



# SAPHIR

OUR MACHINES –  
FOR YOUR SUCCESS



SOIL CULTIVATION



GRASSLAND TECHNOLOGY



TOOLS



FARM, INDUSTRIAL AND MUNICIPAL TECHNOLOGY

FULL CATALOGUE  
**2018**



**OUR MACHINES –  
FOR YOUR SUCCESS**



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# INTRODUCING SAPHIR

## The SAPHIR brand

The SAPHIR brand represents practical, robust, proven technology in grassland technology, soil cultivation and farm, industrial and municipal technology. This principle is followed consistently in design and manufacturing. All legal certifications and standards are complied with in this. Regular quality checks by our Saphir engineering team guarantee high product quality.

Machines and components are prefabricated at different production sites in Central Europe. The machines are finally assembled according to the customer's requirements and specifications. Individual items and small batches are constructed from prefabricated components by experienced metal workers and agricultural machine engineers at the Bockel site. More than 2,500 different machines and components are permanently in stock.

The SAPHIR range is sold by specialist dealers all over Europe. Our specialist trade customers are supported by SAPHIR's internal and external sales team.

**SAPHIR-Maschinenbau:  
Our machines for your success!**





## Data and facts

- Premises covering 15,000 m<sup>2</sup>
- Outside area with exhibition space
- Warehouse with 2,600 m<sup>2</sup> of storage space
- 1,320 m<sup>2</sup> production hall
- Extensive office and administration premises
- Generous social, changing and recreation rooms
- State of the art assembly and welding work stations
- Modern work stations with lifting platforms
- Production hall with bridge and column-mounted slewing cranes
- Additional pallet and small parts stores



## Make your demands on us for your benefit!

- » SAPHIR stands for practical, robust, proven technology. This principle is consistently followed in the design and manufacture of SAPHIR agricultural and municipal technology.
- » SAPHIR complies with all legal certifications and TÜV regulations.
- » SAPHIR guarantees high product quality by regular quality checks.
- » SAPHIR sets great store by an excellent price-performance ratio.
- » SAPHIR offers a wide range of agricultural and municipal technology
- » Advice, sales, workshop and spare parts service are provided all in one place by the local specialist SAPHIR dealer
- » SAPHIR is a Fricke Group company



# THE SAPHIR-VALUE CHAIN

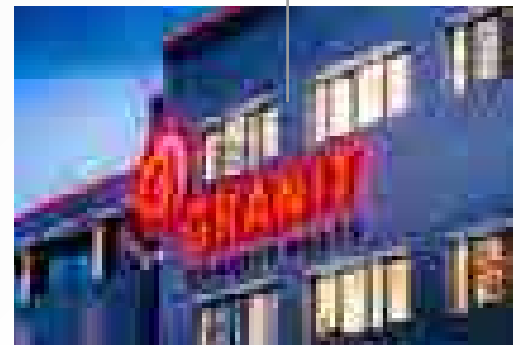
**1.** By professionals for professionals:  
Sales, service and development teams work closely with our customers to find optimum solutions and to enhance the product range constantly.

**2.** Our experienced mechanical engineers implement the specifications and requirements structurally. Modern 3-D CAD software is used for the design.



**10.** Spare parts are supplied throughout Europe by our sister company, GRANIT Parts.

**9.** Our sales and service staff can install machines at the customers' premises if necessary.



**8.** Experienced metal workers perform the final order-related assembly.

3. Our research team builds prototypes and analyses the design specifications in close co-operation with the engineering team.



4. The research and engineering teams test the machines together with users



5. CAD drawings are sent to selected production partners with parts lists and assembly instructions



6. Our own Saphir employees check the production flow and perform quality checks at the product partners' premises.

7. The prefabricated components are stored at Saphir's head office in Bockel.

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# GRASSLAND TECHNOLOGY

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GRASSLAND TECHNOLOGY

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# PERFEKT W GRASSLAND HARROW

01

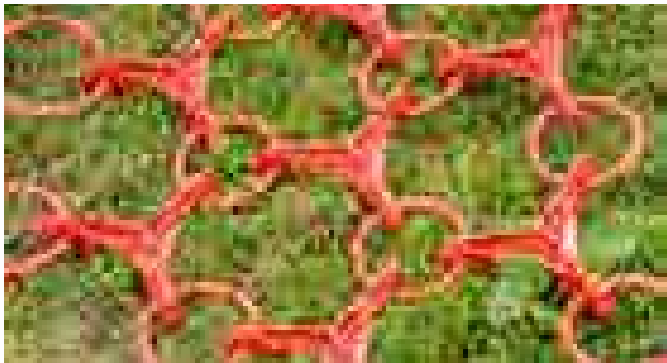
GRASSLAND TECHNOLOGY



The SAPHIR grassland harrow Perfekt W with its cast star wheels net arranged in three rows it is ideal for the easy-to-pull levelling of molehills and the distribution of cow pats, straw manure and liquid manure. Through combing out of dead grass the W-cast star wheels provide for additional aeration of the green sward.



The grassland harrow Perfekt W is available in working widths of 2.00 – 6.00 metres. The Perfekt 200 W in rigid design. From Perfekt 300 W, the machines for the road transport can be folded in.



The net of three rows with approx. 2.5 kg heavy W-cast star wheels ensures an intensive tillage with only one passage. The heavy W-cast star wheels can be used on both sides: Sharp harrowing and aeration with the tine side, easy towing to level out cow pats and molehills with the smooth side.



The closed base frame in connection with the high dead weight guarantees an especially long lifetime also under the heaviest load conditions due to high portions of earth.



The standard front retainers protect the frame from getting stuck on external obstacles like fence posts or trees.



Optionally, the Perfekt W Hydro can be equipped with a hydraulic folding device (for the Perfekt 602 W Hydro this is standard equipment) to provide an especially operator-friendly tool change in transport position. For additional safety in road traffic an optional lighting system incl. warning signs is available for all models.

# PERFEKT W GRASSLAND HARROW

01

GRASSLAND TECHNOLOGY

Technical data	Perfekt 200 W	Perfekt 300 W	Perfekt 400 W	Perfekt 502 W	Perfekt 602 W Hydro
Working width approx. (m)	2.00	3.00	4.00	5.00	6.00
Transport width approx. (m)	2.15	2.10	2.10	2.75	2.75
Hydraulic folding device	Not possible	Not possible	Not possible	Optional	Series
Number of cast star wheels	20	29	40	49	61
Operating speed (km/h)	5-10	5-10	5-10	5-10	5-10
Power requirement approx. in (kW/HP)	11/15	14/20	22/30	29/40	36/50
UL-pins	Cat. I	Cat. I	Cat. I	Cat. II	Cat. II
Weight approx. (kg)	175	240	315	410	530

## Standard equipment

- Cast star wheels with 26 mm material thickness in the main wearing zone for extremely high lifetime
- Durable harrow nets with 14 mm thick net rings for robust applications
- W-cast star wheels arranged in three-rows for combing out and aeration of the turf
- Additional levelling through closed frame
- Small transport width through foldable frame for safe road traffic (except Perfekt 200 W)
- The cast components can be used on both sides to adapt the site-specific operating intensity of the cast star wheels
- Reinforced folding hinges for maximum stability of the frame (from model 502 W)
- Perfect 602 W Hydro equipped with two single action hydraulic cylinders as standard, hose package and cut off valve
- Forced levelling through rigid angle irons for maximum exploitation of the grassland potential
- Powder coating

Model	Order No.	€/piece	Freight costs
Perfekt 200 W	921.00733.200W-2	€ 650.00	on request
Perfekt 300 W	921.00732.300W-2	€ 890.00	on request
Perfekt 400 W	921.00734.400W-2	€ 1,180.00	on request
Perfekt 502 W	921.00735.502W	€ 1,485.00	on request
Perfekt 602 W Hydro	921.00736.602W	€ 2,180.00	on request

### Note:

Headstock and connecting rods must be fitted.

Hydraulic folding device available, if necessary, as a kit of separate parts



## Runners



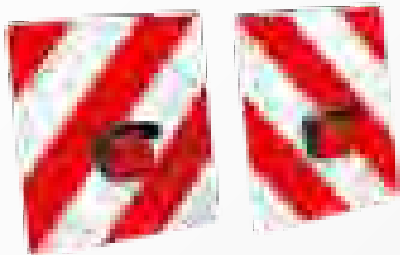
Optional extras	Order No.	€/piece
<b>Runners</b>	921001911-2	€ 40.00
Recommended number:		
• Perfekt 200 W = 2		
• Perfekt 300 W = 2		
• Perfekt 400 W = 4		
• Perfekt 502 W = 4		
• Perfekt 602 W Hydro = 4		

## Hydraulic folding device



Optional extras	Order No.	€/piece
<b>Hydr. folding device</b>	921140848-2	€ 370.00
Suitable for:		
• Perfekt 502 W		

## Lighting incl. warning signs



Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b>	921001153-2	€ 290.00
suitable for:		
• Perfekt W		
<b>Note:</b> Fully assembled for initial installation		

# PERFEKT W4 GRASSLAND HARROW

01

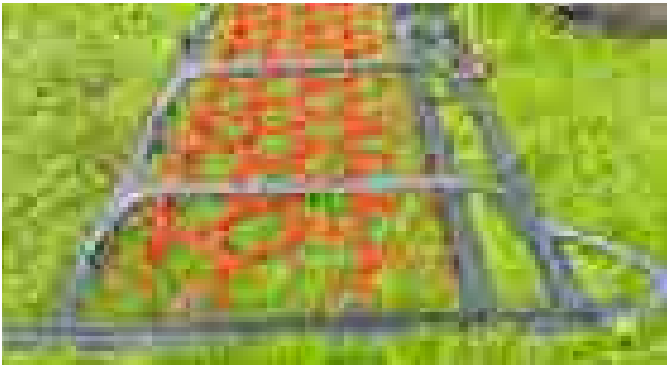
GRASSLAND TECHNOLOGY



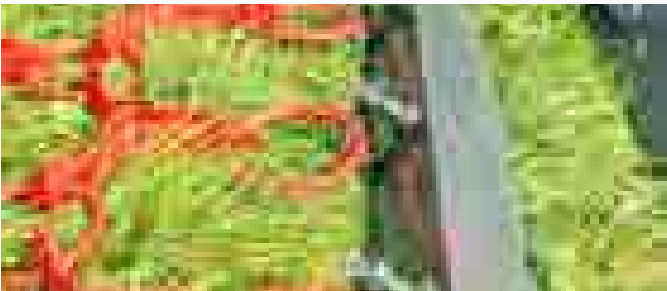
The SAPHIR Perfekt W4 grassland harrow with its four-row arrangement of the cast star wheels net is especially suitable for intensive tillage of grassland. Rough unevenness due to molehills or trampling damages is levelled in only one passage. Through combing out of dead grass the W-cast star wheels provide for additional aeration of the green sward.



The Perfekt W4 grassland harrows have two angle irons arranged one after another in the front of the machine that provide for complete forced levelling of uneven patches like molehills. This reduces wearing of the following harvest machines and reduces soiling of the basic feed.



The W cast star wheels arranged in four rows guarantee optimum performance. The cast components can be used on both sides. The tine side for sharp harrowing and aeration of the greensward; the smooth side for spreading manure and levelling of molehills.



The net is fixed at the front and the side by a shackle. This prevents the net from unintended being hooked out.



Optional hydraulic retraction system for folding in the implements in transport position. For the Perfekt 602 W4 model the hydr. folding device is included in the scope of delivery as standard.

# PERFEKT W4 GRASSLAND HARROW

01

GRASSLAND TECHNOLOGY

Technical data	Perfekt 402 W4	Perfekt 502 W4	Perfekt 602 W4 Hydro
Working width approx. (m)	4.00	5.00	6.00
Transport width approx. (m)	2.75	2.75	2.75
Hydraulic folding device	Accessories	Accessories	Series
Number of cast star wheels	54	66	82
Operating speed (km/h)	5-10	5-10	5-10
Power requirement approx. in (kW/HP)	29/40	36/50	44/60
UL-pins	Cat. II	Cat. II	Cat. II
Weight approx. (kg)	400	490	660

## Standard equipment

- Cast star wheels with 26 mm material thickness in der main wearing zone for extremely high lifetime
- Durable harrow nets with 14 mm thick net rings for robust applications
- W-cast star wheels arranged in four-rows for intensive combing out and aeration of the green sward
- Additional levelling through closed frame
- Small transport width through foldable frame for safe road traffic
- The cast components can be used on both sides to adapt the site-specific operating intensity of the cast star wheels
- Shackle suspension at the front and the side for safe seat of harrow net
- Reinforced folding hinges for maximum stability of the frame
- Two single acting hydraulic cylinders (in Perfekt 602 W4 Hydro as standard), hose package and cut off valve to fold the machine in from operating position to transport position
- Forced levelling through rigid angle irons for maximum exploitation of the grassland potential
- Powder coating

Model	Order No.	€/piece	Freight costs
Perfekt 402 W4	921.00841.GS803	€ 1,420.00	on request
Perfekt 502 W4	921.00842.502W4	€ 1,600.00	on request
Perfekt 602 W4 Hydro	921.00843.602W4	€ 2,570.00	on request

### Note:

Headstock and connecting rods must be fitted.

Hydraulic folding device available, if necessary, as a kit of separate parts

## Runners



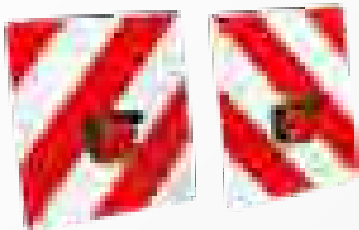
Optional extras	Order No.	€/piece
<b>Runners</b>	921001911-2	€ 40.00
Recommended number:		
Perfekt 402 W4 = 4		
Perfekt 502 W4 = 4		
Perfekt 602 W4 Hydro = 4		

## Folding device



Optional extras	Order No.	€/piece
<b>Hydr. folding device</b>	921140848-2	€ 370.00
Suitable for:		
• Perfekt 402 W4		
• Perfekt 502 W4		

## Lighting system incl. warning signs



Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b>	921001153-2	€ 290.00
<b>Note:</b> Fully assembled for initial installation		

# PERFEKT S4 GRASSLAND HARROW

01

GRASSLAND TECHNOLOGY



Through its especially robust headstock and frame the SAPHIR Perfekt S4 grassland harrow ensures maximum stability. With its freely suspended net, the elevated supporting frame allows very good ground adjustment and with this, optimum operating quality. Due to its elevated supporting frame, combed out material and solid manure residues can pass without problems.



The Perfekt S4 grassland harrows have two angle irons arranged one after another in the front of the machine that provide for complete forced levelling of uneven patches like molehills. This reduces wearing of the following harvest machines and reduces soiling of the basic feed.



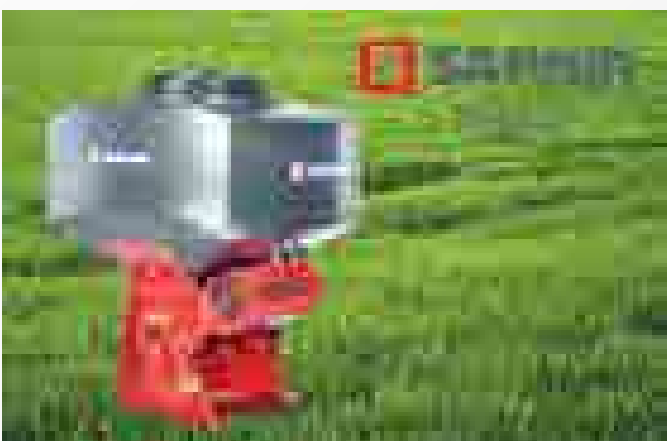
The harrow net can move very freely because of the elevated supporting frame. The S cast components arranged in four rows guarantee optimum operating performance. The S-cast elements can be used on both sides: Sharp harrowing and aeration with the tine side, easy towing for levelling out of molehills with the smooth side.



The especially robust frame design consists of a heavy headstock and reinforced wide band folding hinges. Lower and upper link pins sit in very stable retaining pockets.



They are delivered as standard with hydraulic folding device and safety locking device for operator-friendly securing of the machine in road transport. Generally, the machines are supplied fully assembled.



Optionally, the SAPHIR grassland harrows are equipped with SAPHIR DrillStar overseed machine. With this, very effective overseeding can be done in one work step (For overseeding machines see page 110-113).

# PERFEKT S4 GRASSLAND HARROW

Technical data	Perfekt 502 S4 Hydro	Perfekt 602 S4 Hydro	Perfekt 802 S4 Hydro
Working width approx. (m)	5.00	6.00	8.00
Transport width approx. (m)	2.30	2.30	2.95
Hydraulic folding device	Series (1 x dw)	Series (1 x dw)	Series (1 x dw)
Number of cast star wheels	62	78	102
Operating speed (km/h)	5-10	5-10	5-10
Power requirement approx. in (kW/HP)	36/50	44/60	58/80
UL-pins	Cat. II	Cat. II	Cat. II
Weight approx. (kg)	650	730	1,010

## Standard equipment

- Cast star wheels with 26 mm material thickness in der main wearing zone for extremely high lifetime
- Durable harrow nets with 14 mm thick net rings for robust applications
- W-cast star wheels arranged in four-rows for intensive combing out and aeration of the greensward
- Elevated supporting frame to prevent combed out material and solid manure from rolling on.
- Small transport width through foldable frame for safe road traffic (1 x dw necessary)
- The cast components can be used on both sides to adapt the site-specific operating intensity of the cast star wheels
- Especially heavy headstock for maximum stability
- Reinforced shackle suspension of the net for long lifetime
- Wide band folding hinges for ideal power transmission from side to central part
- Hydraulic transport lock with tow rope against unintended folding out in road traffic
- Highly developed A-folding for safe road traffic
- Forced levelling by rigid angle irons for maximum exploitation of the grassland potential
- Powder coated
- Kennfixx hydraulic couplings for ergonomic coupling and decoupling

Model	Order No.	€/piece	Freight costs
Perfekt 502 S4 Hydro	921.00852.502S4-3	€ 2,790.00	on request
Perfekt 602 S4 Hydro	921.00853.602S4-3	€ 3,010.00	on request
Perfekt 802 S4 Hydro	921.00834.802S4-3	€ 4,520.00	on request

**Note:** Machine is supplied fully fitted.

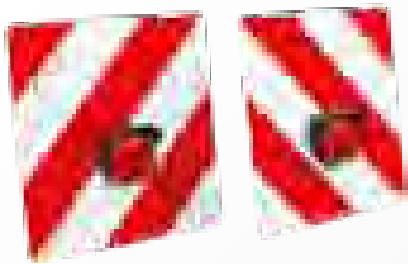


## Runners



Optional extras	Order No.	€/piece
<b>Runners</b>	921001911-2	€ 40.00
Recommended number: Perfekt 502S4 Hydro = 4 Perfekt 602S4 Hydro = 4 Perfekt 802S4 Hydro = 4		

## Lighting incl. warning signs



Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b>	921001378-2	€ 290.00
Suitable for: • Perfekt 502S4 Hydro • Perfekt 602S4 Hydro <b>Note:</b> Fully assembled for initial installation		
<b>Lighting system incl. warning signs</b>	921001377-2	€ 290.00
Suitable for: • Perfekt 802S4 Hydro <b>Note:</b> Fully assembled for initial installation		

## Mounting platform for SAPHIR DrillStar



Optional extras	Order No.	€/piece
<b>Mounting platform for SAPHIR DrillStar sowing machines incl. assembly</b>	921000988-2	€ 750.00
(Kit without small seed sower - for DrillStar models see page 110-113)		

# PERFEKT GSGRASSLAND REGENERATOR



01

GRASSLAND TECHNOLOGY



The SAPHIR Perfekt GS grassland regenerator is a universally applicable machine for mechanical weed control and aeration of the greensward. Furthermore, mounds of earth, as well as organic fertiliser are distributed. Through combing out of dead grass and common panicles, empty spaces can occur in the stand in which new feed grass can be sowed in one work step using the pneumatic SAPHIR DrillStar small seed sower. The grassland regenerator can also be used as land weeder.



Power train-orientated frame construction of angle iron with robust headstock and reinforced folding hinges.



The tine sections that can be adjusted by spindles remove common panicles, moss, dead grass and other weeds. The particularly strong 10 mm harrow tines work particularly effectively. The tines are arranged in four rows and have a triple winding.



The angle irons on the frame ensure excellent levelling of molehills. At the same time manure and organic residues are distributed.

Parking supports for releasing and keeping the spring tension in parked condition.



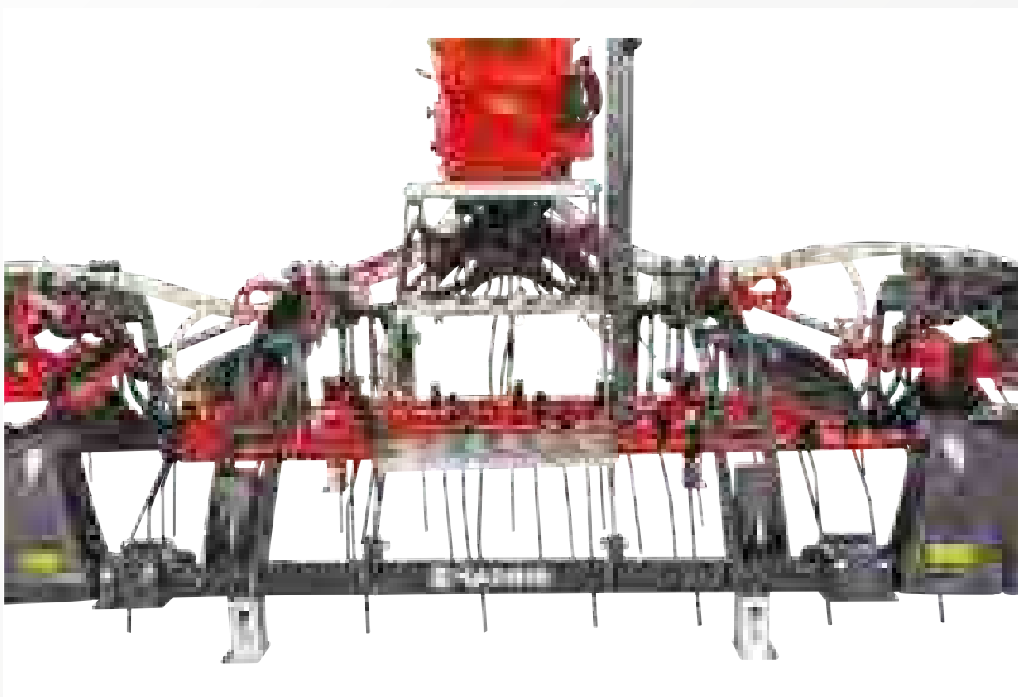
Optionally, the machine can be equipped with a SAPHIR DrillStar. It enables exact overseeding of forage grass which is not prone to wind in damaged stands.



With 12 runners as standard for soil-protecting cultivation in case of wet and strongly damaged greenswards.



The scale divisions on the tine fields provided as standard enable a homogeneous regeneration intensity on the whole operating width.



The working tine segments can be adjusted for up to 250 mm below the rigid frame. With this, the grassland regenerator can also be used for the further exploitation of the field because the machine is held by the hydraulic system. For the effective sowing of catch crops as well as for weed control directly after sowing the main crop (blind combing).

# PERFEKT GSGRASSLAND REGENERATOR

01

GRASSLAND TECHNOLOGY

Technical data	GS 603	GS 803
Working width approx. (m)	6.00	8.00
Transport width approx. (m)	2.60	3.00
Hydraulic folding device	Series (1x dw)	Series (1x dw)
Number of tines	88	114
Operating speed (km/h)	8-12	8-12
Power requirement approx. in (kW/HP)	59/80	73/100
UL-connection	Cat. II	Cat. II
Weight approx. (kg)	1,500	1,800

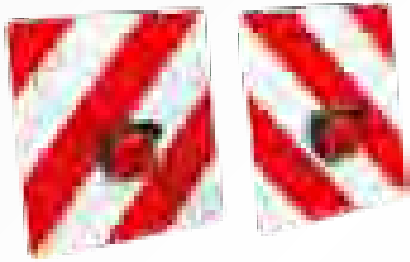
## Standard equipment

- Rigid frame of angle iron for robust applications
- Runners for soil-protecting cultivation on wet surfaces
- Combing tines 10 mm, three-fold winding with high vibration ability and best combing effect
- Tine field four-rows for intensive tillage of the grass sward
- High durability of lacquer coatings against mechanical loads and weather impacts due to powder coating
- Especially heavy headstock for maximum stability
- The adjustment of tines by 250 mm below the rigid frame allows the use on the field for further exploitation
- Forced levelling by rigid towing bar
- Kennfixx hydraulic coupling for ergonomic coupling and decoupling

Model	Order No.	€/piece	Freight costs
GS 603	921.00806.GS603	€ 5,950.00	on request
GS 803	921.00805.GS803	€ 6,950.00	on request

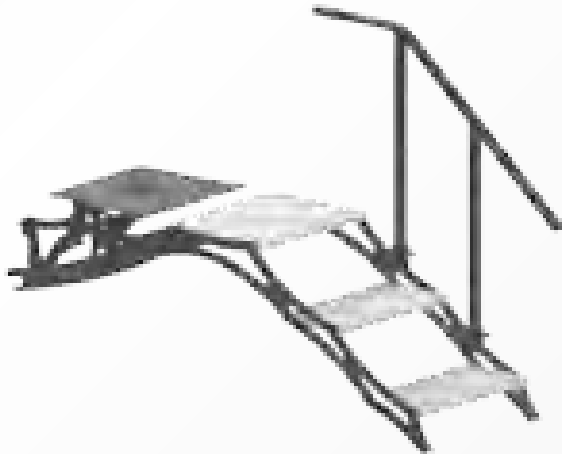
**Note:** Machine is supplied fully fitted.

### Lighting system incl. warning signs



Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b> Note: Fully assembled for initial installation	921003189	€ 290.00

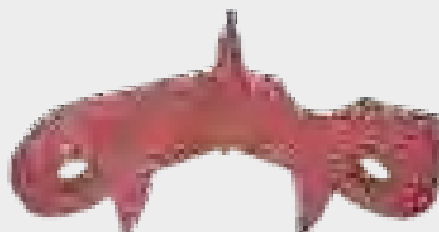
### Mounting platform for SAPHIR DrillStar



Optional extras	Order No.	€/piece
<b>Mounting platform for SAPHIR DrillStar incl. assembly costs</b> (Kit without small seed sower - for DrillStar models see page 110-113)	921002773	€ 750.00

# REPLACEMENT NETS

Cast star wheel W  
 Combi star with aggressive tine  
 Weight: approx. 2,460 g  
 Item No.: 69500156



## Replacement net W with cast star wheel W, 3-row harrow net for closed frame, depth 90 cm (hook suspension)

Designation	Approx. width in (m)	Weight (kg)	Order No.	€/piece	Freight costs
Replacement net 200 W	2.00	65	921140716	€ 280.00	on request
Replacement net 300 W	3.00	100	921140715	€ 380.00	on request
Replacement net 400 W	4.00	130	921140717	€ 510.00	on request
Replacement net 500 W	5.00	160	921140718	€ 630.00	on request
Replacement net 600 W Hydro	6.00	200	921140719	€ 770.00	on request

## Replacement net W with cast star wheel W, 3-row harrow net for closed frame, depth 90 cm (shackle suspension)

Designation	Approx. width in (m)	Weight approx. (kg)	Order No.	€/piece	Freight costs
Replacement net 502 W	5.00	160	921140718-2	€ 630.00	on request
Replacement net 602 W Hydro	6.00	200	921140719-2	€ 770.00	on request

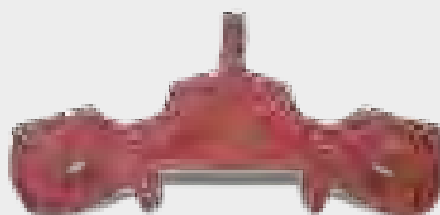
## Replacement net W4 with cast star wheel W, 4-row harrow net for closed frame, depth 110 cm (hook suspension)

Designation	Approx. width in (m)	Weight approx. (kg)	Order No.	€/piece	Freight costs
Replacement net 400 W4	4.00	170	921140871	€ 630.00	on request
Replacement net 500 W4 / 501 W4	5.00	210	921140872	€ 790.00	on request
Replacement net 600 W4 / 601 W4	6.00	260	921140873	€ 970.00	on request

## Replacement net W4 with cast star wheel W, 4-row harrow net for closed frame, depth 110 cm (shackle suspension)

Designation	Approx. width in (m)	Weight approx. (kg)	Order No.	€/piece	Freight costs
Replacement net 402 W4	4.00	170	921140871-2	€ 630.00	on request
Replacement net 502 W4	5.00	210	921140872-2	€ 790.00	on request
Replacement net 602 W4	6.00	260	921140873-2	€ 970.00	on request

Cast star wheel S  
 Combi star with reinforced design  
 Weight: approx. 2,600 g  
 Item No.: 69500152



Replacement net S3 with cast star wheel S, 3-row harrow net with angle bar for closed frame, depth 90 cm

Designation	Approx. width in (m)	Weight approx. (kg)	Order No.	€/piece	Freight costs
Replacement net 400 S3	4.00	140	921140845	€ 580.00	on request
Replacement net 500 S3	5.00	170	921140846	€ 670.00	on request
Replacement net 600 S3	6.00	210	921140847	€ 790.00	on request

Replacement net S4 with cast star wheel S, 4-row harrow net with angle bar for open frame, depth 120 cm

Designation	Approx. width in (m)	Weight approx. (kg)	Order No.	€/piece	Freight costs
Replacement net 500/502 W4	5.00	230	921140856	€ 910.00	on request
Replacement net 600/602 W4	6.00	290	921140857	€ 1,100.00	on request
Replacement net 800/802 W4	8.00	370	921140858	€ 1,460.00	on request

# LAWN ROLLER ROBUST K

01

GRASSLAND TECHNOLOGY



The SAPHIR lawn rollers are particularly suitable for use with small tractors in municipalities, service provision companies, horticulture and landscaping, private green spaces and parks, paddocks, sports fields etc. The grass sward is not damaged while cornering because of the rounded cylinder edges. The roller body can be filled with water to increase the weight.

- Rigid frame of angle iron with ball bearings that can be lubricated
- Parking support for safe stability when parked and safe coupling and decoupling
- Water filler for additional ballast
- Spring-loaded scraper for cleaning of the roller body





Technical data	Robust 100 K	Robust 150 K	Robust 200 K
Working width approx. (m)	1.00	1.50	2.00
Transport width approx. (m)	1.18	1.68	2.18
Cylinder / body	1	1	1
Drum seat-Ø (cm)	81	81	81
Net weight approx. (kg)	300	410	500
Weight filled approx. (kg)	780	1,140	1,500

## Standard equipment

- Frame of angle steel
- Continuous shaft
- Parking support
- Ball bearings that can be lubricated
- Spring-loaded scraper
- Water filler
- Round drum edges
- Running surface wall thickness 8 mm
- Drum diameter 81 cm

Model	Order No.	€/piece	Freight costs
<b>Robust 100 K</b>	927.00808.ROBUST100K-2	<b>€ 1,590.00</b>	on request
<b>Robust 150 K</b>	927.00809.ROBUST150K-2	<b>€ 1,770.00</b>	on request
<b>Robust 200 K</b>	927.00815.ROBUST200K-2	<b>€ 2,220.00</b>	on request

**Note:** Machine is supplied fully fitted.

Lighting system incl. warning signs



Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b> Note: Fully assembled for initial installation	594002454	<b>€ 290.00</b>

# GRASS ROLLER ROBUST

01

GRASSLAND TECHNOLOGY



The SAPHIR Grass Roller Robust serves for rolling of high frozen grass swards in spring and for removing of trampling damages on grazed surfaces.

For new seeding or reseeding soil compaction is generated by pressing the grass seed on. This causes optimum conditions for germination.

- Heavy U-steel frame with ball bearings that can be lubricated
- Spindle parking support for safe stability when parked and operator-friendly coupling and decoupling
- Water filler for additional ballast by filling in water
- The spring-loaded scraper is installed as standard for each roller. If worn the plate can be turned
- Especially wide drawbar (over the whole frame width). Therefore torsions of frame are practically excluded
- The optional hydraulic strap brake acts over a simple-acting hydraulic cylinder and a linkage system directly on the two brake straps
- Optional lighting system incl. warning signs for a safe road transport



Technical data	Robust 250	Robust 275	Robust 300
Working width approx. (m)	2.50	2.75	3.00
Transport width approx. (m)	2.89	3.14	3.39
Cylinder / body	1	1	1
Drum seat-Ø (m)	126	123	123
Net weight approx. (kg)	1,860	1,970	2,010
Weight filled approx. (kg)	4,320	4,680	4,990

## Standard equipment

- Spindle parking support
- Spring-loaded scraper
- Heavy U-steel frame
- Central separating wall (splash guard)
- Self-aligning roller bearing
- Water filler
- Round drum edges
- Extra strong walls of running surfaces 14 mm
- Continuous shaft
- Drum diameter 123 cm
- Side brake rings for hydraulic strap brake

Model	Order No.	€/piece	Freight costs
<b>Robust 250</b>	927.00802.ROBUST250-2	<b>€ 6,470.00</b>	on request
<b>Robust 275</b>	927.00803.ROBUST275-2	<b>€ 6,890.00</b>	on request
<b>Robust 300</b>	927.00804.ROBUST300-2	<b>€ 7,100.00</b>	on request

### Note:

A tow bar and, if necessary, a connecting rod and springs for the strap brake must be fitted. Special approval is required for transport widths above 3 metres.

### Hydraulic strap brake



### Lighting system incl. warning signs



Optional extras	Order No.	€/piece
<b>Hydraulic strap brake</b> 1 x ew required	927350825	<b>€ 1,180.00</b>

Optional extras	Order No.	€/piece
<b>Lighting system incl. warning signs</b> Note: Fully assembled for initial installation	927003105	<b>€ 290.00</b>

# GRASS ROLLER WITH ROBUST CHASSIS FG

01

GRASSLAND TECHNOLOGY



The SAPHIR Grass Roller Robust FG is equipped with an additional chassis. The wheels running near the roller body facilitate road transport and allow the comfortable change of fields.

Optionally, the roller can be equipped with a 2-circuit compressed air system. This allows road transport with water filled in the roller body.

- Heavy U-steel frame with reinforced bearing bushes with self-aligning roller bearings
- Spring loaded scraper (if worn, it can be used on both sides)
- Due to the wheels running very near to the roller body the supported load on the towing vehicle is clearly reduced.
- Lighting system incl. warning signs as standard for safe road transport
- Central separating wall as splash guard
- Check valves on the hydraulic cylinders prevent the roller being lowered accidentally when travelling along the road.
- Drum diameter is 123 cm
- The optional 2-circuit compressed air system incl. brake axle, pressure tank and parking brake. allows road transport with water filled in the roller body
- The round drum edges prevent the grass sward from damages when the machine travels in curves



Technical data	Robust 251 FG	Robust 276 FG	Robust 301 FG
Working width approx. (m)	2.50	2.75	3.00
Transport width approx. (m)	2.90	3.15	3.40
Cylinder / body	1	1	1
Drum seat-Ø (cm)	123	123	123
Net weight approx. (kg)	2,550	2,740	2,980
Weight filled approx. (kg)	4,860	5,440	6,000

## Standard equipment

- Spindle parking support
- Spring-loaded scraper
- Self-aligning roller bearing
- Water filler
- Drum diameter 123 cm
- Side brake rings for hydraulic strap brake
- Wheels 15.0/55-17 12PR (refers to 380/55-17)
- Operating licence (TÜV approved) up to 25 km/h
- Lighting system incl. warning signs
- Road transport without braking axle up to max. 3,000 kg
- Permissible maximum speed 25 km/h

Model	Order No.	€/piece	Freight costs
<b>Robust 251 FG</b>	927.00810.ROB251FG-2	<b>€ 12,190.00</b>	on request
<b>Robust 276 FG</b>	927.00811.ROB276FG-2	<b>€ 12,440.00</b>	on request
<b>Robust 301 FG</b>	927.00812.ROB301FG-2	<b>€ 12,670.00</b>	on request

### Note:

A tow bar and, if necessary, a connecting rod and springs for the strap brake must be fitted. Hydraulic pipes must be screwed onto the tow bar.

Special approval is required for transport widths above 3 metres.

Optional extras	Order No.	€/piece
<b>Hydraulic strap brake</b> 1x dw required (mounted with initial installation)	927350825	<b>€ 1,180.00</b>
<b>The optional 2-circuit compressed air system</b> brake axle, pressure tank and parking brake (with TÜV approval up to 25 km/h)	927003103	<b>€ 1,350.00</b>

# ROTARY MOWER KM

01

GRASSLAND TECHNOLOGY



The SAPHIR rotary mowers feature by robust and proven technology. They have proved to be successful in the field a 1000 times. The strong warp-resistant gearbox is the heart of all SAPHIR rotary mowers. The mowing drums ensure clean cutting of the feed. Good ground adjustment and low dead weight are other advantages of these machines. The productive mowing drums quickly transfer the cuttings and lay them down in clean swathes.

- The quick release fastener of the blades and the blade lever allow changing the blades without tools.
- The mechanical collision protection system protects from damages caused by obstacles.  
The mower automatically swivels backwards when running into an obstacle. After short moving back work can be continued.
- For transportation the mowers can be retracted behind the towing vehicle lengthwise in the direction of travel.
- Optional: The hydraulic lifting device enables folding up on the side in operating position.

The SAPHIR KM 134 rotary mower was especially designed for small and narrow gauge tractors. It is particularly suitable for light towing vehicles with a small track width (up to a max. of 1.20 metres external tyre width) due to its low dead weight and small gauge. External width tyres).

The KM 134 mower can be moved upright for transportation using a crank handle. It is also possible to swivel it lengthwise in the direction of travel behind the towing vehicle.



Technical data	KM 134	KM 136	KM 166	KM 186	KM 211
Working width approx. (m)	1.35	1.35	1.65	1.85	2.10
Power requirement approx. in (kW/HP)	15/20	18/25	29/40	44/60	51/70
Approx. output in (ha/h)	0.7	1.0	1.5	2.0	2.5
UL-pins	Cat. I	Cat. I	Cat. II	Cat. II	Cat. II
Power take-off speed in rpm	540	540	540	540	540
Drum seat	2	2	2	2	2
Blades per drum	2	2	3	3	4
Weight approx. (kg)	245	330	400	455	555

## Standard equipment

- Power take-off connection 540 rpm
- Cardan shaft
- Free wheel (with KM 134 to KM 186 in the machine, with KM 211 with freewheel cardan shaft)
- Collision protection
- Quick release fastener of the blades and the blade lever
- Tarpaulin in especially heavy design
- Cut height adjustment possible with spacer rings
- Transport lengthwise in the direction of travel
- Bevelled guard plate with all-round guards (except KM 134)
- Cardan shaft holder (except KM 134)
- Adjustable lower linkage pins (except KM 134)

Model	Order No.	€/piece	Freight costs
<b>KM 134</b>	399.00771.KM134-2	<b>€ 2,135.00</b>	on request
<b>KM 136</b>	399.00864.KM136-2	<b>€ 2,235.00</b>	on request
<b>KM 166</b>	399.00865.KM166-2	<b>€ 2,420.00</b>	on request
<b>KM 186</b>	399.00866.KM186-2	<b>€ 2,825.00</b>	on request
<b>KM 211</b>	399.00772.KM211-2	<b>€ 3,565.00</b>	on request

### Note:

It is supplied packed in a wooden box. The following steps of assembly are to be taken: Fitting the guard, fitting the headstock and the connecting rods, inserting the blades, adjusting the cardan shaft (Assembly time approx. 3 hours).

Optional extras	Order No.	€/piece
<b>Hydr. lifting device KM 166</b>	399000098-2	<b>€ 280.00</b>
<b>Hydr. lifting device KM 186</b>	399000099-2	<b>€ 330.00</b>
<b>Hydr. lifting device KM 211</b>	399000100-2	<b>€ 360.00</b>

# FRONT MOWER FM

01

GRASSLAND TECHNOLOGY



The SAPHIR FM front mowers are very robust due to their compact headstock and drawn design they adapt in an optimum way to all ground structures. The productive mowing drums accurately cut grass and lay the cuttings down in clean swathes. This prevents the pollution of feed caused by travelling over and enables the full taking over when a self-loading trailer is used.

- The quick release fastener of the blades and the blade lever allow fast changing of the blades without tools.
- The external guards can be folded upwards for transportation, and even narrow passages are no longer a problem.
- The front traction point pendulum device can be locked for road transport. As a result greater ground clearance for the raised mower is achieved.
- The mowers are attached with a Weiste rapid connection. The front traction point with relieving springs provides for a good ground adjustment.
- The FM 265 and FM 300 mowers create swathes using swathe discs whose width can be adjusted





Technical data	FM 210	FM 265	FM 300
Working width approx. (m)	2.10	2.65	3.00
Swathe width approx. (m)	0.90	1.20 - 1.60	1.40 - 1.80
Power requirement approx. in (kW/HP)	36/50	44/60	51/70
Approx. output in (ha/h)	2.50	3.00	3.50
Power take-off speed in rpm	1,000	1,000	1,000
Drum seat	2	4	4
Number of blades	8 (2x4)	12 (4x3)	18 (2x5 + 2x4)
Hydraulic connection	1 x ew	1 x ew	1 x ew
Weight approx. (kg)	570	780	860

## Standard equipment

- Quick release fastener of the blades
- Front traction point pendulum device
- Double counter-springs
- Chains to restrict the depth guide
- Four swathe discs (except for FM 210)
- Three-fold adjustable swathe width
- Foldable guards
- Cut height adjustment possible with spacers
- Cardan shaft with friction and free wheel clutch
- Hydraulic lift system
- Fixation of pendulum device
- Mounting frame for Weiste rapid connector

Model	Order No.	€/piece	Freight costs
FM 210	399.00867.FM210-2	€ 4,710.00	on request
FM 265	399.00868.FM265-2	€ 6,565.00	on request
FM 300	399.00869.FM300-2	€ 7,460.00	on request

**Note:** It is supplied packed in a wooden box.

The following steps of assembly are to be taken: Fitting the guard, fitting the headstock and the connecting rods, inserting the blades, adjusting the cardan shaft (Assembly time approx. 4 hours).



