

# PowerCo Systems International Ltd.

UK MANUFACTURED GENERATORS

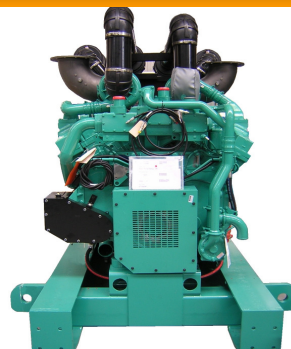
POWERCO MODEL:

## PCS2000C – PCS2750C

CUMMINS TECHNICAL DATA SHEET

Cost Effective Power:

- Compact size and low noise level
- Lower fuel consumption and oil use
- 250hrs service intervals
- 2 year warranty (hours limitation applies)



PowerCo	Cummins	380-415 50hz		480v 60hz	
Generating Set Model	Engine Model	KVA	KW	KVA	KW
PCS2000C (PRIME)	QSK60G4HPI	2000	1600	N/A	N/A
PCS2000C (STANDBY)	QSK60G4HPI	2250	1800	N/A	N/A
PCS2500C (PRIME)	QSK60G13	2000	1600	N/A	N/A
PCS2500C (STANDBY)	QSK60G13	2500	2000	N/A	N/A
PCS2750C (PRIME)	QSK60G14	N/A	N/A	2250	1800
PCS2750C (STANDBY)	QSK60G14	N/A	N/A	2750	2200

### RATING DEFINITIONS

#### Prime Power

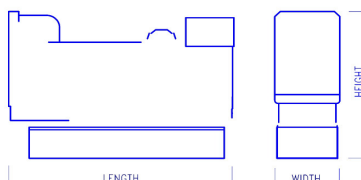
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and these models can supply 10% overload power for 1 hour in 12 hours.

#### 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 / Dry	Length mm	Width mm	Height mm
PCS2000C	12,100KG	5900	2000	2500
PCS2500C	12,100KG	5900	2000	2500
PCS2750C	12,100KG	5900	2000	2500



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## CUMMINS ENGINE TECHNICAL DATA

Generating Set Model:	PCS2000C	PCS2500C	PCS2750C
Engine Manufacturer:	CUMMINS	CUMMINS	CUMMINS
Model:	QSK60G4HPI	QSK60G13	QSK60G14
Number of Cylinder:	16 In line	16 In line	16 In line
Displacement:	60200cc	60200cc	60200cc
Cycle	4 stroke	4 stroke	4 stroke
Cooling System	Water cooled	Water cooled	Water cooled
Combustion System	Indirect Inj.	Indirect Inj.	Indirect Inj.
Bore/Stroke: (mm)	159 X 190	159 X 190	159 X 190
Aspiration:	TURBO CHARGED	TURBO CHARGED	TURBO CHARGED
Direction of rotation	Anti-clockwise	Anti-clockwise	Anti-clockwise
Lub. Oil Capacity ltrs:	261	261	261
Coolant capacity ltrs:	157	157	159
Electrical equipment	24vDC	24vDC	24vDC
Compression ratio:	14.5:1	14.5:1	14.5:1
<b>50 hz</b>			
Engine Speed:	<b>1500rpm</b>	<b>1500rpm</b>	<b>1500rpm</b>
Maximum Continuous Power at Flywheel: kw	1730	1727	N/A
Maximum Standby Power at Flywheel: kw	1915	2164	N/A
Fuel Cons: L/hr			
100%	394	399	N/A
75%	291	302	N/A
50%	200	210	N/A
25%	114	119	N/A
<b>60hz</b>			
Engine Speed:	<b>1800rpm</b>	<b>1800rpm</b>	<b>1800rpm</b>
Maximum Continuous Power at Flywheel: kw	N/A	N/A	1981
Maximum Standby Power at Flywheel: kw	N/A	N/A	2447
Fuel Cons: L/hr			
100%	N/A	N/A	485
75%	N/A	N/A	398
50%	N/A	N/A	291
25%	N/A	N/A	156

**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)	ECO46-1L	ECO46-1L	ECO46-1L
Newage Stamford	PI734F	PI734F	PI734G
Leroy somer	LSA51.2 M60	LSA51.2 M60	LSA51.2 VL85

#### **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(from Feb. 2011)  
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 MG1-22-43  
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 7120 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  
Mains Monitoring and Sensing  
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

7510 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 kVAh 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

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