

## ***Part III : Technical Specification POS B)***

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### **General Data**

GasLine industrial gas CHP set, type GLC 62I C.

|                 |            |       |
|-----------------|------------|-------|
| Output          | <b>kVA</b> | : 312 |
|                 | <b>kWe</b> | : 250 |
| Frequency       | <b>Hz</b>  | : 50  |
| Air temperature | <b>°C</b>  | : 25  |

### **COP, Continuous power**

For continuous operation at a constant load for unlimited number of hours per year. Power definition according to ISO 8528. Power test code ISO 3046.

### **Reference conditions**

|                        |                          |         |
|------------------------|--------------------------|---------|
| Atmospheric conditions |                          |         |
| Barometric pressure    | <b>hPa</b>               | : 1000  |
| Relative humidity      | <b>%</b>                 | : 30    |
| Fuel                   |                          |         |
| Energy value           | <b>kJ/m<sup>3</sup></b>  | : 31000 |
| Density                | <b>kg/dm<sup>3</sup></b> | : 0,67  |
| Methane Number         |                          | : 80 *) |

\*) Note:

Output determined as per above is called sold output and is what is stated in Technical Data and Brochures. Deviating figures may cause output corrections.

## Part III : Technical Specification POS B)

### Engine Data

Water-cooled, 4-stroke, lean-burn gas engine with turbo charger and intercooler:

|                     |            |             |
|---------------------|------------|-------------|
| Engine              |            | : SCANIA    |
| Type                |            | : SGI-I3    |
| Power output *)     | <b>kW</b>  | : 266       |
| Speed               | <b>rpm</b> | : 1500      |
| Cycle               |            | : D2        |
| Number of cylinders |            | : 6 in line |
| Displacement        | <b>dm3</b> | : 12,7      |
| Bore x stroke       | <b>mm</b>  | : 130 x 160 |
| Compression ratio   |            | : 12,6 : 1  |

\*) Outputs have been determined under given test conditions according to the international performance standard ISO 3046.

#### Fuel system

Electronically adjustable air/fuel mixer.  
Throttle valve with actuator.  
Speed control.  
Heavy duty industrial ignition system with controller.  
One ignition coils per cylinder.  
Sparkplugs for industrial use.  
Gas fuel train build on set with stainless steel hose to mixer, 40-50 mBar inlet pressure.

#### Lub oil system

Centrifugal lub oil cleaner.  
Full flow lub oil filter.  
Drip tray for lub oil filter.  
Gear driven lub oil pump.  
Lub oil cooler.  
Piston cooling by oil nozzles.  
Lub oil drain pump.

#### Air inlet system

Engine mounted air cleaner.

## ***Part III : Technical Specification POS B)***

---

### **Exhaust system**

Dry exhaust manifold.  
Turbo charger.  
90° exhaust bend including flanges and gaskets.  
Exhaust compensator with flange.  
Exhaust gas temperature sensor (PT-200) for every cylinder.  
Stainless steel silencer 6 " 35 dB(A) set mounted.

### **Cooling system**

Engine water coolers.  
Exhaust gas cooler set mounted.  
Jacket water heater temperature controlled including ON/OFF switch.  
Set build header tank 24 litre, including:

- pressure cap
- sight glass
- Murhpy level alarm

### **Electrical system**

Electric starter, 24 V, single poled.  
Battery charger, 24 V, 16 Amp, build on the control box frame.  
Battery container, integrated in the genset frame.  
Starter batteries, 2x 12V with cold cranking amps >800 Amp, maintenance free types.

### **Several**

Flywheel housing SAE I.  
Flywheel, 14.  
Internal crankcase ventilation.  
Protection covers for all moving parts.  
Separate 4-valve cylinderhead for each cylinder.  
Gear train at flywheel side of the engine.

## ***Part III : Technical Specification POS B)***

---

### **Alternator Data**

|                        |           |  |
|------------------------|-----------|--|
| Alternator             |           | : STAMFORD                               |
| Type                   |           | : HCI 434 E                              |
| Insulation class       |           | : H                                      |
| Temperature rise class |           | : H at 40 °C ambient temperature         |
| Voltage                | <b>V</b>  | : 380, 400, 415 or 440                   |
|                        |           | : 3-phase serie star winding no. 311/312 |
| Frequency              | <b>Hz</b> | : 50                                     |
| Load factor            |           | : 0,8                                    |
| Protection             |           | : IP23                                   |
| Short circuit current  |           | : 300%                                   |

Scope of supply includes:

SAE adaptor flange.

Single bearing.

Anti-condensation heater.

AVR control system type MX-34I.

## ***Part III : Technical Specification POS B)***

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### **Engine Control and Monitoring System**

#### **General**

All-In-One engine controller is mounted in a control box.

Key switch mounted in the control box.

Control box mounted left hand side of skid.

Wiring and sensors mounted on the engine including cable harness to control box.

#### **Engine controller**

All-In-One is a dedicated controller for genset applications. It controls, monitors and protects the gas engine and alternator. The controller is equipped with a powerful graphic display with icons, symbols and bar graphs for intuitive operation, which together with high functionality sets new standards in engine controls.

##### **Engine functions**

- engine control
- engine monitoring and protections
- speed measurement
- running hours counter
- voltage monitoring starter batteries
- number of start attempts registration
- on screen alarm list indication
- event and time driven engine history for back tracing
- binary, analogue and CAN engine communication
- languages selectable
- MODBUS communication selectable

##### **Generator functions**

- Generator Circuit breaker control
- Main circuit breaker control
- Synchronization

#### **Monitoring system**

##### **Alarms consisting of:**

- alarm cooling water temperature (high)
- alarm cooling water level (low)
- alarm lub oil pressure engine (low)
- alarm lub oil temperature engine (high)

##### **Engine shut down consisting of:**

- cooling water temperature (high high)
- lub oil pressure engine (low low)
- overspeed (high)

##### **Generator monitoring consisting of:**

- 3 phase monitoring
- Over/Under Frequency
- Over/Under voltage

## ***Part III : Technical Specification POS B)***

---

- Overload protection

### **Distribution board**

Distribution board, 630 Amp, set mounted, consisting of:

- MCCB switch
- Thermal protection
- Motor drive
- Feedback signal
- G59 relais (for sets in UK only)

### **Several**

Knock detection.

AIN8 Analog Input Module.

IO88 Input/Output Unit.

AVRi interface Module.

### **Parallel operation**

Genset suited for parallel operation including:

- automatic synchronising and breaker control integrated in All-In-One controller.
- droop trafo in alternator.

## ***Part III : Technical Specification POS B)***

---

### **Assembly**

#### **Frame and assembly**

Engine and alternator flexible mounted on a common base frame.

Frame painted black and provided with:

- drip tray
- drain plug
- mounting strips for electrical wiring
- 6-point support for the genset

Acoustic enclosure voor inside placement.

#### **Test run and classification**

Genset tested on Sandfirden test bench, and contains

- FAT and performance test according to test protocol
- acceptance by class (if applicable)
- alarm and shut down test
- parallel running (optional)
- final check before delivery

#### **Finishing**

Genset painted in Sandfirden blue (RAL 5010).

Set provided with warning stickers and hoisting instructions.

Genset sealed in plastic.

## ***Part III : Technical Specification POS B)***

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### **Miscellaneous**

#### **Commissioning**

Commissioning in Europe, per set one (1) man for three (3) days, including travelling and lodging.

#### **Warranty**

8000 Running hours or twelve (12) months after start-up, but not beyond eighteen (18) months after delivery from Suppliers plant, whichever occurs first. For more information we refer to our Terms and Conditions 20070418Ec.