Power harrows
LION

PÖTTINGER

Preparing a bed for the seed

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Preparing a bed for the seed

All information on technical data, dimensions, weights, output, etc. and the images shown, are approximate and are not binding. The machines shown do not feature country-specific equipment and may include equipment that is not supplied as standard, or is not available in all regions. Your PÖTTINGER dealership would be pleased to provide you with more information.

The power harrow plays an important role in many arable farming scenarios. Best quality seed bed and excellent mixing of the soil to form a perfect seedbed are highlights of PÖTTINGER power harrows. Combined with a seed drill, this machine becomes a flexible and high output combination delivering perfect drilling results. We offer a tailor-made solution featuring many equipment versions to cover all soil types and different sizes of farm.

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The best soil

For optimum plant growth

What is soil?

Soil is the uppermost loose layer of the Earth's lithosphere where the atmosphere, hydrosphere, and biosphere intermingle and influence each other.

Sourced originally from rock, soil was formed by the influencing factors of climate, vegetation, relief, water, animals and humans. Over millions of years, soil-forming processes have created different layers in varying stages of development.

Soil types

Different soil types each have the same characteristic structure sequence. Like, for example, brown earth soils. These soil types have different features and specifications. This means we can draw conclusions about how the soil was formed and identify special agronomic characteristics that need to be taken into account in plant cultivation and crop care.

Soil classification

The soil classification indicates the grain size composition of the mineral particles. These are divided into coarse soil with grain sizes above 2 mm, which form the soil structure, and fine soil with grain sizes below 2 mm. In the fine soil, the primary grains are divided into three different classes: sand, silt and clay.

Primary grains range in diameter from less than 0.002 mm for fine clay to 2 mm for coarse sand. Within this range there are many other subfractions of grain sizes.

How the soil type influences soil characteristics

Different grain sizes have a great influence on the properties of the soil. The larger the components the higher the water permeability, aeration and the ability for roots to penetrate. At the same time, however, water content and, in particular, water retention capacity decrease sharply. Such soil is characterized by a high proportion of gravel or sand.

The smaller the particle size, the higher the volume of pores available. Water holding capacity and cation exchange capacity increase accordingly, allowing more nutrients to accumulate. However, the gas content decreases.

High water holding capacity is not only an advantage. If soil with a high clay content has to be cultivated in adverse, wet conditions, this can have a negative effect on the properties of the soil.

Water balance

Only water made available to the plant can actually be absorbed by the plant. This soil water is stored between the central pores and is called adhesion water.

Adhesive water between the fine pores, which occurs in diameter sizes <0.2 µm is not made available to plants. The cohesion tension in these small pores is too great here for this water to be drawn out by roots. The pores are too small for the root system and are multiplied when the soil is compacted.

Seepage water entering the soil from precipitation is absorbed between wide coarse pores and narrow coarse pores with a pore size of >50 µm and 10-50 µm. This water moves fast between the wide coarse pores and moves slowly between the narrow coarse pores.

The best working results

The best working results for an optimum seedbed

A perfectly prepared seedbed features a uniform, level finish, an ideal proportion of fine soil and optimum consolidation. This creates perfect germination conditions for rapid and uniform growth of the plants.

With this series of efficient, high output power harrows, PÖTTINGER gives you the best possible support in achieving homogeneous seed germination.

Designed for the toughest conditions, these machines are known for delivering the best working results working solo and in combination with a seed drill.

Neat work

Thanks to the configuration of the rotors, the machine actively cultivates the full working width from side board to side board. As a result, the soil is moved even along the outermost edge of the machine.

Universal tines for every situation

LION power harrows with approximatively 1 rotor per foot of working width can be used both as harrows and cultivators. All that is needed to change the application is for the tines to be repositioned. The same geometry of tine is used for both applications.

The tines on LION power harrows have a long service life and ensure consistent, effective tillage of the soil with intensive loosening and uniform seed bed.

1 Sweeping tine position - power harrow

The sweeping angle of the tines produces a good seed bed structure throughout the working depth. This tine arrangement ensures that the soil is levelled to perfection. The mulch layer remains near the surface to protect against erosion.

- Intensive crumbling of the soil
- More harvest residues remain on the surface
- Covering with a mulch layer provides good protection against erosion
- Faster working speeds possible
- Sweeping angle as factory setting and possible with all tine thicknesses

2 Aggressive tine position - rotary cultivator

Set to an aggressive angle, the tine breaks up the soil from underneath. This results in good mixing of the soil, with fine seed bed concentrated lower down.

The rotation direction of the rotors stays the same; only the change of tines alters the working geometry.

- The tines break up the soil from underneath; highly suitable for deep seed placement and deep-rooted crop.
- Excellent incorporation of harvest residues into the soil
- Only possible with 11/16" (18-mm) thick tines
- Cannot be used on models with approximatively 1.2 rotors per foot of working width (LION 3040 / 3540)

Maximum flexibility

All-round skill set

As leading tillage tools, LION power harrows not only perform well when operated on their own but also deliver excellent results in combination with any PÖTTINGER linkage mounted or implement mounted seed drill. You can use these tillage machines together with VITASEM and AEROSEM seed drills or the TEGOSEM flexible hopper cover crop sowing system.

They are fitted and removed using the same mounting brackets on the rear roller as for all implement-mounted machines. Quick and easy coupling and decoupling is carried out by 4-point attachment without the need for tools.

On linkage-mounted seed drills, a HYDROLIFT frame is required for coupling a LION or FOX unit.

Versatile operations

In combination with VITASEM models you can choose between a mechanical or hydraulic top link.
The hydraulic top link draws the seed drill closer to the power harrow when it is raised, bringing the center of gravity closer to the tractor while turning around at the headland. This makes it easier to maneuver on slopes. At the same time, a much higher lifting height can be achieved at the headland.

Further advantages:

- More ground clearance with coulters raised
- Easier starting in field corners and at embankments along the edge of the field
- Rotors can be activated without using the seed drill
- Leveling furrows

1 Compact combination with center of gravity close to tractor

2 The weight of the seed drill is carried by the rear roller

Focus on weight reduction and distribution

A narrow yet strong headstock increases visibility to the rear. Weight is also saved compared to the predecessor models.

- On AEROSEM seed drills the center of gravity lies between the power harrow beam and the rear roller.
- On VITASEM models, the center of gravity acts on the front section of the rear roller.

Advantages of the 4-point mounting

- The additional weight of the seed drill is carried entirely by the rear roller for maximum soil conservation.
- The center of gravity of the whole seed drill combination is located very close to the tractor. This means that only a slight weight is taken off the front axle of the tractor, so there is still plenty of traction for steering.
- The power harrow can move upwards independently of the seed drill.
- Changing the working depth of the power harrow does not affect the seed placement depth settings.

To make work easier for you

Clever details

You need to be able to react quickly and easily to different operating conditions. PÖTTINGER power harrows feature some well thought-out details that make setting up your machine much easier.

Convenient working depth setting

The working depth of the rigid LION power harrows can be flexibly adjusted by simply repositioning the bolts in the 9-hole matrix.

On the folding models it is possible to set the working depth of each frame section from the side without the need for tools.

Hydraulic depth adjustment is available as an option.

Leveling board is adjusted automatically

The rear leveling board is standard and is set automatically with the depth of the rear roller. No readjustment is necessary when changing the depth. The rear Leveling board can be quickly removed and positioned in front of the rotors.

- Over the full working width the leveling board is always at a consistent distance from the tines
- All models are preset using an easily accessible 18-hole matrix
- Adjusted using ratchet wrench supplied

Optional:
- Additional front leveling board on all models

Working width is the same as the transport width

For your convenience, the side boards do not have to be especially folded upwards on new models to transport the machine to the next field. The boards are located within the permitted transport width and make full use of the maximum working width. This means it is no longer necessary to modify machines with working widths of approximately 9'10", 11'6", and 13'1" for road transport (permissible transport width varies from country to country). This saves time and lets you focus on the important things.

Spring mounting

Spring mounted side boards are provided as standard to ensure perfect merging between passes even in extreme conditions, such as on heavy and stony soils. Compared to the previous generation, the spring mounting force has been increased by approx. 20 % to ensure a continuously clean and tidy working pattern.

Safety and mountings

A sturdy tube section is mounted on the gear trough to protect against stones and against reaching into the work area. This also enables track eradicators to be retrofitted easily.

PTO shaft holder for easy coupling

The PTO shaft can be placed on a convenient fold-away support. Additional contamination is avoided and maintenance work is made easier. Thanks to the correct position of the PTO shaft at the height of the PTO shaft stub, the coupling process is more convenient.

To make work easier for you

Perfectly dimensioned

Tines measuring approximately 0.71 x 13" are available for machines with approximatively 1 rotor per foot and a rotor diameter of 12". This results in an overlap of 0.63". In this configuration, the tines can be mounted in the aggressive position. The larger rotor diameter and the strong tines create an excellent flow of soil even in stony conditions.

