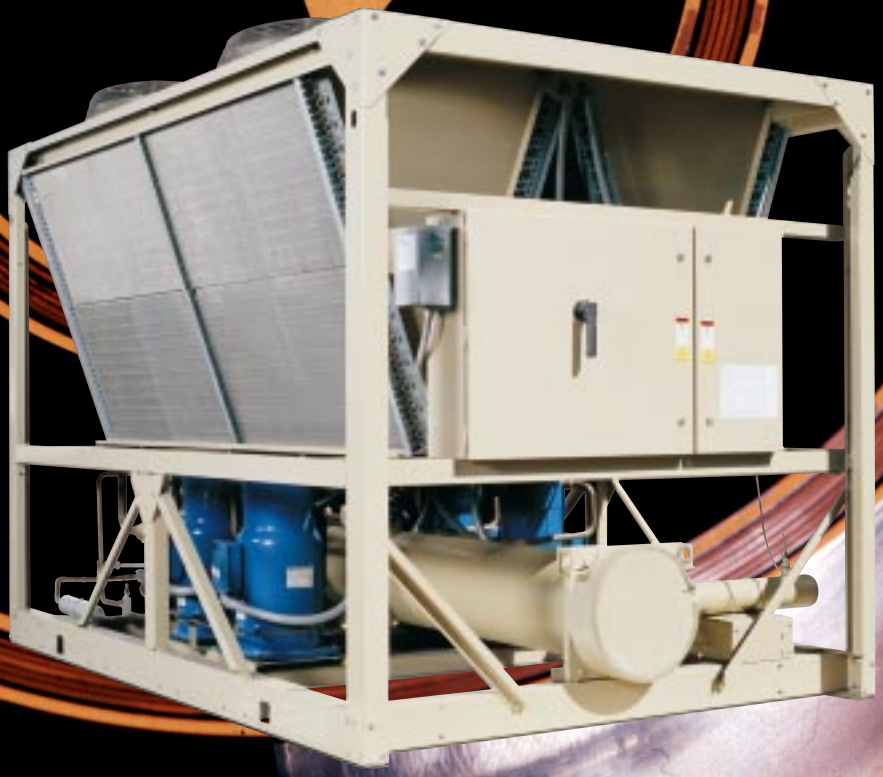
YORK® Millennium® Air-Cooled Scroll Chillers



Run reliably with trusted scroll-chiller technology

Dependable, smooth, quiet and efficient operation result from the scroll compressors precise "no-contact" design.

Compressors you can count on

Reliable, efficient, trouble-free operation is the true measure of a chiller's value. That's why YORK® Millennium® Air-Cooled Scroll Chillers use established scroll-compressor technology to deliver dependable, economical performance in a wide range of applications—for producing chilled water for central-station air-handlers and terminal units, for light-process cooling, for brine chilling, and for thermal-storage duty.

With the Millennium scroll chiller, you get the latest generation of compressor enhancements added to the scroll's inherent strengths. The simplicity of a hermetic scroll compressor allows the use of fewer moving parts to minimize breakdown. YORK also employs the latest sealing technology to avoid metal-to-metal contact. Axial sealing is accomplished with floating tip seals, while radial sealing utilizes a microcushion of oil. The result: a maintenance-free compressor providing minimum wear and maximum runtime.

The difference is by design

A Millennium scroll compressor operates with two scroll members—a fixed scroll and an identical orbiting scroll turned 180 degrees, like two hands curled and interlocked together. As the orbiting scroll oscillates against the fixed scroll, it traps and compresses suction gas inside involute pockets. As the orbiting scroll moves, the gas is "squeezed" into the central area, where it is discharged as compressed gas.

With the Millennium scroll compressor, high efficiency is achieved through a precisely controlled orbit and the use of advanced scroll geometry. There is no wasted motion. All rotating parts are statically and dynamically balanced to ensure optimal performance over the long haul.

