Highly reliable engine solutions

OSV+
WORKBOAT

Engineering the Future – since 1758.
MAN Diesel & Turbo
MAN Diesel & Turbo is the world’s leading provider of large-bore diesel engines and turbomachinery. Our portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers, as well as gas and steam turbines, compressors and chemical reactors.

Many years of experience ensure that our innovative marine engines are ideally suited to your business operations, both offshore and in harbors.

In addition, we can provide you with unparalleled support. Our engineers are permanently at your disposal, from conceptual design to installation and from commissioning to maintenance.
Reliability in the face of new challenges

As the demand for energy continues to grow, drilling operations are moving into deeper waters in search of resources. When the large ships that transport and consume this fuel come into port, they need more powerful tugs. New opportunities arise for offshore and harbor operators to increase their profits.

Offshore vessels require highly reliable and efficient propulsion systems that adapt easily to heavy seas, harsh environments and low load operation. They often have to meet strict emissions regulations.

Engines that keep your business running
Our engines are reliable, compact, safe, and easy to maintain. They are ready to keep your business running smoothly, with long TBO (Time Between Overhauls), high HSE (Health, Safety and Environmental) standards, and easy maintenance.
AHT / AHTS vessels perform a wide range of tasks, such as high-powered towing, delivering supplies to rigs, and emergency rescue operations. All these tasks have to be performed with reliability.

Flexible performers

The requirements for AHT vessels include high propulsion power for transit but significantly lower power for dynamic positioning mode and station keeping. And sometimes you need high power very quickly.

Low SFOC (Specific Fuel-Oil Consumption) is essential for the charter and oil business, which tend to work with companies that have a green profile. Other specific requirements can include accommodation for up to 60 people, high winch capacity and subsea construction capability.

Our engines cover all these needs as well as complying with new international regulations such as IMO and Marpol.
MAN 27/38: Good for business

Heavy-duty propulsion and maneuvering power is the core of the MAN L27/38's performance characteristics. This solid and reliable engine delivers good performance over the entire load range with quick acceleration and immediate load response.

The proven reliability of this engine ensures long periods between overhauls and no unscheduled maintenance and repair work. Additional economic benefits derive from its low fuel and lube oil consumption – while fulfilling legal emission limits. Noise and vibration levels are also reduced, providing comfort to the crew.

Benefits
- Reliability in operation
- Solid and compact design
- Long periods between overhauls
- 32,000 hours
- Low fuel and lube oil consumption
  - Thanks to efficient fuel injection

Propulsion package
The MAN L27/38 is available as part of an integrated package including reduction gearbox, shaftline, propeller and control system. This has notable advantages for both ship builders and operators with excellent results in terms of operating economy, reliability, durability and predictable service intervals.

Further power solutions
MAN 175D GENSET  MAN 32/44CR

Power Take-Off (PTO)
100% PTO is possible from either end of the engine and additionally a small 50 kW PTO is optional on the front-end box for driving a seawater pump or similar.

Jet assist
This device supports rapid acceleration in partial load operation. Compressed air is blown onto the compressor wheel of the turbocharger. The charge air pressure is increased and the maneuvering characteristics are improved.
Platform Supply Vessels (PSV)

PSVs transport cargo and crews to offshore oil rigs and platforms. They can also be adapted for a variety of offshore support operations, such as subsea surveys, flexible pipe laying or repairs.

The need for exceptional load response

One of the challenges for PSV engines is operating at very low load while keeping position near the rig. On the other hand, high load operation is necessary for the working and transit. Some engines have to cope with very cold climate, for example on exploration missions in Arctic waters. And in terms of getting a return on one’s investment, low SFOC and long TBO are very desirable life cycle cost qualities.

All in all, the platform supply business depends on very special engines.
MAN 175D: Robust, dynamic and economical

Designed for extreme robustness, first-rate reliability and maximum efficiency, the MAN 175D offers not only high speed but also a rapid return on investment. This powerful and compact engine provides outstanding SFOC and long TBO.

Benefits
- Environmentally friendly
  Full IMO Tier III compliance in combination with MAN SCR.
- Advanced and robust
  Cutting-edge technology and proven reliability.
- Powerful and reliable
  Peak performance built on experience.

