

The Unimog U 3000/U 4000/U 5000.
Technology, Facts and Figures.



Mercedes-Benz

The Mercedes-Benz Unimog. A vehicle in a league of its own.

When all-wheel-drive trucks have reached their limits and even tractors don't make any headway, a new kind of workhorse is called for. The Unimog redefines the meaning of 4-wheel versatility. No other vehicle in the world provides so much versatility within a single vehicle category. With its wide range of implements and superstructures which can be fitted at the front, middle or rear, the Unimog is the only vehicle able to provide such outstanding operating flexibility. With supreme off-road handling capabilities and rapid road speeds, the Unimog is also in its element for transporting tasks. It is absolutely professional in all situations and in all terrains. **Moving mountains. Unimog.**



The Unimog range: U 3000/U 4000/U 5000

With its unique off-road capabilities, the Unimog U 3000/U 4000/U 5000 is miles ahead of any possible competitor. Worldwide. Thanks to its more than convincing features such as the flexible ladder-type frame for high rigidity on the road and its amazing torsional flexibility off-road, its superior 4-wheel-drive with differential locks in both axles, as well as,

portal axles to provide ample ground clearance. The other range of models, the professional implement carriers Unimog U 300/U 400/U 500 will be dealt with in a separate technical brochure. With its wide range of mounted implements and superstructures, it combines the highest operative capabilities with convincing cost-effectiveness.

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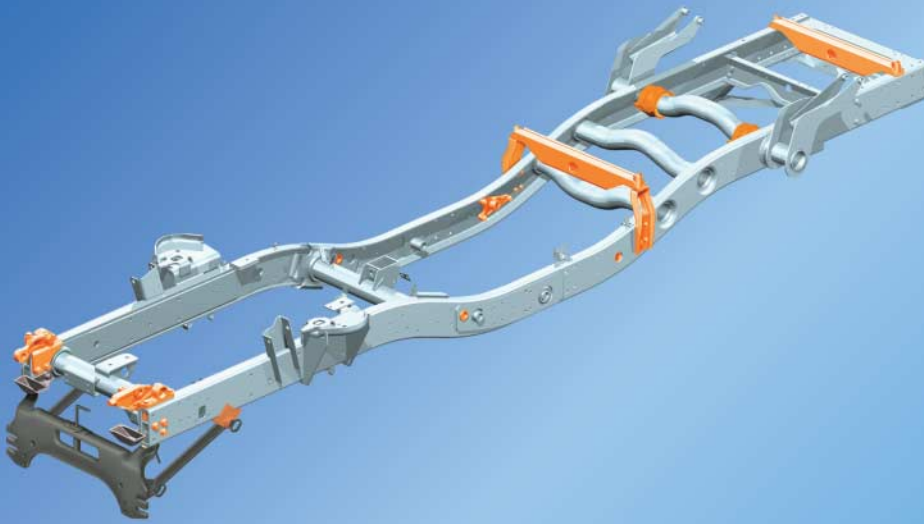


Unimog U 3000/U 4000/U 5000 – a symbol worldwide for operating successfully under extreme working conditions

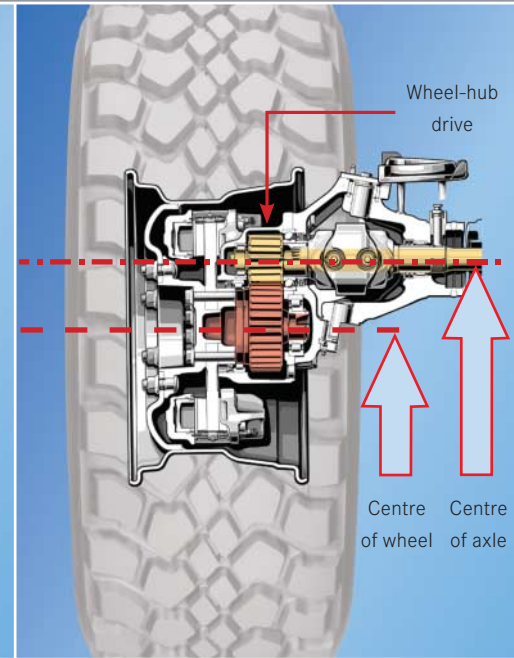


Always to the fore to ensure safety for intervention teams – for instance, when fighting forest fires

Unique chassis design.



Highly flexible and designed to take stress: The ladder-type frame with its tubular cross members provides outstanding torsional flexibility and elasticity for tasks involving difficult terrain



Ample ground clearance due to the 2 identically constructed portal axles with wheel-hub drive

Flexible frame design

It gives way, when and where required: at the heart of the uncompromising all-terrain capabilities of the Unimog U 3000/U 4000/U 5000 is the flexible ladder-type frame with tubular cross members which ensures the necessary rigidity on the road, and allows great torsional flexibility off-road. This is provided by the three-point mounted cab, engine and transmission as well as the defined interfaces for mounting superstructures and implements. So nothing happens even with 30° axle articulation.

