Product range 2016

PFANZELT MASCHINENBAU


Innovations-Preis 2014
Pfanzelt Maschinenbau GmbH
„Innovatives Unternehmen“

The success range

Table of contents

Dear customers actual and potential,

I am pleased that you have received a copy of our product range 2016. This year, too, we again present new and familiar machines *made in the Allgäu*.

With around 140 employees and trainees, we produce machines for forestry, environmental management and local authority applications. Our cable winches are now frequently found on building sites or at the scenes of accidents and emergencies. For more than 24 years we have taken the needs and requirements of our customers as our starting point. This approach will continue to guide us in the future.

Paul Pfanzelt,
Managing Director

Made in Germany

Tested quality:


EASY-FORM

The company/ Company philosophy

The company Pfanzelt Maschinenbau was founded in 1991 by Paul Pfanzelt and initially focused on the production and mounting of simple geared cable winches for 3-point, quick-fit and fixed attachment to agricultural tractors. With constantly increasing production volumes of cable winches, in 1996 another product was added to the range – the forwarding trailers. Over the years, the range has been further extended to become the widest of any European forestry machine manufacturer, and contains much more than add-on tools for agricultural tractors and conversions of these. In 2001, Pfanzelt began to produce tractors of its own and now manufactures three different vehicle models for agriculture and forestry. In addition to the Felix specialised forestry tractor, since 2005 the range has also included the Pm Trac multipurpose tractor.

Not content to rest on its laurels, Pfanzelt has continued to unveil new innovations and extend its product range since 2005 – most recently in 2010 with the S-line series of geared cable winches and forwarding trailers. A new series designed to meet the requirements of semiprofessionals and forest owners.

Now we have become a forge for new ideas and attach great importance to close contact with our customers. After all, many of our innovations are the direct result of requirements, suggestions and wishes from our customers that we are happy to address and turn into concrete products. With our machines we constantly pursue the goal of providing solutions that make everyday work as simple and cost effective as possible. The company is located in the thickly wooded foothills of the Alps, giving us a perfect proving ground for our products literally directly outside the front door. We only ship products that are tried and tested under real operating conditions.

With a highly qualified workforce and its trusted partner companies, Pfanzelt Maschinenbau manufactures its products in Germany.

Made in Germany

In contrast to today's standard production philosophy, based on the purchase of many bought-in parts, Pfanzelt prefers to maximise the percentage of parts manufactured in-house. Besides guaranteeing the reliability and quality of all components, this also ensures short delivery times. On the other, this also means that the production of machines often involves more time and effort than with some of our competitors. However, to avoid an excessively high purchase price for the products, we obviously take the going market rates as our starting point for our pricing.

Accordingly, a part produced in-house may not cost more than a bought-in part. Besides in-house production, the extensive in-house know-how enables flexible reaction to changes and to product developments.


FENDT

The company history

1991 Foundation of the company Pfanzelt Maschinenbau GmbH Production and assembly of the Pm geared cable winches for 3-point, quick-fit and fixed attachment to tractors.

1995 Redevelopment of administrative building and extension of production facilities

1995 Development and production start of the Bavarian 3-point cable winch.

1996 Production start of the Pfanzelt forwarding trailer.

1997 Extension of the production facilities.

1998 Presentation of a study of the “Felix” forwarder at the Interforst trade fair in Munich.

2001 Launch and production start of “Felix” forwarder.

2001 Product group expansion in Pfanzelt loading crane range.

2003 Extension of the production facilities.
Presentation and production start of the Pm recovery winch.

2004 Launch and production start of the “Felix” 145 K and 145 V forwarders.

2005 Launch and production start of Pm Trac multipurpose tractor.

2006 Launch and production start of the “Felix” 180 6-WD forwarder.
Presentation of the Pm Profi 1590 4-WD forestry trailer.

2007 Product group expansion of Pfanzelt loading and forwarding crane range.

2007 Presentation of new forwarding trailers with load-bearing capacity up to 15 t.

2008 Expansion of the cable winch range with the new 91 S-Line series in the 5 - 7 t range.

2009 Expansion of the forwarding trailer range with the S-Line forwarding trailers.

2011 Launch and product start of the new “Felix” specialist forestry tractor series at the Austrofoma trade fair.

2012 Awarded the forestry prize by the German Federal Ministry for Food, Agriculture and Consumer Protection (BMELV) for the Pfanzelt hydraulic overrun brake and PPS controller.

2013 Extension of the cable winch and forwarding trailer range with the Profi Eco series.

2013 Presentation of the Pm Trac III multipurpose tractor at the Agritechnica trade fair in Hannover.

2014 Awarded the special “Innovative Company” prize of the KWF (Foundation for Forestry Work and Technology) Innovation medal at Interforst

2015 Start of production of the new logLINE professional forwarding trailer series

2015 Nominated for the “Grand Prix for medium-sized privately owned companies”

Pfanzelt as employer

Since Pfanzelt Maschinenbau GmbH, now certainly the largest German manufacturer of forestry machinery, was established in 1991, all products have been exclusively manufactured and assembled at our production facility in Rettenbach in the Allgäu. With a total of around 140 employees, Pfanzelt is making its contribution to securing many other jobs in this rural region into the long-term. There is a special focus on fair working conditions, such as flexible working hours, working hours accounts and taking into account personal needs.

Currently we have 16 trainees undergoing apprenticeships in metal working, mechatronics and office communications. Pfanzelt Maschinenbau's exceptional commitment to vocational training is also underlined by the several student interns working in our factory. Pfanzelt regards the training of skilled technical staff as the most important responsibility in order to secure our requirements for skilled workers in the future and as a social responsibility with respect to young people of the region.

Our philosophy in training young people: *"We offer motivated young people a high quality training and a secure job with an interesting range of tasks, excellent working conditions and opportunities for personal development."*

Here is a selection of skilled jobs in which training is offered every year:

- Fine mechanic (machine construction)
- Vehicle mechatronics technician
- Machine and plant operator

You can find out more about your career at Pfanzelt in the internet at karriere.pfanzelt-maschinenbau.de


NEU mit Eilgangventil
PFANZELT

Events 2016

In 2015, many thousands of customers and interested visors have found out about our products at over 25 trade fairs and events in five European countries as well as our practical demonstrations.
We look forward to informing you about our machine, technical innovations and about the Pfanzelt company face to face in 2016. We look forward to seeing you there.

Event	Date	Country - venue
Interaspa	13.01. - 14.01.2016	D - Hannover
Bois Energie*	15.03. - 17.03.2016	FR - Nancy
Forst live Süd	08.04. - 10.04.2016	D - Offenburg
KWF Expo	09.06. - 12.06.2016	D - Roding
Anniversary celebration	23.07. - 24.07.2016	D - Rettenbach
Internationale Holzmesse	01.09. - 04.09.2016	A - Klagenfurt
Rottalschau	01.09. - 06.09.2016	D - Karpfham
ZLF	17.09. - 25.09.2016	D - Munich
Agro Alpin	10.11. - 12.11.2016	A - Innsbruck
Agraria	30.11. - 03.12.2016	A - Wels

* At this event the products will be presented by a Pfanzelt partner.
Further dates were not fixed at the time of going to print. You can find an up-to-date list of all dates in the internet under kalender.pfanzelt-maschinenbau.de


OAL UQ 329
40
OAL SG 312


40

Although the design of the stacking shield and drive components is almost identical with the Profi cable winch, by limiting the range of versions and by purchases the same components as for the ***S-line*, Pfanzelt can offer an attractive alternative to cable winches** with chain drive. In the test version with cable infeed brake and cable distributor as well as wireless remote control by toggle switch, the 9155 *S-line* is priced at just under EUR 8,000 in the price list."

"profi" magazine 7/2010

Overview Pfanzelt geared cable winches.

engine power tractor

S-line geared cable winches
S150 - 5,0 t Tractive force
S160 - 6,0 t Tractive force
S172 - 7,2 t Tractive force

Profi geared cable winches
P170 - 7,0 t Tractive force
P172 - 7,2 t Tractive force
P185 - 8,5 t Tractive force
P186 - 8,6 t Tractive force
P1102 - 10,2 t Tractive force
P260 - 2 x 6,0 t Tractive force
P272 - 2 x 7,2 t Tractive force
P285 - 2 x 8,5 t Tractive force

logLINE geared cable winches
L186 - 8,6 t Tractive force
L1102 - 10,2 t Tractive force
L1110EHS - 10,2 t Tractive force
L1120 - 12,0 t Tractive force
L286 - 2 x 8,6 t Tractive force
L2102 - 2 x 10,2 t Tractive force

Tractive force

The Pfanzelt product range includes a very wide selection of cable winches. The product range extends from standard cable winches to custom-made system solutions.

S-line geared cable winches

Both the tree farmer and semiprofessional contractor need a professional geared cable winch. The S-line model fulfils this requirement at the price level of a chain cable winch. ► Page 16

Professional geared cable winches

Mature tree harvesting on flat ground or thinning on steep slopes – the demands on a professional geared cable winch vary according to the area of application and the available equipment. Pfanzelt professional geared cable winches are based on an adaptable modular system and can therefore be easily adapted to the specific deployment conditions. The pre-assembled Profi Eco special offer models are available at an especially attractive price. ► Page 22

logLINE geared cable winches

Single- and double drum winches for profesionalls with a tractive force between 8 and 12 t and a cable capacity up to 200 m. The stabilizers offer more steadiness in rough areas. ► Page 28

Quick-fit and fixed cable winches

Pfanzelt quick-fit and fixed cable winches are the perfect implements for commercial timber forwarding. One reason is that the cable winch is mounted on a special frame that protects the tractor against excessive loading when winching. ► Page 30

Made in Germany

Tested quality:


AL PM240

S-line geared cable winches

Until a few years ago, only professional operations could afford geared cable winches because of the small production runs and heavy duty design. All this has changed since the introduction of the new Pfanzelt S-line cable winch series. With the S-line geared cable winch, Pfanzelt now offers geared cable winches especially designed for semiprofessional contractors and tree farmers with an attractive price/performance ratio. The design is the same as with the larger models, only the dimensions have been rescaled to match the size of the usually smaller tractors.

Technical specs ▶ Page 34

Technical details that impress:

- Very low cable payout forces of only 30N by mounting the cable drum in the direction of travel (confirmed by KWF)
- Lowest tractive force loss of only 21% from the top to bottom cable layer due to use of drum with large core diameter
- Precision steering of braking and gear shifting process by multi-disc plate set and independent hydraulic circuit
- Pfanzelt PPS precision controller for adapting the cable winch to the forwarding situation in three stages
- Wireless control as standard with engine speed adjustment function
- Custom-made accessories: Cable distribution with cable infeed brake, hydromechanical cable payout, various shield widths and much more.

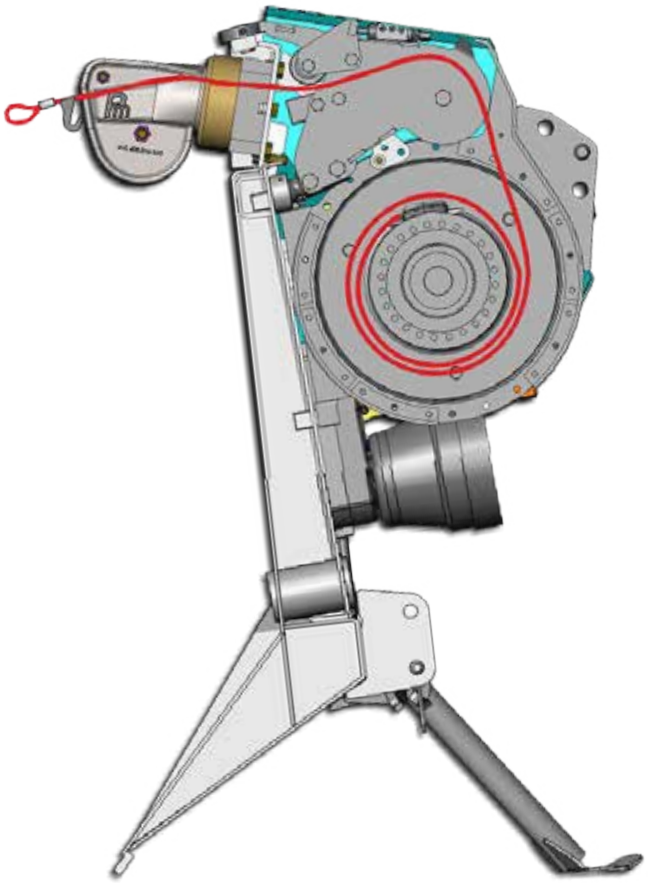
Made in Germany

Tested quality:

S-line geared cable winches – technical specs

Stacking shield

Pfanzelt S-line geared cable winches are equipped with an especially robust stacking shield made of high strength fine grained steel to create a torsion-resistant box. The resulting wedge form is able to absorb even lateral pulling powers safely, giving many years of robust service. Laterally actuated parking supports ensure that the cable winch can be conveniently attached or removed the tractor, preventing accidents.



