HIGH-ENERGY X-RAY GENERATOR

The Recovered Chemical Materiel Directorate (RCMD) uses the high-energy X-ray generator to assess large, thick-walled items in a variety of configurations.

This generator can be used independently, in conjunction with a suitable detector, or on RCMD's Large Item X-ray System, (LIXS), allowing for increased image resolution for thick-walled and overpacked munitions. The high-energy X-ray generator has an output of up to six megaelectronvolts (MeV), whereas the standard X-ray generator used on the LIXS and the Digital Radiography and Computed Tomography (DRCT) system has an output of 300 kiloelectron volts (keV). This higher-energy generator can penetrate up to eight inches of steel and up to 30 inches of concrete and other non-steel material.

The high-energy X-ray generator consists of a power supply, an accelerator and a control panel.

RCMD's future development efforts, which will be conducted at Idaho National Laboratory, include adapting the LIXS and DRCT for X-ray assessment of items of interest that may require higher-energy systems.

The high-energy X-ray generator allows for increased image resolution for thick-walled and overpacked munitions.

Specifications			
Format of X-rays Digital	**Accelerator (Radiator)** 24" x 16" x 9" / 200 lbs	**Power supply unit** 24" x 15" x 14" / 140 lbs	**Control panel** 5" x 8" x 2" / 1.5 lbs
X-ray output energy selector 2 to 6 MeV	**Radiation beam spread angle** 26 degrees	**AC power input** 110/240V 50/60Hz	**Penetration capability** Steel: 8 inches Non-steel: 30 inches

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