

NATURAL GAS FIRED CHP PB 50QSNG

SPECIFICATION DATASHEET

Operation:	Mains parallel Synchronous
Fuel:	Natural gas
Electrical power modulation:	28 kW(e) - 50 kW(e)
Thermal output:	89.8 kW(t)
Electrical efficiency:	30.6%
Flow temperature:	85 ° C (90 °C Max)
Return temperature:	75 ° C (80 °C Max)
Exhaust temperature:	120 ° C
Exhaust gas flow:	159 kg/hr
Efficiency:	88.2%
Voltage:	400 V
Current:	100 A continuous
Power Factor:	cos phi 0.98
Sound Power Level:	<65 dBA (at 1 metre)
Fuel Consumption:	163 kW



image for illustration purposes only

Engine

Type:	4 cylinder Inline, water cooled 4-stroke, spark ignition
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Alternator

Voltage:	400 V
Frequency:	50 Hz
Rated speed:	1550 rpm
Rated Current:	109 Amps

Overall Dimensions & Connections

Length	3200	mm
Width	1000	mm
Height	1900	mm
Weight	2500	kg
Heating flow	R 2	inch
Heating return	R 2	inch
Exhaust port	R 3	inch
Gas connection	R 1 1/4	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

- Woodward Easygen control system
- 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

CONTROL OUTPUTS

- 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

- G59 Electrical Protection Relay
- Performance Monitoring of CHP system
- Current monitoring of CHP and Electrical Network

SWITCHING TO THE GRID

- Unit has independent starter motor
- Black Start and Island Mode options available

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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