



X-Ray Tubes

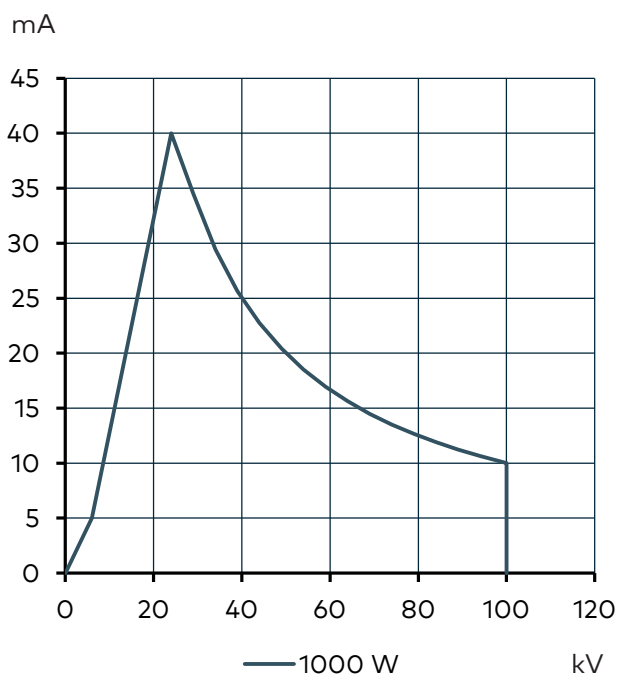
CXR-105

Product Description

The CXR-105 is an unipolar water-cooled X-ray tube insert with integrated radiation protection. It comprises a single focal spot, a tungsten anode and a directional beam. The tube is specifically designed for non-destructive imaging applications.

Power rating chart

Power rating at a given filament current



Product Specifications

Nominal tube voltage	100 kV
Continuous rating	1000 W
Focal spot acc. EN 12543	d = 3.0 mm
Focal spot acc. ASTM E1165-12	N/A
Filament current, max	3.2 A
Filament voltage, typical	4.6 V
Inherent filtration	0.8 ± 0.1 mm Be
Target material	W
Target angle	20°
Radiation coverage	40°
Leakage radiation, max at loading factors in 1 m distance	2.5 mSv/h (100 kV; 10 mA)
Weight	3.8 kg
Terminal type	R10
Gapping spring-loaded HV-cable	2 rings visible (4.0 - 5.0 mm)
Gapping non-spring-loaded HV-cable	3.0 - 4.0 mm
Grease quantity for HV-cable terminal	0.6 ml
Product No.	915110.51

Cooling

Cooling medium	Water
Cooling medium flow, min.	4 l/min
Cooling medium temp. at inlet, max.	35°C
Pressure at cooling medium inlet, max.	6 bar
Post-cooling time after switchoff, min.	2 min

General Information

General

The control of high-voltage, tube current and filament current as well as the design of the cooling system and the radiation protection are within the responsibility of the integrator. Settings in the generator must assure that the X-ray tube will be protected against overcurrent, overvoltage and lack of cooling. Otherwise the tube and/or the radiation protection may be damaged and become a hazard. For detailed instructions always refer to the "X-Ray Tube Manual."

Radiation protection

When installing an X-ray tube assembly into an X-ray equipment and/or operating an X-ray equipment, the responsibility for radiation protection is with the integrator. Compliance with local regulatory requirements and limit values must be assured. After each tube exchange, repair, modification or upgrade of the unit, radiation protection integrity should be performed. Any modification of a Comet product will result in the warranty being invalidated.

Connection of the X-ray tube

High-voltage cables must be installed by trained personnel only. Please proceed with the installation as follows: Cleaning, greasing and gapping. Respect the cleanliness, the correct amount of grease and the correct pressure of the plug inside the high-voltage receptacle.

Cooling

The integrator is in charge that the cooling circuit is properly connected to the cooling system. Prior to operating the tube, the cooler must be turned on. Make sure that the coolant flow meets the required cooling conditions and is monitored. If any of the cooling conditions is not met, the high-voltage has to be switched off immediately. When the tube is switched off intentionally, the coolant flow must continue for at least two minutes in order to protect the anode and the lead protection from overheating.