

MARINE

Auxiliary gensets



MAN Engines



MAN ENGINES AS AUXILIARY GENSETS

Renowned manufacturers of auxiliary gensets and emergency gensets often use MAN engines. Reliable, durable and economical, MAN engines serve their purpose well in the power range from 190 kW to 800 kW.





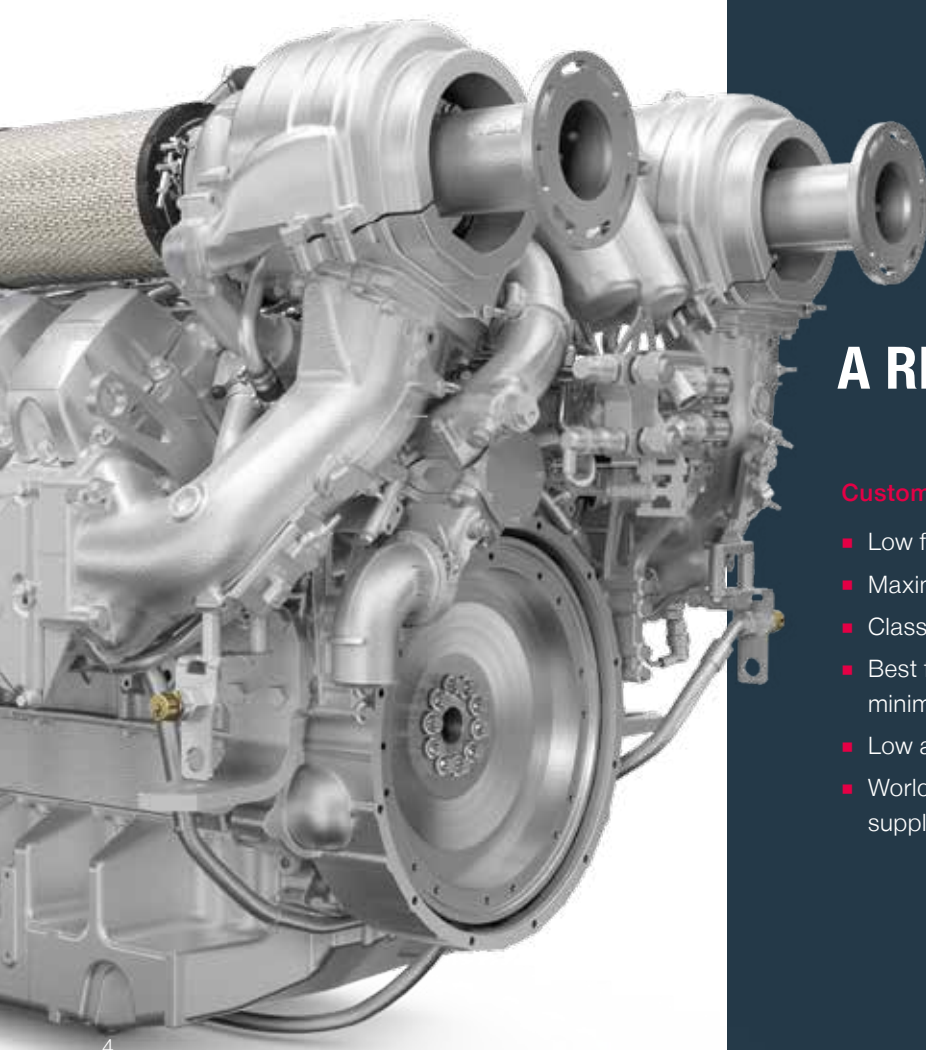
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Description of engines

