

# RAY 14

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## Features and benefits

### Siemens Healthineers RAY 14

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.



- 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

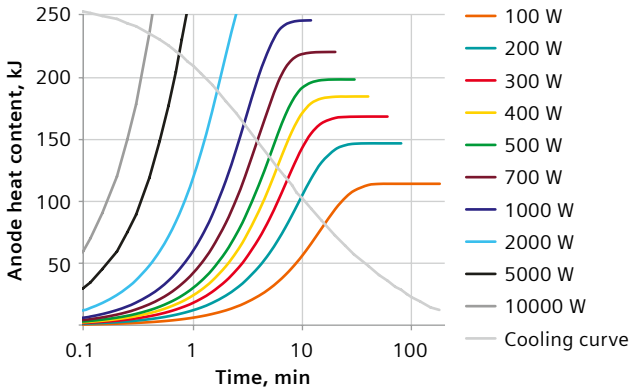
## Technical data

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Nominal voltage	150 kV		IEC 60613 (2010)
Nominal voltage Fluoroscopy	110 kV		
Nominal focal spot value	0.6	1.2	IEC 60336 (2005)
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			AC < 50 kHz
	maximum current	5.4 A	5.5 A
	maximum voltage	≈ 10 V	≈ 15 V
Anode angle	12°		
Anode heat storage capacity	260 kJ = 350 kHU		IEC 60613 (1989)
Anode drive frequencies for exposure	150 / 180 Hz		
Heat storage capacity of assembly	1.0 MJ = 1.35 MHU		IEC 60613 (1989)
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 (2008)
Total inherent filtration	2.5 mm Al / 75 kV		IEC 60522 (2003), IEC 60601-1-3 (2008)
Weight (incl. flange)	≈ 18 kg		

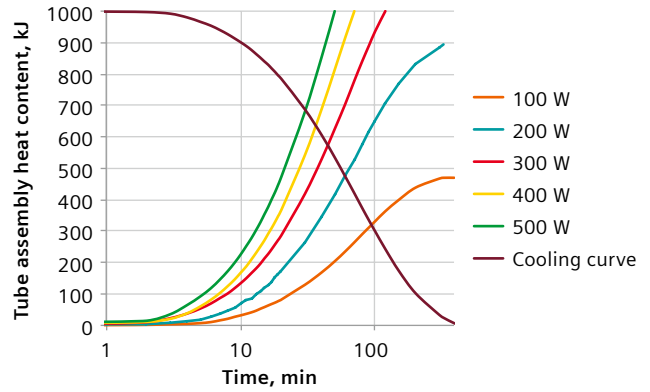
# Heating and cooling curves

Anode



According to IEC 60613 (1989)

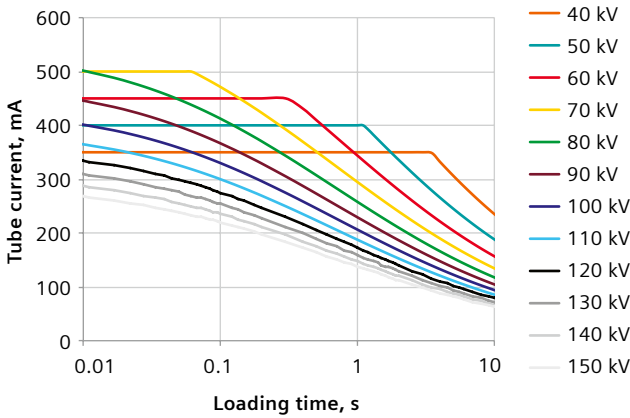
X-ray tube assembly (without fan)



According to IEC 60613 (1989)

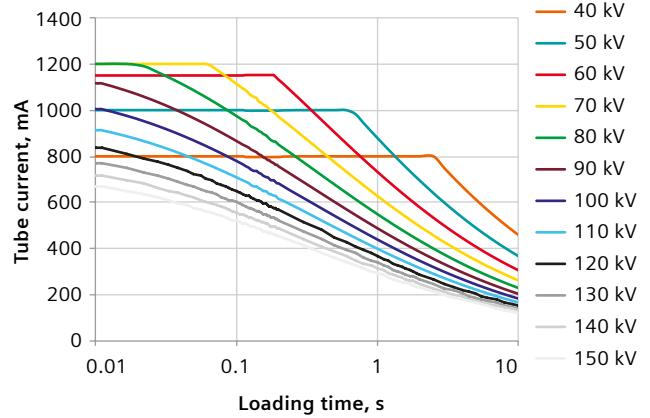
# Rating charts

Focal spot IEC 0.6



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

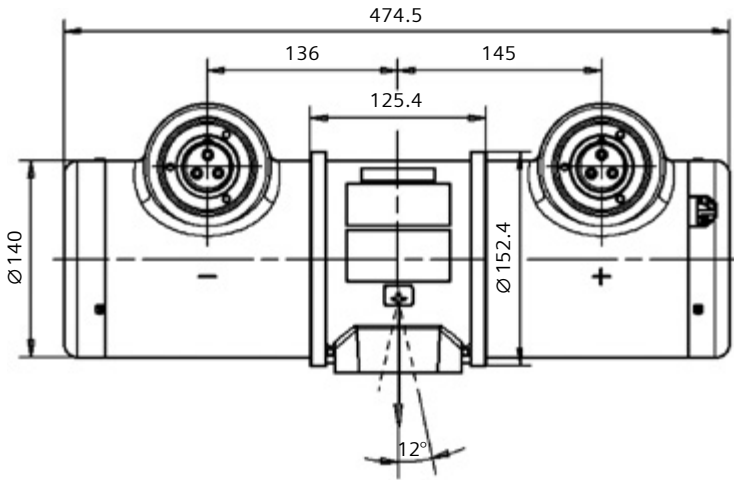
Focal spot IEC 1.2



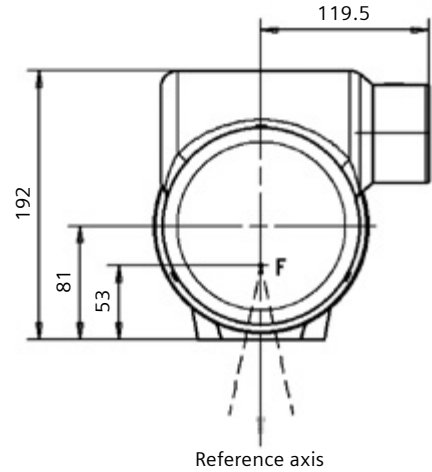
According to IEC 60613 (1989)  
Anode drive 180 Hz  
Thermal anode reference power 300 W

# Dimensions

Front view



Side view



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

F = Focus position  
Dimensions are given in mm.

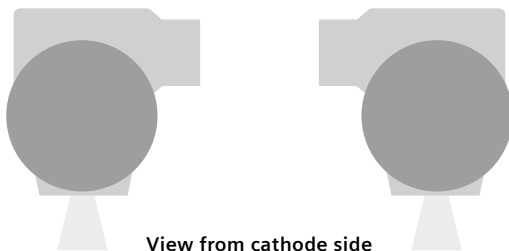
# Types and material numbers

	1-phase drive, without collimator flange	3-phase drive, without collimator flange
Housing	RAY-14S_1	RAY-14S_3
90° Mat.-No.	7037141	7037000
Housing	RAY-14_1	RAY-14_3
90° reverse Mat.-No.	7037133	7035483

# Horn angles

90°

90° reverse



View from cathode side

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