# **EFFICIENCY EN ROUTE.**

A

MAN

Maan 1061

Simply my truck.



CONT DO



From semi-trailer tractors to articulated lorries – the entire range and flexibility offered by our trucks.

### PAGES 04-29



### **EXCELLENT DRIVER FIT**

The cockpit design ensures maximum driving performance coupled with perfect ergonomics, intuitive operation and a high level of comfort.

**PAGES 30-45** 



### GREAT EFFICIENCY AND ECONOMY

MAN trucks combine innovation with reliability - to achieve maximum transport efficiency.

**PAGES 46-51** 





### **STRONG PARTNER** Thanks to a variety of solutions, MAN is there for you – any time,

I hanks to a variety of solutions, MAN is there for you – any time any place.

**PAGES 52–53** 



### **OPTIMISED UPTIME**

Intelligent fleet and maintenance management, financing and mobility services to keep business reliably rolling along.

### **PAGES 54-61**

Find out more: www.man.eu/mantg

### TRUCK



### **SECURE IN THE SADDLE WITH MAN.**

### There is a lot in favour of the Euro semi-trailer.

The full-length cargo bay in the semi-trailer is a major advantage. Semi-trailer tractors, moreover, can pick up and drop their semi-trailers, increasing flexibility and transport throughput while minimising stoppages. It is worth bearing in mind, too, that semi-trailer combinations are also used for intermodal transport.

So there are many advantages you can now utilise to even better effect. Because in terms of drive dynamics, reliability and cost-effectiveness, MAN semi-trailer tractors come complete with everything necessary for success.

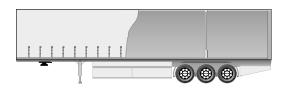
### Chassis heights for Euro-standard semi-trailers and high-capacity semi-trailers

Because the dimensions for the semi-trailer combination are statutory, the coupling height is the most important starting point for flexible load volume in the semi-trailer. In theory, the following is true: the lower the coupling height, the greater the load volume. In practice, two types of semi-trailer dominate the highways:

- Euro-standard semi-trailer with a coupling height of 1,100 mm for up to 95 m<sup>3</sup> load volume.
- High-capacity semi-trailer with a coupling height of 930 mm for up to 3 m load loading height.



Overall length of semi-trailer tractor + semi-trailer



Euro chassis height 1,100 mm

### MAN semi-trailer tractors for all purposes

With practice-oriented concepts, MAN meets all requirements:

- Long-haul semi-trailer tractors as 4x2 or 6x2 for Euro-standard semi-trailers, for example semi-trailer with box or tarpaulin body (up to 2.80 m loading height) or for ISO container (up to 2.90 m external height).
- Semi-trailer tractors for high-capacity semi-trailers. With the extremely low semi-trailer top edge, the MAN TGX and TGS Ultra have the ideal dimensions many customers want to allow for a loading height of approx. 3 m for 100 m<sup>3</sup> load volume in the semi-trailer.

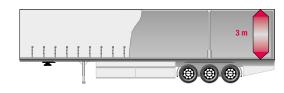
### **DIN ISO 1726 angle of inclination**

Frame overhang is short, so there is ample clearance for the semi-trailer. The DIN-ISO-1726 values for the front and rear angles of inclination are met.



Middle of kingpin to end of semi-trailer

Derivative dimensions

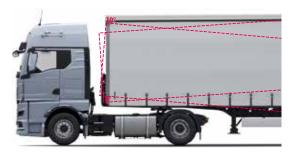


High-capacity coupling height starting from 930 mm





Front slew radius



Angle of inclination of fifth-wheel coupling at 150 mm height and tyres 315/70 R 22.5

# **CHAMPIONS IN THE EUROPEAN LEAGUE.**

### Euro-standard semi-trailers for 90 m<sup>3</sup> to 95 m<sup>3</sup> volume

With the help of different tyre sizes, fifth-wheel couplings and plates, MAN TGX and TGS with air suspension offer a wide range of chassis heights.

### Chassis heights depending on equipment configuration<sup>1)</sup>

Tyre size rear axle		295/60R22,5		315/60R22,	315/60R22,5			315/80R22,5	
Fifth-wheel coupling height	Fifth-wheel	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen
	pick-up plate								
150 mm	12 mm	1,059	1,089	1,072	1,102	1,100	1,130	1,131	1,161
150 mm	40 mm	1,087	1,117	1,100	1,130	1,128	1,158	1,159	1,189
185 mm	12 mm	1,094	1,124	1,107	1,137	1,135	1,165	1,166	1,196
185 mm	40 mm	1,122	1,152	1,135	1,165	1,163	1,193	1,194	1,224
250 mm	12 mm	1,159	1,189	1,172	1,202	1,200	1,230	1,231	1,261
250 mm	40 mm	1,187	1,217	1,200	1,230	1,228	1,258	1,259	1,289
162 mm <sup>1)</sup>		1,059	1,089	1,072	1,102	1,100	1,130	1,131	1,161
203 mm		1,100	1,130	1,113	1,143	1,141	1,171	1,172	1,202
263 mm		1,160	1,190	1,173	1,203	1,201	1,231	1,232	1,262

1) Weight-optimised fifth-wheel coupling with integrated 22 mm fifth-wheel pick-up plate (weight saving up to 25 kg).

Heights relate to 4x2 semitrailer tractors of normal height specification with leaf/air suspension.

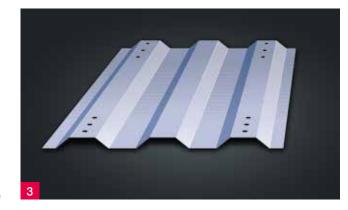
Figures for semitrailer tractors of normal height specification with air/air suspension +15 mm.

The maximum value of the respective tyre size was applied for the static tyre radius.

The hitch heights are subject to a tolerance of -25 mm.

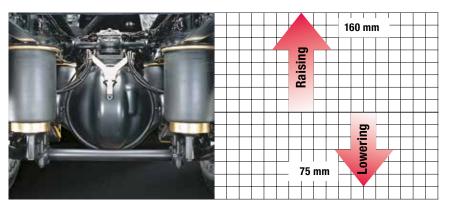






Tyres
 Fifth-wheel coupling

3 Fifth-wheel pick-up plate



Easy coupling and uncoupling due to long air-suspension travel of 235 mm For semitrailer tractors of normal height specification with air/air suspension lift 145 mm and lowering 90 mm.



### MAXIMUM VOLUME. OPTIMUM SOLUTION.

### 100 m<sup>3</sup> volume in semi-trailer

With a coupling height of approx. 930 mm, the MAN TGX and TGS allow for a semi-trailer load volume of up to 100 m<sup>3</sup> with a loading height of approx. 3 m. The low frame concept is made possible due to the narrowed frame at the rear axle.

#### Low semi-trailer top edge, high ride comfort

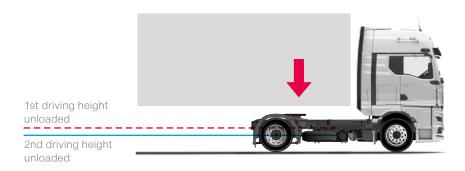
The air suspension guarantees a comfortable ride and safe driving characteristics. The air suspension travel of 180 mm (120 mm raising, 60 mm lowering) allows for fast coupling and uncoupling.

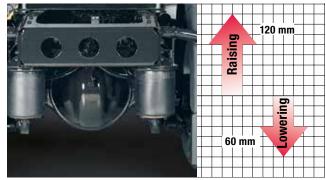
### Two driving heights

A switch on the dashboard enables the driver to switch between two driving heights even while the vehicle is in motion. This means that the same driving height can always be maintained – loaded or unloaded with tyres at full rebound. The permissible overall height limit of 4 m can be observed.

### Adjustable lifting fifth-wheel coupling with integrated lubrication

Elevating semi-trailer coupling with two pneumatically adjustable accommodation heights for Euro-standard and high-capacity semi-trailers. From MAN with integrated lubrication. Of course, MAN also offers conventional fifth-wheel couplings.





The air suspension travel of 180 mm allows for fast pick-up and disconnection. With rear tyre size 315/60R22.5 lift 100 mm.

### Coupling heights depending on equipment configuration

Tyre size rear axle		295/55R22,5		295/60R22,5		315/45R22,5		315/60R22,5	
Fifth-wheel coupling height	Fifth-wheel pick-up plate	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen
150 mm	12 mm	954	984	974	1,004	934	964	1,007	1,037
167 mm to 317 mm:									
Lowest position		959	989	979	1,009	939	969	1,012	1,042
Highest position		1,109	1,139	1,129	1,159	1,089	1,119	1,162	1,192
162 mm		954	984	974	1,004	934	964	1,007	1,037

The maximum value of the respective tyre size was applied for the static tyre radius. The hitch heights are subject to a tolerance of -25 mm.





