

RAY-12

X-ray Tube Assembly

Data Sheet

Description

This compact X-ray tube assembly was developed for use in radiography and fluoroscopy systems.

The integrated high quality tube with glass design has two superimposed focal spots and a reinforced 74 mm anode.

Features and customer benefits

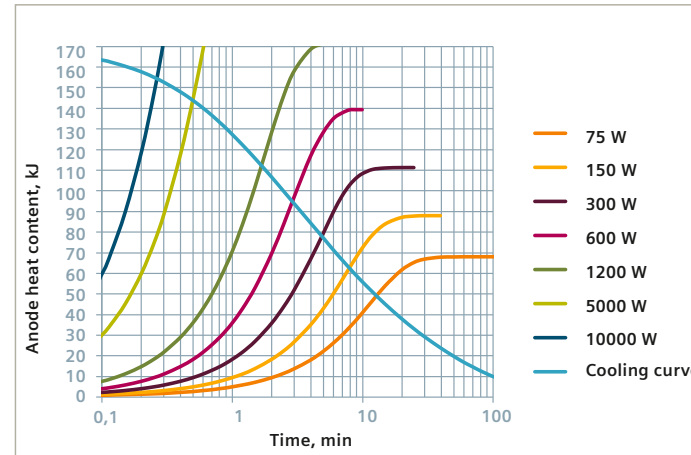
- Available with 1- and 3- phase stator
- Designed for high patient throughput with 450 W tube assembly cooling power (with fan)
- Compact tube housing
- High long-term dose yield
- Excellent quality and reliability

Technical Data			
Nominal voltage	150 kV		IEC 60613 (2010)
Nominal voltage Fluoroscopy	110 kV		
Nominal focal spot values	0.6	1.2	IEC 60336
Nominal anode input power (60 Hz)	22 kW	54 kW	IEC 60613 (1989) (at 300 W average anode input power)
Nominal radiographic anode input power (60 Hz)	22 kW	54 kW	IEC 60613 (2010)
Filament Heating	maximum current	4.6 A	AC < 50 kHz
	maximum voltage	≈ 9.0 V	
Anode Angle	12°		
Anode heat storage capacity	170 kJ = 230 kHU		IEC 60613 (1989)
Anode drive frequencies for	exposure fluoro	50/60 Hz	
		20/30 Hz	
Heat storage capacity of assembly	1.0 MJ = 1.35 MHU		IEC 60613
Max. continuous heat dissipation of assembly (without/ with fan)	275 W/450 W		IEC 60613 (2010) (at ambient temperature < 25 °C)
Radiation Leakage	≤ 0.8 mGy/h		IEC 60601-1-3
Total inherent filtration	2.5 mm Al/75 kV		IEC 60522, IEC 60601-1-3
Weight (incl. flange)	≈ 18 kg		

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Heating and cooling curves

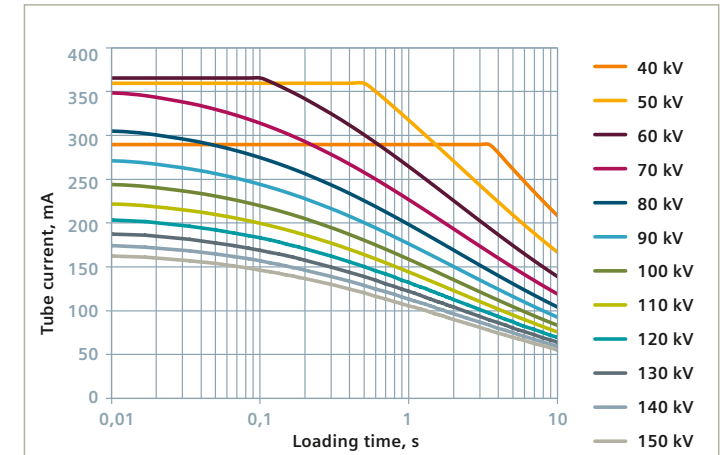
Anode



According to IEC 60613 (1989)

