Form E70-400A SPC (JUL 2005)

SPECIFICATIONS

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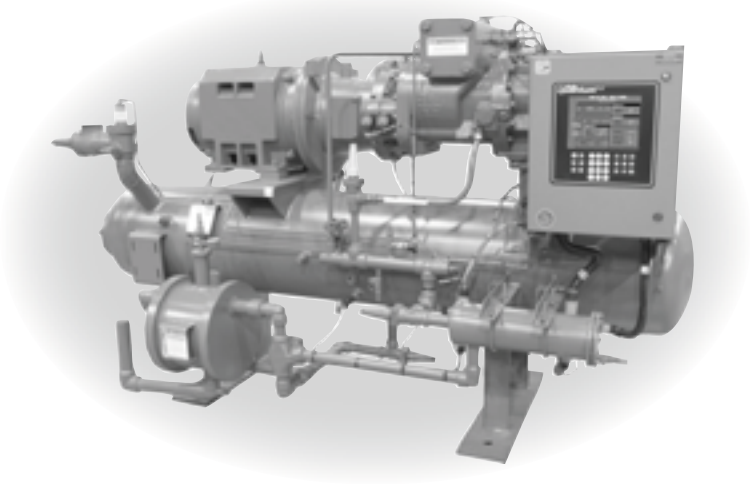


RXF

ROTARY SCREW COMPRESSOR UNITS

Models 58 through 101

RXF Rotary Screw Compressor Units are engineered and manufactured to meet the exacting requirements of the industrial refrigeration market. All components have been designed and arranged to assure reliability, accessibility, and ease of service. Standard units are designed for high-stage or booster duty with ammonia or halocarbon refrigerants and are shipped completely assembled.

COMPRESSOR: The Frick® manufactured RXF compressor incorporates the latest technology to offer the most reliable and energy efficient unit currently available. The ASTM A-48, class 40 gray iron compressor casings are designed and tested in accordance with the requirements of ASHRAE 15 safety code (362 psia maximum working pressure). The rotors are machined to the latest SRM asymmetric profile. This profile, in combination with an integral gear drive to increase rotor tip speed, brings unprecedented efficiency to screw compressors in this size range. The compressor incorporates a complete antifriction bearing design for reduced power consumption, improved efficiency, and reduced maintenance. The RXF compressor unit incorporates a NEMA "C" face or "D" flange motor into a close-coupled mounting arrangement. Compressor/motor assemblies require NO coupling alignment.

VOLUMIZER® II VARIABLE VOLUME RATIO CONTROL: The RXF compressor incorporates a simple mechanism which adjusts the compressor volume ratio during operation to the most efficient of three possible volume ratios, depending on system requirements. This minimizes the power penalty associated with over or undercompression and reduces excess bearing loading caused by running a machine at a less efficient Vi.

MOTOR: Factory mounted, **premium efficient, low noise motors** are standard. (**NEMA** "C" flange design up to 150 HP (Standard ODP) or **NEMA** "D" flange for larger motors) Motors are provided with class B insulation and 1.15 service factor. Standard 60 hertz voltages are 230/460 for 50–250 HP, or 460 for 300-400 HP. Standard 50 Hertz voltages are 190/380 for 40–200 HP, or 380 for 250-350 HP.

CAPACITY CONTROL: The compressor incorporates a slide valve for capacity control, allowing infinite capacity adjustment from 100% to 25% of full load. Slide valve control is the most efficient unloading method available for part-load operation of a screw compressor.

LUBRICATION SYSTEM: The RXF compressor is designed specifically for operation without an oil pump for high-stage service. All oil required for main oil injection and lubrication, is provided by positive gas differential pressure, and passes through our new Frick® SuperFilter™II, which cleans oil cleaner than new. SuperFilter™II captures 99% of particles 5 microns and larger and has twice the dirt holding capacity of the original SuperFilter™ for maximum bearing life.

OIL SEPARATOR/RESERVOIR: The oil separator is a horizontal, three-stage design with integral sump. It is designed and constructed in accordance with ASME Section VIII, Div. 1 for a maximum design working pressure of 300 psig. Replaceable coalescent separator elements are provided for final gas/oil separation of particles down to less than one micron.

