

912. The Genset Engine.

29-64 kVA at 1500/1800 min⁻¹ | rpm



The engine with integrated cooling system.

These are the characteristics of the 912 Gen:

- 3, 4, 6 cylinder naturally aspirated in-line engines.
- Displacement: 0.94 l/cylinder.
- Unit construction system with individual cylinders.
- Advanced injection and combustion system.
- Electronic governor (BC or GAC) as option.
- Worldwide proven: Over 3.0 million engines in service.
- Only a few service points.
- Powerful and compact, low weight.
- Global service network with over 1,000 locations.

Your benefits:

- ▶ Space-saving and cost-effective installation thanks to integrated cooling system.
- ▶ Low maintenance requirements together with legendary durability.
- ▶ High quality combined with highly matured, simple configuration.
- ▶ Outstanding load acceptance ensures immediate power supply.



Dimensions and weights

F 3L 912

Length:	mm inch	670 26.4
Width:	mm inch	704 27.7
Height:	mm inch	795 31.3
Weight:	kg lb	351 774

F 4L 912

Length:	mm inch	777 30.6
Width:	mm inch	704 27.7
Height:	mm inch	796 31.3
Weight:	kg lb	402 886

F 6L 912

Length:	mm inch	1057 41.6
Width:	mm inch	704 27.7
Height:	mm inch	806 31.7
Weight:	kg lb	541 1193

► Rating table: 912. The Genset Engine. 50/60 Hz

Engine type		F3L 912		F4L 912		F6L 912	
Speed	min ⁻¹ rpm	1500	1800	1500	1800	1500	1800
Frequency	Hz	50	60	50	60	50	60
Engine/genset ratings¹⁾							
Continuous power, ICN (COP) ²⁾	kW hp	25 33.5	29 38.9	33 44.3	39 52.3	50 67.1	60 80.5
Prime power, ICN (PRP) ³⁾	kW hp	26 34.9	30,5 40.9	35 46.9	41 55.0	52 69.7	63 84.5
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	27 36.2	32 42.9	36 48.3	43 57.7	55 73.8	66 88.5
Typical generator power output							
Typical generator power output (COP) ⁵⁾	kVA/kWe	29	27	38	36	58	56
Typical generator power output (PRP) ⁵⁾	kVA/kWe	30	28	41	38	60	59
Typical generator power output (LTP) ⁵⁾	kVA/kWe	31	30	42	40	64	61
Spec. fuel consumption (COP)⁶⁾							
100 % load	g/kWh lb/hp-hr	215 0.348	223 0.361	215 0.348	223 0.361	215 0.348	224 0.363
75 % load	g/kWh lb/hp-hr	217 0.351	226 0.366	217 0.352	226 0.366	217 0.351	225 0.364
50 % load	g/kWh lb/hp-hr	235 0.380	245 0.397	236 0.382	244 0.395	235 0.380	243 0.394
25 % load	g/kWh lb/hp-hr	344 0.557	372 0.603	348 0.564	370 0.599	344 0.557	367 0.594

- 1) Possibly power reduction depending on altitude and temperature. Please contact DEUTZ.
 2) Continuous power 100 % available at flywheel, plus 10 % extra power for governing purposes.
 3) Prime power 100 %, mean power output 60 %, no time limitation, plus 5 % extra power for governing purposes.

- 4) Limited-time running power 100 %, which must be available during 500 running hrs/year, thereof max. 300 running hrs/year continuously, no overload permissible; the required extra power for governing purposes must be taken into account however.
 5) Taking into account typical generator efficiency of 93 % and power factor $\cos(\Phi) = 0.8$.
 6) For fuel specification see operation manual.

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:** Flywheel housing SAE 3, flywheel wit 8"/10" connection.
Cooling system: Integrated cooling system, V-belt guard.
Exhaust system: Exhaust manifold with elbow, counterflange (loose).
Filter: Dry-air cleaner with mech. restriction indicator, fuel filter.
Engine electrics: Alternator 14 V, 55 A; starter motor with 12 V, 3 kW.
Governor: Mechanical (Bosch, RSV) or electronic (BC or GAC).



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1013. The Genset Engine.

83-204 kVA at 1500/1800 min⁻¹ | rpm



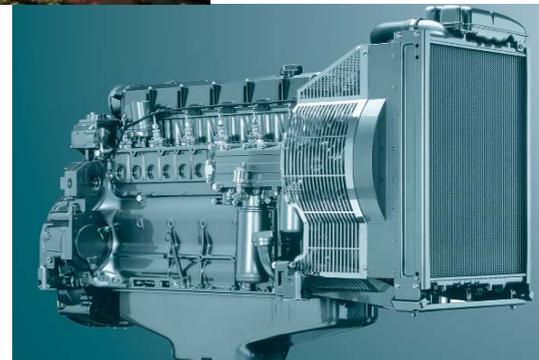
The engine with external cooling system.

These are the characteristics of the 1013 Gen:

- Watercooled 4 and 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 and weights

BF4M 1013 E*)		BF6M 1013 E*)	
Length:	mm inch 1425 56.10	Length:	mm inch 1702 67.00
Width:	mm inch 663 26.10	Width:	mm inch 741 29.17
Height:	mm inch 1151 45.31	Height:	mm inch 1239 48.78
Weight:	kg lb 520 1146	Weight:	kg lb 740 1631
BF4M 1013 EC		BF6M 1013 EC	
Length:	mm inch 1479 58.23	Length:	mm inch 1870 73.62
Width:	mm inch 728 28.66	Width:	mm inch 866 34.09
Height:	mm inch 1151 45.31	Height:	mm inch 1239 48.78
Weight:	kg lb 560 1235	Weight:	kg lb 770 1697
BF4M 1013 FC		BF6M 1013 FC	
Length:	mm inch 1479 58.23	Length:	mm inch 1923 75.71
Width:	mm inch 728 28.66	Width:	mm inch 1003 39.49
Height:	mm inch 1151 45.31	Height:	mm inch 1586 62.44
Weight:	kg lb 560 1235	Weight:	kg lb 770 1697

