

Einböck

**When grassland care
is joy!**

GRASSLAND CARE

GRASSLAND WEEDER
GRASS-MANAGER (-PRO)

GRASSLAND SEEDER
PNEUMATICSTAR (-PRO)



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GRASSLAND WEEDING IN PRACTICE

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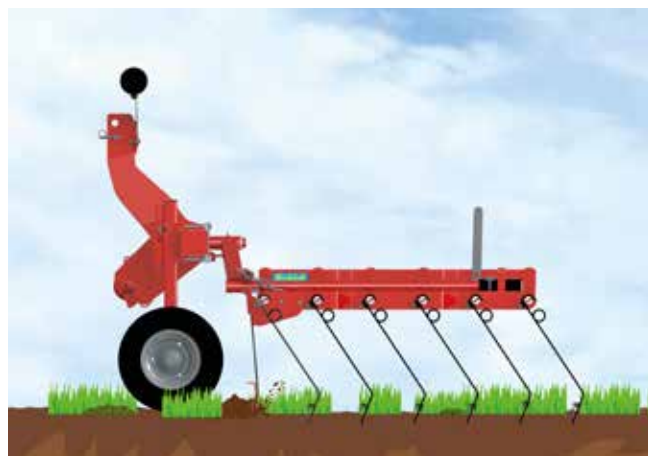
- ✓ Advantages of grassland weeding
- ✓ Different solutions
- ✓ Maintenance and reseedling of grassland
- ✓ Liming, fertilization, grass mixtures
- ✓ Rolling in grassland
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SPECIAL FEATURES OF OUR GRASSLAND WEEDERS

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- ✓ Exact tine position and tine movement
- ✓ True line spacing of 2.5 cm / 1"
- ✓ The right choice of tines
- ✓ And much more



GRASSLAND WEEDER GRASS-MANAGER

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- ✓ Grassland weeding
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- ✓ Levelling the heaps of earth und mole hills
- ✓ De-thatching of the turf



GRASSLAND SEEDER PNEUMATICSTAR

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- ✓ Reseeding with a mechanical or an electrically driven seeding box
- ✓ Grassland weeding
- ✓ Support the vegetation of the grassland
- ✓ Soil aeration in the grassland
- ✓ Levelling (e.g. of mole hills)



GRASSLAND WEEDER GRASS-MANAGER-PRO

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- ✓ Professional machine for contractors or communities
- ✓ Grassland weeding and support of the vegetation
- ✓ Soil aeration in the grassland
- ✓ Heavy triangular plate for perfect levelling
- ✓ Hydraulically controlled, parallel guided weeder sections



GRASSLAND SEEDER PNEUMATICSTAR-PRO

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- ✓ Professional machine for contractors or communities
- ✓ Reseeding with a mechanical or electrically driven seeding box
- ✓ Grassland weeding
- ✓ Support the vegetation of the grassland
- ✓ Hydraulically controlled, parallel guided weeder sections



SEEDING BOXES

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- ✓ Pneumatic seeding box P-BOX-MD with mechanic drive of the seeding roller
- ✓ Pneumatic seeding box P-BOX-STI with electric drive of the seeding roller



UNDERSOWING & SEEDS

PAGE 44-45

- ✓ Undersowing with the grassland weeder
- ✓ Which seed with which machine

ADVANTAGES OF GRASSLAND WEEDING

Repair damages from winter:

Simple levelling is not enough to achieve good yields. Next to levelling of molehills and repair of damages in the turf (e.g. caused by grazing) it is also important to remove dead, shallow rooting grasses. Snow mould, which appears after warm winters especially in turf which grew too high, has to be removed by weeding.

Support tillering of the turf:

The weeder tines hurt the grass a little, this supports tillering. The grass grows with higher density and produces more bio-mass.

Close holes in the turf:

To prevent weeds, e.g. the rough stalk meadow grass, from spreading, holes in the turf have to be covered with seeds of valuable grasses. Annual over-seeding can prevent problems in this respect. Open spots or holes in the turf (molehills) very likely build crusts.

Incorporation of fertilizer:

Manure and slurry have to be crushed and incorporated in the turf. In case they remain on the grass stalks they can burn the grass or slow down decomposition.

Reduce contamination of the fodder:

Levelling of molehills and incorporation of fertilizer in the turf reduce the contamination of the fodder with ash during harvesting. This ensures an improved quality of the fodder.



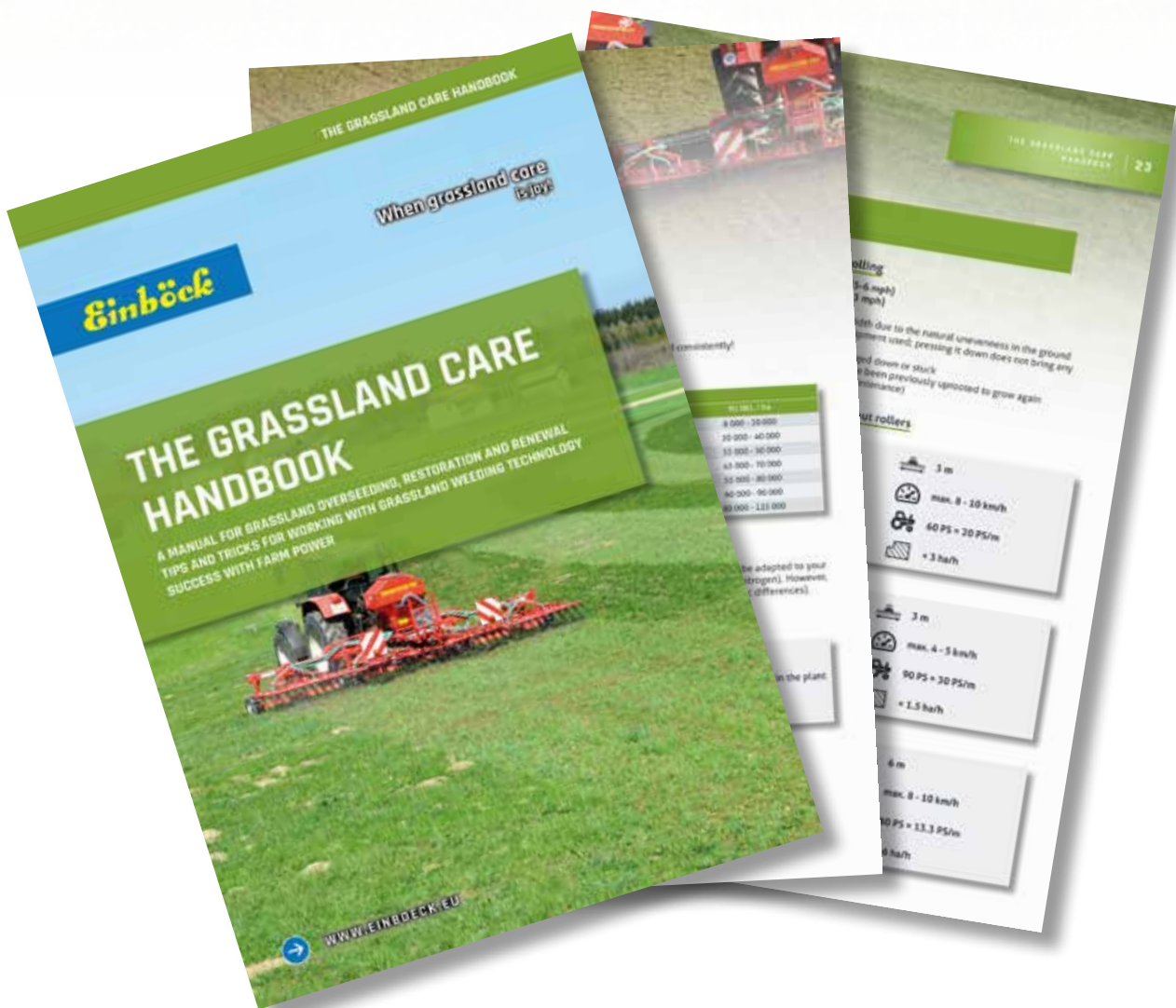
GRASSLAND WEEDING IN PRACTICE

Experience reports and information of the practical use of our grasslandcare-weeding-technology you can find in our "Grassland care handbook". There you will find everything about grassland weeding as well as other topics related to the management of grassland.

