



The Unimog.

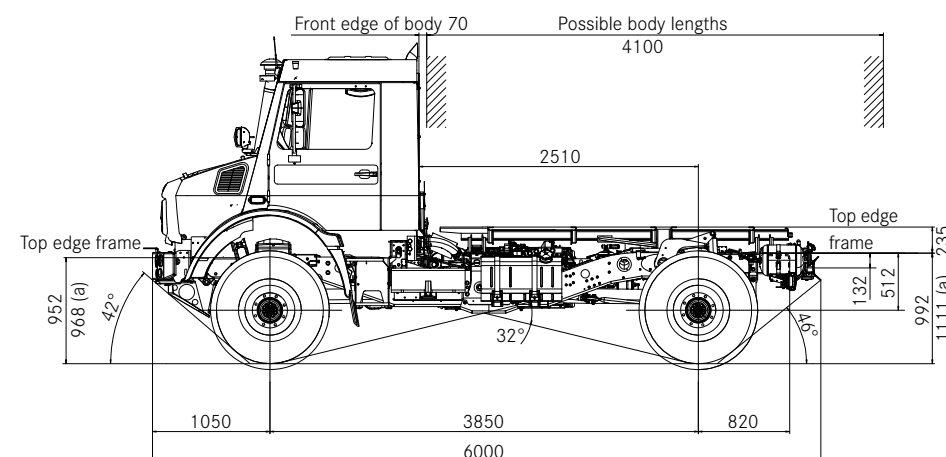
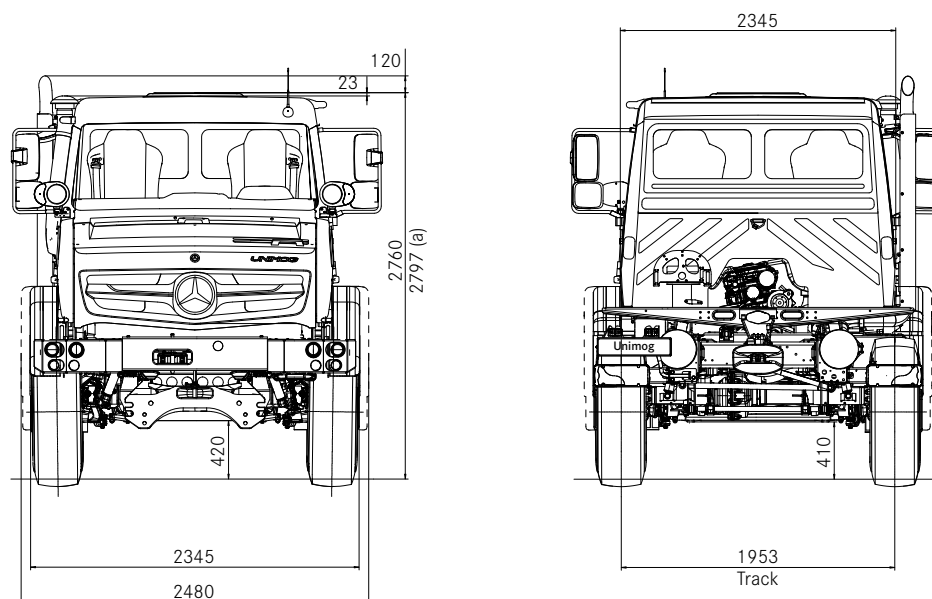
Technical information U 4023/U 5023.

Mercedes-Benz
Trucks you can trust



Dimensions and weights.

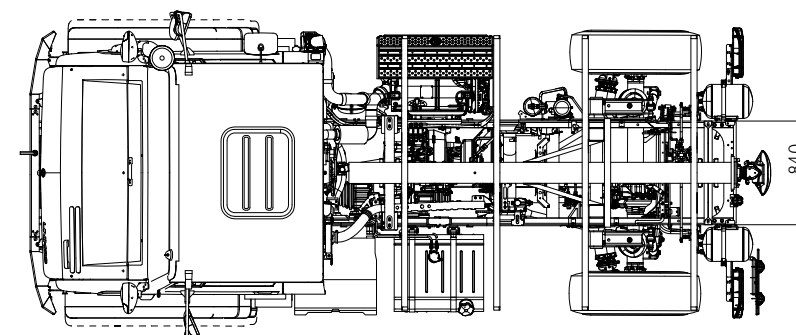
Technical drawing for U 4023 BlueTec 6, model designation 437.427



