

# Cranes



## Forestry cranes

Pfanzelt forestry cranes are designed for professional service. Besides loading cranes, the Pfanzelt crane range also includes cranes for forwarding short and long time for attachment to tractors and specialised forestry tractor units. Usually, they have a larger lifting force and a higher pivoting torque to enable powerful pivoting of the crane – even uphill.

## Off-road crane operations

The use of cranes outside paved roads places great demands on technology, material and safety. The Pfanzelt product range includes cranes for motorised vehicles and tractors as well as for mounting on trailers.



#### **Add-on cranes for tractors**

Pfanzelt offers cranes for three-point and plug-in attachment to tractors. The advantages of the two superstructure systems lie in the customer's operating conditions. If the tractor is to be used flexibly and in combination with trailers, it can be mounted using a three-point attachment system with integrated crane support. If, on the other hand, the crane is required for the forwarding of long timber, quick-fit attachment is the optimum solution. Plug-in attachment combinations of cable winch and forestry crane leave nothing to be desired when operated in conjunction with a tractor with reverse drive system. A modular plug-in attachment system allows the machine to be quickly converted.

#### **Forestry cranes for wood chippers/ mounting on trailers**

The powerful Pfanzelt forestry cranes with powerful slewing gear are also ideal for mounting on trailer chippers. Their modular design means that the crane can be ideally adapted to the vehicle – Pfanzelt's cranes are therefore available in different column heights.



## Cranes | Examples of use

### Convincing technical details:

- Modern and powerful professional cranes with reach up to 10 m and 12 m/t lifting force
- Crane tested according to load class B4 for durability
- Slewing gear housing made of cast metal provides even more strength.
- Concealed hoses up to the crane tip for protection against damage
- Crane pines with brass bushes for daily duty
- Rapid traverse valve for rapid telescopic extension with single telescope
- Various Gripper for each application: Log Gripper, 4-finger Gripper, earth Gripper

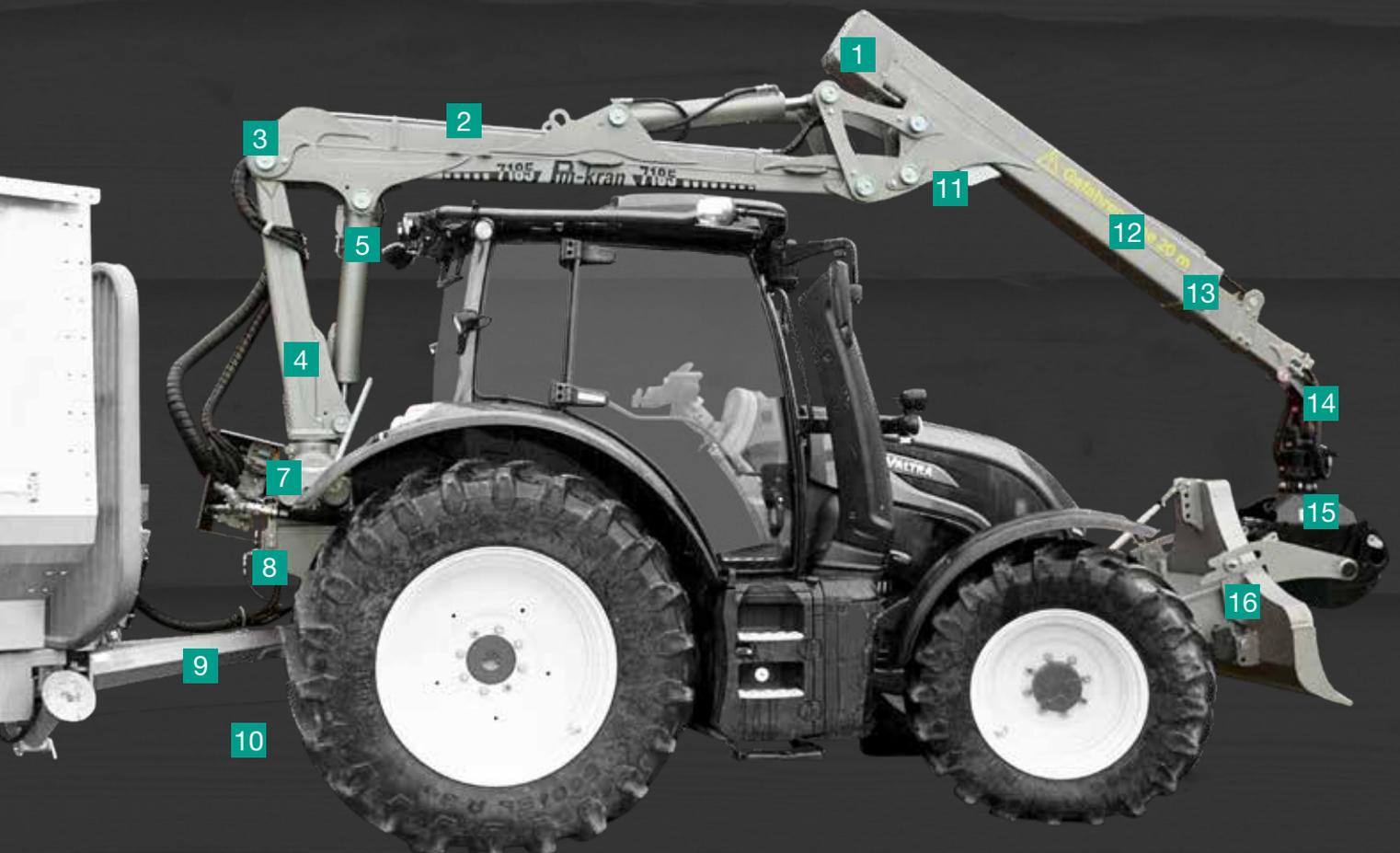
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 Pfanzelt cranes live in action.  
[youtube.com/pfanzeltTV](https://www.youtube.com/pfanzeltTV)

