

Power Harrows

HRB 102 / 103 SERIES
HR 104 / 1004 SERIES



www.kuhn.com



be strong, be **KUHN**



HRB

102 D

103 D

103 DR

HR

104 D

104 M

1004 D

1004 DR

1004 DRC

SEEDBED PREPARATION IN PERFECTION!

THE KEY TO OPTIMUM SEEDBEDS

Optimum seedbed preparation is essential to getting homogeneous germination and crop development as well as vigorous young plants.

Crumbling, levelling and packing by the harrow is vital to maximizing 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

Take a look at the high standard of manufacturing of our power harrows. Benefit from reduced maintenance and costs, and save time with FAST-FIT quick-release blade system.

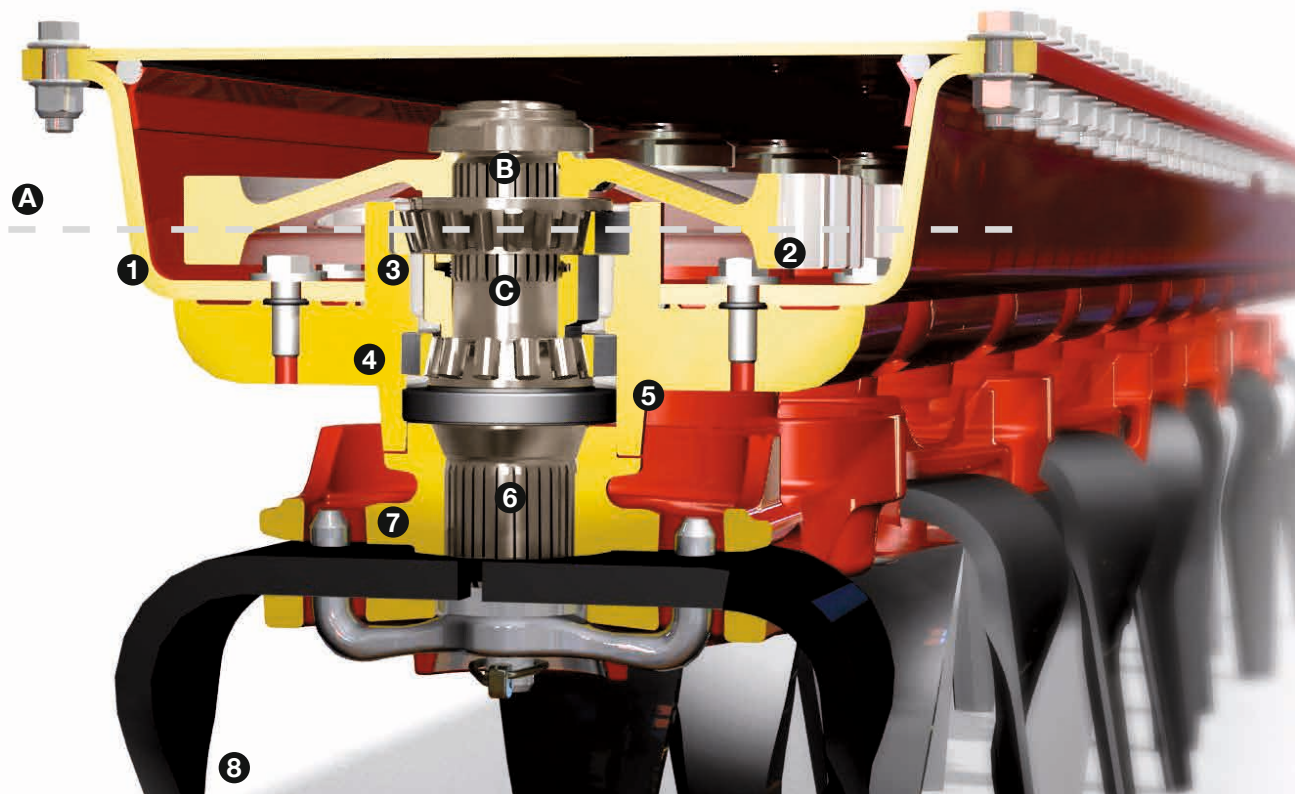
KUHN POWER HARROWS IN BRIEF:

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



ROBUST, RESISTANT, RELIABLE

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 (overdimensioned) 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.

VERSATILE BLADES, CONSIDERABLE TIME SAVERS

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.



Standard FAST-FIT blades



OPTIMIX blades



Reinforced
DURAKUHN blades



Extra-long blades
for deep cultivation

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.