- > The frame: highly resilient, flexible and with great torsional flexibility
- > Short frame overhang for steep angles of approach or departure
- > Safe and controlled driving in any situation

Portal axles

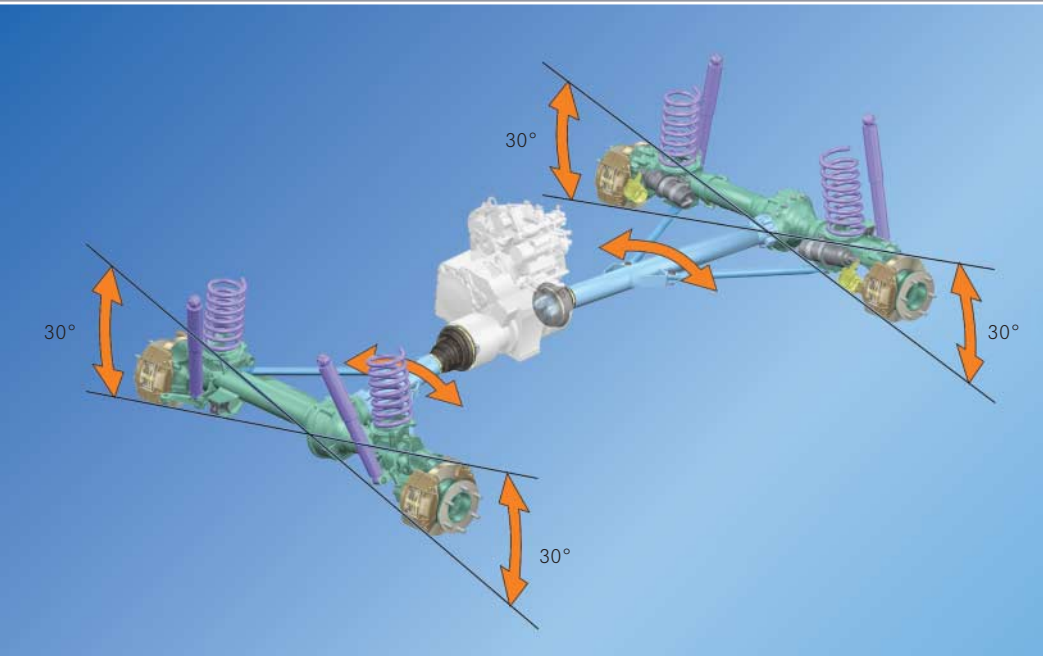
Extreme off-roading made easy: Portal axles are the secret behind the outstanding ground clearance of the Unimog U 3000/U 4000/U 5000. With them it can cope with virtually impassable terrain and obstacles up to half-a-metre in height. The reduction gear on the wheel-hub drive provides increased traction in extreme situations.

- > Outstanding ground clearance with a low vehicle centre of gravity
- > Axle tube and differential are clearly smaller than on a truck and are situated above the wheel centre

Axel suspension

Keeping all four wheels firmly on the ground: One advantage driving off-road is the axle suspension with thrust tube, lateral steering, and coil springs. This somewhat unusual type of suspension, for an off-roader, allows for long spring travel and provides outstanding axle articulation. Stabilisers at front and rear give greater stability when cornering and make for safer driving.

- > Permanent surface contact for all four wheels even when crossing extremely uneven ground
- > Progressive spring characteristics provide great driving stability with any kind of load
- > Great driving stability even with high centre of gravity superstructures



Axle suspension with coil springs and thrust tube technology – guarantee very long spring travel and maximum axle articulation



Even through the most difficult terrain:
The Mercedes-Benz Unimog always has all
4 wheels firmly on the ground

Thrust tube technology

Greatest possible diagonal torsion:

This special thrust tube construction gives the springs an extremely long travel and a diagonal axle articulation of up to 30°. Since the drive shaft is enclosed by the thrust tube, it is secure from dirt and damage. The wheel-hub drive runs independently from the suspension system – thus providing improved traction.

- > Extreme long spring travel
- > Maximum diagonal torsion
- > The drive shaft is protected even when driving through extreme muddy and rocky terrain
- > Wear-resistant and maintenance-free axle suspension