Cable drums

The use of a cable drum with a large core diameter ensures very low tractive force loss from the top to bottom cable layer.

According to independent tests by the KWF, the S-line cable winch has a maximum tractive force loss of 21% with a standard cable length.

The very low cable infeed height enables simple and comfortable operation without deflection roller.

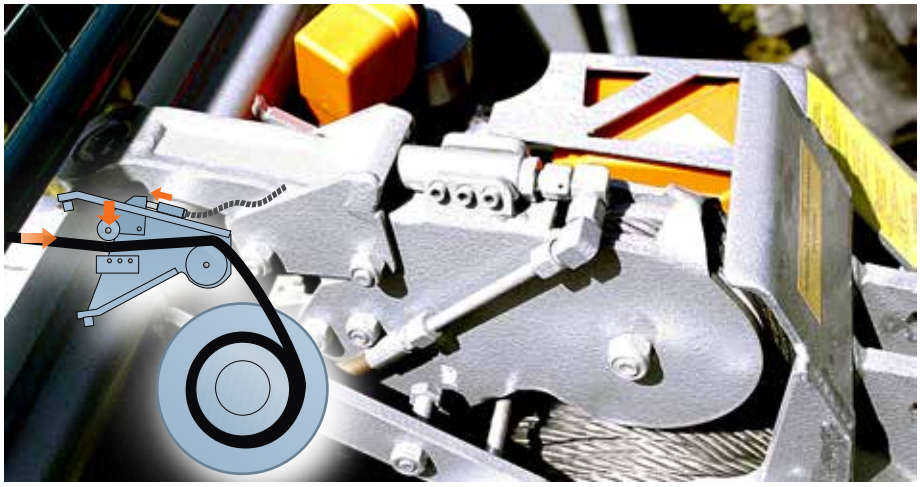
Winch unit

The alignment of the cable drum in the pulling direction enables easy cable payout and ensures low cable wear, as the cable is not fed out and wound in via several rollers in different directions. According to KWF tests, Pfanzelt geared cable winches have the lowest power requirement for paying out the cable. Moreover, the cable winch is mounted in an especially favourable position on the tractor in relation to centre of gravity.

Cable infeed brake & distributor

The cable is always kept taut when drawn in, even if the trunk starts to slip or the cable is loose. All made possible by the Pfanzelt cable infeed brake. A cylinder presses the cable when it is drawn in with a brake roller against the brake block.

The cylinder force is selected so that the cable can only be pressed against the brake block when it is in an unloaded state. When the cable is paid out, the brake opens completely.



Drive system

The cable winch is driven via the tractor PTO shaft at speeds of 540, 750 or 1000 rpm. From the Cardan shaft, the drive is transmitted via a bevel gear to the precision worm gear immersed in an oil bath. This ensures very quiet running and permanent operating safety.

Multi-disc sintered plate sets are used for exact control of the braking and clutch operations and secure crossover. The complete system is protected by internal mount.

Cable payout (optional)

The Pfanzelt cable payout has been developed to increase operating comfort and to improve the cable winding quality on the cable drum and is designed for long-term durability.

The cable payout device built into the pivoting arm of the cable distributor has a mechanical drive and is hydraulically actuated. It is mounted behind the stacking shield as a protection against damage. The cable payout facilitates working on slopes, especially at great cable lengths. The cable is pressed against the cable roll via several flexibly mounted pressure rollers over a large radius.

Stowage space

Specially designed holders for chainsaws and fuel canisters as well as two additional storage bins equipped with lids provide lots of storage capacity for forestry equipment.

Load lowering valve

Pfanzelt S-line geared cable winches are equipped with a load lowering valve. This means that a cable under strain can be gradually released and lowered. This feature is essential for safety felling work. In order to prevent disruptions, the cable winch operates with a separate oil circuit with filter unit that is fed via a radial piston pump and operates all hydraulic functions.

PPS controller

With the Pfanzelt PPS precision controller, which is unique on the market, the cable winch can be adapted to the respective forwarding situation. The operator can rapidly and easily adjust the crossover of the clutch and brake by preselection. This offers maximum operating comfort and the highest degree of safety.

The wireless remote control with engine speed adjustment also comes as standard.

Pfanzelt TUTUM

The Pfanzelt Pro crush protection is an ergonomically designed grip and is fixed to the winch cable yet free to slide. It prevents the hand being crushed when the cable is drawn in or being injured by damaged cable.


S-line


Forst
Forst

Professional geared cable winches

Mature tree harvesting on flat ground or thinning on steep slopes – the demands on a professional geared cable winch vary according to the area of application and the available equipment. Pfanzelt professional geared cable winches consist of an adaptable modular system and can therefore be easily adapted to the various deployment conditions. The underlying engineering of all Pfanzelt cable winches is the same. The complete reliability and durability of the cable winches is guaranteed by the precision worm gear used in the winch assembly and the multi-disc sintered plate sets.
Technical specs ► Page 34

The following options for putting together your own custom trailer are available with the module system:

- Tractive force of 6 to10 t
- Cable capacity up to 200 m
- Three different drum widths
- Variable stacking shield width
- Various cable winding systems and cable payout

Technical details that impress:

- Best pulling power ratios to bottom to top cable layer
- Reliable power transmission with helical and worm gears immersed in oil bath
- Independent hydraulic circuit
- Equipped as standard with cable distribution, cable infeed brake and load lowering valve

Made in Germany

Tested quality:

Profi geared cable winches – technical specs

Stacking shield

Pfanzelt geared cable winches are equipped with an especially robust shield made of high strength fine grained steel to create a torsion-resistant box. The resulting wedge form is able to absorb even lateral pulling powers safely, giving many years of robust service. Laterally actuated parking supports ensure that the cable winch can be conveniently attached or removed the tractor and help prevent accidents.

In addition to 3-point attachment, the cable winch can also be mounted via a **4-point attachment**. This guarantees the highest degree of stability. The Pfanzelt attachment system facilitates rapid and simple attachment.

The stacking shield is also available as a **hydraulic folding shield**. This provides greater ground clearance and space to carry trunks.

Drive

The cable winch is driven via the tractor PTO shaft at speeds of 540, 750 or 1000 rpm. From the Cardan shaft, the drive is transmitted via a bevel gear to the precision worm gear immersed in an oil bath. This ensures very quiet running and permanent operating safety.

Multi-disc sintered plate sets are used for exact control of the braking and clutch operations and secure crossover. The complete system is protected by internal mounting.

Wireless control

In addition to the standard functions (pulling, short braking, permanent release, immediate permanent release, infinitely adjustable engine gas adjustment) the modern wireless control system that comes as standard can also if required support engine start/stop and an emergency call circuit.

Winch unit

If the cable drum is aligned with the pulling direction, this enables easy cable payout and ensures low cable wear, as the cable is not fed out or wound in via several rollers in different directions. According to KWF tests, Pfanzelt cable winches have the lowest power requirement for paying out the cable. Moreover, the cable winch is mounted in an especially favourable position on the tractor in relation to centre of gravity.

The use of a cable drum with a large core diameter ensures very low tractive force loss from the top to bottom cable layer. According to independent tests by the KWF, the Pfanzelt cable winch has a maximum tractive force loss of 28% with a standard cable length.

The very low cable infeed height enables simple and comfortable operation without deflection roller.

cable distribution with cable infeed brake

The cable is always kept taut when drawn in, even if the trunk starts to slip or the cable is loose. All made possible by the Pfanzelt cable infeed brake. A cylinder presses the cable when it is drawn in with a brake roller against the brake block. The cylinder force is selected so that the cable can only be pressed against the brake block when it is in an unloaded state. When the cable is paid out, the brake opens completely.

Position 1
The cable infeed brake is actuated by activating the *Pull* function.

Position 2
As soon as the cable is drawn in under load, the cable infeed brake opens.

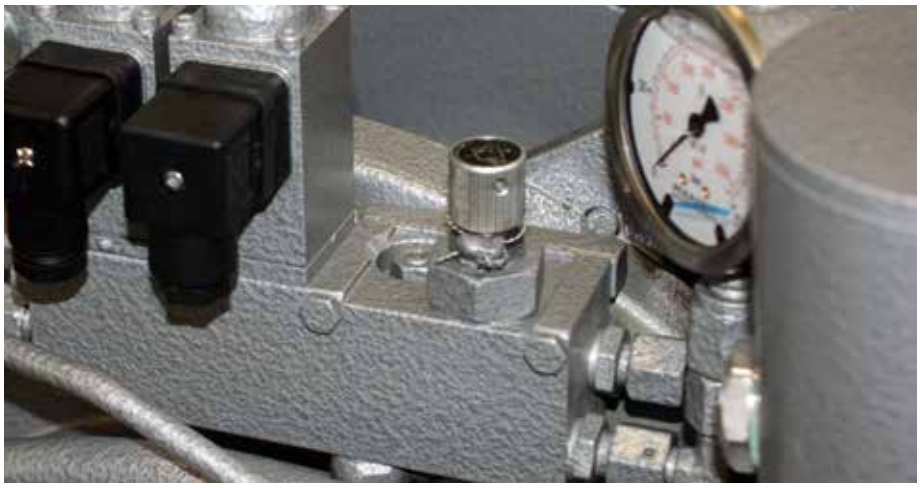
Position 3
During cable payout, the cable infeed brake opens completely and thus does not obstruct cable payout.

Cable payout

The Pfanzelt cable payout has been developed to increase operating comfort and to improve the cable winding quality on the cable drum. The cable payout device built into the pivoting arm of the cable distributor has a mechanical drive and is hydraulically actuated. As soon as the cable payout is activated, the cable is pressed firmly against the cable roll via several flexibly mounted pressure rollers over a large radius.
Due to the special structure the operability of the device is not impaired by soiling or cable damage.

Load lowering valve

Pfanzelt geared cable winches are equipped with a load lowering valve. This means that a cable under strain can be gradually released and lowered. This feature is essential for safety felling work and guarantees the highest degree of safety.



Offset gearbox

Pfanzelt cable winches with a wide cable drum can be equipped with an offset gearbox to provide a centered drive (standard equipment in some models). This is also recommended for use with tractors with an non-centered PTO stub.

An offset gearbox with direction of rotation reversal can also be provided for front-and rear-mounting.

Stowage space

Specially designed holders for chainsaws and fuel canisters as well as two additional storage bins equipped with lids provide lots of storage capacity for forestry equipment.

Pfanzelt TUTUM

The Pfanzelt Pro crush protection is an ergonomically designed grip and is fixed to the winch cable yet free to slide. It prevents the hand being crushed when the cable is drawn in or being injured by damaged cable.

logLINE geared cable winches

Geared cable winches for 3-point linkage mounting have a long tradition at Pfanzelt, as it was with these that the Pfanzelt company history started. The new logLINE series is positioned above the existing Pfanzelt series and offers 3-point linkage cable winches, which with the introduction of an additional side outrigger, offer a new level of stability on uneven terrain.

The two outriggers mean that the tractor is completely stable even when winching in difficult terrain or on highly cambered forest roads. The combination of side support with a hydraulically foldable stacking shield also increases ground clearance and the ability to stack trucks during forwarding work. To increase the safety and enable ergonomical working, Pfanzelt is also offering this series with a new hydraulic system that minimises reaction times.

The new logLINE series includes four single drum and two double drum winches with a tractive force of up to 12 t and cable lengths up to 200 m.

Technical specs ► page 33

Technical details that impress:

- Best pulling power ratios to bottom to top cable layer
- Optimum stability due to side support and lashing lugs for secure positioning in standing timber.
- Large lifting height of sprag bearing
- Reliable power transmission with helical and worm gears immersed in oil bath
- Independent hydraulic circuit
- Equipped as standard with cable distribution, cable infeed brake and load lowering valve

Made in Germany

Quick-fit and fixed cable winches

Pfanzelt quick-fit and fixed cable winches are the perfect implements for commercial timber forwarding. One reason is the mounting of the cable winch and the sprag bearing on a single frame, meaning that the tractor remains largely free of mechanical strain during winching.

Pfanzelt quick-fit geared cable winches consist of an adaptable modular system and can therefore be easily adapted to the almost all commonly used tractor types. The underlying engineering is the same. The complete reliability and durability of the cable winches is guaranteed by the precision worm gear used in the winch assembly and the multi-disc sintered plate sets.

Technical specs ▶ Page 34

Depending on the requirements of the operator, the cable winches are available with various pulling powers, stacking shield widths and cable capacities.

Technical details that impress:

- Best pulling power ratios to bottom to top cable layer
- Optimum installation location in spite of mounted power hitch
- Large lift height of sprag bearing (optionally with automatic trailer coupling)
- Reliable power transmission with helical and worm gears immersed in oil bath
- Adjustable cable infeed (mechanical or hydraulic)

Made in Germany


2/65-2
FEUERWEHR
MAN

Vehicle-mounted cable winches

The Pfanzelt modular series for vehicle winch systems offer cable winches with lifting and tractive forces of between 30 and 450 kN. Various winch drives, which are all largely maintenance- and wear-free, are available for different applications.

