

FELLA SANOS Hay tedders




FELLA

SANOS
Hay tedders

Harvesting energy.





A worried glance at the horizon.
Black clouds are drawing in.
The clock is ticking.
It will be pouring in less than an hour.
The pleasant, sunny days are gone.
And the work is done.
For the harvest is already saved.



Harvesting energy.

There's a very small window for harvesting, and the time pressure is great. There are often only a few hours before the weather changes again. Then everything has to move quickly.

FELLA offers tedders you can rely on. Machines that run even under the most trying of conditions. Machines that are suitable for your field. And most of all, machines that can be relied on to get the harvest in the dry quickly.

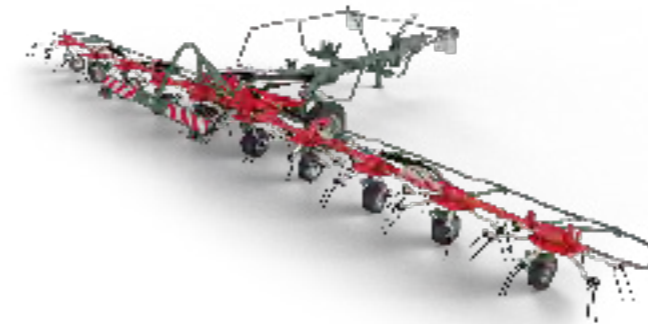


GREEN FORAGE EXPERTISE FROM FRANCONIA
Tradition, innovation and passion –
that's the recipe for success held by the green
forage centre of excellence in Feucht.

Many challenges, one solution.

They can withstand the longest working days:
FELLA tedders are stable and durable.
And always totally reliable.

FELLA helps you achieve high-quality forage.
Harvesting energy with FELLA.



SANOS tedders with transport chassis

Page 22

- ▶ Wide working width
- ▶ Compact transport dimensions
- ▶ Attachment to tractor linkage drawbar or hitch
- ▶ Working widths 7.70–12.70 m



SANOS trailed tedders

Page 28

- ▶ High area coverage capacity
- ▶ Tried and tested technology
- ▶ Optimum ground contour following
- ▶ Working widths 10.20–12,70 m

SANOS tedders with three-point attachment



ALPINE Page 14

- ▶ Specialists for alpine terrain
- ▶ Lightweight construction
- ▶ Ease of handling
- ▶ Working widths 4.00–5.70 m

WITH FOLLOW-UP DEVICE Page 16

- ▶ Wide range of uses
- ▶ Standard mechanical edge spreading device
- ▶ Patented traction/compression system
- ▶ Working widths 4.50–10.70 m





STABILITY AND SMOOTH RUNNING

The large-dimensioned, induction-hardened and ground tooth flanks guarantee smooth running and high break resistance.