*) Without charge air cooling

▶ Rating table: 1013. The Genset Engine. 50 Hz

Engine type		BF4M 1013E*)	BF4M 1013EC	BF4M 1013FC	BF6M 1013E*)	BF6M 1013EC	BF6M 1013FC			
Rating category								G1	G2	G3
Speed	min ⁻¹ rpm	1500	1500	1500	1500	1500	1500	1500	1500	1500
Frequency	Hz	50	50	50	50	50	50	50	50	50
Engine/genset ratings¹⁾										
Continuous power, ICN (COP) ²⁾	kW hp	77 103	92 123	96 129	116 155	139 186	154 206			166 222
Prime power, ICN (PRP) ³⁾	kW hp	81 109	97 130	101 135	122 163	146 196	162 217	166 222		183 245
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	85 114	102 137	106 142	128 172	153 205	170 228	183 245		201 270
Typical generator power output										
Typical generator power output (COP) ⁵⁾	kVA	83	98	102	127	149	166			168
Typical generator power output (PRP) ⁵⁾	kVA	88	104	108	134	157	175	184		203
Typical generator power output (LTP) ⁵⁾	kVA	93	109	114	141	165	184	185		204
Spec. fuel consumption (PRP)⁶⁾										
100 % load	g/kWh lb/hp-hr	219 0.360	206 0.339	205 0.337	212 0.348	198 0.326	202 0.332	223 0.367	226 0.372	
75 % load	g/kWh lb/hp-hr	213 0.330	205 0.337	205 0.337	208 0.342	199 0.327	200 0.329	221 0.363	222 0.365	
50 % load	g/kWh lb/hp-hr	216 0.355	210 0.345	209 0.344	212 0.348	202 0.332	202 0.332	222 0.365	223 0.367	

▶ Rating table: 1013. The Genset Engine. 60 Hz

Exhaust gas optimized according to EPA Stage II

Engine type		BF4M 1013E*)	BF4M 1013EC	BF4M 1013FC	BF6M 1013E*)	BF6M 1013EC	BF6M 1013FC			
Rating category								G1	G2	G3
Speed	min ⁻¹ rpm	1800	1800	1800	1800	1800	1800	1800	1800	1800
Frequency	Hz	60	60	60	60	60	60	60	60	60
Engine/genset ratings¹⁾										
Continuous power, ICN (COP) ²⁾	kW hp	81 109	101 135	110 147	122 164	148 198	179 240			186 249
Prime power, ICN (PRP) ³⁾	kW hp	85 114	105 141	116 155	128 172	155 208	188 252	186 249		204 273
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	89 119	110 147	122 164	134 180	163 218	197 264	204 273		225 302
Typical generator power output										
Typical generator power output (COP) ⁵⁾	kWe	69	83	91	105	127	155			148
Typical generator power output (PRP) ⁵⁾	kWe	73	86	96	111	133	163	148		163
Typical generator power output (LTP) ⁵⁾	kWe	76	91	102	116	140	171	181		200
Spec. fuel consumption (PRP)⁶⁾										
100 % load	g/kWh lb/hp-hr	218 0.358	207 0.340	211 0.347	210 0.345	199 0.327	202 0.332	220 0.362	212 0.349	
75 % load	g/kWh lb/hp-hr	215 0.353	207 0.340	210 0.345	212 0.349	199 0.327	202 0.332	216 0.355	205 0.337	
50 % load	g/kWh lb/hp-hr	223 0.367	214 0.352	213 0.350	231 0.380	208 0.341	204 0.335	217 0.357	208 0.342	

1) Possibly power reduction depending on altitude and temperature. Please contact DEUTZ.

2) Continuous power 100 % available at flywheel, no time limitation, plus 10 % extra power for governing purposes.

3) Prime power 100 %, mean power output 60 %, no time limitation, plus 5 % extra power for governing purposes.

4) Limited-time running power 100 %, which must be available during 500 running hrs/year, thereof max. 300 running hrs/year continuously, no overload permissible; the required extra power for governing purposes must be taken into account however.

5) Taking into account typical generator efficiency of 88.8 - 91.2 % and power factor cos (φ) = 0.8.

6) For fuel specification see operation manual.

*) Without charge air cooling and/or EPA Stage II.

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive. Exhaust-optimized ratings on request.

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.



The engine company.

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1015. The Genset Engine.

211-558 kVA at 1500/1800 min⁻¹ | rpm



These are the characteristics of the 1015 Gen:

- Extremely compact and powerful.
- Very low noise emissions.
- State-of-the-art technology with electronic control.
- Reliability, durability and long service intervals.

Your benefits:

- ▶ The compact 1015 engines save installation space and thus installation costs, resulting in a favourable power-to-weight ratio.
- ▶ The silent 1015 engines reduce your noise attenuation requirements and thus cut down your installation costs as well.
- ▶ The advanced combustion system guarantees low fuel consumption as well as long service intervals, thus reducing operating costs.
- ▶ The 1015 engines meet exhaust emission regulations and are thus geared to the future.



Dimensions and weights/without radiator

BF 6M 1015 CP

Length :	mm inch	1638 64.5
Width:	mm inch	1515 59.6
Height:	mm inch	1924 75.7
Weight:	kg lb	850 1874

BF 8M 1015 CP

Length :	mm inch	1764 69.4
Width:	mm inch	1815 71.5
Height:	mm inch	1849 72.8
Weight:	kg lb	1060 2337

► Rating table: 1015. The Genset Engine. 50 Hz

Engine type		BF6M 1015	BF6M 1015 C	BF6M 1015 C	BF6M 1015 CP	BF8M 1015 C	BF8M 1015 C	BF8M 1015 CP	
Rating category		—	G1	G2	G3	G1	G2	G3	
Speed	min ⁻¹ rpm	1500	1500	1500	1500	1500	1500	1500	
Engine/genset ratings¹⁾									
Continuous power, ICN (COP) ²⁾	kW hp	195 261	250 335	— —	303 406	333 447	— —	399 535	
Prime power, ICN (PRP) ³⁾	kW hp	210 282	285 382	315 422	338 453	380 510	402 539	448 601	
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	231 310	314 421	345 463	365 489	418 561	459 616	490 657	
Typical generator power output									
Typical generator power output (COP) ⁵⁾	kVA	211	271	—	334	375	—	450	
Typical generator power output (PRP) ⁵⁾	kVA	228	311	358	381	432	457	508	
Typical generator power output (LTP) ⁵⁾	kVA	253	344	389	412	477	527	558	
Spec. fuel consumption (PRP)									
100 % load	g/kWh lb/hp-hr	208 0.342	200 0.329	206 0.339	214 0.352	201 0.330	206 0.339	219 0.360	
75 % load	g/kWh lb/hp-hr	206 0.339	196 0.322	202 0.332	207 0.340	196 0.322	202 0.332	210 0.345	
50 % load	g/kWh lb/hp-hr	207 0.340	196 0.322	201 0.330	206 0.339	196 0.322	202 0.332	208 0.342	

