MAXE™

YR Screw Chillers

BEST ROUTE TO
REAL-WORLD
ENERGY PERFORMANCE

YORK®

MaxE™ Chillers Deliver Maximum Efficiency

The Importance of Real-World Energy Performance

YORK® MaxE™ YR screw chillers provide the best route to real-world energy performance — the combined performance at *all* operating conditions, not just design. Because chillers in the real world operate nearly 99% of the time at off-design conditions, off-design performance is the major factor in energy consumption. That's why MaxE YR screw chillers are engineered for maximum efficiency at both design and off-design conditions.

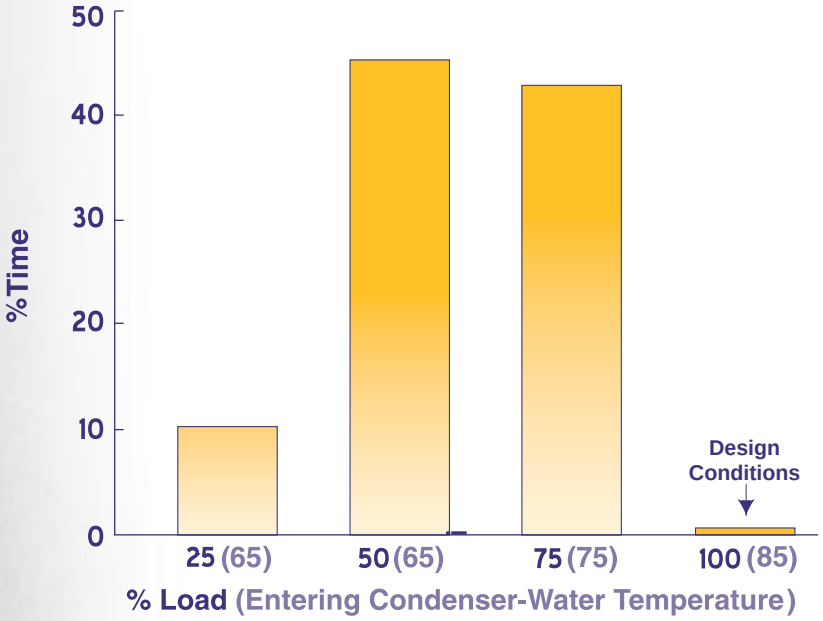
Unsurpassed Integrated Part Load Value

The Air-conditioning and Refrigeration Institute (ARI) Chiller Certification Program endorses the importance of off-design analysis to compare chiller energy consumption. Measured with ARI's Integrated Part Load Value (IPLV), most competitive screw chillers don't even come close to the energy efficiency of the MaxE YR screw chiller.

In fact, the IPLV ratings of MaxE YR screw chillers are as much as 30% better than those of constant-speed centrifugal chillers, which have long been considered the efficiency leaders. The reason is that the screw chiller's capacity-control valve does not create a frictional drag on efficiency like the pre-rotation vanes of the centrifugal chiller.

The result is unmatched energy savings, month after month, year after year, over the chiller's entire life.

IPLV Rating Points



Saves Ozone and Energy

To help protect the environment, MAXE YR screw chillers use HFC-134a refrigerant, which has zero ozone-depletion potential. In addition, they are optimized for HFC-134a, which keeps their efficiency high.

