

DRILLBOX, MECHANICBOX, P-BOX-MD, P-BOX-STI, P-BOX-ED
MECHANICAL SEEDERS AND PNEUMATIC AIRSEEDERS

Einböck



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MECHANICAL SEEDERS AND
PNEUMATIC AIRSEEDERS

DRILLBOX MECHANICBOX
P-BOX-MD
P-BOX-STI
P-BOX-ED

With the DRILLBOX/MECHANICBOX you can seed 5 kg/ha of any intercrop and/or seed mix in a simple oversowing procedure. By using a knob for fine and a lever for coarse settings you can adjust the seeding rate from approx. 5 kg/ha. The SEEDBOX features an activation wheel system with baffle plates.

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▼ **DRILLBOX, MECHANICBOX**



▲ **P-BOX-MD** **mechanic drive**

The P-BOX-MD is an air seeder which can be mounted easily and fast to any machine (tined weeders, cultivators, hoes, disc harrows...). It is able to seed all standard seeds and their mixtures up to a size of 5 mm. It is driven by a rubber wheel or a following tail wheel.

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BEST SEEDING

INDIVIDUALLY ADAPTED

Meeting the increasing demand, the arable farm land has to be healthy and fertile. To improve soil quality it is reasonable to keep it planted throughout the year. In many cases this is only possible by seeding intercrops.

In intensive grassland cultivation there is no room for natural regeneration of soil and crop, therefore this job needs to be done mechanically. Underseeding, overseeding grass, drilling of grass and/or intercrop seeds, distribution of slug granulates - EINBÖCK offers the best possible solution for each of these tasks on any size farming operation.

Contact us and we will gladly advise you how to best combine our seeding implements with your existing machinery like cultivators, weeders, disc-harrows etc.



▲ **P-BOX-STI** **SPEED-TRONIC inside**

The P-BOX-STI has an electric seeding roller drive. An extensive, easy to use control and various sensors ensure an exact and precise seeding, always adapted to the working speed and easy to regulate.

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▲ **P-BOX-ED** electric drive

The P-BOX-ED is based on the well-tried and tested P-BOX-MD. The only difference is the type of seeding roller drive. While the seeding roller in the P-BOX-MD is driven via a variable oil bath gearbox by a rubber wheel or a tail wheel, it is powered by an electric motor on the P-BOX-ED.

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DRILLBOX, MECHANICBOX



P-BOX-MD
mechanic drive



P-BOX-STI
SPEED-TRONIC inside



P-BOX-ED
electric drive





VERSATILE APPLICATIONS

INTERCROP SEEDING

In order to avoid nitrogen losses, sowing intercrops is gaining increasing importance and is often mandatory in water protection areas. Intercrop seeding should be done immediately after or during tillage operations in order to utilise soil humidity.

AFTERSOWING GRASS AND CLOVER INTO EXISTING PASTURES AND GRASSLAND

The natural balance of grassland can be disturbed by weather conditions and mistakes in cultivation. A technology to improve grass quality without destroying the existing turf is ideal to improve pasture.

UNDERSOWING CLOVER OR CLOVER / GRASS IN GRAIN

When grain has reached the 3 to 4 leaf stage, clover can be sown after 1-2 weeding operations. During autumn and winter a successful established clover in grain can collect as much as 100 kg nitrogen before ploughing for the summer-crop. Fields with winter greening after grain have a positive ecological effect due to the good nitrogen balance.

UNDERSOWING OF GRASS INTO MAIZE

The grass will be sown in at a maize height of 20 – 30 cm after hoeing (which had been preceded by an earlier round of weeding or hoeing). The following advantages can be expected after successful underseeding of grass into maize:

- the ground can take heavier loads during harvesting or fertilising
- suppression of late-germinating weeds
- collection of nitrogen in autumn allowing an efficient utilisation of liquid manure
- improvement of ground fertility
- reduced amount of herbicide



The **mounting consoles**, which can be adjusted in an angle by a toothed wheel fit to 60, 70, 80, 90 and 100 mm steel tubes.



The **calibration pan** can also be used to enlarge the opening.



The **arm of the bottom drive wheel** is adjustable in length. Because of its large diameter of 600 mm the drive wheel grants an exact activation of the shearing wheels also in rough terrain.