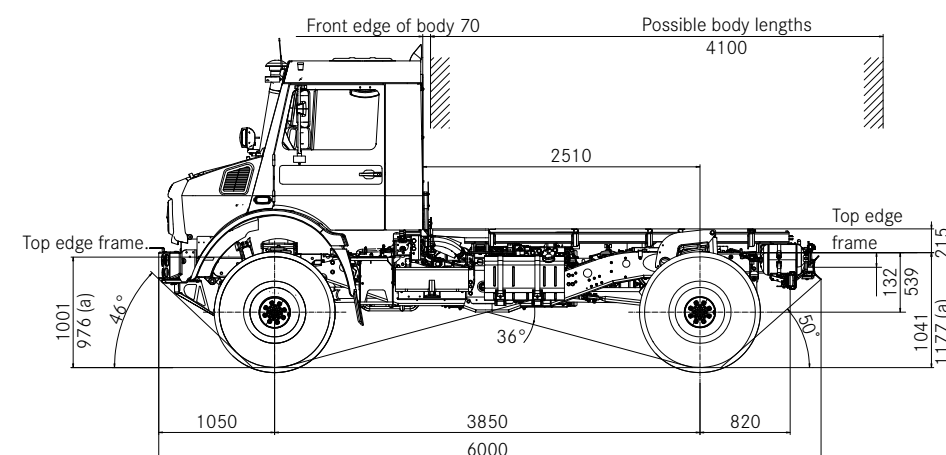
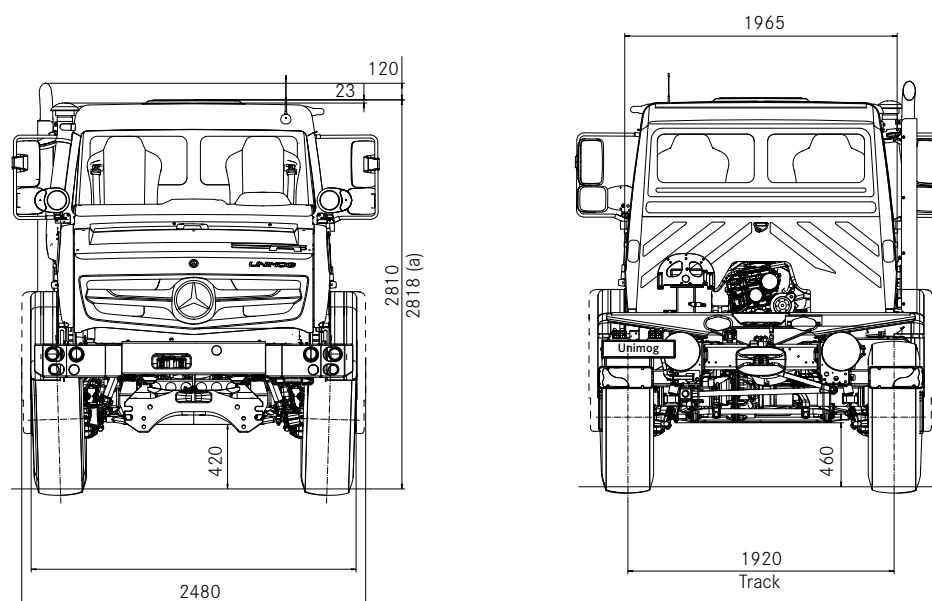
(a) Unladen vehicle
Drawing shows vehicle with compressed suspension and fitted with 335/80 R 20 tyres, OE = optional equipment, all dimensions in mm.

