

# TOOLS

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**NEW!**

# SAPHIR VARIABLE LOCK SYSTEM

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



The patented **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	391VARIOLOCK	430,00 €



# SAPHIR SPECIAL MACHINE CONSTRUCTION

One of the significant competences of our innovative company is the production of our machines according to customer-specific specifications and requirements. 40 years of experience in designing 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 questions? Call upon us for your benefit.**

## High tip sieve shovel HKSS 25



Weight: 2.800kg - Working width: 2.500mm - Content: 4.000l

- Use by disposal companies to sort debris by particle size before they are handed over to recycling companies. The picked up material is separated by rolling in and out of the shovel body and will be loaded afterwards. This step reduces the disposal costs many times over.

## Manure removal shovel EMS 32



Weight: 1.200kg - Working width: 3.200mm - Content: 2.800l - VLS

- Specially designed for use in stall barns, adapted to the structural conditions of the customer. The additionally side panels enables to collect manure completely.

## Potato shovel KS 18



Weight: 780kg - Working width: 1.800mm - Content: 2.000l

- Used on forklifts to load large quantities of potatoes.
- Very large swivel angle in combination with 2 end-damped hydraulic cylinders.  
Protection of the load by round formed side edges of the shovel body.

## Load hook LH 3900



Weight: 390kg - Length: 4.000mm - Load capacity: 1.000kg - VLS

- Wide range of applications thanks to robust frame construction.
- Angled construction for ideal handling of the goods.  
Practical support foot makes storage easy.

## Loading unit WH



Weight: 230kg - usable length: 1.800mm - load capacity: 2.700kg

- Pallet fork carrier made to customer specification with firmly welded forks.
- This product is used in a well known poultry processing company which is operating Germany-wide.

# EXPLANATION OF SYMBOLS

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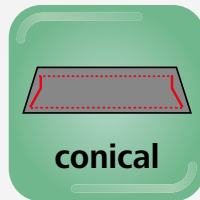
## Powder coating

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.



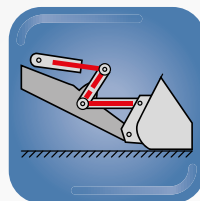
## Conical design

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 114-115.



## Z-kinematics

For wheel loaders, generally two kinematic systems are distinguished. If your vehicle is equipped with the so-called Z-cinematic 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.





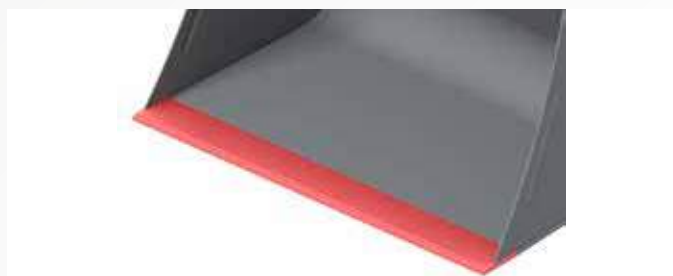
# IMPLEMENTS "AUTO DETENT"

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The SAPHIR implements 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 fitted with highly wear-resistant scraper bar 150 x 16 mm (500 HB)



All manure forks possess a stable, continuous tine support pipe with conical sleeves and wear strips welded on the tine support pipe. Standard SHW quality tines with 800 mm length (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.

Two damping springs are included in the delivery scope as standard.

### 1. Select the device size

Technical data	Size II earth scoop	Size III earth scoop	Manure shovel size II / III	Size II manure fork	Size III manure fork	Size III manure fork 1.40 m	Size III manure fork 1.70 m
Approx. width in mm	830	980	1.870	820	980	1.360	1.730
Approx. height in mm	580	580	690	650	650	680	680
Approx. depth in mm	770	770	770	-	-	-	-
Content (deleted according to DIN) approx. (l)	220	260	585	-	-	-	-
Content (cumulative according to SAE) approx. (l)	275	325	730	-	-	-	-
Number of tines	-	-	-	5	6	8	10
Approx. weight in kg	65	75	195	70	80	120	135
Order-No.	391ESK80	391ESK100	391KGK	391DGK80	391DGK100	391DGK140	391DGK170
€/piece	390,00 €	450,00 €	990,00 €	450,00 €	490,00 €	810,00 €	940,00 €

### 2. Select the latch

Name	Order-No.	€/piece
Latch BAAS	391KLINKBAAS	Series
Latch Stoll	391KLINKSTOLL	Series

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

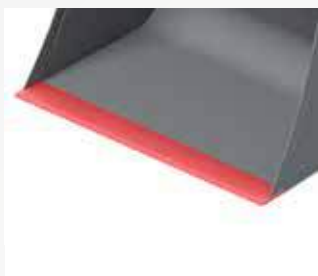
### 3. Special fittings

Name	Order-No.	€/piece
Normal load tines	439439016	25,00 €
Additional price per tine		

# LIGHT DUTY SHOVEL LG



The SAPHIR light duty shovel LG 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>.



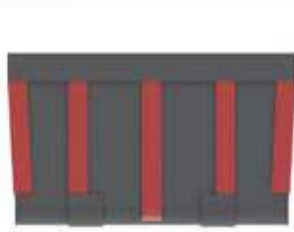
Highly wear-resistant scraper bars 150 x 16 mm (500 HB)



Side panels are reinforced with bead to increase stability



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



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



Round shaped shovel body for complete emptying of the shovel



Internal reinforcement starting from LG 20 +

## 1. Select the device size

Technical data	LG 09	LG 11	LG 13	LG 15	LG 16
Approx. width in mm	900	1.100	1.300	1.500	1.600
Approx. height in mm	790	790	790	790	790
Approx. depth in mm	850	850	850	850	850
Reinforcement	-	-	-	-	-
Content (deleted according to DIN) (l)	330	410	490	570	610
Content (cumulative according to SAE) (l)	430	530	640	740	790
Approx. weight in kg	155	175	195	210	220
Order-No.	391LG09	391LG11	391LG13	391LG15	391LG16
€/piece	610,00 €	690,00 €	770,00 €	850,00 €	890,00 €

Technical data	LG 17	LG 19	LG 20	LG 22	LG 24
Approx. width in mm	1.700	1.900	2.000	2.200	2.400
Approx. height in mm	790	790	790	790	790
Approx. depth in mm	850	850	850	850	850
Reinforcement	-	-	-	1	2
Content (deleted according to DIN) (l)	650	740	780	860	940
Content (cumulative according to SAE) (l)	850	960	1.010	1.120	1.220
Approx. weight in kg	230	250	260	290	310
Order-No.	391LG17	391LG19	391LG20	391LG22	391LG24
€/piece	930,00 €	1.010,00 €	1.050,00 €	1.140,00 €	1.230,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Euro attachment</b> (device width starting from 1.300 mm)	391EUR-S	Series



<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
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<b>VLS Compact</b>	391VARIOLOCK	295,00 €
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When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>1x internal reinforcement for LG</b>	391AUSSTLG	180,00 €



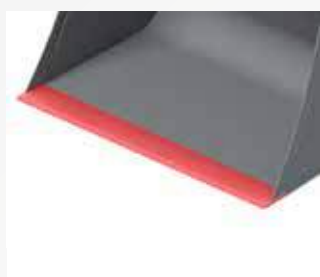
# LIGHT DUTY SHOVEL LG

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The SAPHIR light duty shovel LG+ 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 bars 150 x 16 mm (500 HB)



Side panels are reinforced with bead to increase stability



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



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



Round shaped shovel body for complete emptying of the shovel






Internal reinforcement starting from LG 20 +

## 1. Select the device size

Technical data	LG 12+	LG 13+	LG 14+	LG 15+	LG 16+	LG 17+
Approx. width in mm	1.200	1.300	1.400	1.500	1.600	1.700
Approx. height in mm	910	910	910	910	910	910
Approx. depth in mm	1.100	1.100	1.100	1.100	1.100	1.100
Reinforcement	-	-	-	-	-	-
Content (deleted according to DIN) (l)	660	720	780	840	900	960
Content (cumulative according to SAE) (l)	880	955	1.030	1.105	1.180	1.255
Approx. weight in kg	225	235	255	265	275	285
Order-No.	391LG12+	391LG13+	391LG14+	391LG15+	391LG16+	391LG17+
€/piece	1.010,00 €	1.070,00 €	1.130,00 €	1.190,00 €	1.250,00 €	1.310,00 €

Technical data	LG 19+	LG 20+	LG 22+	LG 24+	LG 26+
Approx. width in mm	1.900	2.000	2.200	2.400	2.600
Approx. height in mm	910	910	910	910	910
Approx. depth in mm	1.100	1.100	1.100	1.100	1.100
Reinforcement	-	1	1	2	2
Content (deleted according to DIN) (l)	1.080	1.140	1.260	1.380	1.490
Content (cumulative according to SAE) (l)	1.405	1.480	1.640	1.790	1.940
Approx. weight in kg	310	330	365	400	435
Order-No.	391LG19+	391LG20+	391LG22+	391LG24+	391LG26+
€/piece	1.430,00 €	1.530,00 €	1.650,00 €	1.770,00 €	1.890,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> (device width starting from 1.300 mm)	391EUR-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>VLS Compact</b>	391VARIOLOCK	295,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>1x internal reinforcement for LG+</b>	391AUSSTLG	240,00 €

# LIGHT DUTY SHOVEL LG XL



The SAPHIR light duty shovel LG 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 bars 200 x 20 mm (500 HB)  
Optional: Scraper bar 300 x 30 mm (as standard in LG XL 26 and LG XL 28)



Optional highly wear-resistant rigid reversing blade that can be screwed for the standard scraper bar



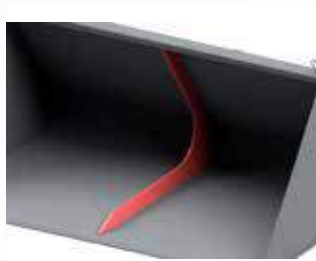
Double-sided visual display as aid for orientation when loading bulk material on ground-level.



Optional overflow protection (can also be combined with increased shovel side panels)



Round shaped shovel body for complete emptying of the shovel



Optionally with two internal reinforcements (standard starting from LG XL 25)



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






Optional increase in loading volume



## 1. Select the device size

Technical data	LG XL 20	LG XL 22	LG XL 24	LG XL 25	LG XL 26	LG XL 28
Approx. width in mm	2.000	2.200	2.400	2.500	2.600	2.800
Approx. height in mm	1.200	1.200	1.200	1.200	1.300	1.300
Approx. depth in mm	1.400	1.400	1.400	1.400	1.600	1.600
Scraper bar (mm)	200 x 20	200 x 20	200 x 20	200 x 20	300 x 30	300 x 30
Reinforcement	0	0	0	2	2	2
Content (deleted according to DIN) (l)	2.050	2.200	2.450	2.550	3.200	3.450
Content (cumulative according to SAE) (l)	2.560	2.750	3.060	3.180	4.000	4.300
Approx. weight in kg	554	610	665	750	850	915
Order-No.	391LGXL20	391LGXL22	391LGXL24	391LGXL25	391LGXL26	391LGXL28
€/piece	2.490,00 €	2.650,00 €	2.810,00 €	3.230,00 €	3.720,00 €	3.880,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> Possible from LG XL 20 to LG XL 25	391EUR-S	Series
	<b>Wheel Loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE-S	Series
	<b>Variable Lock System</b>	391VARIOLOCK	430,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Overfill guard</b> Height approx. 200 mm (permanently welded with the back of the shovel) Price per meter	391UEBERLAUFS	195,00 €
<b>Increased shovel side parts</b> (Set consisting of 2 pieces)	391EHSCHAUFELS	290,00 €
<b>2 internal reinforcements</b> (as standard starting with LG XL 25 and higher)	391INNAUSST	580,00 €
<b>Highly wear-resistant scraper bar (300x30 mm, 500 HB)</b> (Series in LG XL 26 & LG XL 28) Price per meter	391HOCHV300X30	210,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter	391HOCHVWENDE	320,00 €
<b>Highly wear-resistant reversing blade (300x30 mm, 500 HB)</b> Price per meter	391HOCHVWENDE300	390,00 €
<b>Plastic scraper bar</b> 200x30mm, Price per meter	391KUNTSCHUERF	280,00 €
<b>Increase in loading volume</b> approx. 600 - 800 l.	391LADEVOLUMEN	840,00 €

# LIGHT DUTY SHOVEL LGR

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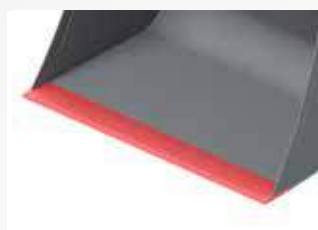
The SAPHIR especially light duty shovel LGR with high capacity is suitable for loading free-flowing bulk goods, such as grain, artificial fertiliser, wood chips and other bulky materials up to a max. of 1.300 kg/m<sup>3</sup>. Because of the particularly stable design of the back of the shovel and an optimum force transmission via the vehicle seat, this shovel model is especially suitable for use on larger wheeled and telescopic loaders.



Round-shaped shovel bodies with reinforcements in the shovel corners for completely emptying the shovel



Optional with internal reinforcements (starting with LGR 25 2 internal reinforcements are standard)



Highly wear-resistant scraper bar 200x20 mm (500 HB)

Optional: Scraper bar 300x30 mm (standard starting from LGR 25)



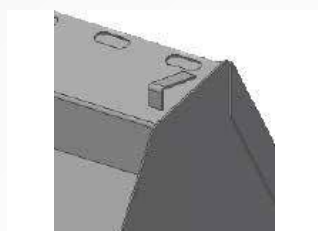
Optional increase in loading volume



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



Optional highly wear-resistant rigid reversing blade that can be screwed for the standard scraper bar



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



Optional overflow protection (can also be combined with increased shovel side panels)

## 1. Select the device size

Technical data	LGR 20	LGR 22	LGR 24	LGR 25	LGR 26.1	LGR 26.2	LGR 28.1	LGR 28.2	LGR 30
Approx. width in mm	2.000	2.200	2.400	2.500	2.600	2.600	2.800	2.800	3.000
Approx. height in mm	900	900	900	1.100	1.300	1.600	1.300	1.600	1.600
Approx. depth in mm	1.200	1.200	1.200	1.400	1.600	1.800	1.600	1.800	1.800
Content (deleted according to DIN) (l)	1.400	1.550	1.700	2.500	3.300	4.450	3.500	4.800	5.150
Content (cumulative according to SAE) (l)	1.750	1.930	2.100	3.100	4.100	5.500	4.350	6.000	6.400
Approx. weight in kg	470	510	550	760	840	1.120	980	1.210	1.320
Order-No.	391LGR20	391LGR22	391LGR24	391LGR25	391LGR26.1	391LGR26.2	391LGR28.1	391LGR28.2	391LGR30
€/piece	2.480,00 €	2.670,00 €	2.860,00 €	3.990,00 €	4.590,00 €	5.710,00 €	5.380,00 €	6.130,00 €	6.550,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
Wheel loader and telescopic loader starting with 2.5 t lifting power	391RAD-S	Series



Variable Lock System	391VARIABLELOCK	430,00 €
When ordering, state the type of the host vehicle.		

