

M-SERIES M100-i



MAGNETRON MODULATOR UP TO 3.1 MW

ScandiNova's M100-i is a compact pulse Modulator designed for system integration. The Modulator is optimized for a wide range of different magnetrons with an RF peak power ranging from 1.0 MW to 3.1 MW. To facilitate system integration, the Modulator has a split design with a Tank Unit and a Pulse Unit, and can be placed in a very compact enclosure. The M100-i is also available as a stand-alone and/or dual version (see M100, M100D, and M100D-i).

All interlocks and essential diagnostics are fully integrated, and ScandiNova's modern control system offers a user-friendly interface. The pulse length, amplitude and repetition rate can all be changed.

The M100-i can be delivered as a pure high-power pulse modulator or as part of an RF Unit including magnetron and related components. Different levels of service and support programmes are available.

COMPACT

UP TO 3.1 MW RF PEAK POWER

FULLY COMPUTERIZED

MINIMIZED CONSUMABLES

THE M-SERIES

ScandiNova's M-series

contains a range of magnetron pulse modulators with high reliability and performance, a compact design and low energy consumption.

Our magnetron pulse modulators require about one third of the space of alternative solutions yet still offer around 30% higher efficiency, two operating advantages that especially appeal to cancer treatment providers.

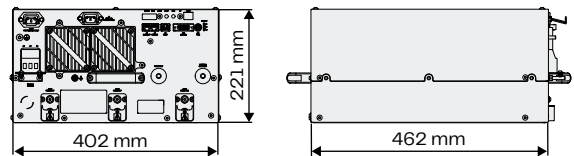
Their high reliability and performance also attract many industry applications.

SPECIFICATIONS	UNIT	VALUE	NOTES
Magnetron RF peak power	MW	1-3.1	Depends on choice of magnetron
Magnetron RF average power	kW	2.8	Maximum, depends on choice of magnetron
Modulator peak power	MW	6.2	Maximum
Modulator average power	kW	8	Maximum
Pulse voltage	kV	30-52	
Pulse current	A	30-120	
RF pulse length, top	µs	0.5-5	Depends on max average power
Pulse repetition rate	Hz	0-500	Depends on max average power
Modulator Voltage Stability, RMS	%	0.4	Verified on resistive load (see options)
Water cooling	l/min	8	18-40 °C, non-condensing

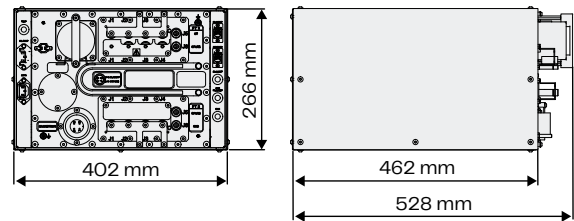
INTERFACE	CONNECTOR	DEFAULT	OPTION
Mains power, three-phase	Terminal block (4-wire)	400±10 % VAC, 50/60 Hz	208/380/480 VAC
Mains power, single-phase	C20	230±10 % VAC, 50/60 Hz	115 VAC
Control interface	RJ45	Modbus TCP	
Water cooling interface	12 mm	Legris Push-in	Swagelock
Trig input	BNC	Electrical	Optical
Diagnostics	BNC	Pulse voltage & current signals	

SIZE AND WEIGHT	UNIT	VALUE
Weight, Pulse Unit	kg	46
Weight, Tank Unit (incl. oil)	kg	76

For more information, visit www.scandinovasystems.com/M100-i



Pulse Unit



Tank Unit

Contact ScandiNova for any requirements not covered by this specification.

Information contained in this document is subject to change without notice.

The Standard Modulator Includes

- Filament power supply
- Control system
- Control via Modbus TCP
- Pulse sensors
- Cable kit between Pulse Unit and Tank Unit
- HV pulse cable
- Internal trig generator
- Factory acceptance test certificate
- Manuals

Options

- Pulse/RF diagnostics
- Enhanced PRF Range (1000-2000 Hz)
- Enhanced Stability (down to 0.1 %)
- Digitizer
- Gunport
- Peaking components

Additional System Components

- Circulator & RF loads
- Directional coupler
- Magnet power supply
- Waveguide windows
- Magnetron

Services

- Training in handling, operation and maintenance
- Shipping
- Installation and start-up
- Service contract

Typical Magnetron Loads

BVERI	GLVAC
VE2110	VE2110A
	VE2098

Nisshinbo

M1603	GLM
M1466	GLM5193
MX7640	GLM5810
M1466N	GLM6090
M1466T	

CPI

E2V	VMC3109
MG5193	VMC3136

- MG6090
- MG6493
- MG7095

COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001 • ISO 14001

HEADQUARTERS
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ScandiNova
Excellence in pulsed power