For changing requirements in relation to operating comfort, safe operation and the various carrier vehicles, both adaptable control and safety systems as well as different cable winding systems can be combined.

In addition, the cable winch can be equipped with practical accessories such as cable payout systems, electronic tractive force monitoring or wireless remote control systems.

The variety of the product range extends from standard winches, such as recovery winches for the fire department or the THW to customised system solutions.

Typical applications for Pfanzelt vehicle-mounted cable winches are:

- Emergency vehicles
- Fire fighting, tool and equipment trucks
- Military vehicles
- Trucks for construction, landscaping and water course maintenance
- Oil field vehicles

Made in Germany

Modular system

Pfanzelt cable winch units can be individually configured by means of their modular design. The cable winch can be adapted for the intended purpose and the installation location.
The high degree of flexibility applies to the unit itself and to the attachment of individual components – thus, for example, the drive can be provided via a hydraulic motor or a mechanical linkage. The drive direction can from all sides of the winch unit.

MYSELF

Both in agriculture/forestry and in environmental management, a cable winch is often required to recover vehicles or items of equipment. The MYSELF front-mounted recovery winch has been especially designed for this application. The simply mounted, hydraulically actuated cable winch for the quick-coupling 3-point link. This means the attachment can be mounted and removed in a matter of minutes for recovery jobs.

Technical specs for geared cable winches

S-line	S150	S160	S172
Tractive force bottom cable layer in kN	50	60	72
Tractive force top cable layer in kN	40	47	56
Standard cable length Ø in mm x m	10 x 70	11 x 70	12 x 60
Stacking shield width (standard) mm	1.500	1.500	1.800
Professional forestry wireless control system	●	●	●
Pfanzelt PPS precision controller	●	●	●
Cable distributor with cable infeed brake	○	○	○
Long cable package incl. cable distributor with cable infeed brake	○ Ø 10 mm x 110 m	○ Ø 10.5 mm x 110 m	○ Ø 12 mm x 90 m
Cable payout	○	○	○
Offset gearbox for centered drive	●	○	○
Weight	approx. 380 kg	approx. 390 kg	approx. 420 kg

Profi (single drum)	P170AKTION	P172	P185AKTION	P186	P1102
Tractive force bottom cable layer in kN	70	72	85	86	102
Tractive force bottom cable layer in kN	56	56	67	62	78
Max. cable capacity Ø in mm x m	12 x 138	12 x 102	13 x 129	13 x 158	14 x 121
Stacking shield width (standard) mm	1.800	1.800	2.000	1.800	1.800
Drive	Mechanical via bevel gear immersed in oil bath				
Clutch	Multi-disc sintered plate set, self-adjusting				
Brake	Multi-disc plate shoes with load lowering valve				
Mech. Cable distribution	●	●	●	●	●
Cable infeed brake	●	●	●	●	●
Cable payout	●	○	●	○	○
Hydraulic folding shield	○	○	○	○	○
Weight (approx. without cable)	490 kg	490 kg	540 kg	590 kg	610 kg

Profi (double drum)	P260AKTION	P272	P285
Tractive force bottom cable layer in kN	2 x 60	2 x 72	2 x 85
Tractive force bottom cable layer in kN	2 x 42	2 x 58	2 x 61
Max. cable capacity Ø in mm x m	2x 11 x 68	2x 12 x 102	2x 13 x 129
Stacking shield width (standard) mm	1.800	1.800	2.000
Drive	Mechanical via bevel gear immersed in oil bath		
Clutch	Multi-disc sintered plate set, self-adjusting		
Brake	Multi-disc plate shoes with load lowering valve		
Mech. Cable distribution	○	●	●
Cable infeed brake	○	●	●
Cable payout	-	○	○
Hydraulic folding shield	○	○	○
Weight (approx. without cable)	590 kg	660 kg	710 kg

logLINE (single drum)	L186	L1102	L1110EHS	L1120
Tractive force bottom cable layer in kN	86	102	102	120
Tractive force top cable layer in kN	62	78	78	86
Max. cable capacity Ø in mm x m	13 x 158	14 x 121	15 x 191	14 x 121
Stacking shield width (standard) mm	2.000	2.000	2.200	2.200
Drive	Mechanical via bevel gear immersed in oil bath			
Clutch	multi-disc sintered plate set, self-adjusting			
Brake	Multi-disc plate shoes with load lowering valve			
Mech. cable distribution	●	●	-	●
Cable infeed brake	●	●	●	●
Cable payout	●	●	●	●
Hydraulic folding shield	●	●	●	●
Professional forestry wireless control system	●	●	●	●
Continuously tractive force	○	-	-	-
Vario tractive force	○	○	○	○

logLINE (double drum)	L286	L2102
Tractive force bottom cable layer kN	2 x 86	2 x 100
Tractive force top cable layer in kN	2 x 62	2 x 78
Max. cable capacity Ø in mm x m	2x 13 x 129	1x 14 x 121 1x 14 x 100
Stacking shield width (standard) mm	2.200	2.200
Drive	Mechanical via bevel gear immersed in oil bath	
Clutch	Multi-disc sintered plate set, self-adjusting	
Brake	Multi-disc plate shoes with load lowering valve	
Mech. cable distribution	●	●
Cable infeed brake	●	●
Cable payout	●	●
Hydraulic folding shield	●	●
Professional forestry wireless control system	●	●
Vario tractive force	○	○

Quick-fit attachment	SW0258	SW0306	SW0308
Tractive force bottom cable layer in kN	80	2x 60	2x 80
Tractive force bottom cable layer in kN	56	2x 42	2x 56
Max. cable capacity Ø in mm x m	13 x 80	2x 11 x 100	2x 13 x 80
Stacking shield width (standard) mm	1.800	2.000	2.100
Independent oil supply via radial piston pump with suction filter	●	●	●
Multi-plate clutch made of sintered metal, self-adjusting	●	●	●
Multi-plate disc brake with load lowering valve	●	●	●
Professional forestry wireless system	●	●	●
Lifting height in mm	approx. 850	approx. 850	approx. 850
Undergrip in mm	approx. 200	approx. 200	approx. 200
Lifting force in t	approx. 3.5	approx. 3.5	approx. 3.5

● Standard ○ Option - Not deliverable

Please note.

To determine the optimum cable length, 10% must be deducted from the maximum cable capacity.

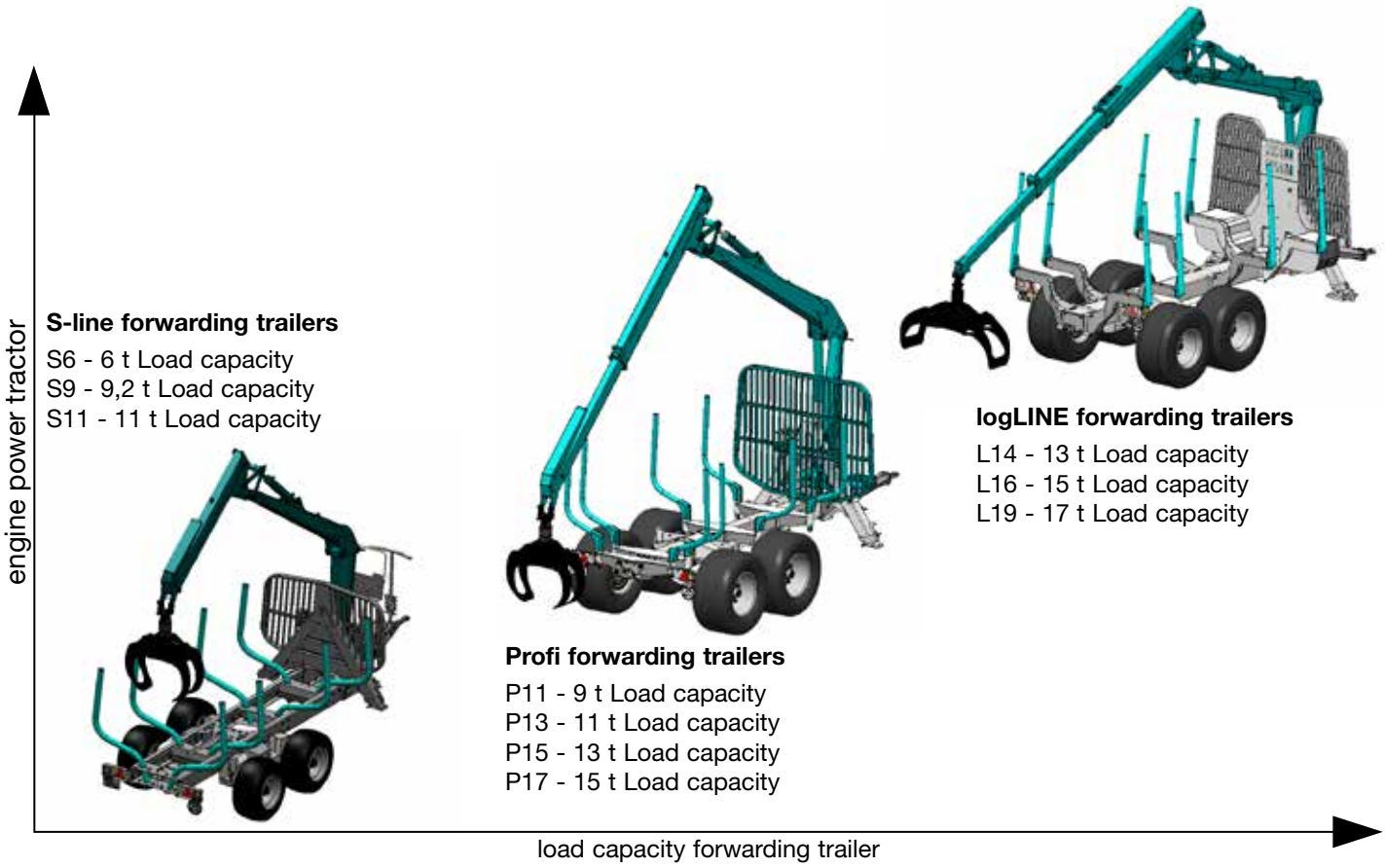
Important.

Please note the statutorily prescribed breaking load when selecting the cable for the cable winch.

"The Pfanzelt RW 1177 is a robustly constructed trailer with strikingly good safety features. **The excellent crane is perfect for professional needs. [...]** The LK 4177 crane is a real work horse. All functions can be easily combined and several can be actuated simultaneously. The crane with top-mounted main cylinder performs solid lifting work. In addition to the trailer, it lifted 1817 kg in the test."

"top agrar" magazine 6/2009

Forwarding trailers



Pfanzelt product range offers customised solutions designed to fulfil every task in relation to meeting the growing need for wood as a raw material, whether as lumber or biomass. The challenge whether loading or transport big or small loads, it always to be able to work efficiently and ergonomically.

Pfanzelt forwarding trailers are divided into three product groups in accordance with the requirements: S-line, Profi and K-line.

S-line forwarding trailers

The Pfanzelt S-line forwarding trailer is especially designed for use by private forest owners. With its low profile design, hydraulic overrun brake and licensing for speeds up to 40 km/h on public roads, the S-line forwarding trailer is a universal machine with the same underlying engineering as the professional forwarding trailer.
► Page 40

Profi forwarding trailer

With its Profi forwarding trailer series, Pfanzelt offers the most extensive forwarding trailer range on the market. With its special modular design, the user can put together the forwarding trailer according to his own requirements and choose between various weight classes, brake systems, loading cranes and an extensive range of accessories. ► Page 46

logLINE forwarding trailers

The logLINE forwarding trailer series rounds off the Pfanzelt forwarding trailer range with two top of the range models. These models are characterised by uncompromising, powerful professional technology. ► Page 52

K-line crane trailers

Same basic design as the S-line forwarding trailer on with swap-in for use in local authority yards, tree nurseries or in gardening and landscape architecture. ► Page 56

Technical specs for all forwarding trailers ► Page 64

Made in Germany

Tested quality:


Gefahrenzone 20 m

S-line forwarding trailers

The Pfanzelt S-line forwarding trailer is especially designed for service with private wood owners and semiprofessional operations. The reliability of the technology has the same priority as for professional. However, the job description is different.

An important criterion when buying a forwarding trailer is the safety equipment. Pfanzelt forwarding trailers offer all safety features required by KWF, FPA and the BG. The hydraulic overrun brake enables loaded road travel at speeds up to 40 km/h. The operating console on the draw bar offers a well organised work station. The joystick control provided as standard with its two electrical functions ensures that the operator can always operate the crane ergonomically.

Technical specs ▶ Page 64

Technical details that impress:

- Load carrying capacity in forests 6.0, 9.2 or 11.0 t
- Double frame made of special steel
- Low design height for combination with smaller tractors
- Modern and powerful profi crane with 6,700, 7,200 or 8,000 mm reach
- Heavy duty slewing gear for powerful pivoting, even uphill
- Concealed hoses protected against damage
- Independent hydraulic oil supply with protected piston pump installed in the draw bar (optional)
- Accessories for forestry professionals: Wood fuel package, long frame version and crane cable winch

Made in Germany

Tested quality:

S-line forwarding trailers – technical specs

Bolted double frame

(S9, S11)

The frame of the S-line forwarding trailer is made of two special steel U-bearers that are bolted together to create a double frame. This system is also widely used in truck manufacture. The torsional forces that are generated when working with loading cranes and driving on rough terrain must be absorbed by the frame. So that the frame can cope with these forces it is made of U-profiles and completely screwed together with special flange bolts. The possibility of fatigue cracks as known from welded structures is therefore excluded.

