



## YD 1212

### Water-cooled triode for Industrial RF Heating



#### High-power 240 kW triode for RF dielectric or induction heating machines

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 1212 triode, intended for high-power induction and dielectric heating applications, delivers continuous RF power of 240 kW. It is especially well suited to industrial applications such as the manufacture of rolled welded tubes, heat treatment of metals, and textile and wood drying.

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

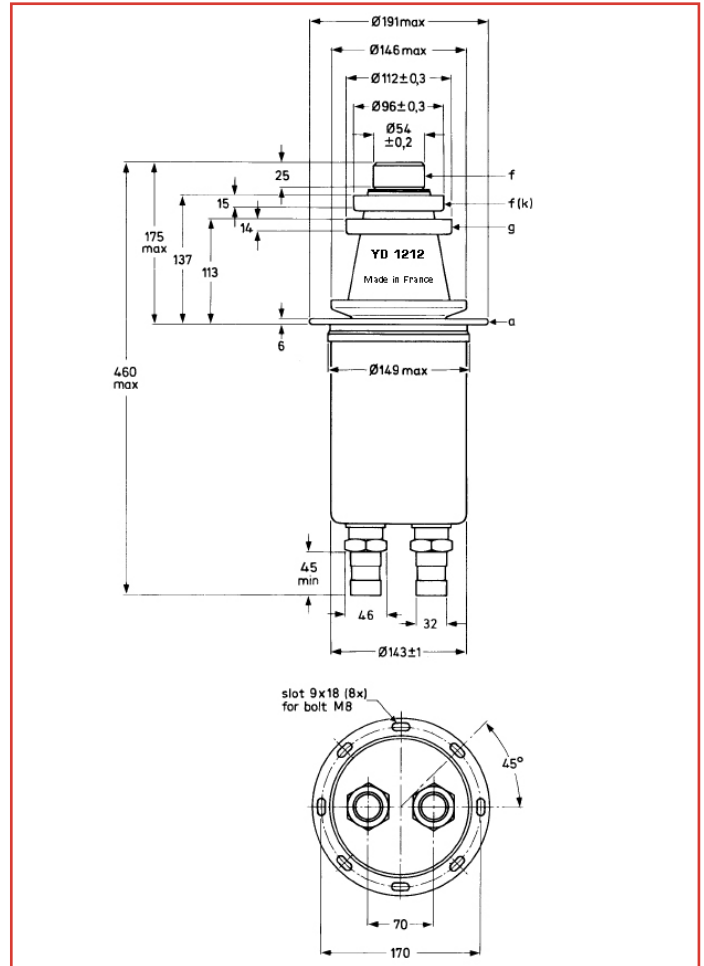
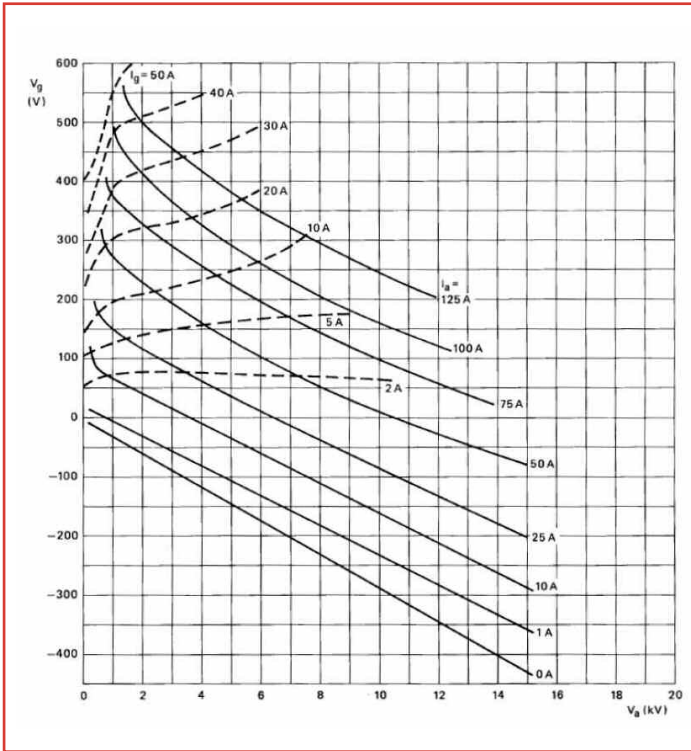
Thales is fully committed to the long-term viability of tube technology, and to delivering high-tech products based on our proven expertise in complex processes. We offer the widest range on the market, whether for dielectric or induction and laser applications, backed by all the customer support and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

- Output power: 240 kW (CW mode)
- Anode voltage: 16.8 kV
- Anode dissipation: 120 kW
- Frequency up to 30 MHz

# YD 1212

## Industrial RF Heating

### Constant current characteristics



Technical specifications	
Cathode	thoriated tungsten
Filament voltage	12.6 V
Filament current	380 A
Max. heater surge current	2000 A
Amplification factor	40
Capacitance	
• grid-anode	60 pF
• grid-cathode	185 pF
• cathode-anode	3 pF
Mechanical characteristics	
Operating position	vertical
Weight	15 kg
Dimensions	191 x 460 mm
Cooling characteristics (industrial water)	
Max. water temperature at tube inlet	40 °C
Max. water temperature at tube outlet	60 °C
Min. water pressure at tube inlet	600 kPa
Max. T° at any point on the tube envelop	240 °C
Min. water flow in the filament of water cooled	0.5 l/min
Min. air flow on filament connections	2 m <sup>3</sup> /min

Maximum ratings		
Frequency	30	MHz
Anode voltage	16.8	kV
Grid voltage	-2000	V
Anode current, CW	25	A
Grid current, at full load	7	A
Grid current, off load	8.5	A
Peak cathode current	175	A
Anode dissipation	120	kW
Grid dissipation up to 30 MHz	3	kW
Grid resistance	10	kΩ
Class C, RF oscillator for industrial applications		
Frequency	30	MHz
Anode voltage	14	kV
Anode current	23.5	A
Anode input power	329	kW
Anode output power	240	kW
Anode dissipation	81.5	kW
Grid current, on load	6	A
Grid dissipation	2.6	kW
Grid resistance	135	Ω
Feedback ratio	10.4	%
Oscillator efficiency	73	%
<i>Operations at higher frequencies available on request.</i>		

For more technical information regarding this tube, feel free to ask our distributor Richardson Electronics - [www.rell.com](http://www.rell.com)

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