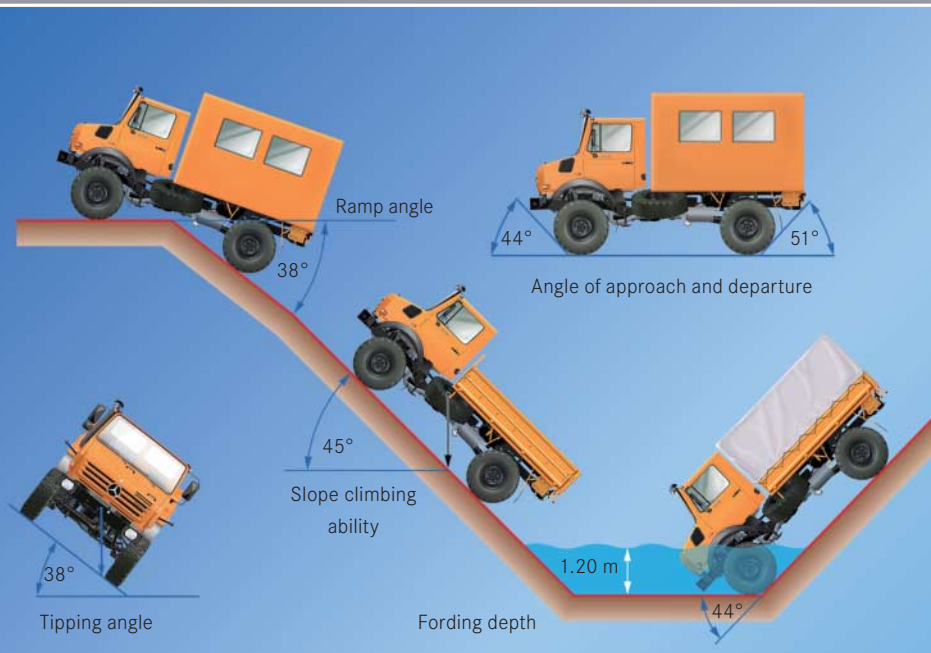
Manually-engageable all-wheel-drive

Powerful – off-road and on the road:

With its rear-axle drive for driving on roads and the manually-engageable all-wheel-drive for off-road work, maximum traction is available in every situation. And if the terrain is extremely difficult, the differential locks in both axles make sure the powertrain is working at full strength, even if only 1 wheel has sufficient traction, the Unimog still gets ahead and copes with gradients of up to 100%.

- > Selectable rear-axle drive or all-wheel-drive
- > The differential locks at front and rear can be engaged or disengaged with a rotary switch while driving
- > No interruption of tractive force during gear shifting
- > All 4 wheels synchronised by 100% locking effect in both axles

The Unimog's off-roadability: still unsurpassed.



Safe over any kind of terrain: with excellent angles of approach or departure at front or rear, slope climbing ability up to 100% and fording ability to a depth of 1.20 m, the Unimog will get you to wherever you want to go



Even when driving through water, aggregates and electrical installations remain high and dry

Short frame overhang

With ease through the most difficult terrain: Thanks to its coil springs with long travel (instead of the typical leaf springs used by trucks), the Unimog U 3000/U 4000/U 5000 only has a short frame overhang at front and rear. This enables it to tackle extreme angles of approach and departure with ease. The vehicle's low centre of gravity and its extreme torsional flexibility provide additional security with respect to steep slopes and tipping angles.

- > Overcoming obstacles, hilltops, steep slopes or embankments easily

Fording ability

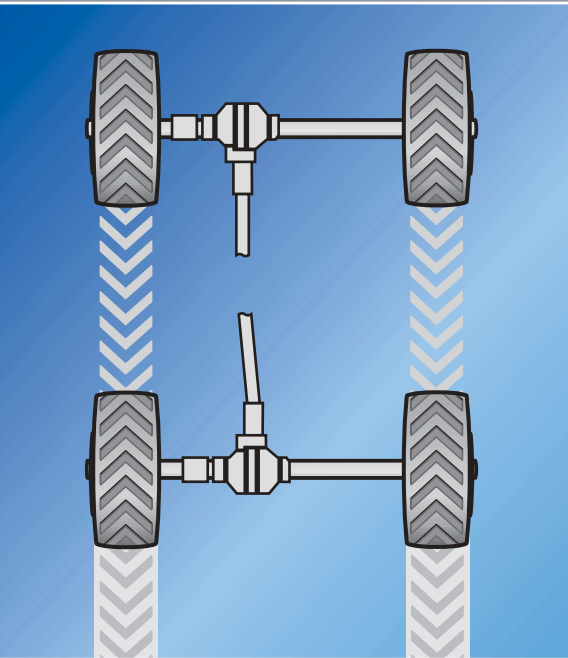
Not shy of water: Watercourses or flooded areas are of no problem for the Unimog. Thanks to its thrust tube technology, air intake pipe at cab roof height and waterproof coverings for its components, the standard version can ford up to 80 cm of water. And with the optional fording package, the Unimog makes its way safely through water up to 1.20 m deep, arriving safe and dry on the other side without sustaining water or fine sand damage.