Standard equipment DRILLBOX / MECHANICBOX

- Exact seeding via the shearing wheel system
- Mounting consoles adjustable via toothed wheel and dimensioned for 60, 70, 80,90, and 100 mm tubes
- Stirring shaft can be retrofitted, just above the seeding wheel (standard on MECHANICBOX)
- Large bottom drive wheel with two long actuation metal drive cassettes
- Distribution deflector plates
- Monitoring window to the bottom of the tank
- High gusset plates (equal distribution of the seeds to all deflector plates)
- Lid cover (no seed loss when filling)
- Lid with caplock
- Calibration pan for calibration test
- Operating instructions

Optional equipment DRILLBOX / MECHANICBOX

- Stirring mechanism (standard on MECHANICBOX)
- Price reduction when bottom drive is not required
- Additional console for mounting on different machines (when mounting the SEEDBOX on a disc harrow we recommend to use an additional console because of the high vibrations during operation)

Technical data DRILLBOX / Seed-body-distance 34 cm

Type	Box width m	Transport width m	Tank volume litres	Number of outlets	Weight approx. kg
DRILLBOX 260	2.72	2.95	215	8	145
DRILLBOX 300	2.84	3.00	230	9	150

Technical data MECHANICBOX / Seed-body-distance 17 cm

Type	Box width m	Transport width m	Tank volume litres	Number of outlets	Weight approx. kg
MECHANICBOX 300	2.84	3,00	230	17	165

Further widths on request



DRILLBOX MECHANICBOX

DRILL WITH RELIABLE TECHNIQUE **IMPROVE SOIL STRUCTURE**

The DRILLBOX/MECHANICBOX is suitable for the use on rigid tilling implements. In a very easy and solid way you can seed 5 kg/ha of any intercrop seed and seed mix in a simple oversowing procedure using a knob for fine and a lever for coarse settings. The seedbox features an activation wheel system with baffle plates and can also be equipped with a stirring shaft for an extra charge.

The specially shaped distribution deflector plates spread the seeds evenly. The system is activated by a separate large bottom drive wheel with metal drive cassette. The box is also available without these options at a reduced price. If you activate the DRILLBOX through the roller of your machine, however, the smaller diameter of the roller may raise the figure for the lowest possible seeding rate beyond the figure stated above. High gusset plates inside the tank keep the seeds from slipping and ensure exact seed distribution even on sloped terrain.

The MECHANICBOX should come into operation by slowly working machines (subsoiler, rotary harrow...) with a shallow mounting position respectively falling height. You should chose the DRILLBOX on the other hand on machines with high working speed (cultivator, disc harrow ...) and from approx. 70 cm mounting height.



P-BOX-MD P-BOX-STI P-BOX-ED

On these and the following four pages the technical details of the P-BOX are described.

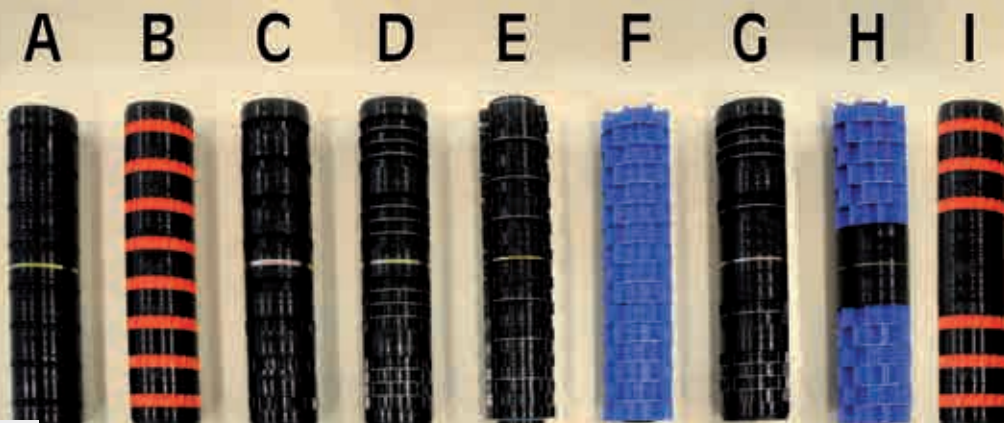
This is followed by a detailed explanation of the P-BOX-MD (page 14), P-BOX-STI (page 20) and P-BOX-ED (page 24).

FOR EVERY SEED THE CORRECT SEEDING ROLLER

We offer a wide range of seeding rollers which can be ordered. One seeding roller with fine and one with coarse toothings are part of the standard equipment.

The seeding rollers are suited for the following seeds depending on seeding quantity, working width and working speed (see table on page 27).

PTO-DRIVEN FAN





PRECISE **PNEUMATIC SEEDING**

The air seeders P-BOX-MD, P-BOX-ED and P-BOX-STI are designed to seed all standard seeds and their mixtures up to a size of 5 mm. Depending on seeding quantity and speed you can adjust the seeding rate to anywhere between 1 kg and 300 kg per hectare in a simple adjustment step.

