Technical Data
Gas Generator Specification

QES 450

For any further information, please contact the Quantum Team by visiting our website at
https://www.quantumes.com/contact-us/

Basic technical data

Engine Manufacturer..... Perkins
Engine Model..... 4006TRS2
No. Cylinders..... 6
Cycle..... Four Stroke
Induction system..... Turbocharged (charge cooled)
Compression ratio..... 12:1
Bore..... 160mm
Stroke..... 190mm
Cubic capacity..... 22.92 litres
Direction of rotation..... Clockwise
Firing order..... 1,5,3,6,2,4

Overall dimensions

Height..... 2450mm
Length..... 5000mm
Width (including mounting brackets)..... 1800mm
Weight..... 4,400kg (approx.)

Alternator

Manufacturer..... Stamford
Phase..... 3 phase
Voltage..... 400V
Assumed Power Factor..... 1

Designation	Units	50Hz	60Hz
Fuel Type		Natural	-
Continuous Output	kW(e)	375	-
Natural gas flow	M^3/hr	102.2	
Recoverable heat	kW(th)	-	-
Exhaust gas flow	Kg/hr	-	-
Exhaust gas outlet temperature	°C	485	-
Jacket water exit temperature (max)	°C	45	
Voltage	V	400	-
Power factor	Pf	1	-
Power output Continuous	kVA	468	-
Power output stand-by	kVA	-	-
Actual alternator efficiency	% @ pf 1	>93	-

Control Panel

- Sheet metal enclosure mounted within and forming an integral part of the canopy. PLC based system enables auto and manual control for start/stop, voltage control, mains synchronisation, 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.

Connection

Condensate drain connections..... 1 ”BSP
Gas connection..... DN50 Flange
Exhaust Connection..... 6”

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 (optional)

- 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

Emergency stop

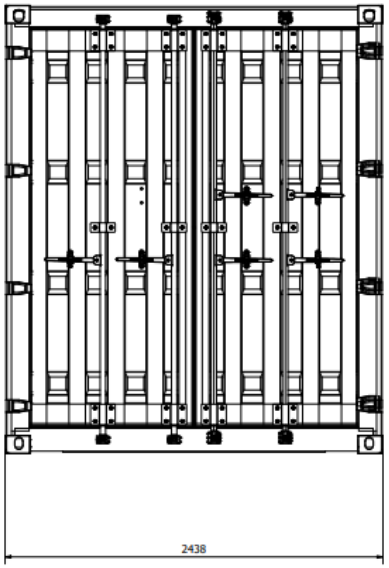
- Canopy mounted push button with external link.

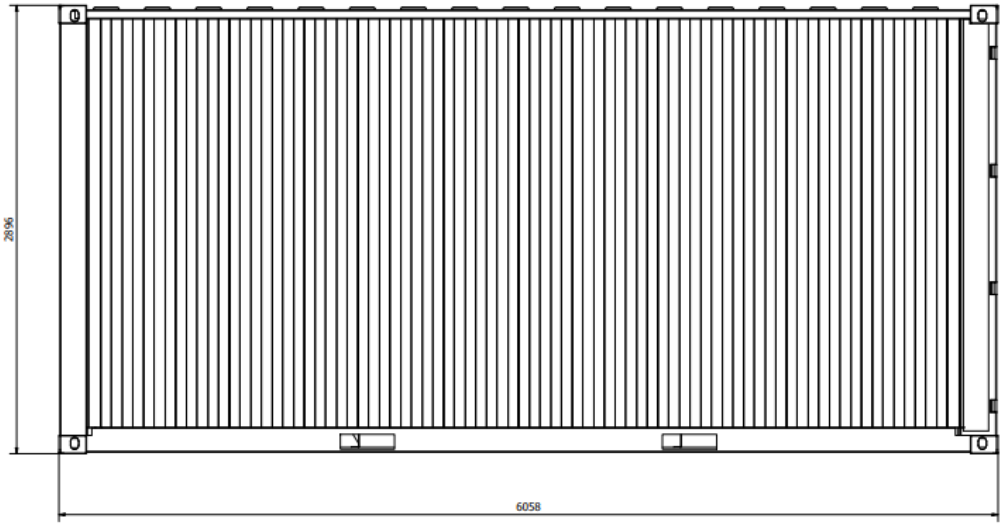
Emissions (optional)

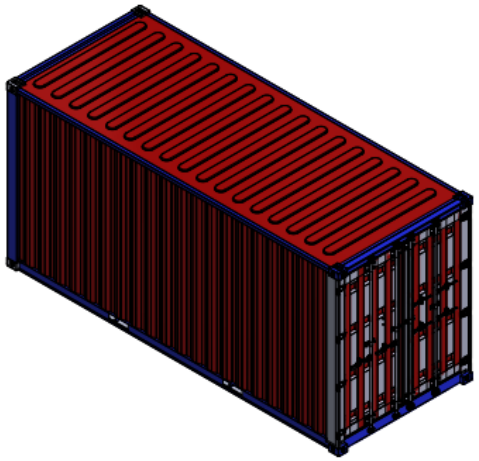
- Standard 3 way catalyst can be add at time of order to reduce the NOX and CO2 for site requirement or regulation (naturally aspirated)
- For turbocharged or lean-burn engines SCR low NOX systems can be added.

Gas Train

- Manual shut off valve, Filter, Double block solenoid, 30-50mbar pressure regulator. High pressure train available on request.







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