc body, brass nozzle, and 1/4" NPT female inlet.



415-N

Parker Blow Gun features a push button style actuator, zinc body with a brass nozzle and 1/4" NPT female inlet.

L

BG Series Blow Guns

Made from impact resistant plastic, BG Series blow guns are durable and versatile. Extended nozzles allow air to be directed where it is required. The pistol grip trigger allows greater control over the amount of air delivered. Combined, these two features provide superior performance in a light weight, ergonomically designed package.

Nozzles are available in short and extended versions and most models meet OSHA directives on the use of compressed air for cleaning purposes. OSHA directive #100-1 states that "when dead ending occurs a static pressure at the main orifice shall not exceed 30 psi." For those blow guns that do not meet this requirement, OSHA requires that "compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment" (section 29 CFR 1910.242 paragraph b). Please refer to the blow gun descriptions below for compatibility with OSHA directive #100-1.

Nozzle configurations are designed for maximum flexibility. Applications with special requirements may find the BG443-NBL with a 1/8" NPT fitting convenient for adapting existing nozzles or extra-long extensions. For information on specials or made-to-order blow gun nozzles, please contact the Quick Coupling Division.

- Easy to control variable flow pistol grip trigger.
- Nozzles available that meet OSHA requirements.
- Lightweight ergonomical design.
- Bodies are constructed of impact resistant plastic.

SPECIFICATIONS	
RATED PRESSURE (PSI)	175
TEMPERATURE RANGE	TO 120° F
INLET PORT	1/4" NPTF

NOMENCLATURE	
EXAMPLE: BG442-SBL	**ATTRIBUTE:**
BG	BG SERIES BLOW GUN
4	INLET PORT IN 16THS
42	NOZZLE STYLE 41 - EXTENDED 42 - EXTENDED (OSHA) 43 - 1/8" FNPT 44 - SHORT (OSHA)
S	MEETS OSHA REQUIREMENTS S - YES N - NO
BL	COLOR BL - BLACK

BG441-NBL BG Series Blow Gun



PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG441-NBL	EXTENDED	NO

BG443-NBL BG Series Blow Gun



PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG443-NBL	1/8" FEMALE NPT	NO

BG442-SBL BG Series Blow Gun



PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG442-SBL	EXTENDED	YES

BG444-SBL BG Series Blow Gun



PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG444-SBL	VORTEC	YES

L

16 Compartment Large Scoop Box



- Prime cold rolled steel outer shell
- High impact styrene insert with 16 compartments
- Scooped bottom compartments for easy part removal
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Handle allows for easy transport
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
16-CB	18	12	3

24 Compartment Large Scoop Box



- Prime cold rolled steel outer shell
- High impact styrene insert with 24 compartments
- Scooped bottom compartments for easy part removal
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Handle allows for easy transport
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
24-CB	18	12	3

ADJ-CB



- Prime cold rolled steel outer shell
- High impact styrene insert with 4 fixed vertical compartments and 9 moveable dividers adjustable on 1” centers
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)			COMPARTMENTS
	WIDTH	DEPTH	HEIGHT	
ADJ-CB	18	12	3	ADJUSTABLE

Easy Glide Slide Rack (Holds 4 16-CB or 24-CB per rack)



- Sturdy construction using prime cold-rolled steel
- Each cradle holds up to 40 lbs
- Easy glide slides allow boxes to move in and out smoothly
- Center braces on cradles provide extra rigidity
- Reinforced rack keeps boxes level
- Boxes can be easily removed for transport to work areas
- Base and locking hinge are available as accessories
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
4CB-SR	20	15.75	15

L

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Otsego, Michigan

LSR-Stand

- Sturdy all steel construction
- Raises units 15 inches off the floor
- Legs attach easily using fasteners provided
- Durable gray powder finish



PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
LSR-STAND	20 5/8	16 1/4	15 5/8

9 Drawer Cabinet

- Prime cold rolled steel construction
- High density drawer cabinet, easy to store large quantities of small parts
- Drawers feature interlocking design for superior strength
- Drawers have full width handles and easy glide runners
- Each drawer includes 2 easy label dividers, which are adjustable on 1" centers
- Cabinets can be stacked using mounting holes
- Durable gray powder coat finish
- Ships fully assembled



PART NUMBER	DIMENSIONS (IN.)			DRAWER DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
9-DC	17.25	11.625	10.875	5.375	11.25	2.75

18 Drawer Cabinet

- Prime cold rolled steel construction
- High density drawer cabinet, easy to store large quantities of small parts
- Drawers feature interlocking design for superior strength
- Drawers have full width handles and easy glide runners
- Each drawer includes 2 easy label dividers, which are adjustable on 1" centers
- Cabinets can be stacked using mounting holes
- Durable gray powder coat finish
- Ships fully assembled



PART NUMBER	DIMENSIONS (IN.)			DRAWER DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
18-DC	17.25	11.625	21.25	5.375	11.25	2.75

24 Opening Bin

- All welded, prime cold rolled steel
- Fully hemmed 1 1/8" bin fronts to hold labels and retain parts
- Roll-formed sides for increased strength and stability
- Ribbed and hemmed dividers provide added strength
- Modular with most 12" deep bins and drawer cabinets; mounting holes are located at both the top and bottom
- Durable gray powder coat finish
- Ships fully assembled



PART NUMBER	DIMENSIONS (IN.)			BIN DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
24B-CABINET	33.75	12	23.875	5.375	11.875	5.5

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Otsego, Michigan

40 Opening Bin

- All welded, prime cold rolled steel
- Fully hemmed 1 1/8" bin fronts to hold labels and retain parts
- Roll-formed sides for increased strength and stability
- Ribbed and hemmed dividers provide added strength
- Modular with most 12" deep bins and drawer cabinets; mounting holes are located at both the top and bottom
- Durable gray powder coat finish
- Ships fully assembled



PART NUMBER	DIMENSIONS (IN.)			BIN DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
40B-CABINET	33.75	12	23.875	4	11.875	4.5

Pneumatic Cabinet

- High quality all-steel construction
- Partitioning slots provide flexibility for customization
- Drawer locks limit access to prevent loss and improve safety when moved
- Drawer interlock prevent opening multiple drawers that could cause accidental tip over
- Available fitting and connector labels with photos make easy selection and restock easy
- Locking 4" heavy-duty casters
- Retainer top with a non-skid mat work surface



PART NUMBER	DIMENSIONS (IN.)			
	WIDTH	DEPTH	HEIGHT	DRAWERS
PNEU-CAB	22.1875	28.5	39.5	**5-3" AND** 1-9"

Clear Plastic Shipping Bags PSB

Reusable, clear polyethylene, zip-lock style bags with panels for marking part number, quantity, and availability information. Features easy visual part identification. Ideal for custom packaging of less than box quantities.

PART NO.	SIZE
4X6PSB	4" X 6"
6X8PSB	6" X 8"



Copper Tubing

Copper tubing meets A.S.T.M. specification B-280 (copper tube for refrigeration field service)

PART NO.	TUBE O.D.	TUBE I.D.	WALL THICKNESS	FEET PER COIL
X50CT-2-30	1/8	.065	.030	50
X50CT-3-30	3/16	.128	.030	50
X50CT-4-30	1/4	.190	.030	50
X50CT-5-32	5/16	.249	.032	50
X50CT-6-32	3/8	.311	.032	50
X50CT-8-32	1/2	.436	.032	50



Notes

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Fluid System Connectors
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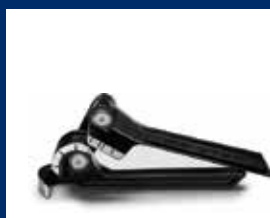
Tube Fabricating Equipment



Tube Cutters



Tube Benders



Flaring Tools



Deburring Tool



Tube Cutter

TC-1000-BPD
1/8" - 1 1/8"



p. M3

TC-1050-BPD
1/8" - 5/8"



p. M3

174-F-BPD
3/8" - 1 1/8"



p. M3

218B-BPD
1/8" - 1 1/8"



p. M3

PTC-001
Plastic Tube cutter



p. M3

Tube Benders

367-FH-BPD
Lever Type



p. M4

368-FH-BPD
Lever Type



p. M4

102-F-XX-BPD
Spring Type



p. M4

Flaring Tools

525-F-BPD
Flaring Kit



p. M5

93-FB-BPD
Flaring Tool



p. M5

945TH-BPD
Flaring Tool



p. M5

Tube Deburring Tool

226-BPD
Deburring Tool



p. M5

208-FSS-BPD
Stainless Deburring Tool



p. M5

Replacement Parts

S75015-BPD
Cutting Wheel



p. M3

S75046-BPD
Cutting Wheel for Stainless



p. M3

S32633-BPD
Cutting Wheel



p. M3

PTC-001RB
Replacement Blades

p. M3

226RB-BPD
Replacement Blades



p. M5

M

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	PART NO.	DESCRIPTION

Tube Cutters

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other metal tubing



	Rollers have flare cut-off groove, fold away reamer and spare cutting wheel.
TC-1000-BPD	For 1/8" to 1 1/8" (4 to 28 mm) O.D. tubing, (1/8" to 1" nom.). Length: 4 15/16" Weight: 6 1/2 oz.
	Replacement Parts:



S75015-BPD	Standard cutting wheel
S75046-BPD	Cutting wheel for stainless steel and hard temper tubing



TC-1050-BPD	
	Requires only 1 1/4" swing radius. (Requires only 1 3/8" swing radius with 5/8" tube.) Repositioned rollers to bottom of tool allows for easier cutter engagement on tubing. Enclosed feed-screw minimized contamination, assuring continued free operation. Redesigned feed mechanism improves overall cutting action. Size: 1 3/4" x 1 1/4" x 1/2" Weight: 2 1/2 oz.
S32633-BPD	Cutting wheel for TC-1050-BPD



174-F-BPD	**Requires only 1 15/16" swing radius.** **(Requires only 2 1/4" swing radius with 1 1/8" tube.)** Size: 2 11/16" x 2 1/32" x 1 1/8" Weight: 5 oz.
	Replacement Parts:
S75015-BPD	Cutting wheel
S75046-BPD	Cutting wheel for stainless steel and hard temper tubing

Kloskut Tube Cutters

Adjustable tube cutters to produce square cut ends with no external burr and minimum internal burring when used on fully annealed copper, brass, aluminum, and steel tubing. Features a hardened and burnished tool-steel cutting wheel, flare cut-off grooves in rollers for removal of old flares, swing-away reamer for removing internal burrs.

Handle feeds and adjusts cutting wheel to uniformly cut tubing as the cutter is rotated.

NOTE: Tube cutters are not recommended for use with stainless steel tubing because of the work hardening effect. The use of a hacksaw with a "Tru-Kut" Sawing Vise or a rotary teeth saw is best recommended for stainless steel.



218B-BPD

218B-BPD	**Medium Kloskut** For tubing sizes -2 (1/8" O.D.) to -18(1 1/8" O.D.) Weigth: 11 oz.



PTC-001	**Plastic Tube Cutter** May be used with polyethylene, Polypropylene, nylon and other thermoplastic tubing. For tube O.D. sizes 1/8" to 1/2"
PTC-001RB	Replacement blades

M

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Fluid System Connectors
Otsego, Michigan

PART NO.	DESCRIPTION

Tube Benders, Lever Type

For soft copper, aluminum, brass, steel and other metal tubing



Triple Header Benders **Calibrated markings for making accurate left-hand, right-hand and offset bends. Ninety degree start requires less effort - making bending fast and easy.**

367-FH-BPD For 1/8", 3/16" and 1/4" (3, 4, and 6 mm) O.D. tubing, 9/16" radius to center of tube.

368-FH-BPD For 1/4", 5/16" and 3/8" (6 and 8 mm) O.D. tubing, 15/16" radius to center of tube.

Metric Tube Benders



Triple Header Benders
For annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

Lever type, multiple size benders. Calibrated markings for making accurate left-hand, right-hand, and offset bends. Ninety degree start requires less effort; makes bending fast and easy.

	BENDING RANGE			
	Tube O.D. (Inches)	(mm)	Radius to Center of Tube (Inches)	(mm)
367-FH-BPD	1/8, 3/16, 1/4	3,4, 6	9/16	14.2
368-FH-BPD	1/4, 5/16, 3/8	6, 8	15/16	17.5

Tube Benders, Spring Type

For soft copper and aluminum tubing



For 1/4" to 5/8" O.D. tubing.
Tools allow hand bending of soft tubing to any shape without collapsing walls. Special spring steel, nickel finished. End belled for quick tube removal.

	BENDER		
	TUBE O.D. (INCHES)	LENGTH (INCHES)	WEIGHT (OZ.)
102-F-04-BPD	1/4	10	3
102-F-06-BPD	3/8	10	4
102-F-08-BPD	1/2	12	6 1/2

M

	PART NO.	DESCRIPTION
	**525-F-BPD**	Flares and burnishes 3/16" to 5/8" (5 to 16 mm) O.D. tubing. Unique, self-adjusting, tube holding mechanism permits use in tight quarters. Faceted, hard chrome finished cone rolls out and burnishes perfect 45° flare above the tube holding mechanism. Weight: 1 3/4 lbs.
	**93-FB-BPD**	For 3/16", 1/4", 5/16", 3/8" and 1/2" O.D. tubing. Recommended for Bundy, GM and other brazed or welded soft steel tubing (wall thickness to .035"). Also makes single or double flares in soft copper or aluminum tubing. Forged steel yoke; swivel-type hard chrome-finished flaring cone. Weight: 3 lbs.
	**945TH-BPD**	**Rolo-flair® Manual Rotary Flaring Tool** For soft metal tubing. Precision burnished 45° flares in tube sizes from 2 (1/8" O.D.) to 12 (3/4" O.D.) with an easy turn of the handle. For copper and aluminum alloy. Weight: 2 1/2 lbs.

In-Ex® Tube Deburring Tool

	**226-BPD**	A quick twist of the wrist will deburr either the O.D. or the I.D. of the tube end. Parker's In-Ex deburrer can be used on annealed steel, stainless steel, copper and aluminum, for tube sizes 1/8" to 1 5/8" O.D. Insert tube into the convexed end of the In-Ex for inside deburring and the opposite end for outside deburring Rotate in either direction. Replacement blades can be ordered. See bulletin 4391-B226 for details. Weight: 10 oz.
	**226RB-BPD**	Replacement Blades
	208-FSS-BPD	Reamer for aircraft grade stainless steel tubing. Black finish Weight: 10 oz.

M

Notes

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

General Technical

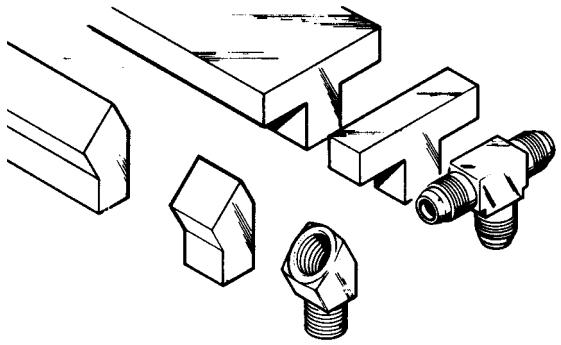


Manufacturing Techniques

Parker Extruded fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper.) After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.



Material used for Parker Brass Fittings

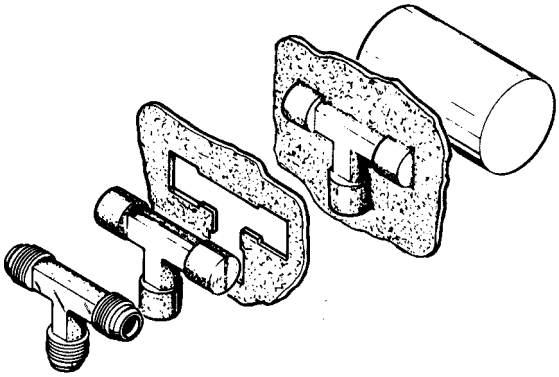
(Reference SAE J461)

Straight bodies:	barstock CA 360 or CA 345
Shape bodies:	extruded barstock CA 360
Shape bodies:	forged CA 377
Nuts:	barstock CA 360
Nuts:	forged CA 377

Parker Forged Fittings

Material for forgings is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties.) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling the flash is trimmed away and the forging blank is ready for machining.

This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is more resistant to mechanical shock and vibration.



Of the major brass fittings producers, only Parker offers elbows and tees machined from both extruded and forged shapes.

N

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Tubing Compatibility Chart

PS = Plastic sleeve & tube support recommended
TS = Tube support is recommended
BS = Brass sleeve recommended
CL = Clamp required

Soft metal tubing			Parflex Thermoplastic Tubing										
			Industrial Tubing Series (Outside Diameter Shown)										
Copper	Aluminum	Steel	Polyethylene E & EB Inch (4,5,6,8,10) Metric (6,8,10,12)	Polyethylene PE Inch (2,2.5,3,4,5,6,8)	Polyethylene FRPE Inch (2,5,4,6,8)	Polyethylene HDPE Inch (4,6)	Nylon N Inch (2,2.5,3,4,5,6,8) Metric (4mm - 20mm)	Nylon PAT Inch (2,4,6,8,10,12)	Nylon NR Inch (2,3,4,5,6,8)	Polypropylene PP & PPB Inch (2,3,4,5,6,8,10)	Polyurethane U (90 - 95 Shore A) Inch (2,3,4,6,8,9,12) Metric (4,6,8,10,12)	Product Sizes (inch)	
BS	BS		PS TS	PS TS	PS TS	PS TS	PS TS	PS TS	PS TS	PS TS		Compression - Inch (2,3,4,5,6,7,8,10,12,14)	Compression & Flare
			TS	TS	TS	TS	TS	TS	TS	TS		Compress-Align - Inch (2,3,4,5,6,8,10,12,14,16)	
			TS	TS								Metru-Lok - Metric (4,6,8,10,12,14,16,18,22)	
							BS			BS		Poly-Tite - Inch (2,3,4,5,6,8)	
			TS	TS	TS	TS	TS	TS	TS	TS		Hi-Duty - Inch (2,3,4,5,6,8,10)	
												45 degree flare - Inch (2,3,4,5,6,8,10,12,14)	
												Inverted Flare - Inch (2,3,4,5,6,8,10,12,14)	
											TS	Fast & Tite - Inch (4,5,6,8,10)	
												Flow Controls - Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)	Push-to-Connect
												Prestolok Brass - Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	
												Prestolok Composite Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	
												Liquifit - Inch (4,6,8)	
											TS	TrueSeal - Inch (4,5,6,8)	
											CL	Par-Barb - Inch (2,3,4,5,6,8,10,12)	Barb
												Dubl-Barb - Inch (2.5,4,6,8)	
												Hose Barb - Inch (2,3,4,5,6,8,10,12,16) Inside Diameter	
												Garden Hose	
												NTA - Inch (3,4,6,8,10,12)	DOT Transportation
												Transmission Fittings - Inch (2,2.5)	
												Air Brake - Inch (4,6,8,10,12,16)	
												Air Brake Hose - Inch (6,8)	
												Vibra-Lok - Inch (2,3,4,5,6,8,10,12)	
												Prestomatic - Inch (2,2.5,3,4,6,8,10,12) Metric (6,8,10,12,16)	
												PTC - Inch (4,6,8,10,12)	
												SAE Cartridges - Inch (2.5,4,6,8,10,12)	
												Manifolds - Inch (4,6,8)	

N

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Fluid System Connectors
Otsego, Michigan

Tubing Compatibility Chart

PS = Plastic sleeve & tube support recommended
TS = Tube support is recommended
BS = Brass sleeve recommended
CL = Clamp required

