

The new PistenBully 600



The innovative highlights

Driver's cab

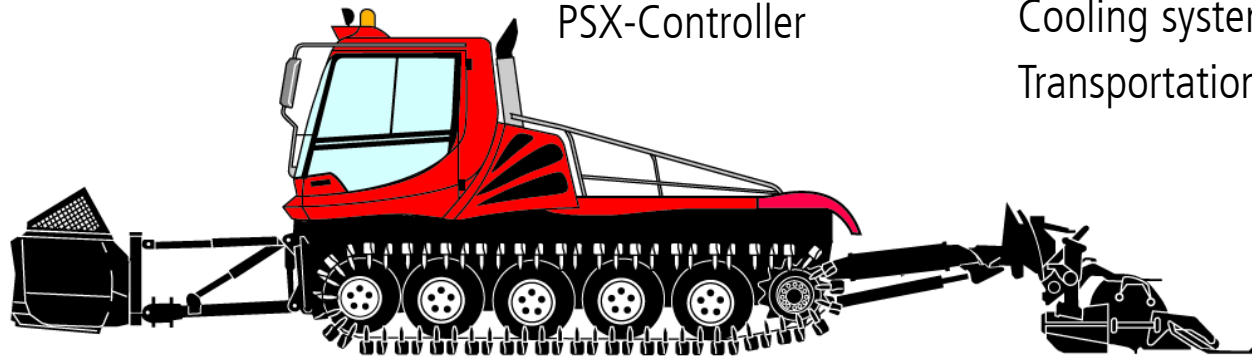
- Exterior Design
- Visibility
- Lighting
- Engine Management
- Operating philosophy
- Vibration and noise reduction
- Driving comfort
- Heating and Ventilation Management
- Interior Design
- Safety

Drive line

- Engine
- Travel electronics
- Hydraulics
- PSX-Controller

Superstructure

- Upper frame
- Supporting frame
- Cooling system
- Transportation gallery



Chassis

- Main frame
- Drive sprocket
- Planetary gearbox

Attachments

- Implement carrier
- Attachments
- Controller

Driver's *Exterior design*



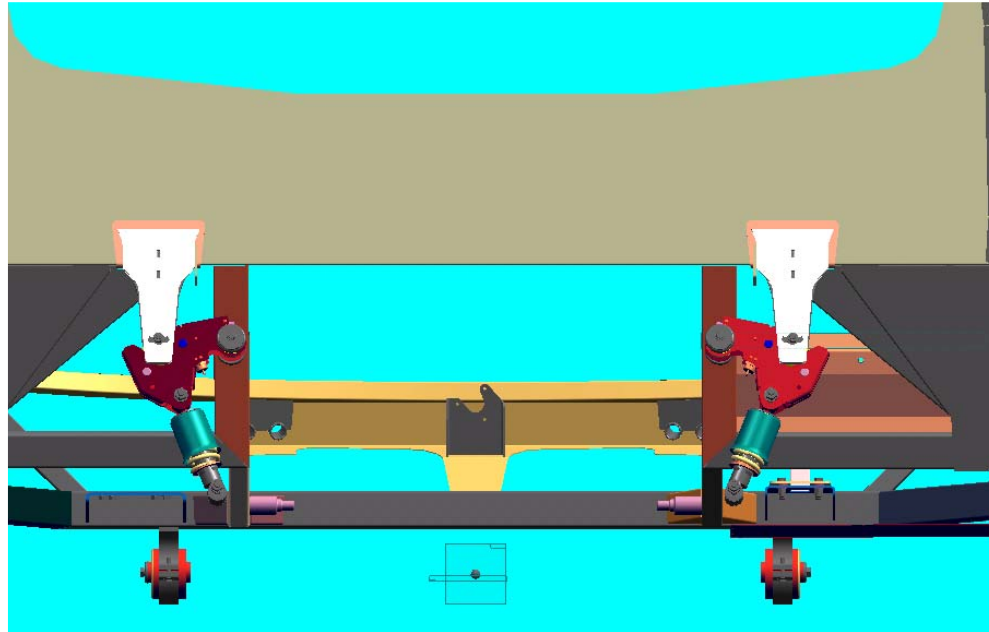
**A striking design with new lines...
...unmistakeable a «true» PistenBully !**

- Proven *Kässbohrer* hybrid construction: Steel in conjunction with glass fibre-reinforced plastic, manufactured using an optimised production process.
- ROPS certified in accordance with DIN 30770/ÖN 9850.
- Modern, timeless design.
- Enhanced driving comfort and security through enlarged driver's workspace.
- Greater visibility to all sides through enlarged windows.
- Comfortable exit and entry through wide-opening doors and additional entry lights.

Dimensions:	300	600	
Width of driver's cab:	2,170 mm	2,350 mm	
Height of cab:	1,560 mm	1,720 mm	
Depth of cab:	1,640 mm	1,721 mm	
Volume*:	4.1 m ³	5.3 m ³	+ 29 %

* Measured from the outer edges of the frame structure.

Driver's cab and platform *Mounting*



A stable position in any driving situation...

- Dependable lateral stability of the PistenBully 600 driver's cab - even on extreme slopes - by means of a four-fold mounting.
- Mounted via broad-based hydro mounts at the front and two special, newly developed oil-filled shock absorbers at the rear.
- Enhanced driving comfort through increased spring travel of bearings in the seats area.
- The driver's cab and the platform can be tilted by means of a motor or manually with hydraulic assistance.
- Hydraulically-powered locking of the driver's cab and the platform.
- As with the PistenBully 300 W, the platform of the PistenBully 600 W is locked with bolts for security reasons.