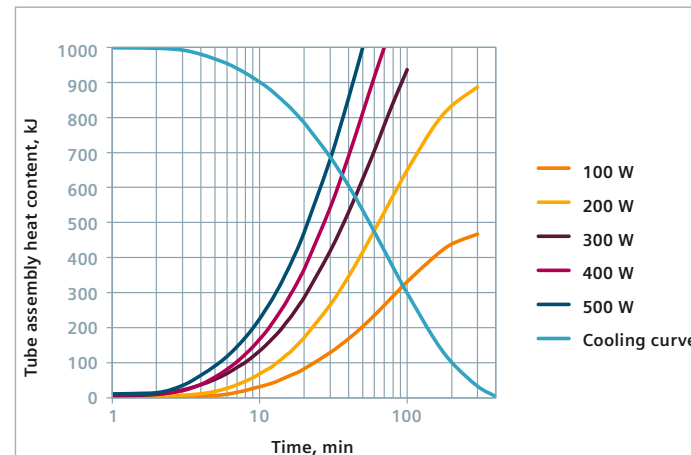
Rating charts

Focal spot IEC 0.6



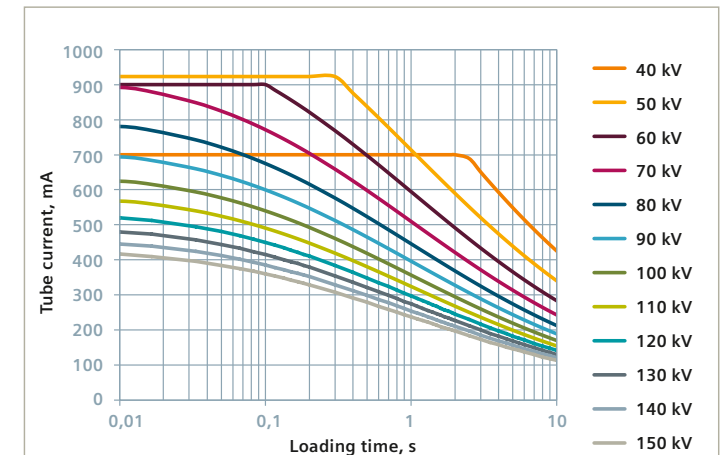
According to IEC 60613 (1989)
Anode drive 50 Hz
Thermal anode reference power 300 W

X-ray tube assembly (without fan)



According to IEC 60613 (1989)

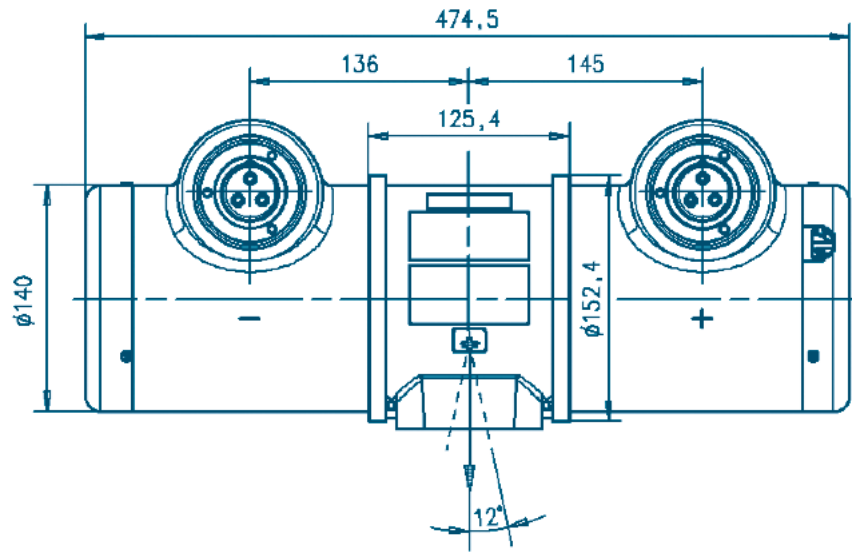
Focal spot IEC 1.2



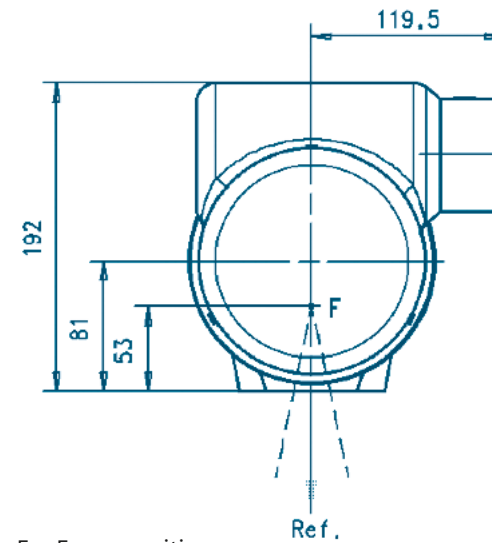
According to IEC 60613 (1989)
Anode drive 60 Hz
Thermal anode reference power 300 W



Dimensional drawings (RAY-12S_3 and RAY-12S_1)



Trunnion rings, high-voltage cables, stator cables with shielding and safety switch cables are optionally available.

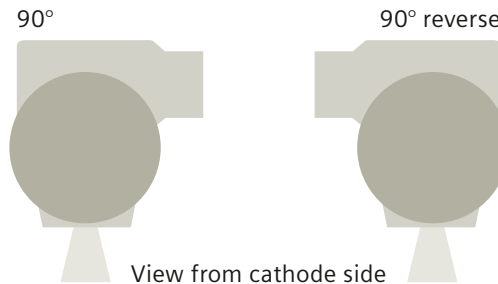


F = Focus position
Ref. = Reference axis
Dimensions are given in mm

Types and material numbers

	1-phase drive, without collimator flange	3-phase drive, without collimator flange	3-phase drive, with collimator flange
Housing	RAY-12S_1	RAY-12S_3	RAY-12S_3F
90°	Mat.-No. 7037166	Mat.-No. 7036994	Mat.-No. 7037224
Housing	RAY-12_1	RAY-12_3	-
90° reverse	Mat.-No. 7037158	Mat.-No. 7036317	-

Horn angles



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Local Contact Information

Siemens Healthcare GmbH
Components and Vacuum Technology
Doris-Ruppenstein-Str. 4
91052 Erlangen
Germany
Phone: +49 9131 84-6911
siemens.com/oemproducts

Publisher for USA

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard
Malvern, PA 19355
United States of America

Siemens Healthcare Headquarters

Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
siemens.com/healthcare

Legal Manufacturer

Siemens X-ray Vacuum Technology Ltd., Wuxi
No. 112, Meiyu Road
214028 Wuxi, Jiangsu
P.R. China