Greenpower DEUTZ diesel engine

1500 RPM	Type GP 450DZ

Engine: BF8M 1015 CG2

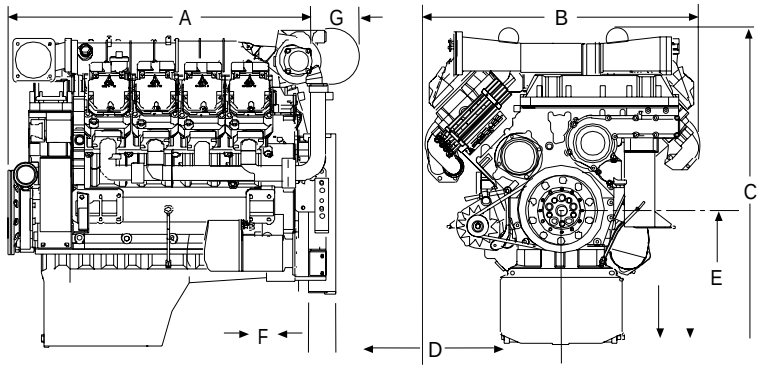
These are the characteristics of the BF8M1015CG2 Gen:

Water-cooled 8-cylinder V-engines.
Turbo charging with charge air cooling.
Four-valve technology.
Injection system with mechanical governor, mechanically actuated/ electronically controlled high-pressure injection on request.
Separate gear-driven PTOs, beltless fan drive.
Very compact design.
Powerful and rugged engine with a high power-to-volume ratio.

These are the benefits for you:

- Its outstandingly low noise radiation is exemplary. Acoustically relevant components with a very rigid structure. This gives genset packagers an advantage over their competitors.
- Environmentally friendly, high-tech combustion ensures not only excellent operating behaviour but also outstanding savings in operating costs.
- The control function of the electronic governor makes it possible to plan service intervals, for example – no costly downtimes.
- Compact design saves installation space and thus installation costs. Radiator dimensions reduced by 30 % with raised fan.
- Low exhaust emission, the 1015 engine series meets "TA-Luft" standards.

Dimension:



Engine type		A	B	C	D	E	F	G
BF8M1015CG2	mm	1010	955	1174	478	462	143	198

Rating table: BF8M1015CG2 The Genset Engine. 50Hz

Engine type		BF8M1015CG2
Speed	min [1] | rpm	1500
Frequency	Hz	50
Engine/genset ratings [1)]		
Prime power, ICN (PRP)[3)]	kW | hp |	402 | 539
Limited time running power, IFN (LTP) [4)]	kW | hp |	459 | 616
Typical generator power output		
Typical generator power output (COP)	kVA	
Typical generator power output (PRP)[5)]	kVA	457
Typical generator power output (LTP)[5)]	kVA	527
Spec. fuel consumption PRP (LTP) [6)]		
100 % load	g/kWh | lb/hp-hr	206 | 0,339
75 % load	g/kWh | lb/hp-hr	202 | 0,332
50 % load	g/kWh | lb/hp-hr	202 | 0,332

Standard specification

Standard engine: Connection housing SAE 2, with flywheel 10″/11.5
Cooling system: Cooling system HAT, depending on engine version incl. charge air cooler, pressure fan.
Exhaust system: Without silencer, with counterflange for exhaust system on the turbocharger.
Filter: Lube oil filter, air filter depending on engine version loose as kit or assembled.
Engine electrics: 12 Volt version, electrical engine governor standard in 6-cylinder FC engines.
Governor: Mechanical standard, optional electronic governor.
Miscellaneous: Painted dark gray.

Scope of Supply:

The engine and the alternator are mounted together forming a rigid monoblock, the shafts are connected by a flexible disc connection. The monoblock is mounted on a steel base frame via silent blocks. The base frame is including a fuel tank. Starting is electric and it includes a battery. The genset monitoring system consist of a control module.

PRP* Kva/KW:

Available electrical power (at a variable load) with a medium of 80% of the indicated maximum power. A 10% overload capability is available

LTP Kva/KW:**

Available electrical load (at a variable load) during a maximum of 500 hours per year. No overload capability is available.

CONTROL PANEL

Manual or automatic start control panel

Manual or automatic remote boot controller, selector switch for Off, Man and Auto with the key.
Complete motor protection functions with alarms visualized via LEDs in the front.
The control unit 6 is set via DIP switches in the rear part of the case.
Standard circuit breaker and differential relay.

