

PTBS-D-220ST

400/230V
50Hz

BAUDOUIIN 6M16G220/5
STAMFORD UCI274H

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Illustrative image.








Dimensions:

L : 3875 mm
H : 2341 mm
W : 1456 mm



Weight:

3500 kg

-  50Hz
-  400/230V
-  Water cooled
-  Diesel
-  1500 r.p.m.
-  Soundproofed
-  CE Conformity

1 / Genset general description

GENERAL TECHNICAL DATA	Engine	BAUDOUIIN 6M16G220/5
	Alternator	STAMFORD UCI274H
	Performance class	G3
	Frequency	50Hz
	Voltage	400/230V
	Control panel	DSE 7320 MKII
	Fuel tank (l)	2100
	Noise level (dBA@7m)	68

POWER¹	PRP (kVA / kW)	200 / 160
	ESP (kVA / kW)	220 / 176

A **robust, compact design** geared to facilitating maintenance work, high standard equipment and components from prestigious brands are just some of the features that make the Powertecnicque **Generator Range** the best option for use in **industrial facilities, infrastructure and the hospital sector.**

Voltage	PRP (kVA/kW)	ESP (kVA/kW)	Amperage (A)
415/240	200 / 160	220 / 176	306
400/230	200 / 160	220 / 176	318
380/220	200 / 160	220 / 176	335
240/139	200 / 160	220 / 176	530
230/133	200 / 160	220 / 176	553
220/127	200 / 160	220 / 176	578

¹PRP: Continuous Power ("Prime Power") ISO 8528-1 standard.

ESP: Emergency Power ("Emergency Standby Power") ISO8528-1 standard.

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2 / Engine specifications

Engine general data	
Manufacturer / model	BAUDOUIN 6M16G220/5
R.P.M.	1500 r.p.m.
Max. Power ESP (kWm)	191.4
PRP Power (kWm)	174.4
Fuel	Diesel
Number of cylinders	6 cylinders
Engine capacity (c.c.)	9726
Compression ratio	17:1
Cooling system	Water cooled
Regulation type	Electronic
Engine type / injection / suction type	Diesel / direct / turbocharged

Fuel	
Fuel type	Diesel
Fuel tank capacity (l)	2100

Fuel consumption table

% load	Consumption l/h	Authonomy (h)
50% PRP	22.4	93.7
75% PRP	32.4	64.8
100% PRP	43.1	48.7
110% ESP	N/A	N/A

Cooling system	
Fan airflow (m ³ /s)	6.9
Fan power consumption (kW)	11
Engine + radiator capacity (l)	20

Lubrication system	
Total oil capacity (l)	30

Air intake system	
Combustion air flow (l/h)	852

2.1/ Fuel feed system

direct injection system, filter that prevents the passage of particles, original parts from the engine manufacturer.

2.2/ Cooling system

Cooling by fully distributed coolant in a closed circuit driven by a pump activated by the engine. Tropicalized radiator. Original parts from the engine manufacturer.

2.3/ Lubrication system

Lubrication system driven by the crankshaft driven pump. Filter on top with full flow cartridge inserted, front crankcase. Original parts from engine manufacturer.

2.4/ Air intake system

Natural air intake system including two-stage filter. Original parts from the engine manufacturer.

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Electrical start system

Number of batteries	2
Battery features	12V 44Ah
Starting voltage (V)	24V

2.5 / Start system

Start system by electric engine, battery (without maintenance) with disconnect and charging alternator driven by the **24V starter engine**, original parts from the engine manufacturer.

Exhaust system

Exhaust gas flow (m ³ /min)	36.02
Exhaust gas temperature (°C)	<600
Exhaust external diameter (mm)	3.5"
Max. exhaust backpressure (kPa)	6

2.6 / Exhaust system

Attenuation level: **-35dB(A)**.

3 / Alternator specifications

Alternator general data

Manufacturer / Model	STAMFORD UCI274H
Number of poles	4
Insulation class	H
Number of wires	12
Mechanical protection degree	IP23
Voltage regulator (AVR)	SX460
Voltage regulator	±1%
ESP power rating 27°C (kVA)	220
PRP power rating 40°C (kVA)	200
Number of phases	3
Power factor (cos φ)	0.8
Efficiency 50% load η (%)	93.9%
Efficiency 75% load η (%)	93.8%
Efficiency 100% load η (%)	93.3%
Efficiency 110% load η (%)	93.0%

STAMFORD UCI274H alternator, **4 poles**, brushless, mechanical structure with easy access to connections and components, insulation class H, winding with 2/3 pitch and autoexcited AVR.

Protection with premium epoxy resins, high voltage parts are impregnated under vacuum allowing always an excellent insulation.