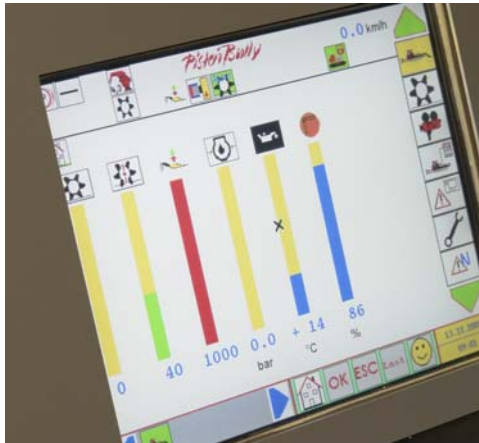
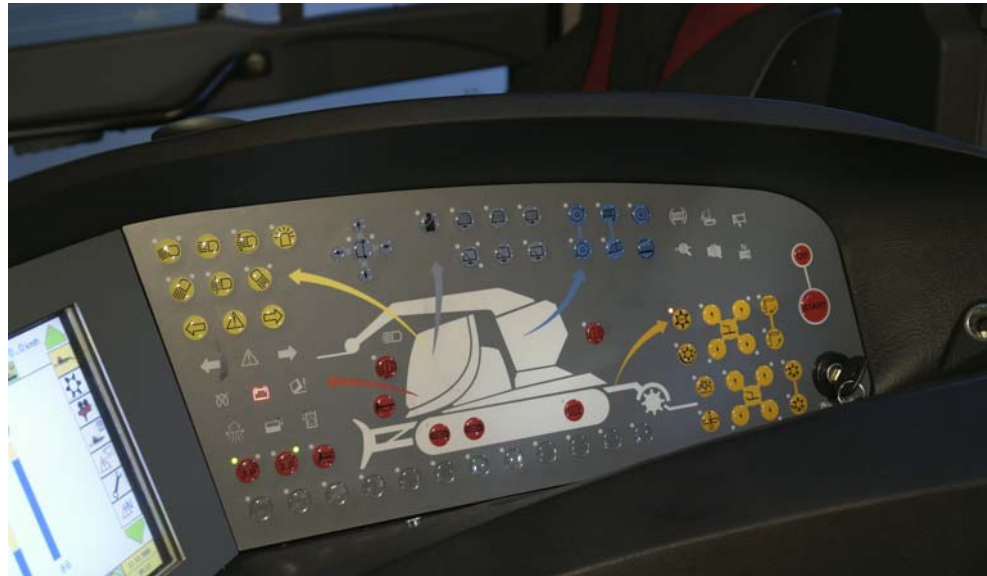
Driver's cab *Interior design*



The initial impression... ... a pleasant workplace!

- State-of-the-art technology in an unmistakable design. Ergonomically designed specifically for the PistenBully.
- An individual and comfortable workplace for all drivers through 30 adjustment options of the driver's seat.
- The length, angle, height and lateral position of both armrests can be adjusted, and they can also be raised.
- An integrated harness belt ensures the driver's safety in winch vehicles.
- The anti-slip micro-fibre Alcantara seat upholstery means that the driver does not slip in the seat when driving downhill.
- Two-stage seat heating contributes to comfortable and pleasant driving.

Driver's cab *Interior design*



A new workplace... ... makes the work easier!

- A completely revamped and newly designed cockpit for relaxed working. Everything is within reach and arranged logically.
- The controls in the steering wheel and cockpit and on the joystick have a universal colour system, are self-explanatory and easy to operate.
- A standard-equipment 10,4" (26,4 cm) TouchScreen provides the driver with information concerning all the major functions and operational data of his PistenBully.
- In conjunction with the I-Command, the colour display is used to operate the emergency travel programm.
- Analogue dial instruments also display the most important information such as speed, engine temperature and fuel level at a glance.

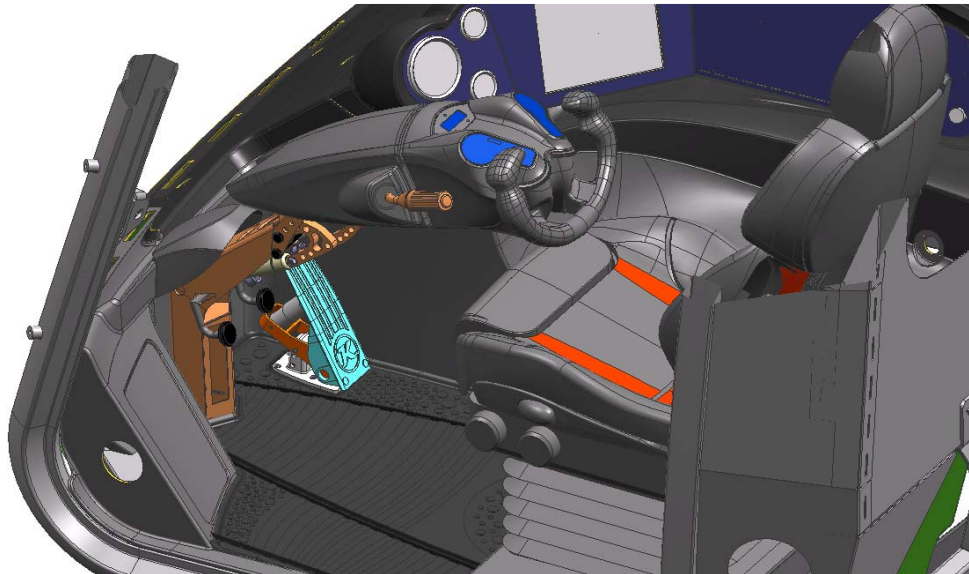
Driver's cab *Interior design*



A new workplace... ... everything safely under control!

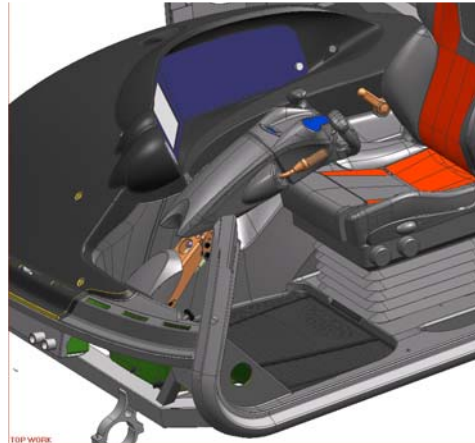
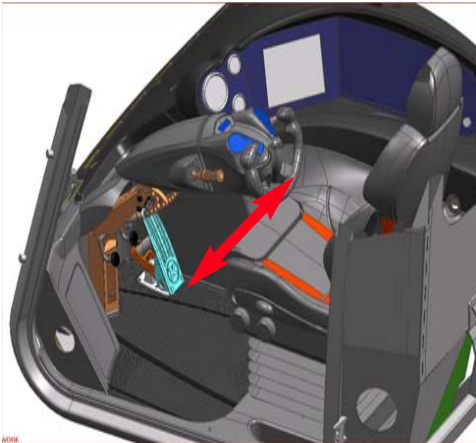
- The new, ergonomically designed semi-circular steering wheel can be individually adjusted in terms of height and length to optimally suit all drivers.
- A number of «ridges» on the semi-circular steering wheel ensures a safe grasp and the most comfortable holding position for every driver.
- The operating elements integrated in the semi-circular steering wheel are ergonomically easy to reach without the need to change hand position.
- The multifunctional display informs the driver at a glance of the PistenBully's most important operational data such as speed and winch pushing force.

Driver's cab *Interior design*



A new workplace... ... making work fun!