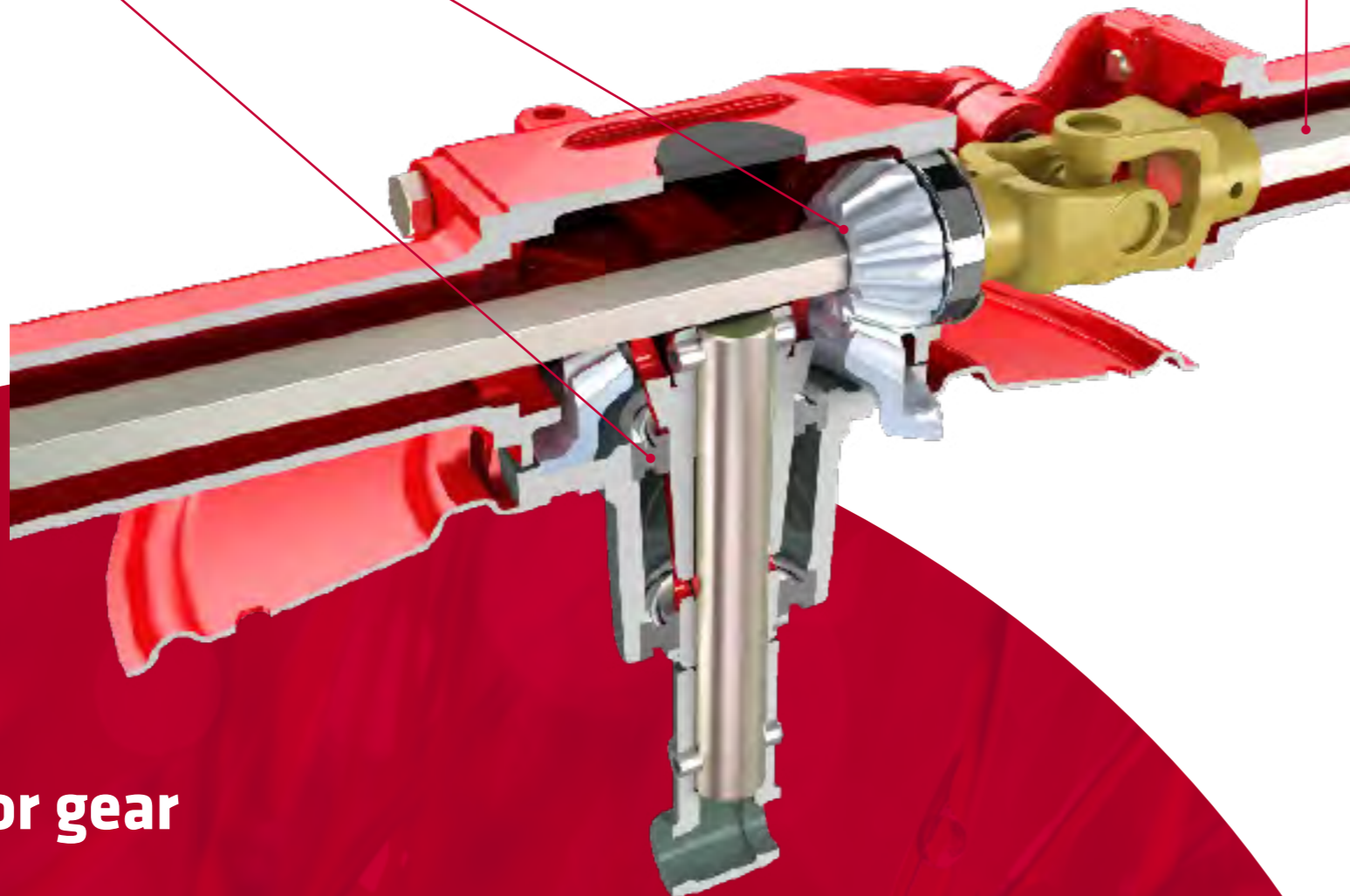
HIGH ECONOMY

Thanks to the 1:2 transmission ratio between the rotor head and the hinge head, the tine speed can be reached even with low engine power.

- ▶ Lower fuel consumption
- ▶ Reduced wear

RELIABILITY

The rotor hub bearing has large bearings and a significant distance between them. This provides robustness of the rotor head for reliable use.



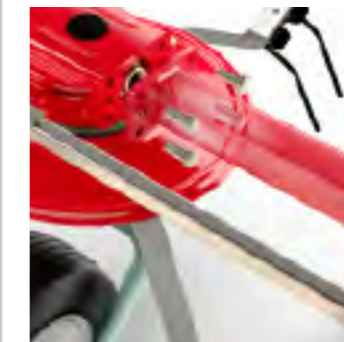
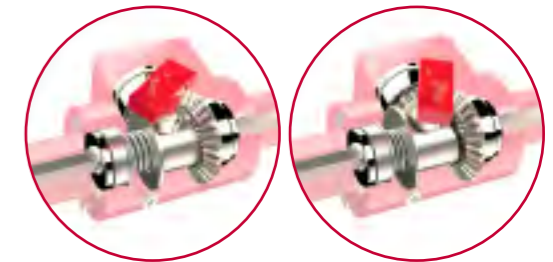
OPTIMISED POWER TRANSMISSION

The individual rotors are driven via a large hexagonal shaft and robust, maintenance-free universal joints. This type of power transmission is free from backlash, smooth and reliable, and has proven it's self time and time again, both in Fella tedders and Fella Drum Mowers, under harsh working conditions.



SWINGING INTO ACTION

When the machine is folded to the transport position, the automatic safety disconnection is activated, with the rotors merely freewheeling. Damage to the drive is therefore reliably prevented.



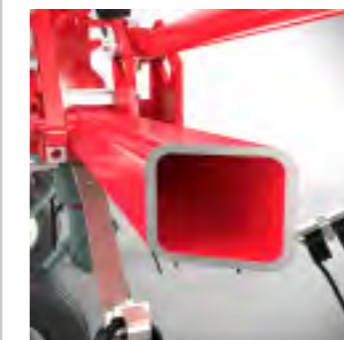
MAINTENANCE-FRIENDLY

The elements are bolted on individually and are easily accessible, thus enabling quick, cost-effective replacement of individual components.



LONG-LASTING FUNCTIONALITY

The individual rotor frames are connected via sturdy frame joints with special flange sleeves and hardened pins. All joints are generously dimensioned and can be lubricated. This ensures optimum ground following even after many years of service.



