

CHOPSTAR, ROLLSTAR, HILLSTAR, ROW-GUARD, JUMBO
UNIVERSAL ROW CROP CULTIVATION TECHNOLOGY

Einböck



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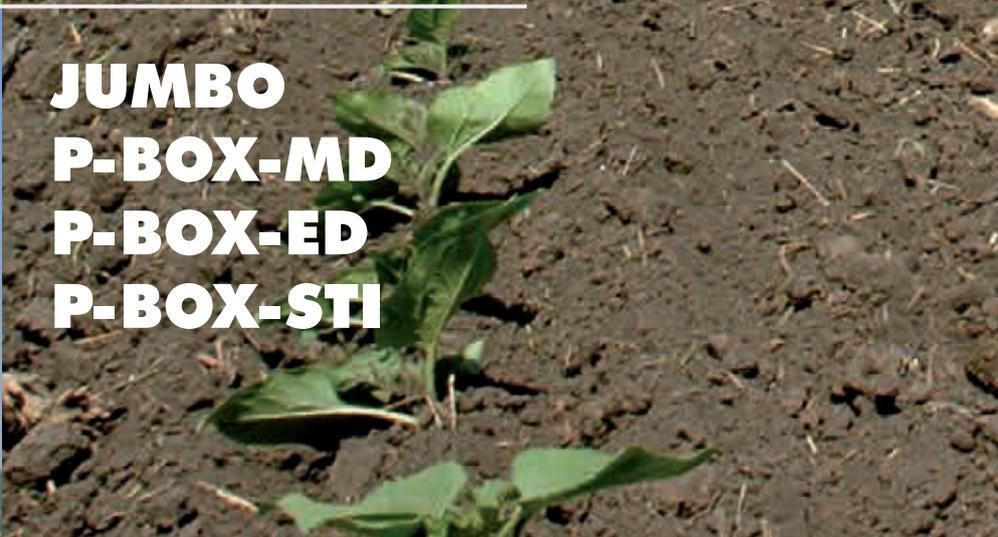
CHOPSTAR
ROLLSTAR
HILLSTAR
ROW-GUARD
JUMBO



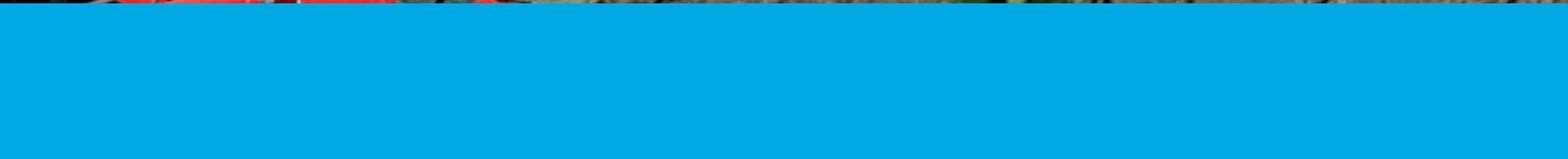
**CHOPSTAR
ROLLSTAR
HILLSTAR**



ROW-GUARD



**JUMBO
P-BOX-MD
P-BOX-ED
P-BOX-STI**





MECHANICAL WEED CONTROL **PROPERLY DONE**

SUCCESS FACTORS:

- PROPER CROP ROTATION
- ADAPTED SOIL PREPARATION
- EFFICIENT HOEING TECHNOLOGY

In contrast to chemical weed control the mechanical approach does not only control weeds, but also achieves excellent results in soil aeration, nitrogen mobilization, regulation of the water balance etc.

To be successful in the long term, however, basic agronomic considerations in all aspects of crop production must be made:

- Efficient primary tillage builds the basis for successful mechanical weed control.
- All tillage operations must fulfill the killing objective, the planted seed competes only against seeds, not mature plants.
- Seeding depth has an indirect influence on successful mechanical weed control. Blind cultivation enables you to destroy a large amount of weeds, whereby the best result is achieved when the weeds are in the germinating stage. This operation shall not harm the germinating seeds. Blind cultivation with the Einböck AEROSTAR, the AEROSTAR-EXACT and the AEROSTAR-ROTATION between seeding and germination of the crop is only possible with an increased seeding depth.
- The crop rotation should involve a wide variety of different crops. Proper crop rotation can help to prevent the massive appearance of problem weeds.
- Nitrogen considerations: excessive use of nitrogen-based fertilizer leads to a high amount of problem weeds.
- Seedbed preparation constitutes an essential precondition for the success of mechanical weed control. Good soil conditions and seedbed preparation at the earliest possible moment are prerequisites for any mechanical weed control. Einböck offers a large variety of machinery for seedbed preparation.



HILLSTAR

HILLSTAR – this is what Einböck calls ridgers for hill-crops with large, concave discs. These machines are used to push soil up in hill-crops. A pre-loosening tine breaks up the soil and the inclined discs transport the earth, pulled down by erosion, up the hill again.

Due to the large smooth discs no hair roots of the crop close to the surface are harmed. The discs have high quality, maintenance free bearings and can be ideally adjusted in the angle. The optional guided hill-weeder (3 sections) additionally fights weeds.

General: Page 4-11

Detailed description HILLSTAR: Page 24 and 25



ROLLSTAR

ROLLSTAR – these are the row-crop cultivators with rolling hoe-stars. These cultivators are mainly used in light soils. This machine is mainly used by clients who want to use it on a variety of crops like potatoes, vegetable, corn, etc.

Depending on the row spacing the machine is equipped with a variable number of rolling hoe-stars. Height adjustable pre-loosening tines in front of the stars support the work for the following stars.

For a wider row spacing or weeding width two pre-loosening tines are used. As the stars can be pivoted horizontally and vertically, the soil flow can be directed towards or away from the crop, plus small hills can be maintained. Upon request the machine can be equipped with hinged crop protection shields or hill-weeders. In case you want to use the ROLLSTAR as a front mounted implement you need a special front mounting support which is available upon request.

General: Page 4-11

Detailed description ROLLSTAR: Page 22 and 23



CHOPSTAR

CHOPSTAR – these are the cultivators equipped with spring tines or vibrotines. These cultivators are mainly used in medium to heavy soil and only for a particular crop, e.g. beet or corn. Depending on the desired working depth the tines and sweeps can differ. For row spacing larger than 60 cm / 23.6" shares and tines for greater working depths are offered.

