



**LIQUID COOLED SOLID  
STATE STARTER**

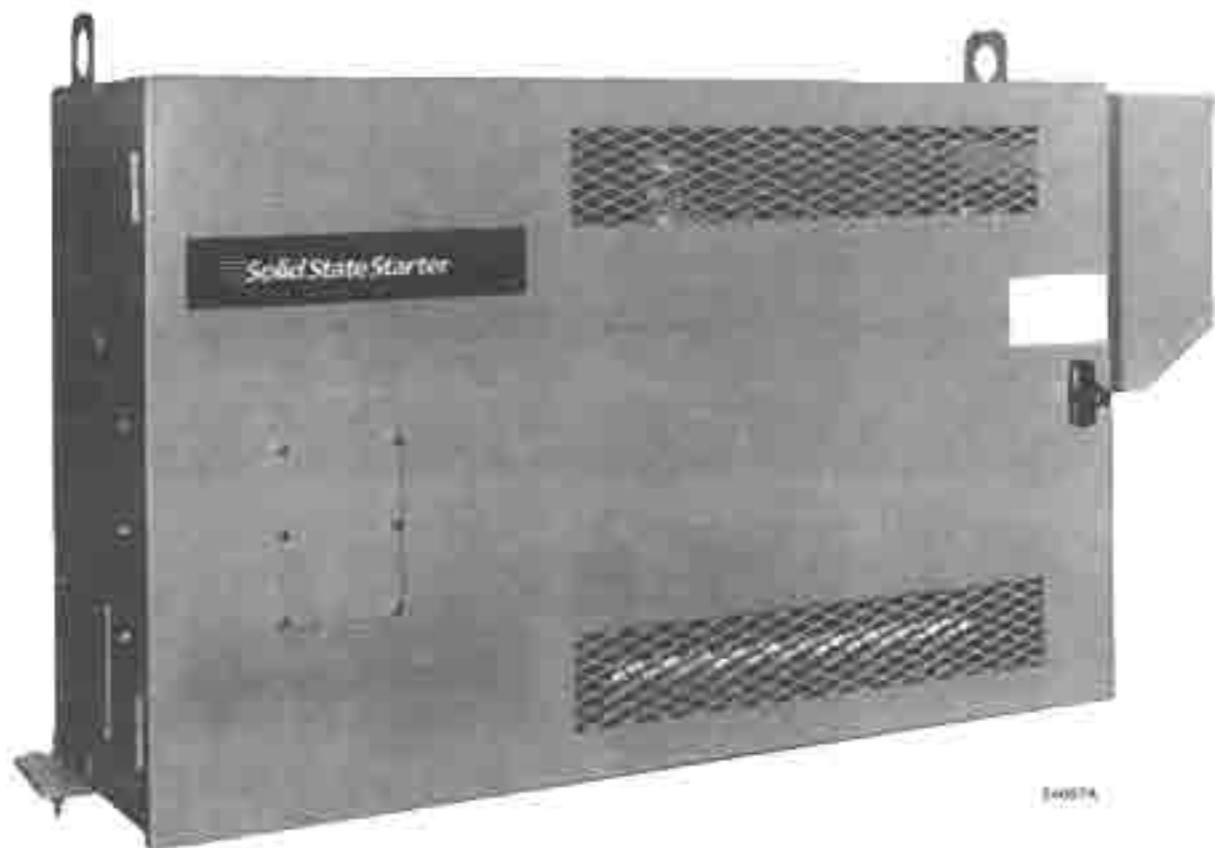
**ORDERING INSTRUCTIONS**

Supersedes Nothing

298

Form 95.40-N30

**STANDARD RETROFIT KITS  
LIQUID COOLED SOLID STATE STARTER**



140574

# Standard Retrofit Kits Liquid Cooled Solid State Starter

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**WARNING:** Cooling water from the condenser water circuit must be cooler than 32.2°C (90°F) and warmer than 78°F.  
The condenser circuit must have a fouling factor of .0005 or less.

**Solid State Starters**  
**for**  
**Low Pressure (R-11 & R-123) Centrifugal Chillers**

**ORDERING INSTRUCTIONS**

**WARNING:** Cooling water from the condenser water circuit must be cooler than 32.2°C (90°F) and warmer than 78°F.  
The condenser circuit must have a fouling factor of .0005 or less.

**1) Micro Panel**

Chiller control panel must be a Micro-Panel with a compatible micro board PN 031-00940-xxx or 031-01065-xxx. A Micro-panel selected from the YES manual is required if the micro board isn't compatible. Pricing and delivery for the YES offers are available from the PDC customer service representative.

**2) SSS Kit Selection**

SSS kit must be selected from the "SSS Kit Selection Table for R-11 & R-123 Chillers". Make the selection based on the "Max" and "Min" values. Be sure your selection satisfies all requirements. If the values of voltage or current exceed the values listed on the table then no solid state starter is available for the application.

**3) Terminal Lug Kit or Disconnect Switch Kit Selection**

Use the table titled "Power Connection Selection Table for Low Pressure Centrifugal Chillers" to select the desired kit.

**4) Adapter Selection**

Adapters designed for style E, F, G, and H chillers are listed in the table titled "Adapters Selection Table for low pressure Centrifugal Chillers". Special or unusual motors will require customized adapters to fit between the motor and SSS. The factory provides adapters for current production motors. The vast variety of motors sold in past years will require creativity from the installing technician to create an adapter (perhaps out of a heavy duty junction box). A basic factory adapter drawing is in the appendix.

