

KVAR POWERHOUSE RANGE

25 KVA – 100KVA

50 Hz Three phase 380-415v

Model	Engine	Alternator	Manufacturing country of engine and alternator	PRP Output		ESP Output	
				Kva	Kw	Kva	Kw
PM25	1103A-33G	ECP28-2L4	UK	25	20	26.5	21.2
PM30	1103A-33G	ECP28-VL4	UK	30	24	32	25.6
PM42.5	1103A-33TG1	ECO32-3S4	UK	42.5	34	46	36.8
PM45	1103A-33TG1	ECO32-1M4	UK	45	36	49.5	39.6
PM60	1103A-33TG2	ECO32-2M4	UK	60	48	66	52.8
PM65	1104A-44TG1	ECO32-3L4	UK	65	52	71.5	57.2
PM80#	1104A-44TG2	ECP32-4L4	UK	80	64	87	69.6
PM80	1104C-44TAG1	ECP32-4L4	UK	80	64	87	69.6
PM100	1104C-44TAG2	ECP34-2S4	UK	100	80	110	88

Ratings definitions:

Ratings are in accordance with ISO8528 and are based on a 25 Deg C ambient/air inlet temperature, 100 M altitude and 30% relative humidity and are based on 0.8 lagging power factor.

Prime Power (PRP)

Power available at variable load, with a load factor not exceeding the figure shown. An overload of 10% is permitted for 1 hour in any 12 hours operation.

Standby Power (ESP)

Power available at variable load in the event of a main power network failure upto a maximum of 500 hours per year. No overload is permitted.

Data

		1103A-33G	1103A-33TG1	1103A-33TG2	1104A-44TG1	1104A-44TG2	1104C-44TAG1	1104C-44TAG2
Performance class	ISO8528	G2	G2	G2	G2	G2	G2	G2
Average load factor	% of PRP	80	80	80	80	80	80	80
Load acceptance	% of PRP	90	90	85	100	90	75	75
Hz regulation – constant load	%	+/-0.75	+/-0.75	+/-0.75	+/-0.75	+/-0.75	+/-0.5	+/-0.5
Voltage regulation	%	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1
Cooling clearance	Deg C	53		53	53	53	53	53
Fuel tank capacity	Litres	90	130	130	200	200	200	200
Fuel consumption	50%	4	5.4	7.5	8	9.8	10.4	11.8
Litres/hour	75%	5.5	7.3	10.7	11.1	14	14.7	17.5
	100%	7.1	9.4	14.3	14.6	18.5	18.8	22.7
	110%	8	10.5	15.6	15.9	19.9	20.5	24.9

Fuel consumption is based on fuel in accordance with BS2869 with a specific gravity of 0.845 and is subject to a +5% tolerance

Cylinders		3	3	3	4	4	4	4
Configuration		Inline	Inline	Inline	Inline	Inline	Inline	Inline
Aspiration		Natural	Natural	Turbo	Turbo	Turbo	Turbo	Turbo
Compression ratio		19.2:1	17.25	17.25	17.25:1	17.25:1	18.23:1	18.23:1
Bore x stroke	mm	105 x 127	105 X 127	105 X 127	105 x 127	105 x 127	105 x 127	105 x 127
Displacement	Litres	3.3	3.3	3.3	4.4	4.4	4.4	4.4
Mean piston speed	m/sec	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Thermal efficiency (PRP)	%	39.2	39.8	39.2	42.5	39.5	39.8	39.5
BMEP (PRP)	kPa	684	1023	1333	1084	1335	1363	1702
Cooling capacity	Litres	10.2	10.2	10.2	13	13	12.6	12.6
Lub. oil capacity	Litres	8.3	8.3	8.3	8	8	8	8
Airflow	M3/min	53	53	89	89	89	165.6	165.6
Duct	Pa							
Exhaust gas flow (ESP)	M3/min	5.8	7.7	10.1	11.4	12.5	12.9	15.2
Max exhaust back pressure	kPa	8	10	10	10	10	12	18

