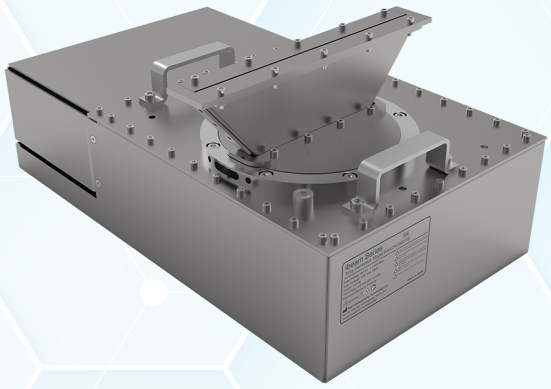
RAXON160LPB



RAXON160LPB 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 systems.

Applications

Industrial Radiography
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
0.8mm (IEC 336)

Beam Filter
3mm thick 6061 Al, ±0.01

Beam Geometry
Symmetrical fan up to 80° x 30°, cone up to 40°

Input Voltage
220±10% Vac, 50/60Hz, 1A maximum

X-ray Tube Voltage
Nominal X-ray tube voltage is adjustable between 80kV to 160kV with 10kV step.

X-ray Tube Current
0.2 mA to 1.2 mA over specified tube voltage range

X-ray Tube Power
200W, continuous mode (can be increased on customer's demand)

Voltage Regulation
Line: ±0.1% for a ±10% input line change of nominal input line voltage
Load: ±0.1% for a 0.2mA to 1.2mA load change

Voltage Accuracy
Voltage measured across the X-ray tube is within ±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
1% pp of rated voltage @ ≤1kHz

Current Regulation
Line: ±0.1% for a ±10% input line change of nominal input line voltage
Load: 0.5% @ 80-160kV , 0.2mA to 1.2mA

Current Accuracy
Current measured through the X-ray tube is within ±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

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
600mm X 375mm X 265mm

Weight (Approx.)
40 kg

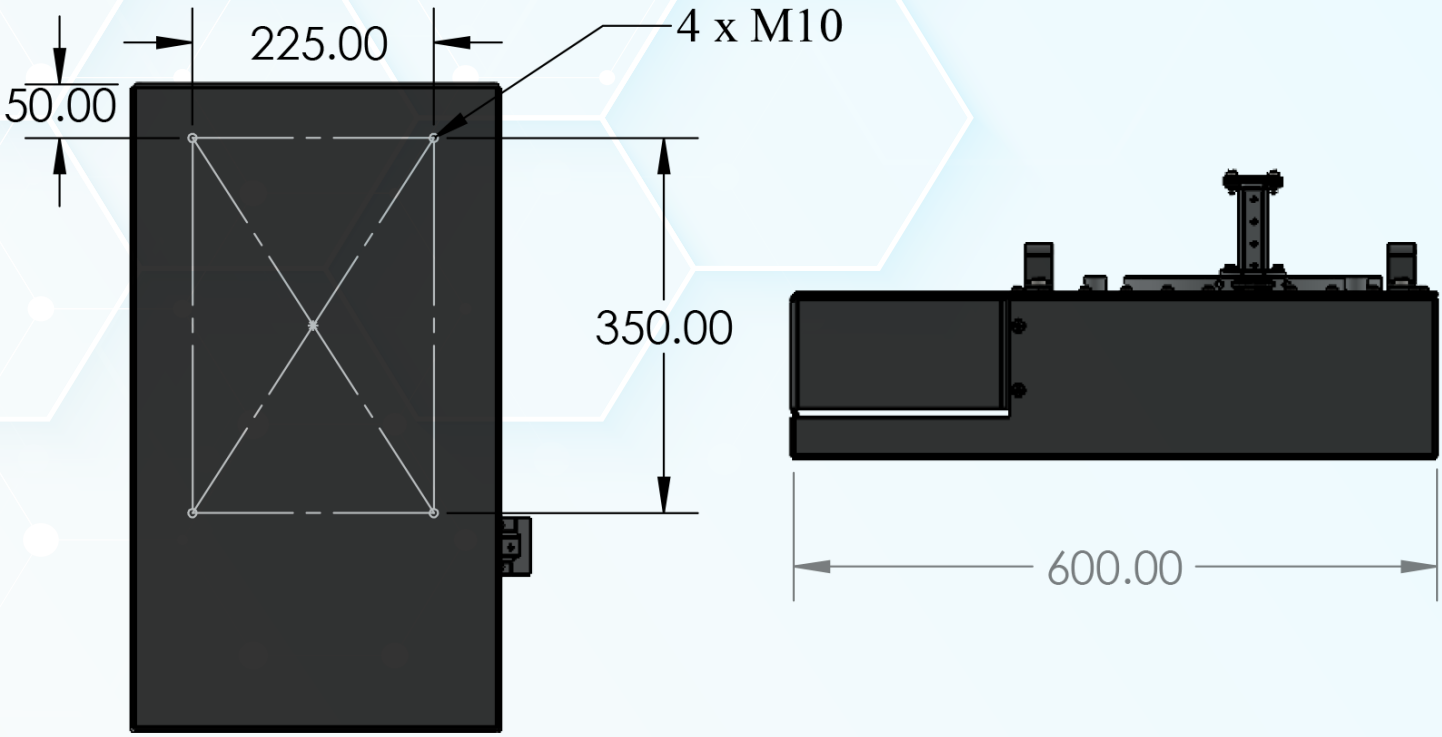
Installation Orientation
Can be mounted in any orientation.