Even with the standard equipment, Pfanzelt S-line forwarding trailers can be flexibly used for the transport of timber of various lengths. The extensive range of accessories opens up additional possibilities.

As soon as the last two stanchions have been turned, the forwarding trailer can also be loaded with metre wood bundles or loose metre wood at right angles to the direction of travel.

Double frame

(S6)

The frame of the S-line S6 forwarding trailer is made of two special steelbearers that are bolted together to create a double frame.
There is also the posibility to load short wood transverse to the direction of travel.

Bogie axle

The bogie axle of Pfanzelt forwarding trailers offers stability during crane operation and the best possible drive characteristics, especially in forwarding trails. The even distribution of the ground pressure is another big advantage.

The bogie axle is mounted on lubricatable and adjustable spherical articulated bearings (only model S9, S11). This guarantees true running for many years.

Brake systems

Pfanzelt offers three braking systems for legally loaded road travel for the S-line forwarding trailers. In addition to a pneumatic and a hydraulic brake system, the range of accessories also includes an overrun brake.

The *Pfanzelt* hydraulic overrun brake transmits the braking force from the start-up device direct to the brakes without mediation by rods or Bowden cables that are vulnerable to faults. For increased safety when reversing and off road, the hydraulic overrun brake is combined with an additional hydraulic brake that can be manually actuated via a tractor control unit. This means that road travel up to a maximum speed of 40 km/h and a maximum weight of 8 t are therefore permitted.

- **S6**
  series: hydraulic 2-wheel-brake
  optional: 2-wheel-overrun brake
- **S9**
  series: hydraulic 2-wheel-brake
  optional: hydraulic 4-wheel-brake, 4-wheel-overrun brake, pneumatic brake
- **S11**
  series: pneumatic brake

Steerable draw bar

The steerable draw bar with high steering angle available as standard with the S-line forwarding trailers enables easy manoeuvring in dense standing timber.

Two powerful hydraulic cylinders that can be operated from the tractor cab, even when the assemblage is in motion, facilitate operation even when the laden forwarding trailer is turned against the slope. The steerable draw bar can be mechanically locked when driving on roads.

Lighting

The lighting system using LED lights is integrated in the frame. To protect the lights when working in the forest, these can be folded in.

Hitch (S9, S11)

The draw bar can be supplied in top and bottom hitch versions. The independent hydraulic oil supply for the trailer is provided via a piston pump concealed in the draw bar.

The bearings of the pivoting draw bar in the form of lubricatable and adjustable spherical articulated bearings ensure long-term operating safety of this component that is subject to heavy loading.


5288
Pm-kran 5288

Profi forwarding trailer

Requirements to modern logging trailers vary greatly depending on the respective area of application. Pfanzelt offers the most extensive range of logging trailers on the market. As a result, users have the opportunity to configure a professional Pfanzelt logging trailer to suit their individual needs.

Technical specs ▶ Page 64

The following options for putting together a custom trailer are available with the module system

- Load-bearing capacity of 9 to 19 t
- Extensive range of professional cranes with up to 10 m reach in various lifting classes
- Oil supplied by tractor or by a separate oil supply featuring a high-quality axial-piston pump

Technical details that impress:

- Central-spar frame for maximum stability
- Frame extension and sliding axle for best weight distribution combined with great load flexibility
- Powerful loading cranes made for professionals with a reach of up to 10 metres and a hoisting force of 7 m/t with a rapid traverse valve for even faster telescopic extension
- A-column or H-column stabilisers for optimum parking stability even in difficult terrain
- Workplace with clear all-round view due to the location the operating panel on the draw bar or the side-mounted high seat
- Large range of accessories for forestry professionals

Made in Germany

Tested quality:

Profi forwarding trailers – technical specs

Frame

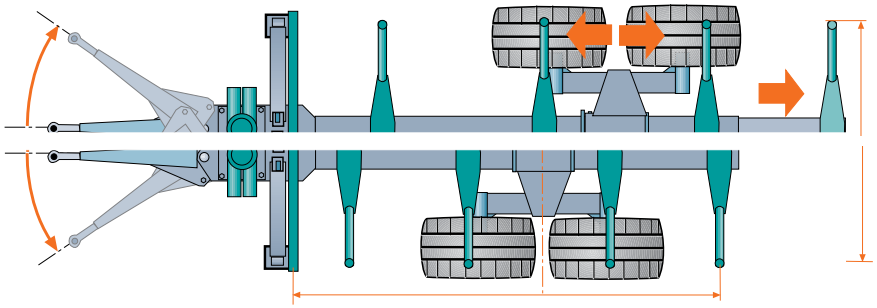
The strong frame structure which is based on a torsion-resistant central spar is the basis for the excellent off-road handling properties of the Pfanzelt forwarding trailer, even when loaded. The central spar is made of fine grain steels to cope with the highest loads. Besides maximum stability, this design offers maximum ground clearance. The frame is only welded to the crane support in the front area, meaning that the strength of the central spar is not compromised.

The central spar has a double wall in the crane mounting plate area to provide the forwarding trailer with additional strength for heavy crane attachments. A second spar is has been carefully welded to the central spar to exacting technical standards.

Sliding axle

The flat bed can be extended by up to 2000 mm for the transport of various timber lengths by means of an integrated, extensible frame.

The greatest possible flexibility for loading of the forwarding trailer is also assured by the stanchions whose position can be changed by sliding them along the central spar and the axle bogie. The operator thus has the option to optimally adjust the stanchion size to various fixed lengths. By sliding the axle bogie, heavy loads can be precisely adjusted to the tractor type, thus avoiding the supporting load being exceeded and also preventing a negative supporting load.



Steerable draw bar

Pfanzelt forwarding trailers are equipped as standard with a pivoting draw bar with a large steering angle. Two powerful hydraulic cylinders that can be operated from the tractor cab, even when the assembly is in motion, facilitate operation even when the laden forwarding trailer is turned against the slope. The steerable draw bar can be mechanically locked when driving on roads.

Bogie axle

The bogie axle of Pfanzelt forwarding trailers offers stability during crane operation and the best possible drive characteristics, especially in forwarding trails. The even distribution of the ground pressure is another big advantage.

The bogie axle is mounted on lubricatable and adjustable spherical articulated bearings. This guarantees true running for many years.

Brake systems

Pfanzelt profi forwarding trailers are equipped as standard with a braking system that acts on four wheels. Depending on the trailer size, the braking system is available as a hydraulic or pneumatic system. The compact diaphragm brake cylinders are completely encapsulated with a protective hood. This means that the brake system is protected from damage by sticks or grippers.

Lighting

The lighting system using LED lights is integrated in the frame. To protect the lights when working in the forest, these can be folded in.

Hitch

The draw bar of the Profi forwarding trailer is available in both top- and bottom-hitched versions. The bearings of the pivoting draw bar in the form of lubricatable and adjustable spherical articulated bearings ensure long-term operating safety of this component that is subject to heavy loading.

When the trailer is fitted with an independent hydraulic oil supply, the powerful piston pump is protected from damage by encapsulated mounting either above or below the draw bar.


Gefahrenzone 30 m
Kran 71100

logLINE forwarding trailers

With the most extensive forwarding trailer range on the market, Pfanzelt offers every professional user the option to put together a customised forwarding trailer according to his own specific requirements.

The forwarding trailers of the logLINE series with a permitted total weight of 14, 16 or 19 t offers powerful professional technology for forestry contractors. Equipped with a 7 m/t class forestry crane, the forwarding trailer is optimised for heavy duty logging.

Technical specs ► Page 64

Technical details that impress:

- Load capacity on non-public roads 13 - 17 t
- Reinforced central tubular frame with frame slide
- Operating permit for public roads up to 25, 40 or 50 km/h (depending on the total weight with selected braking system)
- Optional with spring-loading steerable draw bar (L16 and L19 only)
- Modern and powerful professional crane with reach up to 10 m and 7 m/t lifting force.
- A-column support for optimum parking stability
- Two large storage bins for lashing belts and tools
- Accessories for flexible application: Wheel hub drive, crane cable winch etc.

Made in Germany

logLINE forwarding trailers – technical specs

Frame

The strong frame structure which is based on a torsion-resistant central spar is the basis for the excellent off-road handling properties of the Pfanzelt forwarding trailer, even when loaded. The central spar is made of fine grain steels to cope with the highest loads. Besides maximum stability, this design offers maximum ground clearance. The frame is only welded to the crane support in the front area, meaning that the strength of the central spar is not compromised.

The central spar has a double wall in the crane mounting plate area to provide the forwarding trailer with additional strength for heavy crane attachments. A second spar is has been carefully welded to the central spar to exacting technical standards.

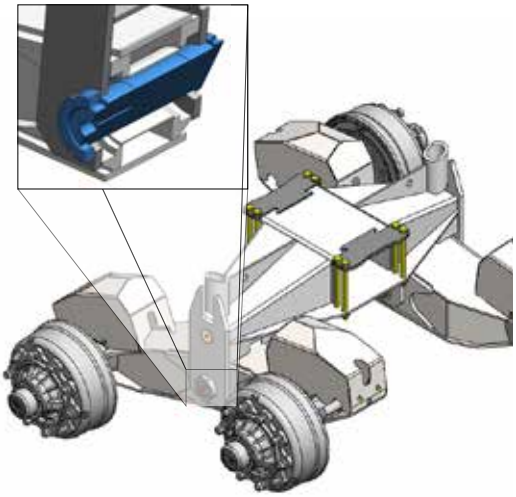
Sliding axle

The flat bed can be extended by up to 1,500 mm for the transport of various timber lengths by means of an integrated, extensible frame.

The greatest possible flexibility for loading of the forwarding trailer is also assured by the stanchions whose position can be changed by sliding them along the central spar and the axle bogie. The operator thus has the option to optimally adjust the stanchion size to various fixed lengths. By sliding the axle bogie, heavy loads can be precisely adjusted to the tractor type, thus avoiding the drawbar load being exceeded and also preventing a negative drawbar load.

Stanchion widening

All stanchions can be extended laterally. The stanchion cage extension is thus 300 mm. This increase the flat bed area by 0.5 m^2.



Bogie axle

The bogie axle of Pfanzelt forwarding trailers offers stability during crane operation and the best possible drive characteristics, especially in forwarding trails. The large pendulum travel of the bogie axle has a range of up to 360 mm. This enables that the trailer can safely drive over branches and other obstacles.

The even distribution of the ground pressure is another big advantage.

For protection against damage due to driving over trunks and projecting branches, the underside of the trailer is smooth. Cables and hoses are concealed for maximum protection.

Bearings

The bogie axle is mounted on lubricatable and adjustable spherical articulated bearings. This guarantees true running for many years.

Steerable draw bar

Pfanzelt forwarding trailers are equipped as standard with a pivoting draw bar with a large steering angle. The maximum excursion from the centre is +/- 860 mm. Two powerful hydraulic cylinders that can be operated from the tractor cab, even when the assembly is in motion, facilitate operation even when the laden forwarding trailer is turned against the slope. The pivoting moment is thus 35 kNm (at an oil pressure of 200 bar).

Draw bar suspension/tilt

In the L19 series model, and optionally in the L16 model, the forwarding trailer can be equipped with a draw bar suspension / tilt system. The steering draw bar also become a tilting device by the provision of an additional cylinder. This feature enables the flat bed to be placed in a horizontal position and the crane column vertically on slopes. During travel, this device acts as suspension, thus increasing driving safety and comfort.

K-line crane trailers

Universal trailers with loading crane and mounted swap body are ideal for all-round service on building sites and yards as well as with gardening and landscape architecture contractors.

The special feature of this vehicle system is that the loading crane is mounted on a stable and robust frame that has already proven its worth in forestry work. This means that no additional carrier vehicle is required for crane operation and there is the possibility of using this trailer in combination with loading crane and various traction vehicles. As a result the load-bearing capacity of the tractor unit is not reduced by the heavy attachments. As the trailer comes as standard with a permit for use on public roads, it can be towed by any truck, implement carrier or tractor.

