

WanSen X-RAY TUBE**XD22-2.8-110****XD22-2.8-110S****XD22-2.8-110SB****XD22-2.8-110SBR****Stationary Anode X-Ray Tube**

- ◆ Designed for DC applications with high input power
- ◆ This X-ray tube has a 2.8 focal point.
The maximum tube voltage that can be used is 110kV.
- ◆ Mounted in the same housing as the high voltage transformer.
- ◆ WanSen product versions comply with IEC standards.

General data

Electrical:

Circuit:

High Voltage Generator constant high voltage generator

Grounding Methods Center-grounded

Nominal X-ray Tube Voltage 110kV

Nominal Value Of Focus :

Focus 2.8 (IEC336)

Nominal Anode Input Power (at 0.1 seconds):

Focus 7.8kW

Nominal Photographic Anode Input Power (at 0.1 seconds):

Focus 7.5kW

Exposure Duty Cycle 1:60 or More

(Exposure Time : Interval Time)

Continuous Anode Input Power 250W

Air Specific Release Kinetic Energy Rate Not Less Than 4.3mGy/s

(75kV, 50mA, 1s, 49cm from focal point (16cm from insulating oil))

Mechanical:

Dimensions:

Overall Length	see dimensional outline
XD22-2.8-110.....	145mm
XD22-2.8-110S.....	155mm
XD22-2.8-110SB.....	155mm
XD22-2.8-110SBR.....	176mm
Maximum Diameter.....	see dimensional outline
XD22-2.8-110.....	51mm
XD22-2.8-110S.....	57mm
XD22-2.8-110SB.....	62mm
XD22-2.8-110SBR.....	62mm

Anode Target:

Anode Angle	19°
Target Surface Materials	Tungsten
Inherent Filtration	At Least 0.8mmAl equivalent at 75kV
X-ray Coverage.....	549×549mm at SID 550mm

Approximate weight:

XD22-2.8-110	0.5kg
XD22-2.8-110S.....	0.58kg
XD22-2.8-110SB.....	1.14kg
XD22-2.8-110SBR.....	1.26kg

Cooling methodOil immersed (60°C Max.) and convection oil cooling

Tube Holding:

XD22-2.8-110	Screws for fixing the anode end and cathode end of the glass housing or anode rod
XD22-2.8-110S/XD22-2.8-110SB/XD22-2.8-110SBR.....	Holding the insulation cylinder

Absolute maximum and minimum ratings

(At any time, these values must not be exceeded.)

Maximum Tube Voltage.....	110kV
Minimum Tube Voltage	60 kV
Maximum Tube Current	125mA
Maximum Filament Current	
Focus	4.0A
Filament Voltage (At maximum filament current)	
Focus	7.3± 0.3V
Thermal Characteristics:	
Anode Heat Storage Capacity	30kJ (41KHU)
Maximum Anode Heat Dissipation Rate	260W

Environmental Limits

Operating Limits (in dielectric oil)	
Oil Temperature	10 ~ 60℃
Oil pressure	70 ~ 106 kPa
Shipping and Storage Limits:	
Temperature	-40 ~ 70℃
Humidity	10 ~ 90 %
	(No condensation)
Atmospheric Pressure	50 ~ 106 kPa