## 3. Special fittings

Name	Order-No.	€/piece
<b>Overfill guard</b> Height approx. 200 mm (permanently welded with the back of the shovel) Price per meter	391UEBERLAUFS	195,00 €
<b>Increased shovel side sections can be screwed</b> (Set consisting of 2 pieces)	391EHSCHAUFEL-R	320,00 €
<b>Increase in loading volume</b> approx. 600 - 800 l	391LADEVOLUMEN-R	890,00 €
<b>Edge protection</b> at the shovel side parts	391KANTENSCHUTZ-R	240,00 €
<b>2 internal reinforcements</b>	391INNENAUSST-R	610,00 €
<b>Highly wear-resistant scraper bar (300x30 mm, 500 HB)</b> Price per meter	391HOCHV300X30	210,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter	391HOCHVWENDE	320,00 €
<b>Highly wear-resistant reversing blade (300x30 mm, 500 HB)</b> Price per meter	391HOCHVWENDE300	390,00 €
<b>Plastic scraper bar</b> Price per meter, 200x30mm	391KUNSCHUERF	280,00 €



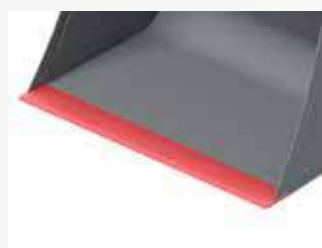
# LIGHT DUTY SHOVEL WITH HYDRAULIC HOLD-DOWN UNIT LGN

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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 bars 150 x 16 mm (500 HB)



With an internal reinforcement as standard starting with LGN 17



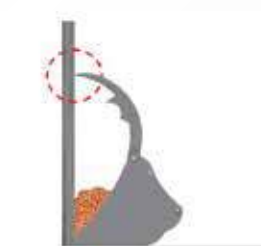
As standard, with two double-acting hydraulic cylinders for optimum opening and closing of the hold-down device



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






Wall removal function can be delivered optionally ex-factory

## 1. Select the device size


Technical data	LGN 09	LGN 11	LGN 13	LGN 15	LGN 17	LGN 19	LGN 21
Approx. width in mm	900	1.100	1.300	1.500	1.700	1.900	2.100
Approx. height in mm	700	700	700	700	700	700	700
Approx. depth in mm	850	850	850	850	850	850	850
Number of sickles/tines	5	6	7	8	9	10	11
Reinforcement	-	-	-	-	1	1	1
Approx. capacity in litres	570	690	810	930	1.050	1.170	1.290
Approx. weight in kg	220	245	270	295	310	335	350
Order-No. sickle version	391LGN09S	391LGN11S	391LGN13S	391LGN15S	391LGN17S	391LGN19S	391LGN21S
€/piece	<b>1.830,00 €</b>	<b>1.910,00 €</b>	<b>1.990,00 €</b>	<b>2.070,00 €</b>	<b>2.230,00 €</b>	<b>2.530,00 €</b>	<b>2.670,00 €</b>
Order-No. tine version	391LGN09Z	391LGN11Z	391LGN13Z	391LGN15Z	391LGN17Z	391LGN19Z	391LGN21Z
€/piece	<b>1.830,00 €</b>	<b>1.910,00 €</b>	<b>1.990,00 €</b>	<b>2.070,00 €</b>	<b>2.230,00 €</b>	<b>2.530,00 €</b>	<b>2.670,00 €</b>

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> (device width starting from 1.300 mm)	391EUR-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>VLS Compact</b>	391VARIOLOCK	295,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Shovel side parts that can be screwed</b> (Set consisting of 2 pieces)	391002251	320,00 €
<b>Wall removal</b> (possible only ex-factory in initial equipment)	391WANDENT	290,00 €
<b>Splitted hydraulic Hold-Down</b> (additional, double-acting control unit is required.) 	391GETNIED	285,00 €

# LIGHT-DUTY SHOVEL WITH PUSH-OFF FUNCTION LGA

03

TOOLS



The SAPHIR light duty shovel with push-off function LGA is especially suitable for the controlled discharge in confined spaces. Due to the push-off function it is possible to easily push off bulk materials without leaving residues. In addition, due to the push-off function additional discharge heights can be achieved on the mixing vehicle. The geared flow divider and the pressure control valve installed as a standard uniformly push off the bulk material. These shovels are suitable for bulk weights up to max. 950 kg/m<sup>3</sup>.



With walls that can be pushed hydraulically (2-part with plastic scraper bar at the lower edge)



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



The hydraulic cylinders are positioned at the rear of the shovel. They provide for a direct transmission of force to the push-off function inside the shovel body.







## 1. Select the device size

Technical data	LGA 16	LGA 18	LGA 20	LGA 22	LGA 24	LGA 25	LGA 26
Approx. width in mm	1.600	1.800	2.000	2.200	2.400	2.500	2.600
Approx. height in mm	950	950	950	950	950	950	950
Approx. depth in mm	1.120	1.120	1.120	1.120	1.120	1.120	1.120
Content (deleted according to DIN) approx. (l)	800	950	1.100	1.250	1.400	1.475	1.550
Content (cumulative according to SAE) approx. (l)	1.000	1.190	1.380	1.560	1.750	1.850	1.940
Approx. weight in kg	550	600	650	700	750	780	800
Order-No.	391LGA16	391LGA18	391LGA20	391LGA22	391LGA24	391LGA25	391LGA26
€/piece	3.990,00 €	4.270,00 €	4.510,00 €	4.750,00 €	4.990,00 €	5.110,00 €	5.350,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b>	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARIABLELOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Grain Kit</b> Enables the loading of fine-grained bulk material	391003971	250,00 €

# LEICHTGUTSCHAUFEL MIT ABSCHIEBEWAND LGA XL

03

TOOLS



Die Saphir Leichtgutschaufel LGA XL eignet sich besonders für das dosierte Entleeren auf beengtem Raum. Durch die Abschiebewand können Schüttgüter einfach und rückstandslos herausgeschoben werden. Zusätzlich kann durch die Abschiebewand ein Ausschütthöhengewinn, zum Beispiel am Mischwagen, erzielt werden. Der serienmäßig verbaute Mengenteiler und das Druckbegrenzungsventil sorgen für ein gleichmäßiges Abschieben des Schüttgutes. Die Schaufeln sind geeignet für Schüttgüter bis max. 950 kg/m<sup>3</sup>.



Mit hydraulisch ausschiebbarer Wand  
(2-teilig mit Kunststoffschrüfleiste an der Unterkante)



Hochverschleißfeste Schrüfleiste  
(300 x 30 mm, 500 HB)



Die Hydraulikzylinder sind am Schaufelrücken positioniert. Sie sorgen für eine direkte Kraftübertragung auf die Abschiebewand im inneren des Schaufelkörpers



serienmäßig mit zwei innenliegenden Aussteifungen für eine erhöhte Stabilität

## 1. Gerätegröße auswählen

Technische Daten	LGA XL 24	LGA XL 25	LGA XL 26	LGA XL 28	LGA XL 30
Breite ca. (mm)	2.400	2.500	2.600	2.800	3.000
Höhe ca. (mm)	1.250	1.250	1.250	1.250	1.250
Tiefe ca. (mm)	1.400	1.400	1.400	1.400	1.400
Inhalt (gestrichen nach DIN) ca. (l)	2.500	2.600	2.700	2.900	3.100
Inhalt (gehäuft nach SAE) ca. (l)	3.130	3.250	3.380	3.620	3.880
Gewicht ca. (kg)	1.200	1.240	1.280	1.360	1.440
Best.-Nr.	391LGAXL24	391LGAXL25	391LGAXL26	391LGAXL28	391LGAXL30
€/Stück	6.990,00 €	7.250,00 €	7.510,00 €	8.030,00 €	8.550,00 €

Serienmäßig ausgestattet mit Hydraulik-Steckkupplungen der Baugröße 3

## 2. Aufnahme auswählen



Aufnahme	Best.-Nr.	€/Stück
Variable Lock System	391VARILOCK-S	Serie

Bei Bestellung Trägerfahrzeugtyp angeben

## 3. Sonderausstattungen

Ausstattung	Best.-Nr.	€/Stück
<b>Raps Kit</b> Ermöglicht das Verladen von feinkörnigen Schüttgütern	391004081	340,00 €

# HEAVY DUTY SHOVEL SG



The SAPHIR heavy duty shovel SG 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>



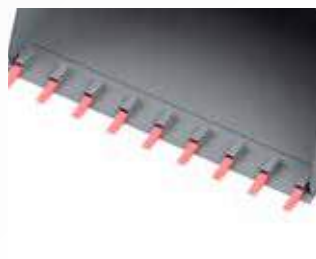
Highly wear-resistant scraper bars 150 x 16 mm (500 HB)



Internal reinforcement (from SG 21 as standard)



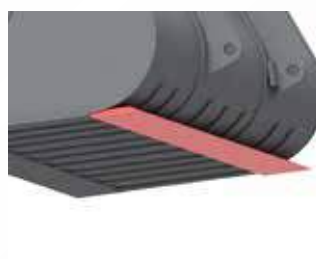
Double-sided visual display as aid for orientation when loading bulk material on ground-level.



Optional metal sprockets for easy tearing open 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 device size

Technical data	SG 09	SG 11	SG 13	SG 15	SG 17	SG 19	SG 21	SG 23
Approx. width in mm	900	1.100	1.300	1.500	1.700	1.900	2.100	2.300
Approx. height in mm	660	660	660	660	660	660	660	660
Approx. depth in mm	650	650	650	650	650	650	650	650
Content (deleted according to DIN) (l)	200	250	300	350	400	450	500	550
Content (cumulative according to SAE) (l)	250	310	370	430	500	560	620	680
Approx. weight in kg	108	155	165	175	195	210	240	250
Order-No.	391SG09	391SG11	391SG13	391SG15	391SG17	391SG19	391SG21	391SG23
€/piece	720,00 €	770,00 €	820,00 €	870,00 €	920,00 €	970,00 €	1.070,00 €	1.170,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Euro attachment</b> Device width starting from 1.100 mm	391EURO-S	Series



<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
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<b>VLS Compact</b>	391VARIABLELOCK	295,00 €
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When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Road safety</b> for heavy duty shovel with metal sprocket	391STRSCHUTZSG	210,00 €
<b>Smoother bar</b> Price per meter	391GLAETTES	120,00 €
<b>Metal sprocket - can be inserted</b> Recommended number SG 09 - 3 pieces SG 11 - 4 pieces SG 13 - 5 pieces SG 15 - 6 pieces SG 17 - 7 pieces SG 19 - 8 pieces SG 21 - 9 pieces SG 23 - 10 pieces	391001616	55,00 €



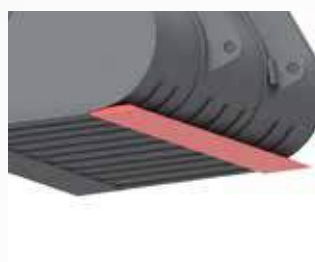
# HEAVY DUTY SHOVEL SG XL



The SAPHIR heavy duty shovel SG XL is particularly suitable for loading heavy loads and for earthworks. With this, the high capacity shovel body allows maximum effectiveness. The standard overflow protection at the back of the shovel protects the vehicle console from contamination. The shovel is suitable for bulk weights up to max. 1.300 kg/m<sup>3</sup>



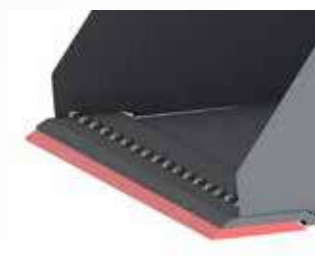
Highly wear-resistant scraper bars 200 x 20 mm (500 HB)



Optional smoothing bar for levelling the soil in reverse travelling



Standard with internal reinforcements (1 reinforcement up to SG XL 20, 2 each starting from SG XL 22)



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



Round shovel body and reinforced corners for especially high stability



Optional metal sprockets for easy tearing open of gravel soil and compacted substrate

## 1. Select the device size

Technical data	SG XL 16	SG XL 18	SG XL 20	SG XL 22	SG XL 24	SG XL 26	SG XL 28
Approx. width in mm	1.600	1.800	2.000	2.200	2.400	2.600	2.800
Approx. height in mm	900	900	900	900	900	900	900
Approx. depth in mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Reinforcement	1	1	1	2	2	2	2
Content (deleted according to DIN) (l)	820	930	1.030	1.130	1.230	1.330	1.430
Content (cumulative according to SAE) (l)	1.000	1.150	1.300	1.450	1.540	1.660	1.800
Approx. weight in kg	410	470	510	580	630	680	740
Order-No.	391SGXL16	391SGXL18	391SGXL20	391SGXL22	391SGXL24	391SGXL26	391SGXL28
€/piece	2.130,00 €	2.210,00 €	2.290,00 €	2.490,00 €	2.620,00 €	2.750,00 €	2.880,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE-S	Series
	Variable Lock System	391VARIOLOCK	430,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Metal sprocket - can be inserted</b> Recommended number: SG XL 16 - 7 pieces SG XL 18 - 8 pieces SG XL 20 - 9 pieces SG XL 22 - 10 pieces SG XL 24 - 11 pieces SG XL 26 - 12 pieces SG XL 28 - 13 pieces	391001616	55,00 €
<b>Road safety</b> For heavy duty shovel with metal sprocket	391STSCHUTZSGXL	210,00 €
<b>Highly wear-resistant scraper bar (300x30 mm, 500 HB)</b> Price per meter	391HOCHV300X30	210,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter	391HOCHVWENDE	320,00 €
<b>Smoothing bar</b> (welded at the back of the shovel), Price per meter	391GLAETTES	120,00 €

# HEAVY DUTY SHOVEL SGR



The SAPHIR heavy duty shovel SGR 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. 1,800 kg/m<sup>3</sup>



Round shovel body and reinforced corners for especially high stability



Optional highly wear-resistant rigid reversing blade that can be screwed for the standard scraper bar



Highly wear-resistant scraper bar 200 x 20 mm (500 HB)  
Optional: Highly wear-resistant scraper bar 300x30 mm (500 HB)(standard starting with SGR 26)



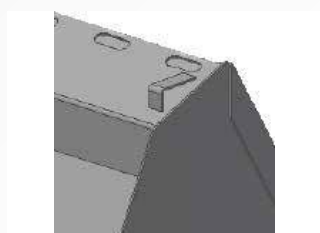
Optional metal sprockets for easy tearing open of gravel soil and compacted substrate



With reinforced shovel rear



Optional smoothing bar for levelling the soil in reverse travelling



Back of the shovel as a display as a directional aid when reversing. The display shows the direction of travel and the position of the shovel.

## 1. Select the device size

Technical data	SGR 20	SGR 22.1	SGR 22.2	SGR 24.1	SGR 24.2	SGR 26	SGR 26.1	SGR 26.2	SGR 28.1	SGR 28.2
Approx. width in mm	2.000	2.200	2.200	2.400	2.400	2.600	2.600	2.600	2.800	2.800
Approx. height in mm	800	800	1.100	1.100	1.250	1.100	1.250	1.450	1.250	1.450
Approx. depth in mm	800	800	1.200	1.200	1.400	1.200	1.400	1.600	1.400	1.600
Content (deleted according to DIN) (l)	840	930	1.800	2.100	2.600	2.400	2.900	3.750	3.200	4.050
Content (cumulative according to SAE) (l)	1.050	1.160	2.250	2.600	3.250	3.000	3.600	4.650	4.000	5.050
Approx. weight in kg	470	510	700	760	920	860	1.000	1.150	1.080	1.250
Order-No.	391SGR20	391SGR22.1	391SGR22.2	391SGR24.1	391SGR24.2	391SGR26	391SGR26.1	391SGR26.2	391SGR28.1	391SGR28.2
€/piece	2.230,00 €	2.430,00 €	3.920,00 €	4.260,00 €	5.590,00 €	4.690,00 €	5.950,00 €	7.090,00 €	6.300,00 €	7.690,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	Series
Variable Lock System	391VARIABLELOCK	430,00 €



When ordering, state the type of the host vehicle.

