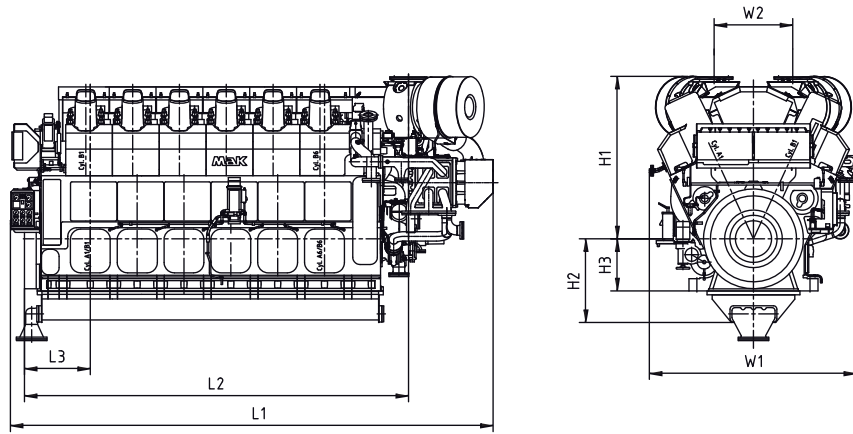


VM 32 E • Technical Data

Propulsion and diesel electric application – Turbocharger at free end



Removal of cylinder liner in transverse direction Y1 = 2,836 mm.

Minimum engine center spacing: 3,500 mm (two engines side by side).

(Dimensions in mm)

Engine	L1	L2	L3	H1	H2	H3	W1	W2	Weight (t)
12 M 32 E	6,956	5,535	949	2,319	1,205	750	2,985	1,133	65.0
16 M 32 E	8,328	6,885	949	2,319	1,205	750	2,985	1,133	82.0

	12 M 32 E	16 M 32 E
Cylinder configuration	12	16
Output	6,720 kW	8,960 kW
Revolutions	720/750 rpm	
Bore	320 mm	
Stroke	460 mm	
BMEP	25.2 / 24.2 bar	
Direction of rotation	clockwise / counter-clockwise	
Mean piston speed	11.0/11.5 m/s	
Turbocharger	single-stage charging	
Injection system	conventional pump-line-nozzle design	

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VM 32 E

New engine design optimized for
Fishing Segment



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MaK

MaK



Picture credit: 3MI Group

VM 32 E • Power, Reliability, Durability

No other marine business segment has as many concurrent expectations to fulfill as does the fishing segment. The VM 32 E engine is an ideal choice for fishing vessel operators to meet all of their demanding technical requirements. The high power density of the VM 32 E combined with its durability and reliability makes it the most preferred main engine.

Moreover, this engine complies with the IMO Tier II emissions regulations with its conventional mechanical injection system, maintenance-friendly single-stage turbocharging, and two-circuit charge air cooler. Beyond that, with an optional Cat® SCR (Selective Catalytic Reduction) system, the VM 32 E also conforms to the stringent IMO Tier III regulations and is provided with an IMO Tier III certificate ex works. This makes the VM 32 E an environmentally friendly engine with the lowest emissions values.

For load profiles with a high level of low load operation (such as covering long transit routes), optional Part Load optimization Kits (PLKs) for constant or variable speed operation are highly advisable. They ensure significant cost savings, enhance load capability and reduce smoke emissions.

With an optional Power Take-Off (PTO), the full engine output can be directed to further specific fishing equipment (such as ice makers). Therefore, it can also be powered by the main engine.



