



Large-scale UPSs guarantee patient safety

Power to protect a patient's life

Modern medical equipment is very sensitive to power cuts and fluctuations. Electronic equipment is used to diagnose, treat and monitor patients – thus, it is vital that equipment is able to function unconditionally. The North Estonia Medical Centre chose Eaton® UPSs to protect its patients' lives.

To learn more about Eaton UPSs, visit www.eaton.com/powerquality

The North Estonia Medical Centre's mission is to provide top-quality, patient-friendly health care and to promote the development of medicine in Estonia. With the aim of offering the best quality treatment and diagnostic technology available, the hospital cannot tolerate power supply failures of any kind. Instead, it must be able to ensure a problem-free working environment for its 3,400 employees without jeopardising patients' lives.

"When deployed in an interdisciplinary clinical environment, high-technology equipment forms a solid prerequisite for improving patient safety and treatment quality," outlines **Ivo Milli**, Technical Director at the North Estonia Medical Centre.

To create this high-tech treatment and diagnostic complex in Tallinn, the Estonian capital, the North Estonia Medical Centre constructed a new five-story building where a number of different treatment blocks were centralised in one complex. Completed in 2009 and providing almost 30,000 square metres of floor space, the new building now houses emergency medicine, intensive care, radiology, radiotherapy and nuclear medicine departments as well as 18 operating theatres.

"Medical equipment is highly dependent on secure electricity. That's why UPSs are also an integral part of modern medicine," says **Aivar Küüle**, Chairman of the Board at

Poweram Elektriseadmed, the customer's key contact and Eaton Power Quality's distributor in Estonia.

"Right at the beginning of the new building's construction project, the hospital decided to go for double-conversion UPSs because of their ability to guarantee clean power for a load in all circumstances, regardless of the power source. When it's a question of critical applications on which people lives depend, double-conversion topology is the only option as it is able to protect against all imaginable power disruptions," he continues.

Large-scale UPSs are critical in modern medicine

When selecting a power protection solution, the North Estonia Medical Centre paid special attention to factors such as efficiency, interoperability with their 250 MVA generator, and the physical dimensions of the UPS units. The hospital had previous experience of Eaton



Powering Business Worldwide

Eaton Corporation is a diversified power management company with 2009 sales of \$11.9 billion. Eaton is a global technology leader in electrical components and systems for power quality, distribution and control; hydraulics components, systems and services for industrial and mobile equipment; aerospace fuel, hydraulics and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems for performance, fuel economy and safety. Eaton has approximately 70,000 employees and sells products to customers in more than 150 countries. For more information, visit www.eaton.com, www.eaton.com/powerquality
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solutions, including small and mid-range UPSs and related services: 100 and 160 kVA devices for magnetic tomographs (imaging devices) and a selection of 6 kVA UPSs for various applications.

"This experience played an important role when Eaton was selected to deliver the new devices. The hospital also emphasised a good price-to-quality ratio and a strong local presence for support services," Küüle says.

In the new building, all medical equipment and lighting for the 18 operating theatres, as well as the equipment used in the intensive care and emergency departments, are protected by six Eaton 9395 275 kVA units configured as an N+1 system. The UPSs, featuring Hot Sync paralleling technology and a backup time of 30 minutes, also secure X-ray equipment and the building's emergency lighting. In addition, one 9395 275 kVA unit with a 10-minute backup time protects the IT systems. Eaton 9390 UPSs – one 120 kVA and two 160 kVA units – protect the hospital's tomographs.

Broad expertise ensures excellent results

Eaton's Estonian distributor, Poweram Elektriseadmed, led the UPS project, providing planning, installation and implementation services as well as being responsible for all future service and maintenance needs.

"Although there were many different parties involved in the building project, it turned out very well and went smoothly. Luckily the UPS unit delivery and installation was already completed during the construction phase, as doing this later would have been very difficult," Küüle points out.

The key to continued success lies in customer satisfaction.

"Co-operation with Poweram and Eaton, and the technical knowledge and support we received, were excellent. UPS deliveries met deadlines and units were installed competently," Ivo Milli says.

"Our new building is a highly noteworthy milestone in Estonian medicine. You cannot make mistakes when there are people's lives at stake," he concludes.



The North Estonia Medical Centre's newest building uses Eaton UPSs to secure medical equipment in operating theatres as well as in the intensive care and emergency departments. Ivo Milli (left) and Aivar Küüle proudly present the hospital's brand new UPS room.



Eaton 9395 275 kVA UPS



Eaton 9390 160 kVA UPS

The North Estonia Medical Centre in a nutshell

- Estonia's foremost hospital; main buildings situated in Tallinn (various locations), Kose and Keila
- Manages medical operations through its clinical divisions: Anaesthesiology Clinic, Diagnostics Division, Surgery Clinic, Psychiatry Clinic, Internal Medicine Clinic and Follow-up and Nursing Care Clinic
- Operates as a tertiary care hospital, providing services in almost all medical specialties
- Employs over 3,400 people
- Treated almost 400,000 patients in 2009
- Newest building, completed in 2009, provides 29,800 square metres of floor space and employs 10 Eaton large-scale UPSs
- The hospital also uses an Arcon arc fault protection system, compact circuit breakers and air circuit breakers delivered by Eaton