



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 gallon 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**

KMGR-80-4SH

KRAFT ENERGY/MAN Rich-Burn Engine

Electrical Output	80 kW
Thermal Output	425,837 BTU/hr
Fuel Consumption	9,929 BTU/kWh
Overall Efficiency	87.97 %

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-80-4SH Rich Burn**

		100%
MAN Engine Model		E 0836 E 302
Generator Model		UCI274E
Electric Output	kWe	80
Amps @ 480 Volts @ 0.8 P.F.	Amps	120
Amps @ 208 Volts @ 0.8 P.F.	Amps	277
Max. Engine BHP	BHP	114
Number of Cylinders/Arrangement		6 IL
Bore & Stroke	Mm	108 x 125
Displacement	Ltrs (cu in)	6.87 (419)
BMEP	Psi	129
Compression Ratio		13 : 1
Combustion Air Required	Scfm	139
Generator Cooling Air Required	Scfm	1308
Total Air Required	Scfm	1447
Fuel Consumption	Th/Hr	7.94
Electric Heat Rate (LHV)	BTU/kWhe	9,929
Hot Water Recovery - Jacket Water & Exhaust Combined		
Cogen Thermal Output	kW	125
Thermal Output	Th/Hr	4.26
Recoverable Heat from Jacket	BTU/Hr	238,077
Recoverable Heat from Exhaust	BTU/Hr	187,760
Total Heat Recovered	BTU/Hr	425,837
Process Water Flow	GPM @ 15° F Rise	57
Process Water Temp	Deg F	190
Exhaust Flow	Lbs/Hr	676
Exhaust Temp	Deg F	1200
Efficiencies		
Electrical Efficiency	%	34.36
Thermal Efficiency	%	53.61
Combined Efficiency	%	87.97
Environmental		
Emissions at 100% Load (Correlation 5% O2)	Pre-Catalyst Gms/BHP-Hr (ppm)	Post-Catalyst Gms/BHP-Hr
Post Catalyst NOx Emission	< 17.4 (< 1278)	0.1
Post Catalyst CO Emission	< 12.5 (< 1500)	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"x90"
Weight (lbs.)		7500
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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