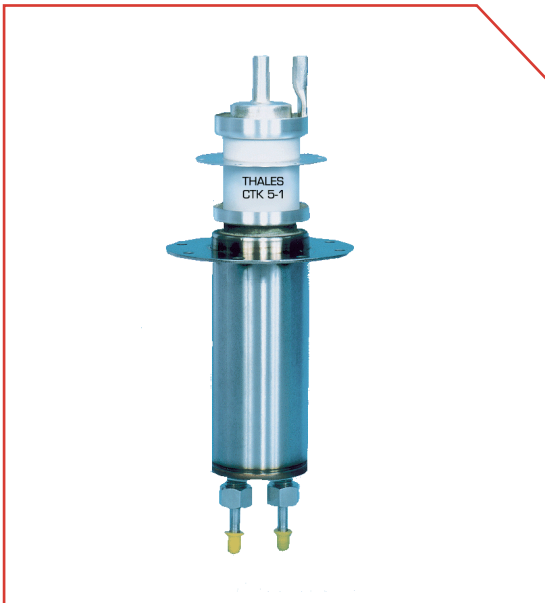




CTK 5-1

Water-cooled, high- μ triode for industrial RF heating



10 kW triode for induction 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 CTK 5-1 triode is intended for low power induction heating applications and deliver continuous RF power of 5 kW. It is especially well suited to industrial applications, such as heat treatment process.

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.

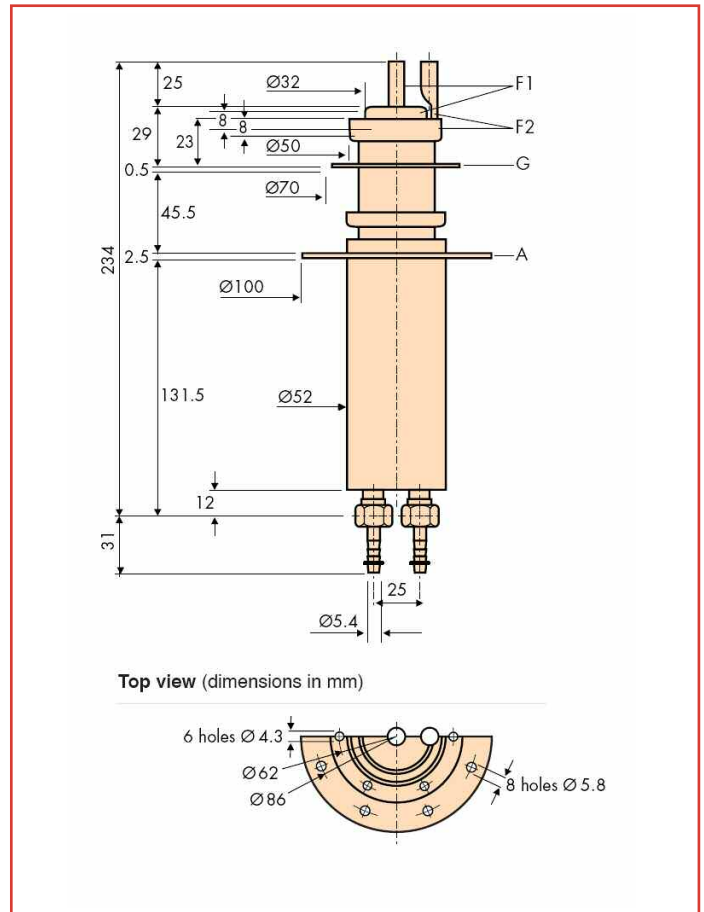
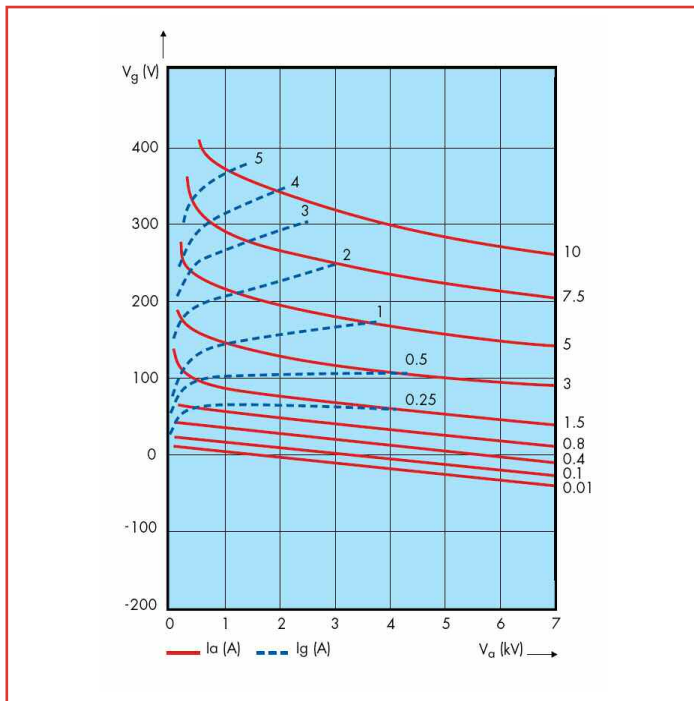
Thales is fully committed to the long-term viability of tube technology, and to delivering high-tech products based on our proven expertise in complex processes. We offer the widest range on the market, whether for dielectric or induction and laser applications, backed by all the customer support and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

- Output power: 10 kW (CW mode)
- Anode voltage: 7.2 kV
- Anode dissipation: 6 kW
- Frequency up to 150 MHz

CTK 5-1

Industrial RF Heating triode

Constant current characteristics



Technical specifications	
Cathode	thoriated tungsten
Filament voltage	6.3 V
Filament current	65 A
Max. heater surge current	250 A
Amplification factor	150
Capacitance	
• grid-anode	17 pF
• grid-cathode	22 pF
• cathode-anode	0.07 pF
Mechanical characteristics	
Operating position	vertical
Weight	1.8 kg
Dimensions	100 x 265 mm
CTK 5-1	without leads
Cooling characteristics (industrial water)	
Max. water temperature at tube outlet	60 °C
Max. water pressure at tube inlet	5 bar
Max. T° at any point on the tube envelop	220 °C
Min. air flow on filament connections	0.3 m ³ /min

Maximum ratings		
Frequency	150	MHz
Anode voltage up to 85 MHz	7.2	kV
Anode voltage from 85 to 150 MHz	6	kV
Grid voltage	-1000	V
Anode current, CW	2.5	A
Peak cathode current CW	15	A
Anode dissipation: industrial water	5	kW
Anode dissipation: distilled water	6	kW
Grid dissipation up to 85 MHz	300	W
Grid dissipation from 85 to 160 MHz	230	W
Grid resistance (tube non conducting)	10	k Ω
Class C RF oscillator for industrial applications		
Frequency	60	60 MHz
Anode voltage	6.5	5.5 kV
Anode current	2	1.9 A
Grid current, on load	0.9	0.84 A
Anode input power	12.9	10.4 kW
Anode output power	9.7	7.7 kW
Anode dissipation	3.2	2.7 kW
Grid dissipation	280	250 W
Grid DC voltage	-415	-350 V

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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