

## Overview of models and components

<b>Model name</b>	<b>Model designation</b>	<b>Wheelbase (mm)</b>	<b>Engine</b>	<b>Output (kW/hp)</b>	<b>No. of cylinders</b>	<b>Permissible gross vehicle weight: Variants (t)</b>
U 4023	437.427	3850	OM934	170/231	4	7.5 / 8.0 / 8.8 / 9.8 / 10.3
U 5023	437.437	3850	OM934	170/231	4	12.5 / 12.7 / 13.0 / 14.1 / 14.5

## Product concept

### Unimog model series in comparison

#### Unimog Implement Carrier BlueTec 6

- Compact all-terrain Unimog implement carrier
- Vehicle type: tractor unit/truck
- Vehicle width: from 2.15 m
- Wheelbases: 2800 mm – 3900 mm
- Straight, dimensionally stable and weight-optimised ladder-type frame
- Panoramic cab with large windscreen and low instrument support
- 4+3 implement mounting areas
- Extensive hydraulics package
- Mechanical engine and transmission PTOs
- Permanent all-wheel drive, differential locks engageable

#### Extreme off-road Unimog BlueTec 6

- Extreme off-road Unimog chassis
- Vehicle type: truck chassis
- Vehicle width: from 2.3 m
- Wheelbase: 3850 mm
- Dropped, flexible and torsionally flexible frame
- Cab-behind-engine truck with raised windscreen
- Long body length for greater load volume
- Integrated hydraulics system available
- Mechanical engine and transmission PTOs
- Rear axle drive, all-wheel drive and differential locks engageable



Unimog Implement Carrier BlueTec 6



Extreme off-road Unimog BlueTec 6

## Extreme off-road capability

### Feature

- Heavy-duty, torsionally flexible frame
- Portal axle with asymmetric differential arrangement
- Axle location via torque tube technology, coil springs and transverse control arms
- Fording capability
- Atmospheric pressure equalisation of components
- Short frame overhangs at front and rear
- Low vehicle centre of gravity
- All-wheel drive and differential locks engageable and disengageable via dog clutch while on the move

### Advantage

- Good flexibility off-road on steep inclines and rough surfaces
- Large ground clearance when driving over obstacles
- Extreme diagonal torsional flexibility
- Central load application and bracing on gearbox
- Protection for drive shafts
- Enables fording of water to a depth of 80 cm (standard) / 120 cm [Z16]
- No excess pressure in components
- Large angle of approach/departure and ramp breakover angle
- High climbing and tipping angle
- High tractive power available at all times
- 100% locking effect
- No interruption in tractive power, no stopping



	U 4023	U 5023
a) Ground clearance (mm)	410	460
b) Angle of approach (°)	42	46
c) Ramp breakover angle (°)	32	36
d) Angle of departure (°)	46	50
e) Tipping angle (°)	38	38



Angle not dependent on load condition or tyres.

## The Unimog concept for extreme torsional flexibility



Driving over obstacles optimised by asymmetric arrangement of the axle differentials