## MAN SOLUTIONS FOR REAL-LIFE SITUATIONS.

#### Almost anything is possible

MAN supplies your vehicle just the way you want it, perfectly matched to your requirements. Here are a few examples of the practical equipment we offer: tyre pressure monitoring (TPM), electronically controlled steering system MAN ComfortSteering, electronically controlled CDC (Continuous Damping Control) roll stabilisation. If you have very special requirements, MAN Individual offers you custom solutions. The extensive portfolio of modifications meets virtually all customer requirements. The most important modules are "driver's cab", "chassis" "driveline", "electronics" and "body". The result is a tailor-made concept every time, such as single driver equipment including additional stowage compartments, kitchen and TV.

### WE BRING YOUR WISHES TO LIFE.

Articulated trains are key players in long-haul transport. In addition to the vehicles with fixed bodies, swap-body platforms play an important role in today's transport industry due to their logistic advantages and multi-use options. MAN trucks take the lead in this sector. High flexibility, high cost-effectiveness and exemplary reliability are always on board.

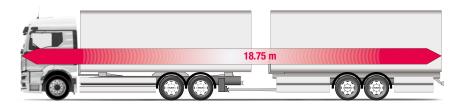
For optimal traction, regardless of loading height we offer the variable axle load ratio for vehicles with a leading or trailing axle. The drive axle is fully loaded until it reaches the prescribed axle load. Afterwards, the additional load is absorbed by the auxiliary axle – without lowering the drive axle load. The axle load is therefore not fixed but rather distributed variably between the rear axles, so that the drive axle has sufficient traction in any loading condition and the legally prescribed minimum axle load is not fallen short of in any loading condition. The system does not have to be switched on separately; it is always active.



### **THE MEASURE OF ALL THINGS.**

Directive 85/3/EEC defines permissible dimensions for articulated trains. It limits total train length to 18,750 mm, and stipulates a maximum system length of 16,400 mm and an overall loading length of 15,650 mm. In accordance with this regulation and in consequence of the diverse transport tasks, a number of different swap containers are available for freight forwarding. They differ firstly in container length, ranging from 7,150 mm to 7,820 mm swap-body platform, and secondly in set-down height, ranging from 970 mm to 1,320 mm. MAN swap-body platform chassis can transport all swap containers, which are particularly common in Germany.

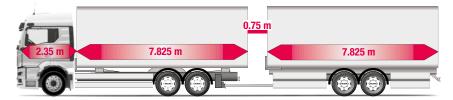
### EU dimensions for articulated trains



Total train length



System length



Derivative dimensions for rigid drawbar trailers with an overall loading length of 15.65 m



Derivative dimensions for pivot plate trailers with an overall loading length of 14.90 m



# **ROOM FOR A FULL LOAD.**

### MAN chassis with fixed body

Today, optimum load volume is essential for competitiveness and success in the haulage industry. A cargo-hold height of three metres is the accepted standard for volume transport. The basis is a chassis with an extremely low top frame edge. After all, each centimetre shaved off chassis height adds additional usable height to the body and increases capacity accordingly.

The ex-works MAN chassis for high-capacity transporters are indeed superb – from the two-axle MAN TGL to the three-axle MAN TGX and TGS with lifting trailing axle.

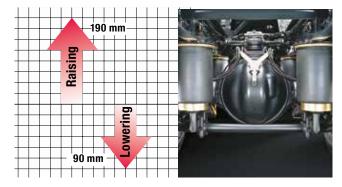




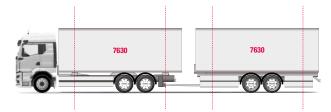
# **A CLEVER SOLUTION.**

### MAN chassis for swap bodies

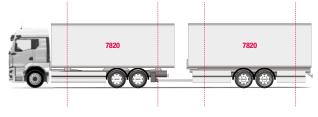
With a variety of wheelbases and overhangs, the MAN TGX and TGS chassis cover all swap container sizes and the various articulated train combinations within the 40 to 44-tonne class. Suitable swap body carriers for all standard container lengths and storage height, as well as a pneumatically actuated deep coupling, are available ex works. In addition to the C 745 swap bodies traditionally used in large quantities with a storage height of 1,320 mm, the C 782 swap bodies with a storage height of 1,120 mm have become increasingly established. This poses a challenge for the versatility of the carrier unit. MAN takes this into account with a fuel tank relocated at the factory, which makes it possible to set up a swap body carrier with height adjustment without great effort. This allows different swap containers to be transported by the same vehicle. Stops for pick-up and set-down are minimised while transport throughput is increased. Increased flexibility and effectiveness are the result.



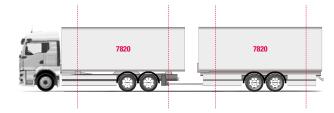
Air suspension: the long air suspension travel of 280 mm allows for quick and easy pick-up of very different kinds of standard swap-body containers.



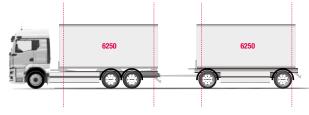
Wheelbase/overhang: 4,800 + 1,350/2,150 mm



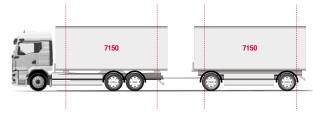
Wheelbase/overhang: 4,800 + 1,350/2,150 mm for solo operation and operation with trailer



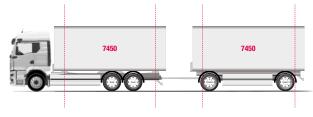
Wheelbase/overhang: 5,100 + 1,350/1,850 mm for permanent operation with trailer



Wheelbase/overhang: 4,500 + 1,350/2,050 mm



Wheelbase/overhang: 4,500 + 1,350/2,050 mm



Wheelbase/overhang: 4,500 + 1,350/2,050 mm



# **ROOM FOR A GOOD DEAL MORE.**

### MAN vehicles for maximum volume

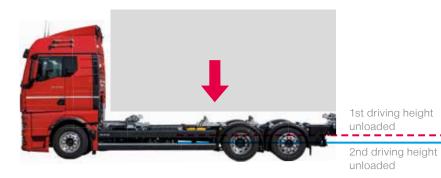
Small tyres plus low top frame edge equals maximum load volume with 3 m loading height inside the swap body container. As a 4x2 with 18 t or a 6x2 with 25 or 26 t and a trailing axle, a MAN TGX or TGS is perfect for volume transport.

### Feeder in volume transport

With set-down heights of 970 mm and 1,020 mm, the swap body platforms C 745 and C 782 are the benchmark for volume transport. Just like the MAN TGX and TGS chassis with the matching wheelbases and overhangs.

### Two driving heights

A button on the dashboard enables the driver to switch between two driving heights even while the vehicle is in motion. This means that the same driving height can always be maintained – loaded or unloaded with tyres at full rebound. The permissible overall height limit of 4 m is not exceeded.



#### Chassis with attached rack overall height 160 mm

		Top frame edge [mm]		
	Tyres	Laden	Unladen	
TGX/S 18.XXX 4x2 LL	295/60R22,5	909	939	
TGX/S 18.XXX 4x2 LL	315/60R22,5	922	952	
TGX/S 18.XXX 4x2 LL	315/70R22,5	950	980	
TGX/S 26.XXX 6x2 LL	295/60R22,5	909	939	
TGX/S 26.XXX 6x2 LL	315/60R22,5	922	952	
TGX/S 26.XXX 6x2 LL	315/70R22,5	950	980	

### Chassis with attached rack overall height 260 mm

		Top fram	e edge [mm]
	Tyres	Laden	Unladen
TGX/S 18.XXX 4x2 LL	295/60R22,5	909	939
TGX/S 18.XXX 4x2 LL	315/60R22,5	922	952
TGX/S 18.XXX 4x2 LL	315/70R22,5	950	980
TGX/S 26.XXX 6x2 LL	295/60R22,5	909	939
TGX/S 26.XXX 6x2 LL	315/60R22,5	922	952
TGX/S 26.XXX 6x2 LL	315/70R22,5	950	980

### Ultra chassis with lateral rack for volume bodies

		Top frame edge [mm]		
	Tyres	Laden	Unladen	
TGX/S 18.XXX 4x2 LL-u	295/55R22,5	841	871	
TGX/S 18.XXX 4x2 LL-u	295/60R22,5	861	891	
TGX/S 18.XXX 4x2 LL-u	315/60R22,5	874	904	
TGX/S 24.XXX 6x2 LL-u	295/55R22,5	841	871	
TGX/S 24.XXX 6x2 LL-u	295/60R22,5	861	891	
TGX/S 24.XXX 6x2 LL-u	315/60R22,5	874	904	

	Set-down he	eight 1,120 mm	Set-down he	eight 1,220 mm	Set-down height 1,320 mm	
Air suspension lift/lowering mm	Min. clearance mm	Max. retraction [mm]	Min. clearance mm	Max. retraction [mm]	Min. clearance mm	Max. retraction [mm]
190/90	111	139	-	_	_	_
190/90	98	152	198	52	_	-
190/90	70	180	170	80	-	-
190/90	111	139	_	_	_	_
190/90	98	152	198	52	_	_
190/90	70	180	170	80	_	-

	Set-down height 1,120 mm		Set-down he	eight 1,220 mm	Set-down height 1,320 mm	
Air suspension lift/lowering mm	Min. clearance mm	Max. retraction [mm]	Min. clearance mm	Max. retraction [mm]	Min. clearance mm	Max. retraction [mm]
190/90	-	-	111	139	-	-
190/90	-	-	98	152	198	52
190/90	_	_	70	180	170	80
190/90	-	-	111	139	-	-
190/90	-	-	98	152	198	52
190/90	-	-	70	180	170	80

	Set-down he	eight 970 mm	Set-down height 1,020 mm		
Air suspension lift/lowering mm	Min. clearance mm	Max. retraction [mm]	Min. clearance mm	Max. retraction [mm]	
190/50	144	66	-	_	
190/50	124	86	_	-	
190/50	111	99	161	49	
190/50	144	66	-	-	
190/50	124	86	-	-	
190/50	111	99	161	49	

With rear axle shock absorbers below frame top edge option (e.g. for set-down skip loader or high-volume body) air suspension stroke 145 mm.