- The new accelerator pedal with sensor technology ensures sensitive acceleration and deceleration.
- Sensor technology means that the accelerator pedal is not longer subject to wear.
- The accelerator pedal angle can be adjusted in three settings without recalibration to match every driver's requirements perfectly.
- New floor mats provide additional sound proofing and also have an anti-slip surface structure.
- Powerful footwell heating has air outlets in the steering column and beneath the seat for pleasant cab temperature.



Driver's cab *Interior design*



An armrest... ... with lots of new details!

- The ergonomically designed armrest ensures pleasant and fatigue-free driving for every driver.
- The I-Command is integrated in the armrest, enabling the driver to navigate easily through the TouchScreen menus, enter his commands and call up information.
- The shape and position of the completely new designed joystick have been developed for the particular demands of PistenBully applications.
- The joystick buttons bear the same colour scheme as the operating panel and the semi-circular steering wheel. Some joystick buttons can be programmed individually.

Driver's cab *Interior design*

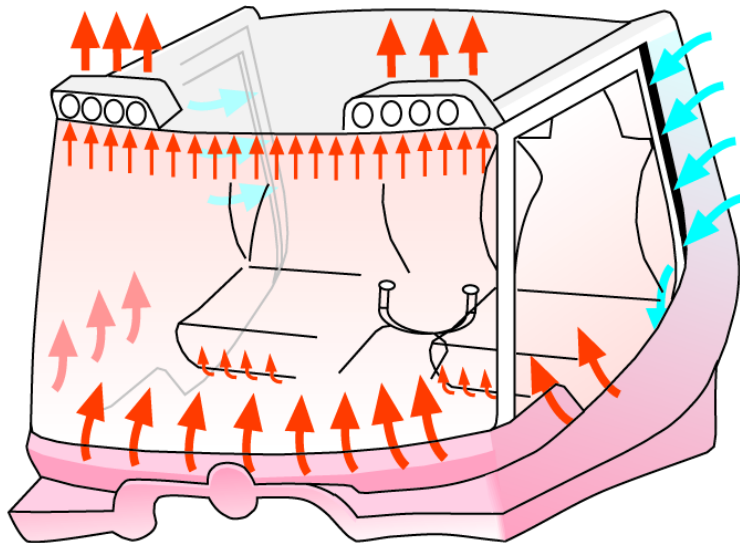


Small details that make life easier!

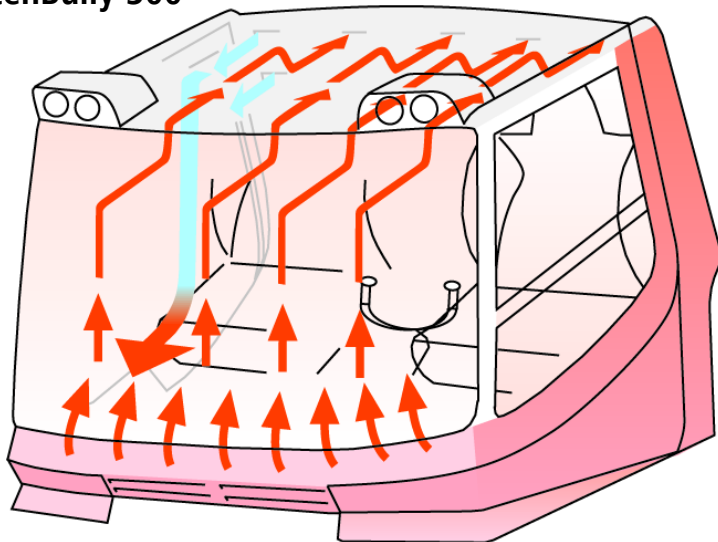
- The rear-view mirror is integrated in the roof console for unimpeded visibility to the front.
- A radio loudspeaker is integrated in the roof console alongside the temperature control system, the CD/radio and the loudspeakers. There is an additional channel for retrofitting a radio unit.
- Two blue-white LED lights for optimal illumination of the working area.
- Cab lighting with a reading light for driver and passenger is integrated in the rear wall.
- Plenty of storage space for the driver's tools beneath the rear window.

Driver's cab *Heating and ventilation*

PistenBully 600



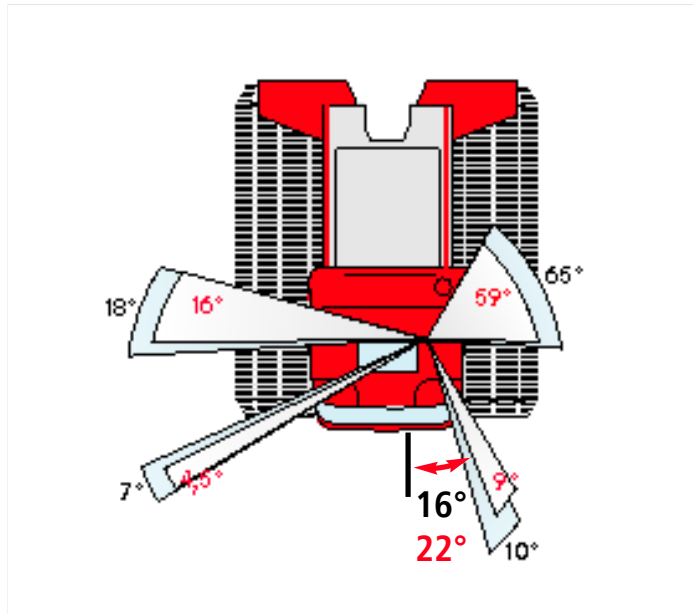
PistenBully 300



A new workplace... ... always the right temperature !

- A newly designed heating and ventilation system with many detailed improvements for a pleasant temperature in the interior of the driver's cab.
- The ventilation system comprises two separate intake systems with heat exchangers and fans. Both systems are connected to each other via the defroster duct. This guarantees consistent ventilation and temperature levels in the driver's cab, even in extreme weather conditions. There is no breeze noticeable inside the cab.
- The air flow into the cab has been optimised. Footwell heating is more powerful to ensure a pleasant cab temperature. Additional warm-air vents along the side windows ensure unimpeded visibility at all times.

Driver's cab *Glazing*



Information in red: free visibility/ blind spots of the PistenBully 600.

Information in black: free visibility/ blind spots of the PistenBully 300.

Dimensions:	300	600	
Windscreen:	1.7 m ²	2.2 m ²	+ 29 %
Rear window:	0.8 m ²	1.08 m ²	+ 35 %
Side windows:	0.53 m ²	0.77 m ²	+ 45 %

A new workplace...

... Seeing and being seen !

