

ROTOSEEDER, DRILLBOX, MECHANICBOX, PNEUMATICBOX, P-BOX SPEED

UNIVERSAL SEEDERS, MECHANICAL SEEDERS AND AIR SEEDERS

Einböck



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UNIVERSAL SEEDERS,
MECHANICAL SEEDERS AND AIR SEEDERS

**ROTOSEEDER
DRILLBOX MECHANICBOX
PNEUMATICBOX
P-BOX SPEED**

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.

Page 8 and 9

▼ **DRILLBOX, MECHANICBOX**



▲ **ROTOSEEDER**

The ROTOSEEDER is the all-rounder amongst the seeders. The easy operation and a simple mounting on nearly every machine make it an extremely economic alternative for the cultivation of fallow areas, intercrops and simultaneous cropping.

Page 6 and 7

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.



▲ PNEUMATICBOX

The PNEUMATICBOX 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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P-BOX SPEED ▲

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

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ROTOSEEDER



PNEUMATICBOX



P-BOX SPEED



DRILLBOX, MECHANICBOX



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 herbicides will be necessary

SPREADING OF SLUG PELLETS (only with the ROTOSEEDER)

High humidity and moisture provide ideal conditions for snails to breed and live in the soil. Spreading slug pellets with the Rotoseeder will help to fight the slimy pest.

Standard equipment **ROTOSEEDER**

12 Volt electric drive, charged by a simple connection to the tractor battery

Stepless adjustment of seeding quantity and speed control

Compact and stable construction, easily mountable to a big variety of machines

Scatter disc with adjustable casting shovels and special stirring shaft for grass

Baffle plate for precise adjustment of the working width range and the spreading characteristics

90 litres synthetic container with sealed lid to prevent dirt and rain water from entering

Convenient to operate, user friendly control from the driver cabin

3 m power supply cable from battery to control unit

6 m cable from control unit to seeder

Airtight foil-covered control unit and mounting console for tractor cabin

Height-adjustable frame with top link mounting and clamping plate

Draining outlet with screwed cover

Hexagonal container guarantees higher container stability as standard types

Screwed cover

Powder coated frame

Operating instructions

Optional equipment **ROTOSEEDER**

Mounting console for tined weeder

Extension cable 5 meters

Sensor for 3 point linkage

ELECTRONIC CONTROL UNIT "WORLD"



- stepless rpm setting
- digital rpm indication
- rpm monitoring and measuring guarantee constant rpm and make sure a diminishing seed amount in the tank will not influence the working width
- seed valve indicator (open/closed)
- automatic start-up mechanism for stuck seeds
- area calculator (ha)
- voltage monitor
- temperature indicator
- counter for operating hours
- choice of various languages
- sensor control for automatic opening and closing of the seed valve upon lifting or lowering the machine



Technical Data **ROTOSEEDER**

Type/electrical control	Working width* m	Height/width/depth cm	Tank volume in litres	Weight in kg (approx.)
ROTOSEEDER WORLD	1 - 20	85/55/60	90	30



ROTOSEEDER

SIMPLE AND EFFICIENT TO **MORE SOIL VITALITY**

The ROTOSEEDER is a versatile oversowing tool for dispensing rotational or permanent fallow, intercrops, grass seeds, seeds for simultaneous cropping, slug pellets and similar granules as well as small seeds.

The sowing volume is adjustable on the stepless feed valve in a quick and easy way to suit the sowing purpose. The RPM of the scatter disc determines the working width. Through its design, construction and function the ROTOSEEDER offers an extremely cost efficient alternative for the cultivation of fallow areas, intercrops and simultaneous cropping.

Draining outlet for emptying the tank in a quick and simple way

The **control unit** comes with a support bracket that makes mounting easy and quick

Front mounting with **mounting bracket on top-link**





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 can maintain an exact activation of the shearing wheels also in rough terrain. The rpm of the shearing wheels can be changed quickly and simply by changing the drive cassettes.

