

**Systemcon<sup>®</sup> Inc.**



A Leader in

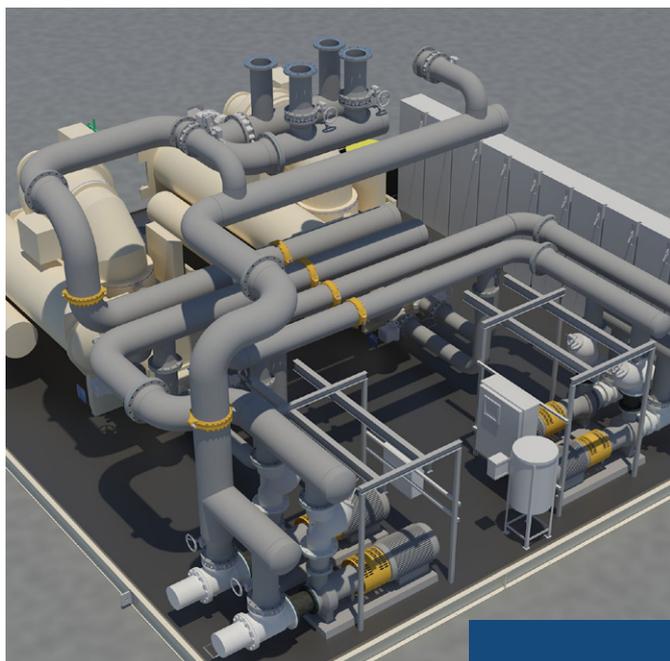
# MODULAR

## Utility Solutions



*Systecon Inc., based in West Chester, OH, is a leading manufacturer of custom, modular utility solutions, including modular central plants, CritiChill® modular indirect evaporative cooling, modular pumping systems and central plant controls.*





**Written by Margaret Patricia Eaton**

**W**ith nearly fifty years' experience, Systecon Inc. has emerged as the go-to manufacturer for innovative and customer-focused modular solutions, filling the needs of Fortune 100 companies in North America and U.S.-based multinational companies all over the world.

What are the factors that put Systecon ahead of the competition? Experience and innovation are two important ones. National Sales Director Chris Huston refers to one of the founders, James B. (Burt) Rishel, as key. Rishel was a professional engineer and one of the leading authorities on pumps and pumping systems in the world. A fellow in ASHRAE and recipient of ASHRAE's Distinguished Service award, he originated many of the current control technologies in the HVAC field for the operation of variable speed pumps. He authored two textbooks published by McGraw-Hill, which Huston says are still used by engineering students. His innovative spirit and interest in adapting to the newest technology has continued to be a driving force at Systecon, Inc.

Founded in 1971 as a manufacturer of pumping packages, Systecon now provides an array of custom central plants including chiller plants, hot water/steam boiler plants, VariPrime® pumping systems and more. "The industry has evolved over the last five decades to apply to significantly larger systems in terms of scope and capabilities. The ability to adapt to a changing construction world and to adopt newer technologies is what has allowed us to expand our capabilities to keep ahead of the industry."

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New technology has long been at the forefront for Systecon. For example, the company developed Wire-to-Water Efficiency (WWE) to determine the best pump selection and sequencing for optimal pumping system performance and efficiency. WWE refers to the ratio between the electrical energy input to the pumps and the kinetic energy achieved by the input. Optimization can reduce operation costs while still maintaining load requirements.

Systecon developed VariPrime® variable primary pumping in the 90s. It optimizes pumping performance using controls, advanced software, and variable speed pumps to vary the flow of system water using a single set of pumps. Huston says it is "something that has allowed us to be on the forefront of energy optimization of pumping systems for well over 20 years."

Systecon's newest innovation is CritiChill® indirect evaporative cooling, for which they hold a patent. Designed for energy and water efficiency, Huston explains that it's a critically important technology because of the huge amount of energy and ▶

water normally required by chilled water plants. “We’ve found a way to integrate the newest technology, leveraging it to benefit companies looking for large capacity chiller plants that use minimal energy and minimal water.”