Low vibration, quiet operation

Balanced components and precision machining also ensure that smooth compression occurs in all involute pockets simultaneously. When compression forces are equally distributed over the entire scroll surface, equal forces in opposing directions cancel one another, minimizing any imbalance. Consequently, compression is smooth, continuous, and quiet.

Vibration isolators on each compressor handle normal vibration. For extra quiet operation, an acoustic sound blanket for each compressor and low-sound fans are available as options.

Built by YORK to take on more jobs

Whether for rooftop or ground installations, Millennium scroll chillers deliver the rugged, industrial value you've come to expect from YORK products. Multiple compressors in each unit provide part-load performance by operating in lead-lag sequence to handle the load. Units larger than 35 tons incorporate two refrigerant circuits, which allow redundant operation for uninterrupted cooling.

Chiller components and circuitry are designed for lower minimum circuit ampacities (MCA) to allow the use of smaller diameter wire to save on power wiring costs.

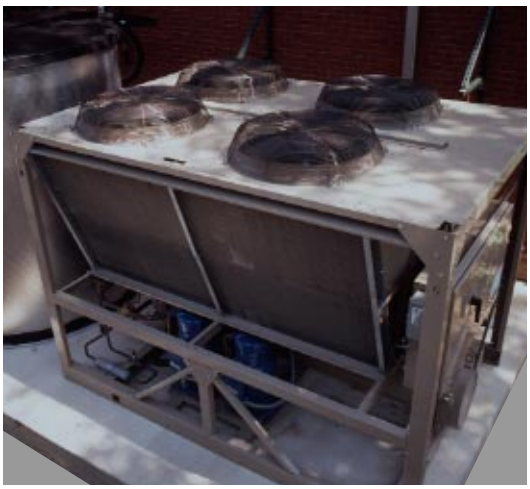
Electronic, digital-based controls ensure reliable, solid-state monitoring and control. If problems should arise, built-in diagnostics allow fast, simple troubleshooting.

A package deal

To minimize field set-up time, each packaged unit is shipped pressure-tested, evacuated, and fully charged at the factory after undergoing complete operational testing. Controls, compressors, coils, cooler, and other components are completely supported by a heavy-gauge, galvanized steel structure.

This durable unit is designed to meet the applicable requirements of NFPA 70 National Electric Code, ASHRAE/ANSI 15 Safety Code, and ASME standards for pressure vessels.

Manufactured in ISO 9000-certified facilities, Millennium scroll chillers are available in 13 models from 10- to 80-ton capacities, certified in accordance with ARI 550/590-88. A 25-to-115°F ambient range is standard, with a 0-to-125°F range available. Other options include 50- or 60-Hz voltages, condensing-unit configurations, and the option of HCFC-22 or HFC-407C refrigerant to meet your exact requirements.



It doesn't get any easier than fingertip, plain-talk controls

Quickly access operating and programmed information with a finger's touch

Outstanding chiller control

Long considered the best control panel in the industry, the YORK® Millennium® Control Center brings unsurpassed simplicity and precision to the Millennium Air-Cooled Scroll Chiller.

Digital technology provides infinitely more precise readings than gauges or meters. As a result, more factors are accounted for to provide tighter, more stable, chilled-water temperature control. There is less "hunting" than with old-style controls, thereby improving system efficiency.

Compatible with a wide range of building operating systems

Connect with your facility's communications

Your YORK scroll chiller is compatible with the YORK Integrated Systems Network (ISN) building automation system, which uses an open protocol that's compatible with other YORK HVAC equipment and a wide range of competitive controls. Connection with nearly 20 building automation systems (including LonMark and BACnet) is simple using the onboard 485 port and optional YorkTalk translator.

Remote water-temperature reset can be accomplished via a Pulse Width Modulated (PWM) signal or by a 4-20mA or 0-10VDC signal or simply contact closure with optional BAS kit.