Major axle articulation made possible by torque tube concept and coil springs



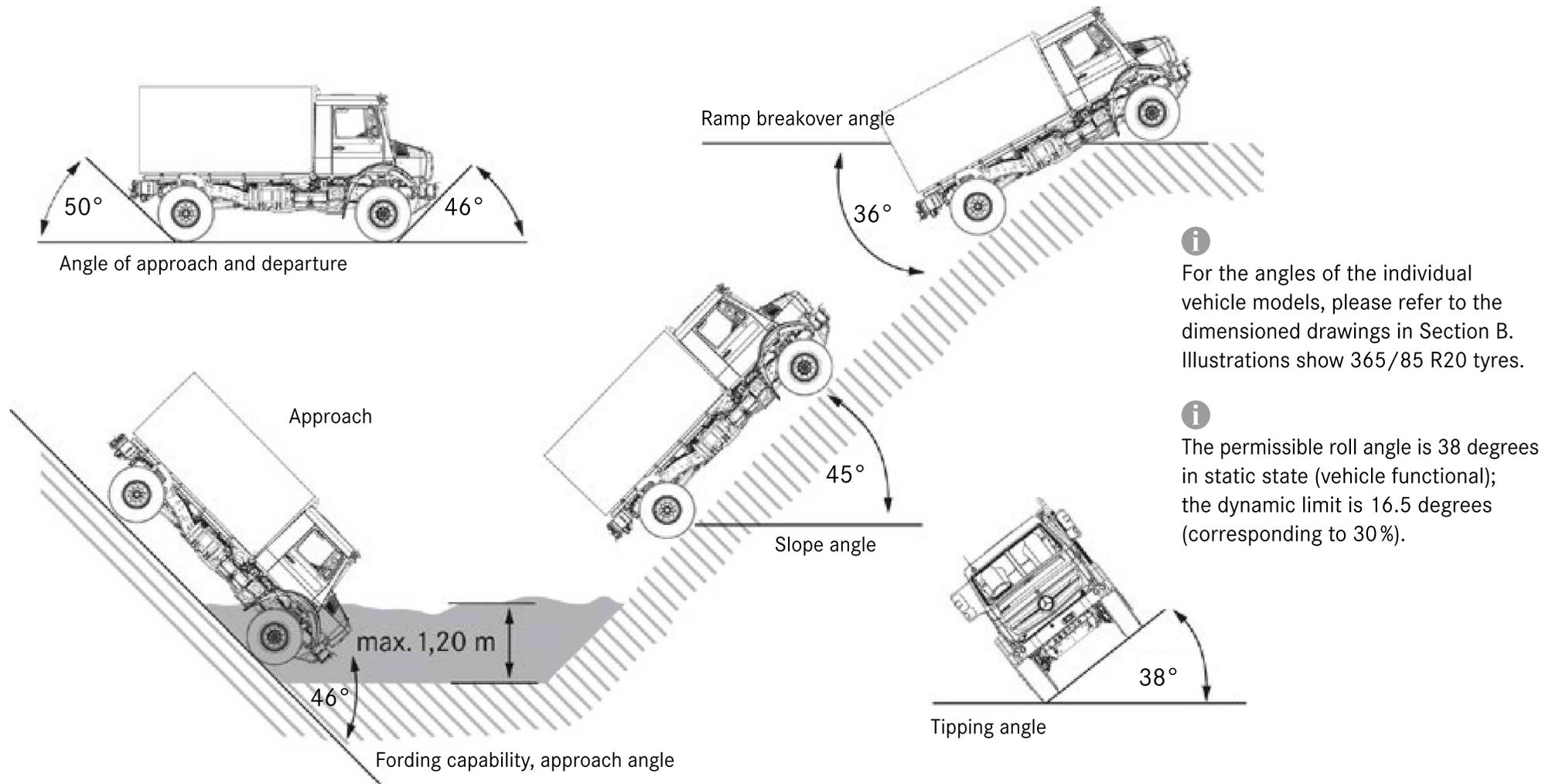
Driving over sharp crests possible thanks to large ramp breakover angle and angle of approach/departure



3-point mounting of engine, gearbox and cab. Double 3-point body mounting

## Angle of approach / departure and ramp breakover angle

Figures shown are static values for the chassis of a U 5023.



## Fording capability

### Feature

- Torque tube technology
- Air intake pipe at level of cab roof
- Large ground clearance
- Fan with electronic viscous clutch, mechanically driven via propeller shaft, raised
- Key components and electrical devices protected against splashing water

### Advantage

- Enables standard fording capability to 80 cm
- No permanent drive, fan remains operational
- No damage resulting from exposure to water
- No sagging of a V-belt



Standard fording capability to 80 cm

## Optional equipment – fording capability

### Feature

#### [Z16] Special parts, fording capability

- Raised pressure compensating lines for axles, gearbox, working gear range, torque tube, fuel tank, air drier, solenoid valves, brake system, etc.
- Waterproof main headlights with central, raised ventilation
- New position for auxiliary heater [D6N]

### Advantage

- Enable fording capability to 120 cm
- Atmospheric pressure compensation with vent lines from the components prevents entry of water and fine sand
- No reduction in fording capability with optional auxiliary heater



Special equipment, special parts for fording capability to 120 cm [Z16]



#### Recommended special equipment:

- Double sealing of wheel hubs, for operations in muddy conditions [A27]