SOLID STRUCTURE

All hay tedders are equipped with thick-walled, strongly heavy-duty square frame tubes which ensure excellent rigidity and a very long service life.

SANOS rotor gear

Durability meets stability.

FELLA rotor heads are of an enclosed design which reliably protects all important components from dirt and dust. This design ensures a long service life and makes it a very attractive proposition due to the low maintenance effort required.

FELLA character

Typical features of FELLA tedders.



SUPER C TINES: HIGH-PERFORMANCE FLEXIBLE TINES

The Super C quality feature guarantees an extremely high level of quality together with an extra-long service life. As early as the manufacturing stage, special process steps are used to design the tines for toughness, flexibility and durability.

- ▶ 6 windings
- ▶ 70 mm winding diameter
- ▶ Test cycle with 200,000 impacts
- ▶ 9.5 mm tine diameter



The SANOS tedders are equipped as standard with a new tine saver; you can choose to add this feature on the alpine variant. This tine saver protects machines that are following behind throughout the entire harvesting chain from downtimes.

SANOS TINE ARM: FLEXIBILITY MAKES ALL THE DIFFERENCE

At FELLA, the tines are secured under the tine arm. On the one hand, this arrangement has the advantage that the upper side is smooth and, as a result, no forage can be left hanging. On the other hand, it allows the tine greater freedom of movement, which contributes to optimal processing of your high-quality forage.



The tine arms are made of tough, galvanised flat steel bar, which allows a wide contact surface between tine and rotor plate. This ensures very good power transmission even under the harshest of working conditions. The forces are optimally absorbed whenever the ground is uneven.



SPREADING ANGLE ADJUSTMENT: ADJUSTABLE FOR YOUR NEEDS

In order to meet the varying requirements for basic foraging, the FELLA SANOS is equipped as standard with a spreading angle adjustment system. This allows the spreading angle to be set to one of three positions.

COMB EFFECT FOR OPTIMUM DRYING PROCESS

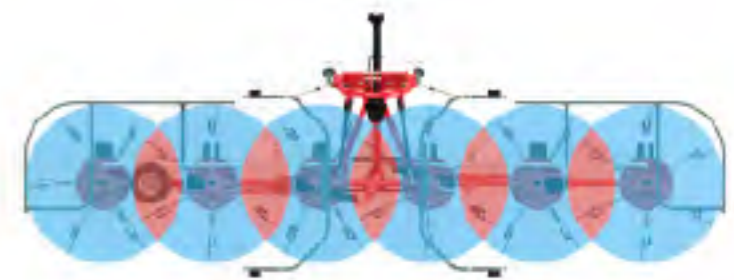
Only equal-sided tines allow you to achieve an optimum mixing of your high-quality forage. This is known as the comb effect since, during the tedding process, the different layers of forage are perfectly mixed together and turned, providing the optimum production of high-quality forage.

Another advantage of using tines with sides of equal length is the consistent load and wear. Furthermore, only one sort of tine is required.



EASY TURNING

A prerequisite for a perfect spread pattern is making sure the entire foraged amount is gathered. Thanks to the optimised, high degree of overlapping of the rotors in combination with an optimised ground adaptation, the forage is all picked up and spread in an even layer of forage.



ADJUSTED TO SUIT THE GROUND

For the best ground contour following, the perfect combination of chassis, running wheel and tines is of paramount importance. The short distance enables precise guidance of the tines along the ground contours, thus guaranteeing optimum forage pick-up. The sward and ground are protected, and the forage is collected in the best possible manner.

SANOS TEDDERS WITH THREE-POINT ATTACHMENT

**The all-round genius
for flexible use.**

Three-point attachment, alpine

The obvious specialists for alpine terrain.

- ▶ Working widths 4.00–5.70 m
- ▶ Standard edge spreading device on both sides
- ▶ Low weight, sturdy design
- ▶ Automatic locking device on the three-point headstock (SANOS DN models)



SANOS 401 DS

Three-point headstock, rigid – specifically for attachment to mountain tractors

SANOS 401DN SANOS 431 DN SANOS 601 DN

Three-point headstock, follow-up device

FELLA has developed four very light yet robust tedders specifically for alpine terrain. Maximum safety is ensured even on extreme slopes thanks to the low centre of gravity and the compact transport position.



STEADY ON SLOPING TERRAIN

The synchronised lifting facility prevents adverse weight distribution during folding operations and gives the machine stability even on sloping terrain.