	Product Sizes (inch)	Parflex Thermoplastic Tubing: Industrial Tubing Series (Outside Diameter Shown): Polyurethane HU & HUM (>95 Shore A) Inch (2,2.5,4,6,8,12) Metric (4,6,8,10,12)	Parflex Thermoplastic Tubing: Industrial Tubing Series (Outside Diameter Shown): Polyurethane LU (<90 Shore A) Inch (2,2.5,4,5)	Parflex Thermoplastic Tubing: Industrial Tubing Series (Outside Diameter Shown): Polyurethane FR (Weld Tubing) Inch (4,5,6,8)	Parflex Thermoplastic Tubing: Industrial Tubing Series (Outside Diameter Shown): Clear Vinyl Inch (1/8" - 2 1/2")	Parflex Thermoplastic Tubing: Transportation Tubing: PFT Air Brake (SAE J844) Inch (2,2.5,3,4,5,6,8,10,12)	Parflex Thermoplastic Tubing: Transportation Tubing: Air Brake DIN 74324 (Nylon 12) Metric (4,6,8,10,12,15,16,18)	Parflex Thermoplastic Tubing: Transportation Tubing: PFT Diesel Fuel Sizes 4,6,8,10,12	Parflex Thermoplastic Tubing: Transportation Tubing: HTFL Diesel Fuel Sizes 4,6,8,10,12	IHP/HPD Hose: GPH General Purpose Inch (3,4,6,8,12) Inside Diameter	IHP/HPD Hose: Parker 271 hose (SAE J1402) Inch (6,8) Inside Diameter	Parflex/Atlantic Fluoropolymer Tubing: PFA Fluoropolymer Inch (3/32" - 1") Metric (4mm - 12mm)	Parflex/Atlantic Fluoropolymer Tubing: FEP Fluoropolymer Inch (1/8" - 1") Metric (3mm - 12mm)
Compression & Flare	Compression - Inch (2,3,4,5,6,7,8,10,12,14)											PS TS	PS TS
	Compress-Align - Inch (2,3,4,5,6,8,10,12,14,16)											TS	TS
	Metru-Lok - Metric (4,6,8,10,12,14,16,18,22)												
	Poly-Tite - Inch (2,3,4,5,6,8)												
	Hi-Duty - Inch (2,3,4,5,6,8,10)												
	45 degree flare - Inch (2,3,4,5,6,8,10,12,14)												
	Inverted Flare - Inch (2,3,4,5,6,8,10,12,14)												
	Fast & Tite - Inch (4,5,6,8,10)	TS	TS		TS								
Push-to-Connect	Flow Controls - Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)												
	Prestolok Brass - Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)												
	Prestolok Composite Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)												
	Liquifit - Inch (4,6,8)												
	TrueSeal - Inch (4,5,6,8)	TS			TS								
Barb	Par-Barb - Inch (2,3,4,5,6,8,10,12)		CL		CL								
	Dubl-Barb - Inch (2.5,4,6,8)												
	Hose Barb - Inch (2,3,4,5,6,8,10,12,16) Inside Diameter				CL					CL			
	Garden Hose				CL					CL			
DOT Transportation	NTA - Inch (3,4,6,8,10,12)												
	Transmission Fittings - Inch (2,2.5)												
	Air Brake - Inch (4,6,8,10,12,16)												
	Air Brake Hose - Inch (6,8)												
	Vibra-Lok - Inch (2,3,4,5,6,8,10,12)												
	Prestomatic - Inch (2,2.5,3,4,6,8,10,12) Metric (6,8,10,12,16)												
	PTC - Inch (4,6,8,10,12)												
	SAE Cartridges - Inch (2.5,4,6,8,10,12)												
	Manifolds - Inch (4,6,8)												

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Tubing Compatibility Chart

Parflex/Atlantic Fluoropolymer Tubing		Polyflex Tubing				
PTFE Fluoropolymer Inch (3/32" - 1.1") Metric (3mm - 16mm)	PVDF Fluoropolymer Inch (2,3,4,5,6,8,10,12,16)	TPU Polyurethane (52 shore D) Inch (2,2.5,3,4,5,6,8) Metric (3,4,6,8,10,16)	Polyamide (Nylon) Inch (2,3,4,5,6,8,10,12) Metric (3mm - 22mm)	Polyethylene Inch (2,4,6,8,10) Metric (4,6,8,10,12,16)	Product Sizes (inch)	
PS TS			PS TS	PS TS	Compression - Inch (2,3,4,5,6,7,8,10,12,14)	Compression & Flare
TS			TS	TS	Compress-Align - Inch (2,3,4,5,6,8,10,12,14,16)	
				TS	Metru-Lok - Metric (4,6,8,10,12,14,16,18,22)	
			BS		Poly-Tite - Inch (2,3,4,5,6,8)	
			TS	TS	Hi-Duty - Inch (2,3,4,5,6,8,10)	
					45 degree flare - Inch (2,3,4,5,6,8,10,12,14)	
					Inverted Flare - Inch (2,3,4,5,6,8,10,12,14)	
					Fast & Tite - Inch (4,5,6,8,10)	
					Flow Controls - Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)	Push-to-Connect
					Prestolok Brass - Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	
					Prestolok Composite Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	
					Liquifit - Inch (4,6,8)	
					TrueSeal - Inch (4,5,6,8)	
					Par-Barb - Inch (2,3,4,5,6,8,10,12)	Barb
					Dubl-Barb - Inch (2.5,4,6,8)	
					Hose Barb - Inch (2,3,4,5,6,8,10,12,16) Inside Diameter	
					Garden Hose	
					NTA - Inch (3,4,6,8,10,12)	DOT Transportation
					Transmission Fittings - Inch (2,2.5)	
					Air Brake - Inch (4,6,8,10,12,16)	
					Air Brake Hose - Inch (6,8)	
					Vibra-Lok - Inch (2,3,4,5,6,8,10,12)	
					Prestomatic - Inch (2,2.5,3,4,6,8,10,12) Metric (6,8,10,12,16)	
					PTC - Inch (4,6,8,10,12)	
					SAE Cartridges - Inch (2.5,4,6,8,10,12)	
					Manifolds - Inch (4,6,8)	

PS = Plastic sleeve & tube support recommended
TS = Tube support is recommended
BS = Brass sleeve recommended
CL = Clamp required

Tube Line Fabrication Guide for Leak Free Systems

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance, and general appearance of any system.

Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting, consider the following in the design of your system:

1. Accessibility of joints
2. Proper routing of lines
3. Adequate tube line supports
4. Available fabricating tools

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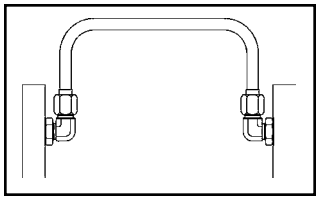
Routing of Lines

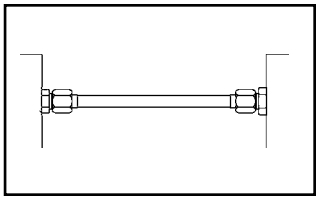
Routing of lines is probably the most difficult yet most significant of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

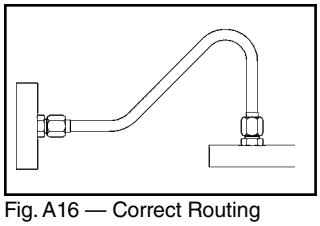
Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.

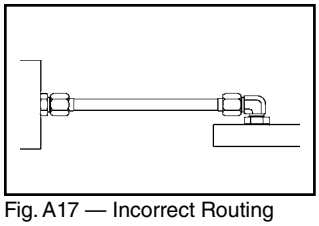
The most logical path should have the following characteristics:

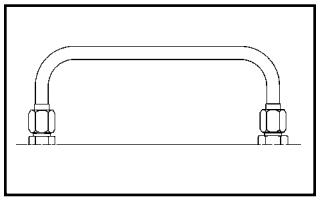
- **Avoid excessive strain on joint —** A strained joint will eventually leak. (See Figures A14 through A21.)
- **Allow for expansion and contraction —** Use a "U" bend or a hose in long lines to allow for expansion and contraction. (See Figure A22.)
- **Allow for motion under load —** Even some apparently rigid systems do move under load. (See Figure A23.)
- **Get around obstructions without using excessive amount of 90° bends —** Pressure drop due to one 90° bend is greater than that due to two 45° bends. (See Figures A24 and A25.)
- **Keep tube lines away from components that require regular maintenance.** (See Figures A26 and A27.)
- **Have a neat appearance and allow for easy troubleshooting, maintenance and repair.** (See Figures A28 and A29.)

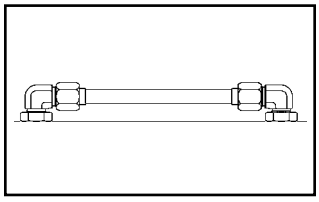

Fig. A14 — Correct Routing

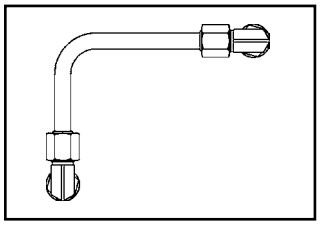

Fig. A15 — Incorrect Routing

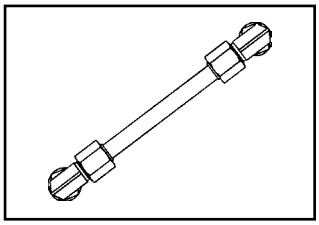

Fig. A16 — Correct Routing


Fig. A17 — Incorrect Routing


Fig. A18 — Correct Routing


Fig. A19 — Incorrect Routing


Fig. A20 — Correct Routing


Fig. A21 — Incorrect Routing

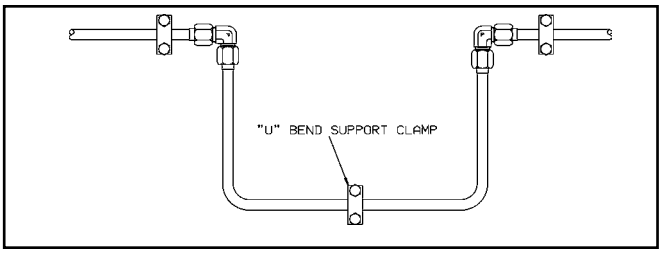
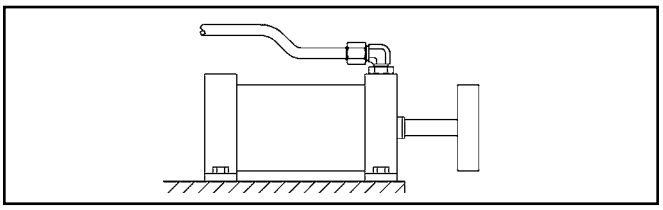
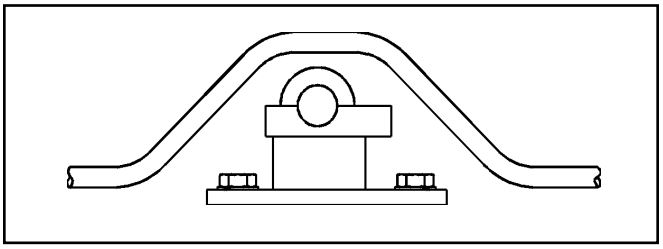
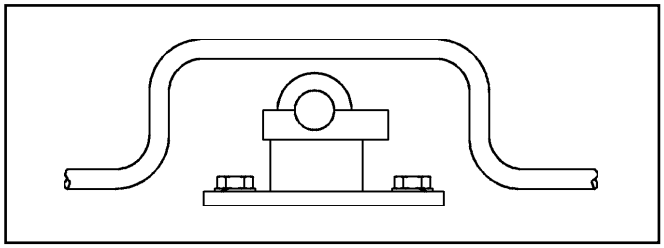
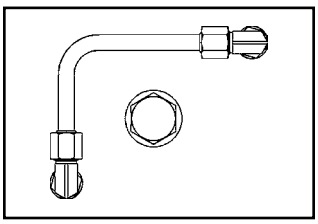


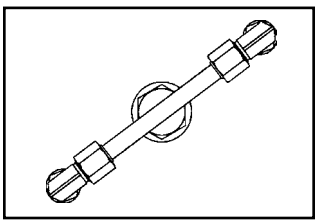
Fig. A22 — U-Bend Allowing Expansion and Contraction

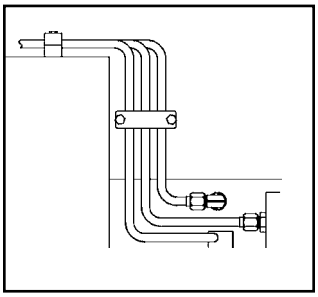

Fig. A23 — Bent Tube Allowing for Motion Under Load

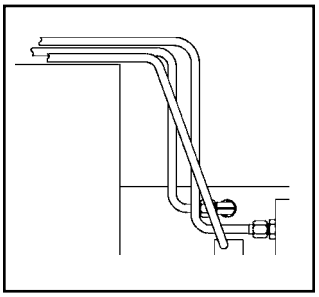

Fig. 24 — Correct


Fig. A25 — Incorrect


Fig. A26 — Correct


Fig. A27 — Incorrect


Fig. A28 — Correct


Fig. A29 — Incorrect

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Thread Specifications

Dryseal Pipe Threads

All dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.3 specification and designed to seal pressure tight joints. The threads may incorporate the NPTF (National Standard Pipe Taper Fuel and Oil), PTF-SAE Short, PTF-SPL Short or PTF-SPL Extra Short form. Dryseal threads are used on brass products found within this catalog. Use of a thread sealant is recommended.

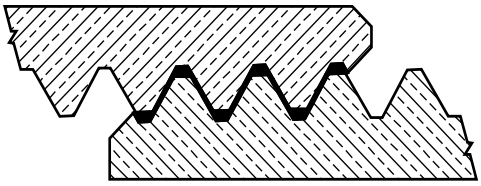
Non-Dryseal Pipe Threads

All non-dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.1 specification. These tapered pipe threads are used on our carbon and stainless steel products. Use of a thread sealant is recommended.

Nickel Plating

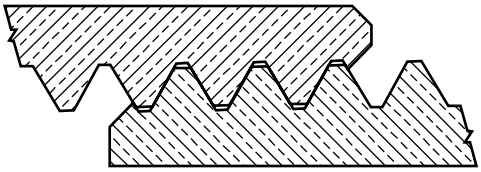
Nickel plating is available for all standard product fittings. Plating will increase male pitch diameters and decrease female pitch diameters of threads. This will affect the assembly characteristics on standard products.

Nickel plating provides a corrosion resistant coating which is desirable in many applications. Electrolytic nickel plating is the standard plating supplied unless otherwise specified. This will provide a uniform coverage of external surfaces; however, internal surfaces may be uncoated.



Dryseal Pipe Thread

Metal to metal contact. Crests of thread are crushed by the roots when wrench-tightened to form seal.



Non-Dryseal Pipe Thread

Flanks are in contact with possible clearance between the roots and crests. Will not prevent spiral leakage

Unified Threads

All threads in the columns headed “Straight Thread” found within this catalog are manufactured in accordance with the American National Standards Institute (ANSI) B1.1 specification.

British Standard Pipe Threads BSPT and BSPP Pressure Tight

The British pipe threaded products found within this catalog intended for use where pressure tight joints are made on the threads are manufactured in accordance with British Standard (BS) 21 and International Standards Organization (ISO) 7-1. The threads are designated as follows:

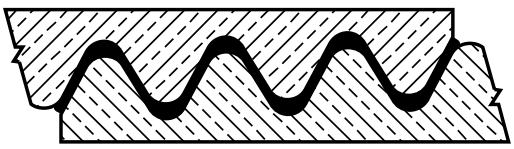
- Rp: Internal parallel
- Rc: Internal taper
- Rs: Special external parallel
- R: External taper

Use of a thread sealant is recommended with the R series thread. An elastomeric peripheral seal should be used with the Rs thread.

Non-Pressure Tight

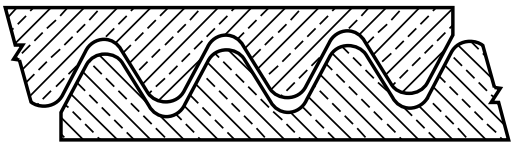
All British Standard parallel pipe threads manufactured in this catalog according to BS2779 and ISO 228-1 are intended for use where pressure tight joints are not made on the threads. An elastomeric peripheral seal should be used. These threads are designated as follows:

G: Internal Thread
GA, External thread, tight tolerance classification
GB, External thread, general purpose and assumed if no classification designation is given



BS21 British Standard Pipe Thread for Pressure Tight Joints

Metal to metal contact provides seal as tapered thread is wrench-tightened.



BS2779 British Standard Pipe Thread for Non-Pressure Tight Joints

Thread tolerances allow for possible clearance between threads. Will not prevent leakage paths.

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Pipe Thread Assembly

The two British Standard pipe thread forms used for Parker's standard product are manufactured in a tighter tolerance range than required by the standards in order to facilitate the assembly and mating of fittings produced by the two different standards. In general, BS21 threads do not necessarily mate with BS2779 threads at tolerance overlap conditions, but fittings located within this catalog can be assembled as follows:

External Thread	Mating Internal Thread
G-BS2779 (parallel)	G-BS2779 (parallel) Rp-BS21* (parallel)
Rs-BS21 (parallel)	Rp-BS21 (parallel) G-BS2779 (parallel)
R-BS21 (taper)	Rp-BS21 (parallel) Rc-BS21 (taper) G-BS2779 (parallel)

*This thread must be manufactured within a reduced tolerance range to always assemble with the G series external thread.

British Standard ISO Metric Screw Threads

They are commonly used in miniature pneumatic applications because of the availability of small thread diameters and are also used extensively in the automotive industry. There are two forms of sealing on metric screw threads.

- O-ring sealing into a profiled port in accordance with ISO 6149.
- Peripheral sealing with a copper or bonded washer in accordance with ISO 261 and 262.

Peripheral sealing of parallel threads

Pressure-tight joints of screwed connections with parallel threads are achieved by placing a seal between the two machined faces

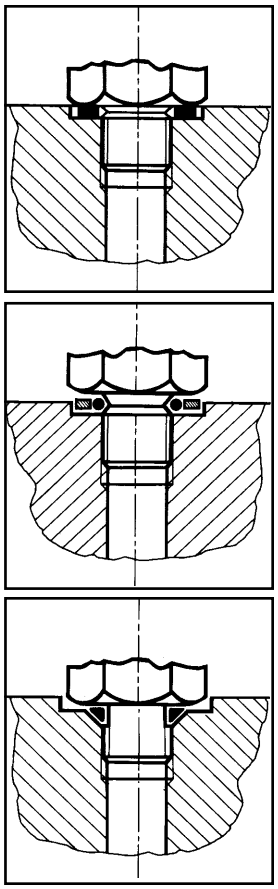
Flat seals

Washers and rings are manufactured in many different materials including copper, aluminium, fiber, plastics, etc.

The tightening torque at assembly must be carefully selected so as to avoid compressing the seal to the point of extrusion. As a general rule, the fitting should be tightened with an additional 1/4 wrench turn from the fingertight position.

O-rings

Depending upon the configuration of the female port or male thread, O-Ring seals are fitted with or without back-up washers, and can be fully retained in a captive seal.



Flaring Instructions

In order to properly flare copping tubing for use with Parker 45° Flared Fittings and Inverted Flared Fittings, the following procedures and specifications should be met in preparation and make-up of flares.

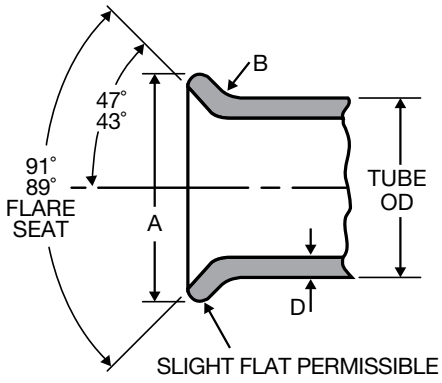
1) CUT TUBE WITH TUBE CUTTER:
To minimize the burr and workhardening, use a light feed on the cutting wheel and make several revolutions.

2) REAM THE TUBING:
Cutting with a tube cutter will always create a burr. The burr must be removed to obtain maximum sealing surface. Remove only the burr, do not remove material from the original wall thickness. Also clean the tube end thoroughly to remove burrs.

3) FLARE TUBING:
Flare with a compression or generating type flaring tool. Follow tool manufacturer's instructions for: (A) positioning the tube in tool and (B) for the correct number of turns on the feed handle.