Standard equipment DRILLBOX / MECHANICBOX

Exact metering through the shearing wheel system
Mounting consoles adjustable through toothed wheel and dimensioned for 60, 70, 80,90, and 100 mm tubes
Stirring shaft can be retro-fitted, just above the seeding wheel (standard on MECHANICBOX)
Large bottom drive wheel with two long actuation metal drive cassettes
Special shaped distribution deflector plates
Monitoring window
Lid cover (no seed loss when filling)
Lid with caplock
Calibration pan for turning sample
Wear-resistant, elastic, environmentally friendly 2 component varnish
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	Working width (metres)	Box width (metres)	Transport width (metres)	Tank volume (litres)	Number of outlets	Weight in kg (approx.)
DRILLBOX 260	2.72	2.72	2.95	215	8	145
DRILLBOX 300	3.06	2.84	3.00	230	9	150

Technical data MECHANICBOX / Seed-body-distance 17 cm

Type	Working width (metres)	Box width (metres)	Transport width (metres)	Tank volume (litres)	Number of outlets	Weight in kg (approx.)
MECHANICBOX 300	2.89	2.84	3.00	230	17	165



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.



PNEUMATICBOX

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

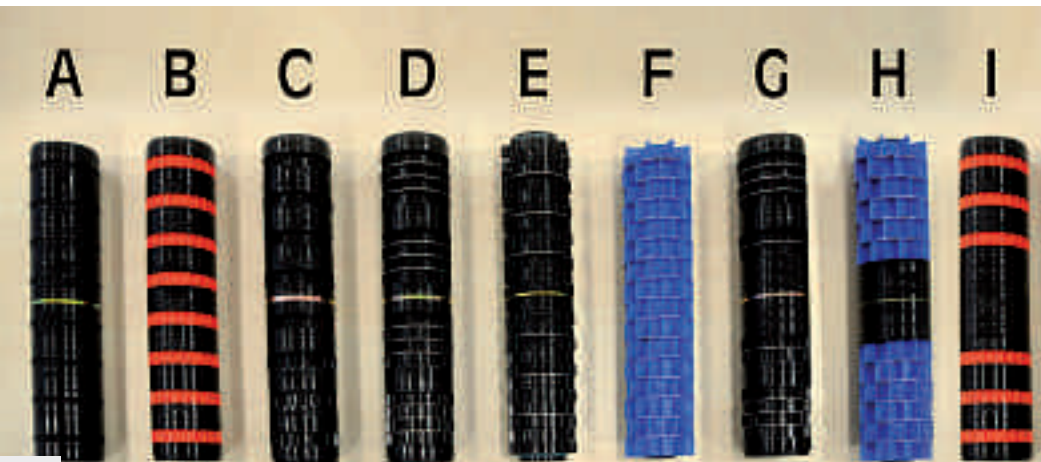
This is followed by a detailed explanation of the PNEUMATICBOX (from page 16) and the P-BOX SPEED (from page 22).

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 toothing 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





P-BOX SPEED

PRECISION PNEUMATIC SEEDING

The air seeders PNEUMATICBOX and P-BOX SPEED 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.

DOUBLE ELECTRIC 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.

HYDRAULIC FAN

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



The **deflector plates** are mounted with a **splash guard** to push the seeds down and ensure an exact distribution. The bracket for the baffle plate can be set to any desired angle.

When mounting the deflector plates you have to consider that the maximum distance between the plates must not exceed 75 cm (23.9 inch).

The **seeding roller** distributes the seeds into the eight divided and separated outlets. From there it is conveyed 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 plays a reduced role in comparison to mechanical seeders.



The technical data listed here refer to 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 amount or 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.

The **mechanical fan** is suited for seeding of heavy seeds and operating at higher speeds.