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. greater soil loosening effect,
- 2. increased mixing of top soil and crop residues.

DURAKUHN BLADES: MADE TO LAST

KUHN power harrows are supplied on request with tungsten carbide-coated blades for long life.

EXTRA-LONG EXTRA-DEEP BLADES

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 holder prevents possible damage or accidental loosening of the blade locking device.

RELIABLE ROTOR DRIVE

The rotors are driven by large-diameter gearwheels. Power transmission to the blades is ensured by a large number of teeth fully engaged at all times. This rotor drive design has contributed to building KUHN's reputation in power harrows: highly reliable power harrows.

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.



PERFECT ADAPTATION TO CHANGING CONDITIONS

The purpose of seedbed preparation is to produce a fine, structured and level seedbed for uniform plant development, in one pass. But working conditions are as different as soil-types are. So to adapt the power harrow to conditions, you need a versatile gearbox.

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, TOTALLY RELIABLE

Models of the HRB 102 D series have proven their worth in terms of reliability, performance and robust design, on thousands of farms already. Output quality, design and manufacturing standard are the same as top-of-the-range models. The user benefits of these tools in brief:

- no concessions made on output quality,
- easily adjustable to adapt to different conditions,
- reduced maintenance and operating costs.





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 soil guidance and channelling to ensure a good finish between passes. The deflectors are guided by the roller arms on which they are fitted and follow working height perfectly.

DESIGNED TO CUT YOUR COSTS

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

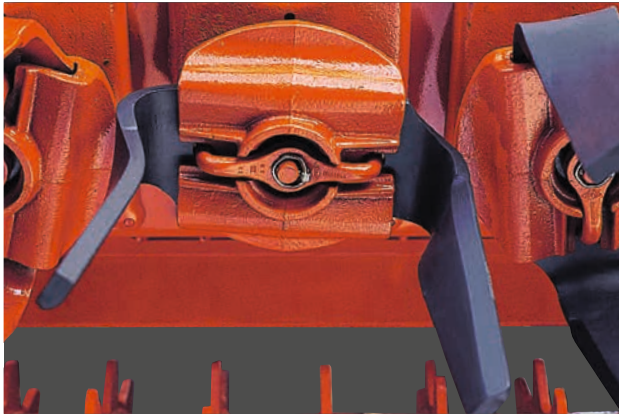
Long machine-life is essential for power harrows as they are subject to high levels of mechanical stress from hard clods and large stones. KUHN has paid particular attention to the HRB 103 D series models.

The front of the hitch is a rectangular tube.

Lower and top links are made of treated steel with anti-rotation pins.

The headstock of the HRB 403 is connected to the gear case by a large base and has two stiffening arms.





TOP LEVEL ASSEMBLY

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



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

Machine flexibility is absolutely essential when preparing a seedbed.

On the HR 104 series, you get the choice between a Duplex and a Multiplex gearbox.



DUPLEX GEARBOX: THE MOST VERSATILE ON THE MARKET

Featuring a wide range of gears.



MULTIPLEX GEARBOX: FOR HETEROGENEOUS SOILS

Having a selection lever, this gearbox suits land that necessitates frequent changes in rotor speed. This lever has two speeds and two more after gearwheel inversion: four speeds as standard!

An extra set of gearwheels is available for four additional speeds. The Multiplex gearbox is standard on HR 304 M models.



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.



FORGET DAILY GREASING!

With the reduced-maintenance drive system of the rigid HR 104 and HR 1004 series models, daily greasing is a thing of the past, it is now required every 250 hours only!

That means extra operating comfort and lower maintenance costs thanks to the special drive shafts that equip KUHN HR 104 and HR 1004 rigid harrows.



PERFECT SOIL PREPARATION

A side deflector is responsible for perfect levelling during seedbed 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.



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.

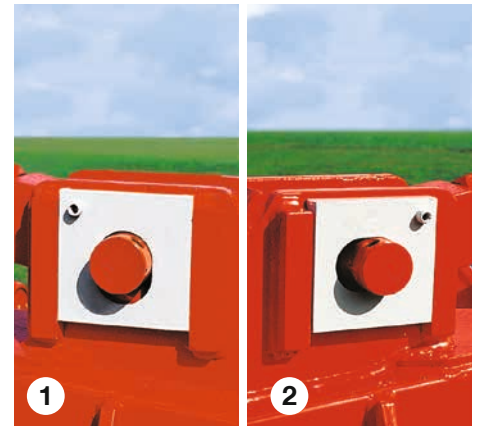
Of robust design, the models with four to six meters are the ideal solution for farmers who are looking for a versatile and performing tool for combined seeding: front hopper and two rear coulter bars or telescopic precision seed drill with fertiliser distribution.



