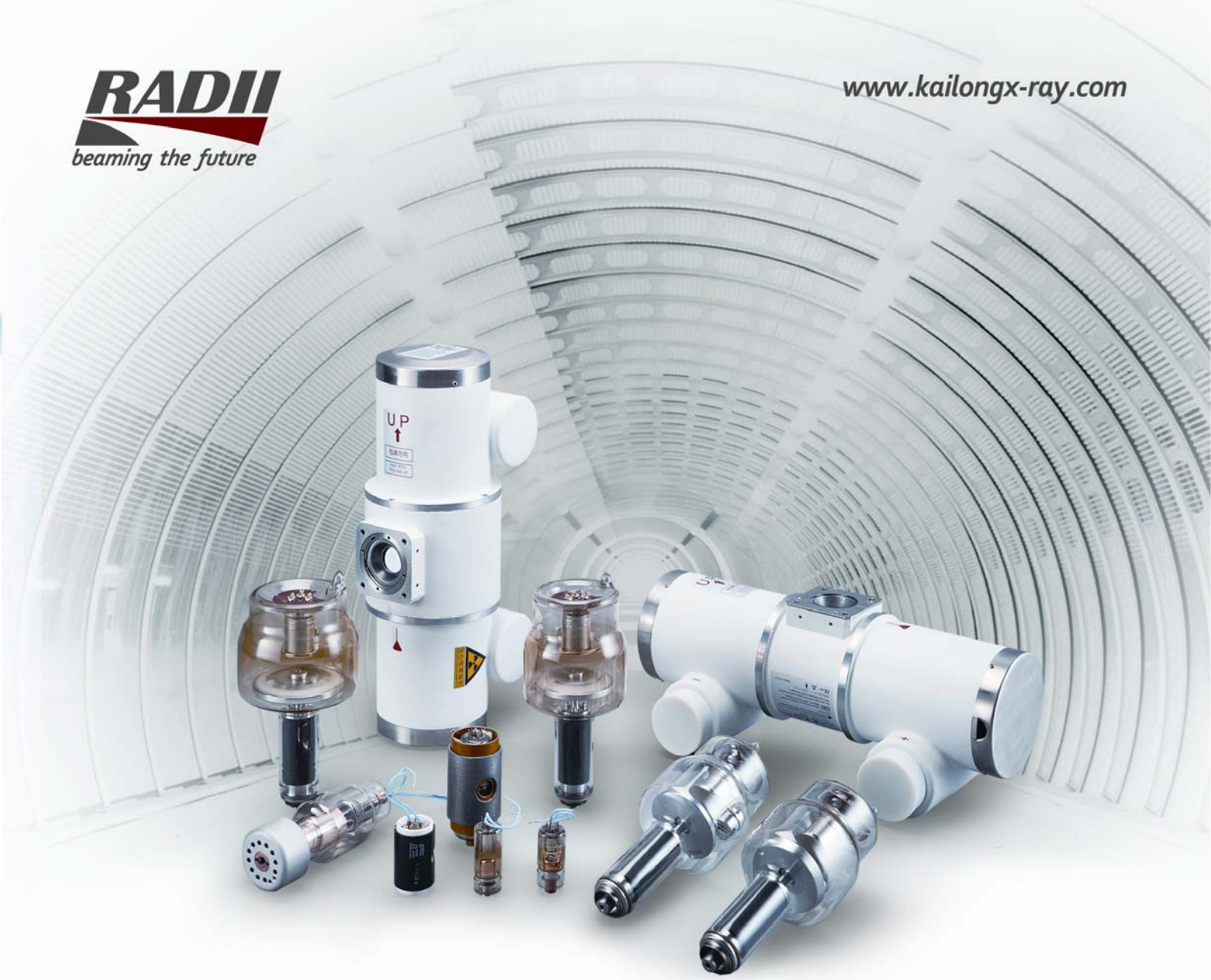
RADII
beaming the future

www.kailongx-ray.com



Rotating X-Ray Tube

KL74-1.0/2.0-125

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Hangzhou Kailong Medical Instruments Co., Ltd.
Add: 6, No. 6 Road, Dongzhou Industrial Zone, Fuyang, Hangzhou, China 311401
Tel: +86 571 87195000-8525 Email: sales@kailongx-ray.com