► Rating table: 1015. The Genset Engine. 60 Hz

Engine type		BF6M 1015	BF6M 1015 C	BF6M 1015 CP	BF8M 1015 C	BF8M 1015 CP
Rating category		—	G1	G3	G1	G3
Speed	min ⁻¹ rpm	1800	1800	1800	1800	1800
Engine/genset ratings¹⁾						
Continuous power, ICN (COP) ²⁾	kW hp	211 283	271 363	320 429	362 485	426 571
Prime power, ICN (PRP) ³⁾	kW hp	228 306	310 416	351 471	413 554	473 634
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	250 335	341 457	384 515	454 609	517 693
Typical generator power output						
Typical generator power output (COP) ⁵⁾	kWe	175	234	280	320	380
Typical generator power output (PRP) ⁵⁾	kWe	190	271	309	367	423
Typical generator power output (LTP) ⁵⁾	kWe	215	300	339	406	464
Spec. fuel consumption (LTP)						
100 % load	g/kWh lb/hp-hr	218 0.358	209 0.344	223 0.367	210 0.345	234 0.385
75 % load	g/kWh lb/hp-hr	212 0.349	204 0.335	212 0.349	205 0.337	220 0.362
50 % load	g/kWh lb/hp-hr	214 0.352	204 0.335	211 0.347	205 0.337	218 0.358

- 1) Possibly power reduction depending on altitude and temperature. Power ratings without fan power requirement. Please contact DEUTZ.
 2) Continuous power 100 % plus 10 % extra power for governing purposes.
 3) Prime power 100 %, mean power output 80 %, within 24 hours, plus 10 % extra power for governing purposes.

- 4) Limited-time running power 100 %, which must be available during 500 running hrs/year, thereof max. 300 running hrs/year continuously, no overload permissible; the required extra power for governing purposes must be taken into account by the customer.
 5) Taking into account typical generator efficiency of 91.8 to 95.0 % and power factor cos (φ) = 0.8.

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:** Adapter housing SAE 1 with 50 Hz, SAE 0 with 60 Hz; flywheel with 14" connection.
Cooling system: LT cooling system, charge air cooler (not BF6M 1015), pusher-type fan (raised), viscous fluid coupling, guard.
Exhaust system: Turbocharger (flywheel end) with counterflange, without exhaust silencer.
Filter: Lube oil filter, air cleaner with restriction indicator mounted, fuel twin filter loose.
Engine electrics: Alternator 24 V, 55 A; starter motor with 5.4 kW; monitoring: coolant temperature, oil pressure and coolant level.
Governor: Electronic speed control.
Miscellaneous: Painting.



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2011. The Genset Engine.

12-50 kVA at 1500/1800 min⁻¹ | rpm



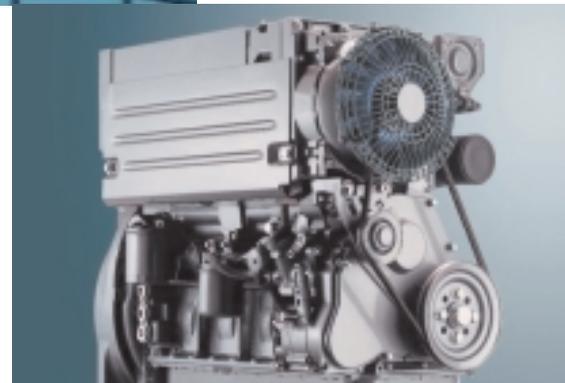
The engine with integrated oil cooling system.

These are the characteristics of the 2011 Gen:

- 2, 3 and 4 cylinder naturally aspirated in-line engines.
- 4 cylinder model also with turbocharging.
- Displacement: 0.78 l/cylinder.
- Integrated oil-cooling (engine is delivered complete with cooler).
- Acoustically optimized crankcase.
- All service points on the same engine side.
- Electronic engine governor (option).
- Compact design and low weight.
- Worldwide service network with over 1,000 locations.

Your benefits:

- ▶ Low noise emission, cost savings as no noise attenuation measures are required.
- ▶ Long service intervals: 1,000-hour oil change intervals and low fuel consumption bring savings in operating costs.
- ▶ Low installation costs.
- ▶ Excellent load takeover characteristics ensure prompt power supply.
- ▶ Combined oil cooling and lubrication prevents corrosion and cavitation. High reliability and durability together with reduced maintenance requirement and wear parts.



Dimensions and weights/integrated cooler

F2L 2011

Length:	mm	inch	645	25.2
Width:	mm	inch	588	22.9
Height:	mm	inch	707	27.6
Weight:	kg	lb	212	467

F3L 2011

Length:	mm	inch	756	29.5
Width:	mm	inch	588	22.9
Height:	mm	inch	701	27.3
Weight:	kg	lb	254	560

F4L 2011

Length:	mm	inch	868	33.9
Width:	mm	inch	588	22.9
Height:	mm	inch	722	28.2
Weight:	kg	lb	293	646

BF4L 2011

Length:	mm	inch	778	30.3
Width:	mm	inch	531	20.7
Height:	mm	inch	704	27.5
Weight:	kg	lb	295	650