- All cab windows have been enlarged and the blind spot has been reduced to afford better visibility onto the surrounding area and, above all, of the front and rear attachments.
- A new adhesive technology ensures that snow and ice do not build up along the installation edge of the windscreen.
- Electric windscreen heating has increased the heated area by **29 %**. This means reduced snow and ice build-up on the edge of the windscreen for enhanced visibility.
- The side windows are both electrically heated even when open; the lower section is heated via the warm-air vents.
- The exterior mirrors on both sides are electrically heated and can be adjusted for good visibility to the rear.

Driver's cab *Glazing*

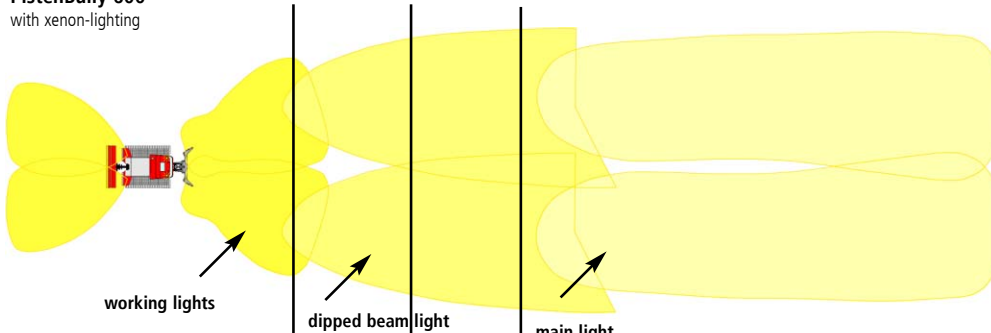


A new workplace... ... Seeing and being seen !

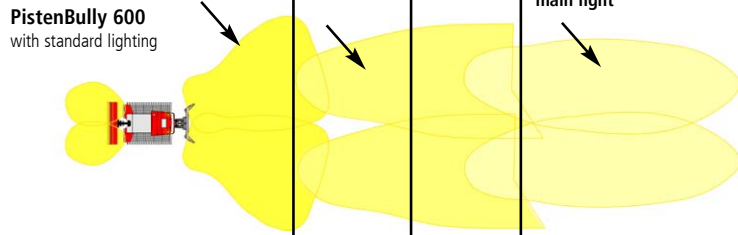
- A new glass manufacturing technique means that double glazing is no longer necessary for winch vehicles.
- The absence of the additional safety screen means improved visibility, as dirt or scratches on the Plexiglas window cannot impede visibility.
- No extra time is wasted dismantling and cleaning the safety screen.
- The stability of the new windscreen was tested using pendulum impact tests to simulate the impact of the winch hook.

Driver's cab *Seeing and being seen*

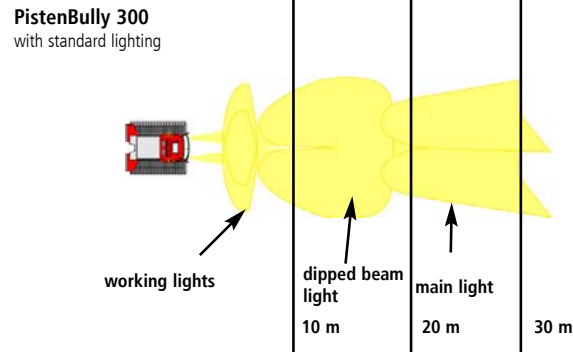
PistenBully 600
with xenon-lighting



PistenBully 600
with standard lighting



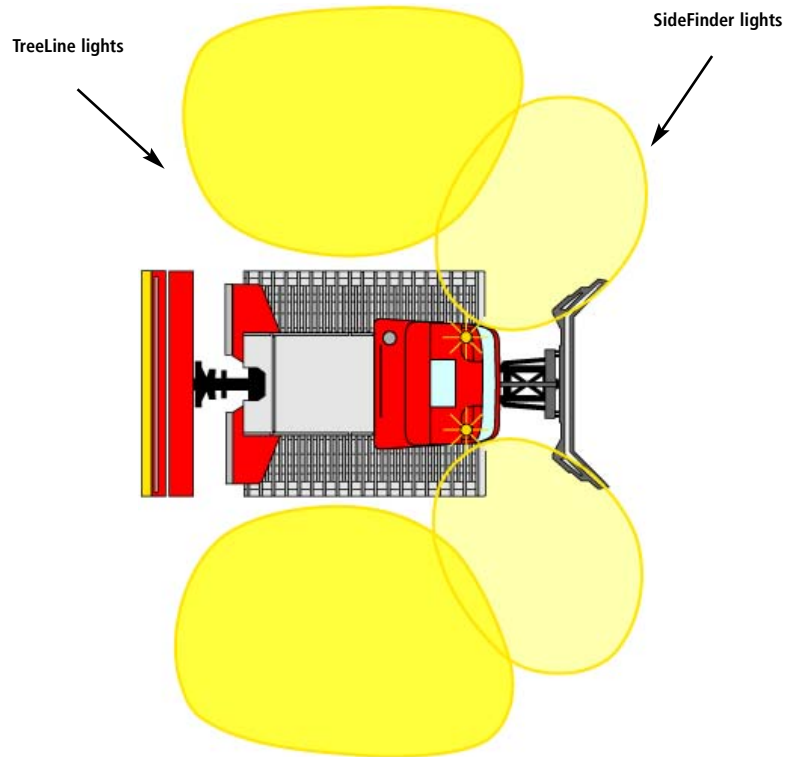
PistenBully 300
with standard lighting



A new lighting concept... ... night becomes day !

- All front headlights are integrated in the roof to ensure non-dazzle working conditions. The main and dipped beam lights are H7 headlights. The working light employs xenon technology.
- The rear headlights are H3 lights.
- Two rotating beacons, indicators and rear lights complete the vehicle lighting.
- The «Comfort» lighting set comprises all headlights; the front and rear lights employ xenon technology.
- Two LED lights for safe entry and exit into and out of the vehicle.
- An additional LED light illuminates the interior of the platform superstructure for servicing work.

Driver's cab *Seeing and being seen*



A new lighting concept... ... entirely new perspectives !

- Two new SideFinder-lights, which form part of the PistenBully 600 standard lighting set, illuminate the side and rear working area of the All-Way-Blade.
- The H3 TreeLine-lights, also new, illuminate the side area and are part of the «Xenon» lighting set.

