

REFRIGERATION EQUIPMENT

for Food and Beverage

A complete line of
Industrial Refrigeration products



Frick[®]
BY JOHNSON CONTROLS



RWF II and RXF Rotary Screw Compressors
Quiet! Reliable! Efficient!

Frick® RWF II and RXF Rotary Screw Compressors... leading the food and beverage industry with the most innovative and broadest product range available for industrial applications.

- **Variable volume ratio** for maximum efficiency
- **Infinite capacity control** to match changing loads... exactly!
- **Smart Series™ Motors** are NEMA premium efficient, low noise. Standard on Frick® compressor packages.
- **Flange mounting** eliminates troublesome field alignment between low-noise motor and compressor
- **Factory-mounted starter** simplifies electrical installation
- **Cold-start valve** provides oil pressure without the need for a pump
- **Lower leakage potential** because of fewer threads, less fittings and welded connections
- **Oil Cooling** by EZ-Cool™ Liquid Injection using a motorized expansion valve controlled by the Frick® Quantum™LX for optimum discharge temperature control; or by Thermosyphon which uses a plate and shell vessel to cool the oil with no compressor capacity lost or compressor power penalties incurred.

QUANTUM™LX CONTROL *Easy To Learn!*
Easy To Use!

Our new LX display has contemporary graphics that are easy to read and navigate, just like the web. For today's personal computer user, the look and feel of Quantum™LX is second nature.

Our simple graphical interface is perfect for your newest users, while our advanced interface has detail to satisfy even your most experienced operator.

- Four user-defined capacity control modes for a wide application range
- Built-in diagnostic functions simplify troubleshooting
- Quantum™LX has on-screen calibrations and operator-friendly graphics
- Real-time and historical trending
- Smart safeties mean trouble-free operation
- Uses Ethernet for high-speed communications
- Backward compatible to Plus/Quantum™ micro with serial communication
- Industry standard serial communication protocols: Frick® ASCII · Allen-Bradley® DF1 Serial, Modbus ASCII · Modbus RTU
- Ethernet: Modbus TCP/IP · Web accessible



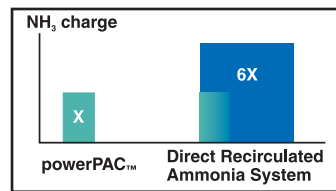


Frick® PowerPac™
Your next refrigeration plant should be easy to buy, easy to install and easy to operate!

Frick® PowerPac™ reduces the need for field labor. Frick® compressors, heat exchangers, evaporators, and condensers come in a compact package controlled by Frick® Quantum™LX controls and Frick® “turnkey” software.

Your Frick® PowerPac™ puts advanced heat exchanger technology to work for reduced refrigerant usage and maximum operating efficiency.

Reduces the requirement for a Process Safety Management (PSM) program.



Frick® PowerPac™

- Less jobsite labor means lower cost
- Optimized design means fewer welds
- “Factory Built” controlled environment; site delivered ready to operate
- Simplified electrical hookups
- Process side uses pumped glycol
- Freeze protection from 3-Directional expansion
- Plate and frame heat exchanger means less refrigerant charge

Conventional Site-assembled Chillers

- Multiple vendors mean project management and costs
- More welds equal more cost and time and the risk of leaks
- Risk of environmental variation during construction
- Expensive on-site electrician for wiring connections
- Process side uses pumped ammonia

Unit-Mounted Solid-State Starter or Variable Speed Drive...Why?



- Lower installation costs
- Less mounting space
- Extended motor life and improved system integrity because it’s factory wired
- Superior motor overload protection
- Main circuit breaker disconnect provides immediate shutdown protection at the compressor.



Frick AcuAir® Hygienic Air-Handling Units

Process Room Control for Air Filtration, Pressurization and Humidity Control For Safe, Sanitary Food Processing

- Filtration, pressurization, condensation control, and sanitization
- Rooftop installation
- Engineered to your specific psychrometric requirements

Frick AcuAir® products are the best solution for clean, conditioned air!

Custom Engineering

Comprehensive CoolWare™ selection software makes sizing simple. Frick® custom designed evaporator circuitry ensures optimized unit performance.



With the remote-mounted Quantum™ LX control panel, you can command up to four AcuAir® units from a single location in your plant.

EVAPORATORS



A Frick® heavy-duty evaporator means:

- Reliable heat transfer for continuous operation at all temperature levels
- Design flexibility in geometry, fan selection, and construction materials.

Innovative solutions driven by your application needs!

- CleanCoil™ hygienic fin design



- Fully welded hygienic drain pans
- Vari-Fin frost management design
- Full coverage drain pans

Frick Quantum™ LX controllers provide the right solution for efficient capacity control.

- Flexible defrost-sequencing control platform
- Control up to 32 evaporators from each Quantum™ LX graphical interface
- Remote terminal boxes minimize wiring requirements and reduce installation expenses.

And ... for extremely large facilities, link several Frick® Quantum™ LX control panels together to manage all of the evaporators at the same time.



The Frick Quantum™ LX Condenser Control Panel

- Multi-step head pressure control
- Graphical operator interface (GOI) simplifies operator training
- Menu driven control-sequencing options
- Vessel level control to manage engine room needs

Longer life! better protection!