Each system Systecon produces is 100 percent customized. Systems are thoroughly designed down to every detail. They include small things that are often overlooked, like allowances for proper service and maintenance clearances. “Everything we make is a unique, custom application-specific solution,” Huston says. “We begin work early in the process – the earlier the better, long before the onsite building starts. We work with the design team that represents the owners and they drive the overall concept. Then we apply our expertise to figure out the best modular approach to provide the solution they need. It’s a collaborative effort. Customization is what allows us to have the flexibility to accommodate such a wide range of industry.”

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***“Systems are thoroughly designed down to every detail.”***

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Systecon can also provide retrofit solutions for older buildings and renovations. However, Huston notes, “They’re trickier. There are pre-existing physical constraints that impact the type of heating and cooling solution that might be needed. We’re doing a lot of renovations right now for older buildings in Boston and New York. There’s limited space available, so we’re creating modular solutions with enclosures that can go outside on a rooftop, on a parking structure or out on a back lot.”

Systecon will take on any size project. As Huston enumerates, “We’ve built systems for large technology and software companies. We’ve done work with automotive, pharmaceutical and large industrial and chemical manufacturing plants. We’ve done universities, hospitals and schools, all the way down to an elementary school. Really there’s nothing too big or too small for us.”



And their work spans the globe. There's a world map on their website showing many locations where Systecon systems have been installed. When we inquired about it, Huston told us, "There are Systecon systems on five continents. Because our systems are modular, they can be shipped and easily reassembled just about anywhere. We're able to provide custom solutions for our clients all over the world."

He explains that, "Our international work is driven by Fortune 100 companies/multi-national corporations that find it easier to deal with us. These are substantial projects with significant costs. Since we design and manufacture everything in one place, it allows for product predictability and reliability. They're not relying on manufacturers in different locales which may not have the same expertise or quality standards."

Systecon's factory-built systems also address one of the major issues facing the industry today – labor shortages. Huston adds, "With baby boomers retiring at a record rate and fewer entering the workforce, there is an extreme shortage of labor. Company owners are looking for innovative ways to manage the construction process in their own business growth, so factory fabrication and construction is one of the tools being leveraged today." ▶▶



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*“There are Syscon systems on five continents. Because our systems are modular, they can be shipped and easily reassembled just about anywhere.”*



► This is not new for Syscon; it has long been ahead of the nationwide labor shortage problem. All Syscon systems are designed, assembled and tested in its state of the art 115,000 square foot facility which boasts five manufacturing bays and in-house engineering, production and administration teams. Not only do Syscon’s factory-built systems allow clients to benefit from a highly skilled and experienced labor force, some of whom Huston says have been there for 30 or even 40 years, they provide numerous other benefits.

Time savings, for instance. Since modular systems can be built in parallel with other construction happening at the job site, they can reduce overall project schedules. Building in a controlled factory environment year-round means no weather delays. It also provides greater workplace safety and improved security and protection of system components since they are not exposed to the elements at an unsecured worksite. ►►