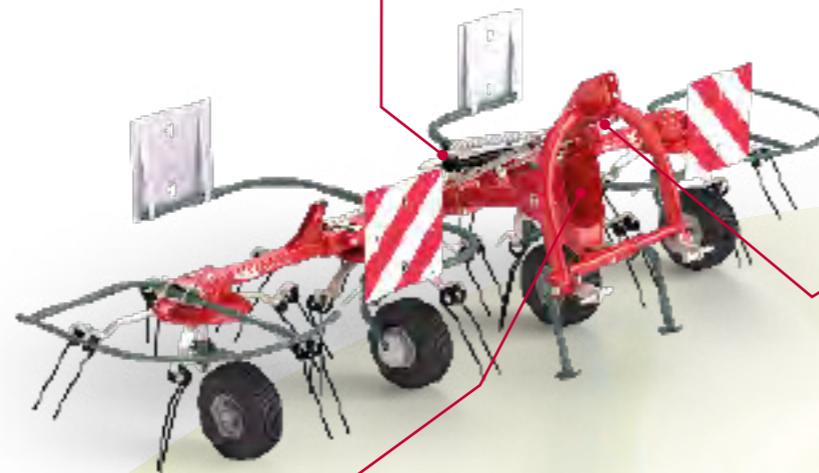


SAFETY ON SLOPING TERRAIN

The automatic locking device prevents the machine from swinging in the direction of travel when it is being raised and ensures stability on sloping terrain (DN models).

OPTIMUM GROUND CONTOUR FOLLOWING ON SLOPING TERRAIN

The patented, low-lying towing point guarantees excellent trailing behaviour and prevents downhill travelling.



LIGHTWEIGHT 6-ROTOR MACHINE

The SANOS 601 DN with its 6 rotors is ideally suited for small alpine tractors. Despite its large working width of 5.70 m, it weighs less than 500 kg.



DRIVING AND TRANSPORT STABILITY

Due to the short, compact attachment, the centre of gravity lies close to the tractor. This leads to excellent track stability on sloping terrain and on roads.



ACCESSORIES:

- ▶ Contact wheel for improved ground adaptation
- ▶ Tine saver

Three-point attachment with follow-up device

The all-rounder.

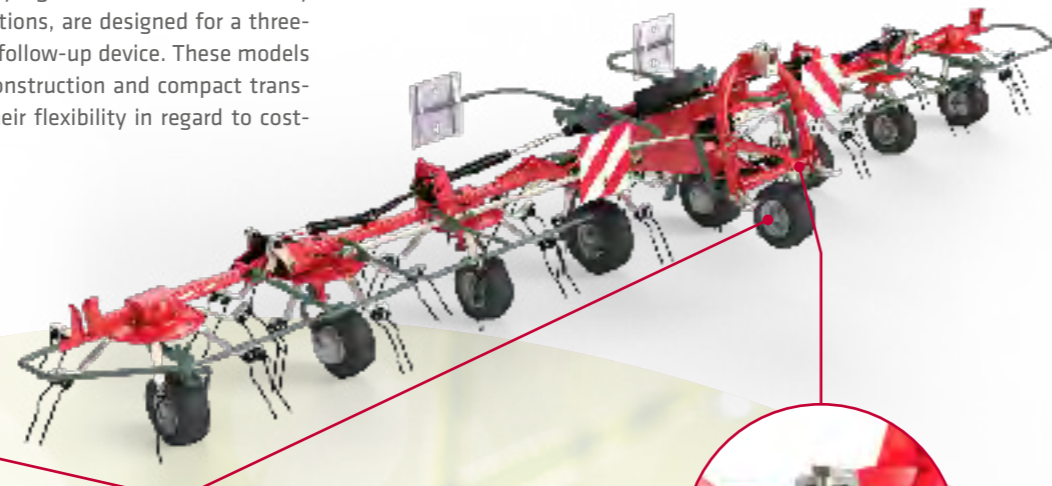
- ▶ Working widths 4.50–8.60 m
- ▶ Optimum ground contour following – excellent trailing behaviour
- ▶ Close attachment to the tractor
- ▶ Robust D-shaped three-point attachment
- ▶ Standard edge spreading device on both sides
- ▶ KENNFIXX® connector (SANOS 8608 DN)



SANOS 4504 DN
SANOS 5204 DN
SANOS 6606 DN
SANOS 7706 DN
SANOS 8608 DN

Three-point headstock, follow-up device

The classic allrounders in the FELLA range of hay tedders, with which you can produce high-quality forage in any region and under an extremely wide range of different operating conditions, are designed for a three-point attachment and equipped with a follow-up device. These models attract buyers thanks to their sturdy construction and compact transportation dimensions and thanks to their flexibility in regard to cost-effectiveness and work output.