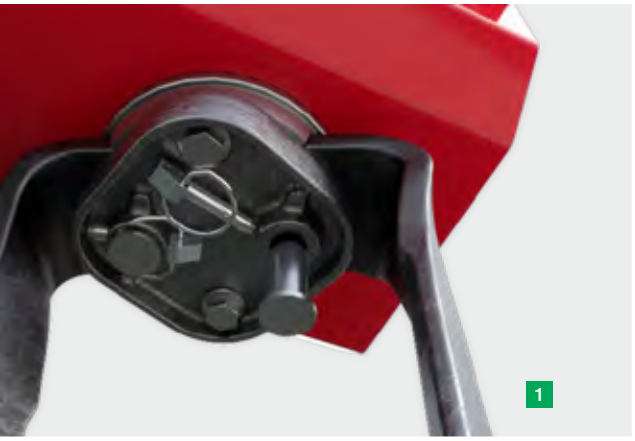
Machines with approximately 1.2 rotors per foot are equipped with tines measuring about 0.59 x 12.99". With a rotor diameter of 11.22" and an overlap of 1.57", the tines prepare the seedbed with a particularly fine tilth. More durable tines measuring approximately 0.71 x 12.99" in DURASTAR quality are available as an option for more abrasive types of soil. Due to their smaller rotor diameter, only a sweeping tine position is possible on these machines.

Save time, increase output

Constantly changing soil conditions are demanding on tillage tools. Practical experience shows that only what can be done easily and quickly is then really done. In order to ensure consistent working results, the tines need to be replaced after a certain period of time, depending on the site specific conditions and the hectares covered.

Maximize tine life

To achieve the maximum service life, you can install DURASTAR and DURASTAR PLUS equipment in addition to the standard tines. These are even more wear-resistant and are characterized by their extra hard coating.



1 Remove lynch pin and lock pin

2 Remove tine

3 Fit new tine

4 Secure in place

DURASTAR

- DURASTAR tines are available as an option for all LION power harrows
- Special tungsten carbide coating on both sides of the tine
- 2 times longer service life compared to standard tines

DURASTAR PLUS

- DURASTAR PLUS is available as an option for tines measuring approximately 0.71 x 13".
- Tungsten carbide plate brazed onto the side for extra wear protection
- 4 times longer service life
- Not recommended for tines set in an aggressive position

Secure mounting

Our tines are mounted using a clamping plate as standard. Two bolts secure the clamping plate to the tine carrier, which needs to be loosened to change tines.

Easy to swap around with QUICK FIX

To make it easier to replace the tines, the QUICK FIX quick-change system with folding lynch pins is available in addition to the standard bolt fastening. The tines can be changed or swapped around easily and conveniently in just a few steps.

More reliability in the field

Kit you can rely on

These machines operate reliably even in the hardest endurance conditions on the heaviest soils. Powerful, smooth-running gearboxes and virtually loss-free power transmission ensure a high level of reliability.

Attachment to different tractors is possible thanks to the extending lower linkage mountings for different tire diameters. The length and width are adjustable without the need for tools. In addition, the mountings are floating for improved ground tracking.

For smooth and ultimately more durable operation of the PTO shaft, the power harrow can be perfectly adapted to a wide variety of tractor geometries thanks to the flexibly adjustable lower linkage mountings. As a result, the PTO shaft has sufficient overlap and a low deflection angle to transmit maximum torque.

Versatile to handle your conditions

PÖTTINGER offers a wide choice of heavy power harrows to cover every tractor power range and application in the field. Each gearbox is optimally matched to the respective application and is engineered for a long service life. Three different gearboxes are installed in the respective models.

Three gearbox versions

Regardless of whether it is fitted with a CLASSIC gearbox, changeable speed gearbox or central gearbox, all models of LION power harrow are smooth running during operation and in the headland position.

LION CLASSIC gearbox

The single gearbox is designed for tractors up to 150 hp and has a fixed ratio.

- Gearbox input stub mounted far back for a long tube overlap
- Longer PTO shaft for a larger angle and uniform, smooth operation
- Protected by a cam-type clutch
- No rear PTO shaft

LION changeable speed gearbox

Designed for tractors between 200 and 270 hp, a choice of different gear pairs is provided to cover a range of different applications.

- Several rotor speeds are available, which are changed by changing gear pairs
- PTO shaft at only a minimal angle with incoming gear placed well back
- Protected by a cam-type clutch
- Large cooling fins
- Optional: rear PTO shaft

LION V drive train

The two folding LION V series models are equipped with large central gearboxes designed for tractors outputting up to 320 and 500 hp respectively.

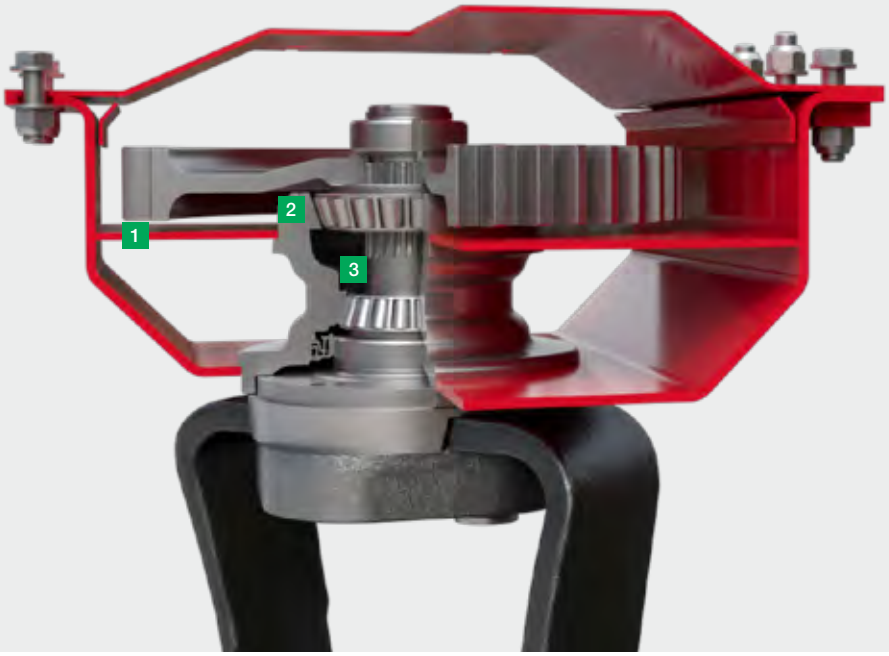
- LION V equipped with changeable speed gearbox
- LION V MASTER equipped with 2-speed manual gearbox - Change gear using lever
- High self-cooling performance thanks to high oil flow rates
- Reduced torque load thanks to high shaft speeds between the central gearbox to the external gearbox

Table of speeds

Series	LION CLASSIC	LION | LION MASTER							LION V		LION V MASTER		
Input speed	Single speed gearbox	Changeable speed gearbox with pair of gears: 29/36 Standard	36/29	|	26/39 Optional	39/26	|	31/34 Optional	34/31	Changeable speed gearbox 29/36 standard	36/29	2-speed manual gearbox	
540 rpm	185	185	285	|	–	343	|	209	251	185	285	–	
750 rpm	256	256	395	|	212	–	|	290	349	256	395	– |	320
1,000 rpm	342	342	527	|	283	–	|	387	456	342	527	350 |	420
1,250 rpm	–	–								–		430 |	–

Recommended: for 540 rpm - gear combination 39/26

More reliability in the field



1 Gear trough supported in the center

2 Tapered roller bearings with robust, single-piece bearing housing

3 Wide spacing between the upper and lower bearings.

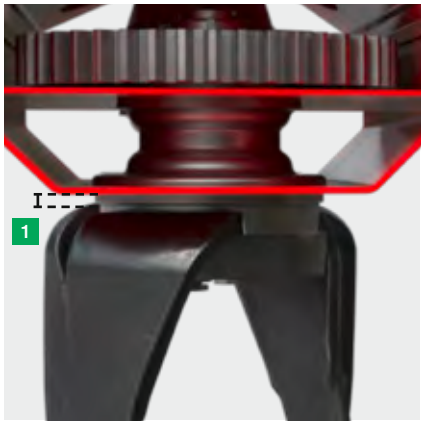
Strength and durability

An extended service life is only possible thanks to precision machining and strong connections.
The internal components on the LION power harrows also deliver maximum strength, durability, and smooth operation; an excellent combination for enhanced reliability in the field.

Robust gear trough

The high gearbox housing is formed from a single piece and is additionally reinforced by the welded central brace. This gives the gear beam extreme strength.

- Above the central brace the gears and bearings run submerged in semi-liquid grease.
- The double base also protects the gear beam from dirt collection and damage.



Integrated tine carriers

The tine carrier is completely integrated into the rotor beam to ensure reliability.

1 No soil can flow above the rotors because of the small gap between the rotor and the rotor beam
- Harvest residues cannot wrap around the tine carriers
- No jamming of stones possible and no optional stone guard necessary

Tapered roller bearings with robust, single-piece bearing housing

The bearing housings are welded into the box section with the central brace before being milled using CNC systems. The manufacturing process achieves the most exact center to center spacing between each rotor. The smooth running of the bearings ensures a long service life.

A bearing for eternity

The upper and lower tapered roller bearings are spaced as far apart as possible to minimize stress on the rotor components The lower bearing is located very close to the tine carrier. This reduces the load on the bearing. The labyrinth seal carefully seals inwards and outwards to prevent collection of dirt.

