MOVING LARGE OBJECTS.
Efficient MAN crane vehicles.
A REAL POWER HORSE.

Today, cranes are indispensable helpers, making for convenience and efficiency in many sectors of industry and commerce. Equipment like this is always needed to shift the cargo on and off a low loader, for example. Trucks with front-mounted or rear-mounted cranes transport timber, carry building materials and generally make light of weighty matters as crane tippers or platforms for heavy-duty cranes.

MAN offers the right vehicles for all these tasks, combining innovation with reliability, aimed at achieving maximum transport efficiency. MAN efficiency in transport ex works: experience it for yourself.

www.truck.man
Some of the equipment illustrated in this brochure is not included in the series-production scope.
The MAN chassis and tractor units for transporting building materials combine dynamic pulling power with superb driving characteristics and exemplary safety.

As solo trucks, articulated trains, tippers, platform trucks or tractor-semitrailers: an MAN with front- or rear-mounted crane easily handles the A to Z of construction materials, from abutment sections and aluminium strip through to zinc-phosphate cement and Z-section steel. The specific weight and volume of the various materials vary widely, and pallet sizes and stacking heights also differ. As far as the truck is concerned, that means: in terms of payload and body dimensions, everything has to be optimised to suit load weight and the space required by the construction materials. MAN offers leaf-air or air-air suspension for chassis depending on the requirements. With MAN you can rest assured: the solution is right.

**Well on the way in construction logistics:**
- Perfect for the job and reliable chassis and tractor units
- Unique ECAS controlling with air-sprung vehicles for safer stabilisation with crane operations
- MAN HydroDrive® for more traction on demand (manual shifting or with MAN TipMatic®)
- Normal height, mid-level construction height and all-wheel drive construction height
- Digital axle-load display in the driver’s cab for air-sprung axles
- Off-gearbox PTOs for high hydraulic power and speedy crane work
- High load compensation stabilisation for improved safety for loads with high load centre of gravity
- Air deflector plate to prevent dust turbulence
- Chassis with full air suspension (depending on the type)
- Variable axle load ratio for chassis with a trailing or leading axle for optimum traction
- Turning brake for optimised turning circle
- Construction air spring for comfortable and safe handling
- Lightweight hypoid axle tandem for weight-optimised usage
HIGH-TECH CAN BE HIGHLY PROFITABLE.

You might need telescopic-jib cranes with lifting heights of 60 metres and load capacities up to 70 tonnes, or articulated-jib cranes for lifting heights of 47 metres and load capacities of 40 tonnes – but MAN has the ideal vehicles, whatever the terms of reference.

The range includes dependable two-, three-, four- and five-axle models that combine highly economical operation with practical sturdiness and reliability. The MAN TGX and TGS chassis come ex works with the spaces for the outriggers, so the crane can easily be mated to the frame. That simplifies installation and reduces costs. The pendulum movement of the axles can be restricted for mobile cranes to ensure that the tyres do not come into contact with the superstructure.

And for articulated-jib cranes MAN offers front crane supports and reinforced frames ex works. Equipped in this way, the truck makes for even more versatility for the crane to operate though its entire slewing range. The cab can also be ordered with a special lowered roof.

Vehicle configuration:
- Common Rail Diesel engines up to 471 kW (640 hp), 640 hp only for MAN TGX
- MAN HydroDrive® for more traction on demand (manual shifting or with MAN TipMatic®)
- KSM interface for external data interchange
- ECAS control for propping for crane work off vehicles with air suspension
- Lowered roof for crane
- Preparation for external engine start/stop
- Ex works front plate for crane support and frame reinforcement
- Digital axle load display in cab for air-sprung axles
- Worklights
- High load roll stabilisation
- Variable axle load ratio for chassis with a trailing or leading axle for optimum traction
- Turning brake for optimised turning circle
- Construction air spring for comfortable and safe handling
JUST GO AHEAD AND LOAD.

MAN chassis and tractor units are perfect for the quick and inexpensive installation of front-mounted loading cranes.