► Rating table: 2011. The Genset Engine. 50 Hz

Engine type		F2L 2011	F3L 2011	F4L 2011	BF4L 2011
Speed	min ⁻¹ rpm	1500	1500	1500	1500
Frequency	Hz	50	50	50	50
Engine/genset ratings¹⁾					
Continuous power, ICN (COP) ²⁾	kW hp	11,4 15.5	18,1 24.6	26,2 35.6	34,6 47.1
Prime power, ICN (PRP) ³⁾	kW hp	12,0 16.3	19,0 25.8	27,6 37.5	36,4 49.5
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	12,6 17.1	20,0 27.2	29,0 39.4	38,2 52.0
Typical generator power output					
Typical generator power output (COP) ⁵⁾	kVA	11,8	19,0	28,5	38,0
Typical generator power output (PRP) ⁵⁾	kVA	12,5	20,0	30,0	40,0
Typical generator power output (LTP) ⁵⁾	kVA	13,1	20,9	31,5	42,0
Spec. fuel consumption PRP (LTP)⁶⁾					
100 % load	g/kWh lb/hp-hr	235 0.381	225 0.365	215 0.348	220 0.356
75 % load	g/kWh lb/hp-hr	245 0.397	230 0.373	220 0.356	225 0.365
50 % load	g/kWh lb/hp-hr	270 0.437	260 0.421	235 0.381	235 0.381
25 % load	g/kWh lb/hp-hr	400 0.648	450 0.729	350 0.567	320 0.518

► Rating table: 2011. The Genset Engine. 60 Hz

Engine type		F2L 2011	F3L 2011	F4L 2011	BF4L 2011
Speed	min ⁻¹ rpm	1800	1800	1800	1800
Frequency	Hz	60	60	60	60
Engine/genset ratings¹⁾					
Continuous power, ICN (COP) ²⁾	kW hp	13,6 18.5	21,4 29.1	31,1 42.3	41,0 55.8
Prime power, ICN (PRP) ³⁾	kW hp	14,3 19.4	22,6 30.7	32,8 44.6	43,2 58.8
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	15,1 20.5	23,8 32.4	34,5 46.9	45,5 61.9
Typical generator power output					
Typical generator power output (COP) ⁵⁾	kVA/kWe	14,3/11.3	22,5/18.0	33,8/27.0	45,0/36.0
Typical generator power output (PRP) ⁵⁾	kVA/kWe	14,9/11.9	23,8/19.0	35,6/28.5	47,4/38.0
Typical generator power output (LTP) ⁵⁾	kVA/kWe	15,7/12.5	25,0/20.0	37,4/30.0	49,9/40.0
Spec. fuel consumption PRP (LTP)⁶⁾					
100 % load	g/kWh lb/hp-hr	235 0.381	225 0.365	220 0.356	220 0.356
75 % load	g/kWh lb/hp-hr	245 0.397	230 0.373	220 0.356	220 0.356
50 % load	g/kWh lb/hp-hr	270 0.437	260 0.421	240 0.389	235 0.381
25 % load	g/kWh lb/hp-hr	400 0.648	400 0.648	350 0.567	350 0.567

1) Possibly power reduction depending on altitude and temperature. Please contact DEUTZ.

2) Continuous power 100 %, available at flywheel, no time limitation, plus 10 % extra power for governing purposes.

3) Prime power 100 %, mean power output 60 %, no time limitation, plus 5 % extra power for governing purposes.

4) Limited-time running power 100 %, which must be available during 500 running hrs/year, thereof max. 300 running hrs/year continuously, no overload permissible; the required extra power for governing purposes must be taken into account, however.

5) Taking into account typical generator efficiency of 83 % to 88 % and power factor cos (φ) = 0.8.

6) For fuel specification see operation manual.

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: Flywheel housing SAE 4 (5 for n = 3000 min⁻¹ | rpm); flywheel with 6.5" connection.

Cooling system: Integrated cooling system, V-belt guard.

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

Engine electrics: Alternator 14 V, 60 A; starter motor with 12 V, 2.2 kW.

Governor: Mechanical (Bosch).

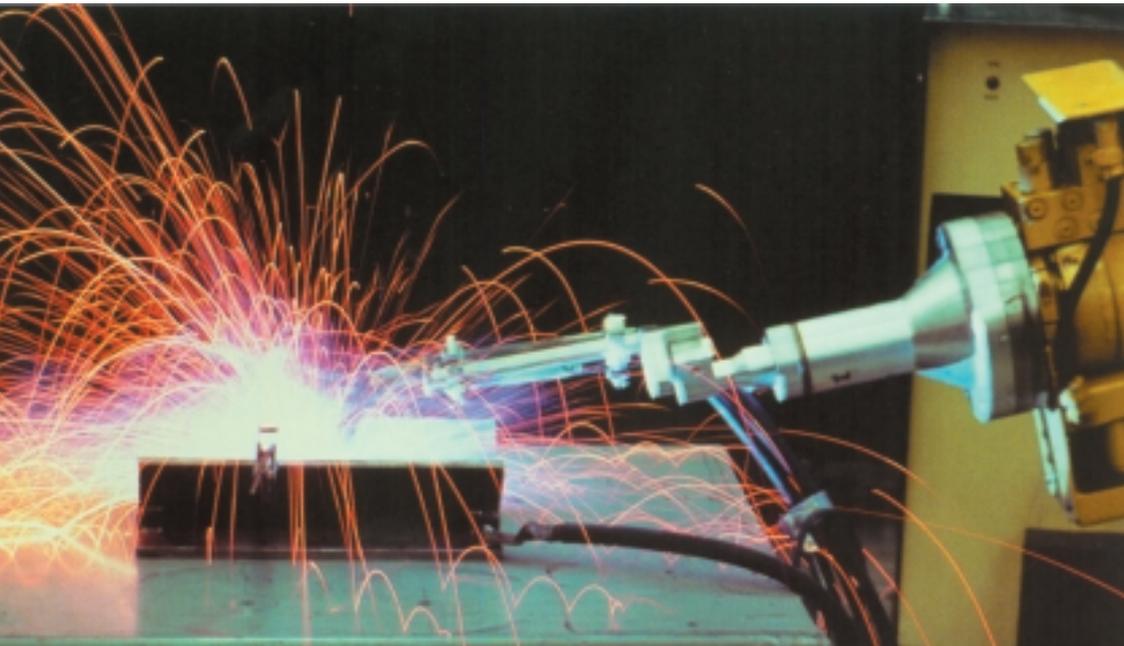
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The engine company.



