

YORK® TITAN™ CENTRIFUGAL CHILLERS

Cooling the engineering marvels of the world



BY JOHNSON CONTROLS

Extraordinary capacity



The 31-mile (50-km) English Channel Tunnel/Trans Manche Link is cooled by two Titan chiller plants providing 15,000 TR (53,000 kWR) of refrigeration.



At 6.6 million square feet (610,000 square meters), the United States Pentagon is one of the world's largest office spaces, requiring 37,500 TR (132,000 kWR) of cooling by Titan chillers.

Around the world, man continues to design and construct engineering marvels: towering skyscrapers, mammoth airports, major universities, expansive government buildings, and lavish places of worship. Though diverse in purpose and architecture, they are bound by a common thread: extraordinary cooling requirements met through the power of YORK® Titan™ centrifugal chillers by Johnson Controls.

The advanced technology behind the superior performance of the YORK Titan chiller is the end result of over half a century of pioneering experience, plus continuing research and development. While other companies approach enormous cooling tasks with solutions that tie together a large number of standard packaged chillers, YORK has taken a far different approach. Titan chillers are up to several times the size of standard chillers and are customizable to fit unique installation specifications, thus delivering all the flexibility, long-term reliability, and custom capabilities that a job requires. No other chiller even comes close to YORK Titan chillers.

Front Cover:

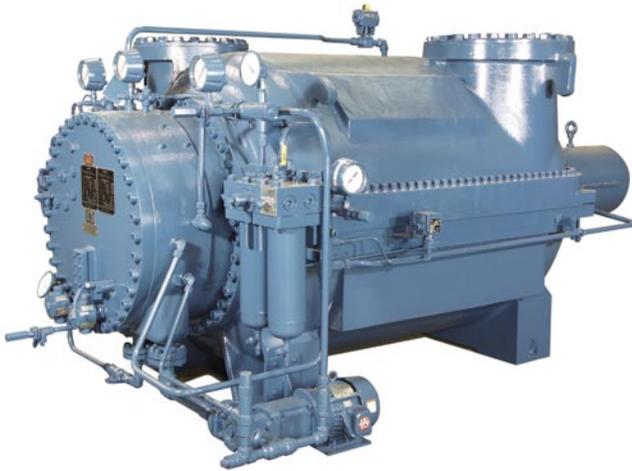
YORK Titan chillers cool the world's tallest buildings, the Petronas Twin Towers in Kuala Lumpur, Malaysia. Three 5,000 TR (17,600 kWR) electric-drive chillers and three 5,000 TR (17,600 kWR) steam-turbine chillers are used to handle this extensive project.



Vehicle Assembly Building
As the Kennedy Space Center's most visible landmark, the 130 million cubic feet (3.7 million cubic meters) Vehicle Assembly Building is the tallest open structure in the world. It is served by five 2,500 TR (8,800 kWR) Titan chillers to keep humidity under control and cool equipment during the assembly of the NASA shuttle fleet.

(Photo courtesy of NASA)

Unsurpassed reliability



The YORK TurboMaster compressor is the heart of the Titan chiller, and is built to perform under extreme conditions.

Like the structures that house it, the Titan centrifugal chiller is built to last. Its unsurpassed reliability has been proven over many decades in thousands of installations world-wide. Some of these facilities, including the U.S. Capitol complex, have enjoyed the benefits of reliable chiller operation for over 40 years.

In order to meet the most demanding prerequisites, Titan chillers are literally designed to operate non-stop on a 24-hour-a-day, 365-days-a-year basis, requiring only minimal scheduled maintenance.

At the heart of this unparalleled reliability is the Turbomaster™ compressor. It performs faithfully under the most extreme conditions, such as those typically found in the petrochemical industry.

What also qualifies this as an industrial-grade chiller are the heavy-gauge materials used in the base, shells, and piping, to the customized, industrial-grade operating and safety controls. The Titan chiller's highly sophisticated control system is capable of constantly monitoring the chiller's operation at far more points than standard chillers, with particularly sophisticated capabilities to monitor key rotating components.



Critical parameters of the Titan chiller are monitored and controlled by industrial-grade, application-specific control systems to ensure reliable operation.



