

# P20P5

Powered by Perkins®



## Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility 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 capability is available 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 unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 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

•Ambient reference conditions 1000 mbar, 25° C, 30% relative humidity.  
Information based on standard specification equipment unless otherwise stated.

| GENERATOR MODEL                                                                     |                          |        | P20P5   |       |
|-------------------------------------------------------------------------------------|--------------------------|--------|---------|-------|
|    | Generator specifications |        | PRP     | ESP   |
|    | Power                    | kW/kVA | 16/20   | 18/22 |
|    | Rated speed              | r.p.m. | 1500    |       |
|    | Available voltages       | V      | 380~415 |       |
|    | Frequency                | Hz     | 50      |       |
|    | Phase                    |        | 3-PH    |       |
|    | Power factor             | Cos φ  | 0.8     |       |
|   | Fuel cons 100%           | L/H    | 5.3     |       |
|  | Starting power           | kW     | Bosch 2 |       |
|                                                                                     | Recommended battery      | Ah     | 60      |       |
|                                                                                     | Number of batteries      |        | 1       |       |
|                                                                                     | Auxiliary voltage        | VDC    | 12V     |       |



FREQUENCY



DIESEL FUEL



WATER-COOLED



SOUNDPROOF



CERTIFICATION

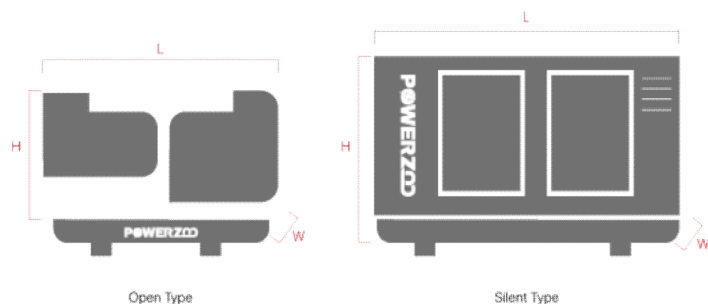


ISO 9001



STACKABLE

## Dimension and Weight



| DIMENSION |            |    | OPEN TYPE | SILENT TYPE |
|-----------|------------|----|-----------|-------------|
|           | Length (L) | mm | 1620      | 2602        |
|           | Width (W)  | mm | 950       | 1100        |
|           | Height (H) | mm | 1400      | 1525        |
|           | Dry weight | kg | 950       | 1500        |
|           | Fuel tank  | L  | 100       | 100         |

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.



www.powerzoos.com

Email: info@powerzoos.com



## Engine Specifications

| ENGINE                       | Perkins®               |
|------------------------------|------------------------|
| Engine model                 | 404D-22G               |
| Number of cylinders          | 4                      |
| Cylinder arrangement         | Vertical inline        |
| Cycle                        | Four stroke            |
| Aspiration                   | Naturally aspirated    |
| Bore × Stroke                | 84 × 100 mm            |
| Displacement                 | 2.216 L                |
| Compression ratio            | 23.3:1                 |
| Prime power/Speed            | 18.7/1500 (kW/rpm)     |
| Standby power/Speed          | 20.6/1500 (kW/rpm)     |
| Speed governor               | Mechanical             |
| Cooling system (open type)   | 40°C tropical radiator |
| Cooling system (silent type) | 50°C tropical radiator |

| ENGINE                            | Perkins®    |
|-----------------------------------|-------------|
| Total lubrication system capacity | 10.6 L      |
| Coolant capacity (with radiator)  | 7.0 L       |
| Speed stability (%)               | ≤5%         |
| Start type                        | Electrical  |
| Maximum exhaust temperature       | 445°C       |
| Exhaust gas flow                  | 3.64 m³/min |
| Maximum allowed back pressure     | 10.2 kPa    |
| Intake air flow                   | TBA         |
| Cooling air flow                  | TBA         |
| Consumption @ 100% load ESP       | 6.1 L/H     |
| Consumption @ 100% load PRP       | 5.3 L/H     |
| Consumption @ 75% load PRP        | 4.0 L/H     |
| Consumption @ 50% load PRP        | 2.9 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         | H      |
| Protection grade         | IP23   |



