

# PP110CSC (Canopied)



| Engine               | Alternator           | Model                  |
|----------------------|----------------------|------------------------|
| Cummins<br>6BT5.9-G1 | Stamford<br>UCI 274C | PP110CSC<br>(Canopied) |

| 50Hz | 1500rpm | 3-Phase | Power factor<br>Factor $\Phi = 0.8$ | Emissions<br>N/A |
|------|---------|---------|-------------------------------------|------------------|
|------|---------|---------|-------------------------------------|------------------|

| Ratings        | Prime Power<br>(PRP) |     | Standby Power<br>(ESP) |     | Rated current<br>Amps<br>(A) | Fuel consumption<br>@100% load<br>L/h |
|----------------|----------------------|-----|------------------------|-----|------------------------------|---------------------------------------|
| Voltage<br>(V) | kWe                  | kVA | kWe                    | kVA |                              |                                       |
| 400            | 80                   | 100 | 88                     | 110 | 144                          | 21.7                                  |

**Ratings** All three phase generator sets are rated at 0.8 power factor.  
All single-phase generator sets are rated at unity or 1.0 power factor.

**Prime output** This rating is applicable for supplying continuous electrical power at variable load.  
There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

**Standby output** This rating is applicable for supplying electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

The above ratings are in accordance with ISO8528-1 and ISO3046-1. Standard reference conditions: 25°C, 100m A.S.L., 30% relative humidity.

# Engine

Cummins 6BT5.9-G1

|                             |                                          | Units       |                                   |
|-----------------------------|------------------------------------------|-------------|-----------------------------------|
| <b>General performance</b>  | Frequency                                | Hz          | 50                                |
|                             | Engine speed                             | r/min       | 1500                              |
|                             | Number of cylinders / arrangement        |             | 6 cyl / vertical in-line          |
|                             | Displacement                             | Litres      | 5.9 L                             |
|                             | Aspiration                               |             | Turbocharged                      |
|                             | Combustion system                        |             | Direct injection                  |
|                             | Governor type                            |             | Mechanical                        |
|                             | Bore / stroke                            | mm          | 102 x 120                         |
|                             | Starter Motor / Charge Alternator (V dc) |             | 24 V DC                           |
|                             | Engine power (gross)                     | kWm         | Prime: 86 Standby: 92             |
|                             | Cooling system                           |             | Water cooled                      |
|                             | Rotation                                 |             | Anti-clockwise viewed on flywheel |
| <b>Fuel system</b>          | Fuel consumption at 110% Prime Power     | Litres/hour | 23.9                              |
|                             | Fuel consumption at 100% Prime Power     | Litres/hour | 21.7                              |
|                             | Fuel consumption at 75% Prime Power      | Litres/hour | 16.3                              |
|                             | Fuel consumption at 50% Prime Power      | Litres/hour | 10.8                              |
|                             | 12 hour fuel tank capacity               | Litres      | 175                               |
| <b>Air system</b>           | Air inlet                                |             | Mounted air filter                |
|                             | Air filter type                          |             | Dry                               |
| <b>Fuel and fuel system</b> | Electronically governed                  |             | NO                                |
|                             | Rotary type pump                         |             | N/A                               |
|                             | Ecoplus fuel filter                      |             | YES                               |
| <b>Oil system</b>           | Total oil system capacity                | Litres      | 16.4                              |
|                             | Maximum sump capacity                    | Litres      | 14.2                              |
|                             | Wet sump with filler and dipstick        |             | YES                               |
|                             | Spin-on oil filter                       |             | YES                               |
| <b>Cooling system</b>       | Total system capacity                    |             |                                   |
|                             | - With radiator                          | Litres      | N/A                               |
|                             | - Without radiator                       | Litres      | 9.9                               |
|                             | Thermostat operation range               | °C          | up to 40°C                        |
| <b>Electric system</b>      | Maximum top tank temperature             | °C          | N/A                               |
|                             | Electrical system voltage                | V           | 24                                |
|                             | Battery                                  |             | Maintenance-free                  |
|                             | Connecting cables                        |             | Included                          |
| <b>Available options</b>    | Battery charger                          |             | Included                          |
|                             | Battery isolator switch                  |             | Included                          |
|                             | 125 AMP 5 Pin (IP67) Socket Outlet       |             | Excluded                          |