Not surprising really, because MAN actually builds a type of truck known as a crane tipper. Trucks with tipper bodies are supplied ex works with extended auxiliary frame and the spaces for crane, outriggers and shackle attachment. The front-axle loads are optimised within the weight aggregate for the various truck weight categories and crane sizes. MAN has two- and three-axle trucks for rear-mounted loading cranes with the wheelbase, overhang and rear-axle load specifics that meet customer requirements. The ECAS air suspension can be deactivated for crane work. This increases the stability of the vehicle when it is braced by the outriggers. Two-part grab, shovel, fork or gripper system: loading cranes are always a worthwhile investment. You gain more flexibility and efficiency by significantly cutting down on loading and unloading times and on manpower.

Vehicle configuration:
- Common Rail diesel engines up to 471 kW (640 hp), 640 hp only for MAN TGX
- MAN HydroDrive® for more traction on demand (manual shifting or with MAN TipMatic®)
- CSM interface for external data interchange
- ECAS control for propping vehicles with air suspension during crane operation
- Lowered roof for crane
- Preparation for external engine start/stop
- Three-way tipper bodies ex works for crane tippers
- Ex works front plate for crane support and frame reinforcement
- Digital axle-load monitor in cab for air-sprung axles
- Spotlights
- Crane tipper with optimised space for outriggers etc.
- High-load roll stabilisation
- Variable axle load ratio for chassis with a trailing or leading axle for optimum traction
- Turning brake for optimised turning circle
- Construction air spring for comfortable and safe handling
AS INDIVIDUAL AS YOUR REQUIREMENTS.

Special requirements require special solutions. MAN Modification centre can implement the customers’ special requests that cannot be implemented in series production.

The MAN Modification Centre delivers individual customer requirements with professional and technical perfection. The range of potential vehicle modifications is almost unlimited. Whether in terms of the cab, chassis, driveline, electronics or the body, tailored solutions are implemented not only for specific individual requirements but also for the entire vehicle. Solutions include roof notches to hold cranes or flat-roof designs to position cranes over the cab. The exhaust system or battery box can also be relocated ex works, saving both costs and time in contrast to a body manufacturer moving them at a later date.

We offer MAN Modification at several locations. Conversion work is carried out at specially qualified facilities in accordance with MAN standards.

→ MAN Modification for crane vehicles:
  ▪ Honed expertise in the field of special vehicles
  ▪ Years of experience gained through intensive cooperation with body manufacturers
  ▪ Specialist knowledge across a range of industries
  ▪ Individual support to meet specific requirements
  ▪ High degree of flexibility and quality in the design
  ▪ Vehicles comply with standards following conversion
  ▪ MAN After Sales provides global support and supply of spare parts
Roof cut-out for a loading crane

Relocating exhaust system

Flat roof
MAN HydroDrive® – more traction as required
MAN, the inventor of MAN HydroDrive®, has in the meantime expanded the range and now offers a unique variety of versions from two-axle to four-axle vehicles with leading or trailing axles. MAN HydroDrive® for more traction and safety when driving into or out of construction sites and dirt roads, on slopes and slippery roads. The engageable hydrostatic frontwheel drive gives you the driving power you need in all these situations, forwards and in reverse. When you’re driving downhill and the MAN HydroDrive® is engaged, the continuous brake also acts on the front axle, thus stabilising the vehicle. MAN HydroDrive® can also be engaged while driving and under load by turning the rotary switch. As far as fuel consumption and wear and tear are concerned, it is comparable to a conventional rear-wheel drive and weighs only slightly more. The design height remains unchanged, which means: easy access, low overall height, low centre of gravity and thus optimal driving stability. MAN HydroDrive® is available in combination with MAN TipMatic® or manually operated gearboxes.