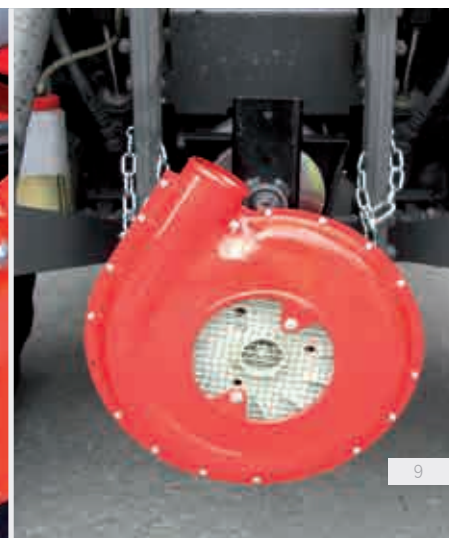
ELECTRIC DOUBLE FAN

The air stream blowing the seeds to the deflector plates is produced either by an electric, hydraulic, shaft-driven or a special fan, which is attached directly to the PTO shaft of the tractor.

With the **mechanical fan** you can seed also heavy seeds and drive with higher working speed.

HYDRAULIC FAN

MECHANICAL FAN
(ATTACHED DIRECTLY
TO THE PTO-SHAFT
OF THE TRACTOR)





The standard P-BOX is designed for grass seed to be sown at a volume of 40 kg/ha at a speed of 10 km/h.

If you want to seed a larger quantity, if the working speed is higher (disc harrows) or if larger, heavier seeds (grain) shall be distributed we ask you to contact us so we can arrange the best possible combination of seeding roller and fan type for you.

The **deflector plates** are equipped with a **splash guard** to make sure the seeds are evenly distributed. The holder of the plate can be adjusted infinitely variable.

When mounting the deflector plates you have to make sure, that the distance between two deflector plates is not more than 75 cm.



The standard P-BOX has 8 sections on the seeding roller, but with special rollers in combination with sealing plugs the outlets can be reduced. You can also use distributor heads for doubling the outlets (e.g. 16 outlets from eight sections).

If a P-BOX is mounted for example on a 9 m Einböck GRASS-MANAGER or AEROSTAR, you need a seeding roller with 6 sections and 2 sealing plugs.



TECHNICAL DETAILS

of P-BOX-MD, P-BOX-ED and P-BOX-STI

A lever adjusts the **distance of the stripper** according to the seed diameter. The seeding roller can be changed without any tools.

The **calibration plate** for the calibration test is standard equipment.



The **seeding roller** distributes the seeds into the eight divided and separated outlets. From there it is transported pneumatically via the PVC seed hoses to the deflector plates from where it is exactly spread over the entire working width. Since the seeds are blown pneumatically, wind does not matter as much as it would with mechanical seeders.



On request the airseeders are available with a **500 litres seed tank** (with tank support and extra-large opening).

The standard seed tank has a capacity of 300 litres. A stirring shaft prevents the seed mix from separating and from bridging in the tank.



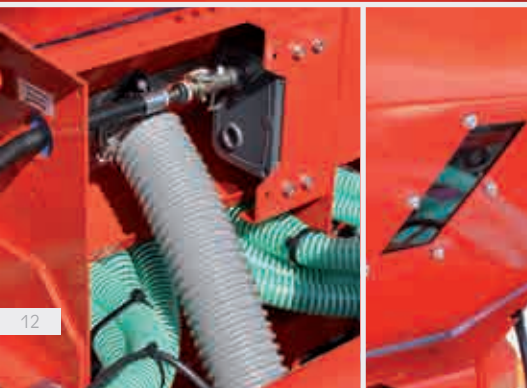
The **rubber sealing** ensures the tank is properly closed - this is necessary for an optimal operation. The opening lid can be mounted with **opening to the left or to the right**.



Mechanic jogging unit for sticky seeds.

