



Felix special forestry tractor

The Pfanzelt special forestry tractor Felix can be assembled according to a modular system and adapted to the respective applications. The front end is the same for all vehicles. The engine used leaves nothing to be desired in terms of durability, torque, and smoothness of running, thanks to the latest common rail technology. The new hydra2POWER drive is downstream. The resulting unit optimally combines the two main applications - road travel and timber forwarding - and can therefore be flexibly used.

For good reasons, the Felix special forestry tractor is subdivided differently. The cab is located very far forward, the winch and crane in the middle of the vehicle, and the clamping bench or stanchion basket is mounted directly on the rear axle.

Felix 4-wheel special forestry tractor

The Pfanzelt Felix 208.5 4-WD forestry tractor is the world champion in maneuverability thanks to its clever combination of articulated and Ackerman steering.

► Page 132

Felix 6-wheel special forestry tractor

Pfanzelt's special forestry tractor Felix 214.5 6-WD can be ideally adapted to all operating conditions as a combination machine.

► Page 138



3 vehicle models

Depending on the area of application, three models of the Felix special forestry tractor Felix are available as 4- and 6-wheel machines.

- **Model K** | With a short wheelbase, this Felix model is agile and is ideal as a skidder. The Felix in this configuration also impresses as a forwarder for tight stocks.
- **Model F (4WD only)** | If you need a longer loading area or transport a lot of short wood, the Felix model with long wheelbase fits the concept.
- **Model V** | If the conditions of use change frequently, you need a combination machine. In this configuration, the Felix can hydraulically extend the wheelbase by 1,200 mm. This creates a large loading area or a very compact machine - depending on the application.



hydra2POWER - The drive concept

The new generation of the Felix special forestry tractor has a completely new, modern, and efficient drive train.

The hydra2POWER concept combines the following aspects:

- Powerful drive thanks to largely dimensioned components
- Best traction due to permanent all-wheel drive and hydraulic longitudinal differential
- Low fuel consumption thanks to state-of-the-art wide-angle hydraulic motors
- High safety thanks to active standstill control
- Low maintenance costs

The continuously variable hydra2POWER drive - a Pfanzelt in-house development - for the new series of Felix special forestry tractors consists of two powerful and largely dimensioned hydraulic pumps and motors. Therefore, every axle has its own unit. Mechanical components, which often require more maintenance, are not installed in this system. The large design of the hydraulic components allows low engine speeds even when driving on roads. The transport speed of 40 km/h is thus reached at 1,600 rpm.

The permanent four-wheel drive and the hydraulic longitudinal differential offer optimum traction and great flexibility. Therefore, the driver can always rely on full traction. When driving with chains or belts on only one axle, the front part of the vehicle does not twist towards the rear. The result is less wear of the tyres and vehicle and lower fuel consumption.

The two 45° swivel-angle hydraulic motors enable high efficiency and consequently low operating costs.

The electronic control of the traction drive enables the programming of application-specific driving characteristics. Depending on whether the vehicle is off-road or on the road, acceleration, coasting behaviour during deceleration, and active standstill control are adapted. This allows the driver to manoeuvre precisely even on steep terrain simply by using the accelerator pedal.



Pfanzelt XXL cabin

The pneumatically sprung cabin developed by Pfanzelt enables a quiet and low-vibration work.

With more than 7 m² of glass, the view of the working environment has been further enhanced. The driver has an even better view of his working area, which facilitates work and increases work safety. The driver finds a relaxed and ergonomic seat and working position on the operator's platform which can now be rotated electrically by 340°.

The intelligent machine control system which is operated by a monitor on the seat also allows presettings to be saved for different drivers.

The Pfanzelt XXL cabin was designed especially for the demands of our customers. Few vibrations when working in standing timber and still maximum driving comfort when driving on the road.

When working in the forest, the steering column is quickly and easily folded towards the side.

All operating and monitoring functions are mounted on the seat and are therefore always in the operator's field of vision.

An additional operating terminal for road travel is located next to the steering wheel. All important parameters are displayed there in the driver's best possible view.

Unique in the forestry industry and essential for use in municipal applications, there is an option of installing a passenger seat in the cab.