For narrow row spacing special vibrotines equipped with shallow working sweeps are recommended. The number of tines and the width of sweeps per hoe section depend on row distance and weeding width. Furthermore, adjustable crop protection shields or rolling discs to protect the small plants in the first weeding operation are available.

The CHOPSTAR design allows you to convert a rear-mounted machine quickly to a front mounted one. Front mounted machines push the parallelograms, that results in a close mounting of the row crop cultivator.

On the hoeing-sections a lot of different options like hilling elements, hilling sweeps, weeder tines, finger-hoes, etc. can be mounted.

ROW SPACING:

CHOPSTAR 20-30 cm 7.9-11.8" GRAIN	CHOPSTAR 25-59 cm 9.8-23.3" SOYBEANS, BEET...	CHOPSTAR 60-90 cm 23.6-35.4" CORN, SUNFLOWER...	CHOPSTAR 91-150 cm 35.8-59" PUMPKIN, CAULIFLOWER, STRAWBERRY...
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General: Page 4-11

Detailed description CHOPSTAR: Page 12 to 21



RIGID



Frame for a front mounted machine



Frame for a rear-mounted machine with upper-link steering

HYDRAULIC FOLDING



Frame for a front mounted machine, hydraulic folding



Frame for a rear-mounted machine, hydraulic folding with upper-link steering





STRONG FRAMES FOR HIGH LOADS

The frame, on which the parallelograms are mounted, is available in a rigid or a hydraulic folding version.



Frame for a rear-mounted machine with double folding frame (4 hinge points) for reduced transport width for large machines



SIMPLY AND QUICKLY ADJUSTABLE

The frame is the same whether you choose a CHOPSTAR, ROLLSTAR or a HILLSTAR.

The special profile-frame used by Einböck, allows mounting of the parallelograms through a single clamp lever.





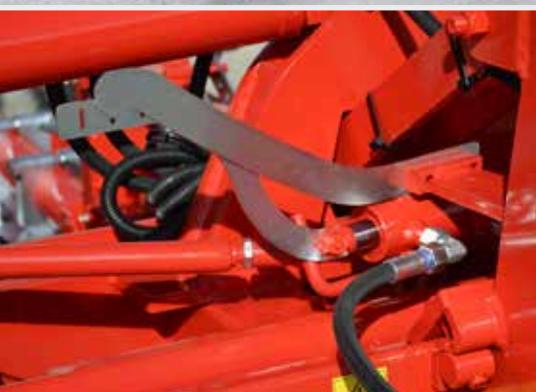
The **working depth** of the hoe element can be adjusted through the spindle of the Farmflex feeler wheel. The tension spring and the adjustment bracket control the downforce of the parallelogram.



Upper-link steering for exact weeding even in hilly terrain and in curves (rear mount machines only).



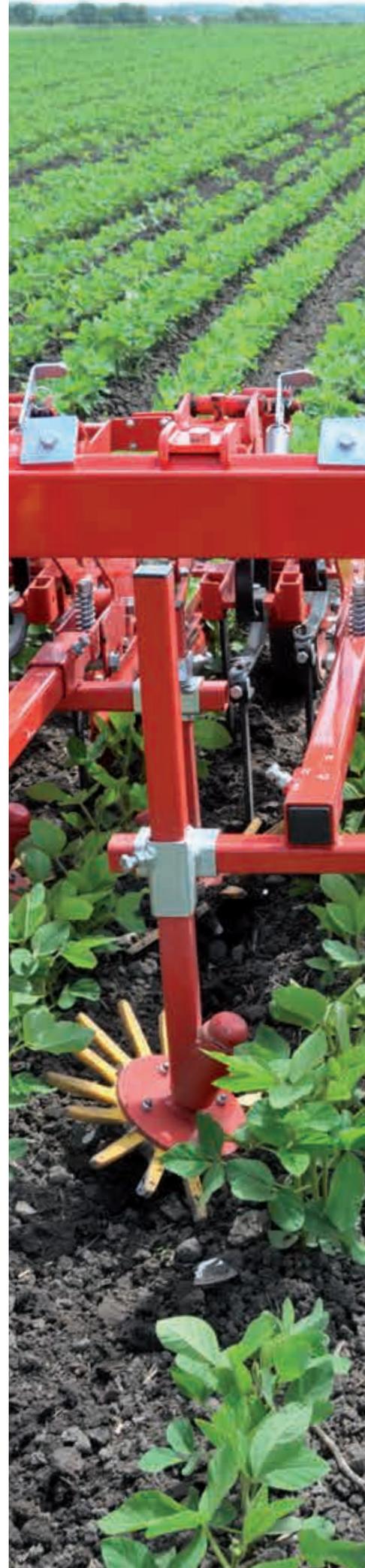
High-gauge wheels provide an optimal guidance of the row crop cultivator (rear mount machines only). The weight of the cultivator is carried by the gauge wheels, therefore traction of the front wheels is not effected.



The action of the **upper link steering** can be increased hydraulically. At the headland the cylinder always has to be switched to the other direction. It is recommended for slopes over 6 %.



Clevis mounting brackets with removable pin.





HIGHER YIELDS AND BETTER QUALITY

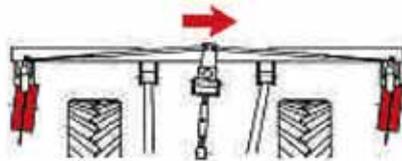
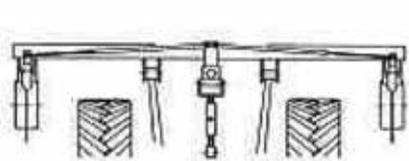
WITH WELL-MAINTAINED ROW CROPS

Due to agronomical, organizational or commercial reasons mainly herbicides were used to keep weeds in check in the past. This chemical weed control reduced costs and efforts while at the same time it helped to increase profits and to stabilize crop yield. This resulted in the fact that typical "cultivation crops" have turned into "chemical crops". Lately, because of the significant disadvantages of chemical weed control, an increased interest in mechanical weed control can be realized. The following reasons are basis for this trend:

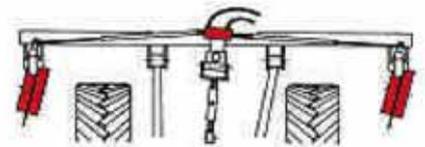
- The appearance of difficult to control weeds that have partially become resistant against certain groups of herbicides
- A ban on a number of pesticides
- A drastic price increase of pesticides
- The general focus on environmental care
- The tolerance of an acceptable amount of weeds in the field
- Improved machine range: upper-link steering for rear mounted machines, ROW-GUARD camera guided steering system

Mechanical weed control also has positive aspects on the soil:

- Increased aeration
- Disruption of the capillary action
- Breaking of crusts
- Conservation of soil nutrients that are often destroyed or displaced by chemical releases
- Biological life is sustained
- The natural soil microorganisms ensure good plant health

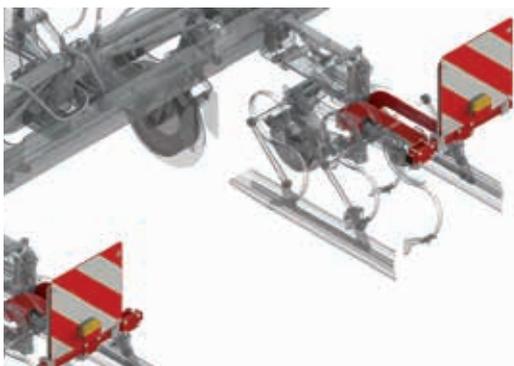


Upper-link steering system

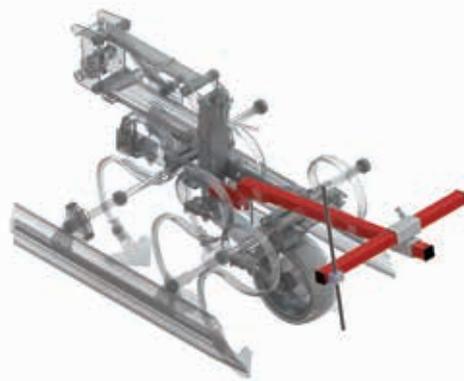


System with hydraulic steering support

Depending on the number of rows, rear-mounted machines are equipped with an **automatic upper-link steering system**. It allows operation on slopes up to 6 %. In turns or contour strips the cultivator will follow exactly the tractor. The steering is done via high gauge-wheels so there is no need for the tractor to carry the machine. It is operated with activated automatic hitch control and freely movable lower links (approx. 7 cm / 3" each side). This ensures that the front wheels of the tractor retain full traction, which gives a better maneuverability, especially in hilly terrain.



Warning signs and lights are available for an extra charge.



Because the front-view to the crops is often restricted, front mounted machines are standard equipped with a **track indicator**.

Standard equipment CHOPSTAR, ROLLSTAR and HILLSTAR

- Clevis mounting brackets with removable pin

- Rear-mounted machines with automatic upper-link steering including upper link (adjustable in length) and high-gauge wheels

- Front mounted machines with track indicator for improved guidance

- Downpressure adjustments on all parallelograms

- Heavy duty designed parallelograms

- Farmflex depth control wheels, ø 300 mm / 11.8", 100 mm / 4" wide, ball bearings, adjustable via a hand crank

- Operating instructions



STANDARD EQUIPMENT **CHOPSTAR, ROLLSTAR, HILLSTAR**

- Heavy duty frame (special design, no U-bolts used)
- Hydraulic folding machines with extra-strong triple frame
- Greasing points on all joints
- High quality tines and sweeps
- Rear-mounted machines (depending on the number of rows) with automatic upper-link steering and high-gauge wheels with stripper and splash guard
- Quick adjustment of the parallelograms
- Easy vertical and horizontal adjustment of the tines
- Easy conversion from rear- to front mount, no additional parts necessary (only possible on the standard version of CHOPSTAR row crop cultivator)
- Tempered joint pins (on hydraulic folding machines)
- Universal parallelogram with downpressure adjustment

All row crop cultivators, CHOPSTAR, ROLLSTAR or HILLSTAR, are equipped with the same, wide parallelogram with downpressure adjustment and Farmflex depth control wheel.



Hoe element parallelogram on front mounted machines (only on CHOPSTAR)



Hoe element parallelogram on rear-mounted machines



**Standard equipment
CHOPSTAR 20-30 cm / 7.9-11.8"**

Variable adjustment of row spacing 20-30 cm / 7.9-11.8"
Clevis mounting brackets
Mounting category CAT II
Rear mounted machines: autom. top link steering with top link and high-gauge wheels
Downpressure adjustment on each parallelogram
Farmflex depth control wheels adjustable by hand crank
Heavy duty designed parallelograms
Special vibrotines are adjustable horizontally and vertically
Front mounted machines with track indicator for guidance
Quick conversion from rear to front mount
Hoe element with 1 sweep 180 mm / 7"
Operating instructions

**Optional equipment
CHOPSTAR 20-30 cm / 7.9-11.8"**

Frame extension
Adjustable weeder tines (see page 20)
Additional parallelogram guided hinged crop protection shields, adjustable in height, from a row spacing of 25 cm / 9.8" (see page 13)
Upper link Cat. III for rear mount machines with upper-link steering
Vibrotine with mounting brackets and special-nut
Sweeps from 120-300 mm / 4.7-11.8"
Warning signs with lights
Pneumatic intercrop seeder / fertilizer distributor

Technical data CHOPSTAR 20-30 cm / 7.9-11.8"

Type/ Working width	Transport- width in m / ft ¹	Frame length in m / ft	Tines	Hoe elements	hp/kW	Weight approx. kg / lbs
REAR MOUNTED						
EGS 12-rows RIGID	3.20 / 10.5	3.20 / 10.5	13	13	40/30	700 / 1543
EGS 16-rows HG ²	3.00 / 9.8	4.20 / 13.8	17	17	70/51	1.200 / 2.646
EGS 24-rows HG ²	3.00 / 9.8	6.20 / 20.3	25	25	80/59	1.560 / 3.439
EGS 32-rows HG ^{2,3}	3.30 / 10.8	8.20 / 26.9	33	33	90/66	2.120 / 4.674
FRONT MOUNTED						
EGS 12-rows RIGID	3.20 / 10.5	3.00 / 10.5	13	13	40/30	680 / 1.500
EGS 16-rows HG ²	3.00 / 9.8	3.80 / 12.5	17	17	70/51	1.100 / 2.425
EGS 24-rows HG ²	3.00 / 9.8	6.20 / 20.3	25	25	80/59	1.450 / 3.197
EGS 32-rows HG ²	3.30 / 10.8	8.20 / 26.9	33	33	90/66	1.940 / 4.277

Technical data and measurements are approximate and non-binding. We reserve the right to change construction and specification.