Technical specs ▶ Page 64

Technical details that impress:

- Permitted total weight on public roads 9.2 and 11 t respectively
- Double frame made of special steel
- Modern and powerful profi crane with 6.7 or 7.2 m reach
- A-column support for optimum parking stability
- Independent hydraulic oil supply with protected piston pump installed in the draw bar (optional)

HERGESTELLT IN DEUTSCHLAND

Tested quality:

K-line forwarding trailers – technical specs

Loading cranes

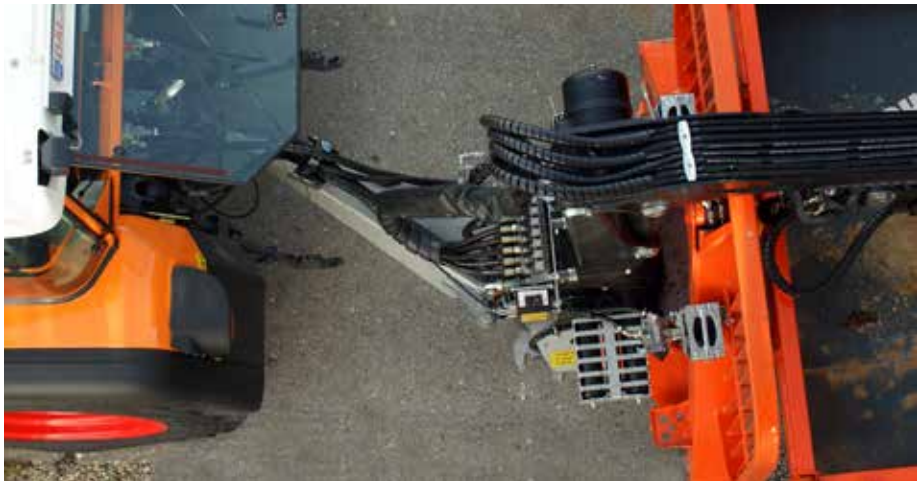
Professional Pfanzelt loading cranes are available for loading and unloading. These are fitted with various implements in accordance with the work to be performed. In addition to a double clam grab for branches and trucks, an earth grab and a green material grab can be attached with a quick conversion system.

Bogie axle

The bogie axle mounted in articulated bearings without axial play ensures optimum handling on rough terrain and safety on roads. In combination with wide tyres, it contributes to conserving sensitive ground surfaces.

Steerable draw bar

The K-line crane trailer is equipped with a steerable draw bar with a large steering angle. Two powerful cylinders ensure reliable operation and easy manoeuvring even in narrow trails.



Controller

The crane is controlled via two control toggles on the control station on the draw bar. Electrohydraulic control with cable or wireless control unit are also optionally available.


4267
Pm-kran
4267

Accessories – forwarding trailers

Transport systems

The practical range of accessories for Pfanzelt forwarding trailers maximises ergonomic comfort for loading and transport work.

In addition to a hot-dip galvanised pan for cut material designed for the transport of branches and cuttings, the extensive range also includes a floor pan for the combined transport of trunks and branches. The range is rounded off by a round bale loading bridge and a 3-side tipper body, offering many options for various application.

woodZIPPER

The new and economical loading and transport system for forwarding trailers facilitates two different work processes. The compacted wood fuel – branches, tips or wood fuel from short cycle plantations – stacked on the woodZIPPER with two hydraulically actuated clamping stanchions – increases the material quantity per trip by around a third. The second design role is the transport of short timber. When working in sloped forestry tracks, the stacked short timber can be pushed to the upper side of the slope. This means that the track can be used longer and less damage is caused to the ground.

chipTRAILER

The concept of the ChipTRAILER was developed in close consultation with our customers. The machine system enables direct chipping of wood fuel mechanically harvested from young plantations during initial thinning directly in the plantation. The high-walled tipper container is mounted on a forwarding trailer.

offroadTRAILER

The offroadTRAILER is the first hook lift trailer to be designed for off-road use. The system consists of a hook lift attachment mounted on a forwarding trailer, which can be used on particularly impassable terrain without difficulty due to the bogie axle. If the terrain is especially demanding, the system can also be fitted with a drive unit.

Accessories – forwarding trailer drive systems

During a demonstration, the MKM 8x8 2380, consisting of a Pm Trac and a powered Pfanzelt forwarding trailer was able to prove itself for the first time in the forest. "**The machine was completely convincing** [...] **in all respects.** While all other machines struggled with the ground conditions [...], none of the wheels of the closely observed multipurpose tractor started spinning as it drove over the edge of a ditch fully laden with beech wood."

Forst und Technik magazine 1/2015

Friction drive

The drive system with friction drive consists from a special axle system with mounting cradle that is fitted with two hydraulic motors. The hydraulic motors drive two star-form friction rollers that if necessary are hydraulically pressed into the tyre treads. This system can transmit a thrust of 3 tonnes.

Hydromechanical drive

If the friction drive is not enough, Pfanzelt also offers direct hydromechanical drive on an NAF axle bogie. This drive unit is based a hydraulic motor that can either be driven via the tractor hydraulics or an independent hydraulic oil supply. The advantage of this systems is a reliable and responsive force transmission to all four wheels. The thrust is up to 4 tonnes.

Hydraulic wheel hub drive

The new wheel hub drive built in-house by Pfanzelt combines all advantages in the forest and on road. In addition to excellent road handling properties, it can be fitted with chains or caterpillar tracks for movement in the forest.

The wheel hub drive from Pfanzelt is equipped as standard with an electrical control unit. The driver is thus able to comfortably control the drive from the tractor cab. This allows the operator to switch between the simple drive for forward travel and reversing which is automatically switched off during braking and an uphill assist function.

Technical specs for forwarding trailers

S-line	S6	S9	S11
Construction			
Frame structure	Double frame	Double frame made of Special steel, U-sections	Double frame made of pecial steel, U-sections
Front safety grille area	1,40 m²	1.92 m²	2.25 m²
Flat bed length	3.500 mm	4.000 mm	4.450 mm
Hydraulic pivoting draw bar with 2 cylinders	●	●	●
Equipment			
Stanchion pairs	3 + 1	4	4
Load capacity on non-public roads	6 t	9.2 t	11.0 t
Permitted total weight on public roads	6 t	up to 9.2	11.0 t
Dead weight with crane	approx. 1.7 t	approx. 2.97 t	approx. 3.58 t
Operating station on draw bar	●	●	●
Brake system	2-wheel hydrl. Brake system	2-whell hdrl. Brake system	4-wheel pneumatic brake system
Tyres			
Dimensions	11.5/80 15,3 groove tread	380/55-17" groove tread	480/45-17" groove tread
Rim with valve protection	●	●	●
Loading crane	**LK 2764**	**LK 4267**	**LK 4272**
Reach	6.200 mm	6,370 mm	7,200 mm
Lift moment net	27 kNm	40.5 kNm	40.5 kNm
Crane control	8-way control block, 2 control toggles, 2 electrical functions		
Accessories			
3-side tipper for local authority use	-	○	○
Flat bed length		3,900 mm	4,400 mm
Flat bed length		2,100 mm	2,100 mm
Side wall height		500 / 1,000 mm	500 / 1,000 mm

logLINE	L14	L16	L19
Construction			
Frame structure	Central spar	Central spar	Central spar
Central spar thickness (mm)	200x200x10	250x250x8	350x250x8
Frame extension 1.500 mm	●	●	●
Stanchion pairs	4 pcs (extensible sideways by 300 mm)		
Hydraulic pivoting draw bar with 2 cylinders	● +/-790mm; +/-34°	● +/-860mm; +/-37°	● +/-860mm; +/-37 (optional suspended)
Front grille area	2,98 - 3,37 m²	3.25 - 3.75 m²	3.5 - 4.00 m²
Equipment			
Load capacity on non-public roads	13.0 t	15.0 t	17.0 t
Permitted total weight on public roads	14.0 t	16.0 t	19.0 t
Dead weight with crane	approx. 4.5 t	approx. 5.5 t	approx. 6.0 t
Brake system	4-wheel pneumatic brake system		
Tyres			
Dimensions	500/45-22.5" 12 PR lug tread	600/50-22.5" 12 PR lug tread	600/50-22.5" 12 PR lug tread
Rim flange reinforcement, spar sleeve protection	●	●	●
Drive			
Wheel hub drive	○	○	○
Loading crane	**LK 6280**	**LK 7185**	**LK 7185**
Reach	7,750	8,300 mm	8,300 mm
Lift moment net	61 kNm	70 kNm	70 kNm
Crane control	EHC control with 2 Danfoss Profi1 joysticks		

Profi	**P11**	**P13**	**P15**	**P17**
Construction				
Frame structure	Central spar	Central spar	Central spar	Central spar
Central spar thickness (mm)	200x200x10	200x200x10	200x200x10	300x200x10
Double walled in crane base zone	-	●	●	●
Frame extension 2.000 mm	●	●	●	●
Front grille area	2.12 m^2	2.37 m^2	2.94 m^2	3.52 m^2
Hydraulic pivoting draw bar with 2 cylinders	●	●	●	●
Equipment				
Stanchion pairs	4	4	4	4
Load capacity on non-public roads	9.0 t	11.0 t	13.0 t	15.0 t
Permitted total weight on public roads	11.0 t	13.0 t	15.0 t	17.0 t
Dead weight with crane	approx. 2.5 t	approx. 2.9 t	approx. 3.6 t	approx. 3.9 t
Brake system	hydraulic 4-wheel brake system		4-wheel pneumatic brake system	
Tyres				
Dimensions	380/55-17" 14 PR groove tread	480/45-17" 14 PR groove tread	500/45-22.5" 12 PR lug tread	600/50-22.5" 12 PR lug tread
Rim with valve protection	●	●	-	-
Rim flange reinforcement, spar sleeve protection	-	-	●	●
Drive (thrust at 200 bar)				
Friction drive (3,000 kg)	-	-	○	○
Wheel hub drive	○	○	○	○
Hydromechanical drive (4,000 kg)	-	-	-	○
Loading crane	**LK 4167**	**LK 4272**	**LK 5180**	**LK 51100**
Reach	6,600 mm	7,140 mm	8,000 mm	10,000 mm
Lift moment net	41 kNm	40,5 kNm	51 kNm	51 kNm
Crane control	8-way control block, 2 control toggles, 2 electrical functions			

● Standard ○ Option - Not deliverable


4200
Pm-kran
4200


Gefahrenzone 20 m
F R 7654

Cranes

The Pfanzelt crane range is one of the most extensive on the market. The modern and powerful professional cranes are available in various lifting classes from 4 to 9 m/t and reaches up to 10 m. In addition to the technical specifications, the cranes also differ in their construction.

Forestry cranes

Pfanzelt loading cranes are designed for professional service. The specifications of the cranes vary according to whether they are intended for use on a Pfanzelt forwarding trailer or an a carrier vehicle (tractor, harvesting machine etc.). These can also be mounted on the 3-point hitch of a standard tractor.

Logging grab and crane

Pfanzelt manufactures cranes that are especially designed to be mounted on specialised forestry machines and tractors used in forestry applications. The two production series differ in relation to logging grabs and logging cranes. The first series have a lower crane column and are therefore especially designed for hauling long timber. In contrast to logging grabs, logging cranes have a high crane column and are optimised both for hauling long timber and for loading short timber onto a forwarding trailer.

Technical specs ▶ Page 64

Made in Germany

Tested quality:


Gefahrenzone 20 m

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. These usually have a larger lifting force and a higher pivoting moment to enable powerful pivoting of the crane – even uphill.

Technical specs ▶ Page 64

Technical details that impress:

- Modern and powerful professional crane with reach up to 10 m and 9 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 maximum protection against damage
- Top-mounted main boom cylinder outside the danger zone
- Crane pins with brass bushes designed for heavy duty daily use (Ø 50 mm)
- Rapid traverse valve for rapid telescopic extension
- Various grippers for each application: Log grippers, 4-finger grippers, earth grippers

Offroad crane applications

The use of cranes away from paved roads presents great challenges for the machinery, the 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

The forestry crane range includes cranes for 3-point and quick-fit attachments to standard tractors. The various advantages of the two attachment systems depend on the conditions of use of the customer. If the customer needs a flexible vehicle and wishes to use the tractor in combination with various trailers, the best solution is attachment via a special 3-point hitch system with integrated crane stabilisers. If, on the other hand, the crane is required for the forwarding of long timber, quick-fit attachment is the optimum solution. Pfanzelt quick-fit combinations of cable winch and loading crane fulfil these requirements and leave no wish unfulfilled when operated in combination with a standard tractor with reversing installation. With the modular quick-fit attachment system, the machine can be rapidly fitted with new attachments.

Forestry cranes for mounting on wood chippers and trailers

The high performance Pfanzelt forestry cranes with powerful slewing gear are also perfectly suitable for mounting on trailer-chippers. Their modular design means that the crane can be ideally adapted to the vehicle – accordingly Pfanzelt cranes with different column heights are available.

Technical specs ▶ Page 64

Made in Germany

Tested quality:

Cranes – technical specs

Crane loading class B4

Pfanzelt cranes are made of especially tough special steel. The crane is rated according to crane loading class B4 for permanent dynamic loading. The main boom cylinder can be fitted as an upright or reclining cylinder above the main boom so that it is always protected against damage when loading trunks.

Slewing gear

Pfanzelt cranes have especially robust and powerful 4-cylinder slewing gear. The resulting high pivoting moment means that loading work can also be performed when working uphill. 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.

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.

The optionally available pendulum with internally laid hydraulic hoses enables protection right up to the crane tip. This is also equipped with a double pendulum brake. This ensures ergonomic operation of the crane and long service life.

