

RAY-14

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.

Based on many years of experience in X-ray tube manufacturing, the RAY-14 was designed to meet the demand for low total cost of ownership.

Features and customer benefits

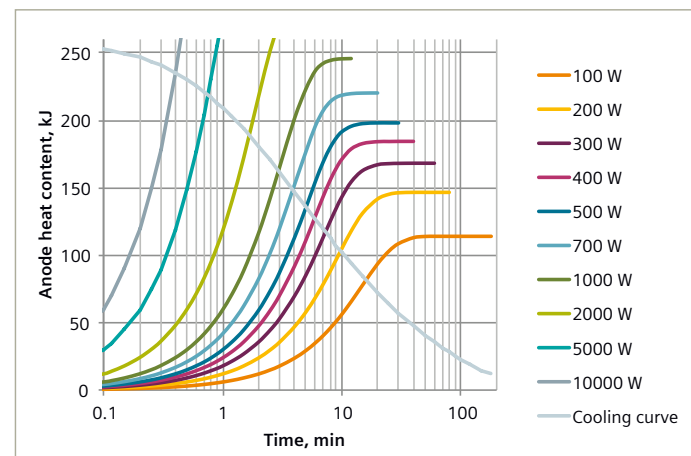
- High power on both focal spots
- Compact tube housing
- High long-term dose yield
- Excellent quality and reliability
- Available with 1- and 3-phase stator

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 (180 Hz)	34 kW	80 kW	IEC 60613 (1989) (at 130 W average anode input power)
Nominal radiographic anode input power (180 Hz)	34 kW	80 kW	IEC 60613 (2010)
Filament Heating	maximum current maximum voltage	5.4 A ≈ 10 V	5.5 A ≈ 15 V
Anode Angle	12°		
Anode heat storage capacity	260 kJ = 350 kHU		IEC 60613 (1989)
Anode drive frequencies for	exposure fluoro	150 / 180 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

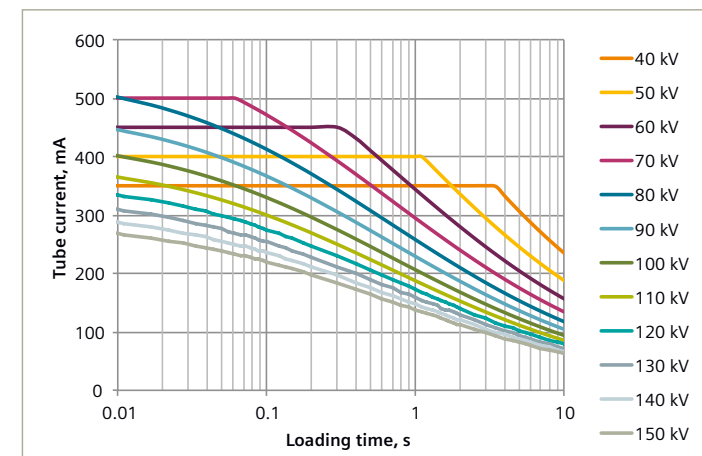
Anode



According to IEC 60613 (1989)