Safer driving on off-road routes with MAN HydroDrive®
With MAN, driving downhill is safer as the engine braking torque is also transferred to the front axle (“support”). The strain on the service brake is also eased thanks to the combination of MAN HydroDrive® and a PriTarder. That means improved driving safety and better tracking stability on uneven ground, even when travelling downhill – the perfect solution for your applications.
All-wheel drive for everyone

Wherever maximum traction is needed, that’s where MAN vehicles with permanent or engageable all-wheel drive go into action. They’re available as 4x4, 6x6, 8x6 and 8x8 versions. The power is distributed by two-speed MAN transfer cases with on-road and off-road ratios. Planetary axles with greater ground clearance, differential locks, drum brakes and stabilisers are also fitted in the all-wheel-drive vehicles. A feature on the MAN TGM is the optional electronic transfer case and lock management. This helps the driver to operate the vehicle on- and off-road as the conditions in terms of traction require and takes some of the load off the driveline. In the MAN TGX and TGS too, the engaging and disengaging of differential locks is electronically monitored.

Continuous braking

EVBec®: as a further development of the MAN EVB engine brake (Exhaust Valve Brake), the EVBec® has many advantages, e.g. an improved braking effect by controlling the exhaust gas back pressure, significantly increased brake output especially in the lower engine speed range, overheating protection during long braking operations and constant brake output whether the engine speed is rising or falling. Three brake output stages are available.

The retarder is a hydrodynamic continuous brake integrated into the gearbox housing. Its brake output depends on the driving speed, with the best performance achieved in the medium to high speed range. The brake output level does not depend on gearshifts or clutch operation. This increases driving safety during long descents by relieving the load on the service brake system.

With the innovative MAN PriTarder®, the MAN TGS comes with a highly efficient primary brake system that is one of a kind. The combination of EVBec® engine brake and PriTarder means that an enormous brake output of up to 620 kW is already produced at low driving speeds. The MAN PriTarder® really demonstrates it strengths in distribution or traction: the completely maintenance-free system increases the payload by up to 64 kg while doubling the brake lining service life of the service brake. The MAN PriTarder® is integrated into the MAN BrakeMatic® electronic continuous brake management and is easy to operate via the stalk switch.
It is extremely easy to change gear correctly with the automated MAN TipMatic®, because it can be operated in automatic mode as well as manually using the touch-action lever. There is a six-gear version for the four-cylinder engines and a 12-gear version for the six-cylinder engines. The MAN TipMatic®, which is specially tailored for construction site deployment, permits the convenient use of automatic mode even in off-road environments. Simply set the selector switch to “Dx” and you’ll find that the gear shifts are noticeably faster, while the engine speed range in each gear is more fully utilised. The new generation MAN TipMatic® adds new functions to the convenient and efficient automatic gearbox.

**SmartShifting** increases the shifting speed intelligently by adapting it to the respective driving situation and depending on the driver’s request, the mass of the vehicle and the driving resistance. The advantages are an extremely fast and convenient gearshift process. SmartShifting works even faster when skipping multiple gears and on steep uphill gradients with upshift assistance (HSU). Here, the engine speed drops faster when the clutch is disengaged, due to the closing of the exhaust throttle valve. This realises a shorter interruption of the tractive force on uphill gradients because the frictional connection can be restored quickly. The truck loses less momentum. In this way, SmartShifting supports fuel-saving operation with lower engine speeds in the higher gears. In the traction segment, shorter interruptions of tractive force are noticeable on inclines.

**MAN EfficientCruise® + EfficientRoll**

Both systems can now be combined. MAN EfficientCruise® uses 3D map data and the vehicle’s GPS position to calculate the topography of the route and determine the required fuel injection. That means independent and proactive speed regulation before and on inclines and slopes. The driver can choose speed tolerances for optimal consumption values from four field-tested levels, of course making it easy to use for maximum driving comfort.

EfficientRoll is designed for gently sloping motorways and main roads. The MAN TipMatic® then automatically shifts into neutral and lets the vehicle roll, without the engine braking effect reducing the speed of the vehicle. The truck carries the momentum from gentle downhill sections into a following flat stretch or slight incline.