# Alternator

Stamford UCI274C

|                     |                               | Units  |                                |
|---------------------|-------------------------------|--------|--------------------------------|
| <b>General data</b> | Manufacturer / brand          |        | Stamford                       |
|                     | Model                         |        | UCI274C                        |
|                     | Coupling / number of bearings |        | Flexible Disc / Single Bearing |
|                     | Phase / Poles                 |        | 3-Phase / 4-Pole               |
|                     | Power factor                  |        | Cos $\Phi$ = 0.8               |
|                     | AVR Regulation                |        | Yes                            |
|                     | Voltage Regulation            |        | ±1 %                           |
|                     | Insulation class              |        | H                              |
|                     | Drip proof                    |        | IP23                           |
|                     | Excitation                    |        | Shunt                          |
|                     | Altitude                      | m      | ≤1000                          |
|                     | Overspeed                     | min -1 | 2250                           |

# DSE Controller Summary

| Controller model / Deepsea DSE | Optional:<br>DSE4520 | Standard:<br>DSE6110/20 | Optional:<br>DSE7310/20 | Optional:<br>DSE8610/20 |
|--------------------------------|----------------------|-------------------------|-------------------------|-------------------------|
|--------------------------------|----------------------|-------------------------|-------------------------|-------------------------|

## Controller photos



## Standard supply

○ ● ○ ○

## Viewable parameters

|                          |                 |   |   |   |
|--------------------------|-----------------|---|---|---|
| Phase voltage            | ×               | 3 | 3 | 3 |
| Current                  | Instrumentation | ● | ● | ● |
| Frequency                | ●               | ● | ● | ● |
| Active power             | ○               | ● | ● | ● |
| Reactive power           | ○               | ● | ● | ● |
| Apparent power           | ×               | ● | ● | ● |
| Power factor             | ○               | ● | ● | ● |
| Electric energy metering | ×               | ● | ● | ● |

## Generator protection

|                           |          |          |          |          |
|---------------------------|----------|----------|----------|----------|
| Abnormal voltage          | ●        | ●        | ●        | ●        |
| Overcurrent warning       | ○        | ●        | ●        | ●        |
| Overcurrent protection    | ●        | ●        | ●        | ●        |
| Over frequency protection | ●        | ●        | ●        | ●        |
| Short circuit protection  | MCCB / ● | MCCB / ● | MCCB / ● | MCCB / ● |

## Engine figure

|                          |     |     |     |     |
|--------------------------|-----|-----|-----|-----|
| Oil pressure             | ●   | ●   | ●   | ●   |
| Water temperature        | ●   | ●   | ●   | ●   |
| Fuel meter / fuel sensor | ●/○ | ●/○ | ●/○ | ●/○ |
| Speed                    | ●   | ●   | ●   | ●   |
| Battery voltage          | ●   | ●   | ●   | ●   |
| Elapsed time             | ●   | ●   | ●   | ●   |

## Engine protection

|                             |   |   |   |   |
|-----------------------------|---|---|---|---|
| Low oil pressure warning    | × | ● | ● | ● |
| Low oil pressure protection | ● | ● | ● | ● |
| High temperature warning    | ○ | ● | ● | ● |
| High temperature protection | ● | ● | ● | ● |
| Overspeed warning           | × | ● | ● | ● |
| Overspeed protection        | ○ | ● | ● | ● |
| Alternator charger          | ● | ● | ● | ● |