**5) Auxiliary Items**

Required items are listed in the “Auxiliary Items” table.

**6) Ordering**

Complete a YORK Applied Systems Parts Distribution Center order form (sample in the appendix) and fax to your PDC customer service representative for pricing and delivery.

**7) Incidental Items**

Small incidental items like electrical tape, tie wraps, screws, paint, steel for mounting brackets, etc... are to be procured locally.

**8) Mounting**

Low pressure refrigerant shells are not coded vessels, so welding support brackets to a shell is recommended. The SSS weight must be supported by a bracket or stand attached to the bottom of the starter, not by the adapter. The adapter fits between the motor and starter to brace the starter against lateral movement.

**9) Operation, Calibration, Testing, and Start-up**

Theory of Operation, Start-Up, and Trouble Shooting are explained in form 160.46-OM3.1 . Calibration and testing procedures for the Solid State Starter are explained in the Micro-Panel Service literature listed below.

**10) Helpful Reference Literature**

Liquid Cooled SSS Operation & Service	Form 160.46-OM3.1
Liquid Cooling Loop Filling Instruction	Form 160.46-OM3.1 (SB-1)
SCR Brick Replacement Instruction	Form 160.46-OM3.1 (SB-2)
Cooling Water Temp. Instruction	Form 160.46-OM3.1 (SB-3)
Leaking SCR Brick Replacement	Form 160.46-OM3.1 (SB-4)
Coolant Maintenance Instruction	Form 160.46-OM3.1 (SB-5)
Trigger Board Resistor Replacement	Form 160.46-OM3.1 (SB-6)
Pump Replacement Instructions	Form 160.46-OM3.1 (SB-7)
Coolant Replacement Instruction	Form 160.46-OM3.1 (SB-8)
Nuisance 1/2 Phase Trips Instruction	Form 160.46-OM3.1 (SB-9)
Nuisance Hi-Temp. Trips Instruction	Form 160.46-OM3.1 (SB-10)
Operation Instr for Disconnect Switch	Form 160.46-OM3.2
Operation Instruction for Chiller	Form 160.48-O1
Operation Instruction for Micro-panel	Form 160.48-O1.1
Service Instruction for Micro-panel	Form 160.48-M2
Wiring Diagram for Micro-panel	Form 160.48-PA6
Wiring Diagram for SSS	Form 160.49-PA8

**SSS Kit Selection Table**  
**Low Pressure (R-11 & R-123) Centrifugal Chillers**  
**All B(67&76) & C(85&95&C3) Compressors**

FLA Min - Max	LRA Max	Current Max Start	Motor Voltage	SSS Model	Basic Kit Part Number
100-260	1556	700	440-480	SSS7L-46A	375-22721-002
"	"	"	550-600	SSS7L-58A	" -003
"	"	"	380-415	SSS7L-50A	" -004
150-510	3111	1400	200-208	SSS14L-17A	" -005
"	"	"	220-240	SSS14L-28A	" -006
"	"	"	440-480	SSS14L-46A	" -007
"	"	"	550-600	SSS14L-58A	" -008
"	"	"	380-415	SSS14L-50A	" -009
250-850	5780	2600	200-208	SSS26L-17A	" -010
"	"	"	220-240	SSS26L-28A	" -011
"	"	"	380-415	SSS26L-50A	" -014
440-1050	7335	3300	200-208	SSS33L-17A	" -015
"	"	"	220-240	SSS33L-28A	" -016

**All E(108,120,&126) & F(131&144) Compressors**

FLA Min - Max	LRA Max	Current Max Start	Motor Voltage	SSS Model	Basic Kit Part Number
150-510	3111	1400	440-480	SSS14L-46A	375-22723-007
"	"	"	550-600	SSS14L-58A	" -008
"	"	"	380-415	SSS14L-50A	" -009
250-850	5780	2600	200-208	SSS26L-17A	" -010
"	"	"	220-240	SSS26L-28A	" -011
"	"	"	440-480	SSS26L-46A	" -012
"	"	"	550-600	SSS26L-58A	" -013
"	"	"	380-415	SSS26L-50A	" -014
440-1050	7335	3300	200-208	SSS33L-17A	" -015
"	"	"	220-240	SSS33L-28A	" -016
"	"	"	440-480	SSS33L-46A	" -017
"	"	"	380-415	SSS33L-50A	" -018

**NOTES:** FLA and LRA are available from the motor name plate or the original order.

Start current =  $0.4498 \times \text{LRA}$

Voltage and current ranges and maximums are absolute.

Cooling water design pressure is 300 PSI max, ( DO NOT EXCEED! ).