## 3. Special fittings

Name	Order-No.	€/piece
<b>Highly wear-resistant scraper bar (300x30 mm, 500 HB)</b> (as standard starting with SGR 26), Price per meter	391HOCHV300X30	210,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter	391HOCHVWENDE	320,00 €
<b>Highly wear-resistant reversing blade (300x30 mm, 500 HB)</b> Price per meter	391HOCHVWENDE300	390,00 €
<b>Smoother bar</b> Price per meter	391GLAETTES	120,00 €
<b>Road safety</b> Price per meter	391STRSCHUTZSGR	210,00 €
<b>Metal sprocket - can be inserted</b> Recommended number: SGR 20 - 9 pieces SGR 22 - 10 pieces SGR 24 - 11 pieces SGR 26 - 12 pieces SGR 28 - 13 pieces Price per piece	391SCHOTTERSGR	55,00 €

# HIGH TIPPING SHOVEL HK

03

TOOLS



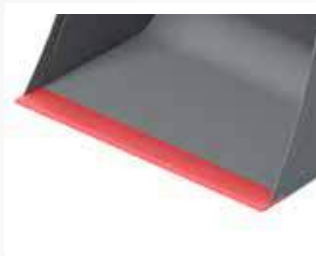
Using the SAPHIR high tipping shovel HK, the lifting height of the host vehicle can be increased by 1.000 mm. The tipping angle is approx. 110 degrees. The shovel is suitable for bulk weights up to max. 950 kg/m<sup>3</sup>



The models HK 12 and HK 15 are particularly suitable for small tractors and farm loaders because of their compact dimensions.



Stable bearing frame with a low fore part dimension



Highly wear-resistant scraper bar 150x16 (500 HB)



Tipping angle is 110°



Gain in lifting height of 1,000 mm



Two protected hydraulic cylinders in external pockets







## 1. Select the device size

Technical data	HK 12	HK 15	HK 16	HK 18	HK 20	HK 22	HK 24
Approx. width in mm	1.250	1.500	1.600	1.800	2.000	2.200	2.400
Approx. height in mm	860	860	900	900	900	900	900
Approx. depth in mm	1.000	1.000	1.200	1.200	1.200	1.200	1.200
Content (deleted according to DIN) (l)	470	560	900	1.000	1.100	1.200	1.300
Content (cumulative according to SAE) (l)	590	700	1.120	1.250	1.370	1.500	1.620
Approx. weight in kg	335	360	477	502	527	553	608
Order-No.	391HK12	391HK15	391HK16	391HK18	391HK20	391HK22	391HK24
€/piece	3.190,00 €	3.290,00 €	3.890,00 €	3.990,00 €	4.090,00 €	4.240,00 €	4.480,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARILOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Plastic scraper bar</b> 150x20mm, Price per meter	391KUNSCHUERF	270,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €

Special designs available upon request - please contact us!

# HIGH TIPPING SHOVEL HKR

03

TOOLS



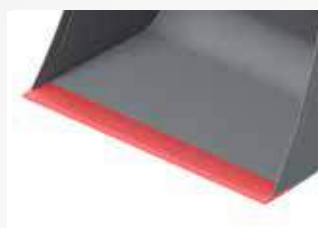
The SAPHIR high tipping shovel HKR increases the dumping height of the wheel loader by approx. 1.000 mm. The tipping angle is approx. 110 degrees. The shovel is suitable for bulk weights up to max. 1.100 kg/m<sup>3</sup>



Tipping angle 110 ° Gain in height of 1.000 mm



Robust bearing frame with the best possible force transmission to the shovel body



Highly wear-resistant scraper bar 200x20 mm (500 HB)  
Optional:  
Scraper bar 300x30 mm (500 HB) (starting with HKR 25.1 series)



Optional highly wear-resistant rigid reversing blade that can be screwed for the standard scraper bar



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



Optional increase in loading volume



Two protected hydraulic cylinders in external pockets with end cushioning on both sides



Optional overflow protection (can also be combined with increased shovel side panels)

## 1. Select the device size

Technical data	HKR 20	HKR 22	HKR 24	HKR 25.1	HKR 25.2	HKR 26	HKR 28.1	HKR 28.2	HKR 30.1	HKR 30.2
Approx. width in mm	2.000	2.200	2.400	2.500	2.500	2.600	2.800	2.800	3.000	3.000
Approx. height in mm	1.100	1.100	1.100	1.200	1.450	1.100	1.200	1.450	1.450	1.800
Shovel body depth (mm)	1.300	1.300	1.300	1.500	1.800	1.300	1.500	1.800	1.800	1.800
Total depth (mm)	1.550	1.550	1.550	1.800	2.100	1.550	1.800	2.100	2.100	2.100
Content (deleted according to DIN) (l)	1.300	1.500	1.700	2.300	3.300	1.900	2.700	3.800	4.150	6.000
Content (cumulative according to SAE) (l)	1.650	1.900	2.100	2.900	4.100	2.350	3.400	4.750	5.200	7.500
Approx. weight in kg	1.230	1.290	1.350	1.800	2.300	1.410	1.900	2.420	2.500	2.600
Order-No.	391HKR20	391HKR22	391HKR24	391HKR25.21	391HKR25.2	391HKR26	391HKR28.1	391HKR28.2	391HKR30.1	391HKR30.2
€/piece	5.780,00 €	6.130,00 €	6.370,00 €	8.690,00 €	10.990,00 €	6.650,00 €	9.570,00 €	11.490,00 €	11.990,00 €	13.470,00 €

As standard, fitted with hydraulic plug couplings of the size 3.

## 2. Select the attachment



Name	Order-No.	€/piece
Wheel loader and telescopic loader starting with 2.5 t lifting power	391RAD-S	Series
Variable Lock System	391VARIABLELOCK	430,00 €



When ordering, state the type of the host vehicle.

## 3. Special fittings

Name	Order-No.	€/piece
Highly wear-resistant scraper bar (300x30 mm, 500 HB) Price per meter	391HOCHV300X30	210,00 €
Highly wear-resistant reversing blade (200x20 mm, 500 HB) Price per meter	391HOCHVWENDE	320,00 €
Highly wear-resistant reversing blade (300x30 mm, 500 HB) Price per meter	391HOCHVWENDE300	390,00 €
Plastic scraper bar Price per meter 200x30mm	391KUNSCHUERF	270,00 €
Increased shovel side sections can be screwed Can be screwed, set consisting of 2 pieces	391EHSCHAUFEL-R	320,00 €
Overfill guard Price per meter	391UEBERLAUFS	195,00 €
Increase in loading volume approx. 600 - 800 l	391LADEVOLUMEN-R	890,00 €
Pressure limiting valve, adjustable (required starting from 200 bar working pressure)	391001154	180,00 €

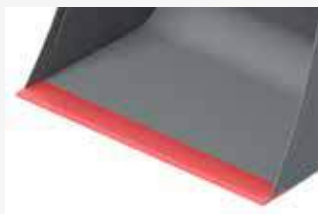
# GRIP SHOVEL GS



Product video



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 removal.



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



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



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



Optional wall removal possible in initial equipment ex-factory



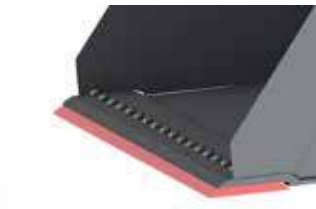
Upper gripper with central bearings and replaceable slide bearings.  
For loaders with Z-kinematics, an optional upper gripper pocket is possible



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.








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

## 1. select the device size

Technical data	GS 16	GS 18	GS 20	GS 22	GS 24
Approx. width in mm	1.600	1.800	2.000	2.200	2.400
Approx. height in mm	750	750	750	750	750
Approx. depth in mm	900	900	900	900	900
Bearings	2	3	3	4	4
Approx. capacity in litres	880	980	1.080	1.180	1.280
Opening width approx. (mm)	1.450	1.450	1.450	1.450	1.450
Scraper 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
Approx. weight in kg	542	565	629	705	735
Order-No.	391GS16	391GS18	391GS20	391GS22	391GS24
€/piece	2.990,00 €	3.220,00 €	3.340,00 €	3.770,00 €	3.990,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b>	391EURO-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE	430,00 €
	<b>VLS Compact</b>	391VARILOCK	590,00 €
	<b>Additional price for wheel loader with Z-kinematics</b>	391ZKINE	190,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Removable side parts (set)</b> Set consisting of 2 side parts	391HERSEITENG	370,00 €
<b>Wall removal</b> (possible only ex-factory in initial equipment)	391WANDENT	290,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter, Can be screwed	391HOCHVWENDE	320,00 €
<b>High tipping device</b> 1 x dw required	391HOCHKIPPGS	3.350,00 €
<b>Electrohydraulic switch over</b> (6/2-way valves 12 V/90 ltr/min, CAUTION: without electrical kit)	526001622	400,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure),	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Tinegrab for GS</b> with curved tines, ex works available for each working width, price per meter	391ZINKENBERZ	<b>NEW!</b> 330,00 €



# GRIP SHOVEL GS L

03

TOOLS



The SAPHIR grip shovel 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 to remove 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. A wall removal function can be delivered optionally ex-factory.



Highly wear-resistant scraper bar  
150x20 mm( 500 HB)



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



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



Optional wall removal possible  
in initial equipment ex-factory



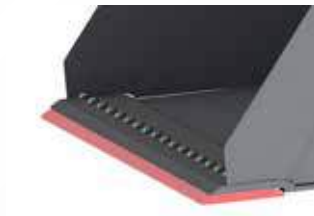
Upper gripper with central  
bearings and replaceable slide  
bearings.  
For loaders with Z-kinematics,  
an optional upper gripper  
pocket is possible



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



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







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

## 1. Select the device size

Technical data	GS L 20	GS L 22	GS L 24	GS L 26	GS L 28
Approx. width in mm	2.000	2.200	2.400	2.600	2.800
Approx. height in mm	850	850	850	850	850
Approx. depth in mm	1.000	1.000	1.000	1.000	1.000
Bearings	3	4	4	4	4
Approx. capacity in litres	1.750	1.850	1.950	2.050	2.150
Opening width approx. (mm)	1.540	1.540	1.540	1.540	1.540
Scraper bar (mm)	150 x 20	150 x 20	150 x 20	150 x 20	150 x 20
Reinforcement	1	2	2	2	2
Number of sickles	5	6	6	7	7
Approx. weight in kg	810	880	910	1.030	1.080
Order-No.	391GSL20	391GSL22	391GSL24	391GSL26	391GSL28
€/piece	4.720,00 €	4.930,00 €	5.060,00 €	5.450,00 €	5.890,00 €

As standard, fitted with hydraulic plug couplings of the size 3.

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE-S	Series
	Variable Lock System	391VARILOCK	430,00 €
	Additional price for wheel loader with Z-kinematics	391ZKINE-2	190,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Wall removal</b> (possible only ex-factory in initial equipment)	391WANDENT	290,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter,	391HOCHVWENDE	320,00 €
<b>High tipping device</b> 1 x dw required	391HOCHKIPPGSL	3.550,00 €
<b>Electrohydraulic switch over</b> (6/2-way valve 12 V/90 ltr/min. CAUTION: without electrical kit)	526001622	410,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Tinegrab for GS</b> with curved tines, ex works available for each working width, price per meter	391ZINKENBERZ	<b>NEW!</b> 360,00 €

# GRIP SHOVEL GS XL



The SAPHIR XL grip shovel is an all-purpose gripping tool for agriculture. The XL stands for an additionally increased volume compared to the grip shovel L. The main field of application of this grip shovel is the removal of silage 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. A wall removal function can be delivered optionally.



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



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



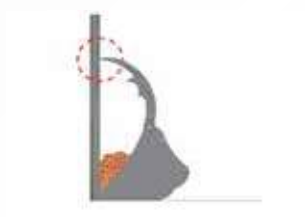
Stable base frame of the shovel  
body in the direction of travel



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



As standard with 2 internal  
reinforcements



Optional wall removal possible  
in initial equipment ex-factory



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



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

## 1. Select the device size

Technical data	GS XL 20	GS XL 22	GS XL 24	GS XL 26	GS XL 28
Approx. width in mm	2.000	2.200	2.400	2.600	2.800
Approx. height in mm	950	950	950	950	950
Approx. depth in mm	1.100	1.100	1.100	1.100	1.100
Bearings	3	4	4	4	4
Approx. capacity in litres	1.950	2.150	2.350	2.550	2.750
Opening width approx. (mm)	1.630	1.630	1.630	1.630	1.630
Scraper 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
Approx. weight in kg	880	960	1.040	1.130	1.180
Order-No.	391GSXL20	391GSXL22	391GSXL24	391GSXL26	391GSXL28
€/piece	5.970,00 €	6.210,00 €	6.520,00 €	6.930,00 €	7.140,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE-S	Series
<b>Variable Lock System</b>	391VARILOCK	430,00 €
<b>Additional price for wheel loader with Z-kinematics</b>	391ZKINE-2	190,00 €



When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Wall removal</b> (possible only ex-factory in initial equipment)	391WANDENT	290,00 €
<b>Highly wear-resistant scraper bar (300x30 mm, 500 HB)</b> Price per meter	391HOCHV300X30	210,00 €
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter	391HOCHVWENDE	320,00 €
<b>High tipping device</b> Unladen weight approx. 700 kg, 1 x dw required	391HOCHKIPPGSXL	3.950,00 €
<b>Electrohydraulic switch over</b> (6/2-way valves 12 V/90 ltr/min, CAUTION: without electrical kit)	526001622	410,00 €
<b>Pressure limiting valve, adjustable</b> Necessary starting from 200 bar working pressure	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Tinegrab for GS with curved tines, ex works available for each working width, price per meter</b>	391ZINKENBERZ	<b>NEW!</b> 390,00 €

# GRIP SHOVEL GSR



The SAPHIR grip shovel R is an all-purpose gripping tool for agriculture. The R stands for the special use at wheel loaders with working weights of above 10 t. The design suffices the highest requirements and offers even higher loading volumes as compared to the grip shovel XL. The application areas are many and range from the typical removal of silage at the silo stock and removal of dung from stalls right till loading of compost. The carrier vehicle mount is shown via the variable lock system as a standard and can be changed via the 8 locking pins. All devices are fitted ex-factory with an adjustable pressure limiting valve.



Highly wear-resistant scraper bar  
300 x 30 mm (HB 500)



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



The vehicle mount can be changed via the 8 locking pins using the variable lock system (VLS) that comes as a standard.



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



Comes as standard with 2 internal reinforcements



Optionally, all models of the GSR can also be delivered with a tine upper gripper.



Upper gripper with central bearings and replaceable slide bearings. A removable opening is integrated as a standard for wheel loaders with Z-kinematics.