2011. The Genset Engine.

12 - 60 kVA at 1500/1800 min⁻¹ | rpm



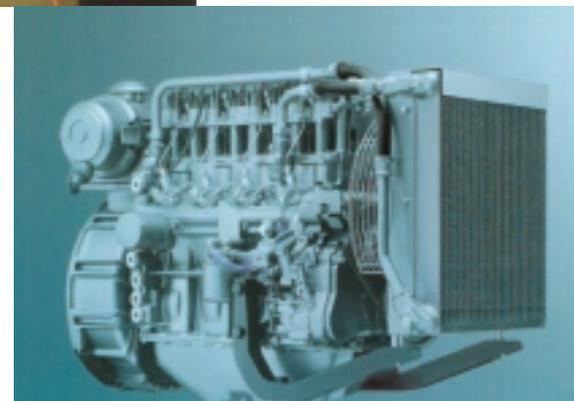
The engine with external oil cooling system.

These are the characteristics of the 2011 Gen:

- 2, 3 and 4 cylinder naturally aspirated in-line engines.
- 4 cylinder model also with turbocharging.
- Displacement: 0.78 l/cylinder.
- Fully oil-cooled (engine with conventional cooling system)
- Acoustically optimized crankcase.
- All service points on the same engine side.
- Electronic engine governor (option).
- Compact design and low weight.
- Worldwide service network with over 1,000 locations.

Your benefits:

- ▶ Low noise emission, cost savings as no noise attenuation measures are required.
- ▶ Long oil change intervals: 1,000-hour / turbocharged engines 500 hour and low fuel consumption bring savings in operating cost.
- ▶ Low installation cost.
- ▶ Excellent load takeover characteristics ensure prompt power supply.
- ▶ Combined oil cooling and lubrication prevents corrosion and cavitation. High reliability and durability together with reduced maintenance requirement and wear parts.



Dimensions and weights

F2M 2011

Length:	mm inch	845 33.0
Width:	mm inch	643 25.1
Height:	mm inch	762 29.7
Weight:	kg lb	206 454

F3M 2011

Length:	mm inch	956 37.3
Width:	mm inch	616 24.0
Height:	mm inch	761 29.7
Weight:	kg lb	247 545

F4M 2011

Length:	mm inch	1067 41.6
Width:	mm inch	616 24.0
Height:	mm inch	778 30.3
Weight:	kg lb	285 628

BF4M 2011

Length:	mm inch	1080 42.1
Width:	mm inch	649 25.3
Height:	mm inch	787 30.7
Weight:	kg lb	286 631

BF4M 2011 C

Length:	mm inch	1183 46.1
Width:	mm inch	717 28.0
Height:	mm inch	807 31.4
Weight:	kg lb	350 772

► Rating table: 2011. The Genset Engine. 50 Hz

Engine type		F2M2011	F3M2011	F4M2011	BF4M2011	BF4M2011C
Speed	min ⁻¹ rpm	1500	1500	1500	1500	1500
Frequency	Hz	50	50	50	50	50
Engine/genset ratings ¹⁾						
Continuous power, ICN (COP) ²⁾	kW hp	11.8 16.0	18.5 25.2	26.6 36.2	35.6 48.4	53.3 72.5
Prime power, ICN (PRP) ³⁾	kW hp	12.4 16.0	19.4 25.4	28.0 38.1	37.4 50.9	56.1 76.3
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	13.0 17.7	20.4 27.7	29.4 40.0	39.2 53.3	59.0 80.2
Typische Generatorleistung						
Typical generator power output (COP) ⁵⁾	kVA	11.8	19.0	28.5	38.0	58.0
Typical generator power output (PRP) ⁵⁾	kVA	12.5	20.0	30.0	40.0	60.0
Typical generator power output (LTP) ⁵⁾	kVA	13.1	20.9	31.5	42.0	65.0
Spec. fuel consumption PRP (LTP)⁶⁾						
100% load	g/kWh lb/hp-hr	235 0.381	225 0.365	220 0.356	215 0.348	211 0.342
75% load	g/kWh lb/hp-hr	245 0.397	230 0.373	215 0.348	210 0.340	207 0.335
50% load	g/kWh lb/hp-hr	270 0.437	245 0.397	230 0.373	225 0.365	207 0.335
25% load	g/kWh lb/hp-hr	400 0.648	400 0.648	320 0.518	270 0.437	231 0.374

► Rating table: 2011. The Genset Engine. 60 Hz

Engine type		F2M2011	F3M2011	F4M2011	BF4M2011	BF4M2011C
Speed	min ⁻¹ rpm	1800	1800	1800	1800	1800
Frequency	Hz	60	60	60	60	60
Engine/genset ratings ¹⁾						
Continuous power, ICN (COP) ²⁾	kW hp	14.3 19.4	22.1 30.1	31.8 43.2	42.8 58.2	-
Prime power, ICN (PRP) ³⁾	kW hp	15.0 20.4	23.3 31.7	33.5 45.6	45.0 61.2	63.6 86.5
Limited-time running power, IFN (LTP) ⁴⁾	kW hp	15.8 21.5	24.5 33.3	35.2 47.9	47.3 64.3	66.8 90.8
Typische Generatorleistung						
Typical generator power output (COP) ⁵⁾	kWe	11.3	18.0	27.0	36.0	-
Typical generator power output (PRP) ⁵⁾	kWe	11.9	19.0	28.5	38.0	56.0
Typical generator power output (LTP) ⁵⁾	kWe	12.5	20.0	30.0	40.0	59.0
Spec. fuel consumption PRP (LTP)⁶⁾						
100% load	g/kWh lb/hp-hr	230 0.373	225 0.365	230 0.373	210 0.340	215 0.348
75% load	g/kWh lb/hp-hr	240 0.389	225 0.365	220 0.356	210 0.340	214 0.347
50% load	g/kWh lb/hp-hr	270 0.437	250 0.405	230 0.373	220 0.356	219 0.355
25% load	g/kWh lb/hp-hr	400 0.648	400 0.648	320 0.518	260 0.421	259 0.419

1) Possible power reduction depending on altitude and temperature, without deduction of fan power requirement. Please contact DEUTZ.

2) Continuous power 100%, available at flywheel, no time limitation, plus 10% extra power for governing purposes.

3) Prime power 100%, mean power output 60%, no time limitation, plus 5% extra power for governing purposes.

4) Limited-time running power 100 %, which must be available during 500 running hrs/year, of these max. 300 running hrs/year continuously, no overload permissible; the required extra power for governing purposes must be taken into account however.

5) Taking into account typical generator efficiency of 83 - 88% and power factor cos (φ) = 0.8.

