



Propulsion Unit – Pleasure and Commercial Applications

- **Environmentally friendly** – The new 4 cylinder, 4.4 litre turbo charged intercooled marine diesel engine, satisfies the requirements of the RCD, CCNR II, BSO (Bodensee) step 2 and USA Tier 2, marine legislation
- **Most compact package in its class** – Offers boat design flexibility - easier new boat and repower installation
- **Premium engine features for reliability and durability** – Minimises down time and service costs
- **Unrivalled worldwide parts and service network** – Service available wherever you are
- **Lowest cost of ownership in its class** – It pays to compare running costs



Cleaner and Quieter

- The M132Ti operates with smoke levels barely visible to the naked eye
- Improvements of up to 3dBA have also been made to bare engine noise over its predecessor. Concentrating on reduced noise levels throughout the complete operating range of the engine from idle through to full load rated speed. This has been achieved through numerous individual product developments, including a new cylinder block design and develops to the front end gear train

Reliability

- High capacity heat exchange equipment with cupro-nickel tube stack ensuring low component operating temperatures for exceptionally reliable and durable operation
- Gear driven engine and raw water pumps with high quality silicone hoses for the ultimate in reliable cooling and leak-free operation
- An integral plate type oil cooler offers compactness, saving installation space and features a by-pass valve for start up safety
- The Perkins turbocharger wastegate system reduces the maximum cylinder pressure and hence improves reliability and durability

Innovative Performance Specification

- The latest Delphi rotary fuel pump, wastegated turbocharger system and air intake silencer offer significant improvements in fuel economy, emissions and noise
- The turbocharger wastegate system optimises low speed engine performance providing smoother and faster boat acceleration at planing speed
- Lightweight materials and the use of computer aided design on cylinder block and head provides an excellent power to weight ratio for enhanced boat performance
- Controlled expansion oil cooled pistons with low friction three ring pack and silicone carbide honed cylinder liners give exceptionally low oil consumption, easier cold starting and extended oil change periods

Cost of Ownership

- Competitive engine and parts pricing, extended service intervals and exceptionally low fuel consumption make the M132Ti the best in its class
- Extended service intervals including a 500 hour or once a season oil change period

Ease of Installation

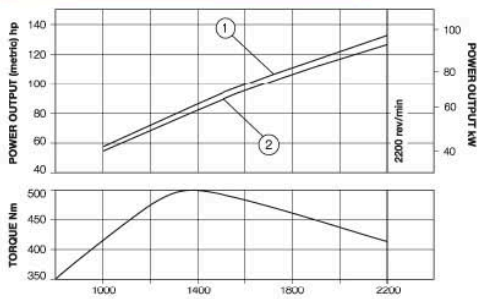
- Easy access to all routine servicing features in either single or twin installations
- Oil and coolant systems developed to permit a wide range of operating angles both for conventional shaft and vee-drive installations
- Support is available from Sabre Engines Ltd and the Perkins distributor network to advise on all aspects of power, performance and installation

Service

- Perkins unrivalled service network with dealers providing a fast, effective parts and after market support. This is enhanced by the introduction of TIFSS (The Integrated Parts and Service System) which represents a step change in diesel engine support. TIFSS enables customers to electronically specify and order parts as well as service electronic and mechanical engine with online guides and service tools

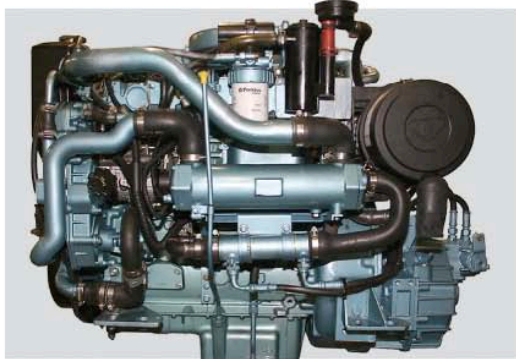
Warranty

- A genuine top quality warranty package offering two year cover as standard plus a third year on major components for engines operating less than 250 hours per year. Warranty only applies to engines operating in the EU, including Norway and Switzerland



PRELIMINARY POWER CURVE

Propellers should be matched to achieve maximum rated engine speed under fully laden boat conditions. Engine delivered from factory will be set to produce gross (flywheel) power output within manufacturing tolerances and run-in allowance to BS AU141a: 1974 conditions



	Pleasure, curve 1	Commercial, curve 2	Rated speed
• Gross Flywheel Power at max. production tolerance	97 kW (132 hp)	94 kW (128 hp)	2200 rev/min
• Net shaft power with ZF-Hurth 45A gearbox	93,6 kW (127 hp)	90.7 kW (123 hp)	2200 rev/min

Standard Specification

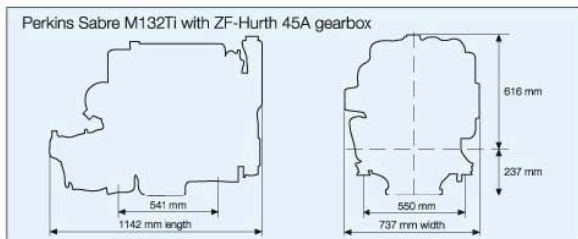
- Fresh water heat exchanger cooled engine with gear driven self priming raw water and fresh water pumps or keel cooling adaption
- Fresh water cooled exhaust manifold
- Wastegated turbocharger with insulation cover
- Raw water cooled charge air cooler
- Air intake filter with cleaner element
- High inclination engine sump, top access dipstick and engine mounted sump drain pump
- Spin-on element lubricating oil filter
- Integral plate engine lubricating oil cooler
- Closed breather system • High mounted fuel filter
- Cold start aid • Alarm switches and warning siren
- Electric stop solenoid • Manual control adaptation parts

Optional Equipment

- **Backends** – suitable for a range of transmissions
- **Marine Transmissions (standard)**
 - ZF-Hurth 45A
 - Newage PRM 500D
- **Electrical** – 12 and 24 volt insulated marine electrics
- **Exhaust Outlets**
 - Variable angle water injected outlets including high rise option
 - Dry outlets with flexible bellows
- **Instrumentation** – single and dual station instrumentation incorporating audible/visual alarms and gauges complete with senders, switches and varying lengths of interconnecting cables
- **Power Take Off** – crankshaft PTO extension shaft with pulley drives
- **Mountings**
 - Solid mounting brackets
 - Flexible engine mountings with alignment shims
- **Miscellaneous**
 - Solid or flexible output couplings
 - Tool kit
 - On board parts kit
 - Engine mounted electro-magnetic bilge pumps
 - Calorifier connections
 - Fuel pre-filter
 - Fuel feed and return pipes

General Data

- Bore** 105mm
- Stroke** 127mm
- Cubic Capacity** 4.4 litres
- Cycle** 4 stroke
- No. of Cylinders** 4 in-line
- Aspiration** Wastegated turbocharger, charge air cooled
- Combustion System** Direct injection
- Engine Rotation** Anti-clockwise viewed from rear
- Fuel Pump** Delphi rotary with boost control and electric stop device
- Engine Operating Angles** Maximum continuous, operating angles: 20° engine front up, 25° sideways, 35° sideways intermittent operation
- Power Take Off** Available from front end drive (for drive limitations refer to Sabre Engines Ltd)
- Weight (Wet)** 455 kg engine only
501 kg with ZF-Hurth 45A
550 kg with Newage PRM 500D



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Visit our website:
www.perkins-sabre.com

All information in this document is substantially correct at the time of printing but may be altered subsequently by the company.

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