CE
CFDA

Rotating X-Ray Tube

KL74-1.0/2.0-125

Description

- KL74 tube has a double focus, designed for use with standard-speed anode rotation for general diagnostics
- The integrated high quality tube with glass design has two super imposed focal spots and a 72mm anode. The high anode heat storage capacity ensures a wide range of applications for standard diagnostic procedures with conventional radiographic.
- A special designed anode enables an elevated heat dissipation rate which leads to a higher patient through- put and a longer product life.
- A constant high dose yield during the entire tube life is ensured by the high density rhenium-tungsten compound target. Ease of integration into system products is facilitated by extensive technical support.
- Kailong product version adheres to IEC standards.
- Certification, e.g. CE, CFDA.

Features and customer benefits

- Standard speed anode rotation with silenced bearings
- High density compound anode (TM)
- Elevated anode heat storage capacity and cooling
- Constant high dose yield
- Excellent lifetime

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Technical data

Parameter	Specification		Standard
Type	KL74-1.0/2.0-125		
Nominal input power(s) of the anode	F 1	F 2	IEC 60613
	■	■	
	21 kW(50Hz) 22.5kW(60Hz)	43kW(50Hz) 47kW(60Hz)	
Maximum anode heat content	111kJ(150 kHU)		IEC 60613
Maximum continuous heat dissipation	475W		
Anode material Anode top coating material	Tungsten-Molybdenum(TM)		
Target angle (Ref: reference axis) X-ray tube and X-ray tube assembly	16°		IEC 60788
Focal spot nominal value(s) Ref: Reference axis	F1 (small focus)	F2 (large focus)	IEC 60336
	1.0 ■	2.0 ■	

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X-ray tube nominal voltage	125 kV		IEC 60613
Max. Tube Current	Large Focus	570mA	
	Small Focal	340mA	
Data on cathode heating	≈ /AC, < 20 kHz		
	F 1	F 2	
	■	■	
Max. current	5.4A	5.4 A	
Max voltage	≈ 9 V	≈12 V	
Data on anode drive Anode rotary frequency	50/60Hz		

Limits	**Operation Limits**	**Transport and Storage Limits**
Ambient temperature	From 10 °C to 60 °C	From -40 °C to 70 °C
Relative humidity	/	From 10 % to 90 %
Barometric pressure	From 70kPa to 106kPa	From 50kPa to 106kPa

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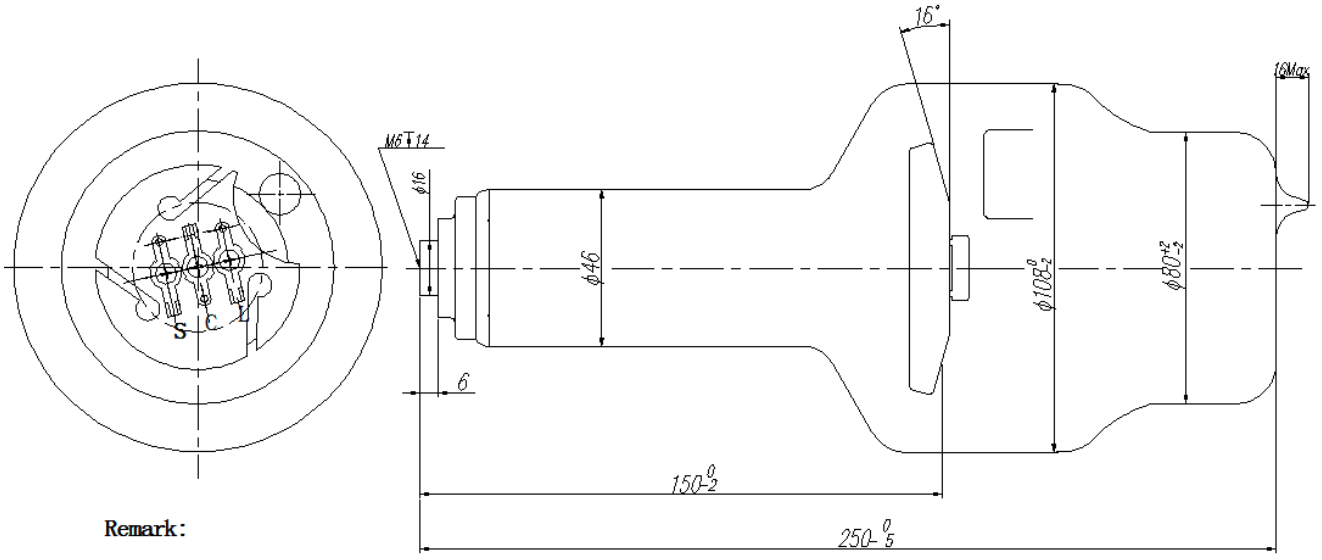
Outline drawing