Dimensions of tine rotor shaft:

- 2" on the LION CLASSIC / LION / LION V series
- 2.5" on the LION MASTER / LION V MASTER

Rigid power harrows

Rigid power harrows

Our rigid power harrows are divided into three different models. The biggest difference lies primarily in the dimensions of the components and bearings for the different types of gearbox, which are designed for different tractor outputs. All of them feature settings to achieve a perfect working result.

The best working results

In order to always achieve the best working results in all conditions, our rotor tines are dimensioned and designed for maximum service life. This means they can remain in operation for longer because the tines retain their original length longer.

In addition, on machines with approximatively 1 rotor per foot of working width, the tines can be repositioned so that the cultivation intensity can be changed.

Working depth adjustment

On all rigid models, the working depth adjustment is carried out mechanically without the need for tools using a 9-hole matrix as standard. Hydraulic adjustment is available as an option, which can be operated while driving.

Thanks to lasered numbering on the hole matrix, good accessibility and automatic adjustment of the leveling board, the working depth can be changed quickly and conveniently.

Adjustable side boards

The side boards have two adjustment options. In addition, their height can be adjusted precisely and easily using slotted holes. This allows them to be adjusted to prevent the formation of ridges.

- Narrow position: Side boards are within the country-specific permitted transport widths of approximately 9'10", 11'6", and 13'1". They do not need to be folded up manually for transport.
- Wide position: The side boards can be extended by 2" on each side without the need for tools for exact GPS passes. The transport width is increased to 10'2".

Adjusting the leveling board

When the working depth of the power harrow is changed the leveling board is adjusted automatically as well.

The 18-hole matrix and ratchet wrench supplied are used to fine-tune the position of the Leveling board.

Adaptable tool bar

The safety guard in front of the tines is also used as an adaptable tool bar for mounting optional equipment.

It can be used to install track eradicators and a front leveling board. The tools can be depth adjusted using lock pins accessible from the side.

Wide range of speeds

All versions of gearbox on the rigid models of power harrow are approved for PTO speeds of 540, 750 and 1,000 rpm.

This means that the rotor speed can be changed conveniently from the cab.

Rigid power harrows

LION CLASSIC lightweight series for tractors up to 150 hp

LION CLASSIC Lightweight series

With the LION CLASSIC series PÖTTINGER offers slightly lighter weight models. They are best suited for more compact tractors and small farms. On CLASSIC versions you can choose from working widths of 8'2" with 8 rotors and 9'10" with 10 or 12 rotors.

The series includes the following models:

- LION 2530 CLASSIC
- LION 3030 CLASSIC
- LION 3040 CLASSIC

CLASSIC gearbox up to 150 hp

- The PTO input shaft positioned is mounted far back with a long tube overlap of the PTO shaft for smooth running and maximum torque transmission
- Depending on the tractor PTO, the speed range is 185 to 342 rpm with a fixed gear ratio
- Large-dimensioned cooling fins for high self-cooling capacity
- Large dimension gears running in semi-liquid grease
- No rear PTO shaft

LION CLASSIC

LION 2530 CLASSIC, 3030 CLASSIC

- approximatively 1 rotor per foot of working width
- A total of 8 or 10 rotors at 8'2 or 9'10"
- Tine dimensions of 0.71 x 13" for a working depth of up to 11"
- Tines can be set to aggressive angle
- Designed for lower power tractors
- Designed for less load-bearing soils and lighter conditions

LION 3040 CLASSIC

- approximatively 1.2 rotor per foot of working width
- Total of 12 rotors within 9'10"
- Tine dimensions of 0.59" x 12.99" for a working depth of up to 9.84" (0.71" x 12.99" optional).
- A very fine soil structure is achieved because more tines are in use than on LION 3030 machines
- Better mixing and crumbling effect because 20% more active tools are in use
- Particularly suitable for crops requiring a seedbed with fine seed bed

Rigid power harrows

LION medium weight series for tractors up to 200 hp

LION
Medium weight series

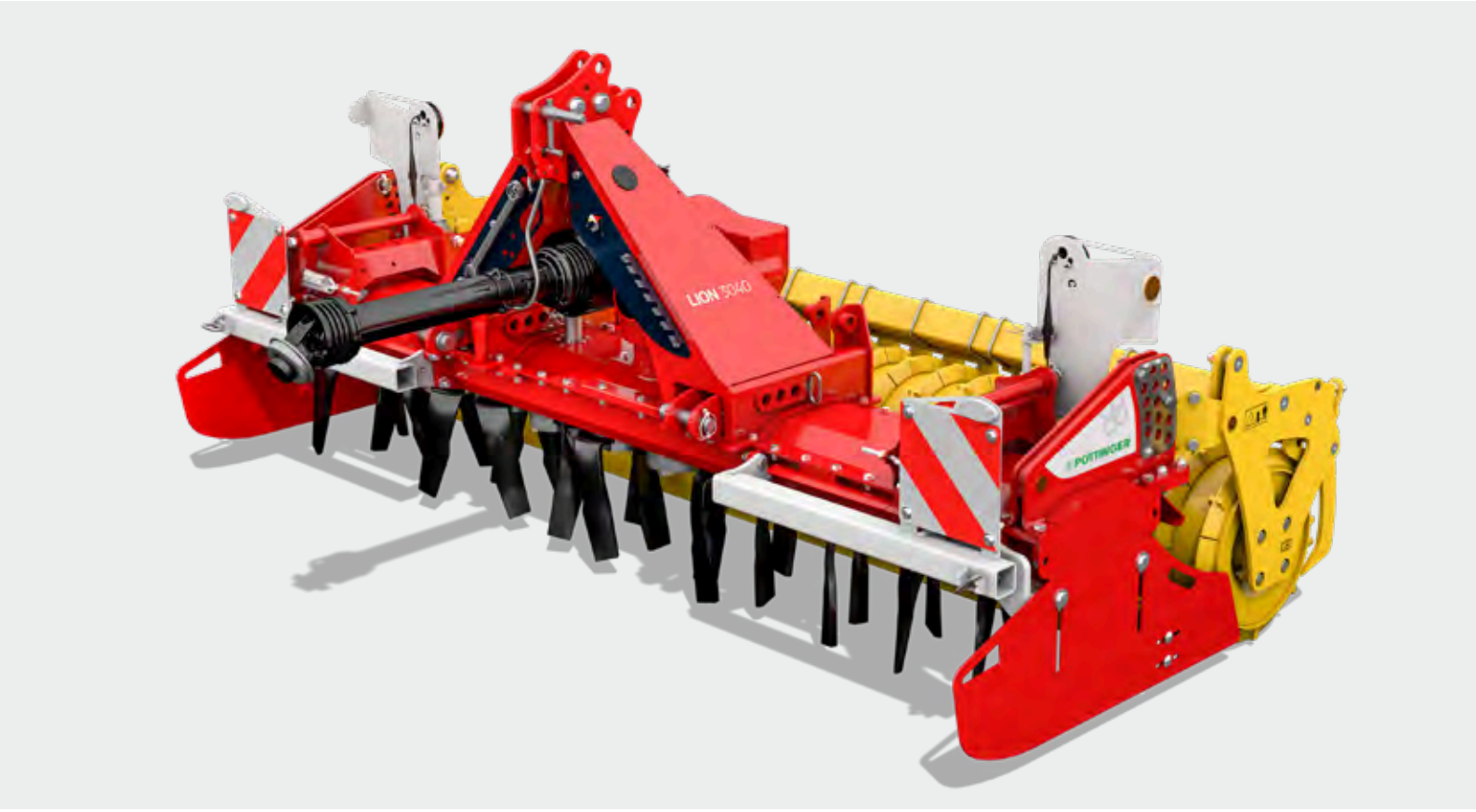
PÖTTINGER's LION series offers medium weight power harrows. These are available with working widths of 9'10" and 11'6" Thanks to the interchangeable gear the rotor speed can be adjusted to suit any soil conditions and PTO shaft rpm. There is a large selection of rear rollers to cover all possible conditions and deliver the best consolidation in each case.

The series includes the following models:

- LION 3030
- LION 3040
- LION 3540

LION changeable speed gearbox up to 200 hp

- Proven changeable speed gearbox for an extended speed range
- A total of three different gear pairings are available, depending on the model
- Recommended tractor power starting at 110 hp for 9'10" models and 130 hp for 11'6"
- Variable rotor speeds between 185 and 527 rpm
- PTO shaft at only a minimal angle with incoming gear placed well back
- Overload protected by a cam-type clutch
- Large-dimensioned cooling fins for continuous heat dissipation
- Rear PTO shaft optional