# SOIL CULTIVATION

DiscStar Kid short disc harrow	NEW	38-41
DiscStar Ecoline short disc harrow	NEW	42-45
DiscStar Profi short disc harrow	NEW	46-49
DiscStar F Profi short disc harrow	NEW	50-53
AllStar Profi large spring tine harrow		54-59
AllStar 801 F Profi large spring tine harrow		60-65
TerraStar Profi / S Profi wing share cultivator		66-69
TineStar Ecoline mulch seeder		70-73
TineStar Profi mulch seeder		74-79
DeepStar Ecoline subsoiler		80-83
DeepStar Profi subsoiler	NEW	84-87
PlowStar Ecoline subsoiler		88-89
PlowStar Combi subsoiler		90-91
PlowStar Profi subsoiler		92-95
FineStar Ecoline seed bed combination	NEW	96-99
FineStar Profi seed bed combination	NEW	100-103
Rollstar front attachment	NEW	104-107
UniSeed small seed sower		108-109
DrillStar small seed sower		110-113
Trailing rollers		114-115

# DISCSTAR F PROFI SHORT DISC HARROWE

NEW



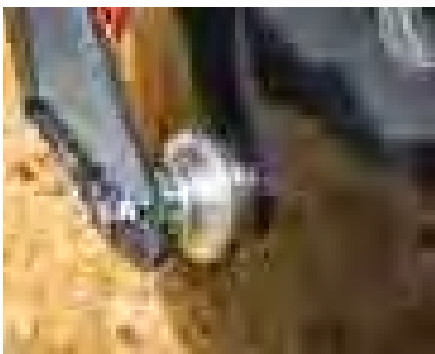
With the new SAPHIR „DiscStar Kid“ models, compact short disc harrows with a lot of advantages are introduced. These short disc harrows are especially designed for the application in speciality crops. Large disc diameters, perfect arrangement and compact design are the features of short disc harrows that make it an easy to pull machine for narrow gauge and small tractors.



Compact design for narrow gauge tractors and the application in special crops. Available in working widths from 1.25 - 2.00 m. The disc size of Ø 560 mm provides for safe passage.



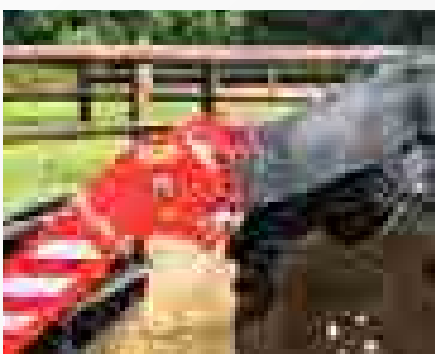
Side guide plates as standard for exact connecting runs and minimised soil throw outside the working width.



Maintenance-free, dust-tight bearings from SKF® with especially long lifetime.



The selected disc position prevents the machine from escalating at high working speed and ensures light draw-in on dry soil conditions. The machines are easy to pull.



Adjustment of working depth without tool by socket pins. Optional configuration possible with SAPHIR DrillStar.

# DISCSTAR F PROFI SHORT DISC HARROW

02

SOIL CULTIVATION

Technical data	DiscStar 125 Kid	DiscStar 150 Kid	DiscStar 175 Kid	DiscStar 200 Kid
Working width approx. (m)	1.25	1.50	1.75	2.00
Transport width approx. (m)	1.25	1.50	1.75	2.00
Frame design	Rigid	Rigid	Rigid	Rigid
Number of discs	10	12	14	16
Approx. disc diameter (mm)	560	560	560	560
Working depth approx. (cm)	3 - 15	3 - 15	3 - 15	3 - 15
Operating speed (km/h)	10 - 20	10 - 20	10 - 20	10 - 20
Power requirement approx. in (kW/HP)	29/40	33/45	37/50	40/55
UL-connection	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II
Weight with crumbler roller Ø 500 mm (series)	620	675	750	825

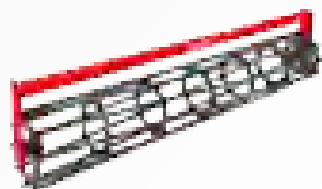
## Standard equipment

- Three point linkage Cat. I/II
- Disc size Ø 560 mm for safe passage
- Individually suspended and locked discs for optimum adaptation to soil
- Stone guard by rubber spring elements
- Crumbler roller Ø 500 mm for depth control
- Maintenance-free SKF-bearings © ensure long lifetime

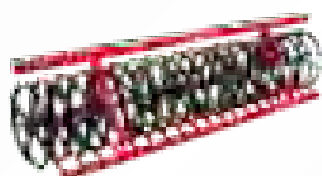
Model	Order No.	€/piece	Freight costs
DiscStar 125 Kid	593.01520.DS125	€ 4,420.00	on request
DiscStar 150 Kid	593.01521.DS150	€ 5,070.00	on request
DiscStar 175 Kid	593.01522.DS175	€ 5,790.00	on request
DiscStar 200 Kid	593.01523.DS200	€ 6,440.00	on request

**Assembly costs:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

## Trailing rollers

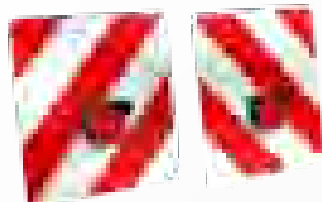


Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
DiscStar 125 Kid	593002912	90	Series
DiscStar 150 Kid	593002913	110	Series
DiscStar 175 Kid	593002914	125	Series
DiscStar 200 Kid	593002915	140	Series



<b>Roof ring roller with traction bars Ø 600 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 125 Kid	593002844	150	€ 610.00
DiscStar 150 Kid	593002845	180	€ 690.00
DiscStar 175 Kid	593002846	210	€ 770.00
DiscStar 200 Kid	593002847	240	€ 850.00

## Lighting system incl. warning signs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Lighting system DiscStar Kid</b>			
Suitable for all types	593002848	20	€ 530.00

## Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar incl. assembly</b>			
Surplus price in addition to the standard version	593003158	50	€ 960.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113

# DISCSTAR ECOLINE SHORT DISC HARROWE

NEW



The SAPHIR DiscStar F Profi short disc harrow is the ideal partner for flat and intensively mixing stubble cultivation. Incorporation of solid manure as well as high amounts of organic residues like maize straw and grain straw are counted among the strengths of the machine. Further fields of application are breaking of flat fallows, seed bed preparation, incorporation of liquid manure and the sowing of catch crops.

The SAPHIR DiscStar Ecoline is a compact disc harrow with laminated spring elements mounted as standard stone guard. With this, the discs also work safely on stony and heavy soils and free from clogging. This form of overload protection features a wide escape angle.

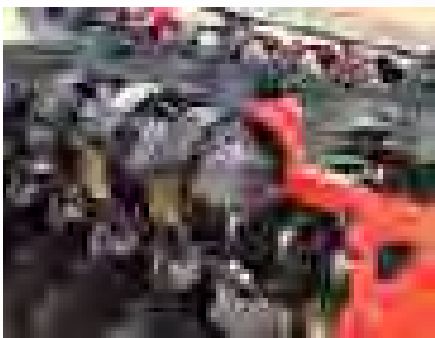




The compact and especially robust frame structure also withstands the toughest operating conditions. In addition, the bar distance of 800 mm guarantees working without clogging.



The serrated hollow discs with a diameter of 560 mm are mounted to dust-tight and maintenance-free high-quality bearings from SKF® with a particularly long lifetime. Due to the disc setting without overlapping (non-angle), high working quality is combined with minimum disc wear.



The laminated spring elements guarantee a greatest possible escape angle of the discs and serve as automatic overload protection. With this, the discs can cultivate deep tracks and uneven patches without problems. Especially suitable for extremely stony soil.



Three point linkage Cat. II incl. quick coupling bar for fast coupling and decoupling of the machine to the tractor.



Side guide plates as standard for exact connecting runs without forming of ridges. The side guide plate can be adapted individually to the soil conditions.

# DISCSTAR ECOLINE SHORT DISC HARROWE

Technical data	DiscStar 306 Ecoline
Working width approx. (m)	3.00
Transport width approx. (m)	3.00
Frame design	Rigid
Number of discs	24
Approx. disc diameter (mm)	560
Working depth approx. (cm)	3 - 15
Operating speed (km/h)	12 - 20
Power requirement approx. in (kW/HP)	59/80
UL-connection	Cat. II
Weight with crumbler roller Ø 500 mm (series)	1.150

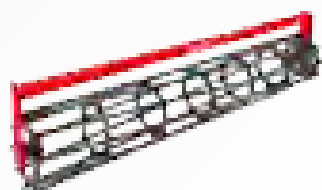
## Standard equipment

- Three point linkage Cat. II
- Disc diameter Ø 560 mm for safe passage
- Individually suspended and locked discs for an optimum soil adaptation
- Stone guard over the laminated spring elements
- Crumbler roller Ø 500 mm for depth control
- Maintenance-free SKF® - bearing with especially long lifetime
- Lighting system incl. warning signs
- Side guide plates for exact connecting runs
- Foldable and adjustable side discs

Model	Order No.	€/piece	Freight costs
DiscStar 306 Ecoline	593.00682.DS306	€ 8,990.00	on request

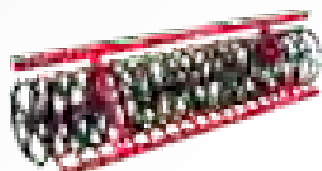
**Assembly costs:** The machine is supplied fully assembled. The following roller is dismantled for transport reasons.

## Trailing rollers



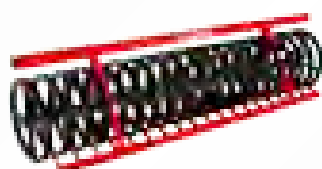
Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			

DiscStar 306 Ecoline	593002892	210	Series
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<b>Roof ring roller with traction bars Ø 600 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
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DiscStar 306 Ecoline	593002826	360	€ 960.00
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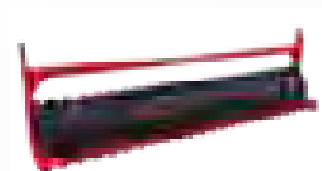
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
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DiscStar 306 Ecoline	593002830	400	€ 1,310.00
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<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
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DiscStar 306 Ecoline	593002834	420	€ 2,040.00
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<b>Rubber roller Ø 500 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
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DiscStar 306 Ecoline	593002968	540	€ 2,320.00
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## Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			

DiscStar 306 Ecoline	593002822	90	€ 990.00
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## Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar incl. assembly</b>			

DiscStar 306 Ecoline	593003159	120	€ 1,190.00
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**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113.

# DISCSTAR PROFI SHORT DISC HARROWE

NEW

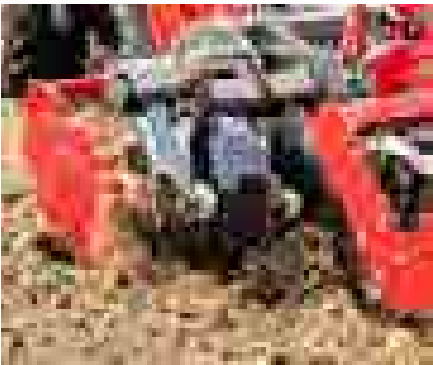


The SAPHIR DiscStar Profi is the ideal machine for flat and intensively mixing stubble cultivation. Incorporation of solid manure as well as high amounts of organic residues are counted among the strengths of this machine. Further fields of application are breaking of catch crops as well as flat fallows and incorporation of liquid manure. In the preparation of seed bed, the DiscStar Profi features high portion of fine earth production in the mulch-till as well as on the ploughed land. Here, it is unique that it has a very low fuel consumption and minimum material wear. The SAPHIR DiscStar Profi short disc harrows feature stone protection due to polyurethane rubber elements. The various equipment variants allow an optimum configuration of the machine for any desired application.



Due to the new SAPHIR non-angle disc position (no overlapping of the discs) the machine can easily be set and guarantees smooth working without lateral forces and clogging.

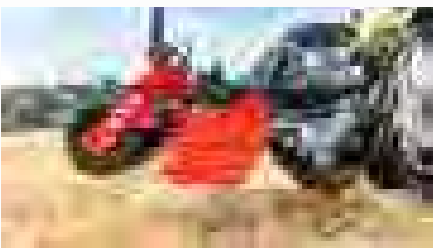
- Low lateral forces on the disc, therefore no lateral pulling force acts on the machine. Important with steering systems (RTK/GPS).
- Vibration of the machine is not possible.



- Thrown near ground from the first to the second disc row. With this, intensive mixing effect and minimum fuel consumption.
- Homogeneous work image because the soil passes the second disc row without problems.
- Due to the smooth passage of the soil mulch, organic residues can be incorporated homogeneously. No straw nests will be caused.
- Seamless connecting runs because of the low soil throw and the side guide plates.



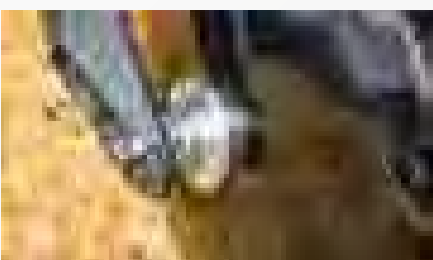
For machines from a working width of 4.0 m, the frame is hydraulically folded. The three-part frame can be folded to a transport width smaller than 3.00 metres to be compact and with a low transport height.



The high passage of the discs allows the very compact design of the machine. This makes it possible that the short disc harrows with three-point attachment and wide working width can be towed by tractors of low performance classes. The front axle relief is low. Therefore, the efficiency of the tractor is increased enormously.



For increasing the operational utilisation, we are offering a hydraulic three-point linkage for the DiscStar 305 Profi that allows the additional installation of a mechanical sowing machine. With this, seed bed preparation and sowing of catch crops or main crops can be done in the mulch seed in one passage. Even on ploughed surfaces, the DiscStar discs achieve a high crumbling and levelling effect.



Low wear on the discs due to small contact surfaces to the soil and complete self-propulsion of the disc. No friction occurs between the discs and the soil that minimises wearing of the discs. The serrated hollow discs with a diameter of Ø 560 mm are mounted with dust-tight and maintenance-free high-quality bearings from SKF.

# DISCSTAR PROFI SHORT DISC HARROWE

Technical data	DiscStar 305 Profi	DiscStar 405 Profi	DiscStar 505 Profi	DiscStar 605 Profi
Working width approx. (m)	3.00	4.00	5.00	6.00
Transport width approx. (m)	3.00	3.00	3.00	3.00
Frame design	Rigid	hydr. foldable	hydr. foldable	hydr. foldable
Number of discs	24	32	40	48
Approx. disc diameter (mm)	560	560	560	560
Working depth approx. (cm)	3 - 15	3 - 15	3 - 15	3 - 15
Operating speed (km/h)	8 - 20	8 - 20	8 - 20	8 - 20
Power requirement approx. in (kW/HP)	56/80	88/120	110/150	125/170
UL-connection	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III
Weight in standard version	1.350	2.450	2.840	3.200

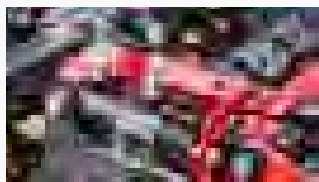
## Standard equipment

- Disc size Ø 560 mm
- Individually suspended discs
- Stone protection by rubber spring elements
- Crumbler roller Ø 500 mm
- Foldable and height-adjustable side discs
- Maintenance-free SKF-bearings
- Hydraulic folding from DiscStar 405 Profi (1 x dw. required)
- Kennfixx hydraulic couplings
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
DiscStar 305 Profi	593.00683.DS305	€ 9,980.00	on request
DiscStar 405 Profi	593.00684.DS405	€ 16,560.00	on request
DiscStar 505 Profi	593.00685.DS505	€ 20,630.00	on request
DiscStar 605 Profi	593.00686.DS605	€ 23,540.00	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

## Depth guide



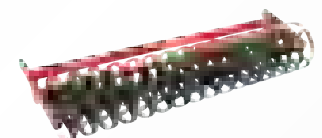
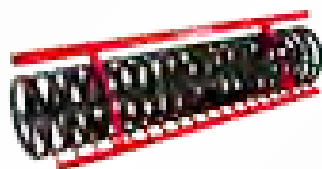
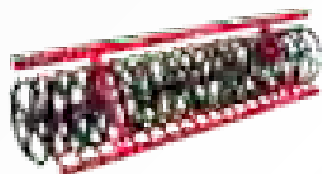
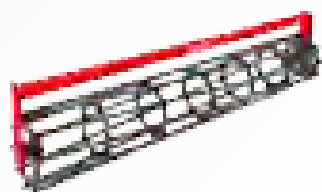
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Hydr. foldable</b>			
DiscStar 305 Profi (1 x dw required)	593003099	20	€ 600.00
DiscStar 405 Profi (1 x dw required)	593003067	40	€ 1,480.00
DiscStar 505 Profi (1 x dw required)	593003107	40	€ 1,480.00
DiscStar 605 Profi (1 x dw required)	593003090	40	€ 1,480.00

## Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
DiscStar 305 Profi	593002822	90	€ 1,120.00
DiscStar 405 Profi	593002823	120	€ 1,610.00
DiscStar 505 Profi	593002824	150	€ 1,890.00
DiscStar 605 Profi	593002825	180	€ 2,190.00

## Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
DiscStar 305 Profi	593002892	210	Series
DiscStar 405 Profi	593002893	280	Series
DiscStar 505 Profi	593002894	350	Series
DiscStar 605 Profi	593002895	420	Series
<b>Roof ring roller with traction bars Ø 600 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 305 Profi	593002826	360	€ 960.00
DiscStar 405 Profi	593002827	480	€ 1,400.00
DiscStar 505 Profi	593002828	600	€ 1,660.00
DiscStar 605 Profi	593002829	720	€ 1,890.00
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 305 Profi	593002830	400	€ 1,310.00
DiscStar 405 Profi	593002831	530	€ 1,990.00
DiscStar 505 Profi	593002832	670	€ 2,380.00
DiscStar 605 Profi	593002833	800	€ 2,760.00
<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 305 Profi	593002834	420	€ 2,040.00
DiscStar 405 Profi	593002835	560	€ 2,720.00
DiscStar 505 Profi	593002836	700	€ 3,200.00
DiscStar 605 Profi	593002837	840	€ 3,650.00
<b>Rubber roller Ø 500 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 305 Profi	593002868	540	€ 2,320.00
DiscStar 405 Profi	593002869	720	€ 3,100.00
DiscStar 505 Profi	593002870	900	€ 3,750.00
DiscStar 605 Profi	593002871	1.080	€ 4,380.00

## Hydraulic three-point linkage for sowing machine (only for DiscStar 305 Profi)



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Three-point linkage for sowing machine</b>			
DiscStar 305 Profi (1 x DW required)	593002838	200	€ 1,430.00

## Mounting platform SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar incl. assembly</b>			
DiscStar Profi	593003141	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113

# DISCSTAR F PROFI SHORT DISC HARROWE

NEW



The short disc harrows SAPHIR DiscStar F Profi are the ideal partners for flat and intensively mixing stubble cultivation. Incorporation of solid manure as well as high amounts of organic residues are counted among the strengths of this machine. Further fields of application are breaking of catch crops as well as flat fallows and incorporation of liquid manure. In the preparation of seed bed, the DiscStar F Profi features fine earth production in the mulch-till as well as on the ploughed land.

The DiscStar F Profi models are equipped with a transport chassis with pneumatic brake system as standard. This makes it possible that also tractors with low lifting power can use these powerful machines. For travelling in public road traffic, a TÜV-certificate is required.

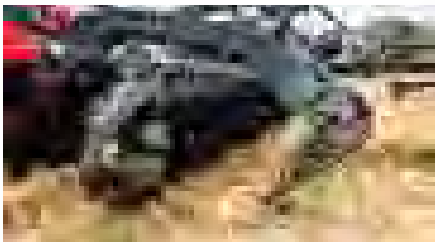




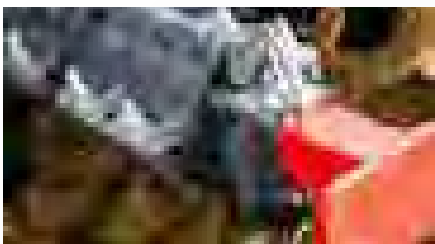
As standard, the machine is connected to the tractor using a Cat. III attachment. All hydraulic hoses, compressed air hoses and lighting cables are conveniently stowed in the hose store.



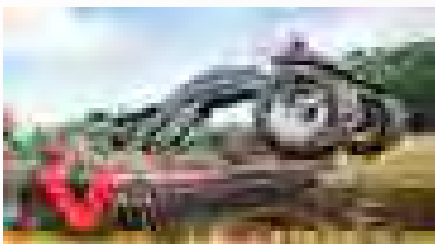
The optional balance-board provides for exact levelling of the soil in the seed bed preparation. Furthermore, straw nests and uneven patches of soil are distributed in stubble cultivation.



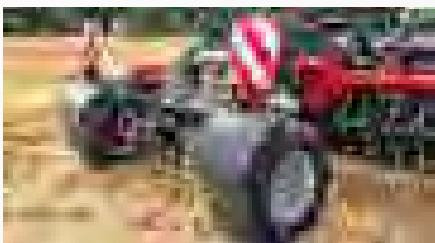
The serrated hollow discs with a diameter of  $\varnothing$  560 mm are mounted with dust-tight and maintenance-free high-quality bearings from SKF®.



In the DiscStar Profi models, each disc is secured individually by means of elastic rubber spring elements. With this, each hollow disc can individually adjust to the soil contour, so that tracks cannot be filled up but can be cultivated without limitation. Furthermore, the discs allow the most possible passage with big amounts of organic mass compared with discs that are arranged in pairs.



Fast hydraulic lifting on the headland and optional hydraulic adaptation of working depth. In working position, the chassis is swivelled out of the cultivation horizon.



The standard chassis with tyres 500/50-17 and the pneumatic brake system provide for safe road travel and high lifting height on the head land.



The side panels are hydraulically locked against incidental folding open by a lock valve. The standard lighting system provides for safe road transport.

# DISCSTAR F PROFI SHORT DISC HARROWE

02

SOIL CULTIVATION

Technical data	DiscStar 505 F Profi	DiscStar 605 F Profi
Working width approx. (m)	5.00	6.00
Transport width approx. (m)	3.00	3.00
Frame design	hydr. foldable	hydr. foldable
Number of discs	40	48
Approx. disc diameter (mm)	560	560
Working depth approx. (cm)	3 - 15	3 - 15
Operating speed (km/h)	12 - 20	12 - 20
Power requirement approx. in (kW/HP)	125/170	140/190
UL-connection	Cat. III	Cat. III
Weight with crumbler roller Ø 500 mm (series)	4,040	4,400

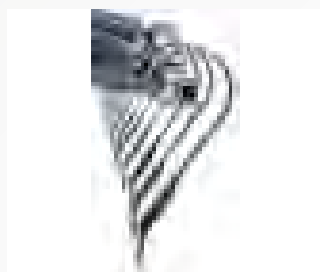
## Standard equipment

- Disc size Ø 560 mm
- Individually suspended discs
- Stone protection by rubber spring elements
- Crumbler roller Ø 500 mm
- Foldable and height-adjustable side discs
- Maintenance-free SKF-bearings
- Hydraulic folding device (1 x DW required)
- Lighting system incl. warning signs
- Chassis (1 x DW required) with tyres 500/50-17
- Pneumatic brake system
- Kennfixx hydraulic couplings
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
DiscStar 505 F Profi	593.00685.DS505F	€ 29,460.00	on request
DiscStar 605 F Profi	593.00686.DS605F	€ 32,390.00	on request

**Note:** Machine is supplied fully fitted.

## Hydraulic balance board



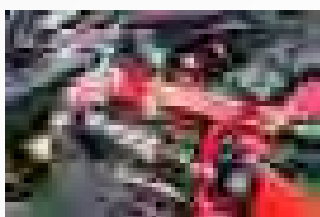
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Hydraulic balance board</b>			
DiscStar 505 F Profi (1 x dw required)	593002841	460	€ 4,030.00
DiscStar 605 F Profi (1 x dw required)	593002842	550	€ 4,450.00

## Following harrow

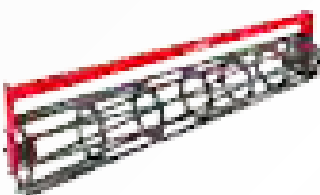


Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
DiscStar 505 F Profi	593002824	150	€ 1,750.00
DiscStar 605 F Profi	593002825	180	€ 2,030.00

## Depth guide



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Hydraulic depth adjustment</b>			
DiscStar 505 F Profi (1 x dw required)	593003111	10	€ 1,480.00
DiscStar 605 F (1 x dw required)	593003112	10	€ 1,480.00



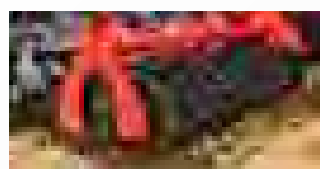
Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
DiscStar 505 F Profi	593002894	350	Series
DiscStar 605 F Profi	593002895	420	Series



<b>Roof ring roller with traction bars Ø 600 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 505 F Profi	593002828	600	€ 1,660.00
DiscStar 605 F Profi	593002829	720	€ 1,890.00



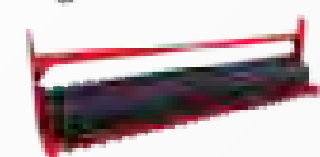
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 505 F Profi	593002832	670	€ 2,380.00
DiscStar 605 F Profi	593002833	800	€ 2,760.00



<b>Double U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 505 F Profi	593003114	1.072	€ 3,450.00
DiscStar 605 F Profi	593003115	1.280	€ 4,150.00

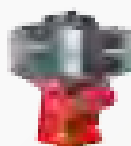


<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 505 F Profi	593002836	700	€ 3,200.00
DiscStar 605 F Profi	593002837	840	€ 3,650.00



<b>Rubber roller Ø 500 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
DiscStar 505 F Profi	593002870	900	€ 3,750.00
DiscStar 605 F Profi	593002871	1.080	€ 4,380.00

## Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar incl. assembly</b>			
DiscStar F Profi	593003141	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113.

## TÜV certificates

Optional extras	Order No.	Weight approx. (kg)	€/piece
TÜV certificate 25 km /h incl. road guard for tines DiscStar F Profi	593002843		€ 990.00

# ALL STAR LARGE SPRING TINE HARROWE



With the SAPHIR ALLSTAR Profi large spring tine harrows with working widths of 3, 4, 5 and 6 m a versatile universal implement for stubble cultivation, for incorporating liquid manure and for seed bed preparation is available for the farmer. The harrows work with light towing force and without plugging, also with medium high straw occurrence at high coverage rate. Because of the natural vibration of each individual spring tine, mixing of the miscibility of harvest residue in stubble cultivation and the crumbling structure of the seed bed is improved decisively.



The AllStar 301 Profi model has a continuous frame. The permissible transport width of 3.0 m is observed. The implement can be operated with tractors from 44 kW / 60 HP. The implement can be adapted for use in many different areas and soil conditions because of the comprehensive range of optional equipment.



The frame of the SAPHIR All 401, 501 and 601 large spring tine harrows is constructed in two parts. Folding takes place in the middle by means of large hydraulic cylinder (with integrated check valve). In folded position the machine can be parked without problems. The 4 bar frame with a 60 x 60 mm pipe profile is braced in many places which guarantees the highest level of stability.



1. 45 x 12 large spring tines  
Standard tines for incorporating liquid manure and for seed bed preparation in light and medium light soil.
2. 45 x 12 large spring tines with double spring  
In case of heavy soil conditions, particularly with loam to clay soils, we recommend equipment with double springs.
3. 60 x 12 x 690 mammoth tines with duck foot share  
The duck foot share has a working width of 180 mm. It is intended for all-over, flat stubble cultivation and for the mechanical removal of weeds.
4. 60 x 12 x 690 mammoth tines  
Mammoth tines are intended for universal use for seed bed preparation, incorporating liquid manure and stubble cultivation.
5. 70 x 12 x 755 Hercules tines  
The Hercules tines are designed for extremely heavy working conditions in the 1st work step of the stubble cultivation.
6. 70 x 12 x 755 Hercules tines with duck foot share  
The duck foot share has a working width of 180 mm. It is intended for all-over, flat stubble cultivation and for the mechanical removal of weeds.
- 7.-8. 70 x 12 x 755 Hercules tines  
Optionally, the Hercules tine can be equipped with a quick change system. With this, the narrow and duck foot shares can be replaced flexibly and quickly.



Drag tine pairs are required for cultivating ploughed farmland. They level the soil very well before the roller. Thus the soil is compacted homogeneously over the whole working width.

# ALL STAR LARGE SPRING TINE HARROWE

02

SOIL CULTIVATION



The double tilling roller consists of two tilling rollers Ø 350 mm. They are intended for seed bed preparation and mechanical weed control on medium to heavy soil. The cleats remove root balls from soil. Because the re-compaction of this roller is low, the weeds can be brought to the surface by a following regenerator. The soil pressure of the rear roller can be adjusted by the adjustable spindles (optimum approx. front 40%/rear 60%).



When used for stubble cultivation on medium and heavy soils, the roof ring roller compacts the soil per strips. This provides optimum conditions for an even accumulation of self-grown grain as well as weed seeds and protects the soil from erosion. In the seed bed preparation, a high re-compaction is reached to achieve the best possible field sprouting of the following crop. The roof ring roller is suitable for all soil conditions.



U profile ring roller with a diameter of Ø 540 mm offers a wide range of application possibilities and can be used in many ways. The U-profile ring takes up soil and with this, it compacts with the „soil-to-soil“-method. With this, it leaves an open-pore soil surface.



The following harrow is used for mechanical control of root weeds.

They are combed out and placed on the soil for drying. In addition, the soil horizon is crumbled to improve the accumulation of the self-sown grain.



Small seed sowers with a capacity of 200 - 500 litres are available for sowing catch crops.

Using 8 baffles, seed is directly distributed in front of the following roller.

Seeds are worked in in the upper 2-3cm; this provides for a homogeneous field sprouting.

Technical data	AllStar 301 Profi	AllStar 401 Profi	AllStar 501 Profi	AllStar 601 Profi
Working width approx. (m)	3.00	4.00	5.00	6.00
Transport width approx. (m)	3.00	2.55	2.55	2.55
Frame design	Rigid	hydr. foldable	hydr. foldable	hydr. foldable
Total number of tines	20	25	31	39
Number of tines 1.. row	5	6	8	10
Number of tines 2.. row	5	6	8	10
Number of tines 3.. row	5	7	7	9
Number of tines 4.. row	5	6	8	10
Distance between the strips approx. (cm)	155	155	155	155
Working depth approx. (cm)	2 - 15	2 - 15	2 - 15	2 - 15
Operating speed (km/h)	8 - 18	8 - 18	8 - 18	8 - 18
Power requirement approx. in (kW/HP)	44/60	59/80	75/100	90/120
UL-connection	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III
Weight without following roller	580	900	1,000	1,100

## Standard equipment

- 45 x 12 mm large spring tines
- 4-bar frame design
- Lighting system incl. warning signs
- AllStar 401, 501, 601: two-part frame design with hydraulic folding device (1 x dw required)
- KENNFIXX couplings
- Frame made of thick-walled tube sections 60 x 60 mm

**Note:** There is no following roller included in the basic price. The machines are supplied fully assembled. If necessary, the following rollers are dismantled for transport reasons.

Model	Order No.	€/piece	Freight costs
AllStar 301 Profi	593.00625.GE301-2	€ 3,740.00	on request
AllStar 401 Profi	593.00624.GE401-2	€ 5,480.00	on request
AllStar 501 Profi	593.00626.GE501-2	€ 5,990.00	on request
AllStar 601 Profi	593.00627.GE601-2	€ 6,620.00	on request

### 1. Track eradicator tines



Optional extras	Order No.	Weight approx. (kg)	€/piece
Track eradicator tines (4 pcs)			
Suitable for all working widths	593135675	20	€ 920.00

# ALL STAR LARGE SPRING TINE HARROWE

## 2. Tines field

The SAPHIR large spring tine harrows can be equipped with different tine per row.

Please find the number of tines in the technical details and quote the row + tine name in the order.

**Note:** The following table includes all tines in additional cost / piece.



Design	Order No.	Weight approx. (kg)	€/piece
<b>45 x 12 large spring tines</b>			
with reinforced share	5931208381	6	Series
Double spring (Supplement in addition to the standard version) for large spring tines 45 x 12	593135629	3	€ 18.00
<b>60 x 12 x 690 mammoth tines (Supplement in addition to the standard version)</b>			
with reinforced share	593135274	9	€ 36.00
With 200 mm duck foot share	593135275	9	€ 40.00
<b>70 x 12 x 755 Hercules tines (Surplus price in addition to the standard version)</b>			
With reinforced share 50 mm	593135276	12	€ 53.00
With quick change system narrow share 50 mm	593003202	13	€ 94.00
With 180 mm duck foot shares	593135277	12	€ 57.00
With quick change system duck foot share 180 mm	593003203	13	€ 98.00

## 3. Levelling



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>AllStar drag tine pairs</b>			
AllStar 301 Profi drag tine kit with 4 tines	593135640-2	28	€ 320.00
AllStar 401 Profi drag tine kit with 5 tines	593135620-2	35	€ 395.00
AllStar 501 Profi drag tine set with 7 tines	593135630-2	49	€ 560.00
AllStar 601 Profi drag tine set with 9 tines	593135631-2	63	€ 715.00

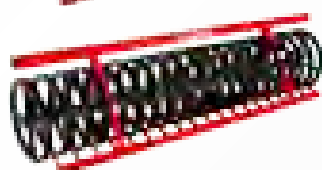
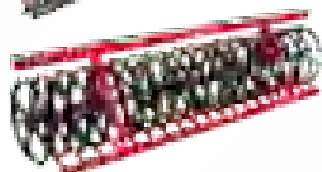
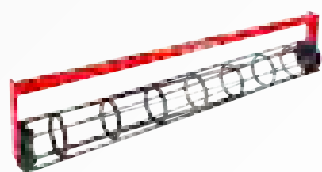
## 4. Depth guide



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm support wheel set</b>			
AllStar 301 Profi 2 pieces	593135648-2	30	€ 540.00
AllStar 401, 501, 601 Profi: 4 pieces	593135632-2	60	€ 1,080.00



## 5. Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 350 mm tilling roller</b>			
AllStar 301 Profi	593135624-2	160	€ 1,210.00
AllStar 401 Profi	593135621-2	250	€ 1,990.00
AllStar 501 Profi	593135625-2	290	€ 2,120.00
AllStar 601 Profi	593135626-2	320	€ 2,510.00
<b>Ø 350 mm double tilling roller</b>			
AllStar 301 Profi	593135668-2	320	€ 2,400.00
AllStar 401 Profi	593135669-2	480	€ 3,880.00
AllStar 501 Profi	593135670-2	540	€ 4,190.00
AllStar 601 Profi	593135671-2	640	€ 5,020.00
<b>Ø 500 mm crumbler roller</b>			
AllStar 301 Profi	593135623-2	190	€ 1,510.00
AllStar 401 Profi	593135622-2	310	€ 2,400.00
AllStar 501 Profi	593135627-2	350	€ 2,510.00
AllStar 601 Profi	593135628-2	380	€ 2,890.00
<b>Ø 600 mm roof ring roller</b>			
AllStar 301 Profi	593000516-2	340	€ 2,470.00
AllStar 401 Profi	593135679-2	550	€ 4,210.00
AllStar 501 Profi	593135680-2	630	€ 4,440.00
AllStar 601 Profi	593135681-2	680	€ 4,670.00
<b>Ø 540 mm U-profile ring roller</b>			
AllStar 301 Profi	593002174-2	350	€ 2,820.00
AllStar 401 Profi	593002175-2	570	€ 4,490.00
AllStar 501 Profi	593002176-2	640	€ 4,790.00
AllStar 601 Profi	593002177-2	700	€ 5,100.00
<b>Ø 550 mm spring stamp roller</b>			
AllStar 301 Profi	593001426-2	420	€ 3,550.00
AllStar 401 Profi	593003108-2	560	€ 5,860.00
AllStar 501 Profi	593003109-2	700	€ 6,200.00
AllStar 601 Profi	593003110-2	840	€ 7,100.00

## 6. Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow with tilling roller/double tilling roller</b>			
AllStar 301 Profi	593135641-2	90	€ 810.00
AllStar 401 Profi	593135652-2	120	€ 940.00
AllStar 501 Profi	593135636-2	150	€ 1,380.00
AllStar 601 Profi	593135637-2	180	€ 1,460.00
<b>Following harrow with other following rollers</b>			
AllStar 301 Profi	593135642-2	90	€ 810.00
AllStar 401 Profi	593135653-2	120	€ 940.00
AllStar 501 Profi	593135638-2	150	€ 1,380.00
AllStar 601 Profi	593135639-2	180	€ 1,460.00

## 7. Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar incl. assembly</b>			
AllStar 301 Profi	593003140	120	€ 1,190.00
AllStar 401, 501, 601 Profi:	593002570	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113.

# LARGE SPRING TINE HARROW ALLSTAR 801 F PROFI



The Allstar 801 F provides large farming operations with a soil cultivation machine with many different operating conditions and a large number of different optional extras. The 8 metre wide large spring tine harrow with its 54 large spring tines is an excellent machine for first and second stubble breaking, for incorporating liquid manure, for sowing catch crops and preparing seed beds. A distinguishing feature of the machine is the approx. 600 mm frame clearance and 660 mm distance between the bars.

When combined with the optionally available SAPHIR cutting roller, improved reduction and incorporation of harvest residue is possible. Because of the many different equipment variants, the machine is suitable for all non-turning soil cultivation processes up to a working depth of 150 mm.



The 4-bar frame of the AllStar 801 F Profi is constructed in three parts. Four large hydraulic cylinders retract the harrow. The side sections are locked automatically during the retraction procedure. The side sections retract at an angle of more than 102° thus guaranteeing safe road transport. In folded position the machine can be parked without problems.



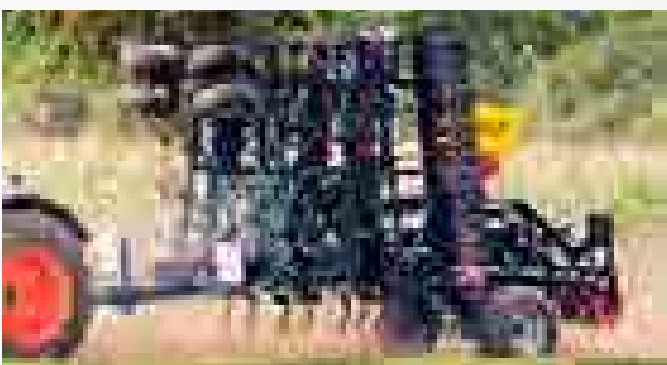
The high 600 mm frame clearance and the 660 mm wide distance between the bars enable universal use for incorporating liquid manure and catch crops, seed bed preparation and stubble cultivation. Low drag resistance, fuel saving and a high coverage rate are further arguments for the AllStar 801 F Profi.



The AllStar 801 F Profi is equipped with Hercules tines in the format 70 x 12 x 755 mm as standard. Alternatively, Hercules tines 70 x 12 x 755 mm with duck foot shares can be mounted. The duck foot share has a working width of 180 mm. It is intended for all-over stubble cultivation.



The long tow bar provides for optimum towing. Towing vehicles with twin tyres can thus easily perform shunting manoeuvres on the headland.



The integrated chassis ensures enormously high ground clearance during road transport. Thus it can easily pass through uneven country lanes. The running characteristics are very stable even on uneven roads because of its compact design. A TÜV (Technical Inspection Agency) certificate can be issued for the machine to be used on the roads at 25 km/h because it has pressure air brakes and a lighting system fitted as standard.

# LARGE SPRING TINE HARROW ALLSTAR 801 F PROFI

02

SOIL CULTIVATION



A cutting roller is available as an optional extra. The highly wear-resistant steel cutters (500 HB) have a long service life. With this, catch crops and corn, straw and rapeseed stubble can be reduced and crushed well before the actual soil cultivation. The consequence is very good mixing in of plants, clogging-free soil cultivation and an acceleration of the rotting process.



Optionally, the working depth can hydraulically be adjusted. With this, the running wheels and the following roller are adjusted with hydraulic cylinders and setting clips.



There is an optionally available device for attaching a small seed sower for sowing catch crops. Gritters with a capacity of 120 - 500 litres can be fitted. A homogeneous accumulation of catch crops is created using 8 baffles for precise seed distribution. By sowing the seeds between the harrow and the following roller, the seeds are perfectly worked in close.

Technical data	AllStar 801 F Profi
Working width approx. (m)	8.00
Transport width approx. (m)	3.00
Frame design	hydr. foldable
Total number of tines	54
Number of tines 1.. row	13
Number of tines 2.. row	14
Number of tines 3.. row	13
Number of tines 4.. row	14
Distance between the strips approx. (cm)	150
Working depth approx. (cm)	3 - 15
Operating speed (km/h)	8 - 18
Power requirement approx. in (kW/HP)	148/200
UL-connection	Cat. III
Hydraulic connection	3 x dw.
Weight in standard version	5,800

## Standard equipment

- Solid supporting frame with chassis, traction device, UL-connection Cat. III and 4-bar frame
- 70 x 12 mm large spring tines with interchangeable tip
- Telescopic tow bar
- 4 front support wheels 10.0/75-15.3
- Chassis tyres 500/55-20
- Pneumatic brake system
- Roof ring roller with traction bars Ø 600 mm
- Tool box
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
AllStar 801 F Profi	593.00678.GE801-2	€ 40,950.00	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons

# LARGE SPRING TINE HARROWALLSTAR 801 F PROFI

## 1. Track loosening



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Track eradicator tines</b>			
Set with 2 x 3 tines AllStar 801 F Profi	593002155	20	€ 1,370.00

## 2. Preprocessing tools



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Front tool adapter</b>			
AllStar 801 F Profi (1 x DW required)	593002153-2	400	€ 3,230.00
<b>Ø 360 mm cutting roller (5 pieces)</b>			
AllStar 801 F (Tool adapter required!)	593002169-2	650	€ 5,980.00
<b>Hydraulic balance board</b>			
AllStar 801 F (Tool adapter required!)	593002156-2	450	€ 3,100.00

## 3. Tines field

The SAPHIR large spring tine harrows can be equipped with different tine per row.

Please find the number of tines in the technical details and quote the row + tine name in the order.

**Note:** The following table includes all tines in additional cost / piece.

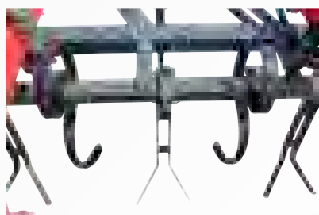


Design	Order No.	Weight approx. (kg)	€/piece
<b>70 x 12 x 755 Hercules tines (Surplus price in addition to the standard version)</b>			
With reinforced share 50 mm	593135276	12	Series
With quick change system narrow share 50 mm	593003202	13	€ 41.00
With 180 mm duck foot shares	593135277	13	€ 4.00
With quick change system duck foot share 180 mm	593003203	13	€ 45.00

## 4. Depth adjustment

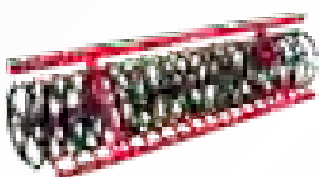
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mechanical depth adjustment front</b>			
	593003161	60	Series
<b>Hydraulic depth adjustment front (running wheels) AllStar 801 F Profi</b>			
	593002157	60	€ 640.00
<b>Hydraulic depth adjustment rear (following roller) AllStar 801 F Profi</b>			
	593002158	60	€ 1,950.00

## 5. Levelling



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Drag tine pairs</b>			
AllStar 801 F Profi, 13 pieces	593002154-2	90	€ 1,040.00

## 6. Following roller



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 600 mm roof ring roller with traction bars</b>			
AllStar 801 F Profi	593002171-2	960	Series



<b>U-profile ring roller Ø 600 mm (Surplus price in addition to the standard version)</b>			
AllStar 801 F Profi	593002170-2	1.000	€ 820.00



<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version)</b>			
AllStar 801 F Profi	593002172-2	1,260	€ 3,450.00

## 7. Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
AllStar 801 F Profi	593002167-2	320	€ 1,890.00

## 8. Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar (platform and ladder) incl. assembly</b>			
AllStar 801 F Profi	593002022	250	€ 1,190.00

Note: Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113

## 9. TÜV certificates

Optional extras	Order No.	€/piece
<b>TÜV certificate 25 km /h incl. road guard for tines</b>		
AllStar 801 F Profi	593002173	€ 990.00

# TERRASTAR PROFI WING SHARE CULTIVATOR

02

SOIL CULTIVATION



The SAPHIR TerraStar Profi and TerraStar S Profi wing share cultivators have already proven to be successful in soil cultivation for many years and feature especially robust structure and various application possibilities. The two-bar design and the high passage guarantee working without blockage. The wide wing shares cultivate the soil all over while the following hollow discs ensure intensive mixing. Several following rollers are available for the final optimum re-compaction.





