

Power Harrows

# HRB 102 / 103 Series HR 104 / 1004 Series



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be strong, be **KUHN**







HRB 102 D 103 D 103 DR HR 104 D 104 M 1004 D 1004 DR

# SEEDBED PREPARATION IN PERFECTION!

## THE KEY TO OPTIMUM SEEDBEDS

Optimum seedbed preparation is an imperative prerequisite for no less than good and homogeneous germination and crop development as well as vigorous young plants. The crumbling, levelling and packing work of the harrows is the key to maximize the productivity of your crops.

## HOW TO ADAPT TO MY PREVAILING CONDITIONS

Weather, soil, production system...there are many factors influencing the current conditions and therefore making it necessary for the power harrow to adapt. The great choice of blades, other equipment and the wide range of gears available for the Duplex gearbox will reassure you in choosing a KUHN power harrow.

## WORK OUTPUT IS A QUESTION OF RELIABILITY

Have a closer look inside our power harrows to make ascertain their high manufacturing level. Benefit from reduced maintenance time and costs and save more time with FAST-FIT quick-release blade system.

## KUHN power harrows in brief:

	Working width (m)	Frame	Max.tractor power requirement (kW/hp)	FAST-FIT
<b>HRB 102 D series</b>	2.50 - 3.00	rigid	103/140	not available
<b>HRB 103 D series</b>	3.00 - 3.50 - 4.00	rigid	118/160	standard
<b>HRB 103 DR series</b>	4.00 - 4.50 - 5.00	foldable	132/180	standard
<b>HR 104 D/M series</b>	3.00 - 4.00	rigid	140/190	standard
<b>HR 1004 D series</b>	3.00 - 3.50 - 4.00 - 4.50	rigid	184/250	standard
<b>HR 1004 DR series</b>	4.00 - 4.50 - 5.00	foldable	184/250	standard
<b>HR 6004 DRC</b>	6.00	foldable	256/350	standard





# ROBUST, RESISTANT, RELIABLE

SOMETIMES  
COPIED,  
BUT NEVER  
EQUALLED

The strong rotor drive train is fully protected by a rigid gearcase. Let's look a bit closer into the heart of KUHN power harrows. Here are the exclusive strong points:



**1. Maintenance free highly rigid trough:** 8 mm thick trough made from fine grain high-tensile steel. It contains semiliquid grease, which ensures lubrication of pinions and gearwheels all through their service life. O-rings and lip joints ensure sealing for a longer service life.

**2. No gearwheel overhang:** Convex treated and forged steel gearwheels so that the drive forces (A) are transmitted at the centre of the upper roller bearing (over-dimensioned) without creating an overhang. High capacity shaft guidance and torque transmission capability thanks to the important spline length in contact with the shaft (B).

**3. No maintenance on bearings:** Large dimension conical roller bearings are always perfectly aligned in a one-piece cast housing not subject to distortion. Factory preloaded with a calibrated spacer (C), no further adjustments are required.

**4. Perfect bearing hold, gearcase protection:** The thick cast iron housings (from 18 mm/0.71" on HRB 102 D to 35 mm/1.38" on HR 1004 range) ensure perfect bearing hold and trough protection against wear and distortion.

**5. Reinforced sealing:** A cassette seal on HR models as well as a lip seal on the HRB range provide very efficient protection against bearing pollution.

**6. No play on the spline level:** Rotor shafts with rolled splines are obtained by metal compression (no milling). Perfect connection with the shaft thanks to the conical centring of the blade holders (KUHN patent), preventing play on the spline level.

**7. Oval shaped blade holder:** to prevent stones from getting jammed and to facilitate their evacuation as well as the evacuation of plant residues.

**8. Blades highly resistant to shocks and wear thanks to their thick section:** Heat treated 16 mm thick and 310 mm long FAST-FIT blades as standard (except on HRB 102 D). Also available in DURAKUHN coated version or "forward action" version OPTIMIX or 360 mm long blades.

## CASING DESIGNED TO WORK ALL SOIL

The casing, bearings and tine holders form a compact and very robust unit reducing twisting forces on the housing.

The small distance between casing and tine holders prevents stones from getting jammed and the soil flow inevitably is directed completely towards the blades' working area, so that really all soil is worked, ensuring a constant high level of work quality.







1. Standard FAST-FIT blades

2. OPTIMIX blades

3. Reinforced DURAKUHN blades

4. Extra-long blades for deep cultivation

**EXCLUSIVE**



BLADES THAT OFFER MORE POSSIBILITIES

With seedbed preparation you pursue three major goals to get your cultivations to a good start:

- small clods on top, fine soil around the seed,
- in-depth packing,
- exact levelling to ensure even germination.



**1. FAST-FIT STANDARD BLADE: VERSATILE APPLICABILITY AS KEY ASSET**

KUHN power harrow blades with their bevelled, twisted shape are ready to work in difficult conditions, such as in stony, hard or clayey soils, and still achieve a seedbed, where the seed feels completely comfortable. They are adapted for high working speeds.