- > Able to ford water up to 1.20 m deep
- > Special sealing methods prevent water or fine drifting sand from seeping into its aggregates

Single tyres

Can be used anywhere and everywhere: Unlike the normal 4 x 4 truck with twin tyres fitted at the rear axle, the Unimog has 4 single tyres. The rear wheels always run in the compressed tracks created by the front wheels, which offers higher traction and lower rolling resistance. With the wide range of tyre sizes and types available, the Unimog can be equipped with exactly the right tyres for the terrain in question.

- > A large selection of tyres are available – from MPT large-volume low pressure tyres to special sand and traction tyres
- > Chains can also be used for snow or difficult terrain, depending on the size of tyres chosen



The single tyres increase driving stability and traction at low rolling resistance



With tirecontrol, the tyre pressure can be adjusted while in motion to suit the terrain – at the push of a button



Disc brakes and disengagable ABS on all 4 wheels provide greater safety off-road – even when loaded with heavy superstructures

Central tyre inflation system (tirecontrol)

Always the right tyre pressure:

An additional advantage for difficult or soggy ground is the optional central tyre inflation system – tirecontrol – which allows the tyre pressure to be adjusted to the type of surface while driving. Simply by pressing a button in the cab, the tyre pressure can be lowered to enlarge the tyre contact surface, thus increasing traction. This prevents the vehicle from sinking into the soft ground. Or to compensate for loss of tyre pressure while driving.

- > High traction, good self-cleaning properties and reduced tracks on the ground
- > Adjust the tyre pressure while driving to suit the road and terrain conditions
- > Tyre damage due to not enough or too high tyre pressure is avoided

Dual circuit braking system plus ABS and ALB

Safe whatever the situation:

The air-pressure supported dual circuit disc braking system always makes sure that the Unimog comes to a safe stop even on steep hills and when carrying heavy loads. It is just as reliable in winter as it is in summer after driving through mud and water. Additional safety and driving stability are provided by the disengagable anti-lock braking system (ABS) – which means that the wheels can block and shorten the braking distance in difficult terrain by building up a soil wedge.

- > Effective spring-type cylinder parking-brake which requires minimal operating strength
- > ABS control for each wheel
- > ALB – automatic braking force control which adjusts to the load situation

Easy operation and comfortable working conditions: Unimog lives



Air-conditioned cab for 3 persons



The instrument panel: clearly structured with an easy-to-operate driver information system (FIS), illuminated dials and 2 LCD multi-function displays

Short bonneted cab

Ergonomically-designed, spacious and air-conditioned: Vibrations and jolts are suppressed due to the position of the cab which is located behind the engine. Plus, its 3-point mounting on rubber elements provide a relaxed working atmosphere. The interior with its sound-absorbing shell and comfortable seats is equipped with generous storage areas and headroom (e.g. when wearing a helmet). A pleasant working atmosphere is ensured in every situation by the integrated air-conditioning unit with auxiliary heater.

- > Driver's cab: 3-point mounting to neutralise vibrations
- > Optional: raised cab roof providing more headroom
- > Square roof hatch which can be raised on all four sides. Optional: round swivel roof hatch
- > Easy entry and exit behind the front axle

Crew cab

Plenty of room for the crew: the Unimog U 3000/U 4000/U 5000 with optional crew cab, raised roof, storage for tools and materials, plus a maximum of 7 seats to provide enough room for 7 people. The rear passenger doors open extra wide and offer easy access. Optional: a second roof hatch for the crew sitting in the back.

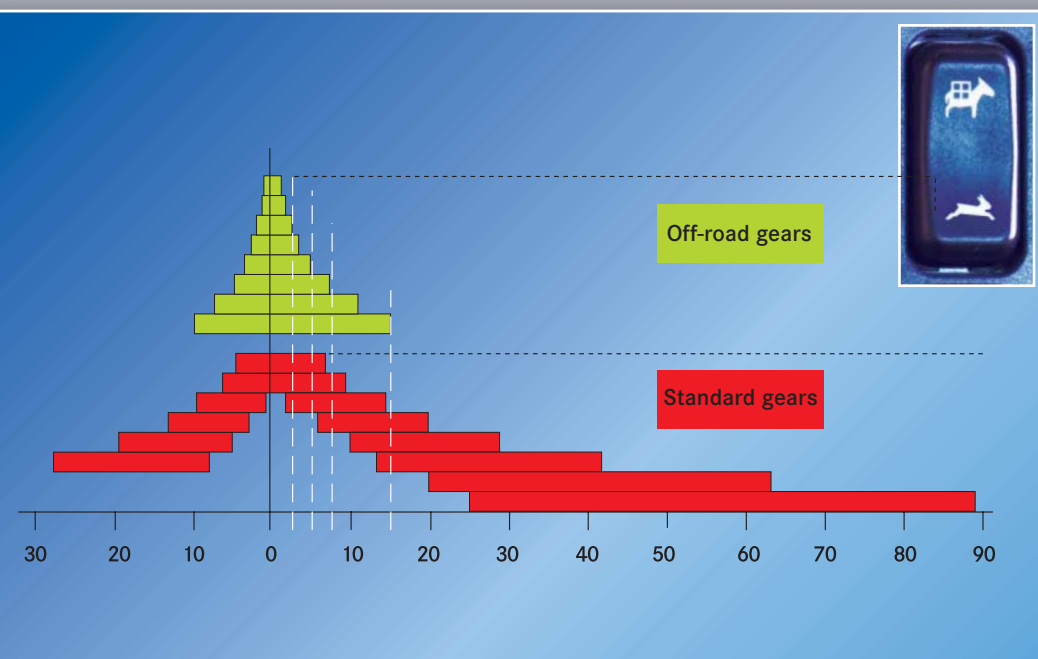
- > Optional: crew cab with raised roof, 4 side doors and up to 7 seats
- > Integrated in the vehicle's design and available ex factory
- > Plenty of storage space under the foldable rear bench