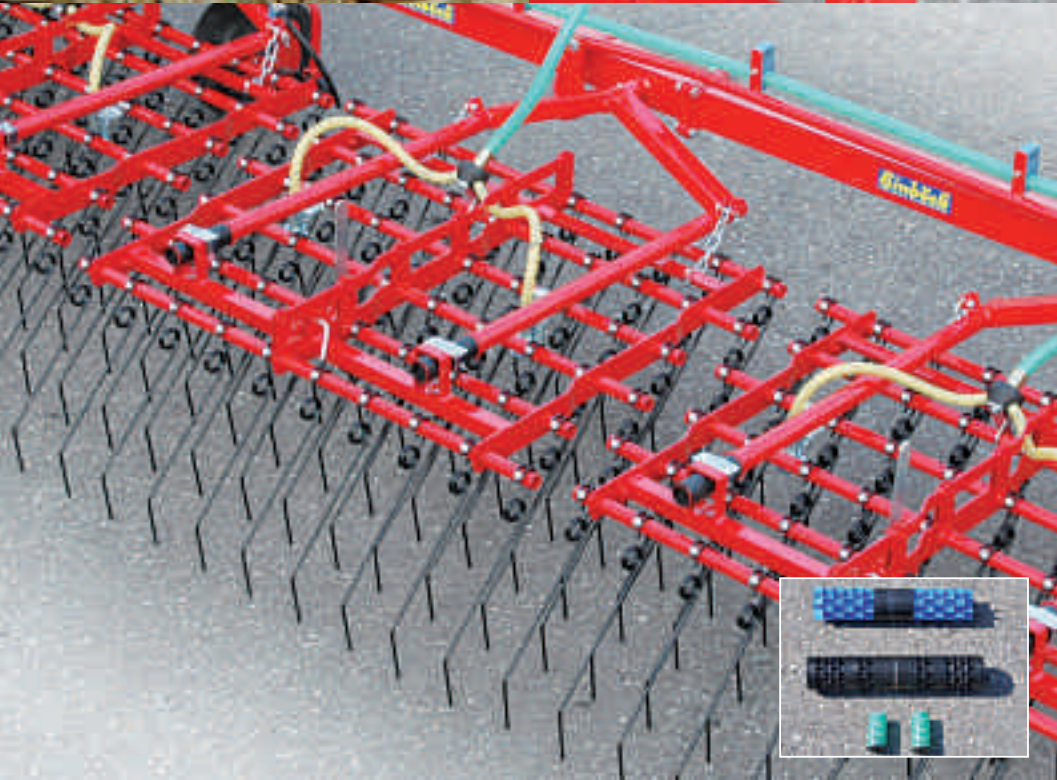
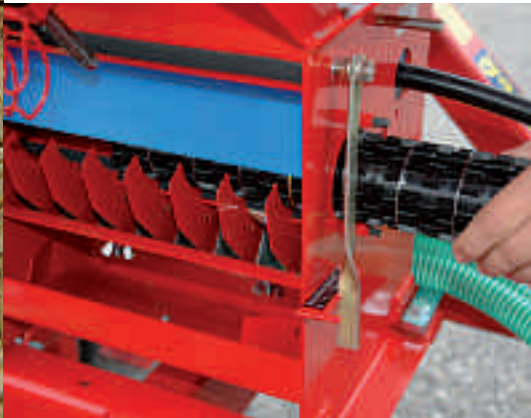
TECHNICAL DETAILS

of PNEUMATICBOX and P-BOX SPEED



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 turning sample** is standard equipment.



The standard PNEUMATICBOX/P-BOX SPEED 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 the PNEUMATICBOX/P-BOX SPEED is mounted for example on a 9 meters Einböck GRASS-MANAGER or AEROSTAR, you need a seeding roller with 6 sections and 2 sealing plugs.



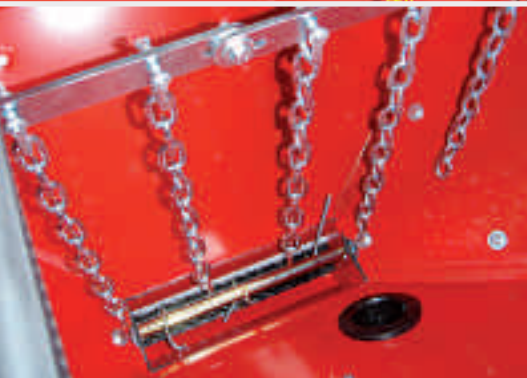
On request the PNEUMATICBOX and the P-BOX SPEED are available with a **500 litres seed tank** (with tank support and extra-large opening).