The **alternator** complies with the following **standards**:

**AS 1359 | IEC 34-1 1 | BS EN 60034-1 |
VDE 0530 | BS 5000 | CAN/CSA-C22.2-100
| NEMA MG1-32**

Low wave distortion:

- THD (100% load) = 2%
- THF < 2%
- Complying with: EN61000-6-3, EN61000-6-2 standards on radio interference.

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4 / Bench specifications

Genset mounted over an **electro-welded bench made of high-strength steel** (with retention bath), painted with **electrostatic epoxy polyester powder paint**. Union assembly to the bench by **anti-vibration shock absorbers**. Fuel **tank located on the bench**, provided with measuring gauge and fuel installation to the engine. Tested in saline mist chamber according to the ASTM B-117-09, 500h resistance.



5 / Canopy specifications

Electro-welded canopy made of galvanized high-strength steel, painted with **electrostatic powderbased epoxy-polyester paint**. Interior soundproofing with acoustical and fireproof isolating rock wool. **Efficient residential exhaust -35dB(A)** for the evacuation of gases to the outside with rain cap. Tested in saline mist chamber according to the ASTM B-117-09 standard, 720h resistance. Mechanical protection degree IP44



6 / Control panel

Including protection devices, distribution with **DSE 7320 MKII** control card, that allows to operate in automatic, manual or by signal starting modes.



6.1 / Main elements of the control panel

- Emergency stop button.**
- DEEP SEA battery charger: DSE 9255 24V, 5A.** Designed to be permanently connected to the battery and keep 100% of the load. The charger switches to float mode when the load is complete.
- Protections:**
 - 4-pole magnetothermic protection against overloads and shortcircuits
 - Protection fuses for the control assembly.

Protection switch

Manufacturer / model	Schneider EasyPact 400A 4P
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6.2 / Control card

DSE 7320 MKII DEEP SEA control card with mains grid monitor. The genset will automatically start up when detecting a fault in the electric power network and it will turn off automatically as well, when the electrical supply is re-established. It can also work in manual mode and by signal. It allows you to monitor a wide range of generator parameters and display information alerts, status and alarms.

The module includes communication ports USB, RS232, RS485, and also DSENet@ for system expansion. Possibility of Ethernet networking (plug).

The entire module is easily configurable via PC using the DSE specific software configuration.

It has 132x64p illuminated LCD display with 4 lines of text, 5-key navigation through menus, 9 configurable outputs and 8 configurable inputs, programmable clocks and alarms, reading and displaying parameter values, including RMS values.

Different operating modes: AUTOMATIC mode, MANUAL mode, SIGNAL mode and TEST mode.

Other alternative configurations are available upon request to extend the capabilities of the operation modes.

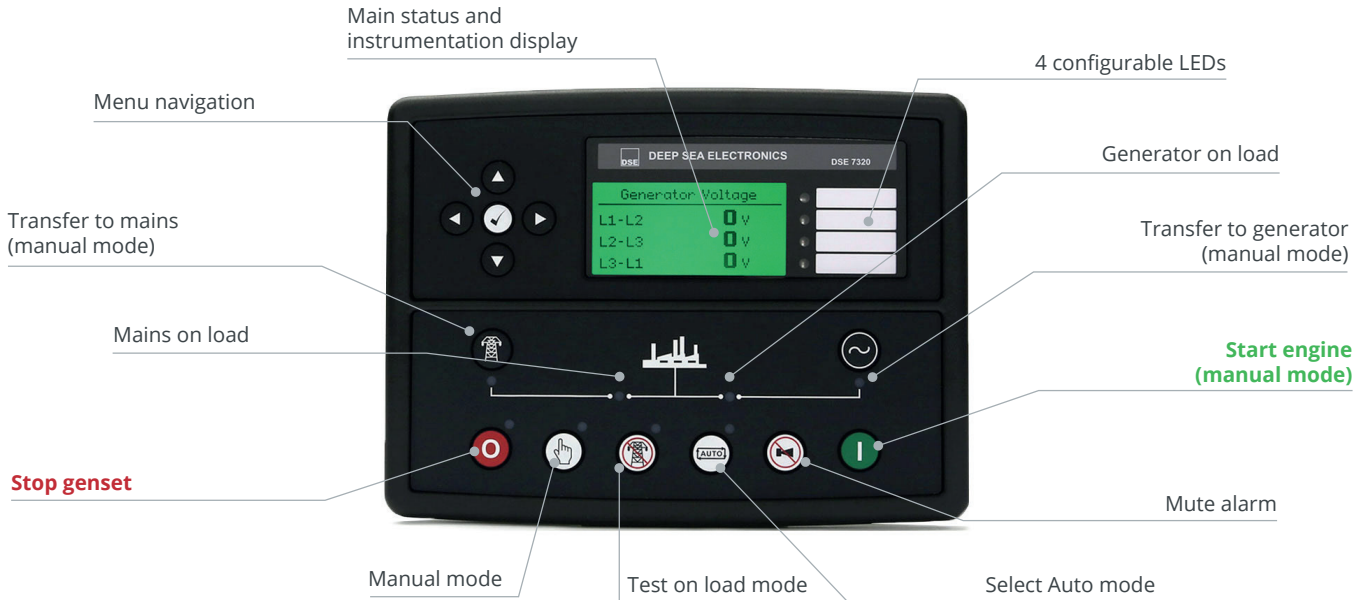
The control card complies with the following **environmental tests**:

| BS EN 61000-6-2 (electromagnetic compatibility) | BS EN 61000-6-4 (electromagnetic compatibility) | BS EN 60950 (electrical safety) | BS EN 61000-6-2 (Temperature) | BS EN 60068-2-6 (Vibration) | BS EN 60068-2-30 (Humidity) | BS EN 60068--2-27 (Shock).

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6.2.1 / Allowing reading

Engine	
Turning speed	Engine temperature
Oil pressure	Hours counter
Battery Voltage	Number of engine starts
Fuel level	Consumo combustible

Generator	
Generator voltage (L-N)	Generator Voltage (L-L)
Generator frequency	Generator intensity
Power factor	Generator load (kW, kVA, kWh, kVAh)

Mains
Mains voltage (L-N)
Mains voltage (L-L)
Mains frequency

Alarm detected	
Start-up failure	High engine temperature
Low oil pressure	Low fuel level
Low coolant level	Overload
High/Low battery voltage	Charging alternator failure
High/Low generator voltage	High/Low generator frequency
External emergency stop	Over speed engine
Maintenance interval	

⚙️ Genset response to a fully configurable alarm via **DSE 7320 MKII** software.

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7 / Standard supply range

The Powertecnicque **Generator Range** has the following **standard equipment** (soundproofed models):

- 1500 rpm water-cooled diesel engine.
- 12-wire electronically adjusted alternator.
- Deep Sea Electronics digital control module (DSE 7320MKII).
- DSE2157 with 8 volt free signal (only DSE 7320MKII).
- High-attenuation silenced exhaust with an anti-rain cap.
- Galvanized metal plate, epoxy painted, soundproofed body with an outer filling port with a key.
- Large capacity metal fuel tank with a cleaning register.
- Retention bath.
- Emergency stop button with mechanized outer access.
- Control panel with magneto-thermal protection.
- Electronic battery charger, maintenance-free battery and a battery disconnect switch.
- Lifting eye.

8 / Optional equipment

The Powertecnicque **Generator Range** has the following **optional equipment** (soundproofed models):

Engine - Alternator Options

- Engine heater.
- Electronic governor.
- Fuel prefilter with water separator.
- Oil sump pump.
- 6-way valve kit with quick connectors.
- Automatic fuel system, electric pump included.
- Automatic fuel system, electric pump not included.
- SuperSilent Kit*.
- Anti condensation heaters.
- Alternator impregnation systems 3 (spray).
- Alternator impregnation systems 4 (superior).
- AVR MX341 + PMG \pm 1% STAMFORD.
- AVR MX321 + PMG \pm 0,5% STAMFORD.
- EBS (for those models with Stamford alternator which do not have a permanent magnet in its standard equipment).

Mechanical options

- Sensor on retention bund warning when spillage.
- Stackable canopy.
- Galvanized frame.
- Special RAL color.
- 24h fuel tank with retention bath.
- External fuel tank - 400L.
- External fuel tank - 620L.
- External fuel tank - 1000L.
- External fuel tank - 1500L.
- Leveling machine mounts.
- Spring isolators.

Electrical and DSE Control Card Options

- Earth Leakage protection SCHNEIDER.
- ATS contactors SCHNEIDER.
- Remotely operated ATS SOCOMEC.
- DSE 2130 with 8 Inputs module (DSE 7320MKII is required).
- DSE 2548 LED module with 8 signals (DSE 7320MKII is required).
- DSE 2520 for remote display (DSE 7320MKII is required).
- GSM modem (RS232) (DSE 7320MKII is required).
- DSE 855.
- DSE 890 webnet.
- DSE 2430 (DSE 7320MKII is required).
- DSE Control card DSE 7420.
- DSE 334 network surveillance.
- DSE 8610 Synchronism Module.
- IG-NT Synchronism Module.

* The SuperSilent Kit includes: heavy mass (alternator) & -50dB(A) high-attenuation silenced exhaust.

Synchro modules note: 4P motorized breaker + Harting connectors gensets + 10 meters genset connection wires + Earth contactor + PMG are included. Electronic regulation is required.

Check for the availability of these options depending on model.
Check for the availability of other options.