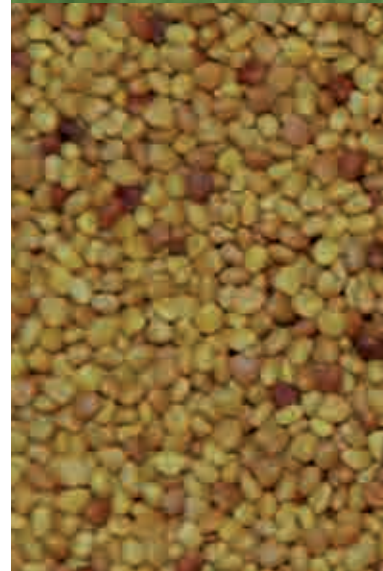


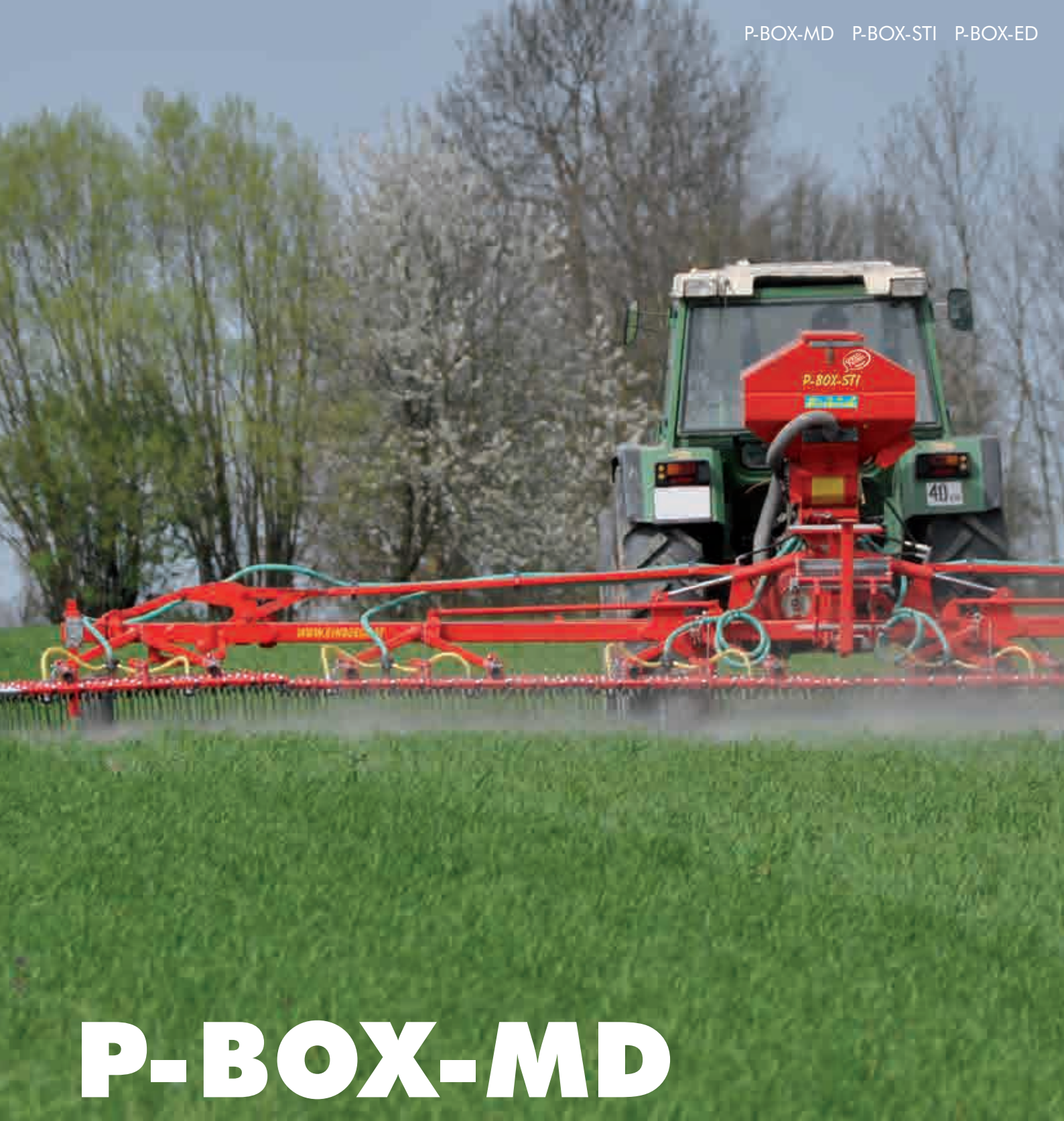
For heavy seeds we recommend the **retaining plate** mounted above the stirring shaft and the seeding roller.