**Idle speed driving** enables comfortable moving off and driving at idling speed. After driving off, the vehicle pulls away with the clutch engaged and continues moving at a low idling speed of approx. 600 rpm until the brake is applied or the gradient to steep. The driver can therefore manoeuvre the truck very precisely and sensitively forward and backward and get through stop-and-go traffic without any issues. That means reduced wear and tear on the clutch as well as gentle torque build-up when moving off.
In addition, MAN TipMatic® with Idle Speed Driving, Speed Shifting\(^1\) and EfficientRoll\(^1\) functions is now also available for MAN TGL and TGM. These moving-off and gearshift strategies improve driving comfort and reduce fuel consumption. Another advantage is the use of selective catalytic reduction (SCR), which allows the processing of fuels with a sulphur content of up to 2000 ppm without causing any damage to the new MAN D08 Euro 4 and Euro 5 engines.

\(^1\) Speed Shifting and EfficientRoll only available with 12-speed version
THE MAN RUNNING GEAR.

Axle and suspension systems
Whether planetary or hypoid axle – both axle systems are available with various transmissions and parabolic or air suspension. The planetary axle is also available with trapezoidal suspension. Parabolic suspension makes driving the loaded or the empty vehicle very comfortable, and is beaten into second place only by air suspension.
The available weight-optimised hypoid axle results in a weight saving of 180 kg compared to the normal hypoid axle and 280 kg for the planetary axle. The ground clearance is similar to a planetary axle. Vehicles with leaf springs are available with simple tandem hypoid axles in normal and medium-high design height. Vehicles with air suspension are available in normal design height.

Construction air suspension
One of MAN’s specialities is construction air suspension on the rear planetary axles – available for construction vehicles of medium height and all-wheel-drive height. With lifting and lowering equipment fitted as standard, it has a load-carrying capacity of up to 13 t per rear axle. This is ideal for the tough work on building sites (overload reserve) and on difficult terrain. Advantages: a smooth ride in any load condition thanks to the electronic levelling system ECAS, easier on the vehicle, the body, the load and the road. For use with road finishers there are internal stabilisers.

Steel bumper
The three-part steel bumper with centred towing eye and hinged front step is not only robust but also integrates itself elegantly into the MAN TGS/MAN TGX design. A modified version of the bumper is available, prepared for fitting an attachment plate for a snow-plough or shackle. Robust steel bumpers are also available for the MAN TGL and MAN TGM series as special equipment.

Vehicle heights
MAN delivers vehicles in normal, medium and all-wheel-drive heights, corresponding to increased requirements in terms of ground clearance and angle of approach.

Turning brake
Take the sharpest bends. With the turning brake function activated, the rear wheels on the inside of the bend are braked, depending on how far the steering wheel is turned. This considerably decreases the turning circle. The turning brake, which is available for the 6x4, 6x6H, 8x4 und 8x6H vehicles with tandem axles, is activated by pressing a button and functions at speeds of up to 30 km/h.
**MAN EasyStart**
Problems with moving off on a slope are out. MAN Easy-Start with MAN TipMatic® is in. The start assistant for slopes makes things easy for the driver. When the brake pedal is released, the brake pressure is maintained for one second so that the driver can change to the accelerator and the vehicle can move off without jolting, with low wear and without rolling back.

**Hill-climbing brake**
The hill-climbing brake for MAN all-wheel vehicles acts pneumatically on all wheels, holding the truck reliably when stopping and moving off and is controlled by the driver by means of a switch on hills. As opposed to systems that use spring reservoirs to brake the only rear axle, an MAN all-wheel truck equipped with the hill-climbing brake can’t slip.

**Variable axle load ratio**
A new feature is the variable axle load ratio for vehicles with a leading or trailing axle. This variable ratio means that the drive axle always has optimum traction, regardless of the payload being carried. The variable distribution of the axle load between the driven and non-driven rear axle ensures that, in every payload situation, the drive axle always has sufficient traction, and that the axle load is never below the legally stipulated minimum.

**Modifications to cab and chassis**
Special axle configurations and modifications to the driver's cab can be individually retrofitted for specific customers or branches.
**MAN DRIVER ASSISTANCE EQUIPMENT.**

**Electronic stability program (ESP)**
ESP protects you from unpleasant surprises. ESP sensors constantly monitor the driving dynamics. If there is a risk of imminent skidding or tipping over, the separate wheels are braked accordingly and, where necessary, the engine torque is reduced. In this way ESP stabilises the vehicle and keeps it safely in the lane. MAN offers the electronic stability program for vehicles with leading or trailing axles and even for 4-axle vehicles or multiple tractors.

