

New Generation X-Ray assembly for RAD



Laurus-RAD is an innovative, high performance assembly, complete with X-ray monoblock (stationary or rotating anode), specifically designed for application in medical diagnostic field. Solid, reliable and compact, it satisfies the most critical requirements, reaching an higher radiation quality whilst reducing leakage emission. This result has been obtained with high frequency control of filament heating and H.V. transformer. Monoblock heat dissipation power, thanks to the new housing material (pressure casted aluminium), has been increased to 100W. Available in three power configurations and with different control panels.

Applications

Laurus-RAD can be assembled onto human diagnostic X-ray equipment such as mobile units and bucky units and onto VET X-ray systems.

Main Features

Heat dissipation: 100 W
Compact, reduced weight and sizes
Leakage radiation < 0,3 mGy/h
Power: up to 32 kW
Quick kV rising time
Low residual ripple
High frequency filament power supply
Provided with RAD Control Electronics
Different control panels (RS 232 and CAN bus interfaces also available).

TECHNICAL DATA	F	R	RAD
HF Generator	Aluminium casting housing		
Frequency	40 kHz	40 kHz	100 kHz
Maximum power	4.2 kW	6 kW	32 kW
Maximum voltage to the X-ray tube	120 kV	120 kV	125 kV
Maximum current to the X-ray tube	70 mA	150 mA	450 mA
Residual ripple at maximum power	< 1%	< 1%	< 3%
Max kV rising time	< 1 ms	< 1 ms	< 1 ms
Sheath features			
Minimum inherent filtration @ 80 kV (in compliance with USA N.C.P.R. – part 33)	2 mm Al	1,8 mm Al	1,8 mm Al
Dimensions	See picture	See picture	See picture
Weight	19 kg	19 kg	19 kg
Thermal features			
Thermal capacity	1000 kJ	1000 kJ	1000 kJ
Thermal safety	60°C ±5°C	60°C ±5°C	60°C ±5°C
Continuous thermal dissipation	100 W	100 W	100 W
Max sheath temperature	60 °C	60 °C	60 °C
Leakage radiation	Less than 0,3 mGy per hour, in compliance with applicable standard IEC 601-1-3 (par. 12.4).		
X-ray tube data			
Anode type	Stationary (4.2 kW) or rotating (6 kW and 32 kW)		
Focal spots (small & large)	1,5 (4.2 kW) 0,6-1,3 (6 kW and 32 kW)		
Anode disk target angle	12° (4.2 kW) 16° (6 kW and 32 kW)		

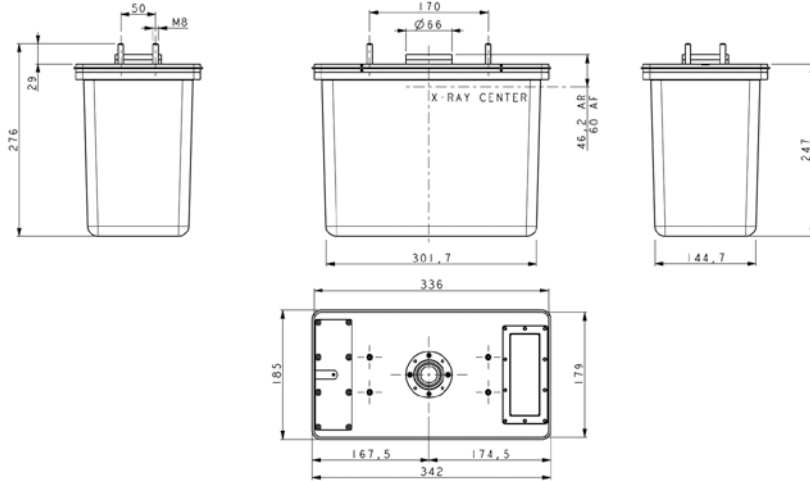
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RAD Control Electronics	Aluminium casting housing		
Maximum power	4.2 kW	6 kW	32 kW
kV range	40÷120 kV	40÷120 kV	40÷125 kV
mAs range	0,2÷320 mAs	0,2÷320 mAs	0,5÷200 mAs
Ripple	<1%	<1%	<3%
Rising time	<1 ms	<1 ms	<1 ms
Dimensions	See picture	See picture	See picture
Weight	27 kg	27 kg	68 kg (320 mAs version) 54 kg (125 mAs version)
Safeties	<ul style="list-style-type: none"> mAmin and mAmax Max load to X-ray tube Max exposure time Monoblock temperature and thermal unit controller Max kV, min kV, max Δ kV max I Anode rotation (for 6 kW and 32 kW models) Microprocessor self-test with display of diagnostic messages 		
Control panel controlled by microprocessors	<p>Different versions available</p> <ul style="list-style-type: none"> - Ergonomic panel with back-lighted LCD Two points technique and APR programs - Touch screen display 8" Two or three points technique and APR programs - RS 232 and CAN bus interfaces for digital processing system 		



Monoblock



RAD Control Electronics

