

Technical Data

QES 95 Generating set



Basic technical data

| | |
|---|------------------|
| Engine Manufacture | Quantum ES |
| Engine Model | Q6.71SI |
| Number of cylinders | 6 |
| Cycle | Four stroke |
| Induction system | Turbo charged |
| Compression ratio | 13:1 |
| Bore | 105 mm (4.13 in) |
| Stroke | 135 mm (5.31 in) |
| Cubic capacity | 7.01 litres |
| Direction of rotation (view from front) | Clockwise |
| Firing order | 1, 5, 3, 6, 2, 4 |
| | |
| Alternator Manufacture | Mecc Alte |
| Alternator Model | ECPxxx |
| Phase | 3 Phase |
| Voltage | 400V |
| Assumed Power factor | 1 |

Dimensions and Connections

Gas Connection 1" BSP

Overall dimensions

| | |
|--------|----------------|
| Height | 2015 mm |
| Length | 3250 mm |
| Width | 1100 mm |
| Weight | 920kg(approx.) |

If the engine is to operate in ambient conditions other than those of the test conditions, suitable adjustments must be made for the changes. For full details, contact QES or KVT

| General installation | | Units |
|---|-------------|----------|
| Fuel Type | Natural Gas | |
| Fuel heat input | 225 | kW |
| Electrical output | 76 | kWe |
| Recoverable heat | - | kWth |
| Exhaust gas flow | - | Kg/hr |
| Exhaust gas outlet temperature (approx) | 450 | °C |
| Frequency | 50 | Hz |
| Voltage | 400 | V |
| Power factor | 0,8 | pf |
| Power output | 95 | kVA |
| Current | 137 | A |
| Actual alternator efficiency | >90 | % @ pf 1 |

Caution: The airflows shown in this table will provide acceptable cooling for an open power unit operating in ambient temperatures of up to 53 °C (127 °F) or 46 °C (114.8 °F) if a canopy is fitted. If the power unit is to be enclosed totally, a cooling test should be done to check that the engine cooling is acceptable. If there is insufficient cooling, contact us.

Construction

- Rigid base frame made of profiled steel.
- Direct coupled engine and generator assembly with flexible drive plate.
- Engine generator assembly flexibly mounted on the base frame.
- Electrical equipment installed in a sheet steel cabinet that forms an integral part of the canopy.
- Air movement within the canopy controlled by a engine driven fan.
- All connection points at one end of the canopy.
- Primary exhaust silencer mounted within the canopy with a vertical exit at the end.

Canopy

- Highly effective sound enclosure in packs of sheet steel construction, powder coated. Air passages acoustically lined and waterproof.

Exhaust System

- Steel mounted within the canopy.
- The lubrication system comprises a wet sump system with full flow oil pump.

Control Panel

- Sheet metal enclosure mounted within and forming an integral part of the canopy (1000x800x210mm). PLC based system enables auto and manual control for start/stop, voltage control, mains synchronization, load control, Remote control Data access through Ethernet, HMI graphic interface to view and set parameters.

Engine control

- Start/stop, engine speed control, monitoring for engine coolant inlet and outlet temperatures and exhaust temperature.

Alternator control

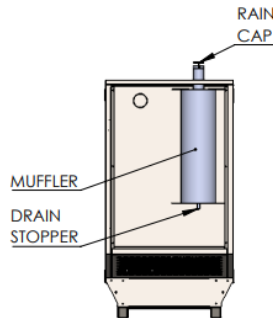
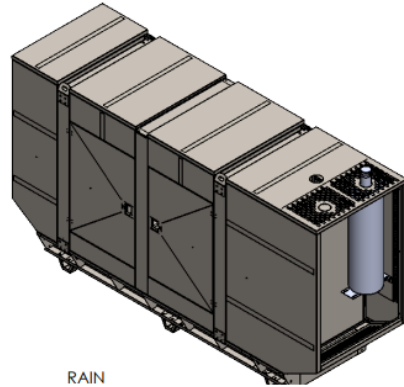
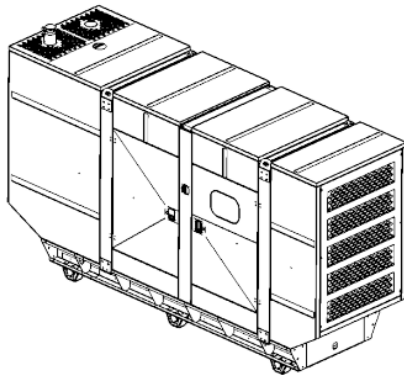
- Control of the alternator mounted AVR for voltage output, power output and Power Factor.

Emergency stop

- Canopy mounted push button with external link.

Emissions (optional)

- Standard 3 way catalyst can be add at time of order to reduce the NOX and CO2 for site requirement or regulation (naturally aspirated)
- For turbocharged or lean-burn engines SCR low NOX systems can be added.



Quantum ES Limited
Goat Mill Road
Dowlais
Merthyr Tydfil
Mid Glamorgan
CF48 3TF

Tel: + 44 (0) 1685 353 290
Fax: + 44 (0) 1685 353 291
Email: sales@quantumes.co.uk
Website: www.quantumes.co.uk