LION 3030

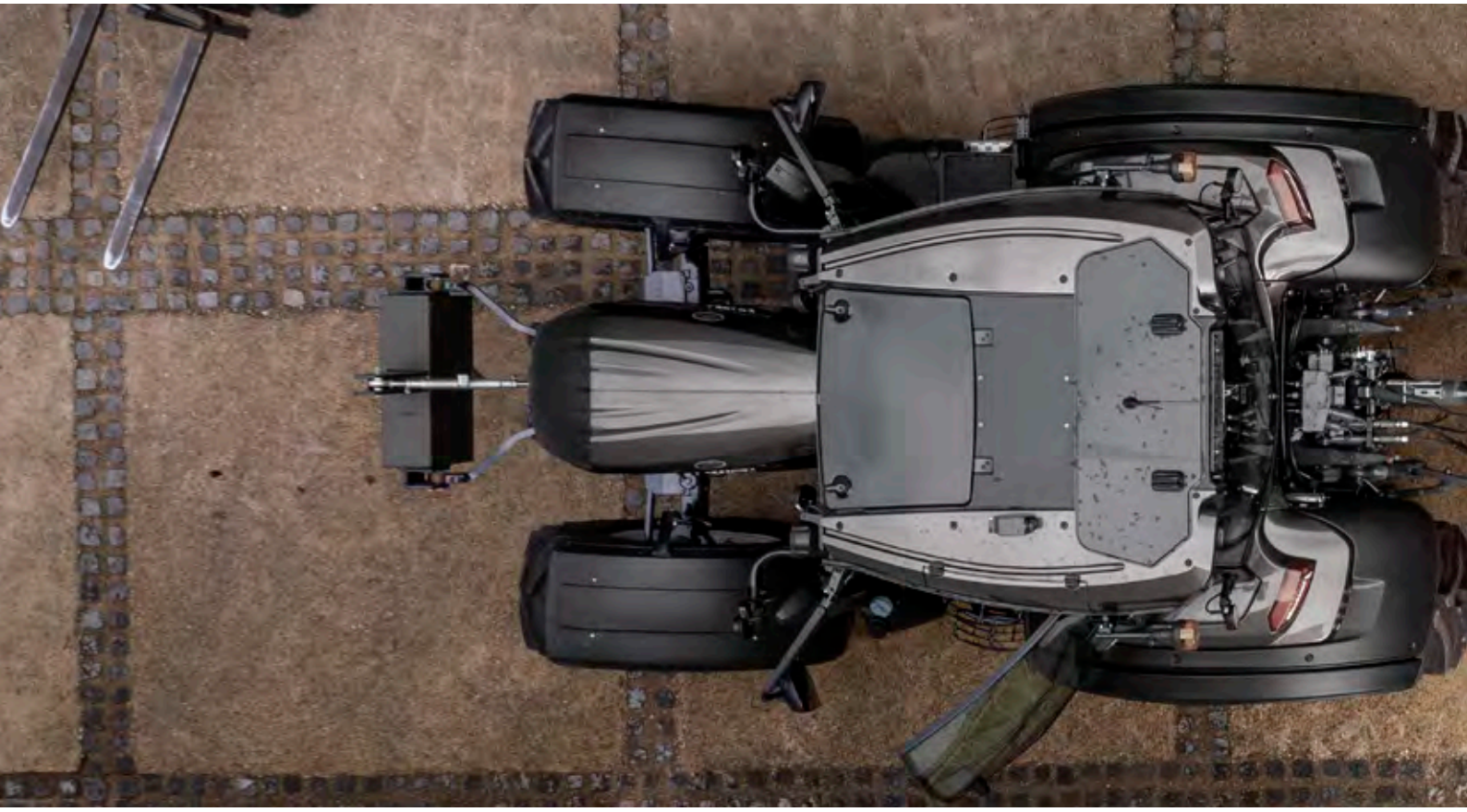
- approximatively 1 rotor per foot per foot of working width
- Total of 10 rotors within 9'10"
- Tine dimensions of 0.71" x 13" for a working depth of up to 11"
- Tines can be set to aggressive angle
- Designed for challenging conditions on clay and dry soils
- Reliable operation even in stony conditions due to high strength tines

LION 3040, 3540

- approximatively 1 rotor per foot of working width
- A total of 12 or 14 rotors at 9'11 or 11'6"
- Tine dimensions of 0.59" x 12.99" for a working depth of up to 9.84" (0.71" x 12.99" optional)."
- A very fine soil structure is achieved because more tines are in use than on LION 3030 machines
- Better mixing and crumbling effect because 20 % more active tools are in use
- Particularly suitable for crops requiring a seedbed with fine seed bed

Rigid power harrows

LION MASTER heavy duty series for tractors up to 270 hp



LION MASTER
Heavy duty series

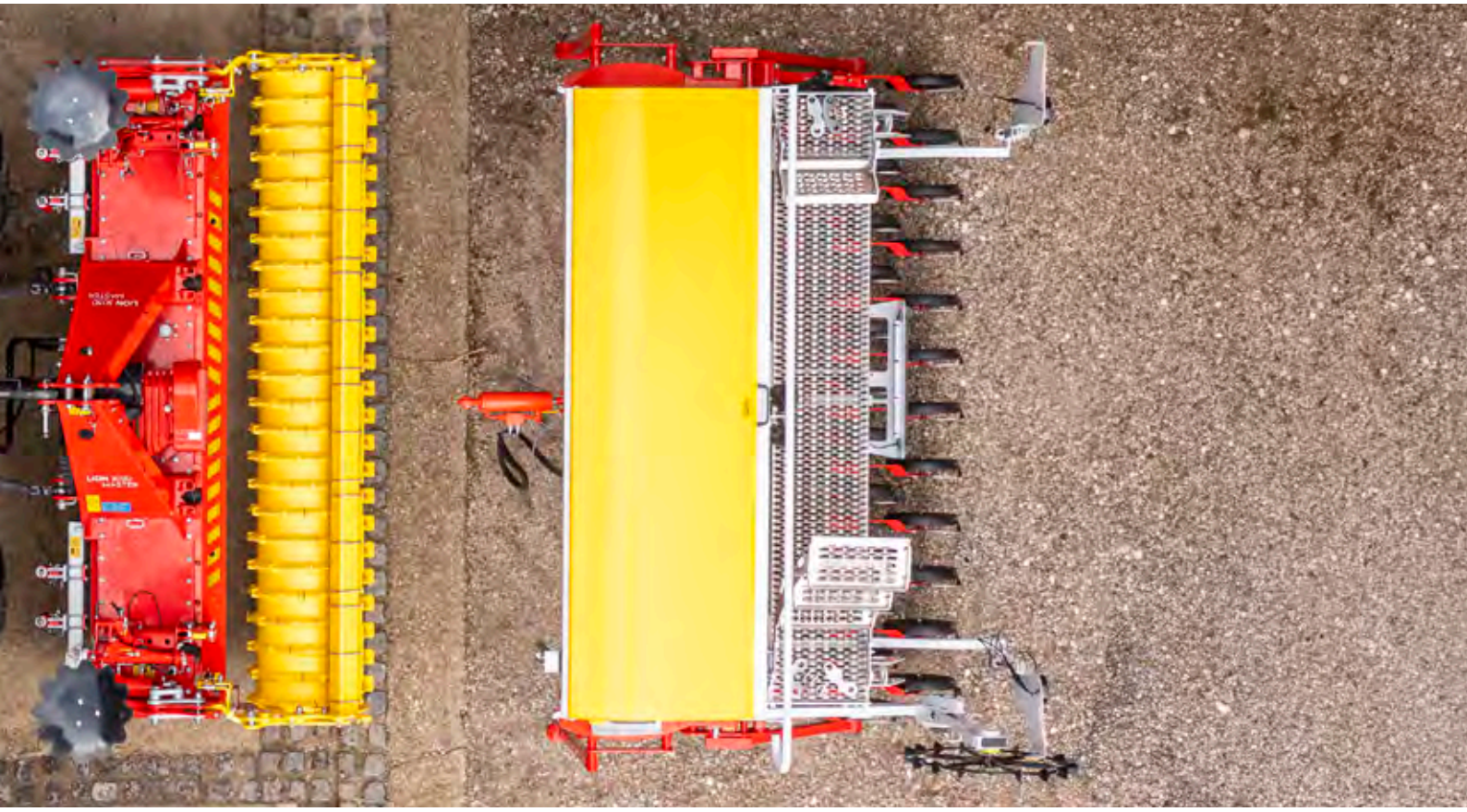
Our best equipped and heaviest power harrow series is the MASTER, which is available with working widths of 9'10" and 13'1" The machines have approximatively 1 rotor per foot of working width and a total of 10 or 14 rotors, respectively. Designed for the toughest applications in difficult conditions, the MASTER is the perfect partner for getting the job done.

The series includes the following models:

- LION 3030 MASTER
- LION 4030 MASTER

LION changeable speed gearbox up to 270 hp

- High specification changeable speed gearbox for an extended speed range
- A total of three different gear pairings are available, depending on the model
- Recommended tractor power starting at 130 hp for 9'10" models and 150 hp for 13'1"
- Variable rotor speeds between 185 and 527 rpm
- Overload protected to 2,000 Nm with a cam-type clutch
- The large dimensioned, heat-treated precision bevel gears are submerged in semi-liquid grease
- 2.5" diameter rotor shaft with robust tapered roller bearings
- Rear PTO shaft optional



Power harrow technology for the highest power class

A robust, wide headstock ensures maximum strength and smooth running. On the LION 4030 MASTER, the headstock features an additional lateral strut.