Topics which might be interesting for you:

- » Different solutions
- » Maintenance and reseeding of grassland
- » Liming, fertilization, grass mixtures
- » Rolling in grassland & trial reports

You can download the handbook at www.einboeck.at/en/know-how



Longlasting experience results in reliable machines







SPECIAL FEATURES OF OUR GRASSLAND WEEDERS

GRASS-MANAGER (-PRO) | PNEUMATICSTAR (-PRO)

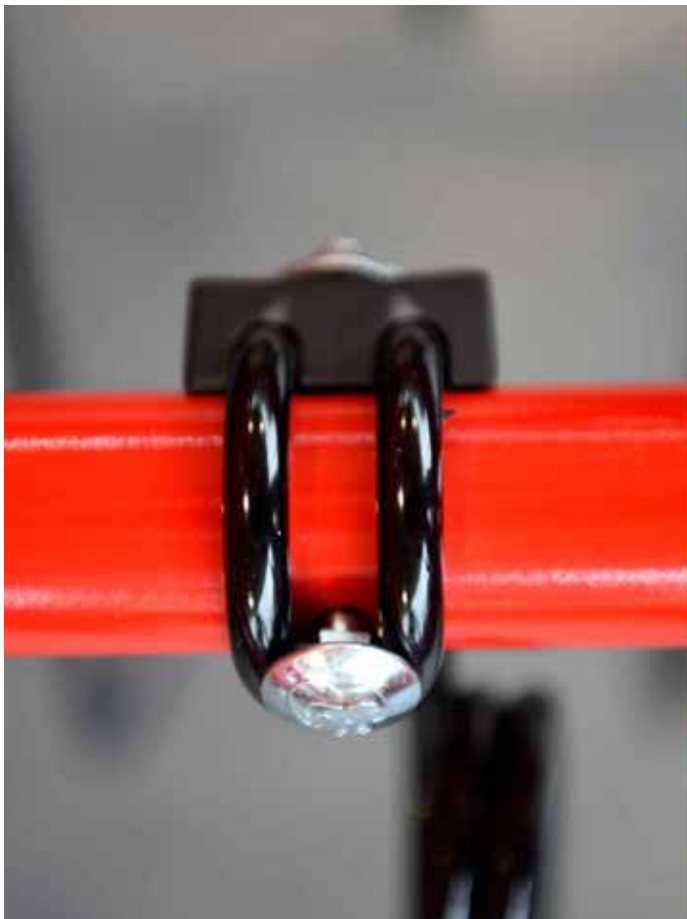
- » Sturdy profile tube frame and therefore extremely durable
- » Large ball bearing supported wheels and lubrication points on all joints
- » Tempered hinge bolts with bushings
- » No sharp edges and therefore no damage to plants
- » Spring coil and tine movement is not restricted (no risk of tine-breakage)
- » Large triangular struts prevent the side wings from swinging during operation on machines with large working width
- » Large selection of tines in different lengths and diameter



There are many small details which make our machines very user-friendly and reliable for many seasons!

Precise tine position and tine movement

The tines on the weeder are fixed to the sections by plastic holders to prevent them from twisting so the tine is aligned exactly in working direction. The spring coil of the tine is mounted below the holder to ensure free tine movement and vibration out of the spring coil. As movement of the tine is not limited or restricted, breakage is very unlikely.



PLASTIC SUPPORT ON U-FRAME

On the U-frame holding of the weeder section, the supports which guide the section are covered with hard plastic. They ensure an excellent guidance of the weeder section, but still keep the possibility to copy the relief of the surface.

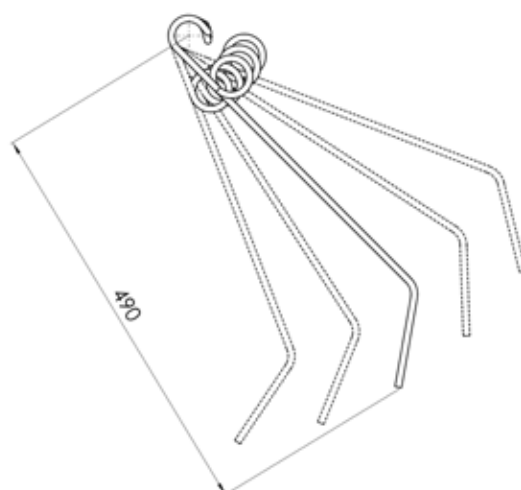


STOP BAR FOR PERFECT ADAPTION TO THE SURFACE

By taking away or demounting the stop bar on the wing (only on single-fold machines) the machine follows the contours of the land surface perfectly.

SPRING TINES ADJUSTABLE WITH A CENTRAL HANDLE

The aggressivity of the spring tines can be adjusted with a central handle per section in five different positions. The positions can vary from dragging to "tip forward of the bend".

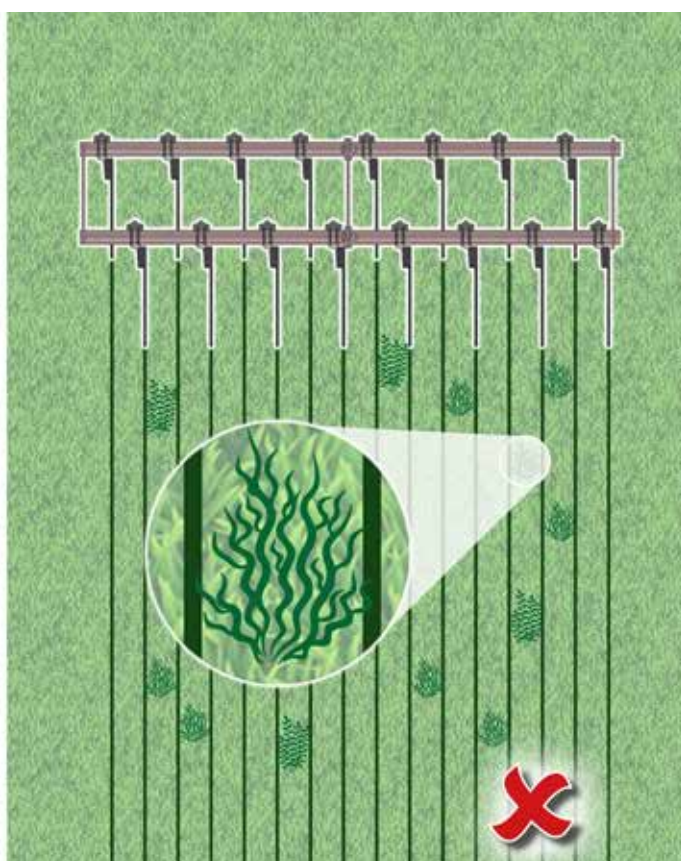
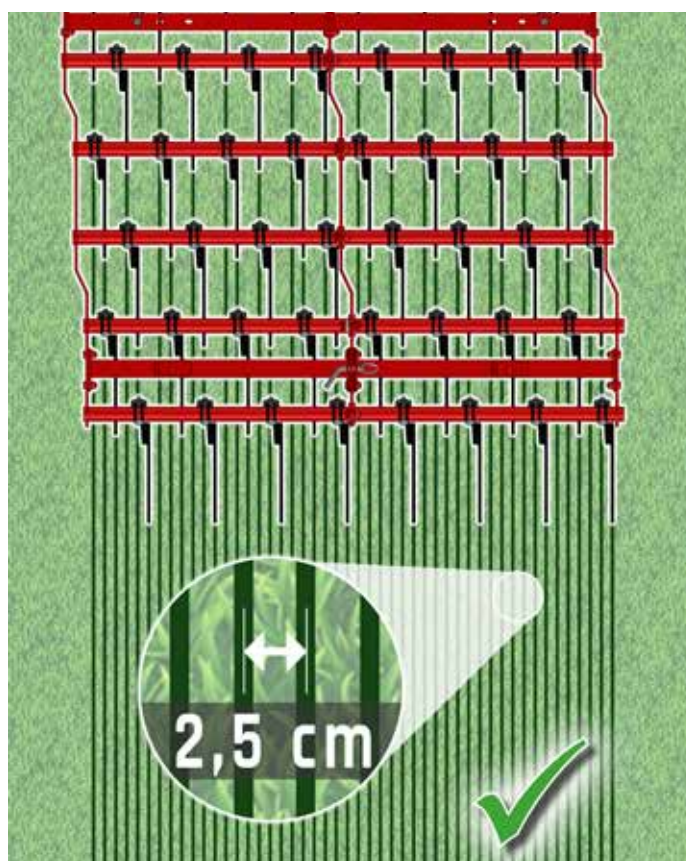
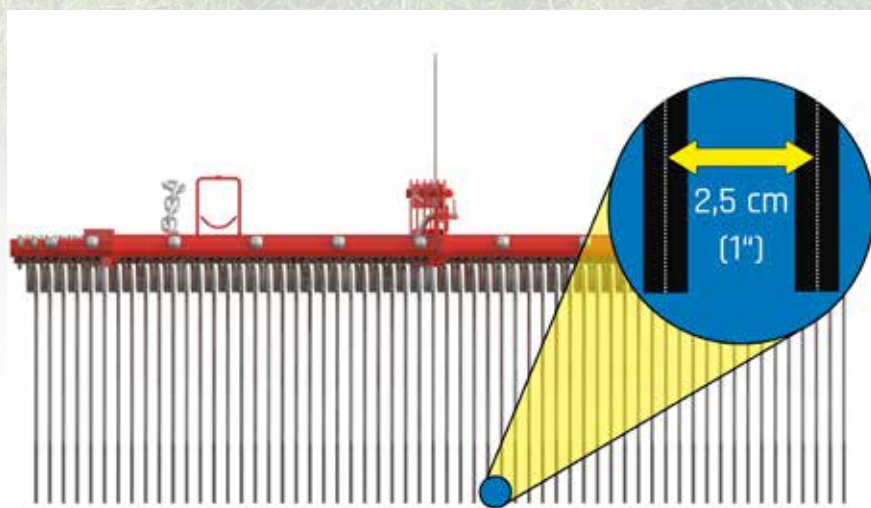


