

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

Einböck



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UNIVERSAL ROW CROP CULTIVATION TECHNOLOGY

CHOPSTAR
CHOPSTAR-HYBRID
CHOPSTAR-TWIN
ROLLSTAR
HILLSTAR
ROW-GUARD
JUMBO



**CHOPSTAR
CHOPSTAR-HYBRID
CHOPSTAR-TWIN
ROLLSTAR
HILLSTAR**



ROW-GUARD



**JUMBO
P-BOX-MD
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.



CHOPSTAR



HILLSTAR



ROLLSTAR

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 28 and 29

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.

General: Page 4-11

Detailed description ROLLSTAR: Page 26 and 27

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 1-30

11.8"

GRAIN

CHOPSTAR 3-60

23.6"

SOYBEANS, BEET...

CHOPSTAR 5-90

35.4"

CORN, SUNFLOWER...

CHOPSTAR 10-150

59"

PUMPKIN, CAULIFLOWER, STRAWBERRY...

General: Page 4-11

Detailed description CHOPSTAR: Page 12 to 21

CHOPSTAR-HYBRID This inter-row crop cultivator with horizontal discs is the perfect solution for hoeing in mulch-till. Based on the proven CHOPSTAR hoeing frame there are – at discs mounted to the hoeing section that can rotate freely. The diameter is adapted to the desired row spacing. These discs cut through the soil just below the surface. They harm the roots of the weeds respectively hoe the weed just below the soil surface and below the mulch layer. High-gauge wheels are mounted in front of the discs. They cut the soil and the mulch layer vertically to guarantee a smooth operation without any clogging.

It is also the first choice for hoeing in special crops, in vegetables and in crops with a lot of green mass because it operates below the leaves and doesn't harm the crop. The – at discs and the cutting high-gauge wheels prevent a clogging also in fields with a high amount of weed, as it could happen with conventional tines. This guarantees a perfect hoeing result.

General: Page 4-11

Detailed description CHOPSTAR-HYBRID: Page 22 and 23



CHOPSTAR-HYBRID

CHOPSTAR-TWIN The CHOPSTAR-TWIN was developed for hoeing exactly above the row. The hoeing parallelogram does not operate in the classic way in between the rows but directly above the row. The result is a very narrow hoeing strip and the hoeing can be done at a very early stage of the crop growth and very narrow to the crop. The hoeing element consists of two vertical cutting discs that are adjustable in angle and distance, and two angle knives following the discs. Two Farmflex wheels running close to the crop row allow a very exact adjusting of the working depth. The CHOPSTAR-TWIN is suited for special crops, grain, soybean, vegetables, etc.

General: Page 4-11

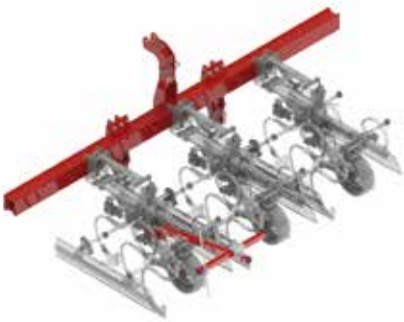
Detailed description CHOPSTAR-TWIN: Page 24 and 25



