Eaton 9390 units are healthy choice for hospital

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Bill Brummett, facility engineer

Location:
Yakima, Wash.

Segment:
Medical

Problem:
The hospital needed highly reliable UPSs to provide continuous, clean power and ride-through capabilities until its generators kick on.

Solution:
Eaton® 9390, 9130, Service

Results:
Eaton 9390 and 9130 UPSs safeguard critical hospital equipment against dirty power and complete outages, while preserving valuable space.

Background
Serving more than 130,000 patients annually, Yakima Valley Memorial Hospital provides state-of-the-art, quality-of-life health care services. Home to 327 physicians representing 25 specialties, Yakima Memorial offers a 226-bed hospital, as well as facilities that provide coordinated services for children with special health care needs, world-class cancer care, comprehensive occupational and return-to-function services, and many other specialized services. Trusted medical and surgical care is teamed with advanced technology to provide patients with modern and immediate attention to acute and chronic medical needs.

Challenge
As the life-blood of the hospital, it is imperative that Yakima Memorial’s information systems remain in optimal health at all times. “Many of our systems are mission-critical,” emphasizes Bill Brummett, a facility engineer.

A wide range of the hospital’s equipment demands continuous uptime, including multiple servers, archived storage devices housing patient information, core switches that enable critical hospital communications, and tape libraries that store radiology and other health records. “All of these things are critical to daily operations,” Brummett points out.

In 2006, when Yakima Valley Memorial was building out a new data center, the hospital’s IT team began exploring a wide variety of power protection options. When one information systems manager asked Brummett for his opinion, “Basically I told him we wanted to purchase a well-known brand, a large capacity model, and a unit with expansion capability, because nothing ever stays the same,” he recalls.
Solution

Brummett’s assessment led the hospital to deploy the perfect Rx: a 100 kVA Eaton 9390 uninterruptible power system (UPS).

“Any time before, we had replaced a UPS on another floor with an Eaton 9130 model,” Brummett shares, noting that the smaller unit monitors equipment in the hospital’s critical care unit. “So when the IS professionals were looking for a larger one, I immediately suggested Eaton. The company backs its equipment 100 percent, and our 9130 unit hasn’t missed a beat since it’s been there.”

The same can be said for the Eaton 9390, which boasts an impressive combination of power performance, battery management, scalable architecture, flexibility, power density, and a comprehensive warranty and service plan. The UPS affords the hospital the highest level of protection available. With its double-conversion design, the 9390 shields equipment from the most common power problems, including outages, sags, surges, spikes, brownouts, line noise, frequency variation, switching transients and harmonic distortion.

Since Yakima Memorial relies on a generator backup system during prolonged outages, the 9390 is also on call to provide vital ride-through capabilities. “It gets us past any power bumps, and keeps the equipment running until the generator takes over,” Brummett explains.

One feature that enhances the reliability of the 9390 is its unique battery management system, which relies on advanced technology to extend battery life and optimize recharging time. In addition, an integrated battery management system tests and monitors battery health at all times. Yakima Hospital also values the special input circuit inside the 9390 that keeps total harmonic distortion (THD) at less than 4.5 percent at full load without compromising efficiency. As a result, the UPS transfers maximum power between the source and protected load, making it exceptionally friendly to the hospital’s generators.

Furthermore, the scalability of the 9390 — which can expand up to 160 kVA — enables the unit to keep pace with the hospital’s growing power requirements, since up to four equivalent modules can be paralleled for additional capacity or redundancy. Another major selling point for Yakima Memorial was the 9390’s compact footprint, which is 35 to 50 percent smaller than competitive UPSs in its class. And since the unit can be installed against back and side walls with cabling through the top or bottom, it lends itself to more flexible locations options, as well as facilitates fast and easy installation.

“In a hospital, space is always at a premium,” Brummett points out. “We are always remodeling and moving equipment around. Our data center is full of servers, and it’s a very tight space. This UPS worked great.”

In fact, Yakima Memorial was so impressed with the 9390 that a year after the initial deployment, it purchased a second 90 kVA unit. “We’d experienced excellent reliability with the other 9390, so we said ‘let’s go with that same manufacturer,’” Brummett reports.

It was during the process of expanding its laboratory that the hospital realized its existing Deltec UPS did not have sufficient capacity to handle the larger equipment load. “We knew that we needed to bump up to a bigger UPS,” Brummett says.

For years, the hospital’s laboratory equipment had been safeguarded by the Deltec UPS, a brand purchased by Exide Electronics in 1996 and subsequently rolled into the Powerware® product line, which is owned and serviced by Eaton.

“It’s still plugging away today in a different part of the hospital,” Brummett reveals. Just like the pair of 9390 units, the Eaton 9130 on the hospital’s critical care floor also provides continuous, clean power to connected equipment and sustains devices in the event of an outage until Yakima Memorial’s generator kicks on. “It has life support, monitors at the nurses’ station and other vital equipment attached to it,” Brummett says.

The Eaton 9130 UPS delivers premium online protection, as well as scalable battery runtimes. With an efficiency rating of greater than 95 percent, the UPS cuts also energy costs while significantly extending battery service life with Eaton’s exclusive ABM technology.

With a unique appreciation for the benefits of preventive health measures, Yakima Memorial keeps a constant pulse on its 9390 units by relying on an Eaton service plan. “A technician visits every few months to check the batteries and complete a PM,” Brummett explains. “We take comfort in having someone who can look after the units that way. It’s much better to catch something when it’s a small issue, rather than when it becomes a big problem.”

Results

For Yakima Memorial, the Eaton units have proven to be just what the doctor ordered. With the UPSs in place, the hospital is now able to:

• Safeguard critical equipment against dirty power
• In the event of an outage, keep critical systems up and running until generator power can kick in
• Expand its power protection solution as new equipment is added
• Preserve valuable hospital floor space with the unit’s small footprint
• Maintain the long-term health of the units with an Eaton service plan

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