**2. OPTIMIX: EXCLUSIVE SHAPE FOR MORE EFFECT**

We recommend the OPTIMIX blades for seedbed preparation on unploughed land after stubble clearing or soil loosening, but also for pasture reclamation. Their shape and "forward action angle" position provide two results:

1. a greater soil loosening effect,
2. an increased mixing of top soil and crop residues.

**3. & 4. MORE BLADE OPTIONS**

KUHN power harrows are supplied on request with tungsten carbide-coated blades for long life. These DURAKUHN blades are made to last. For deep soil preparation (potatoes...) 36 cm extra-long blades are available (also in DURAKUHN version).

# A CONSIDERABLE TIME SAVER



## FAST-FIT



### **QUICK RELEASE BLADE SYSTEM FAST-FIT**

The power harrows are equipped as standard (except HRB 102 D) with a quick release blade system. A full set of blades is replaced within minutes.



### **VERY PARTICULAR SHAPES**

The conical shaped blade housings combined with the rectangular flat section blade provide flexibility to the attachment. With this principle the blade system can withstand very high forces.



### **PERFECT BLADE HOLD**

Blades are held in place in their holder by means of a high resistance forged steel connecting piece.



### **ASSEMBLY RELIABILITY**

The connecting piece is locked in place using an easily accessible special clip placed inside a recess of the blade holder. An underside ring integrated in the support prevents possible damage or accidental loosening of the blade locking device.





# RELIABLE ROTOR DRIVE

Rotors are driven by large diameter gearwheels. Power transmission to the blades is ensured by numerous teeth fully engaged at all times. The rotor drive design has contributed to build the high reliability reputation of KUHN power harrows: the result of more than 30 years of experience and success.

## ORIENTATION OF THE BLADE HOLDERS

KUHN power harrow blade holders are known to be positioned in a particular order to provide a progressive crumbling of the soil by the blades. This precise and exclusive layout prevents the harrow from vibrations while at the same time reducing the power consumption.



## Gearboxes for ideal adaptation to changing conditions

**The aim of seedbed preparation is a fine, structured and levelled seedbed for a uniform plant development - in one passage to save costs. But working conditions are as heterogeneous as soils are. In general, the soil should be worked as intensively as necessary, but as little as possible. Therefore, machines, which are adaptable in their work intensity, are the first choice for most farmers. The gearboxes are the important parts in this context.**

### DUPLEX: THE MOST VERSATILE ON THE MARKET

Most KUHN power harrows are equipped with Duplex gearboxes. Its gearwheels can be inverted, thus offering a large range of rotor speeds to adapt the crumbling intensity. The set-back power take-off reduces the angle of the drive shaft and makes it easier to lift the harrow when turning. The open-ended power take-off is standard, as on all KUHN harrows, to enable the simultaneous use of a pneumatic seed drill.





# SIMPLE DESIGN, T



Models of the HRB 102 D series have proven their value through their reliability, their performance and their robustness on thousands of farms already. They provide the same work quality, design and manufacturing level as top range models. The user benefits of these tools in brief:

- no concessions regarding quality of work,
- easily adjustable to adapt to variable conditions,
- with reduced maintenance and operating costs.





# TOTALLY RELIABLE



## RELIABLE AND PROVEN BLADE ATTACHMENT VIA BOLTS



### DUPLEX GEARBOX MANAGES MOST VERSATILE SITUATIONS

An adequate structure whether the soil is hard or crumbly: You can achieve this thanks to interchangeable gearwheels on the Duplex gearbox. The whole drive line is protected by a friction slip clutch fitted as standard or a cam-type cut-out clutch as option. The rear PTO shaft is part of the standard equipment on all KUHN power harrows.



### A HIGHLY RESILIENT DESIGN

The hitch is made from a shaped and welded steel plate. Benefit from its great strength and resistance.



### FOR A PERFECT FINISH

- The specific shape of the side deflectors provides efficient ground guidance and channeling to ensure a good finish between passes.
- Guided by the roller arms on which they are fixed, they follow the roller adjustment.

# DESIGNED TO CU



During the design phase of the KUHN HRB 103 D series, special attention was paid to four fundamental criteria:

- to obtain optimum seedbeds,
- a wide choice of tools and simple adjustments for best possible adaptation to every situation,
- maintenance costs reduced to the minimum,
- highly reliable machines for your peace of mind.

## MODELS, WHICH COPE WITH MOST DIFFICULT SITUATIONS

A long machine life is crucial for power harrows, as they have to bear many things, from extra-hard clods to big stones. On the HRB 103 D models KUHN has paid attention, because:

- The front of the hitch is a rectangular section tube.
- Lower and top links are of treated steel, all with pins stopped from rotating.
- On HRB 403, the headstock is connected to the gear case by a large base and completed with two stiffening arms.



### TOP LEVEL ASSEMBLY

HRB 103 models are fitted with a rectangular shaped housing providing protection and rigidity.





# T YOUR COSTS





HR 104

RIGID POWER HARROWS

## FOR DIFFICULT SITUATIONS WITH MEDIUM POWER TRACTORS

The KUHN 104 series power harrows are the result of very long experience in seedbed preparation.