Maximum power, minimum volume
With its quick load response the MAN 175D allows safe maneuvering in the harshest environments, even in Arctic temperatures. The small size of the engine allows more space for cargo. The MAN 175D is ideal for economical operation in platform supply vessels.

Clear-cut design
A functional design with the minimum weight and dimensions. Easy to commission, easy to operate, and easy to service.

Modular concept
For easy adaptation to different applications, the MAN 175D can be configured with auxiliary equipment and modular components, such as a seawater cooler. It has four auxiliary Power Take-Offs (PTOs).
Very special vessels are needed for building offshore oil rigs and wind farms, as well as for pipe laying and installing subsea systems in deep waters. OCVs are sometimes involved in well intervention and drilling and have to meet the harshest of conditions.

Reliable and economic operation

As well as transporting construction equipment and structures, OCVs often store large quantities of liquids or dry substances under deck and can have a deck load capacity of up to 9,000 tons. Some have moon pools and cranes for support work.

Owners and operators are looking for low speed operation to ensure long engine life, low wear rates, minimum downtime, easy and efficient maintenance, and fuel economy. Our engines deliver.
MAN 32/44CR: Excellent load response

The flexibility of the Common Rail injection system allows the fuel consumption and emissions of the MAN 32/44CR to be optimized on its operating profile. The engine easily matches different load profiles and provides excellent load acceptance. The management system can detect a load increase at an early stage and improves the load response of the engine significantly by activating a load injection in the Common Rail control.

Benefits
- Highly efficient Common Rail technology
- Outstanding low-load capabilities and low fuel consumption
- Low exhaust emissions
- Complies with IMO Tier II and IMO Tier III (with optional MAN SCR)
- Low operating costs

Thanks to SFOC savings due to in-house development ECOMAP

MAN 175D GenSet: Compact powerhouse

Packing the latest state-of-the-art technology into a minimum volume, the MAN 175D GenSet is the perfect complement to the MAN 32/44CR: easy to commission, easy to operate, and easy to service.

Further power solutions

MAN 175D GENSET
MAN 32/44CR GENSET

Common Rail injection system

Advanced electronic fuel injection system allows the flexible setting of injection timing, duration and pressure for each cylinder. The optimized match for each load results in low SFOC/CO2.

Boost injection

This is a special patented feature for Common Rail engines. It provides a short time increase of injection pressure and change of injection timing in case of load steps.

ECOMAP

ECOMAP is a software feature for our electronically controlled engines that allows the engine to be programmed to run along different SFOC/power characteristics, each of them having its efficiency optimum at different load points.
Global growth in marine transport has brought larger vessels and an increase in the volume and complexity of harbor traffic, prompting the development of larger, more powerful tugs for ship assistance and harbor operation.

Clean and flexible engines for hard-working boats

Harbors are environmentally sensitive areas and emission requirements are strict in terms of NOx and particulate matter. Modern tugs require cost-efficient engines with great adaptability to various propulsion systems. Because the operation profile of a tug could be described as a “sleeping bear” – many hours of standby interrupted by full power demand on all engines.

Some ocean-going tugs serve as icebreakers or salvage boats. Small crews mean easy maintenance is a must. That’s never a problem for our engines.
MAN 27/38: Ready for business

This well-known engine is designed for solid, reliable operation with no unscheduled maintenance and repair work and long TBO. The MAN 27/38 is equipped with jet assist, which boosts the turbocharger speed if sudden load peaks occur, for rapid and smoke-free load increase.

Benefits
- Reliability in operation
- Long periods between overhauls and no unscheduled maintenance
- Low fuel and lube oil consumption
- While fulfilling legal emission limits
- Convenient Power Take-Off (PTO) 100% PTO from either end of the engine plus optional 50 kW PTO

Environmental compliance
The MAN 27/38 engine is compliant with the limits specified in Tier II of the emissions legislation of the International Maritime Organization (IMO). It can comply fully with IMO Tier III in combination with the MAN Selective Catalytic Converter.

Further power solutions
MAN 175D

Efficient fuel equipment
Including high injection pressure and good atomization for optimal charge air mixture – even at part load.

Genuine Propulsion Package
A risk-minimizing concept with built-in system responsibility attractive for current and future propulsion requirements. Includes all core elements of propulsion system – such as main engine, reduction gearbox, shaftline, propeller and control system.
Multi-Purpose Support Vessels

The multi-purpose label covers a wide range of specializations. These vessels commonly support diving operations, offshore structure maintenance and provide general assistance in the oil and gas industry. Often, they are adapted with special equipment for fire-fighting, safety standby, emergency evacuations and rescue operations.

