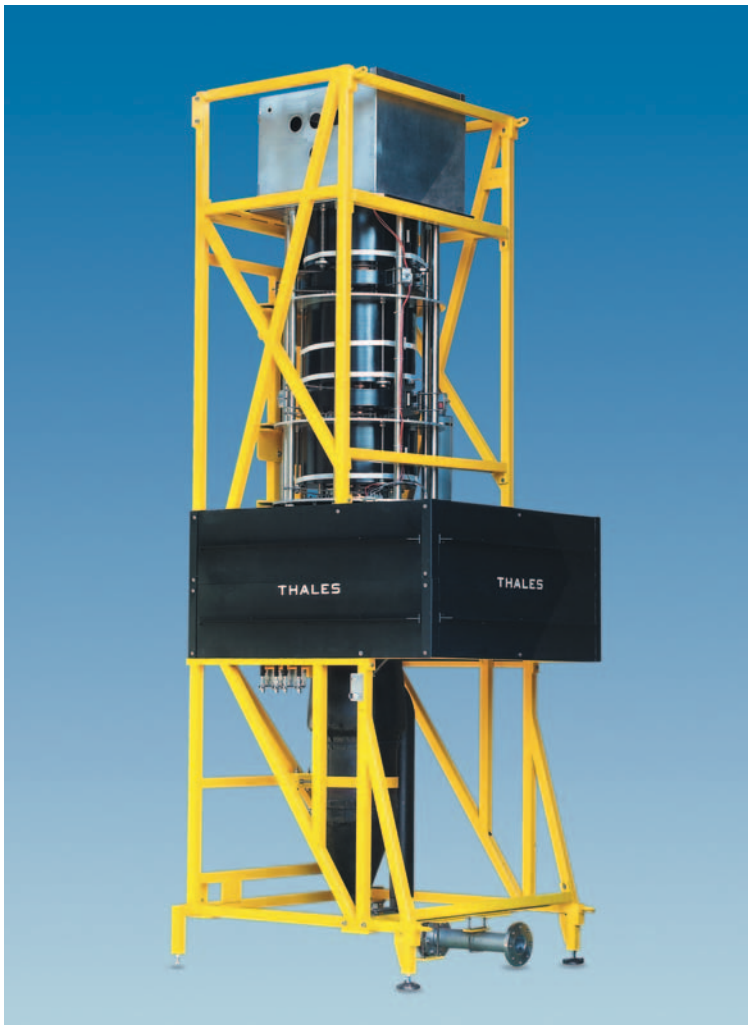
SCIENCE
SYNCHROTRONS

TH 2178

High-power CW klystrons

Used in
DESY program

800 kW CW at 500 MHz



- High efficiency: 62% typ.
- Six-cavity RF circuit
- Modulating anode
- Air gun insulated
- Integral focusing coils
- Integral X-ray shielding
- Proven reliability by design, long life

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The TH 2178 is the latest generation of CW klystron specially designed as RF source for synchrotrons and storage rings. It has been developed for DESY program. Operating at 500 MHz, it may deliver 800 kW CW.
This six-integrated-cavity klystron, with one operating on the second harmonic, is fitted with modulating anode to adapt operation to specific applications.

This klystron is used vertical, collector down. Collector and body are water cooled, electron gun and output window are forced-air cooled.

This product is designed, developed and manufactured at an ISO 9001: V 2000 and ISO 14001 production site registered.

RF performance

Frequency	499.67	MHz	
RF output power	800	kW	
RF drive power	80	W	max.
-1 dB bandwidth	+/- 1	MHz	min.
Efficiency	62	%	typ.
Saturated gain	40	dB	typ.

Electrical characteristics

Cathode voltage	75	kV	max.
Beam current	18	A	max.
Anode voltage	55	kV	max.
Heater voltage	25	V	max.
Heater current	25	A	max.

Cooling

Collector coolant flow	1 400	l/min	
Body 1 coolant flow	20	l/min	
Body 2 coolant flow	8	l/min	

Electromagnet

1 power-supply			
• dc voltage	150	V	typ.
• dc current	11	A	typ.

Mechanical characteristics

Height	4 000	mm	
Length	1 600	mm	
Width	1 500	mm	
Weight	2 200	kg	approx.
RF input	UG 22 type - 50	Ω	
RF output	CPR 2300 F flange		

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