Stabilisers

Optimum parking stability for operating the loading crane is assured by the A-column stabilisers. The telescopic structure of the stabilisers ensures secure support even in thick stands of timber and on slopes. They also make it possible to drive up close to the timber stack and thus use the full lifting force of the crane. Furthermore, the cylinder is protected by its concealed installation from damage by falling trunks.

In addition to A-column stabilisers, the extensive range of accessories includes H-column stabilisation for cranes with a very long reach and a high lifting force. The wider stabilisation area ensures even greater stability.

Operating station and high seat

The Pfanzelt operating station mounted as standard on the draw bar provides a well organised work station outside the hazard zone with an optimum view for safety purposes of the loading crane and the surrounding area. The back rest of the platform and the hand guard over the control toggles optimize the operator's safety and ensure that he adopts an ergonomic working stance.

A high seat mounted on the side of the crane column, which rotates with the crane, is optionally available with nearly all Pfanzelt forestry cranes. The joy sticks are ergonomically mounted on both sides of the seat.

Rapid traverse valve

Pfanzelt forestry cranes are the only such cranes on the market 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.

Crane cable winch

If the crane's reach is not long enough, the crane winch can be used to pull the material to be lifted closer.

Controllers

The highest performance is achieved when the controls are perfectly ergonomic.

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 having 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 via two separate toggle switches that are installed on a rotary seat in the tractor.

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.

Grippers

Clam shell grippers can be mounted on the regular grippers for loading dry bulk. The 4-finger gripper ensures easy and ergonomical loading of branches and cut wood. Special gripper attachments for loading round bales are also available as accessories.

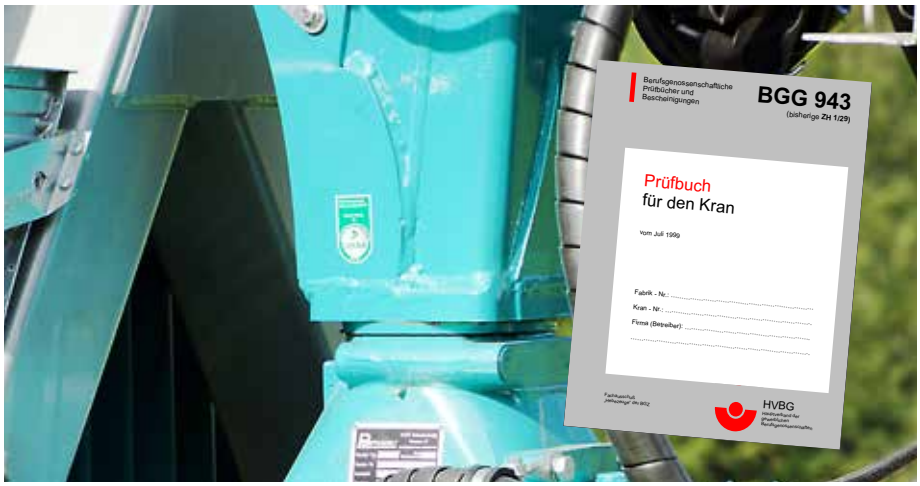
All *made by Pfanzelt* grippers are available in various sizes.

Independent hydraulic oil circuit

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. The oil supply tank is tidily integrated in the A-column support and the hydraulic pump in the draw bar, all helping to avoid field of vision restrictions.

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 (Germany only).



Technical specs for cranes

Loading crane with top-mounted main boom cylinder

	4167	4177	5169	5180	51100
Reach	6,620 mm	7,550 mm	6,710 mm	8,000 mm	10,000 mm
Lift moment net	41 kNm	41 kNm	51 kNm	51 kNm	51 kNm
Pivoting moment	15.2 kNm	15.2 kNm	21.5 kNm	21.5 kNm	21.5 kNm
Slewing range	370°	370°	370°	370°	370°
Telescope	single	single	single	single	double
Rotator, infinite	4.5 t	4.5 t	4.5 t	4.5 t	4.5 t
Gripper	Pm 230	Pm 230	Pm 230	Pm 230	Pm 230
Crane control	8-way control block, 2 control toggles, 2 electrical functions				
Weight (approx.)	825 kg	905 kg	935 kg	1035 kg	1125 kg

	6169	6180	61100
Reach	6,710 mm	7,870 mm	9,780 mm
Lift moment net	61 kNm	61 kNm	61 kNm
Pivoting moment	25 kNm	25 kNm	25 kNm
Slewing range	370°	370°	370°
Telescope	single	single	double
Rotator, infinite	6.0 t	6.0 t	6.0 t
Gripper	Pm 230	Pm 230	Pm 230
Crane control	8-way control block, 2 control toggles, 2 electrical functions		
Weight (approx.)	935 kg	1,035 kg	1,125 kg

Z-crane	Z4359
Reach	5,700 mm
Lift moment net	40.5 kNm
Pivoting moment	15.2 kNm
Slewing range	370°
Telescope	single
Rotator, infinite	4.5 t
Gripper	Pm 230
Crane control	8-way mechanical, 2 control toggles with 2 electrical functions
Weight (approx.)	945 kg

Loading crane with upright main boom cylinder

	4267	4272	4280	5280	5285	52100
Reach	6,370 mm	7,140 mm	7,850 mm	7,800 mm	8.500 mm	9,800 mm
Lift moment net	40.5 kNm	40.5 kNm	41 kNm	50 kNm	70 / 50 kNm	51 kNm
Pivoting moment	15.2 kNm	15.2 kNm	15.2 kNm	21.5 kNm	21.5 kNm	21.5 kNm
Slewing range	370°	370°	370°	370°	370°	370°
Telescope	single	single	single	single	double	double
Rotator, infinite	4.5 t	4.5 t	4.5 t	4.5 t	4.5 t	4.5 t
Gripper	Pm 230	Pm 230	Pm 230	Pm 230	Pm 230	Pm 230
Crane control	8-way control block, 2 control toggles with 2 electrical functions					
Weight (approx.)	910 kg	990 kg	1070 kg	1105 kg	-	1195 kg

	6280	62100
Reach	7,750 mm	9,590 mm
Lift moment net	61 kNm	79 / 62 kNm
Pivoting moment	25 kNm	25 kNm
Slewing range	370 °	370 °
Telescope	single	double
Rotator, infinite	6.0 t	6,0 t
Gripper	Pm 230	Pm 230
Crane control	8-way mechanical, 2 control toggles with 2 electrical functions	
Weight (approx.)	1,390 kg	

Add-on cranes	5153	5167	7169	7185	71100
Reach	5,090 mm	6,830 mm	6,930 mm	8,300 mm	10,000 mm
Lift moment net	51 kNm	51 kNm	70 kNm	70 kNm	70 kNm
Pivoting moment	21.5 kNm	21.5 kNm	27 kNm	27 kNm	27 kNm
Slewing range	190°	190°	190°	360°	360°
Telescope	single	single	single	single	double
Rotator, infinite	6.0 t	6.0 t	10.0 t	10.0 t	10.0 t
Gripper	Pm 270	Pm 270	Pm 360	Pm 360	Pm 360
Crane control	8-way control block, 2 control toggles, 2 electrical functions				
Weight (approx.)	820 kg	850 kg	1,220 kg	1,320 kg	1,420 kg


Felix

Forestry tractors

Pfanzelt forestry machines guarantee minimum operating costs. The combination of modern motor technology, power hydraulic systems as well as economical split transmissions are the basis for maximum cost effectiveness. Operating and service costs are other key factors in determining cost efficiency. Pfanzelt forestry machines impress with their professional service concept with long service intervals and full diagnostics for all key components.

Their sheer versatility ensures that they perform many operating hours over the whole year. With permits for use on public roads as standard, work sites can be reached rapidly, flexibly and without expensive transporters.

Pm Trac multipurpose tractors

Only the Pm Trac is both better than a regular tractor and can do even more than a specialised machine. The unique vehicle design of the multipurpose tractor is designed for service in agriculture, forestry and landscape management. ► Page 68

Pfanzelt Felix special forestry hauler

The Felix specialised forestry tractor as combination machine adapts perfectly to various working conditions. The flexibility of the Felix is great and is improved yet further by the short implement changeover times between stanchion cage and clam bunk and by its permit for use on public roads. The Felix can be rapidly and economically redeployed for larger and especially also for smaller jobs. ► Page 76

Made in Germany

Tested quality:

Pm Trac III multipurpose tractor

The all-year vehicle system

With the unveiling of its Pm Trac at the Agritechnica trade fair in Hannover in November 2005, Pfanzelt set new standards in the design of multipurpose tractors. Eight years later, with the presentation of the Pm Trac 2380, the first 3rd generation model, a completely new vehicle was unveiled. The Pfanzelt Pm Trac III tractor system, thanks to its unique vehicle design. is optimised for combined service in agriculture and forestry as well as in landscape management. With the new generation, a completely new vehicle chassis has now been developed with key components, however, that are based on tried and tested series production parts. The core of the Pm Trac machine are the central attachment bay over the centre of the rear axle and the rapid and flexible adaptation to various working conditions.

Technical details that impress:

- Split transmission, infinitely adjustable S-matic gearbox (50 km/h)
- Strong with 175 HP engine power
- Safe working in the forestry, thanks to active parking control of vehicle
- Parking stability due to sliding tube front axle with automatic hydraulic axle locking during crane operation
- Pneumatically suspended XXL high comfort cab with all round vision and operating stand that can be turned through 350°
- Support frame with 4 adjustable mounting and attachment bays for the heaviest working implements
- Pfanzelt mounting system: tool-free quick-change mounting frame for crane and cable winch

Pm Forsttrac

The Pfanzelt Forsttrac 2380 is a special version of the Pm Trac tractor system, optimised for the heaviest duty applications with cable winch and logging grab in the forest. A new vehicle configuration with front winch ensures optimum weight distribution and great ground protection.

The sliding tube front axle with hydraulic suspension and automatic locking offers a new dimension in stability for crane operation.

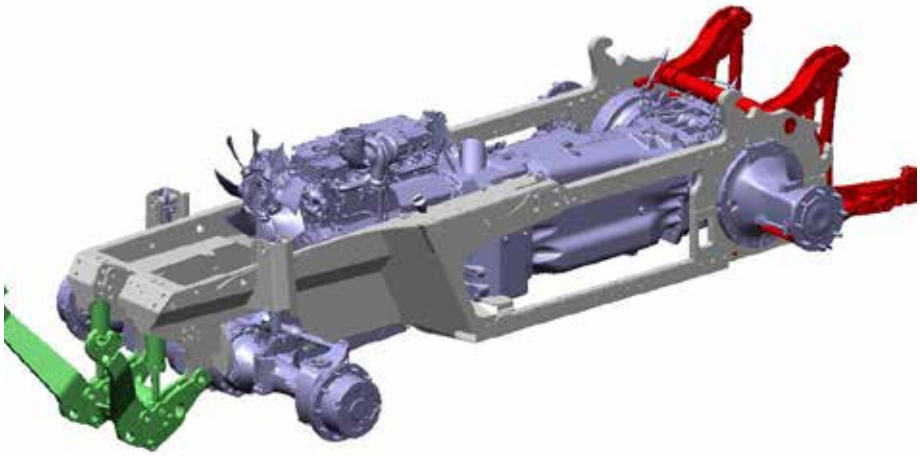
Made in Germany

Tested quality:

Pm Trac – technical specs

The chassis

The Pm Trac II has been mounted on a vehicle chassis from a leading tractor manufacturer. The frame was, however, originally designed for agricultural use and had to be restructured by Pfanzelt for use in forestry and local authority application. With the new production series of the Pm Trac III, a completely new vehicle chassis has now been developed. The basis is a vehicle frame that has been designed from scratch for forestry use. The new front axle, in the form of a sliding tube axle with hydraulic suspension and automatic immobilisation, also constitutes an integral part of the new chassis. As soon as the Pm Trac comes to a halt, the hydraulic suspension is automatically locked. The vehicle now achieves a degree of stability that was previously only attainable by specialised forestry tractors.



The Pfanzelt System for Attachment (PSA)

The relocation of the cab to the centre of the vehicle means that additional implements can be mounted in the tail attachment bay by means of the Pfanzelt System for Attachment (PSA); as a result the attachments are directly over the rear axle.

Via a special quick conversion system, attachments can be changed without requiring tools in a very short time. For example, it now takes less than 20 minutes to attach or remove a crane or cable winch.

As soon as the working implements have been detached, the tractor can be used for agricultural purposes without any additional conversion work, as no modifications have to be made to the tail power lifter or other components that are relevant for forestry operations.

This conversion system also offers advantages in relation to service and cleaning work.

With the tail attachment bay with EHR tail power lifter other working implements such as boom-mounted mowing machines can be operated in combination with an additional green shoulder mower or flail mower. The additional tail attachment bay space is also used for professional forestry operations with a forwarding or loading crane in combination with a cable winch.

The PSA services in the Pm Trac as the carrying frame. The extreme forces generated during the operation of heavy forwarding cranes or mowing booms are absorbed via the bearing frame and dissipated in a controlled fashion.