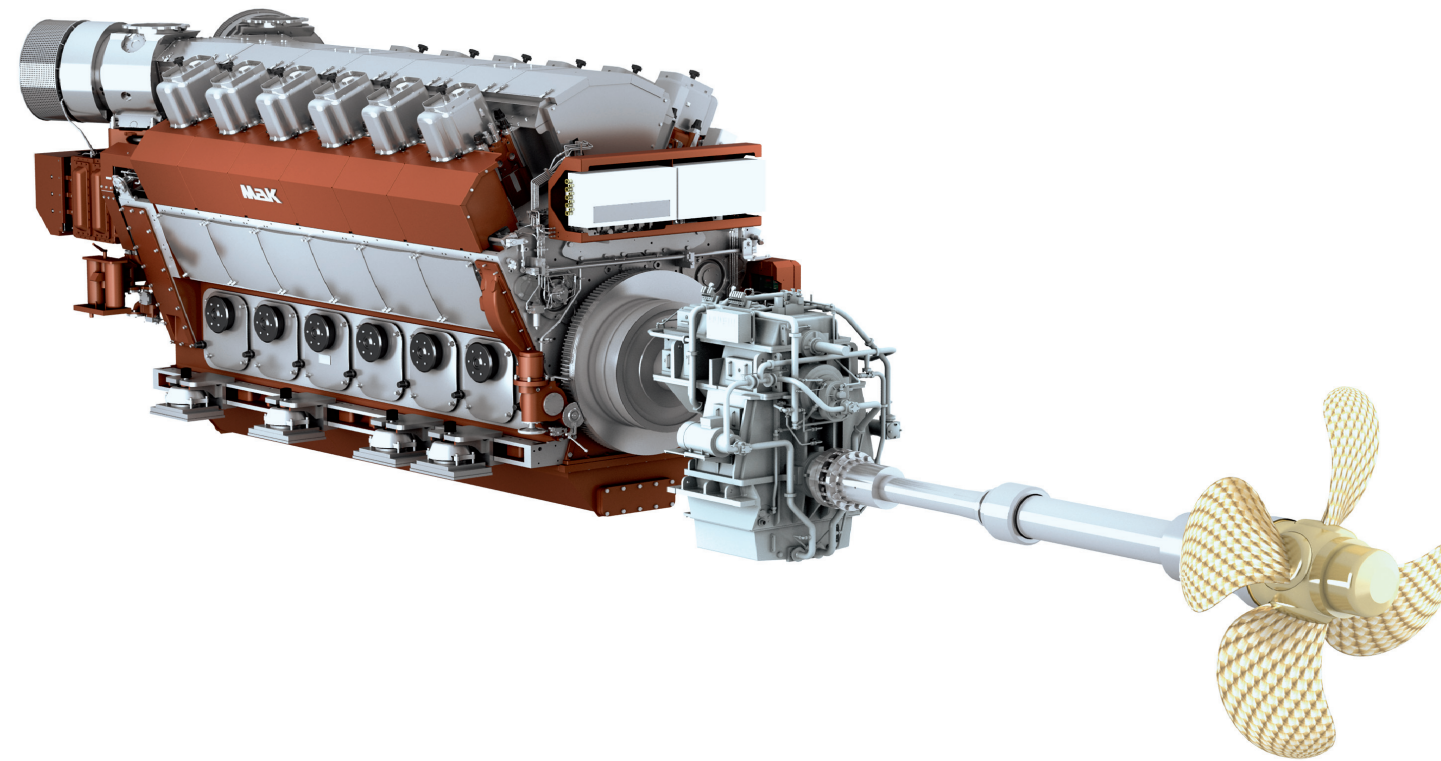
VM 32 E • Benefits and Options

Benefits

- Reliable and durable engine due to proven engine concept with mechanical injection system and maintenance-friendly turbocharger
- Low maintenance costs due to long service intervals and easy-to-maintain engine concept
- High power density due to special turbocharger matching and finely adjusted injection system
- Standard dry lubricating oil system ideal for operating in high wind forces particularly on North Sea and Baltic Sea