Ergonomic

Clearly arranged and easy to operate: The driver information system (FIS) makes sure that all important functions are under control at a glance with status reports, event reports and menu-driven online diagnosis. The standard cruise control, Temposet, electronic manual throttle control and the 2-stage engine or permanent brake are all controlled with the multifunction-lever on the right-hand side of the steering column. Optical and acoustic signals help the driver to react immediately, if the need arises.

- > Cruise control regulates the speed without using the accelerator
- > Temposet limits the speed using the accelerator
- > Manual throttle control sets the engine speed exactly

up to all expectations.



With its finely-graduated speed range and, upon request, resilient off-road gear group, the Unimog U3000/U4000/U5000 is perfect for coping with a wide variety of assignments

The Electronic Quick Reverse shifting unit makes turning and rocking-free in extreme off-road conditions much easier

Telligent® gearshift

Shifts gears faster than you can imagine: a light tap on the gearshift lever either forwards or backwards and the Telligent® gearshift immediately calculates the torque and, depending on the engine speed, the right follow-up gear which is then shown on the display. If you agree, you only have to depress your clutch. Otherwise you simply select the gear you want manually.

- > Goes easy on the engine, clutch and gears
- > Relaxed, concentrated driving with cost-effective fuel consumption

AutomaticShift

Shifting gears as you like: Take the strain out of driving while operating implements or hauling heavy loads. With AutomaticShift you can decide, by pressing a button, to use either M for manual or A for automatic gear shifting. Both without using the clutch. Even in automatic mode, the driver can intervene with the gearshift lever and change a gear manually.

- > Less wear and tear on the clutch
- > Reduced fuel consumption
- > Select either automatic mode (e.g. for driving on the road) or manual mode (e.g. for off-road driving)

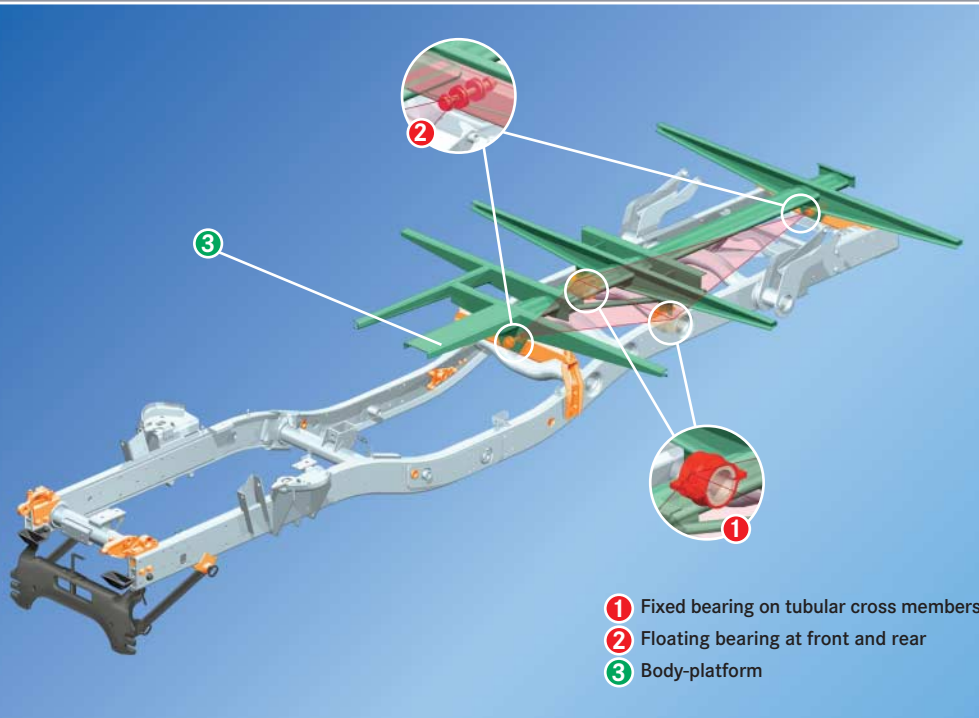
Transmission

As versatile as you need it to be:

The fully-synchronized electronic gearshift Telligent® with its 8 forward gears and 6 reverse gears stands out with its smooth-running, long life and high efficiency. It is perfectly coordinated to deal with numerous types of operations. The synchronized Electronic Quick Reverse (EQR) makes it easy to change directions quickly or to rock free when off-roading. The special off-road gear group with an additional 8 forward and 8 reverse gears guarantees maximum traction in the lower 1-15 km/h speed range.

