

KVA POWERHOUSE RANGE

225 KVA – 300 KVA

50 Hz Three phase 380- 415 v

Model	Engine	Alternator	Manufacturing country of engine & alternator	PRP Output		ESP Output	
				Kva	Kw	Kva	Kw
PM225	1506A-E88TAG2	ECO383SN	USA/UK	225	180	250	200
PM250	1506A-E88TAG3	ECO381LN	USA/UK	250	200	275	220
PM300	1506A-E88TAG5	ECO382LN	USA/UK	300	240	330	264
PS230	1506A-E88TAG2	UCD274J	USA/UK	230	184	253	202
PS250	1506A-E88TAG3	UCD274K	USA/UK	250	200	275	220
PS300	1506A-E88TAG5	HCI444D	USA/UK	300	240	330	264

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 up to a maximum of 500 hours per year. No overload is permitted.

Data

		1506A-E88TAG2	1506A-E88TAG3	1506A-E88TAG5
Performance class	ISO8528	G2	G2	G2
Average load factor	% of PRP	70	70	70
Load acceptance	% of PRP	79	73	66
Hz regulation – constant load	%	+/-0.25	+/-0.25	+/-0.25
Voltage regulation	%	+/-1	+/-1	+/-1
Cooling clearance	Deg C	51	51	53
Fuel tank capacity	Open	609	609	638
	Canopied	500	500	500
Fuel consumption Litres/hour	50%	26.1	28.6	32.1
	75%	36.2	40.1	46.7
	100%	48.3	52.9	61.9
	110%	53	58.2	70.1

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

		6	6	6
		Inline	Inline	Inline
		Turbocharged	Turbocharged	Turbocharged
		Air/air charge cooled	Air/air charge cooled	Air/air charge cooled
Compression ratio		16.1:1	16.1:1	16.1:1
Bore x stroke	mm	112 x 149	112 x 149	112 x 149
Displacement	Litres	8.8	8.8	8.8
Mean piston speed	m/sec	7.4	7.4	7.4
Thermal efficiency	%	42	42	42
BMEP (PRP)	kPa	1936	2145	2345
Cooling capacity	Litres	29.6	29.6	33.2
Lub. oil capacity	Litres	41	41	41
Airflow	M3/min	370	370	370
Duct	Pa	125	125	125
Exhaust gas flow (ESP)	M3/min	35.7	40.4	46.3
Exhaust back pressure	kPa	10	10	10

		UCD274J	UCD274K	HCI444D
Avr model		AS440	AS440	AS440
Bearings		1	1	1
Stator insulation	Class	H	H	H
Rotor insulation	Class	H	H	H
Temperature rise	PRP	125/40	125/40	125/40
	ESP	163/27	163/27	163/27
Winding pitch		2/3	2/3	2/3
Number of leads		12	12	12
Mechanical protection		IP23	IP23	IP23
THF		<2	<2	<2
Inertia	Kgm2	2.37	2.39	4.07

		ECO383SN	ECO381LN	ECO382LN
Avr model		DSR	DSR	DSR
Bearings		1	1	1
Stator insulation	Class	H	H	H
Rotor insulation	Class	H	H	H
Temperature rise	PRP	125/40	125/40	125/40
	ESP	163/27	163/27	163/27
Winding pitch		2/3	2/3	2/3
Number of leads		12	12	12
Mechanical protection		IP21	IP21	IP21
THF		<2	<2	<2
Inertia		2.07	2.34	2.83

Scope of standard supply

Cooling system	Set mounted tropical radiator- original Perkins supply Engine driven cooling fan Fan and protection guard
Induction system	Dry paper element air filter Pressure drop indicator
Governor type	ECU
Fuel system	Fuel filter Fuel lines 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	24 v starter motor 24 v charge alternator 2 x 125 amp/hour lead acid maintenance free batteries
Baseframe	Steel baseframe with integral steel 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
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

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

Stainless steel exhaust silencer

Polyamide door handles

Gloss powder coat

Zinc plated door hinges

Neatly fitted fireproof (DIN75200) soundproofing materials

Detachable air inlet and outlet attenuators – allows access to radiator and maximises the space available when loading multiple sets into containers for shipment



Prototype tested to ensure cooling clearance

Sound attenuation	Db@ 1m	85
Ambient cooling clearance	Deg C	50
Thickness of steel	mm	2
IP rating		IP44
Access		Combination of hinged doors and bolted panels
Access points		Viewing window
		Cable gland plate
		Radiator filler
		Fan belt adjustment
Exhaust position		Roof mounted
Lifting facilities		Single point lifting frame
		Forklift access from base
Colour	Canopy	RAL9010 White
	Base	Galvanised



We can also offer Custom built soundproof canopies designed for specific applications

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
Permanent magnet excitation Alternator anti condensation heaters	Provides improved motor starting and voltage regulation 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
Single point exhaust temperature monitoring	Provides a temperature readout
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	
Bunded base fuel tank	Required for EC countries
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	Width	Height	Dry weight
	Cm	Cm	Cm	kg
PM225/250	265	111	181	3200
PM300	275	111	186	3400
PS230	261	111	181	3100
PS250	261	111	181	3200
PS300	280	111	187	3400

Canopied Sets

Model	Length	Width	Height	Dry weight
	Cm	Cm	Cm	kg
All models	414	116	222	Open set + 750 kg

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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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