Longevity, reliability, lowest possible maintenance and operating costs...we have developed these machines in order that you can work in total ease. Finally the working result will also convince you: a uniformly crumbly, levelled and reconsolidated seedbed, which offers each grain the same chances to succeed.



### EVERYTHING SPEAKS IN FAVOUR OF THIS HITCH

- The lower links pivot: Hitching is easier and faithfully follows unevenness in the terrain.
- Tractor adaptation is optimized with multiple top link positions.
- No risk of wear: Lower links and top link are made of treated steel.
- Maximum reliability: Hitch pins are prevented from rotating!





Adapt the machine to the conditions



As intensively as necessary, but as little as possible: Flexibility is absolutely necessary when preparing a seedbed. On the HR 104 series, you therefore have the choice between a Duplex and a Multiplex gearbox.

#### **DUPLEX GEARBOX: THE MOST VERSATILE ON THE MARKET**

Benefit from the wide range of gears for this gearbox. The open-ended power take-off is standard, as on all KUHN harrows.

#### **MULTIPLEX GEARBOX: FOR HETEROGENEOUS SOILS**

With its selection lever, this gearbox is appropriate for soils requiring a frequent change of rotor speed. Two speeds with the lever and two others after inverting the gearwheels make four standard speeds! An extra set of gearwheels is available for four extra speeds. The Multiplex gearbox is standard on HR 304 M and HR 404 M.





HR 1004

RIGID POWER HARROWS

## FOR INTENSIVE CONDITIONS WITH VERY HIGH POWER TRACTORS

With the 1004 series, farmers, contractors and machinery rings have tools at their disposal of renowned reliability providing outstanding levels of performances.

Deep or shallow soil preparation, spring or autumn work, in wet or dry conditions, they will prove their high efficiency under all circumstances.



### ROBUST GEARBOX

The robust Duplex gearbox is also standard on the 1004 series power harrows. Thanks to its interchangeable gearwheels you can choose the rotor speed most appropriate for your needs.







**PERFECT SOIL PREPARATION**

A side deflector is responsible for perfect levelling during seed bed preparation no matter the soil type and working depth. The advantage: It is combined with a new reinforced arm. Working efficiency and quality are maintained, even if you hit a rock. For greater comfort: There are no bolts to remove when making adjustments.

**THE KUHN PLUS**



**FORGET DAILY GREASING!**



With the reduced-maintenance drive of the rigid HR 104 and HR 1004 series models, daily greasing is a thing of the past and you can move up to greasing every 250 hours!

This means:

- extra comfort,
- lower maintenance costs, through special drive shafts mounted on KUHN rigid HR 104 and HR 1004 harrows.



HRB 103 DR - HR 1004 DR

FOLDABLE POWER HARROWS

# SAVE YOUR TIME!





KUHN foldable power harrows enable high work outputs, particularly on farms with small plots. Their folding capability makes a faster and safer travel from one field to another possible. Of robust design, the models with four to six meters are the ideal solution for farmers who are looking for a versatile and performing tool for combined seeding: front hopper and two rear coulter bars or telescopic precision seed drill with fertiliser distribution.



poujou/pavello.de



### AN EVOLUTIONARY TOOL

To take into account the development of your needs, the HRB 103 DR and HR 1004 DR foldable power harrows can be fitted with a frame pre-equipped (3-point attachment on 4 to 5 m) to attach coulter bars combined to a front hopper. The latter calibrates and feeds the rear seeding units with seeds. On the 6 m model, the coulter bar is integrated to the roller frame for maximum load reduction on the axle. No restrictions anymore for an optimum field output!



### A COMPACT AND BALANCED COMBINATION

Combined with a seed drill consisting of a front hopper and two rear coulter bars, KUHN foldable power harrows are part of a compact transport unit, with an optimum load distribution between the tractor front and rear axles. Changes between work and transport settings on the power harrow are quickly made thanks to two largely dimensioned cylinders.



### A MOST VERSATILE COMBINATION

The 4.50 m foldable power harrow can be associated to a telescopic precision seed drill and can be combined at the same time with a front hopper for fertiliser distribution.

## ADAPT TO GROUND CONDITIONS



1



2

**KUHN foldable power harrows can be used in rigid or floating position thanks to their centrally articulated frame.**

**In a few minutes, the tool is adapted to the ground conditions by simply pivoting a wedge with an oblong hole.**

1. Rigid position
2. Floating position





# ROBUST HARROWS WITH A SOLID REPUTATION



## HEAVY-DUTY CENTRAL FRAME

On the 4.00 and 5.00 m models, the central frame is made from heavy box sections which ensure increased rigidity and high resistance to bending and torsion. For further simplicity and comfort, the HR 1004 DR models are fitted with hydraulic locking in transport position (except on HR 4004 DR).



## REINFORCED ARTICULATIONS

Each half-harrow is connected to the central frame by a heavy bushed pin. This assembly provides resistance to the highest loads.



## GEARBOX FOR THE MOST DIFFICULT SOILS

The Duplex gearbox with interchangeable gearwheels enables the rotor speed to be quickly changed to suit the various working conditions. It is fitted as standard with a rear PTO stub and a cam type cut-out clutch which protects the whole drive line.