ENGINE CHARACTERISTICS

MAKE	MODEL
DEUTZ	BF8M 1015 CG2

GENERAL DATA

Power PRP (kWm)	369.30
Power LTP (kWm)	407.30
No. cylinders	8
Cylinder capacity (L)	-
Diameter per stroke (mm)	132 x 145
Compression ratio	16.50
Cooling system	LIQUID
Injection	DIRECT
Suction	TURBO
Series regulator	ELECTRONIC
Fly wheel coupling	1 - 14"

Lubrication system

Oil capacity (L)	45
Oil consumption (%)	0.30
Min. alarm oil pressure (bar)	3

Ventilation system

Air cooling flow (m3/h)	24120
Combustion air flow (m3/h)	1953
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m3/h)	5375
Exhaust back pressure (mbar)	50
Temp. exhaust gases (ºC))	515

Electrical system

VDC (V)	24
Battery (Ah)	2 x 180
Engine start-up (kW)	

ALTERNATOR CHARACTERISTICS

MAKE	MODEL
MECC-ALTE	ECO 40-2SN / 4

GENERAL DATA

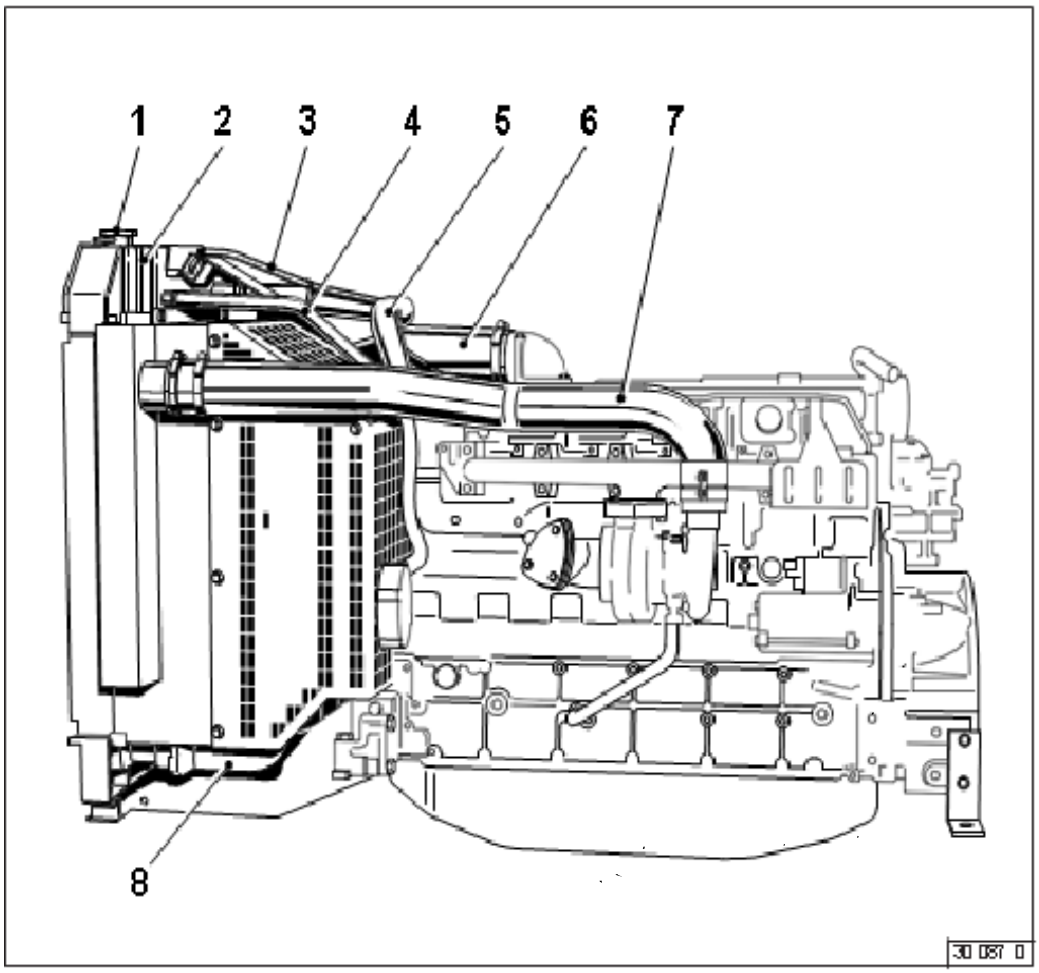
Power PRP (kVA)	450
Power LTP (kVA)	495.00
Efficiency Alt. 3/4 %	94.60
Efficiency Alt. 4/4 %	94.40
No. Poles	4
Voltage regulator	DER-1
No. wires	12
Insulation	H
Xd (%)	232.00
X'd (%)	21.40
X	12.10
Degree of protection	IP21