CHOPSTAR-TWIN



RIGID



Frame for a front mounted machine

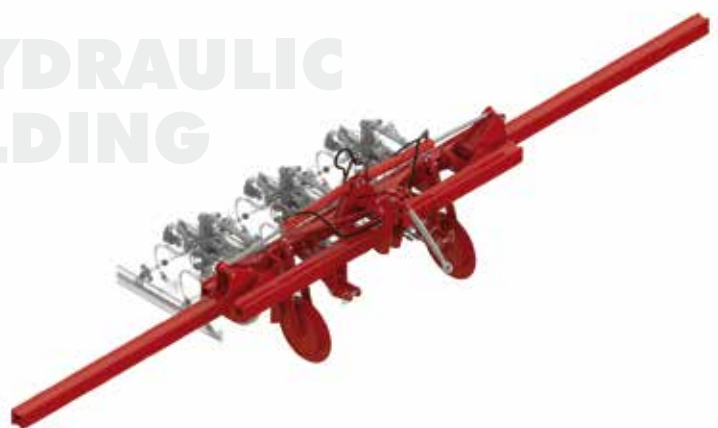


Frame for a rear-mounted machine with upper-link steering

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

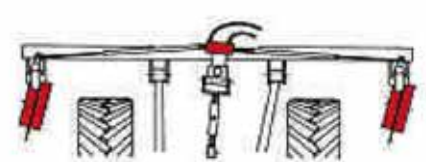
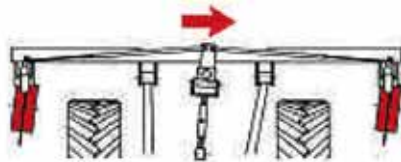
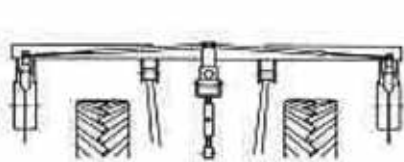
WITH WELL-MAINTAINED ROW CROPS

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



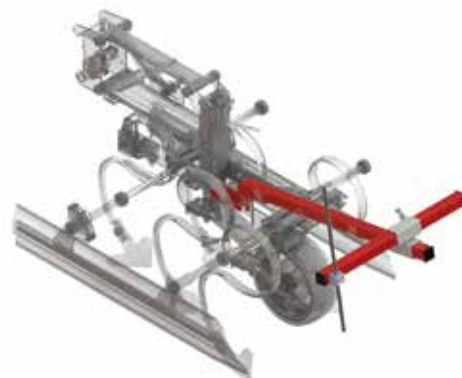
Upper-link steering system

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, \varnothing 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 1-30 / 11.8"

Variable adjustment of row spacing 20-30 cm / 7.9-11.8"
Standard vibro tines 32x12 (vibro tines 40x12 optionally)
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
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 1-30 / 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)
Protection discs, adjustable in height, mounted behind the hoeing element – only for rear mounted machines and row distance of 30 cm / 11.8" possible
Upper link Cat. III for rear mount machines with upper-link steering
Vibrotine with mounting brackets and special-nut
Vibrotine 40 x 12 with holder 35 x 11 and sweep with 1 fixing hole
Warning signs with lights
Pneumatic intercrop seeder / fertilizer distributor

Technical data CHOPSTAR 1-30 / 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 1-30

GRAIN



Hoe section **CHOPSTAR 1-30 / 11.8"**
with vibrotine and duckfoot sweep



Hinged crop protection shield for hoe section
CHOPSTAR 1-30 / 11.8" from a row spacing of 25 cm / 9.8"
(optional)





Standard equipment

CHOPSTAR 3-60 / 23.6"

Variable adjustment of row spacing up to 60 cm / 23.6"
Standard vibro tines 32x12 (vibro tines 40x12 optionally available)
Rear mounted machines: autom. top link steering with spindle and high-gauge wheels
Adjustable retraction support on each parallelogram
Farmflex-feeler-wheels adjustable by spindles, ball bearing mounted
Robust, adjustable parallelogram
Parallelogram guided crop deflector plates or crop deflector discs
Full hoeing element with 3 Vibrotines - 2 duckfoot sweeps 140 mm / 5.5" and in the centre 1 duckfoot sweep 160 mm / 6.3"
Half hoeing element with 2 Vibrotines - 1 duckfoot sweep 140 mm / 5.5" and in the centre 1 duckfoot sweep 160 mm / 6.3"
Front mounted machines with track indicator
Operating instructions

Optional equipment

CHOPSTAR 3-60 / 23.6"

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)
Vibrotine 40 x 12 with holder 35 x 11 and sweep with 1 fixing hole
Hydraulic steering support for extremely hilly terrain
Warning signs and lights
Pneumatic intercrop-seeder / fertilizer distributor
Angle-knives (see page 20)

Technical data CHOPSTAR 3-60 / 23.6"

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 3-60

SOYBEANS, BEET...



