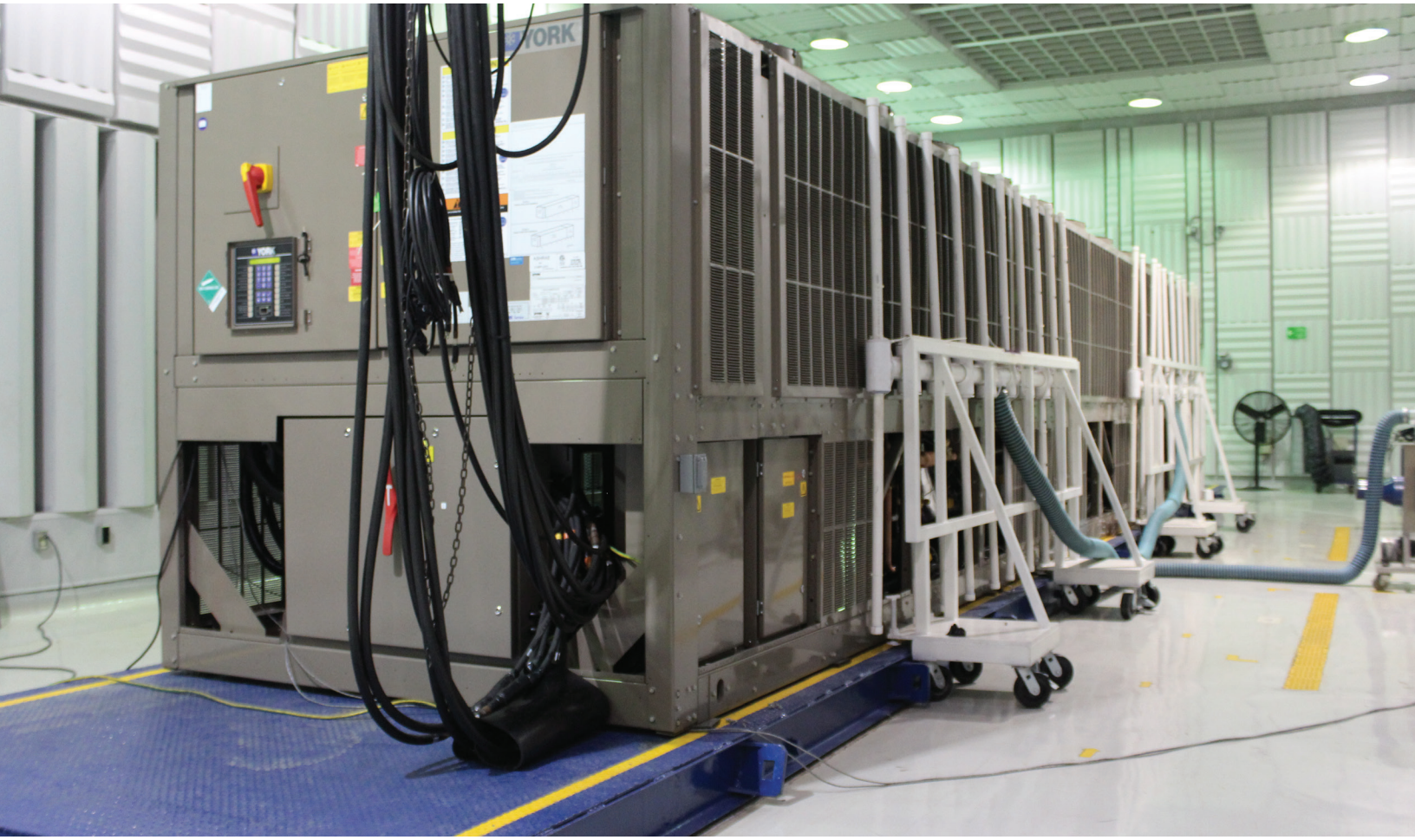
YORK®

The Monterrey Performance Test Facility



Why guess when you can test?

The power behind **your mission**

Johnson Controls

At Johnson Controls, confidence in the consistent high performance and unbeatable quality of our YORK Brand water chiller units inspires us to demonstrate it to customers at our AHRI-certified Air-Cooled Chiller Performance Test Facility and Customer Center.

Located at our manufacturing site in Monterrey, Mexico, this innovative facility gives our customers the chance to test chillers in a wide range of conditions to validate performance and assess our units in a live operating state.

The Johnson Controls Monterrey Performance Test Facility
The 8,000 ft2 test lab building includes an environmental test chamber where performance measurements are obtained utilizing calibrated and certified instrumentation. Our expert team manages the testing event, supporting our valued customers through each performance demonstration procedure.

While we welcome and encourage customers to visit both our testing facility and manufacturing facility (same campus) in person, we offer fully transparent remote testing options. Our customer center is equipped with:

- A High Definition camera with high-visibility zooming capabilities provides a live stream video of the chiller during the performance test. The camera also rotates so you can view different sections of the chiller if needed.
- Live streaming data that can be shared with the customer throughout the test procedure.
- The live streaming testing information can be shared with up to 250 different attendees from different locations.