# Frame

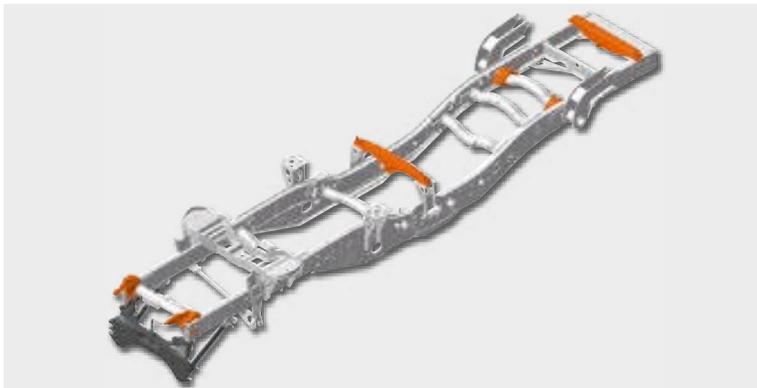
## Frame concept

### Feature

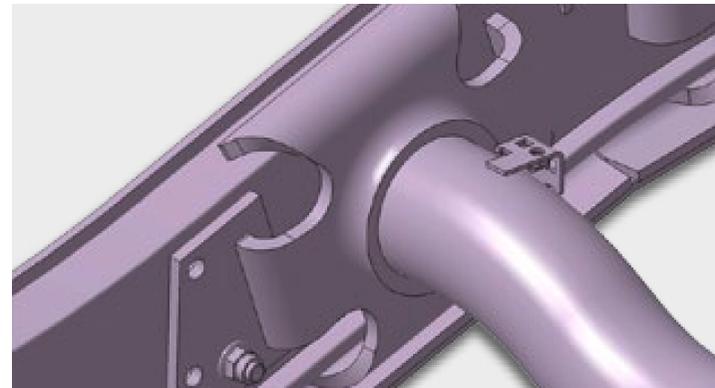
- 2 U-section longitudinal frame members with welded tubular cross-members and reinforcements in the frame profile
- Offset design, no components protruding downwards
- Robust steel bumper
- Special torsionally flexible connection flange

### Advantage

- Heavy-duty, flexible and torsionally flexible frame offering high elasticity
- No permanent deformation even after extreme diagonal torsion
- Enables all four wheels to remain permanently in contact with the ground in all driving situations
- Safe and controlled off-road driving
- Installation of drive units at lowest possible point: low centre of gravity, high ground clearance
- Protection of components in off-road terrain
- Robust protection from mechanical influences in collisions
- Transmission of high torsional forces between longitudinal and transverse members



Frame with attachment fixtures for non-MB bodies [CD5], front mounting brackets [CA2], front mounting plate [CP3], cable winch brackets (CH5)



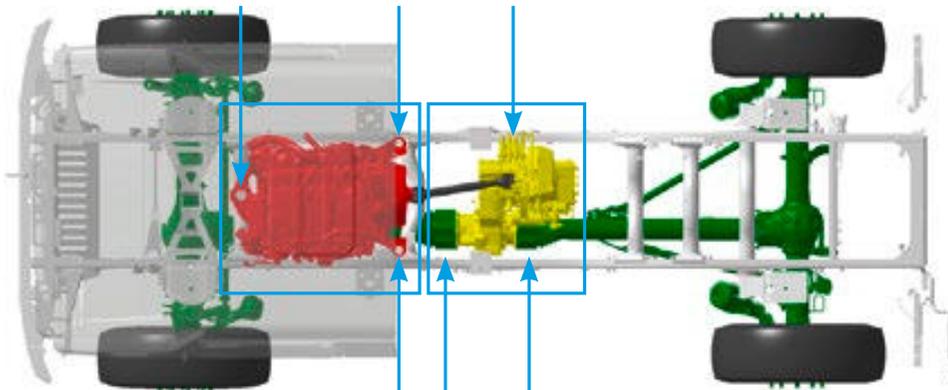
Special torsionally flexible connection flange

**Feature**

- Integrated attachment points
- 3-point mounting of cab, engine and gearbox
- Double 3-point mounting for bodies and attached equipment

**Advantage**

- Suitable for attaching heavy front- and rear-mounted implements with defined transmission of forces
- Torsion and stress-free mounting of components and bodies
- No restriction of off-road capabilities
- Equipment, attachments and bodies can be mounted in the ideal positions with regard to torsion and centre of gravity
- Transmission of trust, tensile and weight forces to the intended points in the frame
- Safe, secure and simple attachment and mounting of equipment



3-point mounting of engine and gearbox



Even with extreme axle articulation ( $30^\circ$ ) there is only a limited amount of twist between cab and body ( $12^\circ$ )