

PowerCo Systems International Ltd.

UK MANUFACTURED GENERATORS



POWERCO MODEL: **PCS1000P**

PERKINS 4008 SERIES TECHNICAL DATA SHEET

Cost Effective Power:

- Economic Power- 4 valve heads**
- Reliable Power-piston jet cooling**
- Clean efficient power-low gaseous emissions**
- Global distributor network**



PowerCo	Perkins	380-415 50hz		480v 60hz	
Generating Set Model	Engine Model	KVA	KW	KVA	KW
PCS910P (PRIME)	4008-TAG1A	910	728	884	707
PCS1000PS (STANDBY)	4008-TAG1A	1000	800	975	780
PCS1000P (PRIME)	4008-TAG2A	1000	800	995	796
PCS1100PS (STANDBY)	4008-TAG2A	1100	880	1098	878

RATING DEFINITIONS

Prime Power

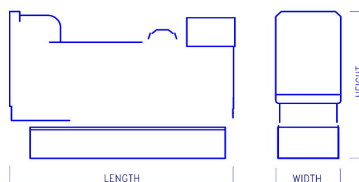
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and these models can supply 10% overload power for 1 hour in 12 hours.

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
PCS910P	7500KG	4700	2100	2300
PCS1000P	7600KG	4700	2100	2300



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PERKINS ENGINE TECHNICAL DATA

Generating Set Model:	PCS910P	PCS1000P	
Engine Manufacturer:	PERKINS	PERKINS	
Model:	4008-TAG1A	4008-TAG2A	
Number of Cylinder:	8 In line	8 In line	
Displacement:	22.921	22.921	
Cycle	4 stroke	4 stroke	
Cooling System	Water cooled	Water cooled	
Combustion System	Direct Inj.	Direct Inj.	
Bore/Stroke: (mm)	160X190	160X190	
Aspiration:	Turbo charged A2A	Turbo charged A2A	
Direction of rotation	Anti-clockwise	Anti-clockwise	
Lub. Oil Capacity ltrs:	165.6	165.6	
Coolant capacity ltrs:	149	149	
Electrical equipment	24vDC	24vDC	
Compression Ratio:	13.6:1	13.6:1	
1500rpm			
Engine Speed:	1500rpm	1500rpm	
Maximum Continuous Power at Flywheel: kw	762	861	
Maximum Standby Power at Flywheel: kw	839	947	
Fuel Cons: L/hr			
110%	217	248	
100%	194	220	
75%	142	160	
50%	97	113	
1800rpm			
Engine Speed:	1800rpm	1800rpm	
Maximum Continuous Power at Flywheel: kw	800	838	
Maximum Standby Power at Flywheel: kw	877	924	
Fuel Cons: L/hr			
110%	222	252	
100%	201	227	
75%	146	164	
50%	101	118	

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)	ECO43-2SN	ECO43-1LN	
Newage Stamford	HCI634H	HCI634J	
Leroy somer	LSA49.1L10	LSA50.2S4	

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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 PowerCo 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:

PowerCo 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 PFL1, 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 powder-coat.

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 links above 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