ADAPT TO GROUND CONDITIONS

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



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 more restrictions for an optimum field output!



A COMPACT AND BALANCED COMBINATION

Combined with a front hopper and two rear coulter bars, KUH N foldable power harrows make a compact unit for transport. Changes between work and transport settings are very quick thanks to the two large 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.

ROBUST HARROWS WITH A SOLID REPUTATION

KUHN power harrows feature powerful and fully protected rotor-drive systems.



HEAVY-DUTY CENTRAL FRAME

On the 4, 4.5 and 5 m models, the central frame is made of heavy box sections which make the machine highly rigid and resistant to bending and torsion. HR 1004 DR models are fitted with hydraulic locking in transport position (except HR 404 DR) for extra comfort and simplicity.



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.



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.



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.



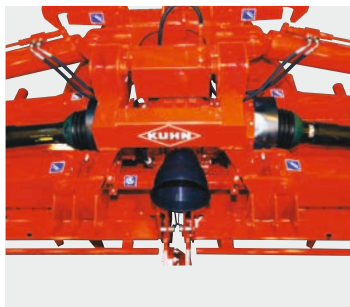
CENTRAL LEVELLING SHARE

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 finish over the entire working width.

DESIGNED FOR HIGH PRODUCTIVITY

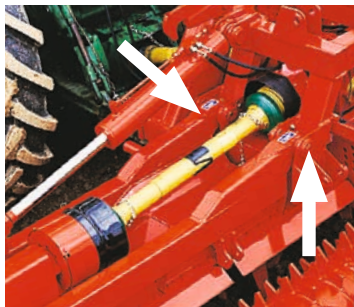
More than ever, managing your farm means targeting return on investment, cost reduction and improved productivity. The HR 6004 DRC power harrow with a working width of 6.00 m was designed to help you reach these objectives.

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 finish over the entire working width.





KINETICS ADAPTED TO HIGH POWERS

This harrow is designed for tractors up to 350 hp.

The following features have been specially adapted for use with high-powered tractors.

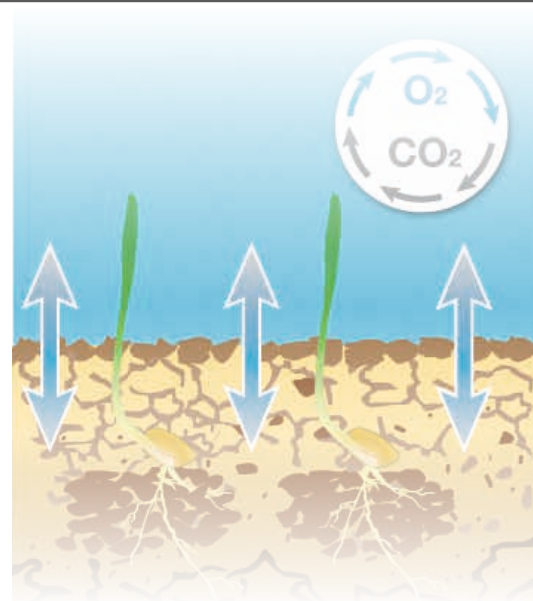
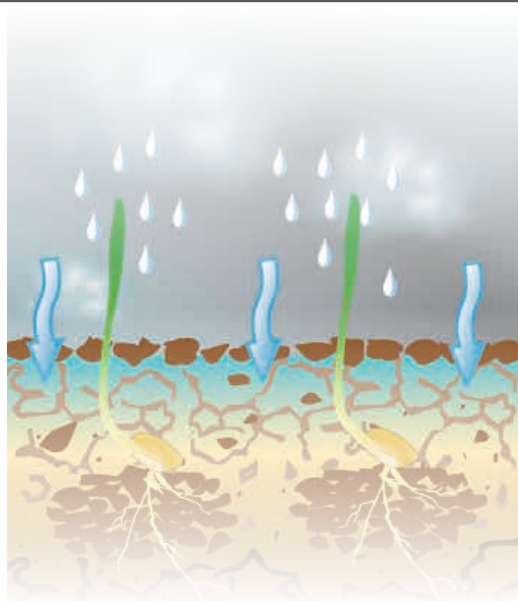
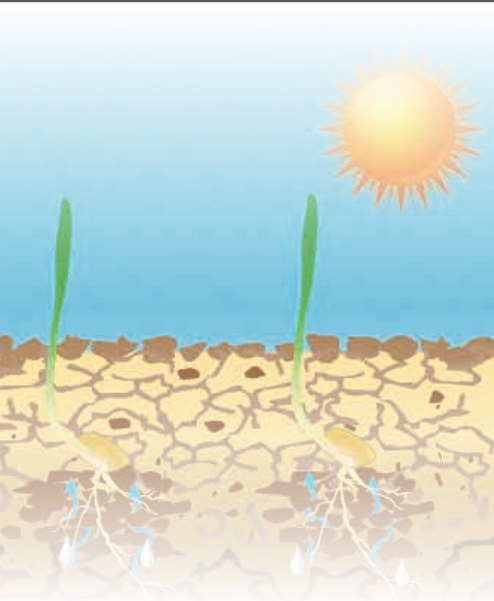