Load ratings (in kg)	Standard	OE	OE	OE for fixed bodies	OE for fire services
Perm. gross vehicle weight	8,000	7,500	8,800	9,800	10,300
Weight on front axle	4,100	4,100	4,200	4,600	4,600
Weight on rear axle	4,600	4,600	5,000	5,500	6,000

Turning circle: 16.3 m



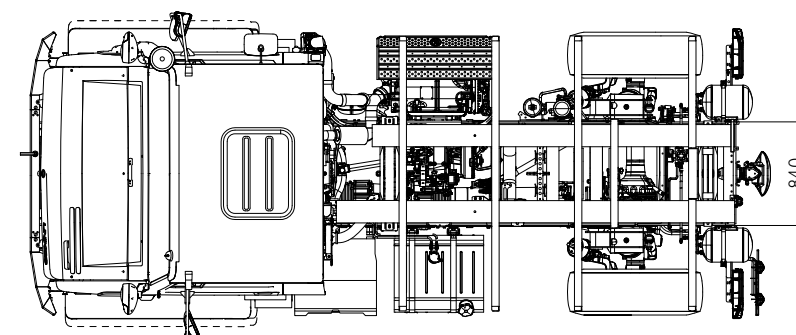
Technical drawing for U 5023 BlueTec 6, model designation 437.437



(a) Unladen vehicle
Drawing shows vehicle with compressed suspension and fitted with 365/85 R 20 tyres, OE = optional extras, all dimensions in mm.

Load ratings (in kg)	Standard	OE	OE	OE for fixed bodies	OE for fire services
Perm. gross vehicle weight	13,000	12,500	12,700	14,100	15,000
Weight on front axle	5,000	5,500	5,800	6,300	6,400
Weight on rear axle	7,500	7,100	6,900	8,800	8,800

Turning circle: 16.3 m



Engine.

Standard equipment:

- New clean BlueEfficiency Power generation of engines according to Euro VI exhaust emission standards
- Diesel direct injection with turbocharger/intercooler
- Dual regulation (Driving/operating equipment modes)
- Electronic manual throttle
- Fan drive, mechanical
- Powerful high performance engine brake
- Air compressor 310 l/min
- Air dryer
- Air filter, prefilter
- Cold engine start up to -15°C
- Long inspection intervals (1400 operating hours)

Exhaust-gas aftertreatment:

- Diesel particulate filter
- SCR catalytic converter

Powerful high performance engine brake:

- 2-stage decompression brake
- Max. power: 178 kW with OM 934
- Operated with steering column control stalk

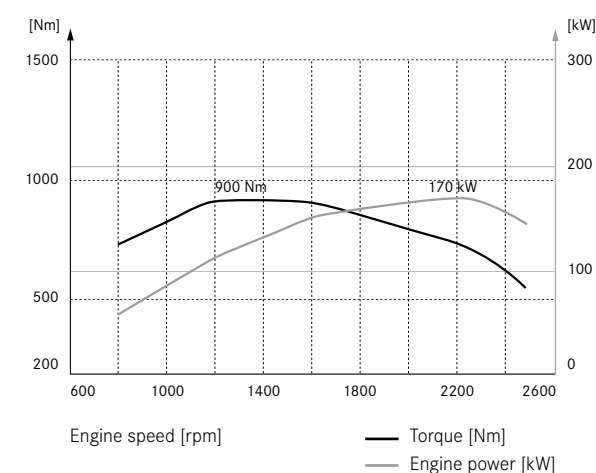
Optional extras:

- Engine-driven power take-off (PTO)
- Engine pre-heating
- Fuel pre-heating
- Cold climate package (up to -26 °C)
- Exhaust pipe extending up to cab roof on right-hand side of vehicle

Availability of optional equipment may vary.

Engine data	U 4023/U 5023	U 4023/U 5023
Engine model	OM 934 LA	Model version 934.974
Output (kW/hp)	170/231	Max. torque (Nm) 900
No. of cylinders/arrangement	4, vertical, in-line	Torque curve (%) 22
Operating principle	4-stroke diesel direct injection	Rated engine speed [rpm] 2200
Total displacement (cc)	5132	Fan drive mechanical
Injection pressure (bar)	up to 2400	Fuel tank with increased capacity [l] 160 / 240
Compression ratio	17.6 : 1	AdBlue tank [l] 18

OM 934 engine diagram



Transmission / Brakes / Steering.