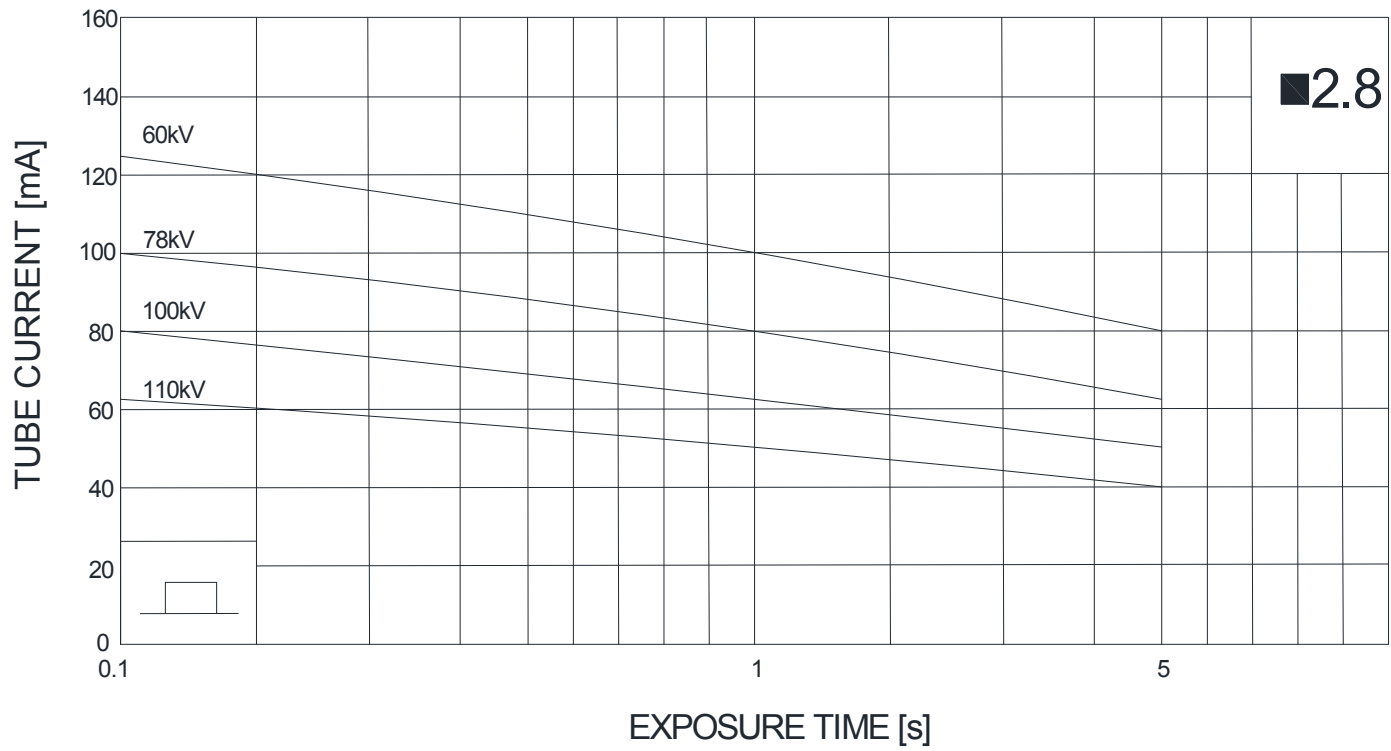
Cautions

Read through this page before using the tube.

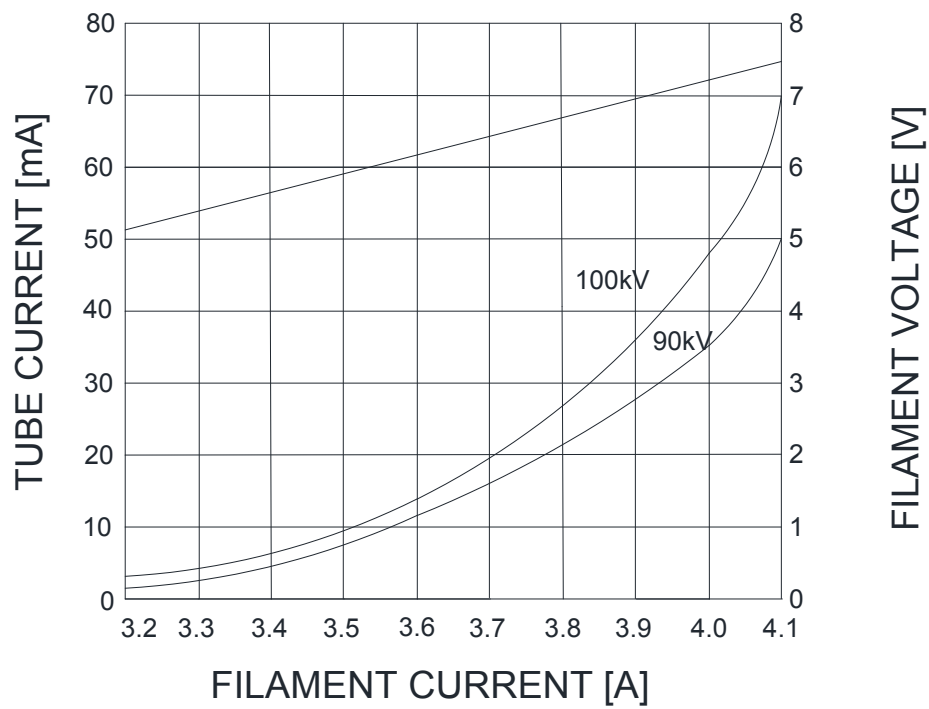
Since X-ray tube will emit X-rays when it is energized with high voltage, special knowledge is required to handle it. The items below show general cautions for the tube handling.

