

9 Technical specifications

9.1 Specifications of the engine/alternator/unit

Reference conditions 1) Rated frequency

4)

50 Hz
1500 rpm

60 Hz

1800 rpm

Generator service duty

PRP

Absolute inlet pressure

1 bar(a)

Relative air humidity

30 %

Air inlet temperature

25°C

Limitations 2)

Maximum ambient temperature

50°C

Altitude capability

4000 m

Maximum relative air humidity

85 %

Minimum starting temperature

7°C

Minimum starting temperature with coldstart equipment

-25°C

Performance data 2) 3) Rated active power (PRP) 3 phase

4) 5)

1156 kW

Rated power factor (lagging) 3 phase

0.8

Rated apparent power (PRP) 3 phase

1445 kVA

Rated voltage 3 phase line-to-line

480 V

Rated current 3 phase

1738.1 A

Performance class (acc.ISO 8528-5:1993)

G2

Single step load acceptance

70%

65%

809 kW

Frequency droop

isochronous

Fuel consumption at 0% load

29.1 kg/h

Fuel consumption at 50% load

126.4 kg/h

Fuel consumption at 75% load

183.8 kg/h

Fuel consumption at 100% load

236.5 kg/h

Specific fuel consumption

0.211 kg/kWh

Fuel autonomy at full load with standard tank

5.5 h

Maximum oil consumption at full load

0.83 l/h

Maximum sound power level (L_w) complies with 2000/14/EC
Capacity of fuel tank
Single step load capability

98 dB(A)
1500 l
100%
1000 kW

Application data

Mode of operation
Site
Operation
Start-up and control mode
Start-up time
Mobility/config. acc. to ISO 8528-1:1993
Mounting
Climatic exposure
Status of neutral (TT or TN))

PRP
land use
single/parallel
manual/auto
unspecified
transportable/D
fully resilient
open air
earthed

Design data engine

Standard
Type Cummins
Rated net output
Rating type acc. ISO 3046-7
Coolant
Combustion system
Aspiration
Number of cylinders
Swept volume
Speed governing
Governer type
Capacity of oil sump - initial fill
Capacity of cooling system
Electrical system
Emission compliance
Maximum permissible load factor of PRP during 24h period ⁴⁾

ISO 8528-2
KTA50
1097 kW
ICXN
coolant
direct injection
turbocharged, intercooled
16
50.3 l
electronic
Woodward
140 l
300 l
24 Vdc
NA
70%

ISO 8528-2
KTA50
1220 kW
ICXN
coolant
direct injection
turbocharged, intercooled
16
50.3 l
electronic
Woodward
140 l
300 l
24 Vdc
NA
70%

Design data alternator Standard

Make

Model

Rated output, class H temp. rise

Rating type acc. ISO 8528-3

Degree of protection (IP index acc. NF EN 60-529)

Insulation class stator

Insulation class rotor

Number of wires

IEC34-1	IEC34-1
ISO 8528-3	ISO 8528-3
Leroy Somer	Leroy Somer
LSA 50.2 M6	LSA 50.2 M6
1250 kVA	1560 kVA
BR	BR
IP23	IP23
H	H
H	H
6	6

Electrical power circuit **Circuit breaker, 3ph.**

Number of poles

Thermal release (It)

Magnetic release (Im)

4	4
1800 A	1800 A
1..10xIn	1..10xIn

Fault current protection

Residual current release, I_{dn}

0.03-3.0 A	0.03-3.0 A
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Unit

Dimensions (L x W x H)

Weight net mass

Weight wet mass

6058 x 2438 x 2591 mm	6058 x 2438 x 2591 mm
15780 kg	15780 kg
17608 kg	17608 kg

Notes

1) Reference conditions for engine performance to ISO 3046-1.

2) See derating diagram or consult the factory for other conditions.

3) At reference conditions unless otherwise stated.

Rating Definition (ISO 8528-1):

- LTP: Limited Time Power is the maximum electrical power which a generating set is capable of delivering (at variable load), in the event of an utility power failure (for up to 500 hours per year of which a maximum of 300 hours is continuous running). No overload is permitted on these ratings. The alternator is peak continuous rated (as defined in ISO 8528-3) at 25°C.
- PRP: Prime Power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals and under the stated ambient conditions. A 10% overload is permitted for 1 hour in 12 hours. The permissible average power output during a 24h period shall not exceed the stated load factor as indicated on the AML.

5) Specific mass fuel used: 0.86 kg/l.