The maximum value of the respective tyre size was applied for the static tyre radius.

The frame top edge heights are subject to a tolerance of -25 mm.

With very low clearance and lift, the values should be determined on the basis of the actual configuration.



Easily operated swing-back under-ride protection with an operating lever at each side with low trailer coupling

### Equipment for volume swap body platforms:

- Trailer coupling on low coupling mount with compressed-air-assisted actuation
- Specific clearance for front receiving points of the swap body frame (front axle load reduction)
- Contour marking for swap body rack, reflective, white sides, yellow rear
- Rack, swap body, for 7,450 mm body
- Rack, swap body, for 7,820 mm body
- Compressed-air tank, on vehicle frame, additional (e.g. for fast adjustment to loading ramps)

# **SPECIALITIES À LA CARTE.**

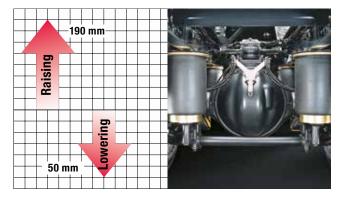
### **Preparation for liftgate**

MAN offers various options for easy and convenient liftgate attachment:

- Electrical preparation. Purposely restricted to the electrical parts required in the driver's cab, so the body manufacturer has full latitude to respond to different customer requirements. The wiring harness for the liftgate terminates in a generous loop at the end of the frame. The defined interface (7-pole receptacle) ensures a secure connection.
- Five-chamber or LED tail light unit. They allow for the movement of the hydraulic cylinder of the liftgate.
- Power supply for batteries in trailer with liftgate.
   Three-pole socket at end of frame, battery charge 24 V.

### Switch and wiring for load space lighting for additional spotlights

The preparation consists of a switch in the driver's cab, the electrical installation in the on-board network and a cable harness. Since all electrical elements are pre-mounted on the chassis, the body manufacturer does not have to intervene in the vehicle electrical system. The cable harness only has to be adapted to the body. Maximum consumer power draw: 150 W.



Air suspension with ample raising and lowering travel of 240 mm.



Low coupling mount with trailer coupling.

Return 1,400 mm (standard) or 1,600 mm (volume). Brake and electrical connections to customer specification on driver's or co-driver's side, behind trailing axle.

# THE PERFECT CHOICE FOR THE JOB.

Within the broad scope of applications, there is really nothing that our vehicles cannot do. Wherever there is a need for reliable transport services, a 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.

### MAN chassis for volume fixed bodies

Туре				Wheel base [mm]
TGL	8.XXX2)	4x2	BL	5,200, 5,550
TGL	10.XXX	4x2	BL	5,200, 5,550
TGL	12.XXX	4x2	BL	5,200, 5,550
TGM	12.XXX	4x2	BL	5,125, 5,475
TGM	15.XXX	4x2	BL	5,125, 5,475, 6,175
TGM	15.XXX	4x2	BL	5,125, 5,475, 6,175
TGM	26.XXX	6x2-4	BL	4,125, 4,425, 4,725, 5,075, 5,425, 5,775
TGX/TGS	18.XXX	4x2	BL, LL	5,500, 5,900
TGX/TGS	26.XXX	6x2-2	BL, LL	4,800, 5,100
TGX/TGS	18.XXX	4x2	LL-u	5,500, 5,900
TGX/TGS	24.XXX	6x2-2	LL-u	4,500, 4,800

### MAN chassis for standard fixed bodies

Туре				Wheel base [mm]
TGL	8.XXX2)	4x2	BL	4,200, 4,500, 4,850, 5,200, 5,550
TGL	10.XXX	4x2	BL	4,200, 4,500, 4,850, 5,200, 5,550, 6,700
TGL	12.XXX	4x2	BL	4,200, 4,500, 4,850, 5,200, 5,550, 6,700
TGM	12.XXX	4x2	BL	4,425, 4,775, 5,125, 5,475
TGM	15.XXX	4x2	BL	4,425, 4,775, 5,125, 5,475, 6,175, 6,575
TGM	18.XXX	4x2	BL	5,075, 5,425, 5,775, 6,175, 6,575
TGX/TGS	18.XXX	4x2	BL, LL	5,500, 5,900, 6,300, 6,700
TGX/TGS	26.XXX	6x2-2	BL, LL	4,500, 4,800, 5,100, 5,500, 5,900

### MAN chassis for standard swap bodies

Туре				Wheel base [mm]
TGX/TGS	18.XXX	4x2	LL	5,500, 5,900
TGX/TGS	24.XXX	6x2-2	LL	4,500, 4,800, 5,100

	MAN
I 10	M AN 520

### MAN semi-trailer tractors for Euro-standard semi-trailers

Туре				Wheel base [mm]
TGX/TGS	18.XXX	4x2	BLS	3,600
TGX/TGS	18.XXX	4x2	LLS	3,600
TGX/TGS	18.XXX	4x2	BLS	3,900
TGX/TGS	18.XXX	4x2	LLS	3,900
TGX/TGS	24.XXX	6X2/2	BLS	2,800, VLA 19,5"
TGX/TGS	26.XXX	6X2/2	BLS	2,600
TGX/TGS	26.XXX	6X2/4	BLS	2,600

### MAN semi-trailer tractors for high-capacity semi-trailers

Туре				Wheel base [mm]
TGL <sup>1)</sup>	8.XXX <sup>2)</sup>	4x2	BL	3,050 <sup>3)</sup> , 3,600, 3,900
TGL <sup>1)</sup>	10.XXX	4x2	BL	3,050 <sup>3)</sup> , 3,600, 3,900
TGL <sup>1)</sup>	12.XXX	4x2	BL	3,050 <sup>3)</sup> , 3,600, 3,900
TGM <sup>1)</sup>	12.XXX	4x2	BL	2,975 <sup>3)</sup> , 3,525
TGM <sup>1)</sup>	15.XXX	4x2	BL	2,975 <sup>3)</sup> , 3,525
TGM <sup>1)</sup>	18.XXX	4x2	BL	3,575
TGX/TGS	18.XXX	4x2	LLS-u	3,600

1) MAN Individual 2) Can be reduced to 7.49 t

3) Only with CC cab

### MAN chassis for volume swap bodies

Туре				Wheel base [mm]
TGX/TGS	18.XXX	4x2	LL-u	5,300, 5,500, 5,900
TGX/TGS	24.XXX	6x2-2	LL-u	4,500, 4,800



### Examples of modifications for local and long-haul transport:

- MAN individual cab interior fittings
- Exterior style package
- Individual cab adhesions
- Hydraulic, height-adjustable BDF (Federal association of German long-distance haulage) interchangeable frames
- Wheelbase alterations
- Fuel tank conversions
- Seating benches as well as seating/ bunk arrangements

# **TAILOR-MADE TRUCK.**

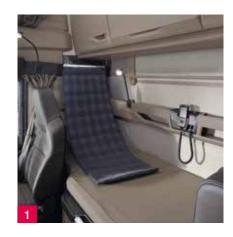
Life is all cakes and ale – at least with MAN Individual. We can upgrade your truck to suit your wishes and requirements. This will make it exclusively unique – from a first glance at the design right up to a feeling of well-being throughout the entire driver's cab. You have the choice when it comes to the cab, chassis, driveline, electronics and body – and we have the right solutions.

#### One-stop service.

You get everything from one source, thus always having an overview of the costs. From order preparation and design right up to production, quality assurance and delivery, your personal contact partner will ensure that you receive your desired vehicle or your ideal chassis rapidly and straightforwardly. Completely individually. MAN Individual.