Standard equipment:

Gears:

- Fully synchronised Mercedes-Benz forward-reverse gearbox with 8 forward and 6 reverse gears
- Single-plate dry clutch, self-adjusting
- Rear axle drive with pneumatically engageable all-wheel drive
- Cruise control/speed limiter
- Speed limiter 90 kph
- Electropneumatic Power Shift (EPS)
- Electronic Quick Reverse (EQR)

Brakes:

- High performance engine brake, 2-stage
- Pneumatic high-pressure brake system (18 bar)
- Pneumatic disc brakes on all four wheels
- Spring-loaded parking brake
- 4-channel off-road ABS, can be activated for off-road driving
- Automatic load-sensitive brake pressure control (ALB)
- Compressed air connection for auxiliary consumers
- Brake pad wear indicator

Steering:

- Hydraulic power steering

Optional extras:

- Electronic automated transmission (EAS)
- Off-road working group with 8 additional forward and reverse gears
- Transmission-driven power take-off (PTO)
- All-wheel parking brake
- Right-hand drive

Availability of optional equipment may vary.

Driving speeds and gear ratios

			U 4023								U 5023							
		Gears	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Transmission ratio		Forward	9.570	6.635	4.375	3.219	2.188	1.517	1.000	0.736	9.570	6.635	4.375	3.219	2.188	1.517	1.000	0.736
		Reverse	14.569	10.101	6.660	4.900	3.330	2.309	1.522	1.120	14.569	10.101	6.660	4.900	3.330	2.309	1.522	1.120
Driving speed	Basic gears	Forward	6.6	9.6	14.5	19.7	29.0	41.9	63.5	86.3	6.9	9.9	15.0	20.4	30.1	43.4	65.8	89.4
		Reverse	4.4	6.3	9.5	13.0	19.1	27.5	–	–	4.5	6.5	9.9	13.4	19.8	28.5	43.2	58.8
	Off-road gears (x 3.19)	Forward	2.1	3.0	4.6	6.2	9.1	13.1	19.9	27.1	2.2	3.1	4.7	6.4	9.4	13.6	20.6	28.1
		Reverse	1.4	2.0	3.0	4.1	6.0	8.6	13.1	17.8	1.4	2.0	3.1	4.2	6.2	8.9	13.6	18.4

Rated engine speed: 2200 rpm Axle ratio: 6.53 (U 4023)/6.94 (U 5023) U 4023 tyres: 335/80 R20 U 5023 tyres: 365/85 R20
Conversion factors for vehicle speeds with deviating tyres: see vehicle speed conversion factor chart.

Frame/Axles/Wheels.

Standard equipment:

- Heavy-duty torsionally-flexible frame construction
- Sturdy welded curved frame
- 2 U-section longitudinal frame members with welded tubular cross-members and reinforcements in the frame structure
- Implement and body-mounting points integrated in the frame
- Mounting brackets on centre of frame
- Towing jaw with locking pin at the front
- Integrated support for fitting front mounting plate
- Coil springs with progressive load recognition
- 3-point suspension for torsion-free mounting of engine, transmission and cab
- Capable of fording to a depth of 800 mm
- Dinol anti-corrosion body underseal
- Anti-roll bars at front and rear
- Telescopic shock absorbers
- Portal axles
- Torque tube controlled axles with wishbone steering
- Differential lock on the front axle
- Differential lock on the rear axle
- All differential locks can be engaged and disengaged electro-pneumatically while driving by means of a dog clutch (with 100% locking effect)

