

# K-SERIES K200



RF PEAK POWER UP TO 35 MW  
MODULATOR PEAK POWER UP TO 80 MW

This mid-range solid-state pulse modulator is designed to handle a wide range of different klystrons with a RF peak power from 7 MW to 35 MW. ScandiNova offers everything from a standard modulator to a turn-key RF system that includes all necessary system components from the wall socket to the accelerator, such as the klystron, diagnostics and low-level RF. Review our other pulse modulators in the modular K-Series.

SYSTEM SPECIFICATIONS	UNIT	DATA	NOTES
Klystron RF Peak Power	MW	7–35	Depends on choice of klystron
Klystron RF Average Power	kW	20	Maximum
Modulator Peak Power	MW	80	Maximum
Modulator Average Power	kW	55	Maximum
Pulse Voltage	kV	160–290	Typical range
Pulse Current	A	120–280	Typical range
Pulse Repetition Frequency Range	Hz	0–500	Typical range. Depending on max average power (see options).
Pulse Length, Top	µs	0.5–10	Typical range. Depending on max mod. power.
Flatness (Voltage)	%/ µs	< 0.5	Flat top. Depending on load (see options).
Modulator Voltage Stability, RMS	%	0.015	(see options)
Cooling (incl. RF parts)	l/min	5-110	Clean water

INTERFACE	DEFAULT	OPTION
Mains Power, 3 Phase	400 VAC, 50/60 Hz	208/380/480 VAC
Mains Power, Single Phase	230 VAC, 50/60 Hz	115 VAC
Control Interface	ModBus TCP	
Water Cooling Interface In/Out	ISO G1 1/2"	
Trig Input	Electrical and Optical	
Diagnostics	Pulse Voltage and Current	See Options

#### Standard Modulator Includes

Control System (ScandiCat)  
 Remote Control  
 Local Control Panel  
 Mains Power Distribution  
 Cooling System  
 Filament PS  
 Klystron Socket  
 Pulse Sensors  
 Hard Wired Interlock System

#### Additional System Components

Low Level RF Amplifier/Generator  
 Circulator & RF Loads  
 Directional Coupler  
 Waveguide Windows  
 Vacuum PS  
 Solenoid PS  
 Klystron  
 Extended cooling for Klystron,  
 Solenoid etc.

#### Typical Klystron Loads

Thales	Toshiba
TH2128E	E3754
TH2130	E3776
TH2170	
TH2171	
TH2172	

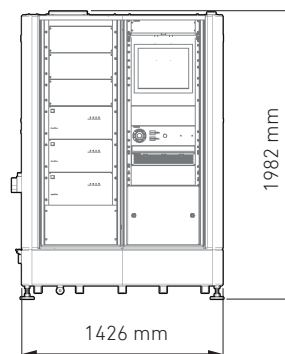
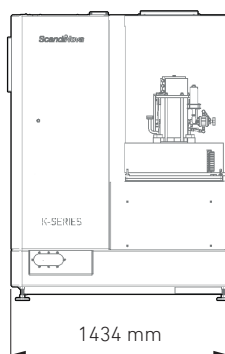
#### Options

Pulse/RF Diagnostics  
 Enhanced PRF Range (up to 1000 Hz)  
 Enhanced Stability (down to 0.003%)  
 Enhanced Flatness (<0.25%/µs)  
 Neutron Resistant Switching

#### Size and Weight

Weight approx. 1400 kg  
 (excl. oil, klystron, solenoid)  
 Oil volume approx. 380 l

*Information contained in this document*



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