**Lane guard system LGS**
The electronic lane guard system permanently monitors the lane ahead of the vehicle. If drivers stray from the lane without activating a flasher, they are warned by an acoustic signal. Depending on the direction in which the driver has strayed, the loudspeaker on the left- or right-hand side emits rumble-stripe noise, which the driver intuitively understands correctly. LGS increases the driver’s awareness of staying in the lane, thus preventing many a dangerous situation.

**Adaptive Cruise Control (ACC)**
Adaptive cruise control automatically evaluates the distance and differential speed of the vehicle in front and ensures a safe distance through electronic intervention in the accelerator or brake pedal. ACC can be used at driving speeds from 25 km/h and helps the driver to stay relaxed while driving.

**Active roll stabilisation CDC and high-load roll stabilisation**
With active roll stabilisation, dampers are automatically regulated by the CDC (Continuous Damping Control). This prevents the development of rolling or pitching movements, and thus makes driving safer. For vehicles with high centres of gravity, high-load roll stabilisation with an additional X control arm is ideal. This ensures that sideways tilting is effectively reduced.
MAN BrakeMatic® brake system with ABS and ASR
The most important distance is the braking distance. To prevent any nasty surprises, the electronic brake system (EBS), including ABS and ASR, ensures reduced braking distances. The coupling force control for optimal balancing of the trailer and/or semitrailer brakes enables perfect brake performance, reduced braking distances and evens brake lining wear along the entire vehicle combination to increase the service life of the linings.

Brake assistant
The brake assistant registers speed and pressure when the brake pedal is operated and optimises the applied brake pressure through to full brake force. It recognises an emergency stop when it is initiated and immediately develops the largest possible brake pressure.

Emergency Brake Assist (EBA)
As even a brief moment of distraction can lead to an accident, MAN has developed the anticipatory Emergency Brake Assist (EBA). It gives drivers an advance warning of impending collisions, providing them with valuable time to react. The system automatically initiates braking in an emergency. The optimised Emergency Brake Assist (EBA) features a more advanced traffic monitoring system by using two independent sensor systems (radar and video) to detect a potential collision more quickly and to issue a warning signal earlier. EBA complies with the more stringent legal requirements for emergency braking systems starting in 2016/2018.

Xenon light for better vision
The combination of Xenon light and free-form reflectors casts a whole new light on the road. The luminance of the long-lasting Xenon lamps results in a wide stretch of road being illuminated. Illumination in this area is bright and homogeneous without dazzling oncoming traffic.

Automatic low-beam headlights and automatic wiper system with sensors
The automatic low-beam headlights with light sensors activate and deactivate the front, side and rear lights as needed. Dawn and dusk, tunnels and bridges are also detected and the lighting is regulated accordingly. The automatic wipers with rain sensor are activated as soon as visibility is affected by water or dirt. The optimum wiper speed is then set automatically depending on the situation. The control system can detect all kinds of visibility conditions such as rain, splashes, streaks or dirt.

New LED rear lights
With tail lights in an LED design, burnt-out lightbulbs and the associated compromised safety and maintenance costs can be avoided. LED lights have a longer service life with lower energy consumption than conventional light-bulbs.
THE CHOICE IS YOURS.

The right cab for every need – and a maximum level of comfort and ergonomics travels with you wherever you go.

MAN cabs are designed to facilitate fatigue-free, concentrated driving and relaxing recovery. And of course safety. All cabs meet the crash safety requirements, comply with the ECE-R29 Directive and offer optimum passenger protection. The many useful details such as the washable door interior cladding, the easy-care fittings, the compressed-air connection that turns cleaning into such a simple job and the optional headlight washer unit make it clear: nothing has been forgotten. Take the optimum all-round visibility, for example, which is supported by such features as the mirror concept with the main and wide-angle mirror, large kerb mirror and front mirror. The blind spot has been practically eliminated.