Optional high tipping device (1 x dw required) for a gain of 1.000 m in the lifting height



## 1. Select the device size

Technical data	GSR 24	GSR 26	GSR 28	GSR 30
Approx. width in mm	2.400	2.600	2.800	3.000
Approx. height in mm	1.100	1.100	1.100	1.100
Approx. depth in mm	1.350	1.350	1.350	1.350
Bearings	4	4	4	4
Opening width approx. (mm)	1.950	1.950	1.950	1.950
Scraper bar (mm)	300 x 30	300 x 30	300 x 30	300 x 30
Reinforcement	2	2	2	2
Number of sickles	6	6	8	8
Contents (l)	3.200	3.500	3.800	4.100
Approx. weight in kg	1.810	1.870	2.030	2.090
Order-No.	391GSR24	391GSR26	391GSR28	391GSR30
€/piece	8.530,00 €	8.990,00 €	9.430,00 €	9.890,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Variable Lock System</b> (1 set of vehicle mounts as per selection delivered as a standard)	391VARILOCK-S	Series

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Wall removal</b> (possible only ex-factory in initial equipment)	391WANDENT	290,00 €
<b>Highly wear-resistant reversing blade (300x30 mm, 500 HB)</b> Price per meter	391HOCHVWENDE300	390,00 €
<b>High tipping device</b> Unladen weight approx. 700 kg 1x dw required	391HOCHKIPPGSR	4.150,00 €
<b>Tine upper gripper for GSR</b> with bent full-profile tines, delivered ex-factory for all working widths Price per meter	391ZINKENBERZ	420,00 €
<b>Electrohydraulic switch over</b>	526001622	410,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €

# FOLDING SHOVEL KS (4 IN 1)

Zum Produktvideo



The SAPHIR folding shovel KS is an efficient multi-purpose shovel with a large number of possible uses. The front part of the shovel can be opening by means of 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) at the back of the shovel



II. Levelling work with open shovel body



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



III. Gripping loads with a very wide opening width of approx. 1.020 mm



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



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







I. Earth and transport work with closed shovel body



## 1. Select the device size

Technical data	KS 13	KS 16	KS 19	KS 21	KS 23	KS 25
Approx. width in mm	1.300	1.600	1.900	2.100	2.300	2.500
Approx. height in mm	780	780	780	780	780	780
Approx. depth in mm	700	700	700	700	700	700
Opening width approx. (mm)	1.020	1.020	1.020	1.020	1.020	1.020
Content (deleted according to DIN) approx. (l)	300	360	420	460	500	540
Content (cumulative according to SAE) approx. (l)	380	460	530	580	630	680
Approx. weight in kg	340	400	460	500	540	580
Order-No.	391KS13	391KS16	391KS19	391KS21	391KS23	391KS25
€/piece	2.990,00 €	3.680,00 €	3.920,00 €	4.140,00 €	4.360,00 €	4.580,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> possible starting from KS 16	391EURO-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE	430,00 €
	<b>VLS Compact</b>	391VARIOLOCK	590,00 €

When ordering, state the type of the carrier vehicle. In case your quick change device is fitted with a lateral tool locking, then please contact us!

## 3. Special fittings

Name	Order-No.	€/piece
<b>Metal sprocket - can be inserted</b> Recommended number: SK 13 - 5 pieces SK 16 - 7 pieces SK 19 - 8 pieces SK 21 - 9 pieces SK 23 - 10 pieces SK 25 - 11 pieces	391001616	55,00 €
<b>Road safety</b> necessary in case of metal sprockets	391STRSCHUTZKS	210,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €

# SIDE TIPPING SHOVEL SKS



The SAPHIR side tipping shovel SKS is a special device and is used mainly in road and underground construction. For instance, the shovel body can be tilted to the right in the direction of travel for filling the side space at the road side. As a result of this, the carrier vehicle has to do less shunting and stands at an angle of 90° to the unloading point. The shovel is suitable for bulk weights up to max. 1.300 kg/m<sup>3</sup>.



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



Massive, large-sized bearing point



Reinforced base frame in the direction of travel







One-sided, funnel-shaped shovel body for an easy emptying of the bulk material

Select the device size

Technical data	Seitenkippschaufel SKS 18	Seitenkippschaufel SKS 20	Seitenkippschaufel SKS 22
Width (mm)	1.800	2.000	2.200
Height (mm)	800	800	800
Depth (mm)	1.000	1.00	1.000
Content (deleted according to DIN) approx. (l)	750	860	970
Content (cumulative according to SAE) approx. (l)	940	1.070	1.200
Weight (kg)	580	620	710
Order-No.	391SKS18	391SKS20	391SKS22
€/piece	4.640,00 €	4.710,00 €	4.810,00 €

As standard, fitted with hydraulic plug couplings of the size 3

Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	VLS Compact	590,00 €

When ordering, state the type of the host vehicle. Please note that the load centre gets displaced during the sidewise tilting of the shovel. Therefore, the working weight of the carrier vehicle should be adequately high.

Special fittings

Name	Order-No.	€/piece
<b>Metal sprocket - can be inserted</b> Recommended number: SKS 18 = 8 pieces SKS 20 = 9 pieces SKS 22 = 10 pieces	391001616	55,00 €
<b>Road safety</b> necessary in case of metal sprockets	391STRSCHUTZKS	210,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €



# DISPOSAL SHOVEL ES



The SAPHIR disposal shovel is a particularly stable shovel with upper gripper. The application areas of this shovel range from loading of brushwood and green waste right till rubble and waste at disposal 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.



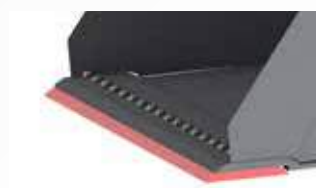
Highly wear-resistant scraper bars 200 x 20 mm (500 HB)



Removable side panels allow loading of bulky goods



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



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



Very large opening width of approx. 1,750 mm



Optional: pluggable metal sprockets for a better loading of building rubble and stones







Comes as a standard with adjustable pressure limiting valve

## 1. Select the device size

Technical data	ES 16	ES 18	ES 20	ES 22	ES 24
Approx. width in mm	1.600	1.800	2.000	2.200	2.400
Approx. height in mm	850	850	850	850	850
Approx. depth in mm	1.050	1.050	1.050	1.050	1.050
Number of tines	4	4	4	5	5
Reinforcement	1	1	1	2	2
Approx. capacity in litres	1.300	1.500	1.700	1.900	2.100
Approx. weight in kg	620	680	740	830	890
Order-No.	391ES16	391ES18	391ES20	391ES22	391ES24
€/piece	3.980,00 €	4.210,00 €	4.440,00 €	4.810,00 €	4.990,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b>	391EURO-S	<b>Series</b>
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	<b>240,00 €</b>
	<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE	<b>430,00 €</b>
	<b>Variable Lock System</b>	391VARIOLOCK	<b>590,00 €</b>

When ordering, state the type of the host vehicle

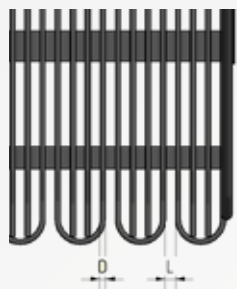
## 3. Special fittings

Name	Order-No.	€/piece
<b>Metal sprocket - can be inserted</b> Recommended number: ES 16 - 7 pieces ES 18 - 8 pieces ES 20 - 9 pieces ES 22 - 10 pieces ES 24 - 11 pieces	391001616	<b>55,00 €</b>
<b>Highly wear-resistant reversing blade (200x20 mm, 500 HB)</b> Price per meter Can be screwed	391HOCHVWENDE	<b>320,00 €</b>
<b>Cross-pipe with spike bar</b> (Price per meter)	391QUERZ	<b>220,00 €</b>
<b>Road safety</b> For disposal shovels with metal sprockets	391STRSCHUTZES	<b>210,00 €</b>
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	<b>230,00 €</b>

# KARTOFFEL- UND RÜBENKORB KK / RK



Die SAPHIR Kartoffelkörbe KK sowie die SAPHIR Rübenkörbe RK ermöglichen das sichere Aufnehmen der entsprechenden Feldfrüchte. Ein Kantenschutz verhindert Beschädigungen an den Früchten, während der Korbboden das Aussieben von Sand und Steinen ermöglicht. Der Rübenkorb eignet sich zudem sehr gut für die Verladung von Scheithölzern.



**Kartoffelkorb** mit 14 mm Rundstählen und 26 mm lichter Stabweite.

**Rübenkorb** mit 33,5 mm Rundstählen und 66,5 mm lichter Stabweite



Rundbügel, empfohlen für Arbeiten auf unbefestigtem Untergrund



Hochverschleißfeste Schürfleiste 150 x 16 mm (500 HB), empfohlen für Arbeiten auf befestigtem Untergrund







Serienmäßig mit Kantenschutz, um Beschädigungen der Feldfrüchte zu verhindern

## 1. Gerätegröße auswählen

Technische Daten	KK 20 mit Rundbügel	KK 20S mit Schürfleiste	KK 22 mit Rundbügel	KK 22S mit Schürfleiste	KK 25 mit Rundbügel	KK 25S mit Schürfleiste
Breite ca. (mm)	2.000	2.000	2.250	2.250	2.500	2.500
Höhe ca. (mm)	1.050	1.050	1.050	1.050	1.050	1.050
Tiefe ca. (mm)	1.150	1.150	1.150	1.150	1.150	1.150
Inhalt (gestrichen nach DIN) ca. (l)	1.200	1.200	1.400	1.400	1.600	1.600
Inhalt (gehäuft nach SAE) ca. (l)	1.500	1.500	1.750	1.750	2.000	2.000
Gewicht ca. (kg)	370	370	385	385	422	422
Best.-Nr.	391KK20	391KK20S	391KK22	391KK22S	391KK25	391KK25S
€/Stück	2.270,00 €	2.270,00 €	2.510,00 €	2.510,00 €	2.810,00 €	2.810,00 €

Technische Daten	RK 20 mit Rundbügel	RK 20S mit Schürfleiste	RK 22 mit Rundbügel	RK 22S mit Schürfleiste	RK 25 mit Rundbügel	RK 25S mit Schürfleiste
Breite ca. (mm)	2.000	2.000	2.250	2.250	2.500	2.500
Höhe ca. (mm)	1.050	1.050	1.050	1.050	1.050	1.050
Tiefe ca. (mm)	1.150	1.150	1.150	1.150	1.150	1.150
Inhalt (gestrichen nach DIN) ca. (l)	1.060	1.060	1.170	1.170	1.320	1.320
Inhalt (gehäuft nach SAE) ca. (l)	1.270	1.270	1.400	1.400	1.590	1.590
Gewicht ca. (kg)	445	445	460	460	495	495
Best.-Nr.	391RK20	391RK20S	391RK22	391RK22S	391RK25	391RK25S
€/Stück	2.040,00 €	2.040,00 €	2.260,00 €	2.260,00 €	2.510,00 €	2.510,00 €

## 2. Aufnahme auswählen

	Aufnahme	Best.-Nr.	€/Stück
	Euroaufnahme	391EURO-S	Serie
	Hof- und Radlader bis 2,5 t Hubkraft	391HOFRAD	240,00 €
	Rad- und Teleskoplader ab 2,5 t Hubkraft	391RADTELE	430,00 €
	Variable Lock System	391VARILOCK	590,00 €

Bei Bestellung Trägerfahrzeugtyp angeben

# STEINKORB STK



Der SAPHIR Steinkorb STK ermöglicht das Laden bzw. Aufsammeln von Steinen. Die besonders robuste Konstruktion des Korbes und die verwendeten Materialstärken ermöglichen einen universellen Einsatz. Durch den Aufbau aus Rundstählen können u.a. Sand und kleine Steine herausfallen. Der Steinkorb ist optional mit einer fest verschweißten Rückrollsicherung auf den Rundstählen erhältlich.



Rundstähle mit einem Durchmesser von 30 mm und einer lichten Stabweite von 60 mm



Spitz auslaufende Rundstähle, empfohlen für Arbeiten auf unbefestigtem Untergrund



Hochverschleißfeste Schürfleiste 150 x 16 mm (500 HB), empfohlen für Arbeiten auf befestigtem Untergrund







Optionale Rückrollsicherung, empfohlen bei der Verladung von Steinen auf dem Feld, um ein Herausrollen von Steinen zu verhindern



## 1. Gerätegröße auswählen

Technische Daten	STK 21	STK 21S mit Schürfleiste	STK 23	STK 23S mit Schürfleiste	STK 25	STK 25S mit Schürfleiste
Breite ca. (mm)	2.100	2.100	2.300	2.300	2.500	2.500
Höhe ca. (mm)	1.100	1.100	1.100	1.100	1.100	1.100
Tiefe ca. (mm)	1.040	1.040	1.040	1.040	1.040	1.040
Inhalt (gestrichen nach DIN) ca. (l)	850	850	950	950	1.050	1.050
Inhalt (gehäuft nach SAE) ca. (l)	1.060	1.060	1.180	1.180	1.300	1.300
Gewicht ca. (kg)	450	450	480	480	510	510
Best.-Nr.	391STK21	391STK21S	391STK23	391STK23S	391STK25	391STK25S
€/Stück	3.290,00 €	3.460,00 €	3.480,00 €	3.660,00 €	3.720,00 €	3.890,00 €

## 2. Aufnahme auswählen

	Aufnahme	Best.-Nr.	€/Stück
	Euroaufnahme	391EURO-S	Serie
	Hof- und Radlader bis 2,5 t Hubkraft	391HOFRAD	240,00 €
	Rad- und Teleskoplader ab 2,5 t Hubkraft	391RADTELE	430,00 €
	Variable Lock System	391VARIOLOCK	590,00 €

Bei Bestellung Trägerfahrzeugtyp angeben

## 3. Sonderausstattungen

Ausstattung	Best.-Nr.	€
Rückrollsicherung Mehrpreis für kompletten Besatz	391RÜCKROLL	140,00 €

# MANURE FORK DG



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



Additional wear rails for protecting 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 device size

Technical data	DG 09	DG 11	DG 12	DG 13	DG 15	DG 17	DG 19	DG 21	DG 23
Approx. width in mm	900	1.100	1.200	1.300	1.500	1.700	1.900	2.100	2.300
Approx. height in mm	800	800	800	800	800	800	800	800	800
Number of tines	5	6	6	7	8	9	10	11	12
Approx. weight in kg	84	109	130	140	155	170	185	200	215
Order-No.	391DG09	391DG11	391DG12	391DG13	391DG15	391DG17	391DG19	391DG21	391DG23
€/piece	590,00 €	630,00 €	670,00 €	710,00 €	790,00 €	870,00 €	950,00 €	1.030,00 €	1.110,00 €

## 2. Select the attachment



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



<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
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<b>VLS Compact</b>	391VARIOLOCK	295,00 €
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When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Normal load tines</b> Additional price per tine	439439016	25,00 €
<b>Normal load tines</b> 1,100 mm long Additional price per tine	391003079	30,00 €
<b>Lateral tines</b> 600 mm long Price per tine	391002956	35,00 €
<b>Road safety</b> For DG09-DG13	<b>NEW!</b> 391004370	240,00 €
<b>Road safety</b> For DG15-DG19	<b>NEW!</b> 391004371	320,00 €
<b>Road safety</b> For DG21-DG23	<b>NEW!</b> 391004372	390,00 €

# MANURE FORK DG XL



The SAPHIR manure fork XL serves for removing and transporting loose manure, straw, vegetation, shrubs, etc. The SAPHIR manure fork XL use only heavy-duty high-quality tines from SHW Friedrichstal having a standard length of 800 mm . Longer, heavy-duty tines can also be installed upon request.



Additional wear rails for protecting the tine support pipe



Optional side steel tines for loss reduction during transport



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






Massive tine support pipe with welded conical sleeves and reinforcement bushes. Vertical reinforcements for the back of the fork provide for additional stability

## 1. Select the device size

Technical data	DGXL 17	DGXL 19	DGXL 21	DGXL 23	DGXL 25
Approx. width in mm	1.700	1.900	2.100	2.300	2.500
Approx. height in mm	860	860	860	860	860
Number of tines	9	10	11	12	13
Approx. weight in kg	334	360	386	412	438
Order-No.	391DGXL17	391DGXL19	391DGXL21	391DGXL23	391DGXL25
€/piece	1.850,00 €	1.960,00 €	2.070,00 €	2.180,00 €	2.290,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO	Series
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE-S	Series
	Variable Lock System	391VARIOLOCK	430,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Heavy-duty tines</b> 1.000 mm long, Additional price per piece	391001322	25,00 €
<b>Heavy-duty tines</b> 1.200 mm long, Additional price per piece	391001323	30,00 €
<b>Lateral steel tines</b> 800 mm long, Price per piece	391003940	95,00 €
<b>350 mm rear wall extension</b> Attachment with expanded metal, Price per meter	391001325	360,00 €
<b>Road safety</b> For DG XL 17 - DG XL 19	391004371	320,00 €
<b>Road safety</b> For DG XL 21 - DG XL 25	391004372	390,00 €



# MANURE FORK WITH HYDRAULIC HOLD-DOWN UNIT DGN

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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 unit is opened and closed as standard by two double-action hydraulic cylinders.