6) For fuel specification see operation manual.

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive. Exhaust-optimized ratings on request.

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.

Governor: Mechanical (Bosch).

The engine company.





2012. The engine for construction equipment.

75 - 147 kW at 1500 - 2500 rpm



The new 1 litre class.

These are the characteristics of the 2012:

- Modern liquid-cooled 4- and 6-cylinder in-line engines.
- 1 litre displacement per cylinder. Compact design and high power-to-volume-ratio.
- Turbocharging and turbocharging with charge air cooling.
- High-pressure fuel injection up to 1600 bar.
- Electronic engine governor with diagnostic facilities and CAN-bus optional.
- 3 separate mounting options for gear-driven hydraulic pumps.
- Easy accessible service points on one engine side.
- Wedge ribbed belt drive with automatic belt tensioner optional.

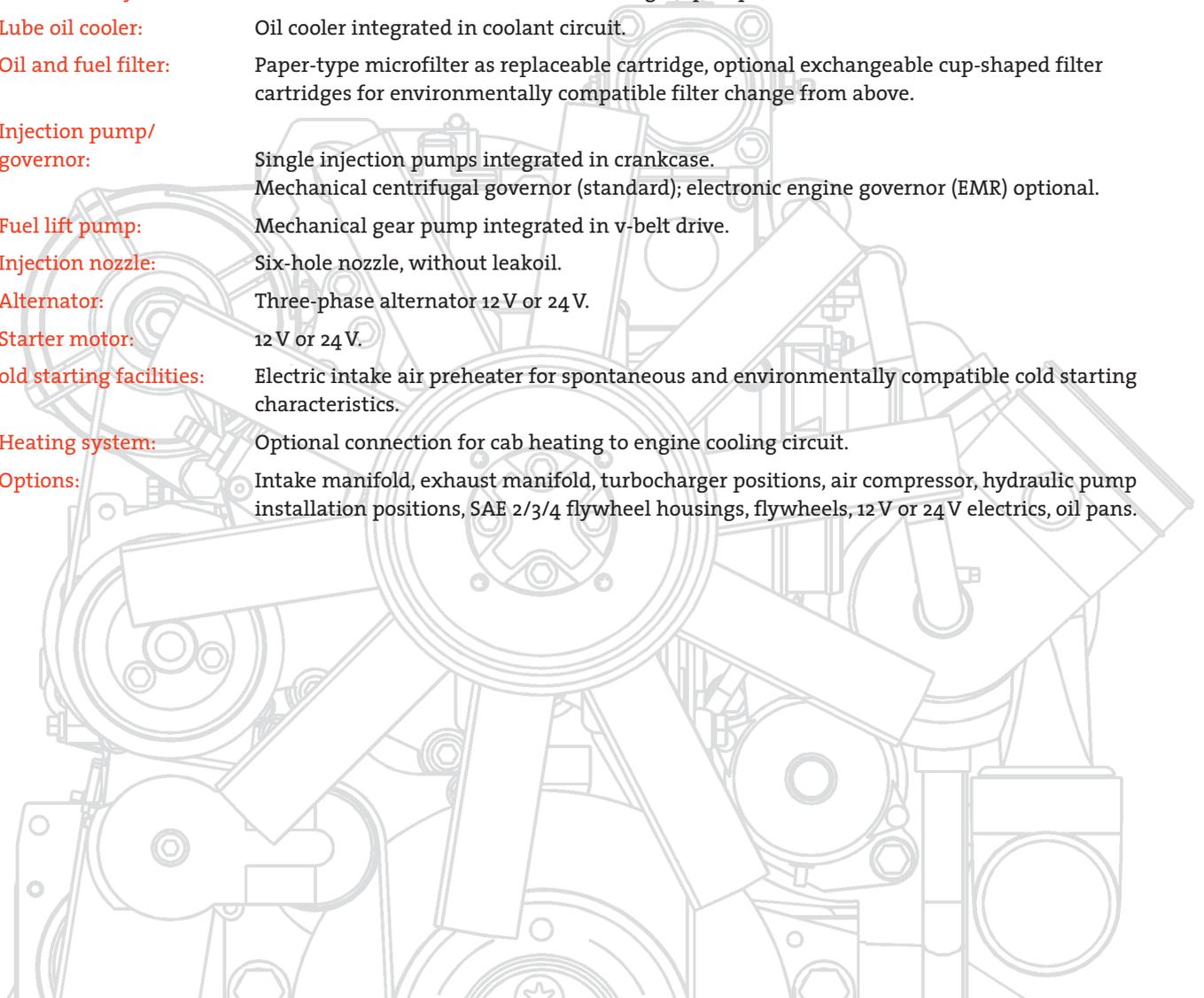


Your benefits:

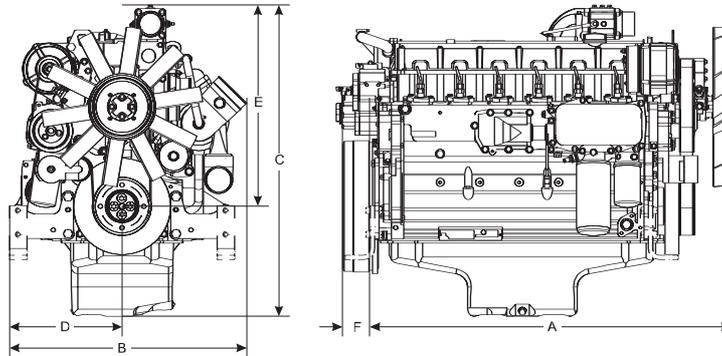
- ▶ Fast and powerful response to changing operating duties, dynamic power development.
- ▶ Low cost for noise insulation measures. High comfort in the driver's cab because of low noise level. Low noise emission, low environmental impact.
- ▶ High operating economy thanks to low fuel consumption, long oil change intervals and low maintenance requirement.
- ▶ Low exhaust emission for a clean environment. Meets exhaust regulation EU-RL 97/68 (Step 2) and US-EPA Nonroad (Tier 2).
- ▶ High reliability even under extreme working conditions.