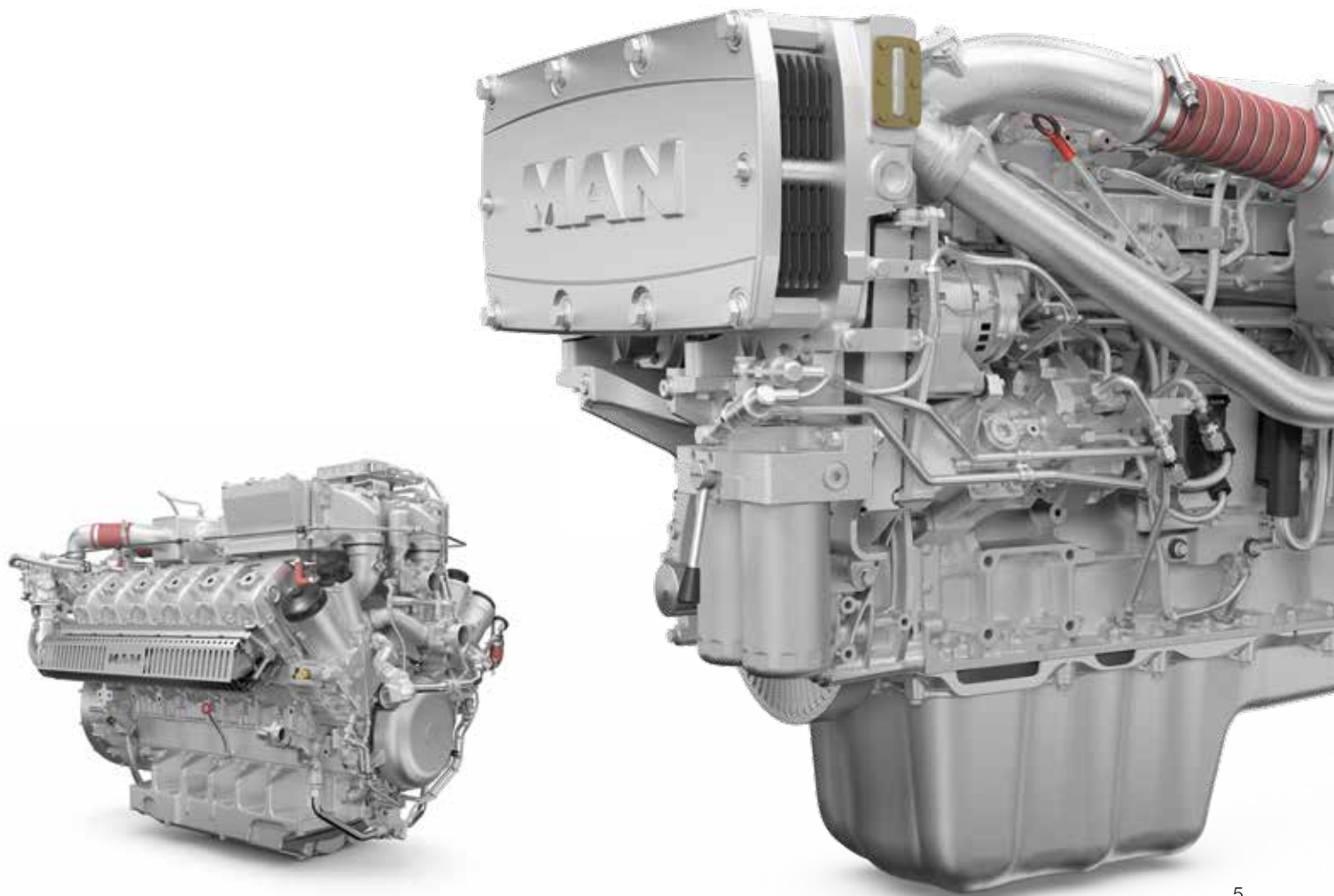
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A RELIABLE DRIVING FORCE

Customer Benefits

- Low fuel consumption in a wide range of engine loads
- Maximum power output with a quick load pick-up
- Class-leading compactness for a space-saving design
- Best fuel consumption values and long service intervals minimizing the TCO
- Low acoustics and low vibrations
- World-wide service network with rapid spare parts supply



AUXILIARY GENSETS

Characteristics

- Annual operating hours: $\leq 5\,500\text{ h}$
- Average load application: $\leq 75\%$

EMERGENCY GENSETS

Characteristics

- Annual operating hours: $\leq 1\,000\text{ h}$
- Average load application: unlimited