LINE SPACING OF 2.5 CM | 1"

GRASS-MANAGER (-PRO) | PNEUMATICSTAR (-PRO)

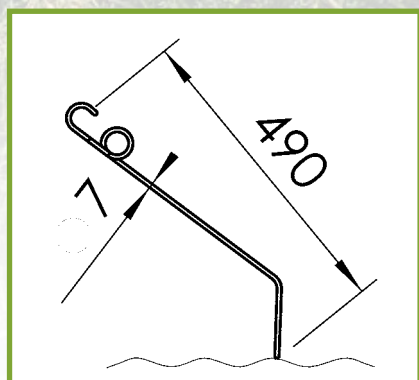
The line spacing has a decisive influence on the working effect and quality of the operation. With a 6-row arrangement of 60 tines per 1.5 m / 59.1" field, an effective line spacing of 2.50 cm / 1" is achieved. The basic requirement for efficient weed control is the smallest possible line spacing.

The correct spacing of the tines in combination with aggressively adjustable tines is the main criterion that makes a grassland reseeding successful. In order to be able to effectively de-thatch the turf, a narrow spacing of the tines is required. Only this ensures the entire surface is worked.

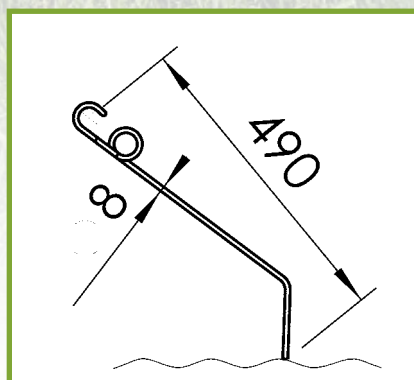


THE RIGHT TINE

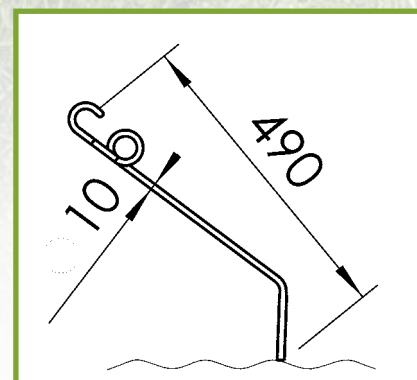
GRASSMANAGER (-PRO) | PNEUMATICSTAR (-PRO)



This standard universal tine with a diameter of 7 mm / 0.28" and a length of 490 mm / 19.3" is ideal for medium to heavy soil conditions.

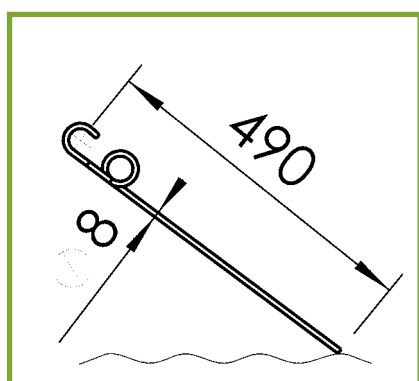


In middle or heavy soil, the tines with 8 mm / 0.31" diameter and 490 mm / 19.3" length should be used. These tines are the most common ones in grassland care.

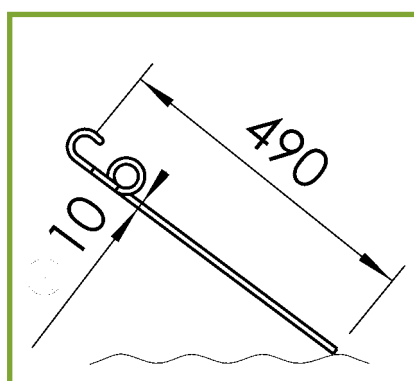


For heavily felted grassland or in medium to heavy soil conditions, these tines with a diameter of 10 mm / 0.39" and a length of 490 mm / 19.3" should be used. They are ideal to fight the rough meadow-grass in summer and produce the ideal pre-condition for the overseeding.

(only available for heavy frame SR)



For stony soil, in order not to bring stones to the surface, we recommend the straight tines with a diameter of 8 mm / 0.31" and a length of 490 mm / 19.3". Tines adjusted "dragging" protect the turf in wet grassland.



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(only available for heavy frame SR and PRO)

Type	Standard equipment	Options
GRASS-MANAGER	7/490	8/490
GRASS-MANAGER SR	7/490	8/490 10/490
GRASS-MANAGER-PRO	8/490	10/490
PNEUMATICSTAR	7/490	8/490
PNEUMATICSTAR SR	7/490	8/490 10/490
PNEUMATICSTAR-PRO	8/490	10/490
SPORTSTAR	6,5/490	6,5/380

Specifications in mm
Conversion mm in inch = mm / 25,4



GRASSLAND WEEDER / SEEDER

GRASS-MANAGER & PNEUMATICSTAR



MACHINE COMBINATIONS

GRASS-MANAGER | PNEUMATICSTAR



Perfect suited for:

- » Farms growing various crops: weeding of grassland and field crops
- » Farmers growing nurse crops in cereals, corn, ...
- » Small to medium size grassland farms



The universal alrounder among our grassland weeders



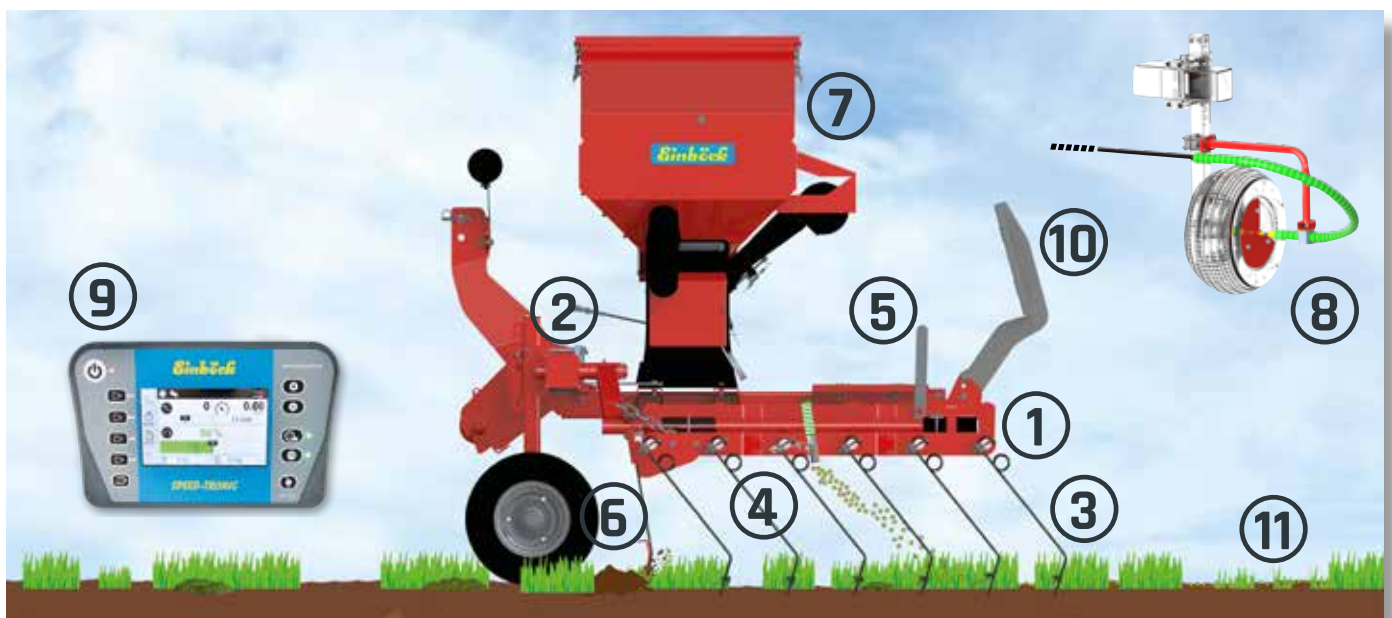
CONCEPT

GRASS-MANAGER | PNEUMATICSTAR

GRASS-MANAGER

PNEUMATICSTAR (-MD & -STI)

1. **Increased vibration effect** due to special tines and holder.
2. **Stable and durable frame**
3. **Effective operation** due to **line spacing of exact 2,5 cm / 1"**
4. **Large selection of tines** = the right tine for every job
5. **Central adjustment** of the tine position per section (optional hydraulic adjustment)
6. Optionally available **front levelling plates**
7. **P-BOX-MD** or **STI** for optimal and accurate seeding
8. **The seeding roller is driven mechanically** via a flexible shaft on a support wheel on the implement (**MD**)
9. **The seeding roller is driven electronically** via the **SPEED-TRONIC** control system in the tractor (**STI**)
10. **Steps for filling**
11. **No rollers** to establish seed to soil contact





GRASSLAND WEEDER GRASS-MANAGER

Even on healthy and balanced grassland an annual maintenance is absolutely essential. The long-established grassland weeder GRASS-MANAGER is especially designed for that purpose. It aerates and dethatches the turf. Furthermore, it crushes plants residues, manures and mixes the material.

