



# Pinzgauer

# X-M

**X-TREME MOBILITY**



# RELIABILITY



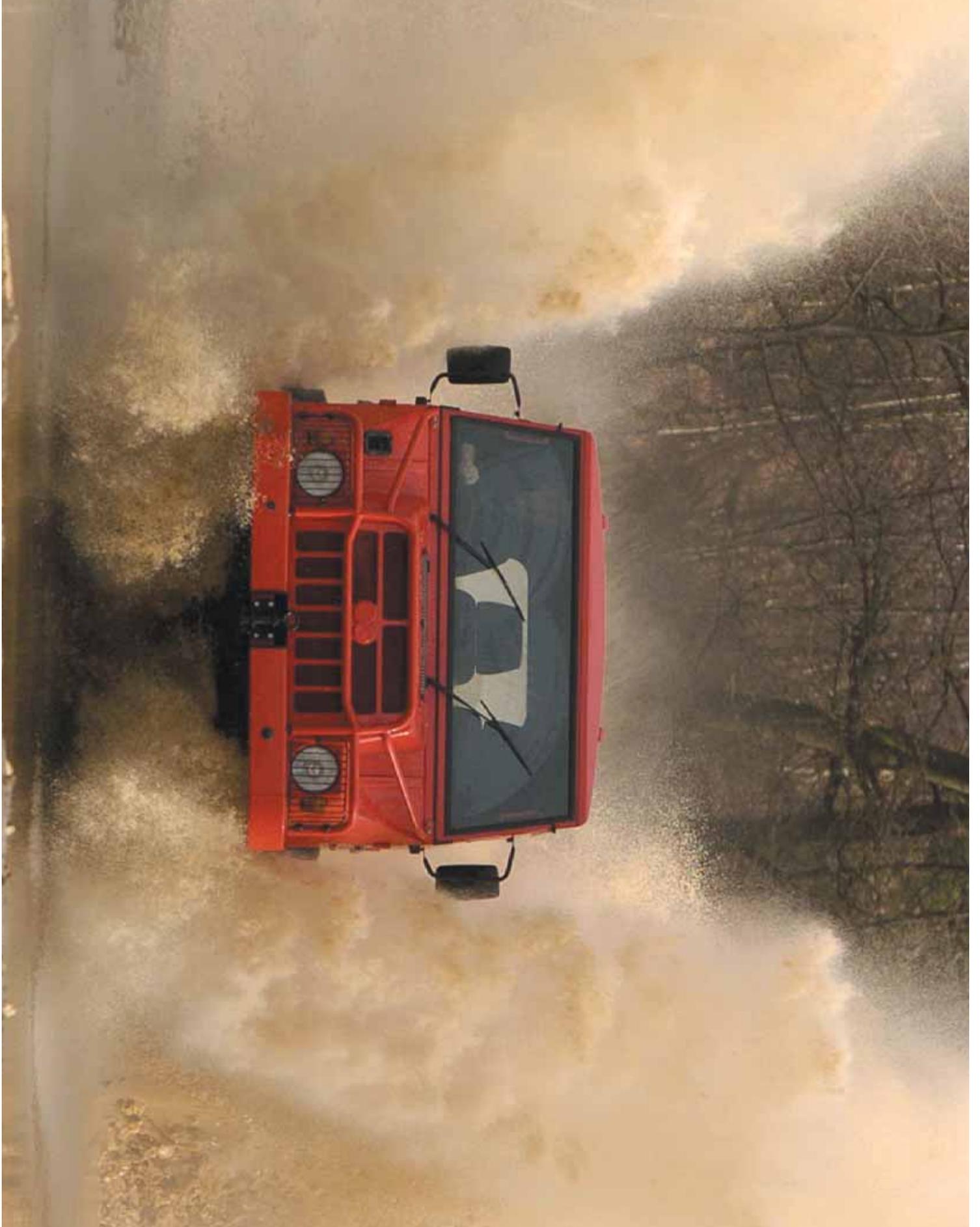
## Vehicle of Choice

The new, advanced Pinzgauer X-M (X-treme Mobility) takes the legendary all-terrain vehicle performance, mobility and driveability to an even higher level. Developed from the highly successful Pinzgauer range already proven in-service for a wide range of military and civilian roles, the X-M introduces a number of advanced features and systems which significantly enhance the vehicle's world class capabilities.

With its unique centre-tube chassis design with portal half-axes, independent suspension, powerful engine and brakes with precise, accurate steering, the Pinzgauer offers the ultimate in no compromise performance both on- and off-road.

