



### 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-55-4SH

#### KRAFT ENERGY/MAN Rich Burn Engine

|                           |                       |
|---------------------------|-----------------------|
| <b>Electrical Output</b>  | <b>55 kW</b>          |
| <b>Thermal Output</b>     | <b>300,318 BTU/hr</b> |
| <b>Fuel Consumption</b>   | <b>10,133 BTU/kWh</b> |
| <b>Overall Efficiency</b> | <b>87.56 %</b>        |

### 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-55-4SH Rich Burn**

|   |                               | 100%                     |
|---|-------------------------------|--------------------------|
| MAN Engine Model  |                               | E 0834 E 302             |
| Generator Model   |                               | UCI224G                  |
| Electric Output   | kWe                           | 55                       |
| Amps @ 480 Volts @ 0.8 P.F.   | Amps                          | 83                       |
| Amps @ 208 Volts @ 0.8 P.F.   | Amps                          | 190                      |
| Max. Engine BHP   | BHP                           | 83                       |
| Number of Cylinders/Arrangement   |                               | 4 IL                     |
| Bore & Stroke   | Mm                            | 108 x 125                |
| Displacement  | Ltrs (cu in)                  | 4.58 (279)               |
| BMEP  | Psi                           | 131                      |
| Compression Ratio   |                               | 13 : 1                   |
| Combustion Air Required   | Scfm                          | 96                       |
| Generator Cooling Air Required  | Scfm                          | 595                      |
| Total Air Required  | Scfm                          | 691                      |
| Fuel Consumption  | Th/Hr                         | 5.57                     |
| Electric Heat Rate (LHV)  | BTU/kWhe                      | 10,133                   |
| <b>Hot Water Recovery - Jacket Water &amp; Exhaust Combined</b>   |                               |                          |
| Cogen Thermal Output  | kW                            | 88                       |
| Thermal Output  | Th/Hr                         | 3.00                     |
| Recoverable Heat from Jacket  | BTU/Hr                        | 169,775                  |
| Recoverable Heat from Exhaust   | BTU/Hr                        | 130,543                  |
| Total Heat Recovered  | BTU/Hr                        | 300,318                  |
| Process Water Flow  | GPM @ 15° F Rise              | 40                       |
| Process Water Temp  | Deg F                         | 190                      |
| Exhaust Flow  | Lbs/Hr                        | 468                      |
| Exhaust Temp  | Deg F                         | 1191                     |
| <b>Efficiencies</b>   |                               |                          |
| Electrical Efficiency   | %                             | 33.67                    |
| Thermal Efficiency  | %                             | 53.89                    |
| Combined Efficiency   | %                             | 87.56                    |
| <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  | < 17.4 (< 1278)               | 0.1                      |
| Post Catalyst CO Emission   | < 10.0 (< 1200)               | 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.)   |                               | 6500                     |
| i) Tech data is based on natural gas with a calorific value of 970 Btu/cu ft and a methane No. >80.<br>ii) The tolerances: electrical output: +/- 0%, fuel consumption: +/- 5%, thermal output: +/- 8%<br>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%.<br>iv) The coolant data is based on 40% antifreeze. |                               |                          |