A GRASS-MANAGER with pneumatic seed drill results in the PNEUMATICSTAR.



The universal machine for grassland, as well as mechanical weed control in field crops (cereals, corn, soybeans,...)

Type/ working width cm	Sections	Feeler wheels	Tines	from HP/kW	Weight approx. kg / lbs
RIGID non folding:					
GRASS-MANAGER 150	1x1,5	2	60	20/15	190/419
GRASS-MANAGER 200	1x2,1	2	84	25/18	200/441
GRASS-MANAGER 300	2x1,5	2	120	30/22	250/551
Hydraulic retraction:					
GRASS-MANAGER 450	3x1,5	4	180	40/29	520/1146
GRASS-MANAGER 500	1x2,1 / 2x1,5	4	204	50/37	540/1190
GRASS-MANAGER 600	4x1,5	4	240	60/44	640/1410
GRASS-MANAGER 600 SR	4x1,5	4	240	60/44	800/1764
GRASS-MANAGER 750	5x1,5	4	300	70/51	850/1874
GRASS-MANAGER 900 ^{1,3)}	6x1,5	4	360	80/59	1170/2579
GRASS-MANAGER 900 SR ³⁾	6x1,5	4	360	80/59	1260/2778
GRASS-MANAGER 1200 ^{2,3)}	8x1,5	4	480	90/66	1310/2888
GRASS-MANAGER 1200 SR ³⁾	8x1,5	4	480	90/66	1420/3131

1) Can be extended to 12 m / 39.40 ft. working width

2) Can be reduced to 9 m / 29.50 ft. working width

3) Hydraulic folding with shear retraction

SR = heavy frame for contractors or communities



STANDARD EQUIPMENT

- ✓ Lower links with quick coupling pendular axle
- ✓ Tines Ø 7 mm / 0.28", 490 mm / 19.3" long
- ✓ The tines are fixed on a tube on 6 row tine sections with central adjustment of the tine position
- ✓ Line spacing 2,5 cm / 1"
- ✓ Large bearing mounted rubber support wheels
- ✓ When folding to transport position the side sections swing automatically through parallel guidance
- ✓ Parking support
- ✓ For machines with rear-retraction two double-folding hydraulic remotes are required
- ✓ Transport width ≤ 3,00 m / 9.80 ft.

OPTIONS

Hydraulic tine adjustment - perfect in changing soil conditions (not in combination with front levelling plates)

Pneumatic seeder P-BOX

Levelling plate for excellent distribution and levelling of mole hills

Tines 490 mm / 19.3 long, Ø 10 mm / 0.39" (or SR models)

Tines 490 mm / 19.3 long, Ø 8 mm / 0.31"

Tines 490 mm / 19.3 long STRAIGHT, Ø 8 mm / 0.31"

Front mounting frame

Warning signs with LED-lights

Hydraulic transport lock



GRASSLAND SEEDER PNEUMATICSTAR (-MD & -STI)

The PNEUMATICSTAR is designed for grassland care, seeding, under- and reseeding. The seeding roller is driven mechanically via the support wheel or is electronically controlled by different sensors. It is designed with steady frames and, depending on the working width, the frame is rigid or mechanic or hydraulic folding. Using high-quality materials and through the special, solid construction you can put additional pressure on the 6-row tine sections in hard soil conditions.

There are 2 versions of the PNEUMATICSTAR available. MD Version with mechanical drive of the seeding roller and STI with electronic drive of the seeding roller, controlled by the STI terminal.



Type/ working width cm	Tines	Feeler wheels	Deflector plates	Sections	Seeding rollers	from HP/kW	Weight approx. kg / lbs
PNEUMATICSTAR 200 ¹⁾	84	2	8	1	B, E	25/18	260/419
PNEUMATICSTAR 300 ¹⁾	120	2	8	2	B, E	30/22	350/772
PNEUMATICSTAR 500 ²⁾	204	4	8	3	C, E	50/37	580/1279
PNEUMATICSTAR 600 ²⁾	240	4	8	4	C, E	60/44	690/1522
PNEUMATICSTAR 600 SR ²⁾	240	4	8	4	C, E	60/44	920/2029
PNEUMATICSTAR 600 NR ¹⁾	240	4	8	4	C, F	80/59	1100/2426
PNEUMATICSTAR 900 ^{3,4)}	360	4	12	6	G, H	90/66	1400/3087
PNEUMATICSTAR 900 SR ³⁾	360	4	12	6	G, H	90/66	1490/3285
PNEUMATICSTAR 1200 ³⁾	480	4	16	8	D, F	100/74	1650/3638
PNEUMATICSTAR 1200 SR ³⁾	480	4	16	8	D, F	100/74	1760/3881

1) Rigid frame, not foldable

2) Hydraulic folding

3) Hydraulic folding with double folding

4) Can be extended up to 12 m / 39.40 ft.

SR = heavy frame (for contractors or communities)

NR = with mechanical fan, also suitable for the distribution of fertilizer (seeding unit as well as distribution plates made from stainless steel), stronger gearbox, no European folding - frame SR version (heavy frame), 500 l tank standard



STANDARD EQUIPMENT

- ✓ Like GRASS-MANAGER
- ✓ P-BOX-MD = mechanical drive of the agitator shaft with its own sowing wheel section per hose
- ✓ P-BOX-STI = quantity metering speed-controlled optionally by wheel sensor, GPS sensor, radar or tractor signal by means of 7-pin signal cable - electronically monitored
- ✓ Electric fan 12 volts - up to 6 m / 19.70 ft. working width
- ✓ Mechanical fan with PTO-shaft - for 9 m / 29.50 ft. and 12 m / 39.40 ft. working width
- ✓ One seeding roller with fine and one with coarse toothing
- ✓ Calibration plate + calibration pan
- ✓ Tank volume 300 litres with tank inspection glass + drainage opening (for PNEUMATICSTAR 600 NR = 500 l)
- ✓ Adjustment of the seeding rate via a flexible cable, driven by a ground wheel through a stepless gearbox
- ✓ Specially designed distribution plates with splash guard
- ✓ Steps for filling



OPTIONS

Like GRASS-MANAGER

- Retaining plate
- Mechanical jogging unit
- Electronical hectare counter (only MD)
- 500 litre tank
- Mechanical or hydraulic fan
- Alarm when seeding box is getting empty
- Extension-kit for "ISARIA-Sensor" (only STI)
- Various speed sensors (only STI)
- Calibration button (only STI)
- Airflow monitoring

DETAILS & ADVANTAGES

GRASS-MANAGER | PNEUMATICSTAR

RUBBER SUPPORT WHEELS FOR GENTLE OPERATION

Depending on the working width, the GRASS-MANAGER - and PNEUMATICSTAR series are guided by two or four rubber support wheels. Via the support wheels the working depth of the tines is regulated. They are height-adjustable in the half-hole grid.



MECHANICAL LOCKING IN TRANSPORT POSITION

Frames on machines without double folding lock mechanically in transport position. The lock is released via a pulling-rope. (only on machines without double folding).

STABLE OPERATION

Due to the solid and strong frame construction the operation of machine and frame is very steady, even in higher working speeds. Also on hard soil the tined weeder can apply sufficient pressure on the tines without making the frame swing. In addition, the frame is designed to withstand heavy loads and many seasons of operation without any problems.



STRONGER CONSTRUCTION FROM 9 M / 29.50 FT. WORKING WIDTH

A larger working width means greater forces acting on a machine. The triangular bracing on machines with double folding prevents the side wings from swinging and jumping even at higher working speeds. The tine aggressivity can be adjusted depending on the conditions.