► Engine description

Type of cooling:	Liquid cooling, thermostatically controlled at engine outlet. Charge-air-cooled engines with air-to-air charge air cooler.
Crankcase:	High grey cast iron crankcase, for monobloc construction.
Mass balance shafts:	4-cylinder optional with full mass balance by 2 shafts integrated into the crankcase.
Crankcase breather:	Closed-circuit crankcase breather.
Cylinder head:	Grey cast block-type cylinder head.
Valve arrangement/ timing:	Two valves per cylinder, actuated from gear driven camshaft via tappets, push rods and rocker arms.
Piston:	Three-ring aluminium piston.
Piston cooling:	Oil cooled with spray nozzles.
Connecting rod:	Forged steel rod.
Crankshaft:	Forged steel shaft with integral counterweights, 4-cylinder version with integral mass balancing shafts.
Camshaft:	Steel shaft.
Lubrication system:	Forced-feed circulation lubrication with gear pump.
Lube oil cooler:	Oil cooler integrated in coolant circuit.
Oil and fuel filter:	Paper-type microfilter as replaceable cartridge, optional exchangeable cup-shaped filter cartridges for environmentally compatible filter change from above.
Injection pump/ governor:	Single injection pumps integrated in crankcase. Mechanical centrifugal governor (standard); electronic engine governor (EMR) optional.
Fuel lift pump:	Mechanical gear pump integrated in v-belt drive.
Injection nozzle:	Six-hole nozzle, without leakoil.
Alternator:	Three-phase alternator 12 V or 24 V.
Starter motor:	12 V or 24 V.
old starting facilities:	Electric intake air preheater for spontaneous and environmentally compatible cold starting characteristics.
Heating system:	Optional connection for cab heating to engine cooling circuit.
Options:	Intake manifold, exhaust manifold, turbocharger positions, air compressor, hydraulic pump installation positions, SAE 2/3/4 flywheel housings, flywheels, 12 V or 24 V electrics, oil pans.



► Dimensions



Engine with belt drive

		A	B	C	D	E	F
BF 4 M 2012	mm	742	643	741	300	506	105
BF 4 M 2012 C	mm	742	643	835	300	600	105
BF 6 M 2012 C	mm	998	628	920	300	600	105

Engine with wedge ribbed belt drive (Poly-V)

		A	B	C	D	E	F
BF 4 M 2012	mm	798	643	741	300	506	105
BF 4 M 2012 C	mm	798	643	835	300	600	105
BF 6 M 2012 C	mm	1015	628	920	300	600	105

► Technical data

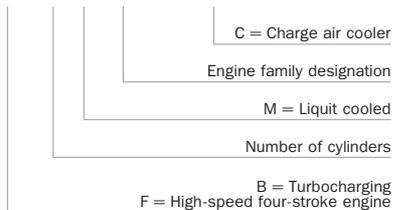
Engine type		BF 4 M 2012	BF 4 M 2012 C	BF 6 M 2012 C
Number of cylinders		4	4	6
Bore/stroke	mm	101/126	101/126	101/126
Displacement	l	4.04	4.04	6.06
Compression ratio		19	19	19
Max. rated speed	rpm	2500	2500	2500
Mean piston speed	m/s	10.5	10.5	10.5

Power ratings for construction equipment engines ¹⁾

Power ratings for industrial engines ²⁾	kW	74.9	103	155
at speed	rpm	2500	2500	2500
Mean effective pressure	bar	8.9	12.2	12.3
Max. torque	Nm	390	493	743
at speed	rpm	1500	1500	1500
Minimum idle speed	rpm	800	800	800
Specific fuel consumption ³⁾	g/kWh	208	202	202
Weight to DIN 70020, part 7A ⁴⁾	kg	391	391	509

► Modell designation

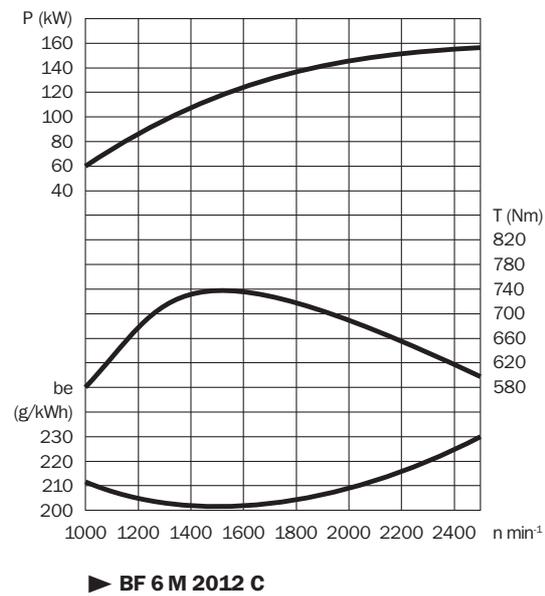
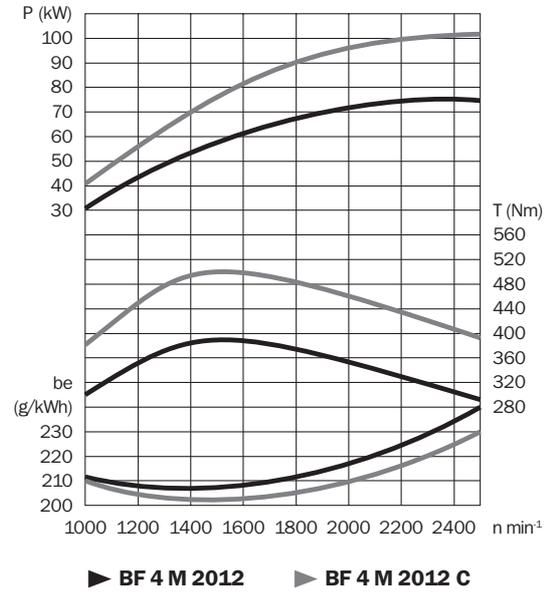
BF 6 M 2012 C



- 1) Power ratings without deduction of fan power requirement.
- 2) Fuel stop power to ISO 3046/1.
- 3) Specific fuel consumption based on diesel fuel with a specific gravity of 0.835 kg/dm³ at 15°C.
- 4) Without starter motor/alternator, radiator and liquids, however with flywheel and flywheel housing.