- 1.** The central gearbox is reinforced and equipped, as standard, with an oil cooling system. The pump is integrated in the housing to form a compact and robust unit: no delicate components are exposed to shocks.
- 2.** Two side gearboxes with speed change by switching the gearwheels.
- 3.** Each half-harrow has the best possible protection from a cut-out clutch.



FURROW ROLLERS: PREPARE EACH SEEDING LINE

PRECISE TAMPING: Furrow rollers give your crops a good start by preparing an optimum seedbed. They provide many agronomical advantages. They produce furrows of a uniform depth to make seed delivery more even. They facilitate capillary water transfer to the seed and press the soil for better soil/seed contact to improve nutrient uptake.



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



IN DRY AND SLIGHTLY STICKY SOIL WITHOUT INTEGRATED SEED DRILL



CRUMBLER:

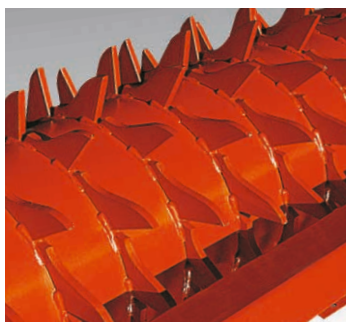
- 390 mm diameter,
- removable bars can prevent clogging,
- low power requirement,
- light and economical,
- not compatible with integrated seed drill.



MAXICRUMBLER:

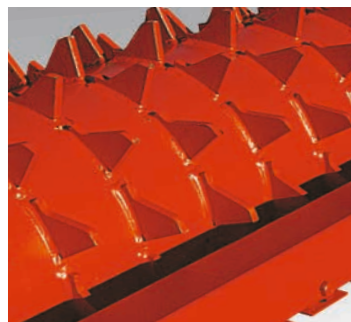
- 520 mm diameter,
- less rolling resistance,
- reduced soil build-up,
- more resistant in stony conditions,
- not compatible with integrated seed drill.

IN CAPPING LOAM OR STICKY CLAY



PACKER 2:

- 515 mm diameter,
- crumbling and packing effect for optimum seedbed preparation,
- tamped soil down deep and loosened soil on the surface.



MAXIPACKER:

- 535 mm large diameter,
- less rolling resistance, less pull power required,
- less subject to roller sinking in light or limestone soils.



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.

HARD COATED SCRAPERS

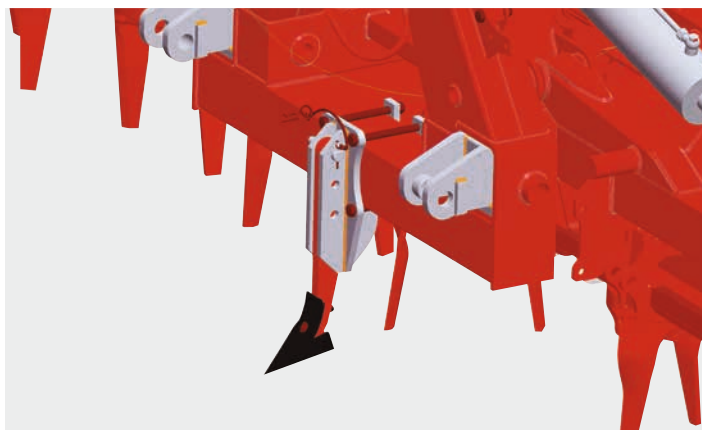
The hard coated scrapers have a very long service life thanks to the tungsten carbide coating. The three work surfaces are protected, preventing frequent adjustments. Standard on MAXIPACKER, STEELLINER and PACKLINER rollers.