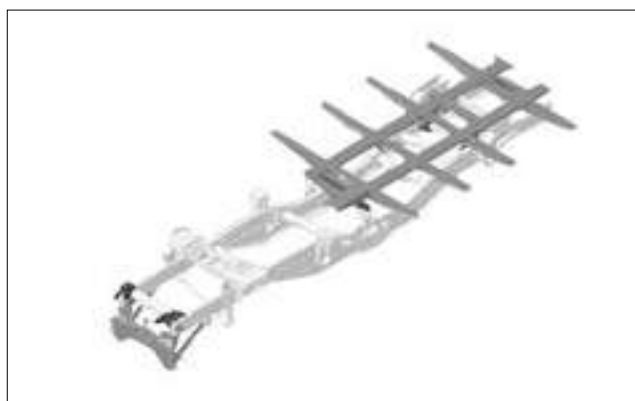
Standard tyres

- U 4023: 335/80 R 20
- U 5023: 365/85 R 20

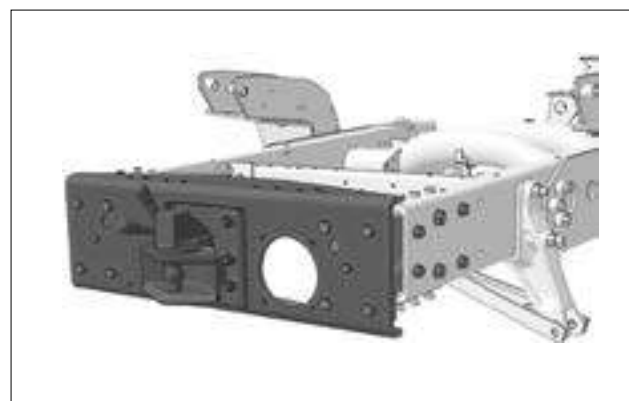
Optional extras:

- Capable of fording to a depth of 1200 mm
- Low pressure tyres with MPT/AS profiles
- Central tyre inflation system Tirecontrol plus for adjusting tyre pressure to on-road/off-road driving
- Front mounting plate
- Sub-frame with double 3-point torsionally-flexible mounting
- Mounting brackets for winches
- Mounting brackets for heavy-duty superstructures (e.g. crane) and components fitted to the frame for supporting legs
- Parts for torsionally-flexible mounting of bodies/superstructures
- Lashing and load restraint eyes

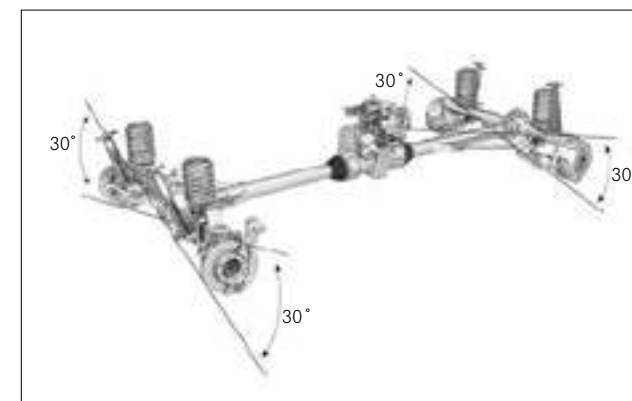
Availability of optional equipment may vary.



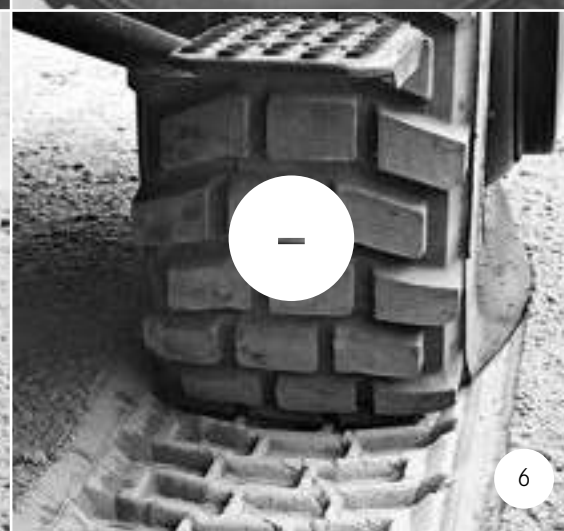
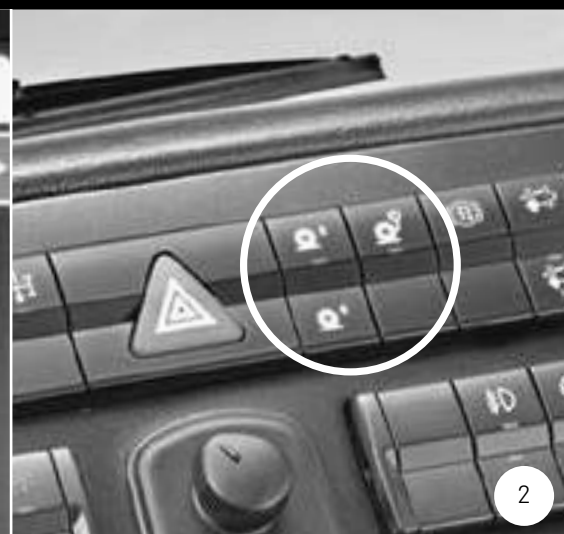
Frame design: curved frame, mounting points on frame