The Pinzgauer, takes its name from an incredibly strong and tough breed of mountain horse, was first introduced in 1971 - and has been in continuous production ever since. The latest Pinzgauer continues to be a market leader and now with increased payload and a higher torque engine.



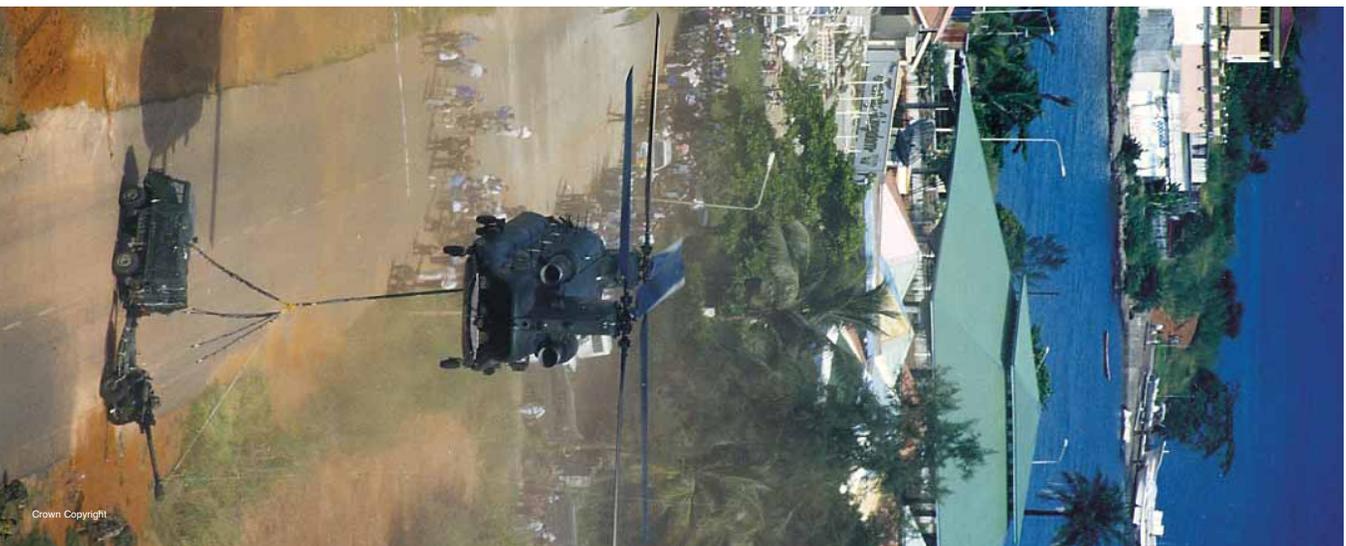


*DURABILITY*

# MOBILITY



The highest standard of build quality and continuous product development throughout its 30 years' service with military and civilian users have kept the Pinzgauer at the very top of the specialised mobility vehicle sector for reliability, survivability, durability and versatility. The Pinzgauer's performance is equally impressive, whatever the conditions. It feels like a car to drive - smooth, responsive, easy to control and with exceptionally good handling. On-highway road holding is also excellent and body-roll is minimal, even when cornering at speed. This incredible all-round stability gives the driver real confidence in the vehicle.





QUALITY



# VERSATILITY

Low overall whole life costs, component commonality – and reduced maintenance and inventory are important operational considerations for today's integrated fleets. Major components – including engines, gearboxes, axles, brakes, hubs, steering systems and most body panels - are common across the whole Pinzgauer range.

The latest Pinzgauer range also includes a 6x6 Armoured variant, designed to meet NATO and international standards of protection, whilst retaining the Pinzgauer's legendary agility, speed and performance, particularly off-road. The basic rolling chassis is common with the latest soft-skin Pinzgauer 6x6 variants and the monocoque bodyshell is built to the European CEN standard, Class B6 for ballistic protection. Further enhancements are available to raise the protection level.



Crown Copyright





*PERFORMANCE*



# POWER

## In a word, Unique!

**Engine** - The new 5-cylinder 2.5litre Volkswagen engine developed for the Pinzgauer meets the strict Euro III emissions requirement, achieved without the use of a catalytic converter. The unit produces massive torque, in particular at low engine speed, just where an extreme mobility vehicle requires it – and also provides the Pinzgauer with startling performance. Using the latest engine mapping technology, the engine has been optimised to match perfectly the needs of the Pinzgauer's specialist customers. The engine is extremely efficient and quiet in operation. All these positive improvements provide benefits to the user in stealth, range and performance.

