



## YD 1342

### Water-cooled triode for Industrial RF Heating



- Output power: 530 kW (CW mode)
- Anode voltage: 18 kV
- Anode dissipation: 240 kW
- Frequency up to 30 MHz

#### 530 kW triode for RF 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 very high-power YD 1342 triode, intended for high-power induction heating applications, delivers continuous RF power of 530 kW. It is especially well suited to industrial applications such as the manufacture of rolled welded tubes.

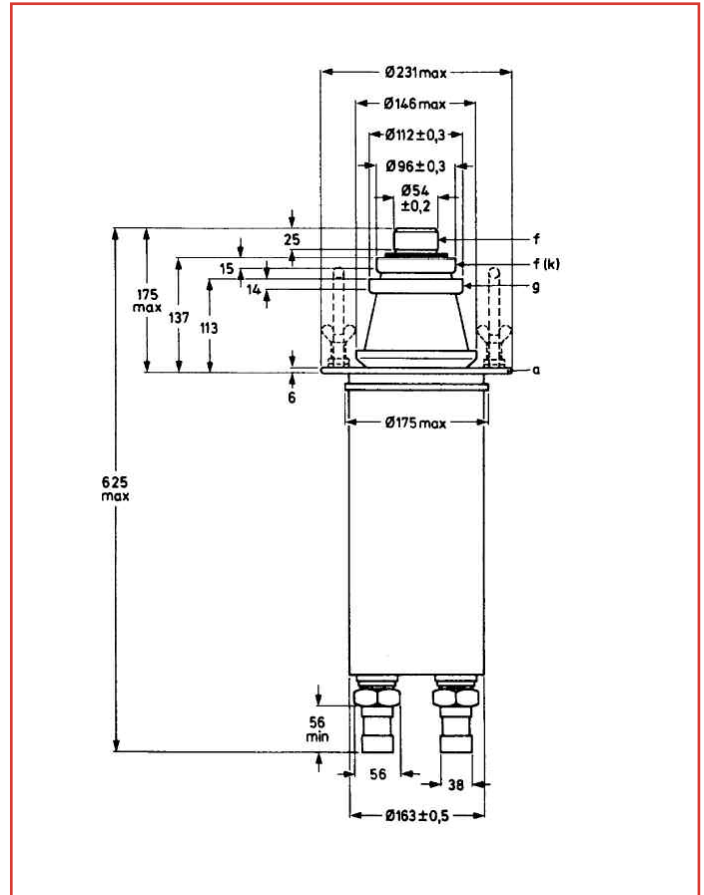
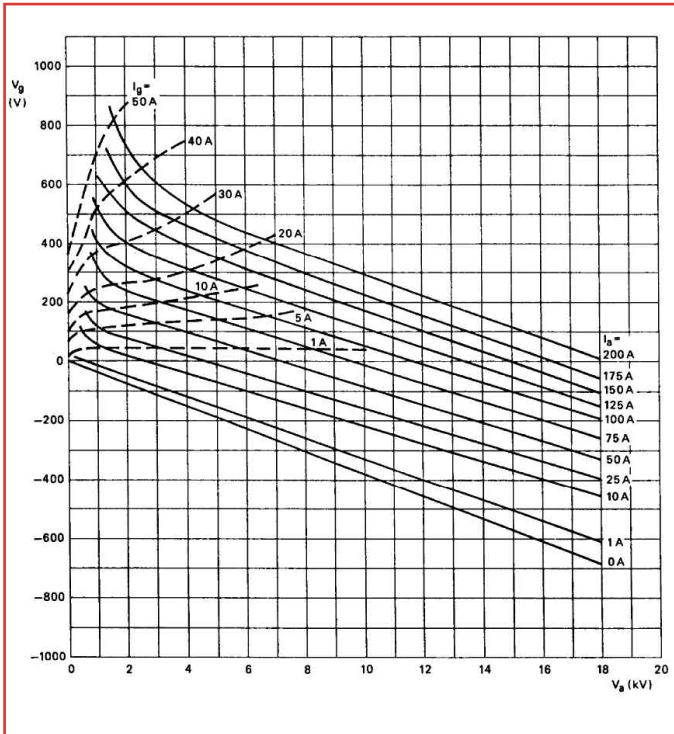
This water-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulse modes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

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.

# YD 1342

## Industrial RF Heating

### Constant current characteristics



### Technical specifications

Cathode	thoriated tungsten
Filament voltage	14 V
Filament current	555 A
Max. heater surge current	3500 A
Amplification factor	35
Capacitance	
• grid-anode	70 pF
• grid-cathode	250 pF
• cathode-anode	4.5 pF

### Mechanical characteristics

Operating position	vertical
Weight	30 kg
Dimensions	175 x 625 mm

### Cooling characteristics (industrial water)

Max. water temperature at tube inlet	40 °C
Max. water pressure at tube inlet	6 bar
Max. T° at any point on the tube envelop	240 °C
Min. air flow on filament connections	4 m <sup>3</sup> /min

### Maximum ratings

Frequency	30	MHz
Anode voltage up to 30 MHz	18	kV
Grid voltage	-2500	V
Grid DC current at full load up to 30 MHz	9	A
Grid DC current, off load up to 30 MHz	11	A
Anode DC current	45	A
Cathode peak current	250	A
Anode dissipation (deionized water)	240	kW
Anode dissipation (industrial water)	200	kW
Grid dissipation up to 30 MHz	6	kW
Grid resistance	10	kΩ

### Class C, RF oscillator for industrial applications

Frequency	30	30	30	MHz
Anode DC voltage	12	14	16	kV
Grid DC voltage	-550	-650	-750	V
Anode DC current	39.1	41	43.5	A
Grid DC current, on load	8.4	8.2	7.7	A
Anode input power	470	574	696	kW
Anode output power	355	440	530	kW
Anode dissipation	106	125	156	kW
Grid dissipation	3.8	3.8	3.8	kW
Grid resistance	65	79	97	Ω
Feedback ratio	10	9.5	9.3	%
Oscillator efficiency	75.5	76.6	76.1	%

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](http://www.rell.com)

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