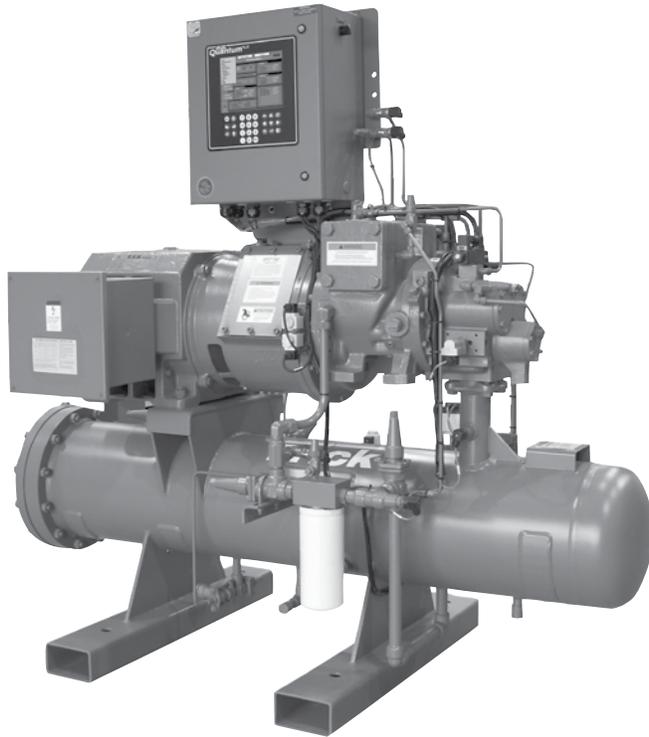




BY JOHNSON CONTROLS



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 bring large screw reliability and efficiency to small screw sizes. 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 steel rotors incorporate a new generation rotor 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" 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 Volume Ratio.

MOTOR: Factory mounted, **premium efficient, low noise NEMA motors** are standard. Motors are provided with class B insulation and 1.15 service factor. Standard 60 hertz voltages are 230/460 (15–150 HP). Standard 50 Hertz voltages are 190/380 (15–125 HP).

CAPACITY CONTROL: The compressor incorporates a slide valve for capacity control, allowing infinite capacity adjustment from 100% to 25% of full load.

Form 070.410-SPC (AUG 2012)

SPECIFICATIONS

File: EQUIPMENT MANUAL - Section 70
Replaces: 070.410-SPC (NOV 2007)
Dist: 1, 1a, 1b, 1c, 4, 4b, 4c

RXF

ROTARY SCREW COMPRESSOR UNITS Models 12 through 50

LUBRICATION SYSTEM: The RXF compressor is designed specifically for operation without an oil pump for normal high-stage operation. All lubrication and injection oil passes through our Frick® SuperFilter™II, specifically designed for increased particle capture and cleaner oil and compressor operation. SuperFilter™ II captures 99% of particles 5 microns and larger and has twice the dirt holding capacity of the original filter for maximum bearing life. It is also designed for horizontal filter mounting and furnished with isolation stop valves and drain connections for ease of servicing.

OIL SEPARATOR/RESERVOIR: The oil separator is horizontal, three-stage design with integral sump. The separator 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 1 micron.

OIL COOLING: Cooling the compressor oil may be achieved by EZ-Cool™ liquid refrigerant injection or unit-mounted external cooler (refrigerant or water) with three-way oil temperature control valve.

QUANTUM™ HD CONTROLLER: The Quantum™ HD controller is factory mounted, NEMA 4 and built to the UL-508A standard. It is completely wired with all the required safety and operating devices. A 15" Touch-Screen, XGA Graphics Display offers a high contrast, crisp, clear display of compressor information and status. Additional I/O can be easily installed in the field. This feature provides flexibility for future engine room upgrades and changes. Ethernet communications provides remote access to Quantum HD screens through a local network or even across the Internet. Ethernet protocols deliver Quantum™ HD data over that same Ethernet network. Three field-selectable serial communication ports allow you to choose from a combination of RS-422 or RS-485, port configurations for external serial communications. Features included in the Quantum™ HD controller are, time-proportioning capacity control, first out annunciation, pre-alarms, variable volume ratio control (Vi), PIN code security protection, lead-lag sequencing, four user-defined capacity control modes, trending, maintenance schedule, compressor VFD control and more. Freeze displays of the operating conditions at the time of the compressor's last 50 alarms or shutdowns are stored in memory, providing the ultimate in service and troubleshooting convenience. For more information, see the Quantum™ HD controller SPC (090.040-SPC).

