

THE FOLLOW-UP FILES: AQUATHERM DELIVERS LONG-TERM PERFORMANCE AT FLORIDA DATA CENTER

Aquatherm pipe in place during the 2014 renovation of a 1983 building into a modern data center.

PROJECT:

TierPoint Data Center
Mission-Critical HVAC

PRODUCTS:

aquatherm blue pipe®

LOCATION/DATE:

Jacksonville, FL
Original installation Winter 2013-2014
Follow-Up January 2020

AQUATHERM ADVANTAGES:

- Aquatherm's heat fusion joining process creates a connection with no leak paths
- Aquatherm pipe will never scale or corrode, so its performance in mission-critical applications will not change over time
- Aquatherm pipe has an anticipated life span of 50-plus years—much longer than steel pipe. It can be expected to provide trouble-free operation for decades

Blue Pipe® helping protect clients' data 24/7 year after year

The mission of modern data centers is to store and protect customers' valuable data 24/7/365. This is made challenging by several factors, not the least of which being that computer servers generate a lot of heat, and (as fate would have it) heat is the enemy of computer servers.

That's why state-of-the-art data centers such as the 40-plus nationwide operated by TierPoint (<https://www.tierpoint.com/>) need a better-than-state-of-the-art cooling system. One might say cooling represents the "critical" in mission-critical applications.

At the TierPoint data center in Jacksonville, FL, Aquatherm polypropylene pipe has been an integral part of the chilled-water system since the facility opened in February 2014. Aquatherm has proven itself at TierPoint Jacksonville with leak-free performance day-in and day-out for years and is expected to do so for decades to come.

TierPoint consists of more than 40 interconnected data centers nationwide. The 120,000-sq-ft facility in Jacksonville provides colocation space, cloud services, private cloud certainty, and disaster recovery and business recovery services for 53 clients. The Jacksonville data center is housed in a building originally constructed in 1983 and extensively renovated in 2013-2014 by CxP Data Centers. CxP was purchased by TierPoint in July 2015.

Although Aquatherm was originally chosen for this data center to help meet a tight



Aquatherm pipe has been helping ensure the safety of clients' data at this data center for more than six years.

installation timeline during the 2013-2014 renovation, it has paid additional dividends over the years with its leak-free and energy-efficient performance. The installing contractor, JAX Refrigeration, Jacksonville, FL, had only about four weeks to complete the installation of 1,200 ft of Aquatherm Blue Pipe® in 8-in., 6-in., 4-in., 3-in., 2-in., and 1½-in. sizes. It was able to achieve this timeline thanks to Aquatherm's heat-fusion process, which is much faster than welding steel. It also creates connections with no leak paths: at this data center, JAX Refrigeration left 100 psi of compressed air in the Aquatherm piping system for nine days and identified zero leaks among the system's 500





Aquatherm pipe being installed at the TierPoint Jacksonville data center in 2014.

individual joints. While this isn't the standard Aquatherm pressure testing method, time has shown that this nine-day test demonstrated the long-term leak-tightness of this system.

(To read more about the original 2014 project, visit aquatherm.com/case-studies/florida-data-center-finds-security-with-aquatherm-piping-system.)

The trouble-free performance of Aquatherm pipe over time led TierPoint to select it for a recent 5,000-sq-ft expansion that added a new 80-ton chiller to the Jacksonville facility's existing three 100-ton units. That installation called for an additional 600 to 800 feet of Aquatherm Blue Pipe.

"I feel very good about the Aquatherm installation," said Eric Mason, Manager of Data Center Operations, TierPoint Jacksonville. "We actually had to make some modifications to the

pipe's routing during the installation, and the Aquatherm was very easy to work with. It goes in much easier and faster than steel, and we've been very happy with its performance."

"We've been very happy with the performance [of the Aquatherm pipe]. We have another 22,000 sq ft of space that we'll be expanding into in the next 18 months or so, and we plan on using Aquatherm for that project."

—Eric Mason, Manager of Data Center Operations, TierPoint Jacksonville


Mason noted that the Aquatherm pipe was installed without welding, which was important in the clean environment of an operational data center. The Aquatherm pipe, thanks to its inherent R-value, also required less insulation than steel pipe would have.

But it's the ongoing leak-free performance that most impresses Mason and has helped make Aquatherm the facility's go-to piping option as it continues to grow.

"We are continuing to expand," Mason said. "We have another 22,000 sq ft of space that we'll be expanding into in the next 18 months or so, and we plan on using Aquatherm for that project."

Data is only going to continue to increase in importance, and the numbers and needs of data center clients also will continue to grow. The knowledge of data center owners and operators will be a powerful tool as they seek products that can help them carry out their mission and ensure the long-term safety of their customers' data.

Mason concluded that not all clients who are using or considering using the services of TierPoint Jacksonville give much thought to the facility's piping system. But they always are pleased to learn that TierPoint is taking steps to protect their data in ways they may never have imagined.

"We tell the clients about Aquatherm," he said. "It ultimately may or may not be a factor for them, but we do discuss the benefits of the piping and I believe they take it into consideration. It certainly doesn't hurt!" 

The German-manufactured pipe has been one of the world's most durable and greenest piping systems for five decades and proven successful in 70-plus countries. Aquatherm piping systems offer many performance and environmental benefits, such as:

- Eliminating toxic materials, glues and resins, and open flames from the piping installation equation
- An R-value of 1 or more per inch or greater depending on pipe size and SDR
- The fusion welding process, which creates seamless connections that last a lifetime without leaking or failing
- An optional multi-layer, fiber-composite layer in the pipe reduces linear expansion of the pipe by up to 75% compared to plastic piping



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