OPTIONAL: LEVELLING PLATE FOR EXCELLENT DISTRIBUTION AND LEVELLING OF MOLE HILLS

In front of the weeder sections a levelling plate can be mounted, which is overload-protected by a leaf spring. This levelling plate is height adjustable and ensures an excellent distribution and levelling of mole hills. In addition, it distributes and levels manure and slurry. (Only up to 6 m / 19.70 ft. working width and for 900 SR and 1200 SR, not in combination with hydraulic tine adjustment)

OPTIONAL: HYDRAULIC TINE ADJUSTMENT - PERFECT IN CHANGING SOIL CONDITIONS

The hydraulic tine adjustment makes adjustment of the GRASS-MANAGER and the PNEUMATICSTAR in changing soil conditions easier. Furthermore, folding to the transport position is more convenient as you can easily put the tines into a flat position. The hydraulic tine adjustment can be retrofitted any time.



DETAILS & ADVANTAGES

PNEUMATICSTAR

PERFECT FOR UNDER- OR RESEEDING

The pneumatic seeders with integrated stirring-shaft are designed in such a way that each sowing tube has its own seeding wheel section to achieve perfect dosing and uniform output. For working widths wider than 6 m / 19.70 ft. the seeding hoses are split to reach 12 or 16 outlets. Machines up to 6 m / 19.70 ft. working width are standard equipped with an electric double fan. Bigger machines work with a mechanical fan as standard. A hydraulic fan is available as an option.



DRIVEN BY A RUBBER WHEEL (MD)

On the grassland weeder PNEUMATICSTAR-MD the pneumatic seeding box P-BOX-MD is mounted. On the P-BOX-MD the seeding roller is mechanically driven via a flexible shaft, which transfers the actual ground speed from a ground wheel to the seeding roller. The seeds are distributed pneumatically via hoses to the deflector plates, which spread the seeds evenly. The seeding rate is adjusted via a lever which is mounted on the stepless gearbox of the P-BOX-MD.

PRECISE, ELECTRIC DISTRIBUTION OF VARIOUS SEEDS (STI)

On the grassland weeder PNEUMATICSTAR-STI the drive of the seeding roller is done by an electric motor which communicates with various sensors. This ensures the adjusted seeding rate is constant, independent from changing working speed. The adjustment/control is done via the SPEED-TRONIC terminal from the tractor's cab. On machines up to 6 m / 19.70 ft. the air flow is generated by an electric double fan. For machines which are bigger than 6 m / 19.70 ft. working width a mechanical fan is used as standard (picture). A hydraulic fan is available as an option.



NO ROLLERS

To combine grassland weeders and rollers in one machine does not provide the desired effect. Even distribution of the seeds over the entire working width, which is ensured by the centrally placed deflector plates, is the key factor for good emergence of the seeds. Furthermore, the operating speed of roller and grassland weeder do not match. In case soil gets stuck to the roller, seeds which have been distributed by the weeder get stuck on it and previously sown grass is collected from the ground again. In addition, a roller establishes contact between previously torn out weeds (such as the rough stalked meadow grass) and the ground. So they will not dry out but continue to grow. Especially for reseeding and grassland care, rolling is not necessary as the roller runs on the turf and has very limited contact to the soil. For new seeding rolling can be beneficial, but it should be done in a separate operation after weeds dried out and with the optimal working speed for rolling.



DEFLECTOR PLATES ARE MOUNTED CENTRALLY ON THE TINE SECTIONS

The deflector plates with splash-guard are placed in the centre of each tine section. They spread the seeds before the last two rows of tine sections to establish optimal seed to soil contact.

GREAT FLEXIBILITY OF USE

Just a few examples of the various ways you can use the machines: re- or new seeding in grassland (1), underseeding in cereals (2) or corn (3), etc.







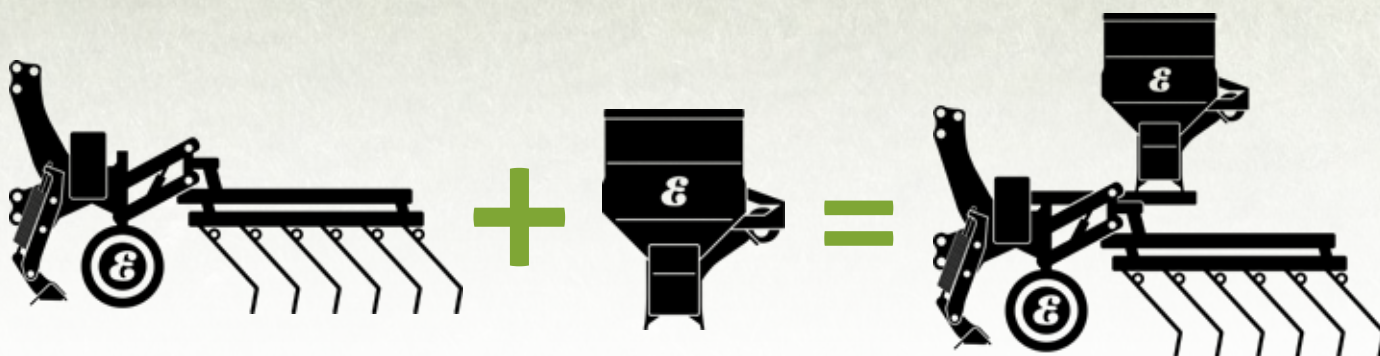
GRASSLAND WEEDER / SEEDER

GRASS-MANAGER-PRO & PNEUMATICSTAR-PRO



MACHINE COMBINATIONS

GRASS-MANAGER-PRO | PNEUMATICSTAR-PRO



GRASS-MANAGER-PRO



P-BOX

-MD & -STI



PNEUMATICSTAR-PRO

-MD & -STI

Perfect suited for:

- » Pure grassland farms or farms with predominately grassland
- » Contractors & communities
- » Grassland-specialists
- » Extremely uneven fields and a high number of molehills
- » Big farms



The EXPERT among the grassland weeders.
Grassland care without compromise.



CONCEPT

GRASS-MANAGER-PRO | PNEUMATICSTAR-PRO

GRASS-MANAGER-PRO

PNEUMATICSTAR-PRO (-MD & -STI)

1. Heavy-duty **triangular levelling bar** to level out mole hills
2. Solidly built **flexible frame** for perfect ground adaption
3. Hydraulically controlled, parallelogram guided **fixed weeder sections**
4. **8 mm / 0.31"** or **10 mm / 0.39"** direct spring-loaded **tines** with **exact 2,5 cm / 1"** line spacing
5. **Distribution plates** with splash guard for ideal spreading of the seeds
6. **P-BOX-MD** or **STI** for ideal seeding
7. The **seeding roller** is driven **mechanically** via a flexible cable on the ground wheel of the weeder (**MD**)
8. The **seeding roller** is driven **electronically** via the SPEED-TRONIC control system in the tractor (**STI**)
9. **Steps** for easy and safe filling of the seeding box
10. **No reconsolidation roller**





GRASSLAND WEEDER GRASS-MANAGER-PRO

The GRASS-MANAGER-PRO is the consequent further developed version of the GRASS-MANAGER that has been proven in years. Every section is mounted on a parallelogram. One hydraulic cylinder per section ensures a perfect adaption to uneven ground and an optimal pressure compensation of the sections. The pressure can easily be adjusted from the tractor. A heavy triangular front levelling plate in front of the support wheels evens the mole hills.

A pneumatic seeding box can be mounted on the GRASS-MANAGER-PRO at any time (PNEUMATICSTAR-PRO-MD).



Perfectly levels molehills, aerates and dethatches the turf

Type/ Working width cm	Tines	Front levelling plates	Feeler wheels	Sections	from HP/kW	Weight approx. kg / lbs
With front levelling plates - without seeder						
GRASS-MANAGER-PRO 300	120	2	4	2	60/44	670/1477
GRASS-MANAGER-PRO 600	240	4	6	4	80/59	1280/2822
GRASS-MANAGER-PRO XXL ¹⁾	480	8	8	8	170/125	4200/9259
Without front levelling plates - without seeder						
GRASS-MANAGER-PRO 300	120	-	4	2	60/44	590/1301
GRASS-MANAGER-PRO 600	240	-	6	4	80/59	1100/2425
GRASS-MANAGER-PRO XXL ¹⁾	480	-	8	8	170/125	4030/8885

1) Trailed



STANDARD EQUIPMENT

- ✓ Lower and top link mountings are equipped with hardened bushings - mounting category CAT II
- ✓ Tines Ø 8 mm / 0.31", 490 mm / 19.30" long
- ✓ Frame hydraulically foldable with single acting cylinder - on 6 m / 19.70 ft.
- ✓ Spring loaded, heavy duty front levelling bars running in front of the support wheels
- ✓ Line spacing 2.5 cm / 1"
- ✓ Track width 200 cm / 78.80"
- ✓ Tube frame section providing equal working pressure over the full width
- ✓ Sections parallel guided with hydraulic level control
- ✓ Parking support
- ✓ Transport width 3 m / 9.80 ft.