Power harrows have to perform in all tillage systems and conditions. The heart of the KUHN harrows, the strong and fully protected rotor drive train, stands for itself. On the foldable models additional attention has been paid to the frame and articulations in order to provide machines that are as rigid and robust as you can expect it from KUHN machines.



#### ADJUSTABLE SIDE DEFLECTORS

All models of the HRB 103 DR and HR 1004 DR series are equipped with side deflectors adjustable in height to best adapt the various working conditions. Articulated, they are equipped with a spring release system.



#### CENTRAL LEVELLING SHARE

These models of 4.00 m and 5.00 m are standard equipped with a rear levelling share. Placed between the rollers of the two half-harrows, it ensures a good finishing over the entire working width.



## OPTIMUM CENTRE OF GRAVITY

**The optimised design of the folding drive line provides the best possible centre of gravity and a reduced overhang. This compactness reduces the loading placed on the tractor's lift linkage.**

# DESIGNED FOR HIGH PRODUCTIVITY

More than ever, you have to manage your farm always bearing in mind the return on investment, the cost reduction and the increase in productivity.

To achieve this, a well-designed, reliable and high performance machine is required. The HR 6004 DRC power harrow is the ideal answer to these criteria. Its large working width (6.00 m/19'8") makes it a highly productive machine. Built to last, HR 6004 DRC meets requirements of the most demanding.

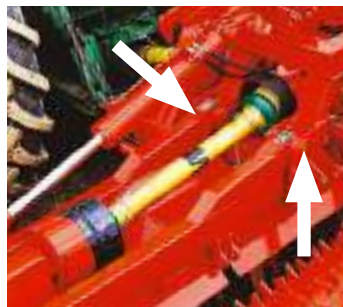


Reinforced central gearbox with cooler as standard!



## AS STURDY AS CAN BE

The HR 6004 DRC model's central frame consists of a double front and rear structure made of heavy box sections. This construction accepts important bending or torsion loads.



## DOUBLE PIVOTS FOR MORE RIGIDITY

Each wing assembly is supported by double pivots making its chassis exceptionally rigid. This means increased strength and longer service life of the machine.



## HIGH CAPACITY 3-POINT FRAME

- The pivoting lower links make attachment a simple operation.
- At work, they enable perfect ground following.

The pivoting lower links as well as the top link are of robust design and made of heat treated steel.



## HIGH-QUALITY WORK FROM START TO END

The HR 6004 DRC power harrow is standard equipped with a rear levelling share. It is placed between the rollers of the two half harrows and ensures a good finishing over the entire working width.





## KINETICS ADAPTED TO HIGH POWERS

This harrow is designed for tractors of up to 265 kW or 350 hp. Following details have been adapted in order that it can work on such high power tractors:



- 1.** A reinforced central gearbox fitted as standard with a circulation to cool the oil. The pump is integrated in the housing forming a compact and robust unit: No sensitive component is exposed to shocks.
- 2.** Two side gearboxes with speed modification by changing or switching the gearwheels.
- 3.** Each half-harrow is protected individually with a cut-out clutch for ensuring the best possible protection.



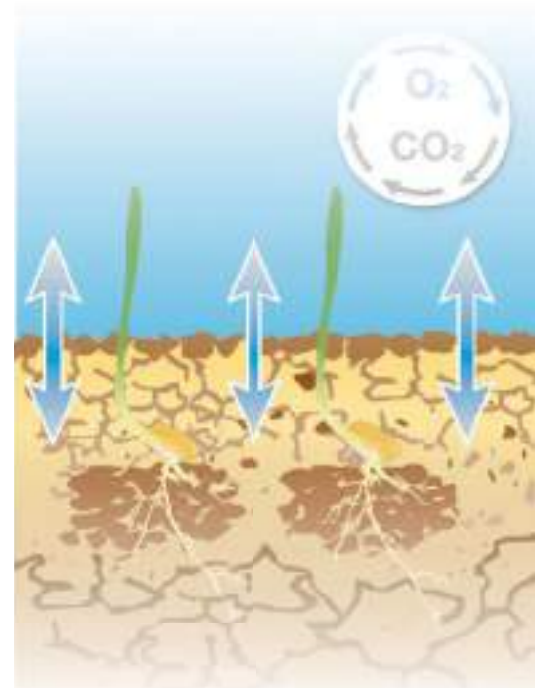
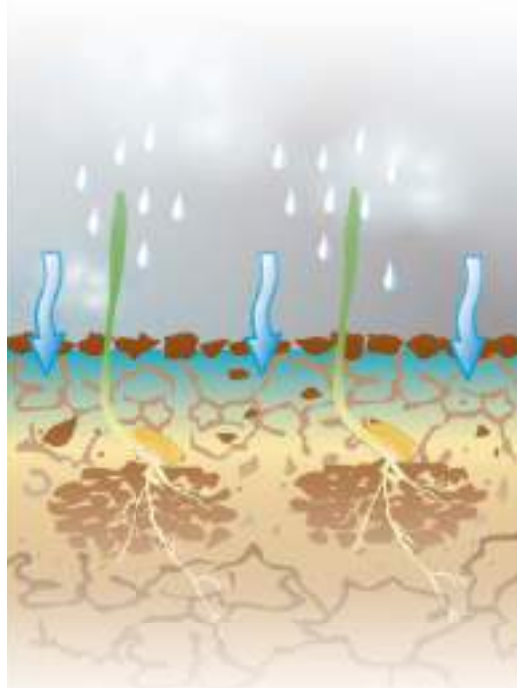
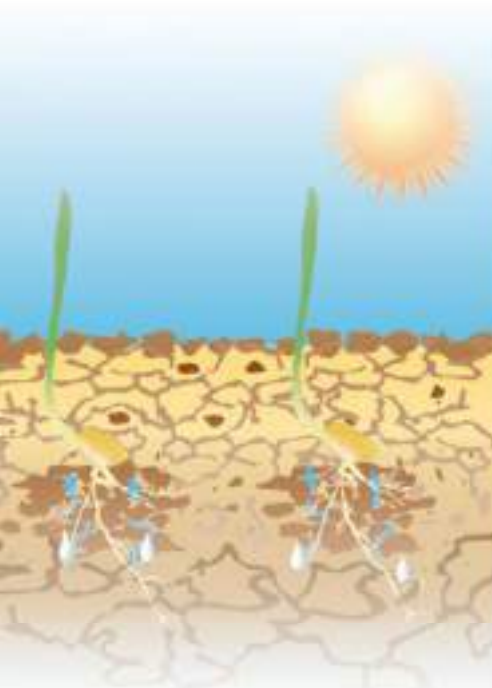