OIL COOLING: Cooling the compressor oil may be achieved by liquid refrigerant injection, unit-mounted external water-cooled oil cooler, or unit-mounted thermosyphon oil cooler.

QUANTUM™ LX CONTROL CENTER: The Quantum™LX control panel is factory mounted, NEMA 4,UL® listed, and completely wired with all the required safety and operating devices. A 10.4" Active Color VGA Graphics Display offers a high contrast, crisp clear display of compressor information and status. Additional Input/Output can be easily installed in the field. This feature provides flexibility for future engine room upgrades and changes. Ethernet communications along with three field-selectable serial communication ports allow you to choose from a combination of RS-422, RS-485, or RS-232 port configurations for both interpanel and external communications. Included in the microprocessor is time-proportioning capacity control, first-out annunciation, prealarms, volumizer control, real-time clock control, access code protection, lead-lag sequencing, alternate suction pressure operation, trending, and more. The operating conditions at the time of the compressor's last twenty alarms or shutdowns are stored in memory, providing the ultimate in service and troubleshooting convenience.

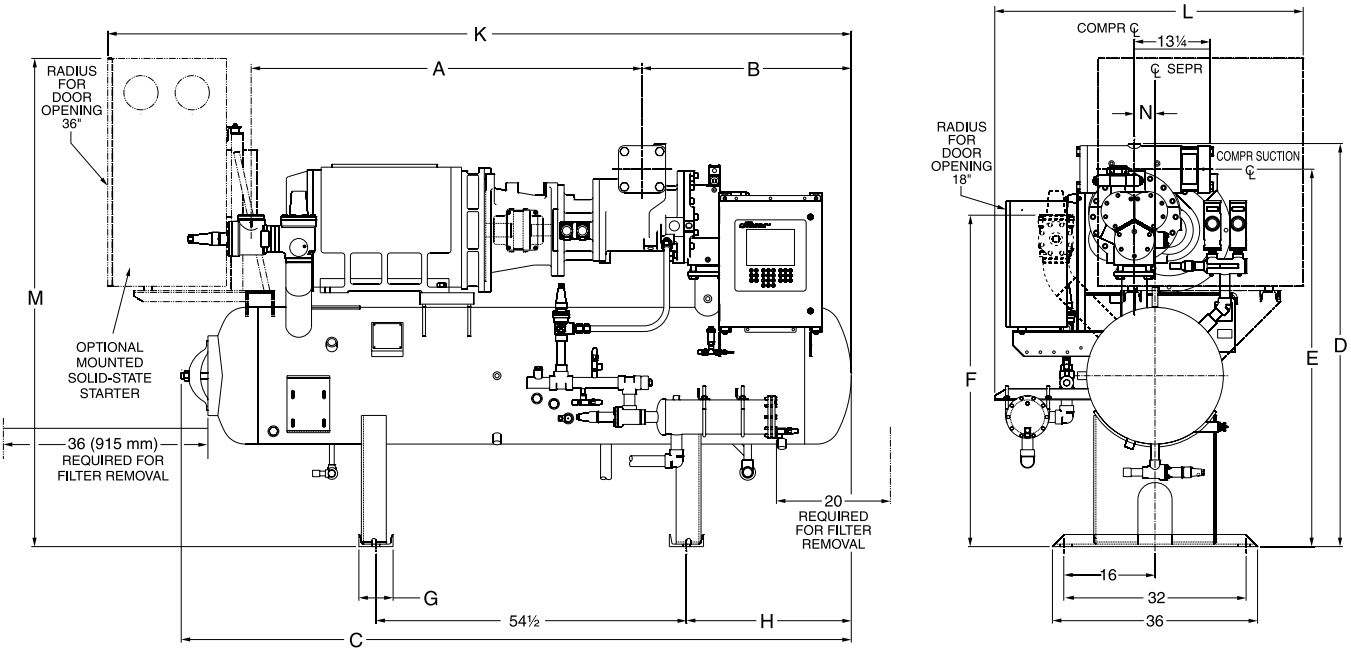
VALVES: The unit's discharge has a mounted combination stop/check valve with a serviceable check valve assembly. The suction has an integral suction strainer and mounted check valve and a separately shipped stop valve.