Remark:

S:Small Filament
C:Common
L:Large Filament

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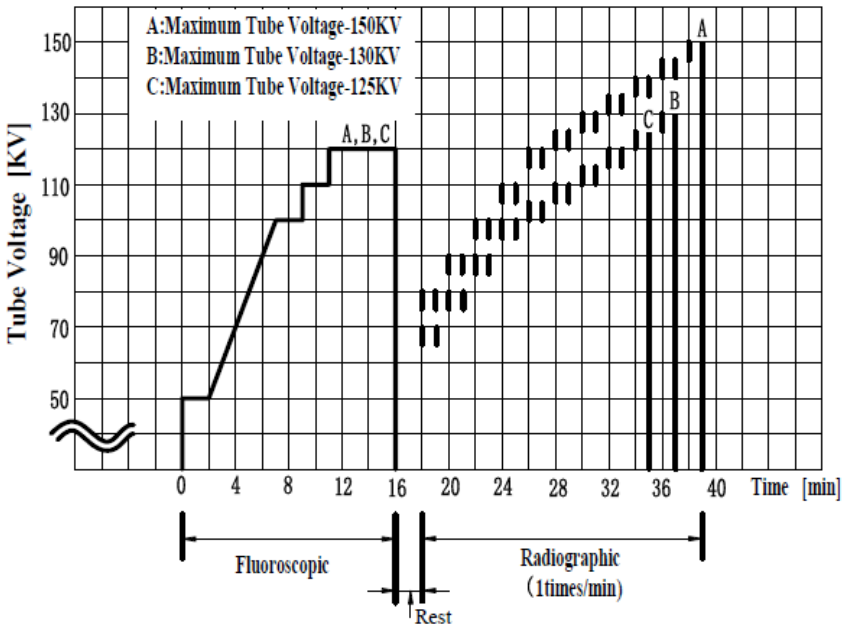
Recommended seasoning procedure for long period unused tube

In order to keep long term to use x-ray tube device without any failure, please make seasoning procedure before usage, and enough cooling after application.

