



ITK 120-2

Water-cooled triode for industrial RF heating



- Output power: 425 kW (CW mode)
- Anode voltage: 18 kV
- Anode dissipation: 150 kW
- Frequency up to 30 MHz

425 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 ITK 120-2 triode is intended for high power induction heating applications and delivers continuous RF power of 425 kW. It is especially well suited to industrial applications, such as pipe welding.

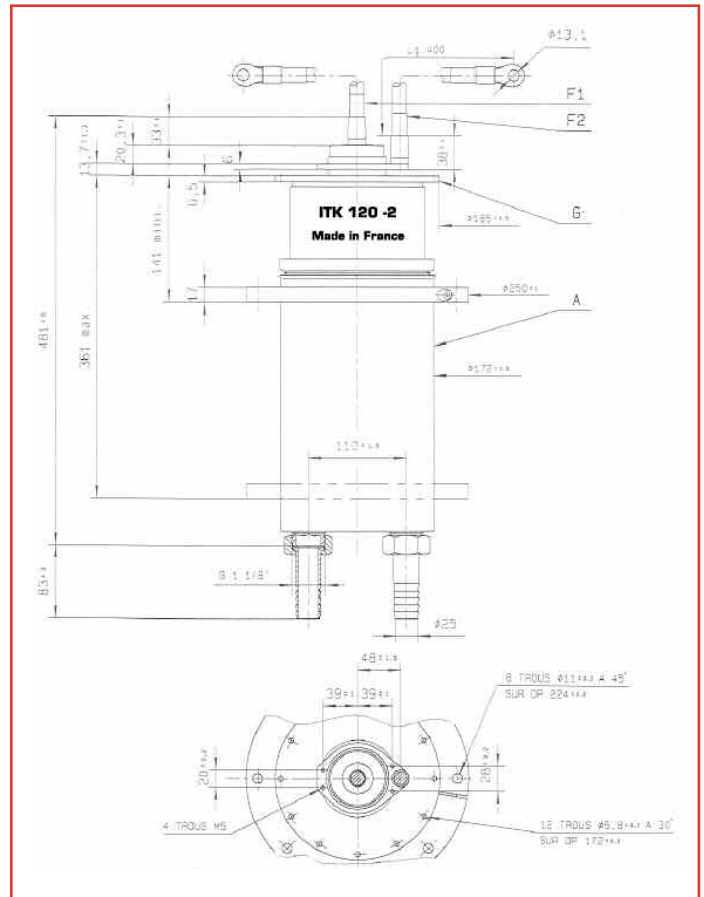
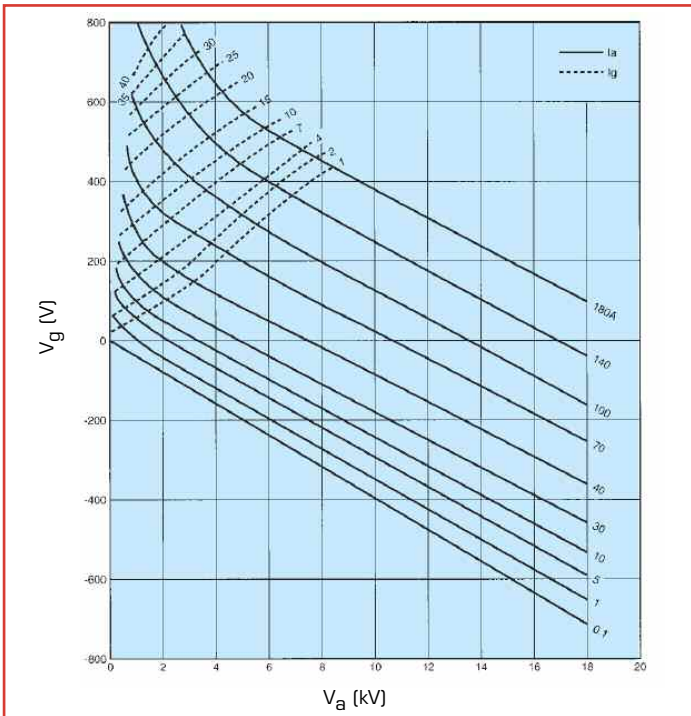
This water-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulsemodes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

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.

ITK 120-2

Industrial RF Heating triode

Constant current characteristics



Technical specifications

Cathode	thoriated tungsten
Filament voltage	18 V
Filament current	330 A
Max. heater surge current	1300 A
Amplification factor	27
Capacitance	
• grid-anode	75 pF
• grid-cathode	180 pF
• cathode-anode	4.5 pF

Mechanical characteristics

Operating position	vertical
Weight	18 kg
Dimensions	250 x 564 mm

Cooling characteristics (industrial water)

Max. water temperature at tube outlet	60 °C
Min. water pressure at tube inlet	5 bar
Max. T° at any point on the tube envelop	220 °C
Min. air flow on filament connections	2 m ³ /min

Maximum ratings

Frequency	30	MHz
Anode voltage		
• up to 15 MHz	18	kV
• from 15 to 30 MHz	15	kV
Grid voltage	-1500	V
Anode current, CW	36	A
Grid current		
• at full load, CW	6	A
• at no load, CW	7.5	A
Peak cathode current CW	200	A
Anode dissipation: industrial water	120	kW
Anode dissipation: distilled water	150	kW
Grid dissipation		
• up to 15 MHz	3.6	kW
• from 15 to 30 MHz	3.2	kW
Grid resistance (tube non conducting)	10	kΩ

Class C, RF oscillator for industrial applications

Frequency	15	30	MHz
Anode voltage	17	15	kV
Anode current	33	32	A
Grid current, on load	4.8	5.1	A
Anode input power	561	480	kW
Anode output power	425	360	kW
Anode dissipation	130	112	kW
Grid dissipation	2.7	2.9	kW
Grid resistance	210	180	Ω
Feedback ratio	10.7	11.6	%
Oscillator efficiency	76	75	%

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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