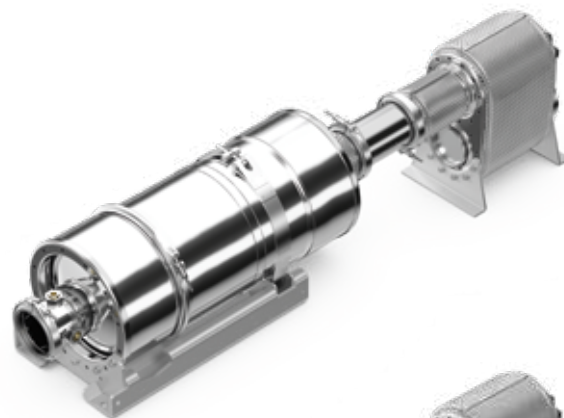


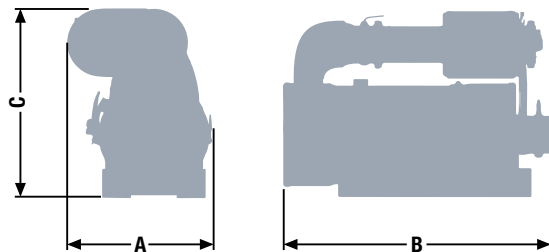


EXHAUST AFTERTREATMENT

Flexibility makes use of free space – also when it comes to exhaust gas aftertreatment: Individual components of the modular EGA kit from MAN Engines, which can be positioned variably, enable a wide range of installation variants as well as maximum design freedom when installed in machinery and vehicles.

Alternatively, pre-defined complete systems offer practical, space-saving solutions.

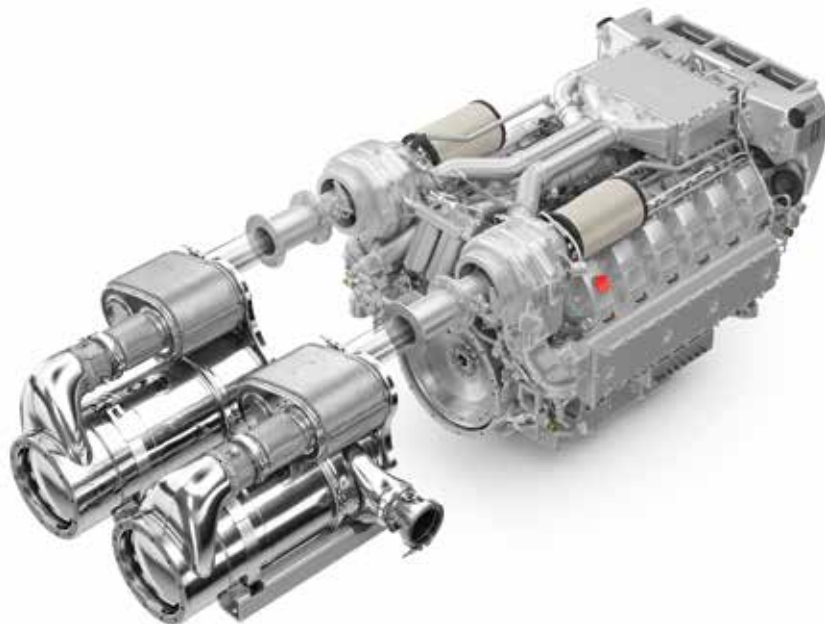




Dimensions

Type designation		SCR system
A-Overall width	mm	500
B-Overall length	mm	950
C-Overall height	mm	655
Average weight of SCR system	kg	115

For detailed examinations of installation dimensions, please order drawings from our factory.



WARRANTY

MAN Warranty Relaxing and calculable

With MAN engines for marine gensets you are on the safe side since MAN Engines goes one step further. With the **“Work Plus”** Warranty you do not only extend the warranty for your engine, but it also gives you the certainty and peace of mind that you have made the right decision. In practice this means an additional year of safety for you and your engine plus attractive pricing which makes this offer even more appealing.





Two years' warranty on MAN service and parts: Higher quality, more time

We know that MAN Genuine Parts are characterised by their quality and precise fit. Combined with the qualified and professional work at MAN service centres, they ensure reliability: reduced downtimes and a longer service life. We are now passing this security on to you. Instead of the one year we offer now the two years' warranty on MAN Genuine Parts and MAN Genuine Parts ecoline. That means double the security for you.

The MAN Truck & Bus AG two-year warranty is valid for all repairs carried out at MAN service centres ¹⁾ from 2017 ²⁾ onwards, including repairs where MAN Genuine Parts and MAN Genuine Parts ecoline are fitted. The scope of service is identical to the previously valid one-year warranty. Please refer to our General Terms & Conditions for more information.

We cover the following costs as part of a warranty case:

- Costs for work time and spare parts directly related to the repair of the defect or to the exchange of faulty parts.
- Installation and removal costs are covered if the original scope of delivery also included the installation of the part ³⁾.
- Certain additional costs are covered after inspection, night time/weekend charges, on-site repairs, courier costs.