Frame-profile-length = row distance x rows + 20 cm/7.9" (transport width will change!)

¹ depending on row spacing

² hydraulic folding – triple-frame

³ 2 high-gauge-wheels instead of upper link steering and 1 rubber support wheel each on the outer wing



CHOPSTAR 20-30

GRAIN



Hoe section **CHOPSTAR 20-30 cm / 7.9-11.8"**
with vibrotine and duckfoot sweep



Hinged crop protection shield for hoe section CHOPSTAR
20-30 cm / 7.9-11.8" from a row spacing of 25 cm / 9.8"
(optional)





**Standard equipment
CHOPSTAR 25-59 cm / 9.8-23.3"**

Variable adjustment of row spacing 25-45 cm / 7.9-17.7"
(plant protection discs or shields not possible)

Variable adjustment of row spacing 37-45 cm / 14.6-17.7"
(plant protection discs or shields are possible)

Special-vibrotines are adjustable horizontally and vertically

Parallelogram-guided hinged crop protection shields
(adjustable in position) or rolling discs

Complete hoe element with 2 duckfoot sweeps
140 mm / 5.5", 1 duckfoot sweep 160 mm / 6.3"

Half hoe element with 1 duckfoot sweep 140 mm / 5.5",
1 duckfoot sweep 160 mm / 6.3"

**Optional equipment
CHOPSTAR 25-59 cm / 9.8-23.3"**

Frame extension for wider row spacing

Adjustable weeder tines – also for working in the row
(see page 20)

Finger weeders for work in between the plants
(see page 21)

Heaping share for vibrotine (see page 20)

Hydraulic or mechanical steering support
(not possible on all machines)

Warning signs and lights

Pneumatic intercrop-seeder / fertilizer distributor

Angle-knives (see page 20)

Technical data CHOPSTAR 25-59 cm / 9.8-23.3"

Type/ Working width	Transport width in m / ft ¹	Frame length in m / ft ¹	Tines	Hoe elements	hp/kW	Weight with plates (approx. kg / lbs)	
						rear	front
ERS 5-rows RIGID ⁶	2.45 / 8.0	2.45 / 8.0	16	6	30/22	630 / 1389	-
ERS 6-rows RIGID	3.00 / 9.8	3.00 / 9.8	19	7	40/30	660 / 1455	830 / 1830
ERS 8-rows HG ²	3.00 / 9.8	3.80 / 12.5	25	9	60/44	990 / 2183	970 / 2138
ERS 12-rows HG ²	3.20 / 10.5	5.60 / 18.4	37	13	70/51	1380 / 3042	1270 / 2800
ERS 15-rows HG ^{2, 5}	3.20 / 10.5	6.95 / 22.8	46	16	90/66	1780 / 3924	-
ERS 18-rows HG ^{2, 4}	4.80 / 15.7	8.30 / 27.2	55	19	130/96	2120 / 4674	-
ERS 18-rows HG ^{3, 4}	3.00 / 9.8	8.30 / 27.2	55	19	130/96	2310 / 5093	-
ERS 24-rows HG ^{2, 4}	6.70 / 22.0	11.00 / 36	73	25	160/118	2700 / 5952	-
ERS 24-rows HG ^{3, 4}	4.55 / 15	11.00 / 36	73	25	160/118	2910 / 6415	-

Technical data and measurements are approximate and non-binding. We reserve the right to change construction and specification.

Length of frame profile = row spacing x number of rows + 20 cm / 7.9" (transport width will change)

¹ for a row spacing of 45 cm / 17.7"

² hydraulic folding - triple-frame

³ hydraulic folding – double folding frame (paket-folding)

⁴ 4 high-gauge wheels instead of upper link steering

⁵ 2 gauge wheels and 1 rubber support wheel on each side wing instead of upper-link steering

⁶ with support - gauge wheels follow the tractor track



CHOPSTAR 25-59

SOYBEANS, BEET...



Hoe section CHOPSTAR 25-59 cm / 9.8-23.3", with **hinged crop protection shields** and vibrotines for shallow operation



Hoe section CHOPSTAR 25-59 cm / 9.8-23.3", complete, with **rolling discs** and vibrotines for shallow operation





MOUNTED SWEEPS

Row spacing	Front row of tines Hoe element complete / half	Middle row of tines Hoe element complete / half	Last row of tines Hoe element complete / half
60-69 cm 23.6-27.2"	2 pieces / 1 piece 120 mm/4.7" half-duckfoot sweep	2 pieces / 1 piece 105 mm/4.1" duckfoot sweep	1 piece 180 mm / 7.1" duckfoot sweep
70-74 cm 27.6-29.1"	2 pieces / 1 piece 120 mm/4.7" half-duckfoot sweep	2 pieces / 1 piece 180 mm/7.1" duckfoot sweep	1 piece 180 mm / 7.1" duckfoot sweep
ab 75 cm above 29.5"	2 pieces / 1 piece 180 mm/7.1" duckfoot sweep	2 pieces / 1 piece 180 mm/7.1" duckfoot sweep	1 piece 180 mm / 7.1" duckfoot sweep

**Standard equipment
CHOPSTAR 60-90 cm / 23.6-35.4"**

- Variable adjustment of row spacing 60-70 cm / 23.6-27.6"
- Rear tine with reinforcement spring, adjustable in height
- Excellent horizontal tine adjustment
- Parallelogram-guided hinged crop protection shields or rolling discs (adjustable)