Far left: **Draining outlet** with flexible drain hose

Monitoring window

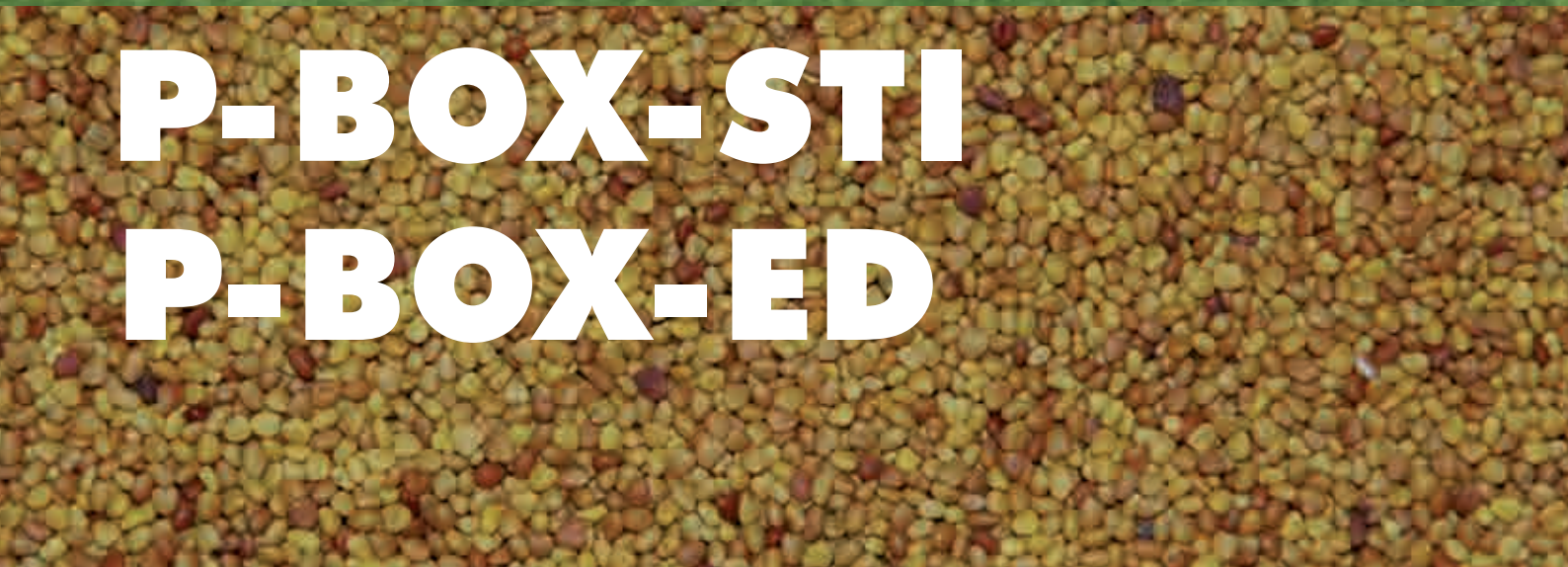




P-BOX-MD

P-BOX-STI

P-BOX-ED





The flexible drive shaft flanged to the rubber support wheel or tail wheel transfers the power to an infinitely variable oil-immersed gearbox, which powers the seeding roller and the stirring shaft by a chain drive.

Standard air wheel bottom drive,
fix mounted to the frame.



Optional equipment:
Bottom drive with air wheel,
which is pressed on a roller.



Optional equipment: Suspended
bottom drive with 90° angle unit
through **trailing tail wheel** instead
of standard version.





P-BOX-MD

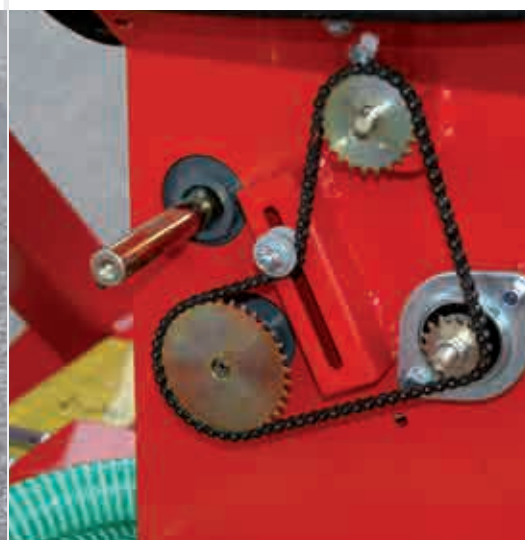
ROOTS IMPROVE SOIL STRUCTURE

COVER CROPS ARE WORTH IT

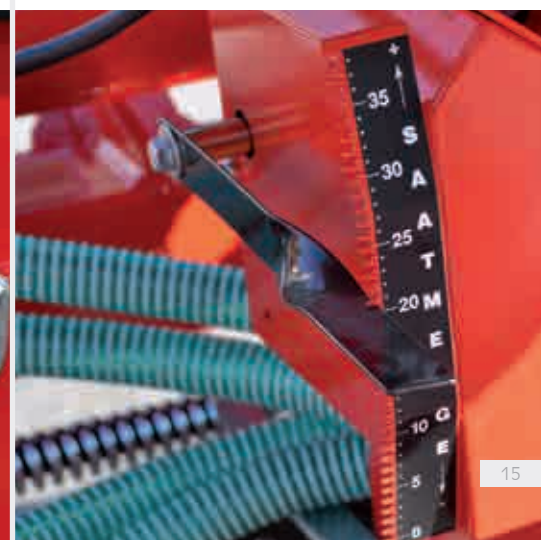
Drive redirection 90° for the bottom drive (mounting possibility on standard bottom drive and tail wheel).



