





Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utili ty source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capabili ty is avai lable in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Continuous Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimi ted hours. Continuous Power (COP) in accordance wi th ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

POWERZOO generators are CE certified and conform to the following Directives:

- •EN 12100: 2010, EN ISO 8528-13: 2016, EN 60204-1: 2018,
- •EN 61000-6-2: 2019, 2006/42/CE Machinery safety
- •2014/35/EU Low voltage
- •2014/30/EU Electromagnetic compatibility
- •Power according to ISO 8528 and ISO 3046
- $\mbox{^{\circ}}\mbox{Ambient}$  reference conditions 1000 mbar, 25 $\mbox{^{\circ}}\mbox{^{\circ}}\mbox{^{\circ}}$  C, 30% relative humidity. Information based on standard specification equipment unless otherwise stated.

	GENERATOR MODEL			P100P5	
	Generator specificationsl		PRP	ESP	
•	Power	kW/kVA	80/100	88/110	
<b>(2)</b>	Rated speed	r.p.m.	1500		
<b>W</b>	Available voltages	V	380~415		
50 60 HZ	Frequency	Hz	50		
3	Phase		3-PH		
	Power factor	Cos $\Phi$	0.8		
	Fuel cons 100%	L/H	22.6		
	Starting power	kW		3	
âñ	Recommended battery	Ah		45	
	Number of batteries		2 (PARALLELING)		
	Auxiliary voltage	VDC	2	24V	









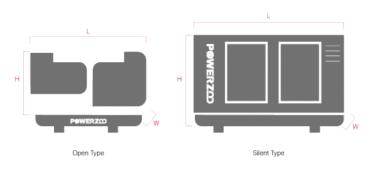








# Dimension and Weight



	DIMENSION		OPEN TYPE	SILENT TYPE
砂田	Length (L)	mm	1900	2602
Ø.₩	Width (W)	mm	950	1100
	Height (H)	mm	1400	1525
Kg	Dry weight	kg	1150	1650
	Fuel tank	L	160	160

POWERZOO has the right to modify any feature without prior notice. Weights and dimensions based on standard products. Illustrations may include optional equipment. Technical data described in this catalogue correspond to the available information at the moment of printing. The illustrations and images are indicative and may not coincide in their entirety with the product. Industrial design under patent.









# **Engine Specifications**

ENGINE	Perkins <sup>®</sup>	
Engine model	1104C-44TAG2	
Number of cylinders	4	
Cylinder arrangement	In-line	
Cycle	Four stroke	
Aspiration	Turbocharged, air-to-air charge cooled	
Bore × Stroke	105*127mm	
Displacement	4.4	
Compression ratio	18.23:1	
Prime power/Speed	93.6/1500 (kW/rpm)	
Standby power/Speed	103/1500 (kW/rpm)	
Speed governor	Electrical	
Cooling system (open type)	40°C tropical radiator	
Cooling system (silent type)	50°C tropical radiator	

ENGINE	Perkins <sup>®</sup>	
Total lubrication system capacity	8.0 L	
Coolant capacity (with radiator)	12.6 L	
Speed stability (%)	≤5%	
Start type	Electrical	
Maximum exhaust temperature	514°C	
Exhaust gas flow	15.2 m³/min	
Maximum allowed back pressure	18 kPa	
Intake air flow	ТВА	
Cooling air flow	ТВА	
Consumption @ 100% load ESP	24.9 L/H	
Consumption @ 100% load PRP	22.6 L/H	
Consumption @ 75% load PRP	17.1 L/H	
Consumption @ 50% load PRP	11.8 L/H	



#### Features:

- •Diesel engine
- •4-stroke cycle
- •Water-cooled

- •Dry air filter
- •Radiator with pusher fan
- •Moving parts protection
- •Radiator water level sensor (Optional)
- •55 degree radiator (Optional)

- •Jacket coolant heater (Optional)
- •Lube oil heater (Optional)
- •Engine filter heater (Optional)
- •Fuel inlet line heater (Optional)
- •Heavy duty air filter (Optional)



# **Alternator Specification**

ALTERNATOR	
Exciter type	Brushless, self-excited
Power factor	0.8
Voltage adjust range	≥5%