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## Technical details at a glance:



1

**Power link system** – toggle lever control – guarantees manoeuvrable crane operation, greater reach and more lifting power.

2

A system of **protected hoses** on the complete crane guarantees minimum downtime.

3

The mounting of all fitting bolts in lubricatable **bronze bushes** maximises service life and ensures stability under pressure.

4

The crane is designed for dynamic continuous load according to **Crane load class B4**.

5

Protected from damage during loading, the **cylinder** of the main arm is **twisted**.

6

Most Pfanzelt cranes for superstructure are available with upright or overhead main boom cylinder.

7

Very sturdy and powerful **four-cylinder slewing gear** made of cast metal with a high swivel torque.

8

Different possibilities of mounting the crane on the carrier vehicle (quick-change console possible).

9

Depending on the console type, it is also possible to attach a three-point or four-point cable winch or a trailer.

10

If required, a crane support in the form of an A- or H-pillar support can be combined.

11

Optionally available **crane floodlights** turn night to day and reliably illuminate the gripper zone.

12

The **inside telescopic cylinder and the hose guide inside** are protected against damage

13

The electrically actuated **quick-action valve**, supplied as standard, ensures rapid telescopic extension of simple telescopic booms.

14

Equipped as standard with a powerful **flange rotor** and on request also with a **double pendulum brake**.

15

**Various grippers** for every application: Double clamshell bucket, 4-finger grab, earth grab

16

Safe crane storage in the Pfanzelt front pallet blade with crane storage when driving on the road.

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## Technical details that will convince you

### Crane attachment

Pfanzelt loading cranes for mounting on forwarding trailers and other vehicles are available in two different versions. The distinction lies in the position of the main boom cylinder.

The overhead arrangement of the cylinder protects it from damage when handling wood. To protect the upright main boom cylinder from damage as well, it is mounted such that the piston rod is protected by the forwarding trailer's fender grille.



### Crane loading class B4

Pfanzelt cranes are made of especially tough special steel. The crane is designed for continuous dynamic load according to the crane load class B4.



### Bearings

The mounting of all positive locking bolts on the crane is executed in long-life, lubricatable hard bronze bushes. The axial play of the bolt bearings can be infinitely adjusted and readjusted.



### Slewing gear

Pfanzelt's cranes have a very robust and powerful four-cylinder slewing gear. The resulting high pivoting torque means that loading work can also be performed when working uphill.

### Overview of the pivoting torques of Pfanzelt's forestry cranes

| Crane series  | Net pivoting torque |
|---------------|---------------------|
| 41*, 42*, 43* | 15.2 kNm            |
| 51*, 52*      | 21.5 kNm            |
| 61*, 62*      | 25.0 kNm            |
| 71*           | 27.0 kNm            |
| 91*           | 32.0 kNm            |
| 93*           | 36.0 kNm            |



The large distance between the bearings and the oil immersion bath ensure reliable operation. Shear forces that are generated when working with heavy trunks are safely absorbed.



### Safety

At Pfanzelt safe handling of forestry machines has the topmost priority. All cranes mounted in the Pfanzelt factory come with a crane test log and initial acceptance by an independent crane expert in accordance with the regulations of the BG.