# PREPARE EACH SEEDING LINE

## ACCURATE AND INDIVIDUAL TAMPING

Furrow rollers give your crops a strong start by preparing an optimum seedbed. From the agronomist's view, they combine the following strong points:

- Seed furrows have a more uniform depth making seeding more even.
- Compact furrow bases facilitate capillary water transfer to the grain.
- Firmer soil improves the contact between seed and soil to improve the uptake of nutrients.



### STEELLINER ROLLER

- Total diameter 500 mm (tube 406 mm) on HRB and 550 mm on HR models;
- Very good rotation and carrying capacity;
- Provides improved clod-crushing capacity on dry, hard ground.
- Good soil structure, even in difficult and wet seeding conditions.



### PACKLINER ROLLER

- Very large diameter of 592 mm;
- Exclusive prismatic profile improves self-cleaning and produces uniform furrow shape.
- Improved seed covering, even in difficult conditions;
- It excels in light soil and is also adapted to the 'clayeyest' soils.



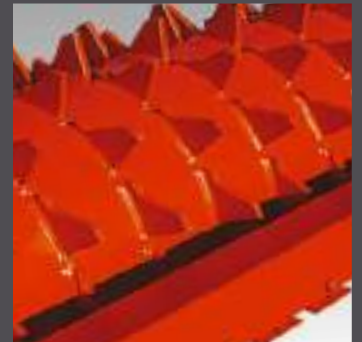
# A LARGE CHOICE OF ROLLERS TO MEET YOUR NEEDS



For dry, non-sticky soils,  
without integrated  
seed drill

For compact  
silty or sticky  
soils

For light and  
clayey-silty  
soils



## TUBE ROLLERS

Ideal for soil preparation in spring and summer, not compatible with integrated seed drills:

- low power consumption;
- economical purchase;
- maintenance-free.

## CRUMBLER:

- diameter of 390 mm;
- removable bars can be taken out if necessary to prevent clogging risks.

## MAXICRUMBLER:

- diameter of 520 mm;
- reduced rolling resistance;
- large diameter to reduce risk of soil accumulation;
- more resistant in stony conditions.

## PACKER AND PACKER 2 ROLLERS

- diameter of 485 mm (PACKER) and 515 mm (PACKER 2);
- optimum seedbed preparation thanks to the rollers' crumbling and packing effect;
- for tamped soil underneath and loosened soil on the top.

## MAXIPACKER ROLLER

- large diameter of 535 mm;
- less resistant to rolling, requires less traction power;
- less subject to roller sinking in light soils.



1

## 1. Roller height adjustment

Roller height is easily adjusted with a simple to use multi-hole and stop pin selector. Having no downward restriction, the roller holds the ground even when the machine is forced up during work. Due to the rounded shape of the pin and stop arm, their contact area is increased and prevents any problems of burring.

## 2. Hard coated scrapers

The hard coated scrapers have a very long service life thanks to the tungsten carbide coating. The three work surfaces are protected, preventing frequent adjustments. Standard on MAXIPACKER, STEELLINER and PACKLINER rollers.



2





## TRACK ERADICATORS

Available as optional equipment on all foldable power harrows as well as rigid HR 104 and HR 1004 series, they are used to loosen the ground compacted by tractor wheels. Adjustable in height, the track eradicators are equipped with traction bolt or spring safety. When working with dual wheels or very large tyres, two sets of track eradicators may be fitted on each side of the machines on the same holder.