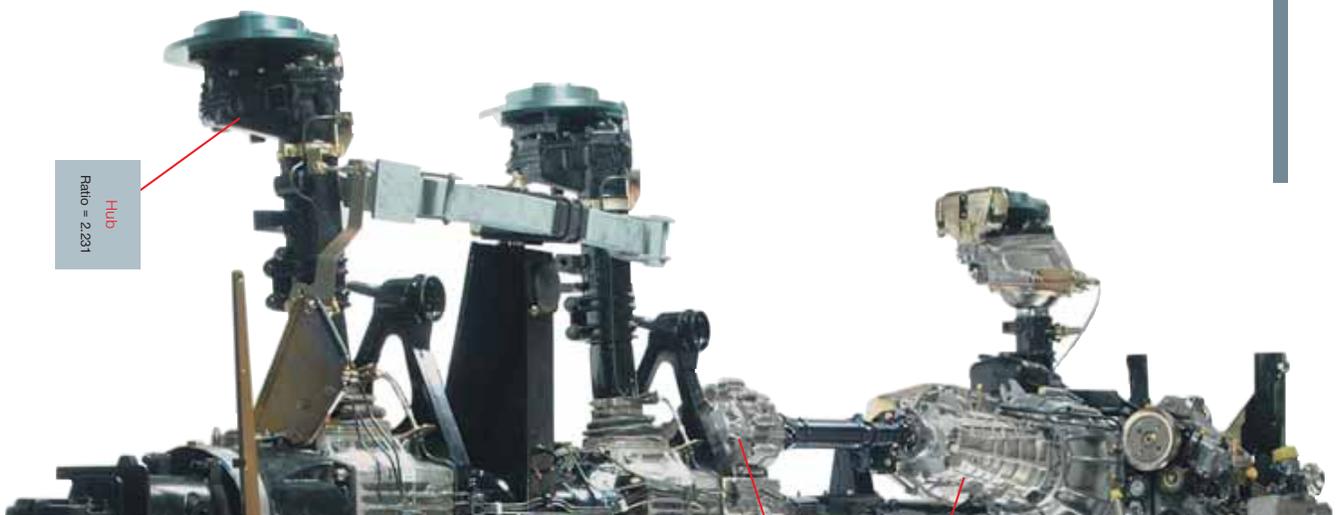
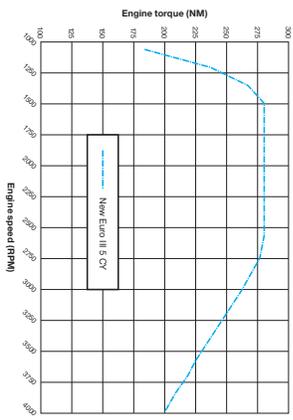
**Alternator** - The new engine is also fitted with a 100amp alternator as standard - recognising the need to provide high output electrical power at 24V for modern applications. The alternator is mounted high on the engine to protect against ingress of mud and water and a split charge capability is available to power auxiliary batteries.

**Gearbox** - The Pinzgauer uses a ZF 4-speed automatic gearbox. While designed to select the right gear for the conditions automatically, it still offers manual override, which gives excellent engine braking.

**Transfer Box** - The ZF 2-speed transfer box is fully synchronised, allowing the driver to select high or low range whilst on the move. The transfer box forms part of the centre tube system and is therefore completely protected from ground damage.

**Differentials** - The Pinzgauer's class-unique twin crown wheel and pinion differentials are a pivotal feature of the vehicle's design and part of the centre tube chassis - one solid, massively strong, torsion resistant backbone. All the differential units are identical and provide both drive and suspension movement. Within the centre tube connecting the differentials are housed the solid prop shafts, differential locks and all-wheel-drive connections, fully protected from damage and enclosed to ensure maintenance free operation.

