

Wärtsilä 32



WÄRTSILÄ® 32 bore engines have been the preferred choice of yards, operators and owners since the 1980s, with more than 5100 engines delivered to the marine market alone. The Wärtsilä 32 is available with 6 to 16 cylinders and a power output ranging between 3 and 9.3 MW at 720 and 750 RPM. It has best-in-class power density and fuel economy over a wide operating range.

With proven reliability and low consumption of consumables, the Wärtsilä 32 represents the most efficient solution throughout the entire lifecycle of the vessel.

- Proven in service
- High reliability
- High power density
- Low fuel consumption over a wide load range
- Operates on HFO, MDO and liquid bio fuels
- Supported by Wärtsilä's global service network.

Typical application areas

The Wärtsilä 32 has a proven track record in a wide range of vessel applications. It is used for main engine applications, both direct mechanical drive as well as diesel electric, and as an auxiliary engine. It can be optimized for either constant speed or along a combinatory curve. In the merchant fleet, typical applications include use as the main

engine on different types of tankers and container vessels. In the offshore sector, the reliability of the Wärtsilä 32 has made it the most popular medium speed engine for OSVs and drilling vessels. Similarly, in the cruise and ferry sector, the Wärtsilä 32 has proven to be the most favoured engine of its size.

In auxiliary electric production, the Wärtsilä 32 is widely utilized in all vessel categories where high auxiliary load is needed.

Operational features

Its excellent fuel flexibility allows the Wärtsilä 32 to operate on HFO, MDO and liquid bio fuel with a broad range of fuel viscosities, from 2.0 cSt up to 730 cSt HFO (at 50 °C/122 °F).

The engine is able to operate efficiently and economically on low sulphur fuel oils (<0.1% S), making





it suitable for operation in emission-controlled areas. The engine can also be equipped with a SCR catalyst, such as the Wärtsilä NOR (nitrogen oxide reducer), which can reduce NO_x emissions by up to 95%. This means that, already today, the machinery is IMO Tier III compliant. The standard Wärtsilä 32 naturally fulfils IMO Tier II regulations.

The Wärtsilä 32 is equipped with a variable inlet valve closure (VIC) unit. This makes it possible to apply early inlet valve closure at high load, which in turn enables minimized NO_x levels and reduced fuel consumption. By switching to late inlet valve closure, good part load and transient performance is assured. The overall operational benefits include improved part load performance, smoke reduction, and improved load acceptance.

The engine control system incorporates automatic monitoring and control for optimal operating efficiency.

Lifecycle costs

The Wärtsilä 32 has been designed to operate reliably on a range of fuels, even the poorest quality heavy fuel. The engine is designed for long periods of maintenance-free operation and has overhaul intervals of up to 24,000 hours. This and the maintenance-friendly design reduce downtime, promote scheduling, and cut operating costs. Together with condition based maintenance and long-time service agreements, the overhaul interval time for the Wärtsilä 32 can be even further extended, thus minimizing maintenance costs and maximizing the revenue-earning capability of the vessel. The Wärtsilä 32 engine is fully compliant with the IMO Tier II exhaust emissions regulations as set out in Annex VI of MARPOL 73/7.

Wärtsilä 32		IMO Tier II or III						
Cylinder bore	320 mm	Fuel specification: Fuel oil						
Piston stroke	400 mm	700 cSt/50°C	7200 sR1/100°F					
Cylinder output	580 kW/cyl	ISO 8217, category ISO-F-RMK 700						
Speed	750 rpm	SFOC 178.8 g/kWh at ISO conditions						
Mean effective pressure	28.9 bar							
Piston speed	10.0 m/s							
Rated power								
Engine type	kW							
6L32	3 480							
8L32	4 640							
9L32	5 220							
12V32	6 960							
16V32	9 280							
Dimensions (mm) and weights (tonnes)								
Engine type	A*	A	B*	B	C	D	F	Weight
6L32	5 570	5 130	2 432	2 295	2 380	2 345	1 155	35
8L32	6 400	6 379	2 457	2 375	2 610	2 345	1 155	44
9L32	6 885	6 869	2 455	2 375	2 610	2 345	1 155	49
12V32	7 098	6 865	2 516	2 430	2 900	2 120	1 210	57
16V32	8 041	7 905	2 516	2 595	3 325	2 120	1 210	71

* Turbocharger at flywheel end.