ALTERNATOR	
Voltage regulation NL-FL	≤±1.0%
Insulation grade	Н
Protection grade	IP23



#### Options:

- •AREP/PMG/EBS
- •Air inlet filter (5% deration)
- •louver (5% deration)
- •Space heater
- Digital AVR
- •Severe environmental impregnation
- •Stator sensor
- •PT100

- •Rotor sensor
- Double bearing
- •Drip proof cover
- •Terminal box IP44



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### **Controller Brands**





SmartGen













## **Controller Functions**

OPTIONAL CONFIGURATION	Stand-alone Basic	Stand-alone Advanced	Synchronization Basic	Synchronization Advanced
Voltage between phases	•	•	•	•
Voltage between neutral and phase	•	•	•	•
Current intensities	•	•	•	•
Frequency	•	•	•	•
Apparent power (kVA)	•	•	•	•
Active power (kW)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
Coolant temperature	•	•	•	•
Oil pressure	•	•	•	•
Battery voltage	•	•	•	•
R.P.M.	•	•	•	•
Battery charge alternator voltage	•	•	•	•
High water temperature by sensor	•	•	•	•
Low oil pressure by sensor	•	•	•	•
Unexpected shutdown	•	•	•	•
Fuel storage by sensor	•	•	•	•
Stop failure/Start failure	•	•	•	•
Overspeed/Underspeed	•	•	•	•