**Brakes** - The Pinzgauer has massive stopping power for a vehicle in its class, with all-round disc brakes and double callipers on the front axle. The vacuum assisted hydraulic system is both simple and



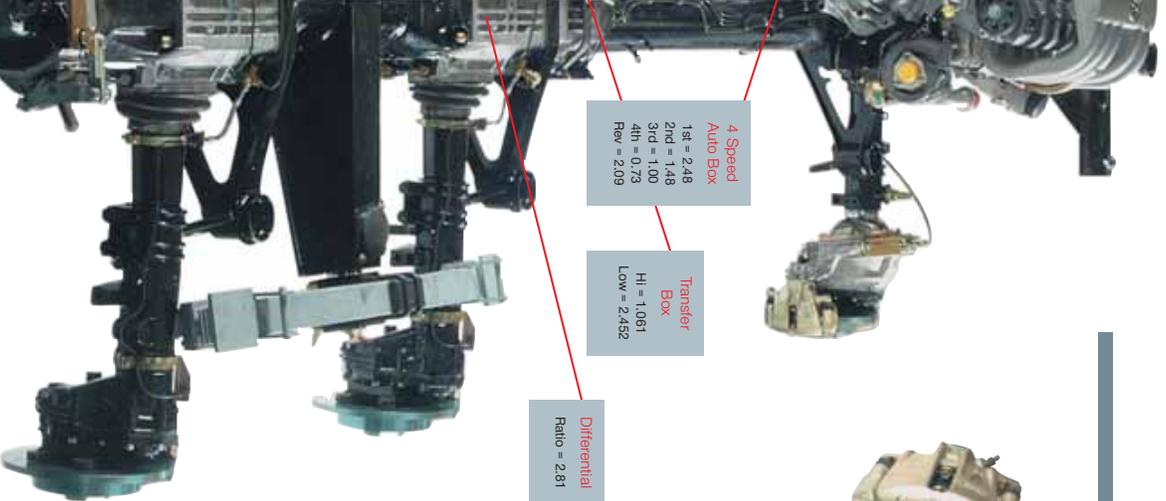
Hub  
Ratio = 2.231



**4 Speed  
Auto Box**  
1st = 2.48  
2nd = 1.48  
3rd = 1.00  
4th = 0.73  
Rev = 2.09

**Transfer  
Box**  
Hi = 1.061  
Low = 2.452

**Differential  
Ratio = 2.81**



effective, whether on- or off-road, braking performance is exceptional. Now, with ABS (Anti-lock Braking System) and EBD (Electronic Brake Distribution), the Pinzgauer offers even higher levels of driveability and safety. The double-disc mechanical transmission handbrake on the Pinzgauer operates directly on the rear differential. With the differential locks engaged, it effectively locks all axles and wheels. In this situation, it is capable of holding the vehicle fully laden on extreme gradients.

**Steering** - The Pinzgauer uses a ZF power assisted steering system with divided tie rods and a safety steering column. The system provides exceptionally good response and feel with minimum kick back and remains fully operational without the power assistance.

**Suspension** - Fully independent suspension on all wheels, provides no cross axle shock, which enhances the Pinzgauer's ability to travel exceptionally fast cross-country. The 4x4 uses coil springs all round, while the 6x6 uses a rocking beam parabolic taper-leaf design at the rear, to ensure outstanding stability and performance. Telescopic double acting dampers are used all round and rear air suspension options are also available.

The Pinzgauer's unique suspension system does not incorporate bushes, radius arms, panhard rods or links – and is effectively therefore maintenance free. The Pinzgauer's exceptional, smooth ride quality and low level vibration transfer, make the vehicle ideal for ambulance applications and as a carrier for communications equipment and sensitive weapons systems.

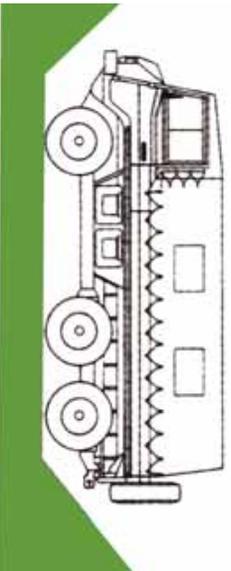
**Traction** - The latest Pinzgauer incorporates ETC (Electronic Traction Control) which provides the driver with effective wheel control in marginal conditions. The ETC also engages when the vehicle is in rear-wheel-drive mode only. Following exhaustive testing, the Goodrich 285/75R16 M/T (Mud Terrain) has been specified as the standard tyre equipment on the Pinzgauer - with the option of the A/T (All Terrain) for applications with high road use. A specially developed run-flat system is also available, which aids mine blast protection. The system incorporates an alloy split wheel rim and run-flat insert.