**Optional equipment
CHOPSTAR 60-90 cm / 23.6-35.4"**

- Frame extension for wider row spacing
- Spring-mounted hilling element (see page 20)
- Heaping share for S-tine (see page 20)
- Adjustable weeder tines also for working in the row (see page 20)
- Hydraulic or mechanical steering support (not possible on all machines)
- Finger weeders for work in between the plants (see page 21)
- Shallow working vibrotines, adjustable in height
- Pneumatic intercrop-seeder / fertilizer distributor
- Warning signs and lights

Technical data CHOPSTAR 60-90 cm / 23.6-35.4"

Type/ Working width	Transport width in m / ft ¹	Frame length in m / ft ¹	Tines	Hoe elementsz	hp/kW	Weight with protection shields (approx. kg / lbs) rear	front
EMS 2-rows RIGID ⁵	1.60 / 5.3	1.60 / 5.3	11	3	20/15	470 / 1036	390 / 860
EMS 4-rows RIGID	3.00 / 9.8	3.00 / 9.8	21	5	40/30	640 / 1411	560 / 1235
EMS 4-rows HG ²	3.00 / 9.8	3.00 / 9.8	21	5	50/37	920 / 2028	700 / 1543
EMS 6-rows RIGID	4.40 / 14.4	4.40 / 14.4	31	7	60/44	930 / 2050	720 / 1587
EMS 6-rows HG ²	3.00 / 9.8	4.40 / 14.4	31	7	60/44	1120 / 2469	1020 / 2249
EMS 8-rows RIGID	5.80 / 19.0	5.80 / 19.0	41	9	80/59	1140 / 2513	1220 / 2690
EMS 8-rows HG ²	3.20 / 10.5	5.80 / 19.0	41	9	80/59	1320 / 2910	-
EMS 12-rows HG ^{2, 4}	4.80 / 15.7	8.60 / 28.2	61	13	140/103	2040 / 4497	-
EMS 12-rows HG ^{3, 4}	3.00 / 9.8	8.60 / 28.2	61	13	140/103	2270 / 5004	-
EMS 16-reihig HG ^{2, 4}	6,90	11,40	81	17	160/118	2100 / 4630	-

Technical data and measurements are approximate and non-binding. We reserve the right to change construction and specification.

Length of frame profile = row spacing x number of rows + 20 cm / 7.9" (transport width will change)

- ¹ for a row spacing of 70 cm / 27.6"
- ² hydraulic folding – triple-frame
- ³ hydraulic folding – double folding frame, folds to 3.00 m / 9.8 ft transport width (paket-folding)
- ⁴ 4 high-gauge wheels instead of upper link steering
- ⁵ with support - gauge wheels follow the tractor track



CHOPSTAR 60-90

CORN, SUNFLOWER...



For crops that require shallow hoeing, the hoe section CHOPSTAR 60-90 cm / 23.6-35.4" is also available with shallow working **vibrotines** (optional)



Hoe section CHOPSTAR 60-90 cm / 23.6-35.4" complete, with **hinged crop protection shields and Danish spring tines**



Hoe section CHOPSTAR 60-90 cm / 23.6-35.4" complete, with **notched rolling discs and Danish spring tines**





**Standard equipment
CHOPSTAR 91-150 cm / 35.8-59"**

Variable adjustment of row spacing 60-150 cm / 23.6-59"

Rear tine with reinforcement spring, height adjustable

Excellent horizontal tine adjustment

Parallelogram-guided hinged crop protection shields or rolling discs (adjustable)

Hoe sections with duckfoot sweeps 180 mm / 7.1"

**Optional equipment
CHOPSTAR 91-150 cm / 35.8-59"**

Frame extension for wider row spacing

Spring-mounted hilling element (see page 20)

Adjustable weeder tines – also for working in the row (see page 20)

Hydraulic or mechanical steering support (not possible on all machines)

Finger weeders for work in between the plants (see page 21)

Pneumatic intercrop-seeder / fertilizer distributor

Warning signs and lights

Technical data CHOPSTAR 91-150 cm / 35.8-59"

Type/Working width	Transport width in m / ft ¹	Frame length in m / ft ¹	Tines	Hoe elements	hp/kW	Weight with protection shields (approx. kg / lbs)	
						rear	front
EKS 2-row RIGID	3.00 / 9.8	2.55 / 8.4	20	4	40/30	480 / 1058	440 / 970
EKS 3-rows HG ²	3.00 / 9.8	4.05 / 13.3	30	6	60/44	1000 / 2205	840 / 1984

¹ for a row spacing of 150 cm / 59"

² hydraulic folding - triple-frame



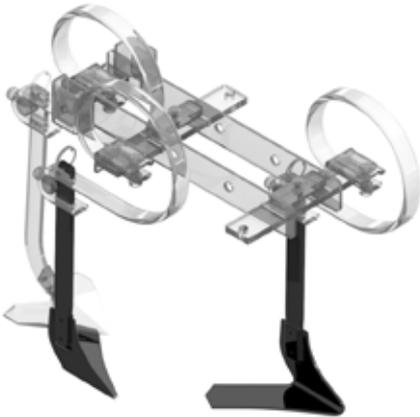
CHOPSTAR 91-150

PUMPKIN, CAULIFLOWER, STRAWBERRY...

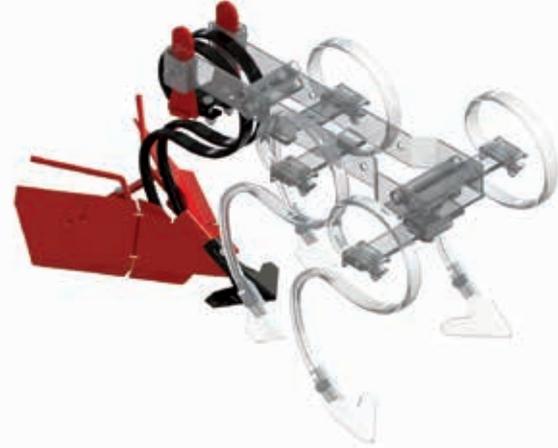


Hoe section CHOPSTAR 91-150 cm / 35.8-59" complete, with **hinged crop protection shields and Danish spring tines**





Straight or cranked **angle knives** are available on request.



