



## KMGR-150-4SH

### KRAFT ENERGY/MAN Rich-Burn Engine

Electrical Output	150 kW
Thermal Output	9,558 BTU/hr
Fuel Consumption	784,012 BTU/kWh
Overall Efficiency	90.38 %

### STANDARD EQUIPMENT

- **Natural Gas Engine and Synchronous Generator** connected with flexible coupling
- **Digital Electronic Ignition**
- **Heat Exchangers** for jacket water and exhaust piped and insulated at the factory
- **Electric Circulation Pump** for jacket water, with electric temperature control valve
- **Secondary Exhaust Silencer**
- **Vibration Isolators** between engine/generator and base frame as well as between base frame and foundation
- **Sound Attenuated Enclosure**, 72-75 dB(A) avg. at 3 ft, for indoor installation, with ventilating fan
- **Utility Grade Protective Relay**
- Electrically operated **Power Circuit Breaker** with trip unit
- 24 V maintenance-free **Batteries**, 10 amp **Battery Charger**
- **Hot water temp up to 190 °F**
- **Lube Oil Make-up System** with 15 gal storage tank, unit mounted
- **Electric Pre-lubrication Pump**
- **Dual Solenoid Gas Train**, with zero pressure regulator per NFPA 37
- **Low Fuel Pressure** system 0.5-3 PSI
- **Remote Monitoring**

### BENEFITS

- **Most Reliable MAN Gas Engines**
- **Naturally Aspirated Rich-Burn Engine**
- **High Efficiency**
- **Low Emissions**
- **Compact Design**
- **Easy On-site Installation**
- **PLC-based Digital Controls**
- **Remote Communication Capabilities**

### OPTIONAL EQUIPMENT

- **Outdoor Enclosure**
- **Remote Heat Dump Radiator**
- **Induction Type Generator**
- **Secondary Exhaust Silencer**
- **Electric Circulation Pump for Process Hot Water**
- **Hot Water Temperature Control Valve**
- **Load Sharing Controls for Multiple Unit Applications**
- **Island Mode Operation Capability**

# TECH DATA: **KMGR-150-4SH Rich Burn**

		100%
MAN Engine Model		E 2876 E 312
Generator Model		UCI274H
Electric Output	kWe	150
Amps @ 480 Volts @ 0.8 P.F.	Amps	225
Amps @ 208 Volts @ 0.8 P.F.	Amps	520
Max. Engine BHP	BHP	228
Number of Cylinders/Arrangement		6 IL
Bore & Stroke	Mm	128 x 166
Displacement	Ltrs (cu in)	12.82 (782)
BMEP	Psi	128.3
Compression Ratio		12 : 1
Combustion Air Required	Scfm	246
Generator Cooling Air Required	Scfm	1308
Total Air Required	Scfm	1554
Fuel Consumption	Th/Hr	14.34
Electric Heat Rate (LHV)	BTU/kWe	9,558
<b>Hot Water Recovery - Jacket Water &amp; Exhaust Combined</b>		
Cogen Thermal Output	kW	230
Thermal Output	Th/Hr	7.84
Recoverable Heat from Jacket	BTU/Hr	472,992
Recoverable Heat from Exhaust	BTU/Hr	311,020
Total Heat Recovered	BTU/Hr	784,012
Process Water Flow	GPM @ 15° F Rise	104
Process Water Temp	Deg F	190
Exhaust Flow	Lbs/Hr	1198
Exhaust Temp	Deg F	1143
<b>Efficiencies</b>		
Electrical Efficiency	%	35.70
Thermal Efficiency	%	54.68
Combined Efficiency	%	90.38
<b>Environmental</b>		
Emissions at 100% Load (Correlation 5% O2)	Pre-Catalyst Gms/BHP-Hr (ppm)	Post-Catalyst Gms/BHP-Hr
Post Catalyst NOx Emission	< 10.6 (<776)	0.1
Post Catalyst CO Emission	< 10.6 (<1275)	0.6
Sound Level at 1 Meter		73-75
Steady State Gas Pressure-min		20
Steady State Gas Pressure-max		40
Dimensions (LxWxH)		150"x65"x98"
Weight (lbs.)		9500
i) Tech Data is based on Natural Gas with a calorific value of 970 Btu/cu ft and a methane No. >80. ii) The Tolerances: Electrical Output: +/- 0%, Fuel Consumption: +/- 5%, Thermal Output: +/- 8% iii) Tech Data is based on standard conditions acc to DIN ISO 3046-1. Standard Conditions: Atmospheric pressure : 14.5 psi or 328 ft above sea level, Air Temperature: 77 deg F, Relative Humidity: 30%. iv) The coolant data is based on 40% antifreeze.		

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