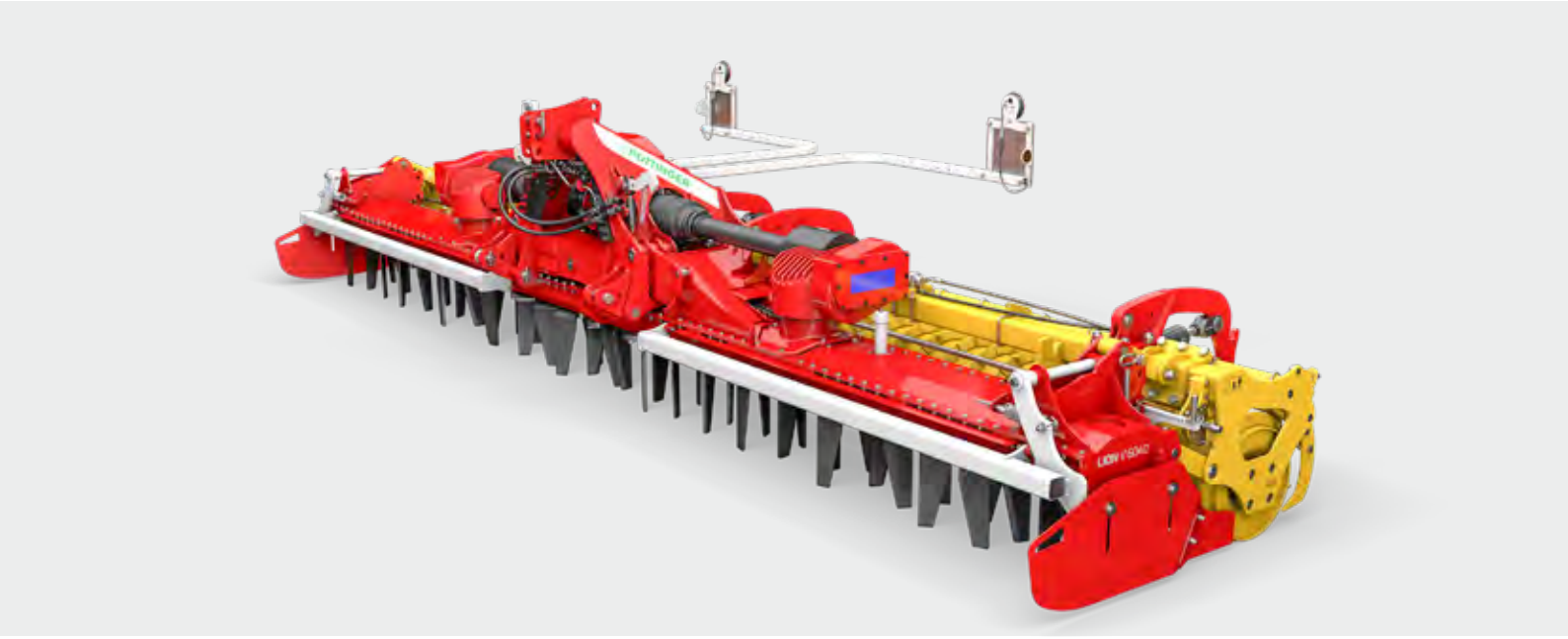
- Robust internal design with integrated tine carriers and tapered roller bearings with a shaft diameter of 2.5"
- Low stress acting on the tine shaft bearings because they are spaced at 2"
- The tine mounting is supported on both sides for reliable and secure tine attachment

LION 3030 MASTER / 4030 MASTER

- approximatively 1 rotor per foot of working width at widths of 9'10" and 13'1"
- A total of 10 or 14 rotors at 9'10" or 13'1"
- Tine dimensions of 0.71" x 13" for a working depth of up to 11"
- Tines can be set to aggressive angle
- Designed for the toughest conditions on heavy and dry soils
- Reliable operation even in stony conditions due to high strength tines
- The LION 4030 is supported by additional struts from the headstock to the outer edges of the machine

Folding power harrows

Folding power harrows



Integrated folding frame

The folding frame integrated into the rotor beam results in a 5" shorter design compared to the models in the previous series and its competitors. This makes it possible to move the weight of the machine including the rear roller closer to the tractor. Having the center of gravity closer to the tractor means that weight is distributed better between the front and rear axle. The traction of the tractor is significantly optimized as a result.

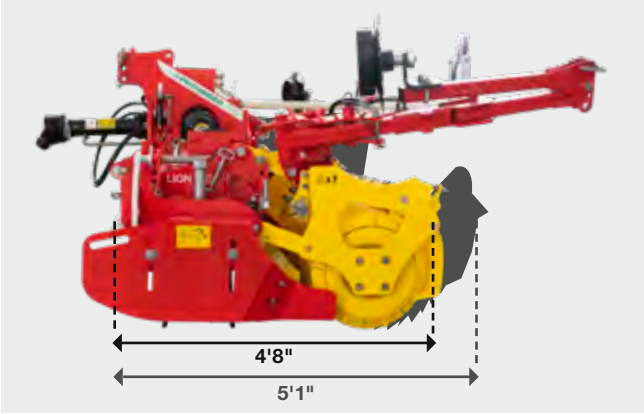
At the same time we have increased the gap between the bearings on the rotor beam hinge points to improve the durability of the robust folding frame.

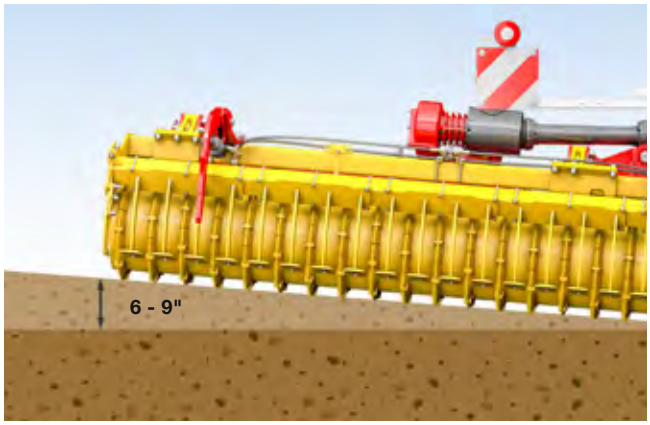
Compact design

Shorter, stronger and more compact: These characteristics have been incorporated by engineering an integrated folding frame.

Thanks to the compact construction an excellent field of vision is provided even with large working widths.
This is made possible by installing the folding cylinders in the headstock.

The ingenious and intuitive setting systems give the machine a perfect layout.





The best working results

Depending on the working width, each side section of the machine has a deflection path of between 6" and 9" upwards. This enables optimum adaptation to the ground contours.
A pressure accumulator system ensures the correct ground pressure, which is distributed evenly over the entire width of the machine. Optimum seedbed preparation is ensured even in the most difficult conditions.

Working depth adjustment

The working depth is set for each frame section using swing clips and without the need for tools. The working depth is easily adjusted from the side of each folding section. The correct position is achieved by moving an integrated push rod with a scale that is easy to read. The working depth can also be adjusted hydraulically as an option.

Adjusting the leveling board

The 15-hole matrix and ratchet wrench supplied are used to fine-tune the position of the leveling board.

When the working depth of the power harrow is changed the leveling board is adjusted automatically as well. No manual re-adjustment is needed.

Integrated folding cylinder

Thanks to the integrated folding cylinders being located under the headstock, the LION V models offer an unrestricted view of the entire machine. In the working position the cylinders are completely retracted and therefore protected from dust and dirt.

Folding power harrows

LION V medium weight series for tractors up to 320 hp

Even higher output

The power harrow range featuring the folding LION V series with working widths of 13'1", 16'4", and 19'8" is designed for tractors up to 320 hp.

On the medium weight LION V series , the focus is on the compactness of the machine and optimized weight distribution. These folding power harrows are designed to be operator friendly by providing a perfect overview of the entire machine to simplify monitoring and control.

The series includes the following models:

- LION V 4040
- LION V 5040
- LION V 6040

Technical and agronomic requirements

The top priority in seedbed preparation is the creation of optimum germination and growth conditions to ensure rapid and uniform plant emergence. On the medium weight LION V power harrows, PÖTTINGER achieves this by using approximatively 1.3 rotor per foot of working width and tines that are 11" long and 0.59" thick (0.71" thick as an option).

A perfect seedbed is the basis for an optimum harvest. These folding power harrows produce a fine seed bed and create a level seedbed while consolidating the soil perfectly.

Versatility

The LION V medium weight series power harrows in combination with the AEROSEM FDD front hopper seed drill offers the highest level of versatility.

The coupling system for attaching the coulter rail to the power harrow features a simple catch hook solution with lock pin that allows the system to be fitted in a few minutes. This extends the range of applications considerably, since attachment and removal is easier and quicker than on comparable machines.

All adjustments such as working depth of the tines and the leveling board are easy to operate from the side of the machine. This means the machine can be adapted to work in different soil conditions within a few minutes.

Our top customer benefits

- The best working results thanks to proven LION technology, combined with the integrated folding system
- High durability and smooth running thanks to a no-compromise drive train and central gearbox
- The highest reliability thanks to the proven LION gear beam design with robust tapered roller bearings
- The highest level of operating convenience thanks to the integrated folding cylinders and intuitive adjustment possibilities

Folding power harrows

LION V medium weight series for tractors up to 320 hp

Efficient drive train

A large central gearbox transmits full power to the outer gears without reduction. The changeable speed gearboxes on the frame sections are designed for PTO speeds from 540 rpm to 1000 rpm and enable a wide speed range from 185 to 527 rotor revolutions per minute. This means that your tractor runs within its optimum performance range.

Reliable operation in all conditions

The medium-duty LION V models are characterized by their high level of reliability and are designed for 320 hp. The drive train is protected by cam-type clutches on the outer gearboxes with a triggering torque of 1700 Nm.