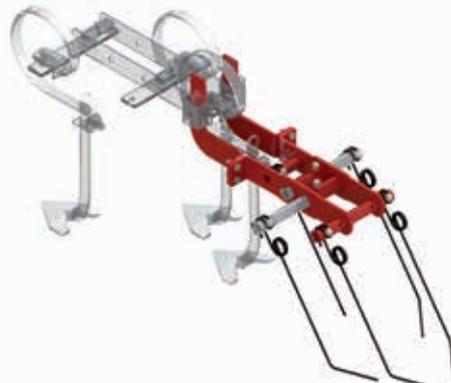
This **hilling element** can be mounted instead of the rear tine of the CHOPSTAR 60-90 cm / 23.6-35.4" to maintain potato hills or hill crop rows



Heaping shares are used for hilling up the plant rows. They can be mounted on the holder of the vibrotine as well as on the Danish spring tine.



Reinforcement spring for the Danish spring tine and the vibrotine



Adjustable weeder tines for CHOPSTAR 20-30 cm / 7.9-11.8", CHOPSTAR 25-59 cm / 9.8-23.3" and CHOPSTAR 60-90 cm / 23.6-35.4". The outer tines on each section can be turned around, in order to push soil away from or towards the row (not on CHOPSTAR 20-30 cm / 7.9-11.8").

BEST CHOPSTAR TECHNOLOGY INDIVIDUALLY EQUIPPED

Depending on the row spacing the vibrotines are offered with 120-300 mm / 4.7-11.8" wide duckfoot sweeps.

The finger weeders work in between the plants in the crop row. For the front version additional support wheels are required.





Standard equipment ROLLSTAR

Variable adjustment of row spacing 30-70 cm / 11.8-27.6"
 - vegetable and beet 30-50 cm / 11.8-19.7"
 - corn 60-70 cm / 23.6-27.6"

1 height-adjustable pre-loosening tine with duckfoot sweep per hoe section on the potato or vegetable version

2 height-adjustable pre-loosening tines with duckfoot sweeps per hoe section on the corn version

Hoe stars mounted on angular roller bearings, individually removable

Hoe stars made of high wear-resistant material

Optional equipment ROLLSTAR

Frame profile extension for wider row spacing

Guided hill-weeder (3 sections)

Hydraulic or mechanical steering support (not possible on all machines)

Front mounting support

Warning signs and lights

Pneumatic intercrop-seeder / fertilizer distributor

Technical data ROLLSTAR

Type/working width	Transport width in m / ft ¹	Frame length in m / ft ¹	Hoe elements	Hoe stars	hp/kW	Weight approx. kg / lbs
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Corn: Row spacing 60-70 cm / 23.6-27.6", adjustable

EMR 2-rows RIGID ⁵	1.60 / 5.2	1.60 / 5.2	3	16	20/15	550 / 1213
EMR 4-rows RIGID ⁵	3.00 / 9.8	3.00 / 9.8	5	32	40/30	820 / 1808
EMR 6-rows RIGID	4.40 / 14.4	4.40 / 14.4	7	48	60/44	920 / 2028
EMR 6-rows HG ²	3.00 / 9.8	4.40 / 14.4	7	48	60/44	1180 / 2602
EMR 8-rows HG ²	3.20 / 10.5	5.80 / 19.0	9	64	80/51	1450 / 3197

Potato: Row spacing 60 – 70 cm / 23.6-27.6", adjustable

EKR 2-rows RIGID ⁵	1.60 / 5.2	1.60 / 5.2	3	8	20/15	520 / 1146
EKR 3-rows RIGID ⁵	2.30 / 7.5	2.30 / 7.5	4	12	30/22	490 / 1080
EKR 4-rows RIGID	3.00 / 9.8	3.00 / 9.8	5	16	40/30	750 / 1653
EKR 6-rows RIGID	4.40 / 14.4	4.40 / 14.4	7	24	60/44	800 / 1764
EKR 6-rows HG ²	3.00 / 9.8	4.40 / 14.4	7	24	60/44	1060 / 2337
EKR 8-rows HG ²	3.20 / 10.5	5.80 / 19.0	9	32	80/59	1450 / 3197
EKR 12-rows HG ^{3,4}	3.00 / 9.8	8.60 / 28.2	13	48	140/103	2000 / 4410

Beet, vegetable, special crops: Row spacing 30-45 cm / 11.8-17.7", adjustable

EGR 2-rows RIGID ⁵	1.10 / 3.6	1.10 / 3.6	3	8	15/11	550 / 1213
EGR 3-rows RIGID ⁵	1.60 / 5.2	1.60 / 5.2	4	12	20/15	490 / 1080
EGR 4-rows RIGID ⁵	2.00 / 6.6	2.00 / 6.6	5	16	40/30	730 / 1610
EGR 5-rows RIGID ⁵	2.45 / 8.0	2.45 / 8.0	6	20	50/37	710 / 1565
EGR 6-rows RIGID	3.00 / 9.8	3.00 / 9.8	7	24	60/44	800 / 1764
EGR 7-rows HG ²	3.00 / 9.8	3.35 / 10.1	8	28	60/44	1200 / 2646
EGR 8-rows HG ²	3.20 / 10.5	3.80 / 12.5	9	32	70/51	1290 / 2844
EGR 12-rows HG ²	3.20 / 10.5	5.60 / 18.3	13	48	80/51	1650 / 3638

Technical data and measurements are approximate and non-binding. We reserve the right to change construction and specification.

Length of frame profile = row spacing x number of rows + 20 cm / 7.9" (transport width will change)

¹ for a row spacing of 70 cm / 27.6" (potato, corn) respectively 45 cm / 17.7" (beet, vegetable)

² hydraulic folding - triple-frame

³ hydraulic folding - double folding frame, folds to 3.00 m / 9.8 ft transport width (paket-folding)

⁴ 4 high-gauge wheels instead of upper link steering

⁵ with support - gauge wheel behind the tractor track



ROLLSTAR

VARIOUS HOE SECTIONS



Guided hill-weeder (3-sections)
for covering and pulling out weeds
along the potato hills.

When the ROLLSTAR is used front
mounted, a special front mounting
support is used.