Fingertip control in a language you speak

Color-coded buttons and logical menus make it easy to access information with a finger's touch. Readouts include: entering and leaving liquid temperatures; outdoor ambient temperature; system pressures; compressor starts; run hours; clock; daily/holiday scheduling.

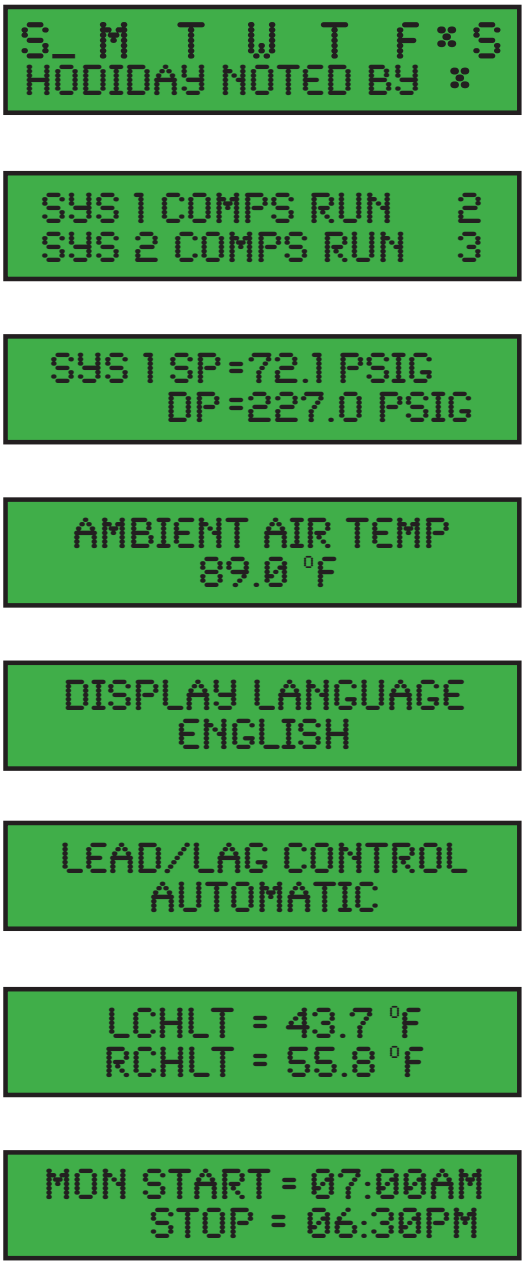
All monitoring and control parameters can be easily read on the 2-line, 40-character, backlit LCD, alphanumeric display. You'll never have to worry about interpreting special reference codes or struggling to read imprecise gauge increments. The panel displays messages in plain English (or Spanish, French, German, or Italian). Numeric data is available in a range of International System of Units. For example, on English units, temperature readouts display in Fahrenheit or Celsius.

Daily/holiday scheduling

With more information about chiller operation available, routine maintenance can be accurately scheduled well in advance of actual need. And with advance information on the maintenance required, you can confidently schedule routine service whenever it's most convenient for day-to-day building operation.

Data logging doesn't get easier

The Millennium Control Center's comprehensive monitoring capabilities dramatically simplify log reading and recording. All data needed for accurate, detailed logs can be gathered directly from the display panel. Instead of moving from thermometer to thermometer and gauge to gauge, chiller status can be accessed from one station. Valuable operator time is freed for other important activities. Or better still, a printer can be connected to the panel to obtain up-to-the-minute operating data. A printed log also can be obtained automatically without involving an operator if the unit should shut down on a fault.



Useful readouts of temperatures, pressures, scheduling, etc. are available in plain English or optional Spanish, French, German, and Italian

Information can be easily obtained in hard copy form.

An impressive array of features to meet your exact requirements

Small footprint fits small spaces

When compared to scroll chillers of similar capacity, a Millennium® scroll unit has 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 transportation costs, too.