**SSS Kit Bill of Material**  
**for**  
**Low Pressure (R-11 & R-123) Centrifugal Chillers**  
**B(67&76) & C(85&95&C3) Compressors**

Kit Part Numbers 375-22721-002 to 016

<b><u>Qty</u></b>	<b><u>Part Description</u></b>
1	Solid State Starter
1	Heat Exchanger
1	Water Pump
1	Transformer Kit 1.5 kva
1	Logic Control Board LCSSS
1	Flange Kit or Union Kit 3/4 inch
2	Ball Valve 3/4 NPTI x 3
2	Elbow, Screw Street 3/4 NPTI
1	Nipple, Pipe 3/4 Sch 40 x
27ft	Hose, Black Rubber 3/4 ID
2	Adapter, Combination 3/4
8	Hose Clamp 11/16 Min Dia
1	Clamp, Hanger, Conduit 1
3	Clamp, Hanger, Conduit 3
2	Angle Support
1	Disk, Orifice Pump Flange (if required)
8	Machine Screw, Pan Head Rec'd 1
4	Cap Screw, Hex 1/4-20UNC
6	Cap Screw, Hex 3/8-16UNC
6	Lockwasher TH Int 3/8
12	Lockwasher TH Int 1/4
12	Nut, Hex 1/4-20UNC
1	035-14063-000 Drawing, Instruction
1	035-14067-000 Drawing, Instruction

**SSS Kit Bill of Material**  
**for**  
**Low Pressure (R-11 & R-123) Centrifugal Chillers**  
**E(108,120,&126) & F(131&144) Compressors**

Kit Part Numbers 375-22723-007 to 018

<b>Qty</b>	<b>Part Description</b>
1	Solid State Starter
1	Heat Exchanger
1	Water Pump
1	Transformer Kit 1.5 kva
1	Logic Control Board LC SSS
1	Flange Kit or Union Kit 3/4 inch
2	Ball Valve 3/4 NPTI x 3
2	Elbow, Screw Street 3/4 NPTI
1	Nipple, Pipe 3/4 Sch 40 x
11 ft	Hose, Black Rubber 3/4 ID
4	Hose Clamp 11/16 Min Dia
1	Clamp, Hanger, Conduit 1
2	Clamp, Hanger, Conduit 3
2	Angle Support
1	Disk, Orifice Pump Flange (if required)
6	Machine Screw, Pan Head Rec'd 1
4	Cap Screw, Hex 1/4-20UNC
6	Cap Screw, Hex 3/8-16UNC
6	Lockwasher TH Int 3/8
11	Lockwasher TH Int 1/4
10	Nut, Hex 1/4-20UNC
2	Connector, 3/4 ext flare x 3/4
2	Union, Scr 3/4 NPTI steel
16ft	Hose, Red Rubber 3/4 ID
4	Adapter, Stem Male 3/4
4	Clamp, Hose 3/4 2 bolt
2	Union, Flare 3/4 ID
1	035-14066-000 Drawing, Instruction
1	035-14067-000 Drawing, Instruction

**Power Connection Selection Table**  
for  
**Low Pressure Centrifugal Chillers**

SSS Model	FLA Range	Terminal Lug Kit	Disconnect Switch Kit
SSS7L-xxA	100-210	375-00445-001	371-01301-101
SSS7L-xxA	211-260	“ -001	371-01301-102
SSS14L-xxA	150-510	“ -002	371-01160-000
SSS26L-xxA	250-850	“ -003	371-01161-000
SSS33L-xxA	440-1050	“ -004	none available

Note: Select either a terminal lug kit or a disconnect switch kit.

**Motor to SSS Adapter Selection Table**  
for  
**Low Pressure Centrifugal Chillers**

Motor Code	Voltage Range	Reliance	Siemens	Toshiba
CF-CJ	200-600	-	-	025-28400-004
CK-CN	200-600	-	-	025-28400-003
CP	200-208	025-28400-003	-	-
CP	230-600	-	-	025-28400-003
CR-CS	230-240	025-28400-003	-	-
CR-CS	440-600	-	-	025-28400-003
CT-CW	440-600	-	-	025-28400-003
CX	440-600	025-28400-003	-	-
CY-CB	440-600	025-28400-003	025-28400-002	-
5CC-5CE	380-415	-	-	025-28400-004
5CF-5CP	380-415	-	-	025-28400-003
5CQ-5CS	380-415	025-28400-003	-	-
5CT-5CV	380-415	025-28400-003	025-28400-002	-

**Auxiliary Items**  
**for**  
**Low Pressure Centrifugal Chillers**

<b>Quantity</b>	<b>Part Number</b>	<b>Description</b>
1	013-02987-000	Corrosion Inhibitor - 1 gallon premixed
1	035-14033-000	Label, Field Wiring
1	035-14018-000	Label, Field Wiring
1	375-24710-000	Auxiliary Wiring Kit

**Notes**

# **Solid State Starters** **for** **Screw Chillers**

## **ORDERING INSTRUCTIONS**

**WARNING:** Cooling water from the condenser water circuit must be cooler than 32.2°C (90°F) and warmer than 78°F.  
The condenser circuit must have a fouling factor of .0005 or less.

### **1) Micro-panel**

Chiller control panel must be a YORK Micro-Panel with micro board PN 031-00940-xxx or 031-01065-xxx. A Micro-panel purchased from the factory is required if one isn't already on the chiller. Price quotes for a Micro-panel are available from Retrofit Marketing.

### **2) SSS Kit Selection**

SSS kit must be selected from the "SSS Kit Selection Table for Screw Chillers". Make the selection based on the "Max" and "Min" values. Be sure your selection satisfies all requirements. If the job values of voltage or current exceed the values listed on the table, no solid state starter is available for the application.

### **3) Terminal Lug Kit or Disconnect Switch Kit Selection**

Use the "Power Connection Selection Table for Screw Chillers" to select the desired kit.