Example: ROLLSTAR Potato EKR 4-rows





Standard equipment HILLSTAR

Soil loosening tine with 180 mm / 7.1" sweep
Row spacing variable adjustable 65-70 cm / 25.6-27.6"
Hoe section complete with 1 sweep 180 mm / 7.1" and double disc
Hoe section half with 1 sweep 180 mm / 7.1" and single disc
Hilling discs laterally adjustable
Exact adjustment of the angle of the discs

Optional equipment HILLSTAR

Frame extension for wider row spacing
Guided hill-weeder (3 sections)
Hydraulic or mechanical steering-support (not possible on all models)
Pneumatic intercrop-seeder / fertilizer distributor
Warning signs and lights

Technical data HILLSTAR

Type/Working width	Transport width in m / ft ¹	Frame length in m / ft ¹	Tines	Hilling elements	hp/kW	Weight approx. kg / lbs
EHC 2-rows RIGID ⁵	1.60 / 5.2	1.60 / 5.2	3	3	20/15	360 / 794
EHC 4-rows RIGID	3.00 / 9.8	3.00 / 9.8	5	5	40/30	600 / 1323
EHC 4-rows HG ²	2.80 / 9.2	3.00 / 9.8	5	5	50/37	720 / 1587
EHC 6-rows RIGID	4.40 / 14.4	4.40 / 14.4	7	7	60/44	850 / 1874
EHC 6-rows HG ²	3.00 / 9.8	4.40 / 14.4	7	7	60/44	980 / 2161
EHC 8-rows RIGID	5.80 / 19.0	5.80 / 19.0	9	9	80/59	1040 / 2293
EHC 8-rows HG ²	3.20 / 10.5	5.80 / 19.0	9	9	80/59	1350 / 2976
EHC 12-rows HG ^{2,4}	4.80 / 15.7	8.60 / 28.2	13	13	120/88	1580 / 3483
EHC 12-rows HG ^{3,4}	3.00 / 9.8	8.60 / 28.2	13	13	140/103	2100 / 4630

Technical data and measurements are approximate and non-binding. We reserve the right to change construction and specification.

Length of frame profile = row spacing x number of rows + 20 cm / 7.9" (transport width will change)

- ¹ for a row spacing of 70 cm / 27.6"
- ² hydraulic folding – triple frame
- ³ hydraulic folding - double folding frame, folds to 3.00 m / 9.8 ft transport width (4 Fold)
- ⁴ 4 high-gauge wheels instead of upper link steering
- ⁵ mit Zwischenbock - Spurkranzräder hinter der Traktorspur



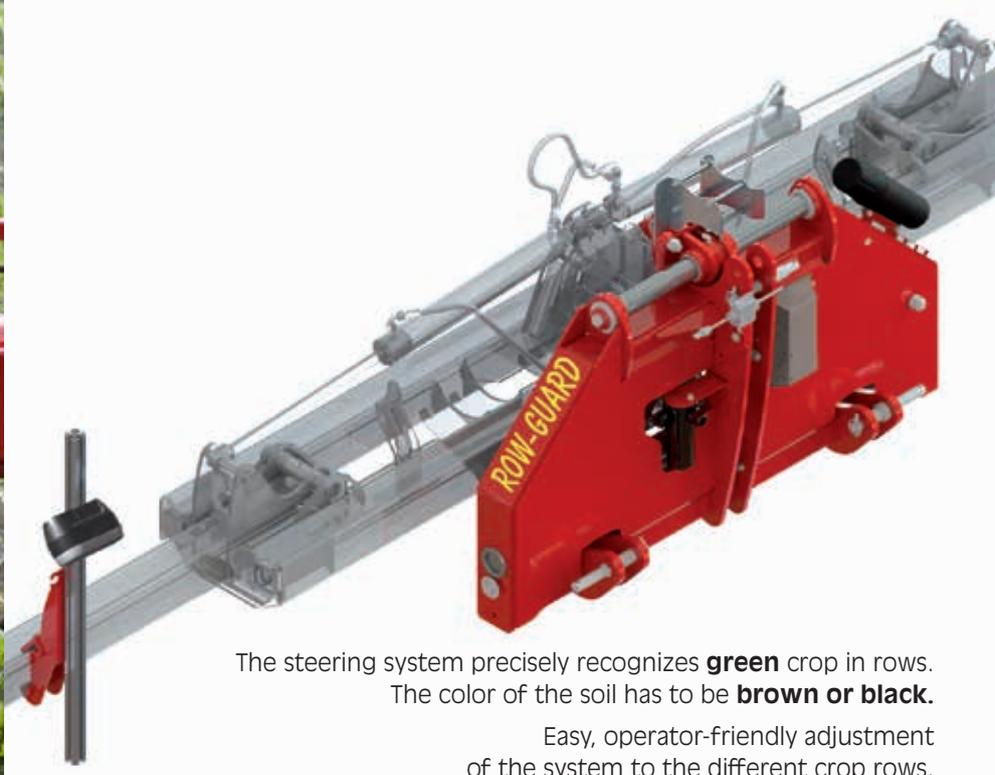
HILLSTAR

EFFICIENT **HILLING OPERATION**



Guided hill-weeder (3-sections)



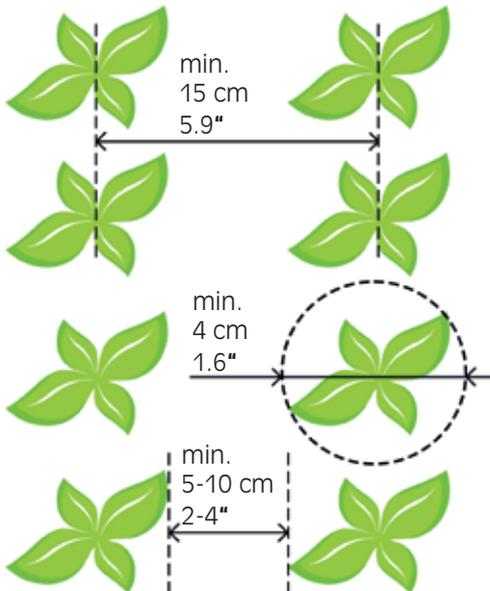


The steering system precisely recognizes **green** crop in rows. The color of the soil has to be **brown or black**.

Easy, operator-friendly adjustment of the system to the different crop rows.

The big field of vision over several rows ensures good guidance also in fields with high weed pressure.

The two lenses of the camera have different exposure settings, what minimizes the influence of shade (also in strong sunlight).