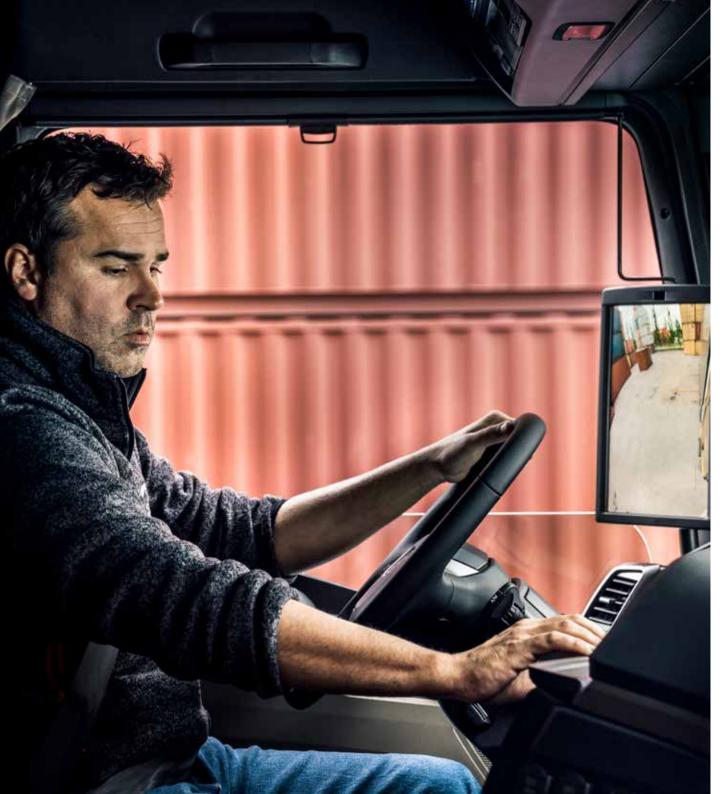
Precisely as with the standard chassis, with MAN Individual you are building upon excellent MAN quality excelling in outstanding reliability and safety. And what's more: After delivery of the modified chassis, you benefit from our guarantee and warranty.

Contact your seller to discuss your individual requests. Working together with MAN Individual, they will find the best solution for you.





 Lounger with hammock for relaxing
 Perfect for independent types: on-board kitchenettes









- Language recognition via driver card
   Preparation for Alcohol Interlock
   Sensor system for the fifth-wheel coupling

## **DRIVING IN COMFORT.**

#### Language recognition via driver card

With automatic language recognition via driver card, activated via MAN Now, the language saved on the card is automatically adopted as the "vehicle language" after inserting the driver card into the tachograph (when the ignition is switched on) and does not have to be set or selected manually via the vehicle menu. Manual language setting via the vehicle menu remains available, so that a language other than the one stored on the driver card can be subsequently selected.

28 languages are available. The languages German and English are available in every vehicle. In countries where RIO is offered, additional languages are also available subsequently free of charge via MAN Now.

### **Preparation for Alcohol Interlock**

Traffic accidents caused by alcohol are particularly annoying because they are absolutely preventable. The driver must react in a fraction of a second even in a sober state, e. g. to avoid an impending accident. Under the influence of alcohol, this is impossible. With the preparation for connecting a device for determining the alcohol content in the breath, the engine can only be started if a maximum permissible alcohol content (may vary from country to country) is measured in the air tested.

The electronic blocking of the engine start by the alcohol tester can be cancelled or bypassed (depending on the version, for example in emergencies) by pressing a secured button. Please note: This is only permissible for certain countries.

#### Sensor system for the fifth-wheel coupling

The sensor system of the fifth-wheel coupling enables safe and convenient sensor-supported monitoring of the coupling and uncoupling operation from the driver's workplace. This prevents damage due to incorrect coupling processes. For a controlled and guided coupling process between the semitrailer tractor and semitrailer, displays and text messages are shown to the driver on the instrumentation display as a sub-item of the air suspension menu. If a coupling process has been completed correctly, this is also confirmed by an acoustic signal. Please note: The pre-departure check remains mandatory despite the indication of the locking status in the driver's display.

### **INCREASED SAFETY.**

### **Front Detection**

Whether in the delivery zone of a supermarket, when leaving the workshop or in hectic inner-city traffic: people may be located directly in front of the vehicle where they are difficult to see. When moving off and at speeds of up to 10 km/h, Front Detection monitors the close range in front of the vehicle, which is difficult or impossible for the driver to see, and warns the driver in two stages if it has detected particularly vulnerable, "weaker" road users, such as pedestrians or cyclists. Front Detection thus helps to increase safety and prevent accidents. It relieves the strain on the driver, in particular during urban driving.

Front Detection supplements the Emergency Brake Assist EBA Plus, which includes a comparable protective function for particularly vulnerable road users, but only becomes active at speeds above 10 km/h.

### **Emergency Brake Assist EBA Plus**

In an emergency, automatic brake intervention until full braking – this has previously saved lives in the event of an impending collision with other vehicles. But what happens if pedestrians or cyclists suddenly enter the driving area? The enhanced Emergency Brake Assist warns and now reacts to these more vulnerable road users as well. The Emergency Brake Assist EBA Plus warns the driver of an impending collision **at road speeds of 10 km/h and above**. In the event of an emergency, if a collision hazard is detected, automatic braking intervention takes place even to the point of standstill – also for vulnerable, weaker road users such as pedestrians or cyclists. Available on demand in a version that cannot be switched of.





Front Detection
 Emergency Brake Assist EBA Plus



## FURTHER ASSISTANCE SYSTEMS.

### Direct call-up of central operating menu for assistance systems

configuring the assistance systems available in the vehicle. This simplifies switching on and off as well as configuration of all the available assistance systems - especially with frequently changing drivers. Depending on the equipment, the button for central operation of the assistance systems is located either on the multifunction steering wheel or in the assistance system key panel on the instrument panel (for vehicles without multifunction steering wheel). There is also a button for temporary switching off the acoustic signals of the assistance systems.

#### Long-haul transport assistant MAN CruiseAssist

Across the entire permitted speed range on motorways and main roads similar to motorways with structural separation of lanes, the long-haul transport assistant MAN CruiseAssist automatically controls the driveline, brakes and steering, if necessary decelerating to a full stop behind a vehicle that is stopping and, in the case of brief stops, automatically moving off again. MAN CruiseAssist guides the vehicle continuously by means of gentle steering interventions. The system uses the detected lane markings as orientation.

### Lane Change Collision Prevention Assist

The MAN Lane Change Collision Prevention Assist uses A new button directly opens the central operating menu for radar sensors to monitor the areas to the left and right of the vehicle's lane. If the sensors detect that changing lanes would result in a dangerous situation, the driver is warned in good time. If the vehicle nevertheless leaves the given lane – also if the turn indicator has been actuated – the Lane Change Collision Prevention Assist steers it back into the lane by means of a corrective steering torque.

### Lane departure warning (LDW)

An acoustic signal warns the driver if they drift out of their lane. Available on demand in a version that cannot be switched off.

#### Lane change support (LCS)

Lane Change Support LCS monitors the lanes on the right and left next to the vehicle with the aid of radar sensors from a driving speed of 50 km/h - up to approx. 30 m towards the front and up to approx. 80 m towards the rear. If the sensors detect a dangerous situation when the vehicle is changing lanes, the driver is warned in good time so that they can prevent a potential collision with other vehicles.

#### Lane return assist (LRA)

If the truck departs from its lane, corrective steering guides the vehicle back. The vehicle is automatically steered until it reaches the normal lane position; it is not kept in its lane continuously.

#### Turn Assist

Turn Assist monitors the difficult-to-see side area next to the vehicle (co-driver's side) with the help of radar sensors at road speeds of up to 30 km/h. If the sensors detect a dangerous situation when the vehicle is turning off, the driver is warned in good time so that they can intervene and prevent a possible collision with other road users.

### Traffic jam assist

On motorways or other well-constructed major roads, the traffic jam assist can independently operate the vehicle's drivetrain, brakes and steering. It slows behind a stopping vehicle ahead until coming to a stop and moves the truck forward again by itself.

#### ACC Stop&Go

The ACC with Stop&Go feature automatically controls speed and the distance from the vehicle in front. The desired speed is maintained without the driver having to operate the accelerator. The truck automatically brakes until it comes to a standstill and moves away again after short stops.

### Distance warning system

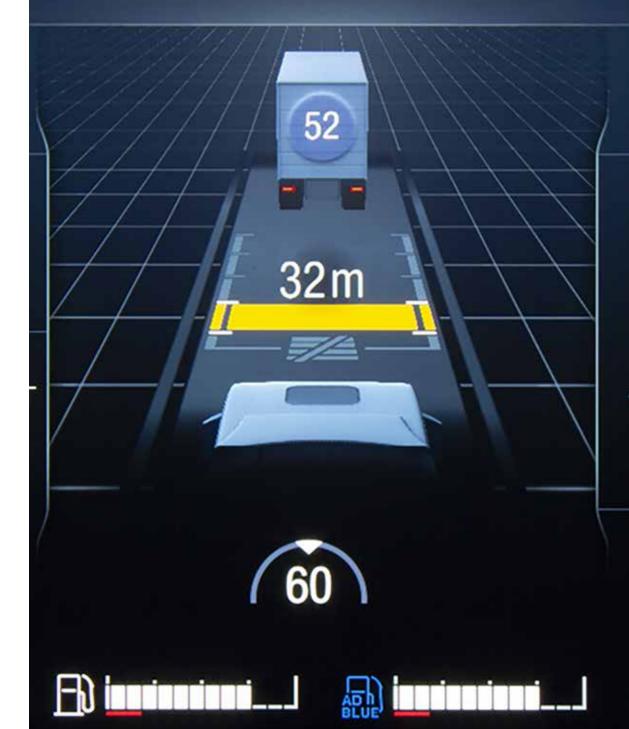
The distance warning system helps to maintain the required, generous safety distance to the next vehicle. After an acoustic or visual warning, the driver can correct the distance so that more reaction time remains for unforeseen situations.