		ECP 282L4	ECP 28VL4	ECO 323S4	ECO 321M4	ECO 322M4	ECO 323L4	ECP 324L4	ECP 342S4
Avr model		DSR	DSR	DSR	DSR	DSR	DSR	DSR	DSR
Bearings		1	1	1	1	1	1	1	1
Stator insulation	Class	H	H	H	H	H	H	H	H
Rotor insulation	Class	H	H	H	H	H	H	H	H
Temperature rise	PRP	125/40	125/40	125/40	125/40	125/40	125/40	125/40	125/40
	ESP	163/27	163/27	163/27	163/27	163/27	163/27	163/27	163/27
Winding pitch		2/3	2/3	2/3	2/3	2/3	2/3	2/3	
Number of leads		12	12	12	12	12	12	12	
Mechanical protection		IP21	IP21	IP21	IP21	IP21	IP21	IP21	
THF		<2	<2	<2	<2	<2	<2	<2	
Inertia	Kgm2	0.142	0.163	0.35	0.42	0.50	0.57	0.59	0.90

Scope of standard supply

Cooling system	Set mounted tropical radiator- original Perkins supply Engine driven cooling fan Fan & matrix protection guard
Induction system	Dry paper element air filter Pressure drop indicator
Governor type	Mechanical P80 & P100 Electronic
Fuel system	Fuel filter Fuel lines Fuel tank located in chassis Contents gauge Vent and drain
Lubrication system	Lub oil filter Sump drain pump (optional on open sets) Standard on all canopied sets
DC electrical system	12 v starter motor 12 v charge alternator 1 x 60 or 1 x 125 amp/hour lead acid maintenance free battery
Baseframe	Galvanised chassis with removable polyethylene fuel tank
Control panel	Powder coated steel enclosure flexibly mounted above alternator terminal box
Controller	DSE 7120
Circuit breaker	Powder coated steel enclosure fitted to gen set 3 pole MCCB
Monitoring	Oil pressure Engine temperature Engine speed Hours run Amps per phase Ac voltage Frequency Mains ac monitoring Maintenance scheduler
Exhaust	Industrial exhaust silencer Flexible exhaust section – 1 metre OAL
Works Test	Full works test In accordance with ISO8528 covering Functions Load tests upto 110% Load acceptance capability Conducted at unity power factor
Paint colour	Black with galvanised chassis

Canopy specifications

Our canopies are designed and manufactured in Western Europe to our own specifications and share the following in common:

- Acoustic & weatherproof
- Galvanised steel
- Polyamide door handles
- Gloss powder coat
- Zinc plated door hinges
- Neatly fitted fireproof (DIN 75200) soundproofing materials



Prototype tested to ensure cooling clearance

Sound attenuation	Db@ 1m	75
Ambient cooling clearance	Deg C	50
Thickness of steel		2
IP rating		IP44
Access		Combination of hinged doors and bolted panels
Access points		Viewing window
		Cable gland plate
		Radiator filler
Exhaust position		Internal
Lifting facilities		Single point lifting frame
		Forklift access from base
Colour	Canopy	RAL9010 White
	Base	Galvanised

Options

Each set within the KVA Powerhouse range can be supplied with a number of options to tailor the set to a specific duty.

Mains coolant heater	Assists starting and load acceptance capability at low ambient temperatures
Alternator anti condensation heaters	Minimises damage to the windings caused by condensation build up
Alternator winding thermistors	Provides alarm/shutdown for high winding temperature
Alternator winding and bearing RTD's	Provides temperature readout of windings and bearing(s)
High specification fuel/water separator with alarm contact	Minimises damage to fuel systems and provides alarm indication
DSE7220 controller DSE7320 controller DSE8610 controller	Enables remote communications Enables synchronising
Remote monitoring and control	
4 pole mccb Motor operator Earth fault protection	
5 amp or 10 amp battery charger Battery temperature monitoring	
Automatic Transfer Switch panel Bypass switch panel	Using either Contactors or circuit breakers
Synchronising	Available either between generators or between generator and mains
Custom built enclosures	Purposely designed tailor made canopies for specific installations such as water authorities
High attenuation enclosures	65 dba @ 1m for Hospitals and residential installations
Critical exhaust silencer systems	
Ce compliance and certification	Required for EC countries

Further options are shown in our current price list.

Weights and dimensions

The following is given for guidance. For installation purposes we can supply as built drawings

Open Sets

Model	Length Cm	Width Cm	Height Cm	Dry weight kg
PM25/30	148	75	131	800
PM42.5/45/60	165	75	134	1000
PM65	184	74	141	1100
PM80/80#	189	74	156	1100
PM100	189	74	156	1150

Canopied Sets

Model	Length Cm	Width Cm	Height Cm	Dry weight kg
PM25/30	181	76	144	1100
PM42.5/45/60	231	78	155	1350
PM65	277	86	165	1500
PM80/80#	277	86	165	1550
PM100	277	86	165	1600

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We have a policy of continuous product development and reserve the right to alter specifications without notice

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