

Cummins 6BT5.9-G1

Diesel Generator Set



PRIME POWER

100 kVA / 80 kW

STANDBY POWER

110 kVA / 88 kW

Specifications

| | |
|-----------------------------|-----------------------|
| Voltage / frequency | 400/230 V, 50 Hz |
| Power factor | 0,8 |
| Rated current | 144 A |
| Model name | C110 |
| Engine | Cummins 6BT5.9-G1 |
| Alternator | Leroy Somer TAL-A44-D |
| Control panel | DSE 6120 |
| Fuel type | Diesel |
| Autonomy at 75% load | 10,9 h |
| Dimensions | 304 x 113 x 130 cm |
| Weight | 1.430 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 |
|------------------------------------|--|
| EU Directives | 2006/42/EC, 2014/30/EU |
| Product standards | 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 |
| Manufacturer certifications | ISO 9001:2015 / GB/T 19001-2016, ISO 14001:2015 / GB/T 24001-2016, ISO 45001:2018 / GB/T 45001-2020 |



Technical Data

Engine

| | |
|----------------------------|--|
| Model | 6BT5.9-G1 |
| Brand | Cummins |
| Number of cylinders | 6 |
| Aspiration | Four-stroke, water-cooled, in-line, direct injection, turbocharged |
| Displacement | 5,9 L |
| Bore x stroke | 102 x 120 mm |
| Compression ratio | 17.3:1 |
| Rated speed | 1500 r/min |
| Engine power | 86 kWm |
| Emission standard | Fuel Optimised (non-Stage V) |
| Coolant capacity | 7,9 L |
| Oil capacity | 16,4 L |
| Recommended oil | 15W-40 API CI-4 |

Alternator

| | |
|---------------------------|----------------------------|
| Model | TAL-A44-D |
| Alternator brand | Leroy Somer |
| Phase | 3 |
| Voltage | 230/400 V |
| Wiring type | 12 wires |
| Bearing | 1 |
| Power factor | 0,8 |
| Frequency | 50 Hz |
| Prime power | 100 kVA |
| Excitation type | Brushless, self-excitation |
| Voltage regulation | ±0,5 % |
| Protection grade | IP 23 |
| Insulation class | H |

Fuel consumption

| | |
|----------------------------------|----------|
| 110% load (Standby power) | 23,6 L/h |
| 100% load (Prime power) | 22,3 L/h |
| 75% load (Prime power) | 16,9 L/h |
| 50% load (Prime power) | 11,3 L/h |
| Fuel capacity | 185 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

2 x 12 V batteries, rack and cables

Exhaust system

User manual

Battery charger

Jacket water heater

Controller

Model: DSE 6120

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