### MAN AttentionGuard

MAN AttentionGuard is an attention assistant based on the principle of lane monitoring. Within the limits of the system, starting at a speed of approx. 60 km/h it detects reduced driver alertness in good time. A visual as well as acoustic warning supports the driver in refocusing their concentration on the road – thus we help reduce a possible accident due to lane departure. Compared with the previous version, the enhanced MAN AttentionGuard continuously evaluates the driver's directional accuracy, steering interventions and other parameters. The uniformly specified, scientifically recognised rating scale (Karolinska Sleepiness Scale, KSS) is used to calculate and estimate the driver fatigue level. The driver is warned when a specific stage on this rating scale has been reached.

# 20,5°C 03:00 PM





## FURTHER ASSISTANCE SYSTEMS.

### Traffic sign recognition system

The traffic sign recognition system uses the new video camera on the windscreen to detect road signs on the route in front of the vehicle and displays the permitted maximum speed on the instrumentation display. This applies to both traffic signs that show a specific speed limit, as well as town boundary or motorway signs. If the permitted maximum speed is exceeded, the system warns the driver visually and, if necessary, also acoustically.

For vehicles with navigation system, the system combines the optically recorded data with stored navigation data. This means that the system can also react accordingly to current changes in signs – which are not shown in the existing navigation data. Other country-specific and vehicle-specific restrictions such as no-overtaking or no-entry restrictions can also be shown on the display.

#### Tyre pressure monitoring system

The tyre pressure monitoring system (TPM) with display of tyre temperature uses sensors to determine and monitor the air pressure and temperature in the vehicle tyres – including the spare wheel (here only air pressure). If the air pressure is too low/too high in comparison to the nominal pressure or the tyre temperature is too high, the driver is warned by means of a display in the instrumentation. As standard available for the entire range up to and including 4-axle vehicles. The function autolearn/autolocate automatically learns the sensors and their position so that the wheels no longer have to be fitted in the same position; there is no need for a workshop visit to re-initialise the sensors with the correct position.

#### Driver's airbag

The airbag integrated into the steering wheel and the seat belt tensioner incorporated into the belt lock on the driver's side are activated in the event of a collision via a joint trigger: if a critical deceleration of the truck is detected, the activators for the airbag and belt tensioner launch in parallel.

#### High-beam assist

Depending on the driving situation, high-beam assist optimises use of the main beam. It prevents the drivers of oncoming vehicles or vehicles in front from being dazzled by automatically dipping the headlights.

#### Side camera system (SCS)\*

The side camera system is an integrated camera system for assisting in turn-off procedures. It makes it easier for the driver to observe those areas next to the vehicle that are difficult to see (co-driver's side). The video feed is transmitted to an optional additional monitor (only for vehicles with conventional mirrors) on the co-driver A-pillar or to the media display.

#### Video Turn Assist (VTA)\*

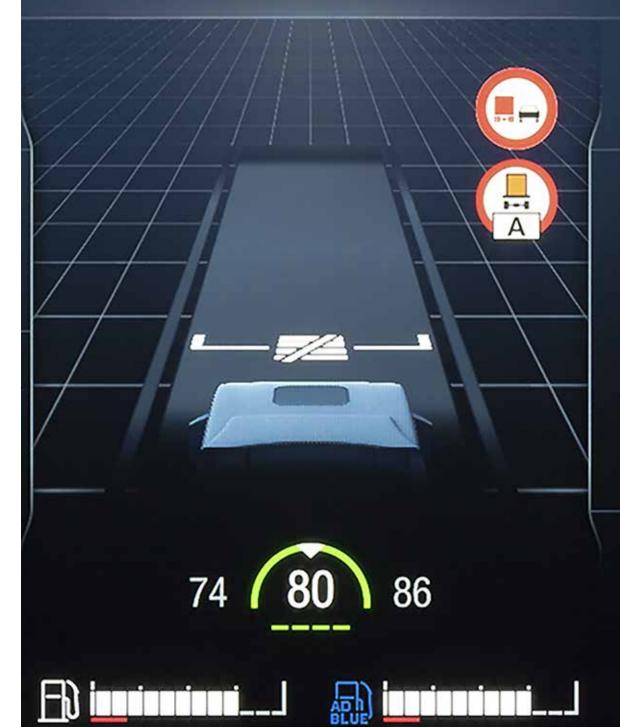
Video Turn Assist expands object recognition by comparison with the side camera system (SCS): Objects are detected in an area of 2.5 m x 6 m to the right of the vehicle and the monitor display is supplemented by a warning to the driver in the form of an acoustic signal from the loud-speaker built into the vehicle. The video feed is transmitted to an additional monitor (only for vehicles with conventional mirrors) on the co-driver A-pillar. In addition, an optical display lights up and an acoustic signal is emitted.

#### 360° view assistant BirdView\*

The camera system for a  $360^{\circ}$  live view 'from above' seamlessly displays an area of up to four metres around vehicles with fixed bodies (e.g. fire-fighting, beverage or wastedisposal vehicles). Stitch-and-blend technology combines four camera views (front, rear, left and right, in full-HD quality) to a single image from the bird's-eye perspective. A special feature of the system is – depending on the driving situation – self-adjusting image sections at manoeuvring speed ( $\leq 40$  km/h), when the turn indicator is set (lane change) and when reversing.

# 20,5°C 03:00 PM





\*MAN Individual package

## SAFETY FIRST, EVERY TIME.

MAN has the right cab for every need – and maximum safety, comfort and ergonomics travel with you wherever you go. Our cabs are designed for fatigue-free, focussed driving, relaxing breaks and maximum passenger protection. All of the cabs offer optimum safety thanks to a range of features, including the mirror system comprising main and wide-angle mirror, large kerb mirror and front mirror. Or the innovative MAN OptiView digital mirrorreplacement system which provides the driver with the optimal overview of the traffic situation. A heated windscreen ensures an unobstructed view even at the coldest times of the year.

### Aerodynamically optimised sun visor for MAN GX and GM cabs

The design sun visor in dark grey adds a touch of class to the front of the GX and GM cabs. It prevents the driver from being dazzled when the sun is at a steep angle. The design has been optimised for aerodynamics, resulting in better airflow around the A-pillar at the roof and preventing separation of the air stream which is unfavourable for fuel consumption. This improvement of the drag coefficient (cd value) reduces fuel consumption.

#### MAN OptiView.

With the innovative MAN OptiView digital mirror-replacement system, enhanced safety takes to the road. This is not only because MAN does away with mirror arms and depicts the statutorily required fields of vision, but also because in critical driving situations such as manoeuvring, turning off and changing lanes, the extended views provide the driver with the optimal overview of the traffic situation.

MAN OptiView does far more than conventional mirror systems. Besides the statutorily required fields of vision, the digital mirror-replacement system also shows views specifically adapted for various driving situations (e.g. turning off, manoeuvring, driving on motorways). The functional principle and display concept of MAN OptiView are thus optimally matched to natural human perception, enabling the driver to visually grasp the vehicle surroundings and traffic activity quickly, evaluate them reliably and deal with them safely.



Cab	W x L (mm)	Sleeping facilities	Available for	Segment	Benefits at a glance
Cab GX: The maximum one (wide, long, extra height)	2,440 x 2,280	2	TGX	Long-haul transport	<ul> <li>One of the most capacious in Europe</li> <li>Even more standing height: 2,100 mm</li> <li>2 comfortable beds</li> </ul>
Cab GM: The generous one (wide, long, medium height)	2,440 x 2,280	2	TGX	Long-haul transport	<ul><li>Full standing height</li><li>Spacious interior</li><li>2nd bed possible</li></ul>
Cab GN: The roomy one (wide, long, standard height)	2,440 x 2,280	1	TGX	Special uses in local trans- port (e.g. building materials, wood)	<ul><li>Compact size</li><li>Convenient through access</li><li>Comfortable bed as standard</li></ul>
Cab TM: The comfy one (narrow, long, medium height)	2,240 x 2,280	2	TGS, TGM, TGL	Heavy-load special uses in national long-haul transport	<ul> <li>2 sleeping spaces</li> <li>Capacious exterior storage compartment</li> <li>Expanded standing space in through access</li> </ul>
Cab TN: The flexible one (narrow, long, standard height)	2,240 x 2,280	1	TGS, TGM, TGL	Local and distribution transport, off-road transport, municipal services	<ul> <li>1 sleeping space</li> <li>Capacious exterior storage compartment</li> <li>Expanded standing space in through access</li> </ul>
Cab NN: The practical one (narrow, medium length, standard height)	2,240 x 1,880	-	TGS	Local and distribution transport, off-road transport, municipal services	<ul> <li>Space behind seats for work clothes, etc.</li> </ul>
Cab CC: The compact one (narrow, short, standard height)	2,240 x 1,620	-	TGM, TGL	Local and distribution transport, off-road transport, municipal services	<ul> <li>Comfortable height</li> <li>3rd seat possible</li> <li>Additional storage spaces in midsection</li> </ul>
Cab DN: The crew cab	2,240 x 2,790	-	TGM, TGL	Construction transport, municipal services	<ul><li> 6 (optionally 7) seats</li><li> Comfortable height</li></ul>

### **ERGONOMICS START WITH THE VERY FIRST STEP.**

The ergonomic entry design of the MAN Trucks ensures a pleasant start to the day. As the entrance is positioned in the middle of the door area, the driver can get into the vehicle in an upright position. The access ladder is designed as a stair so you have all steps in view. On entering the vehicle, the design ensures extra comfort, and it offers better safety, too. Thanks to entry lighting, the steps and surroundings are visible at any time of day and in any weather conditions as soon as you open the door. For all this, we didn't forget the little things either: an entrance optimised especially for off-road work and that features steps with a non-slip surface and a lattice structure, washable interior door panelling and a compressed air supply. This way sand, mud and gravel can guickly be shown back out the door. In addition to ensuring your truck makes a positive impression visually, breaks feel all that much better, too.

