



# **MAGNUM Ultrasonic Generators -Types GM, GMR**

## **Overview**

Power Sonics newest line of ultrasonic generators (power supplies) employs the latest solid state IGBT technology to replace the rugged and reliably performing PSCR generators built for many years. These brand new designs represent years of development and testing to ensure reliability while adding new product and diagnostic features not available before.

NEMA 1 Enclosed Stations available:

**Model GM, GMR-2KR ....2000 W (2 Generators)**

**Model GM, GMR-3KR ....3000 W (3 Generators)**

**Model GM, GMR-4KR ....4000 W (4 Generators)**

**Model GM, GMR-5KR ....5000 W (5 Generators)**

NEMA 12 Enclosed Air Conditioned Stations available:

**Model GM, GMR-3KE ... 3000 W (3 Generators)**

**Model GM, GMR-4KE ... 4000 W (4 Generators)**

**Model GM, GMR-5KE ... 5000 W (5 Generators)**

**Model GM, GMR-6KE ... 6000 W (6 Generators)**

## **Individual Generator Features**

### • **Types GM and GMR Power Generator IGBT technology**

Types GM (used with "flat" transducers) and GMR (used with "radial" transducers) generators are our newest power supplies and use modern IGBT technology. They are designed to be highly self protective and self diagnostic.

The solid state circuitry utilizes active power devices which have higher peak current and voltage ratings over previous power devices. Circuit design features match the generator and output signal to various applications and operate effectively in less than ideal bath conditions. An integral, cleanable air filter is standard.

### • **Interchangeable with Power Sonics, Westinghouse and other makes of Magnetostrictive Equipment**

The entire line of Power Sonics generators has been designed to be directly interchangeable with equipment previously manufactured by Westinghouse Electric Corp. and other magnetostrictive manufactured equipment.

### • **Front Panel Display**

The front panel displays multiple lights which indicate operational and trip conditions of the generator. Green LED's indicate ON conditions while Red LED's indicate trip conditions. The status of the lights directs the user to the probable cause of the current condition through instructions supplied with the generator.

GM(R)-4K



GM(R)-1K



GM(R)-2K

### • **Operational LED's**

AC POWER ON (Green) - Indicates that the line circuit breaker is turned on and 115 Volts is available for control and power.

ULTRASONIC POWER ON (Green) - Indicates that the generator is supplying power to the transducer and that the transducer and power circuits are functioning properly.

### • **Diagnostic LED's**

GENERATOR ON (Green) - Indicates that the IC control has supplied a signal to turn on the rectifier and high frequency circuit.

CONTROL POWER ON (Green) - Indicates that the control voltage is operational and is at the proper voltage level.

OVER VOLTAGE (Red) - Indicates that a fault has occurred in the high frequency circuit of the generator.

OVER CURRENT (Red) - Indicates that the AC line current is too high from either a component or transducer problem.

OVER TEMPERATURE (Red) - Indicates that the temperature of the heat sink is too high for proper operation.

### • **Optional Features**

- A factory installed Microcontroller based timer with start/stop and reset feature.

# Multiple Generator Features

- **NEMA 1 or NEMA 12 Enclosed Generators**

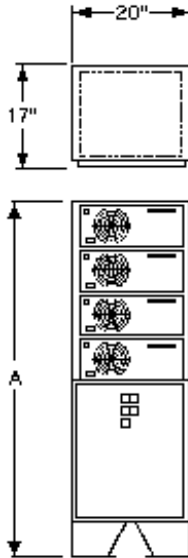
Power Sonics offers two choices when the installation requires the use of multiple generators. One is a NEMA 1 type general purpose enclosure and the second is a NEMA 12 enclosure for demanding hot and dirty industrial environments. Both accommodate all types of generators.

- **Three Phase Incoming Line Service**

Either multiple enclosure accepts three phase, 230/460 volt, 50/60 Hertz service as standard, 380 or 575 Volt, three phase service is optional.

- **NEMA 1 Rack Enclosure**

The base generator rack is comprised of a NEMA 1 control and transformer enclosure with portable, modular enclosed generators mounted above. Up to five generators can be mounted, either at time of purchase, or later as a retrofit in the field, if designated at the time of original order. This modular design provides the user with easy future expansion capability. The Rack requires only six inches additional floor space over a single portable generator.



- **Output Power and Local Remote Operation**

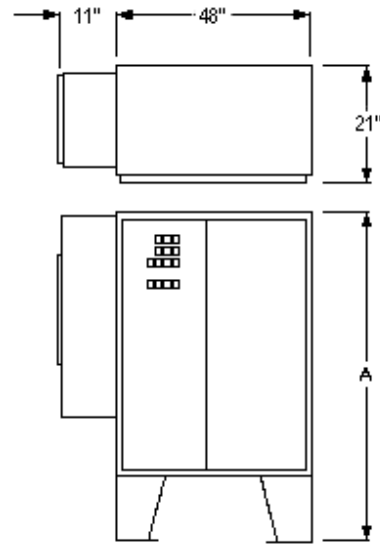
Individual units have a rated output of 1000 Watts at a nominal frequency of 20 kiloHertz, operate from a typical single phase, 115 Volt, 20 ampere circuit and contain an integral RFI (Radio Frequency Interference) suppression network.

Each multiple unit has a rated output of 2000 Watts up to 6000 Watts at a nominal frequency of 20 kiloHertz. Standard, modular portable generators are used for maximum up time and ease of maintenance.

Switchable local or remote operation is standard to allow for ease of production floor layout and access.

- **NEMA 12 Air Conditioned Enclosure**

A heavy duty NEMA 12, air-conditioned enclosure is available for those applications demanding our ultimate in protection from the environment. The floor space requirement is slightly over twice the rack requirement. Door mounted generator controls and "On" indicating lights for the generators are also standard with this unit.



MODELS	NO. OF GENS.	A DIM.	KVA REQ'D	EST. SHIP WGT.
GM,GMR-2KR	2	45.25"	6.0	370#
GM,GMR-3KR	3	52.75"	6.0	495#
GM,GMR-4KR	4	60.25"	12.0	620#
GM,GMR-5KR	5	67.75"	12.0	745#

MODELS	NO. OF GENS.	A DIM.	KVA REQ'D	EST. SHIP WGT.
GM,GMR-3KE	3	72.00"	12.0	820#
GM,GMR-4KE	4	72.00"	13.0	940#
GM,GMR-5KE	5	72.00"	15.0	1160#
GM,GMR-6KE	6	72.00"	18.0	1280#

PROD-SPEC-GM 080103

For analysis of cleaning applications, submit completed [Engineering Study Form](#) (ESF) to Power Sonics



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