

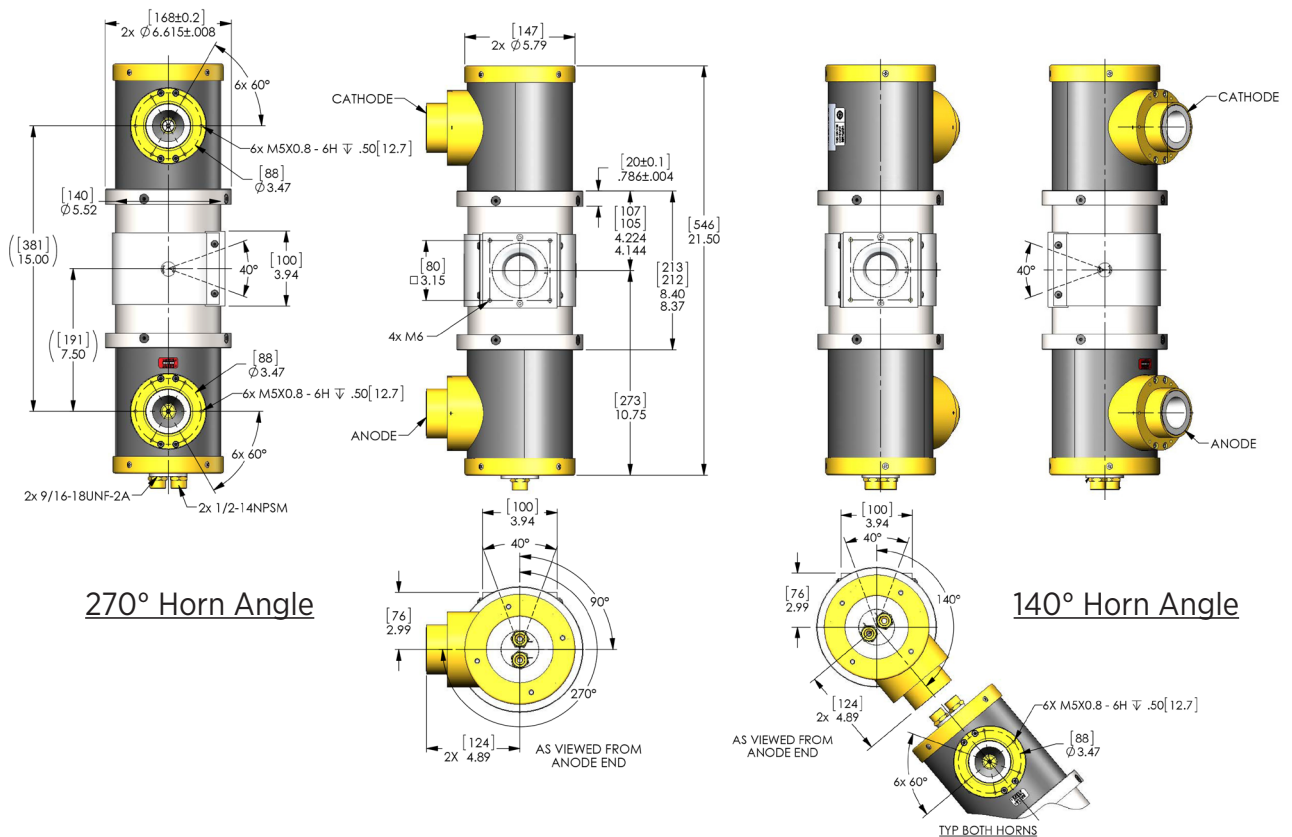
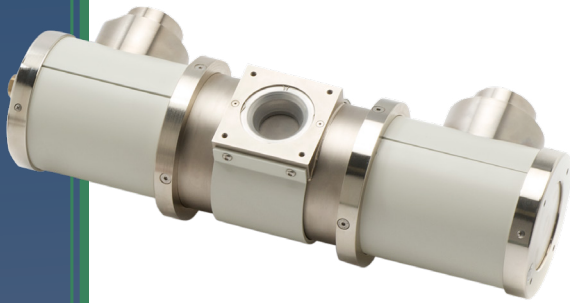
NDI-320-26