That said, we developed the MAN EasyControl system specifically to help you avoid getting in and out when you don't have to. Within the driver-side door there are four controls that can be easily accessed from outside the vehicle. Depending on your configuration, they come preprogrammed with the key functions or can even be implemented according to individual needs. Once in the cab, you have a variety of driver's seats to choose from, each ready to welcome your particular build. There is a larger range of backrest adjustment options for drivers of all sizes. The passenger seat as well features highly ergonomic design and its own range of individual adjustment possibilities. The Vario seat is especially space-saving: when it's not needed, thanks to its Cinema function, it can simply be folded away. With the TGX, the whole seat can even be rotated 90° to enjoy maximum legroom during breaks.

Even the steering wheel has been given greater flexibility: for the resting position, the steering wheel can be tilted forward to a horizontal position by the driver, and in action as well, it can be given as steep an angle as that of an average passenger car. The result is a workplace that bends over not only backwards, but forwards and sideways as well, to suit. So the driver doesn't have to.





### WITH MAN YOU CAN TAKE A LOAD OFF.

Everything has to come to rest at some point. A good atmosphere. A cosy environment. In the sleeping area of the MAN trucks that's exactly what you'll find. In the extended cab models, a multizone cold-foam mattress and a slatted frame ensure comfort for well-deserved shut-eye and peaceful dreams. Personal items have their spot too in the many, customisable stowage compartments.

The bed is so comfy, you might want to stay just where you are. And you can, too, since all important functions can be operated and monitored right from the remote control. Lights, locks, heating, windows – all a simple push of a button away. Just like the radio, music, the perimeter camera and important data on the battery's current status or driving times. The infotainment system can also be conveniently operated via the MAN Driver app. Breaks and sleeping times can therefore be used optimally so that you're well rested and ready to take on upcoming challenges.

In our cabs an auxiliary water heater provides pleasant temperature and air condition. For the MAN GX, GM, GN, and TM and TN cabs for the TGS electrical auxiliary air-conditioning system (as an option) is ready for use. The electric air conditioner works without a cold reservoir, which would have to be charged during vehicle operation, and is thus ready for use at any time. Even in summer it can keep things refreshingly cool for up to 11 hours. While the truck is on the road, MAN Climatronic maintains the chosen temperature fully automatically. Comfortable temperature zones in the cab are assured as well, as the foot area and the head area are controlled separately. Perfect for keeping your head cool but your toes toasty. Noise and lights are kindly asked to stay away, however. To create the perfect feel-good environment, the entire interior can be tailored to suit you down to the ground. From the colour scheme (Desert Beige or Moon Grey) to the storage space in the cab and even the interior lighting, everything can be customised to your needs – while maintaining a clear focus on the functionality which will never let you down.

#### Lion emblem on partial leather seats and curtains

With the expressive lion emblem on the partial leather seats and the practical curtains, stays in the cab are even more pleasant. The curtain fabric is hard-wearing and is in the same colour for both interior colour schemes. The crosscab curtain is designed as a single piece. The bunk area can now be made even darker.





 Perfect for independent types: on-board coolbox/fridge
 Lion emblem and curtains

## **TOP-CLASS DRIVER'S CAB.**

The traffic situation is becoming ever more demanding and complex. And when off-road, you're always facing new challenges that call for a driver's full concentration. It is all the more important to us then to make the cockpit as driver-friendly and organised as possible. Displays and controls are separated from one another spatially. Reading distances and reachability are thus ergonomically optimised: data is set at a farther distance, making it easier to grasp, functions are colour-coded, and buttons and switches are within easy reach. The focus is clearly set on the most important areas. The driver's view can easily go between the road and the instruments, without fear of distraction. Just another MAN contribution to making drivers' lives less complicated and less tiring.

All of the displays and controls throughout the vehicle follow a single concept. Symbols, colours, usage, alert and warning sounds as well as design are consistent throughout the cockpit. The quick-selection keys are individually programmable and accelerate workflows. Not to mention notices can be played in any of 30 different languages. For voice command operation, a choice of six languages is offered. All of it intuitive to use. After all, the controls – and especially the cutting-edge digital components – were developed by drivers for drivers. This way the driver can see to the truly important things: the cargo and the transport, whatever the terrain.

#### DNR selection for MAN TipMatic® on stalk switch

Operation of the gearbox using the right control stalk is a completely new development. Both driving mode and driving program are selected by means of the stalk switch. Controls located in easy reach near the steering wheel and electric parking brake make for certainty in operation.

The parking brake can optionally be engaged by means of an electric switch, which is located on the right-hand side of the instrument panel next to the main display. Under certain circumstances, both actuation (engagement) of the parking brake when parking the vehicle as well as its release when moving off can be carried out automatically.





### **DRIVING SMART.**

With navigation, radio (from standard to digital), video, telephone and more tailored to trucks, the infotainment system of the MAN Trucks is a communication and multimedia hub. It is available in five different variants, from entry-level to Navigation Professional. The 7-inch or 12.3-inch display – both with brilliant HD resolution – makes for great viewing. Direct access buttons and a USB-C input connection are part of the standard fittings, and from Advanced level on up to two smartphones can be paired. The media system Medium 7" is an entry-level media system version for vehicles that are subject to the new statutory provisions on equipment with a Reversing Motion System.

The infotainment system can be operated either via a classic control system with buttons or via MAN Smart-Select (can be combined from version Advanced 7-inch). Throughout, familiar usage meets innovative comfort. The result is one you can see and feel, too, as high-quality surfaces make every journey with an MAN Truck tangibly special.

#### **Reversing Motion System**

Overview to the rear when manoeuvring – ex-works! When reversing a solo vehicle, the camera image of the camera installed ex-works in the rear area supports the driver. People or objects behind the vehicle can be detected, trailers or semitrailers are in full view when connecting or hitching up.

The image from the camera is automatically shown on the MAN media system display when reverse gear is engaged and the vehicle rolls backwards. A button on the instrument panel with a camera symbol enables manual activation of the system.





 Infotainment system with 12-inch display and MAN SmartSelect
 Right: Camera image of the Reversing Motion System when hitching up Left: Camera image of the front camera

with MAN OptiView

### **IMPROVED AERODYNAMICS.**

The better the headwind flows around a vehicle, the less fuel is required for driving. With the TGX, in line with the design of the MAN Trucks, gap widths between the cab and semitrailer are therefore reduced and the formation of turbulence is suppressed for optimum aerodynamics. The reversible extensions on the side flaps and roof spoiler reduce the free space between the cab and the semitrailer. This achieves a particularly effective aerodynamic airflow around the entire vehicle – even in cross winds. The door gap closing element is a highly flexible plastic element attached to the door extensions, which closes the vertical gap between the front edge of the door extension and the bumper. This further optimises the aerodynamic flow around this area.

The aerodynamically optimised A-pillar cladding for TGX and TGS has a specially shaped attachment made of flexible plastic, which improves airflow around the A-pillar and thus – due to lower eddies – reduces drag. Vehicles with the MAN OptiView mirror replacement system benefit to a greater extent from the new aerodynamically optimised A-pillar cladding and the calm airflow in this area.



### **POWER THAT GOES THE DISTANCE.**

If you want to get to the top, you need drive and efficiently deployed strength. For the MAN trucks, we have a full four on offer: the MAN D38, our engine for heavy-duty tasks for the MAN TGX, the MAN D26, the D15 and the D08. Each one is a high performer and brings efficiency and trusted MAN reliability to make your new truck a strong and cost-transparent member of your business for a long time to come. With every stage of development, a high level of engineering skill reduces fuel consumption and increases performance. Recent example: the MAN D26 in Euro VIe. Brings 10 hp and 50 Nm more to the road and still consumes up to 3% less fuel.

