

RMG-i™

WRITTEN-POLE® MOTOR-GENERATOR - UPS WITHOUT BATTERIES

**A Rugged and Reliable Solution
for Power Quality and
Extended Power Outages**



APPLICATIONS: The RMG-i™ contains a Written-Pole® Roesel Motor-Generator (RMG®) and an integral engine. It is designed to supply **continuous clean power** to sensitive electrical loads in commercial and industrial installations. Loads such as computers, security systems, machinery, medical devices, communications, controls, instruments and lights are provided **the ultimate isolation and continuous protection** from spikes, sags, and other variations in the utility power. The RMG-i also prevents load harmonics from feeding in either direction between the utility system and the load through complete electrical isolation. In addition the RMG-i can be use for peak shaving of power during high demand periods as well as being used for distributed generation under emergency conditions.

Precise uninterruptible power is generated by the patented Written-Pole RMG even when utility power blinks out for several seconds during bad weather or utility switching. These "blinkouts", voltage surges and sags cause more than 99% of power problems. The rugged reliable rotary energy in the RMG is designed to use flywheel energy to ride through the longest utility "blinkouts" or sags and absorb even the worst power surges. Some cases need continuous power for the few times when the "blinkout" becomes a blackout. The RMG-i supplies enough time to start its own engine with No-Break in power to the sensitive load. The integral engine included with the RMG-i starts by using the RMG flywheel energy so there are no batteries needed in the system. The RMG-i is packaged with all controls including a make-before-break Automatic Bypass System. Standard engines are LPG (propane) or natural gas.

RMG-i™ SPECIFICATIONS

Model Identification	40 kVA	60 kVA
PHYSICAL		
Dimensions in inches (W x H x D)	80 W x 83 H x 50 D	89 W x 83 H x 50 D
Weight	13,000 lbs	14,520 lbs.
Shipping Weight (approx.)	13,000 lbs	14,820 lbs.
Cooling Air Flow (CFM) for 5°F rise	3,590	5,250
Maximum Heat Rejection (Btu/hr) @ 85% eff.	19,270	29,000
Noise Level, Measures @ 3 Ft (No Engine)	75 dBa	75 dBa
Ambient Temperature Range	4°C to 40°C	4°C to 40°C
Maximum Relative Humidity, Non-Condensing	<100%	<100%
Storage	-40°C to 60°C	-40°C to 60°C

ENGINE		
Type	Ford V-10	Ford V-10
Rating	6.8L	6.8L
Fuel Consumption (Approximate)		
LPG – Steady State	23 LB/HR	34 LB/HR
LPG – Max	49 LB/HR	56 LB/HR
NG – Steady State	523 CF/HR	720 CF/HR
NG – Max	1,117 CF/HR	1,210 CF/HR
Fluids (*Always check fluids before putting RMG-i into service.)		
Oil	See Engine Manual	See Engine Manual
Coolant	See Engine Manual	See Engine Manual
Hours between oil changes	See Engine Manual	See Engine Manual

INPUT			
Voltage (+10% to 15%) 3-Phase, 4-wire	208 VAC	480 VAC	480 VAC
Frequency (Nom), (Min)	60 Hz	60 Hz	60 Hz
Current:			
Full Load	105 Amps	45 Amps	67 Amps
Starting Inrush	263 Amps	113 Amps	168 Amps
Power Factor, Full Load (Min)	.95	.95	.95

OUTPUT			
Voltage: 3-Phase, 4-wire	208 VAC (120)	480 VAC (277)	480 VAC (277)
kW	32	32	48
Load Power Factor (Leading to Lagging)	0.9 Leading to 0.8 Lagging	0.9 Leading to 0.8 Lagging	0.9 Leading to 0.8 Lagging
Frequency	60	60	60
Current: PF = 1.0	89	38	58
Current: PF = 0.8	111	48	72
Voltage Regulation			
Transient Load Condition (0-50 msec.) (< 50% Load Step)	-15% to +10%	-15% to +10%	-15% to +10%
Transient Load Condition (50-500 msec.) (< 50% Load Step)	± 8%	± 8%	± 8%
Steady State	± 5%	± 5%	± 5%
Harmonic Content (Linear Load) THD	≤ 3%	≤ 3%	≤ 3%
Load Condition			
Ride-through time at 100% load	10 Sec.+	10 Sec.+	8 Sec.+
Efficiency at 100% load	85%	85%	85%

Specifications are subject to change without notice.