The seed tank has a standard capacity of 300 litres. As an option there is a tank with 500 l volume available. 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.

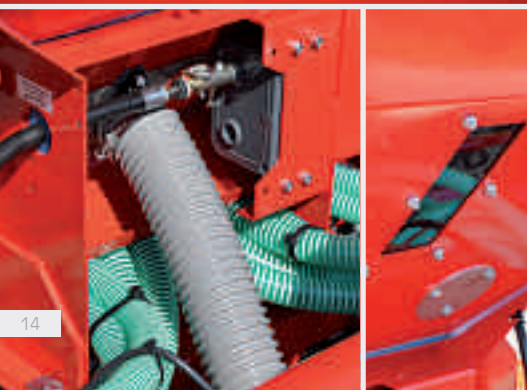
The opening lid can be mounted with **opening to the left or to the right**.



Mechanic **jogging unit** for sticky seeds.

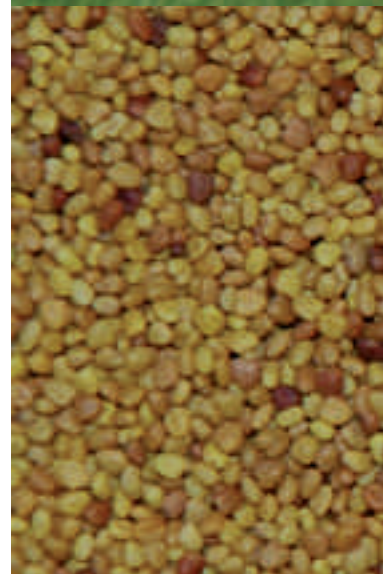


For heavy seeds we recommend the **retainer plate** mounted above the stirring shaft and the seeding roller.



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

Monitoring window





PNEUMATICBOX P-BOX SPEED





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

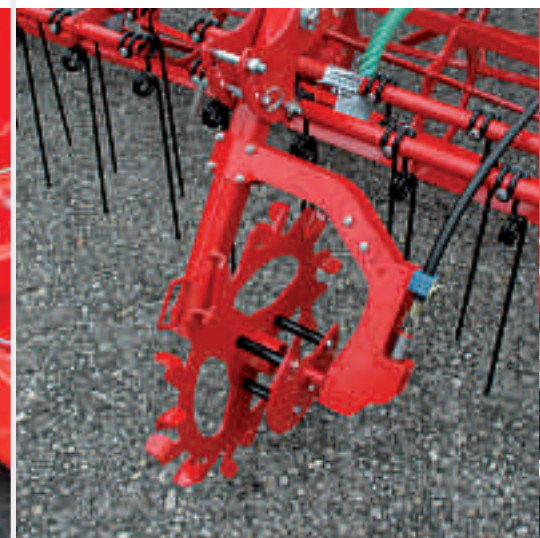
Standard air tyre bottom drive,
fix mounted to the frame.



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.