Hoe section CHOPSTAR 3-60 / 23.6", with **hinged crop protection shields** and vibrotines for shallow operation

Hoe section CHOPSTAR 3-60 / 23.6", 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 100 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 5-90 / 35.4"

- ____ Last tine with reinforcement spring and adjustable in height
- ____ Row distance variable adjustable up to 90 cm / 27.6"
- ____ Lower links guided on both sides
- ____ Mounting category CAT II / from 12 rows triple frame, CAT III
- ____ Rear mounted machines: autom. top link steering with spindle and high gauge wheels
- ____ Adjustable retraction support on each parallelogram
- ____ Robust, adjustable parallelogram
- ____ Parallelogram guided crop deflector plates (height adjustable)
- ____ Farmflex-feeler-wheels adjustable through spindles
- ____ Front mounted machines with track indicator
- ____ Operating instructions

Optional equipment
CHOPSTAR 5-90 / 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 steering support for extremely hilly terrain
- ____ Crop deflector discs serrated
- ____ Finger weeders for work in between the plants (see page 21)
- ____ Upper link Cat. III for rear mount machines with upper-link steering
- ____ Pneumatic intercrop-seeder / fertilizer distributor
- ____ Warning signs and lights

Technical data CHOPSTAR 5-90 / 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	-
EMS 8-rows HG ²	3.20 / 10.5	5.80 / 19.0	41	9	80/59	1320 / 2910	1220 / 2690
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 / 22.6	11.40 / 37.4	81	17	160/118	2550 / 5622	-

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 5-90

CORN, SUNFLOWER...



For crops that require shallow hoeing, the hoe section CHOPSTAR 5-90 / 35.4" is also available with shallow working **vibrotines** (optional)



Hoe section CHOPSTAR 5-90 / 35.4" complete, with **hinged crop protection shields and Danish spring tines**



Hoe section CHOPSTAR 5-90 / 35.4" complete, with **notched rolling discs and Danish spring tines**





**Standard equipment
CHOPSTAR 10-150 / 59"**

Last tine with reinforcing spring and adjustable in height
Row distance up to 150 cm / 59" and variable adjustable
Lower links guided on both sides
Mounting category CAT II
Rear mounted machines: autom. top link steering with spindle and high-gauge wheels
Adjustable retraction support on each parallelogram
Robust, adjustable parallelogram
Parallelogram guided crop deflector plates (height adjustable) or crop deflector discs (can be lifted)
Farmflex-feeler-wheels adjustable through spindles
Front mounted machines with track indicator
Hoe element complete - all duckfoot sweeps 180 mm / 7.1"
Operating instructions

**Optional equipment
CHOPSTAR 10-150 / 59"**

Frame-profile extension
Trailing tines adjustable, mounted behind the hoe element, per hoe element
Crop deflector plates
Vibrotine 32 x 12 with holder 30 x 10 and duckfoot sweep, instead of S-tine
Vibrotine 40 x 12 with holder 35 x 11 and sweep with 1 fixing hole, instead of S-tine
Hydraulic steering support for extremely hilly terrain
Finger-hoe
Additional support wheels
Upper link Cat. III for rear mount machines with upper-link steering
Pneumatic intercrop-seeder / fertilizer distributor
Warning signs and lights

Technical data CHOPSTAR 10-150 / 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	900 / 1984

¹ For a row spacing of 150 cm / 59"

² hydraulic folding - triple-frame

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



CHOPSTAR 10-150

PUMPKIN, CAULIFLOWER, STRAWBERRY...