## Functions

|                              |     |     |             |             |
|------------------------------|-----|-----|-------------|-------------|
| Remote start                 | ●   | ●   | ●           | ●           |
| AMF (Auto Main Failure)      | ●   | ●   | ●           | ●           |
| Programmable input           | ●   | ●   | ●           | ●           |
| Programmable output          | ●   | ●   | ●           | ●           |
| Expand module                | ×   | ○   | ○           | ○           |
| Communication function       | ×   | ×   | RS232 / 484 | RS232 / 485 |
| Communication port           | USB | USB | RS232 / 484 | RS232 / 485 |
| CAN                          | ●   | ○   | ●           | ●           |
| Service indicate             | ○   | ○   | ●           | ●           |
| Fault history                | ●   | ●   | ●           | ●           |
| Gen-gen synchronising        | ×   | ×   | ×           | ●           |
| Gen-mains synchronising (20) | ×   | ×   | ×           | ●           |

**Remark:** ● Standard supply ○ Available as optional × Not available

# Enclosure / Canopy

Sound-attenuated or open option

“Ensure a quieter life with our sound attenuation system.”

## Features

### Extremely rugged and highly corrosion resistant construction

- Unique appearance with high sound absorbing and thermal properties
- 8-12 hours built-in fuel tank integrated into the skid-mount base
- Excellent design and craftsmanship
- Full weatherproof enclosure, suitable for operations in harsh conditions
- Thermo-acoustic installation which can withstand fire, high temperature and severe conditions
- Residential exhaust muffler manufactured from galvanised steel
- High quality polyester powder paint
- Designed on modular principles with interchangeable components permitting on-site repairs

### Easy commissioning and maintenance

- Control panel viewing window with lockable access door for quick, safe and easy monitoring
- Side doors allowing 180° opening for easy accessibility
- Lifting point for easy mobility
- Lube oil drain and radiator drain
- Internally mounted exhaust silencers constructed to withstand rough conditions

### Security and safety

- Earth leakage protection
- Secure and lockable access doors for fuel fill and battery
- Fully guarded cooling fan and battery charging alternator
- Emergency stop push button mounted on the enclosure exterior for urgent and safe shutdown
- Efficient management of cooling air to avoid high water temperature

### Transportability

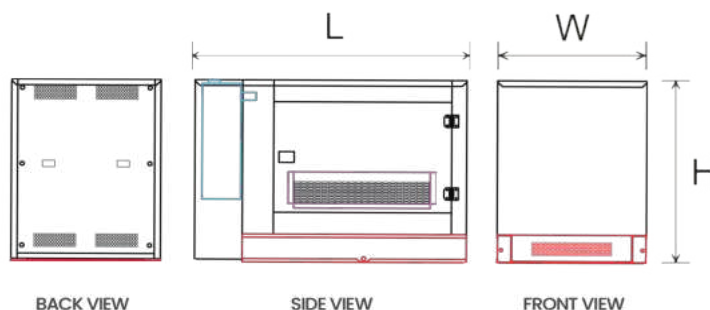
- Top access lifting points for crane lifting
- Fork lift pockets for easy moveability



\*Image for reference only. Actual product will differ

## Overall dimensions, weight and noise

| Frame type | Dimensions       | Weight | Base tank @100% load |        | Noise level |
|------------|------------------|--------|----------------------|--------|-------------|
|            | ( L x W x H ) mm | kg     | Hours                | Litres | dB(A) at 7m |
| Canopied   | 2800x1100x1700   | TBC    | 8                    | 175    | 70.5        |



# Automatic Transfer Switch

A.T.S - 4 Poles

We offer as an optional accessory, not only a changeover switch but also an integrated mains detection and switch system for your 24 hour power protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of a mains automatic retransfer once it comes back.

## System advantages

Automatically transfer and re-transfer load from main power to gen-power without operator intervention (both automatic and manual)

ATS Controller (AMF function)

Available from 32 - 4000A

Available in standard, bypass isolation and service-entrance configurations

Configurable in open, closed and programmed transition operating modes

Designed to interface seamlessly with all AMF generators and switchgear

Drip proof IP42 enclosure

Easy installation: wall-mounted and floor standing



\*image for illustration purposes only, actual product may differ

## Warranty coverage

Generators used with commercial utility source: One (1) year or 1000 hours (whichever occurs first) from date of shipment from the factory or registered start-up date.