So that you can get the most out of our high-performance engines at all times, we have a variety of digital tools ready and waiting. The digital service Perform assists drivers in optimising the economy of their driving styles. Perform evaluates all the relevant vehicle data with respect to the economic efficiency of the driving style. The service provides important vehicle data about utilisation of cruise control or the service brake, for example. Efficiency is always what comes first when it comes to MAN engines. You can count on it. Finally, there was only one component left for us to improve: the driver. And we took that on, too: first via efficiency data displays and assistance systems like the GPS-based speed control system MAN EfficientCruise<sup>®</sup> with PredictiveDrive. The new function of the MAN EfficientCruise<sup>®</sup> GPS cruise control no longer drives blindly and stubbornly uphill, but weighs up possible speed and gearshift strategies against each other like a strategist and ultimately selects the one with the most economical fuel consumption. Then we added tailored driver training using the data from your specific MAN truck, continuously digitally recorded and ready for evaluation. Together it's the ideal basis for the perfect interplay of human and MAN.

#### New generation of hypoid axles\*

The new generation of hypoid axles enables a driveline configuration that is optimally matched to the respective application: Lighter and more efficient. As single axle or tandem-axle assembly.

#### Engines Euro VI

	Туре	Capacity	Rated output	Max. torque
D0834 R4		4.61	118 kW (160 hp)	600 Nm
	R4	4.61	140 kW (190 hp)	750 Nm
	R4	4.61	162 kW (220 hp)	850 Nm
D0836	R6	6.91	184 kW (250 hp)	1 050 Nm
	R6	6.91	213 kW (290 hp)	1 150 Nm
	R6	6.91	235 kW (320 hp)	1 250 Nm
D1556	R6	9.01	243 kW (330 hp)	1 600 Nm
	R6	9.01	265 kW (360 hp)	1 700 Nm
	R6	9.0	294 kW (400 hp)	1 800 Nm
	R6	12.4	324 kW (440 hp)	2 250 Nm
	R6	12.4	353 kW (480 hp)	2 450 Nm
	R6	12.4	382 kW (520 hp)	2 650 Nm
D3876	R6	15.2	397 kW (540 hp)	2 700 Nm
	R6	15.2	427 kW (580 hp)	2900 Nm
·	R6	15.2	471 kW (640 hp)	3 000 Nm

\*Available for MAN TGX und TGS. Also for MAN TGM vehicles with 13 t rear axle.





### MAN TRUCKS ARE PRE-PROGRAMMED FOR EFFICIENCY.

MAN has taken efficiency to the next level with the MAN TipMatic<sup>®</sup>. This system enables the vehicle to automatically recognise the load and incline conditions and optimise the gear-changing strategy to match. Whether the truck is unladen or fully loaded, MAN TipMatic® automatically selects the ideal gear for pulling away. Moreover, the wide gear spread and software which recognises inclines guarantee outstanding performance when moving off. "SmartShifting" is a further evolution of the well-known "SpeedShifting" and minimises traction interruptions when changing gear while travelling uphill, for instance. "Idle Speed Driving" enables comfortable moving off and driving at idling speed. This feature allows the driver to manoeuvre the truck with precision and sensitivity or "just go with the flow" in slow-moving traffic on the motorway. And should the truck get stuck in snow or in wet, loose ground, the rocking-free function makes it easier to drive off, especially due to the ability of the clutch to rapidly open and closing.

In addition, MAN TipMatic<sup>®</sup> also contains preprogrammed driving settings for various driving situations, such as the fuel-saving Efficiency program, Manoeuvre mode, programs for heavy loads and Performance mode for a more agile driving style. This ensures that your truck will always perform to the max, anytime, anywhere.

### MAN TipMatic<sup>®</sup> 12 for MAN 26 engine also available for 4x2 standard semitrailer tractor

In future, for all standard semitrailer tractors in the heavy series the MAN TipMatic<sup>®</sup> shift system is based exclusively on the twelve-speed gearbox. The MAN TipMatic<sup>®</sup> 12 offers significant added value for applications in which payload and consumption play decisive roles.

The twelve-speed TipMatic gearbox has twelve forward and two reverse gears. There are two versions of the gearbox: direct drive and overdrive. The automated manual gearbox independently performs clutch actuation and gearshifts. The MAN TipMatic<sup>®</sup> shift system uses software control functions to determine the optimum moving-off and gearshift strategy in all situations in conjunction with the load and slope detection function.

The innovative SmartShifting function permits particularly fast gear changes with minimum interruptions in tractive force as required and thus increases efficiency. Due to its three-shaft design, the gearbox has a low weight with high transmission efficiency.

### THE MAN TGX AND TGS KNOW EVERY HILL – AND THE BEST GEAR TO MATCH.

Complex chess game on uphill gradients: the new PredictiveDrive function of the MAN EfficientCruise<sup>®</sup> GPS cruise control no longer drives blindly and stubbornly uphill, but weighs up possible speed and gearshift strategies against each other like a strategist and ultimately selects the one with the most economical fuel consumption.

By taking into account the selected navigation route, or without navigation the most likely, the cruise control function MAN EfficientCruise® calculates the route with its uphill and downhill gradients up to three kilometres ahead with the aid of three-dimensional map data. The new PredictiveDrive supplements the effect of MAN EfficientCruise®, especially on uphill and downhill gradients. The PredictiveDrive system continuously analyses potential driving and gearshift strategies in these route sections and selects the most efficient one depending on the situation. This makes it possible to prevent unnecessary traction interruptions due to gear hunting and frequent gearshifts. Depending on the topographical conditions, the available torgue is enabled or reduced as part of the dynamic torque adjustment. In addition, the characteristics of the selected drving program are also taken into account.

What is new is that a reduced form of dynamic torque adjustment is also used in the Efficiency driving program – with a correspondingly positive effect on the fuel consumption of the entire fleet. Previously, the positive effect of dynamic torque adjustment was reserved for the Efficiency Plus driving program. The aim of the PredictiveDrive function is generally to make the best possible use of the predicted topographical changes on the route in order to be as fuel-efficient as possible by actively varying the speed, gear and available engine torque. With the goal of implementing this at almost average speed neutrality.

For example, it may be advantageous:

- to drive into an uphill gradient with momentum and shift down early,
- to use the full engine torque when on the gradient,
- and to reduce the engine torque again at the end of the incline.

MAN EfficientCruise<sup>®</sup> and PredictiveDrive are already active from low speeds (approx. 30 km/h). The system works both when driving freely and in cruise control mode. The anticipatory system reactions on uphill gradients ensure significantly better drivability and thus also increase driver acceptance of the dynamic torque adjustment.

Within a tolerance range, adaptation of the vehicle speed to the topography can be higher or lower than the desired speed set by the driver. This maximum deviation from the desired speed can be set in four ECO levels. In this way, the driver is easily able to adjust the potential fuel saving to the road surface, visibility and traffic conditions.



### **CUSTOMER-ORIENTED.**

#### New air suspension control

The air sprung rear axle is now standard in long-haul transport. However, the possibilities and advantages of air suspension are also increasingly being used in many other application segments. The new air suspension control with its improved and extended range of functions takes this trend into account. The new electronically controlled air suspension VASC (Vehicle Air Suspension Control) allows the vehicle frame to be raised and lowered to suit different deployment scenarios. The control unit for the electronically controlled air suspension (VASC) is installed in a separate holder next to the driver's seat and allows the driver to ad-just the height of the vehicle frame quickly and precisely - for example, to adjust the cargo space floor and the loading ramp to the same level. An extended control unit enables the VASCto be operated via the multifunction steering wheel and via a menu in the display of the instrumentation.

#### System improvements:

- New functions, for example a 2nd rear axle relievable, a manual and automatic suppression of VASC (Vehicle Air Suspension Control) level control, and a selection option of 2nd lowered driving height for compensation of tyre rebound on empty runs.
- Shorter lifting and lowering times (up to 50%)
- Remote control with new ergonomic operating design
- Control via multifunction steering wheel and on-board menu
- Control of the air suspension of the trailer/semitrailer via remote control or multifunction steering wheel

#### New electronic brake system EBS

The electronic brake system EBS combines the basic function of the electro-pneumatic brake with the extended functions of antilock braking system (ABS) and anti-slip control (ASR). With the aid of EBS, driving and braking procedures can be optimised in many different ways. It thus makes an important contribution to enhancing driving safety, driving comfort and cost-effectiveness. In the brake system of the MAN Truck Generation, the electronic brake system EBS has been further developed and its range of functions expanded with new functions. Active wheel speed sensors with their own power supply and evaluation electronics now replace the previous passive sensors. Active sensors enable extremely accurate and fast speed measurement from just 0.1 km/h. Off-road moving-off behaviour with tandem-axle units is improved with the use of sensors on the second axle. Also new are halt brake braking function with preparation for reversing restriction and rollback detection, MAN EasyStart Offroad hill holder and the hill-climbing brake in conjunction with manual gearbox. It is now also possible to combine the systems in one vehicle.

#### Electronic anti-slip control (ASR)

In future, the new electronic anti-slip control will be able to prevent the spinning of driven wheels on all vehicles – including on the driven front axles of vehicles with MAN HydroDrive® \*.

The anti-slip control (ASR) prevents the drive wheels from spinning when moving off or accelerating. This improves traction, particularly on slippery surfaces such as ice, snow, loose chippings or wet cobbles, and ensures stable driving. The further development of the electronic brake system EBS (use of active wheel speed sensors) means that for example vehicles with MAN HydroDrive<sup>®</sup> can also be combined with anti-slip control (ASR). This improves traction in this type of drive when a front wheel spins more on one side.