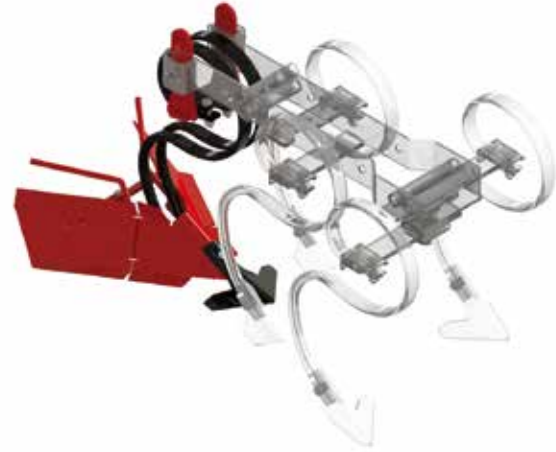


Hoe section CHOPSTAR 10-150 / 35.8-59"
complete, with **hinged crop protection shields**
and **Danish spring tines**





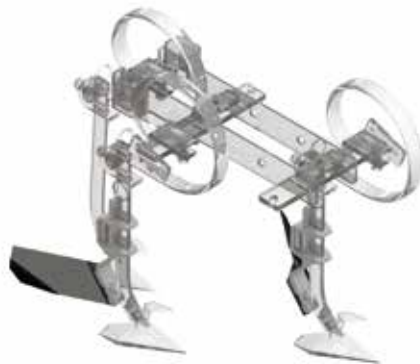
Straight or cranked **angle knives** are available on request.



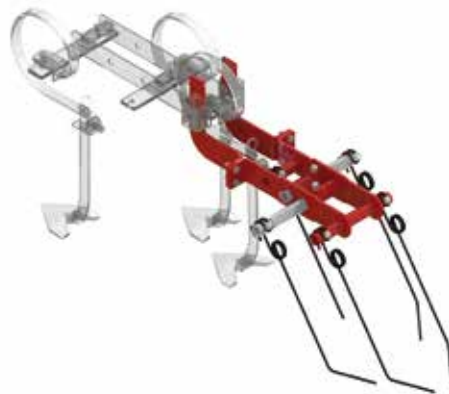
This **hilling element** can be mounted instead of the rear tine of the CHOPSTAR 5-90 / 23.6-35.4" to maintain potato hills or hill crop rows



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 1-30 / 11.8", CHOPSTAR 3-60 / 23.6" and CHOPSTAR 5-90 / 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 1-30 / 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.





HOEING IN MULCH TILL

Standard equipment CHOPSTAR-HYBRID

Variable adjustment of row spacing from 25-50 cm / 9.8-19.7"

Lower links guided on both sides

Mounting category CAT II / from 18 row triple frame, CAT III

Rear mounted machines: autom. top link steering with spindle and high-gauge wheels

Adjustable retraction support on each parallelogram

Adjustable Farmflex-feeler wheels

Robust, adjustable parallelogram

Carrier for horizontal disc with shearbolt overload protection

Element full with horizontal disc \varnothing 350 mm / 13.8"

Half-element with horizontal disc \varnothing 250 mm / 9.8"

Different diameters of horizontal discs on request

Operating instructions

Optional equipment CHOPSTAR-HYBRID

Frame-profile extension

Finger hoe

Adjustable crop deflector discs and shields

Upper link Cat. III for rear mount machines with upper-link steering

Metal gauge wheels instead of Farmflex-wheel

Hydraulic steering support for extremely hilly terrain

Warning signs and lights

Pneumatic air seeder / fertilizer

Technical data CHOPSTAR-HYBRID

Type/ working width	Transport width in m / ft ¹	Frame length in m / ft	Discs	Hoe element	HP/kW	weight approx. kg / lbs
EHH 6-rows RIGID	3.00 / 9.8	3.20 / 10.5	7	7	60/44	660 / 1455
EHH 8-rows HG ²	3.00 / 9.8	4.20 / 13.8	9	9	70/51	990 / 2183
EHH 12-rows HG ²	3.00 / 9.8	6.20 / 20.3	13	13	90/66	1380 / 3042
EHH 15-rows HG ^{2,5}	3.00 / 9.8	7.70 / 25.3	16	16	100/99	1780 / 3924
EHH 18-rows HG ^{2,6}	4.80 / 15.7	9.20 / 30.2	19	19	130/96	2120 / 4674
EHH 18-rows HG ³	3.00 / 9.8	9.20 / 30.2	19	19	130/96	2310 / 5093
EHH 24-rows HG ^{2,4}	6.70 / 22.0	12.20 / 40.0	25	25	160/118	2700 / 5952
EHH 24-rows HG ³	4.90 / 16.1	12.20 / 40.0	25	25	160/118	2910 / 6415