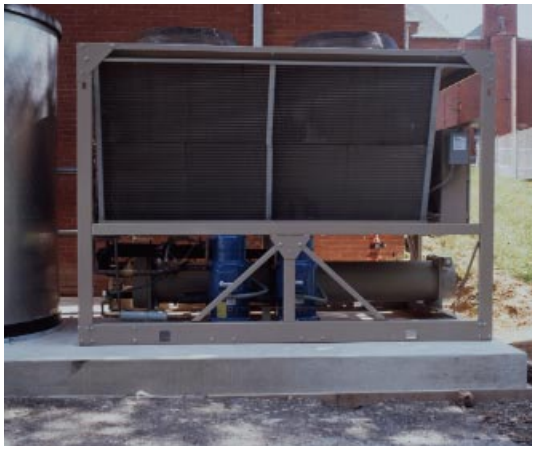
Rugged design

The Millennium scroll chiller is built on a firm foundation using heavy- gauge galvanized steel for base-rail construction. This rugged frame results in a unit that is strong and light, yet withstands the wear and tear of situating the unit on-site. A baked-on powder-paint coating protects the frame and components. The coating passes the ASTM B117 500-hour, salt-spray test, yielding a minimum ATM 1654 rating of “6”.

Options allow for custom design

Power options: You can choose two separate power supplies, or specify a single power supply for all compressors depending on requirements. In either case, exposed unit wiring is run in seal-tight conduit to protect against water and dirt infiltration.

Electrical options: All models are ETL- and CETL- listed and meet local and federal safety codes. For wiring convenience, options include single-point supply terminal block, single-point non-fused disconnect switch, and single-point circuit breaker. A control transformer for converting to



115-1-60 (500VA capacity) and power-factor correction capacitors for complying with a utility power factor of 0.90-0.95 are available as factory-mounted options.

Condenser coil options: Choose fins made of corrosion-resistant aluminum, copper, phenolic coating or Black-Epoxy.

Control options: Low-temperature (down to 0°F) and high-temperature (up to 125°F) operation can be obtained with high- and low-ambient kits. Building Automation System, Remote Control Center or Multi-unit Sequence control options may be individually selected. Other options include discharge-pressure transducers and suction-pressure transducers with respective readout capabilities.

Intelligently designed to simplify servicing

Easy access to components and controls facilitates maintenance

Easy-access, side-situated components and connections

The YORK® Millennium® Scroll Chiller makes it easy to access critical components and connections. No maintenance is required on these scroll compressors. But if replacement is ever needed, the compressors are located at the unit's side for ready access. Water connections extend out to the unit's side to simplify hook-up. The cooler endplates are accessible from the unit's front and back to allow easy removal and servicing.

Alarm contacts, Manual overide, automatic restart

Wiring in an alarm is easy, because the Millennium Control Center incorporates alarm contacts as a standard feature. To facilitate off-hours servicing, a manual override feature is included that allows maintenance personnel to operate the chiller independently. In the event of power failure during normal hours, an automatic restart will ensure chiller resumes operation without operator intervention.

Balanced compressor wear

To let you balance wear between compressors, the Millennium Control Center keeps track of compressor operating hours and startups. The microprocessor will automatically switch the lead and lag compressors within a system based on comparing the actual operating hours of each compressor stored in nonvolatile memory.

Controls that simplify diagnostics

If operating problems occur, all diagnostics are displayed in plain English (or Spanish, French, German, or Italian)—there are no codes that take precious time to decipher.

All service-related data can be obtained from the LCD panel for on-site assessment. A printer can be connected to the panel to obtain a hard-copy log.

If an emergency shutdown should ever occur, the Millennium Control Center speeds troubleshooting and reduces downtime. A first-out display preserves all readings that exist at that instant. A "shutdown record display" stores the cause and time of the last six shutdowns, letting maintenance personnel print out the date, time, fault, and all related data for review.

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