## FRONT SHARE

The front share crumbles the part of the soil positioned between the two troughs of the foldable models. This is particularly useful for cultivations requiring a perfect seedbed and for minimum tillage applications.

## REAR HYDRAULIC LINKAGES: KUHN GIVES YOU THE RIGHT CHOICE FOR YOUR SITUATION

The standard hydraulic linkage with its lifting capacity of 2,500 kg is appropriate for routine use with in-line seed drills and is available for all power harrow series apart from the folding harrows.

They can be equipped with a high capacity linkage, which lifts up to 3,300 kg. Cylinders and hinge pins are reinforced and ringed and it is as standard equipped with a hydraulic lift limiter. This linkage is recommended for hitching to high-capacity seed drills or precision seed drills. Available on all HR 104 and 1004 models.







### LEVELLING BARS

- The front levelling bar is used to break down and level mounds in irregular grounds. Easily removable and adjustable in height, it does not affect the blade working depth.
  - To obtain a fine seedbed the levelling bar can be positioned at the rear between the gear trough and the roller.
- If required, two levelling bars can be fitted: one to the front and one to the rear. They are available for all KUHN power harrows.



### LEVELLING BAR HEIGHT ADJUSTMENT

The height adjustment of the front and rear levelling bars is done with a crank handle and locked in the selected position with a pin for increased comfort in use and reliability (just the pin on HR 6004 DRC). You can easily remove them.



# POWER HARROW AND SEED DRILL: MADE FOR EACH OTHER

You will find almost certainly an answer to your questions about combining seedbed preparation and seeding in the wide range of KUHN seed drill combinations. Because they are:

- well-matched and homogeneous,
- efficient and profitable,
- versatile (working on ploughed and min-till land),
- reliable,
- compact.

Choose from the numerous solutions of the tillage and drilling specialist. KUHN is at your side to give you the new keys to profitability and success in seeding.

More information on:

[www.kuhn.com](http://www.kuhn.com)



## FIVE RULES FOR PROPER DRILLING

### 1. THE RIGHT SEEDING DENSITY:

To find the desired seeding density, the intra-row distance, seeding time and soil type have to be taken into account. An efficient seed drill realizes this theoretical calculation.

### 2. A SUPERIOR STUBBLE MANAGEMENT:

KUHN seed drills ensure a proper clearance of the seeding row and avoid every contact between plant residues and the seeds.

### 3. A REGULAR SEEDING DEPTH FOR MAXIMUM RETURN:

An efficient seed drill is able to control the seeding depth accurately.

### 4. SEED/SOIL SURROUNDINGS AT OPTIMUM:

An optimal air exchange and water supply are vital for a quick development of the plant.

### 5. ACHIEVE A WELL-DEVELOPED ROOT SYSTEM WITH AN ADAPTED SOIL PREPARATION:

Small clods on the surface and fine earth around the seed: This facilitates root growth.

1 2 3 4 5







1. Combined with integrated mechanical seed drill: **COMBILINER INTEGRA, COMBILINER SITERA**. 2. Combined with integrated pneumatic seed drill: **COMBILINER VENTA**. 3. Combined with front hopper and rear coulters bar: **TF 1500 + BTF / BTFR**. 4. Combined with telescopic precision seed drill: **MAXIMA 2 or PLANTER 3**.



## Technical specifications

	HRB 252 D	HRB 302 D	HRB 303 D	HRB 353 DN	HRB 403 D	HRB 403 DR	HRB 453 DR	HRB 503 DR	HR 304 D	
Working width (m/ft)	2.50 / 8'2"	3.00 / 9'10"	3.44 / 11'3"	4.00 / 13'1"	4.50 / 14'8"	5.00 / 16'5"	3.00 /			
Overall width (m/ft)					4.08 / 13'5"	4.67 / 15'4"	4.97 / 16'4"			
Transport width (m/ft)	2.60 / 8'5"	3.08 / 10'1"	3.50 / 11'6"	4.11 / 13'6"	2.67 / 8'9" 2.51 / 8'3" (rollers raised)			3.12 /		
Frame type	rigid					folding (two double acting cylinders)				
Min. PTO power requirement (kW/hp)	37 / 50	44 / 60	51 / 70	59 / 80	66 / 90	81 / 110	88 / 120	96 / 130	59	
Max. tractor power requirement (kW/hp)	103 / 140		118 / 160			132 / 180				
Gearbox	Duplex (central)								Duplex (central)	
PTO speed (min <sup>-1</sup> )	540* / 750 / 1,000		540 / 750 / 1,000*			750 / 1,000				
PTO shaft safety	◆ (friction slip clutch) ◇ (cam type cut-out clutch)		◆ (cam-type cut-out clutch)							
Rear PTO stub										
Number of rotors	8	10	12	13	15	16	1			
FAST-FIT blade attachment	-									
Working depth (cm/in)	2 to 20 / 1" to 8"									
Attachment	cat. 2 or 3 with pivoting lower links				cat. 3				cat. 2	
Lighting and signalling	◇					◆				
Approx. weight (kg/lbs) with	CRUMBLER roller	835 / 1,841	965 / 2,127	1,075 / 2,370	1,300 / 2,866	1,405 / 3,097	-	-	-	1,090 / 2,403
	MAXICRUMBLER roller	845 / 1,863	975 / 2,150	1,085 / 2,392	1,290 / 2,844	1,380 / 3,042	2,035 / 4,486	2,185 / 4,817	2,255 / 4,971	1,100 / 2,425
	PACKER 2 roller	-	1,170 / 2,579	1,280 / 2,822	1,525 / 3,362	1,650 / 3,638	2,260 / 4,982	2,430 / 5,357	2,530 / 5,577	1,295 / 2,855
	MAXIPACKER roller	1,035 / 2,281	1,200 / 2,646	1,310 / 2,888	1,575 / 3,472	1,700 / 3,748	2,310 / 5,092	2,505 / 5,522	2,605 / 5,743	1,325 / 2,921
	STEELLINER roller	-	1,325 / 2,921	1,435 / 3,164	1,725 / 3,803	1,870 / 4,123	2,400 / 5,291	2,645 / 5,831	2,765 / 6,095	1,450 / 3,197
	PACKLINER roller	-	-	1,455 / 3,208	1,770 / 3,902	1,920 / 4,233	-	-	-	1,490 / 3,284

