

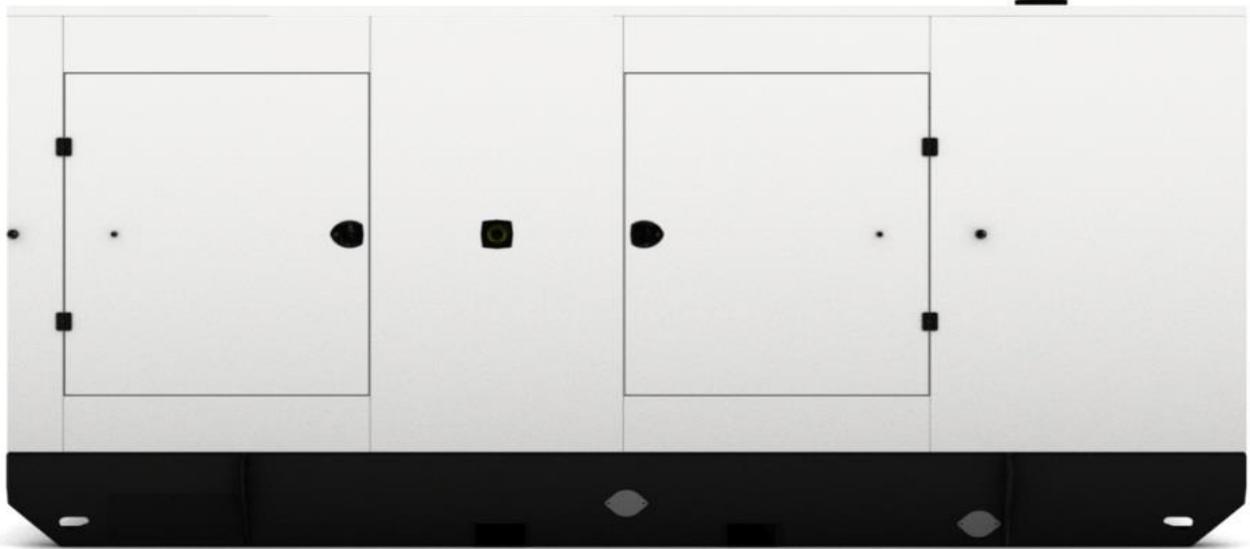
IPS500P Diesel Generator

UK Made

3 Phase

50Hz

Perkins Engine



This image is for illustration purposes only, the actual unit will be supplied to the ordered specification and manufacturing drawing.

This unit is designed, assembled and manufactured in the UK.

This IPS UK generator stands out for its exceptional performance, durability, and efficiency. Esteemed for its reliability, it harnesses innovative technology to deliver uninterrupted power. Its compact design ensures ease of installation, while our environmental compliance during manufacture makes it a favoured choice among eco-conscious consumers seeking to reduce their carbon footprint without sacrificing quality or power.



Generator Power Summary

Ratings based on NTP conditions. Ratings below are the available ratings at point of order. It may not be possible to switch ratings after due to alternator, engine or other configurations. A rating should therefore be selected prior to ordering.

Connection	Voltage	ESP kVA	ESP KW	PRP KVA	PRP KW
SS	380	550	440	500	400
SS	400	560	448	513	410
SS	415	550	440	500	400

Prime Power (PRP)

This rating is the maximum power that a IPS Empower Diesel Generator can deliver continuously for an unlimited number of hours per year in a variable load application. A 10% overload is permitted for 1 hour in every 12 hours of operation. The average load factor should not exceed 70% of the engines PRP power rating during any 24 hour period.

Standby Power (ESP)

This rating is the maximum power that a IPS Empower Diesel Generator can deliver in the event of a power outage for up to 500 hours per year. The average load factor should not exceed 70% of the engines ESP rating. No overload is available.

Connection Key

SS	Series Star	PS	Parallel Star	SD	Series Delta
PD	Parallel Delta	DD	Double Delta		

Engine Overview

The following data is taken from the engine manufacturers datasheets. If critical, please use the latest datasheet from the manufacturers website, or confirm with sales prior to order.

Manufacturer	Perkins
Engine Model	2506A-E15TAG2
Aspiration	Turbocharged
Combustion System	Direct Injection
Cycle	4 Stroke
Governor	Electronic
No. of Cylinders	6
Cylinder Arrangement	In Line
Displacement	15.2L
Bore	137mm
Stroke	171mm
Compression Ratio	16:1
Cooling Type	Liquid Cooled
Coolant Capacity	58.0L
Oil Capacity	62.0L
Max Exhaust Temperature	550 °C
Emission Standards EU	None
Emission Standards US	

Fuel Consumption Litres/Hour

The following data is at NTP Conditions.

50% Load	53.00
75% Load	76.00
100% Load	100.00
110% Load	111.00

Alternator Overview

The following data is taken from the alternator manufacturers datasheets. If critical, please use the latest datasheet from the manufacturers website, or confirm with sales prior to order.

Manufacturer	Stamford	Model	S5L1D-D41
Type	Brushless	Phases	3
Bearings	1	Poles	4
Leads	12	AVR Model	AS440
Voltage Regulation	1.0% Regulation%	Insulation Class	H
Excitation	Brushless	Winding Number	311
Harmonic Content	<5.00%	Short Circuit Capacity	>300%

Reactances

X_d	3.61	X'_d	0.17	X''_d	0.13
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Alternator Ratings

Connection	Voltage	ESP kVA	ESP Efficiency %	PRP KVA	PRP Efficiency %
SS	380	550.0	94.1	500.0	94.5
SS	400	590.0	93.8	550.0	94.3
SS	415	550.0	94.5	500.0	94.8

Standard Specification

The following is a functional overview. Additional items are available as an option and certain specifications and individual models may have the below changed based on the specifications of interconnected items, options and/or changes to third party manufacturers specifications.

