



# Head in the Right Direction

Guiding Your Chiller Choice



Small-Tonnage Water-Cooled Chillers





# Considerations to Guide Your Chiller Choice

When choosing a water-cooled chiller for institutional, commercial, or industrial applications requiring less than 300 tons of cooling, no one technology serves all



requirements. Therefore, you need to compare chiller technology and benefits against your specific requirements. The main considerations a chiller-plant operator looks at are: energy efficiency, reliability, equipment-room-space utilization, application

versatility, use of environmentally acceptable refrigerants, quiet operation, and ease of repair and maintenance.

## Consider Efficiency

As one of the largest energy users in a building, chiller energy efficiency is a critical factor to consider. Energy efficiency is doubly critical these days, since consumption of electricity can be costly both financially and environmentally. Take into consideration that burning fossil fuels to generate electricity produces CO<sub>2</sub>— a greenhouse gas that may contribute to global warming. Furthermore, to be truly efficient, chiller technology should perform well at both design and off-design conditions.

## Consider Friendly Refrigerants



The European Montreal Protocol has proven to be disruptive to the mechanical cooling industry. Fortunately, the HVAC industry's chemical-industry allies have quickly developed alternate refrigerants that are environmentally acceptable and able to deliver similar performance characteristics. Only chillers using acceptable alternate refrigerants should be part of your selection set.

## Consider Size

Building owners are constantly trying to optimize the use of non-incoming-producing space. Chillers with a small footprint help overcome this dilemma. They also make retrofit and remodeling jobs easier and allow more room for other equipment. And, because they use a smaller pad, the cost of the concrete pour can be reduced.

## Consider Versatility

Different chiller technologies perform better in different conditions. Are you looking at a general air-conditioning application or will your use require process glycol/brine cooling, thermal storage, or a remote condenser? Choose the technology that performs best in your circumstance.

## Consider Reliability

Minimal downtime is a requirement of any critical mechanical system. All serviceable components should be fully accessible, and maintained quickly and easily without special tools. Products and technology demonstrating proven reliability should get first consideration.

## Consider Noise

Noise pollution is a major issue for building owners. Since water-cooled chillers are located inside the building, they should be designed for low-noise emission.

## Consider Remote Condensing

Remote condensing allows you to dispense with the cooling tower and its associated pipework. If you need to eliminate the cost and maintenance associated with a cooling tower, or your building cannot support the rooftop installation of a chiller, remote condensing offers an alternative solution.



*Victualic grooved water connections. Clamp-connect designs eliminate the need for on-site pipe welding.*



*Two oil separators per refrigerant circuit provide complete oil/refrigerant separation.*

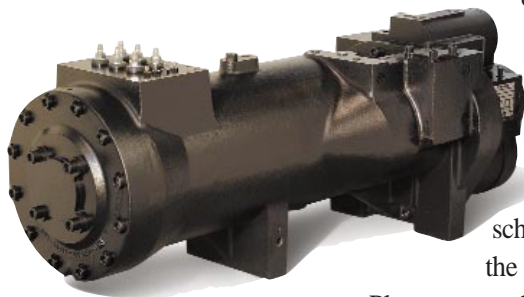
## Consider More

You can now choose between water-cooled screw chillers available in 80 to 200-ton capacities or reciprocating chillers in 55 to 240-ton capacities. The choice is yours. Call your local YORK office at **1-800-861-1001** or visit **[www.york.com](http://www.york.com)**

# Screw Chillers Get You Where You Want to Go

## Constant Reliability

YORK water-cooled screw chillers use a compressor that is designed with reliability in mind. 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.

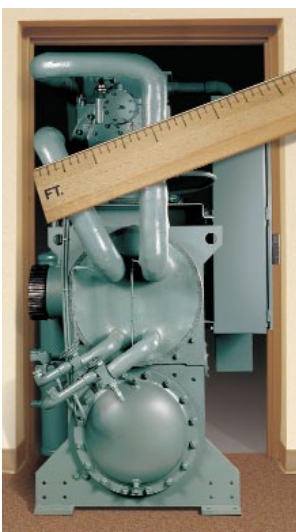
Plus, you get the assurance of two independently operable refrigerant circuits; one for each compressor.

## Inherent Energy Efficiency

Anytime you can precisely match your chiller's capacity to your exact building load, you eliminate wasted energy input. The YORK water-cooled screw chiller does just that by using a unique capacity-control design that optimizes compressor and chiller efficiency. YORK water-cooled screw chillers continuously modulate from 100% down to 10% capacity, precisely matching your load and minimizing energy use.

## More Space

YORK water-cooled screw chillers have a small footprint that reduces installation costs and makes space available for other uses. This compact design also helps installation crews save time and money by easily fitting through most standard industrial doorways without modification.



## Less Demanding At Start-Up

YORK water-cooled screw chillers use Wye-Delta starters to reduce inrush current at start-up. Wye-Delta starters require two-thirds less inrush current at start-up than traditional across-the-line starters.

## Atmosphere Friendly

- Get the proven performance of HCFC-22 with 0.05 ozone depletion potential.
- And now, zero ozone depletion potential HFC-407C is an option.

## Optimized Operation

YORK incorporates "fuzzy logic" in water-cooled screw chiller controls.



Fuzzy logic allows the control system to monitor several key variables. It tracks where the chiller has been operating, where it is currently operating, and then accurately predicts where it will need to perform. There is less hunting than with old-style controls, thereby ensuring lower energy consumption and more stable operation over the unit's operational range.

## Low-Temperature Application Flexibility

Screw chillers provide the resilience required to handle the demanding conditions encountered in refrigeration, ice-making and thermal-storage processes. They also provide efficient, reliable operation for comfort cooling.

# Reciprocating Chillers are a Good Direction

## Extra Performance

YORK water-cooled reciprocating chillers give you the durability needed for trouble-free performance. We've designed every component to industrial standards, giving you cooling long after lighter-duty commercial units fail. Two independently operable refrigerant circuits provide part-load on demand, and ensure a basic level of cooling redundancy.

## High-Efficiency Ratings

Precise electronic controls keep energy usage matched to your requirements at design and off-design conditions. Intelligent mechanical engineering of the system, using advanced heat exchangers and efficient motors, provides unmatched efficiency. Combined, these factors give you some of the best energy ratings available.

## Compact Design

The small footprint of YORK water-cooled reciprocating chillers reduces installation costs and frees up space for other uses. This compact design also helps installation crews save time and money by easily fitting through most standard doorways without modification.

## Environmental Approval

Get the proven performance of HCFC-22 with 0.05 ozone depletion potential. As an option, you can specify your chiller charged with zero ozone depletion potential alternative refrigerants.

## Easily Serviced

All components that may require attention are designed to reduce the time and expense of both routine and emergency service. Both compressors and motors are fully accessible, and suction screens, sight glasses, and filter driers can be serviced quickly without special tools.

## Versatility to Handle Off-Design Conditions

Reciprocating chillers can easily handle a variety of conditions. These include air-conditioning applications with varying entering condenser water temperatures and low-temperature refrigeration applications (such as ice rinks, food freezing and thermal storage).