Felix 4-WD special forestry tractor

The rear carriage of the Felix in the 4-wheel version is designed for working with long timber. If one goes back in history to the beginnings of wood recovery with machines, the technology at that time was limited to the use of winches. Only years later cranes and clamping benches came into use, although the machine concept had not changed. Consequently, all additional implements were mounted at the rear of the machine. To counteract the resulting problems with weight distribution, the machines were additionally ballasted. This resulted in disproportionately heavy machines - a problematic aspect in terms of soil conservation.

Pfanzelt have consistently worked on their concept and adapted it to today's requirements.

An additional highlight is the steering system of the Felix 4-WD


Convincing technical details:

- Optimum weight distribution for demanding terrain
- Combined steering system for maximum crop protection and impressive manoeuvrability
- Powerful but energy-efficient transmission technology hydra2POWER
- Road travels at 40 km/h enable easy changes of the places of operation

Technical details ► Page 142





 Felix 4WD forestry tractor in operation
[youtube.com/pfanzeltTV](https://www.youtube.com/pfanzeltTV)

Felix 4-WD special forestry tractor

Technical details that will convince you

The front end

Our new customers are regularly surprised when the Felix special forestry tractor is inspected for the first time. The reason for this is probably the rather unusual layout of the vehicle. The cabin is located very far towards the front end. The cabin is located very far towards the front end.

If one briefly thinks about this layout, one quickly realises that the concept behind it is different, but certainly justified. On the one hand, the short nose provides an optimum overview, while on the other hand the ideal work angle - in relation to the distance between the front axle and the front polder shield - leaves no marks when driving into the aisle.



The vehicle layout

In order to install the cable winch, crane, and clamping bench with a favourable centre of gravity, we designed a rear carriage with sufficiently large body space. This design prevents the crane or clamping bench from rearing up when forwarding heavy timber. At the same time, due to the weight distribution, working in the most difficult terrain is possible in a way which protects the soil and saves fuel.

Pfanzelt quick change system

Pfanzelt's quick change system allows a time-optimised conversion of the types F and V from stake basket to clamping bench without tools. When shifting the machine, the superstructures can be placed on the loading area at the same time.



The steering system

The Pfanztel Felix 208.5 4-WD special forestry tractor is world champion in manoeuvrability. The clever combination of articulated and Ackerman steering results in unimagined maneuvering possibilities. An important design feature of the Felix 4-WD is its steering system. When driving on the road, only the articulated steering is operated via the steering wheel. During work, the steering system is converted to joystick operation. This means that the operator has independent access to both articulated and Ackermann steering. A steering angle of 70° is thus possible.



Every day, precarious situations arise. For example, if the vehicle has slid into a ditch, Felix can be maneuvered easily and in parallel out of the ditch thanks to the steering system. Even wet surfaces can be protected due to the weight distribution in crab steering mode.



Working on a steep slope

In order to ensure optimal and safest possible work even on steep slopes, the roller block is hydraulically height-adjustable. Guide tubes ensure the necessary cable protection from the power unit to the cable infeed roller. Damaging the cable with the gripper is therefore impossible.



Stanchion basket tilt

In order to shift the centre of gravity upwards when driving sideways on slopes, the stanchion basket can optionally be tilted sideways.



The road approval

Considering the work sequence on a forestry machine, it is essential to start already at the depot and not only when entering the woods. It is also decisive for economic efficiency how the machine is transported to the place of use, or how it is moved from one place of use to the next. Is a truck with a low loader necessary for transporting the forestry machine, or does the vehicle have a transmission system which also allows road travel?

Felix offers the flexibility of a vehicle concept which does not require any aids to reach or change the place of operation.





The service possibilities

The layout of the vehicle's components means that the engine, transmission, and the main hydraulic components are installed below the cab. In order to reach all areas quickly and without tools for service purposes, various maintenance openings have been installed on the Felix special forestry tractor.

In addition to the ergonomic possibility of hydraulically opening and closing the floor plates of the vehicle in a

one-man system, the cabin can also be tilted. Additional maintenance hatches at the entrances allow access from the sides.