TECHNICAL HIGHLIGHTS

- **Quick couplers on the lower links simplify mounting of the hoe**
- **Lower- and upper links are equipped with hardened bushings**
- **Big offset of total 500 mm / 19.7" – corrects even serious aberration from the path**
- **Solid holder for camera with quick couplers to adjust the position and the angle of the camera without tools**

Standard equipment ROW-GUARD

Sideshift frame with offset of 500 mm / 19.7" in total
Clevis mounting bracket
Upper- and lower links equipped with hardened bushings
Quick couplers for easy and quick attachment of the hoe
Guidance shaft made from high-strength, coated metal for minimized wear and tear
Camera with 2 lenses with different exposure for improved operation in changing light conditions
Holder for camera for Einböck hoes
Wheel sensor with holder and connection cable suitable for farmflex wheels of Einböck hoes
Sensor on the upper link to determine the position of the 3 point linkage
Control unit with universal holder for the tractor cabin
Parking support
Storage box for camera and control unit
1 single acting hydraulic valve with pressure-free return line and 12 V power plug necessary
Operating instructions

Technical data ROW-GUARD

Type/Working width	Weight approx in kg / lbs
ROW-GUARD 500 ¹	390 / 860
ROW-GUARD 500 SR ²	530 / 1168
ROW-GUARD 500 SRHD ³	960 / 2116

- ¹ for frames up to 6,99 m / 22,93 ft working width
- ² for frames up to 12,2 m / 40 ft working width
- ³ for frames from 12,2 m / 40 ft working width

Optional equipment ROW-GUARD

Xenon-working light for operation during night
Stabilizing discs – recommended for small tractors (upon request)
Extension cable for camera
Extension cable for wheel sensor
Additional wheel sensor with holder for additional hoes
Additional holder for camera for additional hoes
Ground wheel with sensor – necessary for other brand hoes



PRECISION CAMERA STEERING EXACTLY IN BETWEEN THE ROWS

The ROW-GUARD camera steering system guides hoes precisely, even in high speed. Via a control unit in the tractor cabin the precision guidance system can be adjusted comfortably. The picture captured by the camera is being analyzed on spots with a high concentration of green pixel. With help of the available information about row-configuration of the crop (row spacing, number of rows, etc.) a raster is put on top of the picture. This data builds the basis for the information provided to the sideshift frame which guides the hoe exactly in between the rows.



All the advantages of the ROW-GUARD system are obvious:

- improved working accuracy
- in combination with finger weeders all soil is distributed
- extremely efficient weed control!

Extremely high working speed (up to 15 km/h - 9.3 mph, depending on field conditions) are possible, depending on field and crop conditions.

The operator does not get tired so quickly, the required concentration is limited to stay in between the rows – the exact steering is done by the ROW-GUARD steering system.

The system can be used in various different green crops, independently from row spacing, number of rows, etc.

The **hydraulic fan** produces the necessary airstream to transport the fertilizer or the seeds from the seeding unit to the rear mounted distribution heads and further on to the outlets.

From a transport distance of the seeds of 10 m the optionally available rotary airlock ensures that the airstream does not escape via the seeding unit and that the necessary air pressure is available.



The **seeding roller** is driven by a big ground wheel and therefore the distribution rate is always adjusted to the working speed. With the hydraulically liftable ground wheel the JUMBO can be mounted to the tractor without hydraulic front linkage.



The **seeding volume** is regulated by a lever and different seeding rollers. The machine is supplied with two seed metering rollers allowing distribution of nearly every seed or fertilizer (independent from the seed or particle size).

Standard equipment front-tank JUMBO

1500 l / 42.5 bu / 53 cu-ft tank volume
Seeding unit made from stainless steel - painted
Hydraulic fan (1 single acting hydraulic valve with up to 30 l/min - 1.14 bu/min - 1.06 cu-ft/min capacity and pressure free return line with 3/4" coupling necessary)
Big ground drive wheel with hydr. lifting cylinder (1 single acting valve necessary)
Variable gearbox for quantity regulation
Disconnectable agitation shaft
Up to 4 seed metering rollers
Calibration pan
Operating instructions

Optional equipment front-tank JUMBO

Rotary airlock (necessary for seed transportation above 10 m / 33 ft)
Hydr. hose set (when the tractor has hydr. valves only at the rear)
Lightning
Parking support
Filling steps

Technical data JUMBO

Type	Rotary airlock	Weight approx. kg / lbs	Transport way
JUMBO OZ	without	450 / 992	up to 10 m / 33 ft
JUMBO MZ	with	460 / 1014	more than 10 m / 33 ft



JUMBO

FULL VOLUME FOR INCREASED PRODUCTIVITY

The front JUMBO tank gives the opportunity to distribute seeds or fertilizer when working with folding row-crop cultivators and provides improved weight distribution! The tank has a volume of 1500 litres / 42.5 bu / 53 cu-ft and can work in combination not only with various different rear mounted row-crop cultivators, but also with various different types of rear mounted machines (e.g. tined weeders, field cultivators,...).





INTERSOWING IS THE BEST EROSION PROTECTION

For the distribution of seeds (or fertilizer) you can mount our pneumatic seeding boxes

P-BOX-MD, P-BOX-ED and **P-BOX-STI**.

You can find further information in our leaflet for the seeding boxes!

For rigid CHOPSTAR 60-90 cm / 23.6-35.4", ROLLSTAR Corn or HILLSTAR **mechanical fertilizer distributors** made from stainless steel are available.





INDIVIDUAL SOLUTIONS

TUNED TO YOUR REQUIREMENTS

We can produce a row-crop cultivator for nearly all row crops for you.
But we need the following information:

- Row spacing
- Number of rows on the planter or drill you used
- Choose front or rear mounting of the row-crop cultivator (or rear mounting in combination with the ROW-GUARD camera steering system)
- Cultivating width per section
(how wide is the initial strip you want to leave unworked)
- In special crops – how deep shall the row-crop cultivator work?
- Are the rows centred between the tractor wheels?
- Hitch category of the tractor
- Track width of the tractor

Related brochures

- AEROSTAR, AEROSTAR-EXACT, AEROSTAR-ROTATION - Tined weeder
- ROTARSTAR - Rotary hoe
- SEEDING MACHINES



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