Reinforced track eradicator tines

Equipped with overload protection of up to 396 lbs and tungsten carbide points, the track eradicator tines deliver the best working results.

Up to three track eradicators per tractor track are available as an option. These can be shifted to the side easily on the box section. The working depth is easily adjusted using lock pins.

Bout markers

For road transport, the optional bout markers have a central hinge and are folded down through 90 degrees.

An integrated hydraulic collision safety device and additional shear bolts protect the system. The aggressiveness is easily adjusted by altering the position of the disc.

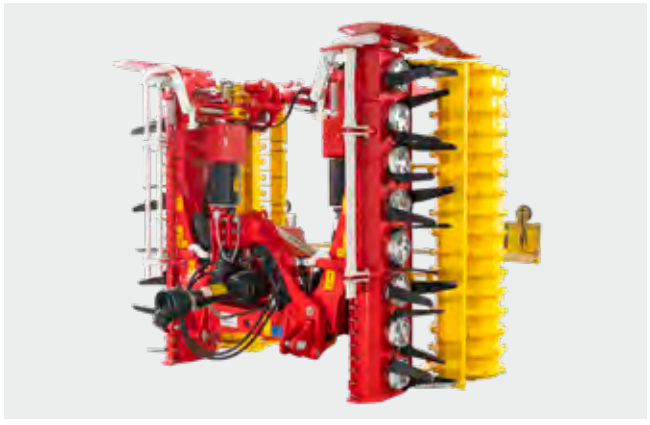
High performance combined with flexibility

The power harrows deliver an impressive performance both solo and when combined with a seed drill. In combination with the AEROSEM F, the short design of the machine becomes even more important. Thanks to the quick attachment and removal of the coulter rail, the LION is ready for action on any job in no time at all.

BASIC CONTROL terminal

The BASIC CONTROL terminal is included in combination with an optional gearbox temperature monitoring system, or a hydraulic preselect system.

A hydraulic preselect system with integrated hydraulic block is recommended when used in combination with the AEROSEM F front hopper seed drill and a low number of spool valves on the tractor.



Parking position

The machine can be parked when folded up to save space.

In combination with a seed drill it is recommended the machine is parked in the unfolded position to avoid having to detach the DUAL DISC coulter arms. This is possible without additional parking stands.

Road transport

With a width of just 8'4" when folded for transport, enhanced safety is also provided on the road. When transporting the machine, the rear rollers can be secured in position using transport interlock pins.

Folding power harrows

LION V MASTER heavy duty series, up to 500 hp

A new dimension in performance

With the heavy duty folding LION V MASTER series, PÖTTINGER extends its power harrow range north for tractors up to 500 hp.

These power harrows are designed to meet the very toughest expectations. In addition, the machine is laid out for a high level of operator friendliness. An optimum overview of the entire machine enhances safety during operation.

The series includes the following models:

- LION V 6030 MASTER

Technology at a glance

For perfect seed emergence, a level seedbed of fine seed bed is crucial. PÖTTINGER achieves this goal with the LION V MASTER series with a working width of 19 feet. 20 rotors, each with a pair of 0.7087" x 13" tines, ensure ideal seedbed preparation across the entire working width in the most adverse conditions.

When developing this series of power harrows, the focus was on the compactness of the machine. Integrating the folding frame into the rotor beam makes the machine more compact and improves weight distribution.

High output

The heavy duty LION V MASTER series impresses with the highest output both in solo mode and when combined with an AEROSEM F front hopper seed drill.

The handling has been designed for the highest level of ease of use. Working depth and leveling board adjustment are conveniently accessible from the side. Hydraulic working depth adjustment is available as an option for highly variable soil conditions.

Thanks to the simple coupling system, with an AEROSEM F you have a compact, high output seed drill at your disposal. The user-friendly catch hook solution allows the coulter rail to be attached and detached in a matter of minutes to increase machine utilization.

Our top customer benefits

- The highest operating convenience thanks to proven LION technology combined with the integrated folding system
- The best working results to produce the finest seedbed in the toughest conditions, approved for tractors up to 500 hp
- Maximum durability thanks to a large-dimensioned central gearbox and rotor beam with welded central brace
- Enhanced safety during operation thanks to the compact design and best overview

Folding power harrows

LION V MASTER heavy duty series, up to 500 hp

The best working results

The spring-loaded side boards side plates are fitted with guide plates. Because there is only a very small rotor gap between the folding section, no center tines are needed. This produces very uniform working results.
Up to 3 track eradicator tines are available as an option for each tractor track and can be mounted on the guard tube using a clamping bracket. Featuring a triggering pressure of 396 lbs and carbide tips, they are designed for the toughest conditions.

Powerful 2-speed manual gearbox

A PTO driveline with 2-speed manual gearbox provides a wide speed range. The gearbox is designed for PTO speeds between 750 and 1,300 rpm This ensures that your tractor always runs within its optimum performance range. Reliability is enhanced as a result. A large dimensioned gearbox housing provides the necessary cooling.

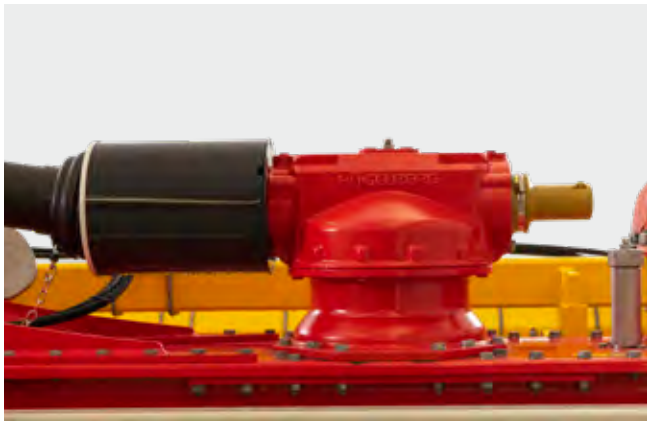
Ground tracking

Thanks to the integrated pressure accumulator system in both sections of the machine, the sections can move upwards by 5° (approx. 9").
Uniform pressure is applied over the entire width of the machine to maintain a consistent working depth.

Convenient to use

The working depth is set from the side of the machine without the need for tools. An intuitive indicator scale acts as a guide.

Thanks to the parallel linkage, the leveling board is adjusted automatically when the working depth is changed. A total of 15 different basic setting positions can be selected.



Reliable operation in all conditions

The rotor speeds vary between 320 and 430 rpm. This ensures perfect working results at all times while reducing fuel consumption. Thanks to its strongly dimensioned external gearbox, the power harrow is approved for tractor outputs of up to 500 hp. A cam-type clutch on each frame section protects the machine against overload up to 2,400 Nm.

Tine dimensions and position

With 0.7" x 13" tines, you are equipped for every job in the field. DURASTAR and DURASTAR PLUS tines with up to 4 times longer service life are available as an option.

The tines can be mounted in two positions: aggressive or sweeping. Available with the QUICK FIX tine quick-change system as an option.

Choice of rear rollers

PÖTTINGER offers a total of 3 different rear rollers in different sizes to meet your individual requirements. The rear roller is guided in a parallelogram, so that in combination with an AEROSEM 6002 FDD no readjustment of the coulter rail is necessary when changing the working depth.

Enhanced safety during transport

The transport chassis can be adapted to ensure safe transport on the road. The chassis is hydraulically damped to make road transport smoother. Especially in combination with the AEROSEM F coulter rail. This is engaged conveniently using catch hooks, which are centrally locked and unlocked using a ratchet wrench.

Equipment options

TEGOSEM

LION and TEGOSEM 200

Efficient and combined work is becoming more and more important due to increasingly shorter time frames for getting out into the field. While making it easier to stay on schedule for planting cover crops after harvest, it also has a number of agronomic advantages. By establishing ground cover rapidly and extensively, unproductive water evaporation is prevented. Likewise, excess nitrogen in the soil is absorbed by the plants and retained on site. Improving and stabilizing the soil structure with organisms increases water infiltration while reducing the risk of erosion.

The flexible 14 bushel TEGOSEM hopper combines high-output tillage with the application of cover crops or micro-granules in a single pass. By carrying out both tasks in a single pass, the flexible hopper saves time and costs, reduces soil compaction and produces precision working results.

Advantages with soil preparation machines:

- Tillage and application in a single pass
- Rapid and cost-effective application of small seeds or sowing a cover crop
- Applied either before or after the rear roller
- Mounted close to the rear roller for uniform seed emergence
- The rear roller presses the seed into the soil
- Loading platform with handrail for convenient and safe filling
- Can be retrofitted to all existing rear rollers

Precision metering

With the flexible TEGOSEM hopper, the application materials are metered and distributed uniformly. Two different sizes of metering shaft are provided as standard to ensure precision distribution of the seed material using fine or coarse metering, even at low application rates. Changing shafts is quick and easy without the need for tools. Before starting work, the system is optimized using a calibration test. The calibration bag is provided as standard equipment.

Hitching and detaching

- The sowing unit including coulter rail is mounted and removed without the need for tools
- Mounted on coupling points on the rear roller and top link
- Parking stands are standard

Reliable transport

The fan is driven by an electric motor, depending on the distance that the seed material needs to be conveyed. This provides a continuous flow over the entire length of the eight spiral hoses for reliable transport to the point of application without clogging the hose.