Strong rectangular tube sections make the frame particularly warp-resistant. The wide bar spacing and the large clearance height (800 mm) ensure that work continues without blockages.



All models are equipped with wing shares as standard. The offset wing shares ensure that the soil is perfectly mixed even with flat stubble processing.



An automatic stone guard is recommended for stony or hard soil conditions (Model TerraStar S Profi). Overload is prevented by a very sturdy pressure spring with grease nipples on the pivotal points. The tines are constantly reset to the operating position after overcoming the obstacle. The releasing force is 500 kg.



The hollow discs are located on a spring-loaded annular plate bar (80 x 80 mm pipe profile) as standard. In addition, the hollow discs are fitted with dustproof ball bearings (closed version). The hollow discs can be both with smooth or serrated and can be adjusted individually and also centrally over the whole height of the bar.



In the models 501 Profi, 541 Profi, 501 S Profi, the side sections are retracted using two double-action cylinders. A check valve prevents the side sections being raised unintentionally even under hard soil conditions. Under extreme soil conditions the side sections can also be secured by a bolt in the operating position. The folded-in medium part can also be used for cultivation of unpaved shoulders.

# TERRASTAR PROFI WING SHARE CULTIVATOR

Technical data	TerraStar 301 Profi	AllStar 301 S Profi	TerraStar 501 Profi	AllStar 501 S Profi	TerraStar 541 Profi
Working width approx. (m)	3.00	3.00	4.60	4.60	5.40
Transport width approx. (m)	3.00	3.00	3.00	3.00	3.00
Frame design	Rigid	Rigid	hydr. foldable	hydr. foldable	hydr. foldable
Total number of tines	7	7	11	11	13
Number of tines 1.. row	3	3	5	5	6
Number of tines 2.. row	4	4	6	6	7
Number of hollow discs	6	6	10	10	12
Working depth approx. (cm)	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20
Operating speed (km/h)	8 - 15	8 - 15	8 - 15	8 - 15	8 - 15
Power requirement approx. in (kW/HP)	66/90	66/90	100/140	100/140	117/160
UL-connection	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III
Stone guard	Bolt	Pressure spring	Bolt	Pressure spring	Bolt
Weight in standard version	1,120	1,420	1,950	2,390	2,160

**Note:** The machines are supplied fully assembled. If necessary, the following rollers are dismantled for transport reasons.

## Standard equipment

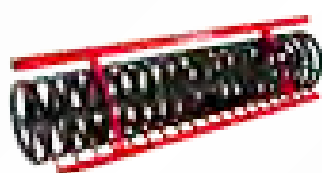
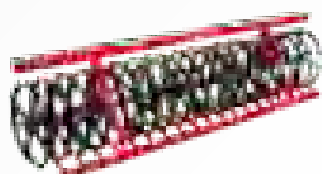
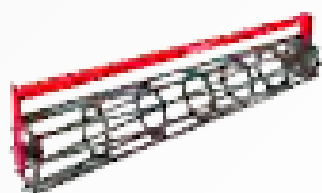
- Spring-loaded hollow discs Ø 460 mm
- Tine filed with wing share system
- Tines with shear bolt protection
- For TerraStar 301 S Profi and 501 S Profi overload protection by pressure spring
- Offset wing shares
- Crumbler roller Ø 500 mm
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
TerraStar 301 Profi	593.00658.FG301/80-2	€ 6,890.00	on request
TerraStar 301 S Profi	593.00681.FG301/80S-2	€ 11,660.00	on request
TerraStar 501 Profi	593.00659.FG501/80-2	€ 12,740.00	on request
TerraStar 501 S Profi	593.00682.FG501/80S-2	€ 19,530.00	on request
TerraStar 541 Profi	593.00662.FG541/80-2	€ 15,830.00	on request

## 1. Levelling

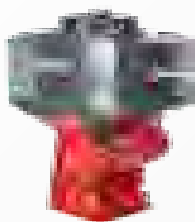
Optional extras	Order No.	Weight approx. (kg)	€/piece
Side disc set TerraStar 301 to 541	593135655	50	€ 470.00

## 2. Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
TerraStar 301 PROFI / S PROFI	593000216-2	190	Series
TerraStar 501 PROFI / S PROFI TerraStar 541	593000219-2	420	Series
<b>Roof ring roller Ø 600 mm with traction bars (surplus price in addition to the standard version with crumbler roller)</b>			
TerraStar 301 PROFI / S PROFI	593000563-2	340	€ 960.00
TerraStar 501 PROFI / S PROFI	593000564-2	670	€ 1,660.00
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TerraStar 301 PROFI / S PROFI	593001992-2	350	€ 1,310.00
TerraStar 501 PROFI / S PROFI	593002994-2	690	€ 2,380.00
<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TerraStar 301 PROFI / S PROFI	593003164-2	420	€ 2,040.00
TerraStar 501 PROFI / S PROFI	593001627-2	700	€ 3,200.00

## 3. Mounting platform for SAPHIR DrillStar incl. assembly costs



Designation	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar (platform and ladder) incl. assembly</b>			
TerraStar 301 PROFI / S-PROFI	593003139	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113.

# TINESTAR ECOLINE MULCH SEEDER

02

SOIL CULTIVATION



The Die SAPHIR TineStar Ecoline mulch seeders are suitable for incorporating of especially large portions of organic material and for the operation with preserving soil cultivation. The design that is especially easy to pull allows deep mixing of the soil with lowest working costs. A plane and homogeneous seed bed is prepared for the following sowing process.



The particularly stable frame of tubular profile with 750 mm frame passage allows working without blockage also for high percentages of organic material.



The mulch seeders guarantee optimum mixing of soil and can flexibly be adapted. By dismounting of the wing shares (350 mm), variation is possible between all-over and flat stubble cultivation and deep soil cultivation of up to approx. 30 cm by narrow shares. The maximum working depth with wing shares is approx. 12 cm.



For especially high percentages of stones, we recommend models with automatic stone protection (S) by double springs. They have a releasing force of 500 kg and allow the application without standstill.



Soil is levelled by hollow discs arranged in pairs. Working depths can be adapted by a perforated template with locking pins.



Optionally, all models can be equipped with SAPHIR small seed sower DrillStar for the combined sowing of catch crops.

# TINESTAR ECOLINE MULCH SEEDER

02

SOIL CULTIVATION

Technical data	TineStar 306 Ecoline	TineStar 306 S Ecoline	TineStar 407 Ecoline	TineStar 407 S Ecoline
Working width approx. (m)	3.00	3.00	4.00	4.00
Transport width approx. (mm)	3.00	3.00	3.00	3.00
Frame design	Rigid	Rigid	hydr. foldable	hydr. foldable
Total number of tines	11	11	15	15
Number of tines 1.. row	3	3	5	5
Number of tines 2.. row	4	4	5	5
Number of tines 3.. row	4	4	5	5
Distance between the strips approx. (cm)	27	27	27	27
Working depth approx. (cm)	5 - 25	5 - 25	5 - 25	5 - 25
Operating speed (km/h)	10 - 15	10 - 15	10 - 15	10 - 15
Power requirement approx. in (kW/HP)	80/110	110/150	110/150	130/180
UL-connection	Cat. II	Cat. II	Cat. II/III	Cat. II/III
Stone guard	Bolt	Double spring	Bolt	Double spring
Weight in standard version	1,390	1,950	2,380	3,140

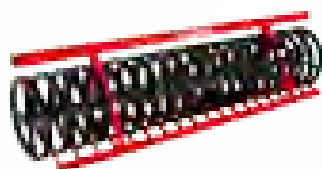
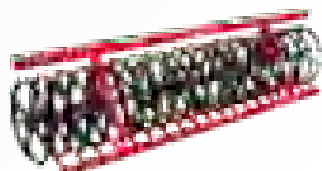
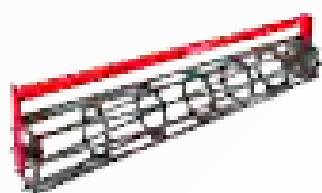
## Standard equipment

- Combi share: Wing share 350 mm + narrow share with baffle plate 80 mm
- Stone protection by shear bolts (TineStar 306 Ecoline, TineStar 407 Ecoline)
- Stone guard by double spring (TineStar 306S Ecoline, TineStar 407S Ecoline)
- Toothed hollow discs
- Crumbler roller Ø 540 mm
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
<b>TineStar 306 Ecoline</b>	593.00670.MSG306	<b>€ 7,490.00</b>	on request
<b>TineStar 306 S Ecoline</b>	593.00671.MSG306S	<b>€ 9,430.00</b>	on request
<b>TineStar 407 Ecoline</b>	593.00674.MSG407	<b>€ 11,980.00</b>	on request
<b>TineStar 407 S Ecoline</b>	593.00674.MSG407S	<b>€ 15,490.00</b>	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

## 1. Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 540 mm crumbler roller</b>			
TineStar 306/S Ecoline	593000208-2	200	Series
TineStar 407/S Ecoline	593001319-2	410	Series
<b>Roof ring roller Ø 600 mm with traction bars (surplus price in addition to the standard version with crumbler roller)</b>			
TineStar 306/S Ecoline	593003165-2	340	€ 960.00
TineStar 407/S Ecoline	593001400-2	480	€ 1,610.00
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TineStar 306/S Ecoline	593002151-2	350	€ 1,310.00
TineStar 407/S Ecoline	593001993-2	500	€ 1,880.00
<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TineStar 306/S Ecoline	593003166-2	390	€ 2,040.00
TineStar 407/S Ecoline	593001631-2	820	€ 2,660.00

## 2. Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
TineStar 306/S Ecoline	593000551-2	90	€ 990.00
TineStar 407/S Ecoline	593000552-2	120	€ 1,890.00

## 3. Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for (platform and ladder) for SAPHIR DrillStar</b>			
TineStar 306/S Ecoline / 407/S	593003138	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113

# TINESTAR PROFI MULCH SEEDER



The SAPHIR TineStar Profi mulch seeder is the professional and versatile solution for the intensive management of arable land. Numerous equipment variants allow the free configuration to any operational requirements. In addition, the optionally available hydraulic depth adjustment and the optional hydraulic side disc retraction guarantees particularly high user comfort.





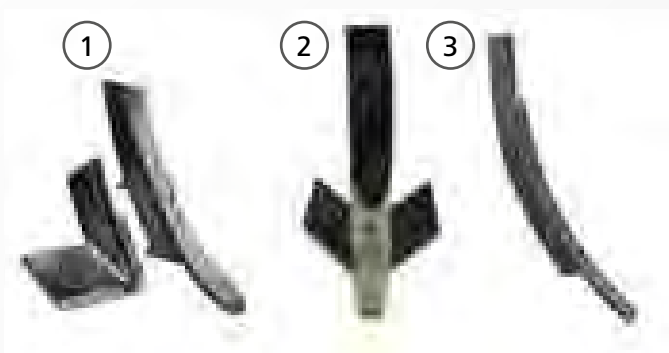
The sturdy frame design provides a high level of operational reliability even under the most difficult conditions. The frame design based on power transmission and the thick walls in extremely loaded areas guarantee long lifetime of the machine.



The overload protection of the tine with shear bolts is recommended for light, loose-fill soil with minor stone occurrence. With this, the working quality of the tines is not affected because the optimum share angle is kept continuously. The share angle can be adapted to the soil conditions. The flatter the angle the higher the overlapping. The steeper the angle, the more intensive the mixing effect.

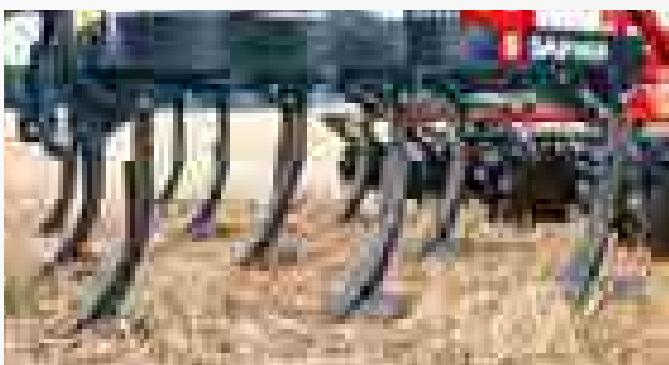


An automatic stone guard is recommended for stony or hard soil conditions. The release force of the pressure spring is more than 550 kg which allows efficient working also under the heaviest conditions. The share angle can be adapted to the soil conditions. The flatter the angle, the more intensive the mixing effect.



#### Share system

1. Share tip 80 x 14 mm with wing share 310 mm for medium depth soil cultivation (max. working depth with wing share approx. 12 cm, max. working depth without wing share approx. 25 cm)
2. Highly wear-resistant share tip 80 x 20 with wing share for medium and deep loosening at long lifetimes (max. working depth with wing share approx. 12 cm, max. working depth without wing share approx. 25 cm)
3. Narrow share 40 x 20 mm for extremely deep loosening (ca. 30 cm)



The optimum tine arrangement and the alignment of the guide plates offer the best possible conditions for a perfect passage and outstanding incorporation of harvest residue into the soil. Using the wing share (350 mm) a complete undercut of the soil surface is created.

# TINESTAR PROFI MULCH SEEDER

02

SOIL CULTIVATION



Levelling of uneven patches and incorporating of harvest residues is done by levellers as standard. Optionally, the spring-loaded hollow discs are available whose bearings have lifetime lubrication and do not any maintenance works.

The pressure spring system additionally protects the discs from overload and automatically adapts the working depth to the tines.



The working depth of the TineStar Profi is set via the mech. depth adjustment device. The following packer is strongly fixed by clips. In this way, the cultivator sits on the roller. If conditions are very dry and hard, the weight of the following roller can move to the cultivator frame. Instead of the mechanical depth adjuster there is a hydraulic version available as an option. The working depth can easily be varied out of the tractor cab using two hydraulic cylinders.



A hydraulic side disc retraction component is available in order to convert the machine easily to its transport or operating position. The hydraulic retraction system is also used for the flexible retraction of side discs in order to make it easier to deal with the field edges and woods. The cylinders are installed intelligently in the carrier section of the side discs in order to prevent damage by stones.



A hose store is provided as for the organised storage of hydraulic hoses and light system plugs.



For sowing of catch crops, the SAPHIR small seed sowers can be mounted with a content of 200-500 litres.

Technical data	TineStar 307 Profi	TineStar 307 S Profi
Working width approx. (m)	3.00	3.00
Transport width approx. (m)	3.00	3.00
Frame design	Rigid	Rigid
Total number of tines	11	11
Number of tines 1.. row	3	3
Number of tines 2.. row	4	4
Number of tines 3.. row	4	4
Distance between the strips approx. (cm)	27	27
Working depth approx. (cm)	5-25	5-25
Operating speed (km/h)	10 - 15	10 - 15
Power requirement approx. in (kW/HP)	80/110	80/110
UL-connection	Cat. II/III	Cat. II/III
Stone guard	Shear bolt	Double spring
Weight in standard version	1,420	1,820

## Standard equipment

- Wing shares 350 mm, narrow share with guide plate 80 mm
- Stone protection by shear bolts (TineStar 307 Profi)
- Stone protection by double spring (TineStar 307 S Profi)
- Spring-loaded covering tines
- Crumbler roller Ø 500 mm
- Mechanical depth adjustment
- Shear bolt magazine
- Lighting system incl. warning signs

Model	Order No.	€/piece	Freight costs
TineStar 307 Profi	593.00670.MSG307	€ 7,710.00	on request
TineStar 307 S Profi	593.00670.MSG307S	€ 10,950.00	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

# TINESTAR PROFI MULCH SEEDER

02

SOIL CULTIVATION

## 1. Tines field



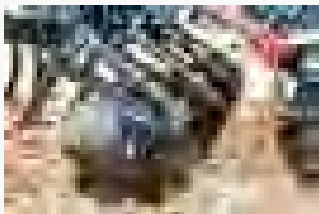
Design	Order No.	Weight approx. (kg)	€/piece
<b>Combi mix share system (350 mm)</b>			
TineStar 307/S Profi	593003162		Series
<b>With narrow share (40 mm)</b>			
TineStar 307/S Profi Set with 11 pieces.	593002849		€ 583.00
<b>Heavy Duty share tip</b>			
TineStar 307/S Profi Set with 11 pieces.	593003205		€ 1,160.00

## 2. Depth adjustment



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mechanical depth adjustment</b>			
TineStar 307/S Profi	593002274	40	Series
<b>Hydraulic depth adjustment (Surplus price in addition to the standard version)</b>			
TineStar 307/S Profi (1 x DW required)	593002159	40	€ 810.00

## 3. Levelling



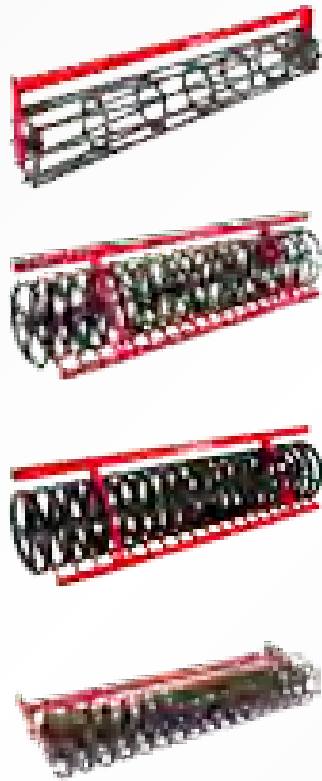
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Levelling hollow discs</b>			
TineStar 307/S Profi	593002165		€ 1,070.00

## 4. Side disc retractor



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mechanical Side disc retractor</b>			
TineStar 307/S Profi	593003118	1	Series
<b>Hydraulic side disc retractor</b>			
TineStar 307/S Profi (1 x DW required)	593002160	15	€ 590.00

## 5. Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 540 mm crumbler roller</b>			
TineStar 307/S Profi	593000208-2	200	Series
<b>Rubber roller Ø 600 mm (Surplus price in addition to standard version with crumbler roller)</b>			
TineStar 307/S Profi	593000516-2	340	€ 960.00
<b>U-profile ring roller Ø 540 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TineStar 307/S Profi	593001992-2	350	€ 1,310.00
<b>Spring stamp roller Ø 550 mm (Surplus price in addition to the standard version with crumbler roller)</b>			
TineStar 307/S Profi	593002834	420	€ 2,040.00

## 6. Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
TineStar 307/S Profi	593003168-2	90	€ 810.00

## 7. Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for (platform and ladder) for SAPHIR DrillStar incl. assembly</b>			
TineStar 307/S Profi	593002254	120	€ 1,190.00

**Note:** Kit does not include a sow unit - please find the SAPHIR DrillStar models on pages 110-113.

# DEEPSTAR ECOLINE SUBSOILER



The SAPHIR DeepStar Ecoline subsoilers are the ideal machines to eliminate soil compaction and loosen machine tracks. The water and air can be regulated significantly better up to a working depth of 80 cm. Using subsoiling increases the permeability of the soil and optimises sowing conditions. Loosening improves drainage and promotes a faster exchange of gases. This results in fast germination and promotes nutrient uptake from the soil. Soils that have been loosened deep down dry out faster and thus can be cultivated earlier.



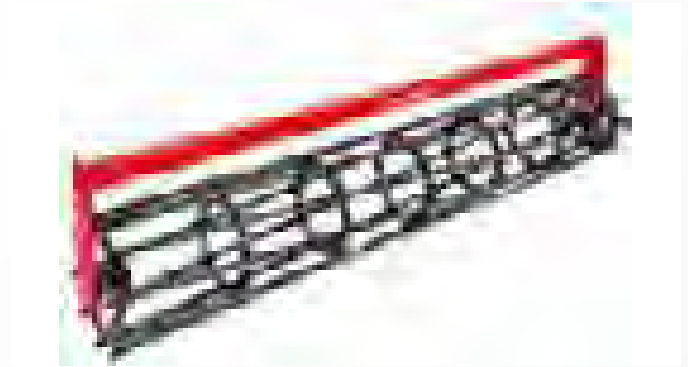
Robust square-pipe frame for optimum power absorption.



The standard stone guard by means of shear bolts ensures a particularly long lifetime of plough beam and frame.



Die parking supports guarantee a safe stability of the machine.



Optional Crumbler roller (Ø 500 mm) for depth control and re-compaction.



Optional drainage cone for the creation of drainage channels for improved water flow.



DeepStar 1/80 Ecoline



DeepStar 2/80/160 Ecoline



DeepStar 4/80/300 Ecoline

# DEEPSTAR ECOLINE SUBSOILER

02

SOIL CULTIVATION

Technical data	DeepStar 1/80 Ecoline	DeepStar 2/80/160 Ecoline	DeepStar 2/80/180 Ecoline	DeepStar 3/80/180 Ecoline
Working width approx. (m)	-	1.60	1.80	1.80
Number of tines	1	2	2	3
Distance between tines approx. (cm)	-	160	180	90
Working depth approx. (cm)	80	80	80	80
Operating speed (km/h)	3 - 10	3 - 10	3 - 10	3 - 10
Power requirement approx. in (kW/HP)	50/70	60/80	60/80	75/100
UL-connection	Cat. II	Cat. II/III	Cat. II/III	Cat. II/III
Weight approx. (kg)	230	415	425	555

Technical data	DeepStar 3/80/200 Ecoline	DeepStar 3/80/225 Ecoline	DeepStar 4/80/300 Ecoline	DeepStar 5/80/300 Ecoline
Working width approx. (m)	2.00	2.25	3.00	3.00
Number of tines	3	3	4	5
Distance between tines approx. (cm)	100	112	100	75
Working depth approx. (cm)	80	80	80	80
Operating speed (km/h)	3 - 10	3 - 10	3 - 10	3 - 10
Power requirement approx. in (kW/HP)	75/100	75/100	95/130	130/175
UL-connection	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III
Weight approx. (kg)	570	590	735	850

## Standard equipment

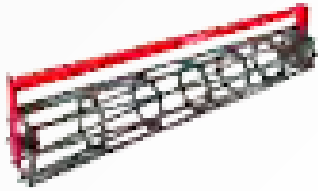
- Rigid frame design
- Transport width of all models below 3.0 m.
- Stone protection by shear bolts
- Share individually replaceable
- Parking support
- With wide shares as standard (11 - 19 cm)
- Narrow share (6 - 11 cm)  
(available at an extra charge if required)

Model	Order No.	€/piece	Freight costs
DeepStar 1/80 Ecoline	583404875-2	€ 1,070.00	on request
DeepStar 2/80/160 Ecoline	583404876-2	€ 1,930.00	on request
DeepStar 2/80/180 Ecoline	583404874-2	€ 1,990.00	on request
DeepStar 3/80/180 Ecoline	583404877-2	€ 2,440.00	on request
DeepStar 3/80/200 Ecoline	583404881-2	€ 2,550.00	on request
DeepStar 3/80/225 Ecoline	583404883-2	€ 2,660.00	on request
DeepStar 4/80/300 Ecoline	583404882-2	€ 3,290.00	on request
DeepStar 5/80/300 Ecoline	583404878-2	€ 3,390.00	on request

**Assembly costs:** The machines are supplied fully assembled. Only the ploughs have to be mounted to the machine. Required time approx. 15 minutes per plough.



## 1. Depth guide



Optional extras	Order No.	€/piece
<b>Support wheel set</b>		
Available for DeepStar Ecoline 3/80/180 and 3/80/200	583001644-2	€ 1,350.00
<b>Ø 500 cm crumbler roller incl. attachments</b>		
Available for DeepStar Ecoline 3/80/225, 4/80/300 and 5/80/300	583001761-2	€ 2,390.00

## 2. Accessories

Optional extras	Order No.	€/piece
Share wide (11-19 cm)	583000075	€ 120.00
Share narrow (6-11 cm)	583000074	€ 120.00
Plough loose	583000124	€ 285.00
Ø 60 mm drainage cone	583404879	€ 120.00

# DEEPSTAR PROFI SUBSOILER

NEW



Due to the use of heavy machinery farmland and grassland have suffered from great compaction of about 30-50 cm over the last centuries. The consequences are bad absorption of precipitation, bad water management in case of drought and reduced soil life due to unattractive soil structure. The new subsoiler DeepStar Profi with hydraulic stone protection completes the subsoiler program of SAPHIR. The various possibilities of following rollers provide an additional effective benefit for all soil conditions in one passage.



Hydraulic stone protection of tines (releasing force 650 kg). After releasing, the tines automatically return to their working position.



Optional drainage cone for the creation of drainage channels for improved water flow



Maintenance-friendly due to individually replaceable tines and shares



Optional support wheels for depth control for DeepStar 2/60/160 and 3/60/180



Optional lighting system incl. warning signs for safe road transport

# DEEPSTAR PROFI SUBSOILER

Technical data	DeepStar 2/60/160 Profi	DeepStar 3/60/180 Profi	DeepStar 4/60/300 Profi	DeepStar 5/60/300 Profi
Working width approx. (m)	1.60	1.80	3.00	3.00
Transport width approx. (m)	2.20	2.40	3.00	3.00
Frame design	Rigid	Rigid	Rigid	Rigid
Number of tines	2	3	4	5
Distance between tines approx. (cm)	160	90	90	70
Working depth approx. (cm)	10 - 60	10 - 60	10 - 60	10 - 60
Operating speed (km/h)	3 - 10	3 - 10	3 - 10	3 - 10
Power requirement approx. in (kW/HP)	55/75	74/100	92/125	110/150
UL-connection	Cat. II/III	Cat. II/III	Cat. II/III	Cat. II/III
Weight in standard version	620	775	1,180	1,345

## Standard equipment

- Narrow shares (11 cm) for vertical, easy to pull loosening
- Overload protection of tines by hydraulic cylinders and nitrogen bubble
- Parking supports for safe parking
- Kennfixx hydraulic couplings

Model	Order No.	€/piece	Freight costs
DeepStar 2/60/160 Profi	583.01510.DS2-160	€ 4,570.00	on request
DeepStar 3/60/180 Profi	583.01511.DS3-180	€ 5,390.00	on request
DeepStar 4/60/300 Profi	583.01512.DS4-300	€ 7,650.00	on request
DeepStar 5/60/300 Profi	583.01513.DS5-1300	€ 8,520.00	on request

## 1. Depth guide

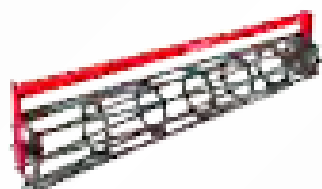
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Support wheel set</b>			
DeepStar 2/60/160 Profi + 3/60/180 Profi	583002820	60	€ 1,350.00

## 2. Drainage cone



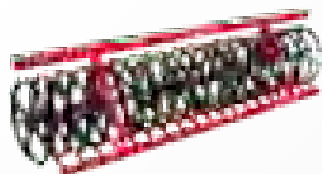
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Ø 60 mm drainage cone</b>			
For all models of DeepStar Profi	583002813	3	€ 120.00

## 3. Trailing rollers



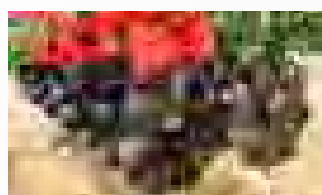
Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
DeepStar 2/60/160 Profi + 3/60/180 Profi	583002814	140	€ 1,340.00

DeepStar 4/60/300 Profi + 5/60/300 Profi	583002815	190	€ 1,650.00
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DeepStar 2/60/160 Profi + 3/60/180 Profi	583002818	240	€ 2,190.00
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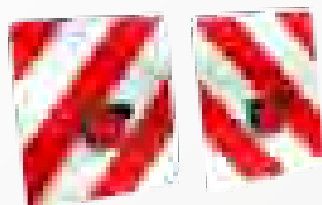
DeepStar 4/60/300 Profi + 5/60/300 Profi	583002819	360	€ 2,610.00
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<b>Twin Disc roller Ø 470 mm</b>			
DeepStar 2/60/160 Profi + 3/60/180 Profi	583002816	400	€ 3,050.00

DeepStar 4/60/300 Profi + 5/60/300 Profi	583002817	600	€ 4,200.00
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## 4. Lighting



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Lighting system incl. warning signs</b>			
For all models of DeepStar Profi	583002821	20	€ 530.00

## 5. Three-point linkage for attachment

Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Hydr. three-point linkage (Cat. II) for additional attachment</b>			
DeepStar 4/60/300 Profi and 5/60/300 Profi 1 x DW required	583002812-2	300	€ 2,300.00

# PLOWSTAR ECOLINE SUBSOILER

02

SOIL CULTIVATION



The especially shaped tine of the SAPHIR PlowStar Ecoline subsoiler provides for particularly good soil loosening. Soil is loosened over the whole width of the machine up to a working depth of approx. 45 cm. Only a little soil is conveyed to the top and the ground surface remains relatively plane. The proven design of the tine guarantees easy drawing in of the machine in almost all soil conditions without problems. If worn, the shares and the contact plate of the tine can be replaced.



Robust square-pipe frame in V-shape for optimum power absorption.



Especially curved tine shape for optimum loosening over the whole working width.

The standard stone guard by means of shear bolts ensures a particularly long lifetime of plough beam and frame.



Standard support wheel set (10.0/75-15.3) for homogeneous deep control

Technical data	PlowStar Ecoline
Working width approx. (m)	3.00
Transport width approx. (m)	3.00
Number of tines	6
Distance between tines approx. (cm)	40
Working depth approx. (cm)	45
Operating speed (km/h)	3 - 12
Power requirement approx. in (kW/HP)	117/160
UL-connection	Cat. II/III
Weight approx. (kg)	1,110

### Standard equipment

- Shares and contact plates can be replaced individually
- Stone guard by shear bolts
- Support wheels 10.0/75-15.3
- Rigid frame design

Model	Order No.	€/piece	Freight costs
PlowStar Ecoline	583404880-2	€ 7,180.00	on request

# PLOWSTAR COMBI SUBSOILER



The SAPHIR PlowStar COMBI subsoiler is used to break up the soil structure up to a working depth of approx. 45 cm. Due to the curved tines, soil compaction is effectively removed over the whole working width. A special feature of the SAPHIR PlowStar COMBI is that it can be combined with various attachments. Thus subsoiling can be combined with stubble or seed bed cultivation.



Robust square-pipe frame for optimum power absorption.



Especially curved tine shape for optimum loosening over the whole working width.





The standard stone guard by means of shear bolts ensures a particularly long lifetime of plough beam and frame. There is a three point linkage Cat. II in the back of the machine for the combination with a further attachment for stubble or seed bed cultivation (max. 1,600 kg).



Take-up shaft passage for the installation of take-up shaft operated machines.

Technical data	PlowStar Combi
Working width approx. (m)	3.00
Transport width approx. (m)	3.00
Number of tines	6
Distance between tines approx. (cm)	50
Working depth approx. (cm)	45
Operating speed (km/h)	3 - 12
Power requirement approx. in (kW/HP)	140/190
UL-connection	Cat. II
Weight approx. (kg)	995

### Standard equipment

- Rigid frame design
- Three point linkage Cat. II for further attachment devices
- Take-up shaft passage
- Parking support
- Shares and contact plates can be replaced separately

Model	Order No.	€/piece	Freight costs
PlowStar Combi	583404855-2	€ 5,880.00	on request

# PLOWSTAR 301/H PROFI SUBSOILER



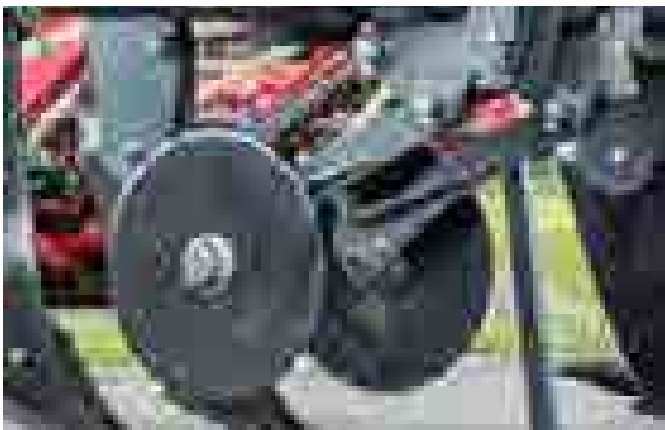
Farmland and grassland have suffered from great compaction of about 30 to 40 cm over the last years because of the use of heavy machinery. One of the consequences is the poor absorption of rainfall and moisture is not released in the event of drought. At the same time, poorly developed plant roots and low microorganism activity increase the risk of lower yields. With the PlowStar 301/H Profi subsoiler, the farmer has a machine with a wide range of applications.

Because of the different conversion options, the subsoiler can be used both for trace-less elimination of soil compaction in meadows and fields and also for loosening the subsoil in arable land with minimal stubble cultivation and sowing catch crops.



Especially curved tine shape for optimum loosening over the whole working width.

The standard stone guard by means of shear bolts ensures a particularly long lifetime of plough beam and frame.



Disc coulters cut through the surface of the soil before each subsoiler plough beam in order to pull the subsoiler share through the soil without a trace. As a result soil compaction in meadows can easily be eliminated. When dealing with corn crops that have been damaged by storm, hail or wild boars, corn stalks lying on the ground are cut through. This prevents the maize plants from threading.



Optional hydraulic stone guard (TL 301 H) for especially stony soil conditions.



Small seed sowers with a capacity of 200 - 500 litres are available for sowing catch crops. The seeds are sown homogeneously over the whole working width between the subsoiler plough beams and the trailing unit by baffles. Nothing stands in the way of fast juvenile development of the plants anymore because of the improved soil structure.

# 02 SOIL CULTIVATION

## 02 PLOWSTAR 301/H PROFI SUBSOILER

Technical data	PlowStar 301 Profi	PlowStar 301 H Profi
Working width approx. (m)	3.00	3.00
Transport width approx. (m)	3.00	3.00
Number of tines	6	6
Distance between tines approx. (cm)	50	50
Working depth approx. (cm)	45	45
Operating speed (km/h)	4 - 12	4 - 12
Power requirement approx. in (kW/HP)	117/160	117/160
UL-connection	Cat. II/III	Cat. II/III
Weight approx. (kg)	1,800	1,850

### Standard equipment

- Attachment Cat. II/III
- Working depth to 45 cm
- Stone guard by shear bolts (PlowStar 301 Profi)
- Hydraulic stone guard (PlowStar 301 H Profi)
- Preparatory disc coulter (Ø 51 cm)
- Shares and disc coulter can be replaced individually
- The entire surface of soil is loosened by the curved tines

Model	Order No.	€/piece	Freight costs
PlowStar 301 Profi	583.01265.TL301	€ 9,170.00	on request
PlowStar 301 H Profi	583.01266.TL301H	€ 11,880.00	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

### 1. Depth guide

Optional extras	Order No.	Weight approx. (kg)	€/piece
Support wheel set			
PlowStar 301/H Profi	583002099	60	€ 1,350.00

## 2. Trailing rollers



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Ø 500 mm crumbler roller</b>			
PlowStar 301/H Profi	583002130	190	€ 1,650.00
<b>Ø 600 mm roof ring roller</b>			
PlowStar 301/H Profi	583002132	360	€ 2,610.00
<b>Ø 540 mm U-profile ring roller</b>			
PlowStar 301/H Profi	583002033	360	€ 2,960.00
<b>Cambridge roller Ø 520 mm</b>			
PlowStar 301/H Profi	583002031	500	€ 3,230.00

## 3. Following harrow



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Following harrow</b>			
PlowStar 301/H Profi	583002137	90	€ 810.00

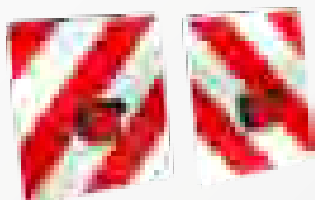
## 4. Mounting platform for SAPHIR DrillStar incl. assembly costs



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Mounting kit for SAPHIR DrillStar (platform and ladder) incl. assembly</b>			
PlowStar 301/H Profi	583002041	80	€ 1,190.00

**Note:** Kit does not include a saw unit - please find the SAPHIR DrillStar models on pages 110-113

## 5. Lighting



Optional extras	Order No.	Weight approx. (kg)	€/piece
<b>Lighting system incl. warning signs</b>			
PlowStar 301/H Profi	583002190	20	€ 530.00

# FINESTAR ECOLINE SEED BED COMBINATION

NEW



The SAPHIR FineStar Ecoline seed bed combinations are ideal machines for creating a plane and fine-crumbly seed bed before sowing. The combination of at least three steps of cultivation ensures a very good result of work in only one passage. In addition due to their working widths of 6 metres, the models with three-point attachment are especially powerful.



Preparatory tilling roller 320 mm for levelling of the soil and braking of bigger clods. In combination with the following roller, it also serves for homogeneous height control of the machine. Alternatively, a mechanical balance rail can be mounted for especially uneven soil structures with big clods.



Vibromix tines (32 x 12 mm) as standard for the application on extremely sandy or stony soils. Due to vibration, a very fine crumble structure is generated and the soil is aerated. All tines are equipped with a double spring.

Optionally, it can be equipped with track loosening tines. They loosen the tracks of the tractor and prevent compacted strips in the seed bed.



The optional Combiflex tines (32 x 12 mm) are suitable for heavy soil. Due to the steep position of the tines, no harvest residues and stones are conveyed to the ground surface. This tine is particularly not sensitive to jamming. All tines are equipped with a double spring.



The following double tilling roller levels the top soil horizon and leaves a very fine crumbly soil structure behind. Furthermore, the lower soil horizons are re-compacted to recover the capillary structure.

# FINESTAR ECOLINE SEED BED COMBINATION

Technical data	FineStar 300 Ecoline	FineStar 400 Ecoline	FineStar 500 Ecoline	FineStar 600 Ecoline
Working width approx. (m)	3.00	4.00	5.00	6.00
Transport width approx. (m)	3.00	3.00	3.00	3.00
Frame design	Rigid	Hydr. foldable	Hydr. foldable	Hydr. foldable
Number of tines	30	40	50	60
Distance between the strips approx. (cm)	10	10	10	10
Working depth approx. (cm)	3 - 8	3 - 8	3 - 8	3 - 8
Operating speed (km/h)	10 - 20	10 - 20	10 - 20	10 - 20
Power requirement approx. in (kW/HP)	44/60	66/90	81/110	96/130
Weight approx. (kg)	715	1,520	1,680	1,890

## Standard equipment

- Preparatory tilling roller Ø 320 mm
- With Vibromix tines 32 x 12 mm as standard or Kombiflex tines 32 x 12 mm (optionally)
- Side guide plates
- Double tilling machine-following roller with toothed bars Ø 320 mm
- Kennfixx hydraulic couplings
- Lighting system incl. warning signs

From FineStar 400 Ecoline:

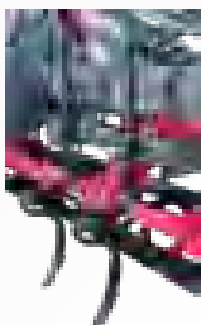
- Foldable side sections ( 1 x EW required)
- Hydraulic locking of side sections (1 x EW required)

Model	Order No.	€/piece	Freight costs
FineStar 300 Ecoline	593.01500.FS300	€ 5,600.00	on request
FineStar 400 Ecoline	593.01501.FS400	€ 9,590.00	on request
FineStar 500 Ecoline	593.01502.FS500	€ 10,560.00	on request
FineStar 600 Ecoline	593.01503.FS600	€ 12,260.00	on request

**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons.

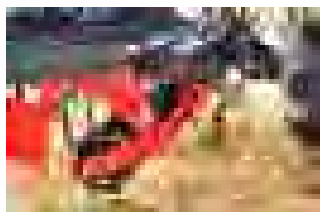


## 1. Track loosening tines



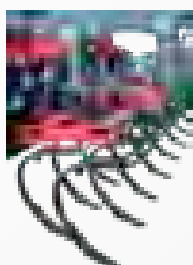
Optional extras	Order No.	€/piece
<b>Track eradicator tines</b> Set of 2 x 2 tines For all types	593002810	€ 475.00

## 2. Preparatory working tools



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 320 mm tilling roller</b>			
FineStar 300 Ecoline	593003125	140	Series
FineStar 400 Ecoline	593003126	190	Series
FineStar 500 Ecoline	593003127	230	Series
FineStar 600 Ecoline	593003128	280	Series
<b>Mechanical Balance rail (surplus price in addition to the standard version)</b>			
FineStar 300 Ecoline	593003121	150	€ 300.00
FineStar 400 Ecoline	593003122	200	€ 390.00
FineStar 500 Ecoline	593003123	250	€ 480.00
FineStar 600 Ecoline	593003124	300	€ 570.00

## 3. Tines field



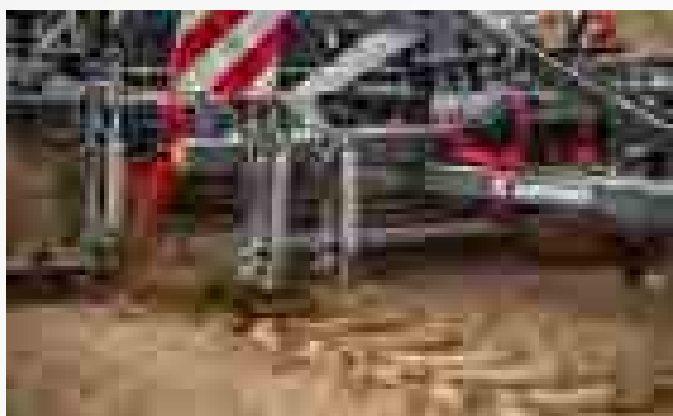
Design	Order No.	Weight approx. (kg)	€/piece
<b>Vibromix tines (32 x 12 mm) with double spring</b>			
FineStar 300 Ecoline	593003142	105	Series
FineStar 400 Ecoline	593003143	140	Series
FineStar 500 Ecoline	593003144	175	Series
FineStar 600 Ecoline	593003145	210	Series
<b>Four-row Kombiflex-tine field (32 x 12 mm) with double spring (optional, no additional costs)</b>			
FineStar 300 Ecoline	593003146	105	Series
FineStar 400 Ecoline	593003147	140	Series
FineStar 500 Ecoline	593003148	175	Series
FineStar 600 Ecoline	593003149	210	Series

# FINESTAR PROFI SEED BED COMBINATION

NEW



The new SAPHIR seed bed combination „FineStar Profi“ is a conventional seed bed combination which is used for preparing an outstanding seed bed in one passage. The easy to pull machine features six working segments that are perfectly adapted to each other. This provides ideal preconditions to guarantee high field sprouting and vital stands. The intensive seed bed preparation provides for optimum germination especially of fine seeds.