PNEUMATICBOX

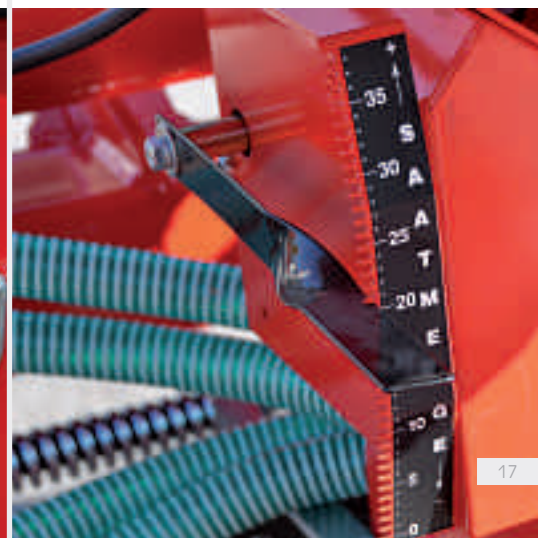
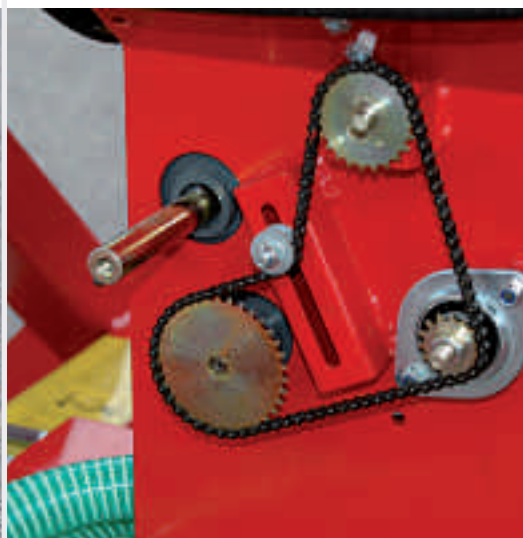
ROOTS IMPROVE SOIL STRUCTURE

COVER CROPS ARE WORTH IT

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

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

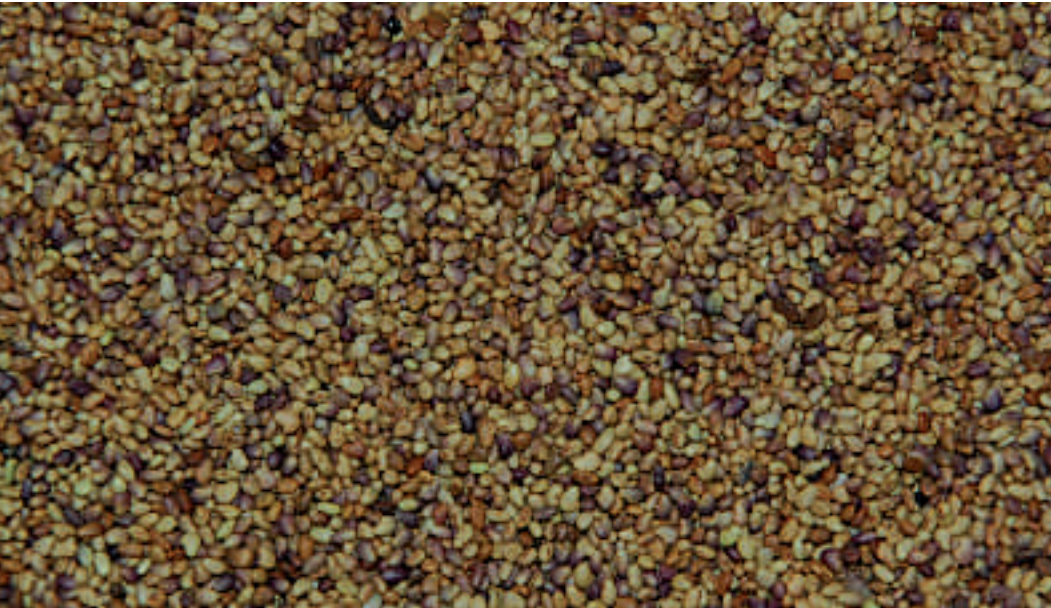
Simple **adjustment of seeding quantity** through a lever.



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** you can switch on/off the electric fan.