# TECHNOLOGY

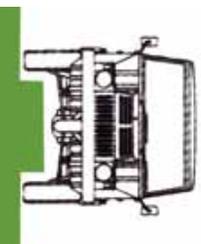


# Performance Envelope

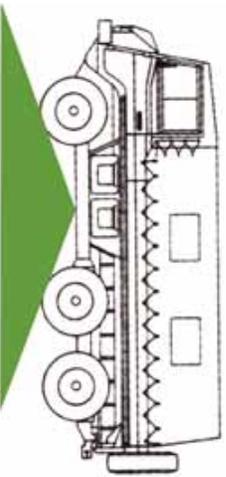
Approach/Departure 40°/45°



Ground clearance 360mm



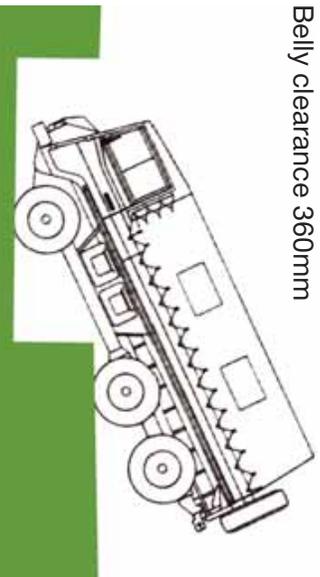
Break over angle 132°



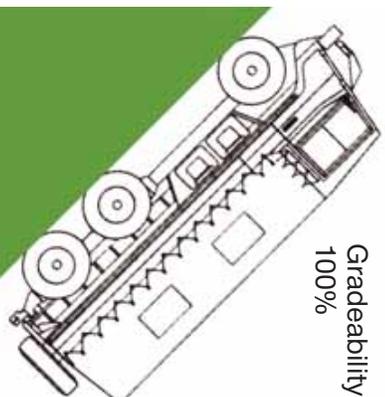
Lateral inclination 40°



Belly clearance 360mm



Gradeability 100%



The Pinzgauer is, arguably, the finest X-treme Mobility vehicle available in the world today. Its legendary features include 100% gradeability fully laden, a massive 360mm of ground clearance, a short wheelbase, differential locks on all wheels and independent suspension. No other vehicle offers such a unique combination of strength of construction, ease of use, protected components and ultimate X-treme Mobility. All-wheel-drive and the differential locks are activated by switches on the dashboard – and can be operated on the move.

One of the most critical considerations when selecting a vehicle for world-wide X-treme Mobility is the track width and overall envelope of space around the vehicle. The optimum size is defined as a track width of 1.5m and a vehicle width of not more than 1.8m, “that’s the Pinzgauer”!

**Multi-role suitability** - The Pinzgauer is the tool for the professional, designed to get the job done quickly, safely and efficiently. It is, simply, the most reliable and survivable extreme mobility vehicle in its class. With standard payload capacities of 1.4 and 2.4 tonnes for 4x4 and 6x6 respectively, the Pinzgauer is a formidable Light Logistic Vehicle. These capacities enable the vehicles to carry up to two standard NATO pallets, up to 14 men with full kit – and a wide-range or mix of other equipment. Excellent ride quality also makes the Pinzgauer ideal for use as an ambulance or carrier for electronics and sensitive weapons systems.

**Wading** - Because the air inlet is over 1.6m - and the exhaust system 1m - from the ground, the Pinzgauer can operate continuously in water up to 700mm deep. A waterproof variant of the vehicle is also available for Special Forces applications – such as the variant developed for the UK Royal Marines, which has a capability of operating in seawater up to a depth of 1.5m.

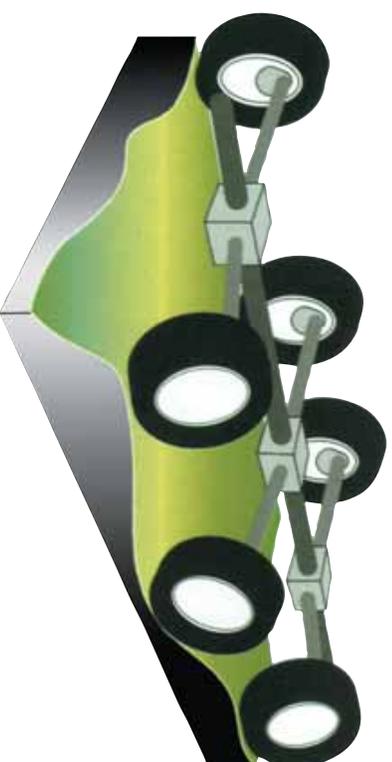
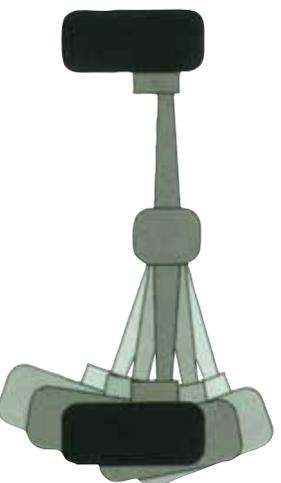
**Climatic conditions** - The Pinzgauer is designed to accommodate all of the extreme environments in which the vehicle is expected to operate, from Arctic to Desert conditions. Options are available for winterisation, including an engine preheating system, allowing the vehicle to operate down to as low as -46°C. The engine is also able to operate on AVTUR. Tropical options are also available, such as cyclonic filtration.