Standard equipment for XXL (12 m / 39.40 ft. working width) different to the other types:

- ✓ Trailed
- ✓ Track width 220 cm / 86.60"
- ✓ Three double acting hydraulic valves necessary
- ✓ Wheel chocks
- ✓ Transport width 3 m / 9.80 ft.



OPTIONS

Tine 490 mm / 19.30" long, Ø 10 mm / 0.39"

Tine 490 mm / 19.30" long STRAIGHT, Ø 10 mm / 0.39"

Front mounting frame

Warning signs with LED-lights

P-BOX seeder for undersowing or fertilizing



GRASSLAND SEEDER PNEUMATICSTAR-PRO (-MD & -STI)

The PNEUMATICSTAR-PRO is designed as the version for professionals or large farms (in comparison to the PNEUMATICSTAR) for grassland restoration. The machine is available in working width 3, 6 or 12 metres (9.80, 19.70 or 39.40 ft.) with an extremely solid frame construction. A heavy levelling board which is overload-protected by springs, levels molehills in front of the support wheels. It is adjusted "on hold", so it lifts the soil and spreads it loose in the turf. Pores in the soil are not smeared up!

As the support wheels are behind the levelling plate the machine works very smoothly with a high working speed.

There are 2 versions of the PNEUMATICSTAR-PRO available. MD Version with mechanical drive of the seeding roller and STI with electronic drive of the seeding roller, controlled by the STI terminal.



Type/ Working width cm	Tines	Front levelling plates	Feeler wheels	Deflector plates	Sections	Seeding rollers	from HP/kW	Weight approx. kg / lbs
With front levelling plates - with seeding box								
PNEUMATICSTAR-PRO 300 ^{1,3)}	120	2	4	8	2	B, E	60/44	790/1742
PNEUMATICSTAR-PRO 600 ^{1,4)}	240	4	6	8	4	C, E	80/59	1370/3021
PNEUMATICSTAR-PRO XXL ^{2,5,6)}	480	8	8	16	8	D, F	170/125	4440/9789
Without front levelling plates - with seeding box								
PNEUMATICSTAR-PRO 300 ^{1,3)}	120	-	4	8	2	B, E	60/44	690/2183
PNEUMATICSTAR-PRO 600 ^{1,4)}	240	-	6	8	4	C, E	80/59	1200/2646
PNEUMATICSTAR-PRO XXL ^{2,5,6)}	480	-	8	16	8	D, F	170/125	4280/9436

1) Electrical double fan 12 Volt

2) Hydraulic fan with oil pressure manometer (requirements: pressure free return line, maximum capacity of the oil pump must not exceed 50 litres; recommendation: independent hydraulic valve or load sensing system)

3) 1 double -acting hydraulic valve necessary

4) 1 double -acting and 1 single-acting hydraulic valve necessary

5) 3 double-acting hydraulic valves and 1 single-acting hydraulic valve pressure free return necessary

6) Trailed

STANDARD EQUIPMENT

- ✓ Like GRASS-MANAGER-PRO
- ✓ P-BOX-MD = seeding roller with a separate section for each hose
- ✓ P-BOX-STI = electric drive of the seeding roller, controlled by the STI terminal in the tractor, speed info coming from wheel, GPS or radar sensor or from the tractor via 7-pin signal cable
- ✓ Airseeder with stirring shaft and separate seeding roller section per hose
- ✓ Parking support with filling steps
- ✓ Electric fan 12 Volt and power cable with large diameter and control unit (up to 6 m / 19.70 ft. working width)
- ✓ Hydraulic fan for XXL-Version
- ✓ One seeding roller with fine and one with coarse toothing
- ✓ Seeding roller can be changed without tools
- ✓ Tank made from sheet steel
- ✓ Calibration plate + calibration pan
- ✓ Tankvolume 300 litre with monitoring window + opening to fully empty the box (500 litre XXL-Version)
- ✓ Adjustment of turning speed of the seeding roller via a ground wheel sensor - automatic switch off at the headland via an upper link sensor (STI)
- ✓ Specially designed distribution plates with splash guard
- ✓ Transport width 3 m / 9.80 ft.

OPTIONS

Like GRASS-MANAGER-PRO

- Retaining plate
- Mechanical jogging
- Hectare counter electronic
- 500 l tank
- Mechanical or hydraulic fan
- Alarm when seeding box is getting empty
- Extension-kit for "ISARIA-Sensor" (only STI)
- Various speed sensors (only STI)
- Calibration button (only STI)
- Airflow monitoring



DETAILS & ADVANTAGES

GRASS-MANAGER-PRO | PNEUMATICSTAR-PRO

HEAVY FRONT LEVELLING PLATE FOR PERFECT LEVELLING OF MOLE HILLS

A heavy triangular levelling plate in front of the support wheels levels out the mole hills. The soil is distributed evenly on the surface, there is no reconsolidation of the ground and the pores of the soil remain open.



HYDRAULIC PRESSURE REGULATION

The hydraulic pressure on the parallelograms can be adjusted from the cab via the tractor's hydraulic system. This means that the tine pressure can be easily increased or reduced depending on the soil conditions. The tine aggressivity is identical on each section over the full working width. The turf is aerated - this helps to control the rough meadow-grass in summer. The hydraulic levelling system guarantees an equal pressure on each weeder section and the tines follow the contour of the ground perfectly also in uneven terrain.

PARALLELOGRAM-GUIDED WEEDER SECTIONS

The hydraulic levelling system with parallelograms works very smoothly even when working at high speed. The weeder sections are always parallel to the ground so all tines have the same pressure.



IDEAL ADJUSTMENT OF THE FRAME TO FOLLOW THE CONTOUR OF THE GROUND

The joints are equipped with hardened bolts with \varnothing 35 mm / 1.38" and brass bushings which can be greased. The position of the stop bars changes the setup of the frame - either it is rigid or the side wings can go down to follow the contour of the surface even better. Not only the tine sections, but also the heavy levelling boards can follow the surface of the ground.



STRONG FRAME FOR LONG SERVICE-LIFE

The main frame is made from 150x100x6 mm / 5.9x3.9x0.2" steel tubes and gusset plates reinforce heavily loaded spots of the frame.



DETAILS & ADVANTAGES

GRASS-MANAGER-PRO | PNEUMATICSTAR-PRO

SIX FEELER WHEELS FOR SMOOTH OPERATION

Six feeler wheels guide the frame smoothly over the grassland with precise depth control and ensure operation without shaking of the frame even when working in high speed.



STABLE OPERATION

Due to the solid and strong frame construction the operation of machine and frame is very steady, independently from the working speed. Also on hard soil the tined weeder can apply sufficient pressure on the tines without making the frame swing. In addition, the frame is designed to withstand heavy loads and many seasons of operation without any problems.

HARDENED BUSHINGS

Hardened bushings on the 3-point mounting ensure a long working life of the mounting.



DETAILS & ADVANTAGES

PNEUMATICSTAR-PRO

DRIVE OF THE SEEDING ROLLER VIA A GROUND WHEEL

On the grassland weeder PNEUMATICSTAR-PRO-MD the pneumatic seeding P-BOX-MD is mounted. On the P-BOX-MD the seeds are distributed pneumatically via hoses to the deflector plates, which spread the seeds evenly. The seeding roller is mechanically driven via a flexible shaft, which transfers the actual ground speed via a 90° angle unit from a ground wheel to the seeding box. The 90° angle unit is especially protected against damage through stones or soil. The seeding rate is adjusted via a lever which is mounted on the stepless gearbox of the P-BOX-MD.



PRECISE, ELECTRIC DISTRIBUTION OF VARIOUS SEEDS (STI)

On the grassland weeder PNEUMATICSTAR-PRO-STI the drive of the seeding roller is done by an electric motor which communicates with various sensors. This ensures the adjusted seeding rate is constant, independent from changing working speed. The adjustment/control is done via the SPEED-TRONIC-terminal from the tractor's cab.

DEFLECTOR PLATES ARE MOUNTED CENTRALLY ON THE TINE SECTIONS

The deflector plates with splash-guard are placed in the centre of each tine section. They spread the seeds before the last two rows of tine sections to establish optimal seed to soil contact.