Pfanzelt XXL cab

The tractor cab developed by Pfanzelt with pneumatic suspension enable smooth and vibration-free operation.

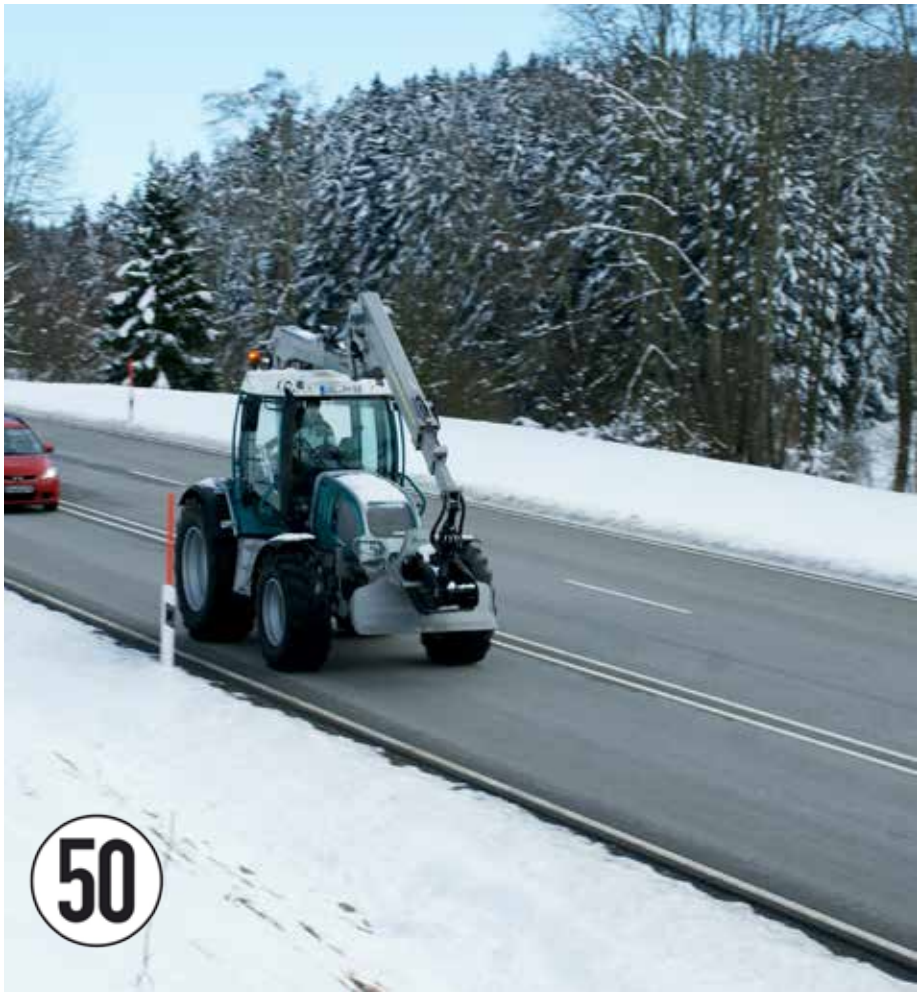
The view over the working environment is further extended with 7 m^2 of glass area. The driver has an even better view of his working zone, this means less stress and increasing safety. The driver has a relaxed and ergonomical sitting and working position on the operator stand that can now can be turned through 350° by electric motor. The intelligent machine controller – which is operated via a touch screen from the seat – also saves the individual preferred settings for different drivers.

The Pfanzelt XXL cab has been especially created with the demands of our customers in mind – low vibrations when working in standing timber yet with maximum comfort when driving at 50 km/h on public roads.

Road travel

The operator can rapidly reach working locations or change between them with a permitted road speed of 50 km/h and a transmission suited for road use, and all without requiring an expensive transporter. Even in combination with a forwarding trailer or a trailer-chipper, the vehicle can still be driven on public roads.

The lighting systems and mudguards required for road use can be easily and rapidly removed for forestry operations. The four mudguards that are mounted with a snap-on system are in this case detached from the vehicle. The indicator lights and headlights are concealed behind protective panels.



Technical specs for Pm Trac III

Multipurpose tractor type	Pm Trac, Forsttrac 2380 4f
Engine	Deutz TDC 6.1 L6 Agri
Power	133 kW
Number of cylinders	6
Cooling	water-cooled/turbocharger/intercooling
Exhaust gas treatment	SCR system with AdBlue injection, particulate filter
Tank capacity	145 l
Transmission	
Gearbox/type	ZF type S-matic
Specifications control function	split transmission, infinitely adjustable reverse gearbox with automatic speed for forward and reverse travel, engine-transmission management, 3 driving ranges, preselectable travel speed 0-50 km/h, clutchless reverser (forward/reverse), active parking control (parking lock)
Front axle	hydropneumatic suspension sliding tube axle with automatic levelling control, all-wheel and differential-locking management (axle automatically locked during stationary crane operation)
Steering	hydrostatic steering, steering column can be folded away when working, incl. joystick control via control unit
Brakes	
Type	hydraulic servo disc brakes in oil bath, disc brakes on the rear axle, spring-loaded parking brake, 2 line pneumatic brake system
PTO	quadruple PTO 540, 540E, 1000, 1000E rpm with PTO management
Hydraulics	
Type	pressure & volume controlled axial piston pump with load sensing
hydraulic pump flow rate / operating pressure	140 l/min / 210 bar
optional auxiliary pump	120 l/min / 210 bar
Control valves	electrically proportionally controlled valves, quantity and time adjustable via display
Electronics	
Type	CAN BUS system: Central control and monitoring of engine transmission, additional control units, **operating terminal with touch screen** at control station
Power lifter	
Front power lifter	max. lifting force 35 kN, double-action
Tail power lifter	max. lifting force 82 kN, actuated via 1-way control valve with floating position, can be switched to double-action for lifting and pressing, adjustable lower arm stabilisers
Front loader	flange points on integrated bearing frame for mounting front loader attachment frames
Tail attachment bay	Pfanzelt System for Attachments (PSA), vehicle frame for stabilisation of the modular structure with hook mounting
Cab	spacious cab with air suspension and all-round view (over 7 m^2 window area), two large roof windows front and rear, safety cab as per ISO standards (ROPS)
Rotary seat with air suspension and seat heater	rotatable with electric motor through 350°
Ventilation	heating with 3-stage blower, automatic air-conditioning
Fire extinguisher	series
Lighting	12 working floodlights integrated in cab roof
Additional standard equipment	detachable mudguards, stowage bins with integrated pneumatically operated step

• Standard ○ Option - Not deliverable

Multipurpose tractor type	**Pm Trac, Forsttrac 2385 4f**
Engine	Deutz TDC 6.1 L6 Agri
Power	174 kW
Number of cylinders	6
Cooling	water-cooled/turbocharger/intercooling
Exhaust gas treatment	SCR system with AdBlue injection, particulate filter
Tank capacity	145 l
Transmission	
Gearbox/type	ZF type S-matic
Specifications control function	split transmission, infinitely adjustable reverse gearbox with automatic speed for forward and reverse travel, engine-transmission management, 3 driving ranges, preselectable travel speed 0-50 km/h, clutchless reverser (forward/reverse), active parking control (parking lock)
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Rotary seat with air suspension and seat heater	rotatable with electric motor through 350°
Ventilation	heating with 3-stage blower, automatic air-conditioning
Fire extinguisher	series
Lighting	12 working floodlights integrated in cab roof
Additional standard equipment	detachable mudguards, stowage bins with integrated pneumatically operated step


Felix

Pfanzelt Felix special forestry hauler

The Pfanzelt Felix specialised forestry tractor can be put together according to specific needs thanks to its modular design and optimally adapted to individual applications. The front section is the same in all versions. The drive unit consisting of a Deutz engine and a ZF gearbox are located under the cab in the machinery compartment. The engine leaves nothing to be desired in terms of durability, torque and quiet running due to state-of-the-art common rail technology. The engine is connected to an infinitely adjustable, split transmission S-matic gearbox from ZF with active parking control. The resulting unit is ideal for both operating situations – road travel and timber forwarding – and is therefore extremely flexible.

The allocation of functions between the various of the Felix specialised forestry tractor is unique but completely rational. Thus the cab is located very far forward, the cable winch and crane in the middle of the vehicle and the clam bunk or stanchion cage directly over the rear axle, which is optimum in terms of centre of gravity.

Felix 4-wheel special forestry hauler

The Pfanzelt Felix 206 4-WD special forestry hauler is a world beater when it comes to manoeuvrability. By a skilful combination of joint and stub axle steering, previously unimaginable manoeuvring options are made possible. ► Page 78

Felix 6-wheel special forestry hauler

As a combination machine, the Pfanzelt Felix 211 6-WD special forestry hauler can be ideally adapted to all field conditions. ► Page 82

Made in Germany

Tested quality:


Fm-kran

Felix special forestry tractor 4WD

The rear section of the Felix in the 4WD version is designed for working with long timber. In the early days of mechanical timber recovery, all that was available was the cable winch. It was several years later that cranes and clam bunks were introduced, whereby the underlying machine system remained the same. Consequently all additional implements were fitted to the tail end of the machine. In order to deal with the resulting weight distribution problems, the front end of the machine was ballasted. This resulted in a disproportionately heavy machine – something that is problematic in relation to conserving the soil structure.

Pfanzelt has consistently developed its design and adapted it to today's requirements.

Another highlight is the steering system of the Felix 206 4-WD.

Technical details that impress:

- Optimum weight distribution for demanding ground conditions
- Combined steering system for maximum protection of standing timber and impressive manoeuvrability

Made in Germany

Tested quality:

Felix – technical specs

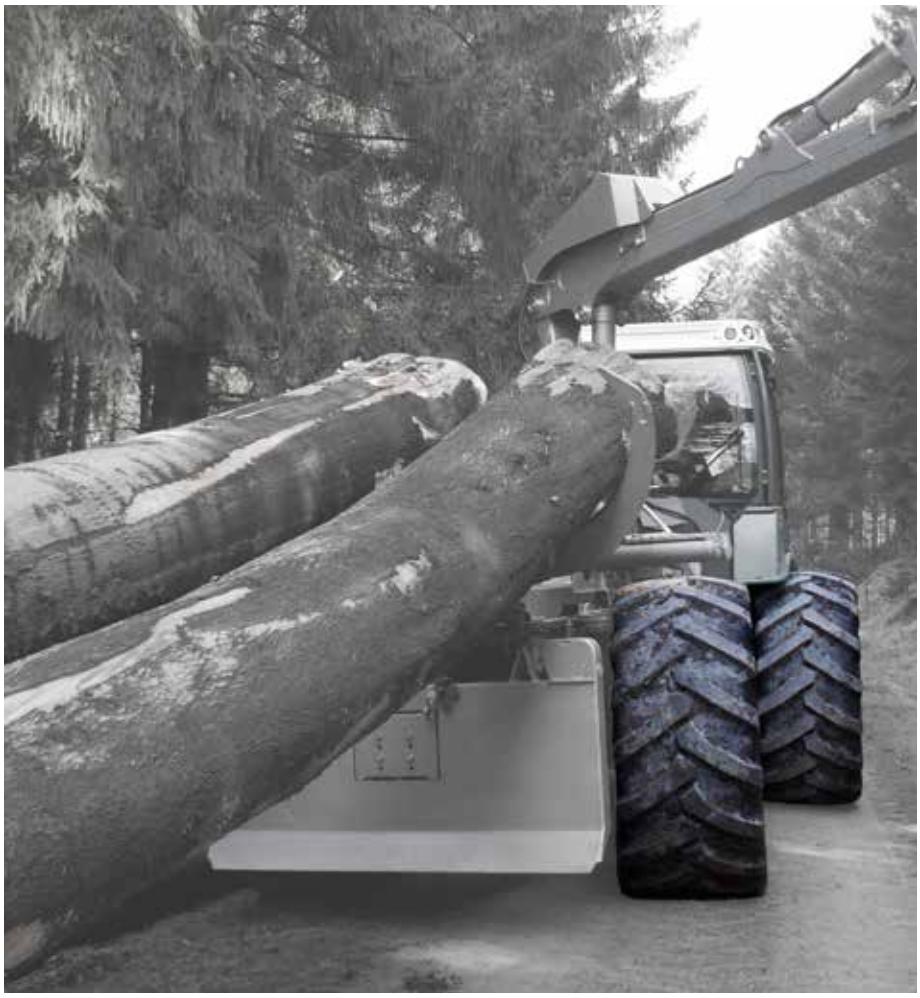
The front section

Our new customers are always surprised when they see the Felix special forestry hauler for the first time. The reason is the unorthodox division of the vehicle. Thus the cab is located right at the front.

If you consider this distribution of units, you have to admit that while it may be unorthodox it is certainly logical. One the one hand, the short hood gives the driver an optimum view, on the other, due to the ideal approach angle based on the distance between the front axles and front stacking shield, no tracks are left when entering the trail.