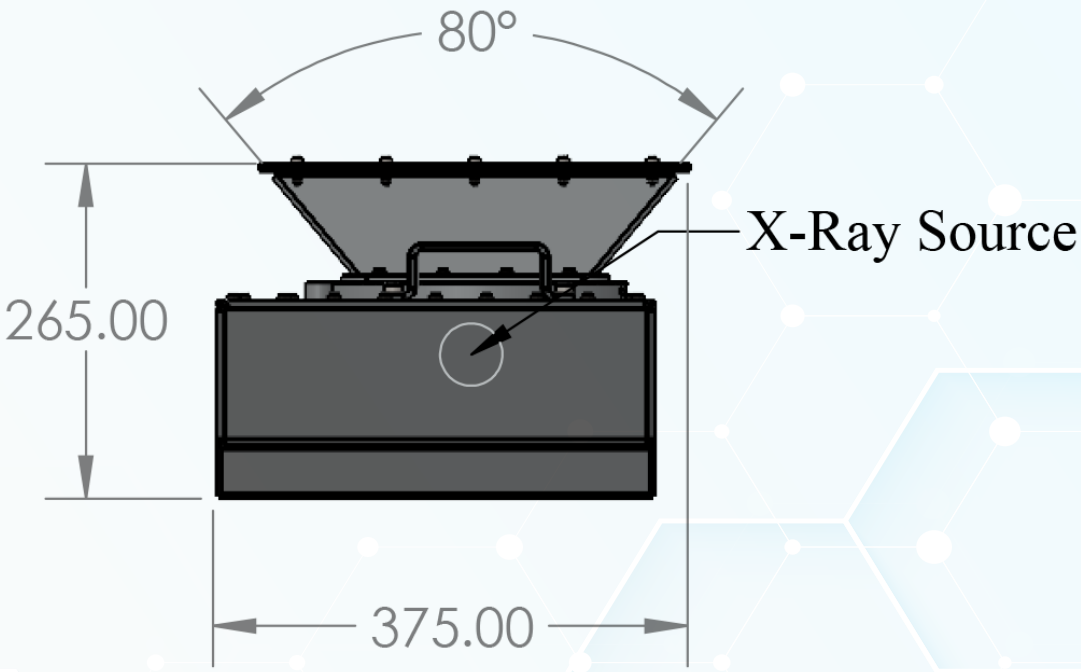
Beam Orientation
Beam divergence angle: 80degree while 20 Degree rotated centrally toward central part of the tube body.

X-ray Leakage
Not to be greater than 1mR/hr at 50cm outside the external surface

Ultra-Low Leakage Dose Option
ULLD option is available on request. For this option, radiation leakage will be less than 0.5mR/hr at 5cm outside the external surface

Accessories
RS-232/USB connection cable
Ethernet connection cable
User Manual
Software





Dimensions are in millimeters