**Fine Focus X-RAY TUBES**

### Specifications

**60 mm**
- Ceramic / metal body tube construction
- Easy Clean Water Filter (Patented)
- Power Rating: 2200 Watts Max (Depends on target)
- Maximum kV: 55
- Maximum mA: 40
- Polarity: Negative (Grounded Anode)
- Duty Cycle: Continuous
- Cooling: Water 3.5 L/min
- Maximum Operating Temperature: 60 ºC
- X-ray Exit Window: Beryllium 0.25 mm thick
- Fine Focus, Long Fine Focus, Normal Focus and Broad Focus
- Target Angle: 0º (6º takeoff angle)
- Overall Tube Dimensions: 60 mm diameter, 193 mm length, short anode
- Available Anodes: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Mo, W, Ag

**30 mm**
- Ceramic / metal body tube construction
- Power Rating: 210 Watts Max (Depends on target)
- Maximum kV: 30
- Maximum mA: 7
- Polarity: Negative (Grounded Anode)
- Duty Cycle: Continuous
- Cooling: Water 1.0 L/min
- Water hose connectors: Quick Disconnect
- Water Hose length (0.5 meters or as per customer request)
- Maximum Operating Temperature: 60 ºC
- High Voltage Cable Length: 8 meters
- X-ray Exit Window: Beryllium 0.125 mm thick
- Overall Tube Dimensions: 30 mm diameter, 125.5 mm length
- Available Anodes: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Mo, W

**16 mm**
- Ceramic / metal body tube construction
- Power Rating: 40 Watts Max
- Maximum kV: 20
- Maximum mA: 2
- Polarity: Negative (Grounded Anode)
- Duty Cycle: Continuous
- Cooling: Water 1.0 L/min
- Water hose connectors: Quick Disconnect
- Water Hose length (0.5 meters or as per customer request)
- Maximum Operating Temperature: 60 ºC
- High Voltage Cable Length: 8 meters
- X-ray Exit Window: Beryllium 0.125 mm thick
- Overall Tube Dimensions: 16 mm diameter, 125.5 mm length
- Available Anodes: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Mo, W

**Custom**
- Need a custom x-ray tube or power supply? At Proto Manufacturing we can design and build your x-ray tube to your specifications. Water cooled, air-cooled, custom power ratings, custom focal spot size, custom targets, custom tube housings, custom windows, custom power supply and cables. We can manufacture single tubes, low volume and high volume runs.

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