

Model: P2500D5

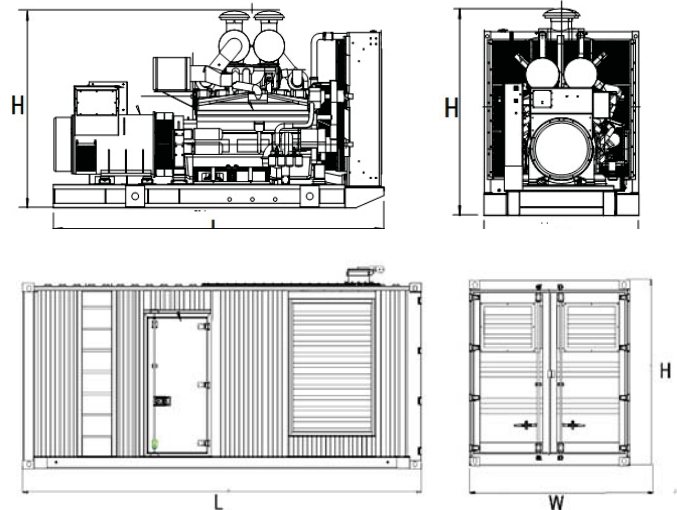
Powered by PERKINS

Output Rating

MODEL		Power rating		Voltage available		
		PRIME(1)	STANDBY(2)			
P2500D5	400V/50HZ	1760KW	2000KW	380/220V	400/230V	415/240V
	PF:0.8	2200KVA	2500KVA			

General Information

Model	P2500D5		
Engine	4016-61TRG3		
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)	528	
	Prime Power(1)	473	
	75% prime power	346	
	50% prime power	235	



Dimension and Weight

Dimension	Open	Silent
Length (L)	6265mm	12192mm
Width (W)	2210mm	2438mm
Height (H)	3040mm	2896mm
Net Weight	13700KG	NA

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 ... 16
 Cylinder arrangement ... 60° Vee
 Cycle ... 4 stroke
 Induction system ... turbocharged, air to water charge cooled
 Combustion system ... direct injection
 Compression ratio ... 13:1
 Bore ... 160 mm
 Stroke ... 190 mm
 Cubic capacity ... 61.123 litres
 Direction of rotation ... anti-clockwise viewed on flywheel
 Firing order ... 1A, 1B, 3A, 3B, 7A, 7B, 5A, 5B
 ... 8A, 8B, 6A, 6B, 2A, 2B, 4A, 4B
 Cylinder 1 ... furthest from flywheel

Moment of inertia (mk²)

-engine ... 11.15 kgm²
 -flywheel ... 9.57 kgm²

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

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

Lubrication system

Recommended SAE viscosity:
 Multigrade oil conforming to the following must be used API CG 15W/40 CH4.

Note: For additional notes on lubricating oil specifications, refer to the OMM manual.

Total system capacity

Maximum sump capacity ... 213 litres
 Minimum sump capacity ... 157 litres
 Oil temperature at normal operating conditions ... 95°C
 Oil temperature (in rail) maximum continuous operation ... 105°C

Lubricating oil pressure

At rated speed ... 400 kPa
 Minimum @ 80°C ... 340 kPa
 Oil filter screen spacing ... 40 microns
 Sump drain plug tapping size ... G1
 Oil pump speed and drive method ... 1.4 x e r/min engine driven
 Shutdown switch - pressure setting ... 193 kPa Falling

Oil consumption

Prime power after running in (typically after 250 hours) 0.52 g/kWhr
 Oil flow rate from pump ... 6.7 litres / sec

Exhaust system

Exhaust outlet size (internal) ... 2 x 254 mm
 Exhaust outlet flange size ... 10 inch table D
 Back pressure for total system ... 4 kPa

General installation 4016-61TRG3

Designation	Units	Baseload	Prime	Standby
Gross engine power	kWm	1600	1975	2183
Fan and battery charging alternator power	kW	100		
Net engine power	kWm	1500	1875	2083
Brake mean effective pressure	kPa	2094	2585	2857
Combustion air flow	m ³ /min	135	160	175
Exhaust gas temperature maximum after turbocharger	°C	460	475	560
Exhaust gas flow (max)	m ³ /min	490		
Boost pressure ratio	:1	4		
Mechanical efficiency	%	94.0		
Overall thermal efficiency (net)	%	40	40	40
Friction and pumping power losses	kWm	160		
Mean piston speed	m/s	9.5		
Engine coolant flow - minimum	l/s	23		
Typical GenSet electrical output (0.8pf)	kVA	1800	2250	2500
	kWe	1440	1800	2000
Assumed alternator efficiency	%	96		



▪ 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.
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: AMF20**



Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- Perfect price/performance ratio

Features

- Support of engines equipped with Electronic Control Unit (J1939 interface)
- Comprehensive diagnostic messages; SPN/FMI codes; KWP2000 support
- Automatic or manual start/stop of the gen-set
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display 128x64 pixels
- 6 LED indicators
- Parameters adjustable via keyboard or PC
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface (AT-LINK CONV cable is necessary for IL-AMF 20)
- Modem communication support (IL-AMF 25 only)
- Dimensions 180x120 mm (front panel)
- Sealed to IP65

- Mains measurements (50/60 Hz): U1-U3, Hz
- Generator measurements (50/60 Hz): U1-U3, I1-I3, Hz, kW, kVAr, kWh
- Selectable protections alarm/shutdown
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Overcurrent/overload
- 3 phase AMF function
 - Over-/under frequency
 - Over-/under voltage
 - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions

The Chart of Functions of IntelLite[®] Controllers

FUNCTIONS/CONTROLLERS	IL-AMF 20	IL-AMF 25	IL-MRS 10	IL-MRS 15	IL-MRS 11	IL-MRS 16
Binary inputs/outputs	7 / 7	7 / 7	6 / 6	6 / 6	6 / 6	6 / 6
Analog inputs	3	3	3	3	3	3
Pick-up	•	•	•	•	•	•
AMF function	•	•	-	-	-	-
Input configuration	•	•	•	•	•	•
Output configuration	•	•	•	•	•	•
Voltage measurement Gen./Mains	3ph / 3ph	3ph / 3ph	3ph / -	3ph / -	3ph / -	3ph / -
Current measurement	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent
kW/kWh measurement	• / -	• / •	• / -	• / •	• / -	• / •
GCB/MCB control with feedback	• / •	• / •	- / -	- / -	• / -	• / -
Extension units (periph.)	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM
Communication interfaces	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾
Modem support	-	•	-	•	-	•
Battery charging alternator circuit	•	•	•	•	•	•

Key: • included; - excluded
 1) GCB control, but without feedback
 2) For IL-AMF 20, IL-MRS 10/11 AT-LINK CONV cable necessary
 3) CAN for periph.

Legend: IG-IOM/IGS-PTM: I/O extension modules
 IGL-RA15: Remote annunciator
 I-RD: Remote display

