

MAN B&W two-stroke engines

Fuel-flexible efficiency

MAN two-stroke engines are super-heroes with multiple powers, their first one being their multifuel operation. Originally developed for traditional liquid fuels, the engines also run on cleaner fuels like natural gas, LNG, methanol, and LPG, plus a wide range of biofuels. The next superpower of the MAN B&W two-stroke engines is their high efficiency. The engines' efficiency

levels are above 50 % at MCRs of between 50 % and 100 %. Additional equipment like the turbo compound system or combined-cycle application can increase the efficiency even further.

Proven by the fact that our two-stroke engines move more than half of the world's seagoing trade, their most valued superpower is their reliability.

Benefits at a glance

- High efficiency or high power performance settings
- High reliability
- Fuel and operational flexibility with liquid, gaseous, and liquid gas fuels
- Low maintenance costs

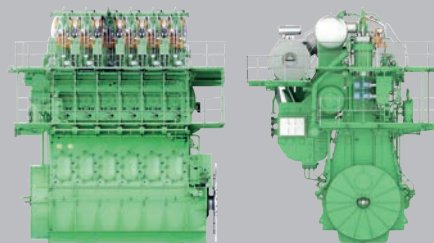


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Available cylinder versions

Cyl. No.	7L	8L	9L	10L	11L	12L
S60	✓	✓				
S70	✓	✓				
S80	✓	✓	✓			
G90	✓	✓	✓	✓	✓	✓



Output

Engine type		S60ME-S S60ME-GI-S S60ME-LGI-S	S70ME-S S70ME-GI-S S70ME-LGI-S	S80ME-S S80ME-GI-S S80ME-LGI-S	G90ME-S G90ME-GI-S G90ME-LGI-S
Power range	kWm	13,860 – 18,720	19,250 – 26,160	26,460 – 38,700	34,300 – 67,680
Speed 50 Hz	r/min		103.4	90.9	83.3
Speed 60 Hz	r/min		102.9	90.0	83.7

Values according to ISO 3046-1:2002; ISO 15550:2002. Last updated June 2020

Engine features

General data

- Engine cycle: two-stroke
- Engine type: S60, S70, S80, G90
- Fuel: Single fuel, dual fuel (liquid gas), dual fuel (gas)
- Electronically controlled stationary engine

Engine emissions

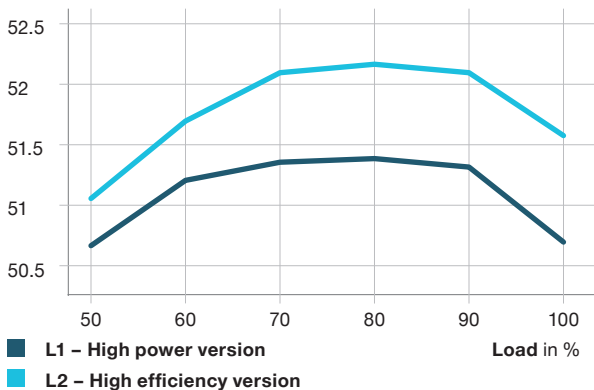
- WB2008
- Depending on fuel type even lower
- With available after-treatment solutions even much lower

Similarity between stationary and marine applications

- 95 % similarity between stationary and marine engines
- All technological improvements are shared

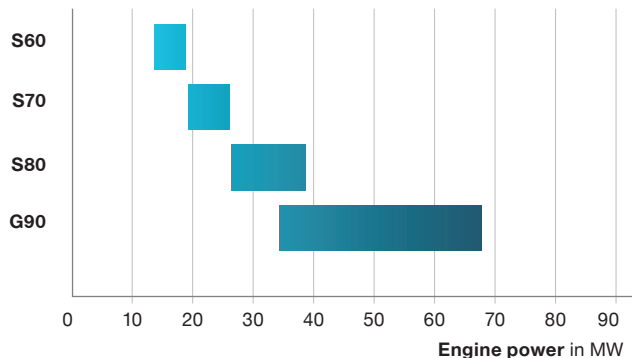
Engine efficiency vs. load

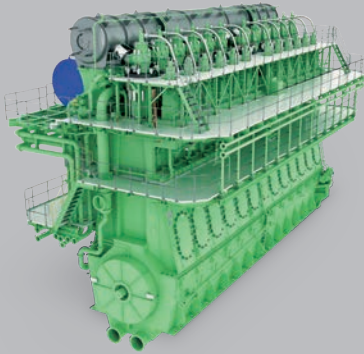
Engine efficiency in %



Power range

Engine type





MAN B&W ME-S



MAN B&W ME-GI-S



MAN B&W ME-LGI-S

Turbo compound system

- Can be used on G90 and S60 engines
- Up to 3 % reduction in combined heat rate

Fuel type

- All engines are available as single fuel and dual fuel versions

ME-S (single fuel)

- HFO
- Diesel (ISO 8217)
- MFO
- LSFO
- Crude biofuel
- Crude oil

ME-GI-S (dual fuel, gas injection)

- NG
- LNG
- Methane
- Ethane
- Pilot oil (liquid fuel as for single fuel version)

ME-LGI-S (dual fuel, liquid gas injection)

- Methanol
- LPG
- DME
- Ethanol
- Pilot oil (liquid fuel as for single fuel version)

Energy sources of diesel engines

- Heat from lube oil cooling
- Heat from jacket cooling
- Heat from scavenge cooling
- Heat from exhaust gas

Applications

- Base-load applications with high reliability and low maintenance costs
- Combined heat and power applications
- Fresh water generation

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