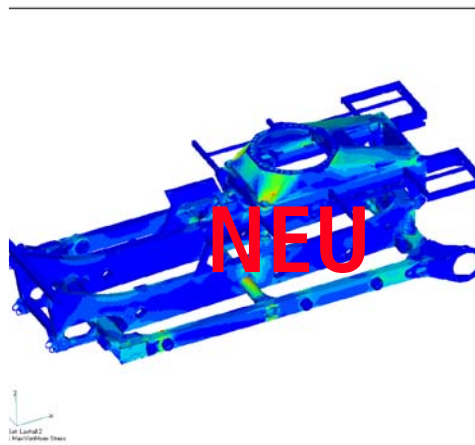


SideFinder-lights



TreeLine-lights

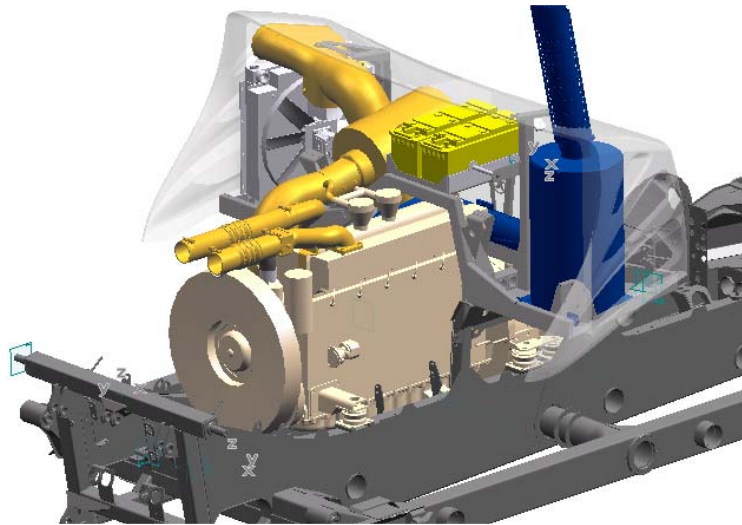
Superstructure *Main frame*



A strong frame for heavy-duty requirements !

- New design of the entire main frame, which is made from high-strength fine-grain steel that is extremely resistant to low temperatures.
 - Optimised for strength and designed using the finite elements method.
 - Fewer notches for an increased lifetime.
 - Static load tests using pulser tests and DMS measurements.
 - Large longitudinal cross-sections for a long lifetime and high stability.
 - High loading up to 1,500 kg (2,500 kg for winches).
- All in all, a new frame, «made» for the heavy-duty requirements of pushing and grooming applications and for a long lifetime.

Drive line *Engine*



A powerful engine!

Mercedes-Benz OM 460 LA

Output: 295 kW (400 hp)

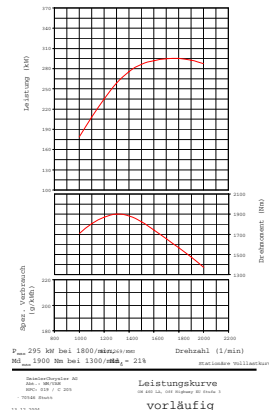
Displacement: 12,800 cm³/ 12.8 l

6-cylinder inline engine with turbocharger and charge air intercooler.

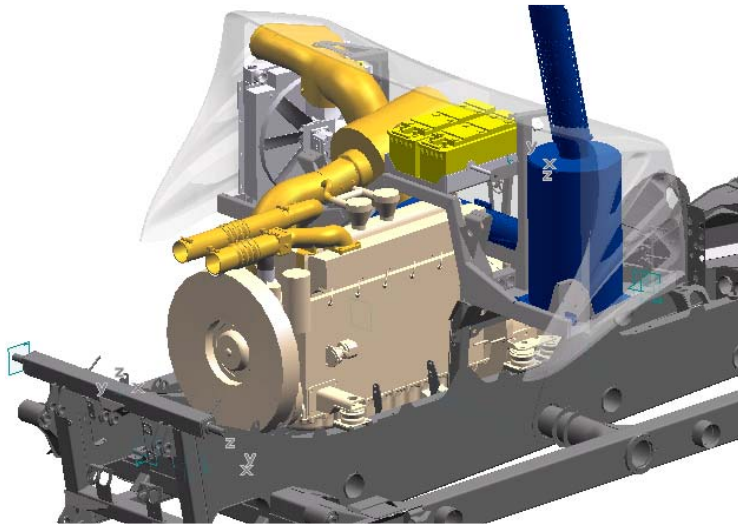
Consumption: from 20 l/h

An engine with plenty of power reserves...

- Lower emissions compliant with TIER 3.
- Outstandingly smooth and quiet operation.
- Huge torque of 1,900 Nm at a low speed of 1,300 rpm.



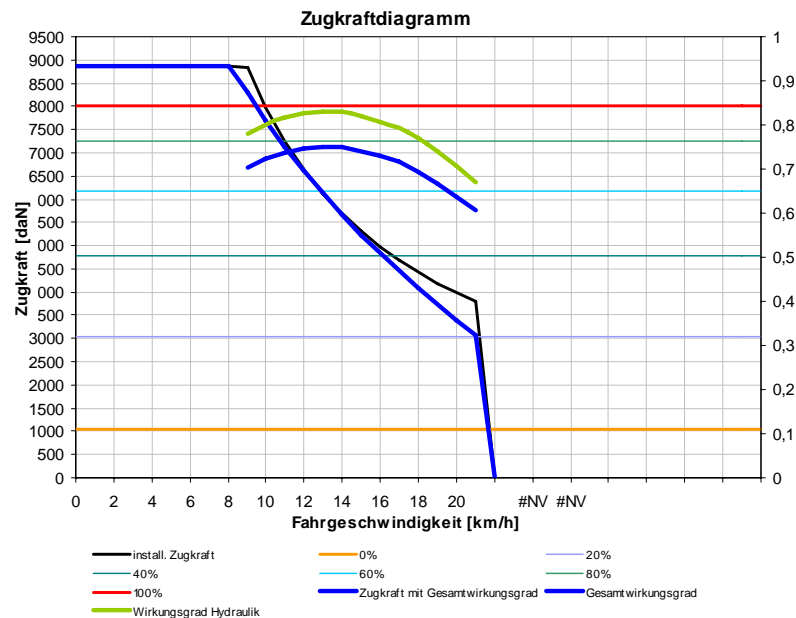
Drive line *Engine*



A powerful engine!

- 21,5 % more output for approx. 4 % more pushing power through large hydraulic pumps 140 cm³.
- 7 % more ground coverage through perfect suited components of the whole drive line.
- Optimised-performance 3 stage fan clutch for low fan noise and low consumption.

The speed of the fan clutch adapts to the temperature and is quieter and more constant.