**Range** - The Pinzgauer is fitted with a fuel tank, of 145 litre or 120 litre capacity, depending on model configuration. This extremely large fuel capacity gives the Pinzgauer an exceptionally long range - over 800 kms without refuelling. With additional fuel tanks and special jerry can storage, the range can be extended up to 2000 kms – providing further operational and logistics support benefits, especially for applications such as Desert Patrol Vehicles.

**Air portability** - All Pinzgauer variants, including the high-bodied ambulance and communication shelter versions, are air portable and fit the C130 envelope. Tie-down points below the chassis are rated at 44.5kN each – and the same attachment points can be used to under-sling the vehicles from a range of helicopters.

With the windscreen folded and role cage dropped, the vehicle can be carried inside a CH47 Chinook Helicopter. The Pinzgauer can also be air-dropped by parachute on a Medium Stressed Platform (MSP).

**Half Axles & Portal Hubs** - The Pinzgauer uses articulated, independently sprung, portal half-axes, which pivot around the centre line of the differentials. The design provides exceptional ground clearance and contributes to the vehicle's legendary ground-following cross-country performance. The hubs, which incorporate straight cut reduction gears, are exceptionally strong and sealed for life, to prevent ingress of water, mud or sand.



# MOBILITY



# Build Quality



Mounted on the massively strong centre tube chassis is an equally durable body, a unitary construction, fabricated from high quality box section steel, to provide exceptional rigidity. The floor-pan is made from galvanised steel.

Once assembled, the complete body/shell is electrophoretic dipped and wax injected. All seams are PVC filled and a special undercoat is used to protect all exposed areas of the body. Special top coat finishes, such as Infra-red Reflective (IRR) and Chemical Agent Resistant Coating (CARC) are available to suit customers' specific requirements.

Final assembly of the Pinzgauer takes place on a uniquely adaptable 'just-in-time' production line. The layout of the line is designed to allow configurations and build schedules to be varied quickly and easily, to accommodate demands such as Urgent Operational Requirements (UOR).



# STRENGTH

# Specification

## STANDARD SPECIFICATION APPLICABLE TO ALL VEHICLES

### Engine:

Type: Water-cooled 5 cylinder turbo diesel with intercooler. Euro III  
Displacement: 2460cm<sup>3</sup>  
Max Torque: 280Nm @ 1400-2,400rpm  
Cooling System: Water cooled, fan assisted  
Fuel System: Injection pump; Distributor with cold starting device  
Tank Capacity: Models with lateral doors: 120 litres  
Models without lateral doors: 145 litres  
Lubrication: Type: Pressure lubricated with return and oil cooler  
Filter: Micronic, easy change oil filter

### Transmission:

All wheel drive with differential locks front and rear (100%) which can be engaged and disengaged while on the move  
Automatic Electronic Traction Control (ETC)  
Fully automatic 4-speed gear box  
Fully synchromeshed 2-speed transfer gearbox

### Chassis and Suspension:

Torsion resistant central tube chassis incorporating the transfer case and lockable differentials with portal hubs on swing axes  
Front: Coil springs, rubber hollow bump springs, hydraulic shock absorbers  
Rear: 4x4: Coil springs, rubber hollow bump springs, hydraulic shock absorber with pneumatic body levelling  
6x6: Parabolic leaf springs, rubber hollow bump springs, hydraulic shock absorbers

### Steering:

ZF Gemmer, power assisted

### Brakes:

Anti-lock Braking System (ABS), Electronic Brake Distribution (EBD). Disc brakes on all wheels. Hydraulic vacuum servo assisted mechanical hand brake acting on the central drive shaft

