

YORK[®] Millennium[®] Air-Cooled Rotary Screw Chillers





New features bring operating costs to new lows



produces CO₂ — a greenhouse gas that contributes to global warming. The environmental implications of chiller energy efficiency are reflected in proposed standards, such as ASHRAE 90.1. Millennium® air-cooled screw chillers address these energy concerns in two ways. Screw chillers provide inherent energy savings, since the unit continuously modulates down from 100% to 10% capacity to precisely match the load and minimize energy use. Plus, performance gains achieved with the latest Millennium compressors, motors, controls, coils, heat exchangers, and fans provide unmatched efficiency whether the unit is operating at full or part loads.

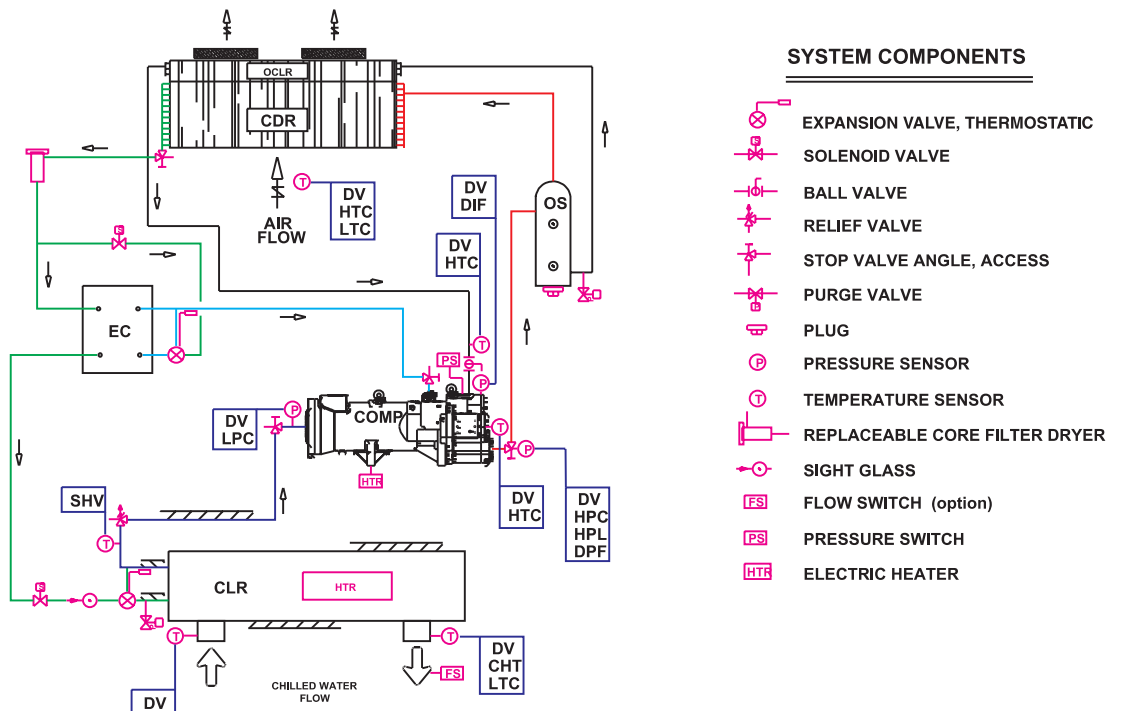
Lower kW/ton saves energy — and the planet

Energy efficiency is doubly critical these days, since electric consumption is costly both financially and environmentally. Burning fossil fuels to generate electricity

Fuzzy Logic control saves energy

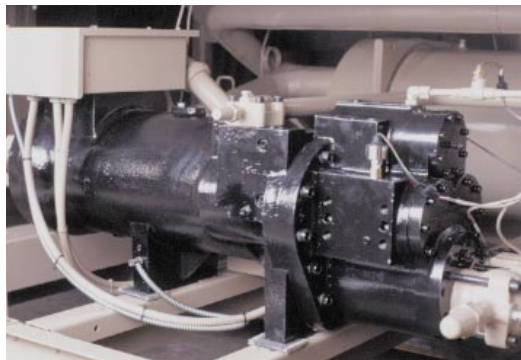
There's a lot of energy wasted in traditional go, no-go chiller capacity control. That's why YORK incorporates "fuzzy logic" in our YORK® Millennium air-cooled screw chiller controls. Fuzzy logic allows the control system to monitor several key variables, then track where the chiller has

This system diagram showing one circuit depicts a proven design providing unsurpassed efficiency thanks to carefully matched components.





Go with the leading compressor technology for outstanding reliability



Latest design from a company known for advancing screw chiller technology

YORK engineers teamed up with experts from Frick—the YORK company recognized as the industrial-refrigeration, screw-compressor experts—to produce a new design optimized expressly for air-cooled chillers. The result? Outstanding reliability and performance whether your

chiller runs continuously or on demand. In day-to-day operation, this tough compressor is designed to perform over the entire chiller service life without any regularly scheduled maintenance of the internal moving components.

To maintain the highest quality, the compressors are built in our new, dedicated compressor plant in Roanoke, Virginia. State-of-the-art manufacturing processes permit precise tolerance control, resulting in unmatched compressor performance.

High-efficiency compressor motors

The electric motors used in YORK® Millennium® air-cooled chillers are specially designed to handle high current and torque demands with outstanding efficiency. No gears are used. The direct-drive motor incorporates heavy-duty magnet wire for exceptional reliability.