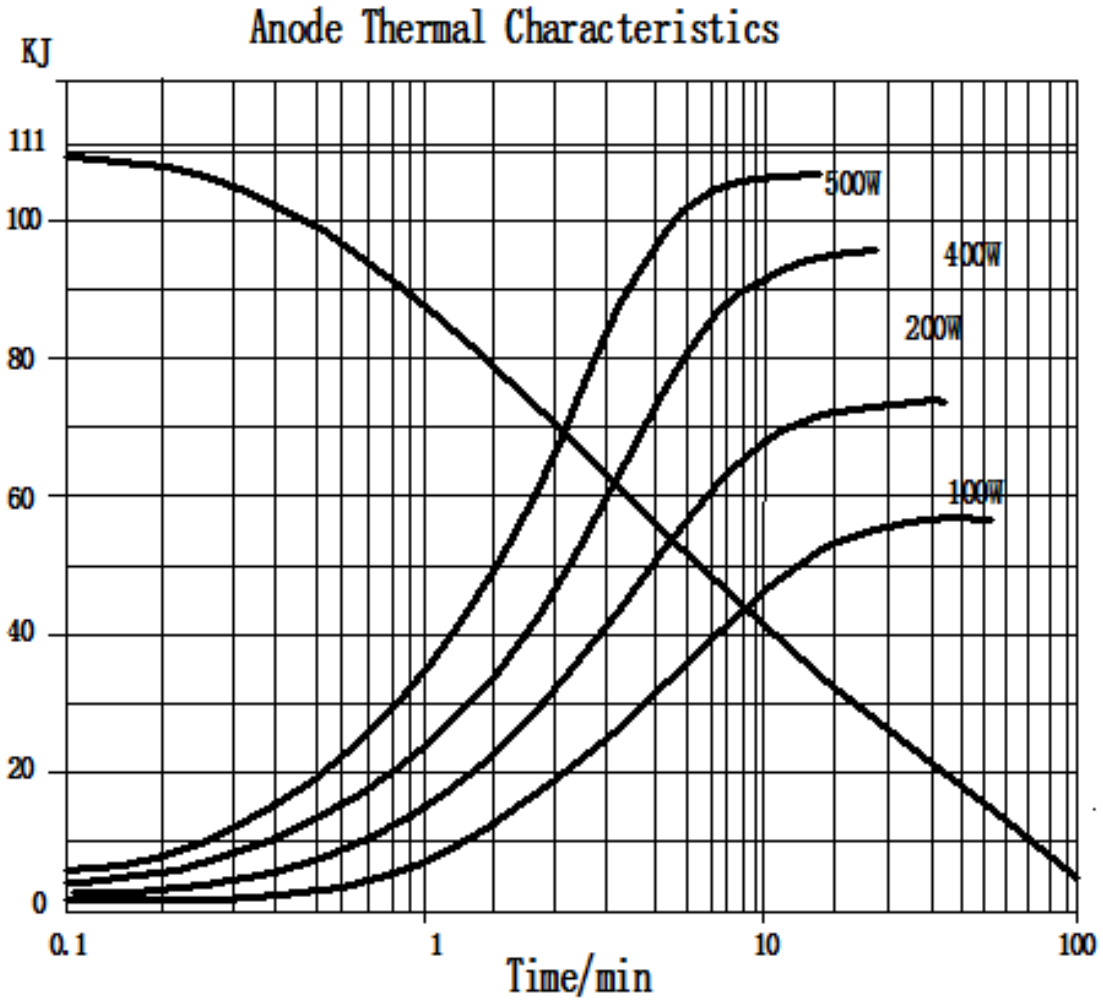
Seasoning procedure

1. Before the initial start-up of the x-ray tubes or after extended idle time (more than 2 weeks), we suggest to make seasoning procedure. And when tubes become unstable, recommend make seasoning procedure according to below seasoning procedure table.
2. Ensure that adequate radiation safety precautions are taken to protect any existing image intensifier against radiation. In order to protect x-ray leakage radiation, please close the collimator which is assembled into the port window of x-ray source.
3. When the tube current becomes unstable during high voltage ramp up, it is necessary to reduce the high voltage to be sure the tube current become stable.
4. Seasoning procedure must be done by professional and safety knowledge people.