### **4) Adapter Selection**

Motor to SSS mounting adapters designed for style A, B, and C chillers are listed in the "Adapters Selection Table for Screw Chillers". The factory can provide standard adapters; however, special or unusual motors will require customized adapters to fit between the motor and SSS. Creativity is needed from the installing technician to create a customized adapter (perhaps out of a heavy duty junction box) if a standard adapter isn't available. A basic factory adapter drawing is in the appendix.

**5) Auxiliary Items**

Required items are in the “Auxiliary Items for Screw Chillers” table.

**6) Ordering**

Complete a YORK Applied Systems Parts Distribution Center order form (sample in the appendix ) and fax to your PDC customer service representative for pricing and delivery.

**7) Incidental Items**

Small incidental items like electrical tape, tie wraps, screws, paint, steel for mounting brackets, etc... are to be procured locally.

**8) Mounting**

The SSS requires support beneath the starter. Welding on the shell is not recommended due to Code restrictions; however, new Screw Chillers incorporate welding pads on the shell where the SSS brackets mount, a stand to support the SSS welded to these pads is recommended. In the absence of the weld pads, construct a stand to support the SSS from the floor. The adapter fits between the motor and starter to brace the starter against lateral movement.

**9) Operation, Calibration, Testing, and Start-up**

Theory of Operation, Start-Up, and Trouble Shooting are explained in form 160.46-OM3.1 . Calibration and testing procedures are explained in the literature listed below.

**10) Helpful Reference Literature**

Liquid Cooled SSS Operation & Service	Form 160.46-OM3.1
Liquid Cooling Loop Filling Instruction	Form 160.46-OM3.1 (SB-1)
SCR Brick Replacement Instruction	Form 160.46-OM3.1 (SB-2)
Cooling Water Temp. Instruction	Form 160.46-OM3.1 (SB-3)

continued from previous page

Leaking SCR Brick Replacement	Form 160.46-OM3.1 (SB-4)
Coolant Maintenance Instruction	Form 160.46-OM3.1 (SB-5)
Trigger Board Resistor Replacement	Form 160.46-OM3.1 (SB-6)
Pump Replacement Instructions	Form 160.46-OM3.1 (SB-7)
Coolant Replacement Instruction	Form 160.46-OM3.1 (SB-8)
Nuisance 1/2 Phase Trips Instruction	Form 160.46-OM3.1 (SB-9)
Nuisance Hi-Temp. Trips Instruction	Form 160.46-OM3.1 (SB-10)
Operation Instruction of Disconnect Switch	Form 160.46-OM3.2
Operation Instruction for Chiller	Form 160.47-O1
Operation Instruction for Micro-panel	Form 160.47-O1.1
Service Instruction for Micro-panel	Form 160.47-M2
Wiring Diagram for Micro-panel	Form 160.47-PA2.1
Wiring Diagram for Micro-panel	Form 160.47-PA6
Wiring Diagram for SSS	Form 160.47-PA2.5
Wiring Diagram for SSS	Form 160.47-PA8

## SSS Kit Selection Table for Screw Chillers

### S0, S1, S2, S3 Compressors

FLA Min - Max	LRA Max	Motor Voltage	SSS Model	Kit Part Number
100-260	1556	440-480	SSS7L-46	375-24707-002
“	“	550-600	SSS7L-58	“ -003
“	“	380-415	SSS7L-50	“ -004
150-510	3111	200-208	SSS14L-17	“ -005
“	“	220-240	SSS14L-28	“ -006
“	“	440-480	SSS14L-46	“ -007
“	“	550-600	SSS14L-58	“ -008
“	“	380-415	SSS14L-50	“ -009
250-850	5780	200-208	SSS26L-17	“ -010
“	“	220-240	SSS26L-28	“ -011
“	“	380-415	SSS26L-50	“ -014
440-1050	7335	200-208	SSS33L-17	“ -015
“	“	220-240	SSS33L-28	“ -016

### S4 & S5 Compressors

FLA Min - Max	LRA Max	Motor Voltage	SSS Model	Kit Part Number
100-260	1556	550-600	SSS7L-58	375-24708-003
150-510	3111	440-480	SSS14L-46	“ -007
“	“	550-600	SSS14L-58	“ -008
“	“	380-415	SSS14L-50	“ -009
250-850	5780	200-208	SSS26L-17	“ -010
“	“	220-240	SSS26L-28	“ -011
“	“	440-480	SSS26L-46	“ -012
“	“	550-600	SSS26L-58	“ -013
“	“	380-415	SSS26L-50	“ -014
440-1050	7335	200-208	SSS33L-17	“ -015
“	“	220-240	SSS33L-28	“ -016
“	“	440-480	SSS33L-46	“ -017
“	“	380-415	SSS33L-50	“ -018

**NOTES:** FLA and LRA are available from motor name plate or the original order.  
 Start current =  $0.4498 \times \text{LRA}$   
 Voltage and current ranges and maximums are absolute.  
 Cooling water design pressure is 300 PSI ( DO NOT EXCEED! ).