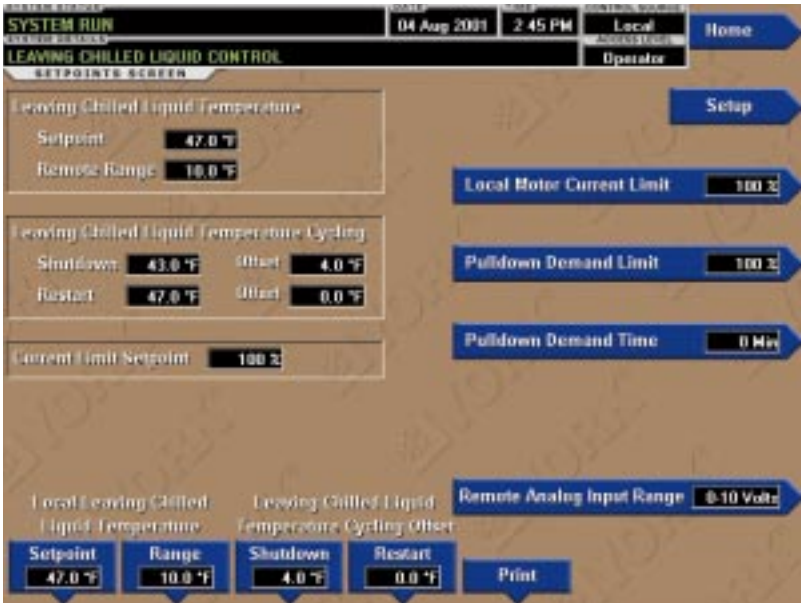
Take Advantage of Colder Entering Condenser Water

YORK MAXE chillers have been designed to take full advantage of colder entering condenser-water temperatures (ECWT), which are naturally available during off-design hours. The colder water reduces the compressor workload and provide considerable energy savings compared to artificially holding the temperature higher as required by other chillers.

Powerful Control Center Saves Energy

MAXE chillers feature the OptiView™ Control Center which uses microprocessor logic to save you energy. Operation at just 1°F below the design chilled-water-temperature setpoint can increase chiller energy consumption by as much as 3%. The digital precision of the OptiView Control Center lets you set chilled-water temperature to a resolution of ± 0.1°F.

The OptiView Control Center can also be used to schedule daily operating hours and holidays. No longer is energy accidentally wasted by cooling the facility when it's not needed.



The OptiView Control Center helps you operate your chiller more efficiently by allowing for the precise setting of chilled-water temperature and operating schedule.

Maximum Control with OptiView™ Control Center

Easy to Read

YORK has always pioneered powerful, yet simpler chiller control. We were the first to apply microprocessor-based, plain-language-display control centers to screw chillers. Now, YORK MAXE YR screw chillers feature the full-screen, full-color OptiView™ Control Center.

It's an advanced, microprocessor control center that sets the standard by presenting the most data in the clearest fashion. You still get the code-free, plain-language data you're accustomed to from a YORK microprocessor control center. But now it's even easier to read, thanks to a large, full-color screen using advanced active-matrix display technology.

This larger display shows even more data per screen with far less button-pushing. And that makes it much quicker and easier to operate your chiller. To facilitate a higher level of monitoring and control, data outputs are shown in association with illustrations of the appropriate chiller components — a layout that minimizes user confusion. For convenience, all data can be displayed in nine different languages, in addition to Imperial or SI units.

Easy to Operate

With the OptiView Control Center, data input is foolproof. A dedicated keypad for numerical input minimizes keystroke errors. Cursor controls for screen navigation make it easy to access all input, control, and monitoring functions. Plus, a "navigation bar" quickly guides you to the level of information you need.

Get the Message — Quickly and Graphically

Thanks to the large, active-matrix screen, detailed logs can be read directly from the OptiView Control Center. Instead of keystroke after keystroke to gather sufficient data from a small, monochrome LCD screen, a single button can reveal an array of chiller information that is quickly seen on a single screen. Data output is provided in precise, digital form. Valuable operator time is freed for other important activities.

Advanced Data Logging

For convenience, a printer can easily be connected to the OptiView Control Center without interfacing through a BAS system. A printed log can be obtained automatically, at predetermined time intervals, without an operator interface. In addition, service technicians can use a portable printer to download information for troubleshooting and repair. All this can also be done while connected to a BAS system.

These sample screens demonstrate how easy it is to access and view more useable data. They are typical of the over 35 screens available on the OptiView Control Center.

