

The Jupiter 5000 Series is a 50kV, 50W packaged X-ray tube designed for applications where high flux density and continuous operation are important.

Utilizing our highly stable and high intensity X-ray tube technology, the Jupiter 5000 Series is ideal for medical imaging applications and most industrial inspection and non-destructive testing applications that require high resolution, including PCB assembly, battery, plastic, metal and mechanical parts inspection.

The 5000 Series features a stainless steel, lead-lined package that is filled with dielectric oil, which enables the unit to provide maximum X-ray shielding and heat dissipation. The design includes high voltage and filament connectors, making it ideal for plug and play operation.

The Jupiter 5000 Series is available in a wide range of spot sizes, targets and price points to meet your needs.



### Benefits

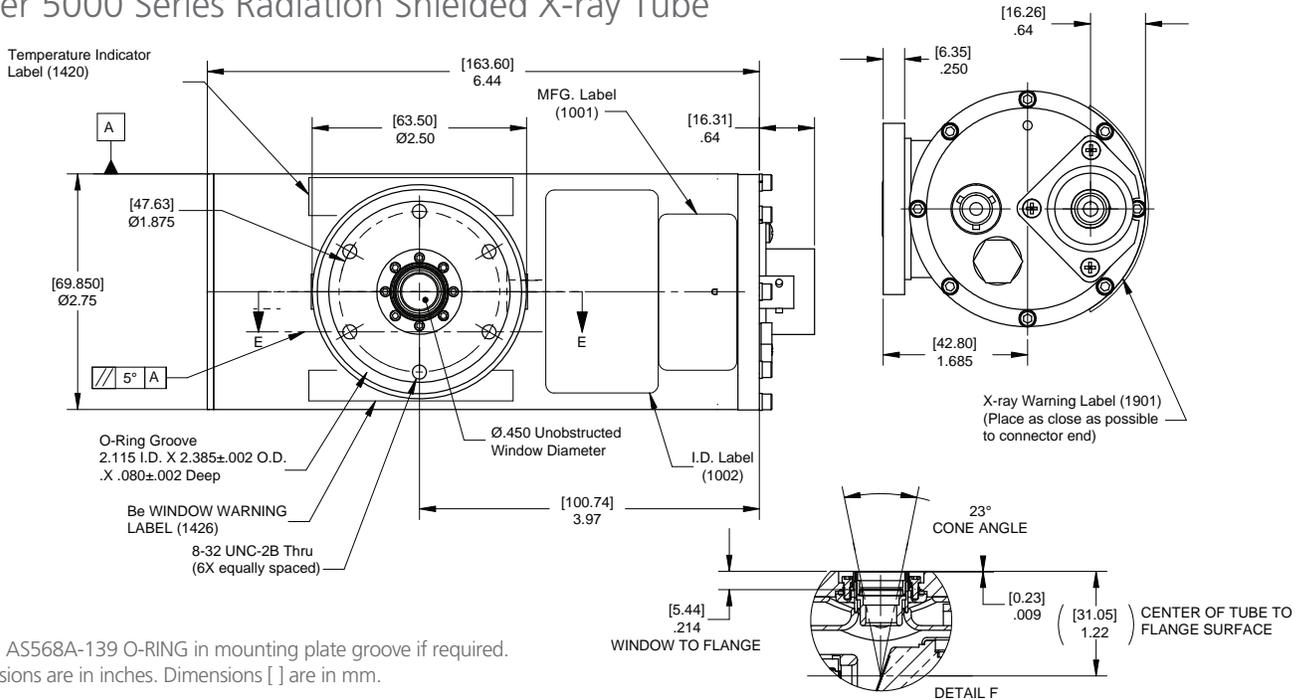
- Wide operating range enables optimal image contrast
- Stable X-ray output delivers high precision measurements
- Low attenuation beryllium window ensures high transmission of low energy X-rays
- Fully-shielded compact package eliminates X-ray leakage and easily integrates into your system

