MAN Energy Solutions
Future in the making

MAN VP185

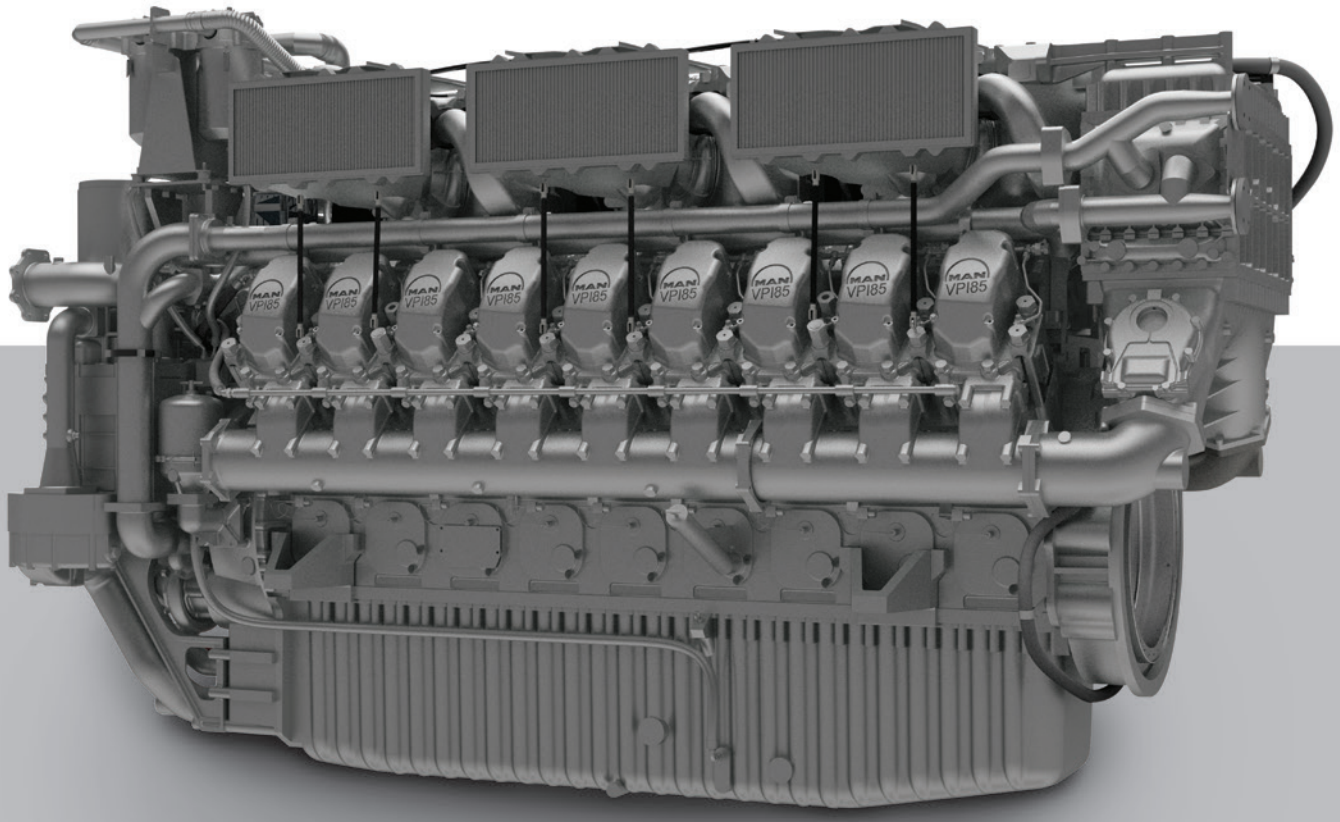
Power Generation and Industrial Drives

The MAN VP185 is a compact, medium and high-speed diesel engine which offers proven class-beating performance and reliability.

The water-jacketed exhaust system reduces radiated heat for lower ventilation requirements whilst the two-stage turbocharging arrangement provides high torque for excellent load acceptance.