End cross-member for increased towed weight



Torque tube technology



1 Pre-selection of tyre pressure on display, operated by steering wheel buttons

2 Switches for tyre pressure control system

3 Attachable hose line and inflation valve for rim and tyres:

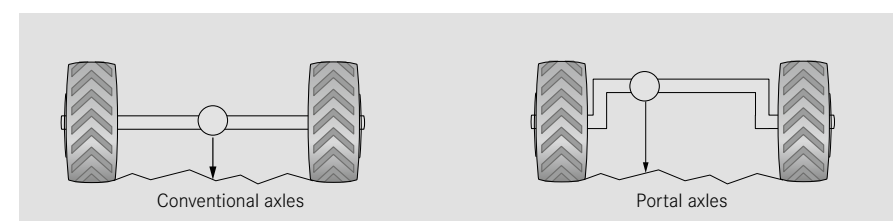
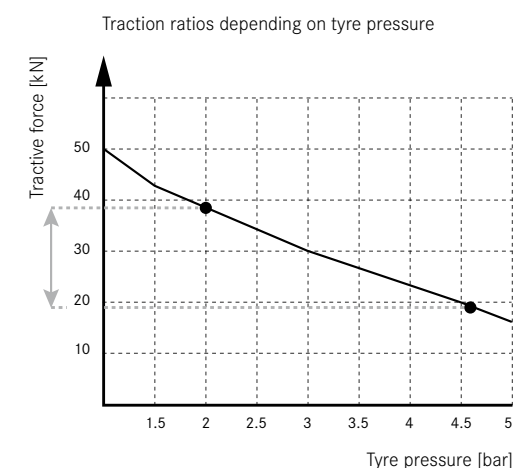
4 Valve and line protected under the hub cap

5 High tyre pressure on the road

- Small contact area
- Reduced tyre wear
- Low fuel consumption
- High load capacity at high speed
- Good road-holding and very stable steering

6 Low tyre pressure off-road

- Large contact area
- Low ground pressure, less field damage
- Reduced slip
- Increased traction
- Good self-cleaning (tread)
- Minimal ground compaction and fewer ruts



Portal axle with hub reduction gear: high ground clearance with a low centre of gravity, as the axle housing and differential are located above the centre line of the wheel and the differential unit is offset.

Cab, exterior.

Standard equipment:

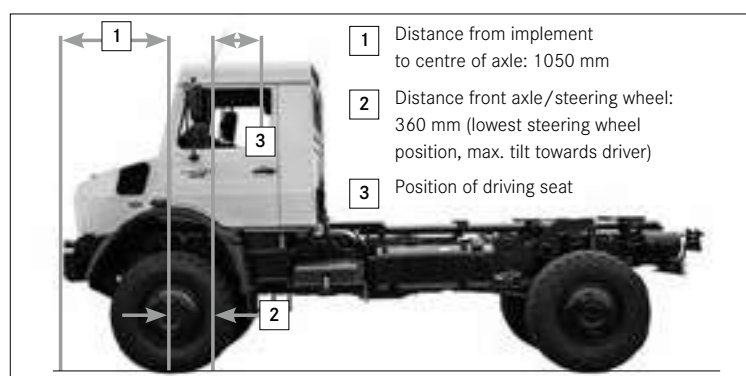
Exterior:

- Steel cab, short bonnet, with seat position behind the front axle
- Short distance between implement and centre of front axle
- Cab stability in accordance with ECE-R-29/3
- 3-point vibration-damped mounting
- Tilt cab
- 2 rear wall windows
- 2-step non-slip entry with handhold
- Exterior mirrors, electrically heated and adjustable on both sides
- Heat-insulating glass all round
- Vertical air intake pipe
- Multi-stage windscreen wipers, with intermittent wiper function and two fixed positions

Optional extras:

- Camera system with display for forward driving and reversing
- Crew cab
- Cab tilting mechanism
- Heated windscreen
- Round roof hatch, swivel-type
- 3-step non-slip entry with handhold
- Electric windows

Availability of optional equipment may vary.



