

Model: P1500D5

Powered by PERKINS

Output Rating

MODEL		Power rating		Voltage available		
		PRIME(1)	STANDBY(2)			
P1500D5	400V/50HZ	1100KW	1200KW	380/220V	400/230V	415/240V
	PF:0.8	1375KVA	1500KVA			

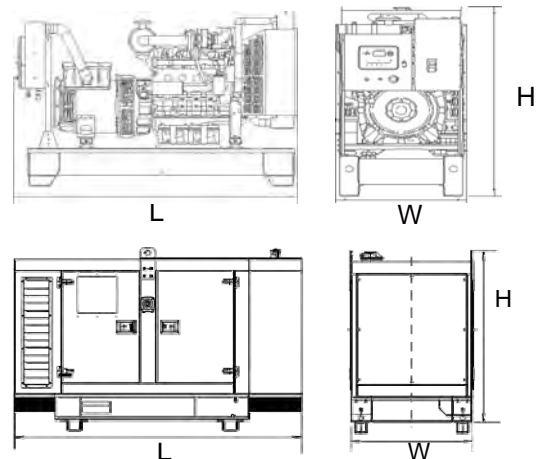
General Information

Model	P1500D5		
Engine	4012-46TWG3A		
Speed control type	Electronic		
Phase	3		
Control System	Digital		
System voltage	12V/24V		
Frequency	50HZ		
Engine Speed(RPM)	1500		
Fuel Consumption L/hr	Standby power(2)	315	
	Prime Power(1)	281	
	75% prime power	212	
	50% prime power	149	



Dimension and Weight

Dimension	Open	Silent
Length (L)	4760mm	12192mm
Width (W)	2020mm	2438mm
Height (H)	2481mm	2896mm
Net Weight	13200KG	20320KG



AGG POWER gensets are compliant with EC mark which include the following directives:

- * 2006/42/EC Machinery safety.
- * 2006/95/EC Low voltage
- * EN 60204-1: 2006+A1:2009, EN ISO 12100:2010, EN ISO 13849-1: 2008, EN 12601: 2010

(1) Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operation conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24h of operation shall not exceed 70% of the PRP.

(2) Standby Power (ESP):

According to ISO 8528-1:2005, standby power is the maximum power available during a variable electrical power sequence, under the stated operation conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.



Engine Specification

Basic technical data

Number of cylinders ... 12
 Cylinder arrangement ... Vee 60°
 Cycle ... 4 stroke, compression ignition
 Induction system ... turbocharged
 Combustion system ... direct injection
 Compression ratio ... 13:1 nominal
 Bore ... 160 mm
 Stroke ... 190 mm
 Cubic capacity ... 45-842 litres
 Direction of rotation ... Anti clockwise viewed on flywheel
 Firing order ... 1^A, 6^B, 5^A, 2^B, 3^A, 4^B, 6^A, 1^B, 2^A, 5^B, 4^A, 3^B
 Cylinder 1 ... furthest from flywheel

Note: Cylinders designated 'A' are on the right hand side of the engine when viewed from the flywheel end.

Overall dimensions of ElectropaK

Height ... 2255 mm
 Length ... 3714 mm
 Width
 -temperate ... 1780 mm
 -tropical ... 1978 mm

Moment of inertia (mk²)

Flywheel ... 9,57 kgm²
 Engine ... 9,73 kgm²

Lubrication system

Recommended multigrade oil viscosity (15W40) which adequately meets the specifications of API CH4. For further details refer to the engine OMM.

Lubricating oil capacity

Total system ... 177 litres
 Sump maximum ... 159 litres
 Sump minimum ... 136 litres
 Oil temperature at normal operating conditions ... 95 °C
 Oil temperature (in rail) - maximum continuous operation .. 105 °C

Cooling system

Recommended coolant: 50% inhibited ethylene glycol or 50% inhibited propylene glycol and 50% clean fresh water. For CHP systems and where there is no likelihood of ambient temperature below 10 °C, then clean 'soft' water may be used, treated with 1% by volume of Perkins inhibitor in the cooling system. The inhibitor is available in 1 litre bottles from all Perkins Distributors.