1. The tube shall be handled or operated only by qualified personnel.
Only a specialist with knowledge of X-ray tube should assemble, maintain and remove the tube.
2. The tube envelope is made of glass. In transporting and handling, sufficient care should be taken not to give strong impact or vibration to the tube.
3. Radiation protection of the tube unit assembled with this tube must be sufficiently taken. And the leakage technique factor of the tube unit must not exceed maximum anode cooling rate of this tube.
4. Regulations and standards require the minimum source-skin distance (SSD) and the minimum filtration of the useful beam.
Use the tube after fulfilling them.
5. The tube might be broken due to only one overload operation.
Provide proper overload protection circuit.
Operate the tube by selecting a proper input condition according to the conditions for operation and tube characteristics charts.
6. When any abnormalities are found in using this tube, immediately switch off the power supply and contact WanSen Service sector.
7. The charts of this specification are indicating standard values.
For usage not described here or for any unclear items, contact WanSen Service sector.

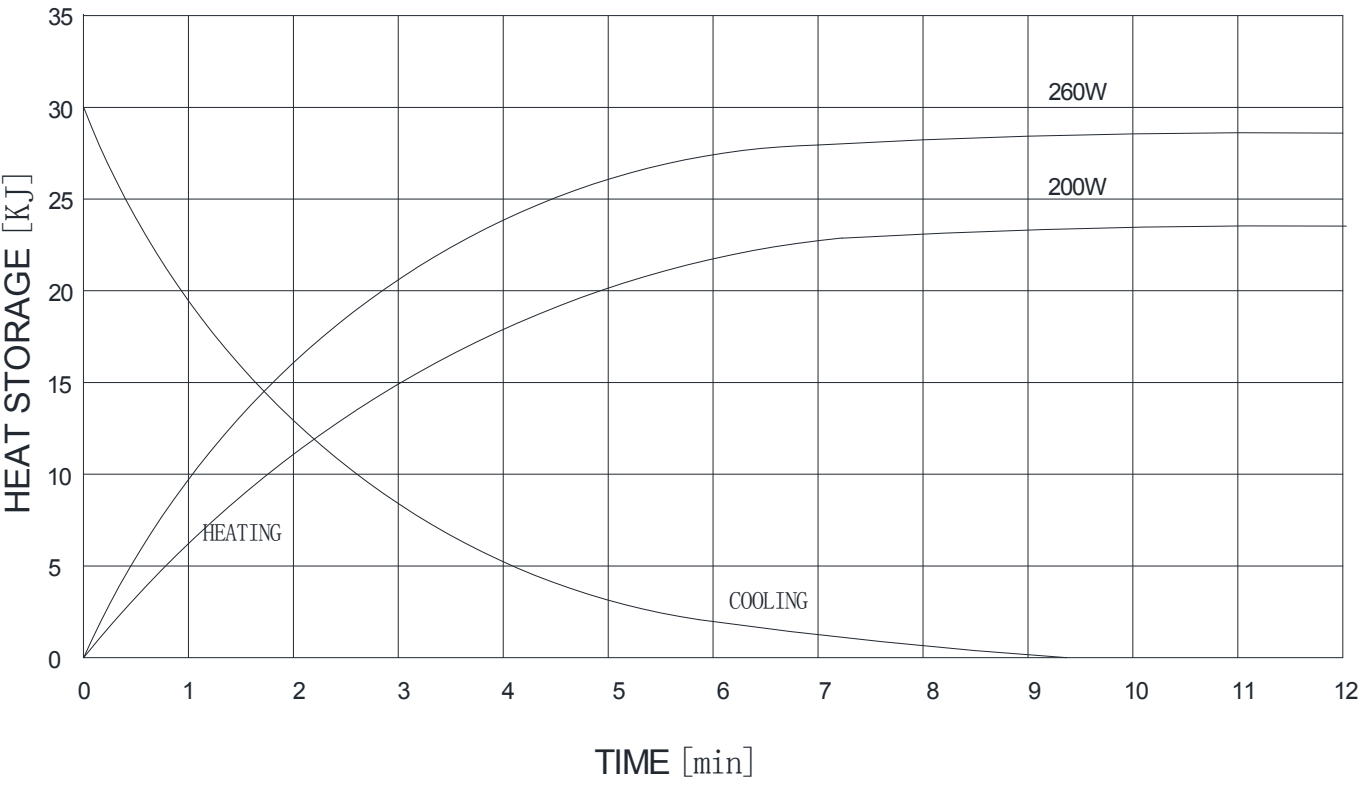
Maximum Rating Charts
(Absolute maximum rating charts)