**SSS Kit Bill of Material**  
**for**  
**Screw Chillers**

**S0, S1, S2, S3 Compressors**

Kit Part Number 375-24707-002 to 016

<b><u>Qty</u></b>	<b><u>Part Description</u></b>
1	Liquid Cooled Solid State Starter
1	Heat Exchanger
1	Water Pump
1	Transformer Kit 1.5 kva
1	Logic Control Board LCSSS
1	Flange Kit or Union Kit 3/4 inch
2	Ball Valve 3/4 NPTI x 3
2	Elbow, Screw 3/4 NPTI 90 deg.
1	Elbow, Screw Street 3/4 NPTI
3	Nipple, Pipe 3/4 Sch 40 x
11ft	Hose, Black Rubber 3/4 ID
4	Hose Clamp 1 1/16 Min Dia
1	Clamp, Hanger, Conduit 1
2	Clamp, Hanger, Conduit 3
2	Angle support
6	Machine Screw, Pan Head Rec'd 1
4	Cap Screw, Hex 1/4-20UNC
7	Lockwasher TH Int 1/4
10	Nut, Hex 1/4-20UNC
6	Cap Screw, Hex 3/8-16UNC
6	Lockwasher TH Int 3/8
10ft	Hose, Red Rubber 3/4 ID
4	Male Stem Adapter 3/4
4	Hose Clamp 3/4 , 2 bolt
2	Union, Flare 3/4 ID
2	Connector 3/4 ext. fla. x 3/4
2	Union, Scr. 3/4 NPTI Stl.
1	Disk, Orifice Pump Flange (if required)
1	Drawing # 075-02688-000 cooling water piping

## SSS Kit Bill of Material for Screw Chillers

### S4, & S5 Compressors

Kit Part Number 375-24708-003 to 018

<u>Qty</u>	<u>Part Description</u>
1	Liquid Cooled Solid State Starter
1	Heat Exchanger
1	Water Pump
1	Transformer Kit 1.5 kva
1	Logic Control Board for SSS
1	Flange Kit or Union Kit 3/4 inch
2	Ball Valve 3/4 NPTI x 3
2	Elbow, Screw 3/4 NPTI 90 deg.
1	Elbow, Screw Street 3/4 NPTI
3	Nipple, Pipe 3/4 Sch 40 x
11ft	Hose, Black Rubber 3/4 ID
4	Hose Clamp 11/16 Min Dia
1	Clamp, Hanger, Conduit 1
2	Clamp, Hanger, Conduit 3
2	Angle Support
6	Machine Screw, Pan Head Rec'd 1
4	Cap Screw, Hex 1/4-20UNC
7	Lockwasher TH Int 1/4
10	Nut, Hex 1/4-20UNC
6	Cap Screw, Hex 3/8-16UNC
6	Lockwasher TH Int 3/8
20ft	Hose, Red Rubber 3/4 ID
4	Male Stem Adapter 3/4
4	Hose Clamp 3/4 , 2 bolt
2	Union Flare 3/4 ID
2	Connector, 3/4 ext. fla. x 3/4
2	Union, Scr. 3/4 NPTI Stl.
1	Disk, Orifice Pump Flange (if required)
1	Drawing # 075-03458-000 water piping

**Power Connection Selection Table**  
for  
**Screw Chillers**

<b>SSS Model</b>	<b>FLA Range</b>	<b>Terminal Lug</b>	<b>Disconnect Switch</b>
SSS7L-xxA	100-210	375-00445-701	371-01301-701
SSS7L-xxA	211-260	375-00445-701	371-01301-702
SSS14L-xxA	150-510	375-00445-702	371-01160-700
SSS26L-xxA	250-850	375-00445-703	371-01161-700
SSS33L-xxA	440-1050	375-00445-704	none available

Note: Select either a terminal lug kit or a disconnect switch kit.

**Adapter Selection Table**  
for  
**Screw Chillers**

<b>Motor Code</b>	<b>Voltage Range</b>	<b>Reliance</b>	<b>Siemens</b>	<b>Toshiba</b>
CF-CJ	200-600	-	-	025-28400-004
CK-CN	200-600	-	-	025-28400-003
CP	200-208	025-28400-003	-	-
CP	230-600	-	-	025-28400-003
CR-CS	230-240	025-28400-003	-	-
CR-CS	440-600	-	-	025-28400-003
CT-CV	440-600	-	-	025-28400-003
5CC-5CE	380-415	-	-	025-28400-004
5CF-5CO	380-415	-	-	025-28400-003

Note: Select motor adapter according to motor vendor.

**Auxiliary Items**  
**for**  
**Screw Chillers**

Quantity	Part Number	Description
1	013-02987-000	Corrosion Inhibitor - 1 gallon premixed
1	035-08942-000	Label, Field Wiring
1	035-09972-000	Label, Field Wiring
1	375-24710-000	Auxiliary Wiring Kit

**Notes**

**Solid State Starters**  
**on**  
**High Pressure Single Stage Centrifugal Chillers**

**ORDERING INSTRUCTIONS**

**WARNING:** Cooling water from the condenser water circuit must be cooler than 32.2°C (90°F) and warmer than 78°F.  
The condenser circuit must have a fouling factor of .0005 or less.

**1) Micro-panel**

Chiller control panel must be a Micro-Panel with micro board PN 031-00940-xxx or 031-01065-xxx. A Micro-panel purchased from the factory is required if one isn't already on the chiller. Pricing for a Micro-panel is available from Retrofit Marketing.

**2) SSS Kit Selection**

SSS kit must be selected from the "SSS Kit Selection Table for High Pressure Centrifugal Chillers". Make the selection based on the "Max" and "Min" values. Be sure your selection satisfies all requirements. If the job values of voltage or current exceed the values listed on the table, no solid state starter is available for the application.