4) INSPECT TUBING:
The flare cone should be checked for a smooth surface on the I.D. of the cone and measure with micrometer over largest O.D. for proper size. (See dimensions below for flare size for each tubing size.)

NOMINAL TUBE	A SINGLE FLARE DIAMETER		B SINGLE FLARE RADIUS	D SINGLE FLARE WALL THICKNESS
IN	IN		IN	IN
	MAX.	MIN.	+/- 0.01	MAX.
1/8	.181	.171	.02	.035
3/16	.249	.239	.02	.035
1/4	.325	.315	.02	.049
5/16	.404	.388	.02	.049
3/8	.487	.471	.02	.065
7/16	.561	.545	.02	.065
1/2	.623	.607	.02	.083
9/16	.676	.660	.02	.083
5/8	.748	.732	.02	.095
3/4	.916	.900	.02	.109
7/8	1.041	1.025	.02	.109
1	1.157	1.141	.02	.120



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Thread Designations and Standards for Threads Used in Fluid Connectors

Abbreviation	Description	Applicable Std.
Straight Pipe		
NPSC	American Standard Straight Pipe Threads in Pipe Couplings Couplings	ANSI B1.20.1 FED-STD-H28/7
NPSF	Dryseal American Standard Fuel Internal Straight Pipe Threads (generally used in soft or ductile materials to mate with NPTF external taper threads)	SAEJ476 ANSI B1.20.3 FED-STD-H28/8
NPSI	Dryseal American Intermediate Internal Straight Pipe Threads (for brittle or hard materials; intended to mate with PTF-SAE short external taper threads)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
NPSM	American Standard Straight Pipe Threads for Free-Fitting Mechanical Joints for Fixtures (these threads fit freely over NPTF threads. They are used in swivel nuts of 07 adapters)	ANSI B1.20.1 FED-STD-H28/7
Taper Pipe		
ANPT	Aeronautical National Taper Pipe Threads (similar to NPT with various additional requirements in gaging)	MIL-P-7105
NPT	American Standard Taper Pipe Threads for General Use	ANSI B1.20.1 FED-STD-H28/7
NPTF	Dryseal American Standard Taper Pipe Threads (used in all of our steel and brass fittings)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
PTF — SAE Short	Dryseal SAE Short Taper Pipe Threads (mainly used in low pressure pneumatic and fuel applications)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
PTF — SPL Short[1)]	Dryseal Special Short Taper Pipe Threads	ANSI B1.20.3
PTF — SPL Extra Short[1)]	Dryseal Special Extra Short Taper Pipe Threads	ANSI B1.20.3
Unified Threads		
UN	Unified Constant Pitch Threads (standard series: 4, 6, 8, 12, 16, 20, 28, 32)	ANSI B1.1 FED-STD-H28/2
UNC	Unified Coarse Threads	ANSI B1.1 FED-STD-H28/2
UNEF	Unifed Extra Fine Threads	ANSI B1.1 FED-STD-H28/2
UNF	Unified Fine Threads	ANSI B1.1 FED-STD-H28/2
UNS	Unified Special Pitch Threads	ANSI B1.1 FED-STD-H28/3
UNJ	Unified Controlled Root Radius Threads	ANSI B1.15 FED-STD-H28/4

Table A48 — Thread Designations and Standards for Threads Used in Fluid Connectors (continued on the next page)

1) Used in some pneumatic components where shortened thread depth is required because of lack of enough material due to component size limitations.

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Abbreviation	Description	Applicable Std.
Metric Threads		
M	Metric Screw Threads — M profile	ISO 261 ANSI B1.13M FED-STD-H28/21
M — Keg	Metric Taper Threads (mainly used in Germany)	DIN 158
British Standard Pipe Threads		
R (BSPT)	British Standard Taper Pipe Threads, External	BS 21 ISO 7/1
Rc (BSPT)	British Standard Taper Pipe Threads, Internal	BS 21 ISO 7/1
Rp or G (BSPP)	British Standard Pipe (Parallel) Threads	BS 2779 ISO 228/1
Japanese Standard Pipe Threads		
PF[1)]	JIS Parallel Pipe Threads	JIS B202 ISO 228/1
PT[1)]	JIS Taper Pipe Threads	JIS B203 ISO 7/1
PS	JIS Parallel Internal Pipe Threads (to mate with PT threads)	JIS B203

Table A48 (Cont'd) — Thread Designations and Standards for Threads Used in Fluid Connectors

1) PF and PT threads are functionally interchangeable with BSPP and BSPT threads, respectively.
These are old designations. They are being replaced with G (for PF) and R and Rc (for PT) as documents are revised.

Straight Thread Size Comparison Chart

	TUBE O.D.										
	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
SAE 45°FLARED	5/16 -24	3/8 -24	7/16 -20	1/2 -20	5/8 -18	11/16 -16	3/4 -16	7/8 -14	1-1/16 -14	1-1/4 -12	-
INVERTED FLARED	5/16 -28	3/8 -24	7/16 -24	1/2 -20	5/8 -18	11/16 -18	3/4 -18	7/8 -18	1-1/16 -16	1-3/16 -16	-
AIR BRAKE/NTA	-	-	7/16 -24	-	17/32 -24	-	11/16 -20	13/16 -18	1 -18	-	1-1/4 -16
STANDARD. COMPRESSION / COMPRESS-ALIGN	5/16 -24	3/8 -24	7/16 -24	1/2 -24	9/16 -24	5/8 -24	11/16 -20	13/16 -18	1 -18	1-1/8 -18	1-1/4 -18
POLY-TITE			3/8 -24	7/16 -24	1/2 -24	-	11/16 -20	-	-	-	-
VIBRA-LOK	3/8 -24	-	1/2 -24	9/16 -24	5/8 -24	-	13/16 -18	1 -18	1-1/8 -18	-	-
V510 BALL VALVES	-	-	7/16 -20	-	9/16 -18	-	3/4 -16	7/8 -14	1-1/16 -12	-	1-5/16 -12
HI-DUTY FLARELESS TUBE FITTINGS	5/16 -24	3/8 -24	7/16 -20	1/2 -20	9/16 -20	-	11/16 -16	7/8 -18	-	-	-

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SAE 040203	H13
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SAE 040424	H13
SAE 040425	H13
SAE 040427	H13
SAE 060101 BA	G6
SAE 060102 BA	G7
SAE 060103 BA	G7
SAE 060110	G6
SAE 060111	G6
SAE 060115	G6
SAE 060201 BA	G8
SAE 060202 BA	G8
SAE 060203 BA	G9
SAE 060401 BA	G8
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SAE 100110	E5
SAE 100115	E5
SAE 100201 BA	E6
SAE 100202 BA	E7
SAE 100203 BA	E7
SAE 100302 BA	E7
SAE 100401 BA	E6
SAE 100424 BA	E7
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SAE Standards (Current)

J246: Spherical and Flanged Sleeve (Compression) Tube Fittings
Tubing: Copper and J844 Nylon
Fittings: NTA and Air Brake

J476: Dryseal Pipe Threads

J512: Automotive Tube Fittings
Tubing: Copper and Nylon
Fittings: 45° Flare, Inverted Flare, Compression

J513: Refrigeration Tube Fittings
Tubing: Annealed Copper
Fittings: 45° Flare

J530: Automotive Pipe Fittings
Fittings: Pipe

J531: Automotive Pipe, Filler and Drain Plugs
Fittings: Pipe Plugs

J844: Nonmetallic Air Brake System Tubing
Tubing: Non-reinforced Type A, reinforced Type B

J1131: Performance Requirements for SAE J844 Nonmetallic Tubing and Fitting
Assemblies Used in Automotive Air Brake Systems
Tubing: J844 Nylon
Fittings: NTA and Prestomatic

J1615: Thread Sealants

J2494: Brass Body Push-to-Connect Fittings
Tubing: J844 Nylon
Fittings: Prestomatic

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U.L. LISTED FITTINGS

Many of the Fluid System Connectors Division's fittings have been listed by the Underwriter's Laboratory. The listings fall under 1 of 3 categories, depending upon application. Underwriter's requires that the smallest unit package carry the U.L. symbol and each carton be printed in accordance with the specification of each category.

List of U.L. Fittings

FITTINGS, FLAMMABLE LIQUID			
1F	62C	168CA	252IFHD
2GF	62CA	169C	256IF
3GF	62CABH	169CA	259IFHD
14FL	62CBH	170C	264C
14FSV	66C	170CA	264CA
14FSX	66CA	171C	265C
41FL	68C	171CA	265CA
41FS	68CA	172C	269C
41FX	144F	172CA	269CA
41IF	145F	176C	270C
41IFS	147F	176CA	270CA
42F	149F	177C	639C
42IFHD	150F	177CA	639CA
46F	151F	244F	639F
46IFHD	155F	244IFHD	640F
48F	159F	245IFHD	660FHD
48IFHD	164C	249F	661FHD
60C	164CA	249IF	664FHD
61C	165C	249IFHD	
61CA	165CA	250IFHD	
61CL	168C	251IFHD	

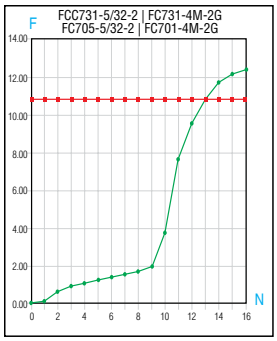
FITTINGS, FUEL EQUIPMENT, MARINE			
2GF	144F	155F	664FHD
3GF	145F	159F	
14FL	147F	639F	
42F	149F	640F	
46F	150F	660FHD	
48F	151F	661FHD	

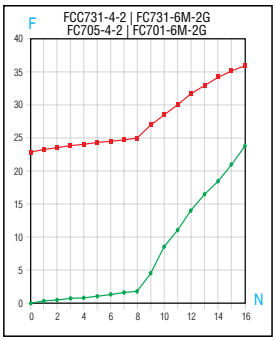
SHUT-OFF VALVES, FLAMMABLE LIQUIDS, LP GAS AND COMPRESS GAS		
XV520P-4	XV520P-20	XV500P-20
XV520P-6	XV520P-24	XV500P-24
XV520P-8	XV520P-32	XV500P-32
XV520P-12	XV520P-40	
XV520P-16	XV520P-48	

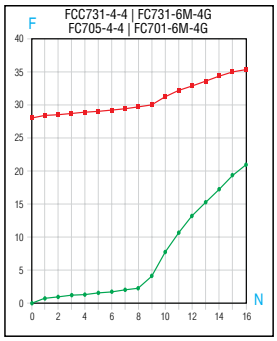
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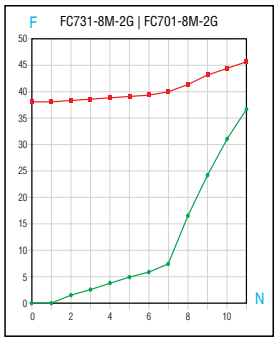
Flow Curves

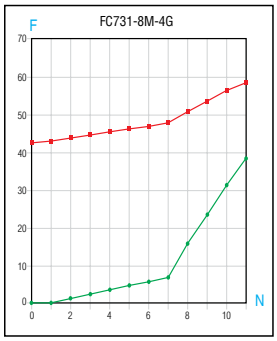
87 psi | Return Direction | Controlled Direction | **N** = Number of Turns | **F** = Flow in SCFM

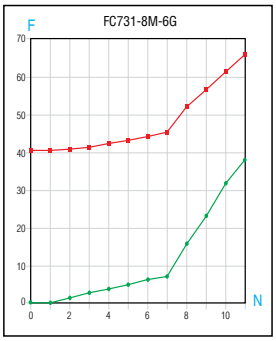


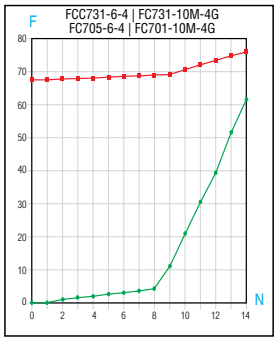


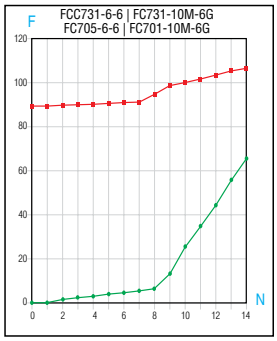


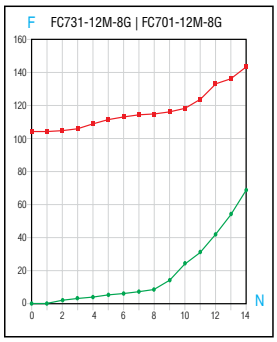


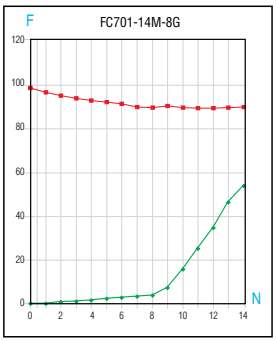


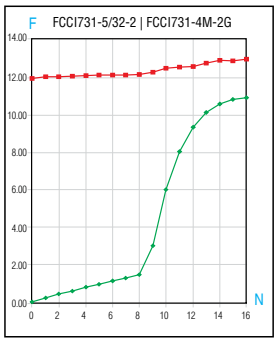


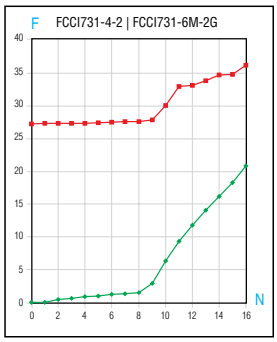


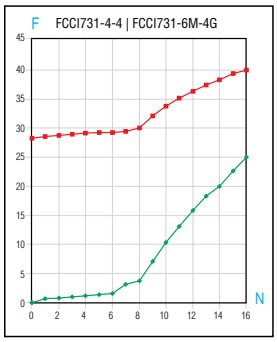


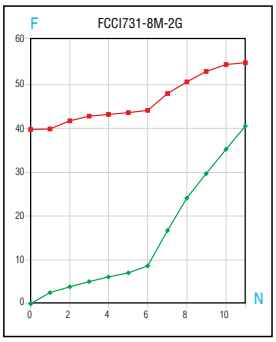


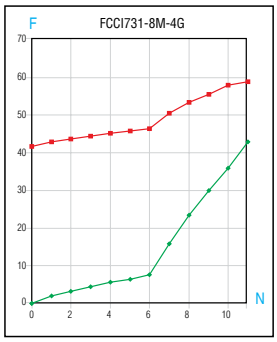


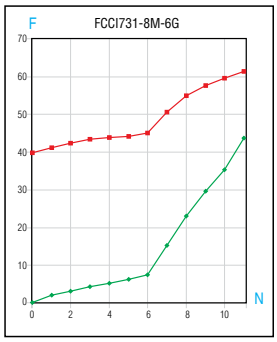










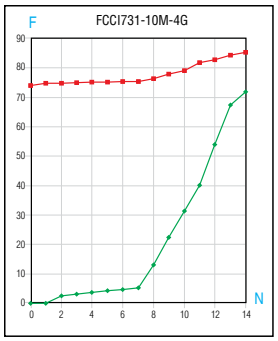


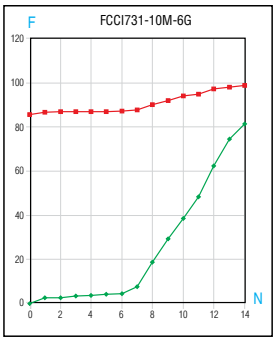
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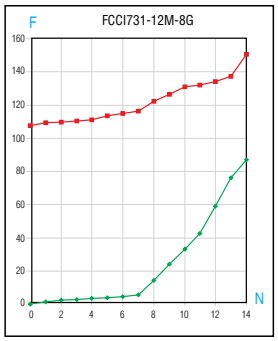
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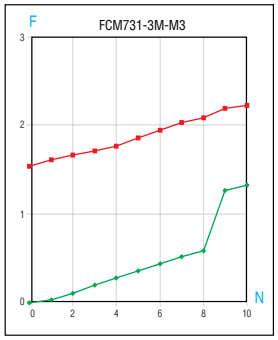
Flow Curves

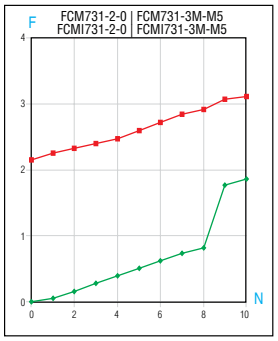
87 psi | Return Direction | Controlled Direction | N = Number of Turns | F = Flow in SCFM

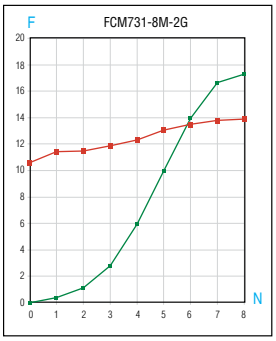


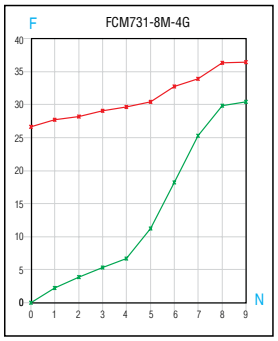


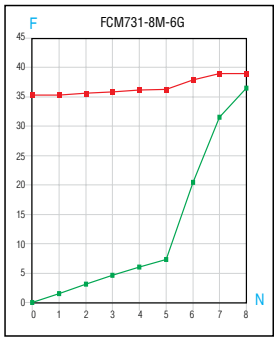


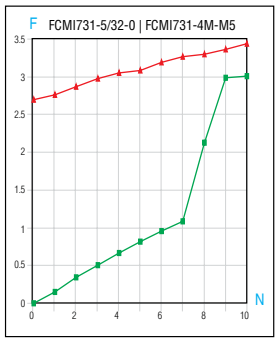


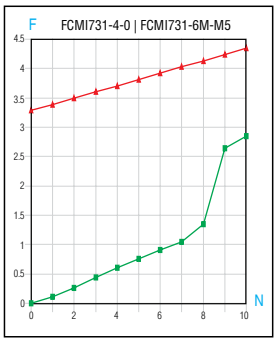


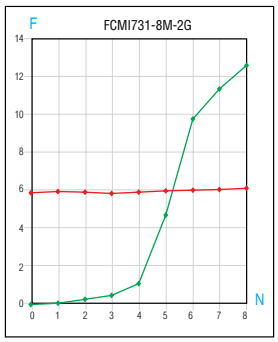


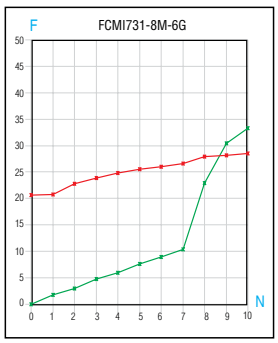


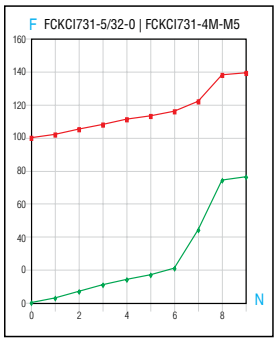


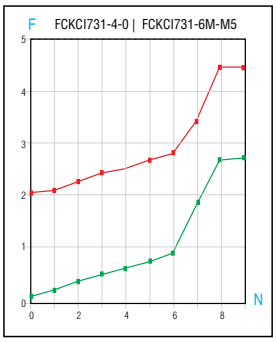


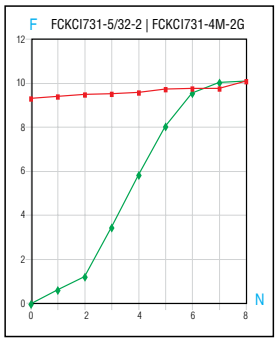


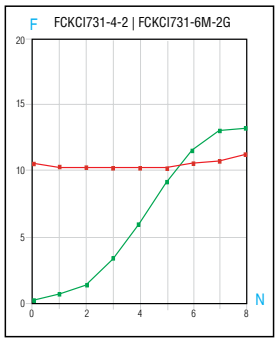










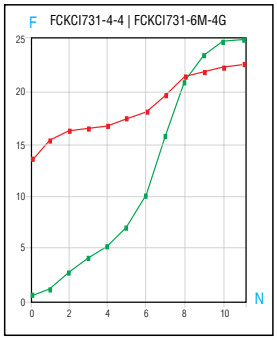


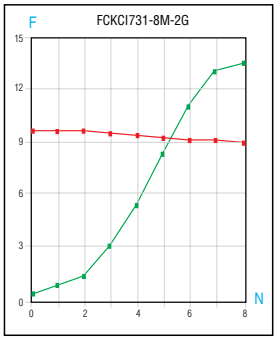
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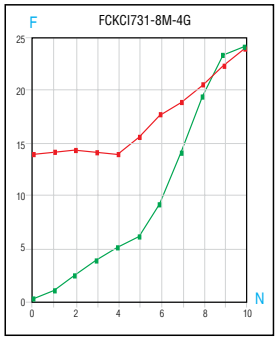
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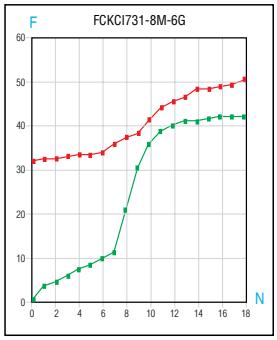
Flow Curves

