COMPRESSORS

Rotary Screw Compressors
For Industrial Refrigeration
Frick RWF II and RXF Rotary Screw Compressors

Advanced Frick® technology means exceptional reliability and efficiency.

- Engineered and manufactured to meet industrial refrigeration requirements.
- Designed to assure reliability, accessibility, and ease of service.
- Compact package allows reduced engine room size and lower construction costs.
- High stage and booster applications for all common refrigerants.

### RWF II Specifications*

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<th>Model</th>
<th>CFM</th>
<th>TR R-717</th>
<th>BHP R-717</th>
<th>TR R-507</th>
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* Based on 20°F Suction and 95°F Condensing with 10° Superheat

### RXF Specifications*

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*Based on 20°F Suction and 95°F Condensing with 10° Superheat

** Booster only @ -40°F Suction, 10°F intermediate, no Superheat
Screw compressor technology preferred –

Screw compressors are specified over reciprocating compressors because of their inherent reliability. Fewer moving parts and simple rotary motion means:
- less maintenance
- lower noise and vibration levels
- lower total repair costs.

Frick compressors perform at peak efficiency under varying loads and operating conditions. Volumizer Variable Volume Ratio Control adjusts the compressor volume ratio during operation to the most efficient point, depending upon system requirements. This reduces energy waste caused by under- or overcompression. Infinite capacity reduction from 100% to 10% (RWF II) or 25% (RXF) of full load is provided by a slide valve control—one of the most efficient methods of capacity control for screw compressors. Frick compressors allow close system control under widely varying load conditions.
**The World’s Best Industrial Refrigeration Compressors**

RWF II and RXF Compressors feature rotor designs that provide the strongest, most efficient operation for their applications.

- Continuous capacity control precisely matches load requirements
- Variable volume ratio control reduces power consumption
- Quantum™ HD Controller for user friendly, worry-free operation
- Flange-Mounted Motors eliminate the need for coupling alignment
- Cold-Start™ Valve ensures a quick start at any condition
- SuperFilter™II keeps your oil clean down to 5 microns
- Antifriction Bearings provide the highest reliability available
- Easy to Service – All critical components for service and maintenance are easily accessible
- External Oil Cooling – Eliminate capacity and power penalties using the latest technology in plate design; constructed according to ASME Section VIII Division I.
- Smart Series™ Motors – NEMA premium efficient, low noise motors also have standard Vacuum Pressurized Impregnation (VPI) of the windings
- PhD Vibration Protection – PhD vibration monitoring helps stop interruptions before they start
- Reliability with confidence – Dependability proven in thousands of installations
- SuperCoalescer – Significantly reduced condensing pressures delivering maximum energy efficiency

**OPTIONS**

- Vyper™ Variable Speed Drive – Changes capacity by varying motor speed
- Mounted Starters – Factory mounted, superior motor overload protection, less mounting space, and reduced installation costs
- Dual Oil Filters – Ensure continuous operation during service of the primary filter. Isolation valves included.
Energy-saving features reduce operating costs significantly. Your plant’s performance depends upon refrigeration equipment reliability and efficiency. While evaluating productivity improvements, it’s a good idea to take a close look at life cycle cost. When you add up maintenance, operating, and repair costs, you’ll find that Frick screw compressors provide increased productivity and efficiency resulting in lower total ownership cost. It’s the “all work, no waste” compressor that helps you save energy and money.
Quantum HD... On-Screen “TOUCH” Control

Quantum™ HD is Standard – Quantum™ HD control panels make equipment management easy, from anywhere!

The large high-contrast display provides easy reading of operating values and control settings.

Access any control, calibration or configuration value using on-screen touch control.

Simply the easiest-to-use yet most powerful controller available today.

Quantum™ HD – Get Connected and Take Control!

Capacity control
  • Four user-defined modes

Sequencing
  • Three suction levels
  • Up to eight compressors per level
  • Uses Ethernet for high-speed communications
  • High stage/booster interlock between levels

Communications

Supported serial protocols:
  • Frick®
  • Modbus ASCII
  • Modbus RTU
  • Allen-Bradley® DF1

Up to three serial communication ports with any protocol

Remote Networking
  • Access all panels from any one panel on the network

Ethernet
  • Modbus TCP
  • Ethernet IP
  • Secure, remote access from any or your web-enabled devices. See screens as though you were standing in front of the compressor using any standard Internet Browser!
Never Leave the Home Screen!

The Home screen of the Quantum HD controller is designed to provide normal day-to-day operation without the user leaving the Home screen. Above, in clockwise order, are the high points of the Home screen.

The Home screen header, including the package status bar, panel name, IP address, date and time, as well as the three primary navigation buttons, is always present. Only the content below the header changes as you navigate the Quantum HD controller.

1. The user-defined panel name, IP address, date and time are clearly illustrated.
2. Simply touch one of these three buttons to initiate the easy-to-follow, intuitive navigation. The active button is outlined. The Home screen is never more than a single touch away.
3. The Capacity Management window illustrates the current mode, setpoint and actual value. It also provides the operator the ability to easily and quickly select from up to four capacity control modes, as well as quickly change the capacity control setpoint.
4. The Compressor window provides the status, position and mode for the compressor, capacity slide, volume slide, oil pump and Variable Speed Drive (if used).
5. Easily change the mode of the compressor, capacity slide and volume slide. If used, the Variable Speed Drive mode will match the capacity slide mode.
6. Manual control of the capacity slide, volume slide and speed is accomplished by simply touching and holding the Up ▲ arrow to load or increase, or the Down ▼ arrow to unload or decrease. Manually starting and stopping the compressor is just as easy.
7. Select up to 6 system operating values from the User-Defined screen to be displayed on the Home screen. All analog values can be selected and viewed on the User-Defined screen.
8. The standard Package Operating Values are prominently displayed for easy interpretation.
9. The capacity control channel, setpoint, and actual value are clearly displayed adjacent to the package status bar.
10. The package status bar is color-coded, letting you know at a glance if the operation is Normal, or if the package is in Warning or Shutdown.