



For Earth, For Life
Kubota

PH

KUBOTA POWER HARROWS

**PH1000/PH2001/PH3000
PH1000F/PH2000F**

Heavy-duty rigid and foldable power harrows



HEAVY-DUTY RIGID AND FOLDAB



Heavy-Duty Technology for Tough Conditions

To meet the ever increasing demand from modern farming Kubota offers a range of heavy-duty rigid and foldable power harrows in working widths of 2.5m to 5.0m.

The rigid range consists of three models:

- PH1000 Series for tractors up to 140HP
- PH2001 Series for tractors up to 180HP
- PH3000 Series for tractors up to 250HP

The foldable range consists of two models:

- PH1000F Series for tractors up to 200HP
- PH2000F Series for tractors up to 300HP

The size of the farms are continuously increasing and farmers are faced with new challenges. Machines should comply with these demanding requirements by offering reliable performance, versatility and a good resale value.

Heavy-Duty Construction

The Kubota Power Harrows are designed for heavy conditions and are built for

tractors up to 300HP. Special emphasis has been given to reliability and a strong trough design. This has been achieved by having a large distance between the conical bearings, hardened gears in the trough and a heavy-duty rigid trough design.

Quick-Fit Tines

All models can be fitted with Quick-Fit tines to meet customers demand for efficiency. The tines are secured by a special pin and clip mounted in the tine holder. The tines can therefore be replaced quickly without tools. 'Active' forward facing tines can easily replace

LE POWER HARROWS



Trough section of the Kubota PH3000 model.

standard tines, and when in combination with a Kubota mounted seed drill fitted with disc coulters; these 'active' tines will provide improved performance in heavy mulch conditions.

The Trough Design

For optimum performance in difficult soil conditions, the robust trough design provides a large clearance between the tine holder and trough bottom. This allows large amounts of residue and stones to pass freely without blocking and provides excellent results in mulch conditions.

Easy to use – easy to maintain

Kubota has focussed on ease of maintenance. The trough is filled with grease to ensure positive rotor lubrication from initial start up. The tine carrier design of PH1000 and PH3000 Series is of two separate pieces, allowing the oil seal to be replaced without opening the trough. The rotors are sealed with cassette seals, ensuring no wear on the shaft and minimum maintenance.

A perfect combination

All Kubota power harrows can be equipped with a wide choice of rear rollers. As an option, a hydrolift system is available in order to combine the power harrow with a precision seeder.

