

NATURAL GAS FIRED CHP PB 138SNG

SPECIFICATION DATASHEET

Operation:	Mains parallel Synchronous
Fuel:	Natural gas
Electrical power modulation:	55 kW(e) -138 kW(e)
Thermal output:	207 kW(t)
Electrical efficiency:	35.2%
Thermal efficiency:	52.8%
Overall efficiency:	88%
Flow temperature max:	90 ° C
Return temperature max:	78 ° C
Exhaust temperature:	120 ° C
Exhaust gas flow:	503 kg/hr
Exhaust emission at: with optional CAT:	CO <600 mg/Nm ³ NO _x <90mg/m ³ CO <110mg/m ³
Voltage:	400 V
Current:	235 A continuous
Power Factor:	cos phi 0.98
Sound Pressure Level:	<65 dBA (at 1 metre)
Fuel Consumption:	392 kW
Combustion and cooling air requirement:	6000 m ³ /hr



image for illustration purposes only

Engine

Model:	MAN
Type:	6 cylinder Inline, water cooled 4-stroke, spark ignition

Alternator

Voltage:	400 V
Frequency:	50 Hz
Rated speed:	1500 rpm
Rated Current:	235 Amps

Overall Dimensions & Connections

Length	3600	mm
Width	1200	mm
Height	1900	mm
Weight	2000	kg
Heating flow	R 2 ½	inch
Heating return	R 2 ½	inch
Exhaust port	R 4	inch
Gas connection	R 2"	inch

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PRIME MOVER UNIT

CONSTRUCTION

- Rigid base frame made of powder coated square section steel tube and profiled steel sections.
- Independent engine and alternator assemblies close coupled with Cush Drive, mounted on four bonded rubber mountings
- Complete hydraulic separation of engine coolant system from building heating system via stainless steel plate heat exchanger
- All electrical components are prewired to central connection point
- Frame is further isolated by four anti vibration mounting feet, for the best prevention of structure borne sound transmission.

CASING

- Highly effective sound absorbing enclosure constructed from:
 - Powder coated steel plate
 - Sound deadening material
 - Rockwall thermal insulation
 - Perforated galvanized steel inner skin
 - Removable side panels allow swift access to all components.

HYDRAULIC SYSTEM REQUIREMENTS

- System Kit does not include:
 - Customer circuit water pump.
 - Customer circuit expansion vessel
 - Customer circuit pressure relief valve
 - Customer plate heat exchange interface

EXHAUST SYSTEM

- Water-cooled exhaust manifold, maintenance-free stainless steel heat exchangers and exhaust silencing in unit enclosure.

GAS

- Gas control from DVGW tested assemblies consisting
 - Gas block with integrated multi-gas filter,
 - Pressure regulator,
 - Gas-air mixer with throttle.

CONTROL

- Electronic Speed Control
- Speed sensor and actuator for precise frequency and power control.

CONTROL CABINET

CONSTRUCTION

- Mounted on CH, made of sheet steel 1.5 mm,
- Colour: grey RAL 7035

FEATURES

- Automatic start/stop
- Full system monitoring
- Fault monitoring and fault indication in plain text
- Automatic Power control and modulation
- Lambda control optional
- Timer function to optimise the operating hours

MOTOR / GENERATOR PROTECTION

- Overload monitoring
- Reverse power monitoring
- Inlet temperature monitoring
- Flow temperature control
- Oil pressure
- Motor temperature monitoring
- Exhaust temperature monitoring
- Gas Monitoring
- Leakage monitoring
- Generator Temperature Monitoring

METERING

- Electric meters (kWh)
- Hour meter
- Start counter

RECORDING

- Logbook history
- Fault memory

CONTROL

- Main switch with Emergency Stop Function
- Easy access keypad on control panel
- Full remote access and control via modem or broadband
- Fault notification via email
- Interface to BMS via Ethernet UDP, Mod-bus RTU, RK512, 3964R
- Ability to control back up boilers

CONTROL OUTPUTS

- Pulsed output for Circulation pump (e.g. Grundfos UPS)
- Gas valve signal
- External fault signal

CONTROL INPUTS

- External run request
- Boiler room emergency switch signal
- External power requirement

NETWORK PROTECTION FUNCTIONS

- G59 Relay, monitoring voltage, frequency and rate of change of frequency (RoCoF)

PROTECTION

- Short-circuit protection 25A fuse
- G59 Electrical Protection Relay
- Performance Monitoring of CHP system
- Current monitoring of CHP and Electrical Network

According to our business policy and the continuing development of our products, we reserve the right to change specifications and features without notice.



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