Benefits at a glance

- High reliability
- High operating efficiency
- High power-to-weight/power density ratios
- Minimal derating to adverse site conditions
- Long periods between maintenance intervals
- Engine rating speed flexibility
- Fast startup and acceleration to rated speed and load applications
- High continuous power even at 1200 r/min engine speed



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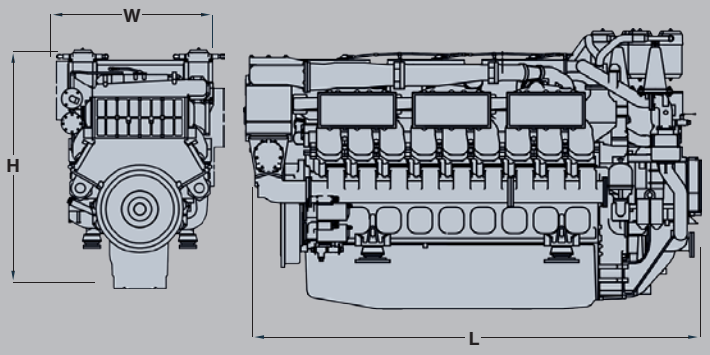
Dimensions

Cyl No		12	18
L	mm	3224	4059
H	mm	2212	2447
W	mm	1703	1703
Dry mass	t	7.7	10.8

Note: Quoted dry mass includes air filters and electric starting motors.



COP Continuous power
PRP Prime power
DCP Data centre power
LTP Limited-time running power
ESP Emergency standby power

Output

		12VP185TG	18VP185TG	12VP185TG	18VP185TG	12VP185TG	18VP185TG
Engine Speed	r/min	1200		1500		1800	
COP	kWb	2165	3175	2165	3250	2200	3300
	bhp	2903	4258	2903	4358	2950	4425
	kWe	2078	3048	2078	3120	2112	3168
PRP / DCP	kWb	2165	3175	2300	3450	2350	3500
	bhp	2903	4258	3084	4627	3151	4694
	kWe	2078	3048	2208	3312	2256	3360
LTP / ESP	kWb	2165	3175	2520	3650	2600	3700
	bhp	2903	4258	3379	4895	3487	4962
	kWe	2078	3048	2419	3504	2496	3552

Notes:

(1) Nominal ratings, subject to altitude, ambient temperature range and operating profile.

(2) Generator Drive power rating definitions to ISO 8528-1:2018 (E). Overload power for PRP applications is not permitted.

(3) Data Centre Power (DCP) meets with the requirements of the Uptime Institute's Tier III and IV standards with the generator sets being considered as the primary power source with no runtime limitations. The ratings are based on connection to a reliable utility power supply. To be approved by MAN upon receipt of full project details.

(4) The kWe power ratings are typical only and based on electrical power output at the generator terminals that may be provided by a generator set manufactured by a Generator Set Builder. The power ratings shown are based on a generator efficiency of 96% and a lagging power factor of Cosine 0.8.

(5) For Constant Speed Industrial Drive applications, the continuous power (brake) as defined in ISO 3046-1:2002 will be equal to the COP brake power.

Overload power for 1 hour in 12 hours of operation above the continuous power may be permitted in service for 1500 and 1800 r/min rated engines only and will be dependent on the service application. To be reviewed by MAN upon receipt of full project details and operating profile.

The proven MAN VP185 range of engines provides a lightweight and high power density solution for new power generation and industrial drives.

General

- Engine cycle: Four-Stroke
- No. of cylinders: 12, 18
- Bore: 185 mm - Stroke: 196 mm
- Swept volume per cyl: 5.269 litres

Fuel consumption (PRP)

- SFOC*: between 195-208 g/kWbh depending on engine speed plus tolerances

Cylinder output (PRP)

- At 1500 r/min: 192 kWb

Weight-to-power ratio (PRP)

- 3.08 - 3.56 kg/kWb

Compliance with emission regulations

- EU Stage IIIA
- EU Stage IIIB with MAN SCR*

Main features

Turbocharging system
- High efficiency two-stage turbocharging system, using multiple low inertia automotive style turbochargers within a waterjacketed housing

Engine control and monitoring
- Choice of on-engine actuators and controllers
- Standard monitoring, alarms and safety switches
- Additional safety switches for crankcase temperature and thermocouples for exhaust temperatures

Charge air
- Inter-cooled and after-cooled passive regulation of air temperature from cooler configuration

Fuel system
- Low pressure fuel system feeds unit pump injectors eliminating high pressure fuel galleries

Exhaust Gas system
- Water-cooled jackets surround the exhaust manifolds and turbochargers to provide a low engine surface temperature

Cooling system
- Primary water system with gear driven engine mounted water pump
- Secondary water system with gear driven engine mounted water pump

Starting system
- Either 2 x 9 kW DC electric starter motors in parallel or 1 x 10 bar air starter or a combination of both systems
- Hydraulic starting is also available

Engine mounting
- Four point engine feet

Optional equipment

- PTO at free end of engine
- Various equipment including jacket water heating and lube oil priming pump

*SCR = Selective Catalytic Reduction / SFOC = Specific Fuel Oil Consumption

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