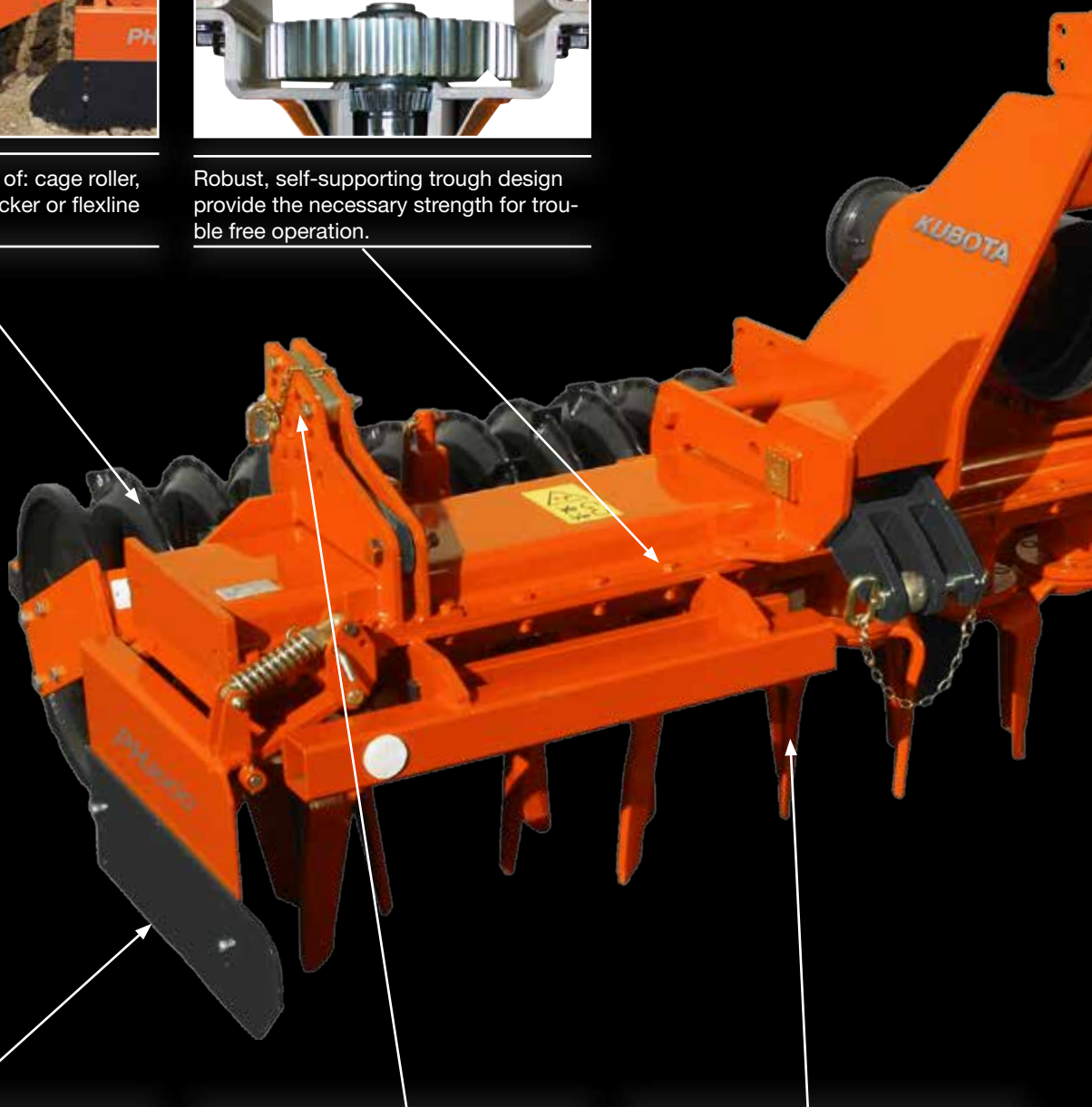
10 GOOD REASONS FOR CHOOSING



Possibility to fit a choice of: cage roller, tooth packer, cracker packer or flexline roller.



Robust, self-supporting trough design provide the necessary strength for trouble free operation.



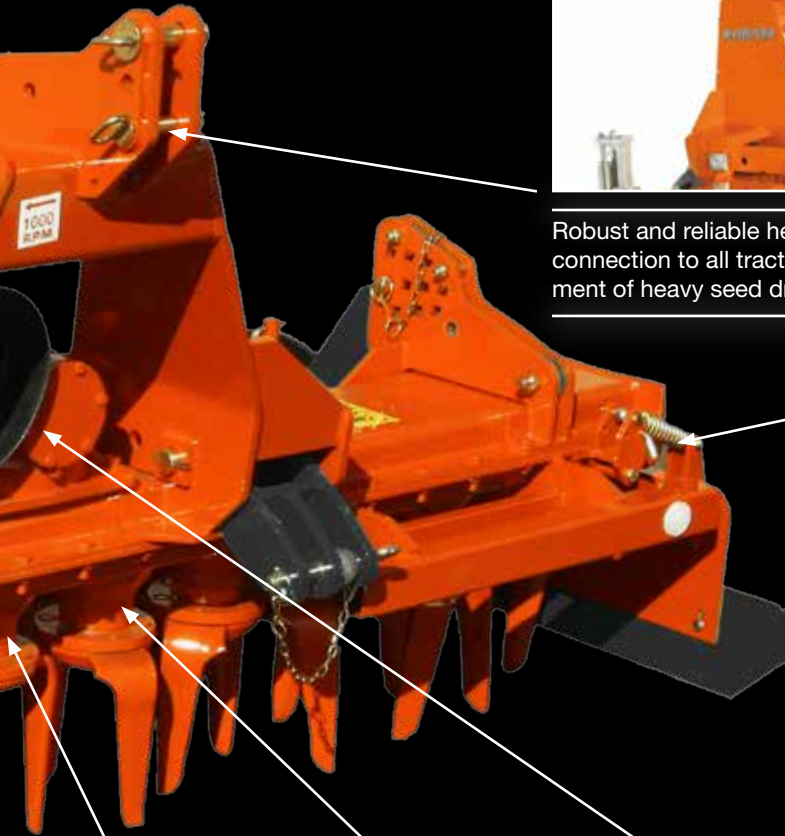
Floating side deflectors with overload protection allow smooth operation and a ridge free soil surface.

Easy depth adjustment via bracket to allow the ease of fitment of all Kubota packer roller types.

Quick-Fit tines – the tines are locked in position by a pin and clip. Tines are quickly replaced without tools.



ING A KUBOTA POWER HARROW



Robust and reliable head-stock for easy connection to all tractors and the attachment of heavy seed drill combinations.



Spring loaded, infinite adjustment of the rear level-ling bar ensures a level surface.

