

Greenpower DEUTZ diesel engine

1500 RPM	Type GP 60DZa
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Engine: BF4M2011C

Alternator: ECO32-2L/4

These are the characteristics of the BF4M2011

4-cylinder naturally aspirated in-line engines.

Displacement: 0.78 l/cylinder.

Fully Oil-cooled (with conventional cooling system).

Acoustically optimized crankcase.

Electronic engine governor (option).

All service points on one engine side.

Compact engine design.

Your benefits:

- ▶ Designed specifically for construction equipment the dimensions of the engines are extremely compact. Thus reducing installation costs.
- ▶ The new engines, which display an exceptional power /weight ratio, perform brilliantly while at the same time complying with the stricter regulations on environmental protection.
- ▶ Cooling and lubrication with oil avoid corrosion and cavitation. High reliability combined with long maintenance intervals and less wear parts.
- ▶ Low noise emission, no expensive insulation measures for noise reduction.

► Ratingtable: **BF4M2011C** TheGensetEngine **50Hz**

Engine type		BF4M2011C
Speed	min ¹ rpm	1500
Frequency	Hz	50
Engine/genset ratings		
Continuous power, ICN (COP)	kW hp	53.3 72.5
Prime power, ICN (PRP) ³⁾	kW hp	56.1 76.3
Limited- time running power, IFN (LTP)	kW hp	59.0 80.2
Typical generator power output		
Typical generator power output (COP)	kVA	58.0
Typical generator power output (PRP)	kVA	60.0
Typical generator power output (LTP)	kVA	65.0
Spec. fuel consumption PRP (LTP)		
100 % load	g/kWh lb/hp-hr	211 0.342
75 % load	g/kWh lb/hp-hr	207 0.335
50 % load	g/kWh lb/hp-hr	207 0.335
25 % load	g/kWh lb/hp-hr	231 0.374

Standard Specification:

Standard engine: Flywheel housing SAE 3; flywheel with 11.5" connection.

Cooling system: Cooling unit, V-belt guard, pusher-type fan.

Filter: Dry air cleaner with mechanical restriction indicator, fuel filter.

Engine electrics: Alternator 14 V, 55 A; starter motor with 12 V, 3.1 kW.

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	BF4M 2011 C

GENERAL DATA

Power PRP (kWm)	54.00
Power LTP (kWm)	56.90
No. cylinders	4
Cylinder capacity (L)	-
Diameter per stroke (mm)	94 x 112
Compression ratio	18.10
Cooling system	OIL
Injection	DIRECT
Suction	TURBO-INTERC.
Series regulator	MECHANICAL
Steering wheel coupling	-

Lubrication system

Oil capacity (L)	10
Oil consumption (%)	0.50
Min. alarm oil pressure (bar)	2.10

Ventilation system

Air cooling flow (m3/h)	3200
Combustion air flow (m3/h)	241
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m3/h)	704
Exhaust back pressure (mbar)	30
Temp. exhaust gases (°C)	570

Electrical system

VDC (V)	12
Battery (Ah)	96
Engine start-up (kW)	3

ALTERNATOR CHARACTERISTICS

MODEL	
MECC-ALTE ECO 32-2L / 4	(400 / 230 V)

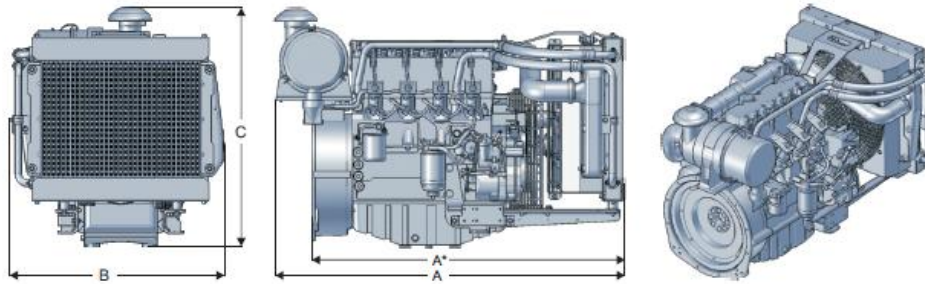
GENERAL DATA

Power PRP (kVA)	60
Power LTP (kVA)	66.00
Efficiency Alt. 3/4 %	90.80
Efficiency Alt. 4/4 %	90.30
No. Poles	4
Voltage regulator	SR7/2
No. wires	12
Insulation	H
Xd (%)	270
X'd (%)	12.80
X	6.80
Degree of protection	IP21

► Engine Description

Type of cooling:	External oil cooling
Crankcase:	Grey cast iron
Crankcase breather:	Closed-circuit breather
Cylinder head:	Block-type cast iron cylinder head
Valve arrangement/ Timing:	Overhead valves in cylinder head, one inlet and one exhaust valve per cylinder, actuated via tappets, push rods and rocker arms, driven by toothed belt and camshaft, automatic tensioner.
Piston:	Three-ring piston, two compressions rings and one oil scraper ring
Piston cooling:	Oil-cooled with spray nozzles
Connecting rod:	Drop-forged steel rod
Crankshaft and big-end bearings:	Ready-to-install plain bearings
Crankshaft:	Modular cast iron
Camshaft:	Steel shaft in bi-metal bearings
Lubrication system:	Forged-feed circulation lubrication with rotary pump which feeds both lubrication and cooling systems (and cab heating if fitted)
Lube oil cooler:	Externally arranged (conventional)
Lube oil filter:	Paper-type micro-filter as replaceable cartridge full flow filter
Injection pump/ Governor:	Single injection pumps with mechanical centrifugal governor
Fuel lift pump:	Serviceable, with integrated strainer
Injection nozzle:	Five-hole nozzle
Fuel filter:	Replaceable cartridge
Alternator:	Three-phase alternator, 14 V; 55 A (Standard)
Starter motor:	2.3 kW; 12 V
Heating system:	Optional connection for cab heating
Options:	Intake manifold connections, exhaust manifolds connections, hydraulic pumps, engine mounts rigid and flexible, oil pans, dipsticks, SAE 3/4/5/6 flywheel housings, alternators 12 and 24 V, oil filter positions horizontal and vertical, oil filler neck on side of crankcase or cylinder head cover

Dimensions



		A	A*	B	C
BF4M 2011C	mm in	1185 47	1055 42	725 29	805 32