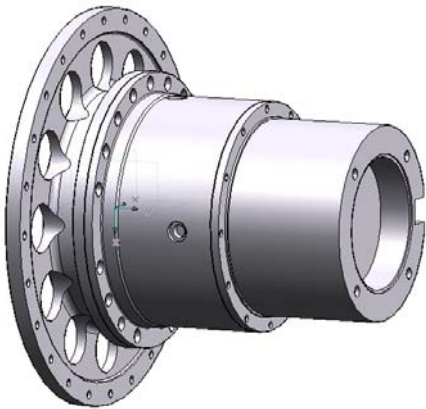


Drive line *Planetary gearbox*

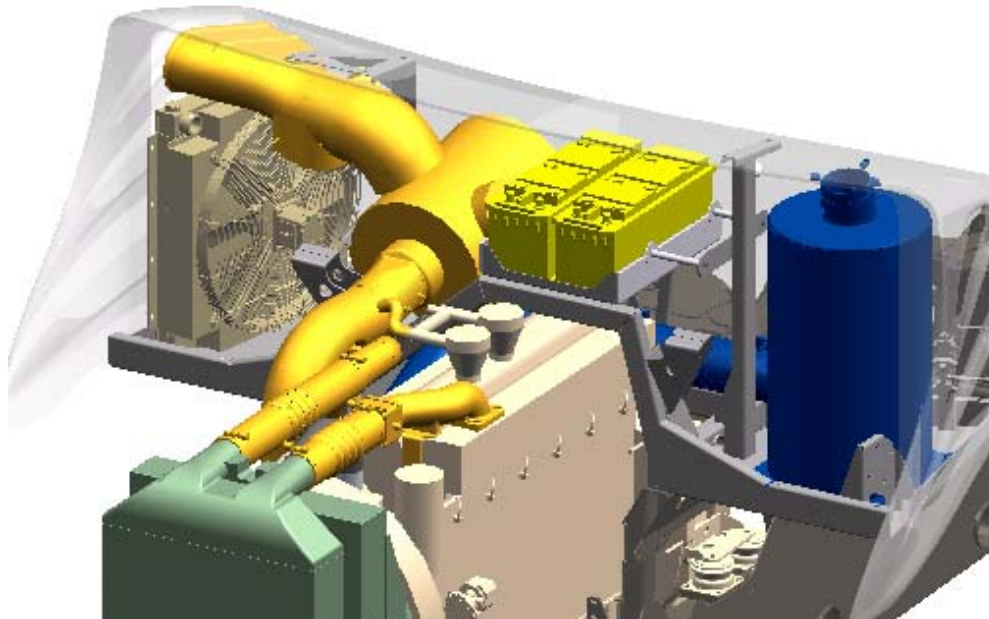


A perfect drive... ... leading the way !

- Optimal power transmission to the tracks via a new, lighter planetary gearbox.
- The planetary gearbox was optimised specifically for use in PistenBully machines.
- The forged sun wheel, the two-stage planetary gearbox and the polished gear teeth ensures sufficient power reserves.
- The gearbox is now sealed by means of a steel floating ring. The sealing system is designed to last the lifetime of the gearbox.
- The steel supporting ring of the Magnum drive sprocket ensures a long lifetime of the driving sprockets.

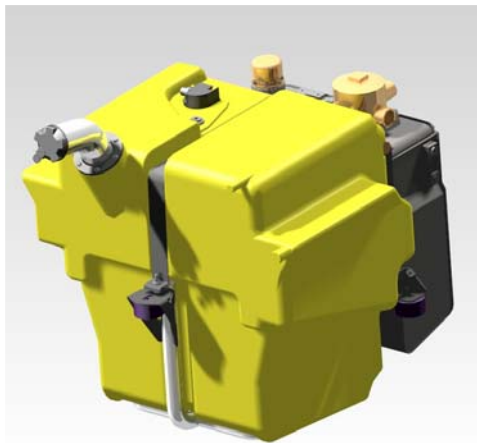


Drive line *Engine peripherals*



It's all well-engineered...

- A larger and modified hydraulic oil cooling system for short radiator operating times ensures less noise.
- Proportional fan control for rapid warm-up of the hydraulic system and a consistent temperature level.
- New, double-wall silencers for improved sound-proofing and thermal insulation of the exhaust system.
- The fuel tank is made of plastic and has a capacity of 220 l.
- 10 % higher tank volume for approx. 11 % more kilometrage
- Additional 80 litre for a further 25 % more kilometrage
- The neck of the fuel tank is positioned so that the vehicle can be refuelled without the driver having to climb onto the tracks.



Upper frame *Platform*

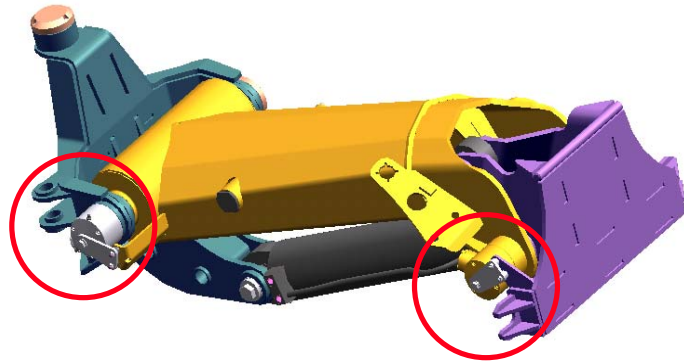


Well-designed,... able to transport virtually anything without difficulty.

- Large (4,3 m²) loading platform for transporting people, tools and equipment.
- Standard vehicles are now fitted with an hydraulic upper frame interlock. Winch vehicles retain the mechanical interlock.
- The PistenBully 600 is equipped as standard with the proven *Kässbohrer* transportation galery, wich can be used for carrying up to three trained personnel.
- The frame and platform structure are designed so that superstructures are possible without significant modifications.
- The platform has a load capacity of 1,500 kg (2,500 kg for winches).