Surface distribution

Surface application and distribution is carried out by distribution plates close to the ground. This guarantees full surface application regardless of the wind conditions. The distributor plates are adjusted by changing the shaft angle to vary the distribution range.

The shaft with the distribution plates can be mounted in front of, or behind, the rear roller. Positioning it in front means that the rear roller can immediately press the seed into the soil. Soil contact is established and capillary action for successful seed emergence starts straight away.

Simple operation

The TEGOSEM is operated from the driver's seat using a convenient control terminal to regulate the flow of seed material. The signals required are provided by the tractor, or by additional sensors. For increased convenience, the flexible TEGOSEM hopper is equipped with additional features, including a level sensor.

- Output rate is set electronically
- Metering shaft control and monitoring
- Priming function
- Headland management

Equipment options

Rollers

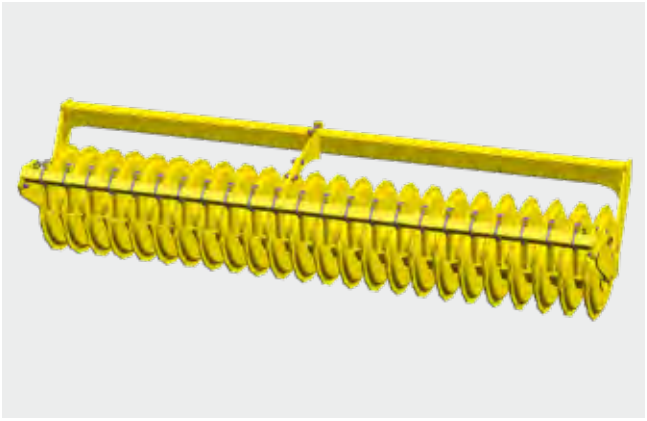
Overview of roller types

	8'2" (2.5 m)	9'10"	11'6"	13'1" rigid	13'1" folding	16'4"	19'8"
Cage roller 16"	326 lbs	429 lbs	–	–	–	–	–
Cage roller 1'9"	–	716 lbs	–	–	–	–	–
Tooth packer roller 1'4"	731 lbs	804 lbs	–	–	–	–	–
Tooth packer roller 19"	987 lbs	1,163 lbs	1,300 lbs	1,322 lbs	1,741 lbs	1,973 lbs	2,303 lbs
Tooth packer roller 21"	–	1,230 lbs	1,322 lbs	1,653 lbs	1,918 lbs	2,292 lbs	2,932 lbs
Crumbling packer roller 20"	–	1,146 lbs	–	1,653 lbs	–	2,601 lbs	2,976 lbs
Pack ring roller 21"	1,086 lbs	1,256 lbs	1,444 lbs	1,631 lbs	2,381 lbs	2,270 lbs	3,549 lbs
Prism packer roller 19" / 4"	–	1,234 lbs	1,410 lbs	1,620 lbs	2,336 lbs	2,821 lbs	3,373 lbs
Prism packer roller 20" / 6"	–	1,168 lbs	–	1,531 lbs	–	2,821 lbs	3,306 lbs
Prism packer roller 23" / 4"	–	1,778 lbs	1,962 lbs	2,226 lbs	2,634 lbs	3,141 lbs	4,111 lbs
Prism packer roller 23" / 6"	–	1,686 lbs	–	2,039 lbs	–	–	–
Rubber packer roller 23"	–	1,345	–	–	–	–	–

Your tailor made solution

Whether used in medium or high moisture soil, light or heavy soil conditions, PÖTTINGER offers you tailor-made rear rollers.

The scrapers can be adjusted centrally, or individually by rotating the scraper tube. They can simply be pivoted away for easier cleaning. To maximize service life, the coated scraper plates are reversible.



Requirements	Prism packer roller	Toothed packer roller	Crumbling packer roller	Pack ring roller	Cage roller	Rubber packer roller
Consolidation	++	o	+	++	o	++
Damp conditions	+	o	o	++	o	+
Dry conditions	++	++	++	++	++	++
Crumbling effect	++	++	++	++	+	++
Load capacity	++	++	+	+	+	++
Suitability for stones	++	o	–	++	+	o
Scrapers (coated)	yes	optional	yes	yes	no	yes

++ highly suitable

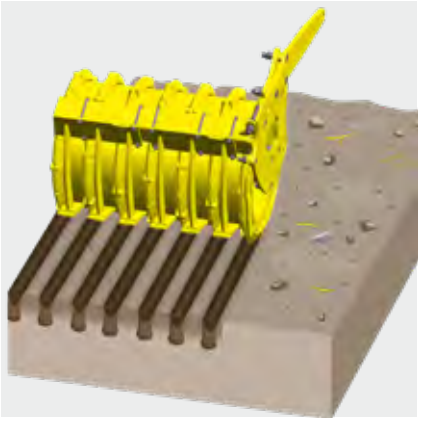
\+ very suitable

o suitable

– not suitable

Equipment options

Rollers

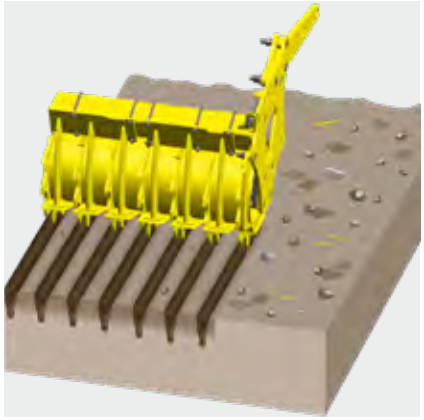


Prism packer roller

Despite its weight, this roller has a good load-bearing capacity, especially with a diameter of 23". It works well with sandy to loose soils, even in stony conditions and in high volumes of organic matter.

Consolidating in strips, it promotes drainage and breathability of the soil in the area between the rings, which has been subject to less pre-compaction.

- Prism rings spaced at 4" or 5" to match the row spacing
- Diameter: 19" and 23"
- Coated scrapers are standard



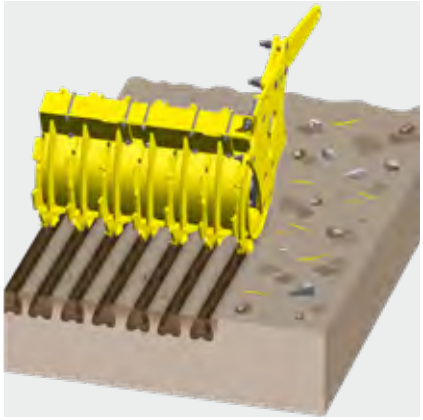
Tooth packer roller

The roller leaves behind a perfectly consolidated seedbed over the whole surface with loose, fine soil at seed slot level. This ensures good capillary action.

In wet and sticky conditions, the scrapers clean the roller reliably. The hardened scraper plates are reversible, which leads to double the service life.

Being able to select different diameters of roller enables adaptation to lighter soils.

- Diameter: 16", 19", 21"
- Coated scrapers optional



Crumbling packer roller

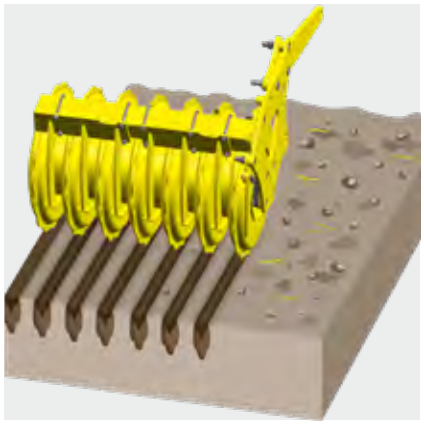
This roller is especially suitable for pre-cultivating medium heavy, clay soils.

The intermediate rings welded alternately to the left and right intensively crumble the soil either side of the seed slot. Compared to the tooth packer roller, wider consolidation of the seed slot takes place.

The result is deep consolidation with a loose crumbling effect just under the surface.

Thanks to the offset intermediate rings, the roller rotates very well. Scrapers prevent soil building up on the roller.

- Diameter: 1" (525 mm)
- Coated scrapers are standard
- Row spacing for coulter rail with 4"

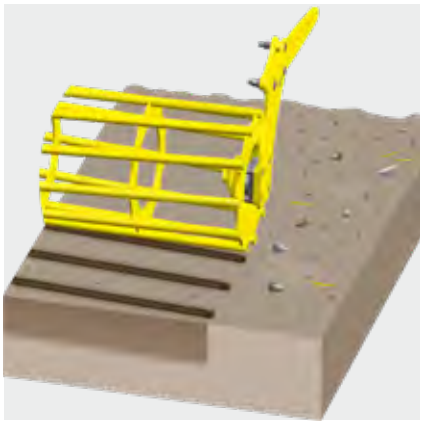


Pack ring roller

Ideal for stony, damp conditions and heavy soils as well as high volumes of organic residues. Harvest residues remain on the surface of the soil and protect the soil against drying.

The roller produces a corrugated consolidation effect to promote drainage and allow the soil to breathe. During the process, the seed slot is consolidated extremely precisely. Thanks to the cutting action of the roller, coarser lumps are broken up again even finer.

- Diameter: 1" (550 mm)
- 2 rings per foot of working width for 4" row spacing
- Coated scrapers are standard



Cage roller

The optimum roller for dealing with dry, non-sticky soils. Cage rollers are very lightweight and perfect for situations where weight needs to be saved. However, this type of roller is not recommended in combination with implement-mounted seed drills.

