



VERTEX
ENGINEERING & SERVICES



UK MANUFACTURED GENERATORS

PS450P –PS500P

PERKINS 2500 SERIES TECHNICAL DATA SHEET

Head Office

H # 2243, Markaz, I-10/2
Islamabad. 44000
Pakistan
Tel: +92-51-4433933
Fax: +92-51-4102199

Lahore Office

Mian Ishaq Nursery Area
Opp Rangers HQ
Lahore Cantt.
Tel: +92-423-6635634-5
Fax: +92-423-6635636

Dubai Office

Mirdif Shoroq Bldg 16,
App # 101,
Dubai 5600
Tel: +971 503566782
Fax: +971 45576210

Germany Office

Maehderstr.11
72768 Reutlingen,
Germany.
Tel: +49 7121 624697
Fax: +49 7121 624698

E: info@vertexengineering.com.pk

Web: www.vertexengineering.com.pk





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Cost Effective Power:

- Economic Power- Electronic fuel injection
- Reliable Power-High compression ratios
- Clean efficient power-Exceptional power to weight ratio
- Global distributor network



Vertex	Perkins	380-415 50hz		480v 60hz	
Generating Set Model	Engine Model	KVA	KW	KVA	KW
PS450P (PRIME)	2506A-E15TAG1	450	360	500	400
PS450P (STANDBY)	2506A-E15TAG1	500	400	563	450
PS500P (PRIME)	2506A-E15TAG2	500	400	500	400
PS500P (STANDBY)	2506A-E15TAG2	550	449	563	450

RATING DEFINITIONS

Prime Power

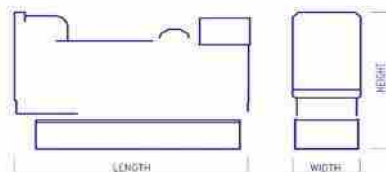
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and these models can supply 10% overload power for 1 hour in 12 hours.

Standby Power

These rating are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

DIMENSIONS AND WEIGHTS

Genset Models:	Net kg	Length mm	Width mm	Height mm
PCS450P	3925KG	3410	1131	2221
PCS500P	3925KG	3410	1131	2221





PERKINS ENGINE TECHNICAL DATA

Generating Set Model:	PS450P	PS500P	
Engine Manufacturer:	PERKINS	PERKINS	
Model:	2506A-E15TAG1	2506A-E15TAG2	
Number of Cylinder:	6 In line	6 In line	
Displacement:	15.2ltrs	15.2ltrs	
Cycle	4 stroke	4 stroke	
Cooling System	Water cooled	Water cooled	
Combustion System	Direct Inj.	Direct Inj.	
Bore/Stroke: (mm)	137x171	137x171	
Aspiration:	Turbo charged A2A	Turbo charged A2A	
Direction of rotation	Anti-clockwise	Anti-clockwise	
Lub. Oil Capacity ltrs:	62	62	
Coolant capacity ltrs:	58	58	
Electrical equipment	24vDC	24vDC	
Compression Ratio:	16:01	16:01	
		50 hz	
Engine Speed:	1500rpm	1500rpm	
Maximum Continuous Power at Flywheel: kw	396	435	
Maximum Standby Power at Flywheel: kw	434	478	
Fuel Cons: L/hr			
110%	104	111	
100%	95	100	
75%	72	76	
50%	50	53	
		60hz	
Engine Speed:	1800rpm	1800rpm	
Maximum Continuous Power at Flywheel: kw	435	435	
Maximum Standby Power at Flywheel: kw	490	490	
Fuel Cons: L/hr			
110%	116	116	
100%	102	102	
75%	78	78	
50%	53	53	

NOTE: All engine performance data based on our maximum continuous rating at the standard reference conditions specified. Fuel consumption data at full load with a diesel fuel with a specific gravity of 0.85 conforming to BS2869:1988, Class A2
In line with our policy of continuous product development, we reserve the right to change specifications without notice.

ALTERNATOR MODELS

Mecc Alte (UK)	ECO40-2S	ECO40-3S	
Newage Stamford	HCI544C	HCI544D	
Leroy somer	LSA47.2S5	LSA47.2M7	



STANDARD OPTION:

12/24volt axial starter motor
12/24v Heavy duty batteries
Engine driven charging alternator
Engine starting motor
Set mounted heavy duty tropical radiator and pusher fan
Fuel oil filter
Lub oil filter
Air intake filter
Energised to run solenoid
Low oil pressure switch
High engine temperature switch
Industrial silencer with flexible section
Mechanical/electrical governor or ECM(check with sales)
8hr base fuel tank upto 800kva
Open Skid base above
800kva Captive AVMS
One set operation manuals
One set engine and alternator maintenance books
One set electrical schematic drawings
TESTING All units are fully tested in our works prior to despatch and each unit is issued with a Test Certificate. WARRANTY All Vertex equipment carries a full 12 month warranty in accordance with our conditions of sale. 24monthys warranties are available FOC for standby units running at limited hours (please checkwith sales for full details.