### Electrical Equipment:

24 Volt system  
2 Batteries, each 12V/85 amp  
Alternator 28V/100 amp  
Convoy lights  
Trailer socket NATO  
Slave start socket  
Cigarette lighter/socket

### Electrical Instruments:

Meters: Speedometer mph or kph  
Odometer  
Gauges: Fuel level  
Water Temperature

### Warning Lamps:

Charging  
High beam  
Rear fog light  
Indicators  
Warning flashers  
Handbrake/Brake fluid  
ABS, EBD, ETC  
Oil pressure  
Cold start  
Interior Lighting: Front and rear compartments  
Exterior Lighting: Headlights  
Sidelights  
Direction indicators  
Reversing light  
Hazard warning lights  
Number plate lights  
Rear fog light

### Wheels:

Steel disc wheels 7J x 16H2

### Tyres:

Dual purpose tyre (biased 60% off-road performance, 40% on-road performance) BF Goodrich 285/75 R16 M/T

### Standard equipment:

2 front seats (head rest and seat belts)  
Steps to front doors  
Grab handle for front passenger  
Vinyl seat upholstery  
Exterior rear view mirrors  
Bush guard  
Tank guard  
Fuel filter in tube  
Water separator  
Towing device NATO pintle  
Licence plate holder  
Grab handles on windscreen left and right

### Internal Design:

As per customer requirements

### External Design:

Colour and markings as per customer requirements

### No cost option:

Left or right hand drive

Automotive Technik Limited reserves the right to change and vary the design, technical details and specification at any time and without prior notice as the company's policy is one of continuous product improvement. Some dimensions may vary according to detailed specifications.

# SPECIFICATION

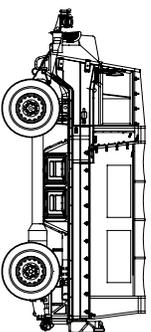


## Dimensions

	4x4	6x6
<b>Dimensions:</b>		
Height:	2,045mm	2,045mm
Overall Length:	4,528mm	5,308mm
Overall Width:	1,800mm	1,800mm
Wheelbase:	2,400mm	2,200 +980mm
Wheel Track:	1,520mm	1,520mm
Gross Vehicle Weight:	3,850kg	5,000kg
Axle Weight 1:	2,000kg	2,000kg
Axle Weight 2:	2,000kg	1,600kg
Axle Weight 3:	-	1,600kg
Payload: up to	1,400kg	2,400kg
Recommended trailer		
Weight:	3,000kg	2,000kg
Max trailer Weight:	5,000kg	5,000kg
Max Speed:	120kph	120kph
Range of Action:	800 km (average 145 litre tank)	
Turning Circle:	11.5m	13.0m
Ground Clearance:		360mm
Fording Depth:		700mm
Max Climbing Ability:		100%

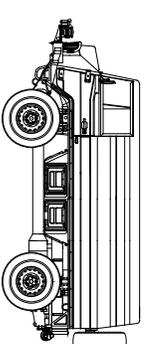
## Configurations

4 x 4



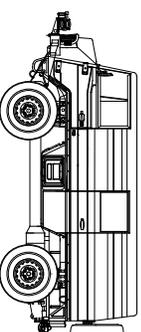
### Pinzgauer 4x4 GS

4x4 General Service Soft Top With Lateral Seats  
**Specification** - 2 side doors, drop down windscreen, drop down sideboards, 8 fold down lateral seats inward facing, 145 litre tank



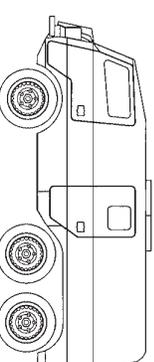
### Pinzgauer 4x4 HT

4x4 Hard Top With Lateral Seats  
**Specification** - 2 side doors, hard top, rear door, rear windows, lateral seats for 8 persons left and right, 145 litre tank



### Pinzgauer 4x4 C

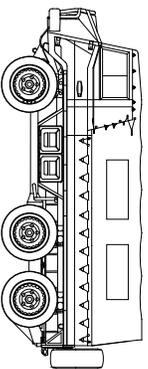
4x4 Command  
**Specification** - 4 side doors, 3 forward facing seats mid vehicle, rear door, hard top, 120 litre tank



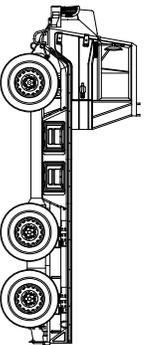
### Pinzgauer 6x6 A

6x6 B6 Armoured  
**Specification**  
 Available with or without side doors. Forward facing or lateral seating, available with up to 10 seats.