CUSTOMIZED TO FIT YOUR OPERATION



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 machine 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 LINKAGE

The standard hydraulic linkage system with lifting capacity of 2,500 kg is ideal for routine use with seed drills and is available with all power harrows except folding models.

Power harrows can be equipped with a high-capacity linkage system which lifts up to 3,300 kg. Cylinders and hinge pins are reinforced and ringed. The linkage system is equipped with a hydraulic lift limiter as standard. This system is recommended for hitching high-capacity seed drills and precision seed drills. It is available with all HR 104 and 1004 models except HR 6004 DRC.

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 MECHANICAL OR PRECISION 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.

5 TIPS FOR SUCCESSFUL SEEDING

1. THE RIGHT SEEDING DENSITY

Seed type, seeding time and soil type have to be taken into account to find the ideal seeding density. An effective seed drill uses this theoretical calculation.

2. STUBBLE MANAGEMENT

KUHN seed drills guarantee good clearance of the seeding row with no contact between the seeds and plant residues.

3. CONTROLLED SEEDING DEPTH

KUHN seed drills are easy to set so that working and seeding depth are under control.

4. SEED/SOIL CONTACT

Good air/seed exchange and water supply is vital for fast and healthy plant development. Opt for a roller to suit your use and conditions.

5. BOOST ROOT DEVELOPMENT

Small clods on the surface and fine soil around the seed facilitate root growth.

Prepare the seedbed in accordance with conditions on the day of seeding and the specific needs of the crop you are planting to ensure the best conditions for germination and growth.

1

2

3

4

5





1. Combined with integrated mechanical seed drill: **INTEGRA, SITERA**
2. Combined with integrated pneumatic seed drill: **VENTA EC**
3. Combined with front hopper and rear coulter 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
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"
Overall width (m/ft)		2.60 / 8'5"	3.08 / 10'1"		3.50 / 11'6"	4.11 / 13'6"	4.08 / 13'5"	4.67 / 15'4"	4.97 / 16'4"
Transport width (m/ft)							2.67 / 8'9" 2.51 / 8'3" (rollers raised)		
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
Max. tractor power requirement (kW/hp)		103 / 140		118 / 160			132 / 180		
Gearbox		Duplex (central)							
PTO speed (min ⁻¹)		540* / 750 / 1000		540 / 750 / 1000*			750 / 1000		
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
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			
Lighting and signalling		◇					◆		
Approx. weight (kg/lbs) with	CRUMBLER	835 / 1,841	965 / 2,127	1,075 / 2,370	1,300 / 2,866	1,405 / 3,097	-	-	-
	MAXICRUMBLER	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
	PACKER 2	-	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
	MAXIPACKER	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
	STEELLINER	-	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
	PACKLINER	-		1,455 / 3,208	1,770 / 3,902	1,920 / 4,233	-	-	-

◆ standard ◇ option - not available *factory fitted

OPTIONAL EQUIPMENT HRB 102 D SERIES / HRB 103 D SERIES: cam-type cut-out clutch safety (on HRB 252 and 302 D) - additional sets of gearwheels - semi-automatic linkage (tractor/machine) - levelling bar to fit to 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 SERIES / HR 1004 SERIES: levelling bar to fit to front or rear - track eradicators - spring or traction bolt safety - additional sets of gearwheels - reinforced PTO shaft for tractors over 200 hp - longer attachment yokes - standard seed drill attachment or hydraulic lift attachment - stroke limiting device for hydraulic attachment - DURAKUHN coated blades - OPTIMIX blades - long blades (36 cm) for deep soil preparation: potatoes, carrots etc.