\*For MAN TGX and TGS



### **RELIABILITY IN DETAIL.**

Our reliability rests on many components. The first is our continuously growing LED range for the lighting systems of the vehicle. Another is our dedication to the little things. For instance, when it comes to the electricity supply of the MAN Trucks we pride ourselves on laying not one wire more than your configuration needs. The wires themselves are now protected by even more flexible and elastic materials, and the number of joints has been cut. We also reduced the wire thickness overall, which in turn means less weight and more available load capacity.

The modular wiring concept offers additional advantages by allowing customer requests to be easily incorporated and enabling quick repairs thanks to prefab sets. Together, the result is shorter downtimes and a vehicle electrical system with higher performance overall.

#### 24V battery management system

Empty batteries and stranded vehicles due to excessive use of electrical devices during rest periods are a thing of the past with the new MAN battery management. The system ensures that the vehicle engine can be started by automatically switching off less important consumers.

#### Cyber security

The networking of electronic systems and the associated data availability and use are both a curse and a blessing. On the one hand, this enables new helpful functions and applications – on the other hand, it offers potential targets for hackers. MAN consistently safeguards all vehicle systems against misuse.



## **SUPPORT NON-STOP.**

Only a truck that runs is a good truck. Unplanned downtime and the associated loss of time and earnings are something we'd all like to do away with for good. The MAN Truck Generation has got your back there too. Right from day one, it brings the ultimate quality synonymous with MAN to its work. So much so that it's hard to get it to stop. If you need us, however, we're ready and waiting. When you're at a standstill, we will get you back on track as quickly as possible. We will move heaven and earth to keep you mobile. In short, where there's a MAN employee, there's a way.

When it comes to financing, too, you can rely on MAN: MAN Financial Services supports your needs and makes sure you stay mobile. You can even cover bottlenecks and react flexibly to higher demand thanks to truck leasing from MAN Rental.

With our clever solutions, you can make your business noticeably easier and more transparent. We've got it covered, so that your head stays clear for the road in front.

#### At a glance:

#### MAN Mobile24

Via the MAN Mobile24 mobility service, you can reach us round the clock europe-wide. The service has been expanded with additional solutions, so that our customers are always on the safe side for every kilometre. As well as the guarantee that the transport business can continue to run smoothly in the event of a breakdown.

#### Uptime guarantee

The MAN uptime guarantee keeps you moving. We are never far away in the event of a breakdown and, even if downtime or repairs are required, we will get you back on the road in no time.

#### Service contracts

We help you save time, money and stress. MAN takes care of everything as required, from servicing and invoice management to answering questions relating to guarantees and goodwill. MAN Genuine Parts

With compliance with strict quality standards guaranteed, MAN Genuine Parts are the ideal match for your vehicle. It's the only way for your MAN vehicle to be driven safely, efficiently and with minimum wear.

#### Accessories and retro-fit solutions

Easily tailor your MAN to your needs with our high-quality accessories. Subsequently and simply. With products exactly matching your MAN model. And matching you.

For further offers and details please contact your local dealer or visit our website: mantruckandbus.com







### SERVICE AS YOU LIKE IT -PERSONAL AND DIGITAL.

Could your company also benefit from the increasing digitalisation taking place in logistics? We are convinced it can. That's why we would like to give you a brief insight into how you can better master the **most pressing challenges of your industry with smart digital solutions.** 

Above all, the high cost and time pressure make the working environment in the logistics industry particularly challenging. Every vehicle in your fleet must be operated as economically as possible. This requires economical driving behaviour as well as effective and repair management. With an internet-enabled truck with Over-the-Air Upgrades, an overview of all the key data about the vehicle and its performance appears directly on your desktop, and many other useful features of our digital services give you the freedom to take care of business.

#### Your benefits:

- more efficiency,
- simplified work processes, with maintenance outsourced to your MAN Service Centre or by keeping drivers and fleet managers digitally connected
- Iower costs.

The best part: it's already a reality.

With MAN DigitalServices, you can begin straightaway.

While transport is – and will always be – analogue, fleet management is becoming digitalised. MAN DigitalServices helps you optimise business tasks, bring fuel and admin costs down, plan and manage servicing tasks from the truck, manage time and provide continuous training to drivers.

We would like to give you the opportunity to try out this comprehensive package for three months for free! Our trial offer includes the following paid-for digital services: Geo, Perform, Compliant, MAN ServiceCare M and Timed. MAN ServiceCare S and the MAN Driver app are already free and are not part of this offer.

Take advantage of:

- efficient fleet management with digital services that make your job significantly easier
- our new cost- and risk-free offer: your free trial will automatically end after three months, with no further obligation.

The trial offer\* is valid for all the vehicles\*\* in your fleet for your registered trial period. Get started now: with just a few clicks, you can try all the benefits of MAN DigitalServices for your whole fleet. We are sure that you will be impressed. www.man.eu/marketplace

The digital services listed below help you manage your fleet economically and efficiently:

- Vehicle tracking
- Maintenance and repair management
- Tachograph and time management
- Economical driving
- Driver assistance
- Over-the-air upgrades

The latest information on MAN DigitalServices can be found on our website: www.digital.man

\*\* Depending on technical availability.

<sup>\*</sup> Valid for all customers who do not currently pay for MAN DigitalServices.

### **EASIER WORKDAYS.**

#### MAN ServiceCare

Regular maintenance is a must if you want to reduce unscheduled downtime and repair costs for your fleet. Our free MAN ServiceCare S is there to help - we'll be very happy to take care of your maintenance and repair needs. The service works using vehicle and maintenance data relayed to MAN ServiceCare over the Internet. Your MAN Service Centre uses this to proactively arrange maintenance appointments and combine your maintenance tasks. After all, you've got enough to do already. What's more, your nearest MAN Service Centre can use remote vehicle diagnostics to view targeted vehicle data and give you a more personalised service if you break down. MAN ServiceCare M gives you all the benefits of MAN ServiceCare S but you also get extra tools for even more personalised maintenance and repair management across your whole fleet. We are continually upgrading MAN ServiceCare - with pre-emptive tools that increase the uptime of your vehicles in a more straightforward and comprehensive way.

#### MAN Driver App

The MAN Driver app ensures that drivers always have important information about their MAN to hand. Not only does our smartphone-based digital assistant make life on the road easier but it also speaks 26 languages, which means that drivers from lots of different countries can use it. Our smart, user-friendly and efficient MAN Driver app helps MAN drivers on every trip, providing important information and offering a range of features to make their lives easier. For example, if they break down, they just tap on the app and connect to the MAN Mobile24 emergency service. Drivers can also notify fleet managers about any damage and send any documentation guickly and easily through the app. The MAN Driver app is a constant companion - whether you need to carry out a vehicle check before departure, look for a parking place online or check driving and rest times.

The MAN Driver app is free of charge and connects drivers, fleet managers and workshops in a simple and secure way. We're constantly improving our driver app and adding new offers and features that make MAN drivers' jobs even easier.





### **SMART SOLUTIONS.**

#### MAN Now

With MAN Now, you receive exclusive vehicle functionalities and upgrades, allowing you to modify your truck software to meet your requirements, any time, any place – and all without having to drop into a MAN service outlet. Thanks to the new and convenient over-the-air technology, you can easily enable and expand functions or add new ones. Thanks to these retrofitted modification options you are more flexible in the vehicle configuration. As no visit to the workshop is required, you increase the vehicle uptime and efficiency.

The following features are available for all vehicles with a model year of 2020 or later:

- MAN OnlineTraffic
- MAN MapUpdate

The following features are available for all vehicles with a model year between 2022 and 2024:

- MAN LanguagePackage
- MAN LanguageRecognition
- MAN Idle Shutdown
- MAN EfficientCruise<sup>®</sup>
- MAN EfficientRoll
- MAN TimeInfo
- MAN TimeControl
- MAN TipMatic<sup>®</sup> driving program

The first usage of MAN OnlineTraffic per vehicle is free.

#### MAN SimplePay

Your trucks become digital wallets that can be used to pay for all the usual transactions that occur in the driver's daily business. The payment platform MAN SimplePay also offers a user-friendly user interface for fleet managers and provides full cost control in a timely manner.

MAN SimplePay can make everyday work easier: For example by instantly approving requests, confirming payments and consolidating invoicing. Or with full transparency and time savings for the fleet manager – all costs are in one system (dashboard). The payment is easily processed via the MAN media system in the vehicle, giving you greater security for transactions.

The portfolio (= use cases and payment options) of MAN SimplePay is constantly being expanded. When the service feature is activated in the MAN SimplePay portal, the new features are automatically imported over-the-air into the vehicle.

Technical requirements for these features are a RIO Box, registration on the RIO platform and activation of your vehicles The range of over-the-air features is being continually expanded. Some of the features illustrated in this brochure are not part of the production series generally described here.

Both the vehicle's air conditioning system and refrigerator contain fluorinated greenhouse gases (R134a / GWP 1430 with up to 1.15 kg; 1.6445 t  $CO_2$  accordingly).

#### MAN Truck & Bus SE

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