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



Standard equipment PNEUMATICBOX

Stirring shaft
Separate section on the seeding roller per hose
Mounting console
Calibration plate + calibration pan
Cable with big diameter and control unit for machines with electric fan
Bottom drive with rubber wheel or tail wheel
Specially designed distribution plates with splash guard
Flexible drive shaft (length = 2100 mm)
Seeding roller with coarse toothing
Seeding roller with fine toothing
Monitoring window + emptying opening
• 6.00 machine with double electric fan, 12 volts
• 9.00 + 12.00 m machines with mechanical fan and PTO-shaft
Wear-resistant, elastic, environmentally friendly 2-component varnish
Operating instructions

Optional equipment PNEUMATICBOX

Several assembly sets and steps for filling of the seed-tank for Einböck machines (cultivators, weeders, etc.)
Cable to tractor 8 m instead of 3 m (for Pneumaticbox with electric fan)
Hectare-counter (electronic)
Flexible drive shaft 3000 mm instead of 2100 mm
Adapter for connection of two flexible shafts
90° angle unit for flexible shaft
Larger tank volume (500 litres)
Tank support – recommended when mounting on machines with high vibrations (standard on 500 l tank)
Mechanic fan
Mechanic fan with PTO shaft
Hydraulic fan with oil print 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)
Additional bottom drive
Retainer plate
Stronger gear box for heavy seeds
Mechanic jogging unit for sticky seeds
Airflow monitoring
Bottom drive with trailing tail wheel instead of standard version
Bottom drive with air wheel, which is pressed on a roller instead of standard version
Special seeding rollers with reduced number of outlets e.g. G, H, I (see page 10)
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 PNEUMATICBOX

Type/working width cm	Working width (maximum *)	Tank volume in litres	Distribution plates	Electr. fan	Mech. fan	Weight in kg (approx.)	Seeding roller **	Fan drive
PNEUMATICBOX 600	6.00 m	300	8	•	-	86	C, E	12V power source
PNEUMATICBOX 900	9.00 m	300	12	-	•	95	H, G	PTO-shaft
PNEUMATICBOX 1200	12.00 m	300	16	-	•	105	D, F	PTO-shaft

* see table page 27

** see photo seeding rollers page 10



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 by a magnet.

What **ETRONIC** can do:

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

Distribution plates
with splash guard

The **electronic hectare counter** can measure in addition to the area also the forward speed (hectare/kph or acre/mph). It can be retro-fitted easily.





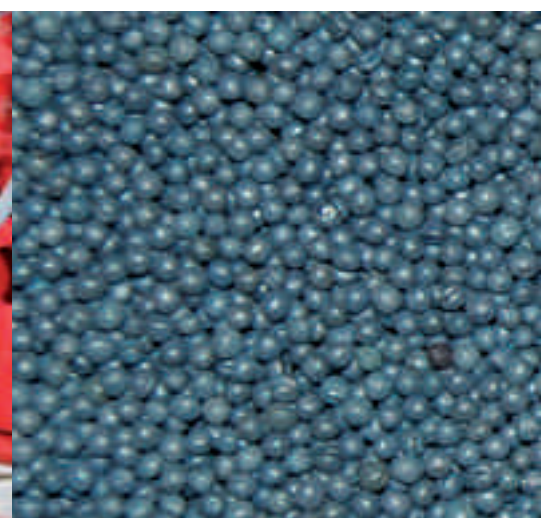
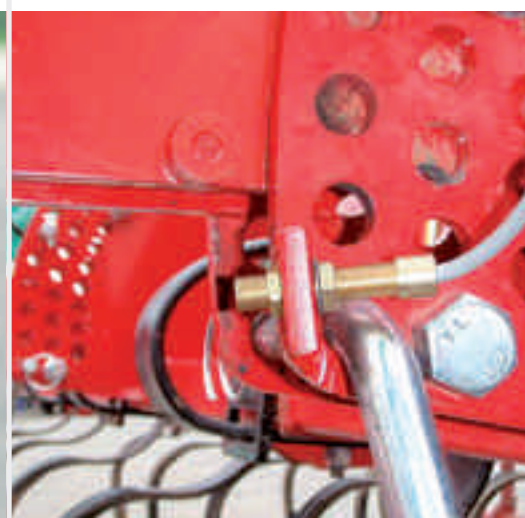
PRECISE AND EFFICIENT

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

It will also allow you to change the speed of the motor and the one of the seeding roller.

The **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 implement is lifted / lowered at the end of the field.

It is also possible to work without the sensor.