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

¹ standard version - depending on row spacing

² hydraulic folding - tripple frame

³ hydraulic folding - double fold, 4 pcs. airwheels 18x8.50 instead of upper link steering Kat. II on 18-rows, Kat. III on 24-rows

⁴ 4 gauge wheels instead of upper link steering and 1 rubber wheel on the side wing

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

⁶ 4 gauge wheels instead of upper link steering



CHOPSTAR-HYBRID



Parallelogram with **Farmflex-wheel**



Parallelogram with **metal gauge wheel**



Cutting disc
crop deflector discs and shields are optional





EXACT HOEING ABOVE THE ROW

Standard equipment CHOPSTAR-TWIN

Variable adjustment of row spacing from 30 cm / 11.8"
Lower links guided on both sides
Mounting category CAT II / from 18 row triple frame, CAT III
Rear mounted machines: autom. top link steering with spindle and high-gauge wheels
Adjustable retraction support on each parallelogram
Two adjustable Farmflex-feeler wheels
Robust, adjustable parallelogram
2 vertical cutting discs, ø 220 mm / 8.7" adjustable in angle and distance
Vibrotine 40x12 with holder 35x11 and angle knife 160 mm / 6.3" incl. guiding plate
Hoeing parallelogram mounted above the crop row
Operating instructions

Optional equipment CHOPSTAR-TWIN

Frame-profile extension
Finger-hoe
Weeder tines adjustable, mounted behind the hoe element
Upper link Cat. III for rear mount machines with upper-link steering
Hydraulic steering support for extremely hilly terrain
Bypass-tine for hoeing the unworked area
Warning signs and lights
Pneumatic air seeder / fertilizer

Technical Data CHOPSTAR-TWIN

Type/ working width	Transport width in m / ft ¹	Frame length in m / ft	Tines	Hoe elements	HP/kW	weight approx. kg / lbs
ETH 5-rows RIGID ¹	2.10 / 6.9	2.00 / 6.6	10	5	30/22	580 / 1279
ETH 6-rows RIGID ¹	2.75 / 9.0	2.45 / 8.0	12	6	40/30	610 / 1345
ETH 8-rows HG ³	3.00 / 9.8	3.35 / 11.0	16	8	60/44	940 / 2072
ETH 12-rows HG ³	3.00 / 9.8	5.15 / 16.9	24	12	70/51	1330 / 2932
ETH 15-rows HG ^{3,6}	3.20 / 10.5	6.50 / 21.3	30	15	90/66	1730 / 3814
ETH 18-rows HG ^{3,7}	4.80 / 15.7	7.85 / 25.8	36	18	130/96	2070 / 4564
ETH 18-rows HG ⁴	3.00 / 9.8	7.85 / 25.8	36	18	130/96	2260 / 4982
ETH 24-rows HG ^{3,5}	6.70 / 22.0	10.55 / 34.6	48	24	160/118	2650 / 5842
ETH 24-rows HG ⁴	4.90 / 16.1	10.55 / 34.6	48	24	160/118	2860 / 6305

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

¹ with additional frame - gauge wheels in the tractor track

² standard version - depending on row spacing - details upon request or on the order confirmation

³ hydraulic folding - tripple frame

⁴ hydraulic folding - double fold, 4 pcs. airwheels 18x8.50 instead of upper link steering, Kat. II on 18-rows, Kat. III on 24-rows

⁵ 4 gauge wheels instead of upper link steering and 1 rubber wheel on the side wing