ACCURATE DETECTION OF THE GROUND CONTOURS

The contact wheel with balloon tyre ensures optimum ground adaptation (special equipment).

ACCESSORIES

- ▶ Night swathing gear box
- ▶ Hydraulic edge spreading device

SWING-FREE TRAVEL

The three-point hay tedders are equipped with an integrated, adjustable swing brake. The brake reliably prevents the tedder from rocking where there are heavy deposits of forage or if the tractor and machine are travelling at relatively high speeds (SANOS 8608 DN also with shock absorbing struts).

BEST FORAGE – ACCURATE RUNNING CHARACTERISTICS

In order to work as effectively as possible, the three-point machines are equipped with the patented traction/compression system.

- ▶ Consistent ground adaptation in any situation prevents the tines from penetrating into the ground, reduces forage contamination and protects the sward.
- ▶ Smooth run of the tedder in any situation
- ▶ Excellent trailing behaviour on bends and when travelling downhill thanks to the low-lying towing point
- ▶ Direct transmission of the machine weight onto the lower link – no bending moment and no wear on the three-point headstock

OPTIMUM BOUNDARY CONDITIONS

The central, double-sided edge spreading device helps to also prevent loss of forage at the field edge or when working in hillside lines. It can be easily adjusted from the tractor seat.



SAFE YET COMFORTABLE

- ▶ The rotors are easily folded in and out hydraulically in a synchronised operation directly from the tractor seat. Safe operation is also possible when working on hillsides thanks to the synchronised lifting facility.
- ▶ When the machine is folded to the transport position, the automatic safety disconnection is activated, with the rotors merely freewheeling. This reliably protects the machines from the consequences of incorrect operation and guarantees safe travel out on the road.

Three-point attachment with follow-up device

The large-scale professional.

- ▶ Working width of 10.70 m
- ▶ Optimum ground contour following – excellent trailing behaviour
- ▶ Hydraulic headland lifting as standard
- ▶ Latest swing brake generation
- ▶ KENNFIXX® connector



SANOS 11010 DN

Three-point attachment with follow-up device

With its new large-scale tedder, FELLA is now also bringing maximum power to the field in the three-point segment. With working widths of almost 11 metres, patented technologies such as the traction/compression system and the low-lying towing point play to their strengths and guarantee a high throughput at optimum forage quality. The newly designed swing brake adjusted to the size and the short attachment ensure even greater safety and convenience on any terrain.



LATEST GENERATION

The three-point headstock contains the integrated and updated swing brake of the latest generation – it is large and offers maximum efficiency.



OPTIMUM BOUNDARY CONDITIONS

The optional hydraulic crop curtain prevents loss of forage at the edge of the field. The equipment can be conveniently controlled from the tractor seat.



ACCESSORIES

- ▶ Night swath gear
- ▶ Hydraulically folding edge spreading cloth
- ▶ Hydraulic transport lock

DRIVING AND TRANSPORT STABILITY

Due to the short, compact attachment, the centre of gravity lies close to the tractor. This is particularly important for machines this size to ensure excellent track stability on slopes and on the road.



COMPACT ON THE ROAD, WIDE-REACHING ON THE FIELD

Despite its large working width and 10 rotors, the sophisticated folding mechanism makes for compact transport dimensions.

MAXIMUM GROUND CLEARANCE

The standard hydraulic headland lifting offers maximum ground clearance for driving over ditches and turning on the headland.



SAFE YET COMFORTABLE

- ▶ The rotors are easily folded in and out hydraulically in a synchronised operation directly from the tractor seat. Thanks to the synchronised lifting facility, safe operation is also possible when working on hillsides.
- ▶ When the machine is folded to the transport position, the automatic safety disconnection is activated, with the rotors merely freewheeling. This reliably protects the machines from the consequences of an incorrect operation procedure and guarantees safe travel out on the road.



SANOS TEDDERS WITH TRANSPORT CHASSIS



**Compact on the road,
big in action.**

Transport chassis

Big performance for lightweight tractors.