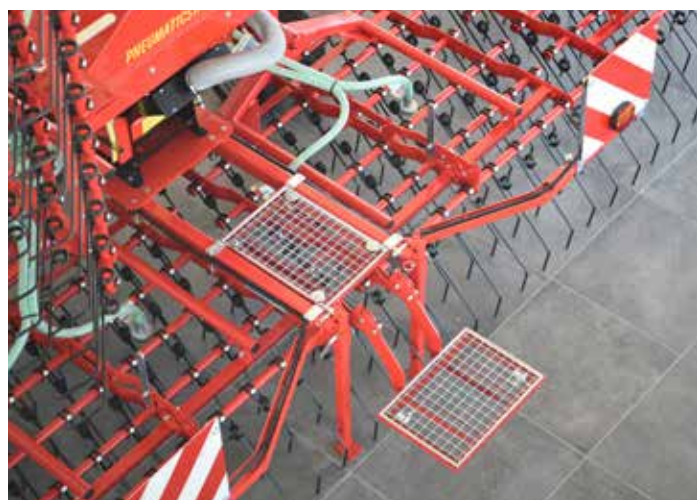


DETAILS & ADVANTAGES

PNEUMATICSTAR-PRO

NO ROLLERS

To combine grassland weeder and rollers in one machine does not provide the desired effect. The centrally placed deflector plates ensure an even distribution of the seeds over the full working width. Furthermore, the operation speed of roller and grassland weeder do not match. In case soil gets stuck to the roller, seeds which have been distributed by the weeder get stuck on it and previously sown grass is collected from the ground again. In addition, a roller establishes contact between previously torn out weeds (such as the rough stalked meadow grass) and the ground. So they will not dry out, but continue to grow. Especially for reseeding and grassland care, rolling is not necessary as the roller runs on the turf and has very limited contact to the soil. For new seeding rolling can be beneficial, but it should be done in a separate operation after weeds dried out and with the optimal working speed for rolling. More about this in "The grassland care handbook".



PARKING SUPPORT WITH STEPS FOR FILLING

The filling steps ensure a safe and quick filling of the seed tank.





DETAILS & ADVANTAGES

PNEUMATICSTAR-PRO XXL

PNEUMATICSTAR-PRO XXL

The PNEUMATICSTAR-PRO XXL is designed for big farms. The trailing chassis, which is connected to the lower links of the tractor, is carried by 2 large wheels. During operation 6 ground wheels ensure optimal guidance of the machine over the field. A sturdy profil-frame prevents the machine from swinging back- or forwards. Also the XXL-Version can be equipped with a P-BOX-MD or P-BOX-STI.



PNEUMATICSTAR-PRO XXL: HALF-TIMBERED CONSTRUCTION

The construction of the main frame **enforced by cross braces** is a guarantee for a long product life.

PNEUMATICSTAR-PRO XXL: TANK VOLUME 500 L

For an efficient working and without losing too much time refilling the tank, a tank with a **volume of 500 litres** standard.



**PNEUMATICSTAR-PRO XXL:
TRANSPORT WIDTH OF 3 M / 9.80 FT.**

The sophisticated retraction mechanism together with putting the tines into the lowest angle position makes it possible to reduce the transport width to only 3 m / 9.80 ft.





PNEUMATIC SEEDING BOX P-BOX-MD

The P-BOX-MD is an air seeder which can be mounted easily and fast to a lot of Einböck machines and also on machines of other manufacturers. It is able to seed all standard seeds and their mixtures up to 1 kg/ha. The seed is pneumatically distributed via hoses to the distribution plates, where an exact spreading takes place. The seed roller is driven by a flexible shaft, which is driven by the support rubber wheel of the machine (or separate tail wheel).

The seed rate of the pneumatic seeding box can be infinitely varied between 1 kg - 300 kg/ha by simple adjustment depending on the working width, travel speed and fan variant. With the P-BOX-MD many possible applications such as seeding of intercrops, catch crops, winter greening, new seeding, reseeding, fertilization, etc. can be done.

Pneumatic seeding box P-BOX-MD

- » Mechanic drive of the seeding roller via flexible shaft connected to a ground wheel
- » Overseeding in grassland or fertilizing
- » Seeding of intercrops or catch crops
- » Distribution of a big variety of different seeds
- » Mounting on many different cultivators, weeders, etc.

Further info on our seeding box you can find in the leaflet "Seeding technology" or on our website!



Type/ Working width cm	Working width max. ³⁾	Tank volume in litre	Deflector plates	Weight approx. kg / lbs	Seeding rollers
P-BOX-MD 600 ¹⁾	6.00 m / 19.70 ft.	300	8	86 / 190	B, E
P-BOX-MD 1200 ²⁾	12.00 m / 39.40 ft.	300	16	105 / 232	D, F

1) For the 6 m / 19.70 ft. machine heavy seeds can be spread up to 3 m / 9.80 ft. for distribution of heavy seeds on 6 m / 19.70 ft. working width there is the choice between hydraulic or mechanical fan

2) With mechanical fan
3) For small seeds

STANDARD EQUIPMENT

- ✓ P-BOX-MD = seeding rate controlled via ground wheel
- ✓ Steel tank including steel substructure
- ✓ Bottom drive through air wheel and assembly kit
- ✓ Stirring shaft
- ✓ Console holder
- ✓ Calibration plate + calibration pan
- ✓ Specially designed distribution plates with splash guard
- ✓ Flexible shaft 2.1 m / 6.90 ft.
- ✓ Seeding roller with separate section per hose
- ✓ One seeding roller with fine and one with coarse toothing
- ✓ Seeding roller can be changed without tools
- ✓ Monitoring window + opening to fully empty the box
- ✓ 6 m / 19.70 ft. machine with electric fan, 12 volts and 24 m / 78.70 ft. hose
- ✓ 12 m / 39.40 ft. machines with mechanical fan, PTO-shaft and 40 m / 132 ft. hose



OPTIONS

- Various options of ground wheels
- Mechanical jogging unit
- Cable to tractor 8 m / 26.20 ft. instead of 3 m / 9.80 ft.
- Hectare-counter electronic
- Retaining plate
- Tank support
- 500 l tank
- Mechanical fan (standard at P-BOX-MD 1200)
- Hydraulic fan
- Airflow monitoring; alarm when seeding box is getting empty
- 90° angle unit for flexible shaft
- Electric adjustment of seeding quantity
- Steps for filling and different mounting kits
- P-BOX-MD with seeding unit made from stainless steel
- Special seeding rollers; dummy plug



PNEUMATIC SEEDING BOX P-BOX-STI

The P-BOX-STI is a pneumatic airseeder with electrical quantity dosage. The user-friendly electronic SPEED-TRONIC control unit regulates the seed quantity depending on the factual working speed. The necessary speed info can be obtained via several sensors or via the 7-pole signal socket of the tractor.

With the P-BOX-STI it is possible to seed all standard seeds and their mixtures up to 1 kg/ha. The seed is pneumatically distributed via hoses to the distribution plates, where an exact seeding takes place. The seed rate can be infinitely adjusted by simple setting in the SPEED-TRONIC terminal. With the P-BOX-STI many possible applications such as seeding of intercrops, catch crops, winter greening, new seeding, reseeding, fertilization, etc. can be done.

Pneumatic seeding box P-BOX-STI

- » Precise electric metering and distribution via terminal
- » Overseeding in grassland or fertilizing
- » Seeding of intercrops or catch crops
- » Distribution of a big variety of different seeds
- » Mounting on many different cultivators, weeders, etc.

Further info on our seeding box you can find in the leaflet "Seeding technology" or on our website!



Type/ Working width cm	Working width max. ³⁾	Tank volume in litre	Deflector plates	Weight approx. kg / lbs	Seeding rollers
P-BOX-STI 600 ¹⁾	6.00 m / 19.70 ft.	300	8	86	B, E
P-BOX-STI 1200 ²⁾	12.00 m / 39.40 ft.	300	16	105	D, F

1) With the 6 m / 19.70 ft. machine heavy seeds can be spread up to 3 m / 9.80 ft. for distribution of heavy seeds on 6 m / 19.70 ft. working width there is the choice between hydraulic or mechanical fan
2) With mechanical fan
3) For small seeds



STANDARD EQUIPMENT

- ✓ P-BOX-STI = electric drive of the seeding roller, controlled by the STI terminal in the tractor, speed info coming from wheel, GPS or radar sensor or from the tractor via 7-pin signal cable
- ✓ Stirring shaft, console holder
- ✓ Calibration plate + calibration pan
- ✓ Specially designed distribution plates with splash guard
- ✓ Seeding roller with separate section per hose
- ✓ One seeding roller with fine and one with coarse toothing
- ✓ Seeding roller can be changed without tools
- ✓ Tank made from sheet steel
- ✓ Monitoring window + opening to fully empty the box
- ✓ 6 m / 19.70 ft. machine with electric fan, 12 volts and 24 m / 78.70 ft. hose
- ✓ 12 m / 39.40 ft. machines with mechanical fan and PTO-shaft and 40 m / 132 ft. hose