**3) Terminal Lug Kit or Disconnect Switch Kit Selection**

Use the "Power Connection Selection Table for High Pressure Centrifugal Chillers" to select the desired kit.

**4) Adapter Selection**

Adapters designed for style A, B, and C chillers are listed in the table titled "Adapters Selection Table for High Pressure Centrifugal Chillers". The factory can provide standard adapters; however, special or unusual motors will require customized adapters to fit between the motor and SSS. Creativity is needed from the installing technician to create a customized adapter (perhaps out of a heavy duty junction box) if a standard adapter isn't available. A sample factory adapter drawing is in the appendix.

**5) Auxiliary Items**

Required auxiliary items are listed in the table titled "Auxiliary Items for High Pressure Centrifugal Chillers".

**6) Ordering**

Complete a YORK Applied Systems Parts Distribution Center order form (sample in appendix ) and fax to your PDC customer service representative for pricing and availability.

**7) Incidental Items**

Small incidental items like electrical tape, tie wraps, screws, paint, steel for mounting brackets, etc... are to be procured locally.

**8) Mounting**

The SSS requires support beneath the starter. Welding on the shell is not recommended due to Code restrictions, so in the absence of the weld pads, construct a stand to support the SSS from the floor. The adapter fits between the motor and starter to brace the starter against lateral movement, not to support weight.

**9) Operation, Calibration, Testing, and Start-up**

Theory of Operation, Start-Up, and Trouble Shooting are explained in form 160.46-OM3.1 . Calibration and testing procedures for the Solid State Starter are explained in the Micro-panel Service literature.

**10) Helpful Reference Literature**

Liquid Cooled SSS Operation & Service	Form 160.46-OM3.1
Liquid Cooling Loop Filling Instruction	Form 160.46-OM3.1 (SB-1)
SCR Brick Replacement Instruction	Form 160.46-OM3.1 (SB-2)
Cooling Water Temp. Instruction	Form 160.46-OM3.1 (SB-3)
Leaking SCR Brick Replacement	Form 160.46-OM3.1 (SB-4)
Coolant Maintenance Instruction	Form 160.46-OM3.1 (SB-5)
Trigger Board Resistor Replacement	Form 160.46-OM3.1 (SB-6)
Pump Replacement Instructions	Form 160.46-OM3.1 (SB-7)
Coolant Replacement Instruction	Form 160.46-OM3.1 (SB-8)
Nuisance 1/2 Phase Trips Instruction	Form 160.46-OM3.1 (SB-9)
Nuisance Hi-Temp. Trips Instruction	Form 160.46-OM3.1 (SB-10)
Operation Instruction of Disconnect Switch	Form 160.46-OM3.2
Operation Instruction for Chiller & Micro-panel	Form 160.49-O1
Service Instruction for Micro-panel	Form 160.49-M2
Wiring Diagram for Micro-panel	Form 160.49-PW4
Wiring Diagram for SSS	Form 160.49-PW6

**SSS Kit Selection Table**  
**for**  
**High Pressure Single Stage Centrifugal Chillers**

<b>FLA Min - Max</b>	<b>LRA Max</b>	<b>Motor Voltage</b>	<b>SSS Model</b>	<b>Kit Part Number</b>
100-260	1556	440-480	SSS7LK-46A	375-24709-002
“	“	550-600	SSS7LK-58A	“ -003
“	“	380-415	SSS7LK-50A	“ -004
150-510	3111	200-208	SSS14LK-17A	“ -005
“	“	220-240	SSS14LK-28A	“ -006
“	“	440-480	SSS14LK-46A	“ -007
“	“	550-600	SSS14LK-58A	“ -008
“	“	380-415	SSS14LK-50A	“ -009
250-850	5780	200-208	SSS26LK-17A	“ -010
“	“	220-240	SSS26LK-28A	“ -011
“	“	440-480	SSS26LK-46A	“ -012
“	“	550-600	SSS26LK-58A	“ -013
“	“	380-415	SSS26LK-50A	“ -014
440-1050	7335	200-208	SSS33LK-17A	“ -015
“	“	220-240	SSS33LK-28A	“ -016
“	“	440-480	SSS33LK-46A	“ -017
“	“	380-415	SSS33LK-50A	“ -018

**NOTES:** FLA and LRA are available from motor name plate or the original order.  
Start current =  $0.4498 \times \text{LRA}$   
Voltage and current ranges and maximums are absolute.  
Cooling water design pressure is 300 PSI ( DO NOT EXCEED !).