Additional wear rails for protecting the tine support pipe



Thick-walled tine support pipe with welded conical sleeves



Large opening width of approx. 1.080 mm



High-quality tines (800 mm) from SHW



Two double-acting hydraulic cylinders



High fork back (735 mm)





Wall removal function as a standard

## 1. Select the device size

Technical data	DGN 09	DGN 11	DGN 12	DGN 13	DGN 15	DGN 17	DGN 19	DGN 21
Approx. width in mm	900	1.100	1.200	1.300	1.500	1.700	1.900	2.100
Approx. height in mm	800	800	800	800	800	800	800	800
Number of tines	5	6	6	7	8	9	10	11
Approx. capacity in litres	540	690	750	835	920	1.090	1.260	1.430
Approx. weight in kg	170	203	210	225	240	260	280	305
Order-No.	391DGN09	391DGN11	391DGN12	391DGN13	391DGN15	391DGN17	391DGN19	391DGN21
€/piece	1.340,00 €	1.420,00 €	1.460,00 €	1.500,00 €	1.560,00 €	1.630,00 €	1.920,00 €	1.980,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> (width starting from 1.200 mm)	391EURO-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>VLS Compact</b>	391VARIOLOCK	295,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Lateral tines</b> 600 mm long Price per piece	391002956	35,00 €
<b>Road safety</b> For DGN09-DGN13	<b>NEW!</b> 391004370	240,00 €
<b>Road safety</b> For DGN09-DGN13	<b>NEW!</b> 391004371	320,00 €
<b>Road safety</b> For DGN09-DGN13	<b>NEW!</b> 391004372	390,00 €
<b>Split hydraulic Hold-Down</b> (1x additional controlling unit)	<b>NEW!</b> 391GETNIED	210,00 €

# MANURE AND SILAGE PLIERS DSZ



The SAPHIR manure and silage pliers are intended for removing grass and maize silage, for mucking out manure and for transporting loose manure, straw, vegetation and shrubs. A special advantage of the devices is the very large opening width of 1.400 mm.

The torsion-resistant tines in the upper gripper provide for taking in the material without any problem. The side tines ensure that items are transported with the lowest possible losses.



Wear rail on the thick-walled  
tine support pipe



Maintenance-free, changeable  
slide bearing



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



Comes as a standard with late-  
ral, pointed bent tines  
(600 mm)






Very large opening width of  
1.400 mm

## 1. Select the device size

Technical data	DSZ 13	DSZ 15	DSZ 17	DSZ 19	DSZ 21	DSZ 23
Approx. width in mm	1.300	1.500	1.700	1.900	2.100	2.300
Approx. height in mm	960	960	960	960	960	960
Number of tines	7	8	9	10	11	12
Tine length approx. (mm)	800	800	800	800	800	800
Approx. capacity in litres	1.060	1.200	1.340	1.490	1.640	1.790
Approx. weight in kg	290	340	390	440	490	540
Order-No.	391DSZ13	391DSZ15	391DSZ17	391DSZ19	391DSZ21	391DSZ23
€/piece	2.520,00 €	2.660,00 €	2.800,00 €	2.940,00 €	3.080,00 €	3.220,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	VLS Compact	391VARILOCK	295,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Road safety</b> For DSZ 13	<b>NEW!</b> 391004370	240,00 €
<b>Road safety</b> For DSZ 15	<b>NEW!</b> 391004371	320,00 €
<b>Road safety</b> For DSZ 21	<b>NEW!</b> 391004372	390,00 €

# MANURE AND SILAGE PLIERS DSZ L



The SAPHIR DSZ L manure and silage pliers are intended for removing grass and maize silage, for mucking out manure and for transporting loose dung, straw, vegetation and shrubs. A special advantage of the devices is the very high capacity and the large opening width of 1.600 mm.

The torsion-resistant tines in the upper gripper provide for taking in the material without any problem. The side tines ensure that items are transported with the lowest possible losses.



Wear rail on the thick-walled tine support pipe



Maintenance-free, changeable slide bearing



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



Comes as a standard with lateral, pointed, bent tines



Welded in conical sleeves



1.000 mm heavy-duty tines from SHW Friedrichstal






Very large opening width of 1.600 mm

## 1. Select the device size

Technical data	DSZ L 19	DSZ L 21	DSZ L 23	DSZ L 25
Approx. width in mm	1.900	2.100	2.300	2.500
Approx. height in mm	1.000	1.000	1.000	1.000
Number of tines	10	11	12	13
Tine length approx. (mm)	1.000	1.000	1.000	1.000
Approx. capacity in litres	1.950	2.150	2.350	2.550
Approx. weight in kg	510	540	580	610
Order-No.	391DSZ19L	391DSZ21L	391DSZ23L	391DSZ25L
€/piece	3.880,00 €	4.090,00 €	4.300,00 €	4.510,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	Variable Lock System	391VARIOLOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Road safety</b> For DSZ L 19	<b>NEW!</b> 391004371	320,00 €
<b>Road safety</b> For DSZ L 21 - DSZ L 25	<b>NEW!</b> 391004372	390,00 €



# MANURE AND SILAGE PLIERS DSZ XL



The SAPHIR DSZ XL manure and silage pliers are intended for removing grass and maize silage, for mucking out manure and for transporting loose manure, 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.



Additional wear rails for protecting the tine support pipe



Massive tine support pipe with welded conical sleeves and reinforcement bushes. Vertical reinforcements for the back of the fork provide for additional stability.



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



Torsion-resistant heavy-duty tines (original SHW) in the upper gripper



Very large opening width of the upper gripper of 2.000 mm



Maintenance-free, changeable slide bearing



High-quality heavy-duty tines (1.250 mm) from SHW Friedrichstal

## 1. Select the device size

Technical data	DSZ XL 21	DSZ XL 23	DSZ XL 25	DSZ XL 27
Approx. width in mm	2.100	2.300	2.500	2.700
Approx. height in 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
Approx. capacity in litres	2.850	3.100	3.350	3.600
Approx. weight in kg	780	850	920	990
Order-No.	391DSZXL21	391DSZXL23	391DSZXL25	391DSZXL27
€/piece	5.990,00 €	6.310,00 €	6.620,00 €	6.930,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



Name	Order-No.	€/piece
Variable Lock System	391VARIOLOCK	Series €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Road safety</b> For DSZ XL 21 - DSZ XL 27	<b>NEW!</b> 391004372	390,00 €

# SILAGE CUTTING PLIERS SSZ



Product Video



The 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. This guarantees an optimum cross-section without distortions.



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



Additional wear rail at the tine support pipe minimises the wear



Screwed-in front blade optionally fitted with serrated or corrugated blades



The lateral, adjustable counter-blade in the rear part minimises the jamming of the material.



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



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



Re-tensioning device for the upper gripper





## 1. Select the device size

Benennung	SSZ 136	SSZ 157	SSZ 178	SSZ 199	SSZ 220	SSZ 241
Breite ca. (mm)	1.360	1.570	1.780	1.990	2.200	2.410
Blockmaß (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
Zylinderanzahl	2	2	2	4	4	4
Zinkenanzahl	10	12	13	16	18	18
Inhalt ca. (l)	920	1.050	1.200	1.350	1.500	1.650
Gewicht ca. (kg)	548	628	710	884	950	1.090
Best.-Nr.	391SSZ136	391SSZ157	391SSZ178	391SSZ199	391SSZ220	391SSZ241
€/Stück	3.920,00 €	4.420,00 €	4.820,00 €	5.680,00 €	5.990,00 €	6.480,00 €

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

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b> (is possible starting with SSZ 157, SSZ 136 can be delivered only for farm loaders)	391EURO-S	Series
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE	430,00 €
	<b>Variable Lock System</b>	391VARIOLOC	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Heavy duty 800 mm tines</b> Additional price per piece Recommended number: SSZ 136 - 8 pieces SSZ 157 - 10 pieces SSZ 178 - 11 pieces SSZ 199 - 12 pieces SSZ 220 - 14 pieces SSZ 241 - 14 pieces	391ZINKEN800S	30,00 €
<b>Lifting gear HG 20</b> Gain in lifting height of 2.000 mm	391HUBGERHG20	2.580,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €

More information about the hydraulic cut-off wall is given on page 176

# SILAGE CUTTING PLIERS SSZ XL



The SAPHIR silage cutting pliers SSZ 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. 1.300 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 and heavy-duty tines 1.000 mm



Additional wear rail at the tine support pipe minimises the wear



Screwed-in front blade optionally fitted with serrated or corrugated blades



The lateral, adjustable counter-blade in the rear part minimises the jamming of the material.



Double-walled, reinforced upper gripper with very wide opening 1.300 mm



Re-tensioning device for upper gripper



Optional lifting gear HG 20 for attaching to the rear or front hydraulic system Cat. II with an additional gain in lifting height of approx. 2.000 mm (1 x dw required)

## 1. Select the device size

Technical data	SSZ XL 157	SSZ XL 178	SSZ XL 199	SSZ XL 220	SSZ XL 241	SSZ XL 262
Approx. width in 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	2.410 x 1.260 x 900	2.620 x 1.260 x 900
Number of cylinders	2	2	2	2	4	4
Number of tines (heavy-duty tines)	12	14	16	18	20	22
Approx. capacity in litres	1.780	2.020	2.260	2.650	2.900	3.150
Approx. weight in kg	1.020	1.190	1.300	1.800	2.050	2.200
Order-No.	391SSZXL157	391SSZXL178	391SSZXL199	391SSZXL220	391SSZXL241	391SSZXL262
€/piece	7.730,00 €	7.980,00 €	8.230,00 €	11.320,00 €	12.990,00 €	13.960,00 €

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

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



Name	Order-No.	€/piece
Variable Lock System	391VARIOLOCK	Series €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Lifting gear HG 20</b> Gain in lifting height approx. 2.000 mm Attachment Cat. II/III 1 x dw required	391HUBGERHG20	2.580,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €

6 More information about the hydraulic cut-off wall is given on page 176



# HYDRAULIC PUSH OFF FUNCTION FOR SILAGE CUTTING PLIERS

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The hydraulic push-off wall for the SAPHIR silage cutting pliers allows the silage block to be deposited by easy pushing out. In addition, due to the push-off wall, additional dumping height can be achieved on the mixing vehicle. This special equipment can be delivered only in initial equipment ex-factory  
An additional, double-acting control unit is required.

Technical data	Order-No.	€/piece (SSZ)	€/Stück (SSZ XL)
SSZ 136 / XL	391SSZ136ASW	860,00 €	
SSZ 157 / XL	391SSZ157ASW	860,00 €	1.190,00 €
SSZ 178 / XL	391SSZ178ASW	860,00 €	1.190,00 €
SSZ 199 / XL	391SSZ199ASW	1.060,00 €	1.190,00 €
SSZ 220 / XL	391SSZ220ASW	1.060,00 €	1.450,00 €
SSZ 241 / XL	391SSZ241ASW	1.060,00 €	1.680,00 €
SSZ 262 XL	391SSZ262XLASW		1.680,00 €
<b>Electrohydraulic switch over</b> Without electrical kit (then only 1x double-acting control unit required)	526001622	410,00 €	410,00 €





# SILAGE CUTTING SHOVEL SSE



The SAPHIR silage cutting shovels SSE are suitable for the removal and transportation of any kind of silage. The closed shovel bottom enables the loading of loose feed components and minimises the loss of crops while removing the maize silage. The lateral counter-blades at the rear part provide for a clean cut without the material getting jammed. The gap between the upper gripper and the rear part can be set by the innovative re-tensioning device. A double-walled design of the upper gripper is another unique feature. This guarantees a uniform cutting without lateral distortions.

The counter-blades placed respectively on the right and left at the rear part provide for a clean cut without the risk of material getting jammed.



Closed shovel bottom with internal reinforcement



Adequate overbite for smooth cutting edges



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



Double-walled upper gripper, large opening width approx. 850 mm.



Welded counter-blades laterally in the upper gripper







Screwed-in front blade can be either serrated or corrugated

## 1. Select the device size

Technical data	SSE 157	SSE 178	SSE 199	SSE 220	SSE 241
Width (mm)	1.570	1.780	1.990	2.200	2.410
Block dimensions (mm)	1.570 x 850 x 750	1.780 x 850 x 750	1.990 x 850 x 750	2.200 x 850 x 750	2.410 x 850 x 750
Number of cylinders	2	2	4	4	4
Opening width approx. (mm)	850	850	850	850	850
Contents (l)	1.050	1.200	1.350	1.500	1.650
Approx. weight in kg	670	740	860	930	1.000
Order-No.	391SSE157	391SSE178	391SSE199	391SSE220	391SSE241
€/piece	4.830,00 €	5.240,00 €	5.990,00 €	6.440,00 €	7.130,00 €

As standard, fitted with hydraulic plug couplings of the size 3.

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	Variable Lock System	391VARIOLOCK	590,00 €

## 3. Special fittings

Name	Order-No.	€/piece
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154-2	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €

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

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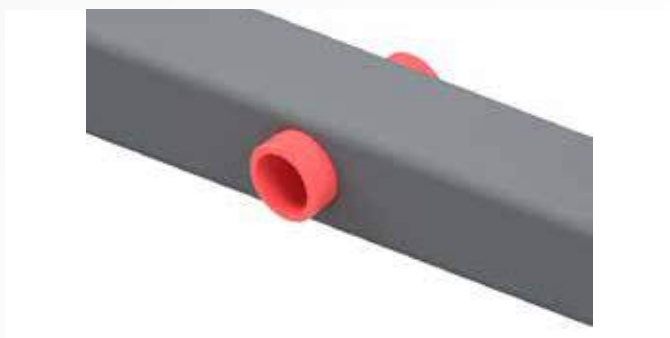


The SAPHIR silage comb SK is the optimum working tool for getting silage down from especially high silo stocks. The adjustable front handle ensures particularly adaptable, optimum work. The risk-free cutting of silage at a great height protects man and machine.

The 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 plate is fitted with a screw-jointed scraper bar made of high wear-resistant steel (500 HB).

The SAPHIR extension can be combined universally with our grain sliding plate as also with our silage combs.

Caution: The extension VL enormously increases the working area of the respective carrier vehicle. The combination of extension and silage comb/grain sliding plate is permitted only for vehicles with a max. working weight of 10 tons.



As a standard, the silage comb SK possesses a thick-walled tine support pipe with welded conical sleeves



As a standard, the silage combs come fitted with torsion-resistant normal-load tines (diameter 28 mm, length 800 mm) of SHW. Optionally, heavy-duty tines (diameter 35 mm, length 800 mm) can also be installed.



As a standard, the grain sliding plate GS has a high wear-resistant steel scraper bar 200x20 mm (500 HB).