Emission & Filament Characteristics

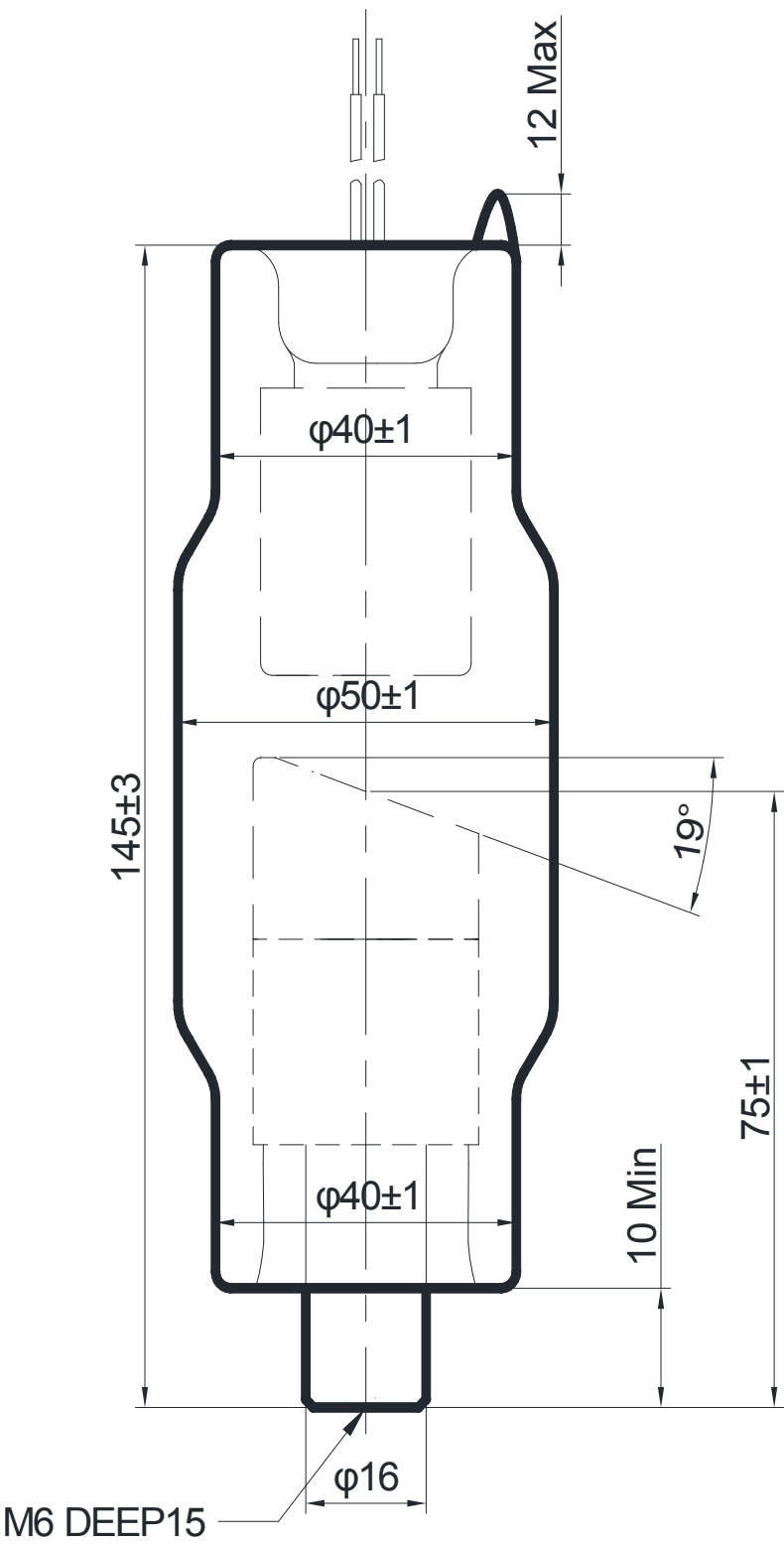


Anode Thermal Characteristics



