



YD 1170

Air-cooled triode for industrial RF heating



- Output power: 15.4 kW (CW mode)
- Anode voltage: 7.2 kV
- Anode dissipation: 10 kW
- Frequency up to 120 MHz

15.4 kW triode for RF dielectric heating

Based on more than 60 years of experience in the design and manufacture of electron tubes, Thales is a long-standing partner to most producers of industrial heating machines. And we are the benchmark supplier of grid tubes.

The YD 1170 triode is intended for low power dielectric heating applications and delivers continuous RF power of 15.4 kW. It is especially well suited to industrial applications, such as plastic welding.

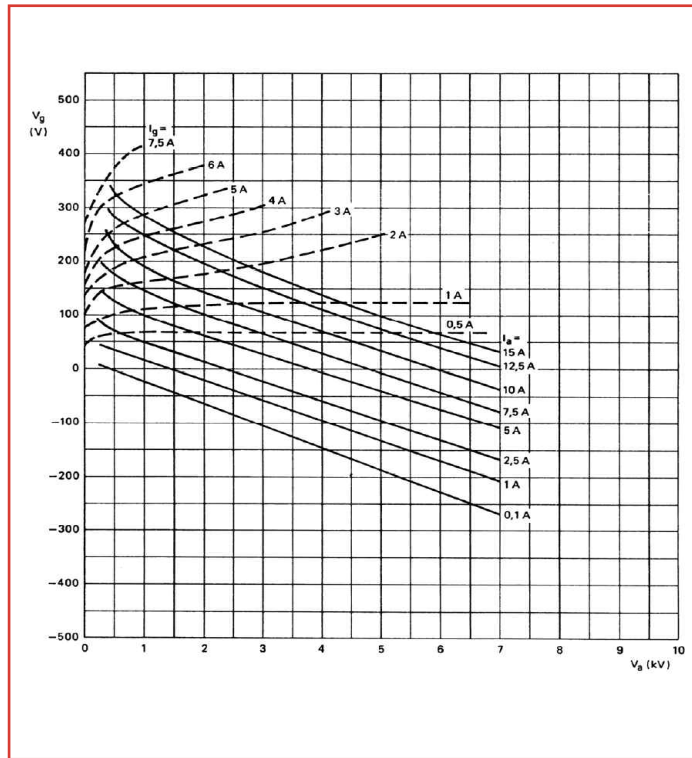
This air-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulsemodes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

Thales is fully committed to the long-term viability of tube technology, and to delivering high-tech products based on our proven expertise in complex processes. We offer the widest range on the market, whether for dielectric or induction and laser applications, backed by all the customer support and technical assistance services you need.

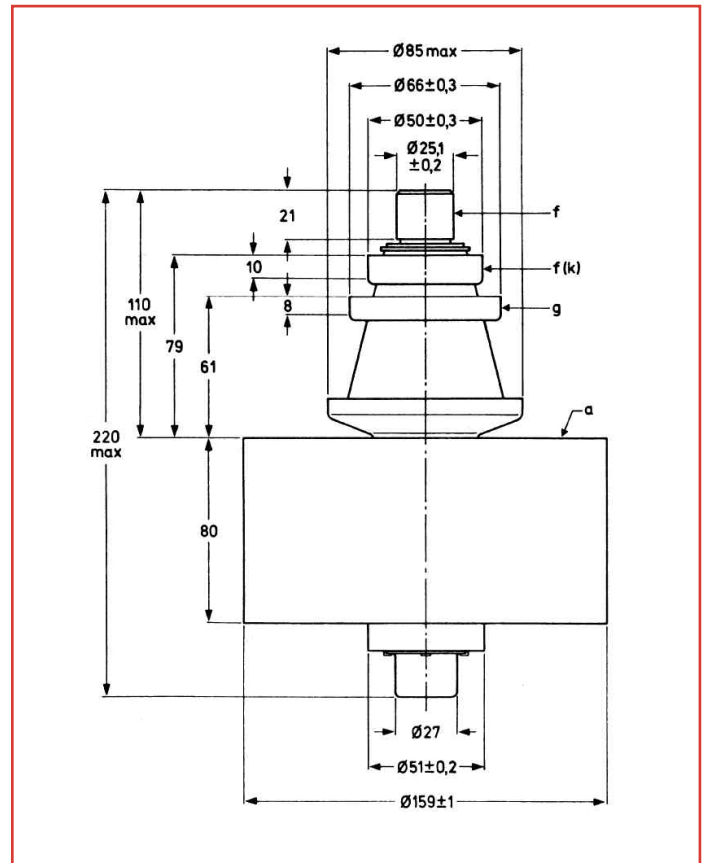
YD 1170

Industrial RF Heating triode

Constant current characteristics



Outline drawing (in mm)



Technical specifications

Cathode	thoriated tungsten
Filament voltage	5.8 V
Filament current	130 A
Max. heater surge current	800 A
Amplification factor	30
Capacitance	
• grid-anode	25 pF
• grid-cathode	47 pF
• cathode-anode	0.8 pF

Mechanical characteristics

Operating position	vertical
Weight	7 kg
Dimensions	220 x 160 mm

Cooling characteristics

Max. air temperature at tube inlet	45 °C
Min. air flow cooling (for $P_a + P_g = 10$ kW)	9.5 m ³ /min
Min. air pressure cooling corresponding	5.5 mbar
Max. T° at any point on the tube envelop	240 °C

Maximum ratings

Frequency	120	MHz
Anode DC voltage	7.2	kV
Grid DC voltage	-1500	V
Anode DC current	4.0	A
Grid DC current at full load	1.0	A
Grid DC current, at no load	1.5	A
Peak cathode current	25	A
Anode dissipation	10	kW
Grid dissipation	350	W
Grid resistance (tube non conducting)	10	kΩ

Class C, RF oscillator for industrial applications

Frequency	120	MHz
Anode DC voltage	6	kV
Grid DC voltage	-460	V
Anode DC current	3.4	A
Grid DC current, on load	0.92	A
Anode input power	20.4	kW
Anode output power	15.4	kW
Anode dissipation	4.3	kW
Grid dissipation	280	W
Grid resistance	500	Ω
Feedback ratio	15.5	%
Oscillator efficiency	75.5	%

Operations at higher frequencies available on request.

For more technical information regarding this tube, feel free to ask our distributor Richardson Electronics - www.rell.com

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