

# Perkins 4012-46TAG2A Diesel Generator Set



PRIME POWER

**1500 kVA / 1200 kW**

STANDBY POWER

**1650 kVA / 1320 kW**

## Specifications

|                             |                         |
|-----------------------------|-------------------------|
| <b>Voltage / frequency</b>  | 400/230 V, 50 Hz        |
| <b>Power factor</b>         | 0,8                     |
| <b>Rated current</b>        | 2160 A                  |
| <b>Model name</b>           | P1650                   |
| <b>Engine</b>               | Perkins 4012-46TAG2A    |
| <b>Alternator</b>           | Leroy Somer LSA 50.2 L8 |
| <b>Control panel</b>        | DSE 8610                |
| <b>Fuel type</b>            | Diesel                  |
| <b>Autonomy at 75% load</b> | 10,2 h                  |
| <b>Dimensions</b>           | 1219 x 244 x 289 cm     |
| <b>Weight</b>               | 16780 kg                |

## Ratings definitions

### PRIME POWER PRP

Prime power available in variable load application in accordance with ISO 8528. A 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation. Average power consumption should not exceed 80% PRP for each 24 h of work.

### STANDBY POWER ESP

Emergency standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed; limited to 500 operating hours per year and 300 operating hours of continuous duty.

### STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25 °C air inlet temperature, barometric pressure 100 kPa and relative humidity 30%. This generating set is designed to operate at high ambient temperatures (up to 50 °C), humidity (up to 70%) and higher altitudes. Under specific site conditions, genset output power may derate.

## Directives, Standards & Certifications

| Category                           | References   |
|------------------------------------|--|
| <b>EU Directives</b>               | 2006/42/EC, 2014/30/EU   |
| <b>Product standards</b>           | EN 60204-1:2018, EN ISO 12100:2010, EN 55012:2007+A1:2009, EN ISO 8528-13:2016, EN 61000-6-1:2019, EN IEC 61000-6-4:2019 |
| <b>Manufacturer certifications</b> | ISO 9001:2015 / GB/T 19001-2016, ISO 14001:2015 / GB/T 24001-2016, ISO 45001:2018 / GB/T 45001-2020                      |



# Technical Data

## Engine

|                            |  |
|----------------------------|--|
| <b>Model</b>               | 4012-46TAG2A                           |
| <b>Brand</b>               | Perkins                                |
| <b>Number of cylinders</b> | 12                                     |
| <b>Aspiration</b>          | 4 stroke, Vee 60°, turbocharged,       |
| <b>Fuel system</b>         | Direct injection                       |
| <b>Displacement</b>        | 45,842 L                               |
| <b>Bore x stroke</b>       | 160x190 mm                             |
| <b>Compression ratio</b>   | 13.6:1                                 |
| <b>Rated speed</b>         | 1500 r/min                             |
| <b>Rotation</b>            | Anti-clockwise, viewed on the flywheel |
| <b>Engine power</b>        | 1267-1395 kWm net                      |
| <b>Emission standard</b>   | Fuel Optimised (non-Stage V)           |
| <b>Coolant capacity</b>    | 201 L                                  |
| <b>Oil capacity</b>        | 177 L                                  |
| <b>Recommended oil</b>     | Perkins 15W-40 API CI-4                |

## Alternator

|                           |                            |
|---------------------------|----------------------------|
| <b>Model</b>              | LSA 50.2 L8                |
| <b>Alternator brand</b>   | Leroy Somer                |
| <b>Phase</b>              | 3                          |
| <b>Voltage</b>            | 400 V                      |
| <b>Wiring type</b>        | 6 wires                    |
| <b>Bearing</b>            | 1                          |
| <b>Power factor</b>       | 0,8                        |
| <b>Frequency</b>          | 50 Hz                      |
| <b>Prime power</b>        | 1500 kVA                   |
| <b>Excitation type</b>    | Brushless, self-excitation |
| <b>Voltage regulation</b> | ±0,5 %                     |
| <b>Protection grade</b>   | IP 23                      |
| <b>Insulation class</b>   | H                          |

## Fuel consumption

|                                  |         |
|----------------------------------|---------|
| <b>110% load (Standby power)</b> | 288 L/h |
| <b>100% load (Prime power)</b>   | 259 L/h |
| <b>75% load (Prime power)</b>    | 196 L/h |
| <b>50% load (Prime power)</b>    | 143 L/h |
| <b>Fuel capacity</b>             | 2000 L  |

## Warranty

12 months from date of purchase or 1000 hours.

# Features & Control

## Standard features

Radiator (50 °C max.), belt-driven fan

24 V charging alternator

Single-bearing alternator, IP23

Insulation class H/H

Standard automatic control system

Main line circuit breaker / ACB

Base fuel tank

24 V batteries, rack and cables

Exhaust system

User manual

Battery charger

Jacket water heater

## Controller

Model: DSE 8610

7 configurable digital inputs

Built-in governor and AVR control

Base load (kW export) functionality

Mains (utility) de-coupling protection

Generator power (kW, kVA) monitoring

Overload (kW & kV Ar) protection

Emergency stop

Start failure