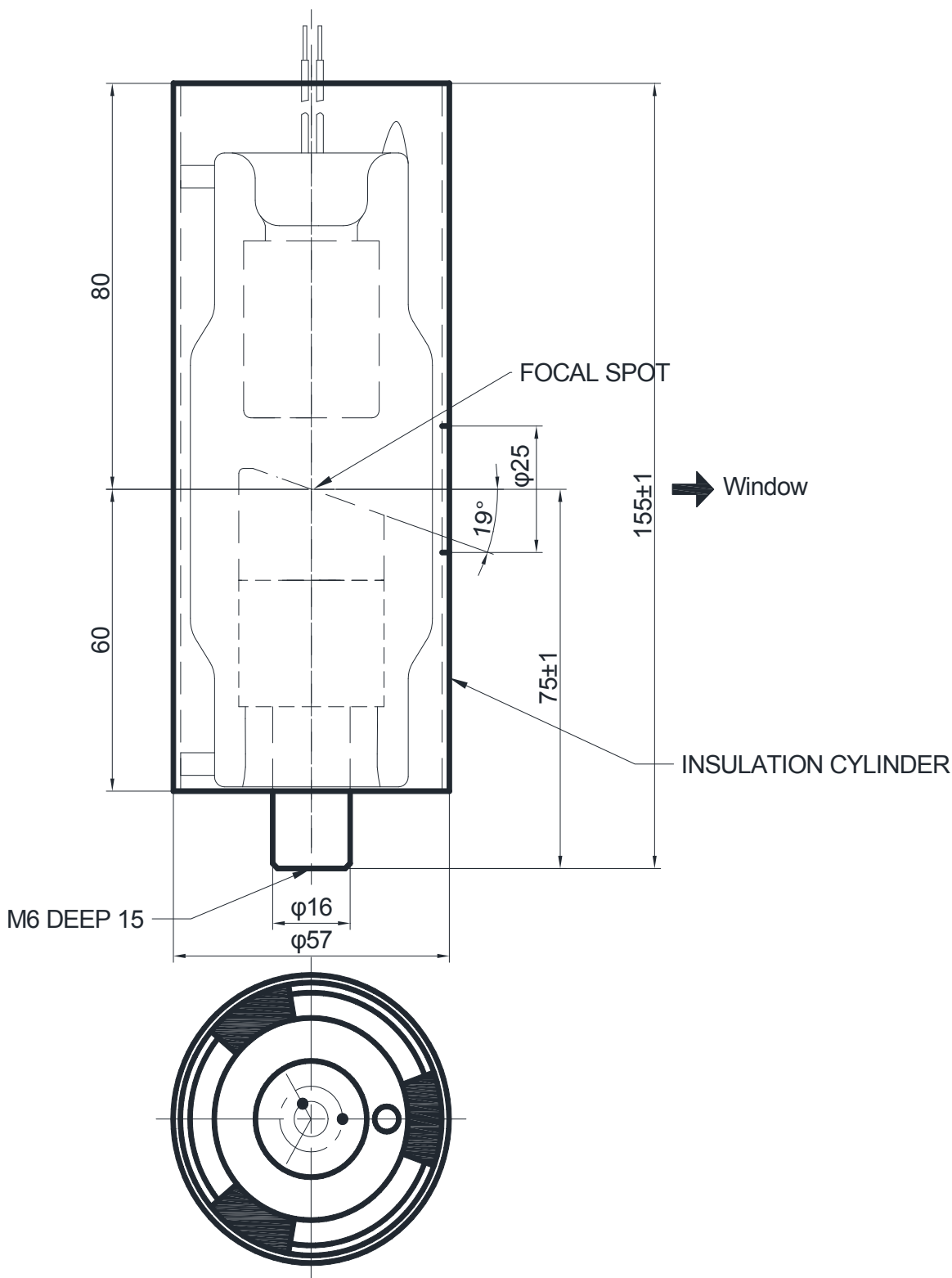
X-Ray Tube Dimensions -XD22-2.8-110

Unit: mm



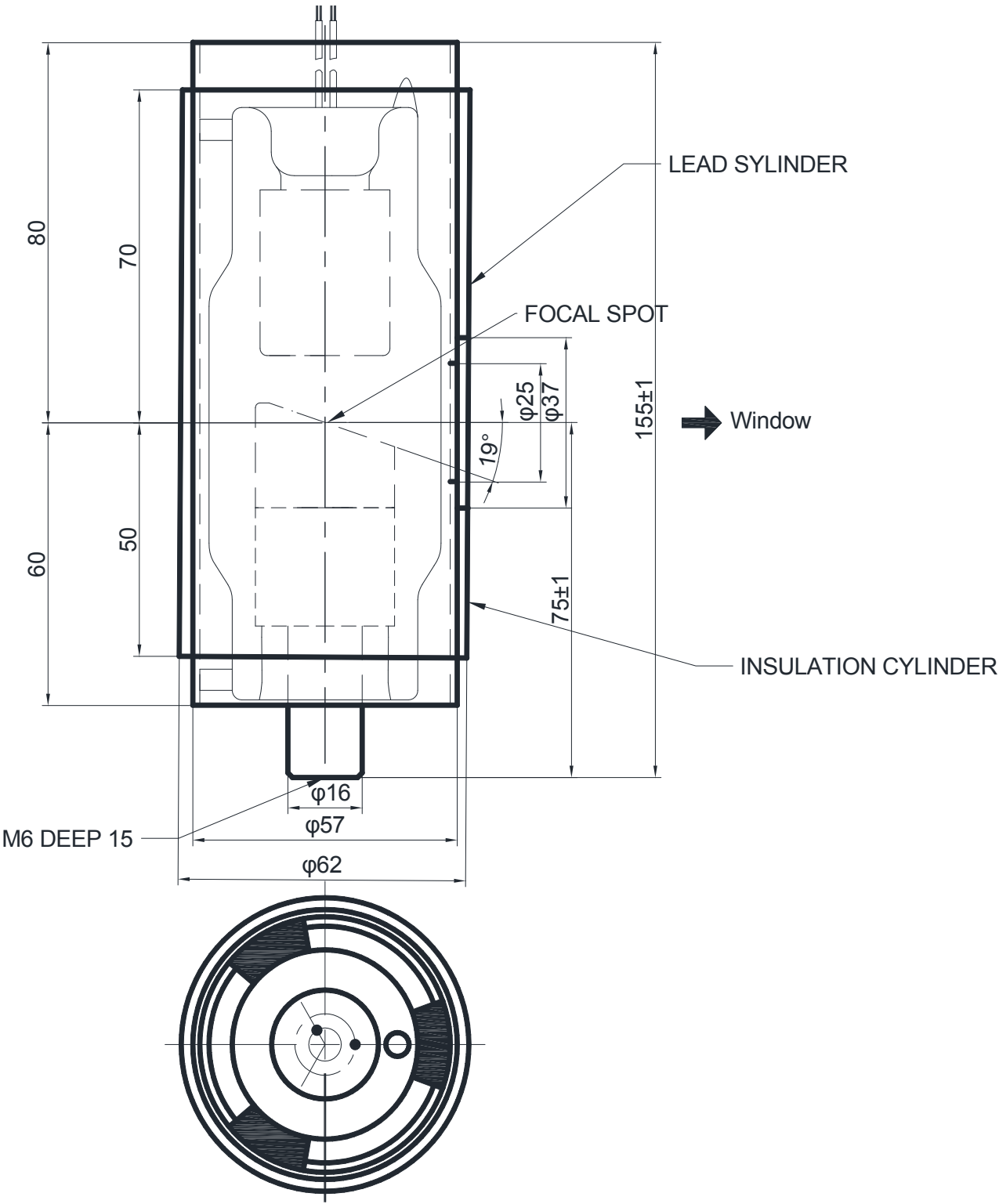
X-Ray Tube Dimensions -XD22-2.8-110S

Unit: mm



X-Ray Tube Dimensions -XD22-2.8-110SB

Unit: mm



X-Ray Tube Dimensions -XD22-2.8-110SBR

Unit: mm