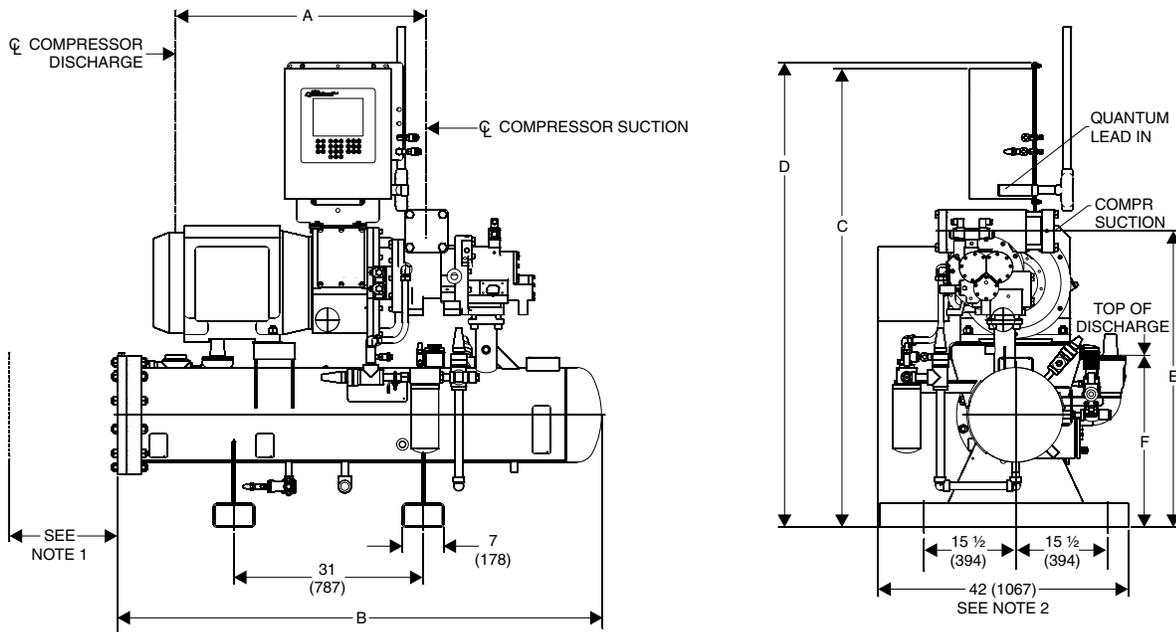
VALVES: The unit's discharge has a mounted combination stop/check valve with a serviceable check valve assembly. The suction has an integral suction strainer and mounted check valve and a separately shipped stop valve.

OPTIONAL FEATURES: Starter Packages (ship loose), Additional Oil Charge, Oversized Suction Stop Valve, Economizer Kit, Power Regulating Control Transformer, Oversized Oil Filter, and Demand Oil Pump.

STANDARD DESIGN DATA (with metric equivalents)

RXF MODEL NO.	MOTOR SPEED RPM	COMPRESSOR DISPLACEMENT		RATINGS R-717 (1)				ESTIMATED SHIPPING WEIGHT WITH MOTOR		ESTIMATED OPERATING WEIGHT WITH MOTOR	
				CAPACITY		POWER		lb	kg	lb	kg
				CFM	M3/HR	TR	kw				
12	1750	71.5	122	25.3	88.9	30.3	22.5	2,726	1,236	3,215	1,456
15	3550	89.2	152	31.6	111.1	37.9	28.2	2,726	1,236	3,215	1,456
19	3550	110.5	188	39.1	137.4	46.9	34.9	2,726	1,236	3,215	1,456
24	1750	144.1	245	51.0	179.3	61.1	45.5	3,566	1,616	3,995	1,810
30	3550	179.8	306	63.7	224.0	76.3	58.9	3,566	1,616	3,995	1,810
39	3550	222.6	378	78.9	277.5	94.5	70.5	3,566	1,616	3,995	1,810
50	3550	292.3	497	103.6	364.3	124.0	92.4	3,566	1,616	3,995	1,810

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.



1. Allow for coalescer element accessibility; 14 inches for Models 12–15 and 22 inches for Models 24–50.
 2. 6 x 5 Oil Coolers, Flat Plate Oil Coolers and Liquid Injection Oil Cooling are within the RXF Screw Compressor unit envelope.
 3. Piping shown is for use with Liquid Injection Kits.
 4. Dimensions shown are inches with millimeters in parentheses.
- NOTE: Drawing for reference only! Use certified drawings for erection.**

MODEL NO.	CONNECTION				DIMENSIONS											
	SUCTION		DISCHARGE		A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RXF 12	2½	64	2½	64	36.87	936	81.12	2060	71.43	1814	72.50	1842	42.19	1072	25.69	653
RXF 15	2½	64	2½	64	36.87	936	81.12	2060	71.43	1814	72.50	1842	42.19	1072	25.69	653
RXF 19	3	76	2½	64	36.87	936	81.12	2060	71.43	1814	72.50	1842	42.19	1072	25.69	653
RXF 24	4	101.6	3	76	42.31	1075	81.81	2078	77.50	1969	78.56	1995	50.13	1273	29.06	738
RXF 30	4	101.6	3	76	42.31	1075	81.81	2078	77.50	1969	78.56	1995	50.13	1273	29.06	738
RXF 39	4	101.6	3	76	42.31	1075	81.81	2078	77.50	1969	78.56	1995	50.13	1273	29.06	738
RXF 50	4	101.6	3	76	42.31	1075	81.81	2078	77.50	1969	78.56	1995	50.13	1273	29.06	738

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