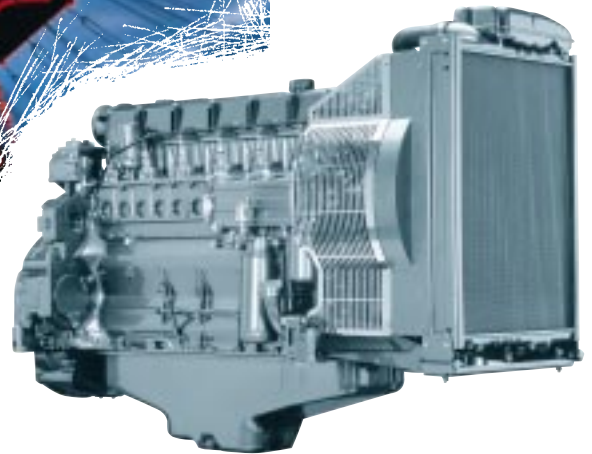


1012 E. Der Gen Motor.



57-82 kVA at 1500/1800 min⁻¹



The engine with external cooling system.

These are the characteristics of the 1012 E GEN:

Watercooled 4-cylinder in-line engine.

Turbocharging and turbocharging with charge air cooling.

Displacement: 0.81/cylinder.

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

Electronic governor (option).

All service points on one side.

Compact design and low weight.

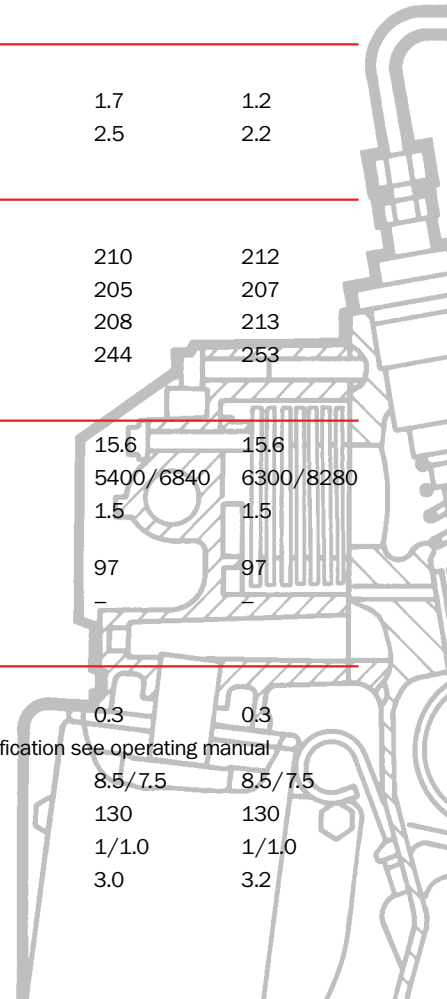
Global service net with over 3,000 locations.

These are the benefits for you:

- ▶ Low operating noise level. This eliminates the need for costly noise attenuation measures.
- ▶ Exemplary low fuel and oil consumption. Long service intervals save operating costs.
- ▶ Easy and cost-effectively installation with minimum weight and small space requirements.
- ▶ Outstanding load acceptance ensures an immediately available power supply.
- ▶ Incomparably low exhaust emission, meets all industrial exhaust regulations.

► Technical data

Engine type		BF4M 1012 E		BF4M 1012 EC	
Speed	min ⁻¹	1500	1800	1500	1800
Frequency	Hz	50	60	50	60
Engine/genset ratings¹⁾					
Continuous power, ICN (COP) ²⁾	kW	51	54	63	67
Prime power, ICN (PRP) ³⁾	kW	53	56	66	70
Limited-time running power, IFN (LTP) ⁴⁾	kW	56	59	69	74
Typical generator power output (COP) ⁵⁾	kVA	57	59	71	74
Typical generator power output (PRP) ⁵⁾	kVA	60	61	75	78
Typical generator power output (LTP) ⁵⁾	kVA	63	65	78	82
Basic engine data					
Inertia moment J					
- Engine without flywheel	kg/m ²	0.122	0.122	0.129	0.129
- Flywheel	kg/m ²	1.2	1.2	1.2	1.2
Weight, engine with radiator	kg	-	-	-	-
Governing					
Governor mechanical					
- Speed droop (static)	%	4-5	4-5	4-5	4-5
Governor electronic					
- Speed droop (static, option)	%	0-3	0-3	0-3	0-3
Control quality ⁶⁾		G2	G2	G2	G2
Load acceptance					
Recovery time					
at 80% continuous power (COP)	sec.	1.23	0.9	1.7	1.2
at 100% continuous power (COP)	sec.	1.23	1.1	2.5	2.2
Fuel system					
Specific fuel consumption at COP ⁷⁾					
100% load	g/kWh	216	215	210	212
75% load	g/kWh	211	214	205	207
50% load	g/kWh	213	214	208	213
25% load	g/kWh	258	266	244	253
Cooling system/cooling capacity					
Coolant volume engine + radiator	l	13.6	13.6	15.6	15.6
Cooling air volume flow rate (NT/HT)	m ³ /h	5400/7560	6300/9000	5400/6840	6300/8280
Max. permissible air flow resistance	mbar	1.5	1.5	1.5	1.5
Max. coolant temperature at engine outlet (alarm)	°C	97	97	97	97
Heat quantity dissipated via radiation	kW	-	-	-	-
Lubrication system					
Lube oil consumption of fuel consumption at full load	ca. %	0.3	0.3	0.3	0.3
Lube oil specification		For further details on fuel specification see operating manual			
Lube oil volume, oil pan (max./min.)	l	8.5/7.5	8.5/7.5	8.5/7.5	8.5/7.5
Oil temperature max.	°C	130	130	130	130
Full-flow filter	No./l	1/1.0	1/1.0	1/1.0	1/1.0
Min. oil pressure (alarm)	bar	3.0	3.2	3.0	3.2