A **large-dimensional chain** with tightener transfers the power from the oil-immersed gear box to the seeding roller and the stirring shaft.



Simple **adjustment of seeding quantity** through a lever.



SAVE COSTS

CONSERVE SOIL

PROTECT THE ENVIRONMENT



In case there are areas you do not want to seed, you can disconnect the flexible shaft from the gearbox by **taking away the bolt** where the shaft enters the gearbox.

If you want to do so without leaving the tractor seat, you can get an **electric adjustment of the seeding quantity** (option), which allows you to adjust the seeding quantity to "0".

UNDERSEEDING IN GRAIN OFFERS **MANY BENEFITS**

For example, the preservation and improvement of soil fertility.
Nurse crops fix nitrogen, control weeds and prevent against erosion.



With **this control unit** , that can easily be mounted in the tractor cabin with a velcro, you can switch on/off the electric fan.

The optional **airflow monitoring** checks the fan and warns of clogged seed hoses.



Standard equipment P-BOX-MD

Bottom drive via air wheel
Stirring shaft
Mounting console
Calibration plate + calibration pan
Cable with big diameter and control unit
Specially designed distribution plates with splash guard
Flexible drive shaft (length = 2.10 m)
Separate section on the seeding roller per hose
Seeding roller with coarse toothing
Seeding roller with fine toothing
Monitoring window + emptying opening
6.00 machine with electric double fan, 12 volts
9.00 + 12.00 m machines with mechanical fan and PTO-shaft
Operating instructions

Optional equipment P-BOX-MD

Several assembly sets for Einböck cultivators, weeders, etc.)
Tank stabilizing support
Cable to tractor 8.00 m instead of 3.00 m
Hectare-counter (electronic)
90° angle unit for flexible shaft
Flexible drive shaft 3.00 m instead of 2.10 m
Additional flexible drive shaft 2.10 m with adapter for connection to the standard shaft
Larger tank volume (500 litres)
Mechanic fan with PTO shaft
Hydraulic fan with oil pressure manometer (requirements: pressure free return line, maximum capacity of the oil pump must not exceed 50 litres per minute; recommendation: independent hydraulic valve or load sensing system)
Airflow monitoring
Stronger gear box for heavy seeds
Retaining plate
Mechanic jogging unit for sticky seeds
Filling steps
Bottom drive with air wheel, mounted on the mainframe
Bottom drive with trailing tail wheel
Bottom drive with air wheel, which is pressed on a roller
Special seeding rollers with reduced number of outlets e.g. G, H, I (see page 8)
Electric adjustment of seeding quantity
Electronic control module "Etronic" (electronic control of seed distribution, fan, seeding shaft, air stream, tank-level, hectare-counter and more)

Technical data P-BOX-MD

Type/Working width	Working width up to. ⁴	Tank volume litres	Distribution plates	Weight approx. kg	Seeding rollers ⁵
P-BOX-MD 600 ¹	6.00 m	300	8	86	B, E
P-BOX-MD 900 ^{2,3}	9.00 m	300	12	95	H, G
P-BOX-MD 1200 ²	12.00 m	300	16	105	F, D

- ¹ with the 6.00 m machine grain can be seeded up to 3.00 m for seeding of grain on 6.00 m working width a mechanical or hydraulic fan is needed
- ² with mechanical fan
- ³ can be extended to 12.00 m
- ⁴ with small seeds
- ⁵ see photos of the seeding rollers on page 8



QUICK GERMINATION, HIGH YIELDS **BEST RESULTS**

The electronic control unit "**ETRONIC**" will make working with the seeder easier and is mounted in the tractor cabin with a magnet.

What **ETRONIC** can do:

- Change the seeding quantity electrically during operation
- Monitor fan, seeding roller, airflow and tank level through sensors, calculate single and daily operation areas in hectares

The **electronic hectare counter** can be retrofitted easily.