- ▶ Working widths of 7.70 m and 8.60 m
- ▶ Automatic follow-up device
- ▶ High level of cost-effectiveness and convenience of operation
- ▶ Transport speed of up to 40 km/h (country-specific) possible
- ▶ Optimum weight distribution
- ▶ Standard edge spreading device on both sides
- ▶ KENNFIXX® connector (SANOS 901 Trans)



SANOS 800 Trans

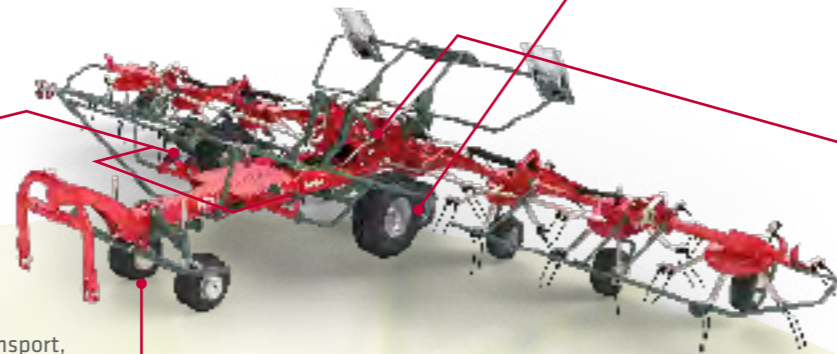
Transport chassis

On the SANOS 800 Trans, attachment is made via a tractor linkage drawbar or a hitch. As a result, maximum flexibility and a high level of cost-effectiveness are guaranteed because this machine can be operated with a tractor power output from as low as 40 hp at a working width of 7.70 m.

SANOS 901 Trans

Transport chassis

The SANOS 901 Trans is conveniently hitched via the tractor lower link. With a working width of 8.6 m, you can easily ted any area of ground, no matter how big.



RELIEF

The rotors are positioned on large rubber dampers during transport, thus relieving the load on the machine.

ACCESSORIES

- ▶ Night swathing gear box
- ▶ Contact wheels with hyper-balloon tyre for improved ground adaptation
- ▶ Hydraulic edge spreading device

ADJUSTED TO SUIT THE GROUND

The movable contact wheels (available as an option) optimise ground sensing and ensure tidy raking and protection of the sward.

UNCOMPROMISING TRANSPORT CHASSIS

- ▶ The transport chassis is raised to working position in front of the rotors and is not therefore in the forage throw path. Furthermore, the weight is evenly distributed on the rotor chassis and tractor, so loading on the centre rotors is therefore lower than with the chassis folded to the rear.
- ▶ The wide track with large-dimensioned tyres ensures peaceful driving behaviour and secure footing on the slope.



SAFETY COMES FIRST

SLS (Security Lock System) is an automatic, hydraulically activated switch-off and positioning system with integrated freewheel, which interrupts the flow of power to the rotors when the halves of the machine are folded up. As a result, a high degree of safety is ensured in the transport position as well as during maintenance work. The possibility of damage to the power train is also excluded in the event of incorrect operation.



OPERATION AND TRANSPORT COMFORT

The rotors are easily folded in and out by a hydraulic sequential control system directly from the tractor seat. Safe operation is also possible when working on hillsides thanks to the synchronised lifting facility. When the machine is folded to the transport position, the automatic safety disconnection of the rotors is activated. This reliably protects the machines from the consequences of incorrect operation and guarantees safe travel out on the road.

Transport chassis

Narrow on the road – wide out in the field.

- ▶ Working widths of 10.20 m and 12.70 m
- ▶ Synchronised lifting facility of the rotors for high level of stability
- ▶ Automatic follow-up device
- ▶ Transport speed of up to 40 km/h (country-specific) possible
- ▶ KENNFIXX® connector



SANOS 11008 Trans SANOS 13010 Trans

Transport chassis

The SANOS 11008 Trans and SANOS 13010 Trans tedders stand out from the crowd thanks to their compact design, low transport length and superb agility. Despite the compact transport dimensions, these tedders have impressive working widths of 10.20 m or 12.70 m.

RELIEF

The rotors are stored in special pockets during transport and thus relieve the load on the hinge points and support arms.

ACCESSORIES

- ▶ Night swathing gear box
- ▶ Mechanical edge spreading device
- ▶ Hitch variants: Drawbar eye, rigid/drawbar eye, turnable/hitch hook



ALWAYS AT THE RIGHT HEIGHT
The working height can be adjusted centrally using a crank.