OPTIONS

- Wheel sensor for ground wheel
- Tail wheel with speed sensor
- GPS-speed sensor or radar sensor
- 7-pole cable
- Upper link sensor, lifting gear sensor
- Automatic area-specific dosing of the seeding rate in combination with the ISARIA sensor
- Alarm when seeding box is getting empty
- Calibration button at the seeding machine, airflow monitoring
- Extension cable 5 m / 16.40 ft. for machine or sensors
- Mechanic jogging unit; Retaining plate
- Tank support; 500 l tank
- Mechanical (standard at P-BOX-STI 1200) or hydraulic fan
- Deflector plate made from stainless steel
- Holder for control terminal
- Steps for filling and different mounting kits
- P-BOX-STI with seeding unit made from stainless steel
- Special seeding rollers; dummy plug

SEEDING OF NURSE CROPS WITH THE GRASSLAND WEEDER

PNEUMATICSTAR

The machines of the PNEUMATICSTAR-series are designed also to distribute nurse crops. Interseeding of clover or clover/grass mixture can collect up to 100 kg of nitrogen per ha. Fields with intercrops after harvesting of cereals show a positive nitrogen-balance. From underseeding of grasses in corn you can expect the following advantages:

- » Improved payload of the soil in wet conditions (harvesting, fertilizing)
- » Suppression of late germinating weeds
- » Improvement of soil fertility and support huminication
- » Immediate cover of the soil after harvesting
- » Prevents erosion
- » Reduces the amount of herbicides needed
- » etc.



WHICH SEEDS WITH WHICH MACHINE

PNEUMATICSTAR (-PRO)

CROP	PNEUMATICSTAR							PNEUMATICSTAR-PRO		
	200	250	300	500	600	900	1200	300	600	XXL 1200
Field beans	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Buckwheat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spelt	–	–	–	–	–	–	–	–	–	–
Peas	●	●	●	●	●	–	–	●	●	–
Futterprofi KM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Barley	●	●	●	●	●	–	–	●	●	–
Grünlandprofi B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Grünlandprofi NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oat	●	●	●	●	●	–	–	●	●	–
Clover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wild flax	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flaxseed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lupines	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alfalfa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Poppyseed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oilseed radish	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Phacelia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Canola	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rye	●	●	●	●	●	–	–	●	●	–
Red clover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wild turnip	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Slug pellets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mustard	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Soybeans	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sunflowers	●	●	●	●	●	–	–	●	●	–
Vetch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Triticale	●	●	●	●	●	–	–	●	●	–
White clover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wheat and various mixtures	●	●	●	●	●	–	–	●	●	–

✓ = possible

● = when ordering options: stronger gearbox, retaining plate, mechanical or hydraulic fan

– = not possible

The above list of seeds is not complete. The machines from the PNEUMATICSTAR-series can also distribute other seeds.

EINBÖCK AT A GLANCE

"Everything from one source"

- » **In-house development from the idea to the finished product**
Over 85 years of experience in the construction of agricultural machinery
- » **From practitioner for practitioners**
75 % of our sales and product management team are practitioners
- » **Suppliers from the region or Central Europe**
Long-lasting supplier relationships ensure consistent product quality and reliable delivery times
- » **Manufacturing**
Exclusively in Dorf an der Pram in Upper Austria
- » **Practical testing of all machines on our own test fields**
Before prototypes are turned into serial production, they have to pass substantial tests in the field and on the road
- » **After-Sales-Service**
Supply of wear and spare parts is guaranteed for decades and ensures long-term customer relationships

Einböck-values

- » **Sustainability and environmental protection**
Environmentally friendly production of sustainable products
- » **Consulting and service**
Sharing of acquired knowledge and first-class customer service
- » **Reliability and quality**
Keeping promised delivery dates and selling high quality products
- » **Honesty and loyalty**
Collaboration with customers, suppliers, employees, partners, dealers, etc. at eye level



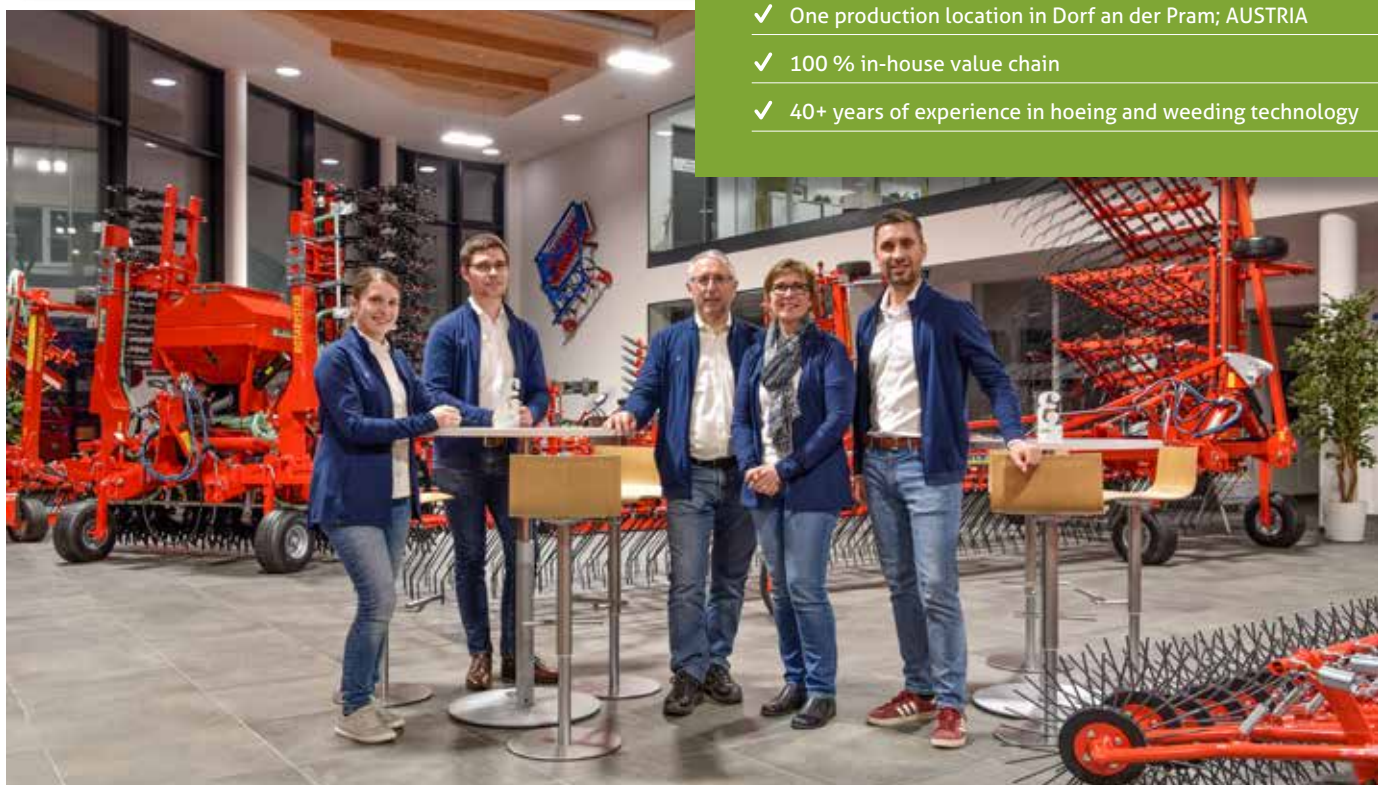
*Our goal is the production of market-oriented,
user-friendly, innovative, environmentally friendly and
high-quality products!*

Family Einböck, management in 3rd & 4th generation





- ✓ Foundation 1934
- ✓ Owner-managed family business
- ✓ One production location in Dorf an der Pram; AUSTRIA
- ✓ 100 % in-house value chain
- ✓ 40+ years of experience in hoeing and weeding technology





WWW.EINBOECK.EU

Related brochures regarding "organic farming & mechanical weed control":



WEEDING TECHNOLOGY

- » **Tined weeder**
AEROSTAR-CLASSIC
- » **Precision tined weeder**
AEROSTAR-EXACT
- » **Rotative weeder**
AEROSTAR-ROTATION

TILLAGE

- » **Fine cultivator**
VIBROSTAR
- » **Cultivator**
TAIFUN
- » **Universal cultivator**
HURRICANE
- » **Seedbed combination**
EXTREM



SEEDING & FERTILIZING

- » **Pneumatic seeding box**
P-BOX-STI | P-BOX-MD
- » **Pneumatic front tank**
JUMBO-SEED
- » **Mechanical intercrop seeder**
DRILLBOX | MECHANICBOX
- » **Row-crop drill**
CHOPSTAR-SEEDER

THE GRASSLAND CARE HANDBOOK

- » Grassland overseeding
- » Grassland restoration
- » Grassland renewal



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