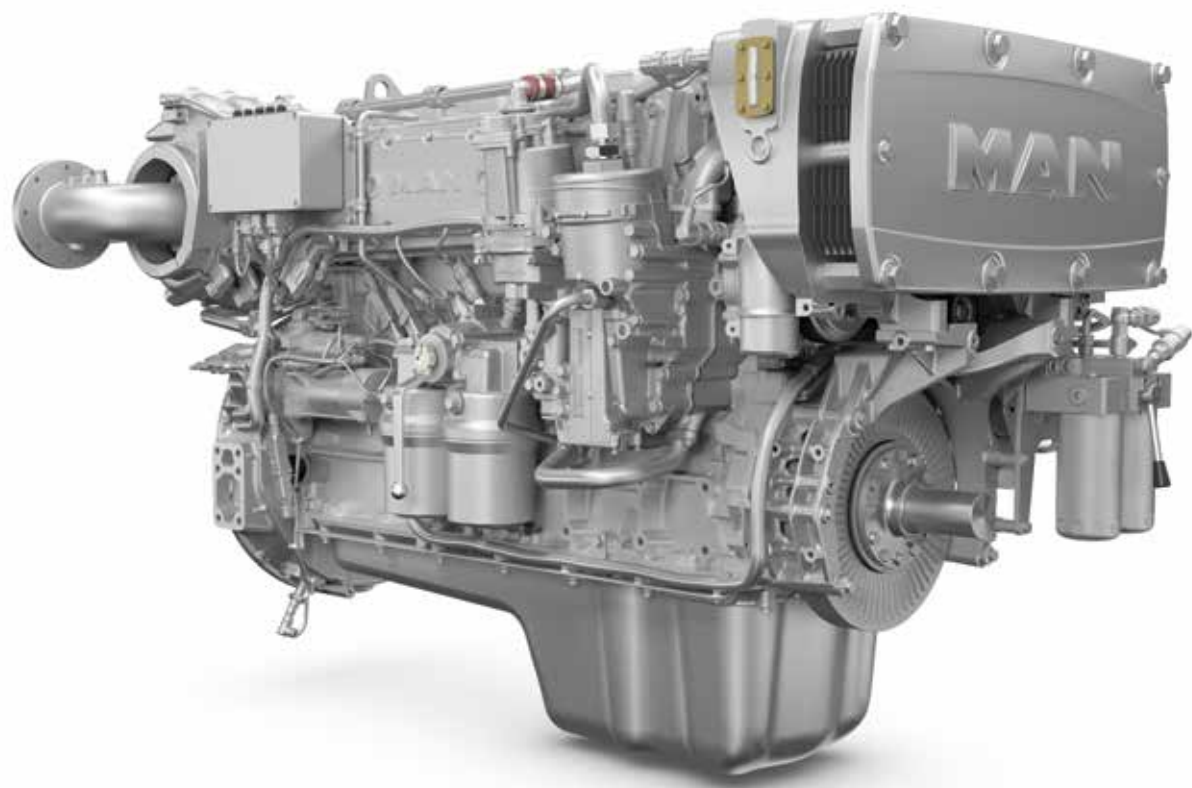
Our genuine engines deserve MAN Genuine Parts – now with two years' warranty.

1) MAN-owned service outlets and participating partners

2) See validity of the General Terms & Conditions

3) Installation and removal costs are not covered in the case of counter sales

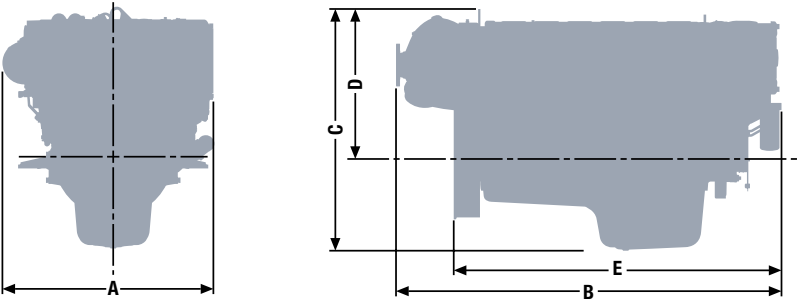
D2676



Characteristics

- Cylinders and arrangement: 6 cylinders in-line
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Turbocharger with charge air intercooler and wastegate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection with electronic control
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Force-feed lubrication, lubrication oil cooler in the cooling water circuit of the engine
- Type of cooling: Heat exchanger with engine and seawater circuit or for keel cooling
- Engine control: Electronic engine monitoring including diagnostic unit
- Fuel: DIN EN 590

D2676



Dimensions

Type designation		LE 321/322/323/327/328/332
A-Overall width	mm	983
B-Overall length	mm	1,763
C-Overall height – standard oil pan	mm	1,103
D-Top of engine to crankshaft centre	mm	686
E-Length of engine from front end to edge of flywheel housing	mm	1,494
Average weight of engine ready for installation (dry)	kg	1,251

For detailed examinations of installation dimensions, please order drawings from our factory.