⁶ 2 gauge wheels instead of upper link steering and 1 rubber wheel on the side wing

⁷ 4 gauge wheels instead of upper link steering



Parallelogram with
2 Farmflex-wheels



Hoe element with **angle knife and vertical cutting disc**



Hoe element with **finger hoe**





Standard equipment ROLLSTAR

Variable adjustment of row spacing up to 70 cm / 27.6"
Height-adjustable pre-loosening tine with wide sweeps
Lower links guided on both sides
Mounting category CAT II
Autom. top link steering with spindle and high-gauge wheels
Adjustable retraction support on each parallelogram
Robust, adjustable parallelogram
Farmflex-feeler-wheels adjustable through spindles, ball bearing mounted
Active wear resistant hoe stars through optimal distribution of chrome and molybdenum – microcarbides
Hoe stars with angular roller bearing – individually removable
Operating instructions

Optional equipment ROLLSTAR

Frame profile extension for wider row spacing
Guided hill-weeder (3 sections)
Crop deflector plates with mounting device
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 ²	Frame length in m / ft ²	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 ¹	1.90 / 6.2	1.60 / 5.2	3	16	20/15	550
EMR 4-rows RIGID ¹	3.30 / 10.8	3.00 / 9.8	5	32	40/30	820
EMR 4-rows HG ³	3.00 / 9.8	3.00 / 9.8	5	32	50/37	1.080
EMR 6-rows RIGID	4.70 / 15.4	4.40 / 14.4	7	48	60/44	920
EMR 6-rows HG ³	3.00 / 9.8	4.40 / 14.4	7	48	60/44	1.180
EMR 8-rows HG ³	3.20 / 10.5	5.80 / 19.0	9	64	80/59	1.450

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

EKR 2-rows RIGID ¹	1.80 / 5.9	1.60 / 5.2	3	8	20/15	520
EKR 3-rows RIGID ¹	2.50 / 8.2	2.30 / 7.5	4	12	30/22	490
EKR 4-rows RIGID	3.20 / 10.5	3.00 / 9.8	5	16	40/30	750
EKR 4-rows HG ³	3.00 / 9.8	3.00 / 9.8	5	16	50/37	1.010
EKR 6-rows STARR	4.60 / 15.1	4.40 / 14.4	7	24	60/44	800
EKR 6-rows HG ³	3.00 / 9.8	4.40 / 14.4	7	24	60/44	1.060
EKR 8-rows HG ³	3.20 / 10.5	5.80 / 19.0	9	32	80/59	1.450
EKR 12-rows HG ⁴	3.00 / 9.8	8.60 / 28.2	13	48	140/103	2.000

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 with support - gauge wheel behind the tractor track

² depending on row distance - detail upon request or on order confirmation

³ hydraulic folding – triple-frame

⁴ hydraulic folding - double folding frame, 3 m transport width with 4 air wheels 18x8.50 instead of upper link steering - Cat. II



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.



CORN

POTATO



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"

Lower links guided on both sides

Mounting category CAT II

Autom. top link steering with spindle and high-gauge wheels

Adjustable retraction support on each parallelogram

Robust, adjustable parallelogram

Hydraulic guidance system on request

Farmflex-feeler-wheels adjustable through spindles

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

Separate depth adjustment of the hilling discs in a breadboard

Hilling discs laterally adjustable

Operating instructions

Optional equipment HILLSTAR

Frame extension for wider row spacing

Guided hill-weeder (3 sections)

Hydraulic steering support for extremely hilly terrain

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 - Spurkanzräder hinter der Traktorspur