The vehicle division

A rear section with sufficient mounting space was designed so that cable winches, crane and clam bunk could be fitted. This configuration prevents the machine tipping during forwarding with heavy timber in the crane or clam bunk. At the same time, due to the optimum weight distribution, it is possible to work in the most challenging terrain while minimising damage to the ground and fuel consumption.



The steering system

The Pfanzelt Felix 206 4-WD special forestry hauler is a world beater when it comes to manoeuvrability. By a skilful combination of joint and stub axle steering, previously unimaginable manoeuvring options are made possible. The steering system is an important design feature of the Felix 4WD. When driving on public roads at 40 km/h, only the articulated steering is operated by the steering wheel. During operation, the steering system is switched to joystick operation. This means that the operator can apply both articulation and stub axle steering, independently of each other. The result is unsurpassed manoeuvrability and a steering angle of 70°.

Precarious situations occur almost daily, for example when the vehicle has slipped into a ditch. If the vehicle has problems manoeuvring with pure articulation steering, the Felix can effortlessly drive out of the ditch in parallel mode. The optimum weight distribution means that even wet ground is protected when travelling in crabbing mode.

Licensing for travel on public roads

When considering the work process of a forestry machine, it is essential start the analysis at the yard and not only when driving into the wood. It is also a major factor in its economic efficiency how the machine reaches the work location and how it travels from when work site to the next. Does the forestry machine have to be brought to the location by a truck on a low loader or does it have a transmission system that also enables travel on public roads at up to 40 km/h?

The Felix offers the flexibility of a vehicle concept that does not require any external aids to reach the work site or to change between work sites and is also suited for felling work in various working areas.

The service options

The distribution of the vehicle components requires that the engine, transmission and the main hydraulic components are installed under the cab. In spite of this, all areas that have to be accessed in the Felix specialised forestry tractor for service work can be easily reached without tools via various special service openings. In addition to the ergonomic one-man system for hydraulically opening and closing the vehicle floor plates, the cab and the fuel tank, for example, can be hydraulically tilted open. Additional service hatches on the accesses ladders provide side access.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Felix 6WD special forestry hauler

In comparison to the predecessor model, the rear section of the Felix 211 has been completely reworked. What has not changed is the underlying combined machine concept, which is compact and manoeuvrable for handling long timber while offering a large loading capacity for short timber. This technical solution gives a major lead in economic efficiency compared with other approaches. The rear section is configured so that the wheel base can be hydraulically telescoped by 1,200 mm to create perfect conditions for working with both long and short timber.

The 6-wheel variant is used as short chassis for long timber handling, as combination chassis with telescoping rear section for short and long timber handling and as long chassis for forwarding.

Technical details that impress:

- Hydraulically telescoping rear section
- Hydraulically height adjustable roller block
- Pfanzelt quick change system for rear section attachments
- Economical and easy on standing timber, a unique system

Made in Germany

Tested quality:

Felix 6WD - technical specs

Roller block

Even on steep slopes, efficient and safe working is assured with the hydraulic height adjustment of the roller block.

Guide tubes for winch cables ensure the required protection of the cable winch unit right up to the cable infeed roller. The risk of the cable being damaged by the gripper is therefore excluded.

Street rubbers caterpillar track

Equipped with a street rubber caterpillar track, the Felix becomes the ideal combination machine for perfect soil structure protection and maximum flexibility. The bogie track system is basically nothing new in the forestry industry. By the special design and the use of rubber tracks, travel is now possible on public roads without restrictions.

The quick conversion system

The Pfanzelt quick conversion system enables rapid and tool-free conversion of the stanchion cage to a clam bunk or woodZIPPER. During conversion of the machine, add-ons can be fitted to the flat bed.

The vehicle division

The rear section is configured so that the wheel base can be hydraulically telescoped by 1,200 mm to create perfect conditions for working with both long and short timber. The Felix 6-WD with short wheelbase is compact and manoeuvrable for handling long timber with crane and clam bunk. If the situation requires that short timber also has to be loaded, the wheelbase can be hydraulically extended. thus creating a stanchion cage for short timber transport. In contrast to other combination machines, the stanchion cage is thus optimally located on the vehicle in terms of centre of gravity.

Felix specialised forestry tractor technical specs

Forwarder type	Felix 207 4WD *K*	Felix 207 4WD *V*
Engine		
Engine / type	Deutz TCD 6.1 L6	
Power (kW/HP)	129/177	
Number of cylinders	6	
Cooling	water-cooled/turbocharger/intercooling	
Cylinder capacity	6,100 cm^3	
Max. torque	1,000 Nm / 1,450 min^{-1}	
Tank capacity	170 l	
Transmission		
Gearbox/type	ZF type S-matic	
Specifications control function,	split transmission, infinitely adjustable reverse gearbox with automatic speed travel speed 0-40 km/h, clutchless reverser (forward/reverse), active parking control (parking lock), spring loaded, parking brake	
Frame	aggregate frame made of fine grain steel, box structure, central spar	
Telescoping central spar	-	• (1,200 mm)
Hydraulics		
Type	pressure & volume controlled axial piston pump with load sensing	
hydraulic pump flow rate / operating pressure	216 l/min / 235 bar	
Extractable hydraulic oil volume	approx. 70 l	
Control valves	electrically proportionally controlled valves, quantity and time adjustable via display, PLC	
Axles		
Front axle (planetary rigid axle)	Kessler, load-bearing capacity 29 t	
Rear axle (planetary steering axle)	Kessler, load-bearing capacity 29 t	
All-wheel drive		
Locking differential front / rear axle	electrohydraulically activated/deactivated, 100%	
Tyres	front and rear axle 620/75 R26“	
Steering	combined steering function consisting of articulated and stub axle steering at rear, load-sensing controlled, steering wheel control for road travel, joystick control for working	
Cab	spacious cab with air suspension and all-round view (over 7 m^2 window area), two large roof windows front and rear, safety cab as per ISO standards (ROPS)	
Rotary seat with air suspension and seat heater	• (rotatable with electric motor through 350°)	
Ventilation	heating with 3-stage blower, automatic air-conditioning	
Fire extinguisher	•	
Lighting	12 working floodlights integrated in cab roof	
Dimensions / weights		
Dead weight	12,500 kg (varying according to winch, crane and attachments)	
Permitted total weight on roads	18,000 kg (40 km/h)	
Permitted total weight off road	24,000 kg (10 km/h)	
Wheelbase	3,400 mm (optionally 4,400 mm, stanchion cage possible)	
Total height (cab)	3,340 mm	
Ground clearance	560 mm (standard tyres)	
External width	2,550 mm	
Total length (with front stacking shield and flapper plate)	7,140 mm	7,140, 8,340 mm

• Standard ○ Option - Not deliverable

Forwarder type	**Felix 212 6WD *V***	**Felix 212 6WD *K***	**Felix 212y 6WD *F***
Engine			
Engine / type	Deutz TCD 6.1 L6		
Power (kW/HP)	129 / 177		
Number of cylinders	6		
Cooling	water-cooled/turbocharger/intercooling		
Cylinder capacity	6,100 cm^3		
Max. torque	1,000 Nm / 1,450 min^{-1}		
Tank capacity	170 l		
Transmission			
Gearbox/type	ZF type S-matic		
Specifications control function	split transmission, infinitely adjustable reverse gearbox with automatic speed travel speed 0-40 km/h, clutchless reverser (forward/reverse), active parking control (parking lock), spring loaded, parking brake		
Frame	aggregate frame made of fine grain steel, box structure, central spar		
Telescoping central spar	• (1,200 mm)	-	-
Loading bed			
Loading length	variable 3,240, 4,440 mm	-	4,440 mm
Loading cross section	3.2 m^2	*without flapper grille*	3,2 m^2
Flat bed width (internal)	2,070 mm	-	2,070 mm
Hydraulics			
Type	pressure & volume controlled axial piston pump with load sensing		
hydraulic pump flow rate / operating pressure	216 l/min / 235 bar		
Extractable hydraulic oil volume	approx. 70 l		
Control valves	electrically proportionally controlled valves, quantity and time adjustable via display, PLC		
Axles			
Front axle (planetary rigid axle)	Kessler, load-bearing capacity 29 t		
Rear axle (planetary steering axle)	NAF tandem axle		
All-wheel drive			
Locking differential front / rear axle	electrohydraulically activated/deactivated, 100%		
Tyres	front axle 620/75 R26“ - rear axle 650/45 22.5”		
Steering	articulated steering, steering wheel control for road travel, joystick control for working		
Cab	spacious cab with air suspension and all-round view (over 7 m^2 window area), two large roof windows front and rear, safety cab as per ISO standards (ROPS)		
Rotary seat with air suspension and seat heater	• (rotatable with electric motor through 350°)		
Ventilation	heating with 3-stage blower, automatic air-conditioning		
Fire extinguisher	•	•	•
Lighting	12 working floodlights integrated in cab roof		
Dimensions / weights			
Dead weight	13,800 kg (varying according to winch, crane and attachments)		
Permitted total weight on roads	20,400 kg (40 km/h)		
Permitted total weight off road	24,000 kg (10 km/h)		
Total height (cab)	3,340 mm		
Ground clearance	520 mm (standard tyres)		
External width	2,550 mm		
Total length	7,820 / 9,020 mm	7,820	9,020 mm

Wood fuel felling gripper

The Pfanzelt 4023 wood fuel felling gripper is designed so that it is optimally suited for harvesting trunks up to 40 cm girth and for loading the harvested wood fuel.

Mode of operation with felling gripper

The Pfanzelt felling gripper is mounted on loading or forwarding cranes with a net lifting force of approx. 5 m/t and with a reach over 8m. The hydraulics is supplied via a separate hose package running externally past the crane. The felling gripper is normally mounted via pendulum and rotator. For initial thinning, the felling gripper can also be mounted via a mounting plate with cylinder guide for optimum fixing and to avoid damage to standing timber. This prevents the machine swinging.

Technical details that impress:

- Felling, sorting, collecting and loading of wood fuel during initial thinning, track clearance or biomass production
- Hydraulically adjustable sawing unit with sickle toothing
- Adjustment of sawing unit to the trunk diameter of the tree to be felled
- Maximum trunk diameter for felling: 35 cm
- Automatic chain tensioner and lubrication
- Quick-action chain replacement system

Made in Germany

Felling and sorting

The Pfanzelt felling gripper is used to fell wood fuel during initial thinning, for opening forest trails in standing timber and on short-cycle plantations with older trees. The felling gripper is ideally suited for cutting back branches on green shoulders.

Harvesting and loading

In addition, the felling gripper can also be fitted with double clam shell grippers to collect and load tree sections or for directly loading of cut wood fuel.

This is possible because in contrast to other systems, the sawing unit can be pivoted via a sickle toothed gearing out of the gripper range.

Logging grabs

The hydraulic logging grab is supplied with attachment block for front loaders and 3-point hitch. The maximises flexibility when forwarding or loading logs. Forwarding and loading work can be performed significantly faster with the logging grab. Furthermore, no effort is required by the operator and he does not have to get out of the cab. The curved tooth rail between the lower arms can securely raise and carry fixed lengths. The gripper is open/closed and the rotator turned by an electrical switch.

Technical details that impress:

- Attachment block for front loaders and 3-point attachment
- Professional double clam shell gripper with 0.23 m^2 cross sectional area
- Electrical switching between gripper and rotator

Made in Germany

Lighting protection

Engine hood protection

Service friendly

Cab protection

Tank protection

Lighting protection

Forestry protection devices

The Pfanzelt forestry protection system offers sophisticated forestry protection equipment for nearly all tractor models from various manufacturers. The emphasis is always on the safety of the driver and protection of the driver's cab also as of the machinery and the underlying ground.

The range includes underrun protection, gearbox, engine, axle and tank cladding and branch protection for the cab. Quick-fit mudguards, lighting and mirrors are also available.

Technical details that impress:

- Optimum protection for the driver without obstructions to his field of vision
- Service ports for rapid access to machinery in spite of protective features
- Minimum impairment of ground clearance due to floor pan
- Compact design and low intrinsic weight due to use of high strength fine grain steels

Floor pan

Floor pan

Front axle protection

Front stacking shield unit

Made in Germany

High wheel tractors

The efficient cultivation of delicate crops such as asparagus requires a highly manoeuvrable tractor with high ground clearance so that it can safely drive over the crop rows. For this special application the Fendt Vario 211 has been modified to create a high wheel tractor. So that implements can be operated outside the wheel steering angle and to enable ergonomic operation with front-mounted implements, the front power lifter has been extended.

Technical details that impress:

- Ground clearance raised from 475 mm to 720 mm
- Infinitely adjustable Vario transmission from 0-40 km/h
- Permitted total weight: 7,000 kg
- Tyres: Rear 320/90 R50; front 270/95 R48
- Conversions: Interim flange rear axle, cab elevation, fuel tank, battery case, hydraulic connections front, access ladder, mudguards, front power lifter, TÜV certificate

HERGESTELLT IN DEUTSCHLAND

Pfanzelt machinery in service (photos from customers)

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