Standard equipment P-BOX-STI

Stirring shaft
Separate section on the seeding roller per hose
Mounting console
Calibration plate + calibration pan
Cable with big diameter and control unit
Specially designed distribution plates with splash guard
Seeding roller with coarse toothing
Seeding roller with fine toothing
Monitoring window + emptying opening
6.00 m machine with electrical fan, 12 Volt
12.00 m machines with mechanical fan and PTO shaft
Operating instructions

Optional equipment P-BOX-STI

Several assembly sets for Einböck cultivators, weeders, etc.)
Tank stabilizing support
Larger tank volume (500 litres)
Mechanic fan with PTO shaft
Mechanic fan
Hydraulic fan with oil pressure manometer (requirements: pressure free return line, maximum capacity of the oil pump must not exceed 50 litres per minute; recommendation: independent hydraulic valve or load sensing system)
Retaining plate for heavy seeds
Mechanic jogging unit for sticky seeds
Ground wheel sensor for external support wheel
Spike wheel with wheel sensor
GPS-speed sensor
7-pole signal cable
Upper link sensor
Linkage sensor
Radar sensor
Tank level sensor
Calibration button direct on the machine
Airflow monitoring
Longer cable 5 m für machine respectively sensors
Filling steps
Special seeding rollers with reduced number of outlets e.g. C, H, I (see page 8)

Technical data P-BOX-STI

Type/Working width	Working width up to ³	Tank volume litres	Distribution plates	Weight approx. kg	Seeding rollers ⁴
P-BOX-STI 600 ¹	6.00 m	300	8	86	B, E
P-BOX-STI 1200 ²	12.00 m	300	16	105	D, F

¹ for seeding of grain on 6.00 m working width a mechanical fan is needed

² with mechanical fan

³ with fine seeds

⁴ see photo seeding rollers page 8



P-BOX-STI

WITH SPEED TO MORE YIELD



The P-BOX-STI is a pneumatic airseeder with electrical quantity dosage. The user-friendly 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 (and also with the P-BOX-MD and the P-BOX-ED) it is possible to seed all standard seeds and their mixtures up to a size of 5 mm. Depending on the seeding rate and working speed it can be set to anywhere from 1 kg to 300 kg per hectare by a simple adjustment.

It can easily be retrofitted on Einböck machines and also on machines of other manufacturers.



PRECISE MONITORING WITH SEVERAL SENSORS

With the **calibration button** on the rear of the machine, the calibration test can be done directly at the machine.



The **linkage sensor** turns off the seeding roller when the machine is lifted up.



The **GPS-Sensor**, mounted on the lid of the tank, is an option to measure the speed precisely.



The power supply is done by the tractor. Several sensor signals can be obtained from the tractor via the **7-pole signal socket**.



The sensors of the **airflow monitoring** signalize, whether one or more seeding hoses are clogged.



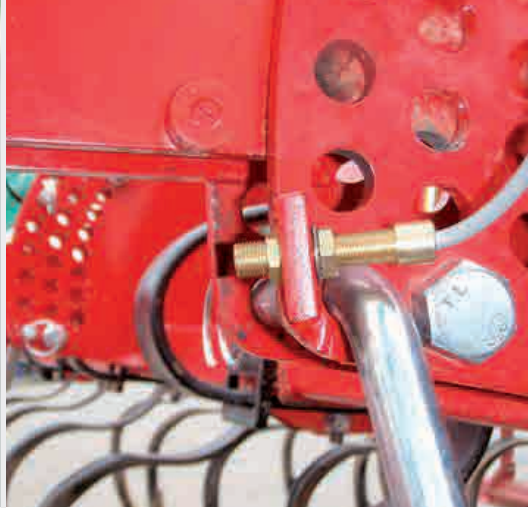
The **tank level sensor** signalizes, when the tank is getting empty. The sensor works inductively, therefore it is vibration independent.

SPEED-TRONIC

CONSISTENT AND FAST SEEDING

- Hectare- and acre-counter (daily and total area)
- Operating hours counter
- Automatic calibration test – optional with calibration button directly on the machine
- Automatic switching off of the seeding roller at the headland
- Pre-dose function
- Tank level monitoring (optional)
- Airflow monitoring (optional)





With the **control unit**, which simply attaches to the tractor cabin by a magnet, you can switch on/off the fan and the electric motor for the seeding roller.

This **sensor, which is part of the standard equipment**, can be mounted on the 3 point linkage of the tractor. It will automatically turn on/off the electric motor powering the seeding roller as soon as the machine is lifted / lowered at the end of the field.

It is also possible to work without the sensor.

The P-BOX-ED is particularly suitable for machines on which it is difficult to mount a bottom drive wheel as it is necessary for a P-BOX-MD.

However, the working speed chosen at the calibration must be maintained exactly. Otherwise the seeding quantity per hectare would change during operation since the setting you have chosen at the calibration test will remain constant regardless of the tractor speed.

If you wish to have the seeding quantity adapting to changing working speeds, then the P-BOX-STI with the SPEED-TRONIC control unit has to be used. With this control unit it is possible to receive a speed signal necessary for the regulation of the seeding roller speed.