OPTIONAL FEATURES: Starter Packages, Three-Way Oil Temperature Control Valve, Additional Oil Charge, Oversized Suction Stop Valve, Economizer Kit, Shipped Loose DX Economizer Kits, Power Regulating Control Transformer, and Demand Oil Pumps.

STANDARD DESIGN DATA (with metric equivalents)

RXF MODEL NO.	MOTOR SPEED RPM	COMPRESSOR DISPLACE-MENT		RATINGS R-717 (1)				RATINGS R-22 (2)				UNIT MINIMUM (3) WEIGHT WITH MOTOR		UNIT MAXIMUM (4) WEIGHT WITH MOTOR	
				CAPACITY		POWER		CAPACITY		POWER					
		CFM	M3/HR	TR	kw	BHP	kw	TR	kw	BHP	kw	lb	kg	lb	kg
58	3550	341	579	120.9	425.2	143.3	106.9	110.4	388.3	153.1	114.2	3495	1585	5795	2629
68	3550	403	685	142.7	501.9	169.3	126.2	130.4	458.6	180.9	134.9	3495	1585	5795	2629
85	3550	499	848	176.8	621.8	209.6	156.3	161.5	567.9	224.0	167.0	3855	1749	6160	2794
101	3550	596	1013	211.4	743.5	250.7	186.9	193.1	679.2	267.9	199.7	3855	1749	6160	2794

1. R-717: +20°F (-6.7°C) suction and 95°F (35°C) condensing with 10°F (5.5°C) liquid subcooling and 10°F (5.5°C) suction superheat.
2. R-22: +20°F (-6.7°C) suction and 105°F (40.6°C) condensing with 10°F (5.5°C) liquid subcooling and 10°F (5.5°C) suction superheat.
3. Minimum unit weight for LIOC (Liquid Injection Oil Cooling).
4. Maximum unit weight for WCOC (Water Cooled Oil Cooling) or TSOC (Thermosyphon Oil Cooling) with Demand Oil Pump.



NOTE: Drawing for reference only! Use certified drawings for erection.

MODEL NO.	CONNECTION				DIMENSIONS									
	SUCTION		DISCHARGE		A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
RXF 58	4	127	3	76.2	67½	1,715	36½	933	114 7/16	2,907	66¼	1683	61¾	1,568
RXF 68	4	127	3	76.2	67½	1,715	36½	933	114 7/16	2,907	66¼	1683	61¾	1,568
RXF 85	5	127	4	101.6	68⅝	1,743	36¾	933	117⅝	2,988	70¾	1797	66¼	1,683
RXF 101	5	127	4	101.6	68⅝	1,743	36¾	933	117⅝	2,988	70¾	1797	66¼	1,683

MODEL NO.	DIMENSIONS													
	F		G		H		K		L		M		N	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
RXF 58	51 1/16	1,297	8	203	29 3/16	741	129½	3,289	53	1,346	81¼	2,064	2½	64
RXF 68	51 1/16	1,297	8	203	29 3/16	741	129½	3,289	53	1,346	81¼	2,064	2½	64
RXF 85	58 3/16	1,478	6	152	28 15/16	735	130½	3,315	54⅞	1,394	85 1/16	2,176	3⅝	92
RXF 101	58 3/16	1,478	6	152	28 15/16	735	130½	3,315	54⅞	1,394	85 1/16	2,176	3⅝	92

NOTE: The suction stop valve is shipped separately for field installation. Make allowances for piping.

1. Allow 36 in./915 mm for coalescer filter and 20 in./508 mm for oil filter accessability.
2. Maximum width applies to WCOC or TSOC package with Oil Temperature Control Valve.

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YORK Refrigeration Systems
100 CV Avenue • P.O. Box 997
Waynesboro, PA USA 17268-0997
Phone: 717-762-2121 • FAX: 717-762-8624
www.frickcold.com