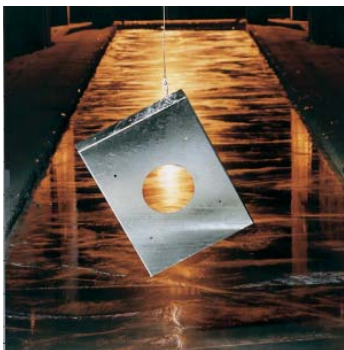
Unique hot dip galvanized after fabrication process extends the life of casings, coils, fans, and pan sections.

Frick rugged condensers provide continuous, energy-efficient operation.



More Zinc More Protection!

- Galvanizing creates a self-sealing repair for the life of the galvanizing zinc
- Ensures highest level of corrosion protection
- 2-3 times more zinc than any mill hot-dip galvanized product
- Cost effective / long-lasting



**Hot Dip Galvanized After
Fabrication process...no painted
holes, no painted edges**

Revolutionary Spray Nozzle

- Innovative nozzle delivers uninterrupted water flow for uniform coil coverage!
- Continuous, self-cleaning, clog-clearing operation
- Minimal maintenance means less rooftop service and increased operator safety
- Unique water distribution provides full-coil coverage
- Minimize scale...maximize evaporation and heat transfer performance
- Heavy, coarse droplets produced by breaker bars greatly reduce the water-drift loss that contributes to corrosion of rooftop equipment and piping



PRESSURE VESSELS



Accumulators

Vertical accumulators with or without coils.

Intercoolers

Vertical intercoolers with or without coils..

Receivers

- Horizontal and vertical high-pressure receivers.
- Horizontal and vertical thermosyphon receivers.
- Vertical high-pressure thermosyphon receivers.



Oil Pots

Horizontal oil pots.

Economizers

Flash type and shell-and-coil type.

Surge Drums

Horizontal surge drums with either single-flow or dual-flow.



Surge Drum Packages

Horizontal vessel design with sufficient room for plate and frame heat exchangers mounted below vessel.

Special Vessels and Packages

Frick® manufactures vessels and packages customized to specific application and design requirements.



Horizontal and Vertical Liquid Recirculator Vessels and Packages

Horizontal and vertical recirculator packages and vessels from 24 to 120 inch outside diameter. Offered with either seal or semihermetic style pumps, packages come standard with an oil pot, 3-inch float column with level eyes, and are completely piped. Options include control panels, liquid-level control systems, oil pot heaters, variable speed drives, and liquid makeup assemblies (shipped loose).

REMOTE EVAPORATOR PACKAGES

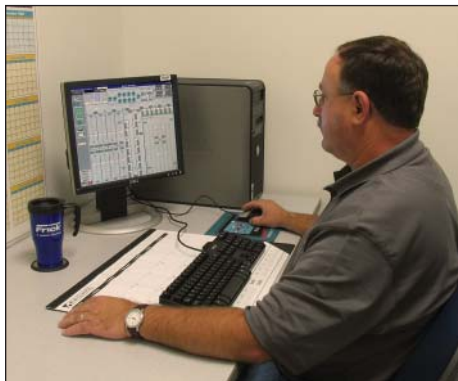


A plate and frame heat exchanger mounted on a structural base, piped to a liquid separator and wired with a NEMA 4 liquid level control panel. Designed to cool water or brine utilizing liquid refrigerant from a central refrigeration system.

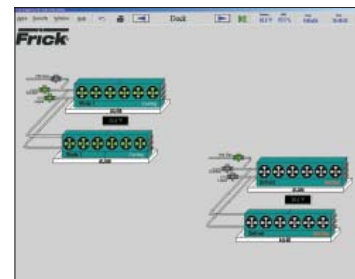
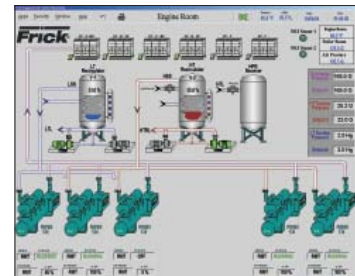


Frick Controls are available for all types of new and existing Industrial Refrigeration applications.

- Custom solutions for individual facilities
- All setpoints password-protected with supervisor-assigned accessibility
- Open architecture
- Nonproprietary hardware and software
- Unit-Mounted Starters AND Controls for ease of installation accessibility



- Data logging and trending
- Remote monitoring
- Report generation and printouts



Opto 22 · Allen-Bradley®
RSView®32™ · Wonderware® In-Touch®



Control technology to make the world a more sustainable place!



Condensers

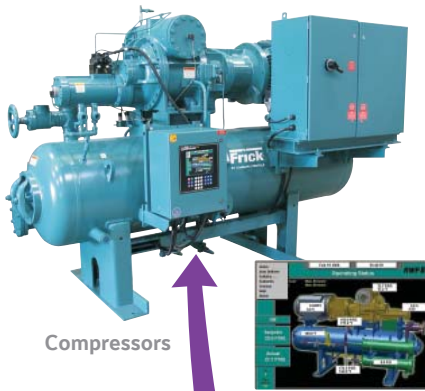


AcuAir Hygienic Air Handlers

Quantum™LX does it all !



Remote Evaporator Packages



Compressors



Evaporators



Quantum™LX technology enables you to view and control your facility's entire refrigeration system.

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JOHNSON CONTROLS
100 CV Avenue • P.O. Box 997
Waynesboro, PA 17268-0997 USA
Phone: 717-762-2121 • FAX: 717-762-8624
www.johnsoncontrols.com