◆ standard ◇ option - not available \*factory fitted





HR 304 M	HR 404 D	HR 404 M	HR 3004 D	HR 3504 D	HR 4004 D	HR 4504 D	HR 4004 DR	HR 4504 DRC	HR 5004 DRC	HR 6004 DRC	
9'10"	4.00 / 13'1"		3.00 / 9'10"	3.50 / 11'6"	4.00 / 13'1"	4.50 / 14'9"	4.00 / 13'1"	4.50 / 14'9"	5.00 / 16'5"	6.00 / 19'7"	
10'3"	4.11 / 13'5"		3.08 / 10'1"	3.50 / 11'6"	4.10 / 13'5"	4.55 / 14'11"	4.08 / 13'5"	4.67 / 15'4"	4.97 / 16'4"	6.21 / 20'4"	
rigid							2.67 / 8'9" 2.51 / 8'3" (rollers raised)				2.65 / 8'8" 2.52 / 8'3" (rollers raised)
/ 80							81 / 110		88 / 120	96 / 130	130 / 180
139 / 190			184 / 250							265 / 350	
Multiplex	Duplex (central)	Multiplex	Duplex (central)							Duplex (side)	
540 / 750 / 1,000*							750 / 1,000			1,000	

◆ (cam-type cut-out clutch)

◆										
0	14	10	12	14	16	13	15	16	20	
3 to 25 / 1" to 10" (standard blades) up to 31 / 12.2" (long blades)						3 to 25 / 1" to 10" (standard blades)				
or 3 with pivoting lower links	cat. 3	cat. 2	cat. 2 or 3			cat. 3				
◇						◆				
1,130 / 2,491	-	-	1,185 / 2,612	-	-	-	-	-	-	-
1,140 / 2,513	1,470 / 3,240	1,510 / 3,329	1,195 / 2,635	1,400 / 3,086	1,580 / 3,483	1,730 / 3,814	2,115 / 4,662	2,275 / 5,015	2,350 / 5,180	2,900 / 6,393
1,335 / 2,943	1,740 / 3,836	1,780 / 3,924	1,390 / 3,064	1,635 / 3,605	1,850 / 4,079	2,020 / 4,453	2,340 / 5,357	2,520 / 5,555	2,625 / 5,787	3,290 / 7,253
1,365 / 3,009	1,790 / 3,946	1,830 / 4,034	1,420 / 3,131	1,685 / 3,715	1,900 / 4,189	2,075 / 4,575	2,390 / 5,270	2,595 / 5,721	2,700 / 5,953	3,350 / 7,390
1,490 / 3,285	1,950 / 4,299	1,990 / 4,387	1,520 / 3,351	1,635 / 3,605	2,095 / 4,619	-	2,480 / 5,467	2,735 / 6,029	2,860 / 6,305	3,550 / 7,826
1,530 / 3,373	2,010 / 4,431	2,050 / 4,519	1,590 / 3,505	-	2,145 / 4,729	2,320 / 5,115	-	-	-	3,630 / 8,003



## Rotor speeds (min<sup>-1</sup>) - HRB 252 D - HRB 302 D

Set of gearwheels		Standard speed gear set (21/24 teeth)		Optional speed gear set (19/26 teeth)		Optional speed gear set (17/28 teeth)	
Position of gearwheel		• 21 ● 24	● 24 • 21	• 19 ● 26	● 26 • 19	• 17 ● 28	● 28 • 17
PTO speed	540	221	289	185	346	154	417
	750	307	402	257	-	214	-
	1,000	410	-	343	-	285	-

## Rotor speeds (min<sup>-1</sup>) - HRB 403 D

Set of gearwheels		Standard speed gear set (21/24 teeth)		Optional speed gear set (19/26 teeth)		Optional speed gear set (17/28 teeth)	
Position of gearwheel		• 21 ● 24	● 24 • 21	• 19 ● 26	● 26 • 19	• 17 ● 28	● 28 • 17
PTO speed (min <sup>-1</sup> )	540	-	165	-	198	-	238
	750	175	229	147	274	-	331
	1,000	234*	306	196	366	162	441