Technical features

Type designation		Auxiliary gensets			
		LE 332		LE 322	
Rated speed	rpm (Hz)	1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
Displacement	l	12.42	12.42	12.42	12.42
Nominal rating ¹⁾	kW (hp)	190 (258)	220 (299)	280 (381)	330 (449)
Specific fuel consumption at rated power	g/kWh	210	208	203	199
Specific fuel consumption at 75% load ¹⁾	g/kWh	213	213	205	201
Classifiable		✓	✓	✓	✓
Exhaust gas aftertreatment		–	–	–	–
Exhaust gas status		IMO Tier II	IMO Tier II	IMO Tier II	IMO Tier II

1) Tolerance +5% according to DIN ISO 3046-1

D2676

Technical features

		Auxiliary gensets			
Type designation		LE 328		LE 327	
Rated speed	rpm (Hz)	1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
Displacement	l	12.42	12.42	12.42	12.42
Nominal rating ¹⁾	kW (hp)	295 (401)	295 (401)	360 (490)	410 (558)
Specific fuel consumption at rated power	g/kWh	196	200	195	202
Specific fuel consumption at 75% load ¹⁾	g/kWh	197	202	195	199
Classifiable		✓	✓	✓	✓
Exhaust gas aftertreatment		✓	✓	✓	✓
Exhaust gas status		IMO Tier III	IMO Tier III	IMO Tier III	IMO Tier III

1) Tolerance +5% according to DIN ISO 3046-1

Auxiliary gensets		Emergency gensets	
LE 321		LE 323	
1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
12.42	12.42	12.42	12.42
375 (510)	445 (605)	375 (510)	445 (605)
200	198	200	198
200	197	200	197
✓	✓	✓	✓
–	–	–	–
IMO Tier II	IMO Tier II	IMO Tier II	IMO Tier II

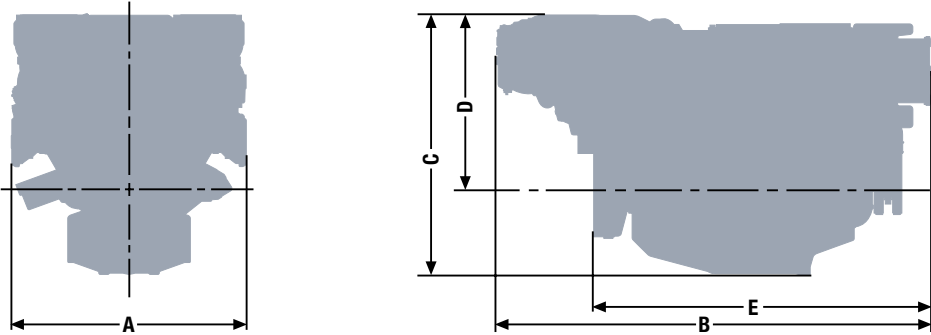
D2862



Characteristics

- Cylinders and arrangement: 12 cylinders in 90° V arrangement
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Turbocharger with charge air intercooler and wastegate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection with electronic control
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Plate heat exchanger, seawater circuit or for keel cooling
- Engine control: Electronic engine monitoring including diagnostic unit
- Fuel: DIN EN 590

D2862



Dimensions

Type designation		LE 321/323/324	LE 327	LE 322/325	LE 328
A-Overall width	mm	1,273	1,151	1,273	1,151
B-Overall length	mm	2,129	2,003	2,119	2,023
C-Overall height – standard oil pan	mm	1,282	1,268	1,305	1,281
D-Top of engine to crankshaft centre	mm	815	803	838	816
E-Length of engine from front end to edge of flywheel housing	mm	1,629	1,608	1,629	1,608
Average weight of engine ready for installation (dry)	kg	2,280	2,280	2,280	2,280

For detailed examinations of installation dimensions, please order drawings from our factory.