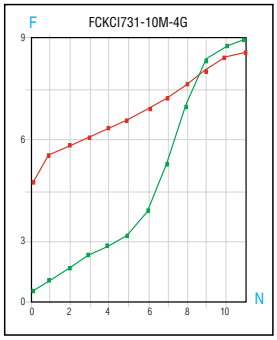
87 psi | Return Direction | Controlled Direction | N = Number of Turns | F = Flow in SCFM

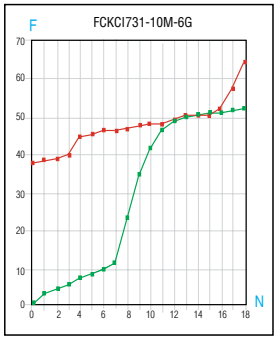


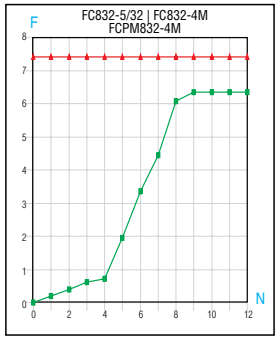


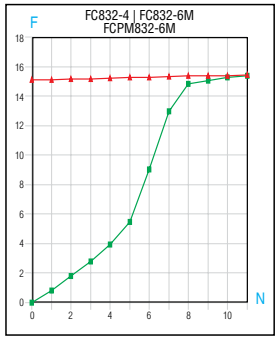


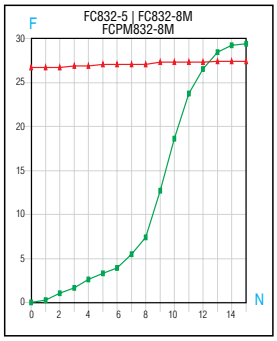


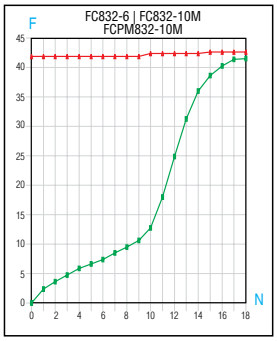


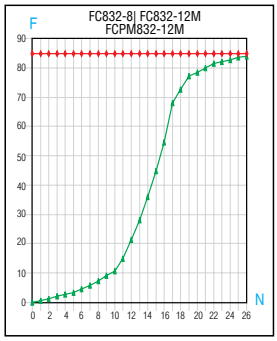










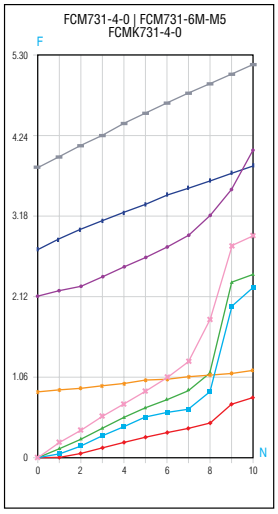


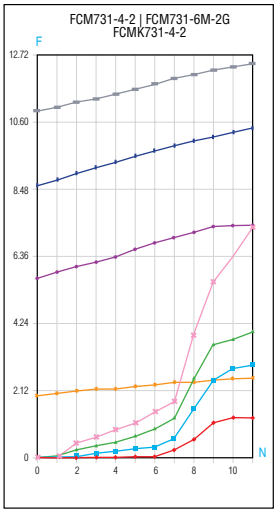
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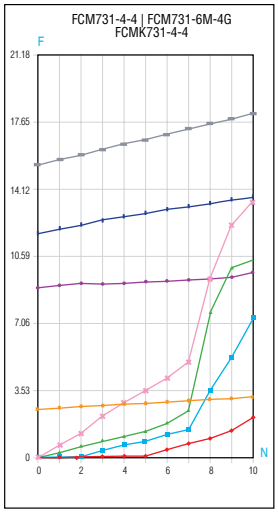
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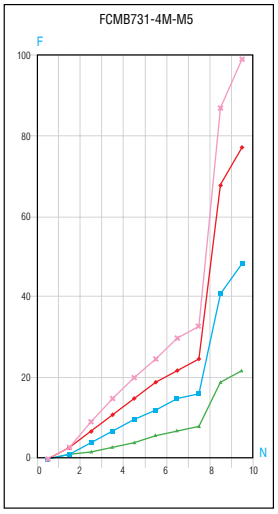
Flow Curves

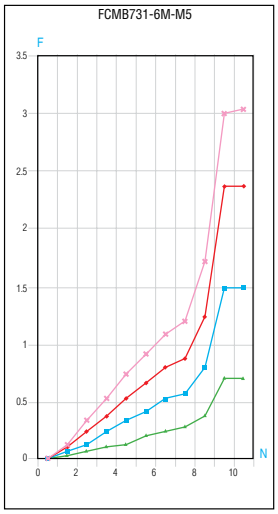
87 psi | Return Direction | Controlled Direction | N = Number of Turns | F = Flow in SCFM

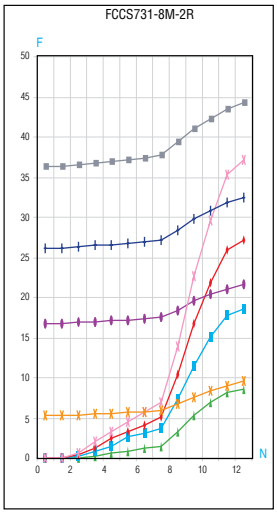


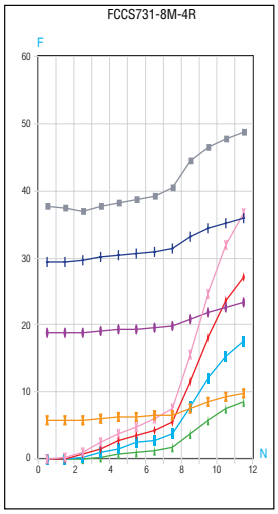


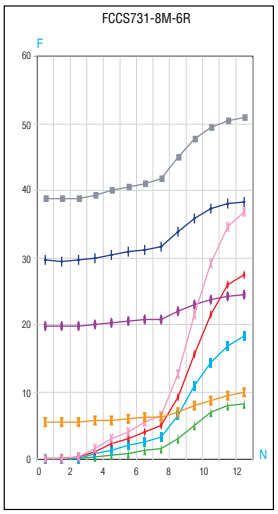


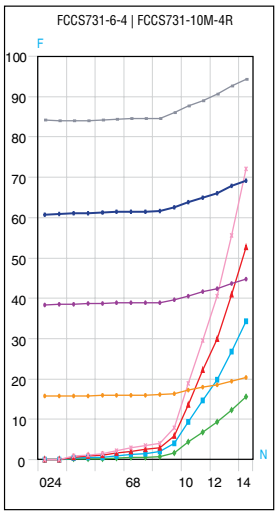


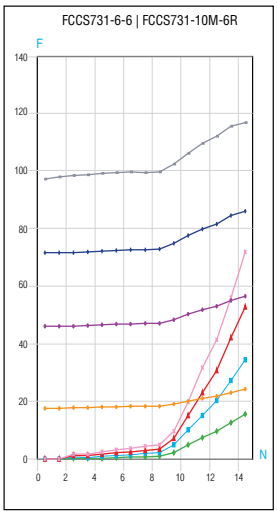


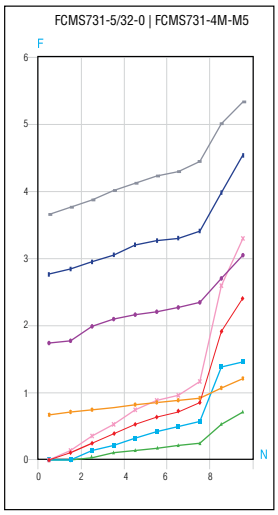


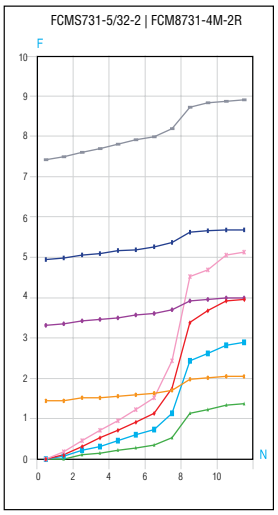












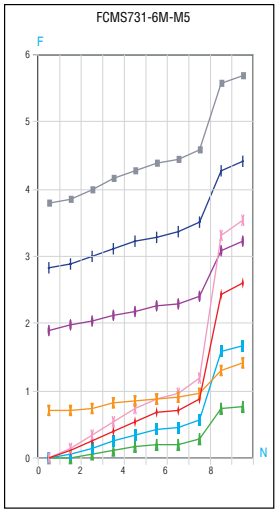
Controlled Direction – 14.5 psi
Controlled Direction – 43.5 psi
Controlled Direction – 72.5 psi
Controlled Direction – 101.5 psi
Return Direction – 14.5 psi
Return Direction – 43.5 psi
Return Direction – 72.5 psi
Return Direction – 101.5 psi

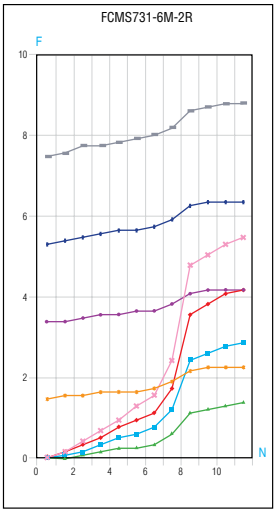
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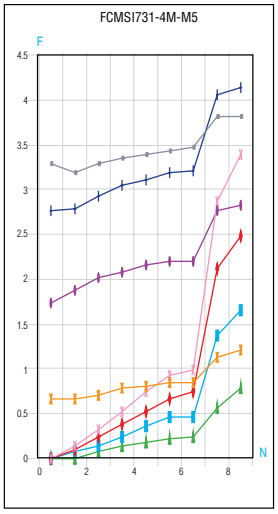
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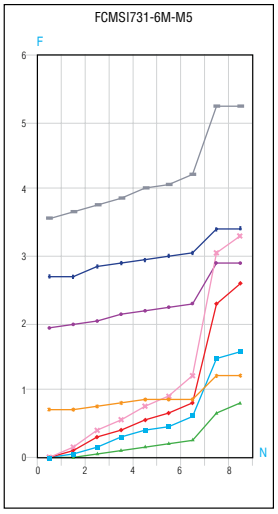
Flow Curves

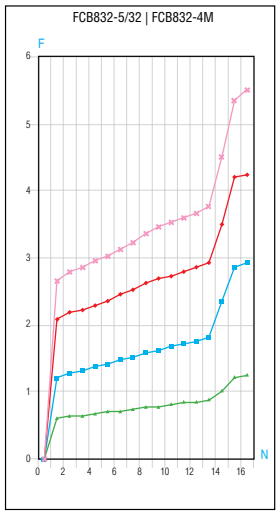
87 psi | Return Direction | Controlled Direction | N = Number of Turns | F = Flow in SCFM

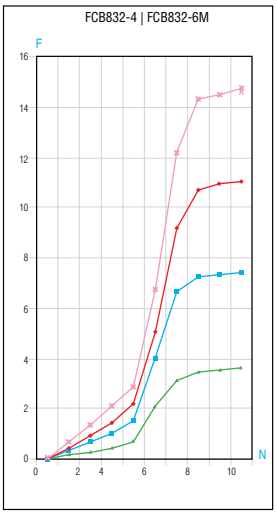


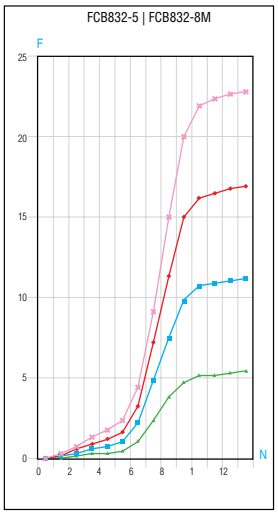












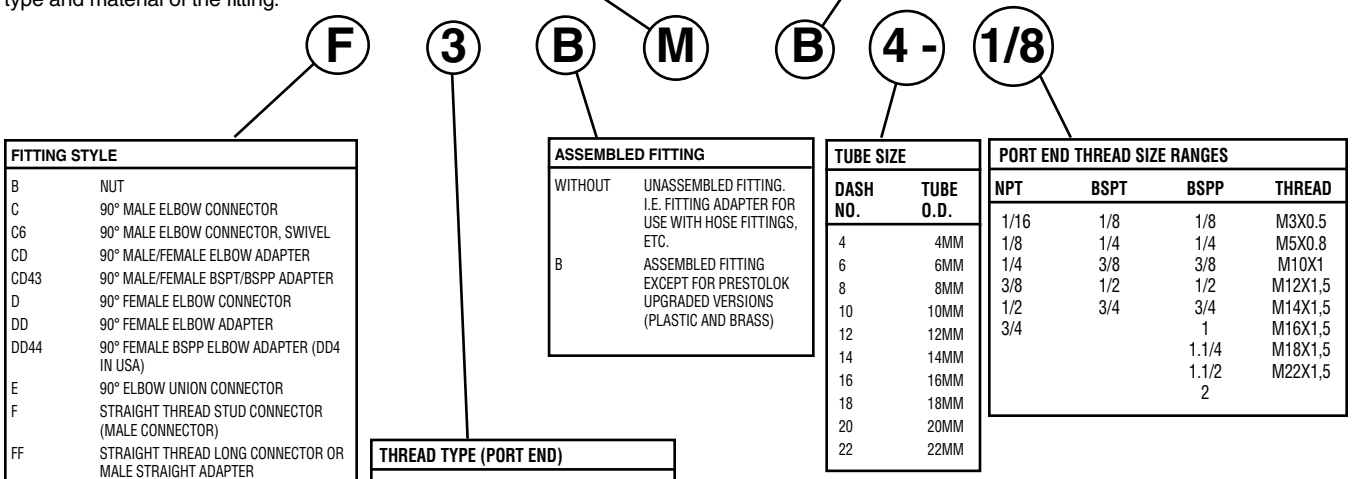
- Controlled Direction – 14.5 psi
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- Controlled Direction – 101.5 psi
- Return Direction – 14.5 psi
- Return Direction – 43.5 psi
- Return Direction – 72.5 psi
- Return Direction – 101.5 psi

N

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Metric Fitting Nomenclature

Parker fitting part numbers are constructed from symbols that identify the size, shape or style, type and material of the fitting.



FITTING TYPE

M	METRU-LOK
P	PRESTO-LOK

FITTING MATERIAL

B	BRASS
K	PLASTIC

FITTING STYLE

B	NUT
C	90° MALE ELBOW CONNECTOR
C6	90° MALE ELBOW CONNECTOR, SWIVEL
CD	90° MALE/FEMALE ELBOW ADAPTER
CD43	90° MALE/FEMALE BSPT/BSPP ADAPTER
D	90° FEMALE ELBOW CONNECTOR
DD	90° FEMALE ELBOW ADAPTER
DD44	90° FEMALE BSPP ELBOW ADAPTER (DD4 IN USA)
E	90° ELBOW UNION CONNECTOR
F	STRAIGHT THREAD STUD CONNECTOR (MALE CONNECTOR)
FF	STRAIGHT THREAD LONG CONNECTOR OR MALE STRAIGHT ADAPTER
FG	MALE TO FEMALE ADAPTER, STRAIGHT
FF33	MALE BSPT STRAIGHT ADAPTER
FF44	MALE BSPP STRAIGHT CONNECTOR
FG	MALE/FEMALE JUMP SIZE ADAPTER
FG43	MALE/FEMALE BSPT/BSPP JUMP SIZE ADAPTER (F3G4 IN USA)
FN	CAP
G	FEMALE STRAIGHT CONNECTOR
GG44	FEMALE BSPP STRAIGHT ADAPTER (GG4 IN USA)
H	STRAIGHT UNION CONNECTOR
HHP	HOLLOW HEX HEAD PLUG
HHP3	BSPT HOLLOW HEX HEAD PLUG
HP3	BSPT HOLLOW HEX HEAD PLUG
J	UNION TEE CONNECTOR
K	UNION CROSS CONNECTOR
KMM00	FEMALE CROSS ADAPTER
KMM004	FEMALE BSPP CROSS ADAPTER
MMO	FEMALE TEE ADAPTER
MMO444	FEMALE BSPP TEE ADAPTER
MMS	FEMALE/FEMALE/MALE TEE ADAPTER
MMS443	FEMALE/FEMALE/MALE BSPP/BSPP/BSPT TEE ADAPTER
PN	PLUG
PTR34	MALE/FEMALE BSPT/BSPP REDUCING ADAPTER
PTR44	MALE/FEMALE BSPP REDUCING ADAPTER (PTR4 IN USA)
R	MALE STUD RUN TEE CONNECTOR
R6	MALE RUN TEE CONNECTOR, SWIVEL
S	MALE STUD BRANCH TEE CONNECTOR
S6	MALE BRANCH TEE CONNECTOR, SWIVEL
T	SLEEVE
T2HF	STANDPIPE TO MALE
T2HG	STANDPIPE TO FEMALE
T23	INSERT (FOR THIN WALLED OR PLASTIC TUBE)
T23HF	STANDPIPE TO MALE BSPT
T24HG	STANDPIPE TO FEMALE
T28HF	STANDPIPE TO METRIC STRAIGHT THREAD
TE	TUBE END SIZE JUMPER
TR	TUBE END REDUCER
W	STRAIGHT BULKHEAD UNION CONNECTOR
WE	90° BULKHEAD UNION ELBOW CONNECTOR
WGG	STRAIGHT FEMALE BULKHEAD ADAPTER
WGG44	STRAIGHT FEMALE BSPP BULKHEAD ADAPTER (WGG4 IN USA)

THREAD TYPE (PORT END)

WITHOUT	NPT (BRASS, STAINLESS) - NPTF (STEEL)
2	NPTF
3	BSPT (MALE ONLY)
4	BSPP (MALE OR FEMALE)
40	BSPP O-RING AND RETAINING RING (MALE) ONLY
41	BSPP CUTTING SEAL (MALE ONLY)
6	SWIVEL NUT (SWIVEL END)
63	ADJUSTABLE SWIVEL CONNECTOR WITH BSPT THREAD
64	ADJUSTABLE SWIVEL CONNECTOR WITH BSPP THREAD
68	ADJUSTABLE SWIVEL CONNECTOR WITH METRIC PARALLEL THREAD
69	ADJUSTABLE SWIVEL CONNECTOR WITH METRIC TAPER THREAD
7	(METRIC TAPER IN USA)
8	METRIC PARALLEL
80	METRIC PARALLEL O-RING AND RETAINING RING (MALE ONLY)
81	METRIC PARALLEL CUTTING SEAL (MALE ONLY)
85	METRIC PARALLEL EOLASTIC SEAL (MALE ONLY)
0	WITH O-RING