## 1. Track eradicator tines

The track eradicator tines delivered as standard can be adapted individually to the tractor gauge via the clamping connection on the hollow section and scarify them. Setting is done via a hole grid with socket pins.



## 2. Balance-Rail

The spring-loaded levelling bar levels rough clods and deep traces optimally. Setting is done via a hole grid with socket pins.



### 3. Flat Bar Roller

The flat bar roller prepares the soil before the tine field optimally. Due to its re-grouting effect, the tine fields have a higher crumbling effect. The flat bar roller is rigidly connected to the frame and defines the basic position of the working tools.



### 4. Tines field

The four-row Kombiflex tine-field crumbles the seed horizon for guaranteed high field sprouting. Optionally, two-row Multimix tines can also be mounted. The harrows guided over a parallelogram are adapted to the depth via spindles.



### 5. Following roller

The tilling roller provides the optimum of the re-compaction. For intensive re-compaction in the depth, optionally there is the Crosskill roller available as tilling roller. The following roller is rigidly connected to the frame and defines the basic position of the working tools.



### 6. Drag bars

The following drag bar levels small uneven patches and leaves a perfect surface. The drag bar is pre-tensioned by a spiral spring.



The FineStar 505 F Profi and 605 F Profi models are equipped with a transport chassis with tyres as standard 400/60-15.5 and a pneumatic brake system.

# FINESTAR PROFI SEED BED COMBINATION

02

SOIL CULTIVATION

Technical data	FineStar 305 Profi	FineStar 405 Profi	FineStar 405F Profi	FineStar 505F Profi	FineStar 605F Profi
Working width approx. (m)	3.00	4.00	4.00	5.00	6.00
Transport width approx. (m)	3.00	3.00	3.00	3.00	3.00
Frame design	Rigid	Hydr. foldable	Hydr. foldable	Hydr. foldable	Hydr. foldable
Chassis	No	No	Yes	Yes	Yes
Total number of tines (four rows)	30	39	39	49	59
Distance between the strips approx. (cm) four rows	10	10	10	10	10
Working depth approx. (cm)	3 - 8	3 - 8	3 - 8	3 - 8	3 - 8
Operating speed (km/h)	12 - 20	12 - 20	12 - 20	12 - 20	12 - 20
Power requirement approx. in (kW/HP)	44/60	92/125	110/150	121/165	132/180
UL-connection	Cat. II	Cat. II	Cat. III	Cat. III	Cat. III
Weight in standard version	1,250	1,850	2,750	3,350	3,990

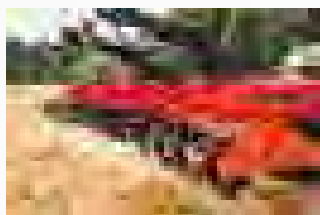
## Standard equipment

- Spring loaded balance rail
- Flat bar roller Ø 450 mm
- Four-row Kombiflex tine-field (45 x 12 mm)
- Side guide plates
- Tilling roller Ø 450 mm
- Drag bar
- Lighting system incl. warning signs
- Kennfixx hydraulic couplings
- From FineStar 405 Profi: Foldable side sections (1 x DW required)
- From FineStar 405F Profi: Standard chassis with tyres 400/60-15.5 (1 x DW required)
- From FineStar 505F Profi: Pneumatic brake system as standard

Model	Order No.	€/piece	Freight costs
<b>FineStar 305 Profi</b>	593.01400.FS305	<b>€ 7,850.00</b>	on request
<b>FineStar 405 Profi</b>	593.10401.FS405	<b>€ 14,430.00</b>	on request
<b>FineStar 405F Profi</b>	593.01402.FS405F	<b>€ 19,570.00</b>	on request
<b>FineStar 505F Profi</b>	593.01403.FS505F	<b>€ 24,990.00</b>	on request
<b>FineStar 605F Profi</b>	593.01404.FS605F	<b>€ 27,990.00</b>	on request

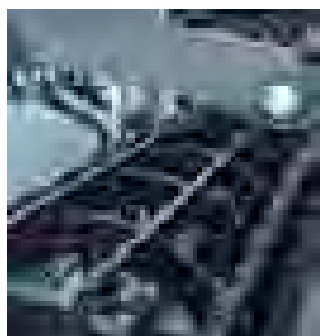
**Note:** Machine is supplied fully fitted. The following roller is dismantled for transport reasons

## 1. Tines field



Design	Order No.	Weight approx. (kg)	€/piece
<b>Four-row Kombiflex-tine field (45 x 12 mm) with double spring</b>			
FineStar 305 Profi	593003150	180	Series
FineStar 405/F Profi	593003151	235	Series
FineStar 505F Profi	593003152	300	Series
FineStar 605F Profi	593003153	360	Series
<b>Two-row Multimix-tine field (50 x 10 mm) with double spring</b>			
FineStar 305 Profi	593003154	120	€ 220.00
FineStar 405/F Profi	593003155	165	€ 320.00
FineStar 505F Profi	593003156	210	€ 380.00
FineStar 605F Profi	593003157	250	€ 460.00

## 2. Trailing rollers



Design	Order No.	Weight approx. (kg)	€/piece
<b>Ø 450 mm tilling roller</b>			
FineStar 305 Profi	593003129	195	Series
FineStar 405/F Profi	593003130	260	Series
FineStar 505F Profi	593003131	330	Series
FineStar 605F Profi	593003132	390	Series
<b>Crosskil roller Ø 400 mm (Surplus price in addition to the standard version)</b>			
FineStar 305 Profi	593003133	510	€ 1,560.00
FineStar 405/F Profi	593003134	680	€ 2,070.00
FineStar 505F Profi	593003135	850	€ 2,660.00
FineStar 605F Profi	593003136	1,020	€ 3,060.00

## TÜV certificates

Optional extras	Order No.	€/piece
<b>TÜV certificate 25 km/h incl. road guard for tines</b>		
Only available ex works assembled as initial equipment! FineStar 505F Profi FineStar 605F Profi	593003137	€ 990.00

# ROLLSTAR FRONT ATTACHMENTS



The front attachment programme „RollStar“ made by SAPHIR offers the right equipment for each seed bed cultivation process and under all soil conditions. Instead of front weights without function, front attachments are used with which better soil structures can be generated in one passage. With this, field sprouting is improved and the health of the stands can be promoted.



SAPHIR RollStar CB 301 Cambridge roller with hydraulic balance-board and LED-lighting system.  
For preparation of seed bed on sandy and loose-fill soils.



SAPHIR RollStar TD 300 TwinDisc roller with Vibromix tine harrow for seed bed preparation on plough land with big clods.



SAPHIR FP 300 Frontpacker with spring-loaded balance rail. On medium and heavy loaded soil, the spring-loaded balance rail provides for intensive forced levelling of the soil. Due to this combination, stones are pressed into the deeper soil layers.



Option: The hydraulic balance board is outstandingly suitable for the intensive levelling of the seed bed and is especially suitable for light, loose-fill and stony soils. On very stony soil, the balance board drag springs press the stones in deeper soil layers.



The optional Vibromix-tine harrow is suitable for the seed bed preparation on heavy soil. Using the two-row spring tines, clods are broken and the seed horizon is crumbled. The standard double spring guarantees the durability of the tines.

# ROLLSTAR FRONT ATTACHMENTS

02

SOIL CULTIVATION

Technical data	RollStar CB301	RollStar TD300	RollStar FP300
Working width approx. (m)	3.00	3.00	3.00
Transport width approx. (m)	3.00	3.00	3.00
Frame design	Rigid	Rigid	Rigid
Roller diameter approx. (mm)	530	470	700
Operating speed (km/h)	6 - 20	6 - 20	6 - 20
Power requirement approx. in (kW/HP)	37/50	44/60	37/50
UL-connection	Cat. II	Cat. II	Cat. II
Weight in standard version	1,310	953	940

## Standard equipment

- Three point linkage Cat. II with steering assembly
- Self-cleaning working tools
- CB301 = Cambridge roller with spheroidal iron rings (GGG50) Ø 530mm
- TD300 = Twin Disc roller with two disc rows of waved discs Ø 470mm
- FP300= Frontpacker with packer rings of spheroidal iron (GGG50) Ø 700mm
- Lighting incl. warning signs

Model	Order No.	€/piece	Freight costs
RollStar CB301	593.00251.CB301	€ 5,340.00	on request
RollStar TD300	593.00251.TD300	€ 5,540.00	on request
RollStar FP300	593.00248.FP300/700	€ 5,770.00	on request

Further working widths available on request!

Note: Machine is supplied fully fitted.

## Additional working tools for all RollStar models

Optional extras	Order No.	Weight approx. (kg)	€/piece
Preparatory working tools - hydraulic balance board (1 x dw required)	593002808	275	€ 2,430.00
Preparatory working tools - spring loaded balance rail	593003073	200	€ 1,130.00
Preparatory working tools Vibromix tine harrow two-row, adjustable via spindle	593002809	225	€ 1,720.00



# UNISEED SMALL SEED SOWER

02

SOIL CULTIVATION



The SAPHIR UniSeed universal spreader is ideal for sowing catch crops, grass seed, undersown crop, slug pellets and similar pellets. The working width can infinitely be adapted to cope with the relevant requirements. Also, the sowing density can be adjusted accordingly on the dosing slider to cope with crop production aims.

## Standard equipment

- Electrical control module with bracket for the assembly in the cabin
- Adjustable winnowing fans
- Retaining bushes for extending of the agitator for grass
- Upper linkage attachment and counter-plate
- 3 m cable to battery
- 6 m cable from spreader to control module

## Functions of the module

- Speed monitor, speed measurement and speed control
- Monitor of spreading disc
- Automatic start with clogged spreading material
- Simple control of spreading width from driver's seat

Designation	ES 100 M1
Working width approx. (m)	2 - 24
Height approx. (cm)	90
Width (cm)	52
Depth approx. (cm)	60
Capacity approx. (l)	105
Weight approx. (kg)	30

Designation	Order No.	€/piece	Freight costs
ES 100 M1	59420081000	€ 1,400.00	on request

## Accessories

Designation	Order No.	Weight approx. (kg)	€/piece
Extension cable 5 m	59404102035	2	€ 75.00

# DRILLSTAR SMALL SEED SOWER

02

SOIL CULTIVATION



Using the pneumatic SAPHIR small seed sower DrillStar and a soil cultivation machine of SAPHIR it is possible to cultivate soil and sow at the same time in one work step and to save time. Seed is distributed accurately without being dependent on the wind thus ensuring more selective, greater success. With its electronically controlled seed shaft that infinitely adjusts the seed flow it is possible to sow the required quantity of each spreading material.

Basic functions of the control modules 3.2 and 5.2

- Control of sow shaft
- Monitoring unit of blower
- Material application - electronically adjustable
- Sow shaft monitor
- Emptying function
- Function „Automatic calibration test“

Additional functions of control module 5.2 for DrillStar 300 + DrillStar 500

- Total hour counter and daily hour counter
- Total hectare counter and daily hectare counter
- Display kg/ha
- Several equipment sensors can be connected
- Speed-dependent control of spread quantity via sensors

Optional extras: Radar + lifting gear sensor

The lifting gear sensor automatically switches the sow shaft on and off when the machine is lifted or lowered. The radar sensor determines the speed of the vehicle and in this way; it automatically regulates the rotary speed of the sow shaft and the spread quantity.

7-pole signal cable

The 7-pole cable connects the control module and the tractor. As a result the actual driving speed is displayed on the control module and the quantity of seed is automatically regulated using the sowing shaft speed regulator.

The technical specifications of the tractor must be checked before ordering (e.g. not with John Deere).

Designation	DrillStar 200 E	DrillStar 300 E	DrillStar 300 H	DrillStar 500 E	DrillStar 500 H
Design of control module	3.2	5.2	5.2	5.2	5.2
Working width approx. (m)	1.00 - 6.00	1.00 - 6.00	6.00 - 8.00	1.00 - 6.00	6.00 - 8.00
Blower	Electr.	Electr.	Hydr.	Electr.	Hydr.
Hydraulic connection	-	-	1 x ew	-	1 x ew
Height approx. (mm)	100	110	110	125	125
Width approx. (mm)	70	77	80	80	80
Depth approx. (mm)	88	100	115	122	125
Capacity approx. (l)	200	300	300	500	500
Weight approx. (kg)	60	70	93	93	116

## Standard equipment

- Complete sowing machine with hoses
- Sow shafts for grass or mustard/phacelia
- Additional agitator for grass
- Complete wiring
- Calibration sheet
- 8 outputs incl. hoses and baffle plates
- For the models with hydraulic blower you need a single-acting control device and a return without pressure

Designation	Order No.	€/piece
<b>DrillStar 200 E</b>	594PS200E	<b>€ 3,790.00</b>
<b>DrillStar 300 E</b>	594PS300E	<b>€ 4,520.00</b>
<b>DrillStar 300 H</b>	594PS300H	<b>€ 6,810.00</b>
<b>DrillStar 500 E</b>	594PS500E	<b>€ 5,650.00</b>
<b>DrillStar 500 H</b>	594PS500H	<b>€ 7,940.00</b>

### Note:

1. No individual order possible for SAPHIR DrillStar. Only in combination with machines of the SAPHIR brand or for retrofitting of SAPHIR machines.
2. Machine is supplied fully fitted.

# SAPHIR DRILLSTAR

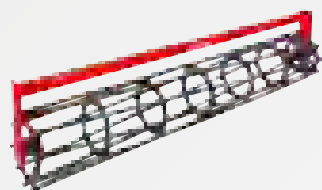
## Optional extras

Designation	Order No.	€/piece
<b>Extension cable 5 m</b>	59404102015	€ 170.00
<b>Calibration button (magnetic)</b> For module 5.2	59404102094	€ 100.00
<b>Seed shaft</b> For grass, mustard, cress (fine seeds up to 5 kg per ha)	5940012130	€ 105.00
<b>Seed shaft</b> For grain, peas, beans, vetch	59440002138	€ 180.00
<b>Radar- and lifting gear sensor</b>	59403002007	€ 1,320.00
<b>GPSa sensor</b>	59404102107	€ 1,020.00
<b>GPSa and lifting gear sensor</b>	59403002053	€ 1,200.00
<b>7-pole signal cable</b>	59404102006	€ 140.00
<b>Accessory set quick-lock coupling</b> For sowing machine and machine	59440002185	€ 420.00
<b>Additional module - quick-lock coupling</b> Only on the machine side	594400002221	€ 260.00
<b>Accessory kit 2nd machine</b> 1 hose roll 25m, 8 baffles	594040002310	€ 630.00
<b>Control module 5.2</b>	59402023218	€ 1,080.00
<b>Control module 3.2</b>	59402023309	680.00 e
<b>Control module 1.2</b>	59403002201	€ 530.00

# THE SAPHIR FOLLOWING ROLLERS

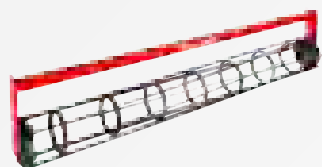
02

SOIL CULTIVATION



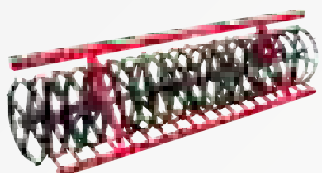
Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 500 mm crumbler roller</b>				
Working width approx. 1.00 m	593002924E	110	€ 890.00	on request
Working width approx. 1.25 m	593002912E	120	€ 980.00	on request
Working width approx. 1.50 m	593002913E	135	€ 1,060.00	on request
Working width approx. 1.75 m	593002914E	145	€ 1,130.00	on request
Working width approx. 2.00 m	593000675-2E	155	€ 1,200.00	on request
Working width approx. 2.25 m	593002927E	165	€ 1,270.00	on request
Working width approx. 2.50 m	593002257-2E	175	€ 1,350.00	on request
Working width approx. 3.00 m	593002258-2E	190	€ 1,510.00	on request

Other working widths are available on request



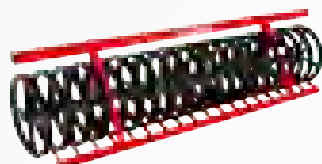
Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 350 mm tilling roller</b>				
Working width approx. 2.00 m	593001892-2E	125	€ 990.00	on request
Working width approx. 2.50 m	593001408-2E	145	€ 1,060.00	on request
Working width approx. 3.00 m	593002256-2E	160	€ 1,210.00	on request

Other working widths are available on request



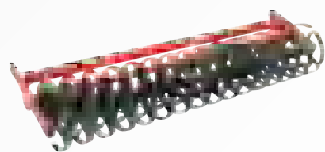
Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 600 mm roof ring roller (with traction bars)</b>				
Working width approx. 1.00 m	593002902E	120	€ 1,420.00	on request
Working width approx. 1.25 m	593002844E	150	€ 1,590.00	on request
Working width approx. 1.50 m	593002845E	180	€ 1,750.00	on request
Working width approx. 1.75 m	593002846E	210	€ 1,900.00	on request
Working width approx. 2.00 m	593002847E	240	€ 2,050.00	on request
Working width approx. 2.25 m	593002906E	270	€ 2,140.00	on request
Working width approx. 2.50 m	593002259-2E	300	€ 2,220.00	on request
Working width approx. 3.00 m	593002826E	360	€ 2,470.00	on request

Other working widths are available on request



Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 540 mm U-profile ring roller</b>				
Working width approx. 1.00 m	593002908E	135	€ 1,550.00	on request
Working width approx. 1.25 m	593003226E	170	€ 1,730.00	on request
Working width approx. 1.50 m	593002909E	200	€ 1,910.00	on request
Working width approx. 1.75 m	593002910E	240	€ 2,070.00	on request
Working width approx. 2.00 m	593003229E	270	€ 2,250.00	on request
Working width approx. 2.25 m	593003230E	300	€ 2,310.00	on request
Working width approx. 2.50 m	593003170-2E	340	€ 2,400.00	on request
Working width approx. 3.00 m	593002830E	400	€ 2,820.00	on request

Other working widths are available on request



Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 550 mm spring stamp roller</b>				
Working width approx. 1.00 m	593003227E	150	€ 2,010.00	on request
Working width approx. 1.25 m	593002916E	190	€ 2,250.00	on request
Working width approx. 1.50 m	593002917E	230	€ 2,480.00	on request
Working width approx. 1.75 m	593003228E	260	€ 2,690.00	on request
Working width approx. 2.00 m	593002997E	300	€ 2,930.00	on request
Working width approx. 2.25 m	593003231E	340	€ 2,990.00	on request
Working width approx. 2.50 m	593002998E	375	€ 3,100.00	on request
Working width approx. 3.00 m	593002834E	450	€ 3,550.00	on request

Other working widths are available on request



Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 500 mm rubber roller</b>				
Working width approx. 1.00 m	593002920E	180	€ 2,170.00	on request
Working width approx. 1.25 m	593003232E	230	€ 2,430.00	on request
Working width approx. 1.50 m	593002921E	270	€ 2,680.00	on request
Working width approx. 1.75 m	593002922E	320	€ 2,900.00	on request
Working width approx. 2.00 m	593003233E	360	€ 3,160.00	on request
Working width approx. 2.25 m	593002923E	410	€ 3,230.00	on request
Working width approx. 2.50 m	593003234E	450	€ 3,350.00	on request
Working width approx. 3.00 m	593002868E	540	€ 3,830.00	on request

Other working widths are available on request



Model	Order No.	Weight approx. (kg)	€/piece	Freight costs
<b>Ø 360 mm cutting roller</b>				
Working width approx. 3.00 m	593001999E	400	€ 3,290.00	on request

Other working widths are available on request





# TOOLS

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Heavy duty shovel	132-133
Heavy duty shovel XL	134-135
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# OUR RECOMMENDATION FOR YOUR HOST VEHICLE




03

TOOLS

For your quick guidance simply check which attachments can be connected to your host vehicle. In the following table they are indicated by "X".

Equipment designation	Tool is listed on page	Euro attachment 	Farm and wheeled loader up to 2.5 t lifting power 	Wheeled and telescopic loader from 2.5 t lifting power 
Light duty shovel	126-127	X	X	X
Light duty shovel XL	128-129			X
Light duty shovel with hydraulic hold-down	130-131	X	X	
Heavy duty shovel	132-133	X	X	
Heavy duty shovel XL	134-135			X
High tip shovel	136-137	X	X	X
Grip shovel	138-139	X	X	X
Grip shovel L	140-141			X
Grip shovel XL	142-143			X
Folding shovel	144-145	X	X	X
Pushing shovel	146-147	X	X	
Disposal shovel	148-149	X		X
Potato, turnip and stone baskets	150-151	X	X	X
Manure fork	152-153	X	X	
Manure fork XL	154-155	X		X
Manure fork with hydraulic hold-down	156-157	X	X	

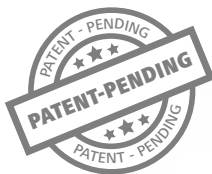
For your quick guidance simply check which attachments can be connected to your host vehicle. In the following table they are indicated by "X".

Equipment designation	Tool is listed on page	 Euro attachment	 Farm and wheeled loader up to 2.5 t lifting power	 Wheeled and telescopic loader from 2.5 t lifting power
Manure and silage pliers	158-159	X	X	X
XL manure and silage pliers	160-161			X
Silage cutting pliers	162-163	X	X	X
Silage cutting pliers XL	164-165	X		X
Pallet fork	172-177	X	X	X
Forklift rotator	178-179	X	X	X
Bale pike	182-183	X	X	X
Profi bale pike	184-185	X		X
Bale lifting fork	186-187	X		
Foil wrap bale gripper	190-191	X	X	X
Cuboid bale gripper	192-193	X	X	X
Round bale gripper	194-195	X		X
Logging grab	196-197	X	X	X
Brush pile grab	198-199	X		X
Green forage and brush pile pliers	200-201	X		X
Work platforms	202-207	X	X	X



# SAPHIR VARIABLE LOCK SYSTEM

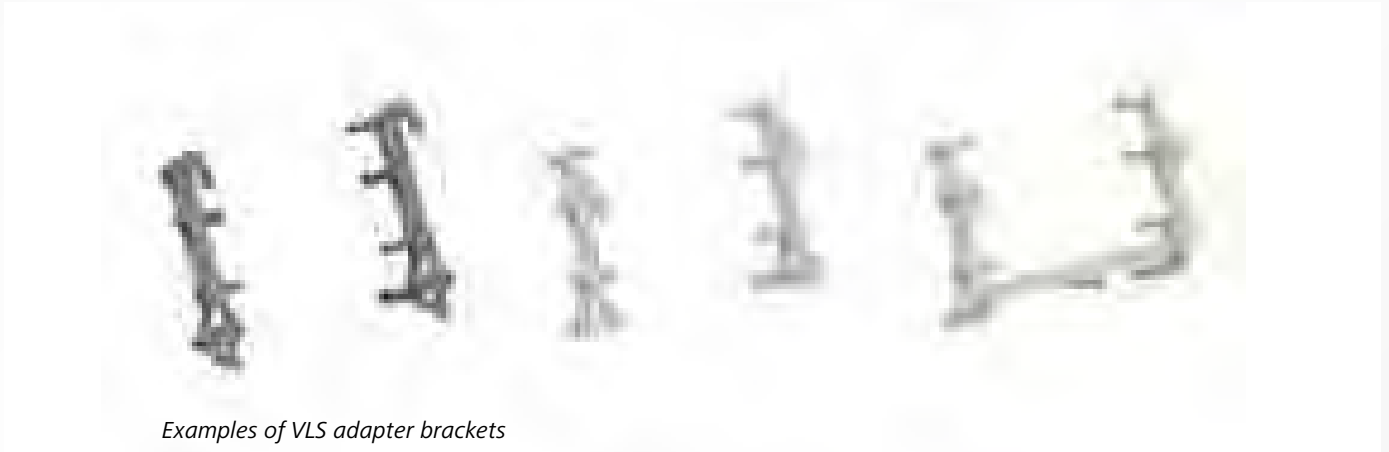
*One tool - a vast number of host vehicles!*



The patent pending **SAPHIR VARIABLE LOCK SYSTEM (VLS)** is the ideal solution for customers with highest requirements who want to use their machines in a flexible and efficient way. A new way of adaption which is fully new in this area allows the replacement of adapter brackets within a few minutes.

The SAPHIR machines that are equipped with this system can be connected to diverse host vehicles. Only the matching brackets (red) are to be mounted to the machine.

Another advantage of the system is that the connecting dimensions of the slot link (white) are standardised on all machines. That means that the various VLS mounting brackets match with any SAPHIR machine equipped with the Variable Lock System. Therefore you can combine each host vehicle with each of your machines.



Examples of VLS adapter brackets


Machine and adapter brackets are connected in a force and form-fitting way by means of several highly wear-resistant bolts. The fitting tolerances are selected in a way that no clearance exists in the connection. Forces occurring during application are transferred via the slotted links to the whole machine back. In addition, the typical deficits of an adapter frame are compensated by the compact design and the rigid assembly.

#### Advantages at a glance:

- Use of the machines on the various host vehicles  
(Joint usage of machines, change of vehicle, rental company/rental machine parks)
- Use of only one type of adapter brackets for several machines
- Force and form-fitting connection, as well as by transmission of force over the whole machine back
- Furthermore, very good load-bearing centre of gravity through compact design
- Replacement of adapter brackets within a few minutes

**Please find out which machine can be equipped with the Variable Lock System, on the belonging catalogue pages with this symbol:**



	Designation	Order No.	€/piece
	Variable Lock System Mounting bracket single	391VARILOCK	€ 395.00

# SYMBOLS BRIEFLY EXPLAINED...



## **Powder coating**

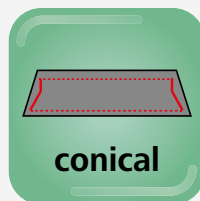
The machines marked with this symbol are powder-coated using the two-layer-method. The layer thickness of the primary coat and the top coat is 60-80µm each.

This causes a robust, weather-resistant and smooth surface with a total thickness of 120-160µm.



## **Highly wear-resistant scraper bar**

This machine includes a highly wear-resistant scraper bar with a hardness of at least 500 HB (hardness Brinell). It is rigidly welded to the underbody of the machine and guarantees low wear in all fields of application.



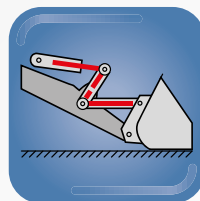
## **Conical design**

The SAPHIR shovels are almost exclusively produced in conical design. The machines marked with this symbol include diagonally angled side panels that cause the shovel body to become wider towards the front. With this, the bulk material flows off better and material residues are clearly reduced.



## **VARIABLE LOCK SYSTEM**

The SAPHIR VARIABLE LOCK SYSTEM (VLS) offers the possibility to be able to use a machine on several host vehicles of different manufacturers. The respective adapter brackets are adapted on the machine by means of several bolts. Changing of the bracket takes a few minutes only. The symbol shown indicates all machines that can be equipped with this system. You can find further information about this on page 120-121.



## **Z-kinematics**

For wheel loaders, generally two kinematic systems are distinguished. If your vehicle is equipped with the so-called Z-kinematic system, the steering lever can collide with the hooked in machine when the quick change adapter is retracted and the lifting arm is lowered. To avoid this, an individual cut-out is positioned in the desired machine.



## **SHW Friedrichstal**

This symbol indicates machines equipped with high-quality tines made in Germany by the company SHW Schmiedetechnik GmbH & Co.KG from Friedrichstal. The tines feature high robustness and low wear also under most extreme conditions.



One of the significant competences of our innovative company is the production of our machines as per customer-specific specifications and requirements. 40 years of experience in design of working tools help us to find the most efficient solution for any problem. Individual items and small batches are made by experienced metal workers and agricultural machine engineers in our factory in Bockel.

**Do you have any questions? Make your demands on us for your benefit.**

# TOOLS " AUTO DETENT "



The SAPHIR machines for front loaders with auto-detent are equipped with latches as standard (if model is available) and are available for all latches of size II / III.



Earth scoops and manure shovel are equipped with highly wear-resistant scraper bar 150 x 16 mm (500 HB)



All manure forks have a stable continuous tine carrying tube with welded in cone bushes and scraper bar on the tine carrying tube. Quality tines 800 mm long from SHW (Made in Germany).





The SAPHIR manure shovel is an extra wide shovel (1,850 mm) that does not need the usual pockets thanks to the external attachment. Therefore, no material can jam or accumulate there and so the manure shovel is optimally suitable for clearing away dung.

### 1. Select the machine sizes

Designation	Earth scoop size II	Earth scoop size III	Manure shovel Gr. II / III	Manure fork size II	Manure fork size III	Manure fork size III 1.40 m	Manure fork size III 1.70 m
Width approx. (mm)	830	980	1,870	820	980	1,360	1,730
Height approx. (mm)	580	580	690	650	650	680	680
Depth approx. (mm)	770	770	770	-	-	-	-
Capacity approx. (l)	220	260	585	-	-	-	-
Number of tines	-	-	-	5	6	8	10
Weight approx. (kg)	65	75	195	70	80	120	135
Order-No.	391ESK80	391ESK100	391KGG	391DGG80	391DGG100	391DGG140	391DGG170
<b>€/piece</b>	<b>€ 325.00</b>	<b>€ 375.00</b>	<b>€ 965.00</b>	<b>€ 360.00</b>	<b>€ 400.00</b>	<b>€ 610.00</b>	<b>€ 700.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

### 2. Select the latch

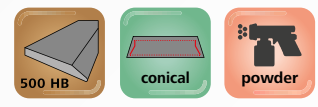
Designation	Order No.	€/piece
Latch BAAS	391KLINKBAAS	Series
Latch FROST	391KLINKFROST	Series
Latch Schöffner	391KLINKSCHAEFF	Series
Latch Stoll	391KLINKSTOLL	Series

Please always specify the front loader manufacturer when ordering so that the proper latch can be supplied.

### 3. Optional extras

Designation	Order No.	€/piece
<b>Normal load tines</b> 1,000 mm long Surplus price per tine	391ZINKEN1000	€ 20.00

# LIGHT DUTY SHOVEL LG



The SAPHIR light duty shovel is suitable for loading free-flowing bulk goods, such as grain, artificial fertiliser, wood chips and other bulky goods up to a max. of 950 kg/m<sup>3</sup>.



Highly wear-resistant scraper bar 150 x 16 mm (500 HB)



Side panels are reinforced with bead to increase stability



Double-sided indicator as aid for orientation when loading bulk material on ground-level.



Strong base frame of the shovel body in the direction of travel



Round shaped shovel body for complete emptying of the shovel



Internal reinforcement from LG 20

## 1. Select the machine sizes

Designation	LG 09	LG 11	LG 13	LG 15	LG 16	LG 17	LG 19
Width approx. (mm)	900	1,100	1,300	1,500	1,600	1,700	1,900
Height approx. (mm)	790	790	790	790	790	790	790
Depth approx. (mm)	850	850	850	850	850	850	850
Reinforcement	-	-	-	-	-	-	-
Capacity approx. (l)	330	410	620	720	760	810	900
Weight approx. (kg)	134	155	180	210	220	230	250
Order-No.	391LG09	391LG11	391LG13	391LG15	391LG16	391LG17	391LG19
<b>€/piece</b>	<b>€ 510.00</b>	<b>€ 600.00</b>	<b>€ 690.00</b>	<b>€ 760.00</b>	<b>€ 810.00</b>	<b>€ 850.00</b>	<b>€ 880.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request

Designation	LG 20	LG 20+	LG 22	LG 22+	LG 24	LG 24+	LG 26
Width approx. (mm)	2,000	2,000	2,200	2,200	2,400	2,400	2,600
Height approx. (mm)	790	910	790	910	790	910	910
Depth approx. (mm)	850	1,100	850	1,100	850	850	1,100
Reinforcement	-	1	1	1	1	1	1
Capacity approx. (l)	930	1,000	1,000	1,850	1,100	1,200	1,400
Weight approx. (kg)	265	320	300	350	380	380	400
Order-No.	391LG20	391LG20+	391LG22	391LG22+	391LG24	391LG24+	391LG26
<b>€/piece</b>	<b>€ 910.00</b>	<b>€ 1,370.00</b>	<b>€ 960.00</b>	<b>€ 1,450.00</b>	<b>€ 1,100.00</b>	<b>€ 1,530.00</b>	<b>€ 1,690.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b> (from 1,200 mm machine width)	391EUR-S	Series



<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	€ 195.00
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When ordering, state the type of the host vehicle.

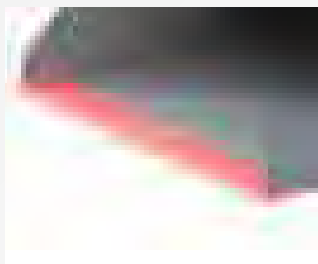
# LIGHT DUTY SHOVEL LG XL

03

TOOLS



The SAPHIR especially light duty shovel XL with high capacity is suitable for loading free-flowing bulk goods, such as grain, artificial fertiliser, wood chips and other bulky materials up to a max. of 950 kg/m<sup>3</sup>.



Highly wear-resistant scraper bar 200 x 20 mm (500 HB)  
Optional: Scraper bar 300 x 30 mm (as standard in LG XL 26 and LG XL 28)



Optional with internal reinforcements (as standard in LG XL 26 and LG XL 28)



Double-sided indicator as aid for orientation when loading bulk material on ground-level.



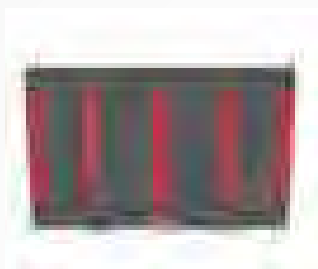
Optional highly wear-resistant rigid reversing blade as screwable option for the standard scraper bar.



Round shaped shovel body for complete emptying of the shovel



Optional overflow protection (also possible with increased shovel side panels)



Strong base frame of the shovel body in the direction of travel






Optional loading capacity

## 1. Machine size

Designation	LG XL 20	LG XL 22	LG XL 24	LG XL 25	LG XL 26	LG XL 28
Width approx. (mm)	2,000	2,200	2,400	2,500	2,600	2,800
Height approx. (mm)	1,200	1,200	1,200	1,200	1,200	1,200
Depth approx. (mm)	1,400	1,400	1,400	1,400	1,400	1,400
Abrading bar (mm)	200 x 20	200 x 20	200 x 20	200 x 20	300 x 30	300 x 30
Capacity approx. (l)	1,650	1,850	2,000	2,250	3,000	3,250
Weight approx. (kg)	554	610	665	682	850	915
Order-No.	391LGXL20	391LGXL22	391LGXL24	391LGXL25	391LGXL26	391LGXL28
<b>€/piece</b>	<b>€ 2,090.00</b>	<b>€ 2,260.00</b>	<b>€ 2,390.00</b>	<b>€ 2,550.00</b>	<b>€ 3,260.00</b>	<b>€ 3,410.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	<b>Euro attachment</b> Possible from LG XL 20 to LG XL 24	391EUR	Series
	<b>Wheeled arm and telescopic loader from 2.5 t lifting power</b>	391RADTELE-S	Series
	<b>Variable Lock System</b>	391VARILOCK	€ 395.00

When ordering, state the type of the host vehicle.

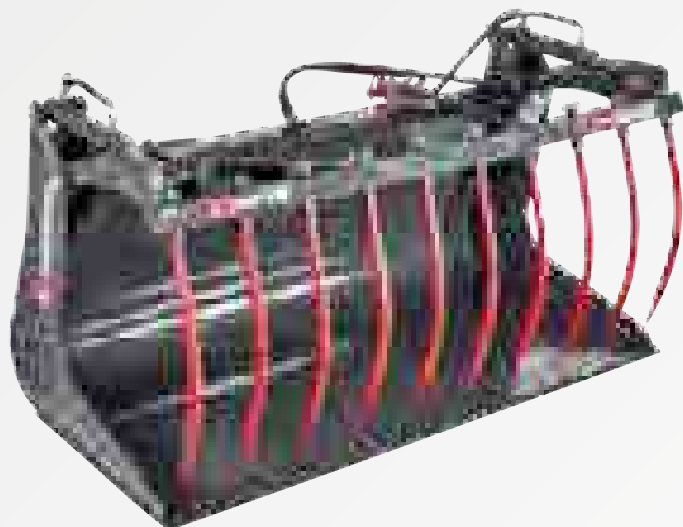
## 3. Optional extras

Designation	Order No.	€/piece
<b>Overfill guard</b> Price per metre	391UEBERLAUFS	€ 170.00
<b>Increased shovel side parts</b>	391EHSCHAUFELS	€ 260.00
<b>2 internal reinforcements</b> (Series with LG XL 26 & LG XL 28)	391INNAUSST	€ 530.00
<b>Highly wear-resistant scraper bar (300 x 30 mm, 500 HB)</b> (Series with LG XL 26 & LG XL 28) Price per metre	391HOCHV300X30	€ 320.00
<b>Highly wear-resistant reversing blades (200x20 mm, 500 HB)</b> Price per metre	391HOCHVWENDE	€ 290.00
<b>Highly wear-resistant reversing blades (300x30 mm, 500 HB)</b> Price per metre	391HOCHVWENDE300	€ 370.00
<b>Plastic scraper bar</b> Price per metre	391KUNTSCHUERF	€ 240.00
<b>Increase of loading capacity</b> approx. 600 - 800 l.	391LADEVOLUMEN	€ 765.00

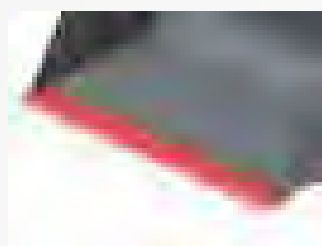
# LIGHT DUTY SHOVEL WITH HYDRAULIC HOLD-DOWN UNIT LGN

03

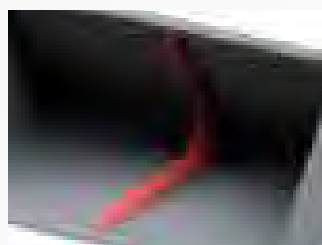
TOOLS



The SAPHIR light duty shovel with hydraulic hold down unit type LGN is used to transport loose manure, straw, vegetation, shrubs, etc.. A particular advantage of the tool is the very large opening width of approx. 1200 mm. As standard, the hold-down unit is opened and closed by two double-acting hydraulic cylinders. With this machine, it can freely be chosen, whether the light duty shovel with hold-down device shall be delivered in tine-shape or sickle-shape. The hold-down device is not suitable for scarifying works.



Highly wear-resistant scraper bar 150 x 16 mm (500 HB)



Internal reinforcement (from 1700 mm)



As standard with two double-acting hydraulic cylinders for optimum opening and closing of the hold-down device



Hold-down device for tines with a very wide opening width of approx. 1,200 mm



Hold-down device for sickles with a very wide opening width of approx. 1,200 mm



Optional wall withdrawal on request

## 1. Select the machine sizes

Designation	LGN 09	LGN 11	LGN 13	LGN 15	LGN 17	LGN 19	LGN 21
Width approx. (mm)	900	1,100	1,300	1,500	1,700	1,900	2,100
Height approx. (mm)	700	700	700	700	700	700	700
Depth approx. (mm)	850	850	850	850	850	850	850
Number of sickles / number of tines	5	6	7	8	9	10	11
Number of hydraulic cylinders	2	2	2	2	2	2	2
Capacity approx. (l)	570	690	810	930	1,050	1,170	1,290
Weight approx. (kg)	220	245	270	295	310	335	350
Order-No. sickle version	391LGN09S	391LGN11S	391LGN13S	391LGN15S	391LGN17S	391LGN19S	391LGN21S
<b>€/piece</b>	<b>€ 1,610.00</b>	<b>€ 1,760.00</b>	<b>€ 1,800.00</b>	<b>€ 1,870.00</b>	<b>€ 2,010.00</b>	<b>€ 2,280.00</b>	<b>€ 2,450.00</b>
Order-No. tine version	391LGN09Z	391LGN11Z	391LGN13Z	391LGN15Z	391LGN17Z	391LGN19Z	391LGN21Z
<b>€/piece</b>	<b>€ 1,610.00</b>	<b>€ 1,760.00</b>	<b>€ 1,800.00</b>	<b>€ 1,870.00</b>	<b>€ 2,010.00</b>	<b>€ 2,280.00</b>	<b>€ 2,450.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment

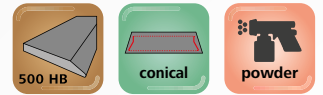
	Designation	Order No.	€/piece
	<b>Euro attachment</b> from 1,300 mm machine width	391EURO-S	Series
	<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	€ 195.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Screwable shovel side parts	391SCHRAUBST	€ 295.00
Wall withdrawal	391WANDENT	€ 265.00

# HEAVY DUTY SHOVEL SG



The SAPHIR heavy duty shovel is suitable for loading heavy loads and for earthworks. The shovel is suitable for bulk weights up to max. 1,300 kg/m<sup>3</sup>



Highly wear-resistant scraper bar 150 x 16 mm (500 HB)



Internal reinforcement (from SG 21 as standard)



Double-sided indicator as aid for orientation when loading bulk material on ground-level.



Optional metal sprockets for easy scarifying of gravel soil and compacted substrate



Round shovel body, with bead-reinforced side panel and reinforced corners for especially high stability



Optional smoothing bar for levelling the soil in reverse travelling.



## 1. Select the machine sizes

Designation	SG 09	SG 11	SG 13	SG 15	SG 17	SG 19	SG 21	SG 23
Width approx. (mm)	900	1,100	1,300	1,500	1,700	1,900	2,100	2,300
Height approx. (mm)	660	660	660	660	660	660	660	660
Depth approx. (mm)	650	650	650	650	650	650	650	650
Capacity approx. (l)	200	250	300	350	400	450	500	550
Weight approx. (kg)	108	155	165	175	195	210	240	250
Order-No.	391SG09	391SG11	391SG13	391SG15	391SG17	391SG19	391SG21	391SG23
€/piece	€ 630.00	€ 650.00	€ 690.00	€ 750.00	€ 830.00	€ 910.00	€ 930.00	€ 1,060.00
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b>	391EURO-S	Series



<b>Farm and wheeled loader up to 2.5 t lifting power</b>	391HOFRAD	€ 195.00
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Road guard</b> for heavy duty shovel with gravel tine	391STRSCHUTZSG	€ 189.00
<b>Smoothing bar</b> Price per metre	391GLAETTES	€ 110.00
<b>Metal sprocket - pluggable</b> Recommended number SG 09 - 3 pcs. SG 11 - 4 pcs. SG 13 - 5 pcs. SG 15 - 6 pcs. SG 17 - 7 pcs. SG 19 - 8 pcs. SG 21 - 9 pcs. SG 23 - 10 pcs.	391SCHOTTERSG	€ 50.00

# HEAVY DUTY SHOVEL SG XL



The SAPHIR heavy duty shovel XL is particularly suitable for loading heavy loads and for earthworks. With this, the high capacity shovel body allows maximum effectiveness. The shovel is suitable for bulk weights up to max. 1,300 kg/m<sup>3</sup>



Highly wear-resistant scraper bar 200 x 20 mm (500 HB)



Optional smoothing bar for levelling the soil in reverse travelling



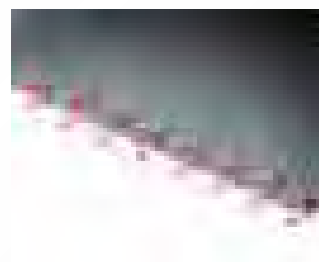
Double-sided indicator as aid for orientation when loading bulk material on ground-level.