● Standard ○ Optional



# P100P5





Emergency stop  High/Low frequency  High/Low voltage  Short-circuit  Incorrect phase sequence  Inverse power  Overload  Total hour counter  Kilowett meter  Starts valid counters  Maintenance  USB  Software for PC  Alarm history  Starten start  Start Inhibition  Mains failure start  Pre-heating angine control  Engine temperature control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Modbus IP  J1939  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSMY GPPS modem  Remote screen  A	OPTIONAL CONFIGURATION	Stand-alone Basic	Stand-alone Advanced	Synchronization Basic	Synchronization Advanced
High/Low voltage Short-circuit Incorrect phase sequence Inverse power Overload Total hour counter Kilowatt meter Starts valid counters Maintenance ISS Software for PC Alarm history External start Start inhibition Mains failure start Pre-heating engine control Fuel transfer control Fuel transfer control Fuel gename be a sequence ISS Sansa Sansa ISS Modus IP J1939 Synchronization Mains synchronization Fuel level (%) Low water level GSMC PRS modem ISS INCORRECT INC	Emergency stop	•	•	•	•
Short-circuit	High/Low frequency	•	•	•	•
Incorrect phase sequence Inverse power Overload	High/Low voltage	•	•	•	•
Inverse power	Short-circuit	•	•	•	•
Overload         •<	Incorrect phase sequence	•	•	•	•
Total hour counter	Inverse power	•	•	•	•
Kilowatt meter       •       •       •         Starts valid counters       •       •       •         Maintenance       •       •       •         USB       •       •       •         Software for PC       •       •       •         Alarm history       •       •       •         External start       •       •       •         Start inhibition       •       •       •         Mains failure start       •       •       •         Pre-heating engine control       •       •       •         Fuel transfer control       •       •       •         Engine temperature control       •       •       •         Engine temperature control       •       •       •         Programmable alarms       •       •       •         Genset start function in test mode       •       •       •         Programmable outputs       •       •       •         Multilingual       •       •       •         RS485       •       •       •         Modbus IP       •       •       •         J1939       •       •       •<	Overload	•	•	•	•
Starts valid counters         •	Total hour counter	•	•	•	•
Maintenance	Kilowatt meter	•	•	•	•
USB	Starts valid counters	•	•	•	•
Software for PC         •	Maintenance	•	•	•	•
Alarm history  External start  Start inhibition  Mains failure start  Pre-heating engine control  Fuel transfer control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Multilingual  RS485  Modbus IP  J1938  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSM/GPRS modem	USB	•	•	•	•
External start       •       •       •       •         Start inhibition       •       •       •       •         Mains failure start       •       •       •       •         Pre-heating engine control       •       •       •       •         Fuel transfer control       •       •       •       •         Engine temperature control       •       •       •       •         Programmable alarms       •       •       •       •         Genset start function in test mode       •       •       •       •         Programmable outputs       •       •       •       •         Multilingual       •       •       •       •         RS485       •       •       •       •         Modbus IP       •       •       •       •         J1939       •       •       •       •         Synchronization       •       •       •       •         Mains synchronization       •       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •	Software for PC	•	•	•	•
Start inhibition         •         •         •           Mains failure start         •         •         •           Pre-heating engine control         •         •         •           Fuel transfer control         •         •         •           Engine temperature control         •         •         •           Programmable alarms         •         •         •           Genset start function in test mode         •         •         •           Programmable outputs         •         •         •           Multilingual         •         •         •           RS485         •         •         •           Modbus IP         •         •         •           J1939         •         •         •           Synchronization         •         •         •           Mains synchronization         •         •         •           Fuel level (%)         •         •         •           Low water level         •         •         •           GSM/GPRS modem         •         •         •	Alarm history	•	•	•	•
Mains failure start         •	External start	•	•	•	•
Pre-heating engine control         • </td <td>Start inhibition</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td>	Start inhibition	•	•	•	•
Fuel transfer control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Multilingual  RS485  Modbus IP  J1939  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSM/GPRS modem	Mains failure start	•	•	•	•
Engine temperature control         • </td <td>Pre-heating engine control</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td>	Pre-heating engine control	•	•	•	•
Programmable alarms         •	Fuel transfer control	•	•	•	•
Genset start function in test mode       ●       ●       ●         Programmable outputs       ●       ●       ●         Multilingual       ●       ●       ●         RS485       ●       ●       ●         Modbus IP       ●       ●       ●         J1939       ●       ●       ●         Synchronization       ●       ●       ●         Mains synchronization       ●       ●       ●         Fuel level (%)       ●       ●       ●         Low water level       ●       ●       ●         GSM/GPRS modem       ●       ●       ●	Engine temperature control	•	•	•	•
Programmable outputs       ●       ●       ●         Multilingual       ●       ●       ●         RS485       ●       ●       ●         Modbus IP       ●       ●       ●         J1939       ●       ●       ●         Synchronization       ●       ●       ●         Mains synchronization       ●       ●       ●         Fuel level (%)       ●       ●       ●         Low water level       ●       ●       ●         GSM/GPRS modem       ●       ●       ●	Programmable alarms	•	•	•	•
Multilingual       •       •       •       •         RS485       •       •       •       •         Modbus IP       •       •       •       •         J1939       •       •       •       •         Synchronization       •       •       •       •         Mains synchronization       •       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •         GSM/GPRS modem       •       •       •       •	Genset start function in test mode	•	•	•	•
RS485       •       •       •         Modbus IP       •       •       •         J1939       •       •       •         Synchronization       •       •       •         Mains synchronization       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •         GSM/GPRS modem       •       •       •       •	Programmable outputs	•	•	•	•
Modbus IP       ●       ●         J1939       ●       ●         Synchronization       ●       ●         Mains synchronization       ●       ●         Fuel level (%)       ○       ○       ○         Low water level       ○       ○       ○         GSM/GPRS modem       ○       ○       ○	Multilingual	•	•	•	•
J1939       •       •       •         Synchronization       •       •       •         Mains synchronization       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •       •         GSM/GPRS modem       •       •       •       •       •	RS485		•	•	•
Synchronization         •         •           Mains synchronization         •         •           Fuel level (%)         •         •         •           Low water level         •         •         •         •           GSM/GPRS modem         •         •         •         •	Modbus IP		•	•	•
Mains synchronization         ●           Fuel level (%)         ○         ○         ○         ○           Low water level         ○         ○         ○         ○           GSM/GPRS modem         ○         ○         ○         ○	J1939		•	•	•
Fuel level (%)       0       0       0         Low water level       0       0       0         GSM/GPRS modem       0       0       0	Synchronization			•	•
Low water level         0         0         0           GSM/GPRS modem         0         0         0	Mains synchronization				•
GSM/GPRS modem	Fuel level (%)	0	0	0	0
	Low water level	0	0	0	0
Remote screen o o o	GSM/GPRS modem	0	0	0	0
	Remote screen	0	0	0	0

● Standard ○ Optional



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