On-Screen Trend Analysis

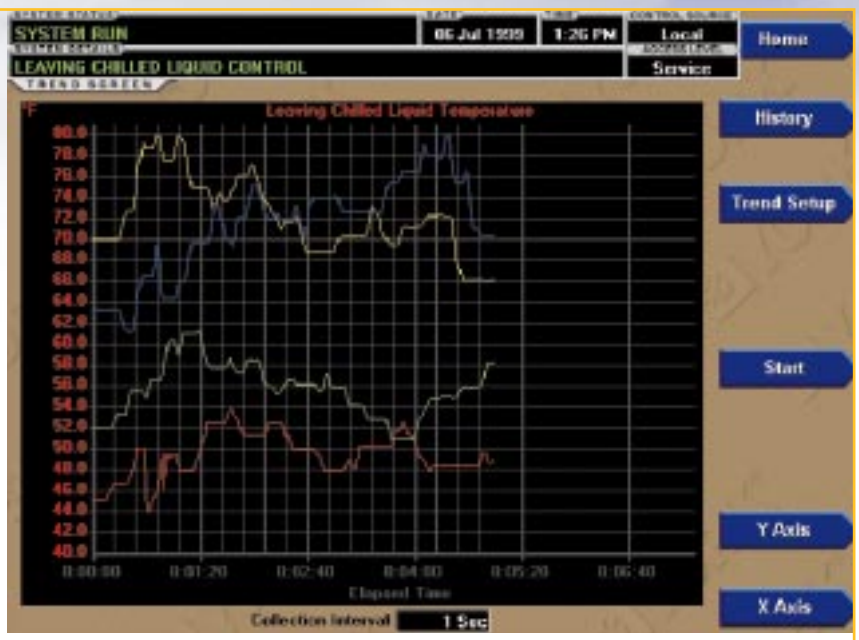
The OptiView Control Center's full-screen, full-color display allows on-board trending of up to six different values, selected from over 80 items. The values and sampling interval are all user-selectable. This flexibility allows operators to select parameters that are critical for their operation, and do trending without a BAS interface and separate monitor.

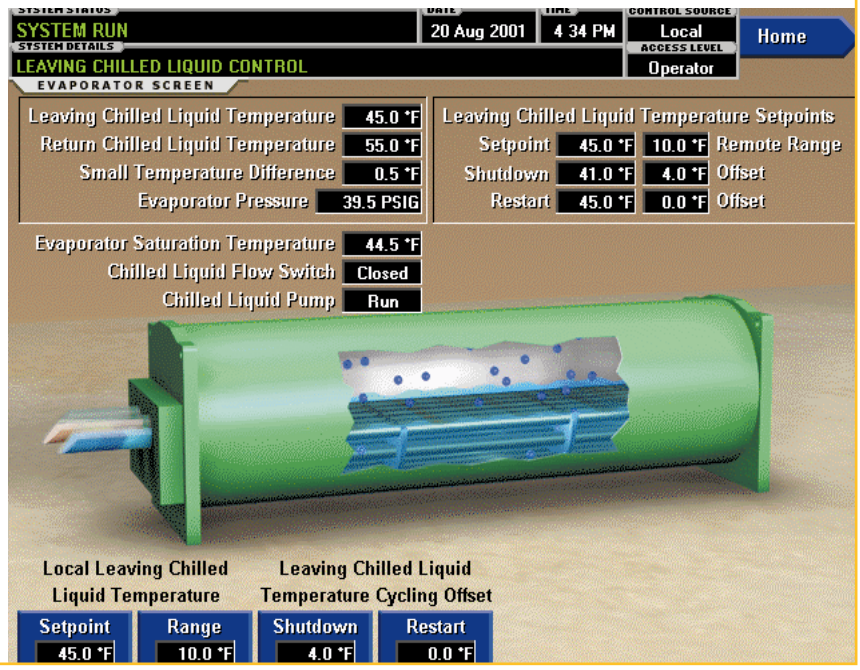
Easy to Integrate

Energy savings and ease-of-use can be fully realized when the HVAC system is an integrated part of the BAS system. The OptiView Control Center is designed to communicate with most existing control systems on the market today, as well as BACnet and LonMark systems.

