



Diesel engine D 2842 LE21x
 Technical Data
 preliminary

Engine type:	four-stroke, direct-injection			
Cylinders :	12 cylinder in V-form, 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 integrated, electromagnetic actuator			
Generator:	Bosch three-phase generator, 80 A			
Starter motor:	Bosch solenoid-operated starter, typ KB, 24 V, 6.6 kW			
Bore :	128 mm	Starter battery capacity	180 Ah (24V)	
Stroke :	142 mm	Filling capacities:		
Volume :	21.927 l	Engine lube oil for		
Compression ratio:	15.5:1	- oil sump standard (min./max.)	24 / 32 l	
		- oil sump shallow (min./max.)	22 / 30 l	
		- oil sump only for LE 202 (min./max.)	40 / 90 l	
Cooling water temperature:	LE 211	LE 213	Inertia moments (SI-Unit):	
- under normal conditions	90 °C	100 °C	- engine and vibration damper	1.316 kgm ²
- short period under extreme conditions	95 °C	105 °C	- flywheel for generator drive 1500 rpm (1-bearing)	2.412 kgm ²
- before start of full load (min.)	40 °C	40 °C	generator drive 1500 rpm (2-bearing)	4.120 kgm ²
			generator drive 1800 rpm	2.412 kgm ²
Permissible charge air temperature after cooler:			Steady-state speed accuracy (speed droop)	
- at 25°C ambient temp.	50 °C	50 °C	- electronic speed governor	0 - 8 %
- at 45°C ambient temp.	60 °C	70 °C	Exhaust gas back pressure max. permissible	60 hPa
Filling capacities:			Negative pressure at air filter outlet, max. permissible (in a new condition/ after usage)	30 / 60 hPa
- engine cooling water abt.	23 l			
- cooling water for radiator with pipe system abt.	75 l			



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		LE211 (PRP)	LE213 (LTP)
speed	rpm	1500	1500
ISO net brake fuel stop rating	kW	640	690
Mean effective pressure	bar	23.4	25.2
Torque	Nm	4074	4393
ISO Standard rating ¹⁾	kW	582	
Mean effective pressure	bar	21.2	
Torque	Nm	3705	
Mean piston velocity	m/s	7.1	7.1
Specific fuel consumption ¹⁾			
100% load	g/kWh	202	206
75% load	g/kWh	200	201
50% load	g/kWh	201	200
Lube oil consumpt. max.	g/h	585	710
Air for combustion	m ³ /h	2370	2770
Exhaust gas heat ²⁾	KW	496	608
Exhaust gas temp. after turbocharger ²⁾	°C	570	590
Exhaust gas mass flow	kg/h	2860	3350
Exhaust gas vol. flow ²⁾	m ³ /h	6935	8315
Jacket water heat ²⁾	kW	235	260
Minimum cooling water circulation	l/min	700	700
Intercooler heat rate	kW	85	125
Intercooler heat temp. before cooler	°C	165	195
Residual energy (radiation, etc.)	kW	56	62
Cooling air requirements for fan-cooled radiator	m ³ /h		35780
Power input for fan	kW	17	17
Noise pressure level at 1 m distance (incl. fan)	dB(A)		
Weight including cooling system (dry)	kg	1770	1770

¹⁾ The nominal ratings and the specific fuel consumption are based on DIN ISO 3046/1, reference conditions according to 298 K (25° Celsius) air temperature, 100 kPa (1000 mbar) air pressure, 60 % relative air humidity; deratings for site conditions to be taken into account. Definition of engine application to ISO 8528-1

²⁾ Data are for engine with non-cooled exhaust manifold.

The power-related data of LE 211 refer to the ISO standard rating and those of LE 213 to the ISO net brake fuel stop power.

Technical data are subject to alterations.



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		LE211 (PRP)	LE213 (LTP)
speed	rpm	1800	1800
ISO net brake fuel stop rating	kW	750	800
Mean effective pressure	bar	22.8	24.3
Torque	Nm	3979	4244
ISO Standard rating ¹⁾	kW	682	
Mean effective pressure	bar	20.7	
Torque	Nm	3618	
Mean piston velocity	m/s	8.52	8.52
Specific fuel consumption ¹⁾			
100% load	g/kWh	205	213
75% load	g/kWh	201	202
50% load	g/kWh	205	203
Lube oil consumpt. max.	g/h	695	852
Air for combustion	m ³ /h	2935	3395
Exhaust gas heat ²⁾	KW	590	767
Exhaust gas temp. after turbocharger ²⁾	°C	555	610
Exhaust gas mass flow	kg/h	3545	4110
Exhaust gas vol. flow ²⁾	m ³ /h	8425	10390
Jacket water heat ²⁾	kW	252	282
Minimum cooling water circulation	l/min	840	840
Intercooler heat rate	kW	120	168
Intercooler heat temp. before cooler	°C	180	210
Residual energy (radiation, etc.)	kW	67	74
Cooling air requirements for fan-cooled radiator	m ³ /h		46010
Power input for fan	kW	28	28
Noise pressure level at 1 m distance (incl. fan)	dB(A)		
Weight including cooling system (dry)	kg	1770	1770

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