Item	UK/EU	EXPORT
Battery Charger*	S	S
Dry Battery	O	O
Wet Battery	S	S
Tropical Radiator	S	S
Temperate Radiator	O	O
First Fill (Oil and Coolant)**	O	O
Single Skin Basetank	S	S
Bunded Base Tank	S	O
Low Fuel Level	O	O
Engine Coolant Heater	S	O
Low Coolant Level		
CE Marking	S	O
Electronic Governor	S	S
Oil Sump Drain	S	O
Oil Sump Pump	O	O
AC Connection Box	C	O
Anti-Condensation Heater	O	O
3 Pole Circuit Breaker		
4 Pole Circuit Breaker	O	O
Automatic Transfer Switch	O	O

Options Key

Optional

O

Standard

S

Not Available

N

*IPS UK Open Generator Specifications Do Not Include A Charger as Standard.

**IPS UK Open Generator Specifications Do Not Include First Fill, Optionally At Additional Cost.

Weights And Dimensions

The following is offered as a guide, to some of the available configurations. For critical dimensions a full drawing should be obtained prior to placement of an order.

Diesel Generator 53WP0550A02, Common Styles and Dimensions

Frame Style	Market	Style	Fuel Tank (L)	Length X Width X Height (mm)	Weight (KG)
5100E	UK/EU	Canopied	1120	4908 x 2164 x 2658	5807.7
5100X	Export	Canopied	1120	4908 x 2164 x 2658	5807.7
9007GA	Export	Open	730	3000 x 1000 x TBC	3557.7
9090GA	UK/EU	Open	590	3000 x 1000 x TBC	3637.7

Standards and Controls

Our high quality generators are generally built to the following standards and classes. The below list is not exhaustive, or universal. Standards depend on the specification ordered. Many of these standards from ISO are replicated in individual member countries standards, which have unique country specific standard numbers.

Standard Name	Description	Code
ISO8528-1:2018	Generating set: Application, ratings and performance	C
ISO8528-2:2018	Generating set: Engines	C
ISO8528-3:2020	Generating set: Alternating current generators	C
ISO8528-4:2005	Generating set: Controlgear and switchgear	O
ISO8528-5:2022	Generating set: Generating sets	C
ISO8528-8:2016	Generating set: Requirements and tests	C
ISO8528-9:2022	Generating set: Measurement of airborne noise	C
ISO8528-10:2022	Generating set: Measurement of airborne noise	C
ISO8528-5:2016	Generating set: Safety	O
IEC60034	Rotating Electrical Machines	C
ISO3046	Internal Combustion Engines	R
ISO9001:2015	Quality Management System	C
ISO9001:2015	Quality Management System	C

Our generators can be made to meet or exceed the criteria set out in these and many other standards, depending on your requirements. Please discuss these requirements with your local dealer or account manager. Verification of the standards can be performed during witnessed testing programs in our testing facility. Witnessed testing is available at additional cost, from your account manager.

C	Generally Complies	O	Optionally complies	R	Refer to Item Manufacturers Current Datasheet
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Generator Noise Data

All our generator sets in our acoustic canopies meet the noise levels required by law. The EU directive 2005/88/EC which has been intergrated into British law, after brexit sets the noise limits for diesel generators. Noise measurements are as per ISO8528-10:2022. When we sell generators without an acoustic housing they will not meet this limit and the customer is responsible, where applicable for complying with all local noise regulations.

The actual values for the diesel generator as follows, when housed in a standard acoustic enclosure. Additional silencing options are available on request.

Frame Style	Market	Noise Level @ 1m	Noise Level @ 7m	Noise Level @ 15m
5100E	UK/EU	85	76	74
5100X	Export	85	76	74

1. A.3.2 Generating Set Electrical Power During Noise Measurement

ISO8528-10:2022

The generating set shall operate at a steady power output oat 75% of its rated power in kilowatts as per ISO8528-1:2018. Typically the full load noise level will be 1dBA higher at 100% PRP load and 2dBA higher at ESP rating.

2. Grade of Measurement

ISO8528-10:2022

The measurements are performed under ISO8528-10:2022 Grade 2. The measurement surface is parallelepiped as per the standard.

3. Conditions Of Measurement

ISO3744:2024

As per this ISO Standard measurements are conducted with free field conditions over a fully reflective plain. An enviroment that is highly reflective will increase the measured DBA by between 2-6dBA.

4. Variability of Measurements

ISO3744:2024

The measurements are performed and create uncertainty as per ISO8528-10:2022 Grade 2. Considering enviromental conditions, metering at Class 2, surfaces and test conditions the test is considered to be accurate to ± 2.3 dBA against the ISO3744:2024 conditions.

5. Correction for Distance

ISO3744:2024

All measurements are taken at 1m. Sound levels at 7m and 15m are adjusted for distance as per ISO3744:2024 using the inverse square law. 7m is -16.9DB and 15m is -23.5DB.

Important Notes and Disclaimers

This data sheet is offered as a guide to our products. our products key components (the engine and alternator) are provided by other third party manufacturers. While we try to maintain and update these specifications as we become aware of any changes, specifications from these manufacturers can change. In all cases should any of the elements be critical to your project, application or use case, you should confirm these prior to placement of order and we can ensure that the product meets your requirements.

The other components in the products we supply are updated regually in line with our policy of continious improvement. These improvements may be for performance, availbility or cost reasons.

All of our products are covered by our standard warranty (which included components that are covered by the respective third party manufacturer), as well as subject to sale under our standard terms and conditions of supply, copys of which are available from our website and/or on request.