**SSS Kit Bill of Material**  
**for**  
**High Pressure Single Stage Centrifugal Chillers**

Kit Part Number 375-24709-002 to 018

<b><u>Qty</u></b>	<b><u>Part Description</u></b>
1	Solid State Starter
1	Channel for Clamp Anchor
1	Clamp for Tube
1	Heat Exchanger
1	Water Pump
1	Transformer Kit 1.5 kva
1	Logic Control Board LCSSS
1	Flange Kit or Union Kit 3/4 inch
2	Ball Valve 3/4 NPTI x 3
1	Elbow, Screw 3/4 NPTI 90 deg.
1	Tee, Screw 3/4 x 3/4 x 3/4
1	Pipe Plug 3/4 square head
4	Nipple, Pipe 3/4 Sch 40 x
11ft	Hose, Black Rubber 3/4 ID
6	Hose Clamp 11/16 Min Dia
2	Clamp, Hanger, Conduit 3
2	Angle support
4	Machine Screw Pan Head Rec'd 1
4	Cap Screw Hex 1/4-20UNC
10	Lockwasher TH Int 1/4
8	Nut, Hex 1/4-20UNC
6	Cap Screw Hex 3/8-16UNC
6	Lockwasher TH Int 3/8
16ft	Hose, Red Rubber 3/4 ID
4	Male Stem Adapter 3/4
4	Hose Clamp 3/4 , 2 bolt
2	Union, Flare 3/4 ID
2	Connector 3/4 ext. fla. x 3/4
2	Union, Scr. 3/4 NPTI Stl.
1	Disk, Orifice Pump Flange (if required)

**Power Connection Selection Table**  
for  
**High Pressure Single Stage Centrifugal Chillers**

SSS Model	FLA Range	Terminal Lug Kit	Disconnect Switch Kit
SSS7L-xxA	100-210	375-00445-701	371-01301-701
SSS7L-xxA	211-260	“ -701	371-01301-702
SSS14L-xxA	150-510	“ -702	371-01160-700
SSS26L-xxA	250-850	“ -703	371-01161-700
SSS33L-xxA	440-1050	“ -704	none available

Note: Select either a terminal lug kit or a disconnect switch kit.

**Adapter Selection Table**  
for  
**High Pressure Single Stage Centrifugal Chillers**

Motor Code	Voltage Range	Reliance	Siemens	Toshiba
CH-CJ	200-600	-	-	025-28400-004
CK-CN	200-600	-	-	025-28400-003
CP	200-208	025-28400-003	-	-
CP	230-600	-	-	025-28400-003
CR-CS	230-240	025-28400-003	-	-
CR-CS	440-600	-	-	025-28400-003
CT-CW	440-600	-	-	025-28400-003
CX	440-600	025-28400-003	-	025-28400-003
CY-CZ	440-600	025-28400-003	025-28400-002	025-28400-003
CA-CB	440-600	025-28400-003	025-28400-002	-
5CE	380-415	-	-	025-28400-004
5CF-5CP	380-415	-	-	025-28400-003
5CQ-5CS	380-415	025-28400-003	-	025-28400-003
5CT-5CV	380-415	025-28400-003	025-28400-002	-
5CW-5CX	380-415	025-28400-003	-	-

Note: Select motor adapter according to motor vendor.

**Auxiliary Items**  
**for**  
**High Pressure Single Stage Centrifugal Chillers**

<b>Quantity</b>	<b>Part Number</b>	<b>Description</b>
1	013-02987-000	Corrosion Inhibitor - 1 gallon premixed
1	035-09324-000	Label, Field Wiring
1	035-09325-000	Label, Field Wiring
1	375-24710-000	Auxiliary Wiring Kit

