

PowerCo Systems International Ltd.

UK MANUFACTURED GENERATORS

POWERCO MODEL:

PCS300-450V

VOLVO 1300 SERIES TECHNICAL DATA SHEET

Cost Effective Power:

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



PowerCo	Volvo	380-415 50hz		480v 60hz	
Generating Set Model	Engine Model	KVA	KW	KVA	KW
PCS300V (PRIME)	TAD1341GE	300	240	333	266
PCS330VS (STANDBY)	TAD1341GE	330	264	366	293
PCS350V (PRIME)	TAD1342GE	350	280	401	321
PCS385VS (STANDBY)	TAD1342GE	385	308	441	353
PCS375V (prime)	TAD1343GE	375	300	410	328
PCS412.5VS (STANDBY)	TAD1343GE	412.5	330	451	361
PCS400V (prime)	TAD1344GE	400	320	456	365
PCS440VS (STANDBY)	TAD1344GE	440	352	502	392
PCS450V (prime)	TAD1345GE	450	360	N/A	N/A
PCS495VS (STANDBY)	TAD1345GE	500	396	N/A	N/A

RATING DEFINITIONS

Prime Power

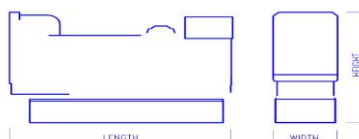
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and these models can supply 10% overload power for 1 hour in 12 hours.

Standby Power

These ratings 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
PCS300V	3400KG	3200	1150	2200
PCS350V	3400KG	3200	1150	2200
PCS375V	3450KG	3200	1150	2200
PCS400V	3450KG	3200	1150	2200
PCS450V	3498KG	3200	1150	2200



PowerCo Systems International Ltd.

Tel: ++(0) 845 643 1777 Fax: ++ (0) 845 643 1888

e-mail: sales@generatorsets.co.uk website: www.generatorsets.co.uk

continue overleaf...

VOLVO ENGINE TECHNICAL DATA

Generating Set Model:	PCS300V	PCS350V	PCS375V	PCS400V	PCS450V
Engine Manufacturer:	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO
Model:	TAD1341GE	TAD1342GE	TAD1343GE	TAD1344GE	TAD1345GE
Number of Cylinder:	6 In line	6 In line	6 In line	6 In line	6 In line
Displacement:	12.78ltrs	12.78ltrs	12.78ltrs	12.78ltrs	12.78ltrs
Cycle	4 stroke	4 stroke	4 stroke	4 stroke	4 stroke
Cooling System	4 stroke	Water cooled	4 stroke	4 stroke	4 stroke
Combustion System	Direct Inj.	Direct Inj.	Direct Inj.	Direct Inj.	Direct Inj.
Bore/Stroke: (mm)	131x158	131x158	131x158	131x158	131x158
Aspiration:	Turbo charged A2A	Turbo charged A2A	Turbo charged A2A	Turbo charged A2A	Turbo charged A2A
Direction of rotation	Anti-clockwise	Anti-clockwise	Anti-clockwise	Anti-clockwise	Anti-clockwise
Lub. Oil Capacity ltrs:	36	36	36	36	36
Coolant capacity ltrs:	29	29	29	29	29
Electrical equipment	24vDC	24vDC	24vDC	24vDC	24vDC
Compression Ratio:	18.1:1	18.1:1	18.1:1	18.1:1	18.1:1
50 hz					
Engine Speed:	1500rpm	1500rpm	1500rpm	1500rpm	1500rpm
Maximum Continuous Power at Flywheel: kw	271	303	325	354	388
Maximum Standby Power at Flywheel: kw	298	333	356	389	431
Fuel Cons: g/KWh					
110%	191	191	194	195	196
100%	191	191	192	194	197
75%	195	193	193	197	199
50%	202	201	200	200	217
60hz					
Engine Speed:	1800rpm	1800rpm	1800rpm	1800rpm	1800rpm
Maximum Continuous Power at Flywheel: kw	287	345	353	392	392
Maximum Standby Power at Flywheel: kw	317	377	388	431	431
Fuel Cons: g/KWh					
110%	200	201	201	202	202
100%	200	201	200	201	201
75%	202	200	200	200	200
50%	211	207	206	205	205

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

ALTERNATOR MODELS

Mecc Alte (UK)	ECO38-2LN	ECO38-3LN	ECO40 1S	ECO40-2S	ECO40-3S
Newage Stamford	HCI444D	HCI444E	HCI444F	HCI444F	HCI544C
Leroy somer	LSA46.2VL12	LSA47.2VS2	LSA47.2S4	LSA47.2S4	LSA47.2M7

In line with our policy of continuous product development, we reserve the right to change specifications without notice.

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 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 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