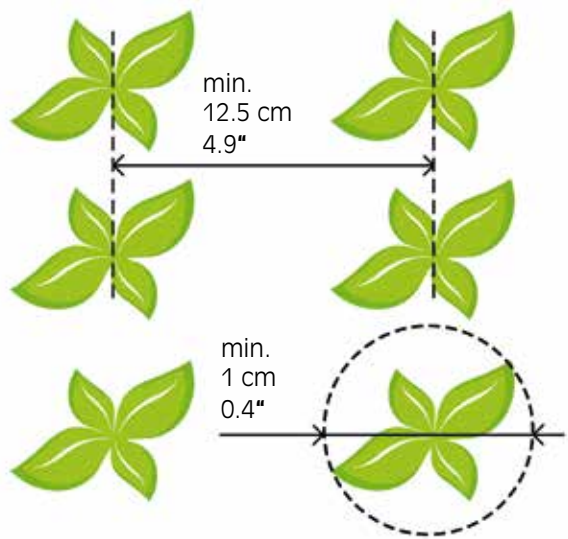
HILLSTAR

EFFICIENT **HILLING OPERATION**



Guided hill-weeder (3-sections)





TECHNICAL HIGHLIGHTS

- **Automatic dual-offset**
- **Capable of detecting multiple rows**
- **Constant system- and sensor-monitoring**
- **Wheel sensor with mounting bracket and connection cable fitting the stabilizing wheel**
- **Camera mounting bracket fitting on Einböck-hoeing machines**
- **Upper and lower links guided on both sides**
- **Quick couplers for quick changing of the inter-row crop cultivator**
- **Sensor on the upper link to determine the position of the 3 point linkage**
- **Control unit with touchscreen und integrated video-monitor and universal-holder for the tractor cab**

Standard equipment ROW-GUARD

- Sideshift-frame with total offset of 500 mm / 21,65 in
- Upper and lower links guided on both sides
- Upper and lower links equipped with hardened bushings
- Mounting category CAT II / category CAT III for type SR and SRHD
- Quick couplers for quick changing of the inter-row crop cultivator
- Guidance shafts made from high-strength, coated metal for minimised wear and tear
- Parking support when ordered without hoe
- Camera with 2 vertically placed, high definition lenses with different exposure for improved operation in changing light conditions
- „Proportional hydraulic valve:
Dynamic valve control for smooth operation of the sideshift frame“
- Holder for camera for Einböck hoes
- Wheel sensor with holder and cable (length 3 m) suitable for the stabilising wheels of the Row-Guard - in case it is ordered!
- Sensor on the upper link to determine the position of the 3 point linkage
- Control unit with touchscreen und integrated video-monitor and universal-holder for the tractor cab
- Operating instructions

Technical data ROW-GUARD

Type/Working width	Hoe kg / lbs	Weight approx in kg / lbs
ROW-GUARD 500 ¹	≤ 2500 / 5512	390 / 860
ROW-GUARD 500 SR ²	≤ 3900 / 8598	530 / 1168
ROW-GUARD 500 SRHD ³	> 4000 / 8818	960 / 2050

- 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

- LED-lights for working at night
- Mechanic feeler for sensing a crop row
- Ground wheel for sensor - necessary for hoes of other producers
- Stabilising wheels with high gauge wheel
- Rubber stabilising wheels
- Rubber support wheels for constant camera position in hilly terrain or uneven fields



ROW-GUARD

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. 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:

- Color mode (green/blue, green/yellow, red)
- 3D-Mode (recognition of crop rows due to different height)
- Recognition of different row structures (single or multiple rows)
- Automatic recognition of camera height and angle (via 3D-mode)
- Integrated chart for recommended camera height
- Automatic switching of offset
- Saving of settings

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

- Hydr. hose set
(when the tractor has hydr. valves only at the rear)

- Lightning

- Parking support

- Filling steps

Technical data JUMBO

Type	Weight approx. kg / lbs
JUMBO MZ	460 / 1014



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,...).





P-BOX-MD P-BOX-STI

INTERSOWING IS THE BEST EROSION PROTECTION

For the distribution of seeds (or fertilizer) you can mount our pneumatic seeding boxes **P-BOX-MD** and **P-BOX-STI**.

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

For rigid CHOPSTAR 5-90 / 35.4", ROLLSTAR Corn or HILLSTAR **mechanical fertilizer distributors FERTIBOX** 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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