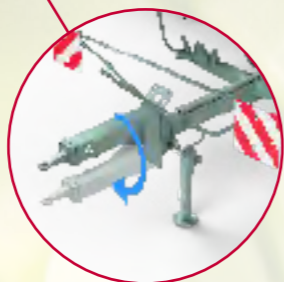
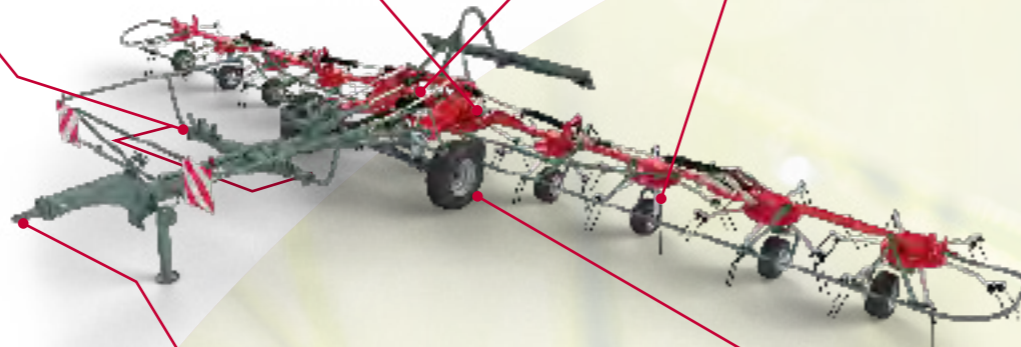
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GROUND PROTECTION AND FORAGE QUALITY

The large contact area of the balloon tyres results in smooth and stable machine operation. The sward enjoys lasting protection and the raw ash content in the crop flow is reduced.



FLEXIBLE

Attachment to the tractor can be made at the top or bottom. There are also different attachment variants available.

BEST GROUND ADAPTATION AND CLEAN SPREAD PATTERN

In the working position, the transport chassis is used for ground sensing, which promotes optimum ground contour following thanks to the large size of the tyres. Thanks to the short distance from the chassis, the tines follow the ground contour directly. Uneven surfaces are driven over evenly and the wheels are not in the forage throw path – resulting in an optimum spread pattern.



BETTER TURNING

With the headland position as standard, areas that have already been tedded or raked, are passed over. The transport wheels remain on the ground, which makes manoeuvring and driving on even very small plots of land significantly easier.



FAST, COMPACT AND COMFORTABLE, FROM PLACE TO PLACE

- ▶ The rotors are easily folded in and out by a hydraulic sequential control system directly from the tractor seat.
- ▶ When the machine is folded to the transport position, the automatic safety disconnection of the rotors is activated.
- ▶ The wide-track transport chassis ensures smooth driving behaviour on the roads.
- ▶ A transport speed of up to 40 km/h (country-specific) is possible.

SANOS TRAILED TEDDERS

The classic with proven technology.

Trailed hay tedders

Proven technology and optimum ground adaptation.

- ▶ Working widths of 10.20-13.00 m
- ▶ Very smooth running thanks to trailing wheels that can be centred
- ▶ Double-sided edge spreading device as standard
- ▶ Adjustable working height as standard
- ▶ Hydraulic conversion to transport position
- ▶ Automatic transport lock



SANOS 1100 Hydro SANOS 1300 Hydro

Hydraulic actuation

The classics among trailed tedders. With the SANOS 1100 Hydro/1300 Hydro models, FELLA offers two fully developed machines for a wide range of applications, which can also be particularly recommended for use behind smaller tractors. Despite their enormous working width, these machines adapt well to uneven and hilly terrain.



ALWAYS AT THE RIGHT HEIGHT
The working height can be adjusted centrally using a spindle.



OPTIMUM BOUNDARY CONDITIONS

The central, double-sided edge spreading device helps to also prevent loss of forage at the field edge or when working in hillside lines. It can be easily adjusted from the tractor seat.



EASE OF OPERATION

Conversion to transport position is made using hydraulic cylinders synchronously and without having to climb off.



EASY AND FLEXIBLE

The attachment can be made quickly in either the tractor linkage drawbar, towing hitch or hitch hook.

ACCESSORIES

- ▶ Night swathing gear box
- ▶ Spare wheel 16/6.50-8 10PR with super-balloon tyre



