

RFGX00VT 13.56 MHz 300/600/1000W RF Plasma Generators

The RFGX00VT includes a wide range of RF output power (300-600 and 1000W) with 13.56 MHz frequency. RFGX00VT made by VacTechniche is a combination of radiofrequency electronics achievements, accurate and repeatable output, advanced power amplifier protection, high safety factors, modular design and high efficiency power amplifier and and functional capabilities. These features have turned this product into a reliable device for industrial and laboratory applications.

Features and Capabilities

Continuous operation capability

These RF Generators are designed for heavy-duty industrial applications.

Ease of operation and adjustment:

Through a graphical display-control panel, user can monitor or control parameter such as:

- Forward power,
- Reflected power,
- DC bias,
- Settings and alarms and errors.

A complete set of Protections:

- Closed-loop output power control,
- Reflected power protection,
- Over temperature protection,
- Over current and overvoltage protection,
- Reflected power limit protection.

Remote control capability:

- Standard Analog (0-5V) Remote control.
- Modbus (RS485) Standard Digital Remote control, with adjustable parameters.

Automatic target protection capability:

- These RF Generators have solved the common problem of thermal shock and breakage of Sputtering Targets.

  In these generators, the output power can be increased from a desired initial value in the form of a Ramp with an adjustable slope. In this way, the sputtering target is protected against thermal shock and breakage.

Load and output RF cable protection:

In some loads, impedance matching is performed without the presence of plasma. In this case, the RF power delivered to the matching box is lost in the load insulators and the output cable causing them to fail as the temperature increases.

- These RF Generators have solved this problem and, by detecting that the plasma is off, detect this destructive condition and protect the load and cable.

RF Generator Specifications		
Model	**RFG300VT**	**RFG600VT**
Output power (W)	Adjustable 3W to 300 W - 1W Step, 1W stability	Adjustable 3W to 600 W - 1W Step , 1W stability
Output frequency	13.56(MHz)	13.56(MHz)
Output impedance	50(Ω)	50(Ω)
Output connector	N type (male)	N type (male)
Protection	Reflected power protection, over temperature protection, over current and overvoltage protection and reflected power limit protection.	Reflected power protection, over temperature protection, over current and overvoltage protection and reflected power limit protection.
Reflect Power limit	50-watt max. Reflect power limit is 30 watts up to 60-watt forward power and decreases automatically and linearly for higher power. Therefore, the reflect power limit, is 10 watts in 300-watt forward power. This additional protection option is for reducing power loss and increasing the system life time.	100-watt max. Reflect power limit is 100 watts up to 120-watt forward power and decreases automatically and linearly for higher power. Therefore, the reflect power limit, is 20 watts in 600-watt forward power. This additional protection option is for reducing power loss and increasing the system life time.
Display and control panel	Graphic display and touch screen control panel: Forward power, reflected power, User requested power, self-bias monitoring and Alarms and system state are shown on the display.	Graphic display and touch screen control panel: Forward power, reflected power, User requested power, self-bias monitoring and Alarms and system state are shown on the display.
Remote control	Standard Digital (Modbus) and analog control (0-5 V). Control: System on/off, Mode selection, Forward power adjustment. Monitoring: Forward Power, Reflect power and alarms	Standard Digital (Modbus) and analog control (0-5 V). Control: System on/off, Mode selection, Forward power adjustment. Monitoring: Forward Power, Reflect power and alarms
Operating temperature range	10 to 40 ℃	10 to 40 ℃
Cooling	Air (fan)	Air (fan)
Dimensions (cm)	45×23×13.5 (length×width×height) 3U rack mountable	50×23×13.5 (length×width×height) 3U rack mountable
Main input power	220 **V** (190-240 V) & 50 Hz (50-60 Hz)	220 **V** (190-240 V) & 50 Hz (50-60 Hz)
Weight	Less than 10kg	Less than 14kg
Case material	Aluminum	

VacTechniche
PROBLEM SOLVED

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