P-BOX SPEED

ADVANCED SEEDING TECHNOLOGY **COMFORTABLE OPERATION**

The only difference between the well-tried and tested PNEUMATICBOX and the P-BOX SPEED is the type of seeding roller drive.

While the seeding roller in the PNEUMATICBOX is driven over a variable oil bath gearbox by a wheel, it is powered by an electric motor on the P-BOX SPEED. 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).





SPEED-TRONIC

SMOOTH FAST SEEDING

The P-BOX SPEED with "SPEED-TRONIC" makes it possible to keep the seeding quantity constant, independently from changing forward speeds. The required speed information can be provided by the 7-pin infosocket of the tractor, via a wheel sensor, or via a GPS- or a radar sensor.

Additionally functions of „SPEED-TRONIC“:

- Calculation of single and daily operation areas in hectares/acres
- Operating hours counter
- Automatic calibration function
- Sensor for tank level control (option)
- Easy handling (different language)

We have the right solution for every operating concept.

Optional equipment for SPEED-TRONIC

7-pin plug to connect control module and tractor
Wheel sensor for air wheel, tail wheel, etc.
Tail wheel with wheel sensor
Sensor for 3-point hitch
Splitter cable for sensor – is required when working with two sensors
Radarsensor with sensor for 3-point hitch and splitter cable
GPS-sensor with sensor on the 3-point hitch and splitter cable
Extension cable 5 m for sensors
Extension cable from the machine to the tractor 5m
Cable set for the tractor, is necessary in case there is no 3-pin plug on the tractor (the cable can also be necessary when the fuse of 3-pin plug of the tractor is too weak)
Sensor for tank level control

Standard equipment P-BOX SPEED

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 coares toothing
Seeding roller with fine toothing
Monitoring window + emptying opening
• 6.00 machine with double electric fan, 12 volts
• 12.00 m machines with mechanical fan and PTO shaft
Wear-resistant, elastic, environmentally friendly 2-component varnish
Operating instructions

Optional equipment P-BOX SPEED

Several assembly sets and steps for filling of the seed-tank for Einböck machines (cultivator, weeders, etc.)
Sensor with cable, for further tractors
Electric cable extension of 5 m (total length 8 m)
Larger tank volume (500 litres)
Tank support - recommended when mounting on machines with high vibrations (standard on 500 l tank)
Mechanic fan on motor
Mechanic fan with PTO shaft
Hydraulic fan with oil print 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
Special seeding rollers with reduced number of outlets e.g. G, H, I (see page 10)
Base equipment „SPEED-TRONIC“
For using the 7-pin infosocket, wheel sensor, GPS- or radar sensor etc. (seeding quantity control in changing working speed)

Technical data P-BOX SPEED

Type/working width cm	Working width (maximum *)	Tank volume in litres	Distribution plates	Electr. fan	Mech. fan	Weight in kg (approx.)	Seeding roller **	Fan drive
P-BOX SPEED 600	6.00 m	300	8	•	-	86	B, E	12V power source
P-BOX SPEED 1200	12.00 m	300	16	-	•	105	D, F	PTO-shaft

* see table page 27

** see photo seeding rollers page 10



GRAIN BY GRAIN

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

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 test turning will remain constant regardless of the tractor speed.

Nevertheless, if the seeding quantity should adjust automatically to a changing working speed the P-BOX SPEED can be equipped with the "SPEED-TRONIC" control. With this control it is possible to obtain a speed signal which is necessary for the regulation.



BETTER YIELD WITH HIGH SPEED

IN COMBINATION

EXAMPLES FROM THE PRACTICE

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

Here are some examples of PNEUMATICBOX and P-BOX SPEED from practice:



PNEUMATICBOX



P-BOX SPEED



WHICH SEEDS FOR WHICH SEEDER?




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

About other fields of applications we will be glad to advise you!

ROTOSEEDER
DRILLBOX
MECHANICBOX
PNEUMATICBOX
P-BOX SPEED



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 for PNEUMATICBOX necessary)
-  not possible



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