Maximum pressure in crankcase water jacket ... 170 kPa
 Maximum top tank temperature (standby) ... 98 °C
 Maximum static pressure on pump ... 70 kPa
 Maximum pressure cap setting ... 70 kPa

Exhaust system

Outlet size (internal) ... 2 x 254 mm
 Outlet flange size ... 10" table D
 Back pressure for total system ... 5 kPa
 For recommended pipe sizes, refer to the Installation Manual.

General installation - 4012-46TWG3A (Temperate), 50 Hz @ 1500 rev/min

Designation	Units	Type of operation and application		
		Base	Prime	Standby
Gross engine power	kWb	960	1200	1314
Fan and battery charging alternator power	kW	51		
Net engine power	kWm	909	1149	1263
Brake mean effective pressure (gross)	kPa	1675	2094	2293
Combustion air flow at ISO conditions	m ³ /min	94	108	114
Exhaust gas temperature (max) after turbo	°C	474		
Exhaust gas flow (max) at atmospheric pressure	m ³ /min	240		
Boost pressure ratio	-	2.55	3.05	3.28
Mechanical efficiency	%	88.9	90.9	91.6
Overall thermal efficiency (nett)	%	39.66	39.80	38.95
Friction and pumping power losses	kWm	120		
Mean piston speed	m/s	9,5		
Engine coolant flow	l/min	948		
Typical GenSet electrical output (0.8pf)	kVA	1079	1364	1500
	kWe	864	1092	1200
Assumed alternator efficiency	%	95		



▪ Alternator

Alternator			
Poles	Num	4	
Winding Connections (standard)		Star-serie	
Insulation	Class	H class	
Enclosure (according IEC-34-5)		IP23	
Exciter System		Brushless	
Voltage Regulator		A.V.R. (Electronic)	
Bearing		Single bearing	
Coupling		Flexible disc	
Coating type		Standard (Vacuum impregnation)	

▪ Options

Engine	Alternator	Generator Sets	Fuel System	Canopy
<ul style="list-style-type: none"> •Water Jacket Preheater •Oil Preheater 	<ul style="list-style-type: none"> •Winding Temperature measuring Instrument •Alternator Preheater •PMG •Anti-damp and anti-corrosion treatment •Anti-condensation heater 	<ul style="list-style-type: none"> •Tools with the machine 	<ul style="list-style-type: none"> • Low fuel level alarm •Automatic fuel feeding system •Fuel T-valves 	<ul style="list-style-type: none"> •Rental Type Canopy •Trailer
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> •Oil with the machine 	<ul style="list-style-type: none"> •Protection board from hotness 	<ul style="list-style-type: none"> • Front heat protection • Coolant (-30°C) 	<ul style="list-style-type: none"> •Remote control panel • ATS • Remote controller • Synchronizing controller 	<ul style="list-style-type: none"> • 415/240V • 380/220V • 220/127V • 220/127V • 200-115V



Control Panel



Product description

- Single gen-set controller for Stand-by and Prime-power applications
- Direct communication with EFI engines
- Total remote monitoring and control

Key features

- Easy to install, configure and use
- Wide range of communication capabilities including:
 - connection via RS232, RS485, CAN and on board USB
 - internet access using Ethernet or GPRS
 - support for Modbus and SNMP protocols
- Cloud-based monitoring and control
- Active SMS and emails in different languages
- 2x 5 A binary outputs for cranking and fuel solenoid
- Option for up to 16 additional binary inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Automatic temperature based cooling/heating
- Comprehensive gen-set protections
- Multipurpose flexible timers
- True RMS measurement

Available extension modules

Product	Description	Order code
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	GSM modem / wireless internet	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

Functions and protections

Description	ANSI code	Description	ANSI code
Over voltage	59	Load shedding	32P
Under voltage	27	Overload	32
Voltage asymmetry and Phase rotation**	47	Power factor	55
Over frequency	81H	Temperature	49T
Under frequency	81L	Gas (fuel) level	71
Over current*	50 + 51	Earth fault current	50N + 64
Current unbalance	46		

* Short current only

** Fixed setting