Technical features

		Auxiliary gensets			
Type designation		LE 322		LE 325	
Rated speed	rpm (Hz)	1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
Displacement	l	24.24	24.24	24.24	24.24
Nominal rating ¹⁾	kW (hp)	600 (816)	700 (952)	600 (816)	700 (952)
Specific fuel consumption at rated power	g/kWh	196	200	196	202
Specific fuel consumption at 75% load ¹⁾	g/kWh	198	202	199	202
Classifiable		✓	✓	✓	✓
Exhaust gas aftertreatment		–	–	–	–
Exhaust gas status		IMO Tier II	IMO Tier II	IMO Tier II, NRMM stage 3A (2012/46/EC)	IMO Tier II, NRMM stage 3A (2012/46/EC)

1) Tolerance +5% according to DIN ISO 3046-1

D2862

Technical features

		Auxiliary gensets			
Type designation		LE 328		LE 321	
Rated speed	rpm (Hz)	1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
Displacement	l	24.24	24.24	24.24	24.24
Nominal rating ¹⁾	kW (hp)	600 (816)	700 (952)	700 (952)	800 (1088)
Specific fuel consumption at rated power	g/kWh	195	199	197	198
Specific fuel consumption at 75% load ¹⁾	g/kWh	196	199	198	201
Classifiable		✓	✓	✓	✓
Exhaust gas aftertreatment		✓	✓	–	–
Exhaust gas status		IMO Tier III	IMO Tier III	IMO Tier II	IMO Tier II

1) Tolerance +5% according to DIN ISO 3046-1

Auxiliary gensets				Emergency gensets	
LE 324		LE 327		LE 323	
1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)	1,500 (50)	1,800 (60)
24.24	24.24	24.24	24.24	24.24	24.24
700 (952)	800 (1088)	700 (952)	800 (1088)	700 (952)	800 (1088)
198	199	199	202	197	198
201	201	197	201	198	201
✓	✓	✓	✓	✓	✓
–	–	✓	✓	–	–
IMO Tier II, NRMM stage 3A (2012/46/EC)	IMO Tier II, NRMM stage 3A (2012/46/EC)	IMO Tier III	IMO Tier III	IMO Tier II	IMO Tier II

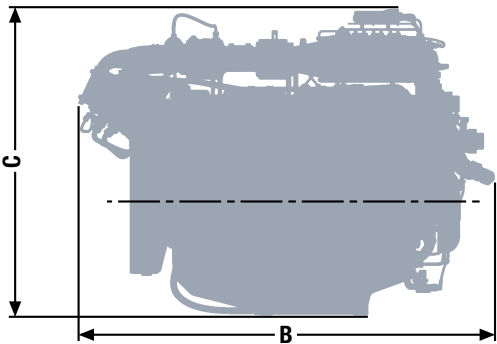
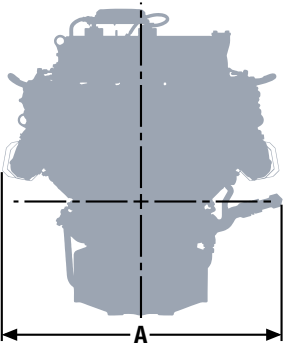
E3262



Characteristics

- Cylinders and arrangement: 12 cylinders in 90° V arrangement
- Operation mode: 4-stroke spark-ignition gas engine
- Turbocharging: Oil lubricated turbochargers with wet bearing block and wet turbine housing
- Number of valves: 4 valves per cylinder
- Exhaust pipes: Dry exhaust pipes with heat insulation cover and cover against direct contact
- Fuel: Natural gas

E3262



Dimensions

Type designation		LE 201
A-Overall width	mm	1,260
B-Overall length	mm	1,870
C-Overall height – standard oil pan	mm	1,365
Average weight of engine ready for installation (dry)	kg	1,849

For detailed examinations of installation dimensions, please order drawings from our factory.

Technical features

Type designation		Auxiliary genset	
		LE 201	
Rated speed	rpm (Hz)	1,500 (50)	1,800 (60)
Bore	mm	132	132
Stroke	mm	157	157
Displacement	l	25.78	25.78
ISO standard power ¹⁾	kW (hp)	500 (680)	580 (789)
Air-fuel ratio	λ	1.64	1.64
Coolant heat ²⁾	kW	255	292
Exhaust heat based on 120 °C ²⁾	kW	233	256
Efficiency ²⁾ : mechanical – thermal – total	%	41.8 – 45.3 – 87.1	39.5 – 46.5 – 86.0
Classifiable		✓	✓
Emission status NO _x ³⁾	mg/Nm ³	500	500
Exhaust gas status		IMO Tier III ready	IMO Tier III ready

1) Tolerance +5% according to DIN ISO 3046-1

2) at 100% load

3) with 5 % exhaust-gas oxygen

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