AVAILABLE OPTIONS:

55DBA-85DBA weatherproof acoustic canopies and containers
Residential silencers
Critical silencers
Full EEC trailers
Non EEC trailers
Free Standing fuel tanks
Bunded fuel tanks
Automatic fuel make-up system
Fuel level warnings
Unlimited other options are available.

ALTERNATOR:

We use Cummins Generator technology (Newage Stamford), Leroy Somer of France and also MeccAlte of the UK(upto 350kva) and MeccAlte of Italy (360-3000kva)
Brushless revolving field
4 pole
Class H Temperature rise 125/40
Class H Insulation
Automatic voltage regulator
Single bearing
0.5% Voltage regulation (Leroy)
1.0% Voltage regulation 200kva and above (MeccAlte)
1.5% Voltage regulation 0-180kva and above (MeccAlte)
0.5% Frequency regulation TIF 50/NEMA
MGI-22-43 THF >3%
RFI to BS800
50HZ Voltage range- 380/220 – 415/240v
60HZ Voltage range- 220/127 – 480/277v

SET MOUNTED DIGITAL CONTROL SYSTEM:

Vertex model 6110 microprocessor engine control module provides metering and alarm facilities via the LCD display as follows:
Emergency stop pushbutton
Generator volts line/line
Generator volts line/neutral
Generator amps 3 phase
Generator frequency Hz
Engine speed
Engine oil pressure
Engine coolant temperature
Engine battery/volts Engine hours run

PROTECTIONS:

Generator over-volts – shutdown
Generator under-volts – shutdown
Over speed – shutdown
Under speed – shutdown
Over frequency Hz – shutdown
Under frequency Hz – shutdown
High current – alarm
Battery charge fail – alarm
Emergency stop
Low oil pressure – shutdown
High engine temperature – shutdown
Fail to start – alarm
High battery volts – alarm
Low battery volts – alarm
Fail to come to rest – alarm
Loss of speed sensing signal – alarm
LED indication indicates – alarm (amber) or shutdown (red flashing)
USB PROGRAMME PORT – standard printer cable connection

TIMERS:

Start delay
Stop delay
Crank/crank rest timer
Engagement attempt and manual crank limit
Safety on delay timer
Warm up timer
Cooling timer
Energise to stop timer

CONTROL SYSTEM UPGRADES:

7210 auto-start unit gives the following extra's:-Generator KVA
Generator KW
Generator COS
5510 auto-synchronising unit gives you the following upgrades:-
Generator kVA L1, L2, L3, Total
Generator kW L1, L2, L3, Total
Generator Pf L1, L2, L3, Average
Generator kVAr L1, L2, L3, Total
Generator kWh
Generator kVAh
Generator kVAh Generator
Phase Sequence
Full automatic synchronising
Automatic load sharing
Automatic load level demand (switches units on and off line depending on load levels)



Automatic transfer panel (ATS) 25 – 1000A Contactors

IP55 wall or freestanding sheet steel cubicle with hinged front access door and base entry gland plate. Finished in grey epoxy polyester powdercoat. AC1 Rating at 40oC

Fitted with;

- 1 x Pair of 4 pole mechanically and electrically interlocked contactors. x Set of load links and terminals upto 125A.
- 1 x Set of copper bar load terminals
- 125A. 1 x 3 ph + N mains detector.
- 1 x Mains available indicator.
- 1 x Mains on load indicator.
- 1 x Generator available indicator.
- 1 x Generator on load indicator.
- 1 x Set of control and monitoring MCB's.
- 1 x Earth stud.
- 1 x Set of interconnecting terminals.
- 1 x Hazard warning label
- 1 x Rating label.

Dimensions 4 pole ;

25A- 125A	H600mm x W400mm x D200mm
200A- 450A	H800mm x W600mm x D300mm
550A-1000A	H1200mm x W800mm x D400mm

Automatic transfer panel (ATS) 800 – 6300A Circuit Breaker

Floor-standing cubicle with hinged front access door and removable side and rear covers for ease of installation. Top and base entry aluminium gland plate. Control compartment IP2X and segregated from load switching. Secondary screening over switchgear. Finished in grey polyester powder-coat RAL7035.

Fitted with;

- 1 x Pair of motorised mechanically and electrically interlocked fixed pattern circuit breakers (Non Auto).
- 800 - 1600A MCCB (MCS)
- 800 – 6300A ACB
- 1 x Set of load connection terminals.
- Generator / Mains / Load.
- 1 x Mains available indicator.
- 1 x Mains on load indicator.
- 1 x Generator available indicator.
- 1 x Generator on load indicator.
- 1 x Set of control and monitoring MCB's.
- 1 x Earth bar.
- 1 x Set of interconnecting terminals.
- 1 x Hazard warning labels
- 1 x Rating label.

Dimensions;

MCCB;

800 - 1600A H1800mm x W600mm x D800mm

ACB;

800A – 1600A	H1800mm x W 600mm x D800mm
2000A	H2000mm x W 800mm x D800mm
2500A – 3200A	H2000mm x W1000mm x D800mm
4000A	H2000mm x W2000mm x D800mm
5000A – 6300A	H2000mm x W2400mm x D800mm