Optional highly wear-resistant reversing blade 200 x 20 mm (500 HB)



Round shovel body, with reinforced corners for especially high stability



Optional metal sprockets for easy scarifying of gravel soil and compacted substrate

## 1. Select the machine sizes

Designation	SG XL 16	SG XL 18	SG XL 20	SG XL 22	SG XL 24	SG XL 26	SG XL 28
Width approx. (mm)	1,600	1,800	2,000	2,200	2,400	2,600	2,800
Height approx. (mm)	900	900	900	900	900	900	900
Depth approx. (mm)	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Capacity approx. (l)	820	930	1,030	1,130	1,230	1,330	1,430
Weight approx. (kg)	410	470	510	580	630	680	740
Order-No.	391SGXL16	391SGXL18	391SGXL20	391SGXL22	391SGXL24	391SGXL26	391SGXL28
€/piece	€ 1,780.00	€ 1,845.00	€ 1,910.00	€ 2,110.00	€ 2,190.00	€ 2,355.00	€ 2,450.00
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
Euro attachment	391EURO-S	Series
Wheeled arm and telescopic loader from 2.5 t lifting power	391RADTELE-S	Series
Variable Lock System	391VARILOCK	€ 395.00



When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Gravel tine pluggable</b> Recommended number: SG XL 16 - 7 pcs. SG XL 18 - 8 pcs. SG XL 20 - 9 pcs. SG XL 22 - 10 pcs. SG XL 24 - 11 pcs. SG XL 26 - 12 pcs. SG XL 28 - 13 pcs.	391SCHOTTERSGXL	€ 50.00
<b>Road guard</b> for heavy duty shovel with gravel tine	391STSCHUTZSGXL	€ 199.00
<b>Highly wear-resistant scraper bar (300 x 30 mm, 500 HB)</b> Price per metre	391HOCHV300X30	€ 190.00
<b>Highly wear-resistant reversing blades (200x20 mm, 500 HB)</b> Price per metre	391HOCHVWENDE	€ 370.00
<b>Smoothing bar</b> Price per metre	391GLAETTES	€ 110.00

# HIGH TIP SHOVEL HK

03

TOOLS



The SAPHIR HK high tip shovel increases the discharge height and tipping angle of the front loader. The discharge height increases by approx. 1,000 mm. The tipping angle is approx. 110 degrees. The shovel is suitable for bulk weights up to max. 950 kg/m<sup>3</sup>



Highly wear-resistant scraper bar 150 x 16 (500 HB)



Tipping angle is 110 degrees



Strong base frame with reinforcing struts in the direction of travel



Double-sided indicator as aid for orientation when loading bulk material on ground-level.



Gain in lifting height: of 1,000 mm



Two protected hydraulic cylinders in external pockets

## 1. Select the machine sizes

Designation	HK 10	HK 12	HK 15	HK 16	HK 18	HK 20	HK 22	HK 24
Width approx. (mm)	1,000	1,250	1,500	1,600	1,800	2,000	2,200	2,400
Height approx. (mm)	860	860	860	900	900	900	900	900
Depth approx. (mm)	1,000	1,000	1,000	1,200	1,200	1,200	1,200	1,200
Capacity approx. (l)	380	470	560	900	1,000	1,100	1,200	1,300
Weight approx. (kg)	310	335	360	477	502	527	553	608
Order-No.	391HK10	391HK12	391HK15	391HK16	391HK18	391HK20	391HK22	391HK24
€/piece	€ 2,690.00	€ 2,770.00	€ 2,850.00	€ 3,280.00	€ 3,410.00	€ 3,500.00	€ 3,700.00	€ 3,950.00
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b> (from a machine width of 1,200 mm)	391EURO-S	Series



<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	€ 195.00
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<b>Wheeled arm and telescopic loader</b> from 2.5 t lifting power	391RADTELE	€ 395.00
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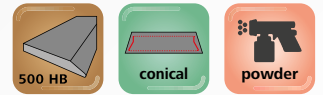
When ordering, state the type of the host vehicle.

## 3. Optional extras

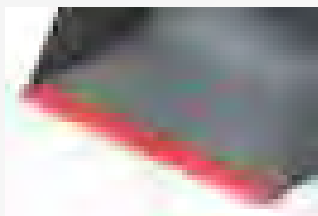
Designation	Order No.	€/piece
<b>Plastic scraper bar</b> Price per metre	391KUNSCHUERF	€ 240.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00

Special designs will be available on request - please contact us!

# GRIP SHOVEL GS



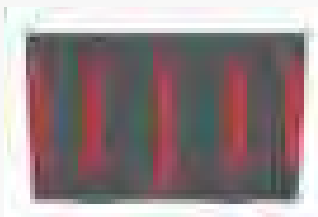
The SAPHIR grip shovel GS is an all-purpose gripping tool for agriculture. The main area of use is removing silage from the silo. Because of its robust design and the hardened sickles it can also be used for mucking out manure. The sickle-shaped design of the upper gripper prevents the load from being impaled. Optionally, the machines can also be delivered for wall withdrawal.



Highly wear-resistant scraper bar 150 x 20 mm (500 HB)



Optimally shaped upper gripper with hardened sickles for proper withdrawal of feed from the silo stock



Strong base frame of the shovel body in the direction of travel



Optional wall withdrawal on request



Upper gripper with central bearings and replaceable slide bearings. For loaders with Z-kinematics, an optional upper gripper pocket will be possible



Optional high tipping device (1 x dw required) gained lifting height- approx. 1,000 mm



Large sized hydraulic cylinder with end cushioning for material-friendly opening and closing of the upper gripper.

## 1. Select the machine sizes

Designation	GS 16	GS 18	GS 20	GS 22	GS 24
Width approx. (mm)	1,600	1,800	2,000	2,200	2,400
Height approx. (mm)	750	750	750	750	750
Depth approx. (mm)	900	900	900	900	900
Bearings	2	3	3	4	4
Capacity approx. (l)	880	980	1,080	1,180	1,280
Opening width approx. (mm)	1,450	1,450	1,450	1,450	1,450
Abrading bar (mm)	150 x 20	150 x 20	150 x 20	150 x 20	150 x 20
Reinforcement	1	1	1	2	2
Number of sickles	4	5	5	6	6
Weight approx. (kg)	542	565	629	705	735
Order-No.	391GS16	391GS18	391GS20	391GS22	391GS24
<b>€/piece</b>	<b>€ 2,520.00</b>	<b>€ 2,740.00</b>	<b>€ 2,820.00</b>	<b>€ 3,180.00</b>	<b>€ 3,380.00</b>
Freight costs in euros	on request	on request	on request	on request	on request

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00
 Wheeler loader with Z-kinematics	391ZKINE	€ 565.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Removable side parts	391HERSEITENG	€ 330.00
High tipping device 1 x dw required	391HOCHKIPPGS	€ 3,950.00
Electro-hydraulic switch-over valve 12 V / 90 l.	391ELEKTRUMSCH	€ 380.00
Highly wear-resistant reversing blade (200x20 mm, 500 HB) screwable Price per metre	391HOCHVWENDE	€ 370.00
Pressure limiting valve controllable for host vehicles above 200 bar operating pressure	391DRUCKGRENZ	€ 170.00
Pressure control valve vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
Wall withdrawal	391WANDENT	€ 265.00

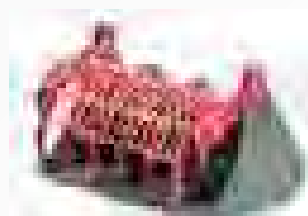
# GRIP SHOVEL GS L



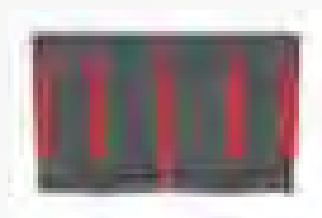
The SAPHIR grip shovel L is an all-purpose gripping tool for agriculture. The L has a greater capacity compared with the standard grip shovel. The main area of use for this grip shovel is removing silage from the silo. Particular advantages are the very strong design and the upper sickle gripper that doesn't allow the material to be spiked in any way. As a result the grip shovel is suitable for mucking out. Optionally, wall withdrawal can be delivered.



Highly wear-resistant scraper bar 150 x 20 (500 HB)



Optimally shaped upper gripper with hardened sickles for proper withdrawal of feed from the silo stock without reheating



Strong base frame of the shovel body in the direction of travel



Optional wall withdrawal on request



Upper gripper with central bearings and replaceable slide bearings. For loaders with Z-kinematics, an optional upper gripper pocket will be possible



Optional high tipping device (1 x dw required) - gain in lifting height of 1,000 mm



Large sized hydraulic cylinders with end cushioning for material-friendly opening and closing of the upper gripper.







Very large approx. 1,540 mm opening width



## 1. Select the machine sizes

Designation	GS L 20	GS L 22	GS L 24	GS L 26	GS L 28
Width approx. (mm)	2,000	2,200	2,400	2,600	2,800
Height approx. (mm)	850	850	850	850	850
Depth approx. (mm)	1,000	1,000	1,000	1,000	1,000
Bearings	3	4	4	4	4
Capacity approx. (l)	1,750	1,850	1,950	2,050	2,150
Opening width approx. (mm)	1,540	1,540	1,540	1,540	1,540
Abrading bar (mm)	200 x 20	200 x 20	200 x 20	200 x 20	200 x 20
Reinforcement	1	2	2	2	2
Number of sickles	5	6	6	7	7
Weight approx. (kg)	810	880	910	1,030	1,080
Order-No.	391GSL20	391GSL22	391GSL24	391GSL26	391GSL28
<b>€/piece</b>	<b>€ 4,090.00</b>	<b>€ 4,290.00</b>	<b>€ 4,410.00</b>	<b>€ 4,810.00</b>	<b>€ 5,150.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE-S	Series
 Wheeler loader with Z-kinematics	391ZKINE-2	€ 170.00
 Variable Lock System	391VARILOCK	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>High tipping device</b> 1 x dw required	391HOCHKIPPGSL	€ 3,150.00
<b>Electro-hydraulic switch-over valve</b>	391ELEKTRUMSCH	€ 380.00
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per metre screwable	391HOCHVWENDE	€ 370.00
<b>Wall withdrawal</b>	391WANDENT	€ 265.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00

# GRIP SHOVEL GS XL

03

TOOLS



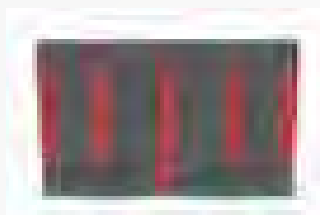
The SAPHIR grip shovel XL is an all-purpose gripping tool for agriculture. XL stands for an additionally increased volume compared to the grip shovel L. The main field of application of this grip shovel is the silage withdrawal from the silo stock. Particular advantages are the very strong design and the upper sickle gripper that doesn't allow the material to be spiked in any way. As a result the grip shovel is suitable for mucking out. Optionally, wall withdrawal can be delivered.



Highly wear-resistant scraper bar 200 x 20 (HB 500)



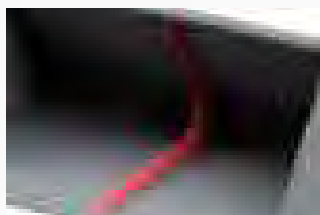
Large sized hydraulic cylinder with end cushioning for material-friendly closing of the upper gripper



Strong base frame of the shovel body in the direction of travel



Optimally shaped upper gripper with hardened sickles for proper withdrawal of feed from the silo stock



Internal reinforcement



Optional wall withdrawal on available request



Upper gripper with central bearings and replaceable slide bearings. For loaders with Z-kinematics, an optional upper gripper pocket will be possible



Optional high tipping device (1 x dw required) for a gain in lifting height of 1,000 mm

## 1. Select the machine sizes

Designation	GS XL 20	GS XL 22	GS XL 24	GS XL 26	GS XL 28
Width approx. (mm)	2,000	2,200	2,400	2,600	2,800
Height approx. (mm)	950	950	950	950	950
Depth approx. (mm)	1,100	1,100	1,100	1,100	1,100
Bearings	3	4	4	4	4
Capacity approx. (l)	1,950	2,150	2,350	2,550	2,750
Opening width approx. (mm)	1,630	1,630	1,630	1,630	1,630
Abrading bar (mm)	200 x 20	200 x 20	200 x 20	200 x 20	200 x 20
Reinforcement	2	2	2	2	2
Number of sickles	5	6	6	7	7
Weight approx. (kg)	880	960	1,040	1,130	1,180
Order-No.	391GSXL20	391GSXL22	391GSXL24	391GSXL26	391GSXL28
<b>€/piece</b>	<b>€ 5,190.00</b>	<b>€ 5,390.00</b>	<b>€ 5,590.00</b>	<b>€ 5,880.00</b>	<b>€ 6,080.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Wheeled and telescopic loader from 2.5 t lifting power</b>	391RADTELE-S	Series



<b>Wheeler loader with Z-kinematics</b>	391ZKINE-2	€ 170.00
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<b>Variable Lock System</b>	391VARILOCK	€ 395.00
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>High tipping device</b> dead weight approx. 700 kg 1 x dw necessary	391HOCHKIPPGSXL	€ 3,350.00
<b>Electro-hydraulic switch-over valve 12 V / 90 l.</b>	391ELEKTRUMSCH	€ 380.00
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per metre screwable	391HOCHVWENDE	€ 370.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure) Necessary from 200 bar operating pressure	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Highly wear-resistant scraper bar (300 x 30 mm, 500 HB)</b> Price per metre	391HOCHV300X30	€ 320.00

# FOLDING SHOVEL (4 IN 1) KS

03

TOOLS



The SAPHIR heavy duty folding shovel is an efficient multi-purpose shovel with a large number of possible uses. The front section of the shovel can be opened by two hydraulic cylinders. This allows, for instance, the transport of tree trunks, controlled filling and discharge of the content, grading of roads, as well as loading of earth or crushed stones.



Screwed scraper bar  
150 x 20 mm (500 HB) in the  
shovel back



Two large-sized  
hydraulic cylinders, with end  
cushioning and preinstalled  
flow divider



Reinforced base frame with  
highly wear-resistant scraper  
bar 150 x 16 mm (500 HB)



I.  
Earth and transport works with  
closed shovel body



II.  
Levelling work with open  
shovel body



III.  
Gripping loads with a very  
wide opening width of approx.  
1,020 mm



IV.  
Folding function for controlled  
filling and emptying of the  
shovel

## 1. Select the machine sizes

Designation	KS 13	KS 16	KS 19	KS 21	KS 23	KS 25
Width approx. (mm)	1,300	1,600	1,900	2,100	2,300	2,500
Height approx. (mm)	780	780	780	780	780	780
Depth approx. (mm)	700	700	700	700	700	700
Opening width approx. (mm)	1,020	1,020	1,020	1,020	1,020	1,020
Capacity approx. (l)	260	370	480	510	550	590
Weight approx. (kg)	372	396	420	460	490	540
Order-No.	391KS13	391KS16	391KS19	391KS21	391KS23	391KS25
<b>€/piece</b>	<b>€ 2,580.00</b>	<b>€ 3,170.00</b>	<b>€ 3,340.00</b>	<b>€ 3,570.00</b>	<b>€ 3,890.00</b>	<b>€ 4,210.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b> possible from SK 16	391EURO-S	Series



<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	€ 195.00
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<b>Wheeled and telescopic loader</b> from 2.5 t lifting power	391RADTELE	€ 395.00
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When ordering quote the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Gravel tine pluggable</b> Recommended number: SG XL 13 - 5 pcs. SG XL 16 - 7 pcs. SG XL 19 - 8 pcs. SG XL 21 - 9 pcs. SG XL 23 - 10 pcs. SG XL 25 - 11 pcs.	391SCHOTTERKS	€ 50.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Road guard</b> required for gravel tines	391STRSCHUTZKS	€ 189.00
<b>Pressure limiting valve</b> (Necessary from 200 bar operating pressure) controllable	391DRUCKGRENZ	€ 170.00

# PUSHING SHOVEL AS



03

TOOLS



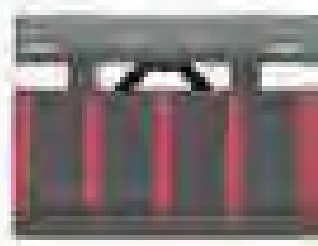
The SAPHIR pushing shovel AS is especially suitable for the controlled discharge in confined spaces. Due to the cut-off wall it is possible to easily push off bulk materials without leaving residues. In addition, due to the cut-off wall additional discharge heights can be achieved on the mixing vehicle. The geared flow divider and the pressure control valve provide for continuous pushing off of the bulk material.



Highly wear-resistant scraper bar 200 x 20 mm (500 HB)



Cut-off wall with visible display



Reinforced base frame in the direction of travel






Wall sealings between the cut-off wall and the shovel sides provide for discharge without leaving residues

## 1. Select the machine sizes

Designation	AS 17	AS 19	AS 21
Width approx. (mm)	1,700	1,900	2,100
Height approx. (mm)	750	750	750
Depth approx. (mm)	900	900	900
Capacity approx. (l)	550	620	690
Weight approx. (kg)	580	620	660
Order-No.	391AS170	391AS190	391AS210
<b>€/piece</b>	<b>€ 3,260.00</b>	<b>€ 3,650.00</b>	<b>€ 4,040.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

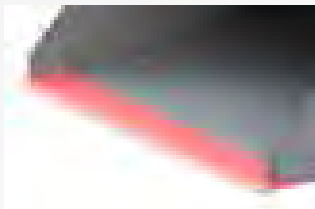
## 3. Optional extras

Designation	Order No.	€/piece
Plastic scraper bar Price per metre	391KUNSCHUERF	€ 240.00

# DISPOSAL SHOVEL ES



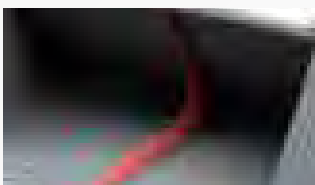
The SAPHIR disposal shovel is a particularly strongly manufactured shovel with an upper gripper. The range of use of this shovel extends from loading lumber and green cuttings up to building rubble and rubbish at recycling yards. The hydraulic cylinders located on the back of the shovel are ideally protected from external influences and the associated damage. The side sections that are removable as standard also enable the safe loading of particularly bulky goods.



Highly wear-resistant scraper bar 200 x 20 mm (500 HB)



Removable side panels allow loading of bulky goods



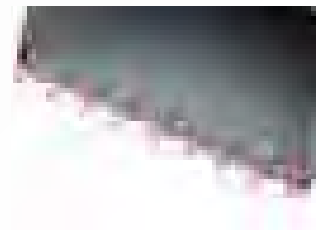
With internal reinforcement as standard (from ES 22 two pieces)



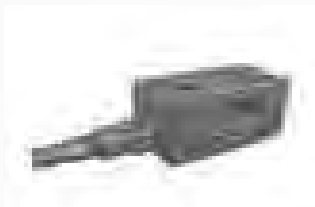
Optional highly wear-resistant rigid reversing blade (screwable 200 x 20 mm (500 HB))



Very large opening width of approx. 1,900 mm



Optional metal sprockets



With adjustable pressure control valve



## 1. Select the machine sizes

Designation	ES 16	ES 18	ES 20	ES 22	ES 24
Width approx. (mm)	1,600	1,800	2,000	2,200	2,400
Height approx. (mm)	850	850	850	850	850
Depth approx. (mm)	1,050	1,050	1,050	1,050	1,050
Capacity approx. (l)	1,300	1,500	1,700	1,900	2,100
Weight approx. (kg)	620	680	740	830	890
Number of tines	4	4	4	5	5
Reinforcement	1	1	1	2	2
Order-No.	391ES16	391ES18	391ES20	391ES22	391ES24
€/piece	€ 3,450.00	€ 3,640.00	€ 3,790.00	€ 4,080.00	€ 4,230.00
Freight costs in euros	on request	on request	on request	on request	on request

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00
 Variable Lock System	391VARILOCK	€ 790.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> screwable, Price per metre	391HOCHVWENDE	€ 370.00
<b>Road guard</b>	391STRSCHUTZES	€ 189.00
<b>Gravel tine pluggable</b> Recommended number: ES 16 - 7 pcs. ES 18 - 8 pcs. ES 20 - 9 pcs. ES 22 - 10 pcs. ES 24 - 11 pcs.	391SCHOTTERES	€ 50.00

# POTATO, TURNIP AND STONE BASKET KK, RK, STK

03

TOOLS



The SAPHIR potato basket and the SAPHIR beet basket are used to pick up the corresponding field crops safely. An edge guard prevents damage to the crops while the basket base enables sand and stones to be filtered out. The SAPHIR stone basket is used to load or collect stones. The particularly robust design of the basket and the material thicknesses used mean that it is universally usable. Optionally the stone basket SK is available with and without roll back guard.



For hall storage, all SAPHIR baskets can optionally be equipped with a highly wear-resistant scraper bar 150 x 16 mm (500 HB). For field silos, round bows are recommended for potato and turnip baskets. Stone baskets should be equipped with pointy round steel sections.



**Potato basket:** Ø Round steel 14 mm

Distance between bars: 26 mm

**Stone basket:** Ø Round steel 30 mm

Distance between bars: 60 mm

**Turnip and firewood basket:** Ø Round steel 33.5 mm

Distance between bars: 66.5 mm



In case of the stone basket, the optional roll-back guard prevents the stones taken from rolling out.

## 1. Select the machine sizes

Designation	KK 20S		KK 22S		KK 25S	
	KK 20 with round bow	with scraper bar	KK 22 with round bow	with scraper bar	KK 25 with round bow	with scraper bar
Width approx. (mm)	2,000	2,000	2,250	2,250	2,500	2,500
Height approx. (mm)	1,050	1,050	1,050	1,050	1,050	1,050
Depth approx. (mm)	1,150	1,150	1,150	1,150	1,150	1,150
Capacity approx. (l)	1,200	1,200	1,400	1,400	1,600	1,600
Weight approx. (kg)	370	370	385	385	422	422
Order-No.	391KK20	391KK20S	391KK22	391KK22S	391KK25	391KK25S
<b>€/piece</b>	<b>€ 2,040.00</b>	<b>€ 2,040.00</b>	<b>€ 2,260.00</b>	<b>€ 2,260.00</b>	<b>€ 2,560.00</b>	<b>€ 2,560.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request

Designation	RK 20S		RK 22S		RK 25S	
	RK 20 with round bow	with scraper bar	RK 22 with round bow	with scraper bar	RK 25 with round bow	with scraper bar
Width approx. (mm)	2,000	2,000	2,250	2,250	2,500	2,500
Height approx. (mm)	1,050	1,050	1,050	1,050	1,050	1,050
Depth approx. (mm)	1,150	1,150	1,150	1,150	1,150	1,150
Capacity approx. (l)	1,200	1,200	1,400	1,400	1,600	1,600
Weight approx. (kg)	330	330	350	350	380	380
Order-No.	391RK20	391RK20S	391RK22	391RK22S	391RK25	391RK25S
<b>€/piece</b>	<b>€ 1,830.00</b>	<b>€ 1,830.00</b>	<b>€ 2,040.00</b>	<b>€ 2,040.00</b>	<b>€ 2,260.00</b>	<b>€ 2,260.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request

Designation	STK 21S		STK 23S		STK 25S	
	STK 21	with scraper bar	STK23	with scraper bar	STK 25	with scraper bar
Width approx. (mm)	2,100	2,100	2,300	2,300	2,500	2,500
Height approx. (mm)	1,100	1,100	1,100	1,100	1,100	1,100
Depth approx. (mm)	1,040	1,040	1,040	1,040	1,040	1,040
Capacity approx. (l)	850	850	950	950	1,050	1,050
Weight approx. (kg)	450	450	480	480	510	510
Order-No.	391STK21	391STK21S	391STK23	391STK23S	391STK25	391STK25S
<b>€/piece</b>	<b>€ 3,280.00</b>	<b>€ 3,490.00</b>	<b>€ 3,455.00</b>	<b>€ 3,685.00</b>	<b>€ 3,740.00</b>	<b>€ 3,920.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Roll back guard for stone basket	391RÜCKROLL	€ 120.00

# MANURE FORK DG

03

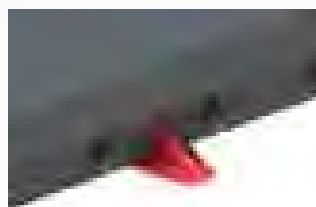
TOOLS



The SAPHIR DG manure fork serves for unloading and transport of loose manure, straw, vegetation, shrubs, etc.. The SAPHIR manure forks are delivered with high-quality tines from SHW. The standard tine length is 800 mm.



Wear strip on the tine support pipe



Stable parking foot for safe stability of the machine



Overlapping of the rear wall over the tine support pipe for especially high stability



Optional side tines for loss reduction during transport



Thick-walled tine support pipe with welded conical sleeves

## 1. Select the machine sizes

Designation	DG 09	DG 11	DG 12	DG 13	DG 15	DG 17	DG 19	DG 21	DG 23
Width approx. (mm)	900	1,100	1,200	1,300	1,500	1,700	1,900	2,100	2,300
Height approx. (mm)	800	800	800	800	800	800	800	800	800
Number of tines	5	6	6	7	8	9	10	11	12
Weight approx. (kg)	84	109	130	140	155	170	185	200	215
Order-No.	391DG09	391DG11	391DG12	391DG13	391DG15	391DG17	391DG19	391DG21	391DG23
<b>€/piece</b>	<b>€ 450.00</b>	<b>€ 540.00</b>	<b>€ 590.00</b>	<b>€ 630.00</b>	<b>€ 690.00</b>	<b>€ 770.00</b>	<b>€ 840.00</b>	<b>€ 930.00</b>	<b>€ 990.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b> (from 1,200 mm machine width)	391EURO-S	Series



<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	€ 195.00
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Normal load tines</b> 1,000 mm long Surplus price per tine	391ZINKEN1000	€ 25.00
<b>Normal load tines</b> 1,100 mm long Surplus price per tine	391ZINKEN1100	€ 30.00
<b>Normal load tines</b> 600 mm long Price per tine	391SEZINKEN600	€ 35.00

# MANURE FORK DG XL

03

TOOLS



The large-size SAPHIR manure fork XL serves for unloading and transport of loose manure, straw, vegetation, shrubs, etc.. The SAPHIR manure fork XL includes only heavy-duty high-quality tines from SHW of a length of 800 mm as standard.



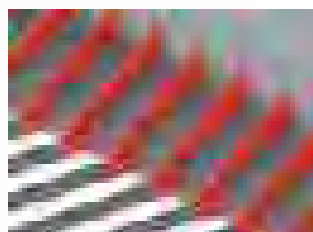
Wear strip on the tine support pipe



Optional side steel tines for loss reduction during transport



Thick-walled tine support pipe with welded conical sleeves, reinforcement bushes and rear wall reinforcement



Overlapping of the rear wall over the tine support pipe for especially high stability






High fork back with a height of 860 mm (optionally additional 350 mm are possible)

## 1. Select the machine sizes

Designation	DGXL 17	DGXL 19	DGXL 21	DGXL 23	DGXL 25
Width approx. (mm)	1,700	1,900	2,100	2,300	2,500
Height approx. (mm)	860	860	860	860	860
Number of tines	9	10	11	12	13
Weight approx. (kg)	334	360	386	412	438
Order-No.	391DGXL17	391DGXL19	391DGXL21	391DGXL23	391DGXL25
<b>€/piece</b>	<b>€ 1,640.00</b>	<b>€ 1,750.00</b>	<b>€ 1,890.00</b>	<b>€ 2,010.00</b>	<b>€ 2,150.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE-S	Series
	Variable Lock System	391VARILOCK	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Heavy duty load tines</b> 1,000 mm long, Surplus price per tine	391ZINKEN1000S	€ 12.00
<b>Heavy duty load tines</b> 1,200 mm long, Surplus price per tine	391ZINKEN1200S	€ 24.00
<b>Side steel tines</b> 800 mm long, Price per tine	391SEZINKEN800S	€ 96.00
<b>Rear wall extension</b> 350 mm long, Price per tine	391RÜCKWANDERH	€ 305.00

# MANURE FORK WITH HYDRAULIC HOLD-DOWN DEVICE DGN

03  
TOOLS



The SAPHIR manure fork with hydraulic hold-down is used to transport loose manure, straw, vegetation, shrubs etc. A particular advantage of the tool is the very large opening width of 1,220 mm. The hold-down is opened and closed as standard by one or two double-acting hydraulic cylinders.



Wear strip on the tine support pipe



Two double-acting hydraulic cylinders with pressure control valve



Thick-walled tine support pipe with welded conical sleeves



High fork back (800 mm)



Large approx. 1,220 mm opening width



Optional wall withdrawal on request



High-quality tines (800 mm) from SHW



## 1. Select the machine sizes

Designation	DGN 09	DGN 11	DGN 12	DGN 13	DGN 15	DGN 17	DGN 19	DGN 21
Width approx. (mm)	900	1,100	1,200	1,300	1,500	1,700	1,900	2,100
Height approx. (mm)	800	800	800	800	800	800	800	800
Number of tines	5	6	6	7	8	9	10	11
Capacity approx. (l)	540	690	750	835	920	1,090	1,260	1,430
Weight approx. (kg)	170	203	210	225	240	260	280	305
Order-No.	391DGN09	391DGN11	391DGN12	391DGN13	391DGN15	391DGN17	391DGN19	391DGN21
<b>€/piece</b>	<b>€ 920.00</b>	<b>€ 1,120.00</b>	<b>€ 1,180.00</b>	<b>€ 1,250.00</b>	<b>€ 1,290.00</b>	<b>€ 1,370.00</b>	<b>€ 1,590.00</b>	<b>€ 1,700.00</b>
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b> (from 1,200 mm machine width)	391EURO-S	<b>Series</b>



<b>Farm and wheeled loader</b> up to 2.5 t lifting power	391HOFRAD	<b>€ 195.00</b>
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Wall withdrawal</b>	391WANDENT	<b>€ 110.00</b>

# MANURE AND SILAGE CUTTERS DSZ

03

TOOLS



SAPHIR DSZ manure and silage cutters/ feeders are intended for removing grass and maize silage, for mucking out manure and for transporting loose dung, straw, vegetation and shrubs. A particular advantage of the device is the very large 1,400 mm wide opening.

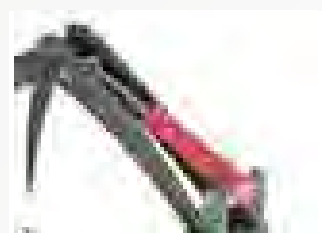
The anti-twist tines ensure that items are picked up easily. The side tines ensure that items are transported with the lowest possible losses.



Wear strip on the thick-walled  
tine support pipe



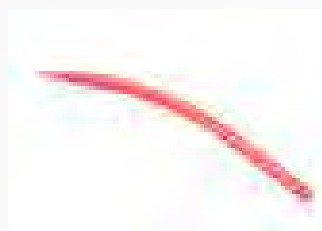
Low-maintenance, replaceable  
slide bearings



Welded in conical bushes



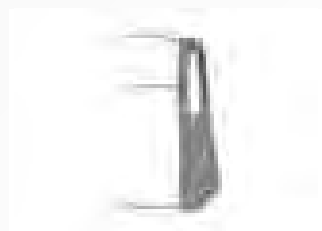
With side, pointy bent tines  
(600 mm)



Hydraulic upper gripper  
with two double-acting,  
end-cushioned  
hydraulic cylinders



High-quality tines from SHW  
with 800 mm normal load  
tines or 1000 mm heavy-duty  
tines (L-version)



Very large opening width of  
1,400 mm

## 1. Select the machine sizes

Designation	DSZ 13	DSZ 15	DSZ 17	DSZ 19	DSZ 21	DSZ 23	DSZ 19 L	DSZ 21 L	DSZ 23 L	DSZ 25 L
Width approx. (mm)	1,300	1,500	1,700	1,900	2,100	2,300	1,900	2,100	2,300	2,500
Height approx. (mm)	960	960	960	960	960	960	950	950	950	950
Number of tines	7	8	9	10	11	12	10	11	12	13
Tine length approx. (mm)	800	800	800	800	800	800	1,000	1,000	1,000	1,000
Capacity approx. (l)	1,060	1,200	1,340	1,490	1,640	1,790	1,950	2,150	2,350	2,550
Weight approx. (kg)	290	340	390	440	490	540	510	540	580	610
Order-No.	391DSZ13	391DSZ15	391DSZ17	391DSZ19	391DSZ21	391DSZ23	391DSZ19L	391DSZ21L	391DSZ23L	391DSZ25L
<b>€/piece</b>	<b>€ 2,150.00</b>	<b>€ 2,250.00</b>	<b>€ 2,400.00</b>	<b>€ 2,510.00</b>	<b>€ 2,660.00</b>	<b>€ 2,870.00</b>	<b>€ 3,450.00</b>	<b>€ 3,660.00</b>	<b>€ 3,860.00</b>	<b>€ 4,060.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Euro attachment	391EURO-S	Series
Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00

# MANURE AND SILAGE CUTTERS DSZ XL

03

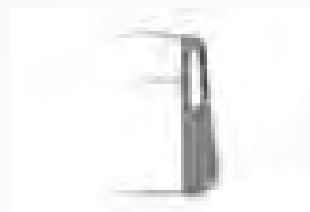
TOOLS



SAPHIR manure and silage cutters XL are intended for removing grass and maize silage, for mucking out manure and for transporting loose dung, straw, vegetation and shrubs. A decisive advantage of the DSZ XL is the particularly large capacity and the very wide opening width of approx. 2,000 mm. The anti-twist heavy-duty tines ensure that items are picked up easily. The side tines give the transported goods an additional side support for the lowest possible losses.



Wear strip on the thick-walled  
tine support pipe



Very large opening width of  
the upper gripper of 2,000 mm



Welded in conical bushes



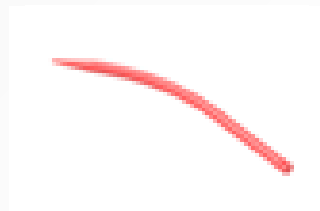
Low-maintenance, replaceable  
slide bearings



Hydraulic upper gripper  
with two double-acting,  
end-cushioned  
hydraulic cylinders



High-quality heavy-duty tines  
(1,250 mm) from SHW



Anti-twist heavy-duty tines in  
the upper gripper

## 1. Select the machine sizes

Designation	DSZ XL 21	DSZ XL 23	DSZ XL 25	DSZ XL 27
Width approx. (mm)	2,100	2,300	2,500	2,700
Height approx. (mm)	1,100	1,100	1,100	1,100
Number of tines	11	12	13	14
Tine length approx. (mm)	1,250	1,250	1,250	1,250
Capacity approx. (l)	2,850	3,100	3,350	3,600
Weight approx. (kg)	780	850	920	990
Order-No.	391DSZXL21	391DSZXL23	391DSZXL25	391DSZXL27
<b>€/piece</b>	<b>€ 5,130.00</b>	<b>€ 5,370.00</b>	<b>€ 5,620.00</b>	<b>€ 5,890.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE-S	Series
Variable Lock System	391VARILOCK	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00

# SILAGE CUTTING PLIERS SSZ

03

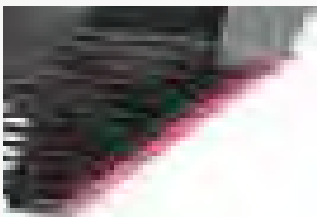
TOOLS



SAPHIR silage cutting pliers SSZ are suitable for removing and transporting any type of silage. The counter blades placed on both the right and left of the back section ensure a clean cut without the risk of material jams. The gap between the upper gripper and the basic machine can be set by the innovative re-tensioning device so that material jams are reduced to a minimum. The back of the silage cutting pliers is closed with expanded metal. This enables particularly good visibility. Another unique selling point of the SAPHIR silage cutting pliers is the double-wall upper gripper design.



Thick-walled tine support pipe (outer tines in heavy-duty design) with welded conical bushes



Tine support pipe protected by additional low-wear bar ( 500 HB )



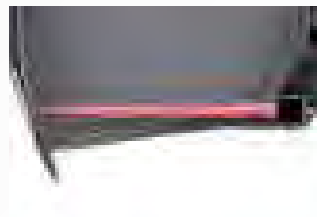
Screwed-in front blade can be either serrated or corrugated



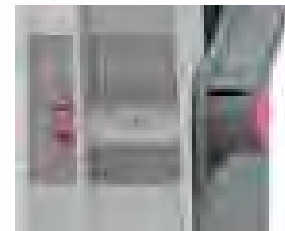
Back wall with side counter blades



Double-walled, reinforced upper gripper with very wide opening (850 mm)



The particularly large overbite (approx. 160 mm) guarantees a clean cut without tearing.






Re-tensioning device of upper gripper

## 1. Select the machine sizes

Designation	SSZ 136	SSZ 157	SSZ 178	SSZ 199	SSZ 220	SSZ 241
Width approx. (mm)	1,360	1,570	1,780	1,990	2,200	2,410
Block dimensions (mm)	1,360 x 850 x 800	1,570 x 850 x 800	1,780 x 850 x 800	1,990 x 850 x 800	2,200 x 850 x 800	2,410 x 850 x 800
Number of cylinders	2	2	2	4	4	4
Number of tines	11	12	13	14	15	16
Capacity approx. (l)	920	1,050	1,200	1,350	1,500	1,650
Weight approx. (kg)	548	628	632	884	950	1,090
Order-No.	391SSZ136	391SSZ157	391SSZ178	391SSZ199	391SSZ220	391SSZ241
<b>€/piece</b>	<b>€ 3,330.00</b>	<b>€ 3,820.00</b>	<b>€ 4,160.00</b>	<b>€ 4,810.00</b>	<b>€ 5,070.00</b>	<b>€ 5,500.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

**Note:** Optionally the machine is available with serrated or corrugated blades

## 2. Select the attachment

	Designation	Order No.	€/piece
	<b>Euro attachment</b>	391EURO-S	Series
	<b>Farm and wheeled loader up to 2.5 t lifting power</b>	391HOFRAD	€ 195.00
	<b>Wheeled and telescopic loader from 2.5 t lifting power</b>	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

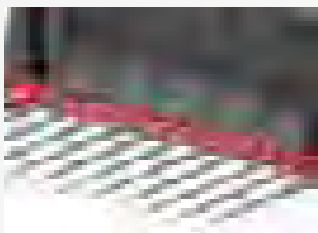
Designation	Order No.	€/piece
<b>Heavy-duty tines</b> Surplus price per tine 800 mm long	391ZINKEN800S	€ 27.00
<b>Lifting frame HG 20</b> additional lifting height of 2,000 mm	391HUBGERHG20	€ 2,120.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00

Please find further information on hydraulic cut-off wall and drive-off ramp in „Silage cutting pliers - special equipment“

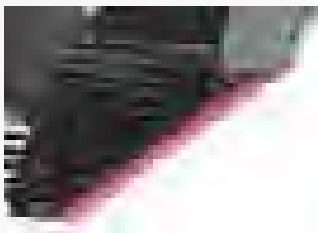
# SILAGE CUTTING PLIERS SSZ XL



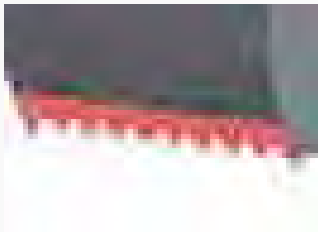
The SAPHIR silage cutting pliers XL are suitable for removing and transporting any type of silage. The particular feature of the XL product range is the very large capacity and the wide opening width of the upper gripper of approx. 1300 mm. The counter blades placed on both the right and left of the back section ensure a clean cut without the risk of material jams. The gap between the upper gripper and the basic machine can be set by the innovative re-tensioning device so that material jams are reduced to a minimum. The back of the silage cutting pliers is closed with expanded metal. This enables particularly good visibility. Another unique selling point of the SAPHIR silage cutting pliers is the double-wall upper gripper design. The particularly large overbite (approx. 160 mm) guarantees a clean cut without tearing.



Thick-walled tine support pipe with welded conical sleeves



Tine support pipe protected by additional highly wear-resistant bar ( 500 HB )



Screwed-in front blade can be either serrated or corrugated



Back wall with side counter blades



Double-walled, reinforced upper gripper with very wide opening 1,300 mm



Re-tensioning device for upper gripper



Optional lifting frame for attaching to the rear or front hydraulic system with an additional lifting height of approx. 2,000 mm ( 1 x dw required)






## 1. Select the machine sizes

Designation	SSZ XL 157	SSZ XL 178	SSZ XL 199	SSZ XL 220	SSZ XL 241	SSZ XL 262
Width approx. (mm)	1,570	1,780	1,990	2,200	2,410	2,620
Block dimensions (mm)	1,570 x 1,260 x 900	1,780 x 1,260 x 900	1,990 x 1,260 x 900	2,200 x 1,260 x 900	2,140 x 1,260 x 900	2,620 x 1,260 x 900
Number of cylinders	2	2	2	2	4	4
Number of tines	12	14	16	21	22	23
Capacity approx. (l)	1,780	2,020	2,260	2,650	2,900	3,150
Weight approx. (kg)	1,020	1,190	1,300	1,800	2,050	2,200
Order-No.	391SSZXL157	391SSZXL178	391SSZXL199	391SSZXL220	391SSZXL241	391SSZXL262
€/piece	€ 6,850.00	€ 7,040.00	€ 7,270.00	€ 10,690.00	€ 12,100.00	€ 13,070.00
Freight costs in euros	on request	on request	on request	on request	on request	on request

**Note:** Optionally the machine is available with serrated or corrugated blades

## 2. Select the attachment

	Designation	Order No.	€/piece
	<b>Attachment Cat. II</b> Front and rear attachment	391KATII-S	Series
	<b>Wheeled and telescopic loader</b> from 2.5 t lifting power	391RADTELE-S	Series
	<b>Variable Lock System</b>	391VARILOCK	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Lifting frame HG 20</b> Additional lifting height approx. 2,000 mm Attachment Cat. II/III 1 x dw required	391HUBGERHG20	€ 2,120.00

# SILAGE CUTTING PLIERS - SPECIAL EQUIPMENT

03

TOOLS



The hydraulic push off wall for silage cutting pliers allows the silage block to be deposited by easy pushing out. In addition, due to the cut-off wall additional discharge heights can be achieved on the mixing vehicle. A double-action control unit is required ( + 1x dw ).