ASSEMBLED FITTING

WITHOUT	UNASSEMBLED FITTING. I.E. FITTING ADAPTER FOR USE WITH HOSE FITTINGS, ETC.
B	ASSEMBLED FITTING EXCEPT FOR PRESTOLOK UPGRADED VERSIONS (PLASTIC AND BRASS)

TUBE SIZE

DASH NO.	TUBE O.D.
4	4MM
6	6MM
8	8MM
10	10MM
12	12MM
14	14MM
16	16MM
18	18MM
20	20MM
22	22MM

PORT END THREAD SIZE RANGES

NPT	BSPT	BSPP	THREAD
1/16	1/8	1/8	M3X0.5
1/8	1/4	1/4	M5X0.8
1/4	3/8	3/8	M10X1
3/8	1/2	1/2	M12X1,5
1/2	3/4	3/4	M14X1,5
3/4		1	M16X1,5
		1.1/4	M18X1,5
		1.1/2	M22X1,5
		2	

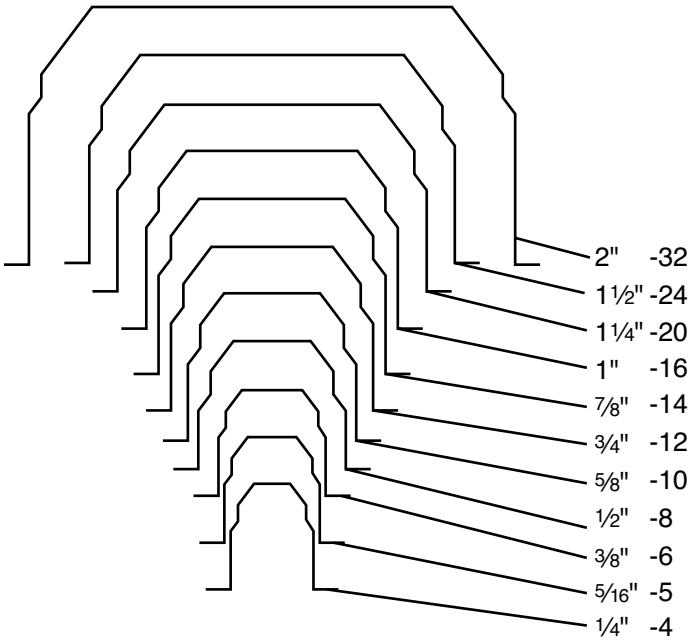
N

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Flare and Thread Profiles

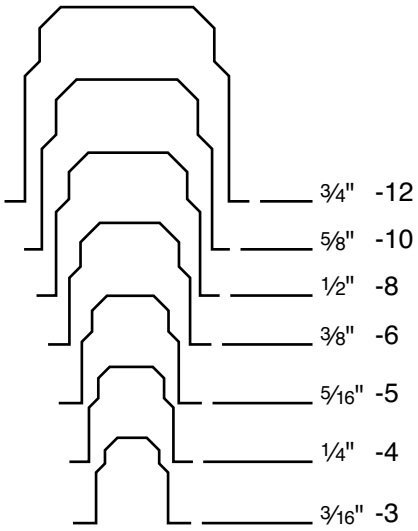
SAE (JIC) 37° Flare Nose Sizes

Actual Size

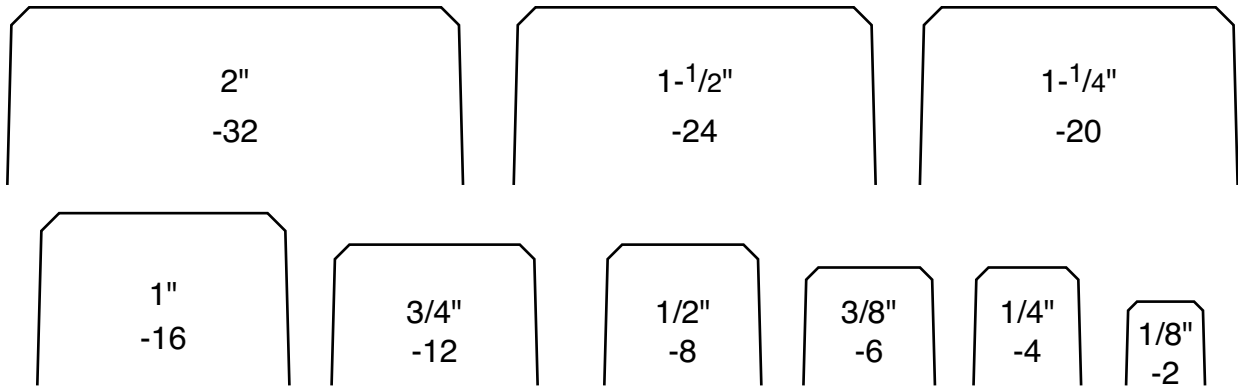


SAE 45° Flare Nose Sizes

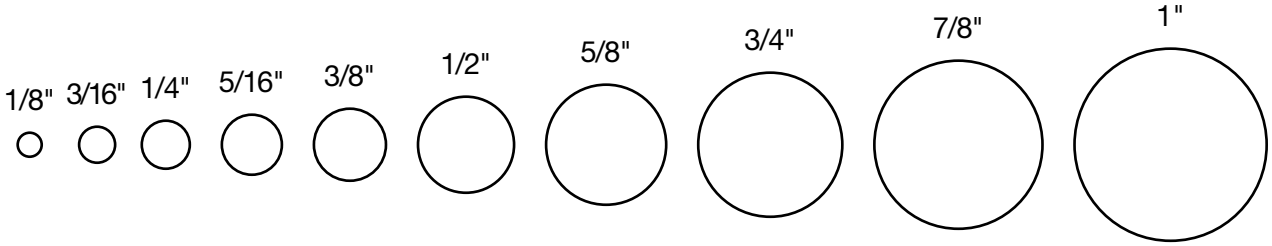
Actual Size



Male Pipe Thread Sizes



Actual Outside Diameters of Tubing



N

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Otsego, Michigan

Pressure Conversions

KILOPASCALS (KPA)	MEGAPASCALS (MPA)	BAR (BAR)	KILOGRAMS PER SQUARE CENTIMETER (KGF/CM2)	POUNDS PER SQUARE INCH(PSI)
100	1.0	1	1.02	14.50
200	.2	2	2.04	29.00
300	.3	3	3.06	43.50
400	.4	4	4.08	58.00
500	.5	5	5.10	72.50
600	.6	6	6.12	87.00
700	.7	7	7.14	101.50
800	.8	8	8.16	116.00
900	.9	9	9.18	130.50
1000	1.0	10	10.20	145.00
2000	2.0	20	20.40	290.10
3000	3.0	30	30.60	435.10
4000	4.0	40	40.80	580.20
5000	5.0	50	51.00	725.20
6000	6.0	60	61.20	870.20
7000	7.0	70	71.40	1015.30
8000	8.0	80	81.60	1160.30
9000	9.0	90	91.80	1305.30
10000	10.0	100	102.00	1450.00
20000	20.0	200	204.00	2901.00
30000	30.0	300	306.00	4351.00
40000	40.0	400	408.00	5802.00
50000	50.0	500	510.00	7252.00
60000	60.0	600	612.00	8702.00
70000	70.0	700	714.00	10153.00
80000	80.0	800	816.00	11603.00
90000	90.0	900	918.00	13053.00
100000	100.0	1000	1020.00	14504.00
200000	100.0	2000	2040.00	29008.00
300000	300.0	3000	3060.00	43511.00

POUNDS PER SQUARE INCH(PSI)	KILOPASCALS (KPA)	MEGAPASCALS (MPA)	BAR (BAR)	KILOGRAMS PER SQUARE CENTIMETER (KGF/CM2)
10	68.90	.07	.70	.70
20	137.90	.14	1.41	1.41
30	206.80	.21	2.10	2.11
40	275.80	.28	2.80	2.81
50	344.70	.34	3.40	3.52
60	413.70	.41	4.10	4.22
70	482.60	.48	4.80	4.92
80	551.60	.55	5.50	5.63
90	620.50	.62	6.20	6.33
100	689.00	.70	6.90	7.00
200	1379.00	1.40	13.80	14.10
300	2068.00	2.10	20.70	21.10
400	2758.00	2.80	27.60	28.10
500	3447.00	3.40	34.50	35.20
600	4137.00	4.10	41.40	42.20
700	4826.00	4.80	48.30	49.20
800	5516.00	5.50	55.20	56.30
900	6205.00	6.20	62.10	63.30
1000	6895.00	6.90	68.90	70.30
2000	13790.00	13.80	137.90	140.70
3000	20684.00	20.70	206.80	211.00
4000	27579.00	27.60	275.80	281.30
5000	34474.00	34.50	344.70	351.60
6000	41369.00	41.40	413.70	421.90
7000	48263.00	48.30	482.60	492.30
8000	55158.00	55.20	551.60	562.60
9000	62053.00	62.10	620.50	632.90
10000	68948.00	68.90	689.00	703.00
20000	137895.00	137.90	1379.00	1406.00
30000	206843.00	206.80	2068.00	2110.00
40000	275790.00	275.80	2758.00	2813.00

N

English/Metric Conversions

Inches x 25.4 = Millimeters (mm)
Inches x 2.54 = Centimeters (cm)
Inches x .254 = Decimeters (dm)
Feet x .3048 = Meters (m)
Yards x .9144 = Meters (m)
Psi x .0689 = Bars (Bar)
Bars x 100 = Kilopascals (kPa)
Psi x .0069 = Megapascals (MPa)
Pound Inches x .113 = Newton Meters (N•m)
Pound Feet x 1.356 = Newton Meters (N•m)

Millimeters x .0394 = Inches
Centimeters x .3937 = Inches
Meters x 3.281 = Feet
Meters x 1.0936 = Yards
Bars x 14.5 = Psi Megapascals x 145 = Psi
Newton Meters x 8.85 = Pound Inches
Newton Meters x .737 = Pound Feet

Millimeters to Fractions to Decimals

MM	INCHES	
	FRACTION	DECIMAL
.3969	1/64	.0156
.7938	1/32	.0312
1.1906	3/64	.0468
1.5875	1/16	.0625
1.9844	5/64	.0781
2.3812	3/32	.0937
2.7781	7/64	.1093
3.1750	1/8	.1250
3.5719	9/64	.1406
3.9688	5/32	.1562
4.3656	11/64	.1718
4.7625	3/16	.1875
5.1594	13/64	.2031
5.5562	7/32	.2187
5.9531	15/64	.2343
6.3500	1/4	.2500

MM	INCHES	
	FRACTION	DECIMAL
6.7469	17/64	.2656
7.1438	9/32	.2812
7.5406	19/64	.2968
7.9375	5/16	.3125
8.3344	21/64	.3281
8.7312	11/32	.3437
9.1281	23/64	.3593
9.5250	3/8	.3750
9.9219	25/64	.3906
10.3188	13/32	.4062
10.7156	27/64	.4218
11.1125	7/16	.4375
11.5094	29/64	.4531
11.9062	15/32	.4687
12.3031	31/64	.4843
12.7000	1/2	.5000

MM	INCH	
	FRACTION	DECIMAL
13.0969	33/64	.5156
13.4938	17/32	.5312
13.8906	35/61	.5468
14.2875	9/16	.5625
14.6844	37/64	.5781
15.0812	19/32	.5937
14.4781	39/64	.6093
15.8750	5/8	.6250
16.2719	41/64	.6406
16.6688	21/32	.6562
17.0656	43/64	.6718
17.4625	11/16	.6875
17.8594	45/64	.7031
18.2562	23/32	.7187
18.6531	47/64	.7343
19.0500	3/4	.7500

MM	INCH	
	FRACTION	DECIMAL
19.4469	49/64	.7656
19.8438	25/32	.7812
20.2406	51/64	.7968
20.2375	13/16	.8125
21.0344	53/64	.8281
21.4312	27/32	.8437
21.8281	55/64	.8593
22.2250	7/8	.8750
22.6219	57/64	.8906
23.0188	29/32	.9062
23.4156	59/64	.9218
23.8125	15/16	.9375
24.2094	61/64	.9531
24.6062	31/32	.9687
25.0031	63/64	.9843
25.4000	1	1.0000

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Fluid Compatibility Guide

The following pages list general recommendations for the selection of valve materials. For specific cases, and for those not included in the Fluid Compatibility Chart, it is advisable to check with your Parker representative.

There are many specific environmental factors which might affect corrosion rate such as temperature, solution, concentration and presence of impurities. Therefore, we suggest that the information be used as a rough guide to material selection. If any questions exist regarding the expected performance of a material in a given application, actual tests should be performed to determine the suitability of the materials in question.

