



40kV with MAGNUM®

Moxtek® manufactures low-power, miniature X-ray sources for a variety of applications including handheld and benchtop instruments. Moxtek sources are small, lightweight, and can be packaged into custom enclosures. The MAGNUM® X-ray source produces high output with a small spot size.

Features	Benefits
Small, compact design	Close coupling of source to detector
Lightweight	Portable, versatile, easy to integrate
Stable output	Enables precise calibrated measurements
Low power consumption	Long battery life
Low spectral contamination	High precision of analysis
High x-ray output	Short sampling time
Customized configurations	Flexible form factor

*See reverse side for customizable options

Applications

Materials Characterization and Identification (XRF)

- Metal and alloy sorting
- Mining and geology
- Environmental analysis
- Lead in paint
- Regulatory (RoHS/WEEE)
- Art and archeometry
- R&D

X-ray Imaging

- Medical R&D, small animal imaging
- Security
- Radiographic inspection

Mechanical Specifications

Tube Type: Metal-ceramic

Cathode Type: Tungsten filament

Operating Temperature: -10 to +50 °C

Storage Temperature: -25 to +85 °C

Cooling: Conduction

Weight: 450g (Typical)

Available Targets: Ag, W, Pd, Rh

Source Characteristics

HV Polarity: Grounded anode

High Voltage: -4 to -40kV

Beam Current: 0.005 to 0.10mA

Total Power: 4.0 watts (maximum)

Stability: <1.0% RSD

Window: Beryllium, 0.125mm or 0.250 thick

Battery Input Power: 7-12 VDC

Focal Spot: 500 to 800µm FWHM (typical)

RoHS Compliant: RoHS3

Standard Warranty: 1 year or 2000 operating hours

Ordering Information

Part Number	Anode Type	Be Foil Thickness (µm)
TUB00045-AG1	Ag	250
TUB00045-AG2	Ag	125
TUB00045-W01	W	250
TUB00045-PD1	Pd	250
TUB00045-RH2	Rh	125
TUB00045-RH3	Rh	125

Standard Package

- MAGNUM® tube potted in a brass shield
- High voltage power supply potted on an aluminum shell
- Standard high voltage wiring length of 292mm, (11.5 inches)
- High voltage insulation- silicone potting

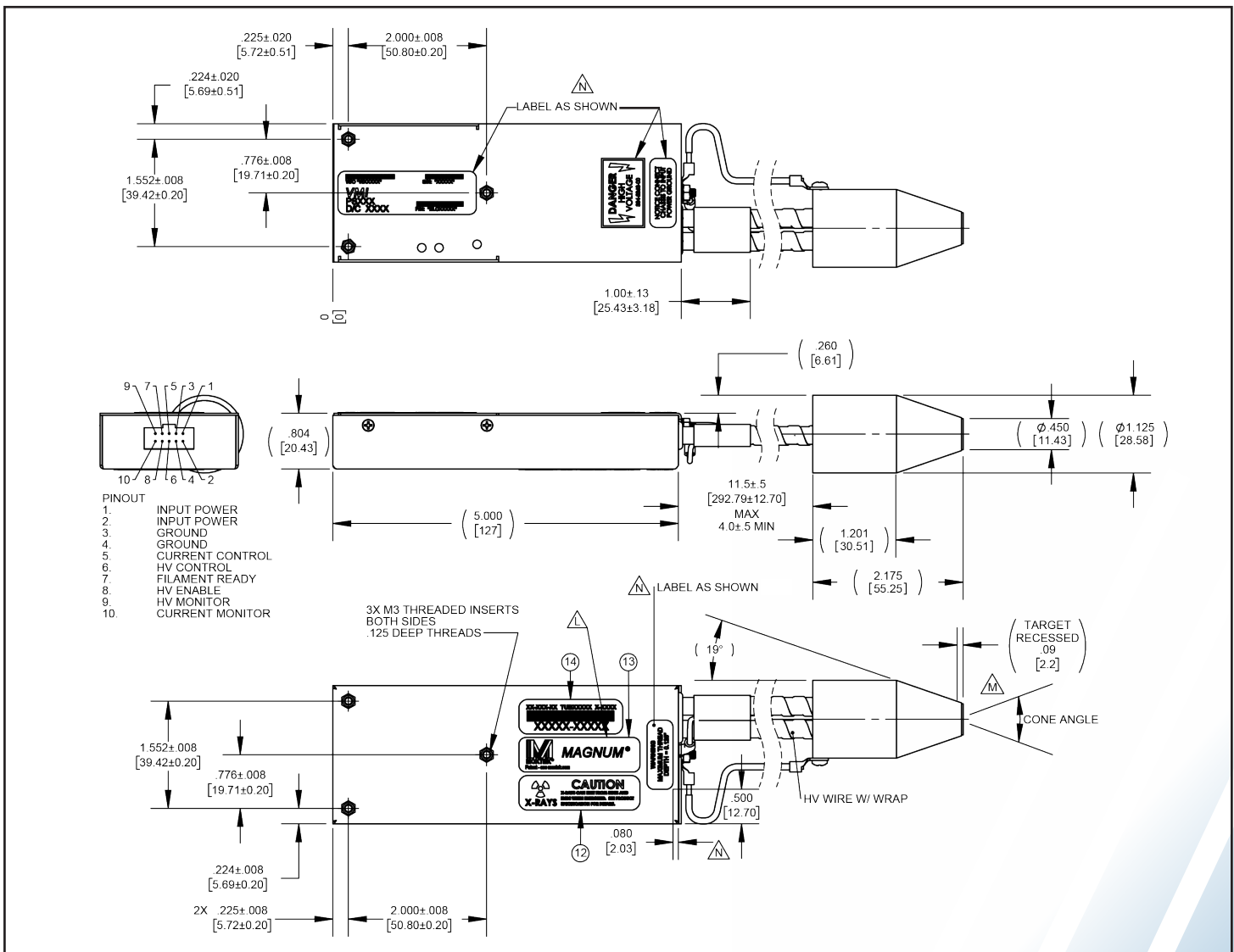
Source Controller Options

- FTC-200 Controller. Source can also operate using analog DC voltage signals

*Customizable Options- Customer to Specify

- Variable high voltage wiring length 100-292mm, (4.0 to 11.5 inches)
- Additional target materials available

40kV MAGNUM® Mechanical Drawing



WARNING

X-rays are emitted from the sides and ends of this product when energized. Moxtek takes actions to reduce the exposure rate from X-rays emitted from the sides through the use of various shielding agents inherent to this product design. It is the buyer's responsibility to ensure adequate protection is provided in the testing and manufacturing of the final product and that users are adequately shielded from incidental exposure.

This product contains a beryllium window. The inhalation of fumes or dust from beryllium metal (or its compounds) are hazardous. Corrosion may occur on the beryllium window during use, these should not be scraped off, machined, or removed. Disposal of the tube unit should conform to federal, state, and local regulations governing beryllium.



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