<table>
<thead>
<tr>
<th>Cab</th>
<th>Vehicle series</th>
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<tbody>
<tr>
<td>C cab</td>
<td>TGM</td>
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<tr>
<td>Crew cab</td>
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<tr>
<td>M cab</td>
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<td>L cab</td>
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<td>LX cab</td>
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<td>XL cab</td>
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<tr>
<td>XLX cab</td>
<td></td>
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<tr>
<td>XXL cab</td>
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</table>
Starting in 2018, MAN vehicles can expect numerous new equipment highlights to make the interior even more driver-friendly and optimised for vehicle operation.

The warm sand and graphite tones of the interior panelling, grained plastic surfaces, satin-chrome-plated door handles and the new seat covers have already been lending the cab a comfortable yet stylish atmosphere.

As of 2018, the optional darker “Urban Concrete” colour will be available for the cockpit. It is a resistant colour scheme for all surfaces that may come into contact with dirty hands or work clothing during vehicle deployments in dirty conditions. The look of the cab interior can also be customised with up to three optional variants for the all-round trim strips (brushed aluminium, Net-Black and wood).

The multi-function steering wheel forms the perfect interface between vehicle and driver: Various functions are integrated in the steering wheel in a clearly laid out and intuitive manner. Without taking your hands off the wheel you can call up vehicle information, receive telephone calls and adjust the radio settings. The driver can freely adjust the height and angle of the multi-function steering wheel, which is also available in leather.

A slimmer centre console and a coolbox/storage box (not available in the C cab), which can be completely stowed under the bed, create a more comfortable sitting and standing experience in the central area. And yet, the new coolbox offers more space. The cup holders are more flexible, and the bunk control panel in the longer cabs with beds is more convenient. The lighting in the living space provides a cosier atmosphere thanks to goose neck lights.

The new function-based switch layout and the colour display offer the driver a modern, ergonomic work place. In the MAN TGX, comfort and working conditions for the driver have been improved thanks to the reduction in interior noise by 1.5 dB compared to the previous series.
EVERYTHING INSIDE, AND ALL AT A GLANCE!

It is the driver who turns efficiency into motion. His performance at the wheel is the key to reliable transport and to a safe, cost-effective driving style. So it’s vital that the workplace is well equipped for this.

In the redesigned MAN cockpit, everything is in the right place. The displays are clear, while frequently used switches and switches requiring quick access are close to the driver. To ensure intuitive operation, interrelated functions are grouped into switch groups, which are always in the same position in all vehicles and series. Having this standardised layout simplifies operation for drivers when switching vehicles. The dial switch for the MAN TipMatic® automated gearbox is now in the driver’s field of view. The main panel of controls now houses all switches vital to operation and driving, while relevant functions for add-ons can be assigned to a second, optional panel of switches at a later date. Placing the panel of buttons for essential functions, such as interior lighting, above the driver provides easy access even while driving.

The focus will be on the instrumentation with new LCD display in four colours. This four-inch, high-resolution colour display supports legibility and orientation, and highlights features such as activated assistance systems and warning messages to enable quicker recognition. A digital speed display complements the analogue display. In addition, menus and controls boast colours coordinated with the MAN Media Truck infotainment system. The air-conditioning panel features displays with a white background, making them considerably easier to read thanks to the better contrast.
**MAN infotainment system**

MAN offers some improved features with the new infotainment system. The standard MAN Media Truck variant includes a 5" TFT display with touchscreen and SD card slot. On request, it’s also available with a hands-free system, Bluetooth audio streaming, USB/AUX inputs, and DAB+ digital radio. In addition, the MAN Media Truck Advanced version offers a larger 7" display, voice control, a hands-free system for a telephone, video display via USB & SD, traffic information via radio, and a maximum of two camera interfaces. MAN Media Truck Navigation includes a specialist truck navigation system. Also, the versions MAN Media Truck Advanced and Navigation offer the function of “Twin Pairing”, which enables two mobile phones to be connected to the system in parallel. Both variants can also be provided with a hook-up for a rear-view camera.