Control chiller operation at the touch of a finger tip



Access vital information with a finger's touch

The simplicity of the Millennium Control Center

Long considered the best electronic control panel in the industry, the YORK® Millennium® Control Center has always provided outstanding electronic chiller control. Now, YORK engineers have improved this technology to provide even greater control and reliability. Not only do you have access to performance information from one easy-to-read display, you also get data previously unobtainable without time-consuming analysis.

Digital technology provides infinitely more precise readings than gauges or meters. Like all similarly equipped YORK chillers with microprocessor controls, your Millennium air-cooled screw machine can

easily interface with the YORK ISN building automation and plant control systems. Connection with other common building automation communication systems (such as LonMark and BACnet) is simple using the onboard 485- or 232-port and YorkTalk Translator.

Fuzzy Logic water temperature control

The improved Millennium Control Center uses Fuzzy Logic to eliminate energy waste resulting from a less than ideal match between chiller performance and system duty. Precise chiller control has never been more accurate—or more flexible. With YORK Fuzzy Logic controls, you get much more precise chilled water



Get the flexibility that fits your application exactly



ISN compatibility adds building automation controls capability

Handles capacity and power requirements

Available in a range of capacities from 90 through 430 tons, YORK air-cooled screw chillers are also available in 50 Hz and 60 Hz voltages to match your power requirements.

Wide range of ambient temperatures

YORK air-cooled screw chillers are designed for a wide ambient temperature range of 0°F through 125°F. Electrical enclosures meet NEMA 3R/12 (rain tight/dust tight) requirements.

Low inrush current

To minimize peak inrush current, you can specify across-the-line or Star(WYE)-Delta starters to reduce inrush current supplied to your equipment to about one third of that required for across-the-line compressor start.

Corrosion-resistant fins

Choose your type of corrosion-resistant coils—with aluminum, Black-Epoxy, Baked Phenolic, or copper fins—to meet your particular operating requirements for saltmist, or industrial environments.

Environmentally acceptable refrigerants

With YORK air-cooled screw chillers, you get the proven performance of HCFC-22 with a 0.05 ozone depletion potential. Plus, you get future flexibility to convert your chiller to a refrigerant with zero ozone depletion potential by recharging with the HCFC-22 alternative, HFC-407C, whenever you desire. Your machine can be provided with HCFC-22 and POE oil, making it fully compatible to receive a charge of HFC-407C with no required lubricant change.

Building automation system compatible

With the Millennium® Control Center, your YORK chiller is compatible with the YORK®

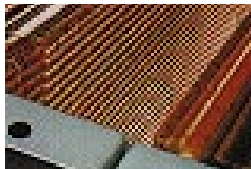
Integrated Systems Network™, or “ISN™.” This capability not only ties together a range of compatible YORK HVAC equipment, it uses an open protocol that’s compatible with a wide range of controls. Supported controls include YORK, LonMark, BACnet, and nearly 20 competitive building automation systems. No other screw chiller offers this degree of system integration or flexibility.

Designed for outdoor durability

No matter the environment, the Millennium air-cooled screw chiller’s all-weather durability is right at home in the harsh outdoors. It is designed for the cold, rain, and snow of North American and European climates, as well as the hot, dusty conditions of the Middle-East and humid equatorial climates. All the exposed compressor and fan power wiring is enclosed in liquid-tight conduits for reliability.

Designed for low acoustics with ultra-quiet options

Every Millennium machine is equipped with compressors and fans incorporating the latest technology to optimize performance, which also results in a very good sound profile even on the basic machine. For applications that are especially sensitive to sound, the unit can be provided with sound attenuation options to reduce emitted fan and/or compressor noise.



Condenser coil available in aluminum, Black-Fin Epoxy, Baked Phenolic, or copper fin



Compressor motor start in Across-the-Line or Star (WYE) Delta (shown)



Shrink your installation costs and space requirements



Compact design, lower weight, less installed electrical service cost

Installation and special application requirements account for a significant portion of the total chiller cost. That's why YORK® Millennium® units are engineered to minimize on-site preparation and to adapt to your exact installation needs. A rugged, steel-truss frame results in a unit that is strong and light, yet withstands the wear and tear of situating the unit on site.

The entire unit takes up one of the smallest footprints in the industry. As a result, you can use a smaller pad, reducing the cost of pouring the pad and giving you more space for other equipment. The compact design and lower weight help minimize overseas shipping costs, too.

The excellent energy efficiency of the Millennium line contributes to an extremely low circuit ampacity required for the machine's electrical service, which reduces wiring and related costs.



Meets local code requirements

60 Hz Millennium screw chillers are constructed to meet NEC, ASHRAE/ANSI, and ASME code safety standards, and are U.L. and C.U.L. listed to assure personnel safety and protection. 50 Hz models are available to meet a variety of applicable global codes, such as TÜV, IEC, EN, C.E., and many others.

Choose from many affordable options

Network capability: Tie your chiller into a network or building automation system to monitor efficiency and detect possible trouble early.

Power supplies: Choose one power supply for each compressor, or one for the entire chiller.

Condenser coils: Choose corrosion-resistant copper, phenolic coating, or Black Epoxy Fins

Tamper-Proof Kits: Choose from several types to protect against vandalism and reduce the risk of accidental injury.

Disconnect switch: Choose circuit breaking or non-fused types as required.

Unit isolators: Choose from 2-inch, seismic-spring-type; resilient, cross-ribbed, Neoprene pad; or standard, 1-inch deflection isolators to suit application.

Sound reduction: Choose noise-reduction devices (compressor sound enclosures, low RPM fans) for sound-level sensitive jobs.

Flanges: While the standard water connections can be connected via welding or Victaulic® coupling, optional flanges are available.

Remote panel: Choose optional remote control capability through simple serial connections at the Control Center.



Get more control in more places thanks to Remote Control connected to the Control Center