HR 304 D	HR 304 M	HR 404 D	HR 3004 D	HR 3504 D	HR 4004 D	HR 4004 DR	HR 4504 DRC	HR 5004 DRC	HR 6004 DRC
3.00 / 9'10"		4.00 / 13'1"		3.50 / 11'6"	4.00 / 13'1"	4.00 / 13'1"	4.50 / 14'9"	5.00 / 16'5"	6.00 / 19'7"
3.12 / 10'3"		4.11 / 13'5"	3.08 / 10'1"	3.50 / 11'6"	4.10 / 13'5"	4.08 / 13'5"	4.67 / 15'4"	4.97 / 16'4"	6.21 / 20'4"
						2.67 / 8'9" 2.51 / 8'3" (rollers raised)			2.65 / 8'8" 2.52 / 8'3" (rollers raised)
rigid						folding (two double acting cylinders)			
59 / 80		73 / 100	59 / 80	66 / 90	73 / 100		88 / 120	96 / 130	130 / 180
139 / 190			184 / 250						265 / 350
	Multiplex	Duplex (central)							Duplex (side)
540 / 750 / 1000*						750 / 1000			1000
◆ (cam-type cut-out clutch)									
◆									
10	14	10	12	14	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)			
cat. 2 or 3 with pivoting lower links			cat. 2	cat. 2 or 3		cat. 3			
◇						◆			
1,090 / 2,403	1,130 / 2,491	-	1,185 / 2,612	-	-	-	-	-	-
1,100 / 2,425	1,140 / 2,513	1,470 / 3,240	1,195 / 2,635	1,400 / 3,086	1,580 / 3,483	2,115 / 4,662	2,275 / 5,015	2,350 / 5,180	2,900 / 6,393
1,295 / 2,855	1,335 / 2,943	1,740 / 3,836	1,390 / 3,064	1,635 / 3,605	1,850 / 4,079	2,340 / 5,357	2,520 / 5,555	2,625 / 5,787	3,290 / 7,253
1,325 / 2,921	1,365 / 3,009	1,790 / 3,946	1,420 / 3,131	1,685 / 3,715	1,900 / 4,189	2,390 / 5,270	2,595 / 5,721	2,700 / 5,953	3,350 / 7,390
1,450 / 3,197	1,490 / 3,285	1,950 / 4,299	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
1,490 / 3,284	1,530 / 3,373	2,010 / 4,431	1,590 / 3,505	-	2,145 / 4,729	-	-	-	3,630 / 8,003

OPTIONAL EQUIPMENT HRB 103 DR SERIES / HR 1004 DR SERIES: levelling bar to fit to front or rear on HR 4.00 - 4.50 - 5.00 m - levelling bar to fit to front or rear on HR 6004 DRC - track eradicators with spring or traction bolt safety- additional sets of gearwheels - reinforced PTO shaft for HR 4004 DR, HR 4504 DRC and HR 5004 DRC - rear seed drill attachment with double acting hydraulic lift with two cylinders and stroke limiting device (except HR 6004 DRC) - front share.

ROTOR SPEEDS (MIN⁻¹)

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 gearwheels		• 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	-

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 gearwheels		• 21 • 24	• 24 • 21	• 19 • 26	• 26 • 19	• 17 • 28	• 28 • 17
PTO speed	540	-	165	-	198	-	238
	750	175	229	147	274	-	331
	1,000	234*	306	196	366	162	441

* Factory setting

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 gearwheels		• 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



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HR 303 M - 403 M - 304 M

Set of gearwheels		Standard speed gear set (20/25 teeth)				Optional speed gear set (19/26 teeth)			
Position of gearwheels		<ul style="list-style-type: none"> • 20* • 25 		<ul style="list-style-type: none"> • 25 • 20 		<ul style="list-style-type: none"> • 19 • 26 		<ul style="list-style-type: none"> • 26 • 19 	
Lever position		1 st	2 nd	1 st	2 nd	1 st	2 nd	1 st	2 nd
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

HRB 353 DN - HR 3003 - HR 3503 D - HR 4003 D - HR 4503 D - HR 3004 D - HR 3504 D - HR 4004 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 gearwheels		<ul style="list-style-type: none"> • 30 • 35 	<ul style="list-style-type: none"> • 35 • 30 	<ul style="list-style-type: none"> • 27 • 38 	<ul style="list-style-type: none"> • 38 • 27 	<ul style="list-style-type: none"> • 25 • 40 	<ul style="list-style-type: none"> • 40 • 25 	<ul style="list-style-type: none"> • 33 • 32 	<ul style="list-style-type: none"> • 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

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 gearwheels		<ul style="list-style-type: none"> • 21 • 24 	<ul style="list-style-type: none"> • 24 • 21 	<ul style="list-style-type: none"> • 19 • 26 	<ul style="list-style-type: none"> • 26 • 19 	<ul style="list-style-type: none"> • 17 • 28 	<ul style="list-style-type: none"> • 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
	1,000	234	306	196	367	162	441

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HR HRB POWER HARROWS

WHICH POWER HARROW FOR WHICH FARM?

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

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