► Technical data

Engine type		BF4M 1012 E		BF4M 1012 EC	
Speed	min ⁻¹	1500	1800	1500	1800
Frequency	Hz	50	60	50	60
Combustion air system					
Combustion air volume flow (LTP)	m ³ /h	204	254	248	306
Max. intake vacuum (filter clean)	mbar	10	10	10	10
Exhaust system					
Exhaust gas mass flow at full load (COP)	kg/h	239	297	287	352
Exhaust temperature at full load and 25°C ambient temperature	°C	530	480	515	460
Max. permissible exhaust backpressure	mbar	30	30	30	30
Exhaust flange	mm	41	41	41	41
TA-Luft (4000)	mg/nm ³	yes	yes	yes	yes
Engine electrics					
Electrical equipment:					
- Voltage	V	12	12	12	12
- Starter	kW	3,1	3,1	3,1	3,1
- Alternator	A/V	55/12	55/12	55/12	55/12
- Battery (min. capacity)	Ah	110	110	110	110
- Coolant preheating units	W	820	820	820	820
Cold-start capability					
Cold-start limit temperature:					
- with starting aid	°C	-32	-32	-32	-32
- without starting aid	°C	-15	-15	-15	-15
Noise emission⁸⁾					
Sound power level	dB(A)/1 pW	99	100	99	101
Sound pressure level at full load, 1 m distance	dB(A)	86	87	86	88

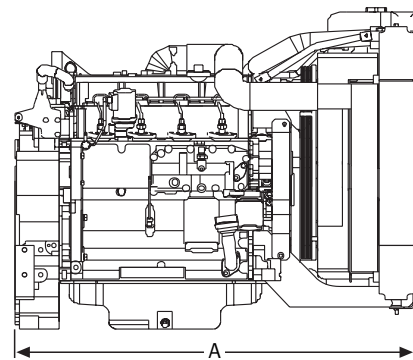
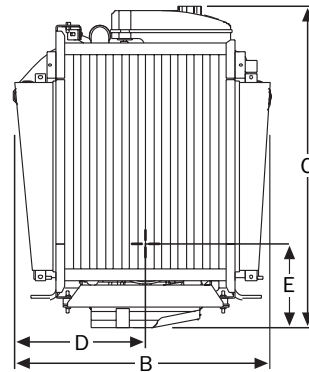
- 1) Power reduction caused by altitude and temperature possible. For details refer to DEUTZ.
- 2) Net-continuous power 100 % available at flywheel, no time limitation, plus 10 % extra power for governing purposes.
- 3) Net-prime power 100 %, permissible average power output equal to or below 60 %, no time limitation plus 5 % extra power for governing purposes.
- 4) Net-limited-time running power 100 %, which can be delivered during 500 running h/a, there of max. 300 running h/a continuously, no overload permissible; the required extra power for governing purposes must be taken into account however.
- 5) Taking into account typical generator efficiency, fan power input (NT-cooling system) and power factor $\cos(\varphi) = 0.8$. Generator efficiency: 0.93.
- 6) Performance acc. to ISO 8528.
- 7) Fuel specification: see operation manual.
- 8) Without cooling system.

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive.

► Standard specification

- Standard engine:**..... Basic parts
- Cooling system:**..... NT cooling system/intercooler mounted
Pusher-type fan
Guard
- Exhaust system-
components:**..... Turbocharger, central arrangement
(air inlet at flywheel end)
Counterflange (loose)
Without exhaust silencer
- Filter:**..... Dry air cleaner mounted, with
connection for restriction indicator
Restriction indicator (loose)
Fuel filter (mounted)
Fuel prefilter (loose)
- Governor:**..... Mech. governor
Mech. fine speed control
- Flywheel:**..... Flywheel for 11.5" connection
 $J = 1.2 \text{ kgm}^2$ (for BF4M 1012 E/EC and
BF4M 1013 E)
Flywheel for 10" and 11.5" connection
 $J = 2.612 \text{ kgm}^2$ (for BF4M 1013 EC and
BF6M 1013 E/EC)
- Adapter housing:**..... SAE 3 housing (for BF4M 1012 E/EC and
BF4M 1013 E)
SAE 2 housing (for BF4M 1013 EC and
BF6M 1013 E/EC)
- Engine mounting:**.... Rigid engine mounting, front end
- Engine electrics:**..... Electric engine shutdown
(de-energized for shutdown)
Starter motor 12 V, 3.1 kW
Alternator 14 V, 55 A
Oil pressure switch (speed-dependent)
Coolant temperature sensor with
switch contact
Without cable harness and
without connector
- Miscellaneous:**..... Painting
Without operation manual

► Dimensions



Engine type		A	B	C	D	E
BF4M 1012 E	mm	1069	612	859	302	235
BF4M 1012 EC	mm	1129	736	908	381	235



Knowing it's DEUTZ.

DEUTZ AG

Deutz-Mülheimer Str. 147-149

D-51057 Köln

Telephone: ++ 49 (0) 2 21-8 22-25 10

Fax: ++ 49 (0) 2 21-8 22-25 29

Internet: <http://www.deutz.de>