

# HPX-320-11FB

## Stationary Anode X-Ray Tube



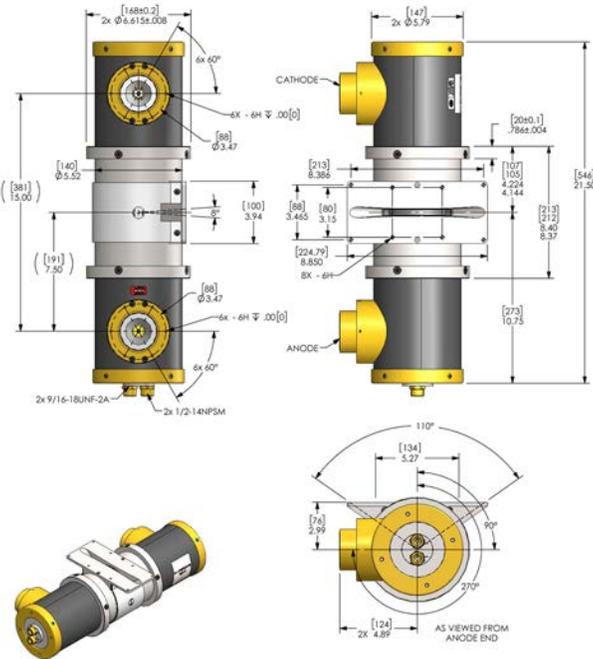
Making the Invisible Visible



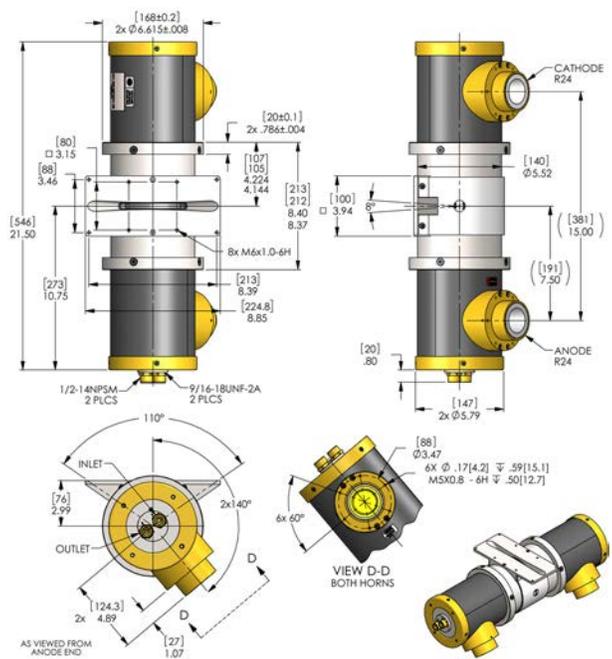
### Product Description

The HPX-320-11FB is a liquid cooled stationary anode, metal ceramic X-ray source. This source is designed for security and NDT applications.

### 270° Horn Angle



### 140° Horn Angle



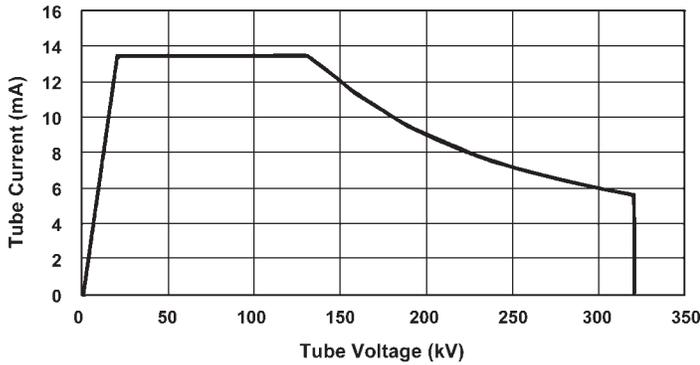
Dimensions are for reference only

### X-Ray Tube Specifications

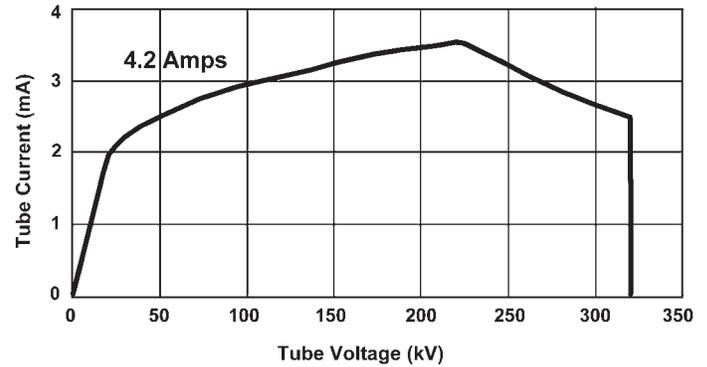
Maximum Peak Voltage	320 kV	Reference Axis	Perpendicular to port face.
Anode to Ground	160 kV	Radiation Coverage	8° x 110°
Cathode to Ground	160 kV	Loading Factors for Leakage Radiation	320 kV, 5.6 mA
Nominal Focal Spot		Maximum Radiation Leakage	5 mSv/h
Small	0.4 mm*	X-Ray Tube Assembly Permanent Filtration	1.0 mm Be + .4 mm Fe
Large	1.0 mm	High Voltage Cable	R24
Target Angle	11°	Housing Type	V320FB
Target Material	Tungsten	Weight (approx.)	44.5 kg (98.0 lbs)
Temperature at fluid inlet (maximum)	50°C		
Maximum Continuous Rating			
Small	800 W with 14 Litre/min cooling flow		
Large	1800 W with 14 Litre/min cooling flow		
Cooling Medium	Oil		

\* .4 mm @ 40% Threshold

## 1800 Watts - Large Filament



## 800 Watts - Small Filament



### Instructions for Installation and Operation

#### **Grounding**

The customer is responsible to provide earth ground to the x-ray tube housing. It is recommended to use a conductive clamp around the center metal can to assure a good ground termination.

#### **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.

#### **Cooling of the Anode**

It is the responsibility of the customer to ensure that the cooling medium flow meets the required cooling conditions. Insufficient cooling of the anode can lead to the destruction of the anode, therefore cooling must be switched on before the application of high voltage.

#### **Control of Cooling Medium**

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

### **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.