Optionally, plastic scraper bar 150 x 20 mm



Round blade body  
Parking support  
Compact design



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

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## Silage comb

Technical data	SK 22	SK 26
Approx. working width in mm.	2.200	2.600
Number of tines	11	13
Approx. weight in kg	168	212
Attachment	Cat. II (suitable for extension VL)	Cat. II (suitable for extension VL)
Order-No.	391SK22	391SK26
<b>€/piece</b>	<b>1.380,00 €</b>	<b>1.560,00 €</b>





## Grain sliding plate

Technical data	GS 30
Approx. width in mm	3.000
Approx. transport width in mm	3.000
Approx. height in mm	1.000
Power requirement approx. (kW/HP)	58/80
Approx. weight in kg	320
Attachment	Cat. II
Order-No.	391GS30
<b>€/piece</b>	<b>1.980,00 €</b>

## Extension

Technical data	VL 20	VL 30	VL 40	VL 50
Length approx. (mm)	2.000	3.000	4.000	5.000
Approx. weight in kg	215	250	305	360
Order-No.	391VL20	391VL30	391VL40	391VL50
<b>€/piece</b>	<b>1.310,00 €</b>	<b>1.820,00 €</b>	<b>2.380,00 €</b>	<b>3.150,00 €</b>

## Attachments for **extension**

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power Permissible for carrier vehicles up to max. 10 t working weight Heavy design for larger carrier vehicles available upon request.	391RADTELE	430,00 €
	Variable Lock System	391VARILOCK	590,00 €

When ordering, state the type of the host vehicle

## Special fittings

Name	Order-No.	€/piece
<b>Heavy-duty tines</b> 800 mm, diameter 35 mm (matching for silage comb SK) Additional price per piece	391003177	50,00 €
<b>Polyurethane scraper bar 130x25mm</b> 150 x 20 mm Recommended for the grain sliding plate GS 30	695001042	460,00 €

# LASTHAKEN LH

**NEW!**



Die SAPHIR Lasthaken LH dienen dem Heben, dem Transport und der Verladung von schweren Lasten. Der unter Last drehbare Wirbelhaken bietet dem Anwender zudem die Möglichkeit der punktgenauen Positionierung der Ladung.



Unter Last drehbarer Wirbelhaken für eine exakte Positionierung der Ladung



Klappbarer und stabiler Abstellfuß für einen sicheren Stand des Geräts



Stabiler Rahmen mit Verstrebungen in Fachwerkanordnung



Serienmäßig mit dem patentierten SAPHIR Variable Lock System (VLS) ausgestattet



Achtung: Durch den Lasthaken wird der Arbeitsbereich des Trägerfahrzeugs erhöht. Der Anwender hat auf die Standsicherheit und Tragfähigkeit des Trägerfahrzeugs zu achten.

## 1. Gerätegröße auswählen

Technische Daten	LH 10/15	LH 10/25	LH 10/40	LH 20/15	LH 20/25	LH 30/10	LH 40/10
Ausladung (mm)	1.000	1.000	1.000	2.000	2.000	3.000	4.000
Tragfähigkeit (kg)	1.500	2.500	4.000	1.500	2.500	1.000	1.000
Gewicht ca. (kg)	200	260	365	340	400	415	465
Best.-Nr.	391LH10/15	391LH10/25	391LH10/40	391LH20/15	391LH20/25	391LH30/10	391LH40/10
€/Stück	<b>2.110,00 €</b>	<b>2.450,00 €</b>	<b>3.030,00 €</b>	<b>2.890,00 €</b>	<b>3.230,00 €</b>	<b>3.310,00 €</b>	<b>3.690,00 €</b>

## 2. Aufnahme auswählen



Aufnahme	Best.-Nr.	€/Stück
Variable Lock System	391VARIOLOCK-S	Serie

Bei Bestellung Trägerfahrzeugtyp angeben

# PALLET FORK PG



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



Load-bearing capacity of up to 6,000 kg (with a 500 mm centre of gravity)



Tines with a wear guard in the bending area



Snap-in system for individual displacement of the fork tines







Fork carrier width 1.200 mm as a standard. Other carrier widths can be delivered upon request - see special equipment.

## 1. Select the device size

Benennung	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
Tragfähigkeit (kg)	1.500	1.500	1.500	2.500	2.500	2.500	3.500	3.500	4.500	6.000
Gabelträgnorm	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
Gabelzinkenlänge ca. (mm)	900	1.100	1.300	900	1.100	1.300	1.000	1.200	1.200	1.200
Gabelquerschnitt ca. (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
Gewicht ca. (kg)	156	164	174	184	196	208	280	300	335	370
Best.-Nr.	391PG09-15	391PG11-15	391PG13-15	391PG09-25	391PG11-25	391PG13-25	391PG10-35	391PG12-35	391PG12-45	391PG12-60
€/Stück	850,00 €	890,00 €	930,00 €	980,00 €	1.020,00 €	1.060,00 €	1.290,00 €	1.410,00 €	1.520,00 €	2.370,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	Variable Lock System	391VARIOLOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Optional extras

Name	Order-No.	€/piece
Fork carrier width 1.500 mm	391GABTRAEGBR1500	270,00 €
+ each further 100 mm	391GABTRAEG100	90,00 €

The additional hydraulic options for the pallet forks of the type PG are given on page 186.

## 4. Accessories

Name	Order-No.	€/piece
<b>Pallet base frame ISO FEM II</b> without fork tines 2.500 load bearing capacity, Euro attachment (without fork tines)	391406290	590,00 €
<b>Pallet base frame ISO FEM III</b> without fork tines 4.500 load bearing capacity, Euro attachment (without fork tines)	391406540	710,00 €
<b>Pallet base frame ISO FEM IV</b> 6.000 load bearing capacity, Euro attachment (without fork tines)	391ISOFEMIV	820,00 €



# SPECIAL EQUIPMENT FOR FORK CARRIER

## Ready for pallet base frame standard ISO FEM II B or ISO FEM III B

For special usage areas, we also offer our pallet fork carriers with hydraulic additional functions. These are available only in initial equipment ex-factory. Other technical special solutions are available on request. Contact us!



### Hydraulic tines adjustment

Adjustment of the fork tines to one another in their distance. The tines adjustment helps in the easy intake of different transport pallets. The pallet fork is fitted with flow divider and pressure limiting valve.



### Hydraulic side shift

Adjustment of the tines in pairs to left as well as to right. The side shift simplifies the handling during stacking and loading work.

Technical data	Hydraulic tines adjustment	Hydraulic tines adjustment
Fork carrier width (mm)	1.200	1.200
Load bearing capacity ISO FEM II (kg)	2.500	2.500
Load bearing capacity ISO FEM III (kg)	3.500	3.500
Clamping range (middle of tine - middle of tine) (mm)	150 - 1.100	-
Shift (on both sides) (mm)	-	100
Weight (kg)	250	310
Order-No.	391004023	391004022
€/piece	2.220,00 €	1.490,00 €

As standard, fitted with hydraulic plug couplings of the size 3.

Please note that the prices for the hydraulic additional options include a surcharge for the pallet forms in series equipment given on page 175. The hydraulic tine adjustment and the hydraulic lateral displacement cannot be combined with each other.



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

Determination of the fork carrier standard:

Height of the fork carrier (intake upper edge to lower edge)

ISO FEM II = 407 mm

ISO FEM III = 508 mm

ISO FEM IV = 635 mm

ISO FEM II B (ground clearance approx. 152 mm)

Technical data	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	260,00 €	265,00 €	270,00 €	280,00 €

ISO FEM II B (ground clearance approx. 152 mm)

Technical data	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	280,00 €	290,00 €	310,00 €	320,00 €	330,00 €

ISO FEM III B (ground clearance approx. 203 mm)

Technical data	Fork tines 1000 mm	Fork tines 1200 mm	Fork tines 1200 mm
Load capacity per pair (kg), LSP 500 mm	3.500	3.500	4.500
Cross section (mm)	100 x 50	100 x 50	120 x 50
Order-No.	391100501000	391100501200	391120501200
€/piece	340,00 €	365,00 €	430,00 €

ISO FEM IV B (ground clearance approx. 254 mm)

Technical data	Fork tines 1200 mm
Load capacity per pair (kg), LSP 500 mm	6.000
Cross section (mm)	130 x 60
Order-No.	391130601200
€/piece	690,00 €

# PALLET FORK COMBI PGK



As a standard, the SAPHIR pallet fork combination has 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  
Form B



Tines with a wear guard  
in the bending area

## 1. Select the device size

Technical data	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 tine cross section approx. (mm)	100 x 40	100 x 40	100 x 40
Width of fork carrier in (mm)	1.200	1.200	1.200
Approx. weight in kg	202	222	234
Order-No.	391PGK09/25	391PGK11/25	391PGK13/25
€/piece	1.450,00 €	1.520,00 €	1.590,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Front / rear attachment Cat. II	391PGKKAT-S	Series

When ordering, state the type of the host vehicle

## 3. Optional extras

Name	Order-No.	€/piece
<b>Pallet fork carriage combi</b> 2.500 load bearing capacity without fork tines ISO FEM II	391406501	1.140,00 €

# FORK CARRIER ACCESSORIES

Ready to be fitted for fork carrier standard ISO FEM II B or ISO FEM III B



Big Bag carrier, adjustable (common hooked load on both the draw-bar eyes max. 700 kg)



Tine holder with large 1.100 mm bale tines. Ideal for transporting straw or silage bales (load bearing capacity approx. 625 kg/piece)



Tine holder with rotating pipe tines (1.100 mm). ideal for loading wrapped round bales.  
(Load bearing capacity approx. 750 kg/piece)



Hydraulic upper gripper with a clamping range of 450 - 1.300 mm.  
For transporting logs and branches. (1x required, as a standard, fitted with hydraulic plug couplings of the size 3)

## Fork carrier accessories

Technical data	BIG BAG Carrier ISO FEM II	BIG BAG Carrier ISO FEM III
Load-bearing capacity kg/ unit	700	700
Tine length approx. (mm)	N/A	N/A
Clamping range (mm)	N/A	N/A
Approx. weight in kg	60	60
Order-No.	391001197	391002111
€/piece	520,00 €	520,00 €

Technical data	Tine holder with large bale tines ISO FEM II	Tine holder with large bale tines ISO FEM III
Load-bearing capacity kg/ unit	625	625
Tine length approx. (mm)	1.100	1.100
Clamping range (mm)	N/A	N/A
Approx. weight in kg	19	21
Order-No.	391001198	391001195
€/piece	210,00 €	210,00 €

Technical data	Tine holder with rotating pipe tines ISO FEM II	Tine holder with rotating pipe tines ISO FEM III
Load-bearing capacity kg/ unit	750	750
Tine length approx. (mm)	1.100	1.100
Clamping range (mm)	N/A	N/A
Approx. weight in kg	48	50
Order-No.	391001199	391002110
€/piece	420,00 €	420,00 €

Technical data	Hydraulic upper gripper ISO FEM II	Hydraulic upper gripper ISO FEM III
Load-bearing capacity kg/ unit	N/A	N/A
Tine length approx. (mm)	N/A	N/A
Clamping range (mm)	450 - 1.300	450 - 1.300
Approx. weight in kg	64	69
Order-No.	391001196	391001284
€/piece	1.080,00 €	1.080,00 €



# REAR PALLET FORK PGH



The SAPHIR rear pallet fork is a functional, light pallet fork for fitting in the rear hydraulic system CAT I/II.

- Adjustable attachment points for upper and lower linkage
- Forks made of 100 x 45 x 1.200 mm reinforced U profiles
- Forks can be folded up for road transport
- Forks can be adjusted in width in 3 stages: 520 / 620 / 720 mm outer width

1. Select the device size

Technical data	PGH
Load-bearing capacity (kg)	1.500
Approx. weight in kg	85
Order-No.	391PGH
€/piece	570,00 €

2. Select the attachment



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

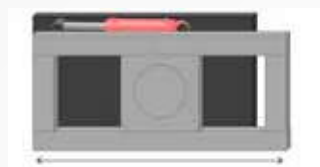
# FORKLIFT ROTATOR KDG



The SAPHIR forklift rotator picks up and empties 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. As a standard, the crates are dumped towards left in the direction of travel. The mounting bracket acts as a stop for the transport boxes. Optionally, the device can also be ordered with clockwise rotation (special equipment).

**Fork tines are not included** in the scope of delivery.

Matching fork tines in different lengths and load bearing capacities can also be delivered via SAPHIR. (see Page 177)



Fork carrier standard  
ISO FEM II  
For carrier width: 1.200 mm  
Angle of rotation approx. 220°







Load-bearing capacity up  
to max. 2.500 kg (with the  
centre of gravity at 500 mm and  
depending upon the fork tines  
used)

## 1. Select the device size

Technical data	KDG 25
Max. load-bearing capacity (kg)	2.500
Direction of rotation	Links (in FR)
Turning range	ca. 220°
Approx. weight in kg	170
Order-No.	391KDG25
<b>€/piece</b>	<b>2.420,00 €</b>

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Fork carrier mount ISO FEM II / III	391KDGGABEL	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
Rotating clockwise in the direction of travel	391KDGRECHTS	120,00 €

Please find various fork tines on page 186

# BOX TIPPING DEVICE KKG



The box tipping device KKG enables a uniform emptying of boxes from front. The box is clamped firmly using the adjustable overhead mounting bracket. Thereafter, the tipping is done in the direction of travel. The tipping angle of approx. 130° provides for an emptying without residues. 2 double-acting control units are required in the series equipment.

Fork tines are not included in the delivery scope, but can be delivered via SAPHIR. (Catalogue page 186)



Suitable for box dimensions:  
Width: 1.200 – 1.800 mm  
Depth: 850 – 1.250 mm  
Height: 800 – 1.250 mm



Fork carrier width 1.200 mm  
Fork carrier standard ISO FEM II  
max. load bearing capacity  
2.500 kg



The tipping angel in the direction of travel is approx. 130°. The contents of the box can thus be emptied without leaving anything behind.

## 1. Select the device size

Technical data	Kistenkippper KKG 25
Load-bearing capacity (kg)	2.500
Fork carriage standard	ISO FEM II
Hydraulic connection	2 x DW
Approx. weight in kg	632
Order-No.	391KKG25
<b>€/piece</b>	<b>4.990,00 €</b>

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



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



<b>Rad- und Teleskoplader ab 2,5 t Hubkraft</b>	391RADTELE	430,00 €
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<b>Variable Lock System</b>	391VARIOLOCK	590,00 €
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## 3. Special fittings

Name	Order-No.	€/piece
<b>Pressure sequence valve</b> 1x da required Upon using this valve, the box is clamped securely at first and thereafter the tipping process is initiated automatically	391DRUCKFOLGEV	840,00 €
<b>Electrical way valve</b> CAUTION: Without electrical kit (6/2-way valve 12 V/90 ltr/min)	391ELEKTRWEGEV	410,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001154-2	180,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001416	230,00 €

Please find matching fork tines on page 186



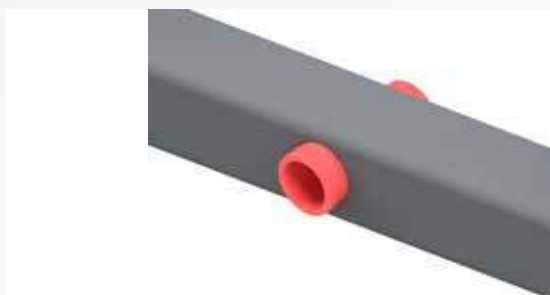
# BALE PIKE BS



BS 5



The SAPHIR bale pike BS is suitable for the fast transport of round or cuboid bales. The height-adjustable bale support also enables the transport of 2 cuboid bales lying one above the other.



