The new Unimog.

Technical information U 4023/U 5023.
Dimensions and weights.

Technical drawing for U 4023 BlueTec 6, model designation 437.427

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

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

Turning circle: 16.3 m
Technical drawing for U 5023 BlueTec 6, model designation 437.437

<table>
<thead>
<tr>
<th>Load ratings (in kg)</th>
<th>Standard</th>
<th>OE</th>
<th>OE</th>
<th>OE for fixed bodies</th>
<th>OE for fire services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perm. gross vehicle weight</td>
<td>13,000</td>
<td>12,500</td>
<td>12,700</td>
<td>14,100</td>
<td>14,500</td>
</tr>
<tr>
<td>Weight on front axle</td>
<td>5,000</td>
<td>5,500</td>
<td>5,800</td>
<td>6,300</td>
<td>6,400</td>
</tr>
<tr>
<td>Weight on rear axle</td>
<td>7,500</td>
<td>7,100</td>
<td>6,900</td>
<td>8,800</td>
<td>8,800</td>
</tr>
</tbody>
</table>

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

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

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

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

<table>
<thead>
<tr>
<th></th>
<th>U 4023</th>
<th>U 5023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gears</td>
<td>1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8</td>
<td></td>
</tr>
<tr>
<td>Transmission ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward</td>
<td>9.570</td>
<td>6.635</td>
</tr>
<tr>
<td>Driving speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic gears</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward</td>
<td>6.6 9.6 14.5 19.7 29.0 41.9 63.5 86.3</td>
<td>6.9 9.9 15.0 20.4 30.1 43.4 65.8 89.4</td>
</tr>
<tr>
<td>Reverse</td>
<td>4.4 6.3 9.5 13.0 19.1 27.5 – –</td>
<td>4.5 6.5 9.9 13.4 19.8 28.5 43.2 58.8</td>
</tr>
<tr>
<td>Off-road gears</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x 3.19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward</td>
<td>2.1 3.0 4.6 6.2 9.1 13.1 19.9 27.1</td>
<td>2.2 3.1 4.7 6.4 9.4 13.6 20.6 28.1</td>
</tr>
<tr>
<td>Reverse</td>
<td>1.4 2.0 3.0 4.1 6.0 8.6 13.1 17.8</td>
<td>1.4 2.0 3.1 4.2 6.2 8.9 13.6 18.4</td>
</tr>
</tbody>
</table>

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/sand 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.
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

Traction ratios depending on tyre pressure

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 windshield 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

1. Distance from implement to centre of axle: 1050 mm
2. Distance front axle/steering wheel: 360 mm (lowest steering wheel position, max. tilt towards driver)
3. Position of driving seat

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

**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.*
Electricity/ 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

Optional extras:

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

• 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.
### Hydraulics and power take-offs as optional equipment.

<table>
<thead>
<tr>
<th><strong>Working hydraulics</strong></th>
<th><strong>U 4023/U 5023</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System pressure [bar]</strong></td>
<td>240</td>
</tr>
<tr>
<td><strong>Flow rate [l/min] at engine speed 2200 rpm</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Pressure build-up valve with switch in cab</td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td>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</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Engine PTO to rear, with flange</strong></th>
<th><strong>U 4023/U 5023</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Version</strong></td>
<td>Engine-driven via spur gear, flange drive at rear of engine via engageable dog clutch, only engageable when engine is stationary</td>
</tr>
<tr>
<td><strong>Gear ratio</strong></td>
<td>i=0.933</td>
</tr>
<tr>
<td><strong>Rotational direction</strong></td>
<td>To the right (in the direction of travel)</td>
</tr>
<tr>
<td><strong>Maximum torque</strong></td>
<td>800 Nm</td>
</tr>
<tr>
<td><strong>Maximum continuous output</strong></td>
<td>138 kW</td>
</tr>
</tbody>
</table>

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