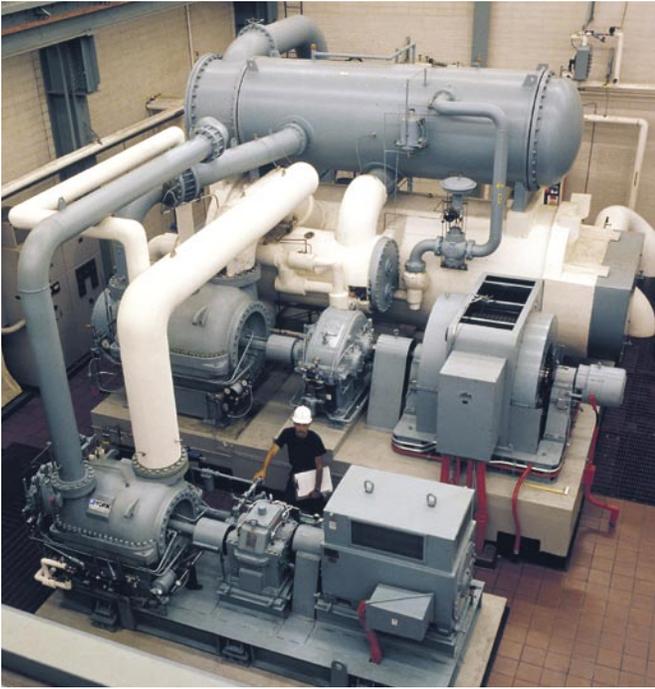
To withstand the demands of higher operating pressures, Titan chillers feature heavy-gauge shells.

U.S. Capitol Complex

For over 40 years, YORK Titan chillers have cooled the United States Capitol complex, providing 30,600 TR (107,600 kW) to generate chilled water for this immense district-cooling project. The complex encompasses over 6 million square feet (550,000 square meters) and 10 buildings, which include the Capitol Building, House and Senate Offices, Library of Congress, and Supreme Court Building.



Exceptional design flexibility



The versatility of the Titan chiller is evident in this parallel-drive installation where two different-capacity drives are used with a single set of shells.

Whether air-conditioning the largest buildings on earth or providing refrigeration for the most extensive district-cooling projects, the world turns to the only chiller with exceptional design flexibility: the YORK Titan centrifugal chiller.

The Earth's harshest operating conditions are easily managed thanks to this incredible flexibility. Application challenges involving extreme ambient temperatures, lack of water, and high seismic-activity areas are met with the Titan chiller's customizable platform.

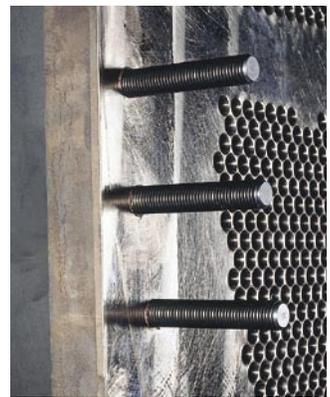
It is also compatible with a variety of drivers, including electric motors, steam turbines, natural-gas engines, and gas turbines. In addition, its open-drive design allows the option of changing the energy source in the future. Multiple drivelines for the same set of shells are also available.

The Titan chiller comes with a high-head capability, allowing it to handle a variety of demanding jobs, including: brine cooling, ice building/thermal storage, direct air-cooled condenser/radiator applications, and heat-pump/recovery applications.

Better still, YORK Titan chillers are environmentally responsible, designed to work with ozone-friendly refrigerants and retrofit to future refrigerant options.



For easy tube cleaning, hinged water-box covers are available for the Titan chiller.



Available corrosion-resistant copper-nickel or titanium-clad tube sheets can be specified.

Prophet's Mosque

The Prophet's Mosque is one of the world's largest air-cooled chiller installation. It requires 20,400 TR (71,700 kWR) of cooling which is accomplished with six Titan 3,400 TR (12,000 kWR) chillers.



In a class by itself

The YORK Titan chiller's very name implies size, strength, and endurance. And rightfully so. Johnson Controls created the Titan centrifugal chiller to easily handle any building size, any cooling requirement, any geographical climate and location, and a wide array of refrigerant choices, year after year with dependable operation.

These and other hallmark characteristics elevate the Titan chiller above any other chiller on the market. Wise owners and designers recognize the YORK Titan centrifugal chiller as the best of the best...a chiller designed to meet the most extraordinary challenges in the world.