Thick-walled tine support pipe with 5 / 7 welded-in conical sleeves Both the models can be fitted optionally with 2 outer lying heavy-duty tines 1.250 mm



Height-adjustable bale support (approx. 700 - 1.100 mm)




Standard tine length 1.100 mm  
Normal load tines Ø 36 mm  
Heavy-duty tines Ø 46 mm

## 1. Select the device size

Technical data	BS 3	BS 5
Approx. width in mm	1.200	1.650
Approx. height in mm	700 - 1.100	700 - 1.100
Number of tines	3	5
Max. load-bearing capacity (kg)	1.500	1.750
Approx. weight in kg	91	120
Order-No.	391BS3	391BS5
€/piece	620,00 €	740,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	VLS Compact	391VARIOLOCK	295,00 €

When ordering, state the type of the host vehicle

## 3. Special equipment

Name	Order-No.	€/piece
Heavy duty 1.250 mm tine	43012502800	70,00 €
Bale Support 1.600 mm 	391005746	210,00 €

# BALE PIKE BSR



The SAPHIR bale pike BSR is especially designed for use at wheel and telescopic loaders. Round and cuboid bales can be transported safely and quickly because of the high bale support and the massive tine support pipe.

Both the models possess two outer lying conical sleeves, which can optionally be fitted with heavy-duty tines.



Standard tine length 1.100 mm,  
optionally 2 heavy-duty tines  
1.250 mm

## 1. Select the device size

Technical data	BSR 3	BSR 5
Width (mm)	1.200	1.650
Height (mm)	1.300	1.300
Number of tines	3	5
Max. load-bearing capacity (kg)	1.750	2.000
Weight (kg)	210	240
Order-No.	391BSR3	391BSR5
€/piece	990,00 €	1.260,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	Series
VLS Compact	391VARIOLOCK	430,00 €



When ordering, state the type of the carrier vehicle

## 3. Special fittings

Name	Order-No.	€/piece
Heavy duty 1.250 mm tines	43012502800	70,00 €

# BALE PIKE PROFI BSP



The SAPHIR bale pike Profi BSP is suitable for especially high requirements for the transport of round and cuboid bales. The various optional extras make the bale pike to be especially powerful and user-friendly. The optionally folding tine support pipe provides for higher safety in road traffic.



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



Tine length 1.000 mm  
Optional: 2 outer lying heavy-duty tines 1.250 mm



An optional folding tine support pipe allows for the safe road transport



As a standard, fitted with mechanically extendable bale supports up to 2.500 mm total height







Optional with hydraulically extractable bale supports up to max. 2.500 mm (1 x da required)

## 1. Select the device size

Technical data	BSP 3	BSP 5
Approx. width in mm	1.300	1.650
Approx. height in mm	1.500 - 2.500	1.500 - 2.500
Number of tines	3	5
Max. load-bearing capacity (kg)	1.750	1.750
Approx. weight in kg	305	330
Order-No.	391BSP3	391BSP5
€/piece	1.090,00 €	1.440,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EUR-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARIOLOCK	590,00 €

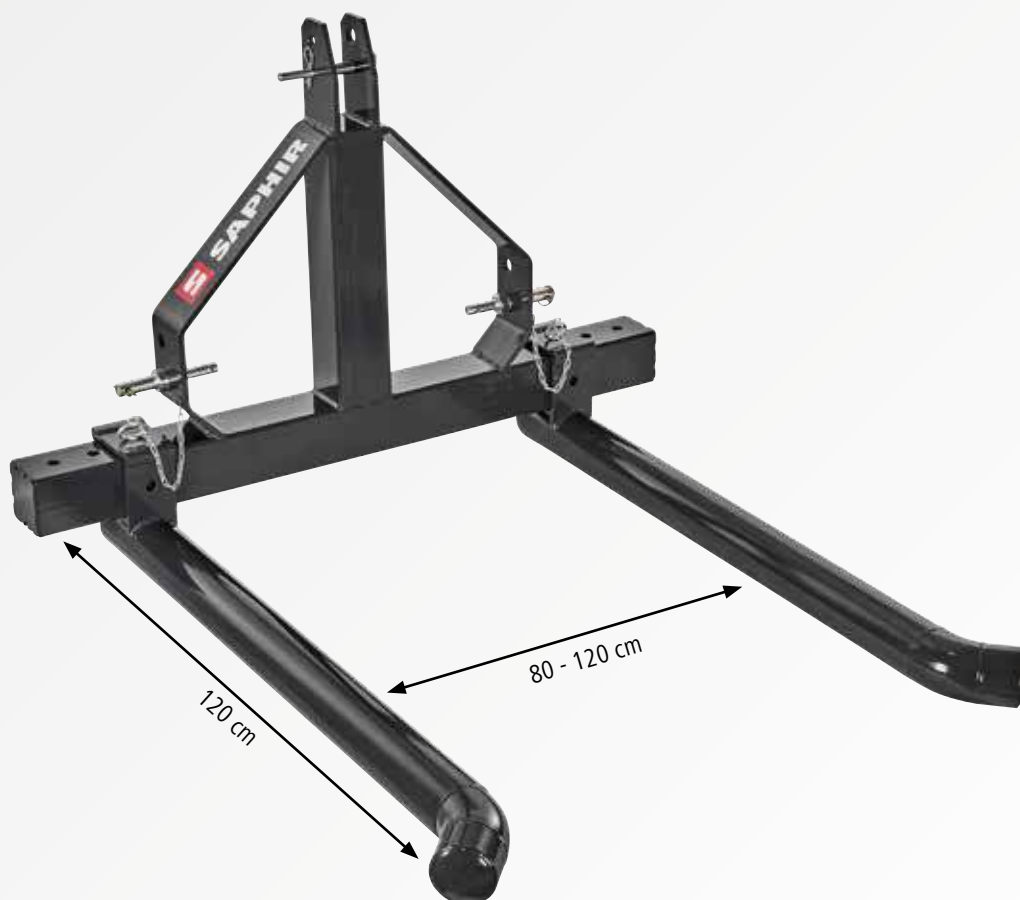
When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
Heavy duty 1.250 mm tines	43012502800	70,00 €
Folding tine support pipe	391KLAPPROHR	440,00 €
Hydraulic bale support 2.500 mm	391HYDRABSTUETZ	580,00 €



# BALE LIFTING FORK BHG



The SAPHIR bale lifting fork serves for the protective transport of round and silo bales in the front- and rear hydraulic system. As a standard, fitted with three-point attachment CAT I/II.



Support arms can be adjusted on the side manually



Suitable for round bales between 1.000 and 1.800 mm



Support arms can be removed and adjusted upwards

# 1. Select the device size

Technical data	BHG
Max. load-bearing capacity (kg)	1.000
Approx. weight in kg	115
Order-No.	391BHG
<b>€/piece</b>	<b>570,00 €</b>

# 2. Select the attachment



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

# BALE ELEVATOR BHS



Using the SAPHIR bale elevator, the lifting height of the host vehicle can be increased by 2.000 mm.

The maximum lifting force 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.



Good visibility through two lifting cylinders fitted on the outside



High stop bracket provides a secure hold to the bales







High-quality large-bale tines with length of 1.100 mm from SHW

## 1. Select the device size

Technical data	BHS
Lifting height max. (mm)	2.000
Lifting force max. (kg)	1.000
Approx. transport width in mm	1.150
Approx. retracted height (mm)	1.670
Approx. weight in kg	265
Order-No.	391BHS
€/piece	<b>2.540,00 €</b>

Please pay attention to the load-bearing capacity of your front loader and to the permissible axle loads of your towing vehicle  
As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Series
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARIOLOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Optional extras

Name	Order-No.	€/piece
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €

# BALE GRIPPER BGZ



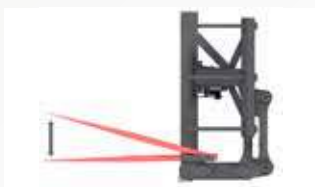
The SAPHIR bale gripper is your unique all-rounder when stacking and loading the bales. The high opening angle of the gripping arms enables loading of round bales with a diameter of 90-200 cm as well as cuboid bales of any size. In doing so, the bales can be loaded from above as well as from the front with the help of the tines with bent tips. For transporting several cuboid bales, it is recommended to have the optional fitting with folding heavy-duty tines in the lower area of the frame. Along with the necessary stability while transporting several bales, these also provide for an easy setting down of the bale stack.



Synchronised opening and closing of the gripper arms, with a large opening width. (1x da required)



Safe stowing of heavy-duty tines



Optional: Folding heavy-duty tines 1.200 mm provide for additional hold when transporting several cuboid bales



Flat stacking of round bales



Tines with bent tips



Stacking of cuboid bales

## 1. Select the device size

Technical data	BGZ
Opening width approx. (mm)	1.300 - 1.800
Height (mm)	1.160
Depth (mm)	650 - 1.100
Number of tines	6
Max. load-bearing capacity (kg)	1.500
Weight (kg)	250
Order-No.	391BGZ
<b>€/piece</b>	<b>2.340,00 €</b>

As standard, fitted with hydraulic plug couplings of the size 3.

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Variable Lock System</b>	391VARIOLOCK-S	<b>Series</b>

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Heavy duty 1.200 mm tines</b>	391004012	<b>75,00 €</b>
<b>Wrapped bales attachment</b> Set consisting of two pluggable holding jaws for transporting the wrapped round bales	391004070	<b>680,00 €</b>



# WRAPPED BALE GRIPPER FBZ



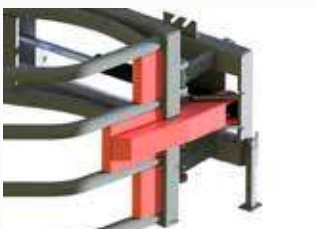
The SAPHIR wrapped bale gripper FBZ is suitable for transporting round bales with a diameter of 0.90 - 1.60 metres. Shifting of bales during loading is prevented by the two movable side shafts. The bales cannot be damaged either because of the narrow design of the arms. The hydraulic cylinder ensures 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 unladen weight and the short design the foil wrap bale gripper is also suitable for small tractors.



Both side arms movable - therefore, bales do not shift



Adjustable parking support



Reinforced side arms without sharp edges





## 1. Select the device size

Technical data	FBZ
Bale diameter approx. (cm)	90 - 160
Max. load-bearing capacity (kg)	1.000
Approx. weight in kg	215
Order-No.	391FBZ
€/piece	<b>1.360,00 €</b>

**Assembly costs:** The hydraulic cylinder also needs to be connected with the side arms.

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Serie
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARIOLOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
Pressure limitation and maintaining valve	391DBVDHV	190,00 €

# CUBOID BALE GRIPPER QBZ

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The SAPHIR cuboid bale gripper QBZ is suitable for the transport of cuboid and silage bales. Clamping brackets and device are designed in such a way that a damage to the wrapped bales is ruled out.

Both the side arms 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 2. bale






Clamping range of 75 to 211 cm

## 1. Select the device size

Technical data	QBZ
Clamping range approx. (mm)	750 - 2.110
Clamping bracket length approx. (mm)	1.100
Approx. transport width in mm	1.150
Max. load-bearing capacity (kg)	1.500
Contact pressure	22 kN bei 130 bar / 32 kN bei 180 bar
Approx. weight in kg	360
Order-No.	391QBZ
<b>€/piece</b>	<b>3.080,00 €</b>

As standard, fitted with hydraulic plug couplings of the size 3.

## 2. Select the attachment

	Name	Order-No.	€/piece
	<b>Euro attachment</b>	391EURO-S	Serie
	<b>Farm and wheel loader up to 2.5 t lifting power</b>	391HOFRAD	240,00 €
	<b>Wheel loader and telescopic loader starting with 2.5 t lifting power</b>	391RADTELE	430,00 €

When ordering, state the type of the host vehicle

# ROUND- AND CUBOID BALE GRIPPER RQZ



The SAPHIR RQZ round and cuboid 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 holding jaws 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 holding jaws







Clamping range  
500 to 1.900 mm

## 1. Select the device size

Technical data	RQZ
Clamping range approx. (mm)	500 - 1.900
Approx. transport width in mm	1.660
Contact pressure	13 - 16 kN
Max. load-bearing capacity (kg)	1.500
Approx. weight in kg	290
Order-No.	391RQZ
€/piece	2.220,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Serie
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	VLS Compact	391VARILOCK	590,00 €

When ordering, state the type of the host vehicle



# BRUSH PILE FORK RG / RGO



SAPHIR brush pile forks 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 screwed-in tines enable a variable adjustment of the number of tines in the machine and hence the clear width between the tines can be adjusted. Included in the series equipment with 3 pipe tines 1.050 mm. 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 damages.



Robust tube tines 1.050 mm  
(standard equipment 3 pieces)  
Optionally, additional tube tines  
can be added.  
(max. number 7 pieces)



The RGO models have two protected hydraulic cylinders



Very wide opening of  
1.550 mm (in the design  
with upper gripper)

## 1. Select the device size

Benennung	RG 20	RG 22	RGO 20	RGO 22
Breite ca. (mm)	2.000	2.200	2.000	2.200
Höhe ca. (mm)	1.100	1.100	1.040	1.040
Tiefe ca. (mm)	1.050	1.050	1.050	1.050
Öffnungsweite ca. (mm)	-	-	1.550	1.550
Zylinderanzahl	-	-	2	2
Zinkenanzahl	3	3	3	3
Inhalt ca. (l)	-	-	1.700	1.900
Gewicht ca. (kg)	410	440	610	640
Best.-Nr.	391RG20	391RG22	391RGO20	391RGO22
€/Stück	2.470,00 €	2.630,00 €	4.240,00 €	4.460,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment



Name	Order-No.	€/piece
Euro attachment	391EUR-S	Serie



Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
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Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
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VLS Compact	391VARILOCK	590,00 €
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When ordering, state the type of the host vehicle

## Special fittings

Name	Order-No.	€/piece
<b>Additional tube tines</b> Maximum 7 tube tines are possible Price per piece	391001749	320,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €

# GREEN FORAGE AND BRUSH PILE GRIPPER GRZ



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 also enables it to be used to push together or collect brushwood in impassable terrain or woods. A jamming of the branches is prevented by the round shape of the upper gripper.



As a standard, fitted with heavy-duty tines 800 mm square profile 44 mm. Optionally, heavy-duty tines XL S 800 round profile 50 mm can also be installed. (see figure above)







Very large opening width of approx. 1.550 mm

## 1. Select the device size

Technical data	GRZ 17	GRZ 19	GRZ 21	GRZ 23	GRZ 25
Approx. width in mm	1.700	1.900	2.100	2.300	2.500
Number of gripper tines (top)	4	4	4	4	5
Number of tines (bottom)	9	10	11	12	13
Approx. capacity in litres	1.300	1.450	1.600	1.750	1.900
Approx. weight in kg	460	490	550	580	640
Order-No.	391GRZ17	391GRZ19	391GRZ21	391GRZ23	391GRZ25
€/piece	3.890,00 €	3.990,00 €	4.090,00 €	4.190,00 €	4.920,00 €

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EURO-S	Serie
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €
	Variable Lock System	391VARIOLOCK	590,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Heavy-duty tines XLS Ø 50 mm</b> 800 mm long Price per piece	43008202801	45,00 €
<b>Pressure limiting valve, adjustable</b> (required starting from 200 bar working pressure)	391001154	180,00 €
<b>Pressure control valve</b> Recommended for Merlo, Bobcat, Dieci	391001416	230,00 €

# WORKING PLATFORM ABB WITHOUT EC PRE-CERTIFICATION



Product video



The working platform without EC pre-certification is suitable for use in the private area. The standing area is covered by a closed base plate. This prevents the equipment units or tools 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 regulation)



Optional: Elevation of 1.200 mm that can be connected with screws (for mounting below the working platform)



Self-closing and locking access door



Optional protective roof for using the working platform in closed rooms



As a standard, fitted with fork tines mount. Optionally with fork tines pockets 120 x 50 mm or fork tines pockets 170 x 90 mm. Please always specify when ordering.