### Power link system

The toggle system of Pfanzelt forestry cranes – also known as the power link system – between the main boom and folding boom ensures optimum crane geometry for loading work. Ergonomic loading directly onto the front grille is also thus made possible. It also ensures constant force, greater reach and a higher working speed.



### Rapid traverse valve for single telescope

Pfanzelt's forestry cranes are equipped as standard with a rapid traverse valve. This enables the rapid telescopic extension even in the case of telescopic booms with only one extension.

The electrically control rapid traverse valve directs the hydraulic oil that flows from the cylinder straight back into the latter and thus

achieves an approx. 1.5 fold extension speed.



### Hose routing

The hydraulic hoses are laid from the control block to the crane tip so as they are protected, ensuring low downtimes and the highest degree of safety when working with the forestry crane in sensitive applications. Pfanzelt therefore attaches the highest priority to ensuring that the hydraulic hoses are protected over the entire crane by being concealed (internal routing). At points of high physical loading, the hoses are laid in a hose shaft. Additional rotary

cutouts increase the service life of the hydraulic hoses.

To increase operator safety, the hoses are also routed through a hose shaft in the vicinity of the control stand.

The telescopic cylinder is also internally mounted, protecting it from damage during crane work.

Protection up to the crane tip is provid-

ed by the optionally available pendulum with inside hydraulic hoses. This ensures ergonomic operation of the crane and long service life.



### Stabilisers

Optimum stability when working with the crane is ensured by the supporting A-pillar. This ensures a safe working position in narrow tree stocks as well as on slopes. It is also possible to drive close to the polter.

In addition to the A-pillar support, Pfanzelt offer an H-pillar support. The wider support surface ensures even greater stability.



### Operating station

The operator's platform on the drawbar, fitted as standard, provides a clearly arranged workplace outside the danger zone with an optimum view of the crane and the safety-relevant environment. The back rest and the hand guard over the control toggles optimise safety and ensure that the operator adopts an ergonomic working stance.



### Independent oil supply (option)

For carrier vehicles with low hydraulic power and when various tractors are pooled, Pfanzelt cranes can be equipped with an independent hydraulic system – safe and fuel-saving oil supply is thus assured. Without restricting the field of vision, the oil supply tank is neatly integrated in the A-column support.

A high-performance axial piston pump is used for a high crane speed.



### Hydraulic oil cooler (option)

The forwarding trailer can optionally be equipped with a hydraulic oil cooler. This is especially useful for large cranes with a hydraulic drive system.



### Trunk scraper (option)

A trunk scraper facilitates loading work with the forestry crane, especially with long sections or very long treetop material. The scraper is mounted on the main boom of the crane.

### Crane floodlights (option)

On request, the crane can also be equipped with crane floodlights. You can choose between two spotlights (mounted on the side of the crane column) or one spotlight (mounted on the inside of the telescopic arm). The spotlight type is designed as a robust LED spotlight.



### Operating hours counter (option)

The operating hours counter records the hours in which the loading crane is service. This is particularly useful if the forwarding trailer is used or lent in a community.



## Crane control

The user achieves the highest performance when ergonomics and operation are in harmony. This is determined by the operating position and the crane controller.

All Pfanzelt forestry cranes are fitted as standard with a mechanical control block, 2 control toggles and an electrical switch. This means that the individual boom movements can be easily and rapidly coordinated, without hav-

ing to reach for different control levers or turning.

In addition to a mechanical crane control, the crane can also be operated via an EHC controller with a cord or wireless control panel.

The crane can also be controlled by two individual joysticks which are mounted on a swivel seat in the tractor or on a control panel. Two Profi1 joysticks by Danfoss,

or mini joysticks can be installed. They enable very precise and ergonomic control.





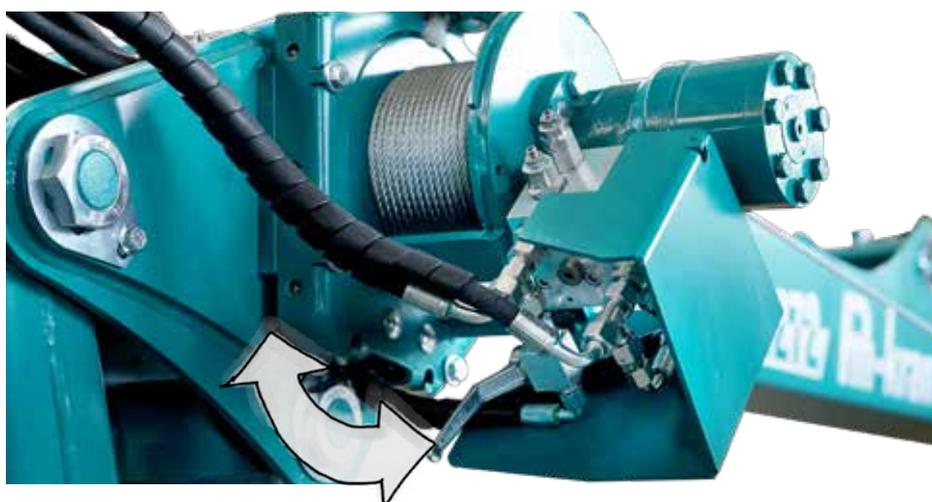
Technology explained in detail.  
[www.pfanzelt.com](http://www.pfanzelt.com)