- > For every situation the proper gear – efficient and cost-effective
- > Direct, rapid gear shifting, e.g. to rock free in extreme off-road conditions

Even with superstructures: safe through any terrain.



Twist and strain-free mounting of aggregates and superstructures due to double 3-point mounting



Powerful, unparalleled off-road performance when it comes to completing assignments safely – whether fighting forest fires, searching for oil and

Double 3-point mounting

Outstanding off-road capabilities even with superstructures and implements:

In addition to the 3-point mounting for cab, engine and transmission, the heavy-duty ladder-type frame is also fitted with a double 3-point mounting system to ensure twist and strain-free mounting for superstructures. They are fitted at positions suitable for passing on thrust, traction and weight. Thanks to the 3-point mounting, even the greatest axle articulation does not cause any damage to the cab or superstructure – the Unimog U 3000/ U 4000/ U 5000 is always completely in command of the situation even in the most extreme off-road conditions.

- > Ladder-type frame with double 3-point mounting system for superstructures

- > Optional ex factory: sub-frame with double 3-point mounting and integrated mounting positions for easy box-type superstructures fitting

Implement and superstructure mounting points

Close cooperation with superstructure and implement manufacturers:

Only the Unimog can deliver when personell and vehicle are pushed to the absolute extreme. And thanks to the Unimog's versatility every demand of your specialised task can be met. That is why DaimlerChrysler has been working for decades closely with leading implement and superstructure manufacturers. And you can rest assure that you will be getting the perfect vehicle solution for your special task.

- > Front mounting: brackets for attaching front winches
- > Superstructures can be mounted directly on the frame or onto the sub-frame. Thus minimal stress and strain is placed on both vehicle and implement



gas, or on expeditions through unexplored regions of the world



The standardised connector at the auxiliary PTO can be used for connecting standard hydraulic pumps, e.g. for a crane

Auxiliary PTOs

Including all power options:

The Unimog U 3000/U 4000/U 5000 has a fast auxiliary PTO for crane or excavator hydraulic pumps. It also has an even faster auxiliary PTO for fire-extinguishing pumps or similar aggregates. The auxiliary PTO can only be engaged or disengaged while stationary.

- > Operated via a pull switch in the central console
- > Hydraulic or fire-extinguishing pumps controlled via a special module (CAN-bus-linked) which can be programmed with varying parameters

Hydraulic system

Simple to connect, easy to operate:

this powerful hydraulic system with a working pressure of up to 240 bars can run an oil engine or an external crane control panel, making it suitable for permanent consumers for adjustments via valves on the implement. Standard plug connections make for easy and fast connections.

- > 2 hydraulic connections at front and rear (pressure und return line) for winches, cranes etc.

Future-proof engines.



- ① Vertical exhaust pipe (C87)
- ② Exhaust pipe (standard)
- ③ Battery housing
- ④ Diesel tank
- ⑤ Air drier
- ⑥ Air vessel
- ⑦ AdBlue® tank
- ⑧ SCR catalytic converter

The low-maintenance Mercedes-Benz Euro-4 engines provide during the most difficult conditions top performance

Mercedes-Benz engines

Always ready for top performance:

The low-maintenance 4-cylinder engines from Mercedes-Benz are state-of-the-art: from their direct-injection system, three-valve technology, exhaust turbo-supercharger and intercooler to their high torque incline, broad constant performance range and great power reserves. They are perfectly equipped to fulfil any and every assignment. At the relatively dust-free area above the cab roof the combustion air is taken in. The radiator system has been developed especially to cope with the high demands placed on the Unimog U 3000/ U 4000/ U 5000. Intercooler and radiator, each with its own viscose fan, are fitted next to each other high above the ground. Thus the cooling performance is greatly improved and