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ACETALDEHYDE	P	G	E	P	G	G	P	E	U	
ACETAMINE	G	G	G	E	G			E		
ACETATE SOLVENTS	E	E	E	P			U	E	U	
ACETIC ACID VAPORS	U		U	U				E		
ACETIC ACID (10%)	P	P	E	U	P	G	U	E	U	U
ACETIC ACID (80%)	P	P	E	U	U	P	U	E	U	U
ACETIC ACID (AERATED)	P	P	E	G	G		P	E	U	
ACETIC ACID (AIR FREE)	P	P	E	G	G		U	E	U	
ACETIC ACID (CRUDE)	P	P	E	U	U		U	E	U	
ACETIC ACID (GLACIAL)			U	U	P	G	P	E		U
ACETIC ACID (PURE)	P	U	E	U	U		U	E	U	
ACETIC ANHYDRIDE	U	U	G	U	P	P	U	E	U	U
ACETONE	E	E	E	U	U	E	U	E	E	E
ACETOPHENONE	G	G	G	U	U	E	U			
ACETYL CHLORIDE	E	G	P	U	U	U	U	E		
ACETYLENE	G	E	E	G	P	E	E	E	E	
ACID FUMES	U	U	G	P	G			E		
ACRYLONITE	E	E	E	U	U	U	P	E		
AIR	E	E	E	E	E	E	E	E	E	
ALCOHOL, AMYL	G	G	E	P	P	E	G	E	E	
ALCOHOL, BUTYL	G	G	E	G	G	P	E	E	E	
ALCOHOL, DIACETONE	E	E	E	U	P	G	U	E		
ALCOHOL, ETHYL	G	G	G	E	G	E	E	E	E	
ALCOHOL, ISOPROPYL	G	G	G	P	G	E	E	E	E	
ALCOHOL, METHYL	E	G	E	G	E	E	P	E	E	
ALCOHOL, PROPYL	E	G	E	G	G	E	E	E		
ALCOHOLS, FATTY	G	G	E	G	G			E		
ALUM	U		G	G	G		G	E		
ALUMINA	U		E	E	E	E		E		
ALUMINUM ACETATE	G		E	U	U	E	U	E		
ALUMINUM BROMIDE				E	E	E	E			
ALUMINUM CHLORIDE DRY	U	P	P	G	G	E	E	E	E	
ALUMINUM CHLORIDE SOLUTION			U	G	G		E	E		U
ALUMINUM FLUORIDE	U	U	P	E	E	E	E	E		U
ALUMINUM HYDROXIDE	E	U	E	E	E	E	E	E		
ALUMINUM NITRATE	U	U	P	G	G	G	U	E		
ALUMINUM OXALATE			U					E		
ALUMINUM SALTS				E	E	E	E			
ALUMINUM SULFATE	P	U	G	E	E	E	E	E	E	P
AMINES	G	G	E	U	U	P	U	E	E	
AMLY CHLORIDE	G		E	U	P	U	U	E		
AMMOMIUM BICARBONATE	G	P	G	G	E	E	E	E	E	
AMMONIA, ALUM			E	G	G			E		
AMMONIA, ANHYDROUS LIQUID	U	E	E	G	P	G	U	E		
AMMONIA, AQUEOUS	U	E	E	G	G		E	E		
AMMONIA, GAS, HOT	U	G	E	P	E	E	U	E		
AMMONIA LIQUOR			E					E		
AMMONIA SOLUTIONS	U	G	E	G	G	G	U	E		
AMMONIUM ACETATE	U		G	G	G	E	U	E		
AMMONIUM BROMIDE 5%			G					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
AMMONIUM CARBONATE	G	G	G	P	E	E	G	E	E	
AMMONIUM CHLORIDE	U	U	P	G	E	E	E	E	E	U
AMMONIUM HYDROXIDE 28%	U	P	G	G	E	G	E	E		
AMMONIUM HYDROXIDE CONC.	U	P	G	P	E	E	E	E	E	
AMMONIUM MONOSULFATE			E					E		
AMMONIUM NITRATE	U	U	E	E	E	E	E	E	E	U
AMMONIUM OXALATE 5%			E					E		
AMMONIUM PERSULFATE	P	U	E	U	P	G	G	E		U
AMMONIUM PHOSPHATE	U	U	G	E	E	E	E	E	G	P
AMMONIUM PHOSPHATE DI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM PHOSPHATE TRI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM SULFATE	P	P	G	E	E	E	G	E	E	U
AMMONIUM SULFIDE	U	U	G	E	G	E	U	E		
AMMONIUM SULFITE	P	P	E	G	E	G	E	E	E	
AMYL ACETATE	G	P	G	U	U	G	U	E	G	P
AMYL BORATE				E	E	U	E			
AMYL CHLORONAPHTHALENE				U	U	U	E			
AMYL NAPTHHALENE				U	U	U	E			
ANILINE	U	P	G	U	U	P	P	E	E	P
ANILINE DYES	P	P	E	P	P	P	G	E	E	
ANIMAL OIL	G	G	G	E	G	G	E			
ANTIMONY TRICHLORIDE	U	U	U	P			G	E		
APPLE JUICE	P	U	G	E	E	G	E	E		
AQUA REGIA (STRONG ACID)	U	U	G	U	U	U	U	E		U
AROCLOR 1248	G	U	U	U	U	G	E			
AROCLOR 1254	G	U	U	U	U	G	E			
AROCLOR 1260	G	U	U	E	E		E			
AROMATIC SOLVENTS	E	P	E	U	U	U		E		
ARSENIC ACID	U	U	G	E	E	G	E	E	E	U
ASPHALT EMULSION	E	G	E	U	P	U	E	E	E	
ASPHALT LIQUID	E	G	E	P	P	U	E	E	E	
ASTM OIL, NO. 1	E	E	E	E	E	U	E			
ASTM OIL, NO. 2	E	E	E	E	G	U	E			
ASTM OIL, NO. 3	E	E	E	E	U	U	E			
ASTM OIL, NO. 4	E	E	E	G	U	U	E			
ASTM REFERENCE FUEL A	U	G	E	E	G	U	E			
ASTM REFERENCE FUEL B	U	G	E	E	U	U	E			
ASTM REFERENCE FUEL C	U	G	E	G	U	U	E			
BARIUM CARBONATE	G	G	G	G	E	E	E	E	E	
BARIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
BARIUM CYANIDE	P		G	G	G	G	G	E		
BARIUM HYDRATE	U		E					E		
BARIUM HYDROXIDE	P	P	G	E	E	G	E	E	E	
BARIUM NITRARE			E		G			E		
BARIUM SALTS				E	E	E	E			
BARIUM SULFATE	P	P	E	E	E	G	E	E	E	E
BARIUM SULFIDE	U	P	G	E	G	E	E	E	E	
BEER	G	U	E	G	G	G	E	E	E	U
BEET SUGAR LIQUORS	E	G	E	E	E	G	E	E	E	
BENZALDEHYDE	E	E	E	U	U	E	U	E	E	E
BENZENE	G	G	G	U	U	U	G	E		E
BENZENESULFONIC ACID, 10%	U	U	U	U	G	U	E			
BENZLY CHLORIDE	U	U	G	U	U	U	E			
BENZOIC ACID	G	U	G	P	P	U	G	E		P
BENZYL ALCOHOL		U	E	U	G	G	E			
BERRYLLIUM	G		G	G	G	G	G	E		
BLEACH LIQUOR				U	G	E	E			
BLEACHING POWDER WET	G		P	U	E	G	G	E		
BLOOD	G		E	G	G	G	G	E		
BORAX	U	P	E	G	U	E	E	E	E	E
BORAX LIQUORS	E	P	G		P	E	E	E	E	
BORDEAUX MIXTURE			E					E		
BORIC ACID	P	U	G	G	G	G	E	E	E	G
BRAKE FLUID	G		G	U	P	G	U	E		
BRINES, SATURATED	G	U	G	E	G	E	E	E	E	
BROMINE, DRY	G	U	U	U	U	U	G	E		
BROMINE, WET	U	U	U	U	U		G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
BUNKER OILS (FUEL)	G	G	E	G	G		E	E	E	
BUTADIENE	P	G	E	P	P	P	G	U		
BUTANE	E	G	E	G	G	U	E	E	E	
BUTTER	G	U	E	G	G			E		
BUTTERMILK	U	U	E	E	E	G	E	E	E	
BUTYL ACETATE	G		G	U	U	U	U	E		E
BUTYL ALCOHOL	E	P	E	G	G		G	E		
BUTYL AMINE	G	G	E	U	U		U	E		
BUTYL BUTYRATE				U	U	E	E			
BUTYL CARBITOL	E	P	E	U	U		U	E		
BUTYL CELLOSOLVE	E	P	E	U	U		G	E		
BUTYL STEARATE				G	U	U	E			
BUTYLENE	E	E	E	U	U	U	U	E		
BUTYRIC ACID	P	U	G	P	P	P	P	E	E	U
CALCINE LIQUORS				E		E	E			
CALCIUM ACETATE				G	G	E	U			
CALCIUM BISULFITE	P	U	G	E	E	U	E	E	E	
CALCIUM CARBONATE	P	U	G	E	E	G	E	E	E	
CALCIUM CHLORATE	U		G	G	G	G	G	E		
CALCIUM CHLORIDE	G	P	G	E	E	G	E	E	E	U
CALCIUM HYDROXIDE	P	P	G	E	G	E	E	E	E	
CALCIUM HYPOCHLORITE	U	U	P	P	P		E	E		U
CALCIUM NITRATE			G	G	G	G		E		
CALCIUM PHOSPHATE	P		G	G	G	G	G	E		
CALCIUM SALTS				E	E	E	E			
CALCIUM SILICATE	P		G	G	G	G	G	E		
CALCIUM SULFATE	P	P	G	E	E	G	E	E	E	U
CALCIUM SULFIDE	U	U	G	E	E	E	E			
CALICHE LIQUOR		G	E	G	G			E		
CAMPHOR	P		G	G	G	G	G	E		
CANE SUGAR LIQUORS	G	G	E	G	G	G	G	E		
CARBOLIC ACID	U	U	G	G	G	G	E	E	U	
CARBON BISULFIDE	P	G	G	U	U	U	E	E	E	
CARBON DIOXIDE, DRY	E	E	E	P	G	G	G	E		
CARBON DISULFIDE	U	P	E	U	U		E	E		
CARBON MONOXIDE	E	E	E	G	U	G	G	E		
CARBON TETRACHLORIDE, DRY	P	G	E	U	U	U	G	E	E	
CARBON TETRACHLORIDE, WET	U	U	G	U	U	U	G	E	E	
CARBONATED BEVERAGE	G	U	G	G	G	G	G	G	E	
CARBONATED WATER	G	G	E	E	E	E	E	E	E	
CASEIN	P			G	G	G	G	G	E	
CASTER OIL	E	G	E	E	G	G	E	E	E	
CAUSTIC POTASH			E	G	G			E		
CAUSTIC SODA		G	E	P		G	G	E		
CELLULOSE ACETATE	G		G	U	U	G	U	E		
CELLULUBE	E	P	E	U	U		U	E		
CHINA WOOD OIL	P	P	E	E	G	U	E	E	E	
CHLORACETIC ACID	P	U	U	U	P		P	E		U
CHLORINATED SOLVENTS	P	P	E	U	U	U	P	E	E	
CHLORINATED WATER	U	P	G	E		E	E	E	U	U
CHLORINE, WET	U	U	U	U	U			E		
CHLORINE GAS	P	G	G	P	U	U	G	E	E	
CHLORO BROMO METHANE	G	U	G	U	U		G	E		
CHLOROBENZENE, DRY	G	G	E	U	U	U	E	E	E	E
CHLOROBUTADIENE				U	U	U	E			
CHLOROFORM, DRY	G	G	E	U	U	U	G	E	E	U
CHLOROPHYLL, DRY	G		G	G	G	G	G	E		
CHLOROSULFONIC ACID, DRY	P	G	G	U	U	U	U	E		U
CHLOROSULFONIC ACID, WET	U	U	U	U	U		P	E		
CHLORPHENOL				U	U	U	E			
CHROME ALUM	P	G	E	G	G	G	G	E		
CHROMIC ACID <50%	U	U	P	U	U	P	P	E	U	U
CHROMIC ACID >50%	U	U	P	U	U	P	P	E	U	
CHROMIUM SULFATE	P		G	G	G	G	G	E		
CIDER			E					E		
CITRIC ACID	P	U	G	G	E	G	E	E		P
CITRUS JUICES	G	U	G	E	E		E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
COCA-COLA SYRUP			E	G	G		G	E		
COCONUT OIL	G	P	G	E	P	E	E	E	E	
COFFEE	E		E	E	E	E	E	G		
COFFEE EXTRACTS, HOT	G	P	E					E		
COKE OVEN GAS	P	G	E	P	U	U	G	E		
COOKING OIL	G	G	E	E	G	U	E	E	E	
COPPER ACETATE	U	U	E	P	P	G	U	E		
COPPER CARBONATE			E					E		
COPPER CHLORIDE	U	U	P	G	G		E	E		U
COPPER CYANIDE	U		E	E	E	G	G	E		E
COPPER NITRATE	U	U	G	E	E	G	E	E	E	U
COPPER SALTS					E	E	E	E		
COPPER SULFATE	U	U	G	E	E	E	E	E	E	P
CORN OIL	G	P	G	E	P	P	E	E	E	
COTTONSEED OIL	G	P	G	E	G	P	G	E	E	
CREOSOTE OIL	G	G	G	P	U	U	E	E	U	
CREOSOLS	U	G	G	U	U	U	U	E		
CRESYLIC ACID	P	P	G	U	U	U	G	E	U	U
CRUDE OIL, SOUR	P	G	E	E	G	U	E	E		
CRUDE OIL, SWEET	G	G	E	E	G		E	E		
CUPRIC NITRATE			E					E		
CUTTING OILS, WATER EMULSIONS	E	G	E	E	G		E	E	E	
CYANIDE PLATING SOLUTION	U		G	G	G	G	G	E		
CYCLOHEXANE	E	E	E	P	U	U	E	E	E	
CYCLOHEXANONE	G		E	U	U			E		
DECANE				E	U	U	E			
DENATURED ALCOHOL				E	E	E	E			
DETERGENTS, SYNTHETIC	G	U	G	G	G	G	E	E		
DEXTRIN	G		G	G	G	G	G	E		
DIACETONE ALCOHOL	E	E	E	U	P			E		
DICHLOROETHANE			P	U	U	U		E		
DICHLOROETHYL ETHER	G		G	U	U	U	U	E		
DIESEL OIL FUELS	E	E	E	E	P	U	E	E		
DIETHYL BENZENE			G	U	U	U		E		
DIETHYL SULFATE	G		G	P	P	P	G	E		
DIETHYLAMINE	G	E	E	G	P	P	U	E		
DIETHYLENE GLYCOL	G	E	E	E	E	E	G	E		
DIMETHLY FORMAMIDE	G		E	G	U	U	U	E		
DIMETHYL PHTHALATE			U	G	G		U	E		
DIOCTYL PHTHALATE	E		E	P	U		P	E		
DIOXANE	G		G	U	U	P	U	E		
DIPENTANE	E		E	G	U	U	G	E		
DISODIUM PHOSPHATE			G	G	G		G	E		
DOW CHEMICAL HD50-4					G	E	U			
DOW CORNING 200, 510, 550				G	E	E	E			
DOWTHERM	E	G	E	U	U	U	E	E	E	
DRILLING MUD	G	G	E	E	P	E	E	E	E	
DRY CLEANING FLUIDS	P	G	E	U	U		G	E	E	
DRYING OIL	P	P	G	E	G			E	E	
ENAMEL	E		E	G	G	U		E		
EPSOM SALTS	G	P	G	E	E		E	E	E	
ETHANE	G	P	G	E	G	U	E	E	E	
ETHANOL	E	U	U	U	E	E	U			
ETHANOLAMINE	U	G	E	G	P		U	E		
ETHERS	G	E	E	U	U	P	P	E	P	
ETHYL ACETATE	P	G	G	U	U	P	U	E	E	E
ETHYL ACRYLATE	G	P	E	U	U	P	U	E		
ETHYL ALCOHOL	G	G	G	E	E		E	E		
ETHYL BENZENE			G	P	U	U		E	E	
ETHYL BROMIDE	E		G	G	G	G	G	E		
ETHYL CHLORIDE, DRY	G	G	E	P	P	P	G	G	E	E
ETHYL CHLORIDE, WET	P	U	G	P	P	G	G	E		
ETHYL ETHER	G		E	U	U	U	U	E		
ETHYL HEXANOL				E	E	E	E			
ETHYL SILICATE	G		G	G	P	G	G	E		
ETHYL SULFATE			G	G	G	P	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ETHYLENE CHLORIDE			E	U	E		U	E		
ETHYLENE DICHLORIDE	U	U	G	U	U	U	U	E		
ETHYLENE GLYCOL	G	G	G	E	G	E	E	E		
ETHYLENE OXIDE	P	G	G	U	U	U	U	E		
FATTY ACIDS	P	U	E	G	G	U	E	E	E	U
FERRIC CHLORIDE	U	U	U	E	U		E	E		U
FERRIC HYDROXIDE			E	G				E		
FERRIC NITRATE	U	U	P	E	E	E	E	E	E	U
FERRIC SULFATE	U	U	G	E	E	E	E	E	E	U
FERROUS AMMONIUM CITRATE			G					E		
FERROUS CHLORIDE	G	U	U	E	E	E	E	E	E	U
FERROUS SULFATE	G	U	G	E	E	E	E	E	E	U
FERROUS SULFATE, SATURATED	P	P	E	P	P	G	G	E		
FERTILIZER SOLUTIONS	P	G	G	G	G			E	G	
FISH OILS	G	G	E	E	G	U	E	E	G	
FLUE GASES	G		E	P	P	U	P	E	P	
FLUOBORIC ACID			G	E	G			E		U
FLUORINE, DRY	U		U	U					E	
FLUOROSILICIC ACID	G	U	G	P	P	P	P	E		U
FOOD FLUIDS & PASTES	G	P	E	G	E			E		
FORMALDEHYDE, COLD	E	E	E	G	P	G	U	E	E	U
FORMALDEHYDE, HOT	G	U	P	G	G			E	E	U
FORMIC ACID, COLD	G	U	G	U	G		G	E	U	E
FORMIC ACID, HOT	G	U	G	U	E		E	E	U	
FRUIT JUICES	G	U	E	E	E	E	E	E	E	
FUEL OIL	G	G	E	E	P	U	E	E	E	
FUMARIC ACID				G	G			E		
FURFURAL	E	E	E	U	P	P	U	E	E	E
GALIC ACID 5%	P	U	G	G	G	P	E	E	E	
GAS, NATURAL	G	G	E	E	E	U	E	E	E	
GAS, ODORIZERS	E	G	G	G	G		E	E	E	
GAS MFG.	G	G	G	E			E	E	E	
GASOLINE, AVIATION	E	E	E	P	U		E	E	E	
GASOLINE, LEADED	E	E	E	P	U		E	E	E	
GASOLINE, MOTOR	E	E	E	P	U	U	E	E	E	
GASOLINE, REFINED	G	G	E	P	P	U	E	E		
GASOLINE, SOUR	G	G	E	P	U	U	E	E	E	
GASOLINE, UNLEADED	E	E	E	P	U		E	E	E	E
GELATIN	E	U	E	E	E	E	E	E	E	
GLUCOSE	E	G	E	E	E	E	E	E	E	
GLUG	E	G	E	E	G	E	E			
GLYCERINE	G	P	E	P	U	E	G	E	P	E
GLYCOL	G	P	G	G	E	E	E	E	P	
GLYCOL AMINE	U		G	E		U	U			
GRAPHITE	G		G	G	G	G	G	E		
GREASE	P	E	E	E	G	U	E	E		
GULF-FR FLUID, EMULSION				E	G	U	E			
GULF-FR FLUID G				E	E	E	E			
GULF-FR FLUID P				U	U	G	G			
HELIUM GAS	G	E	E	G	G	G	G	E		
HEPTANE	E	G	E	E	G	U	E	E	E	
HEXANE	G	G	E	E	P	U	E	E	E	E
HEXANOL, TERTIARY	E	E	E	E	P	U	G	E		
HEXYL ALCOHOL	E	P	E	U	P		E	E		
HYDRAULIC OIL, PETROLEUM BASE	G	E	E	E	G	U	E	E	E	
HYDRAZINE	U	U	G	P	P	G	U	E		
HYDRIGEN SULFIDE, DRY	P	G	E	P	E	E	E	E		
HYDROCHLORIC ACID, AIR FREE	U	U	U	G	P		E	E		U
HYDROCYANIC ACID	U	U	E	G	G	G	E	E	U	
HYDROFLUORIC ACID	U	U	U		G					U
HYDROFLUOSILICIC ACID	E	U	P	G	G	G	E	E		U
HYDROGEN GAS, COLD	G	G	E	G	G	G	E	E		
HYDROGEN GAS, HOT	G	G	G	G	G		E			
HYDROGEN PEROXIDE, CONCENTRATED	U	U	G	U	U	G	G	E		U
HYDROGEN PEROXIDE, DILUTE	P	U	G	E	G	G	E	E	G	U
HYDROGEN SULFIDE, WET	U	P	G	P	G	G	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