Designation	Order No.	€/piece	€/piece (XL)
SSZ 136 / XL	391SSZ136ASW	€ 750.00	-
SSZ 157 / XL	391SSZ157ASW	€ 750.00	€ 1,060.00
SSZ 178 / XL	391SSZ178ASW	€ 750.00	€ 1,060.00
SSZ 199 / XL	391SSZ199ASW	€ 980.00	€ 1,060.00
SSZ 220 / XL	391SSZ220ASW	€ 980.00	€ 1,310.00
SSZ 241 / XL	391SSZ241ASW	€ 980.00	€ 1,530.00
SSZ 262 XL	391SSZ262XLASW	-	€ 1,530.00
<b>Electro-hydraulic switch-over valve</b>	391ELEKTRUMSCH	€ 370.00	€ 370.00
Without electrical kit (Then, only 1 x dw required)			



#### Drive-off ramp for silage cutting pliers:

The drive-off ramp is used to load loose bulk goods in the silage area, such as loose silage, concentrated feed and feed additives. The drive-off ramp is quickly taken by the silage cutting pliers and can also be replaced quickly again. These processes can be carried out without getting out of the host vehicle.

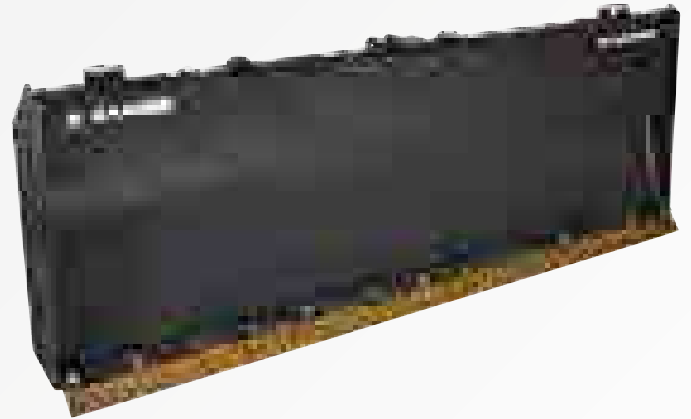
Caution! NO cutting can take place with the drive-off ramp installed!

Designation	Order No.	€/piece	€/piece (XL)
SSZ 136 / XL	391SSZ136EFM	€ 550.00	-
SSZ 157 / XL	391SSZ157EFM	€ 580.00	€ 800.00
SSZ 178 / XL	391SSZ178EFM	€ 710.00	€ 910.00
SSZ 199 / XL	391SSZ199EFM	€ 750.00	€ 1,020.00
SSZ 220 / XL	391SSZ220EFM	€ 800.00	€ 1,130.00
SSZ 241 / XL	391SSZ241EFM	€ 870.00	€ 1,240.00
SSZ 262 XL	391SSZ262XLEFM	-	€ 1,350.00

# SILAGE COMB SK, GRAIN SLIDING PLATE GS AND EXTENSION VL

03

TOOLS



The SAPHIR silage comb SK is the optimum working tool for getting silage down from especially high silo stocks. The adjustable front handle ensures particularly adaptable, optimum work. The safe cutting off of silage at a great height protects people and machines.

SAPHIR grain sliding plate type GS is a simple, rigid plate for attaching to the rear or front hydraulic system or to our SAPHIR extension type VL. The blade is fitted with a screwed-in scraper bar made of highly wear-resistant steel.

The SAPHIR extension can universally be combined with any of our grain pushers and also our silage combs.





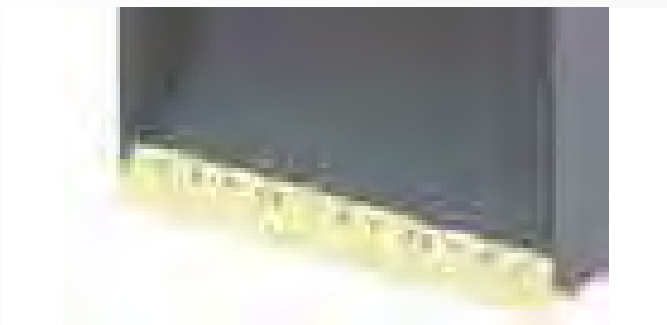
Thick-walled tine support pipe with welded cylinder sleeves



Adjustable front grip for adapted silage withdrawal.  
With anti-twist normal-load tines from SHW 800 mm as standard.



Highly wear-resistant scraper bars 200 x 20 mm (500 HB)



Optional plastic scraper bar



Round blade body  
Parking support  
Compact design

# SILAGE COMB, GRAIN SLIDING PLATE AND EXTENSION

03

TOOLS

## Silage comb

Designation	SK 22	SK 26
Working width approx. (mm)	2,200	2,600
Number of tines	11	13
Weight approx. (kg)	168	212
Attachment	Cat. II	Cat. II
Order-No.	391SK22	391SK26
<b>€/piece</b>	<b>€ 1,130.00</b>	<b>€ 1,290.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>




## Grain sliding plate

Designation	GS 30
Width approx. (mm)	3,000
Transport width approx. (mm)	3,000
Height approx. (mm)	1,000
Power requirement approx. in (kW/HP)	58/80
Weight approx. (kg)	320
Attachment	Cat. II
Order-No.	391GS30
<b>€/piece</b>	<b>€ 1,610.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## Extension

Designation	VL 20	VL 30	VL 40
Length approx. (mm)	2,000	3,000	4,000
Weight approx. (kg)	215	250	305
Order-No.	391VL20	391VL30	391VL40
<b>€/piece</b>	<b>€ 1,120.00</b>	<b>€ 1,570.00</b>	<b>€ 2,040.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## Attachments for **extension**

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## Optional extras

Designation	Order No.	€/piece
<b>Heavy-duty load tines</b> 800 mm long (Installation only possible on silage comb) Surplus price per tine	391ZINKEN800S	€ 45.00
<b>Plastic scraper bar</b> Recommended for grain sliding blade, loose accessory kit price per metre	391KUNSCHUERF	€ 280.00

# PALLET FORK PG



The SAPHIR pallet fork PG features robustness with simultaneously best possible visibility. The forged quality forks (made in Germany) are protected from abrasion by an additional wearing zone in the bent area.



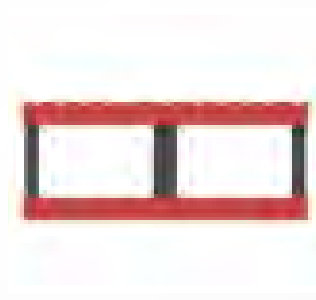
Load-bearing capacity of max. 6,000 kg (with centre of gravity at 500 mm)



Tines with wearing protection in the bent position



Snap-in system for individual displacement of the fork tines






Fork carriage width 1,200 mm



## 1. Select the machine sizes

Designation	PG 09/15	PG 11/15	PG 13/15	PG 09/25	PG 11/25	PG 13/25	PG 10/35	PG 12/35	PG 12/45	PG 12/60
Load bearing capacity (kg)	1,500	1,500	1,500	2,500	2,500	2,500	3,500	3,500	4,500	6,000
Fork carriage standard	ISO FEM II	ISO FEM II	ISO FEM II	ISO FEM II	ISO FEM II	ISO FEM II	ISO FEM III	ISO FEM III	ISO FEM III	ISO FEM IV
Fork tine length approx. (mm)	900	1,100	1,300	900	1,100	1,300	1,000	1,200	1,200	1,200
Fork cross section approx. (mm)	80 x 40	80 x 40	80 x 40	100 x 40	100 x 40	100 x 40	100 x 50	100 x 50	120 x 50	130 x 60
Weight approx. (kg)	156	164	174	184	196	208	280	300	335	370
Order-No.	391PG09-15	391PG11-15	391PG13-15	391PG09-25	391PG11-25	391PG13-25	391PG10-35	391PG12-35	391PG12-45	391PG12-60
€/piece	€ 750.00	€ 780.00	€ 820.00	€ 870.00	€ 900.00	€ 950.00	€ 1,170.00	€ 1,280.00	€ 1,390.00	€ 2,180.00
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request	on request	on request	on request

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Fork carriage width 1,500 mm	391GABTRAEGBR1500	€ 240.00
+ 100 mm for each further one	391GABTRAEG100	€ 80.00
Hydraulic side shifter 100 mm per side	391HYDRS	€ 1,370.00

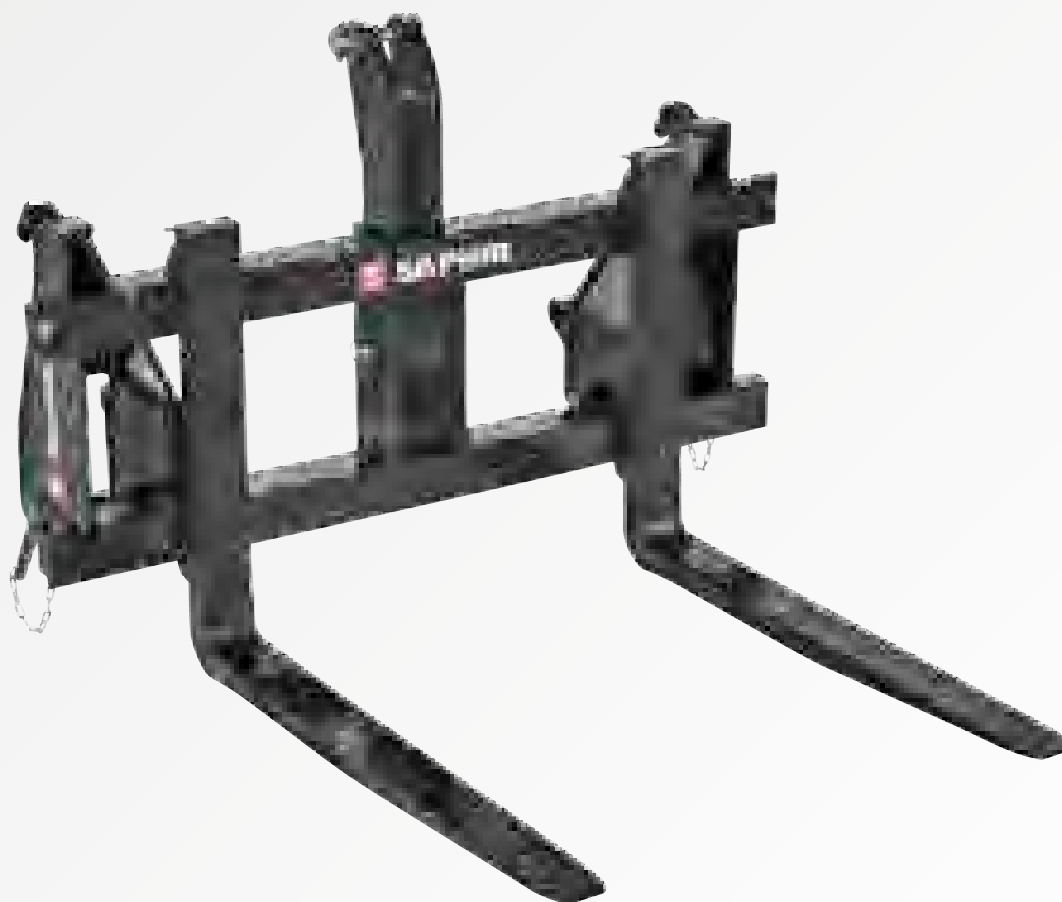
## 4. Accessories

Designation	Order No.	€/piece
Pallet base frame ISO FEM II 2,500 kg load bearing capacity (without fork tines)	391ISOFEMII	€ 530.00
Pallet base frame ISO FEM III 4,500 kg load bearing capacity (without fork tines)	391ISOFEMIII	€ 640.00
Pallet base frame ISO FEM IV 6,000 kg load bearing capacity (without fork tines)	391ISOFEMIV	€ 750.00

# PALLET FORK COMBI PGK

03

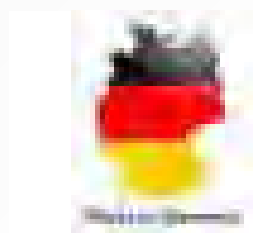
TOOLS



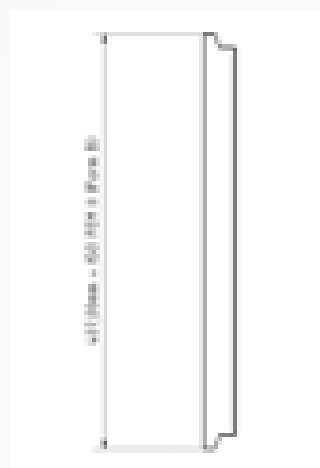
The SAPHIR pallet fork Kombi has as standard attachment options for euro attachments and Cat. II three point linkage for the front and rear hydraulic system. The attachment combination is always available without needing any retrofitting works.



Load-bearing capacity of  
max. 2,500 kg  
(centre of gravity at 500 mm)



Forged quality forks  
(made in Germany )



Fork tine attachment· ISO FEM  
II shape B



Snap-in system for individual  
displacement of the fork tines



Tines with wearing protection  
in the bent position

## 1. Select the machine sizes

Designation	PGK 09/25	PGK 11/25	PGK 13/25
Load bearing capacity (kg)	2,500	2,500	2,500
Fork tine length approx. (mm)	900	1,100	1,300
Fork cross section approx. (mm)	100 x 40	100 x 40	100 x 40
Wide fork carrier approx. (mm)	1,200	1,200	1,200
Weight approx. (kg)	202	222	234
Order-No.	391PGK09/25	391PGK11/25	391PGK13/25
<b>€/piece</b>	<b>€ 1,200.00</b>	<b>€ 1,270.00</b>	<b>€ 1,370.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Euro attachment	391EURO-S	Series



Front rear attachment Cat. II	391PGKKAT	Series
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Pallet base frame Kombi</b> 2,500 kg load bearing capacity without forks ISO FEM II	391PGKISOFEMII	€ 1,040.00

# FORK CARRIAGE ACCESSORIES

Can be fitted to ISO FEM II B or ISO FEM III B fork support standard



Big Bag carrier, adjustable (common hooked load on the two drawbar eyes max. 700 kg))



Tine holder with large bale tines 1,100 mm



Tine holder with rotating tube tines



Hydraulic upper gripper

## 1. Fork carrier

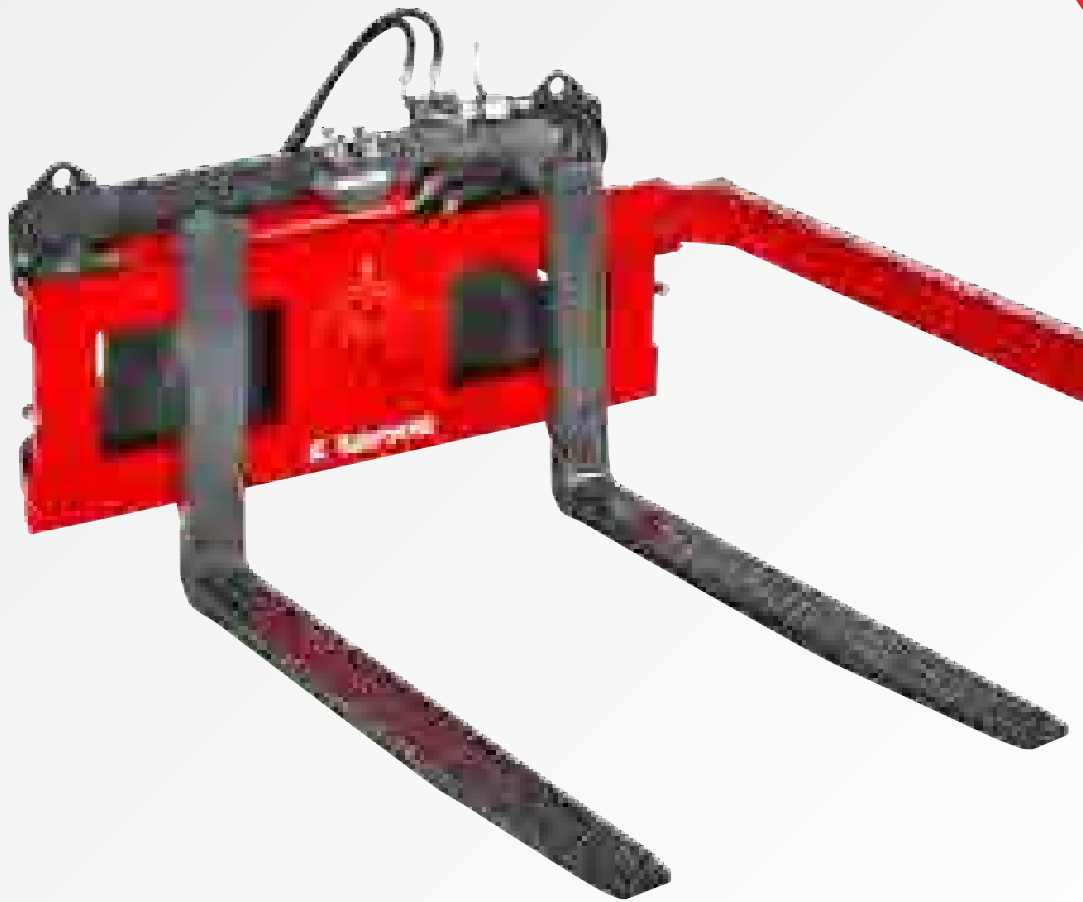
Designation	BIG BAG CARRIER ISO FEM II B	BIG BAG CARRIER ISO FEM III B
Load bearing capacity kg / piece	700	700
Clamping area (mm)	-	-
Weight approx. (kg)	60	65
Order-No.	391BBTII	391BBTIII
<b>€/piece</b>	<b>€ 410.00</b>	<b>€ 490.00</b>
Freight costs in euros	on request	on request

Designation	Tine holder with large bale tines ISO FEM II B	Tine holder with large bale tines ISO FEM III B
Load bearing capacity kg / piece	625	625
Clamping area (mm)	-	-
Weight approx. (kg)	19	24
Order-No.	391ZHGII	391ZHGIII
<b>€/piece</b>	<b>€ 190.00</b>	<b>€ 275.00</b>
Freight costs in euros	on request	on request

Designation	Tine holder with rotating tube tines ISO FEM II B	Tine holder with rotating tube tines ISO FEM III B
Load bearing capacity kg / piece	750	750
Clamping area (mm)	-	-
Weight approx. (kg)	48	53
Order-No.	391ZHRII	391ZHRIII
<b>€/piece</b>	<b>€ 345.00</b>	<b>€ 430.00</b>
Freight costs in euros	on request	on request

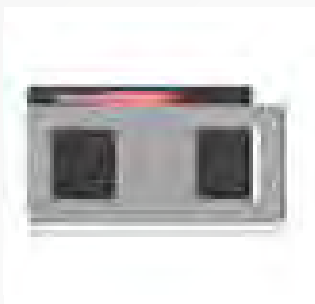
Designation	Hydraulic upper gripper ISO FEM II B	Hydraulic upper gripper ISO FEM III B
Load bearing capacity kg / piece	-	-
Clamping area (mm)	300 - 1,300	300 - 1,300
Weight approx. (kg)	64	69
Order-No.	391HOII	391HOIII
<b>€/piece</b>	<b>€ 850.00</b>	<b>€ 1,060.00</b>
Freight costs in euros	on request	on request

# KDG FORKLIFT ROTATOR



The SAPHIR forklift rotator allows taking and emptying of crates. The tipping angle of 180° - 220° guarantees emptying of each crate without leaving residues. The forklift rotator is designed for crates of a maximum width of 1,600 mm. Depending on the demand, the machine can be aligned for clockwise or counter-clockwise rotation.

Suitable fork tines of different lengths and load bearing capacities are also available from SAPHIR.



Fork carrier width 1,200 mm  
Angle of rotation from 180°  
- 220°







Load-bearing capacity up to  
2,500 kg (with the centre  
of gravity at 500 mm and  
depending on the fork tines  
used)

## 1. Select the machine sizes

Designation	KDG
Load bearing capacity max. (kg)	2,500
Direction of rotation	Left (in FR)
Turning range	180° - 220°
Weight approx. (kg)	170
Order-No.	391KDG
<b>€/piece</b>	<b>€ 2,240.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Fork carrier attachment ISO FEM II	391KDGGABEL	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Clockwise rotating in the direction of travel	391KDGRECHTS	€ 80.00

Please find diverse fork tines on page 214

# REAR PALLET FORK PGH

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TOOLS



The SAPHIR rear pallet fork is a functional, light pallet fork for fitting to the rear hydraulic system.

- Adjustable attachment points for upper linkage and lower linkage
- Forks made of 100 x 45 x 1200 mm interleaved U profiles
- Forks can be folded upwards
- Forks can be adjusted to 3 widths: 520/620/720 mm external width



## 1. Select the machine sizes

Designation	PGH
Load bearing capacity (kg)	1,500
Weight approx. (kg)	85
Order-No.	391PGH
<b>€/piece</b>	<b>€ 490.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Attachment Cat. I/II	391PGHKAT-S	Series

# BALE PIKE BS



BS5



Der SAPHIR bale pike BS is suitable for the fast transport of round and cuboid bales.



Thick-walled tine support pipe with 5 or 7 welded in conical sleeves (the BS 5 has two external sleeves for optional heavy-duty tines)



Height adjustable bale support






Tine length 1,100 mm

## 1. Select the machine sizes

Designation	BS3	BS5
Width approx. (mm)	1,200	1,650
Height approx. (mm)	1,070	1,070
Number of tines	3	5
Load bearing capacity max.(kg)	1,750	1,750
Weight approx. (kg)	91	120
Order-No.	391BS3	391BS5
<b>€/piece</b>	<b>€ 520.00</b>	<b>€ 645.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

# BALE PIKE PROFI BSP



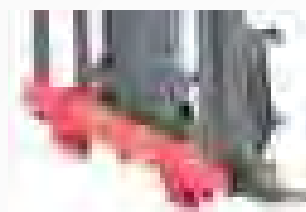
The SAPHIR bale pike Profi BS is suitable for especially high requirements on the transport of round and cuboid bales. The various optional extras make the bale pike to be especially powerful and user-friendly. In addition, higher safety is achieved in road transport by using the foldable tine support pipe.



Thick-walled tine support pipe with 5 - 7 welded-in conical sleeves



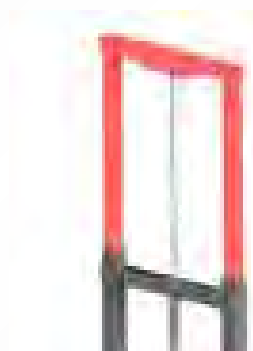
Tine length 1,000 mm  
Optional heavy-duty tines 1,250 mm



An optional foldable tine support pipe allows the safe road transport



With telescopic bale supports up to 1,800 mm



Optional with hydraulically extractable bale supports up to max. 2,400 mm (1 x dw. required)

## 1. Select the machine sizes

Designation	BSP 3	BSP 5
Width approx. (mm)	1,200	1,650
Height approx. (mm)	1,500 - 2,500	1,500 - 2,500
Number of tines	3	5
Load bearing capacity max.(kg)	1,750	1,750
Weight approx. (kg)	305	330
Order-No.	391BSP3	391BSP5
<b>€/piece</b>	<b>€ 940.00</b>	<b>€ 1,210.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b>	391EUR-S	Series



<b>Farm and wheeled loader up to 2.5 t lifting power</b>	391HOFRAD	€ 195.00
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<b>Wheeled and telescopic loader from 2.5 t lifting power</b>	391RADTELE	€ 395.00
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Heavy-duty tines</b> 1,250 mm 2 pieces	391ZINKEN1250S	€ 120.00
<b>Foldable tine support pipe</b>	391KLAPPROHR	€ 390.00
<b>Hydraulically extractable bale support</b> 2,400 mm	391HYDRABSTUETZ	€ 420.00

# BALE LIFTING FORK BHG



The SAPHIR bale lifting fork serves for the careful transport of round and silo bales in the front- and rear hydraulic system.



Support shafts can be adjusted on the side manually



Suitable for round bales between 1,000 and 1,800 mm



Support shafts can be removed and adjusted upwards

## 1. Select the machine sizes

Designation	BHG
Load bearing capacity max. (kg)	1,000
Weight approx. (kg)	115
Order-No.	391BHG
<b>€/piece</b>	<b>€ 490.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Cat. I/II	391BHGKAT	Series

# BALE ELEVATOR BHS

03

TOOLS



Using the SAPHIR bale elevator, the lifting height of the host vehicle can be increased by 2,000 mm.

The maximum lifting power is 1,000 kg.

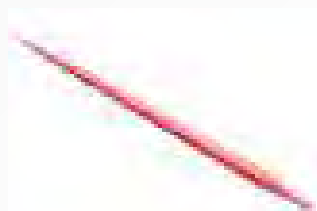
The driver has good visibility through the machine because of the hydraulic cylinders fitted on the outside. The SAPHIR bale elevators are designed to be particularly stable and warp-resistant. The thick-walled tine support pipe has five welded cone bushes. The shipment contains 3 long large bale tines of a length of 1,100 mm. Depending on the bale size, they can be screwed into the different cone bushes. The bales are held securely by the high stop bracket.



Two lifting cylinders are fitted on the outside ensuring good visibility



High stop bow provides for safe support of bales



High-quality large-bale tines with length of 1,100 mm from SHW



## 1. Select the machine sizes

Designation	BHS
Lifting height max (mm)	2,000
Lifting power max.(kg)	1,000
Transport width approx. (mm)	1,150
Height retracted approx. (mm)	1,670
Weight approx. (kg)	265
Order-No.	391BHS
<b>€/piece</b>	<b>€ 2,150.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

# FOIL WRAP BALE GRIPPER FBZ



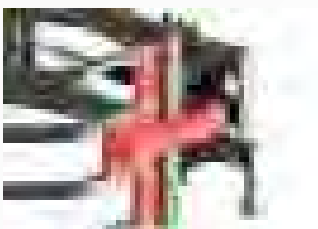
The SAPHIR foil wrap bale gripper FBZ is suitable for transporting of round bales with a diameter of 0.90 - 1.60 m. Shifting of bales during loading is prevented by the two movable side shafts. The bales cannot be damaged either because of the narrow design of the arms. The hydraulic cylinder ensures that the bale is held securely. The parking supports are adjustable so that no damage can occur to the turf or the soil during use. Because of the low dead weight and the short design, the foil wrap bale gripper is also suitable for small tractors.



Both side shafts movable - therefore bales do not shift



Adjustable parking supports





Reinforced side shafts without sharp edges

## 1. Select the machine sizes

Designation	FBZ
Bale diameter approx. (cm)	90 - 160
Load bearing capacity max.(kg)	1,000
Weight approx. (kg)	215
Order-No.	391FBZ
<b>€/piece</b>	<b>€ 1,210.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

**Assembly costs:** Hydraulic cylinders, hoses and plugs are supplied as a kit

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
Excess pressure and pressure control valve	391DBVDHV	€ 170.00

# CUBE BALE GRIPPER QBZ



The SAPHIR cube bale gripper QBZ is suitable for the transport of cubic and silage bales. The clamping bracket and the machine are constructed in such a way that no damage can occur to the wrapped bales.

Both side shafts work independently due to the two double-action hydraulic cylinders. Always the side shaft is moved that is not next to the bale so that the bales do not shift on the ground. Therefore bales can also be stacked closely packed. Cuboid bales can also be incorporated lengthwise because of the long clamping brackets.



Two double-acting hydraulic cylinders



Adjustable pressure retention valve and pressure limiting valve



Folding guard for 2nd bale






Clamping range von 75 to 211 cm

## 1. Select the machine sizes

Designation	QBZ
Clamping width approx. (mm)	750 - 2,110
Approx. clamping bracket length (mm)	1,100
Transport width approx. (mm)	1,150
Load bearing capacity max.(kg)	1,500
Contact pressure	22 kN at 130 bar / 32 kN at 180 bar
Weight approx. (kg)	360
Order-No.	391QBZ
<b>€/piece</b>	<b>€ 2,790.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

# ROUND- AND CUBE BALE GRIPPER RQZ

03

TOOLS



The SAPHIR RQZ round and cube bale gripper is suitable for transporting round, cuboid and silage bales. The retaining side panels and the machine are constructed in such a way that no damage can occur to the wrapped bales. Both side shafts work independently due to the two double-action hydraulic cylinders. Always the side shaft is moved that is not next to the bale so that the bales do not shift on the ground. Therefore bales can also be stacked closely packed. The retaining side panels can move and are fit firmly against the bale.



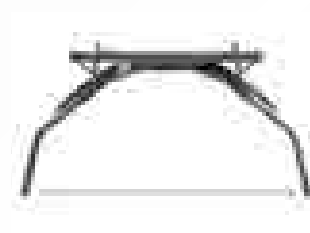
Two double-acting hydraulic cylinders



Adjustable pressure retention valve and pressure limiting valve



Parallel guide for the retaining side panels




Clamping range 500 to 1,900 mm

## 1. Select the machine sizes

Designation	RQZ
Clamping width approx. (mm)	500 - 1,900
Transport width approx. (mm)	1,660
Contact pressure	13 - 16 kN
Load bearing capacity max.(kg)	1,500
Weight approx. (kg)	290
Order-No.	391RQZ
<b>€/piece</b>	<b>€ 1,950.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

# POG / POS LUMBER FORK

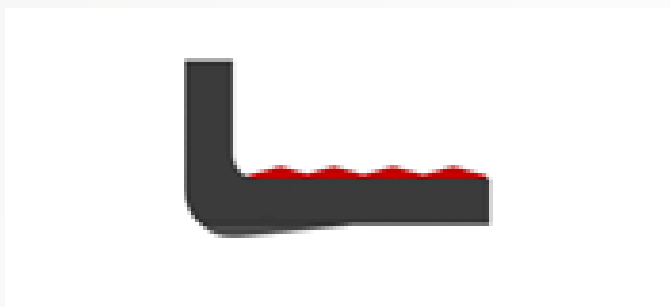


The SAPHIR lumber forks allow easy and safe loading of tree trunks and small-diameter wood in forestry. Serrated edges on the tines of the POG-2 prevent the load from rolling off easily. The curved plate body on the POS -1 and -2 lumber forks are ideally suited to loading in open terrain.

Clamping range for the version with hydraulic upper gripper

POG-2: approx. 200 – 1,200 mm

POS-1 +POS-2: approx. 250 – 1,250 mm



Forks with serrated edges on both sides (POG-2)






Curved blade body (POS)



## 1. Select the machine sizes

Designation	POG-2	POS-1	POS-2
Load bearing capacity max. (kg)	2,750	2,000	2,000
Fork tine length approx. (mm)	900	-	-
Width approx. (mm)	1,500	1,600	1,600
Number of upper grippers	2	1	2
Weight approx. (kg)	390	244	307
Order-No.	391POG-2	391POS-1	391POS-2
<b>€/piece</b>	<b>€ 2,690.00</b>	<b>€ 1,930.00</b>	<b>€ 2,690.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment

	Designation	Order No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
	Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

# BRUSH PILE GRAB RG / RGO

03

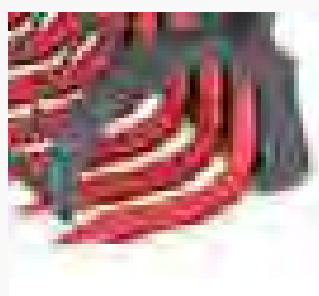
TOOLS



SAPHIR brush pile grabs RG and RGO are suitable for transporting brushwood and green cuttings in forestry. A particularly robust design enables the user not only to perform simple loading work but also enables it to be used to push together or collect brushwood in impassable terrain or woods.

The screw-in tines enable a variable adjustment of the number of tines on the machine and thus the clear width between the tines. SAPHIR brush pile grabs are available with or without a hydraulic upper gripper.

With the design with an upper gripper the brush pile grab has two hydraulic cylinders arranged on the back of the gripper. It protects the cylinders from external influences and the associated damage.



Robust tube tines 1,050 mm  
(Standard equipment 3 pieces)  
Optionally, additional tube  
tines can be added.



With two hydraulic cylinders  
(version with upper gripper)






Very wide opening of 1,550  
mm (for design with upper  
gripper)

## 1. Select the machine sizes

Designation	RG 20	RG 22	RGO 20	RGO 22
Width approx. (mm)	2,000	2,200	2,000	2,200
Height approx. (mm)	1,100	1,100	1,040	1,040
Depth approx. (mm)	1,050	1,050	1,050	1,050
Opening width approx. (mm)	-	-	1,550	1,550
Number of cylinders	-	-	2	2
Number of tines	3	3	3	3
Capacity approx. (l)	-	-	1,700	1,900
Weight approx. (kg)	410	440	610	640
Order-No.	391RG20	391RG22	391RGO20	391RGO22
<b>€/piece</b>	<b>€ 2,040.00</b>	<b>€ 2,200.00</b>	<b>€ 3,820.00</b>	<b>€ 3,990.00</b>
Freight costs in euros	on request	on request	on request	on request

## 2. Select the attachment

Designation	Order No.	€/piece
 Euro attachment	391EUR-S	Series
 Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00

When ordering, state the type of the host vehicle.

## Optional extras

Designation	Order No.	€/piece
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00
<b>Additional tube tines</b> Price per piece Maximum 7 tube tines are possible	391RGROHRZINK	€ 290.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00

# GRZ GREEN FORAGE AND BRUSH PILE PLIERS



The SAPHIR green forage and brush pile grippers are suitable for transporting brushwood and green cuttings in forestry and in municipal areas. The particularly robust design enables the user not only to perform simple loading work but it can also be used to push together or collect brushwood in impassable terrain or woods.



Heavy-duty tines as standard  
800 mm  
Optional heavy-duty tines  
XL S 800 mm round profile  
50 mm







Very wide opening approx.  
1,550 mm

## 1. Select the machine sizes

Designation	GRZ 17	GRZ 19	GRZ 21	GRZ 23	GRZ 25
Width approx. (mm)	1,700	1,900	2,100	2,300	2,500
Number of gripper tines (top)	3	3	4	4	5
Number of tines (bottom)	9	10	11	12	13
Capacity approx. (l)	1,300	1,450	1,600	1,750	1,900
Weight approx. (kg)	460	490	550	580	640
Order-No.	391GRZ17	391GRZ19	391GRZ21	391GRZ23	391GRZ25
<b>€/piece</b>	<b>€ 3,410.00</b>	<b>€ 3,470.00</b>	<b>€ 3,690.00</b>	<b>€ 3,750.00</b>	<b>€ 4,600.00</b>
Freight costs in euros	on request	on request	on request	on request	on request

## 2. Select the attachment

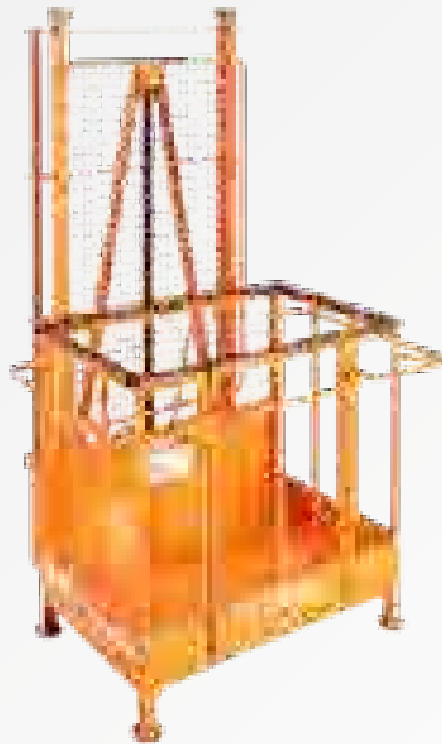
Designation	Order No.	€/piece
 Euro attachment	391EURO-S	Series
 Farm and wheeled loader up to 2.5 t lifting power	391HOFRAD	€ 195.00
 Wheeled and telescopic loader from 2.5 t lifting power	391RADTELE	€ 395.00
 Variable Lock System	391VARILOCK	€ 790.00

When ordering, state the type of the host vehicle.

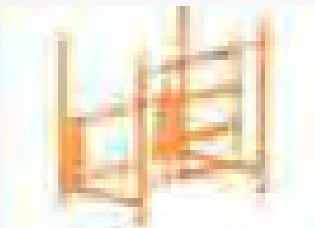
## 3. Optional extras

Designation	Order No.	€/piece
<b>Heavy-duty tines XLS</b> 800 mm long	391ZINKEN800XLS	€ 36.00
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Pressure control valve</b> vehicle-dependent Examples: Merlo, Bobcat, Dieci	391DRUCKHV	€ 210.00

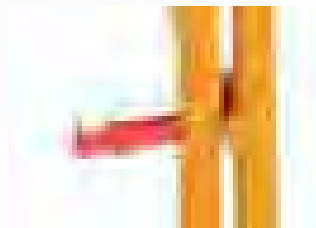
# WORKING PLATFORM ABB WITHOUT EC PRE-CERTIFICATION



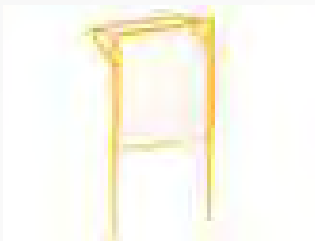
The platform without EC pre-certification is suitable for the application in the private area. The large stand space is covered by a closed bottom plate that prevents small mounting parts from falling down. The working platform has a load capacity of 250 kg. Maximum two persons are allowed to be on the working platform at the same time. The high-grade hardwood edge protection is weather-resistant and protects the user from being injured when working with power saws. (Statutory regulations)



Optional increase of height by 800 mm or 1,200 mm



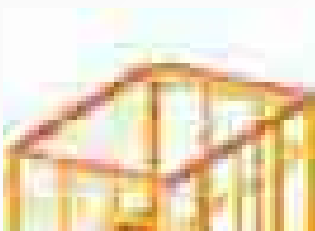
Self-closing and locking access door



Optional protective roof for the application of the working platform in closed rooms



Fork tine receptacle as standard



With wooden guard all around the edge for sawing works

## 1. Select the machine sizes

Designation	ABOEG1	ABOEG2
Width (internal) approx. (mm)	1,240	2,040
Height (internal) approx. (mm)	1,100	1,100
Depth (internal) approx. (mm)	790	1,040
Load capacity (kg)	250	250
Weight approx. (kg)	180	320
Order-No.	391ABOEG1	391ABOEG4
<b>€/piece</b>	<b>€ 1,320.00</b>	<b>€ 2,430.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Fork tine receptacle</b> 120 x 50 mm	391ABOEGGABEL120	Series



<b>Fork tine receptacle</b> 170 x 90 mm	391ABOEGGABEL170	Series
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## 3. Optional extras

Designation	Order No.	€/piece
<b>Increase of height</b> 1,200 mm	391ERHÖHUNG1200	€ 670.00
<b>Protective roof</b>	391SCHUTZDACH	€ 280.00
<b>Set of shunting wheels</b> (consisting of 4 pieces of track rollers)	391RANGIER	€ 310.00

### Technical safety instructions:

Before commissioning a technical safety acceptance test in connection with the host vehicle is required.

The host vehicle requirements are as follows: Stability, automatic parallel guide, hose rupture protection and choke valves must be installed. The tip cylinders must be disabled.

# WORKING PLATFORM ABB WITH EC PRE-CERTIFICATION

03

TOOLS



The application of working platforms in public and commercial areas has been strictly regulated by the legislature since 2006. Requirements derived from this referring the application of a working platform can be found in the Machinery Directive 2006/42/EC.

Due to its EC pre-certification, the SAPHIR working platform meets all necessary requirements to be able to perform the mandatory type test in connection with the individual host vehicle.

## **The required inspections and acceptance tests with positive fitting attachment**

e.g. Quick change receptacle on host vehicles like e.g. tractors, wheel and telescopic loaders,

- Up to a fall height of 3.0 m: Technical safety acceptance test
- at fall heights of 3.0m – 10.0m: EC-type test in connection with the respective host vehicle



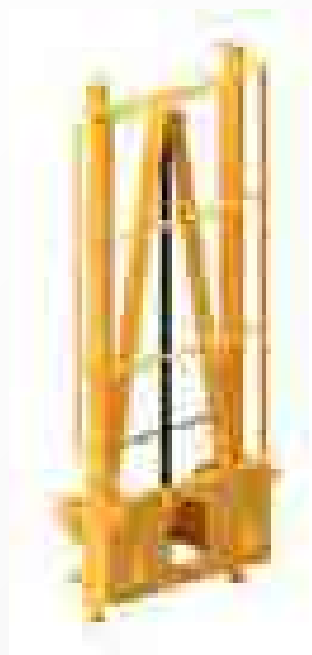
**Requirements on the host vehicle**

- Tested stability
- Automatic parallel guide
- Lockable tipping function
- Lifting cylinder with pipe rupture protection units
- Adjustable lifting and lowering speed
- From 7.5m lifting height: Emergency lowering and radio connection
- EC type test for untested unit
- Expert examination for already tested unit
- Information about already tested combinations is available directly from SAPHIR

The EC type test is performed in accordance with the guidelines of the Machinery Directive 2006/42/EC.



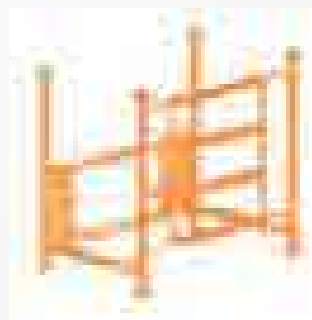
Circular level integrated in the basket as standard



Optional lifting device with added lifting height of 2,000 mm



Sturdy all-steel design



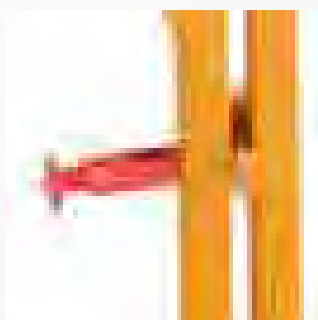
Optional increase of height by 800 mm or 1,200 mm



With wooden guard all-round the edge for sawing works



Optional protective roof for works in closed rooms



With self-closing and locking door

# WORKING PLATFORM ABB WITH EC PRE-CERTIFICATION

03

TOOLS

## 1. Select the machine sizes

Designation	ABB EG1	ABB EG2
Width (internal) approx. (mm)	1,240	2,040
Height (internal) approx. (mm)	1,100	1,100
Depth (internal) approx. (mm)	790	1,040
Load capacity (kg)	250	250
Weight approx. (kg)	180	320
Order-No.	391ABBEG1	391ABBEG2
<b>€/piece</b>	<b>€ 1,830.00</b>	<b>€ 3,260.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
<b>Euro attachment</b>	391EUR-S	<b>Series</b>



<b>Farm and wheeled loader up to 2.5 t lifting power</b>	391HOFRAD	<b>€ 195.00</b>
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<b>Wheeled and telescopic loader from 2.5 t lifting power</b>	391RADTELE	<b>€ 395.00</b>
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When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Increase of height</b> 1,200 mm	391ERHÖHUNG1200	<b>€ 670.00</b>
<b>Lifting device HV 20</b> additional lifting height of 2,000 mm	391HUBVORHV20	<b>€ 2,690.00</b>
<b>Protective roof</b>	391SCHUTZDACH	<b>€ 280.00</b>
<b>Set of shunting wheels</b> (consisting of 4 pieces of track rollers)	391RANGIER	<b>€ 310.00</b>



# ADAPTER FRAME ADAP







The most different adapters can be produced for tractors, farm, wheeled, and telescopic loaders. With this, forepart dimension and tipping angle are optimally designed. On the side of the attachment, usually a mechanical locking device is integrated in the adapters.

