

Technical Data

QVT 70

Generating set

Basic technical data

Engine Manufacture	KVT
Engine Model	E70SI
Number of cylinders	6
Cycle	Four stroke
Induction system	Natural Aspirated
Compression ratio	13:1/10.5:1(LPG)
Bore	105 mm (4.13 in)
Strok	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
Lube oil consumption at full load	0.03 kg/h
Alternator Manufacture	Leroy Somer
Alternator Model	LSA 44.3 S4
Phase	3 Phase
Voltage	400V
Assumed Power factor	0.8



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			50 Hz						60 Hz					
				NG			BG (55% CH ₄)			NG			BG (55% CH ₄)		
Fuel Type	-			NG			BG (55% CH ₄)			NG			BG (55% CH ₄)		
Electrical output COP / Consumption 100%	kWe	kVA	M3/hr	66	83	23	58	73	35	72	90	26	67	84	41
Electrical output COP / Consumption 75%	kWe	kVA	M3/hr	50	63	18	43	54	27	54	68	21	50	63	33
Electrical output COP / Consumption 50%	kWe	kVA	M3/hr	33	41	13	29	36	20	36	45	16	34	43	25
Electrical output COP / Consumption 25%	kWe	kVA	M3/hr	17	21	8	15	19	13	18	23	11	17	21	17
Exhaust gas outlet temperature (approx)	°C			640			660			660			680		
Voltage	V			400			400			480			480		
Power factor	pf			0.8			0.8			0.8			0.8		
Current	A			119			104			109			101		
Actual alternator efficiency	%			94.6			94.6			94.6			94.6		

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

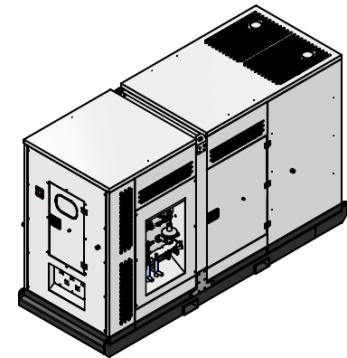
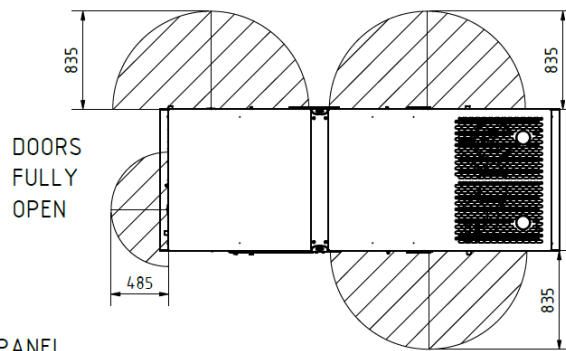
- Control of the alternator mounted AVR for voltage output, power output and Power Factor.

Emergency stop

- Canopy mounted push button with external link.

Emissions

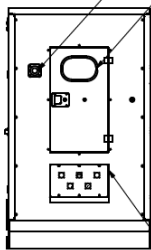
- Standard 3 way catalyst
- NOx emission <100 mg/Nm³ (Additional fine tuning might be needed if gas is different than the specifications above)



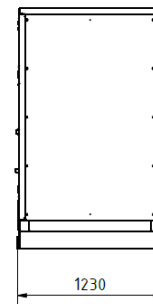
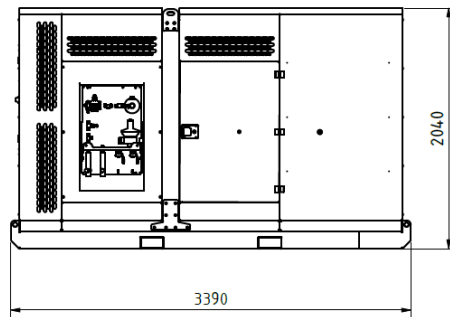
ISOMETRIC VIEW

CONTROL PANEL

EMERGENCY STOP

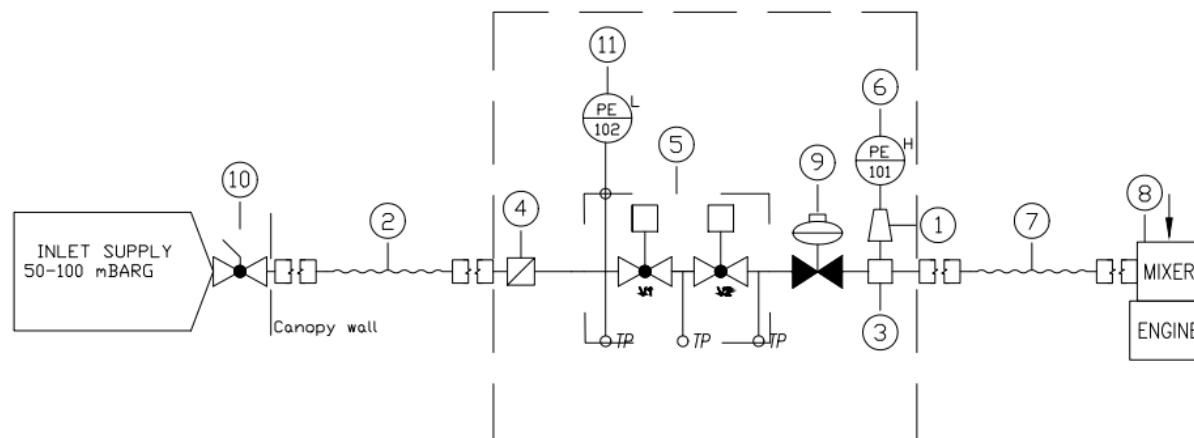


POWER CABLE ENTRY - EXIT



Industrial Gas Generators

REF	QTY	DESCRIPTION	BRAND	MODEL NO	PART NUMBER	SIZE	OPERATING PRESSURE	PRESS RATING	CERTIFICATION
1		ADAPTOR PLATE	DUNGS		222 982	1/4" BSP	500 mBar	15 mBar	
2	1	S/S BRADED FLEXIBLE HOSE				1" BSP	15 mBar	1 Bar	
3		T-PIECE				3/4" - 1/4" - 3/4" BSP	15 mBar	500 mBar	
4		Gas filter	Dungs	GF 1010	297526	1" BSP	100 mbar	1 Bar	
5	1	DOUBLE BLOCK SAFETY SHUT-OFF VALVE	DUNGS	DMV-D 512-11	222 336	1 BSP - 1" BSP	50-100 mBar	360 mBar	EC-Gas Appliances Regulation
5	1	FLANGE Rp1 for DMV-D 512-11	DUNGS	Rp1	222 343	1" BSP	50-100 mBar	360 mBar	
6		PRESSURE SWITCH	DUNGS	GW 50 A5	272 340	1/2" bsp	500 mbar	500 mBar	
7	1	S/S BRADED FLEXIBLE HOSE				3/4" BSP	15 mBar	1 Bar	
8		EFR	WOODWARD	AD-11A0010354		1" BSP	15 mBar	50 mBar	
9		PRESSURE REGULATOR (Blue spring)	DUNGS	FRS 507	070 391	3/2" BSP	10 - 30 mBar	360 mBar	
10		BAL VALVE	DUNGS	KH 5010 II	260774	1" BSP	100 mbar	5 BAR	
11		PRESSURE SWITCH	DUNGS	GW 150 A5	272 339	1/2" bsp	500 mbar	30 mBar	



Medium:

NG NL

Density 0,87 kg/Sm³

Flow 24 Nm³/h

Supplier pressure 50-100 mBar

Pressure @ mixer 15-30 mBar