**Notes**

# YORK<sup>®</sup> INTERNATIONAL

CORPORATION - PARTS DISTRIBUTION CENTER

YORK ORDER NUMBER

.ORDER TYPE \_\_\_\_\_ COPY FROM QUOTE: \_\_\_\_\_ PROFORMA: \_\_\_\_\_

.SOLD TO: \_\_\_\_\_ SHIP TO: \_\_\_\_\_

.BILL TO: \_\_\_\_\_

.SHIP TO: \_\_\_\_\_

.CUST PO: \_\_\_\_\_ REF PO: \_\_\_\_\_ ORDER SOURCE: \_\_\_\_\_

.ORDER DATE: \_\_\_\_\_ WANT DATE: \_\_\_\_\_ ORDER SENDER: \_\_\_\_\_ CSR: \_\_\_\_\_

.FRT CODE: \_\_\_\_\_ DIR SHIP: \_\_\_\_\_ SHIP VIA: \_\_\_\_\_ SHIP FRT/CMP: \_\_\_\_\_

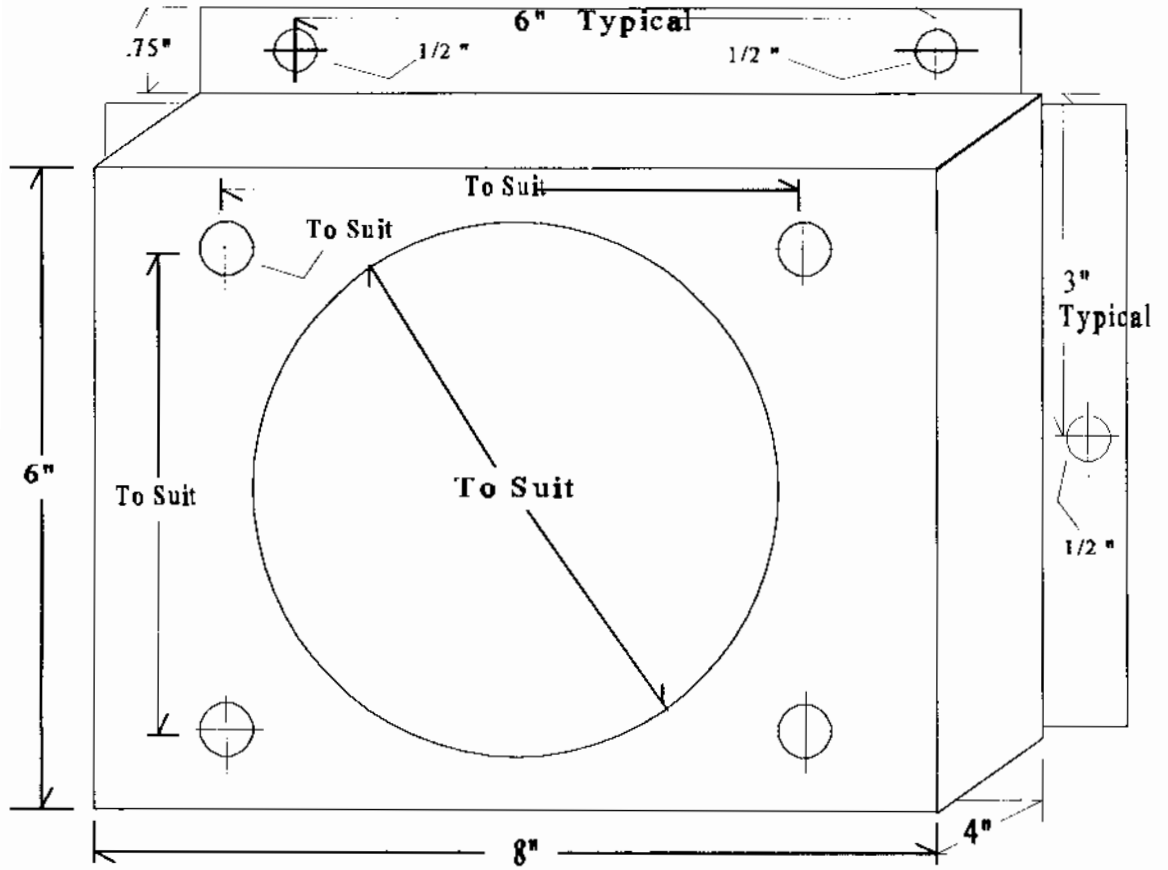
.SPECIAL CHARGES: \_\_\_\_\_ SPECIAL MULTI: \_\_\_\_\_ SPECIAL PRICE: \_\_\_\_\_

.SPECIAL INST: \_\_\_\_\_

.NOTES: \_\_\_\_\_

ITEM	QTY.	PART NUMBER	SPECIAL INSTRUCTIONS	QUOTED PRICE
1	1		REMARKS	
	DESCRIPTION	Solid State Starter Kit		
2	1		REMARKS	
	DESCRIPTION	Terminal Lug Kit or Disconnect Switch Kit		
3	1		REMARKS	
	DESCRIPTION	Adapter, SSS to Motor		
4	1	013-02987-000	REMARKS	
	DESCRIPTION	Corrosion Inhibitor - one gallon premixed		
5	1	375-24710-000	REMARKS	
	DESCRIPTION	Auxiliary Wiring Kit		
6	1		REMARKS	
	DESCRIPTION	Label, Field Wiring		
7	1		REMARKS	
	DESCRIPTION	Label, Field Wiring		
8			REMARKS	
	DESCRIPTION			
9			REMARKS	
	DESCRIPTION			
10			REMARKS	
	DESCRIPTION			
11			REMARKS	
	DESCRIPTION			

# SSS to Motor Adapter - Sample Drawing



## Auxiliary Wiring Kit Part Number 375-24710-000

Quantity	Part Number	Description
1	575-14171-201	Wiring Harness, SSS to Micro Control Panel
1	575-21730-202	Wiring Harness, SSS to Water Pump
1	575-21730-203	Wiring Harness, SSS to Oil Pump Starter (centrif. comprs. only)
2	025-10371-000	Insulator for Splice Connection to Water Pump
1	225-10372-800	(10pk) Splice Cap for Connection to Water Pump
1	025-21192-000	Plug Housing for J/P14 (SSS end on harness to micro panel)
1	025-18955-000	Plug Housing for J1 (SSS end on harness to micro-panel)
1	025-28388-000	Plug Housing for J1 (micro-panel end on harness to SSS)
1	025-21196-000	Plug Housing for J4 (micro-panel end on harness to SSS)
20	025-27232-000	Pin (to fit plug housings for J1 and J4 in micro-panel)
1	221-14667-800	(10pk) Screw, Tap (to mount LCSSS control in micro-panel)
8	021-14661-000	Expansion Nut (to mount LCSSS control in micro-panel)
1ft	010-02847-000	Thermal Insulation (pack in terminal box around motor leads)
1	035-03704-000	Data Label
6	021-01499-000	Cap Screw, Hex 3/8" x 16UNC for motor terminal leads
1	025-28958-000	Plug for oil pump conduit hole in back of SSS (screw chiller only)
1	221-00467-800	(10pk) Nut, Hex 3/8" x 16UNC for motor terminal leads
1	221-05167-800	(10pk) Washer, Plain 13/32 ID for motor terminal leads
6	021-08288-000	Lockwasher, Helical Spring 3/8" for motor terminal leads
3	025-19408-000	Wire Terminal for Oil Pump Starter (centrifugal chillers only)
1	035-14067-000	Wiring Instruction for 1.5 kVA transformer

Note: These items are required for most installations. Some items may be duplicated on certain project sites. Do not be concerned if some of these parts are not used in the installation.



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