ScandiNova
Part of Nodica Group

M-SERIES M110

COMPACT

UP TO 3.1 MW RF PEAK POWER

MULTIPLE DIAGNOSTIC FEATURES

POWER FACTOR > 0.95

MINIMIZED CONSUMABLES

MAGNETRON MODULATOR

ScandiNova's M110 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 M110 is equipped with active power factor correction.

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

The M110 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.

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.

Excellence in pulsed power
www.scandinovasystems.com

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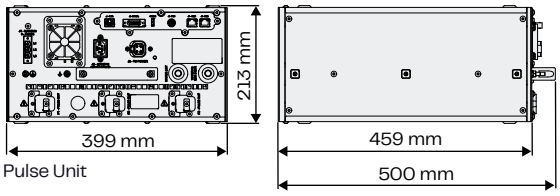
SPECIFICATIONS	UNIT	VALUE	NOTES
Magnetron RF peak power	MW	1–3.1	Depends on choice of magnetron
Magnetron RF average power	kW	4.0	Maximum, depends on choice of magnetron
Modulator peak power	MW	6.2	Maximum
Modulator average power	kW	8	Maximum
Pulse voltage	kV	30–52	
Pulse current	A	30–120	
RF pulse length, top	µs	0.5–5	Depends on max average power
Pulse repetition rate	Hz	0–500	Depends on max average power
Power factor	–	> 0.95	
Water cooling	l/min	8	18–40 °C, non-condensing

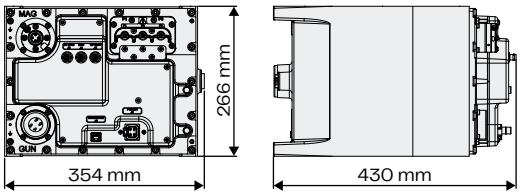
INTERFACE	CONNECTOR	SPECIFICATIONS	NOTES
Mains power, three-phase	Terminal block (4-wire)	380–480±10 % VAC, 50/60 Hz	
Mains power, single-phase	C20	115–230±10 % VAC, 50/60 Hz	
Control interface	RJ45	Modbus TCP	
Water cooling interface	Legris Push-in 12 mm		Other connector options available
Trig input	BNC	Electrical	
Diagnostics	BNC	Pulse voltage & current signals	

SIZE AND WEIGHT	UNIT	VALUE
Weight, Pulse Unit	kg	36
Weight, Tank Unit	kg	62

For more information, visit www.scandinovasystems.com/M110



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

Additional System Components

- Circulator & RF loads
- Directional coupler
- Waveguide windows
- Magnetron
- Peaking components

Services

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

Typical Magnetron Loads

BVERI
VE2110

Nisshinbo (NJRC)
M1603
M1466
MX7640
M1466N
M1466T

E2V
MG5193
MG6090
MG6493
MG7095

GLVAC
VE2110A
VE2098

GLM
GLM5193
GLM5810
GLM6090

CPI
VMC3109
VMC3136

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

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