## 1. Select the type of machine

Designation	ADAP K	ADAP KV	ADAP E	ADAP H	ADAP T
Receptacle for attachment machine	Cat. II	Cat. II/III adjustable	Euro attachment	Farm and wheeled loader up to 2.5 t lifting power	Wheeled and telescopic loader from 2.5 t lifting power
Order-No.	391ADAPK	391ADAPKV	391ADAPE	391ADAPH	391ADAPT
<b>€/piece</b>	<b>€ 320.00</b>	<b>€ 730.00</b>	<b>€ 510.00</b>	<b>€ 750.00</b>	<b>€ 1,040.00</b>
Freight costs in euros	on request	on request	on request	on request	on request

Non-standard designs of quick change devices or tool carriers for the permanent installation on the host vehicle are available on request.

## 2. Select the attachment

	Designation	Order No.	€/piece
	Cat. II	391ADAPKATII	€ 130.00
	Euro attachment	391ADAPEUR	€ 240.00
	Farm and wheeled loader up to 2.5 t lifting power	391ADAPHOFRAD	€ 440.00
	Wheeled and telescopic loader from 2.5 t lifting power	391ADAPTELERAD	€ 580.00

When ordering, state the type of the host vehicle.

## 3. Optional extras

Designation	Order No.	€/piece
<b>Hydraulic locking device</b> Available on request for ADAP E/H/T	391ADAPHYDRVERR	€ 820.00

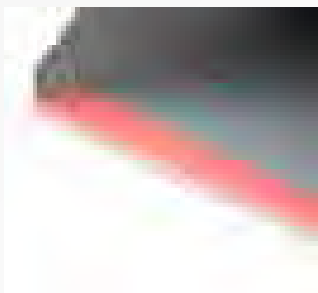
# FORKLIFT TRUCK BUCKET - FORK TINE ATTACHMENT GSSZ

03

TOOLS



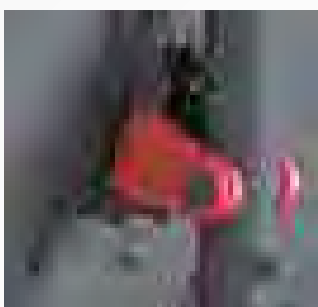
The SAPHIR forklift truck bucket GSSZ is attached with the forklift fork tines (please consider the tine cross section). It is used to pick up and transport free-flowing bulk goods (e.g. potatoes, onions, carrots, grain, fertiliser etc.). A particular feature is that the tipping angle can be adjusted with a screw segment. The centre of gravity for the load is at approx. 680 mm, whereby the forepart dimension is approx. 540 mm.



Scraper bar 150 x 16 mm made of highly wear-resistant steel (500 HB)



Shovel side parts with protected edge all around



Tipping angle can be adjusted by a screw segment



Double joint bearing with slide bearings that can be lubricated

## 1. Select the machine sizes

Designation	GSSZ 12	GSSZ 15	GSSZ 18	GSSZ 21
Width approx. (mm)	1,200	1,500	1,800	2,100
Height approx. (mm)	860	860	860	860
Depth approx. (mm)	1,350	1,350	1,350	1,350
Capacity approx. (l)	750	900	1,200	1,500
Fork pockets internal dimension approx. (mm)	110 x 50	130 x 60	130 x 60	130 x 60
Approx. centre of gravity approx. (mm)	630	660	700	730
Weight approx. (kg)	305	370	395	430
Order-No.	391GSSZ12	391GSSZ15	391GSSZ18	391GSSZ21
<b>€/piece</b>	<b>€ 2,110.00</b>	<b>€ 2,350.00</b>	<b>€ 2,550.00</b>	<b>€ 2,800.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

# FORKLIFT SHOVEL - GSST



The SAPHIR forklift truck bucket GSST is a bulk goods bucket permanently attached to the forklift truck by the fork carriage. The especially stable design allows the application also under high stress.



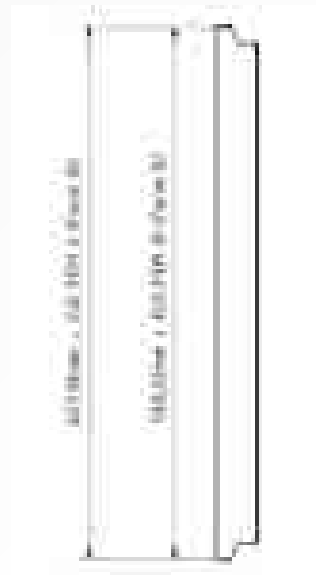
Scraper bar 200 x 20 mm made of highly wear-resistant steel (500 HB)



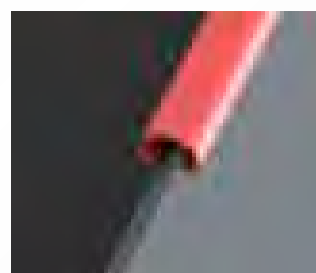
Two end-cushioned hydraulic cylinders



Especially small forepart dimension of 250 mm



It is ready to be installed for the fork carrier attachment ISO FEM II B (407mm) or ISO FEM III B (508mm)



Optional edge protection



## 1. Select the machine sizes

Designation	GSST 16	GSST 20	GSST 23
Width approx. (mm)	1,600	2,000	2,300
Height approx. (mm)	1,050	1,050	1,050
Depth approx. (mm)	1,300	1,300	1,300
Capacity approx. (l)	1,280	1,650	1,940
Weight approx. (kg)	670	720	790
Order-No.	391GSST16	391GSST20	391GSST23
<b>€/piece</b>	<b>€ 4,420.00</b>	<b>€ 4,950.00</b>	<b>€ 5,380.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## 2. Select the attachment



Designation	Order No.	€/piece
Fork carriage standard ISO FEM II	391GSSTIS02	Series



Fork carriage standard ISO FEM III	391GSSTIS03	Series
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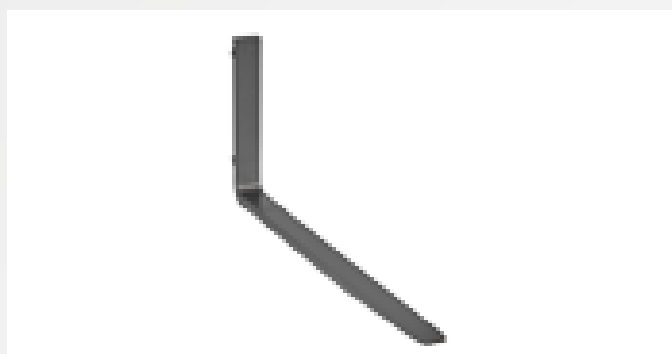
## 3. Optional extras

Designation	Order No.	€/piece
<b>Edge protection</b> with pipe	391GSSTKANTE	€ 130.00
<b>Side panels convex</b> screwable	391GSSTSEITKONVEX	€ 250.00

# FORK TINES

03

TOOLS



SAPHIR fork tines are forged full profile tines of industrial quality.

Determining the fork carriage standard:

Height of fork carrier

(Attachment upper edge to lower edge)

ISO FEM II = 407 mm and ISO FEM III = 508 mm

## ISO FEM II (Length)

Designation	Fork tines 900 mm	Fork tines 1000 mm	Fork tines 1100 mm	Fork tines 1200 mm
Load capacity per pair (kg), LSP 500 mm	1,500	1,500	1,500	1,500
Cross section (mm)	80 x 40	80 x 40	80 x 40	80 x 40
Order-No.	391080400900	391080401000	391080401100	391080401200
€/piece	€ 230.00	€ 235.00	€ 240.00	€ 250.00
Freight costs in euros	on request	on request	on request	on request

## ISO FEM II (Length)

Designation	Fork tines 900 mm	Fork tines 1000 mm	Fork tines 1100 mm	Fork tines 1200 mm	Fork tines 1300 mm
Load capacity per pair (kg), LSP 500 mm	2,500	2,500	2,500	2,500	2,500
Cross section (mm)	100 x 40	100 x 40	100 x 40	100 x 40	100 x 40
Order-No.	391100400900	391100401000	391100401100	391100401200	391100401300
€/piece	€ 250.00	€ 260.00	€ 270.00	€ 280.00	€ 290.00
Freight costs in euros	on request	on request	on request	on request	on request

## ISO FEM III (Length)

Designation	Fork tines 1000 mm	Fork tines 1200 mm	Fork tines 1200 mm	Fork tines 1200 mm
Load capacity per pair (kg), LSP 500 mm	3,500	3,500	4,500	6,000
Cross section (mm)	100 x 50	100 x 50	120 x 50	130 x 60
Order-No.	391100501000	391100501200	391120501200	391140501200
€/piece	€ 300.00	€ 325.00	€ 380.00	€ 610.00
Freight costs in euros	on request	on request	on request	on request

# LOOSE WELDING PARTS FOR RETROFITTING OF EXISTING MACHINES



03

TOOLS

Type	Price category	Type	Price category
Ahlmann AL 70, 150 .....	3	Komatsu WA200-320 .....	4
Ahlmann AS7 – AS18 .....	4	Komatsu WA65-85 .....	2
Ahlmann AX-Series .....	2	Kramer 180, 250, 350.....	1
Atlas AR 95.....	4	Kramer 312-850.....	2
Atlas E-Series to 86E .....	2	Kramer 880 .....	3
Avant farm loader .....	1	Kramer telescopic loader.....	3
Bobcat compact loader / DIN 24410.....	2	Kubota R410-R520.....	2
Bobcat telescopic loader .....	4	Liebherr L506P – 509P .....	3
Case 21-321 .....	3	Liebherr L506Z-509Z .....	2
Case 521-721 .....	4	Liebherr L512-538 .....	4
Caterpillar 902G-908H.....	1	Manitou telescopic loader .....	4
Caterpillar 902H-908H.....	2	Massey Ferguson telescopic loader.....	4
Caterpillar 928-938.....	4	Matbro telescopic loader.....	3
Caterpillar telescopic loader.....	3	Merlo telescopic loader .....	3
Claas telescopic loader .....	3	MultiOne farm loader.....	1
Deutz Agrovector .....	2	New Holland telescopic loader.....	3
Dieci telescopic loader .....	3	Paus wheeled loader .....	3
Doosan wheeled loader.....	4	Schaeff SKL 821-832.....	2
Faresin telescopic loader .....	4	Schaeff SKL 833-871.....	3
Fuchs farm loader.....	1	Schäffer 9380T .....	4
Gehl farm loader.....	2	Schäffer hydraulic.....	2
Genie telescopic loader .....	3	Schäffer mechanical.....	1
Giant farm loader .....	2	Terex telescopic loader.....	3
Hydrema WL470-830.....	3	Terex TL 160 – 360.....	4
JCB 2 CX, 3CX, 4CX.....	2	Terex TL 65 .....	2
JCB 403 .....	1	Terex TL 80 - 120 .....	3
JCB 406-409B .....	2	Thaler farm loader.....	1
JCB 410-456.....	4	Volvo L 50 – 70.....	4
JCB 520-40 – 527-55.....	2	Volvo L20-L45 Z .....	2
JCB 526S .....	3	Wacker WL 18 – WL 50 .....	2
JCB 530-70 – 541-70.....	3	Wacker WL 55, 57.....	3
JCB Robot .....	1	Weidemann 4070, 4204, 8080.....	3
JLG telescopic loader.....	2	Weidemann hydraulic.....	2
John Deere telescopic loader .....	3	Weidemann mechanical .....	1
Kioti CK-Series.....	1	Zeppelin ZL 80 – 110.....	3
Komatsu telescopic loader.....	3	Zettelmeyer 302-602 .....	1

Designation	Order No.	€/set	Freight costs
Price category 1	391ANSCHWPK1	€ 160.00	on request
Price category 2	391ANSCHWPK2	€ 240.00	on request
Price category 3	391ANSCHWPK3	€ 290.00	on request
Price category 4	391ANSCHWPK4	€ 370.00	on request

When ordering, please, quote the type and the order number of the belonging price category.



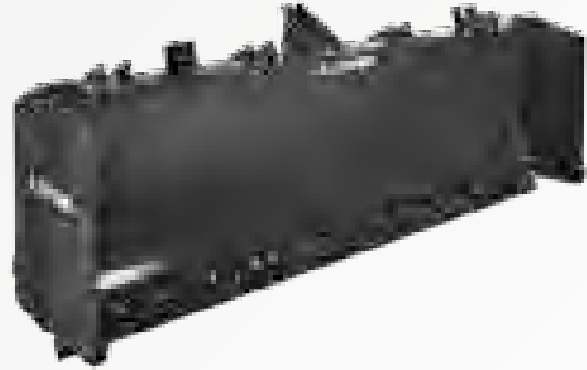
# SILAGE TECHNOLOGY

Maize pushing blade, MGS	218-219
Compact maize pushing blade	220-221
Combi maize pushing blade	222-223
Green forage fork GG	224-225
Green forage fork with hydr. tilt function	226-227
Silage roller SW 30 / H	228-229

# MAIZE AND GREEN FORAGE PUSHER BLADE MGS



MGS 300



MGS 300S with water filling

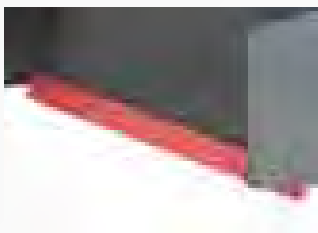


The SAPHIR MGS 300 pusher blade is a simple, rigid blade for attaching to the rear or front hydraulic system. The blade is fitted with a screwed-in Hardox scraper bar that can be replaced if it wears out.

In the heavy version, the SAPHIR MGS 300 S pusher blade can additionally be ballasted by a frame that can be filled with water. To increase the crowd quantity, guiding elements are also installed as standard.



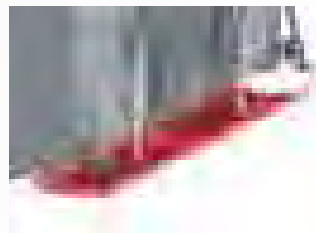
Compact design with round blade body for optimum material flow and maximum stability



Replaceable wear strip of highly wear-resistant steel (screwed, 500 HB)



Heavy version that can be filled with water (MGS 300S) for optimum ballasting of the tractor



Optional sliding runner (MGS 300S) for easy guiding of the blade on the silo stock



Optional grid attachment (MGS 300S), for greater feed quantities with good visibility



Option LED working lights and side lamps for more comfort and safety at work.

## Machine sizes

Designation	MGS 300	MGS 300S
Operating width (mm)	3,000	3,000
Blade height without attachment approx. (mm)	1,000	1,000
Blade height with grid attachment approx. (mm)	-	1,400
Transport width approx. (mm)	3,000	3,000
Attachment	Cat. II	Cat. II/III
Power requirement approx. in (kW/HP)	80/110	110/150
Weight approx. (kg)	320	770
Weight filled approx. (kg)	-	1,320
Order-No.	574MGS300	574MGS300S
<b>€/piece</b>	<b>€ 1,610.00 €</b>	<b>€ 2,760.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Grid attachment (MGS 300S)</b>	574GITTAUF300S	€ 570.00
<b>Sliding runner (MGS 300S)</b>	574SKU300S	€ 520.00
<b>LED side lamps</b>	574BEGRENZLEU	€ 280.00
<b>LED working lights (2 pieces)</b>	574ARBSCHIN	€ 440.00
<b>Rubber scraper bar with fabric insert</b> (Loose accessory kit, undrilled)	574GUMTEXT300S	€ 430.00

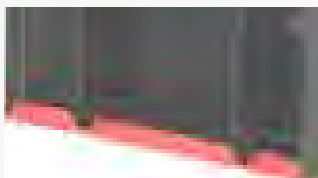
# MAIZE AND GREEN FORAGE PUSHING BLADE KOMPAKT

04

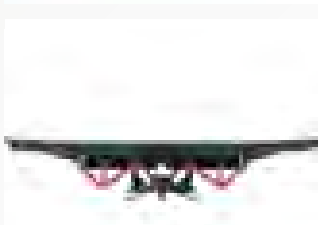
SILAGE TECHNOLOGY



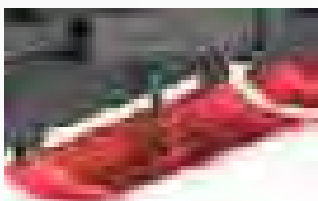
Die SAPHIR KOMPAKT Maize and Green Forage Pushing Blades feature wide working widths due to an especially powerful dozer performance. Three-part hydraulic folding device enables operation close to the silage heap and guarantees safe road transport. In addition, the close attachment of the robust blade body to the host vehicle ensures a good visibility over the blade and good manoeuvring properties.



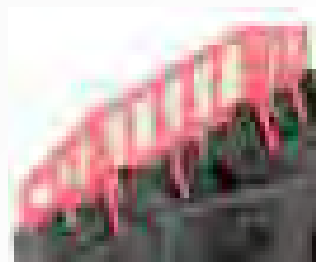
Replaceable wear strip of highly wear-resistant steel (screwed, 500 HB)



Three-part hydraulic folding device



Optional sliding runner for easy guiding of the blade on the silo stock



Optional grid attachment for greater feed quantities with good visibility



Optional LED working lights and side lamps for more comfort and safety at work.



## Machine sizes

Designation	Kompakt 4001	Kompakt 5001
Working width (mm)	4,000	5,000
Blade height without attachment approx. (mm)	1,100	1,100
Blade height with grid attachment approx. (mm)	1,500	1,500
Transport width approx. (mm)	2,360	3,000
Attachment	Cat. II/III	Cat. II/III
Width central part approx. (mm)	2,000	2,600
Hydraulic connection	2 x dw	2 x dw
Power requirement approx. in (kW/HP)	100/135	110/150
Weight approx. (kg)	910	990
Order-No.	574KOMPAKT4001	574KOMPAKT5001
<b>€/piece</b>	<b>€ 6,900.00 €</b>	<b>€ 7,120.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## Optional extras

Designation	Order-No.	€/piece
<b>Grid attachment Kompakt 4001</b>	574GITKOM4001	€ 730.00
<b>Grid attachment Kompakt 5001</b>	574GITKOM5001	€ 795.00
<b>Sliding runner Kompakt 4001</b>	574SKUKOM4001	€ 535.00
<b>Sliding runner Kompakt 5001</b>	574SKUKOM5001	€ 580.00
<b>Rubber scraper bar with fabric insert for Kompakt 4001</b>	574GUMTEXTKOM4001	€ 560.00
<b>Rubber scraper bar with fabric insert for Kompakt 5001</b>	574GUMTEXTKOM5001	€ 630.00
<b>Flow divider</b> The right and left side sections are controlled by a control circuit (1 x dw). Both side sections thus move smoothly.	574MENGTEILER	€ 420.00
<b>Additional weight 280 kg</b>	574ZUSGEWKOMP	€ 460.00
<b>LED side lamps</b>	574BEGRENZLEU	€ 280.00
<b>LED working lights (2 pieces)</b>	574ARBSCHHEIN	€ 440.00

# MAIZE AND GREEN FORAGE PUSHING BLADE KOMBI 4501/5001

04

SILAGE TECHNOLOGY



*Kombi 5001 with grid attachment, working lights and side lamps*



The SAPHIR KOMBI pushing blades are suitable for pulling and pushing. Replaceable Hardox wear strips (500 HB) are fitted on both sides of the stable blade body. The side sections can be retracted and folded out individually backwards or forwards. Because the blade has a particularly stable, robust design, it can be used with system tractors of up to approx. 350 HP (e.g. Claas Xerion).



The wear-resistant strip at the front and the rear can be replaced (Screwable, 500 HB)



Optional grid attachment for greater feed quantities with good visibility



The individual side parts can be swivelled hydraulically



Optional LED working lights and side lamps for more comfort and safety at work.

## Machine sizes

Designation	KOMBI 4501	Kombi 5001
Working width (mm)	4,500	5,000
Blade height without attachment approx. (mm)	1,160	1,160
Blade height with grid attachment approx. (mm)	1,560	1,560
Transport width approx. (mm)	3,000	3,000
Attachment	Cat. II/III	Cat. II/III
Width central part approx. (mm)	2,600	2,600
Width side part approx. (mm)	950	1,200
Hydraulic connection	2 x dw	2 x dw
Power requirement approx. in (kW/HP)	147/200	183/200
Weight approx. (kg)	980	1,030
Order-No.	574KOMBI4501	574KOMBI5001
<b>€/piece</b>	<b>€ 7,110.00 €</b>	<b>€ 7,510.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## Select receptacle



Designation	Order No.	€/piece
Attachment Cat. II / II	574KATIII-S	Series



Attachment Cat. IV	574KATIV	€ 865.00
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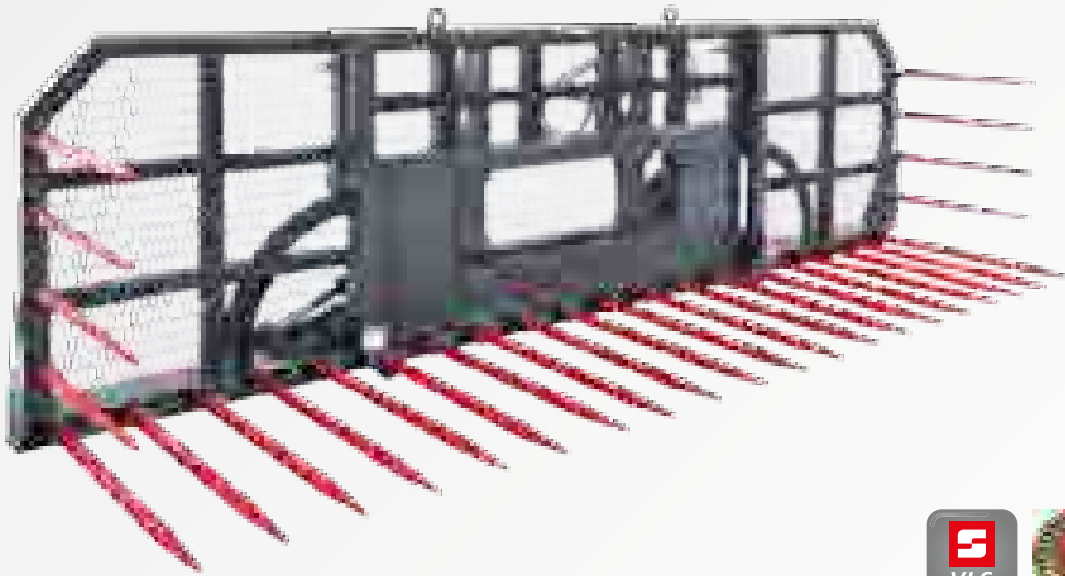
## Optional extras

Designation	Order No.	€/piece
Grid attachment Kombi 4501	574GITKOMB450	€ 760.00
Grid attachment Kombi 5001	574GITKOMB500	€ 795.00
Rubber scraper (one side) Kombi 5001	574GUMTEXTEINS	€ 630.00
Rubber scraper (two sides) Kombi 5001	574GUMTEXTZWEI	€ 1,125.00
Additional weight 280 kg	574ZUSGEW280	€ 460.00
Additional weight 550 kg (Cannot be combined with 574ZUSGEW280)	574ZUSGEW550	€ 620.00
Flow divider The right and left side sections are controlled by a control circuit (1 x dw). Both side sections thus move smoothly.	574MENGEILER	€ 420.00
LED side lamps	574BEGRENZLEU	€ 280.00
LED working lights (2 pieces)	574ARBSCHIEIN	€ 440.00

# GREEN FORAGE FORK GG

04

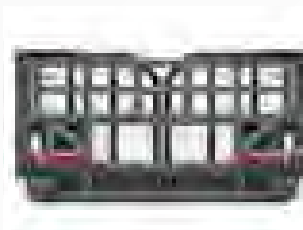
SILAGE TECHNOLOGY



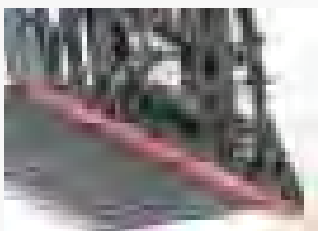
The SAPHIR GGT green forage fork is a heavy duty fork for excavating and distributing green cuttings. The particularly heavy duty, screwed-on tines enable large amounts of green cuttings to be collected. The rear part, enclosed by expanded metal, prevents the green cuttings getting onto the loading arms or the quick change frame. Therefore, there is always good visibility when operating the machine.



Massive square-pipe frame for maximum stability



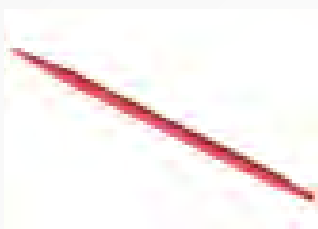
GG 38 / 49: hydraulic folding device fitted as standard for road transport



Tine support pipe protected by additional wear-resistant scraper bar 200 x 20 mm (500 HB)



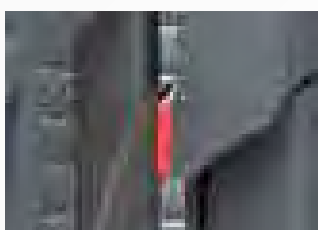
Optional pressure limiting valve (controllable) for host vehicles with more than 200 bar operating pressure



Replaceable, screw-on 1,400 mm heavy duty tines from SHW



Optional road protection. Mandatory for transport on public roads







Plastic wearing block for reduction of wearing

## Machine sizes

Designation	GG 29	GG 38	GG 49
Working width (mm)	2,950	3,800	4,950
Transport width approx. (mm)	2,950	2,700	2,700
Frame hydr. foldable	No	Yes	Yes
Rear wall height approx. (mm)	1,400	1,400	1,400
Number of tines	11	16	20
Weight approx. (kg)	940	1,100	1,670
Order-No.	391GG29	391GG38	391GG49
<b>€/piece</b>	<b>€ 6,360.00 €</b>	<b>€ 11,350.00 €</b>	<b>€ 12,950.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## Select receptacle

	Designation	Order-No.	€/piece
	Attachment Cat. II / III	574KATIII-S	Series
	Attachment Cat. IV	574KATIV-S	Series
	Wheeled arm and telescopic loader from 2.5 t lifting power	391RADTELE-S	Series
	Variable Lock System	574VARILOCK	€ 395.00

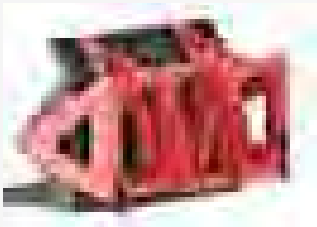
## Optional extras

Designation	Order No.	€/piece
<b>Pressure limiting valve</b> (necessary from 200 bar operating pressure) controllable	391DRUCKGRENZ	€ 170.00
<b>Road guard for GG 38</b>	391STRSCHUGG38	€ 490.00
<b>Road guard for GG 49</b>	391STRSCHUGG49	€ 530.00

# GGK GREEN FORAGE FORK WITH HYDRAULIC TILT FUNCTION



The Green Forage Fork with hydraulic tilt function is used to collect and distribute large quantities of silage. The integrated hydraulic tilt function enables the load to be tilted easily. The rear section, especially closed with expanded metal, prevents the green cuttings from getting into the area of the attachment because of its design. However, this does not block visibility to the tines.



Massive square-pipe frame for maximum stability



Hydraulic tilt function (1 x dw required) with rotational movement over a system of rolls



Tine support pipe protected by additional low-wear scraper bar 200 x 20 mm (500 HB)



Optional road guard, mandatory for transport on public roads



Replaceable, screw-on 1,400 mm heavy duty tines (SHW)



Optional floor panel for chaff. Recommended for maize silage.

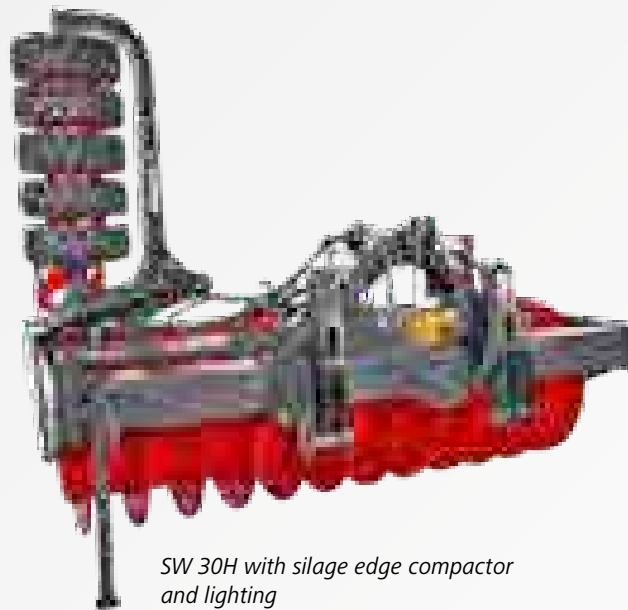
## Machine sizes

Designation	GGK 30
Working width (mm)	2,700
Transport width approx. (mm)	2,970
Rear wall height approx. (mm)	1,400
Attachment	Cat. II/III combined
Number of tines	8
Weight approx. (kg)	1,560
Order-No.	391GGK30
<b>€/piece</b>	<b>€ 9,710.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Pressure limiting valve</b> controllable (necessary from 200 bar operating pressure)	391DRUCKGRENZ	€ 170.00
<b>Floor panel</b>	391BODENPLATT	€ 1,090.00
<b>Road guard for GGK 30</b>	391STRSCHUTZGGK	€ 320.00

# SILAGE ROLLER SW 30 / 30H



*SW 30H with silage edge compactor and lighting*



SAPHIR silage rollers SW 30 and SW 30H are used to increase the compaction performance of the compaction tractor with grass and maize silage. The welded rings ensure a very high point load and thus optimum penetration in the silo. The machines have twelve welded rings of a height of 160 mm and with a distance of 225 mm. Roller body and frame can be filled separately with water or other filling agents. Therefore, the ballast in the machines can be adjusted depending on application and towing vehicle capacity. The SW 30H model has a hydraulic displacement device. The displacement range is 700 mm to the right. Thus work can also be performed in corners and walls



The roller body has a diameter of 950 mm. The welded rings with a fillet height of 160 mm and a distance of 225 mm ensure a homogeneously deep compaction of the silage heap without sticking together



Tow bar to 17 t.



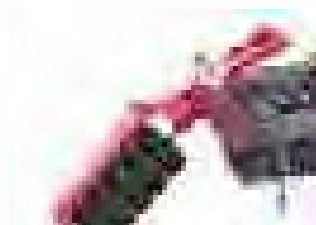
Hydraulic frame displacement by 700 mm (SW 30H) to the right, optionally available also with 600 mm to both sides



Optional tow bar (1 x dw required) as towing aid for transport vehicles for especially high silage heaps



Frame and roller body can be filled with water to achieve optimum ballast conditions



Optional Silage edge compactor (1 x dw required) for fastening freestanding silage edges



## Machine sizes

Designation	SW 30	SW 30H
Working width approx. (mm)	3,000	3,000
Hydraulically displaceable	-	700 mm right
Weight approx. (kg)	1,980	2,240
Weight filled (kg)	2,910	3,170
Order-No.	927SW30	927SW30H
<b>€/piece</b>	<b>€ 8,630.00 €</b>	<b>€ 10,030.00 €</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Silage edge compactor</b> (365 kg; 1 x dw required) Recommended for silage places without walls!	927SW30KANTE	€ 2,990.00
<b>Hydraulically displaceable on both sides</b> (600 mm each on both sides) Note: Not possible when equipped with silage edge compactor	927SW30VERSCH	€ 380.00
<b>Tow bar</b> (1 x dw required)	927SW30SCHLEPP	€ 1,470.00
<b>Electronic operating hours counter</b> (incl. assembly) Reliable timekeeping by vibration sensor	927SW30ZAEHLER	€ 485.00
<b>Lighting incl. warning signs</b>	927SW30BELEU	€ 230.00
<b>Additional weights</b>	927SW30ZUS	On request





# MUNICIPAL TECHNOLOGY

05

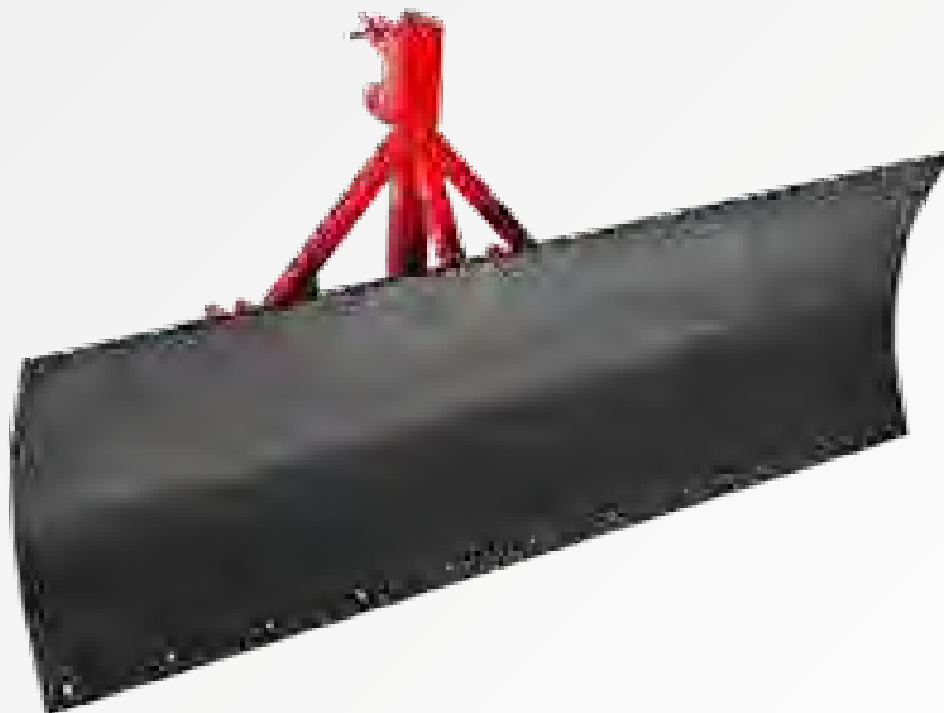
MUNICIPAL TECHNOLOGY

RS dozer blade	232-233
CONTOUR dozer blade	234-235
PROFI dozer blade	236-237
WP road planer	<b>NEW</b> 238-239
FKM sweeper	240-241
GKM sweeper	242-243
SKM sweeper	244-245
PKM sweeper	246-247

# RS DOZER BLADE

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MUNICIPAL TECHNOLOGY



The SAPHIR RS dozer blades are used for light levelling and clearance work. They are particularly suitable for smaller tractors because of their low dead weight. The blades feature robust design and simple operation.



- Stable parking foot
- Can be tilted by 30 degrees mechanically by plug bolts
- Sliding plates can be adjusted without tools
- Attachment on front and rear Cat. I/II
- Optional plastic scraper bar
- Blade body of 12 mm steel sheet

## Machine sizes

Designation	RS 2200	RS 2500
Working width approx. (mm)	2,200	2,500
Blade height approx. (mm)	710	710
Attachment	Cat. I/II	Cat. I/II
Power requirement approx. in (kW/HP)	18 / 25	18 / 25
Weight approx. (kg)	235	257
Order-No.	574401310-2	574401311-2
<b>€/piece</b>	<b>€ 1,060.00</b>	<b>€ 1,100.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

**Note:** Products are supplied fully assembled

## Optional extras

Designation	Order No.	€/piece
<b>Polyurethane scraper bar RS 2200</b> ( 150 x 20 mm )	574001099	€ 350.00
<b>Polyurethane scraper bar RS 2500</b> ( 150 x 20 mm )	574001100	€ 360.00

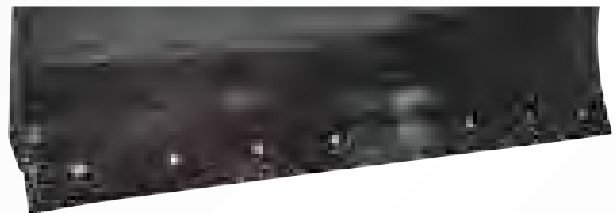
# DOZER BLADE CONTOUR



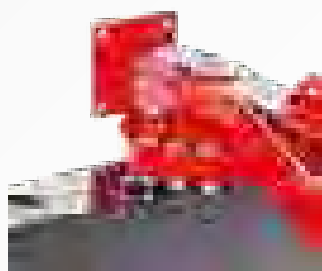
SAPHIR CONTOUR dozer blades are robust, mechanically adjustable blades for levelling work and road construction with tractors with a capacity of up to 73kW/100HP. They are also suitable for snow clearance. The blade body can be panned 360 degrees as standard. Thus the blade can also be used when attached at the front. It is locked by a locking pin in steps of 22.5 degrees each.



Attachment on front and rear  
Cat. I/II  
and stable parking support



Screwed highly wear-resistant scraper bar (500 HB)



Can be swivelled by 360 degrees mechanically (also for front attachment)



Optional central support wheel, with pneumatic tyres and adjustable by spindle for optimum height guidance

## Machine sizes

Designation	C2000	C2500	C3000
Working width approx. (mm)	2,000	2,500	3,000
Blade height approx. (mm)	550	550	550
Attachment	Cat. II	Cat. II	Cat. II
Power requirement approx. in (kW/HP)	29 / 40	36 / 50	44/60
Weight approx. (kg)	450	500	550
Order-No.	574401320-2	574401321-2	574401322-2
<b>€/piece</b>	<b>€ 2,080.00</b>	<b>€ 2,260.00</b>	<b>€ 2,470.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

**Note:** Products are supplied fully assembled

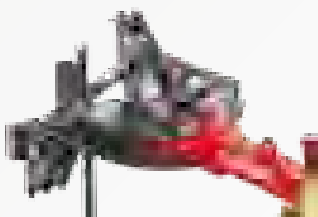
## Optional extras

Designation	Order No.	€/piece
<b>Design S</b> Can be swivelled to the side out of centre by 800 mm	574001089	€ 280.00
<b>Pair of support wheels with pneumatic tyres</b>	574001064	€ 690.00
<b>Central support wheel with pneumatic tyre and adjustable spindle</b>	574001066	€ 615.00
<b>Polyurethane scraper bar C2000</b> For winter service, loose accessory kit (150 x 20 mm)	574001090	€ 300.00
<b>Polyurethane scraper bar C2500</b> For winter service, loose accessory kit (150 x 20 mm)	574001091	€ 350.00
<b>Polyurethane scraper bar C3000</b> For winter service, loose accessory kit (150 x 20 mm)	574001092	€ 400.00
<b>Lighting system incl. warning signs</b>	574001068	€ 400.00

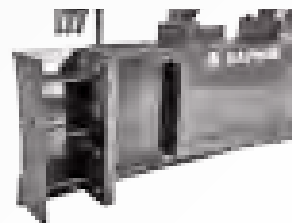
# DOZER BLADE PROFI



The SAPHIR dozer blade Profi stands out because of its extremely robust design. The many different adjustment options and optional extras make it an ideal machine for road construction, levelling work and winter service. The working width can be individually adjusted by screw-on blade adjustments. The high dead weight ensures good levelling even under difficult conditions.



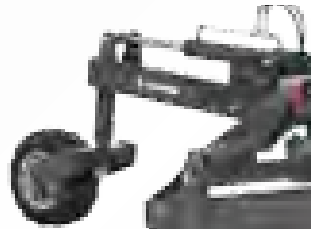
Lateral adjustment - 800 mm on both sides (Optionally hydraulically)



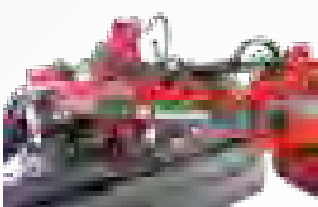
Wider blades by 250 or 500 mm optionally available for a maximum working width of 3,250 mm



Inclination adjustment mechanical or hydraulic by max. 22° for creating a roof profile



Central support wheel with pneumatic tyre and adjustable spindle, 360° rotatable, (optionally as hydraulic version) for optimum height guidance



Optional hydraulic horizontal blade adjustment. The swivelling range is 800 mm on both sides (from the centre)



Pair of pneumatic support wheels with adjustable spindle



## Machine sizes

Designation	PS 2250 PROFI
Working width approx. (mm)	2,250
Blade height approx. (mm)	600
Attachment	Cat. II/III
Power requirement approx. in (kW/HP)	58 / 80
Weight approx. (kg)	770
Order-No.	574.00910.PS2250-2
<b>€/piece</b>	<b>€ 4,160.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Scarifier set</b> for loosening of ground in road construction	574001279	€ 990.00
<b>Hydraulic lateral adjustment</b> on both sides 800 mm (1x dw. required)	574001056	€ 530.00
<b>Hydraulic horizontal blade adjustment</b> 35- 50 degrees (1x dw. required)	574001055	€ 630.00
<b>Hydraulic inclination adjustment</b> max. 22 degrees, (1 dw. required)	574001057	€ 590.00
<b>Blade widening</b> 250 mm	574001058-2	€ 280.00
<b>Blade widening</b> 500 mm	574001059-2	€ 370.00
<b>Side panel left</b>	574001060-2	€ 210.00
<b>Side panel right</b>	574001061-2	€ 210.00
<b>Pair of support wheels with pneumatic tyres (adjustable)</b>	574001064	€ 730.00
<b>Central support wheel with pneumatic tyre and adjustable spindle</b> (foldable)	574001066	€ 630.00
<b>Central support wheel with pneumatic tyre</b>	574001066H	€ 1,360.00
<b>Hydr. height guidance</b>	574001281	€ 1,590.00
<b>Polyurethane scraper bar 150 x 20 mm</b> For winter service, loose accessory kit	574001067	€ 370.00
<b>Electro-hydraulic control system</b> (1 x dw. , 12/24 V connection required)	574001069	€ 2,690.00
<b>Lighting system incl. warning signs</b>	574001068	€ 350.00

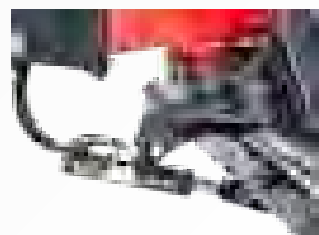
# WP ROAD PLANER WP



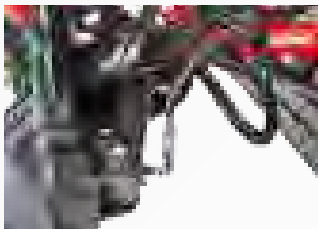
The SAPHIR WP 20 road planer serves for the effective professional care of not stabilised cover sheets like stone chips or gravel. The robust design is especially suitable for the use in forestry, subcontracted companies or in the course of road care concepts. The numerous technical facilities available allow the adaption to any desired structure of application. The optional, hydraulic control components provide for an especially operator-friendly machine.