### Options:

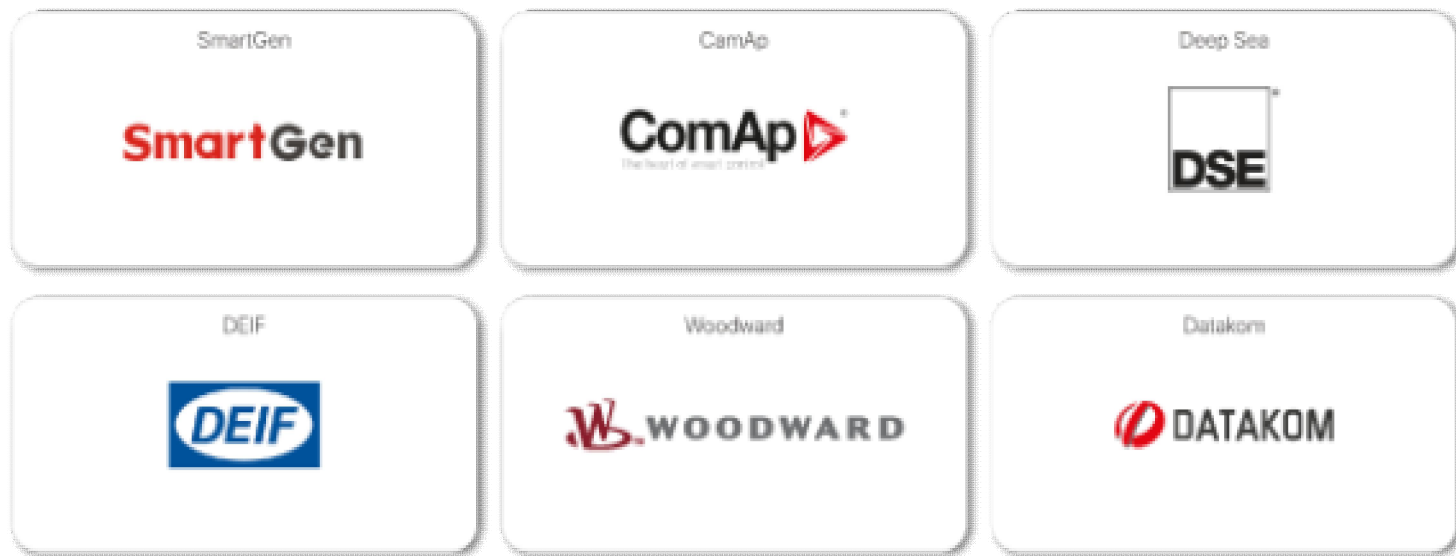
- AREP/PMG/EBS
- Air inlet filter (5% deration)
- Louver (5% deration)

- Space heater
- Digital AVR
- Severe environmental impregnation
- Stator sensor
- PT100

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



## Controller Brands



## 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

| OPTIONAL CONFIGURATION             | Stand-alone Basic | Stand-alone Advanced | Synchronization Basic | Synchronization Advanced |
|------------------------------------|-------------------|----------------------|-----------------------|--------------------------|
| Emergency stop                     | ●                 | ●                    | ●                     | ●                        |
| High/Low frequency                 | ●                 | ●                    | ●                     | ●                        |
| High/Low voltage                   | ●                 | ●                    | ●                     | ●                        |
| Short-circuit                      | ●                 | ●                    | ●                     | ●                        |
| Incorrect phase sequence           | ●                 | ●                    | ●                     | ●                        |
| Inverse power                      | ●                 | ●                    | ●                     | ●                        |
| Overload                           | ●                 | ●                    | ●                     | ●                        |
| Total hour counter                 | ●                 | ●                    | ●                     | ●                        |
| 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         | ●                 | ●                    | ●                     | ●                        |
| 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                     | ○                 | ○                    | ○                     | ○                        |
| Remote screen                      | ○                 | ○                    | ○                     | ○                        |

● Standard ○ Optional