Easy to Secure

You can rest assured that along with state-of-the-art control, the OptiView Control Center provides advanced levels of security. Setpoints are protected by a user-selectable security access code. "Remote" mode allows a BAS to implement sophisticated control strategies as a first priority. "Local" mode provides full control at the control center. "Operator" mode opens control software to your commands. And "Service" mode gives qualified service personnel exclusive access to special functions.





Versatile Design Provides Maximum Flexibility

The YORK MAXE YR screw chiller is one of the most versatile large-tonnage chillers on today's market. In addition to air-conditioning duty, it easily adapts to a variety of high-head cooling requirements, including brine cooling and thermal storage. It can also be tailored to building codes around the world.

Performs Well Under Pressure

If your application calls for cooling brine below 30°F, standard centrifugal chillers just can't handle the pressure. The higher compression requirement is beyond their capability. But the MAXE YR screw chiller works well under pressure. It can easily cool brine down to 20°F, which could significantly reduce the size and cost of the equipment using the brine.

Able to Work Double-Duty

Thermal-storage applications often require chillers to perform double-duty: during the day, it's low-head, chilled-water duty; at night, it's high-head, ice-build duty. In general, centrifugal chillers can be built to do one or the other, but not both. The best choice for the job is the MAXE YR screw chiller, which is able to work both the daytime and nighttime shifts.

As an added benefit, the MAXE YR screw chiller maximizes ice production by utilizing an alternate unloading scheme designed specifically for thermal-storage applications. This logic maintains maximum chiller loading when conventional chiller controls would unload the chiller. The result is shorter ice-build times.

Readily Accepts Change

The global-design platform of the MAXE YR screw chiller allows it to be cost-effectively tailored for code requirements around the world. The chiller can be easily modified by YORK's worldwide design centers and manufacturing facilities to meet local market needs, including language, electrical codes, and vessel specifications.

The OptiView Control Center can present information in nine different languages, as well as Imperial or SI units.

Maximum Reliability with Minimum Maintenance

Proven Compressor Design

YORK engineers teamed up with experts from Frick — the YORK company recognized as the industrial-refrigeration, screw-compressor experts — to produce a new compressor design optimized specifically for water-cooled chillers. This design is based on Frick's experience in thousands of demanding industrial-refrigeration and gas-compression applications. This tough compressor is constructed to perform over the chiller's entire service life.

OptiView Control Center Keeps You Well-informed

The OptiView Control Center provides complete information on your chiller's operating condition. Safety-shutdown information includes day, time, cause of shutdown, and type of restart required. Color-coding of fault messages allows easy determination of chiller status. Yellow messages are shutdowns with automatic restart, requiring no operator intervention. Red messages are displayed for shutdowns requiring manual restart, alerting the operator that a system check may be required.

The Trending Screen can show changes in motor current, oil temperature and pressure, refrigerant pressures, or water temperatures, all of which can be valuable indicators of developing problems. This capability gives you ample time to take corrective measures before any expensive downtime is incurred.

With the OptiView Control Center, you can see when to schedule routine maintenance in advance of actual need.

Solid State Starter Extends Motor Life

Equipped with its Solid State Starter, the MAXE YR screw chiller starts "softly," putting less stress on the motor and compressor, extending their life. In addition, the Solid State Starter includes an impressive array of safety controls that protect the chiller against: phase loss, phase reversal, phase imbalance, undervoltage, overvoltage, and overcurrent. With the available circuit breaker, there is also UL ground-fault protection and a short-circuit-withstand rating of 65,000 amps.

OptiView Control Center provides complete information on your chiller's operating condition. Solid State Starter extends motor and compressor life.

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