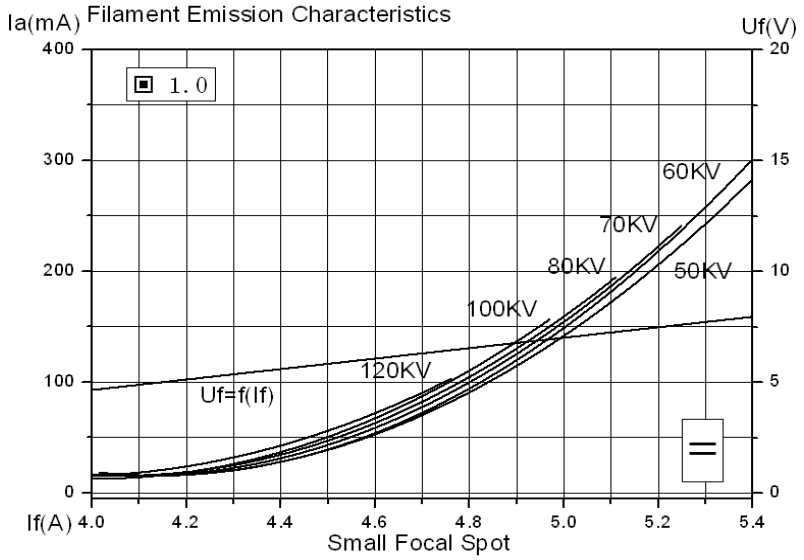


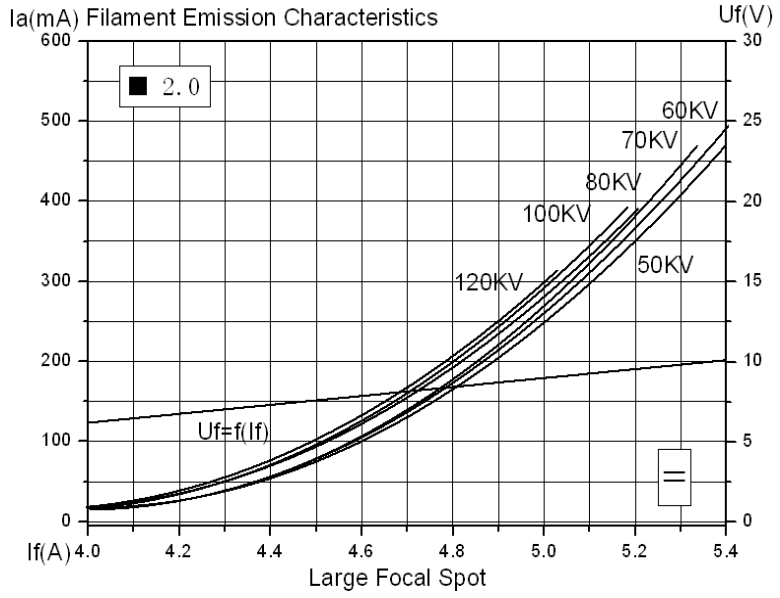
When tube current cannot be set 50% mA, the tube current should be set not excess 50% and nearest value which close to 50% value.