Adapting to the circumstances

Multi-purpose support vessels can be customized for operations and construction work on the seabed and sometimes have sophisticated features such as a helideck and foundations for heave-compensated offshore cranes and A-Frames.

Dynamic positioning is an important requirement, together with environmental friendliness and fuel economy. These are all factors that are taken into account by our engineers and displayed by our engines.
MAN 175D: Compact and powerful

The MAN 175D is compact, reliable and efficient – properties that are essential on working vessels to allow safe maneuverability in the roughest weather conditions.

Easy to operate and easy to service, this high speed engine packs the latest technology into a very small volume and offers four auxiliary PTOs (Power Take-Offs).

Benefits

- Silent operation
  - For comfort
- Environmentally friendly
  - Full IMO Tier III compliance in combination with MAN SCR
- Dynamic positioning ability
  - For lower fuel consumption and costs

An investment in the future

The engine is designed to meet emissions standards, without compromising on efficiency or performance. The compact, modular MAN SCR exhaust gas after-treatment system makes the MAN 175D an eco-friendly, sustainable choice with the lowest emissions at maximum efficiency.

Compact design

Smallest footprint in its power range.

MAN engine control system

Based on the modular concept for low and easy maintenance this is an internal development using well-proven MAN standards of robustness, reliability and safety.

Turbocharger technologies

This is a key competence of MAN Diesel & Turbo. The single stage turbocharging is simple and easy to maintain, compared to more complex sequential turbocharging. It was specially developed for the MAN 175D and consequently provides highly efficient performance with a very wide operating range.
Flexibility and maximum efficiency optimally combined

In a hybrid system, mechanical and electric power work together in the propulsion train, optimizing the propulsion efficiency for ships with a flexible power demand. The combination of mechanical power, delivered by diesel engines, and electrical power, provided by electrical motors, assures the ship a broad operational capability, providing the right amount of power and torque to the propeller in each operation mode. A hybrid propulsion plant is better prepared for changes in operation during the vessel’s trip or even the vessel’s lifetime.

MAN Diesel & Turbo provides fully tailor-made hybrid propulsion solutions. All components such as the main engines, GenSets, switchboards, converters, electric motors, gearboxes and propellers are individually designed.

Benefits
- Large variation of operation modes
- Flexible power demand with fast system responses and a high plant flexibility.
- The propeller can be driven by the diesel engine, and/or by the electric motor.
- Highly redundant and reliable propulsion system
- High plant efficiency over a wide range of operation modes
- Fuel oil consumption is lower, and fuel related emissions like SOx and CO2 are also reduced

OSV + Workboat
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MAN PrimeServ

MAN PrimeServ is the dedicated MAN Diesel & Turbo service brand. Via a network of over 100 service centers worldwide, MAN PrimeServ provides 24/7 service across the globe. Our range of services includes technical support, consulting and OEM spares, as well as maintenance, repair and comprehensive individualized service plans.

MAN PrimeServ’s aim is to provide:

- Prompt delivery of high-demand OEM spare parts within 24 hours
- Fast, reliable and competent customer support
- Individually tailored O&M contracts
- Ongoing training and qualification of operators and maintenance staff
- Global service, 24 hours a day, 365 days a year
- Diagnosis and troubleshooting with our high-performance Online Service
MAN PrimeServ

We offer retrofitting and upgrade services to bring engines and turbochargers already in service up to the very latest standards of performance and efficiency. Using the latest digital technology, we enable you to maximise the performance and availability of your MAN equipment by accessing real-time data analysis, remote support and rapid solutions. We also offer an extensive range of training courses at MAN PrimeServ academies around the world.

Our service does not vary according to location. We know that a vessel may be built in Asia, operated in Europe for ten years and then move to Africa for the next ten years. That does not alter our focus on dedicated training, fast delivery of strategic spare parts, a comprehensive approach, or our tailored maintenance contracts.

For more information please visit: www.man.eu/primeserv
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Explore our latest news via an app
DieselFacts brings you the most recent news from the world of two-stroke and four-stroke engines, including the latest technical papers, in-depth features and videos.