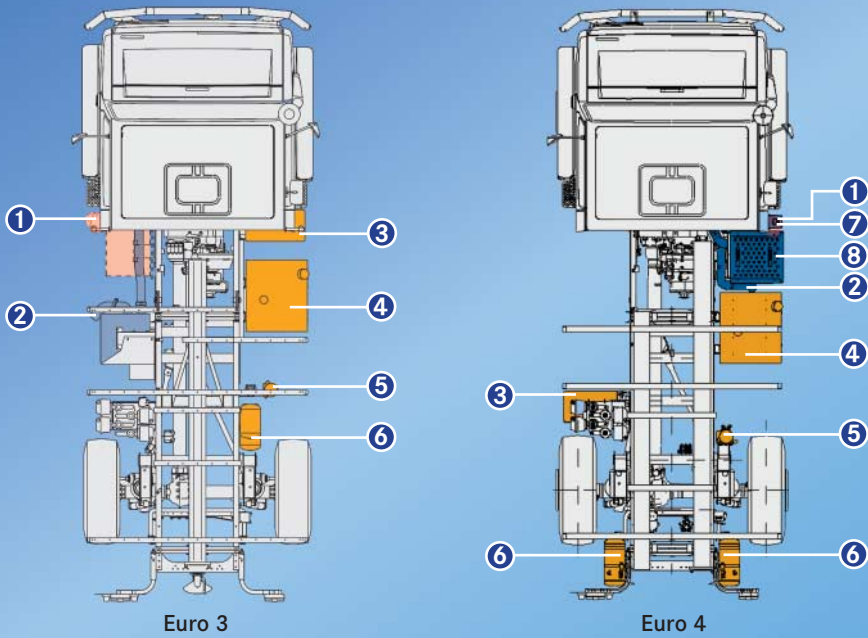
pollutants are kept to a minimum for safe fording. You can definitely rely on the Unimog to get you through, even during the most demanding off-road jobs involving extreme varying temperatures or extreme dust.

- > From 110 kW (150 hp) to 160 kW (218 hp)
- > Low emission levels, cost-effective and quiet
- > High tractive force during resilient or constant rpm

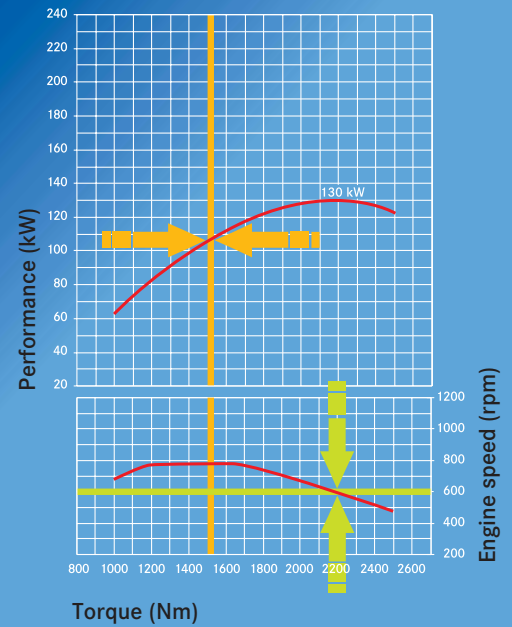
Euro 3/Euro 4

For every standard, a safe future-proof solution: With the new Selective Catalytic Reduction (SCR) diesel technology from Mercedes-Benz, the Unimog U 3000/ U 4000/ U 5000 Euro 4 version fulfils the new European (since October, 2006) exhaust emission standard. Where the new exhaust emission standard is not compulsory, the Unimog can still be delivered in the Euro 3 version – which still fulfils a very high environmental standard for emissions.

- > Depending on the national exhaust emission standard, the Unimog is available in an Euro 3 or Euro 4 version



Component arrangement in Euro 3 and Euro 4 versions. The additional components needed for the Euro 4 version have been installed so that they do not impede the mounting of standard superstructures and implements



Always ready to give top performance. Upon request the engine can be adjusted: either to elastic or constant engine rpm

BlueTec®

Clean, safe, cost-effective: BlueTec® drastically decreases nitrogen oxide and particle emissions while optimising fuel consumption without reducing engine performance. An additional catalytic converter reduces the nitrogen oxide through the additive AdBlue®, a chemically non-toxic, watery solution, which is delivered via a separate tank. With this new technology, the Unimog not only meets the strict European Union standards to reduce vehicle emissions, it also provides a system with minimal wear and tear, and maintenance – depending on the version – improved engine performance and thus a future-proof solution.

- > Drastical reduction of nitrogen oxide and particle emissions
- > Increased combustion efficiency
- > Reduced fuel consumption

Driving and working modes

Optional engine regulation: the engine modes, depending on your type of job, can be adjusted individually. In the driving mode, you will benefit from the elasticity of the engine speeds, for road trips and transporting jobs. The working mode guarantees minimal engine speed deviations, e.g. during off-road operations and with varying loads.

Mercedes-Benz Unimog U 3000/U 4000/U 5000 overview.