The new “Mirror Link” function transfers the user interface of mobile devices to the infotainment system, enabling safe operation via the multi-function steering wheel and the system itself (connection via USB cable). The navigation screen also continuously shows maximum speed limitations (depending on whether the map data includes the respective information). The digital radio (DAB/DAB+) is easy to access and use via voice control.
EFFICIENCY AT FULL THROTTLE.

Vehicles in traction deployment should ideally provide a large amount of torque along with reduced fuel consumption: the high-performance MAN engines tick both of these boxes.

The highly efficient four- and six-cylinder engines with ratings of 118 kW (160 hp) to 471 kW (640 hp) make an impression with their outstanding power delivery even at low engine speeds. The engines of the MAN D20 and MAN D26 series are also designed for service intervals of up to 140,000 kilometres. In order to achieve the extremely low Euro 6 values, MAN has implemented key technologies such as Common Rail injection, exhaust gas recirculation (EGR), SCR filters and diesel particulate filters (DPF/CRT) for many years. The result? MAN Euro 6 engines raise the bar in terms of fuel consumption and AdBlue® consumption. If you want to move things in a big way and at the same time protect the environment, then MAN engines are exactly the drive you need.

Since 2017, MAN will approve the MAN Euro 6 engines for use with paraffin fuels in accordance with EN15940. Fuels that comply with this standard include hydrogenated vegetable oils (HVO), coal to liquids (CTL), gas to liquids (GTL) and biomass to liquids (BTL).

The new generation of MAN D08 engines powers the MAN TGL and TGM with even greater force. And the new engine concept also enhances efficiency at the same time: Fuel consumption is reduced by up to 5%. The new, simplified exhaust gas cleaning without exhaust gas recirculation also makes the engine lighter and less complex.

### Engines Euro 6

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
<th>Rated output</th>
<th>Max. torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0834</td>
<td>R4 4.6 l</td>
<td>118 kW (160 hp)</td>
<td>600 Nm</td>
</tr>
<tr>
<td></td>
<td>R4 4.6 l</td>
<td>140 kW (190 hp)</td>
<td>750 Nm</td>
</tr>
<tr>
<td></td>
<td>R4 4.6 l</td>
<td>162 kW (220 hp)</td>
<td>850 Nm</td>
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<tr>
<td>D0836</td>
<td>R6 6.9 l</td>
<td>184 kW (250 hp)</td>
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<tr>
<td></td>
<td>R6 6.9 l</td>
<td>213 kW (290 hp)</td>
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</tr>
<tr>
<td></td>
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<td>235 kW (320 hp)</td>
<td>1,250 Nm</td>
</tr>
<tr>
<td>D2066</td>
<td>R6 10.5 l</td>
<td>235 kW (320 hp)</td>
<td>1,600 Nm</td>
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<tr>
<td></td>
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<td>D2676</td>
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<td>D3876</td>
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<td>427 kW (580 hp)</td>
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<tr>
<td></td>
<td>R6 15.2 l</td>
<td>471 kW (640 hp)</td>
<td>3,000 Nm</td>
</tr>
</tbody>
</table>
Within the broad scope of traction applications, there is really nothing that our vehicles cannot do. Wherever there is a need for reliable emergency services, an MAN is on the scene.

The comprehensive MAN vehicle range, which includes the MAN TGL, TGM, TGS and TGX series, ranges from 7.49 to 44 tonnes. Thanks to our wealth of experience and close cooperation with body manufacturers, we are able to provide you with the ideal vehicle solution for each and every task.

### DIVERSE SOLUTIONS FOR WIDE-RANGING NEEDS.

<table>
<thead>
<tr>
<th>Chassis for crane tippers, with ex works tipper body optional</th>
<th>Chassis for transport of construction materials</th>
<th>Chassis for heavy-duty cranes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Suspension</strong></td>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>TGL</td>
<td>8.xxx</td>
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<tr>
<td>TGM</td>
<td>13.xxx</td>
<td>4x4</td>
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<tr>
<td>TGM</td>
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<tr>
<td>TGS</td>
<td>18.xxx</td>
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