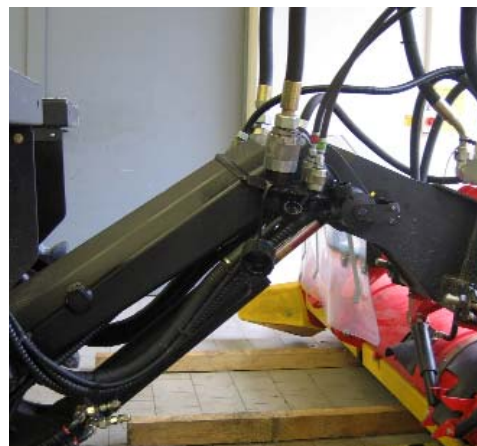


Equipment *Implement Carrier*

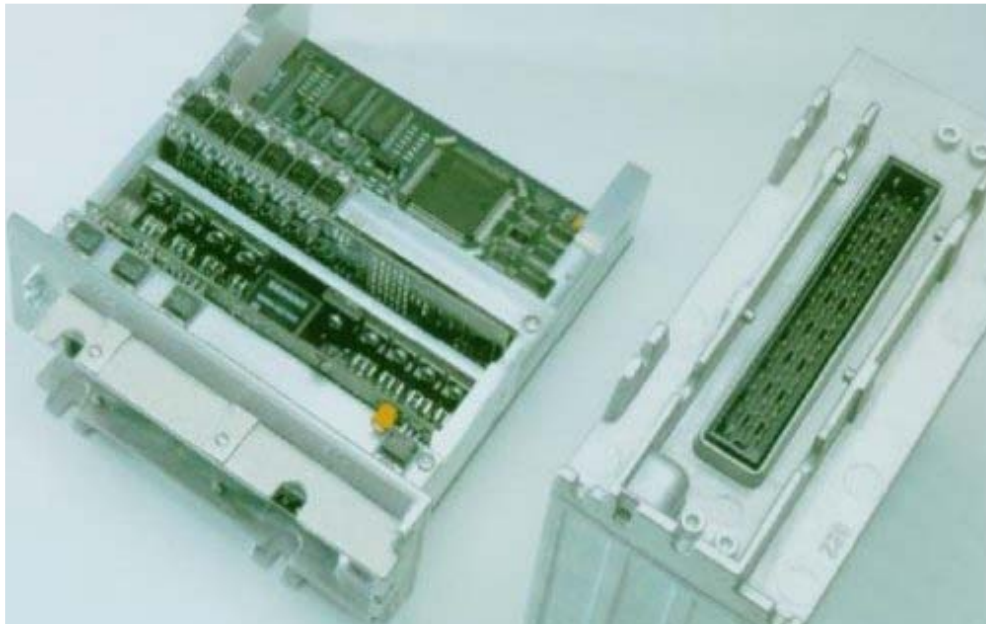


An entirely new range of movement...

- The new angle sensors for path measurement ensure precision positioning and optimised direction control of the MultiFlexTiller.
- PSX-controlled implement carrier.
- The implement carrier is weight-optimised and shorter, and thus exerts a lower load on the main frame. The MultiFlexTiller is closer to the frame.
- The roof profile of the implement carrier ensures minimal build-up of snow.
- The modular design of the hydraulics, e.g. hydraulic interlock, ensures straightforward retrofitting of the MultiFlexTiller.
- Larger hydraulic motors (63cm³) and pumps (90 cm³) provide greater torque to the MultiFlexTiller.
- Tiller shaft rotation up to 1,600 rpm.

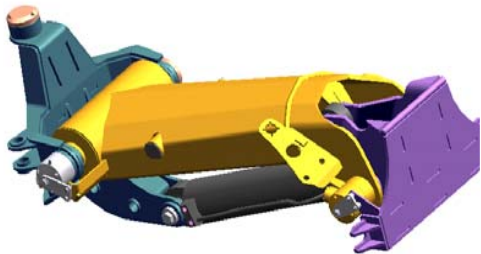


Electronics *PSX controller - working hydraulics*



The super-intelligent PistenBully...

- The PSX travel and tilling electronics are the logical development of the PSX controller of the PistenBully 300 *Polar* and matches to individual travel requirements.
- The PSX controller is the nerve centre for power and energy management.
- The hydraulic functions can also be diagnosed using the TouchScreen.
- Besides controlling the tiller depth via the new angle sensors of the implement carrier, the PSX controls the functions of the lifting and lowering ram, and the smooth raising and lowering of the MultiFlexTiller.
- New high-performance valves with integrated CAN technology ensure that the relevant functions respond quickly.



Electronics *Central electronics and electrics*



The PistenBully's data processing and control centre...

- New central electronics (behind the passenger seat) means that wiring is kept to a minimum, is better laid-out and is less susceptible to errors.
- In all vehicles of the PistenBully 600 series, the central electronics and electrics are the same.
- The use of the new electronics means that all relays are no longer required and the number of fuses is reduced to eight.
- The new jump-start bolt is integrated in the supporting frame and is easily accessible to simplify battery charging and jump-starting.



Electronics *Operating elements*



***An entirely new working atmosphere...
... simply perfect!***

In the cockpit and on the semi-circular steering wheel and joystick, all buttons and control lights are logical and coloured according to their function:

- Yellow: Lighting
 - Grey: Heating and ventilation system
 - Blue: Winch superstructure
 - Orange: Rear hydraulics and rear attachments
 - Red: control and warning lights
- on the joystick additional functions of the front attachments
- 2 blue LED lights illuminate the cockpit.
 - 2 additional LED lights illuminate the workspace with the semi-circular steering wheel and joystick.



Electronics *Operating elements*



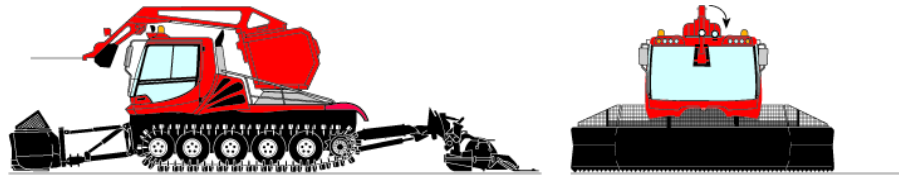
An entirely new working atmosphere...

The 10,4" (26,4 cm) TouchScreen incorporates all display, control and diagnosis functions of the vehicle and the attachments in one instrument:

- Dial instruments provide information on the speed, fuel level and engine temperature at a glance.
- The TouchScreen is a diagnosis tool and simplifies troubleshooting.
- It has a 4-gigabyte memory capacity for recording operating data, GPS navigation and telecommunications tasks.
- The menus are navigated using the I-Command integrated in the armrest or via the TouchScreen itself.



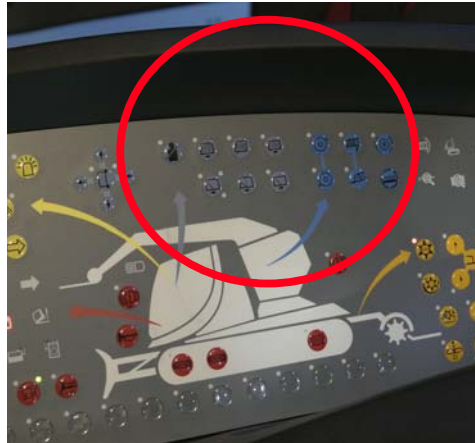
Overall concept *PistenBully 600 W*



Greater winch sensitivity...

The PSX driving and tilling controller ensures non-jerk travel with the winch deployed through all three winch settings:

- The winch speeds in the three winch settings are defined by means of parameters and can be adjusted by authorised trained personnel.
- Two buttons on the joystick are used to change between pulling force settings - without having to adjust hand position.
- The winch's pulling force potentiometer is integrated in the joystick as normal.
- The multifunctional display of the semi-circular steering wheel displays the pulling force of the winch at a glance.
- The colour imageages taken by the rear-view camera are shown in the TouchScreen (optional).