Short-bonnet cab with central engine design
Short front end and with driver's seat position behind the front axle



3-step entrance



Camera system

Cab, interior.

Standard equipment:

- Multifunction steering wheel
- Steering column adjustable for height and tilt
- Heating and ventilation system with pollen filter and residual engine heat utilisation
- Stowage compartments and trays
- Roof console with 2 installation ducts for radio and tachograph
- 3 sun visors
- Centre console with main controls and 2 installation ducts
- Instrument cluster with 10.4 cm display screen
- On-board diagnosis system
- Multifunction control lever for vehicle operation

- Seats with tapered backrests and integrated headrests
- Seats adjustable for height, leg-room and tilt, with adjustable backrest and integrated 3-point safety belt
- Door linings with armrest and bottle holder
- Interior lights with reading lamps for both driver and co-driver
- 3 coat hooks
- Vehicle tool kit
- Cable ducts (front and rear)

Optional extras:

- Air-sprung seats for driver and co-driver
- Centre seat
- Heated seats
- Integrated air conditioning
- Auxiliary heating
- Reading lamp
- Instrument cluster with 12.4cm diagonal colour display screen
- High storage box with folding table
- CD radio with Bluetooth

Availability of optional equipment may vary.



Dashboard



Multifunction lever



Steering column adjustable for height and tilt

Electrics / lighting .

Standard equipment:

- Vehicle power supply 24 V
- Electronics compartment protected in cab, with socket for diagnostics
- Socket with permanent power supply 24 V/15 A
- CAN bus network
- 2 trailer sockets at rear, 15-pin/24 V
- 100 Ah batteries
- Electronic vehicle management system
- EMC-tested
- Alternator 28 V/100 A

- Daytime running lights protected in bumper construction
- Headlight range adjustment
- Rear fog light
- Reversing lights
- Clearance lamps

Optional extras:

- High output alternator 28 V/150 A
- Alternator with dirt protection and fording capability
- Rear working lamps
- Protective headlight grille
- Battery 170 Ah

Availability of optional equipment may vary.



Equipment socket, 32-pin



Daytime running lights



Rear lights

Hydraulics and power take-offs as optional equipment.

Working hydraulics	U 4023/U 5023
System pressure [bar]	240
Flow rate [l/min] at engine speed 2200 rpm	50
Control	Pressure build-up valve with switch in cab
Connections	2 sockets at the front, above the bumper on the left (in the direction of travel), pressurised flow line as a plug connection, return flow line as a socket connection

Engine PTO to rear, with flange	U 4023/U 5023
Version	Engine-driven via spur gear, flange drive at rear of engine via engageable dog clutch, only engageable when engine is stationary
Gear ratio	i=0.933
Rotational direction	to the right (in the direction of travel)
Maximum torque	600 Nm
Maximum continuous output	138 kW

Transmission-run power take-off (PTO)	U 4023/U 5023	U 4023/U 5023	U 4023/U 5023
Designation	Transmission-driven power take-off (PTO) with 6-hole flange	Transmission-driven power take-off (PTO) with 4-hole connection	Transmission-driven power take-off (PTO) high speed, with 6-hole flange
Gear ratio	1.0	1.0	0.61
Rotational direction (in direction of travel)	Left	Left	Right
Maximum engine torque [Nm]	650	650	320
Maximum output [kW]	150	150	120
Rotational speed at engine speed 2200 rpm	2200	2200	3606
Connection	6-hole flange	4-hole connection	6-hole flange

More information, pictures and videos on the topic also online:

Mercedes-Benz Special Trucks World.



Redrawing boundaries. Setting new milestones. The Unimog.



On tough terrain: The Unimog U 4023 in operation as an emergency vehicle.



The all-terrain Unimog U 4023 and U 5023 in a crewcab version.



Motorhome „Mog Home“ makes for off-road mobility with no limits.

Further platforms.



The Extreme All-Terrain Unimog U 4023 - U 5023 Range.

In addition to a wide range of standard and optional equipment, your Unimog can be further customised with a wide range of other purpose-built equipment and miscellaneous items. For further information and advice, please contact your local Unimog Dealer. www.unimog.co.uk

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