N

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
HYDROLUBE				E	G	E	E			
HYPO (SODIUM THIOSULFATE)	P	U	G	E	E	E	E	E	E	
HYPOCHLORITES, SODIUM	U	U	P	P			E	E		
ILLUMINATING GAS	E	E	E	P	P	U	E	E		
INK, NEWSPRINT	P	U	E	E	G	G	E	E	E	
IODINE, WET	U	U	U	G			E	E		
IODOFORM	P	G	E				E	E	E	
ISOPROPYL ACETATE			G	U	U	U		E		
ISOPROPYL ALCOHOL	G	G	G	P	G		E	E		
ISOPROPYL ETHER	E	E	E	P	P	U	U	E		
ISO-BUTANE			G	G	U	U		E		
ISO-OCTANE	E	E	E	E	P	U	E	E	E	
J P-4 FUEL	E	E	E	E	P		E	E	E	
J P-5 FUEL	E	E	E	G	P		E	E	E	
J P-6 FUEL	E	E	E	E	P		E	E	E	
KEROSENE	E	G	E	E	P	U	E	E	E	
KETCHUP	U	U	E	E	E		E	E	E	
KETONES	E	E	E	U	U	U	U	E	E	
LACTIC ACID, CONC. COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, CONC. HOT	U	U	G	P	P	G	G	E	U	U
LACTIC ACID, DILUTE COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, DILUTE HOT	U	U	E	P	U		U	E	U	U
LACTOSE	G		G	G	P	G	G	E		
LAQUER	E	P	E	U	U	U	U	E	E	E
LARD	G	E	E	G	P	P		E		
LARD OIL	G	P	G	E	G	G	E	E	E	
LEAD ACETATE	P	U	G	E	G	G	G	E	E	E
LEAD SULFATE	P		G	G	G	G	G	E		
LECITHIN	P		G	U	U	U	G	E		
LINOLEIC ACID	G	G	E	G	G	U	G	E	E	
LINSEED OIL	G	E	E	E	P	U	E	E	E	
LITHIUM CHLORIDE	G		G	G	G	G	G	E		
LPG	E	G	G	E	G	U	E	E	E	
LUBRICATING OIL	G	E	E	E	G	U	E	E	E	
LUDOX	U		G	G	G	G	G	E		
MAGNESIUM BISULFATE	G	G	E	G	G	G	G	E		
MAGNESIUM BISULFIDE	U		G	G	G	G	G	E		
MAGNESIUM CARBONATE	G		E	G	G	G	G	E		
MAGNESIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
MAGNESIUM HYDROXIDE	G	G	E	E	E	E	E	E	E	
MAGNESIUM HYDROXIDE HOT	U	G	E	G	G		E	E	E	
MAGNESIUM NITRATE			E	G	E		G	E		E
MAGNESIUM SALTS				E	E	E	E			
MAGNESIUM SULFATE	G	G	E	E	E	E	E	E	E	E
MALEIC ACID	G	G	G	G	G	U	E	E	E	
MALEIC ANHYDRIDE	G		G	U	U	U	G	E		
MALIC ACID	G	U	G	E	G		E	E	E	
MALT BEVERAGES			E	E	E	G	E	E		
MANGANESE CARBONATE			G	G				E		
MANGANESE SULFATE	G		E	G	G	G	G	E		
MAYONNAISE	U	U	E	E	E		E	E	E	
MEAT JUICES	U		E	G	G			E		
MELAMINE RESINS			P	G	G			E		
MERCURIC CHLORIDE	U	U	G	E	G	E	E	E		
MERCURIC CYANIDE	U	U	E	E	G	E	E	E		
MERCUROUS NITRATE	U		E				G	E		
MERCURY	U	E	E	E	E	E	E	E	E	
METHANE	E	G	E	E	G		E	E	E	
METHANOL	E	E		E	E	E	U			
METHANOL	G		E	G	G	U	G	E		
METHYL ACETATE	E	G	E	U	U	G	U	E		
METHYL ACETONE	E	E	E	U	U	E	U	E		
METHYL ALCOHOL	G	G	G	E	G		P	E		E
METHYL BROMIDE 100%	P	G	G	G	U	U	G	E		
METHYL CELLOSOLVE	E	G	E	P	U	G	U	E		
METHYL CELLULOSE			E	U	U			E		
METHYL CHLORIDE	G	G	E	U	U	U	G	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
METHYL ETHER				E	U	U	E			
METHYL ETHYL KETONE	E	E	E	U	U	G	U	E	E	E
METHYL FORMATE	E	P	G	U	G	G	U	E		
METHYL ISOBUTYLE KETONE			E	U	U			E		
METHYLAMINE	U	G	E	U	U	G	U	E		
METHYLENE CHLORIDE	E	G	E	U	U	U	P	E		U
MILK & MILK PRODUCTS	G	U	E	E	E	E	E	E	E	
MIL-F-81912, JP-9	E	E	E	U	U	U	E			
MIL-H-5606	E	E	E	E	G	U	E			
MIL-H-6083	E	E	E	E	E	U	E			
MIL-H-7083	E	E	E	E	G	E	G			
MIL-H-8446	G	E	E	G	E	U	E			
MIL-L-2104 &2104B	E	E	E	E	G	U	E			
MIL-L-7808	U	G	E	G	U	U	E			
MINE WATERS, ACID	P	U	P	E			E	E		
MINERAL OILS	G	G	E	E	G	U	E	E	E	
MINERAL SPIRITS	G	G	G	E	P		E	E	E	
MIXED ACIDS, COLD	U	P	G	U	U	U	G	E	U	
MLO-7277 & MLO-7557	G	E	E	U	U	U	E			
MOBILE HF	E	E	E	E	G	U	E			
MOLASSES, CRUDE	E	E	E	E	E		E	E	E	
MOLASSES, EDIBLE	E	P	E	E	E		E	E	E	
MOLYBDIC ACID			E					E		
MONOCHLORO BENZENE DRY			G	U	U			E		
MONOMETHYL HYDRAZINE				G	G	E				
MORPHOLINE	G		E	U	U	G	U	E		
MURIATIC ACID	U	U	U	G			E	E		
MUSTARD	E	G	E	E	E		E	E	E	
NAPHTHENIC ACID	G	E	G	G	U	U	E			
NAPTHA	G	G	G	G	P	U	E	E	E	
NAPTHALENE	G	G	G	U	U	U	E	E	E	
NATURAL GAS, SOUR	G	G	E	E	E	U	E	E		
NEATSFOOT OIL				E	U	G	E			
NICKEL ACETATE	U	G	E	G	G	E	U			
NICKEL AMMONIUM SULFATE	U	U	E	E	G	G	U	E		
NICKEL CHLORIDE	U	U	G	E	E	G	E	E	E	E
NICKEL NITRATE	U	U	G	E	E	E	E	E	E	
NICKEL SALTS				E	G	E	E			
NICKEL SULFATE	U	U	G	E	E	G	E	E	E	E
NITRIC ACID 100%	U	U	E	U	U	U	G	E	U	U
NITRIC ACID 10%	U	U	E	P	G		E	E	U	U
NITRIC ACID 30%	U	U	E	P	P	G	E	E	U	U
NITRIC ACID 80%	U	U	P	U	U	U	G	E	U	U
NITRIC ACID ANHYDROUS	U	U	E	U	U	U	E	E		
NITROBENZENE	U	G	E	U	U	P	P	E		E
NITROGEN	E	E	E	E	E	G	E	E	E	
NITROUS ACID 10%	U	U	G	P	E		E	E		
NITROUS GASES	U	G	E					E		
NITROUS OXIDE	G	G	G	G	G		E	E		
NOCOTINIC ACID	E	G	E	U	U	U	G	E		
OCTYL ALCOHOL	E	E	E	G	G	U	E			
OILS, ANIMAL	E	E	E	E	G	G	G	E		
OILS, PETROLEUM REFINED	G	E	E	E	G	U	E	E	E	
OILS, PETROLEUM SOUR	P	G	E	G	G	U	E	E		
OILS, WATER MIXTURE	E	G	E	E	G		E	E	E	
OILS & FATS			E	G		U		E		
OLAIC ACID			G	U	U		P	E		
OLEIC ACID	G	P	G	G	P	U	E	E	E	
OLEUM	P	G	G	U	U	U	P	E	U	
OLEUM SPIRITS	U		G	P	U	U	E	E		
OLIVE OIL	P	G	E	E	G	G	E	E	E	
ORTHO-DICHLOROBENZENE	G	G	G	U	U	U	E			
OTHER KETONES	E	E	E	U	U	U	U	E		
OXALIC ACID	G	U	G	P	G	G	E	E	P	U
OXYGEN	E	G	E	G	G	E	E	E	U	
OZONE, DRY	E	E	E	U	U	E	G	E		
OZONE, WET	G	P	E	U	U	G	G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PAINTS & SOLVENTS	E	E	E	U	U	U	G	E		
PALM OIL	G	P	G	G	G	U	E	E	E	
PALMITIC ACID	G	P	G	G	G	G	E	E	E	
PAPER PULP	G		E	G	G	G	G	E		
PARAFFIN	E	G	E	E	P	U	E	E	E	
PARAFORMALDEHYDE	G	G	G	G	G	U		E	E	
PARALDEHYDE			G	G	G	U		E		
PARA-DICHLOROBENZENE	G	E	E	U	U	U	E			
PARKER O LUBE	E	E	E	E	E	U	E			
PEANUT OIL	G	E	E	E	U	U	E			
PENTANE	E	G	E	E	G	U	E	E	E	
PERCHLORETHYLENE, DRY	P	G	E	U	U	U	E	E		
PERCHLORIC ACID-2N	U	U	G	U	G	G	E			
PETROLATUM (PETROLEUM JELLY)	G	P	G	E	G		E	E	E	
PHENOL	G	U	E	U	U	U	G	E	U	E
PHOSPHATE ESTER	U	E	E	U		E		E		
PHOSPHORIC ACID 10%	U	U	U	G	E	G	E	E	U	U
PHOSPHORIC ACID 50% COLD	U	U	G	G	G	G	E	E	U	U
PHOSPHORIC ACID 50% HOT	U	U	U	G	G	G	E	E	U	U
PHOSPHORIC ACID 85% COLD	G	G	E	P	P		G	E	U	U
PHOSPHORIC ACID 85% HOT	P	P	G	P	P			E	U	U
PHOSPHORIC ANHYDRIDE			E	U	U		G	E	G	
PHOSPHOROUS TRICHLORIDE	U	G	E	U	U	G	G	E		
PHTHALIC ACID	G	P	G	P	P		E	E	E	
PHTHALIC ANHYDRIDE	G	P	G	P	P		E	E	E	
PICRIC ACID	P	U	G	P	E	G	G	E		
PINE OIL	G	G	E	E	U	U	E	E	E	
PINEAPPLE JUICE	P	P	E	E	E		E	E	E	
PITCH			E	P	P	U		E		
PLATING SOLUTIONS, CHROME	E	U	E		U	E	E			
PLATING SOLUTIONS, OTHER		E	E	E	U	E	E			
PNEUMATIC SERVICE	E	E	E	E	E	E	E	E		
POLYSULFIDE LIQUOR	U		G	G	G	G	G	E		
POLYVINYL ACETATE	G		G		P	G		E		
POLYVINYL CHLORIDE	G		G		P	G		E		
POTASSIUM ACETATE	G	E	G	G	G	E	U			
POTASSIUM BICARBONATE			E	G				E		E
POTASSIUM BICHROMATE			E	G	G		G	E	G	
POTASSIUM BISULFATE			E	G	G		E	E		
POTASSIUM BISULFITE	P	U	G	E	E	G	E	E	E	
POTASSIUM BROMIDE	P	U	E	E	E	G	E	E	E	P
POTASSIUM CARBONATE	G	G	G	E	E	G	E	E	E	E
POTASSIUM CHLORATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM CHLORIDE	P	P	G	E	E	E	E	E	E	P
POTASSIUM CHROMATE	G		G	G	E	G	G	E		
POTASSIUM CYANIDE	U	G	G	E	E	E	E	E	E	E
POTASSIUM DICHROMATE	U	P	G	E	E	G	E	E	E	U
POTASSIUM DIPHOSPHATE	G	E	E	E			E	E		
POTASSIUM FERRICYANIDE	U	P	E	E	E	G	E	E	E	
POTASSIUM FERROCYANIDE	G	P	G	E	E		E	E	E	
POTASSIUM HYDROXIDEDILUTE COLD	U	E	G	E	G		U	E		E
POTASSIUM HYDROXIDE DILUTE HOT	U	G	G	G	G			E		
POTASSIUM HYDROXIDE TO 70% COLD										
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E		E		
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E		E		
POTASSIUM IODIDE	U	P	G	E	E	G	E	E	E	
POTASSIUM NITRATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM OXALATE			E					E		
POTASSIUM PERMANGANATE	G	G	G	E	E	G	E	E	E	U
POTASSIUM PHOSOHATE	P		G	E	E	E	E	E		
POTASSIUM PHOSPHATE DI-BASIC	G	E	E	E	E	G	E	E	E	
POTASSIUM PHOSPHATE TRI-BASIC		E	G	G	G	G		E		
POTASSIUM SALTS				E	E	E	E			
POTASSIUM SULFATE	G	G	E	E	E	E	E	E	E	P
POTASSIUM SULFIDE	G	G	E	E	G	G	G	E		
POTASSIUM SULFITE	G	G	E	G	G	E	G	E		
PRODUCER GAS	G	G	G	E	G	U	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PROPANE GAS	E	G	G	E	G	U	E	E	E	
PROPYL ACETATE	U	E	E	U	U	G	U			
PROPYL ALCOHOL	E	G	G	E	E		E	E		
PROPYL BROMIDE	G		G	G	G	G	G	E		
PROPYLENE	E	E	E	U	U	U	E			
PROPYLENE GLYCOL	G	G	G	E	E	G	E	E	P	
PYDRAUL	E	P	E	U	U		G	E		
PYRIDINE			G	U	U		U	E		
PYROGARD 42, 43, 53, 55				U	U	E	E			
PYROGARD D				E	G	E	E			
PYROLGALIC ACID	G	G	G	E	E		E	E	E	
QUENCH OIL	G	G	E	E	G		E	E	E	
QUININE, SULFATE, DRY			E					E		
R P-1 FUEL	E	E	E	G	P		E	E	E	
RESINS & ROSINS	E	P	E	P	P		E	E		
RESORCINOL			G					E		
ROAD TAR	E	E	E	G	P	U	E	E	E	
ROOF PITCH	E	E	E	G	P		E	E	E	
ROSIN EMULSION	G	P	E	U	P		G	E		
RUBBER LATEX EMULSIONS	E	G	E				E	E	E	
RUBBER SOLVENTS	E	E	E	U	P		U	E	P	
SALAD OIL	G	P	G	E	E	G	E	E	E	
SALICYLIC ACID	P	U	E	E	E	G	E	E	E	
SALT	G	P	G	E	E		E	E	E	
SALT BRINE	G		G	E	U	G	G	E		
SAUERKRAUT ARINE			G					E		
SEA WATER	P	U	G	E	E	E	E	E	E	
SEWAGE	P	P	G	E	P	G	G	E		
SHELL IRUS 905				E	G	U	E			
SHELLAC	E	E	E	E	E			E		
SILICONE FLUIDS	G		G	G	G		G	E		
SILVER BROMIDE										
SILVER CYANIDE	U		E	G	G		G	E		
SILVER NITRATE	U	U	E	P	P	E	E	E	E	
SILVER PLATING SOL.			E		G			E		
SKYDROL 500	E	G	E	U	U		U	E		
SKYDROL 7000, TYPE 2	U	E	E	U	U	E	G			
SOAP SOLUTIONS	E	E	E	E	G	E	E	E		
SODIUM ACETATE	G	P	G	G	G	G	E	E	E	E
SODIUM ALUMINATE	G	P	E	E	E	G	E	E	E	
SODIUM BENZOATE			G					E		
SODIUM BICARBONATE	G	P	G	E	E	E	E	E	E	E
SODIUM BICHROMATE			G	U				E		
SODIUM BISULFATE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BISULFITE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BORATE	G	P	G	E	E	G	E	E	E	
SODIUM BROMIDE 10%	G	P	G	E	E	G	E	E	E	
SODIUM CARBONATE	G	G	E	E	E	G	E	E	E	E
SODIUM CHLORATE	G	P	G	E	E	G	E	E	E	P
SODIUM CHLORIDE	G	P	G	E	E	G	E	E	E	E
SODIUM CHROMATE	P	G	E	E	E	G	E	E	E	
SODIUM CITRATE			G					E		
SODIUM CYANIDE	U	G	E	E	E	G	E	E	E	E
SODIUM FERRICYANIDE			E					E		
SODIUM FLUORIDE	P	U	G	E	E	G	E	E	E	
SODIUM HYDROXIDE 20% COLD	E	E	E	E	E	G	G	E		E
SODIUM HYDROXIDE 20% HOT	E	G	E	G	G	G	P	E		
SODIUM HYDROXIDE 50% COLD	E	E	E	E	E	G	P	E		E
SODIUM HYDROXIDE 50% HOT	E	G	E	G	G		P	E		
SODIUM HYDROXIDE 70% COLD	E	E	E	G	P	G	P	E		
SODIUM HYDROXIDE 70% HOT	G	G	E	U	U	G	P	E		
SODIUM HYPOCHLORITE (BLEACH)	U	U	U				E	E		U
SODIUM HYPOSULFITE			G					E		
SODIUM LACTATE			E					E		
SODIUM METAPHOSPHATE	P	G	G	E	E	G		E		
SODIUM METASILICATE COLD	G	P	E	G	E		G	E		
SODIUM METASILICATE HOT	G	U	E					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
SODIUM NITRATE	G	G	E	P	G	G	E	E	E	E
SODIUM NITRITE			G	P	U	E	G	E	G	
SODIUM PERBORATE	G	G	G	P	G	E	E	E	E	
SODIUM PEROXIDE	U	P	G	P	G	E	E	E	E	
SODIUM PHOSPHATE	P	P	G	G	P	E	E	E	G	
SODIUM PHOSPHATE DI-BASIC	P	P	G	E	E	E	E	E	E	
SODIUM PHOSPHATE TRI-BASIC	P	P	G	G	G	E	E	E	E	
SODIUM POLYPHOSPHATE			G	G	G	E		E		
SODIUM SALICYLATE			E					E		
SODIUM SALTS										
SODIUM SILICATE	G	G	G	E	E	G	E	E	E	E
SODIUM SILICATE, HOT	P	P	G			G		E		
SODIUM SULFATE	G	G	E	E	E	E	E	E		E
SODIUM SULFIDE	U	G	G	E	E	G	E	E	E	E
SODIUM SULFITE	P		E	E	E	G	G	E		
SODIUM TETRABORATE			E	E	E	G		E		
SODIUM THIOSULFATE	P	G	G	E	E	E	E	E	E	
SOYBEAN	G	P	E	E	G	G	E	E	E	
STANNIC CHLORIDE	P	U	U	E	E		E	E		
STARCH	G	P	G	E	E	P	E	E	E	
STEAM (212 F)	E	E	E	U	U	G	P	E	U	
STEARIC ACID	P	P	G	E	P	G	E	E	E	
STODDARD SOLVENT	G	E	E	E	G	U	E			
STYRENE	E	E	E	U	U	U	G	E		
SUCROSE SOLUTIONS	E	E	E	E	G	E	E			
SUGAR, SYRUPS & JAM	G		E		G			E		
SUGAR LIQUIDS	E	G	E	E	E	G	E	E	E	
SULFATE, BLACK LIQUOR	P	P	G	P	G	G	P	E	E	
SULFATE, GREEN LIQUOR	P	P	G	P	G		P	E	E	
SULFATE, WHITE LIQUOR	P	P	G	P	G		P	E	E	
SULFUR	U	P	G	U	P	G	G	E	E	
SULFUR, MOLTEN	U	P	G	U	P	G	G	E		
SULFUR CHLORIDES	G	U	U	U	U	P	E	E	E	
SULFUR DIOXIDE, DRY	G	G	E	U	U	E	E	E	E	
SULFUR DIOXIDE, WET	U		E	U	U	G		E		
SULFUR HEXAFLUORIDE	G		E		G			E		
SULFUR TRIOXIDE	G	G	G	U	U		G	E		
SULFUR TRIOXIDE, DRY	G	G	G	U	U	G	E	E		
SULFURIC ACID 0 TO 77%	P	U	P	G	G		E	E	P	U
SULFURIC ACID 100%	P	P	E	U	U	P	G	E	U	U
SULFUROUS ACID	U	U	G	P	P	P	E	E	P	
SUNSAFE	U	E	E	E	G	U	E			
TALL OIL	G	G	G	G	G	U	E	E		
TANNIC ACID	G	P	G	G	G	G	E	E	E	U
TANNING LIQUORS			G	G	U			E		
TAR & TAR OILS	E	E	E	P	U	U	E	E		
TARTARIC ACID	G	U	E	P	G	G	E	E	E	
TERPINEOL				G	U	U	E			
TERTIARY BUTYL ALCOHOL	E	E	E	G	G	G	E			
TETRACHLOROETHANE		G	E	U	U	U	E			
TETRACHLOROETHYLENE	U	G	U	U	U	E				
TETRAETHYL LEAD	G	P	G					E	E	
TITANIUM TETRACHLORIDE	G	E	G	G	U	U	E			
TOLUOL (TOLUENE)	E	E	E	U	U	U	G	E	E	E
TOMATO JUICE	P	P	E	E	E		E	E	E	
TRANSFORMER OIL	G	E	E	E	G		E	E	E	
TRANSMISSION FLUID, TYPE A	E	E	E	E	G	U	E			
TRIBUTYL PHOSPHATE	E	E	E	U	U	G	U	E		
TRICHLORETHYLENE	G	G	G	U	U	U	G	E	E	U
TRICHLOROACETIC ACID	G		U	P	U		U	E		
TRICHLOROETHANE		G	E	U	U	U	E			
TRICRESYL PHOSPHATE		E	G	U	U	E	G			
TRIETHANOLAMINE			G	P	G	G		E		
TRIETHYLAMINE	G		G	G	G			E		
TRISODIUM PHOSPHATE			G	E	E	G	G	E		
TUNG OIL	G	G	E	E	G	U	E	E	E	
TURBINE OIL #15		G	E	G	U	U	E			

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
TURPENTINE	G	G	G	G	U	U	E	E	E	E
UREA	U	P	G	P	G	G	U	E	E	
URIC ACID			E					E		
VARNISH	E	P	E	P	G	U	G	E	E	
VEGETABLE OILS	G	G	E	E	G	U	E	E	E	
VINEGAR	G	U	E	U	U	E	U	E		E
VINYL ACETATE	G		G		G	E		E		
WATER, ACID MINE	U	U	G	G	E	E	U	E		
WATER, DISTILLED	U	U	E	P	G	G	E	E	E	
WATER, FRESH	P	P	E	P	G	G	E	E	E	
WAXES	E	E	E	E	G	P	E	E	E	
WHISKEY & WINES	G	U	E	G	G	E	E	E	E	
XYLENE (XYLOL), DRY	E	G	E	U	U	U	G	E	E	E
ZINC BROMIDE	G		G	G	G	G	G	E		
ZINC CHLORIDE	U	U	U	G	G		E	E		U
ZINC HYDROSULFITE	P	E	E	E	E	E	E	E	E	
ZINC SULFATE	G	U	G	E	E	E	E	E	E	P

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

1F H5
2GF H5
3GF H5
4CB-SR L5
9-DC L6
14FL H5
14FS H5
14FSV H5
14FSX H5
16-CB L5
18-DC L6
20 ..... I4
22 ..... I4
22BH I4
22CA I4
22CABH I4
24B-CABINET L6
24-CB L5
24M F6
24PLP A32
24PLPD A33
26 ..... I4
27 ..... I4
28 ..... I4, I5
30GH C35
31GH C35
31HB C35
32PLCK B22
32PLP A30
32PLPBH A32
32PLPBHP A38
32PLPDJ A29
32PLPDJB A28
32PLPDRC A37
32PLPRC A37
32PLPSP A36
32PTC D11
37PTCSP D12
40B-CABINET L7
41FL H6
41FS H6
41FX H6
41IF H12
42F H6
42IFHD H12
43F H6
46F H7
46IFHD H12
48F H7
48F-X-MI J14
48F-X-MIX H7
48IFHD H12
50GHSV J16
53GH J16
54GH J16
55GH J16
56PSG G24
56RBSG E15
59CA G11
59HD G33
59P G24
60AB E12
60C G6
60NTA E5
60P G24
60PB G24
60PT G6
60RB E15
60TF E9
60VL E18
60VLV E18
61AB E12
61C G6
61CA G11
61CL G6
61HD G31
61NTA E5
61P G24
61PB G24
61PN G24
61PSGN G24
61RB E15
61RBSG E15
61TF E9
61VL E18
62AB E12
62ABH E12
62ANBH E5
62C G6
62CA G11
62CABH G11
62CBH G7
62HD G31
62HDBH G31
62NBH E5
62NFBH E5
62NTA E5
62P G24, G25
62PBH G25
62PCA G11, G25
62PCABH G11, G25
62PLM A45
62PLMBH A45
62PLMSP A47
62PLP A5
62PLPBH A5
62PLS A55
62PLSBH A56
62PMT D5
62PMTBH D5
62PMTBHR D5
62PTBH G25
62PTC E9
62RB E15
62TF E9
62VL E18
63NTA E5
63PLM A47
63PLP A35
63PT G7, G11, G25
66AB E12
66BJB A29
66C G7
66CA G12
66HD G31
66NBH E5
66NTA E6
66P G25
66PLM A41
66PLMBH A45
66PLP A6
66PLPBH A5
66PMT D5
66PMTBH D6
66PTC E9
66RBSV E15
66VL E18
67PLM A46
67PLP A36
67PLS A57
67RBSG E15
68BJB A28
68BJBD A29
68BJBT A29
68C G7
68CA G12
68HB I8
68HB-X-MI J14
68HB-X-MIX I8
68HD G32
68LF A9
68LFR A7
68NTA-X-MI J14
68NTA-X-MIX E6
68P G26
68PLCK B23
68PLCKI B23
68PLM A41
68PLMSP A42
68PLPR A7
68PLPSP A25
68PLP-X-0 ..... A6
68PLS A50
68PLSSP A51
68PMT D6
68PMTBH D6
68PMT-X-M D6
68PTC E9
68RB E15
68RBSG E15
68TF E9
68VL E18
69GH J16
70GH J16
71GH J16
75GH J16
76RB E15
78GH J16
79GH J16
80GH J16
81GH J16
82GH J16
83GH J16
84GH J16
88AC H16
88GH J16
90GH J16
93-FB-BPD M5
94GH J16
95GH J17
96GH J17
97HC I8
97P G26
98GH J17
98GHSV J17
99GH J17
99GHSV J17
101GHSV J17
102-F-XX-BPD M4
112 ..... J12
122HBL I8
122PLMSP A47
125HB I8
125HBL I8