Overall concept *PistenBully 600 Park*

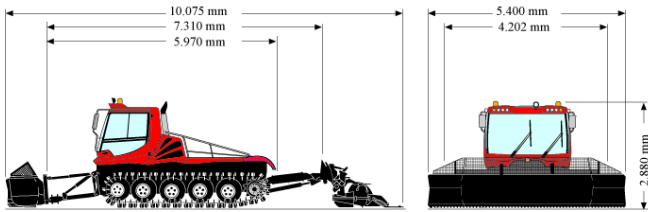
More advantages in FunPark applications... ... the talented mover for designers.

The new ParkBully - still unparalleled and yet now even better.

- The new rear implement carrier and the PSX controller give the MultiFlexTiller a range of movement hitherto unequalled.
- The PistenBully 600 *Park* has the same joystick as standard vehicles, hence no need for adjustment.
- Swivelling driver's seat for improved visibility to the rear (swivels 20° to the right).
- Angle adjustable accelerator pedal for an optimal foot position.
- The PSX automatically detects newly fitted attachments and immediately makes the required new parameter settings in the PistenBully, e.g. the pressure of the high-pressure connection is reduced for attachment of the PipeMagician.



Overall concept *Technical data*

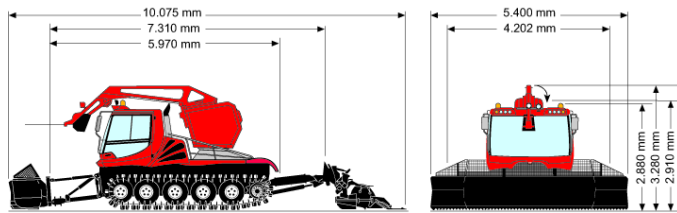


PistenBully 600

Dimensions:	Width	without tracks:	2,500 mm
		over combined tracks:	4,202 mm
		over steel tracks:	4,202 mm
		over finisher and MultiFlexTiller:	5,400 mm
		Height with cab tilted:	3,360 mm
	Overall height:	2,880 mm	
	Length with All-Way-Blade a. MultiFlexTiller:	10,075 mm	
	Ground clearance:	350 mm	
	Loading platform:	2,250 x 1,920 mm (4.3 m ²)	
Weight:	Tare weight with combined tracks:	7,100 kg	
	Tare weight with steel tracks:	7,300 kg	
	Gross weight limit incl. attachments:	11,000 kg	
	Payload on platform excl. attachments:	1,500 kg	

Engine:	Type	Mercedes-Benz OM 460 LA
	No. of cylinders	6
	Displacement:	12.8 l/ 12,800 cm ³
	Output acc. to ECE:	295 kW (400 hp)
	max. torque:	1,900 Nm at 1,300 rpm
	Fuel consumption:	from 20 l/h
	Fuel tank capacity:	220 l (80 l additional tank)
Brakes:	Using hydrostatic transmission, with no mechanical wear.	
	Two multi-disk parking/ holding brakes.	
Electrical:	Voltage	24 Volt
	Alternator	28 Volt/ 140 Ampere
	Batteries	2 x 12 V/ 135 Ah
	Cold-start rating	600 A
Performance data:	Speed, continuously variable:	0 - 23 km/h
	Spec. ground pressure with combined tracks:	0.051 kg/cm ²
	Spec. ground pressure with steel tracks:	0.053 kg/cm ²
	Prepared area with MultiFlexTiller:	96,000 m ² /h

Overall concept *Technical data*



PistenBully 600 W

Dimensions:	Width	without tracks:	2,500 mm
		over combined tracks:	4,202 mm
		over steel tracks:	4,202 mm
		over finisher a. MultiFlexTiller:	5,400 mm
		Height above winch, ready for operation:	3,280 mm
		Height with cab tilted:	3,360 mm
		Overall height:	2,880 mm
		Length with All-Way-Blade a. MultiFlexTiller:	10,075 mm
		Ground clearance:	350 mm
	Loading platform:	2,250 x 1,920 mm (4.3 m ²)	
Weights:	Tare weight with combined tracks:	9,000 kg	
	Tare weight with steel tracks:	9,200 kg	
	Gross weight limit incl. attachments:	11,000 kg	
	Payload loading platform without winch:	2,500 kg	
Engine:	Type	Mercedes-Benz OM 460 LA	
	No. of cylinders	6	
	Displacement:	12.8 l/ 12,800 cm ³	
	Output acc. to ECE:	295 kW (400 hp)	
	max. torque:	1,900 Nm at 1,300 rpm	
	Fuel consumption:	from 20 l/h	
	Fuel tank capacity:	220 l (80 l additional tank)	

Brakes:	Using hydrostatic transmission, with no mechanical wear.	
	Two multi-disk parking/ holding brakes.	
Electrical:	Voltage	24 Volt
	Alternator	28 Volt/ 140 Ampere
	Batteries	2 x 12 V/ 135 Ah
	Cold-start rating	600 A
Winch superstructure:	Cable pull:	40 kN /4,080 kp), 3-level
	Cable diameter:	11 mm
	Cable length:	1,050 m
	Usable cable length:	1,000 m
	Cable breaking strain:	129.8 kN (13,231 kp)
	Drive rating at 40 kN pull:	110 kW (150 hp)
	Weight (Winch, cable a. superstructure):	1,700 kg
Performance data:	Speed with winch in operation:	0 - 17 km/h 3-level
	Speed with winch assembled	0 - 20 km/h
	Spec. ground pressure with combined tracks:	0.063 kg/cm ²
	Spec. ground pressure with steel tracks:	0.064 kg/cm ²
	Prepared area with MultiFlexTiller:	96,000 m ² /h

PistenBully 600 *Easy to service*



A genius, that can help itself...

- Easy OnBoard-diagnosis via the TouchScreen.
- All switches, angle and length measuring systems are controlled by the central electronics and errors are reported via the TouchScreen.
- Clear signal tracing, parallel wiring and clear wiring diagrams make troubleshooting easy.
- Easy retrofitting through modular design and pre-wiring.



The TOP 5 arguments for the PistenBully 600



You have to get this PistenBully!

1. The PistenBully 600 is an intelligent vehicle and it is ready for up-dates.
2. The powerful 400 hp diesel engine supplies all components with enough power and nevertheless is very modest.
3. The drive and operating comfort is extraordinary and is without equal.
4. For high reliability and less downtimes thanks to the new OnBoard-diagnosis.
5. Great visibility thanks to the new lighting concept and large glazing.