## Crane cable winch 2.0 exTEND (option)

The Pfanzelt crane cable winch exTEND offers more comfort and safety in use.

- Tractive force 1.5 t, cable capacity 50 m
- Professional forestry radio system
- Simple switching option between hydraulic freewheel and forward and return
- Mechanical trailing drum brake

Retrofitting is possible.

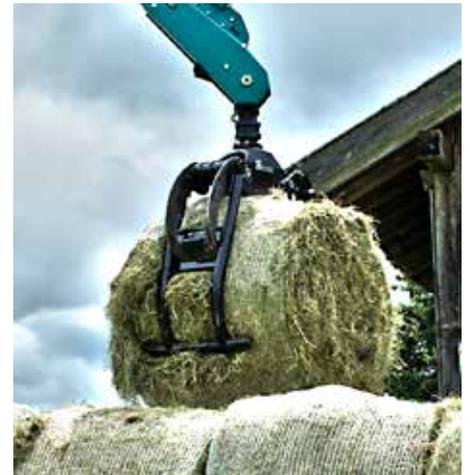


## Grippers

Clam shell Gripper can be mounted in the regular Gripper for loading dry bulk. The range of accessories also includes special gripper attachments for loading round bales (only for Pm 230).

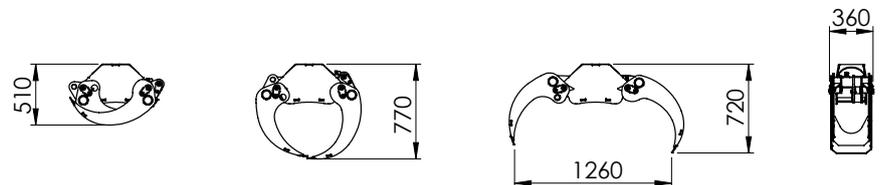
The 4-finger gripper ensures easy and ergonomic loading of branches and cut wood.

Pfanzelt grippers adapted to various crane sizes are available in various sizes.

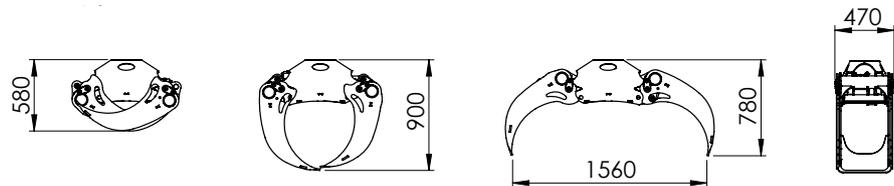


**Gripper Pm 230**

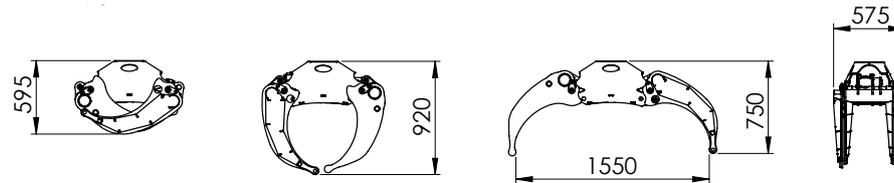
**Gripper Pm 230 4-finger**



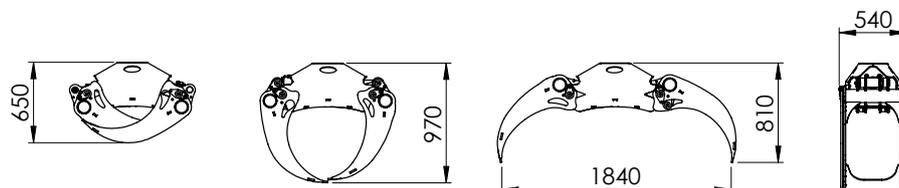
**Gripper Pm 270**



**Gripper Pm 270 4-finger**



**Gripper Pm 360**





## Double telescopic cranes with the 4 and 5 mt series

- Protected telescopic cylinder
- Internal hose installation

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