What's in it for the customer?
- Chiller performance demonstration within AHRI certified testing facility
- Industry defined Standards-based testing process for reliable and repeatable results
- Detailed performance data reports
- World-wide remote witness testing access via our connected customer center

How the test works

Test chamber conditions are maintained by circulating chamber air across heat transfer coils in the chamber air plenum space. These coils also recover heat rejected in the test chiller exhaust air. The resulting load is recycled back to the test chiller evaporator circuit via a secondary flat plate heat exchanger. Excess portions of the heat generated by test chiller compressors, water pumps, blowers, and pipe/duct friction are rejected through an exterior auxiliary chiller.

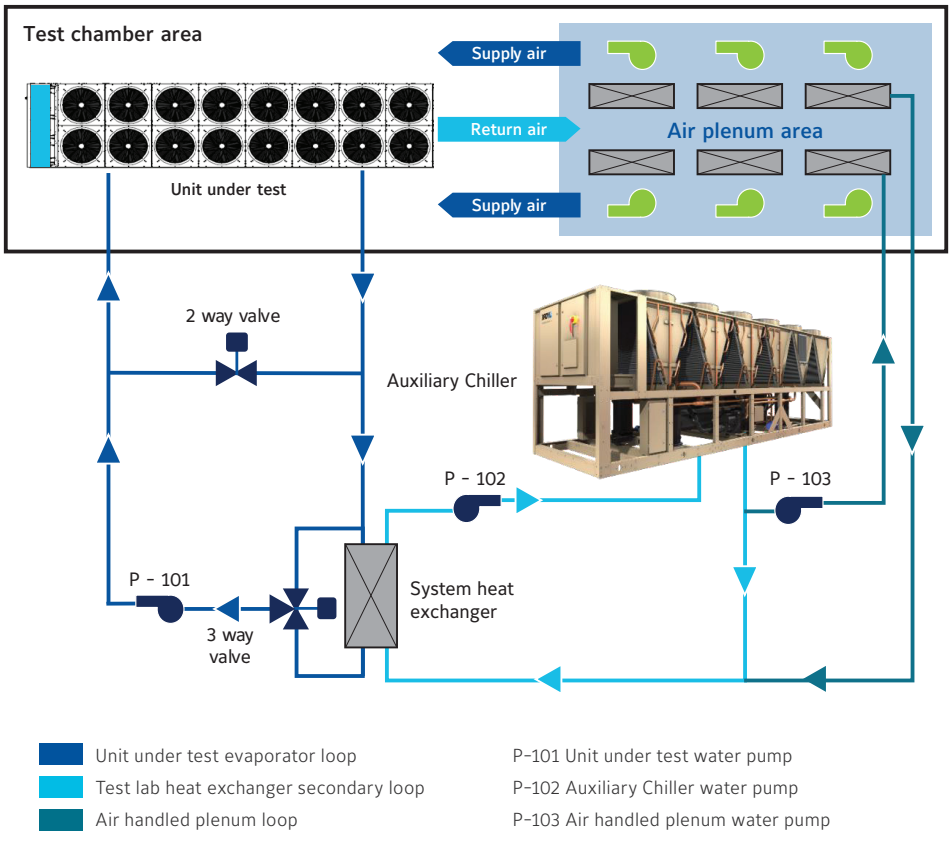
What you need to know

- The water temperature and flow are stabilized and maintained by using PLC-based electronic PID controls and pneumatically operated control valves.
- All of the test chamber fans, pumps, and the auxiliary chiller are driven by variable speed drives to lower electrical use. To boost sustainability, the test water is recovered, filtered, and recycled to avoid large wastewater discharge to the city.
- The different sensors and meters are calibrated in accordance with specifications from the National Institute of Standards and Technology. Flow meters and power analysers are calibrated once a year and pressure transducers and temperature sensors are calibrated every six months.
- A detailed test report is provided once the factory test is completed.

Specifications and technical information

Performance tests can be conducted on cooling-only units with the following attributes:

- Capacity ranges from 25 to 535 tons (88 to 1,880 kW)
- Ambient air temperatures from 50 to 130°F (10 to 54°C)



Unit under test evaporator loop
Test lab heat exchanger secondary loop
Air handled plenum loop

P-101 Unit under test water pump
P-102 Auxiliary Chiller water pump
P-103 Air handled plenum water pump

- Electrical characteristics ranging from 200 to 600 volts at either 50 or 60 Hz

The test center adheres to rigorous quality metrics and testing is conducted in accordance with AHRI Standard 550/590-2018, AHRI Standard 551/591-2018, and Eurovent Standard EN14511-3.

While under load testing, the facility is a functional hemi-anechoic room capable of testing an air-cooled chiller in conformance with AHRI 370 and ISO 3744.

The confidence of guaranteed performance

Now you know all about the benefits of our advanced testing center, you will want to try it out for yourself.

Contact your HVAC Sales Representative or Branch Manager to learn more about our performance testing capabilities.

About Johnson Controls

At Johnson Controls, we transform the environments where people live, work, learn and play. From optimizing building performance to improving safety and enhancing comfort, we drive the outcomes that matter most. We deliver our promise in industries such as healthcare, education, data centers and manufacturing. With a global team of 100,000 experts in more than 150 countries and over 130 years of innovation, we are the power behind our customers' mission. Our leading portfolio of building technology and solutions includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Titus®, Frick®, Penn®, Sabroe®, Simplex®, Ansul® and Grinnell®.

For additional information, please visit www.johnsoncontrols.com or follow us @johnsoncontrols on Twitter.

PUBL-3002 (0121)

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