Heating and cooling curve of anode



Emission curves of the cathode





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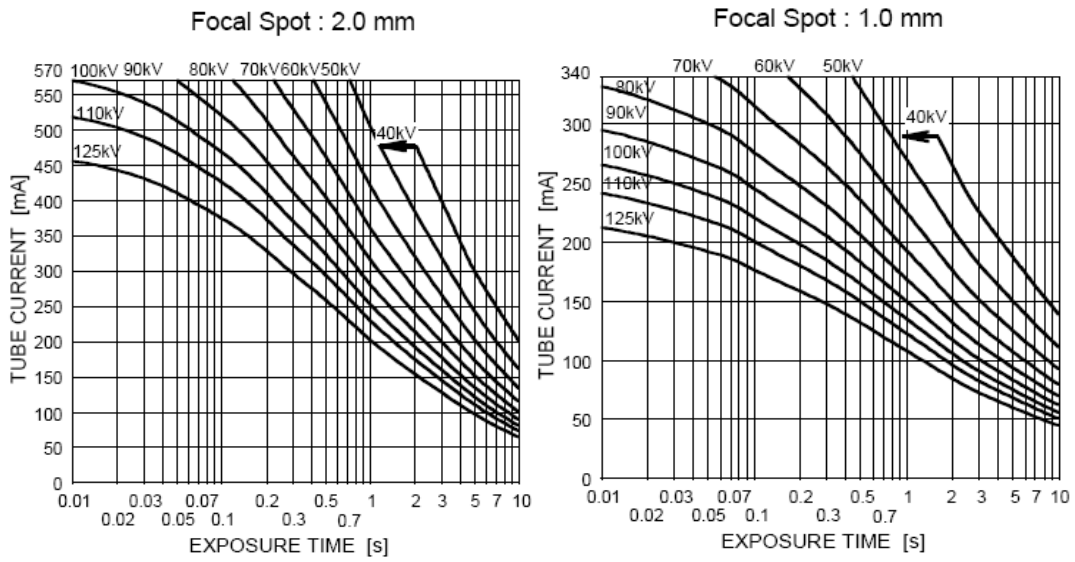
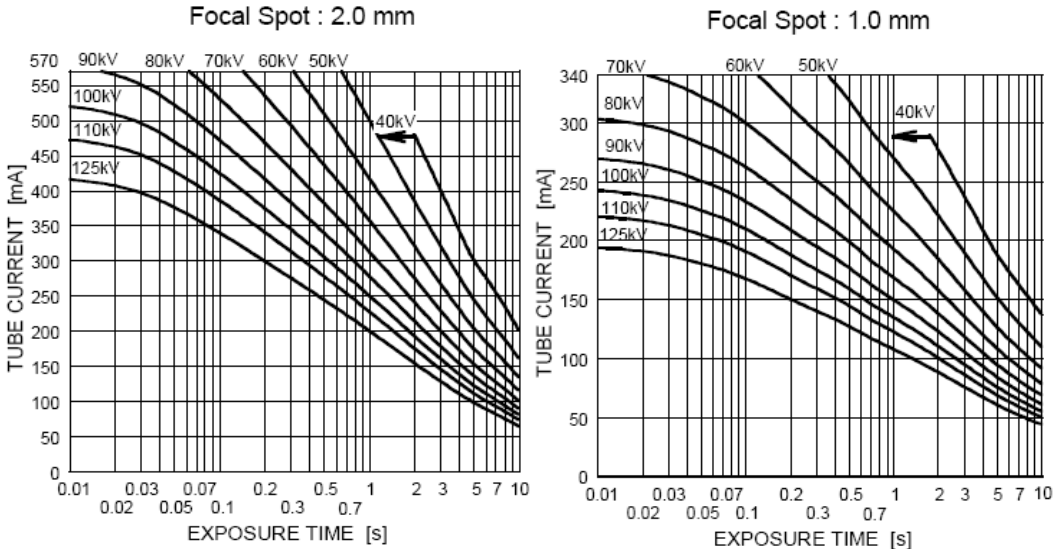
Loading curves

Anode drive : 60 Hz



Anode drive: 50Hz



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Cautions!!!

X-ray tube will emit X–ray when it is energized with high voltage, Special knowledge should be required and cautions need to be taken when handling it.

1. Only a qualified specialist with X-Ray tube knowledge should assemble, maintain and remove the tube. When mounting tube inserts adopt proper caution, in order to avoid glass bulb breaking and fragments projection. Please use protective gloves and glasses.
2. Tube insert connected to H.V. supply is a radiation source: be sure to take all necessary safety cautions.
3. Wash thoroughly with alcohol the external surface of tube insert (care of fire risk). Avoid contact of dirty surfaces with cleaned tube insert.
4. Clamp system inside housing or self-contained units must not mechanically stress the tube.
5. After installation, check the right working of the tube (no fluctuation of tube current nor crackling).
6. Comply with insert thermal parameters, planning and programming the exposure parameters and cooling pauses. Housing or self-contained units must be provided with an adequate thermic protection.
7. Voltages indicated in charts are valid for transformer supplied with ground center.
8. It is extremely important to observe the connection diagram and the grid resistor value. Any change could modify the dimensions of the focal spot, also varying diagnostic performances or overloading anode target.
9. Tube inserts contain environment polluting materials, particularly lead liner tubes. Please apply to qualified operator for waste disposal, according to local regulation requirements.
10. When any abnormalities are found during operation, immediately switch off the power supply and contact the service engineer.

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Notes

- This high vacuum product is produced according to state-of-the–art technology. To prevent implosion please handle with care and use protective devices, e.g. glasses!
- In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources, avoidance of waste) we endeavor to reuse components and to return them to the production cycle. We guarantee the functioning, quality and life of these components by taking extensive quality assurance measures, just as for factory-new components.
- All IEC standards are the update versions.

The Kailong Medical Instrument Co Ltd., is ISO 13485 certified, manufactures in accordance with the Quality System Regulations (QSR) as defined by the Food and Drug Administration (FDA) and endeavors to comply with legal requirements concerning the environmental compatibility of its products.

For further information, please contact:
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