



RAXON100HPO



RAXON100HPO is an industrial X-ray source for producing a beam of high intensity X-rays with small focal spot and high stability which ensures uniform beam intensities and dose rate throughout its fan/cone-shaped beam. Stable voltage and electrical power applied to X-ray tube guarantees stable dose exposure and high-quality images in digital radiography applications.

Applications

- Industrial Radiography
- X-ray Imaging
- X-ray Irradiation
- Non-Destructive Testing
- Food Inspection
- Security Inspection
- Densitometry and Thickness Measurement

Specifications

X-ray Characteristics:

Tube Type: Stationary anode, Glass tube, Tungsten target, Be filter

Focal Spot: 0.5mm (IEC 336)

Beam Filter: 2mm thick 6061 Al, ± 0.01

Beam Geometry: Symmetrical fan up to $50^\circ \times 30^\circ$, cone up to 40°

Input Voltage:

220 \pm 10% Vac, 50/60Hz, 3A maximum

X-ray Tube Voltage:

Nominal X-ray tube voltage is adjustable between 60kV to 110kV with 5kV step

X-ray Tube Current:

0.1-4mA over specified tube voltage range

X-ray Tube Power:

400W, continuous mode

Voltage Regulation:

Line: $\pm 0.1\%$ for a $\pm 10\%$ input line change of nominal input line voltage

Load: $\pm 0.1\%$ for a 0.1mA to 4mA load change

Voltage Accuracy:

Voltage measured across the X-ray tube is within $\pm 2\%$ of the programmed value

Voltage Risetime:

Ramp time shall be <200ms from 10% to 90% of rated output

Voltage Overshoot:

Within 5% of rated voltage in <10ms

Voltage Ripple:

Up to 1% pp of rated voltage

Current Regulation:

Line: $\pm 0.1\%$ for a $\pm 10\%$ input line change of nominal input line voltage

Load: 0.5% @ 60-110kV, 0.1-4mA

Current Accuracy:

Current measured through the X-ray tube is within $\pm 2\%$ of the programmed value

Current Risetime:

<200ms from 10% to 90% of rated output

Arc Intervention:

4 arcs in 10 seconds with a 200ms quench = Shutdown

Filament Configuration:

Internal high frequency AC filament drive with closed loop filament emission control

**Digital Interface:**

RS-232/USB/Ethernet Interface selectable port

Control Software:

A demo GUI for engineering evaluations will be provided for the RS-232/USB/Ethernet digital interface and Encoded Command Port for customized software

Emergency Stop:

A physical emergency stop is embedded for prompt shut down in case of emergency independent of software and microcontroller modules

Operating Temperature:

0°C to +40°C

Storage Temperature:

-40°C to +70°C

Humidity:

10% to 95% relative humidity, non-condensing

Tube Cooling:

Oil circulation and cooling (Optional)

Motherboard Cooling:

Natural convection augmented by customer provided 250cfm cooling fans for continuous operation

Input Power Line Connector:

Standard 3pin Line-Null-Earth connector

Dimensions:

565mm × 325mm × 250mm

Weight:

40 kg

Installation Orientation:

Can be mounted in any orientation.

X-ray Leakage:

Not to be greater than 5μS/hr at 5cm outside the external surface (EN61010-1)

Accessories:

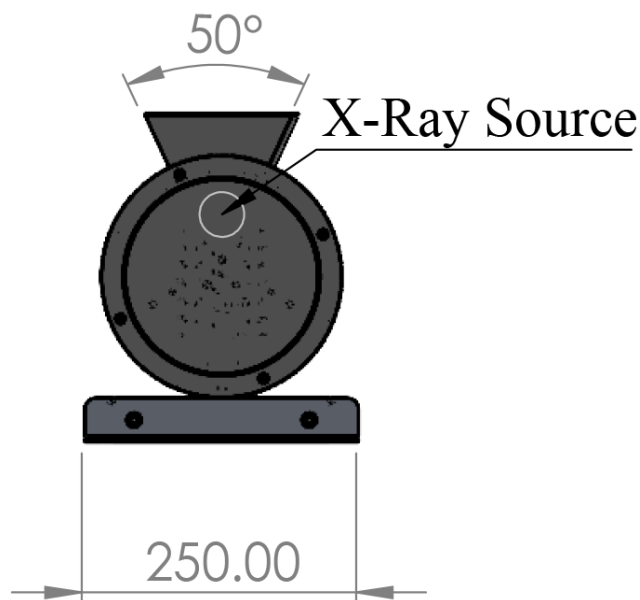
RS-232/USB Connection cable

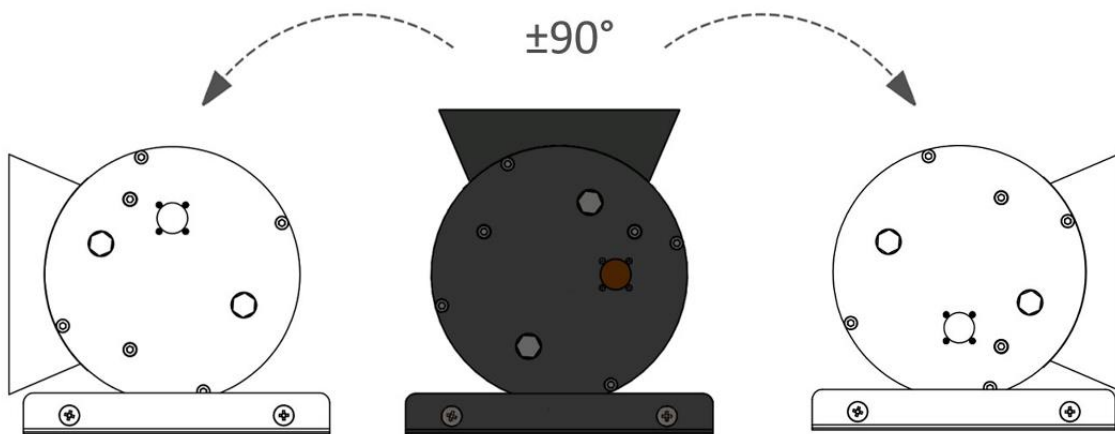
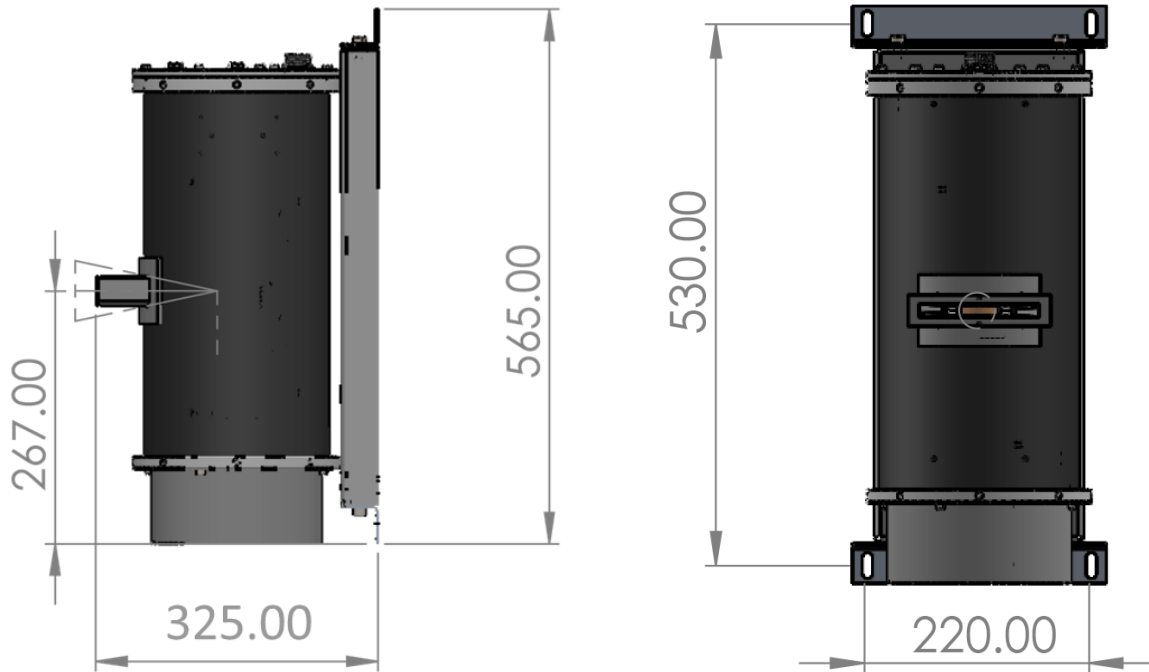
Ethernet connection cable

User Manual

Software

Fan Beam External Collimator (Cone Beam optional)





Dimensions are in millimeters