



Diesel engine D 2866 LXE20  
Technical Data

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Engine type:	four-stroke, direct-injection		
Cylinders :	6 cylinder in line, wet replaceable cylinder liners		
Aspiration :	turbocharger, intercooler		
Cooling :	water circulation by centrifugal pump on engine		
Lubrication:	force-feed lubrication by gear pump, lubricating oil cooler in cooling water circuit of engine		
Injection:	Bosch in-line pump with mechanical speed governor		
Generator:	Bosch three-phase generator with rectifier and transistorized governor, 28 V, 35 A		
Starter motor:	Bosch solenoid-operated starter, typ KB, 24 V, 5,4 kW		
Bore :	128 mm	Starter battery capacity:	143 Ah (24V)
Stroke :	155 mm	Filling capacities:	
Volume :	11,967 l	- Engine lube oil for	
		standard oil sump (min.):	14 l
		standard oil sump (max.):	18 l
Compression ratio:	15,5:1		
Cooling water temperature:		Inertia moments (SI-Unit):	
- under normal conditions	90° C	- engine and vibration damper :	0,914 kgm <sup>2</sup>
- short period under extreme conditions	95° C	- flywheel for :	
- before start of full load (min.)	40° C	generator drive 1500 rpm :	2,412 kgm <sup>2</sup>
		generator drive 1800 rpm :	---
Filling capacities:			
- engine cooling water abt.:	13,3 l	Steady-state speed accuracy (speed droop)	
- cooling water for radiator with pipe system abt.:	20,5 l	- constant speed	4-5%
		(at ISO standard rating)	



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speed	rpm	1500	1500	1500	1800	1800	1800	1800
Nominal rating <sup>1)</sup>	kW	190	244	270	200	218	280	313
	HP	258	332	367	272	296	381	426
Mean effective pressure	bar	12,7	16,3	18	11,1	12,1	15,6	17,4
Torque	Nm	1210	1553	1719	1061	1157	1486	1661
Rating for governing purpose only <sup>1)</sup>	kW	209	268	297	220	240	308	344
	HP	284	364	404	299	326	419	468
Mean effective pressure	bar	14	17,9	19,9	12,3	13,4	17,2	19,2
Torque	Nm	1331	1706	1891	1167	1273	1634	1825
Mean piston velocity	m/s	7,75	7,75	7,75	7,75	7,75	7,75	7,75
Fuel consumption (+5% tolerance)								
Nominal rating								
1/1 load	g/kWh	203	206	201	206	208	205	208
3/4 load	g/kWh	205	206	199	208	210	207	205
1/2 load	g/kWh	210	212	202	214	213	211	209
Lube oil consumpt. max.	g/h	193	250	270	200	227	280	325
Air for combustion	m <sup>3</sup> /h	660	1040	1350	1180	1230	1370	1600
Negative pressure at air filter outlet, max. permissible	hPa	30	30	30	30	30	30	30
Exhaust gas heat <sup>2)</sup>	KW	90	157	233	120	124	180	285
Exhaust gas temp <sup>2)</sup>	°C	395	480	540	420	424	430	470
Exhaust gas mass flow	kg/h	800	1260	1620	1430	1470	1650	1920
Exhaust gas vol. flow <sup>2)</sup>	m <sup>3</sup> /h	1530	2720	3780	2864	2935	3330	4090
Exhaust gas back pressure max. permissible	hPa	60	60	60	60	60	60	60
Jacket water heat non-cooled exhaust manifold	kW	92	100	103	90	95	106	125
Minimum cooling water circulation	l/min	350	350	350	350	350	350	350
Intercooler heat rate	kW	27	33	51	27	29	45	71
Cooling air requirements for fan-cooled radiator	m <sup>3</sup> /h	21200	21200	21200	21200	24500	24500	24500
Power input for fan	kW	11	11	11	18	18	18	18
Radiation heat	kW	28	35	40	27	28	37	55
Noise at 1 m distance (excl. fan)	dB(A)	95	95	95	97	97	97	97
Weight (dry, with cooling system)	kg	1120	1120	1120	1120	1120	1120	1120

<sup>1)</sup> The nominal ratings are based on reference conditions according to 298 K ( 25° Celsius ) air temperature, 100 kPa ( 1000 mbar ) air pressure, 60 % air humidity; deratings for site conditions to be taken into account.

<sup>2)</sup> Data are for engine with non-cooled exhaust manifold.

<sup>3)</sup> Power rating definitions according to ISO 8528-1. Output-related data are referred to the maximum rating specified for each speed.

Technical data are subject to alterations.