Blade width of 2,000 mm



Optional vertical adjustment of scraper bar +/- 25°



Optional hydraulic lateral adjustment left / right for 800 mm each



Optional electrohydraulic control



Optional hydraulically adjustable blade body on both sides by 60°

## Machine sizes

Designation	WP 20 road planer
Working width approx. (mm)	2,000
Blade height approx. (mm)	600
Attachment	Cat. II/III
Power requirement approx. in (kW/HP)	50 / 68
Weight approx. (kg)	680
Order-No.	574WP20
<b>€/piece</b>	<b>€ 6,330.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

**Note:** Products are supplied fully assembled

## Optional extras

Designation	Order No.	€/piece
<b>Hydraulic lateral adjustment</b> 800 mm (1 x de. required)	574WPSEITENVER	€ 530.00
<b>Hydraulic horizontal blade adjustment</b> on both sides up to 60° (1 x dw. required)	574WPHORIZONVER	€ 630.00
<b>Hydraulic inclination adjustment</b> +/- 25°, (1 x de. required)	574WPNEIGUNG	€ 590.00
<b>Electro-hydraulic control system</b> (necessary: 1 x dw, 12/24 V connection)	574001069	€ 2,690.00
<b>Blade widening</b> 250 mm	574001058-2	€ 280.00
<b>Blade widening</b> 500 mm	574001059-2	€ 370.00
<b>Side panel left</b>	574001060-2	€ 210.00
<b>Side panel right</b>	574001061-2	€ 210.00
<b>Central support wheel with pneumatic tyre and adjustable spindle</b> (foldable)	574001066	€ 630.00
<b>Central support wheel with pneumatic tyre</b>	574001066H	€ 1,360.00
<b>Polyurethane scraper bar 150 x 20 mm</b>	574001067	€ 370.00
<b>Lighting system incl. warning signs</b>	574001068	€ 350.00

# FKM SWEEPER

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MUNICIPAL TECHNOLOGY



The SAPHIR FKM sweepers are intended for use with agricultural tractors attached to either the front or rear (with the front attachment a 3rd stabiliser is required). The mechanical tilting device enables the machine to be set at an angle. Thus the machine can be used as a standalone sweeper (without the collection tank). The sweeping roller is driven by a powerful oil motor which is driven by the tractor hydraulic system.



- Protective cloth as splash guard
- Plastic bar prevents stones from being hurled through and scratches on the floor covering
- Honeycomb-shaped brush rings 520 mm made of high wear-resistant plastics
- Optional water spray device
- Optional Side sweeping brush
- Adjustable cat. I/II lower linkage adjustment Cat. I/II
- Mechanical swivelling device
- Running wheels, height-adjustable without tools
- Branded support wheels 200 x 50 mm

## Machine sizes

Designation	FKM 151 sweeper	FKM 181 sweeper	FKM 231 sweeper
Working width approx. (mm)	1,500	1,800	2,300
Total width approx. (mm)	1,850	2,150	2,620
Brushes-Ø (mm)	520	520	520
Approx. quantity of oil required approx. in (l) (170 bar)	25	25	25
Attachment	Cat. I/II	Cat. I/II	Cat. I/II
Number of brush rings	30	36	56
Weight approx. (kg)	260	285	310
Order-No.	526.00548.FKM151-2	526.00549.FKM181-2	526.00550.FKM231-2
<b>€/piece</b>	<b>€ 1,880.00</b>	<b>€ 1,970.00</b>	<b>€ 2,100.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Hydraulic emptying</b> (loose accessory kit)	526140482	€ 440.00
<b>Hydraulic emptying</b> (1x dw . required, mounted with initial installation)	526140484	€ 550.00
<b>Hydraulic swivelling device</b> (1 x dw required, loose accessory kit)	526140483	€ 320.00
<b>3. Support wheel of solid rubber 200 x 50 mm</b> (required if attachment is mounted on the front, incl. upper linkage chain ( loose accessory kit))	526000546	€ 240.00
<b>Extra big 3rd Support wheel of solid rubber 250 x 60 mm</b> rail safe (required if attachment is mounted on the front, incl. upper linkage chain ( loose accessory kit))	526002182	€ 370.00
<b>Side sweeping brushes</b> with spring component, speed adjuster, cut-off valve, plastic edging (3rd stabiliser required, for front attachment and installation on the right) Fully assembled for initial installation	526000413	€ 1,170.00
<b>Sweeping roller FKM/GKM 151</b> plastics / metal mixture	526001135	€ 560.00
<b>Sweeping roller FKM/GKM 181</b> plastics / metal mixture	526001136	€ 620.00
<b>Sweeping roller FKM/GKM 231</b> plastics / metal mixture	526001137	€ 700.00
<b>Special painting (red)</b>	526SONDERLACK	No additional costs
<b>Water spraying device FKM 151</b>	526000575	€ 1,460.00
<b>Water spraying device FKM 181</b>	526000576	€ 1,460.00
<b>Water spraying device FKM 231</b>	526000577	€ 1,460.00

# GKM SWEEPER



The SAPHIR GKM sweeping machines are intended for use with forklift trucks, farm and wheeled loaders and farm tractors when attached to the front. The device is attached as standard by the retaining pockets on the fork tines of the forklift truck. The tool has a levelling device with a read-out display. The third stabiliser is supplied as standard and included in the scope of delivery.



Also available with special painting red.

- Protective cloth as splash guard
- Plastic bar prevents stones from being hurled through and scratches on the floor covering
- Honeycomb-shaped brush rings 520 mm made of high wear-resistant plastics

## Technical data

Designation	GKM 151 sweeper	GKM 181 sweeper	GKM 231 sweeper
Working width approx. (mm)	1,500	1,800	2,300
Total width approx. (mm)	1,850	2,150	2,620
Brushes-Ø (mm)	520	520	520
Approx. quantity of oil required approx. in (l) (170 bar)	25	25	25
Attachment	Fork tines	Fork tines	Fork tines
Number of brush rings	30	36	56
Weight approx. (kg)	260	285	310
Order-No.	526.00551.GKM151-2	526.00552.GKM181-2	526.00553.GKM231-2
<b>€/piece</b>	<b>€ 2,270.00</b>	<b>€ 2,350.00</b>	<b>€ 2,480.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## Select receptacle



Designation	Order No.	€/piece
Fork tine receptacle	391GKMGABEL	Series



Farm and wheeled loader up to 2.5 t lifting power	391GKMHOFRAD	€ 430.00
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Euro attachment	391GKMEURO	€ 430.00
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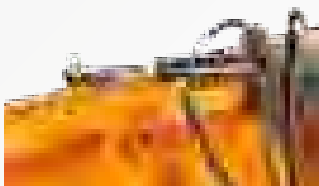
## Optional extras

Designation	Order No.	€/piece
Hydraulic emptying (loose accessory kit)	526140482	€ 440.00
Hydraulic emptying (mounted with initial installation, 1 x dw. required)	526140484	€ 550.00
Hydraulic swivelling device (1 x dw required, loose accessory kit)	526140483	€ 320.00
Extra big 3rd Support wheel of solid rubber 250 x 60 mm rail safe (required if attachment is mounted on the front) incl. upper linkage chain ( loose accessory kit)	526002183	€ 200.00
Side sweeping brushes with spring component, speed adjuster, cut-off valve, plastic edging, (3rd Support wheel required, for front attachment and installation on the right) Fully assembled for initial installation	526000413	€ 1,170.00
Self-locking roller equaliser Mandatory when equipped with side sweeping brushes	526000386	€ 230.00
Sweeping roller FKM/GKM 151 plastics / metal mixture	526001135	€ 560.00
Sweeping roller FKM/GKM 181 plastics / metal mixture	526001136	€ 620.00
Sweeping roller FKM/GKM 231 plastics / metal mixture	526001137	€ 700.00
Water spraying device GKM 151	526000590	€ 1,460.00
Water spraying device GKM 181	526000591	€ 1,460.00
Water spraying device GKM 231	526000592	€ 1,460.00
Special painting (red)	526SONDERLACK	No additional costs

# SKM SWEEPER



The SAPHIR SKM sweepers are effective, robust machines for cleaning streets, building sites and large farm facilities. The 850 mm diameter sweeper roller is fitted as standard with a very watertight edging of beeline brush rings. The large brush diameter guarantees a long service life and also ensures very good sweeping results even under the harshest conditions. The big, pneumatic heavy-load running wheels ensure optimum guidance of the machine even on uneven terrain. The sweepers can be fitted with almost any common attachments for wheeled and telescopic loaders, tractors (Cat. II) and also with fork tine attachments. A levelling device with height display is incorporated as standard on all attachments. The sweeper roller is driven by two internal oil motors. The motors are therefore ideally protected against collision. The machines are fitted as standard with a hydraulic tilting device.



Hydraulic swivelling device equipped as standard



Pneumatic heavy load running wheels (series)






Internal oil-motors with shock valves



## Machine sizes

Designation	SKM 30 sweeper	SKM 33 sweeper
Working width approx. (mm)	3,000	3,300
Total width approx. (mm)	3,200	3,500
Transport width swivelled approx. (mm)	2,720	2,810
Hydraulically swivelled	30°	40°
Approx. quantity of oil required in (l)	70	70
Oil connection required	2 x dw	2 x dw
Weight approx. (kg)	520	560
Order-No.	526.01220.SKM30	526.01221.SKM33
<b>€/piece</b>	<b>€ 5,390.00</b>	<b>€ 5,710.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>

## Attachments

	Designation	Order No.	€/piece
	<b>Wheeled arm and telescopic loader from 2.5 t lifting power</b>	391RADTELE-S	Series
	<b>Attachment Cat. II</b>	391KATII-S	Series
	<b>Polyurethane fork tine receptacle</b> ( inner pocket dimensions 160 x 60 mm )	526001503	€ 300.00

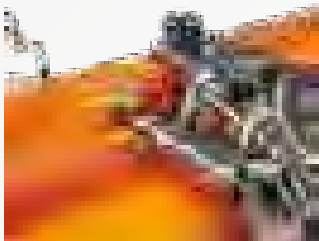
## Optional extras

Designation	Order No.	€/piece
<b>LED side lamps</b> LED 12/24V	526001587	€ 230.00
<b>Flow control valve</b> (required from 90l/min delivery rate of the host vehicle)	526001623	€ 450.00
<b>Hydraulic switching</b> Manual using 2 x three way valves	526001585	€ 290.00
<b>Hydraulic switching</b> Electro-hydraulic (6/2 way valves 12V/90l/min) CAUTION: Without electrical kit	526001622	€ 410.00
<b>Water spraying device SKM 30</b>	526002186	€ 1,500.00
<b>Water spraying device SKM 33</b>	526002187	€ 1,500.00
<b>Water tank 1,000 l</b> Attachment Cat. II incl. electric pump	526TANK1000	€ 1,830.00
<b>Hydraulic lift system</b> for installation on municipal attachment plates	526002133	€ 2,290.00

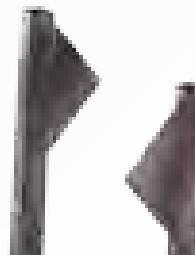
# SWEEPING MACHINES PKM



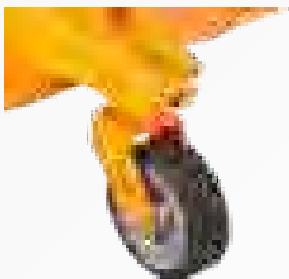
SAPHIR Profi sweepers of series PKM are effective, robust machines for cleaning streets, building sites, squares, depots and large farm facilities. The 620 mm diameter sweeper roller is fitted as standard with a very watertight edging of Beeline brush rings.



Hydraulic swivelling device  
( 30° degrees)



Level compensation incl.  
height indicator (lockable)



Pneumatic heavy-load running  
wheels








Internal oil motor(s)  
Compact valve with safety  
valve (Shock valve protects  
the motor from overload using  
free wheeling)

## Technical data

Designation	PKM 23 sweeper	PKM 26 sweeper	PKM 29 sweeper
Working width approx. (mm)	2,300	2,600	2,900
Total width approx. (mm)	2,500	2800	3100
Transport width swivelled approx. (mm)	2,300	2,560	2,820
Hydraulically swivelled	30°	30°	30°
Approx. quantity of oil required in (l)	35	35	70
Internal hydraulic motors (pieces)	1	1	2
Oil connection required	2 x dw	2 x dw	2 x dw
Weight approx. (kg)	580	610	645
Order-No.	526.01225.PKM23	526.01226.PKM26	526.01227.PKM29
<b>€/piece</b>	<b>€ 5,760.00</b>	<b>€ 6,390.00</b>	<b>€ 7,130.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

## Attachment

Designation	Order No.	€/piece
 Euro attachment	526PKMEUR	Series
 Farm and wheeled loader up to 2.5 t lifting power	526PKMHOFRAD	Series
 Wheeled arm and telescopic loader from 2.5 t lifting power	526PKMRADTELE	Series
 Attachment Cat. II	526PKMKATII-S	Series
 Fork tine receptacle	526PKMGABEL	Series

## Optional extras

Designation	Order No.	€/piece
Hydraulic dirt container with 3rd support wheel PKM 23 (340 litres)	526001603	€ 1,155.00
Hydraulic dirt container with 3rd support wheel PKM 26 (375 litres)	526001604	€ 1,270.00
Hydraulic dirt container with 3rd support wheel PKM 29 (430 litres)	526001605	€ 1,390.00
Mixed edging plastics/metal PKM 23 (additional costs)	526.01225.PKM23M	€ 550.00
Mixed edging plastics/metal PKM 26 (additional costs)	526.01226.PKM26M	€ 590.00
Mixed edging plastics/metal PKM 29 (additional costs)	526.01227.PKM29M	€ 630.00
LED side lamps	526001587	€ 220.00
Hydraulic switching manual, using 2 x three way valves	526001585	€ 280.00
Hydraulic switching CAUTION: Without electrical kit Electro-hydraulic (6/2-way valve 12V/90 l/min)	526001622	€ 400.00
Water spraying device PKM 23	526001606	€ 1,460.00
Water spraying device PKM 26	526001607	€ 1,460.00
Water spraying device PKM 29	526001608	€ 1,460.00
Water tank 1,000 litres Attachment Cat. II incl. electric pump	526TANK1000	€ 1,770.00
Hydraulic lift system for installation on municipal attachment plates	526002133	€ 2,230.00
Flow control valve	526001623	€ 440.00
Side sweeping brushes	526001609	€ 1,250.00



# FARM AND PASTURE MACHINERY

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# RUBBER WIPER MS

06

FARM AND PASTURE MACHINERY



The SAPHIR Rubber Wiper MULTI is suitable for the application in e.g. sludge, snow, manure, feed. Used rubber strips are used to produce the rubber wipers. There may be signs of use and wear. However, the functionality of the machine is not adversely affected by this.

- Rubber wiper with reinforced rubber rail, usable on both sides
- Type S: Attachments Cat. II combined with fork tine receptacle
- Type E: Quick change receptacle
- Type DV: Attachments Cat. II and receptacle for forklift forks, swivelling to the side in steps (15°, 30°, 45°)

## Machine sizes

Designation	Rubber wiper MS-275-S	Rubber wiper MS-275-E	Rubber wiper MS-275-DV
Blade width approx. (mm)	2,600	2,600	2,600
Blade height approx. (mm)	40	40	40
Blade width approx. (mm)	35	35	35
Attachment options	Cat. II three-point, forklift forks	Euro attachment	Cat. II three-point, forklift forks
Weight approx. (kg)	155	165	245
Order-No.	574401397-2	574401398-2	574401399-2
<b>€/piece</b>	<b>940.00 €</b>	<b>1,050.00 €</b>	<b>1,930.00 €</b>
Freight costs in euros	on request	on request	on request

**Note:** Products are supplied fully assembled

## Accessories

Designation	Order No.	€/piece
Replacement rubber 2,750 mm	574000439	€ 455.00

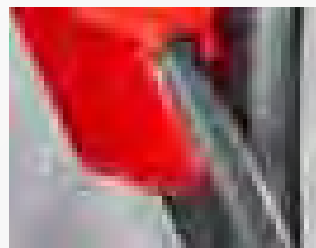
# RUBBER WIPER MULTI



The SAPHIR Rubber Wiper MULTI is suitable for the application in e.g. sludge, snow, manure, feed. The pusher blade can be swivelled hydraulically and the side parts can bend mechanically. The name „MULTI“ stands for the various options of attachment receptacle on the same machine. Used rubber strips are used to produce the rubber wipers. There may be signs of use and wear. However, the functionality of the machine is not adversely affected by this.



Receptacle option for Euro / fork carriage / Cat. II combined, alternatively also available with farm loader receptacle



Side parts can be swivelled mechanically in an operator-friendly way using the mounting lever delivered

## Machine sizes

Designation	MULTI 175	MULTI 225	MULTI 275
Blade width approx. (mm)	1,750	2,250	2,750
Blade height approx. (mm)	400	400	400
Blade width approx. (mm)	35	35	35
Attachment options	Combined / farm loader	Combined / farm loader	Combined / farm loader
Weight approx. (kg)	205	220	240
Order-No. Euro / fork carriage / Cat. II	574MULTI175	574MULTI225	574MULTI275
<b>€/piece</b>	<b>€ 1,180.00</b>	<b>€ 1,450.00</b>	<b>€ 1,720.00</b>
Order-No. farm loader	574MULTI175H	574MULTI225H	574MULTI275H
<b>€/piece</b>	<b>€ 1,310.00</b>	<b>€ 1,580.00</b>	<b>€ 1,860.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

All prices are in euros plus freight costs and statutory VAT. Copying, even in excerpts, is only permissible with written approval. All prices in the price list are subject to change without notice. Technical changes reserved and errors excepted. Products supplied while stocks last.

# FEED SWEEPING TYRES

06

FARM AND PASTURE MACHINERY



SAPHIR sweeping tyres are vital helpers in daily stable work. Using the feed sweeping tyres, the feed alley can easily be brushed clean and the feed is pushed back into the animals' feeding area. The stable floor cannot be damaged when this is done. The feed tyre is mounted on a strong running axle stub. The tyre receptacle can be adjusted for different tyre sizes. The clamping area has a diameter between 770 and 1,040 mm.

- Three point linkage Cat. I/II
- Hydraulically swivelling by 800 mm on both sides (1 x dw required)
- Bearing of sweeping tyre on stable stub assembly
- The tyre receptacle can be adjusted for different tyre sizes from 770 to 1,040 diameter
- Stable parking foot
- Tyre rotation by floor drive



Designation	Feed sweeping tyres
Weight approx. (kg)	205
Order-No.	574401350-3
<b>€/piece</b>	<b>€ 1,180.00</b>
Freight costs in euros	on request

**Note:** Products are supplied fully assembled but without tyres.,.

#### Optional extras

Designation	Adapter frames Euro / Cat. II
Order-No.	391ADAPEK
<b>€/piece</b>	<b>€ 440.00</b>
Freight costs in euros	on request

# AUGURS GREIF

06

FARM AND PASTURE MACHINERY



The SAPHIR Augurs GREIF is suitable for the excavation of post holes with a diameter of up to 450 mm. For especially long lifetime of the drives, the cardan shaft is protected against overload by shear bolt protection. In addition, the GREIF 302 is equipped with a hydraulic swivelling system for easy approaching of precise boreholes. Swivelling range is approx. 1,000 mm per side. Optionally, the GREIF augurs is also available with hydraulic drive. (GREIF 303 H)







- Replaceable drill blades
- As standard, with a drill body 300 mm
- Stable parking feet for safe stability
- Greif 302 with hydraulic swivelling system
- Greif 303H with hydraulic drive (required oil quantity 40-60 l/min.)
- Stable oil bath bevel gear
- Lower linkage receptacle Cat. I/II

## Machine sizes

Designation	Greif 301	Greif 302	Greif 303H
Weight approx. (kg)	200	240	225
Drive	Power take-off	Power take-off	Hydraulic
Order-No.	586GREIF301	586GREIF302	586GREIF303H
<b>€/piece</b>	<b>€ 1,880.00</b>	<b>€ 2,200.00</b>	<b>€ 3,390.00</b>
Freight costs in euros	on request	on request	on request

## Select receptacle

	Designation	Order No.	€/piece
	Cat. I / II	391GREIFKATII	Series
	Euro attachment (only Greif 303H)	391GREIFEURO	Series
	Farm and wheeled loader up to 2.5 t lifting power (only Greif 303H)	391GREIFHOF	€ 195.00
	Farm and telescopic loader up to 2.5 t lifting power (only Greif 303H)	391GREIFTELE	€ 395.00

When ordering state the type of the host vehicle.

## Optional extras

Designation	Order No.	€/piece
Drill body 120 mm	586BOHR120	€ 290.00
Drill body 200 mm	586BOHR200	€ 345.00
Drill body 300 mm	586BOHR300	€ 380.00
Drill body 450 mm	586BOHR450	€ 465.00

**Assembly costs:** Fitting the drill body onto the machine and attaching the cardan shaft

# SALT AND MANURE SPREADERS PS AND PLS



The SAPHIR Salt and manure spreaders are single-blade spreaders that are suitable for distributing granulated fertiliser as well as in connection with the winter service set also for spreading salt or a salt-chipping mixture. To protect from weather impacts additionally tarpaulins are available for all types of spreader.

Caution: The winter service set is absolutely necessary for use in winter service mode!



Steep hopper walls ensure that the material to be spread slides easily. The mixer head supplied as standard guarantees trouble-free spreading of granulated manures.



For continuous use in winter service we recommend the PLS 400 + PLS 500 models with plastic container in connection with the optional winter service set.



Quantity is easily controlled via a control lever by hand



In addition to the tarpaulin, the optional winter service set and the narrow spreading device the set includes a mixer with chain.

## Machine sizes

Designation	PS 300	PS 500	PLS 400	PLS 500
Container type	Metal	Metal	Plastics	Plastics
Capacity approx. (l)	269	361	297	361
Load capacity max. (kg)	347	466	383	466
Filling height approx. (mm)	105	113	107	113
Power requirement approx. in (kW/HP)	11/15	11/15	11/15	11/15
Spreading width fertiliser granulated max. (m)	12-14	12-14	12-14	12-14
Spreading width salt max. (m)	6-7	6-7	6-7	6-7
Attachment	Cat. I	Cat. I	Cat. I	Cat. I
Weight approx. (kg)	58	63	60	63
Order-No.	581980521	581980522	581980523	581980524
<b>€/piece</b>	<b>€ 810.00</b>	<b>€ 850.00</b>	<b>€ 870.00</b>	<b>€ 910.00</b>
<b>Freight costs in euros</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>	<b>on request</b>

**Note:** Products are supplied fully assembled.

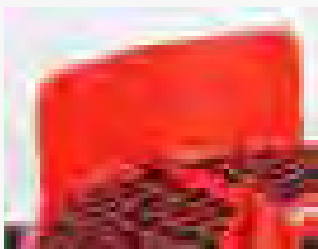
## Optional extras

Designation	Order No.	€/piece
<b>Winter service set</b> Mixer with chain; narrow spreading device of stainless steel	581000527	€ 260.00
<b>Tarpaulin</b> PS 300	581000529	€ 90.00
<b>Tarpaulin</b> PS 500/PLS 400 + 500	581000528	€ 90.00

# CONCRETE MIXER MAMMUT



The SAPHIR Concrete Mixer Mammut is suitable for mixing concrete, screed, mortar, grain, manure, turf and earth. The four spring-loaded mixing arms ensure a fast homogenous mixture of all added components. It is driven by a cardan shaft with shear bolt protection.



Front splash guard to protect the tractor



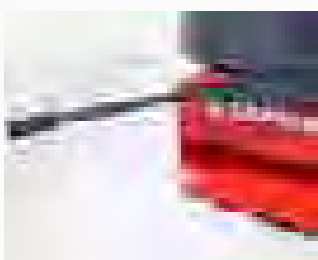
Four spring-loaded and adjustable mixing arms for the fast production of homogeneous mixtures.



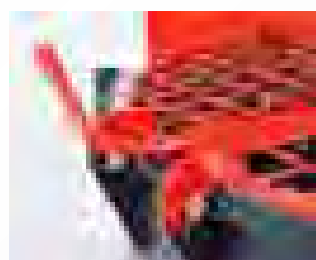
Support brackets for front loaders



Adjustable side wall scrapers for complete emptying of the mixing container.



Outlet at the rear



Heavy protective grid for the protection of the user. The grid prevents the penetration of foreign bodies and stones.

Designation	Mammut 801
Container diameter approx. (mm)	1,500
Container height approx. (mm)	700
Filling capacity approx. (l)	800
Power requirement approx. in (kW/HP)	50/70
Weight approx. (kg)	600
Order-No.	389.00926.MA800-2
<b>€/piece</b>	<b>€ 2,990.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

**Assembly costs:** Supporting bracket, splash guard, protective cap and drain. must be mounted.  
The cardan shaft must be adapted if necessary.

### Optional extras

Designation	Order No.	€/piece
<b>Hydraulic drive</b> Required oil quantity: 40-60 l	389MAMMUTHYDR	€ 1,050.00

# TRANSPORT CONTAINER - GALVANISED

06

FARM AND PASTURE MACHINERY



The SAPHIR Transport Container must be in every farm and can, for instance, be used for the transportation of wood, vegetation, manure etc. For the easy and operator-friendly emptying, all machine sizes can be tipped mechanically.

- Hot galvanized all-steel design
- Attachment Cat. I / II
- Container tiltable
- Trouble-free release because tipping point is under the container
- Slanting scraper and ramp for easy loading
- Scraping and collision edge screwed on and replaceable
- Rear flap removable
- Container depth 1,100 mm

## Machine sizes

Designation	T 110	T 160	T 180	T 200	T 220
Width approx. (mm)	1,100	1,600	1,800	2,000	2,200
Depth approx. (mm)	1,100	1,100	1,100	1,100	1,100
Height container wall front approx. (mm)	600	600	600	600	600
Height container wall rear approx. (mm)	450	450	450	450	450
Attachment	Cat. I/II	Cat. I/II	Cat. I/III	Cat. I/II	Cat. I/III
Permissible total weight approx. (kg)	800	800	900	1,000	1,000
Weight approx. (kg)	215	250	270	290	310
Order-No.	589409924	589409928	589409929	589409930	589409931
<b>€/piece</b>	<b>€ 930.00</b>	<b>€ 1,040.00</b>	<b>€ 1,090.00</b>	<b>€ 1,120.00</b>	<b>€ 1,160.00</b>
Freight costs in euros	on request	on request	on request	on request	on request

**Assembly costs:** The headstock with tipping device and the scraper bar must be mounted.



# TRANSPORT CONTAINER - PAINTED



The SAPHIR Transport Container must be in every farm and can, for instance, be used for the transportation of wood, vegetation, manure etc. For the easy and operator-friendly emptying, all machine sizes can be tipped mechanically. To provide an especially high operator comfort, the TL 180H is equipped with a hydraulic tipping device.

- Attachment Cat. I/II
- Container tiltable
- Trouble-free release because tipping point is under the container
- Slanting scraping and collision edge
- Rear flap removable
- Mechanical unlocking unit
- TL 180 H with hydraulic tipping device (1x dw required)

## Machine sizes

Designation	TL 120	TL 150	TL 180	TL 200	TL 180H
Width approx. (mm)	1,200	1,500	1,800	2,000	1,800
Depth approx. (mm)	1,000	1,000	1,000	1,000	1,240
Height container wall front approx. (mm)	700	700	700	700	400
Height container wall rear approx. (mm)	400	400	400	400	400
Attachment	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II
Permissible total weight approx. (kg)	390	520	650	750	1,050
Weight approx. (kg)	150	170	190	220	310
Order-No.	589TL120	589TL150	589TL180	589TL200	589TL180H
<b>€/piece</b>	<b>€ 610.00</b>	<b>€ 660.00</b>	<b>€ 710.00</b>	<b>€ 760.00</b>	<b>€ 1,250.00</b>
Freight costs in euros	on request	on request	on request	on request	on request

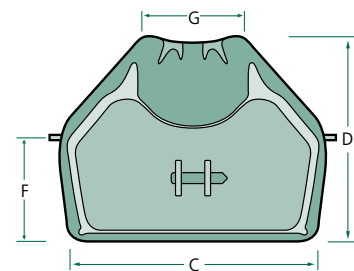
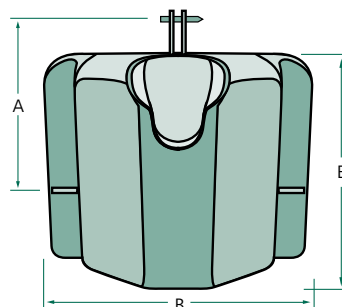
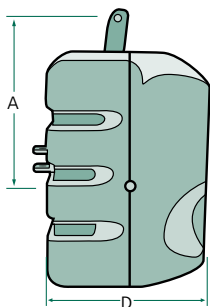
**Assembly costs:** The headstock with tipping device must be mounted. The rear flap must be hooked in.

# REINFORCED CONCRETE WEIGHT STANDARD



- Design of high-quality reinforced concrete with cast steel basket
- Three point linkage Cat. II
- ST 250 kg: Three point linkage Cat. 0 / Cat. I
- Stable and safe tow bar
- Shunting coupling for fast coupling and decoupling of vehicle
- For front and rear attachment

Designation	ST 250 kg	ST 400 kg	ST 600 kg	ST 800 kg	ST 1000 kg	ST 1200 kg	ST 1500 kg
Attachment	Cat. 0/I	Cat. II	Cat. II	Cat. II	Cat. II	Cat. II	Cat. II
Dimension A approx. (mm)	465	380	440	520	520	540	540
Dimension B approx. (mm)	780	780	950	950	950	1060	1060
Dimension D approx. (mm)	450	480	620	630	630	800	800
Dimension E approx. (mm)	580	580	640	860	860	810	910
Dimension F approx. (mm)	420	240	300	300	300	470	470
Weight approx. (kg)	250	400	600	800	1,000	1,200	1,500
Order-No.	391000250ST	391000400ST	391000600ST	391000800ST	391001000ST	391001200ST	391001500ST
€/piece	€ 510.00	€ 520.00	€ 590.00	€ 670.00	€ 780.00	€ 950.00	€ 1,100.00
Freight costs in euros	on request	on request	on request	on request	on request	on request	on request



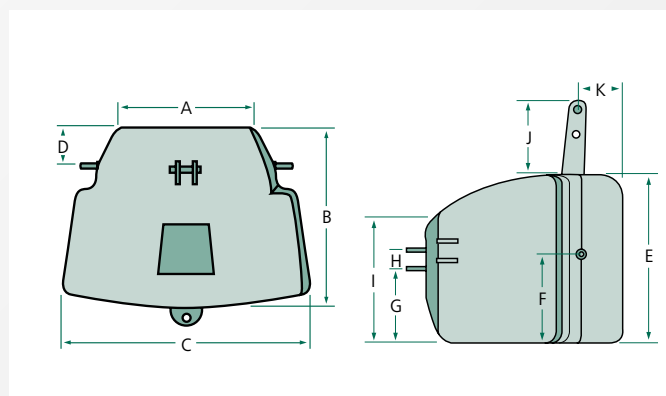
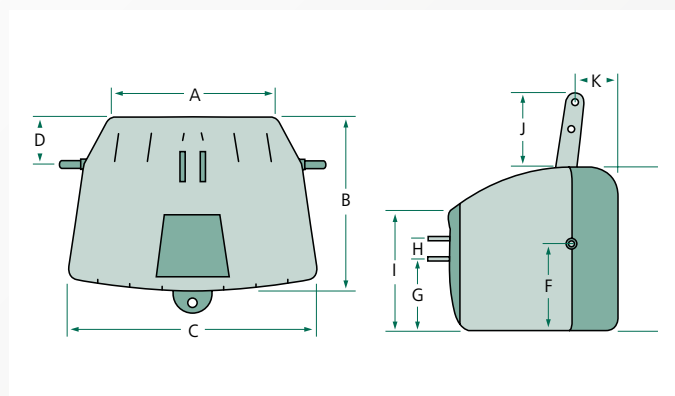
# NEW GENERATION REINFORCED CONCRETE WEIGHTS



- Design of high-quality reinforced concrete with integrated steel basket
- Three point linkage Cat. II Kat. II
- NG 400 kg with Cat. I or Cat. II
- Shunting coupling for fast coupling and decoupling of vehicles
- High ground clearance due to favourable dimensions
- The attachment point transferred to the back has a better effect on the weight on the tractor axle.
- Well-shaped format, optically adapted to the tractor hood
- For front- and rear attachment

## Machine sizes

Designation	NG 400 kg	NG 400 kg	NG 650 kg	NG 900 kg	NG 1100 kg	NG 1500 kg
Attachment	Cat. I	Cat. II	Cat. II	Cat. II	Cat. II	Cat. II
Dimension A approx. (mm)	760	600	560	560	600	600
Dimension B approx. (mm)	660	530	600	750	800	970
Dimension C approx. (mm)	878	880	870	1,000	1,100	1,180
Dimension D (central bolt) approx. (mm)	-	100	110	110	110	110
Dimension E approx. (mm)	450	470	600	640	680	750
Dimension F (central bolt) approx. (mm)	-	270	320	335	350	390
Dimension G approx. (mm)	200	200	265	270	300	330
Dimension H approx. (mm)	57	90	90	90	90	90
Dimension I approx. (mm)	-	360	460	460	470	530
Dimension J (central hole) approx. (mm)	78	245	245	275	275	275
Dimension K (central hole) approx. (mm)	-	130	130	135	135	135
Order-No.	391000400NG-I	391000400NG	391000650NG	391000900NG	391001100NG	391001500NG
€/piece	€ 640.00	€ 580.00	€ 680.00	€ 820.00	€ 930.00	€ 1,210.00
Freight costs in euros	on request	on request	on request	on request	on request	on request



# MINERAL CAST WEIGHT MG



- Design of mineral cast
- Three point linkage Cat. II
- Shunting coupling for fast coupling and decoupling of vehicles
- Available with up to 2,500 kg
- Compact design
- UL-bolts Cat. III with MG 2000 and MG 2500

## Machine sizes

Designation	MG 1600	MG 1800	MG 2000	MG 2500
Dimension A approx. (mm)	1,150	1,200	1,200	1,540
Dimension B approx. (mm)	800	900	900	875
Dimension C approx. (mm)	380	380	380	380
Dimension D approx. (mm)	650	695	695	760
Dimension E approx. (mm)	345	345	345	375
Dimension F approx. (mm)	580	620	620	690
Dimension G approx. (mm)	930	960	960	1,180
Dimension H approx. (mm)	280	285	285	285
Weight approx. (kg)	1,600	1,800	2,000	2,500
Order-No.	391001600MG	391001800MG	391002000MG	391002500MG
<b>€/piece</b>	<b>€ 2,170.00</b>	<b>€ 2,280.00</b>	<b>€ 2,480.00</b>	<b>€ 2,950.00</b>
Freight costs in euros	on request	on request	on request	on request

# MUFO CAST WEIGHTS



Figure: Additional weight 500 kg

- Cast steel design
- Very compact design (free cooler and free lighting)
- Three point linkage Cat. II
- Shunting coupling for fast coupling and decoupling of vehicles
- High ground clearance

## Machine sizes

Designation	MUFO 600 kg	MUFO 800 kg	MUFO 1,000 kg	MUFO 1,250 kg	MUFO 1,500 kg
Dimension A approx. (mm)	713	713	713	1,073	1,073
Dimension B approx. (mm)	416	416	501	603	603
Dimension C approx. (mm)	915	915	915	915	915
Dimension D approx. (mm)	520	520	520	520	520
Dimension E approx. (mm)	380	380	380	380	380
Dimension F (central bolt) approx. (mm)	145	145	145	145	145
Dimension G approx. (mm)	0	0	0	260	260
Dimension B with additional weight approx. (mm)	574	574	659	762	762
Order-No.	391000600MUFO-2	391000800MUFO-2	391001000MUFO-2	391001250MUFO-2	391001500MUFO-2
€/piece	€ 1,520.00	€ 1,950.00	€ 2,370.00	€ 2,890.00	€ 3,450.00
Freight costs in euros	on request	on request	on request	on request	on request

## Optional extras

Designation	Order No.	€/piece	Freight costs
Additional weight 500 kg	391000500MUFO-2	€ 1,090.00	on request



# B900 CAST WEIGHT



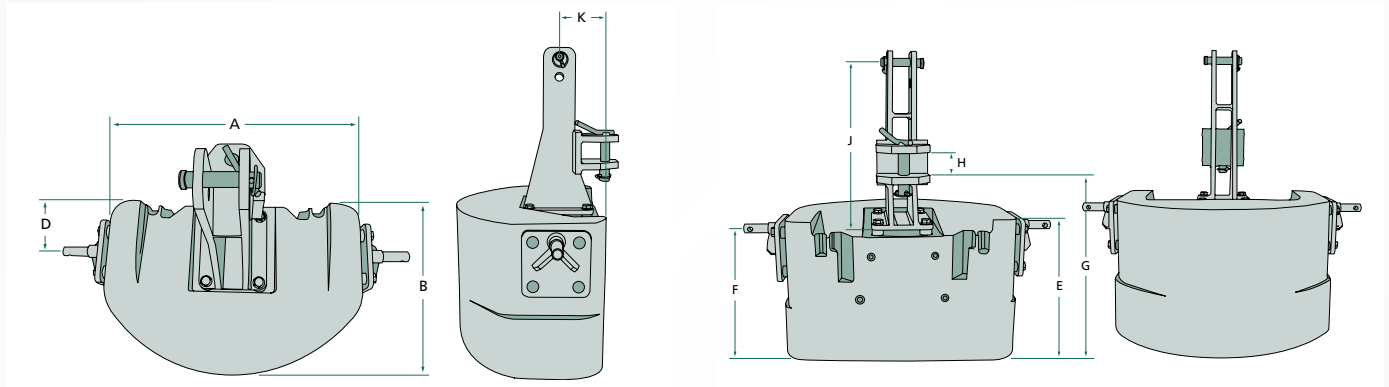
- Cast steel design
- Three point linkage Cat. II
- Very compact design (free cooler and free lighting)
- Shunting coupling
- Threaded inserts to fix an optional adapter plate

## Machine sizes

Designation	B 900 kg
Dimension A approx. (mm)	685
Dimension B approx. (mm)	460
Dimension D approx. (mm)	140
Dimension E approx. (mm)	440
Dimension F approx. (mm)	395
Dimension G approx. (mm)	565
Dimension H approx. (mm)	65
Dimension J (central hole) approx. (mm)	485
Dimension K (central hole) approx. (mm)	130
Order-No.	391000900B
<b>€/piece</b>	<b>€ 1,930.00</b>
<b>Freight costs in euros</b>	<b>on request</b>

## Optional extras

Designation	Order No.	€/piece
<b>Adapter plate</b> With catch hook Cat. II	391000556	€ 390.00

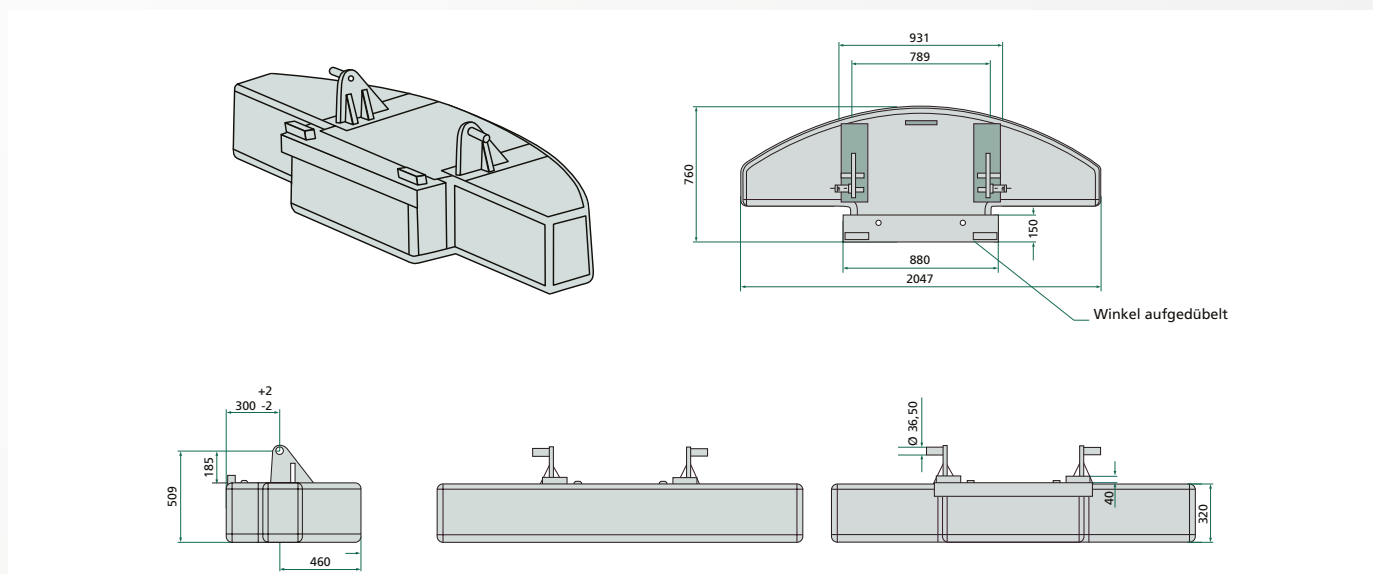




- Magnetite cast design
- Three point linkage Cat. II with bolt Cat. III
- Very low centre of gravity in the rear hydraulics system
- Free hitch on the tractor and, if necessary tow bar on vehicles/ machines (depending on the design and type of tractor)
- Free electrical, compressed air and hydraulic connections on the tractor

## Machine sizes

Designation	Rear weight 1,250 kg	Rear weight 1,450 kg
Weight approx. (kg)	1,250	1,450
Order-No.	391001250HECK	391001450HECK
€/piece	€ 1,660.00	€ 1,990.00
Freight costs in euros	on request	on request



# SAPHIR SPECIFIC WEIGHTS OF LOADS

Grain	kg/m3
Wheat	820
Rye	780
Barley	640
Oats	500
Maize	800
Rapeseed	700
Grass seed	350

Silage	kg/m3
Grass	800
Feed rye	920
Maize	820
Maize, CCM	850
Clover	900
Potatoes	1,000
Beet leaf	1,000

Organic manure	kg/m3
Fresh horse manure	800
Rotted horse manure	1,200
Compressed turf	400
Loose turf	70
Damp turf	620

Root crops	kg/m3
Potatoes	730
Beet	700

Materials	kg/m3
Potash	1,200
Mortar	1,750
Cement	1,400
Loam	1,800
Damp earth	2,100
Dry sand	1,650
Damp sand	2,000
Gravel	2,000

Fuel	kg/m3
Logs	750
Anthracite	900
Briquettes	1,250
Green oak	1,000
Green spruce	750

Straw and hay	kg/m3
Loose straw	60
Round straw bales	140
Loose hay	70
Round hay bales	140

Mineral fertilisers	kg/m3
Chalk	1,400
Chalk	1,200
Phosphate	1,100
Nitrogen	1,600
Compound fertilisers	1,100
Urea	800
Nitre	1,000

Green fodder	kg/m3
Meadow grass	350
Clover	350

Miscellaneous	kg/m3
Loose snow	130
Damp snow	550