Consolidation is in strips along the direction of travel.

Even with a smaller diameter it rotates well and delivers a good crumbling effect.

The roller is fitted with strong psi for optimal consolidation and good load capacity.

- Diameter: 16", 116 psi
- Diameter: 21", 159 psi

Rubber packer roller

This roller is ideal for widely varied soil conditions. Enough loose soil is created between seed rows to neatly cover the seed slot, even in extremely heavy soil types.

Thanks to its high load capacity, it can be used where other rollers have reached their limits. The roller is not susceptible to sticking and clogging. Because the roller has a large diameter, it ensures a good load-bearing capacity despite its high weight.

The special profile produces consolidated ridges with a spacing of 4".

- Diameter: 1" (585 mm)
- Coated scrapers are standard
- Row spacing for coulter rail with 4"

Equipment options

More equipment options

	Tines 0.59" x 1'	Tines 0.71" x 1'	Tines 0.71" x 13"	DURASTAR
LION 2530 CLASSIC	–	–	■	□
LION 3030 CLASSIC / 3040 CLASSIC	– / ■	– / □	■ / –	□ / □
LION 3030 / 3040	– / ■	– / □	■ / –	□ / □
LION 3540	■	□	–	□
LION 3030 MASTER / 4030 MASTER	– / –	– / –	■ / ■	□ / □
LION V 4040 / 5040 / 6040	■ / ■ / ■	□ / □ / □	– / – / –	□ / □ / □
LION V 6030 MASTER	–	–	■	□

	HYDROLIFT for linkage-mounted machines	Rear PTO shaft	Bout markers	Track eradicators spring-loaded
LION 2530 CLASSIC	□	–	–	□
LION 3030 CLASSIC / 3040 CLASSIC	□ / □	– / –	□ / □	□ / □
LION 3030 / 3040	□ / □	□ / □	□ / □	□ / □
LION 3540	□	□	□	□
LION 3030 MASTER / 4030 MASTER	□ / □	□ / □	□ / □	□ / □
LION V 4040 / 5040 / 6040	– / – / –	– / – / –	□ / □ / □	□ / □ / □
LION V 6030 MASTER	–	–	□	□

More equipment options

+ PTO shaft 1 ¾" 6 spline (except CLASSIC model)
+ PTO shaft 1 ⅜" 21 spline
+ Stroke limiter for HYDROLIFT

DURASTAR PLUS

–
– / –
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QUICK FIX quick-change tines

□
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Aggressive tine position

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spring-loaded side boards

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Hydraulic depth adjustment

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Front leveling board

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Warning sign and lighting

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Temperature/speed monitoring

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Hydraulic control

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TEGOSEM

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■ = Standard, □ = Optional

Technical data

	Mounting	Working width	Transport width	Rotor
LION CLASSIC **Rigid power harrows - lightweight series**				
LION 2530 CLASSIC	Cat. 3N / Cat. 3	8'2" (2.5 m)	8'2" (2.5 m)	8
LION 3030 CLASSIC	Cat. 3N / Cat. 3	9'10" (3 m)	9'10" (3 m)	10
LION 3040 CLASSIC	Cat. 3N / Cat. 3	9'10" (3 m)	9'10" (3 m)	12
LION **Rigid power harrows - medium weight series**				
LION 3030	Cat. 3N / Cat. 3	9'10" (3 m)	9'10" (3 m)	10
LION 3040	Cat. 3N / Cat. 3	9'10" (3 m)	9'10" (3 m)	12
LION 3540	Cat. 3N / Cat. 3	11'6" (3.5 m)	11'6" (3.5 m)	14
LION MASTER **Rigid power harrows - heavy duty series**				
LION 3030 MASTER	Cat. 3N / Cat. 3	9'10" (3 m)	9'10" (3 m)	10
LION 4030 MASTER	Cat. 3N / Cat. 3	13'1"	13'1"	14
LION V **Folding power harrows - medium weight series**				
LION V 4040	Cat. 3	13'1"	8'4" (2.55 m)	16
LION V 5040	Cat. 3	16'5" (5 m)	8'4" (2.55 m)	20
LION V 6040	Cat. 3	19'8" (6 m)	8'4" (2.55 m)	24
LION V MASTER **Folding power harrows - heavy duty series**				
LION V 6030 MASTER	Cat. 3	19'8" (6 m)	9'10"	20

Working depth	Standard tines	Possible PTO speeds	Rotor speed at 1,000 rpm with standard 29/36 pair of gears	For tractors up to	Weight with roller* 500
11"	0.71" x 1'2"	540 / 750 / 1,000 rpm	342 rpm	110 kW / 150 hp	2,942 lbs
11"	0.71" x 1'2"	540 / 750 / 1,000 rpm	342 rpm	110 kW / 150 hp	3,328 lbs
9"	0.59" x 1'1"	540 / 750 / 1,000 rpm	342 rpm	110 kW / 150 hp	3,351 lbs
11"	0.71" x 1'2"	540 / 750 / 1,000 rpm	342 / 527 rpm	147 kW / 200 hp	3,402 lbs
9"	0.59" x 1'1"	540 / 750 / 1,000 rpm	342 / 527 rpm	147 kW / 200 hp	3,413 lbs
9"	0.59" x 1'1"	540 / 750 / 1,000 rpm	342 / 527 rpm	147 kW / 200 hp	3,802 lbs
11"	0.71" x 1'2"	540 / 750 / 1,000 rpm	342 / 527 rpm	199 kW / 270 hp	3,615
11"	0.71" x 1'2"	540 / 750 / 1,000 rpm	342 / 527 rpm	199 kW / 270 hp	4,343 lbs
9"	0.59" x 12"	540 / 750 / 1,000 rpm	342 / 527 (rpm)	235 kW / 320 hp	6,613 lbs
9"	0.59" x 1'1"	540 / 750 / 1,000 rpm	342 / 527 (rpm)	235 kW / 320 hp	7,530 lbs
9"	0.59" x 1'1"	540 / 750 / 1,000 rpm	342 / 527 (rpm)	235 kW / 320 hp	8,324 lbs
11"	0.71" x 1'2"	750 rpm 1,000 rpm 1,250 rpm	320 rpm 350 / 420 rpm 430 rpm	368 kW / 500 hp	9,247 lbs

* Tooth packer roller 500

Cat. 3N = dia. 3 / width 2, Cat. 3 = dia. 3 / weite 3

MyPÖTTINGER

MyPÖTTINGER – it’s easy. Anytime. Anywhere.

Benefit from numerous advantages

MyPÖTTINGER is our customer portal that provides you with key information about your PÖTTINGER machines.

Get specific information and useful tips on your PÖTTINGER machines in “My machines”. And find out more about the PÖTTINGER product range.

My machines

Add your PÖTTINGER machinery to “My machines” and assign a name. You will receive valuable information such as: useful tips on your machine, operating instructions, spare parts lists, maintenance information, as well as all the technical details and documentation.

Info on the product range

MyPÖTTINGER provides you with machine-specific information for all machines built starting 1997.

Scan the QR code on the machine’s data plate with a smartphone or tablet or go to www.mypoettinger.com and enter the machine number from the comfort of your own home. You will immediately receive all the information on your machine, such as: instruction manuals, equipment options information, brochures, photos and videos.

ORIGINAL PARTS

Rely on the original

PÖTTINGER ORIGINAL PARTS meet the highest demands in terms of functionality, reliability and performance. These are characteristics that PÖTTINGER is committed to delivering.

That is why we manufacture PÖTTINGER ORIGINAL PARTS from the highest quality materials. We ideally match each individual spare part and wear part to your machinery's overall system. This is because different soil and operating conditions often need to be taken into consideration.

We have been listening to our customers and now offer three different lines – CLASSIC, DURASTAR and DURASTAR PLUS – to make sure you have the right part to meet every requirement. ORIGINAL PARTS are worth every cent, because know-how cannot be copied.

Your advantages

- Immediate and long-term availability.
- Maximum durability thanks to innovative production processes and the use of the highest quality materials.
- Avoidance of malfunctions due to a perfect fit.
- The best working results thanks to optimum match to the overall system of the machine.
- Save time and costs thanks to longer replacement intervals on wear parts.
- Comprehensive quality testing.
- Ongoing advancement through research and development.
- Worldwide spare parts supply.
- Attractive, competitive prices for all spare parts.

Wear parts

The CLASSIC line is for standard duty applications. With these ORIGINAL INSIDE parts we have defined the benchmark for quality, best price/ performance ratio and reliability.

DURASTAR is the innovation on the wear components market – durable, high quality, productive and reliable.

Are you used to putting your machines to work in the most extreme conditions? Then the DURASTAR PLUS line is the right choice for you.

More success with PÖTTINGER

- A family-owned company since 1871
  Your reliable partner
- Specialist for arable and grassland
- Future-safe innovation for outstanding working results
- Roots in Austria – at home throughout the world

Create ideal germination conditions

- LION power harrows deliver the best working results for seedbed preparation
- Maximum flexibility with tailor-made systems for every type of soil and every size of business
- Making work easier for you with the highest level technology
- Extremely smooth operation with the greatest strength for maximum reliability

Ask for more information:

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