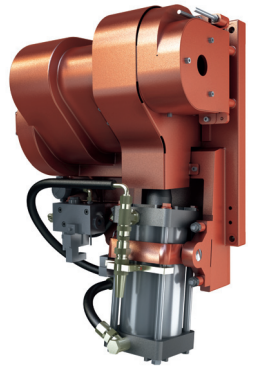
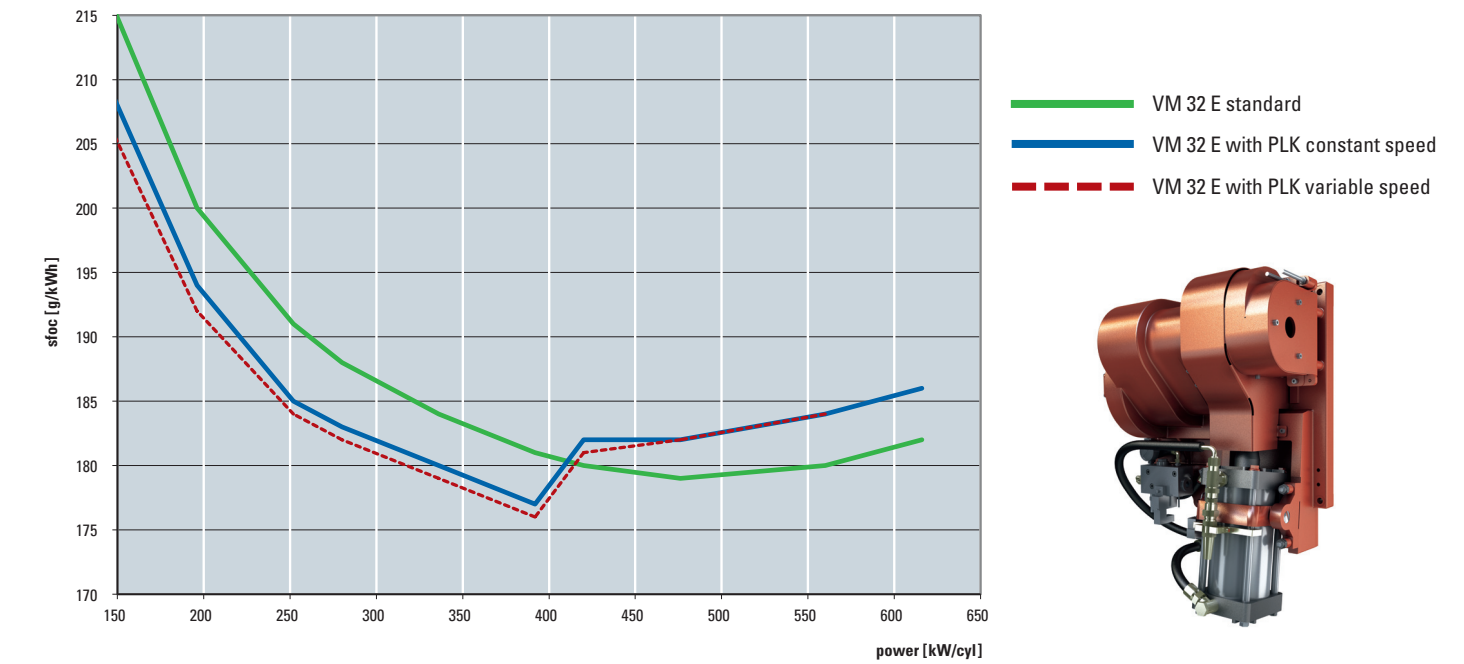
Options

- Wet lubricating oil system with resilient mounting and 30 % reduced lubricating oil volume
- 100 % PTO capability for additional applications powered by main engine
- Part Load optimization Kit for constant speed or Part Load optimization Kit for variable speed for cost savings, adequate load acceptance and minimum smoke emissions
- IMO Tier III exhaust gas emissions compliance with Cat® SCR system provided with IMO Tier III certificate ex works



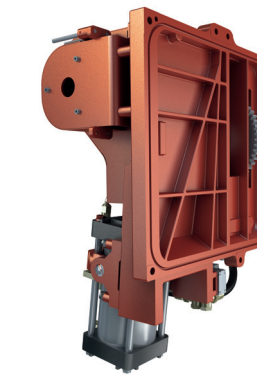
VM 32 E • Part Load Optimization

Specific fuel oil consumption – VM 32 E – IMO II – with 560 kW/cyl. at 720 and 750 rpm
ISO 3046/1 and LCV 42,7 MJ/kg, 5% tolerance



The Part Load optimization Kits (PLKs) for constant or variable speed are ideal options when it comes to profiles with frequent low load operation. The PLK for constant speed is a cost-efficient opportunity to enhance load lifting in the low load range and to drive a shaft generator. The PLK for variable speed guarantees fuel savings at low loads. It enables the variable pitch propeller to work within a wider speed range with optimum efficiency.

The main benefits of the PLKs are fuel savings of up to 10 g/kWh, improved load acceptance and reduced smoke emissions. The PLKs are particularly advantageous for customers operating their engines mainly within the range of 10% to 70% load. Both PLKs include the proven Flexible Camshaft Technology (FCT) with Cat® control software and a special turbocharger matching. The VM 32 E is controlled and monitored by the Large Engine Safety System (LESS).



Benefits of PLKs

- Fuel savings in the 10–70% load range
- Adequate load capability for propulsion engines
- Smoke reduction

