

Greenpower DEUTZ diesel engine

1500 RPM

Type GP 165DZ

Engine: BF6M1013EC

Alternator: ECP34-2L/4

These are the characteristics of the **BF6M1013EC**

Water cooled 6 cylinder in-line engine.

Turbocharging and turbocharging with charge air cooling.

Displacement: 1.2 l/cylinder.

Modern high-pressure fuel injection system with single injection pumps.

Electronic governor (option).

All servicing points on one side.

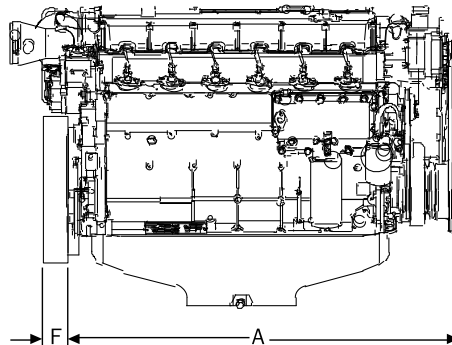
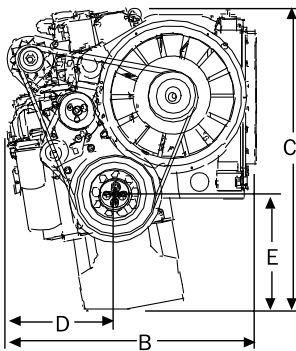
Compact design and low weight.

Your benefits:

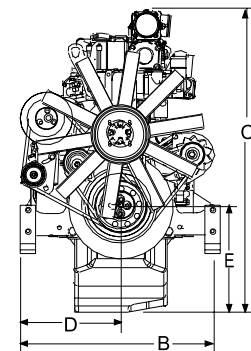
- ▶ Low noise radiation. This eliminates the need for costly noise attenuation measures.
- ▶ Exemplarily low fuel and oil consumption, long service intervals save operating costs.
- ▶ Easy and cost-effective installation with minimum weight and small space requirement.
- ▶ Outstanding load acceptance ensures immediate power supply.
- ▶ Incomparably low exhaust emission, meets all industrial exhaust regulations.
- ▶ Global service network with over 1,000 locations.

▶ Dimensions

Integrated cooling system



External cooling system



Engine		A	B	C	D	E	F
BF6M1013EC	mm inch	1024 40.3	622 24.5	943 37.1	292 11.5	310 12.2	122 4.8

► Rating table: **BF6M1013EC** The Genset Engine **50Hz**

Engine type		BF6M1013EC
Speed	min ¹ rpm	1800
Frequency	Hz	50
Engine/genset ratings		
Continuous power, ICN (COP)	kW hp	139 186
Prime power, ICN (PRP)	kW hp	146 196
Limited- time running power, IFN (LTP)	kW hp	153 205
Typical generator power output		
Typical generator power output (COP)	kVA	149
Typical generator power output (PRP)	kVA	157
Typical generator power output (LTP)	kVA	165
Spec. fuel consumption PRP (LTP)		
100 % load	g/kWh lb/hp-hr	198 0.326
75 % load	g/kWh lb/hp-hr	199 0.327
50 % load	g/kWh lb/hp-hr	202 0.332

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.

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.

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.

TECHNICAL DATA

ENGINE CHARACTERISTICS

MAKE	MODEL
DEUTZ	BF6M 1013 EC

GENERAL DATA

Power PRP (kWm)	139.00
Power LTP (kWm)	145.80
No. cylinders	6
Cylinder capacity (L)	7.15
Diameter per stroke (mm)	108 x 130
Compression ratio	19
Cooling system	LIQUID
Injection	DIRECT
Suction	TURBO
Series regulator	MECHANICAL
Fly wheel coupling	2 - 11,5"

Lubrication system

Oil capacity (L)	20
Oil consumption (%)	0.30
Min. alarm oil pressure (bar)	2.70

Ventilation system

Air cooling flow (m3/h)	10800
Combustion air flow (m3/h)	639
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m3/h)	1799
Exhaust back pressure (mbar)	30
Temp. exhaust gases (°C)	535