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

125HBLSV I9
126HBL I9
127HB I9
128HBLSV I9
129HB I9
139HB I10
144F H8
145F H8
146HBLFSV I10
147F H8
149F H8
149F-X-MI J14
149F-X-MIX H9
150F H9
151F H9
155F H9
159F H9
159F-X-MI J14
159F-X-MIX H10
164C G8
164CA G12
164HD G31
164P G28
164PLM A46
164PLP A9
164PLS A56
164PMT D6
164PTC E9
164VL E19
165C G8
165CA G12
165HD G31
165PLM A46
165PLMBH A46
165PLP A10
165PLS A56
165PMT D6
165PMTBH D6
165PTC E9
166FSV H10
168C G8
168CA G13
169C G8
169CA G13
169HB-X-MI J14
169HB-X-MIX I10
169HD G32
169LP G28
169P G28
169PLM A42, A43
169PLMBJ A47
169PLMX A43
169PLS A52, A53
169PLSX A53
169PMT D7
169PMTBH D7
169PMTL D7
169PMTNS D7
169PMTNS-X-M D7
169PMTR D7
169PS G28
169PTCNS E10
169VL E19
170C G9
170CA G13
170HD G32
170P G29
170PMT D8
170PMTNS D8
170VL E19
171C G9
171CA G13
171HB I10
171HD G32
171P G29
171PLM A43, A44
171PLS A53, A54
171PMT D8
171PMTNS D8
171PTCNS E10
171VL E19
172C G9
172CA G13
172HD G32
172P G29
172PLM A44, A45
172PLS A54, A55
172PMT D8
172PMTNS D8
172PTCNS E10
172VL E19
174-F-BPD M3
176C G9
176CA G14
177C G9
177CA G14
177HD G33
177P G29
179C G9
179CA G14
179HB I10
179HB-X-MI I11, J14
179HD G32
179PMT D9
179PMTNS D9
179PMTR D9
179VL E19
189PMTR D9
207ACBH E13, J5
207P J5
208-FSS-BPD M5
208P J5
209P J5
210P J5
211P J5
212P J5
213P J6
215PN J6
215PNL J6
216P J6
218B-BPD M3
218P J6
219P J6
220 ..... I5
220P J7
222P J7
222P-X-MI J14
222P-X-MIX J11
224 ..... I5
225 ..... I5
226-BPD M5
226RB-BPD M5
228 ..... I5
229 ..... I5
230 ..... I6
231 ..... I6
232 ..... I6
233 ..... I6
237 ..... I6
238 ..... I6
244F H8
244IFHD H12
245IFHD H13
249F H8
249IF H13
250IFHD H13
251IFHD H13
252IFHD H13
255IFHD H13
255M F5
256F H10
259F H9
259IFHD H13
264AB E12
264C G8
264CA G12
264NTA E6
265AB E12
265C G8
265CA G12
265NTA E6
269C G8
269CA G13
269HB I11
269PMT D7
269TF E10
270AB E13
270C G9
270CA G13
270NTA E7
271 ..... E14
279HB I11
309P C32
313GH C35
316GH C35
316P C33
318P C32
322HB C32
322PLPSP A37
325GH C35
325GHSV C35
325HB C33
326HB C33
328HB C35
329HB C34
347PLP A33
362HB C34
362PLP A31
362PLPD A32
362PLPDSP A35
362PLPSP A35
362PTC D11
364HB C32
364PLP A31
364PTC D11
365HB C32
365PLP A30, A31
365PLPBH A32
365PTC D11
367-FH-BPD M4
368-FH-BPD M4
368PLP A26
368PLPD A27
368PTC D11

369PLP....A21
369PLPBJ....A28
369PLPBJB....A28
369PLPO....A60
369PLPSP....A33
369PLPSPX....A34
369PLPTJ....A29
369PLPTJB....A28
369PLPX....A22
369PTC....D11
369PTCSP....D12
370HB....C34
370PLP....A27
370PTC....D11
371PLP....A25
371PLPSP....A34, A35
371PTC....D12
371PTCSP....D13
372HB....C34
372PLP....A24
372PLPSP....A34
372PTC....D12
372PTCSP....D13
376PLPBJ....A29
377PLP....A24
377PTC....D12
379PLP....A22
379PLPSP....A34
379PTC....D12
391P....G26
391PSS....G26
392P....G26
392PSS....G26
393P....G26
393PD....G27
393PDSS....G27
393PSS....G26
394P....G27
394PD....G27
394PDSS....G27
394PSS....G27
398P....G27
398PD....G28
398PDSS....G28
398PSS....G27
400-S-TIP....L3
410....L3
410-N....L3
410-S....L3
410-SV....L3
411FF....H12
411FS....H12
415-N....L3
415-S....L3
485F....H7
525-F-BPD....M5
639C....G9
639CA....G14
639F....H10
639PLM....A47
639PLP....A36, A37
639PLS....A57
639PM....D9
639PMT....D9
640F....H10
640QSF....H16
640QSFCR....H16
660FHD....H10
661FHD....H10
664FHD....H10
682C....G9
682CA....G14
682VL....E19
685HB....I8
685VLV....E18
880AC....H16
881AC....H16
901GH....J17
945TH-BPD....M5
1163-60-BPD....J17
1163-61-BPD....J17
1200P....J7
1201P....J8
1202P....J7
1203P....J7
1204P....J8
1295HB....I9
1495F....H9
1595F....H10
1695HB....I10
1695VLV....E19
1725HB....I10
1795HB....I10
2200P....J7
2200PDE....J8
2201P....J8
2202P....J7
2203P....J7
2205P....J8
2214P....J8
2224P....J8
2225P....J8
2491FHD....H13
6302....C9
6304....C8
6306....C8
6307....C11
6315....C5
6316....C5
6322....C11
6325....C6
6326....C11
6340....C9
6351....C10
6366....C9
6380....C11
6382....C10
6383....C10, C11
6388....C10
6503....C7, C8
6505....C5
6508....C7
6509....C6, C7
6521....C6
6548....C11
6579....C6
ACT-P-X-KIT....K37
ACT-SS-X-KIT....K37
ADJ-CB....L5
AQRT....C24
AVC1....H15
AVCS4D-4....H16
AVE1....H15
AVT2....H15
AVT3....H15
AVTS....H15
AVTS4....H16
AVTS6....H16
AVTSL....H15
AVU1....H15
AVU2....H15
AVU2BH....H15
AVUIFI....H15
AVUR3....H16
AVUS....H16
AVUS3....H16
AVUS3BH....H15
AVUS4D....H16
AVUSE....H15
BG441-NBL....L4
BG442-SBL....L4
BG443-NBL....L4
BG444-SBL....L4
BMB....G21
BTMB....G21
BU....C19, C28
BVG4PLOCK....K43
BVGC....K39
BVGL....K41
BVGTC....K39
BVGTL....K41
C2PMTB....D16
C3BMB....G18
C3PB....A12
C3PMTB....D16
C6PB....A11
C8BMB....G18
C8UPMTB....D16
C63LPB....A12
C63PB....A11
C64PB....A11
C64SPB....A11
C68PB....A11
C68SPB....A12
CAP....C19
CBMB....G17
CD43....J10
COPPER TUBING....L7
COR4BMB....G19
COR4PB....A14
COR4PBD....A14
COR8PB....A14
COR8PBD....A14
CORPB....A14
CORPBD....A14
CR-001....H16
CU....C18
DC601....K59
DC602....K60
DC603....K60
DC604....K60
DC606....K60
DC607....K60
DCR601....K60
DD44....J10
EBMB....G18
EPB....A10
ERHD....D5
ES....D5
EU....C16, C27
F2PMTB....D15
F3BMB....G16
F3HF....J10
F3HG....J10

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Parker Hannifin Corporation
Fluid System Connectors
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F3PB A8
F3PMTB D15
F4BMB G16
F4PB A9
F8BMB G16
F8PB A8
F8UPMTB...., D15
F23PB A8
F28PB A9
FA C18
FBMB G16
FC.... C18, C28
FC601 ....B25
FC602....B25
FC608....B25
FC701 ....B20
FC702....B20
FC705....B20
FC708....B20
FC731....B5
FC832....B17
FC836....B18
FC908...., B27
FCB832 ...., B17
FCC731 ...., B5
FCCB731....B6
FCCI731 ....B5
FCCS731....B12, B13
FCCSI731....B12
FCCSP731 ....B15
FCCSPI731 ....B15
FCI701 ....B20
FCI702....B20
FCIC908 ....B27
FCK701C....B7
FCKC731...., B6
FCKCB731 ....B7
FCKCI731...., B7
FCM731....B9
FCMB731 ....B10
FCMI731....B9
FCMK731 ....B10
FCMS731 ....B13
FCMSI731 ....B13
FCMSP731 ....B15
FCMSPI731 ....B15
FCPM832 ....B18
FE.... C19, C28
FF C18
FF33 ....J10
FF44 ....J11
FG43 ....J11
FHG4....J11
FNMB G21
FNPB....A15
FPB A7
G4BMB.... G17
G4PB....A6
GBMB.... G17
GG44....J11
GR C29
HBMB G16
HHP3....J11
HP3 .... J12
HPB A5
HPMTB...., D15
HV104C K56
HV104C-KIT K56
JBMB.... G18
JPB....A10
JPMTB...., D15
KMMOO4 .... J12
LSR-STAND.... L6
LV91 ....E21
MBVG K45
MC.... C16, C27
ME C20, C27
MES....C17
MMO444.... J12
MMS443 .... J12
MR....C28
MRO434 .... J12
MRS C17
MT C28
MTS....C17
MV200 ....K52
MV308 ....B29
MV309 ....B29
MV608 ....K52
MV609 ....K52
MV708 ....K47
MV709 ....K47
MVV308....B29
MVV309....B29
NS C29
NV101F....K56
NV102F K56
NV103F K56
NV104C K56
NV104CA....K56
NV105C K56
NV105CA....K56
NV106C K57
NV106CA....K57
NV107P K57
NV108P K57
NV109P K57
NV311P G29, K57
NV312P G29, K57
OR C29
PLMC A47
PLPHBF4 ....A7
PLSC A57
PMCE F4
PMTCE F4
PNEU-CAB L7
PNMB G21
PSB L7
PSBJ708 ....B31
PSBJ731 ....B31
PSPE731....B31
PSPJ731 ....B31
PTC-001 .... M3
PTC-001RB M3
PTR34 .... J12
PV607....K54
PV608....K54
PV609....K54
PVMB-001 ....K54
R3BMB G19
R63PB....A12
R64PB....A13
R68PB....A12
RBMB G18
RD C19
S3BMB G19
S8UPMTB ...., D16
S63PB A13
S64PB A13
S68PB A14
S32633-BPD M3
S75015-BPD.... M3
S75046-BPD M3
SAE 010101....H6
SAE 010102 ....H7
SAE 010103 ....H7
SAE 010104 ....H6
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Notes

Parker Hannifin Corporation
Fluid System Connectors
Otsego, Michigan

Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings and Related Accessories

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WARNING: Failure or improper selection or improper use of hose, tubing, fittings, assemblies or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocution from high voltage electric powerlines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping Hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions below. Only Hose from Parker's Stratoflex Products Division is approved for in flight aerospace applications, and no other Hose can be used for such in flight applications.

1.0 GENERAL INSTRUCTIONS

1.1 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. All assemblies made with Hose are called "Hose Assemblies". All products commonly called "fittings" or "couplings" are called "Fittings". All related accessories (including crimping and swaging machines and tooling) are called "Related Accessories". This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use.

1.2 Fail-Safe: Hose, and Hose Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the Hose or Hose Assembly or Fitting will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person that is responsible for selecting or using Hose and Fitting products. Do not select or use Parker Hose or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and applications for Hose and Fittings, Parker and its distributors do not represent or warrant that any particular Hose or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the Hose and Fitting.
- Assuring that the user's requirements are met and that the application presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the Hose and Fittings are used.
- Assuring compliance with all applicable government and industry standards.

1.5 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2.0 HOSE AND FITTING SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fitting and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For these applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fitting for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose and Fitting for such use.

2.1.2 Electrically Conductive Hose: Parker manufacturers special Hose for certain applications that require electrically conductive Hose.

Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage.

Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with AGA Requirements 1-93, "Hoses for Natural Gas Vehicles and Fuel Dispensers". This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG dispensing or transfer. Do not use any other Hose for CNG applications where static charge buildup may occur, even if electrically conductive. Use of other Hoses in CNG applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. Care must also be taken to protect against CNG permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F. Parker CNG Hose should not be used in confined spaces or unventilated areas or areas exceeding 180°F. Final assemblies must be tested for leaks. CNG Hose Assemblies should be tested on a monthly basis for conductivity per AGA 1-93.

Parker manufacturers special Hose for aerospace in flight applications. Aerospace in flight applications employing Hose to transmit fuel, lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in flight applications, even if electrically conductive. Use of other Hoses for in flight applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury , and property damage. These Hose assemblies for in flight applications must meet all applicable aerospace industry, aircraft engine, and aircraft requirements.

2.2 Pressure: Hose selection must be made so that the published maximum recommended working pressure of the Hose is equal to or greater than the maximum system pressure. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the Hose. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.

2.3 Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.

2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose. Temperatures below and above the recommended limit can degrade Hose to a point where a failure may occur and release fluid. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.

2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, and Fittings with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis.

Hose that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals.

2.6 Permeation: Permeation (that is, seepage through the Hose) will occur from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.

Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

2.7 Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.8 Routing: Attention must be given to optimum routing to minimize inherent problems (kinking or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources).

2.9 Environment: Care must be taken to insure that the Hose and Fittings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.10 Mechanical Loads: External forces can significantly reduce Hose life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Unusual applications may require special testing prior to Hose selection.

2.11 Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius, and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged, should be removed and discarded.

2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.

2.13 Length: When establishing a proper Hose length, motion absorption, Hose length changes due to pressure, and Hose and machine tolerances and movement must be considered.

2.14 Specifications and Standards: When selecting Hose and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.

2.15 Hose Cleanliness: Hose components may vary in cleanliness levels. Care must be taken to insure that the Hose Assembly selected has an adequate level of cleanliness for the application.

2.16 Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose require use of the same type of Hose as used with petroleum base fluids. Some such fluids require a special Hose, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.

2.17 Radiant Heat: Hose can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose.

2.18 Welding or Brazing: When using a torch or arc-welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with appropriate fire resistant materials. Flame or weld spatter could burn through the Hose and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing, or soldering may emit deadly gases.

2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose assemblies. Since the long-term effects may be unknown, do not expose Hose assemblies to atomic radiation.

2.20 Aerospace Applications: The only Hose and Fittings that may be used for in flight aerospace applications are tHose available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for in flight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.

2.21 Unlocking Couplings: Ball locking couplings or other couplings with disconnect sleeves can unintentionally disconnect if they are dragged over obstructions or if the sleeve is bumped or moved enough to cause disconnect. Threaded couplings should be considered where there is a potential for accidential uncoupling.

3.0 HOSE AND FITTING ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1 Component Inspection: Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturers Hose or a Parker Hose on another manufacturers Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4.
The Parker published instructions must be followed for assembling the Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

3.3 Related Accessories: Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturers Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager of chief engineer of the appropriate Parker division.

3.4 Parts: Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.5 Reusable/Permanent: Do not reuse any field attachable (reusable) Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.

3.6 Pre-Installation Inspection: Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. Do NOT use any Hose Assembly that displays any signs of nonconformance.

3.7 Minimum Bend Radius: Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.

3.8 Twist Angle and Orientation: Hose Assembly installation must be such that relative motion of machine components does not produce twisting.

3.9 Securement: In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

3.10 Proper Connection of Ports: Proper physical installation of the Hose Assembly requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.

3.11 External Damage: Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

3.12 System Checkout: All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

3.13 Routing: The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame, or sparks, a fire or explosion may occur. See section 2.4.

4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.7.

4.2 Visual Inspection Hose/Fitting: Any of the following conditions require immediate shut down and replacement of the Hose Assembly:
- Fitting slippage on Hose,
- Damaged, cracked, cut or abraded cover (any reinforcement exposed);
- Hard, stiff, heat cracked, or charred Hose;
- Cracked, damaged, or badly corroded Fittings;
- Leaks at Fitting or in Hose;
- Kinked, crushed, flattened or twisted Hose; and
- Blistered, soft, degraded, or loose cover.

4.3 Visual Inspection All Other: The following items must be tightened, repaired, corrected or replaced as required:
- Leaking port conditions;
- Excess dirt buildup;
- Worn clamps, guards or shields; and
- System fluid level, fluid type, and any air entrapment.

4.4 Functional Test: Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.

4.5 Replacement Intervals: Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See section 1.2.

4.6 Hose Inspection and Failure: Hydraulic power is accomplished by utilizing high-pressure fluids to transfer energy and do work. Hoses, Fittings, and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time, Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear, or failure to perform proper maintenance. When Hoses fail, generally the high-pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High-pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid.
If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely. Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information.
Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high-pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

4.7 Elastomeric seals: Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.

4.8 Refrigerant gases: Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.

4.9 Compressed natural gas (CNG): Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per AGA 1-93 Section 4.2 "Visual Inspection Hose/Fitting". The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage.
Caution: Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.

OFFER OF SALE

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5. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 60 days after delivery or, in the case of an alleged breach of warranty, within 30 days after the date within the warranty period on which the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for any amount due to Seller from Buyer) must be commenced within thirteen months from the date of tender of delivery by Seller or, for a cause of action based upon an alleged breach of warranty, within thirteen months from the date within the warranty period on which the defect is or should have been discovered by Buyer.
6. LIMITATION OF LIABILITY. UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.
7. Contingencies. Seller shall not be liable for any default or delay in performance if caused by circumstances beyond the reasonable control of Seller.
8. User Responsibility. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.
9. Loss to Buyer's Property. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

10. Special Tooling. A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

11. Buyer's Obligation; Rights of Seller. To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest. Seller shall have a security interest in, and lien upon, any property of Buyer in Seller's possession as security for the payment of any amounts owed to Seller by Buyer.

12. Improper use and Indemnity. Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.

13. Cancellations and Changes. Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change product features, specifications, designs and availability with notice to Buyer.

14. Limitation on Assignment. Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.

15. Entire Agreement. This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of the agreement. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.

16. Waiver and Severability. Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.

17. Termination. This agreement may be terminated by Seller for any reason and at any time by giving Buyer thirty (30) days written notice of termination. In addition, Seller may by written notice immediately terminate this agreement for the following: (a) Buyer commits a breach of any provision of this agreement (b) the appointment of a trustee, receiver or custodian for all or any part of Buyer's property (c) the filing of a petition for relief in bankruptcy of the other Party on its own behalf, or by a third party (d) an assignment for the benefit of creditors, or (e) the dissolution or liquidation of the Buyer.

18. Governing Law. This agreement and the sale and delivery of all Products hereunder shall be deemed to have taken place in and shall be governed and construed in accordance with the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to this agreement. Disputes between the parties shall not be settled by arbitration unless, after a dispute has arisen, both parties expressly agree in writing to arbitrate the dispute.

19. Indemnity for Infringement of Intellectual Property Rights. Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

20. Taxes. Unless otherwise indicated, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of Products.

21. Equal Opportunity Clause. For the performance of government contracts and where dollar value of the Products exceed $10,000, the equal employment opportunity clauses in Executive Order 11246, VEVRAA, and 41 C.F.R. §§ 60-1.4(a), 60-741.5(a), and 60-250.4, are hereby incorporated.