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

► Standard engines





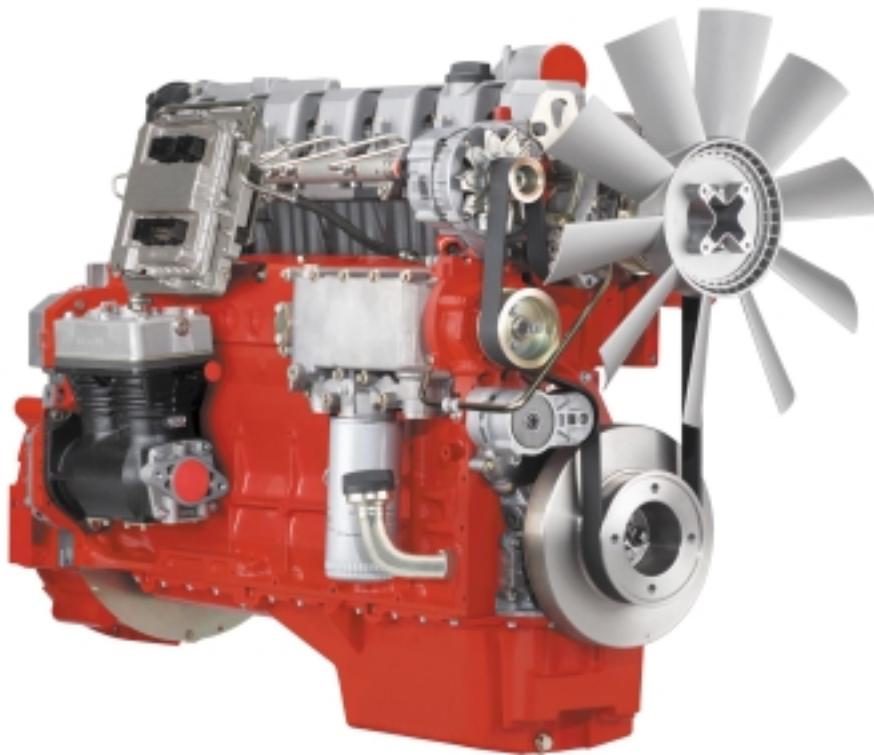
The engine company.

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TCD 2013

The Gen Engine.
250 – 263 kW at 1500/1800 rpm



The engine company.



Engine description

Engine:	4 stroke diesel engine with direct injection.
Turning direction:	At flywheel side to the left.
Cylinder configuration:	Standing in line.
Crankcase/cylinder:	Crankcase of grey cast iron, wet liners.
Cylinder head:	Greycast block type cylinder head.
Valve arrangement/timing:	Hanging in cylinder head, two intake and exhaust valves each, actuated via tappets, pushrods and rocker arms, driven by camshaft in bi-metal bearings.
Camshaft drive:	From the camshaft via straight, high toothed spur gears.
Crankshaft bearings:	Tri-metal bearings.
Connecting rod bearings:	Four-metal, tri-metal sliding bearing.
Turbocharging:	Wastegate turbocharger with charge air cooling (air/air).
Lubrication:	Forced-feed circulation lubrication.
Lubricating oil filter:	One microfilter in full-flow.
Injection pump:	Two high-pressure plug pumps.
Injector:	7-hole nozzle in Injector.
Governor:	Electronical speed governor (EMR3).
Fuel lift pump:	Gear driven gear pump.

Characteristics

Modern, liquid-cooled 6-cylinder in-line engines | Turbocharged with intercooler | Powerful, rugged engine providing high power density | Electronic engine control EMR 3 | High-pressure fuel injection with DEUTZ Common Rail System (DCR®)

Your benefits

- Low noise emission: Lower costs for sound deadening.
- Low fuel and oil consumption and long service intervals save operating cost.
- Very good load characteristics.
- Simple and cost efficient installation due to low weight and small installation space requirements.
- Low exhaust emissions, meets EC regulation step II.

Engine type

		TCD 2013 L6 4V	
Number of cylinders		6	
Bore/stroke	mm	108/130	
Displacement	l	7.15	
Compression ratio		1 : 18.1	
Weight incl. cooling system and air filter	kg	955	

	50 Hz 1500 rpm	60 Hz 1800 rpm
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Power output LTP ¹⁾

Gross output	kW HP	250 336	263 354
Flywheel net	kW HP	238 320	243 327

Fuel consumption ²⁾

25 % load	g/kWh lb/hp-hr	233 0.383	254 0.417
50 % load	g/kWh lb/hp-hr	229 0.376	241 0.396
75 % load	g/kWh lb/hp-hr	213 0.350	225 0.369
100 % load	g/kWh lb/hp-hr	200 0.328	206 0.338

Cooling system/heating balance

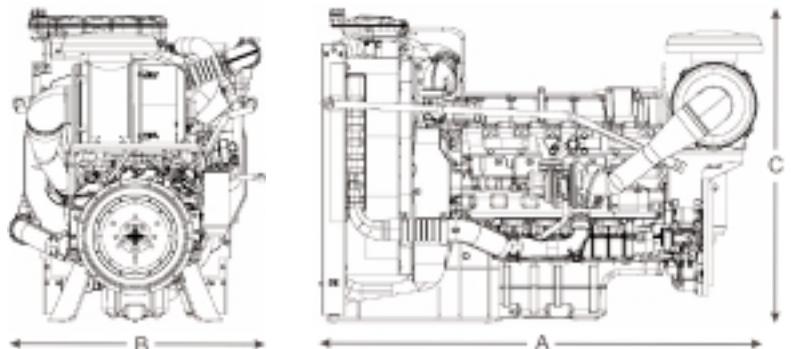
Water cooler	kW HP	122 164	130 175
Chargeair cooler	kW HP	48 65	57 77
Convection	kW HP	25 34	26 35
Fan power	kW HP	12 16	20 27
Cooling air volume flow	m ³ /h	16200	21240

Combustion air/emissions

max. intake vacuum	mbar	30	30
Combustion air volume flow	m ³ /h	909	1027
max. exhaust gas temperature	°C	530	490
Exhaust gas volume flow	m ³ /h	2550	2740

Dimensions

	A	B	C
TCD 2013 L6 4V			
mm	1865	1057	1315
inch	73.4	41.6	51.8



1) Power ratings acc. to ISO 8528, rating category G3 acc. to ISO 8528-5

2) based on diesel fuel with a specific gravity of 0.835 kg/dm³ at 15° C (6.96 lb/US gallon at 60° F).

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