As a standard, fitted with wooden guard all around the edge for sawing works

## 1. Select the device size

Technical data	ABB 1	ABB 2
Width (inside) approx. (mm)	1.240	2.040
Height (inside) approx. (mm)	1.100	1.100
Depth (inside) approx. (mm)	790	1.040
Load bearing capacity (kg)	250	250
Approx. weight in kg	180	320
Order-No.	391ABOEG1	391ABOEG4
€/piece	1.430,00 €	2.510,00 €

## 2. Select the attachment



Name	Order-No.	€/piece
<b>Fork tine attachment</b> 120 x 50 mm	391000619	Serie



<b>Fork tine attachment</b> 170 x 90 mm	391000621	Serie
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Please specify the required fork tines mount along with your purchase order.

## 3. Special fittings

Name	Order-No.	€/piece
<b>Increase 1.200 mm</b> for ABB1	391000581-2	720,00 €
<b>Increase 1.200 mm</b> for ABB2	391406999	1.070,00 €
<b>Safety canopy</b> for ABB1	391000620	330,00 €
<b>Safety canopy</b> for ABB2	391003681	420,00 €
<b>Shunting wheel set ABB 1/2</b> (consisting of 4 running rollers)	391003212	350,00 €

### Technical safety note:

Before commissioning, a technical safety acceptance test in connection with the carrier 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

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Product video



The use 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.

## **Necessary tests and acceptances in case of form-fitting mount**

e.g., quick change mount at the carrier vehicles, such as tractors, wheel and telescopic loaders, ...

up to a fall height of 3.0 metres:

Technical safety acceptance

in case of fall heights of 3.0 m - 10.0 m: EC-type test in connection with the respective carrier vehicle

## Requirements for the carrier vehicle

- Tested stability
- Automatic parallel guide
- Locking tipping function
- Lifting cylinder with pipe rupture protection units
- Adjustable lifting and lowering speed
- Starting from 7.5 m lifting height: Emergency lowering and intercom connection
- EC type testing in case of untested unit
- Expert assessment in case of already tested unit
- Information about the already tested combinations can be obtained directly from SAPHIR
- The prescribed hydraulic safety components for the front loader can be procured from SAPHIR upon request.
- The EC type testing is done according to the regulations of the machine guideline 2006/42/EC.



As a standard, fitted with integrated circular level in the basket.



Optional lifting device with a gain of 2.000 mm in the lifting height (permitted only for ABB EC 1).



Sturdy all-steel design



As a standard, fitted with wooden guard all around the edge for sawing works



With self-closing and locking door



Optional increase of 1.200 mm that can be screwed.



Optional protective roof for working in closed rooms

# WORKING PLATFORM ABB WITH EC PRE-CERTIFICATION




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## 1. Select the device size

Technical data	ABB EG1	ABB EG2
Width (inside) approx. (mm)	1.240	2.040
Height (inside) approx. (mm)	1.100	1.100
Depth (inside) approx. (mm)	790	1.040
Load bearing capacity (kg)	250	250
Approx. weight in kg	180	320
Order-No.	391ABBEG1	391ABBEG2
€/piece	1.960,00 €	3.260,00 €

## 2. Select the attachment

	Name	Order-No.	€/piece
	Euro attachment	391EUR-S	Serie
	Farm and wheel loader up to 2.5 t lifting power	391HOFRAD	240,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391RADTELE	430,00 €

When ordering, state the type of the carrier vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Increase 1.200 mm</b> for ABB EC1	391000581-2	720,00 €
<b>Increase 1.200 mm</b> for ABB EG2	391406999	1.070,00 €
<b>Lifting device HV 20</b> Gain of 2.000 mm in the lifting height, permitted only for ABB EC 1.	391406989	2.930,00 €
<b>Safety canopy</b> for ABB EC1	391000620	330,00 €
<b>Safety canopy</b> for ABB EG2	391003681	420,00 €
<b>Shunting wheel set ABB 1/2</b> (consisting of 4 running rollers)	391003212	350,00 €
<b>Safety packet</b> Hydraulic components for retrofitting of front loaders for the EC type testing	391001885	on demand





# ADAPTER FRAME ADAP



Different adapters can be made for tractors, farm, wheel, and telescopic loaders. With this, forepart dimension and tipping angle are optimally designed. For the attachment devices, the adapter frames are fitted with a mechanical lock. Optionally, the adapter can also be fitted with a hydraulic tool lock.

In order to configure an adapter, please select at first the attachment device mount of the adapter frame from the table given below.

Thereafter, select the carrier vehicle mount of the adapter frame from the overview given on the right page of the catalogue. Both the prices together result in the total list price of the adapter frame.

1. Select attachment device mounts (coloured in red here)







Technical data	ADAP K	ADAP KV	ADAP E	ADAP H	ADAP T
Attachment device mount	Cat. II	Cat. II/III adjustable	Euro attachment	Farm and wheel loader up to 2.5 t lifting power	Wheel loader and telescopic loader starting with 2.5 t lifting power
Order-No.	391ADAPK	391ADAPKV	391ADAPE	391ADAPH	391ADAPT
€/piece	350,00 €	770,00 €	540,00 €	790,00 €	1.090,00 €

Non-standard designs of quick change devices for wheel and telescopic loaders or tool carriers for the permanent installation on the carrier vehicle are available upon request.

On this page you can select the carrier vehicle side of the adapter. Please specify the carrier vehicle (manufacturer and model) as accurately as possible in your purchase order.

## 2. Select carrier vehicle mount (coloured in red here)



	Name	Order-No.	€/piece
	Cat. II	391ADAPKATII	250,00 €
	Euro attachment	391ADAPEUR	270,00 €
	Farm and wheel loader up to 2.5 t lifting power	391ADAPHOFRAD	480,00 €
	Wheel loader and telescopic loader starting with 2.5 t lifting power	391ADAPTELERAD	630,00 €

When ordering, state the type of the host vehicle

## 3. Special fittings

Name	Order-No.	€/piece
<b>Hydraulic locking</b> Can be delivered for ADAP E/H/T upon request	391001329	910,00 €



# QUICK CHANGE DEVICES SWE

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Owing to our long years of experience in the telescopic and wheel loader areas, we are in a position to make complete quick change devices for your carrier vehicle. These replace the ex-factory installed mounts in all their functions, without changing the centre of gravity and the roll-in and out kinematics while doing so.

The connection with the carrier vehicle is made, depending upon the manufacturer, using several permanently fixed bolts. This makes you completely flexible in the procurement of a new wheel or telescopic loader and, with consideration to the manufacturer selection, you need not take into account the attachments already available in your operations.

## Quick change device SWE fork carrier/Euro

Using the SAPHIR quick change device SWE fork carrier/Euro, you are in a position to use working devices with Euro mount on your forklift. For instances, shovels can be filled and emptied without any problem through the hydraulic device activation with a tipping angle of approx. 87°. The tools are locked via a mechanical central locking. The quick change device is ready to use for the fork carrier standard ISO FEM II and ISO FEM III.

Technical data	SWE fork carrier/Euro
Carrier vehicle mount	Gabelträger ISO FEM II / III
Width (mm)	1.180
Height (mm)	1.020
Depth (mm)	450
Load-bearing capacity (kg)	2.500
Tipping angle (°)	87
Hydraulic oil pressure (bar)	180
Weight (kg)	300
Order-No.	391SWEGT
<b>€/piece</b>	<b>2.760,00 €</b>

Two more examples for quick change devices

SWE Caterpillar TH 407C on Volvo L70



SWE Claas Torion 535/639 on Euro



Available for all common vehicle types Prices and delivery times can be given upon request. Please contact us!

# FORKLIFT TRUCK BUCKET - FORK TINE ATTACHMENT GSSZ

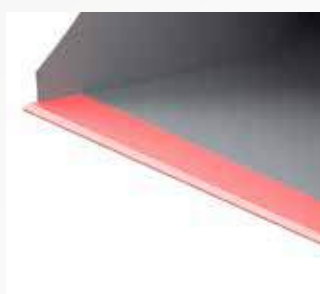
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TOOLS



The SAPHIR forklift truck bucket GSSZ is attached with the fork tines of the fork lift (please consider the tine cross section). It is used for transporting and loading granulated bulk materials (e.g., grain, manure, potatoes, onions, carrots, etc.). The side parts of the bucket are fitted with rounded edge protection as a standard.

A particular feature is that the tipping angle can be adjusted with a screw. The centre of gravity is at approx. 680 mm, whereby the fore-part dimension is approx. 540 mm.



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



The shovel is attached using a fork tine mount and fixed with toggle screws.



Tipping angle can be adjusted by a screw segment



Double joint bearing with slide bearings that can be lubricated

## 1. Select the device size

Technical data	GSSZ 12	GSSZ 15	GSSZ 18	GSSZ 21
Approx. width in mm	1.200	1.500	1.800	2.100
Approx. height in mm	860	860	860	860
Approx. depth in mm	1.350	1.350	1.350	1.350
Content (deleted according to DIN) approx. (l)	750	900	1.200	1.500
Content (cumulative according to SAE) approx. (l)	940	1.120	1.500	1.870
Fork pockets - inner dimension approx. (mm)	110 x 50	130 x 60	130 x 60	130 x 60
Centre of gravity approx. (mm)	630	660	700	730
Approx. weight in kg	305	370	395	430
Order-No.	391GSSZ12	391GSSZ15	391GSSZ18	391GSSZ21
€/piece	2.540,00 €	2.780,00 €	3.020,00 €	3.260,00 €

As standard, fitted with hydraulic plug couplings of the size 3

# FORKLIFT SHOVEL - GSST

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The SAPHIR forklift shovel GSST is a bulk goods shovel permanently attached to the forklift truck by the fork carriage. The especially stable design allows it to be used even under high loads.



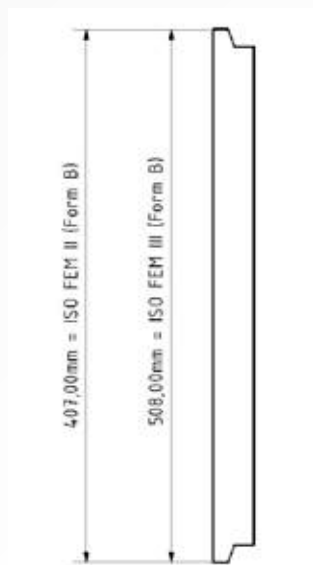
Scraper bar 200 x 20 mm made of highly wear-resistant steel (500 HB)



Two end-cushioned hydraulic cylinders



Especially small fore-part dimension of 250 mm



Ready for installation on fork carrier mount ISO FEM II (407 mm) or ISO FEM III (508 mm)

Please specify the fork carrier standard when placing the order.





Optional edge protection for preventing damages to loaded goods like potatoes or turnips

## 1. Select the device size

Technical data	GSST 16	GSST 20	GSST 23
Approx. width in mm	1.600	2.000	2.300
Approx. height in mm	1.050	1.050	1.050
Approx. depth in mm	1.300	1.300	1.300
Content (deleted according to DIN) approx. (l)	1.280	1.650	1.940
Content (cumulative according to SAE) approx. (l)	1.600	2.000	2.400
Approx. weight in kg	670	720	790
Order-No.	391GSST16	391GSST20	391GSST23
<b>€/piece</b>	<b>4.450,00 €</b>	<b>4.990,00 €</b>	<b>5.420,00 €</b>

As standard, fitted with hydraulic plug couplings of the size 3

## 2. Select the attachment

	Name	Order-No.	€/piece
	Fork carrier standard ISO FEM II	391GSSTISO2	Serie
	Fork carrier standard ISO FEM III	391GSSTISO3	Serie

Please specify the fork carrier standard of your forklift along with your purchase order!

## 3. Special fittings

Name	Order-No.	€/piece
<b>Edge protection</b> Welded tube on the side parts of the shovel Price per set	391GSSTKANTE	150,00 €
<b>Convex side parts</b> can be screwed, price per set	391GSSTSEITKONVEX	290,00 €



# LOOSE WELDING PARTS FOR RETROFITTING OF EXISTING MACHINES

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Type	Price category	Type	Price category
Ahlmann AL 70, 150.....	3	Kramer 180, 250, 350 .....	1
Ahlmann AS7 – AS18 .....	4	Kramer 312-850 .....	2
Ahlmann AX series .....	2	Kramer 880 .....	3
Atlas AR 95 .....	4	Kramer telescopic loader .....	3
Atlas E series till 86E.....	2	Kubota LA series.....	1
Avant Hoflader .....	1	Kubota R410-R520 .....	2
Bobcat compact loader / DIN 24410.....	2	Liebherr L506P – 509P .....	3
Bobcat Telescopic loader.....	4	Liebherr L506Z-509Z .....	2
Case 21-321 .....	3	Liebherr L512-538 .....	4
Case 521-721 .....	4	Manitou telescopic loader .....	4
Caterpillar 902G-908H.....	1	Massey Ferguson telescopic loader .....	4
Caterpillar 902H-908H.....	2	Matbro telescopic loader .....	3
Caterpillar 928-938 .....	4	Merlo telescopic loader.....	3
Caterpillar Telescopic loader .....	3	MultiOne farm loader .....	1
Claas Telescopic loader .....	3	New Holland telescopic loader .....	3
Deutz Agrovector .....	2	Paus wheel loader .....	3
Dieci Telescopic loader.....	3	Schaeff SKL 821-832 .....	2
Doosan wheel loader .....	4	Schaeff SKL 833-871 .....	3
Faresin Telescopic loader .....	4	Schäffer 9380T .....	4
Fuchs farm loader .....	1	Schäffer hydraulic.....	2
Gehl farm loader.....	2	Schäffer mechanical.....	1
Genie telescopic loader.....	3	Sennebogen telescopic loader .....	4
Giant farm loader .....	2	Terex telescopic loader.....	3
Hanomag 10-20E/F.....	3	Terex TL 160 – 360 .....	4
Hanomag 33-44 .....	4	Terex TL 65 .....	2
Hydrema WL470-830.....	3	Terex TL 80 - 120 .....	3
JCB 2 CX, 3CX, 4CX.....	2	Thaler farm loader .....	1
JCB 403 .....	1	Volvo L 50 – 70 .....	4
JCB 406-409B.....	2	Volvo L20-L45 Z.....	2
JCB 410-456.....	4	Wacker WL 18 – WL 50 .....	2
JCB 520-40 – 527-55.....	2	Wacker WL 55, 57 .....	3
JCB 526S .....	3	Weidemann 4070, 4204, 8080 .....	3
JCB 530-70 – 541-70.....	3	Weidemann hydraulic.....	2
JCB Robot.....	1	Weidemann mechanical.....	1
JLG telescopic loader .....	2	Zeppelin ZL 7 – 12 B.....	3
John Deere telescopic loader .....	3	Zeppelin ZL 80 – 110.....	3
Kioti CK series.....	1	Zeppelin ZL4, 6, 6S .....	2
Komatsu telescopic loader .....	3	Zettelmeyer 302-602 .....	1
Komatsu WA200-320 .....	4	Zettelmeyer 602B - 1002 .....	3
Komatsu WA65-85 .....	2		

Name	Order-No.	€/set
Price category 1	391ANSCHWPK1	180,00 €
Price category 2	391ANSCHWPK2	260,00 €
Price category 3	391ANSCHWPK3	310,00 €
Price category 4	391ANSCHWPK4	390,00 €

Please mention the manufacturer and the model of your carrier vehicle when placing the order.