

## NATURAL GAS FIRED CHP PB 42SNG

### SPECIFICATION DATASHEET

|                              |                            |
|------------------------------|----------------------------|
| Operation:                   | Mains parallel Synchronous |
| Fuel:                        | Natural gas                |
| Electrical power modulation: | 17 kW(e) -42 kW(e)         |
| Thermal output:              | 75 kW(t)                   |
| Electrical efficiency:       | 33.8%                      |
| 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:                  | 94%+/-2%                   |
| Voltage:                     | 400 V                      |
| Current:                     | 109 A continuous           |
| Power Factor:                | cos phi 0.98               |
| Sound Power Level:           | <65 dBA (at 1 metre)       |
| Fuel Consumption:            | 124 kW                     |



*image for illustration purposes only*

#### Engine

|       |   |
|-------|---|
| Type: | 4 cylinder Inline, water cooled<br>4-stroke, spark ignition |
|-------|---|

#### Alternator

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

#### Overall Dimensions & Connections

|                |       |      |
|----------------|-------|------|
| Length         | 2745  | mm   |
| Width          | 1000  | mm   |
| Height         | 1850  | mm   |
| Weight         | 1500  | kg   |
| Heating flow   | R 1.5 | inch |
| Heating return | R 1.5 | inch |
| Exhaust port   | R 2.5 | inch |
| Gas connection | R 3/4 | inch |

# NATURAL GAS FIRED CHP PB 42SNG

## 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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