Engine description

Type of cooling:	Water cooling, thermostatically controlled, charge-air-cooled engines with air-to-air charge air cooler
Crankcase:	High grey cast iron crankcase, for monobloc construction
Crankcase breather:	Closed-circuit crankcase breather
Cylinder head:	Grey cast iron block-type cylinder head
Valve arrangement/ timing:	One inlet and one exhaust valve per cylinder, actuated via tappets, push rods and rocker arms, camshaft driven by geartrain
Piston:	Three-ring piston, two compression rings and one oil scraper ring
Piston cooling:	Oil cooled with spray nozzles (channel-cooled piston)
Connecting rod:	Forged steel rod
Crankshaft bearings:	Tri-metal plain bearings
Crankshaft:	With integral counterweights
Camshaft:	Forged steel shaft
Lubrication system:	Forced-feed circulation lubrication with gear pump
Lube oil cooler:	Oil cooler integrated in coolant circuit
Lube oil filter:	Paper-type microfilter as replaceable-cartridge full flow filter
Injection pump/ governor:	Single injection pumps for each cylinder integrated in crankcase Mechanical centrifugal governor (standard); electronic governor (EMR) optional
Fuel lift pump:	Integrated in belt drive
Injection nozzle:	Six-hole nozzle
Fuel filter:	Replaceable cartridge
Alternator:	Three-phase alternator 12 V or 24 V
Starter motor:	12 V or 24 V
Heating system:	Optional connection for cab heating to engine cooling circuit

Identification of engine parts

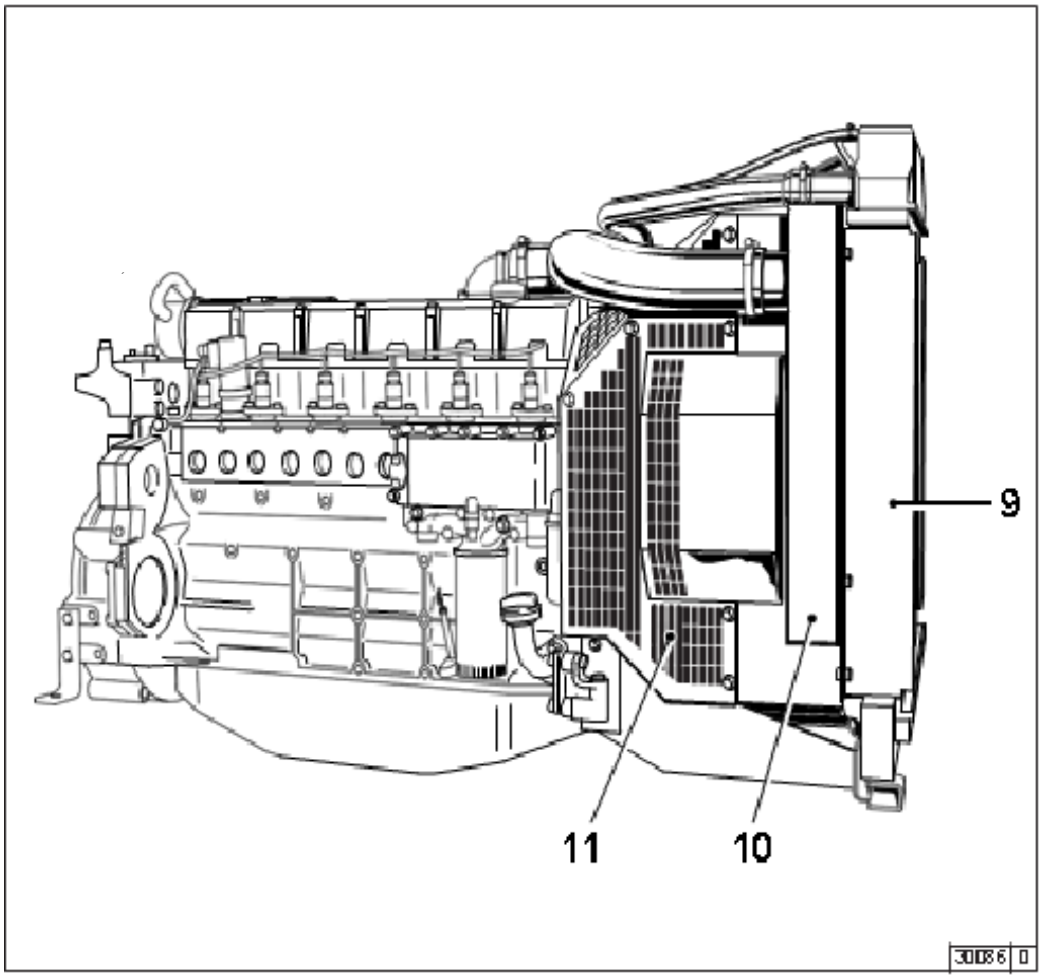
Service side *BF8M1015CG2*



1 Filler neck with cap
2 The expansion tank
3 Vent line from the cylinder head to expansion tank
4 Expansion line from expansion tank to coolant pump
5 Coolant line from crankcase to engine fluid radiator
6 Charge-air line from the charge-air cooler to engine
7 Charge-air line from exhaust turbocharger to charge-air cooler
8 Coolant line from the engine fluid radiator to the engine thermostat

Identification of engine parts

Starter side *BF8M1015CG2*



9 Engine radiator fluid

10 Charge-air cooler

11 Protective guard

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