\* Factory setting

## Rotor speeds (min<sup>-1</sup>) - HRB 303 D - HR 303 D - HR 403 D - HR 304 D - HR 404 D

Set of gearwheels		Standard speed gear set (26/30 teeth)		Optional speed gear set (24/32 teeth)		Optional speed gear set (21/35 teeth)	
Position of gearwheel		• 26 ● 30	● 30 • 26	• 24 ● 32	● 32 • 24	• 21 ● 35	● 35 • 21
PTO speed	540	-	194	-	225	-	281
	750	203	270	-	313	-	390
	1,000*	270	360	234	417	188	-

\* Preferential PTO speed

KUHN SERVICES\*

\*Certain services and equipment are not available in all countries.

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## Rotor speeds (min<sup>-1</sup>) - HR 303 M - 403 M - 304 M - 404 M

Set of gearwheels		Standard speed gear set (20/25 teeth)				Optional speed gear set (19/26 teeth)			
Position of gearwheel		● 20* ● 25		● 25 ● 20		● 19 ● 26		● 26 ● 19	
Lever position		1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>
PTO speed	540	-	-	211	258	-	-	231	282
	750	188	229	293	358	171	209	321	392
	1,000	250	306	391	-	228	279	428	-

\* Factory setting

## Rotor speeds (min<sup>-1</sup>) - HRB 353 DN - HR 3003 - HR 3503 D - HR 4003 D - HR 4503 D - HR 3004 D - HR 3504 D - HR 4004 D - HR 4504 D

Set of gearwheels		Standard speed gear set (35/30 teeth)		Optional speed gear set (27/38 teeth)		Optional speed gear set (25/40 teeth)		Optional speed gear set (33/32 teeth)	
Position of gearwheel		● 30 ● 35	● 35 ● 30	● 27 ● 38	● 38 ● 27	● 25 ● 40	● 40 ● 25	● 33 ● 32	● 32 ● 33
PTO speed	540	-	169	-	204	-	232	-	-
	750	173	235	-	283	-	322	207	195
	1,000*	230	313	190	377	167	429	276	260

\* Preferential PTO speed

## Rotor speeds (min<sup>-1</sup>) - Foldable power harrows

Set of gearwheels		Standard speed gear set (21/24 teeth)		Optional speed gear set (19/26 teeth)		Optional speed gear set (17/28 teeth)	
Position of gearwheel		● 21 ● 24	● 24 ● 21	● 19 ● 26	● 26 ● 19	● 17 ● 28	● 28 ● 17
HRB 403 DR HR 4004 DR HRB 454 DR HR 4504 DRC HRB 504 DR HR 5004 DRC	750	176	230	-	275	-	330
	1,000	234	306	196	367	162	441
HR 6004 DRC	1,000	234	306	196	367	162	441

**Optional equipment HRB 102 D / HRB 103 D series:** cam type cut-out clutch safety (on HRB 252 and 302 D) - additional gearwheel sets - semi-automatic linkage (tractor/machine) - levelling bar to fit to the front or rear - track eradicators with spring or traction bolt safety - standard seed drill attachment or hydraulic lift attachment with two cylinders - stroke limiting device for hydraulic attachment.

**Optional equipment HR 104 / HR 1004 series:** levelling bar to fit to the front or rear - cat. 2 or 3 semi-automatic linkage - track eradicators with traction bolt or spring safety - additional gearwheel sets - additional cost for reinforced PTO shaft for over 200 hp - lengthened attachment yokes - standard or hydraulic lift seed drill attachment - stroke limiting device for hydraulic attachment - DURAKUHN carbide coated blades - OPTIMIX blades - long blades (36 cm) for deep soil preparations, potatoes, carrots, etc.

**Optional equipment HRB 103 DR / HR 1004 DR series:** front levelling bar and rear levelling bar for 4.00 m - 4.50 m - 5.00 m - levelling bar for fitting to front or rear of HR 6004 DRC - track eradicators with traction bolt or spring safety - additional gearwheel sets - additional reinforced PTO shaft on HR 4004 DRC, HR 4504 DRC and 5004 DRC - standard hydraulic lift seed drill attachment with stroke limiter - rear seed drill attachment with double acting hydraulic lift featuring two cylinders with stroke limiter (except HR 6004 DR) - front share.



## KUHN PARTS

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# WHICH POWER HARROW FOR WHICH FARM?

Type	Max. tractor power kW/hp at 1,000 min <sup>-1</sup>	Recommended usage
<b>HRB 252 - 302 D</b>	103/140	mixed farming, from light to medium hard soils average use medium use
<b>HR 304 - 404 D</b>	139/190	intensive arable farming, hard soil conditions and moderately stony
<b>HR 3004 - 3504 - 4004 - 4504 - 5004</b>	184/250	very intensive arable, farming, contractors, machinery rings, difficult soil conditions, very stony
<b>HR 6004</b>	265/350	

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