Standard equipment P-BOX-ED

Stirring shaft
Separate section on the seeding roller per hose
Mounting console
Calibration plate + calibration pan
Cable with big diameter and control unit
Specially designed distribution plates with splash guard
Seeding roller with coarse toothing
Seeding roller with fine toothing
Monitoring window + emptying opening
6.00 machine with electric double fan, 12 volts
12.00 m machines with mechanical fan and PTO shaft
Operating instructions

Optional equipment P-BOX-ED

Several assembly sets for Einböck cultivators, weeders, etc.)
Tank stabilizing support
Electric cable extension to a total length of 8 m
Larger tank volume (500 litres)
Mechanic fan with PTO shaft
Hydraulic fan with oil pressure manometer (requirements: pressure free return line, maximum capacity of the oil pump must not exceed 50 litres per minute; recommendation: independent hydraulic valve or load sensing system)
Retaining plate for heavy seeds
Mechanic jogging unit for sticky seeds
Airflow monitoring
Filling steps
Special seeding rollers with reduced number of outlets e.g. C, H, I (see page 8)

Technical data P-BOX-ED

Type/Working width	Working width up to ³	Tank volume litres	Distribution plates	Weight approx. kg	Seeding rollers ⁴
P-BOX-ED 600 ¹	6.00 m	300	8	86	B, E
P-BOX-ED 1200 ²	12.00 m	300	16	105	D, F

¹ for seeding of grain on 6.00 m working width a mechanical fan is needed
² with mechanical fan
³ with fine seeds
⁴ see photo seeding rollers page 8



P-BOX-ED

ADVANCED SEEDING TECHNOLOGY **COMFORTABLE OPERATION**

The only difference between the well-tried and tested P-BOX-MD and the P-BOX-ED is the type of seeding roller drive. While the seeding roller in the P-BOX-MD is driven via a variable oil bath gearbox by a wheel, it is powered by an electric motor on the P-BOX-ED. The electric motor will always turn at exactly the speed it has been set to, regardless of whether there is more or less resistance on the seeding roller because of the stirring shaft (no inexact potentiometer control).

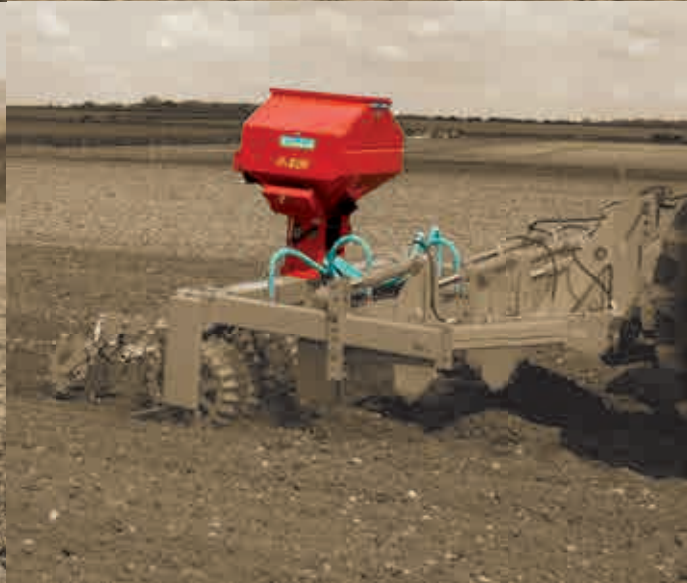


IN COMBINATION

EXAMPLES FROM THE PRACTICE

The Einböck universal seeders are flexible in use and can easily and quickly be mounted on your existing equipment.

Here are some examples of the P-BOX from practice:



WHICH SEEDS FOR WHICH SEEDER?


The list gives an overview of the seeds which can be distributed with which machine.


We will be glad to advise you about other fields of applications!

**DRILLBOX
MECHANICBOX**
**P-BOX-MD
P-BOX-STI
P-BOX-ED**




Fieldbeans		
Buckwheat		
Spelt		
Peas		
Fodder profi KM		
Barley		
Grassland profi B		
Grassland profi NA		
Oats		
Inkarnat clover		
False flax		
Flax seed		
Lupines		
Lucerne		
Poppy seed		
Oil radish		
Phacelia		
Rape		
Rye		
Red clover		
Turnip rape		
Slug pellets		
Mustard		
Soybean		
Sunflower		
So-vetch		
Triticale		
White clover		
Wheat		

 possible, depending on working speed and working width

 possible up to 6 m working width but requires following options:

- Mechanic or hydraulic fan instead of electric fan
- Using the retaining plate
- Stronger gear box (only necessary for P-BOX-MD)

 not possible

Related brochures

- CHOPSTAR-SEEDER - Row crop drill
- JUMBO - Pneumatic airseeder / Fertilizer spreader
in CHOPSTAR brochure
- ROTOSEEDER - Universal seeder



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