Stationary Anode X-Ray Tube



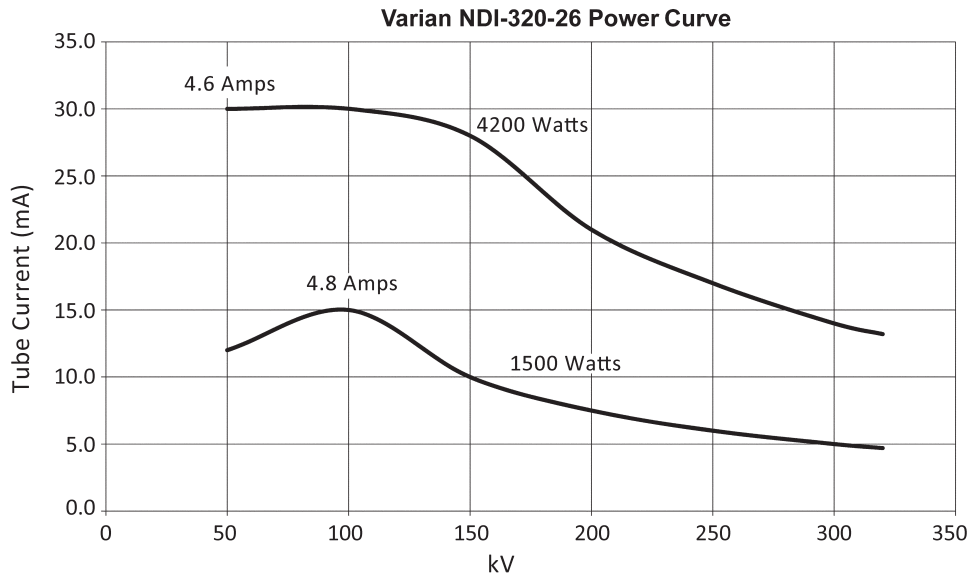
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X-Ray Tube Specifications

Maximum Peak Voltage	320 kV	Temperature at fluid inlet (maximum)	50°C
Anode to Ground	160 kV	Cooling Medium	Oil
Cathode to Ground	160 kV	Reference Axis	Perpendicular to port face.
Focal Spot EN12543		Radiation Coverage	40°
Small	D = 3.0 mm	Loading Factors for Leakage Radiation	320 kV, 13 mA
Large	D = 5.5 mm	Maximum Radiation Leakage	5 mSv/h
Focal Spot Nomial		X-Ray Tube Assembly Permanent Filtration	4 mm Be
Small	1.5 mm	High Voltage Cable	R24
Large	4.0 mm	Housing Type	V320
Target Angle	20°	Weight (approx.)	41.0 kg (90.4 lbs)
Target Material	Tungsten		
Maximum Continuous Rating			
Small	1500 W with 14 Liter/min cooling flow		
Large	4200 W with 14 Liter/min cooling flow		



Instructions for Operation

General

The control of the high voltage and the filament current as well as the design of the cooling unit is the responsibility of the equipment manufacturer.

High Voltage Connection

One terminal type R24 high voltage cables supply high voltage and filament current.

Two different methods of mounting the high voltage cable are available.

1. Mounting flange requiring 4 mm gap for DSI and Essex cables and 6 mm for Claymount cables, as illustrated in tube operating manual.
2. Spring loaded cable head, 2 rings showing, as illustrated in the tube operating manual.

Anode Cooling and Coolant Flow

It is the user's responsibility to ensure that the cooling medium flow rates are met under all operating conditions including tube start-up. Failure to meet flow rate requirements can lead to anode and tube failure.

Control of Cooling Medium

Flow and temperature of the cooling medium at the inlet to the tube assembly must be appropriately monitored. High voltage must be terminated when the pressure or flow rate falls below the minimum level or when the temperature exceeds the maximum level. When power to the X-ray tube is switched off, the coolant flow must continue for at least 2 minutes in order to protect the anode from damage.

NOTE: For further information and troubleshooting, refer to the tube Operating Manual.

WARNING

Beryllium windows transmit a very high level of long wavelength X-radiation, which can injure human tissue. Injury may occur from even very short exposures to the primary X-ray beam. Follow all precautions necessary to avoid radiation exposure to humans.

The radiation dose rate cannot be accurately measured with conventional radiation measurement instruments. Radiation intensity in each installation will vary, and calibration must include the effects of long wavelength X-radiation.

Fumes from beryllium metal (or its compounds) as well as dust can be hazardous if inhaled. During use, corrosion products may occur on the beryllium window, but these should not be scraped off, machined, or otherwise removed. Tube unit disposal should conform to federal, state, and local regulations governing beryllium.