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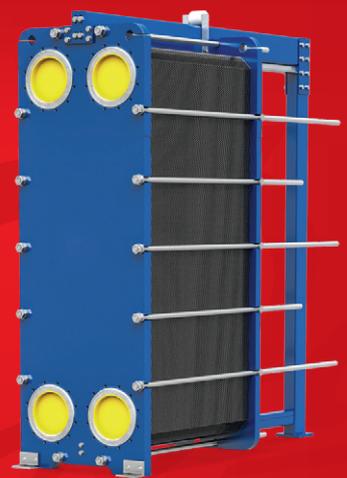
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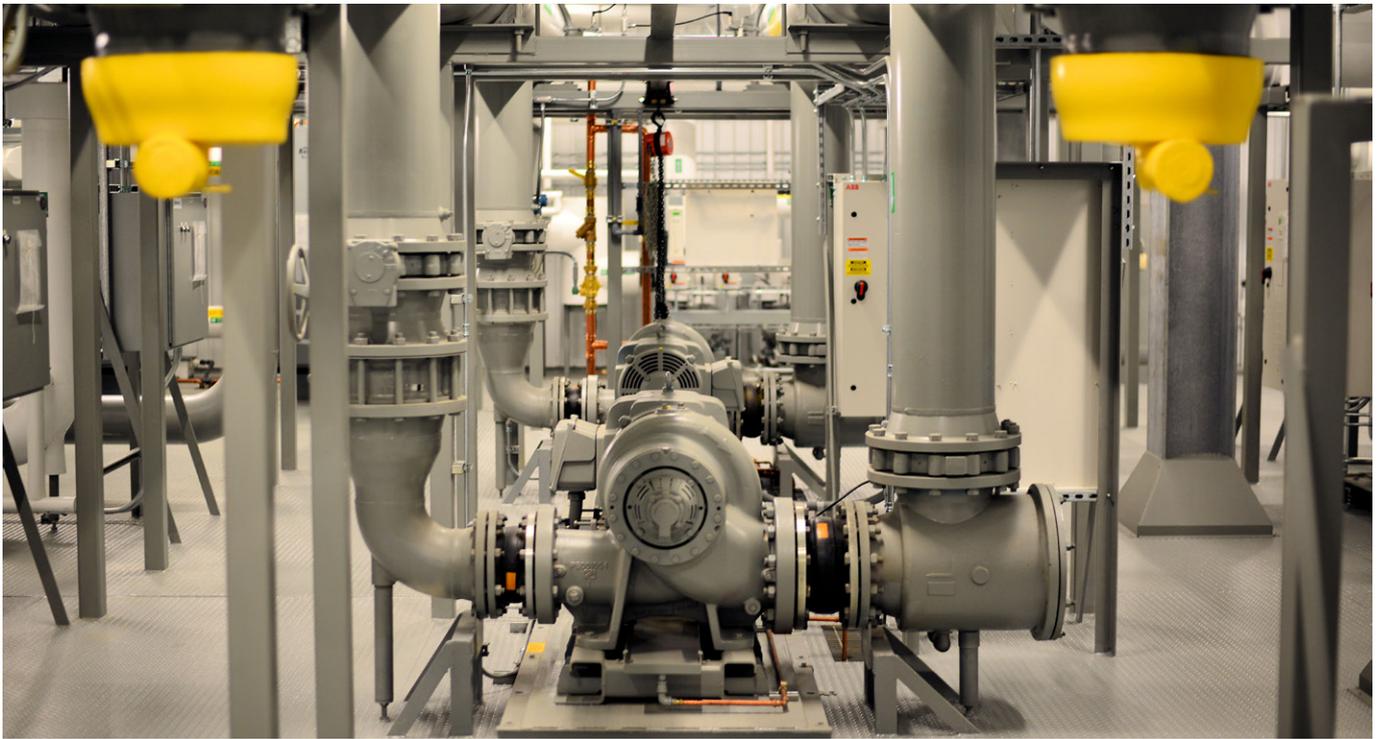


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► The ability to test a system in the factory and address any issues before delivery and reassembly is one of the most important benefits. It ensures the guaranteed performance and quality of a system. To this end, “We have invested heavily in hardware for a testing laboratory system which allows us to validate the quality and control all of the components that make up our modular solutions here at the factory,” says Huston. “We invite our customers to come in and kick the tires before they drive it home, so to speak. That’s a major factor for our success, as that’s one thing you can do here that you can’t do in the field,” he explains.

Controls are also key when it comes to optimizing system efficiency and Systecon’s central plant controls provide a major advantage. Their integrated controls interface with all the major components – chillers, boilers, cooling towers, and pumps – so inefficiencies can be evaluated and adjustments made to minimize power consumption without sacrificing performance for the complete system.



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In summary, the benefits to having a customized modular system by Systecon Inc. are many and long-lasting. “We are perceived to be one of the premier brands and what we do is at a higher price point,” says Huston. “But we’re okay with that and here’s why: We have one of the most extensive sets of engineering and application expertise in the business. We have a strong, competent control technology that we implement to make sure owners will benefit through energy-efficient operations for 25 to 30 years. In the end, quality is the best value. Our product will last and will use less energy, providing an overall savings over the system’s lifecycle,” he shares.

What does the future look like for Systecon? Says Huston, “Over the next five to seven years, we’ll continue to grow our re-assembly business presence nationally as well as our controls monitoring and service capabilities. It makes sense. We design and build the systems, so we’re the best team to put them back together, monitor and maintain them. And we always strive to provide our customers with the best equipment quality and value for the price possible, so we’ll continue to innovate and integrate new technologies into the modular solutions we provide.” ■



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