Electrical system

VDC (V)	12
Battery (Ah)	120
Engine start-up (kW)	3

ALTERNATOR CHARACTERISTICS

MAKE	MODEL
MECC-ALTE	34-2L/4

GENERAL DATA

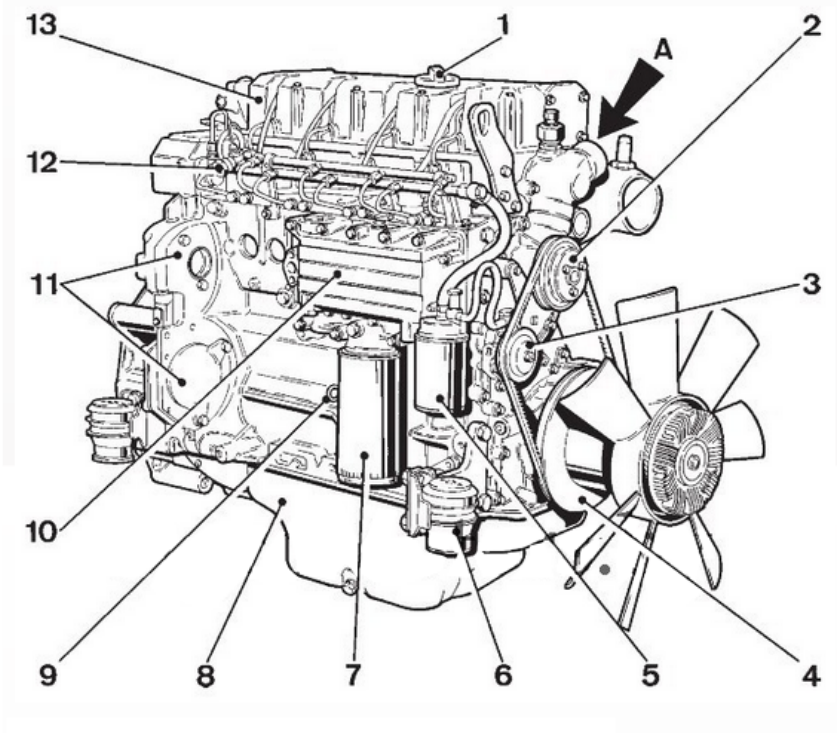
Power PRP (kVA)	150
Power LTP (kVA)	165
Efficiency Alt. 3/4 %	93.50
Efficiency Alt. 4/4 %	93.20
No. Poles	4
Voltage regulator	DSR
No. wires	12
Insulation	H
Xd (%)	240
X'd (%)	14.80
X	6.20
Degree of protection	IP23

► Engine description

Type of cooling:	Liquid 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

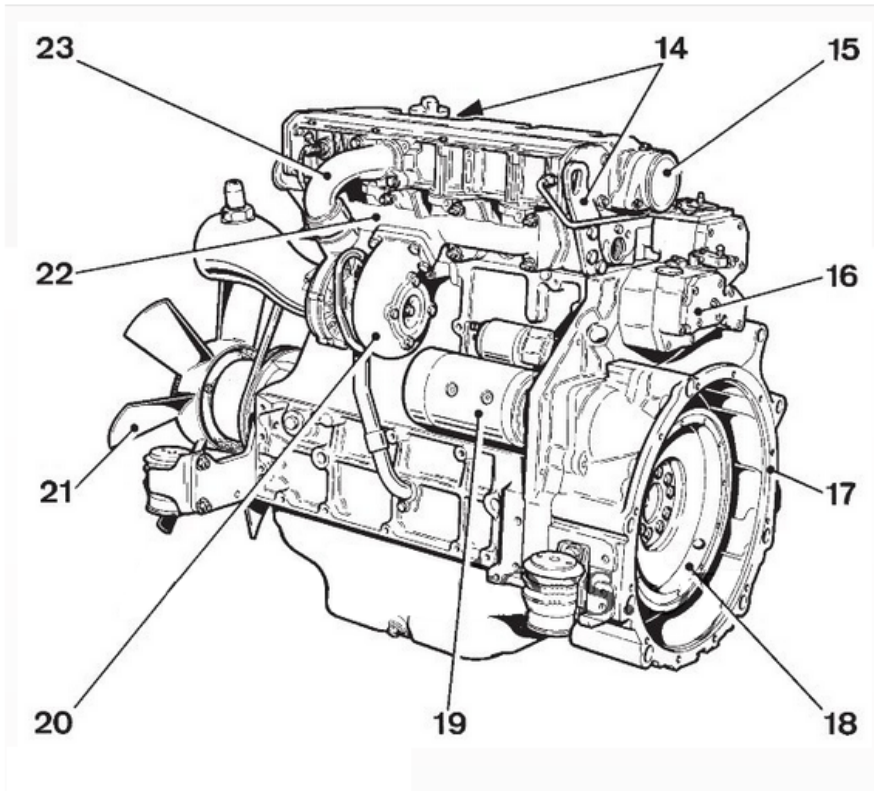
Service side *BF6M1013EC*



- 1 Oil filler cap
- 2 Pumps for coolant
- 3 Fuel pump
- 4 Damper
- 5 Replacement filter for lubricating oil
- 6 Engine Mount
- 7 Replacement fuel filter
- 8 Sump
- 9 Oil dipstick
- 10 Oil cooler
- The element 11 for connecting the hydraulic pump
- 12 Pipeline to drain fuel leaking from the valve to maintain the pressure
- 13 Cylinder head

Identification of engine parts

Starter side *BF6M1013EC*



- 14 The transport device
- 15 Air valve housing
- 16 Speed controller Housing SAE 17
- 18 Flywheel
- 19 Starter
- 20 Turbocharger working on exhaust
- 21 Fan
- 22 Exhaust manifold
- The intake pipe 23



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