

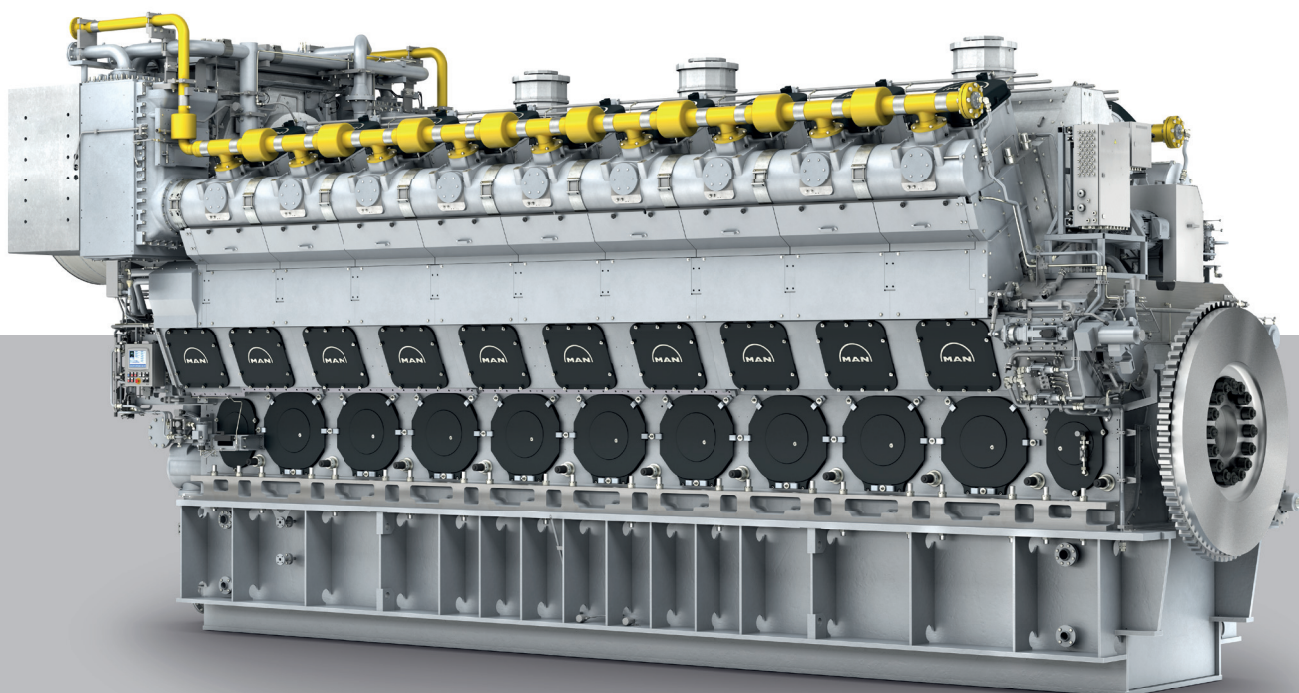
MAN

51/60DF

The MAN 51/60DF runs on either liquid or gaseous fuels and can switch seamlessly from liquid to gas and vice versa during operation, giving you the benefits of a high fuel flexibility. The engine can even be started in gas mode and requires only a very small amount of pilot fuel. Benefitting from the excellent robustness and reliability of its predecessors, the MAN 51/60DF also ensures low emissions and high efficiency.

Benefits at a glance

- Flexible operation and start up
- Start and stop in gas mode
- Full fuel flexibility with HFO, diesel, natural gas, e-methane and bio fuel
- Optimized variants for tropical conditions
- High single cycle efficiency
- Optimized performance settings



MAN 51/60DF

High efficiency and high power

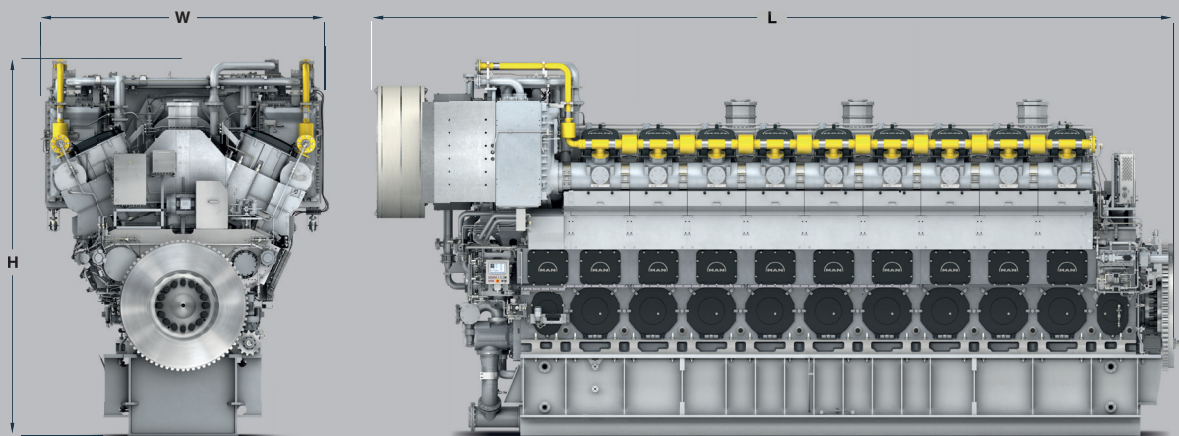
Dimensions

Cyl. No.	6L		12V		18V	
L	8,464 mm	333.2 in	9,970 mm (HE) 10,134 mm (HP)	392.5 in 399.0 in	13,489 mm	531.1 in
H	5,807 mm	228.6 in	6,450 mm	253.9 in	6,450 mm	253.9 in
W	3,156 mm	124.3 in	4,884 mm	192.3 in	4,884 mm	192.3 in
Engine weight	171.6 t	378,313 lb	293.8 t (HE) 297.6 t (HP)	647,718 lb 656,095 lb	416.8 t	918,887 lb

Output

Cyl. No.	6L		12V		18V	
Output mech.	kW	6,300	6,900	12,600	13,800	18,900
Speed	rpm	500/514	500/514	500/514	500/514	500/514
Frequency	Hz	50/60	50/60	50/60	50/60	50/60

HE = high efficiency version (1,050 kW / cyl.)
HP = high power version (1,150 kW / cyl.)



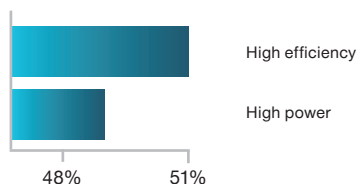
Values according to ISO 3046-1:2002; ISO 15550:2002. Last updated November 2023

Engine Features

General data

- Engine cycle: four-stroke
- No. of cylinders: 6L, 12V, 18V
- Bore: 510 mm / 20.08 in,
Stroke: 600 mm / 23.62 in

Fuel efficiency comparison



Engine automation and control

- MAN SaCoS_{one} safety and control system on engine, developed by MAN

Turbocharging system

- MAN constant pressure turbocharging system
- Individual engine / turbocharger optimization matching on site

Fuel & gas system

- Common rail pilot fuel injection system
- Amount of pilot fuel ~1%
- Seamless switch from liquid to gas during operation

- Robust conventional main injection system
- Low pressure gas system (5 bar(g) / 72.52 psi at inlet of gas valve unit)

Starting system

- Starting air valves in cylinder head

Applications

- Whenever fuel flexibility is of benefit
- Locations with non-constant gas supply
- Installations with gas operation at a later date
- Locations with highly volatile fuel prices

MAN Energy Solutions

info@man-es.com

www.man-es.com