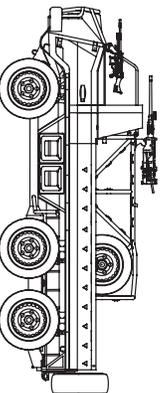
# 6 x 6



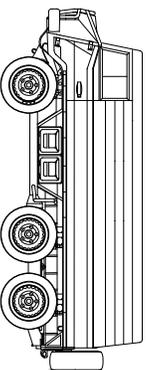
**Pinzgauer 6x6 GS**  
 6x6 General Service Soft Top With Lateral Seats  
**Specification** - 2 side doors, 145 litre fuel tank, drop down sideboards, soft top, 12 fold down lateral seats inward facing, drop down windscreen, roll over bar



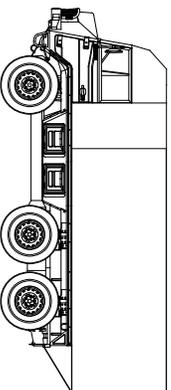
**Pinzgauer 6x6 P**  
 6x6 Platform  
**Specification** - 2 side doors, hard top, 2 seats in cab, 145 litre tank, roll over bar



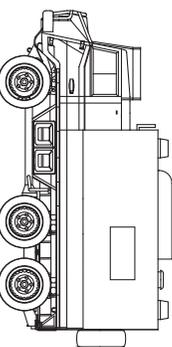
**Pinzgauer 6x6 WP**  
 6x6 Weapons Platform  
**Specification** - Roll over frame and weapon mount



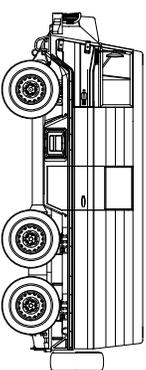
**Pinzgauer 6x6 HT**  
 6x6 Hard Top With Lateral Seats  
**Specification** - 2 side doors, hard top, rear door, 145 litre fuel tank, 1 lateral seat for radio operator, roll over bar



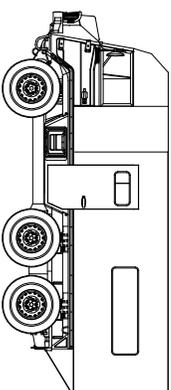
**Pinzgauer 6x6 HVB**  
 6x6 High Volume Box Body  
**Specification** - 2 side doors, insulated box body, 2 container style rear doors, 145 litre tank, roll over bar



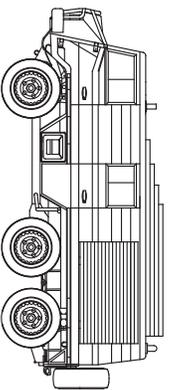
**Pinzgauer 6x6 DS**  
 6x6 Demountable Shelter  
**Specification** - Removable Shelter  
 Coms/Ambulance/Workshop



**Pinzgauer 6x6 C**  
 6x6 Command  
**Specification** - 4 side doors, hard top, rear door, 120 litre tank, 3 forward facing mid mounted seats, roll over bar



**Pinzgauer 6x6 VAB**  
 6x6 Variable Access Box  
**Specification** - As left but with additional side doors in box, suitable for Ambulance, Command applications



**Pinzgauer 6x6 F/A**  
 6x6 Fire Appliance  
**Specification** - 4 door, 5 crew, roller shutters  
 Optional Fire Specification

# VERSATILITY

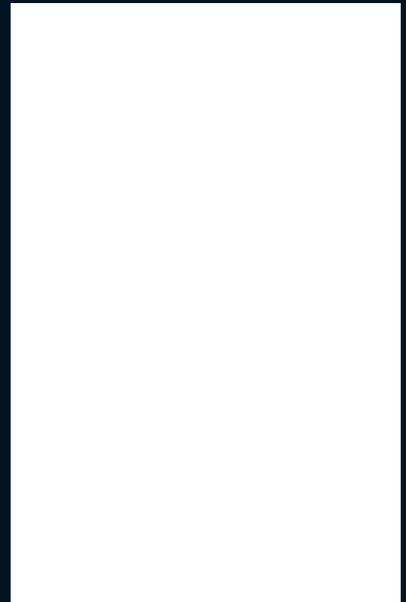


# Pinzgauer

[www.pinzgauer.uk.com](http://www.pinzgauer.uk.com)



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