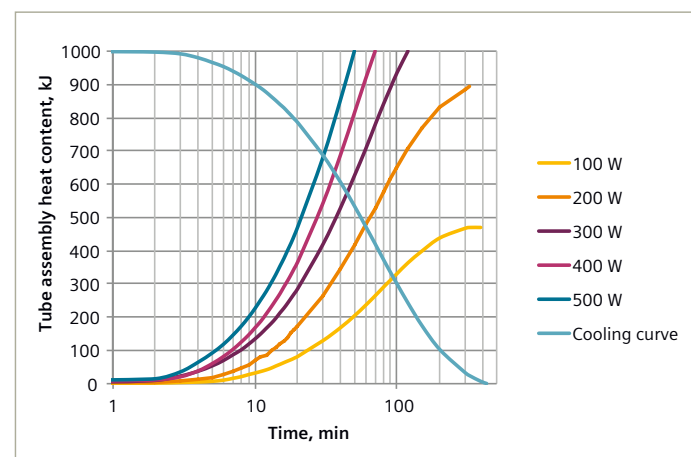
Rating charts

Focal spot IEC 0.6



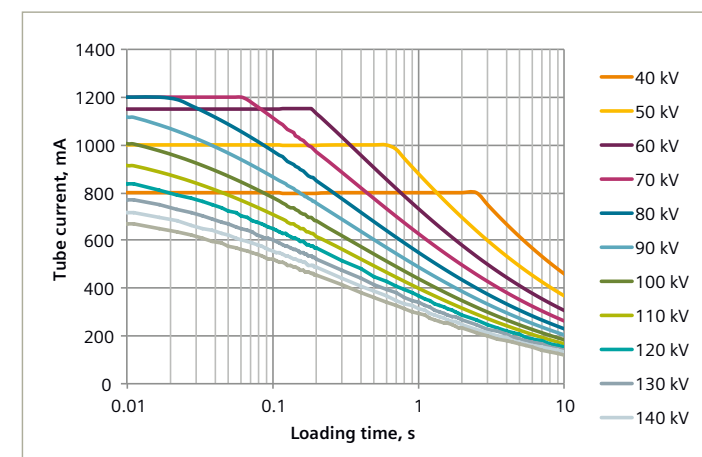
According to IEC 60613 (1989)
Anode drive 180 Hz
Thermal anode reference power 300 W

X-ray tube assembly (without fan)



According to IEC 60613 (1989)

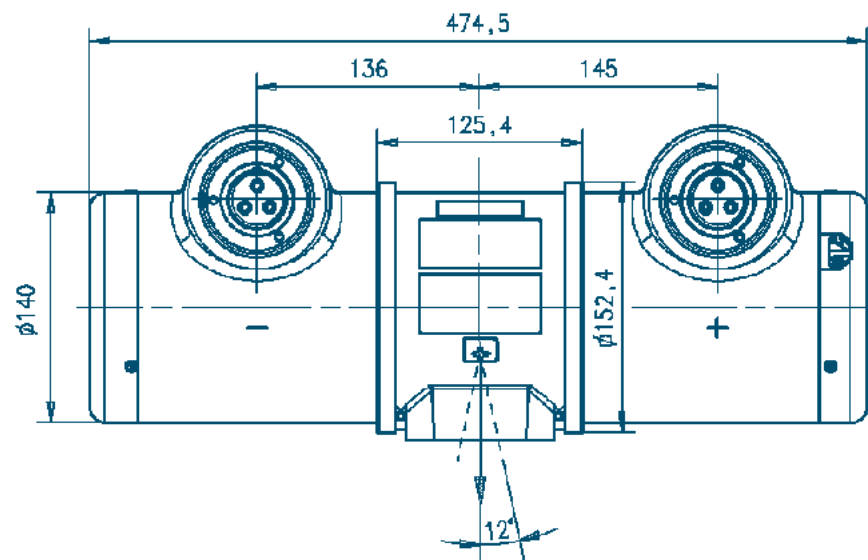
Focal spot IEC 1.2



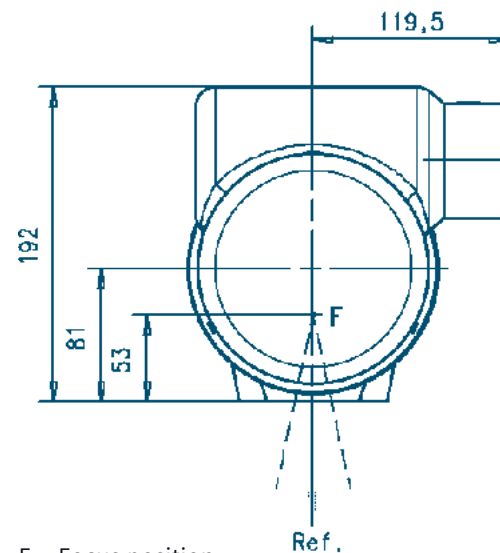
According to IEC 60613 (1989)
Anode drive 180 Hz
Thermal anode reference power 300 W



Dimensional drawings (RAY-14S_3 and RAY-14S_1)



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



F = Focus position

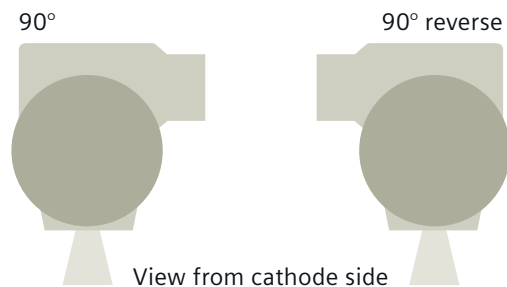
Ref. = Reference axis

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-14S_3	RAY-14S_3F
90°	–	Mat.-No. 7037000	7037208
Housing	RAY-14_1	RAY-14_3	–
90° reverse	Mat.-No. 7037133	Mat.-No. 7035483	–

Horn angles



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