Euro 4

Model	Wheel-base [mm]	Euro 4 engine				Perm. GVW [t]	Perm. front axle load [t]	Perm. rear axle load [t]
		Emission class	Typ	No. of cylinders	Output [kW (hp)]			
U 3000	3,250	Euro 4	OM 904 LA	4	115 (156)	7,5	4.0	4.4
		Euro 4		4		9,5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 3000	3,850	Euro 4	OM 904 LA	4	115 (156)	7,5	4.0	4.4
		Euro 4		4		9,5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 4000	3,250	Euro 4	OM 904 LA	4	130 (177)	7,5	4.0	4.4
		Euro 4	OM 924 LA	4	160 (218)	9,5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 4000	3,850	Euro 4	OM 904 LA	4	130 (177)	7,5	4.0	4.4
		Euro 4	OM 924 LA	4	160 (218)	9,5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 5000	3,250	Euro 4	OM 924 LA	4	160 (218)	11,99	5.5	7.5
		Euro 4		4		12,5/13,8*	5.5	7.5
						Fire-fighting 14.1	(6.2)	(8.5)
U 5000	3,850	Euro 4	OM 924 LA	4	160 (218)	11,99	5.5	7.5
		Euro 4		4		12,5/13,8*	5.5	7.5
						Fire-fighting 14.1	(6.2)	(8.5)

* Only with load value code for special assignments and approved superstructure versions.

Euro 3

Model	Wheel-base [mm]	Euro 3 engine				Perm. GVW [t]	Perm. front axle load [t]	Perm. rear axle load [t]
		Emission class	Typ	No. of cylinders	Output [kW (hp)]			
U 3000	3,250	Euro 3	OM 904 LA	4	110 (150)	7.5	4.0	4.4
		Euro 3		4		9.5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 3000	3,850	Euro 3	OM 904 LA	4	110 (150)	7.5	4.0	4.4
		Euro 3		4		9.5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 4000	3,250	Euro 3	OM 904 LA	4	130 (177)	7.5	4.0	4.4
		Euro 3	OM 924 LA	4	160 (218)	9.5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 4000	3,850	Euro 3	OM 904 LA	4	130 (177)	7.5	4.0	4.4
		Euro 3	OM 924 LA	4	160 (218)	9.5	4.4	5.3
						Fire-fighting 10.0	(4.5)	(5.8)
U 5000	3,250	Euro 3	OM 924 LA	4	160 (218)	11.99	5.5	7.5
		Euro 3		4		12.5/13.8*	5.5	7.5
						Fire-fighting 14.1	(6.2)	(8.5)
U 5000	3,850	Euro 3	OM 924 LA	4	160 (218)	11.99	5.5	7.5
		Euro 3		4		12.5/13.8*	5.5	7.5
						Fire-fighting 14.1	(6.2)	(8.5)

* Only with load value code for special assignments and approved superstructure versions.

Servicing and services.

From a single source

For over a half of a century, Daimler-Chrysler has been working closely together with leading implement and superstructure manufacturers - from the early stages of development, right through to production, sales and marketing. This means: your Unimog-Partner is your one-stop shop for all your needs.

Requirements analysis

Which vehicles do you combine with which implements? What is the most economical way of covering all your needs? How do you ensure your investment is protected in the future? Based on your input, we will produce an in-depth analysis of your requirements. Your Unimog-Partner can then arrange a personal test drive or a demonstration.

Consultation

Your Unimog sales adviser is an expert in all matters relating to the vehicle and implement utilisation. Mercedes-Benz and the implement manufacturers train the sales advisers on a regular basis to offer you custom advice based on your specific requirements.

Financing

For all your needs: this applies to our extensive range of financing packages as well. From traditional financing through to leasing. We have just the right solution for you.

Servicing

The Unimog is built for maximum operational reliability and minimum servicing requirements. Long service intervals (engine oil change every 1,200 hours, transmission fluid change every 2,400 hours) minimise servicing costs. The fact that all major assemblies and components are easily accessible means that the driver can carry out routine maintenance without having to raise the cab. In the unlikely event of an emergency, the highly Mercedes-Benz trained specialists at our Unimog-Partners and service stations, are always available. Thanks to the Mercedes-Benz know-how and genuine parts quality.

Star diagnostics

Each and every one of the electronic components fitted in the Unimog U 3000/U 4000/U 5000 can be examined with the Mercedes-Benz Star Diagnostics system. At the same time, the system automatically checks if the engine is operating in the correct range for optimum fuel consumption and emissions. The menu-guided test is performed by linking the system up to a central diagnostic connector. This allows all malfunctions to be flawlessly identified and swiftly resolved. The system is also able to set and adjust the engine parameters.

Replacement parts

Strict quality checks guarantee the high quality of our replacement parts, which come with a 1 year manufacturer's warranty. Our sophisticated logistical structure for replacement parts and the close-knit service network keep service station downtimes to a minimum. Should a replacement part not be in stock, our express parts service will promptly bring the part to wherever it is needed, without delay. There are also a wide range of Unimog accessories for you to choose from.

If you would like to learn more about the Mercedes-Benz Unimog, have any questions or are interested in a personal consultation, please contact your nearest Unimog-Partner.

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