Technical data

SANOS	401 DS	401 DN	431 DN	601 DN	4504 DN	5204 DN	6606 DN	7706 DN	8608 DN	11010 DN	800 Trans	901 Trans
Dimensions and weight												
Working width approx. in m	4.00	4.00	4.30	5.70	4.50	5.20	6.60	7.70	8.60	10.72	7.70	8.60
Transport width approx. in m	2.33	2.33	2.44	2.55	2.65	3.00	2.90	3.00	2.90	3.00	3.00	3.00
Parking height approx. in m	2.13	2.07	2.36	3.00	2.40	2.60	3.30	3.65	3.30	3.75	2.90	2.90
Transport length approx. in m	1.57	1.73	1.88	2.10	2.10	2.25	2.10	2.45	2.25	2,33	4.48	4.40
Weight approx. in kg	305	365	385	498	574	606	822	946	1172	1535	1237	1660
Hitching												
Three-point	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	CAT I + II	-	-
Two-point lower links	-	-	-	-	-	-	-	-	-	-	-	CAT II
Tractor linkage drawbar	-	-	-	-	-	-	-	-	-	-	■	-
Towing jaw	-	-	-	-	-	-	-	-	-	-	-	-
Power requirement												
Power demand approx. in kW/hp	20/27	20/27	22/30	25/34	22/30	22/30	30/41	60/82	70/95	88/120	30/41	40/54
Rotors/tine arms												
Number of rotors	4	4	4	6	4	4	6	6	8	10	6	8
Number of tine arms per rotor	5	5	6	5	6	6	6	6	6	6	6	6
Anti-tine loss protective device	□	□	□	□	■	■	■	■	■	■	■	■
Edge spreading device	-	■	■	■	■	■	■	■	■	■	■	■
Spreading angle adjustment	■	■	■	■	■	■	■	■	■	■	■	■
Overload protection	■	■	■	■	■	■	■	■	■	■	■	■
Hydraulic control units												
Required hydraulic connections	1x SAV	1x SAV	1x SAV	1x SAV	1x SAV	1x SAV	1x SAV	1x SAV	1x SAV, 1x DAV*	1x SAV, 1x DAV*	1x SAV	1x DAV*
Tyres, lighting												
Tyres of rotor chassis	4x 13/6.50-6	4x 15/6.00-6	4x 15/6.00-6	6x 15/6.00-6	4x 16/6.50-8	4x 16/6.50-8	6x 16/6.50-8	6x 16/6.50-8	6x 16/6.50-8 2x 18.5/8.50-8	8x 16/6.50-8 2x 18.5/8.50-8	4x 16/6.50-8 2x 18/8.50-8	6x 16/6.50-8 2x 18.5/8.50-8
Tyres of transport chassis	-	-	-	-	-	-	-	-	-	-	215/65-15	10.0/80-12
Lighting equipment	□	□	□	□	□	□	□	□	□	■	■	■
Warning signs	■	■	■	■	■	■	■	■	■	■	■	■
KENNFIXX®	-	-	-	-	-	-	-	-	■	■	-	■

■ Series □ Equipment variant - not available

* Floating position absolutely necessary

MACHINE DESIGNATIONS AND ABBREVIATIONS

- ▶ **DS:** Three-point headstock, rigid
- ▶ **DN:** Three-point headstock with follow-up device
- ▶ **Trans:** Transport chassis



Super C tines



Automatic safety shutdown in transport position



Standard spreading angle adjustment into 3 positions

Illustrations show some of the special equipment. The right to technical revision is reserved. Some machines available in selected countries only. The images provided do not necessarily correspond to the most recent version of standard equipment.



Technical data

SANOS	11008 Trans	13010 Trans	1100 Hydro	1300 Hydro
Dimensions and weight				
Working width approx. in m	10.20	12.70	10.20	12.70
Transport width approx. in m	2.94	2.94	2.78	2.78
Parking height approx. in m	2.56	2.56	-	-
Transport length approx. in m	5.70	5.70	6.83	8.07
Weight approx. in kg	1860	2160	1090	1305
Hitching				
Three-point	-	-	-	-
Two-point lower links	-	-	-	-
Tractor linkage drawbar	-	-	■	■
Towing jaw	■	■	-	-
Power requirement				
Power demand approx. in kW/hp	40/54	66/90	35/48	45/61
Rotors/tine arms				
Number of rotors	8	10	8	10
Number of tine arms per rotor	6	6	6	6
Anti-tine loss protective device	■	■	■	■
Edge spreading device	□	□	■	■
Spreading angle adjustment	■	■	■	■
Overload protection	■	■	■	■
Hydraulic control units				
Required hydraulic connections	1x SAV, 1x DAV*	1x SAV, 1x DAV*	1x SAV	1x SAV
Tyres and lighting				
Tyres of rotor chassis	6 x 16/6.50-8 2 x 18.5/8.50-8	8 x 16/6.50-8 2 x 18.5/8.50-8	8 x 16/6.50-8	10 x 16/6.50-8
Tyres of transport chassis	10.0/75-15.3	10.0/75-15.3	-	-
Lighting equipment	■	■	■	■
Warning signs	■	■	■	■
KENNFIXX®	■	■	-	-

■ Series □ Equipment variant - not available

* Floating position absolutely necessary

MACHINE DESIGNATIONS AND ABBREVIATIONS

- ▶ **Trans:** Transport chassis
- ▶ **Hydro:** Hydraulic actuation



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Your FELLA quality partner