### Applications

- Medical Imaging
- Printed circuit board and electronic device inspection
- Non-destructive testing of plastic, metal and mechanical parts
- Thickness gauging
- Analytical XRF

Specifications	
Operating Voltage Range:	50kV max. Lower kV cutoff varies by product. See product ordering table.
Maximum Power:	50W (except 93035)
Maximum Beam Current:	1.0mA (except 93512)
Focal spot size:	See product ordering table.
Maximum Filament Current:	See product ordering table.
Filament Voltage:	2.0V (nominal)
Focus to Object Distance (FOD):	See diagram next page
Window material and thickness:	Be @ 127µm
Cone of illumination (unobstructed):	23°
Window diameter (unobstructed):	11.43mm (.450")
Target material:	See product ordering table next page
Target angle:	12°
Stability:	0.2% 4 hours
Polarity:	Grounded cathode
Ambient operating temperature:	0°C to 40°C
Cooling:	150 CFM forced air recommended. Longest lifetimes are achieved by keeping case temperature as low as possible in operation. Maximum temperature: 55°C. Contact sales@oxinst.com to discuss your specific cooling applications.
Shielding:	0.25mR/hr @ 2" (except at HV connection)
Dimensions:	180mm L x Ø70mm (7.09" L x Ø2.76")
Weight:	2.26kg (5.0 lbs)
Storage Conditions:	-10°C to 55°C Barometric Pressure: 50-106kPa; Humidity: 10-90% (no condensation) Condensation on Be window will cause window corrosion, vacuum loss and X-ray tube failure

# Jupiter 5000 Series Radiation Shielded X-ray Tube



## NOTES

1. Use an AS568A-139 O-RING in mounting plate groove if required.
2. Dimensions are in inches. Dimensions [ ] are in mm.

## Product Ordering Table

See also matched Shasta power supply and/or matching cables part numbers on page 34.

Part Number	Outline Drawing	Target	Operating Range (kV)	Max Anode Current (mA)	Max Anode Power (W)	Max Filament Current (A)	Spot Size (µm)**
93000*	8166	W	10 - 50	1.0	50	1.7	165 Max.
93001	8166	Mo	10 - 50	1.0	50	1.7	150 Typ.
93025	8166	Ag	4 - 50	1.0	50	1.3	1000 Typ.
93035	8166	Au	10 - 50	1.0	25	1.3	1000 Typ.
93046	8208	Mo	4 - 50	1.0	50	1.3	1000 Typ.
93048	8166	Cu	10 - 50	1.0	50	1.7	150 Typ.
93057	8166	Rh	10 - 50	1.0	50	1.7	180 Typ.
93059	8203	Rh	10 - 50	1.0	50	1.7	180 Typ.
93069*	8166	W	10 - 50	1.0	50	1.7	70 Max.
93070	8166	Cr	10 - 50	1.0	50	1.7	200 Typ.
93071	8203	W	10 - 50	1.0	50	1.7	150 Typ.
93072	8166	Ti	4 - 50	1.0	50	1.3	1000 Typ.
93073	8166	Pd	10 - 50	1.0	50	1.7	200 Max.
93078*	8203	Cu	10 - 50	1.0	50	1.7	175 Max.
93079*	8203	Mo	10 - 50	1.0	50	1.7	150 Typ.
93089*	8166	W	10 - 50	1.0	50	1.7	50 Max.
93095*	8166	Mo	20 - 50	1.0	50	1.7	55 Max.
93512*	8166	Fe	4 - 50	2.0	50	1.4	1000 Typ.

Note: Part number specific copies of outline drawings and product specification sheets are available.

\*Includes a thermal switch which adds an additional level of protection to the cooling system safeguards. // \*\*Max. = Maximum, Typ. = Typical, Nom. = Nominal (per IEC60336, NEMA XR5-1999)

Visit [xray.oxinst.com](http://xray.oxinst.com) or [xray-sales@oxinst.com](mailto:xray-sales@oxinst.com) for more information.

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