Two large conical bearings with a wide distance provide rigidity and a long service life.



Fully welded rotor housings ensure high bending and torque resistance to the trough when working in very tough soil conditions. This also provides an optimum clearance between the trough bottom and tine holders and allows large amounts of residues and stones to pass freely without blocking.



Robust change gear box with replaceable gears as standard. Additional sets of gears are available.



KUBOTA POWER HARROW PROGRAM



Technology based on 4 rotors per meter

Kubota rotor technology guarantees excellent soil preparation with minimum power consumption.



Parallel hydraulic depth adjustment

The working depth is adjusted by clips and a hydraulic ram from the tractor seat at foldable power harrows. A parallelogram linkage ensures that the power harrow is always in a horizontal position to the roller. Therefore, the packer roller scraper bar position is always at a fixed height to the ground, independent from the working depth.



Effective rear levelling bar

Kubota's high performance rear levelling bar is infinitely height adjustable. The turnbuckle adjustment is easy to use, even with a seed drill mounted. A scale ensures an even height is achieved across the full working width. An in-built spring system maintains the bar in an effective and consistent operating position.

RAMME – FEATURE BY FEATURE



Quick-hitch

All models can be fitted with a Kubota seed drill quickhitch for fast and easy attachment and demounting.



Lighting kit

On all fixed and folding models of the Kubota range of power harrows is optionally a lighting kit available.



Scraper bar

Central adjustable scraper bar. Low positioned scraper together with single welded crests provide optimum self-cleaning effect in sticky soils.



Side deflector with parallelogram

With its unique parallel guided linkage, the side deflector can move up and down, following ground contours. If stones are trapped between deflector and outer rotor, the deflector can open via coil spring overload protection. For strict transport regulations, the deflectors can easily be set in a raised transport position, just by removing one pin.



Hydraulic functions management

The foldable machines (PH2000F Series) can optionally be equipped with a control panel that allows the management of five different functions from the tractor cabin by using just one double acting spool.



Track marker arms with overload protection

In combination with various seed drill models the track marker arms are fitted directly to the trough of the power harrow. Overload protection is ensured by means of shear bolts.

HEAVY-DUTY TROUGH DESIGN A



ND TRANSMISSION



As the Kubota Power Harrows are designed for tractors up to 300HP (PH3000 Series) the construction of the trough and transmission is very robust.

The trough, which is the backbone of the whole machine, is made of two folded profiled plates, forming a beam which is extremely rigid against bending and torsional stress. There is a difference in dimensions between the three models, but they are all made following the same principles.

Reliability

Special emphasis has been given to reliability. This has been achieved by having a large distance between the conical bearings, hardened gears, and precise distance between the gears and the heavy-duty rigid trough design.



Heavy-Duty conical bearings

The robust shaft and two heavy-duty conical bearings with large distance ensure trouble free operation;

For the PH1000 and PH1000F model:

Ø 40/45mm with a distance of 47mm.

For the PH2000F model:

Ø 45/50mm with a distance of 80mm.

For the PH2001 model:

Ø 45/50mm with a distance of 55mm.

For the PH3000 model:

Ø 55/60mm with a distance of 80mm.

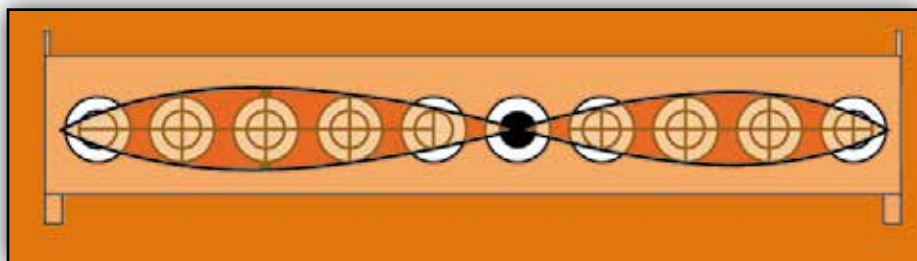
In addition, the massive clearance between the trough bottom and the tine holder gives perfect passing of residues and stones.

Dimensions:	PH1000 Series	PH2001 Series	PH3000 Series
Plate thickness:	5mm	2 x 6mm	10mm
Reinforcement plate:	10mm	–	–
Through mm:	120 x 400	140 x 400	150 x 400



Carbide tines

Down time can be minimised by optional carbide layered Quick-Fit tines. These tines ensure a long lifetime and minimum wearing even in tough and abrasive soils. The Quick-Fit system ensures an easy change of tines without the need for tools.



Helical tine positioning

The tines are arranged in varying angle positions in order to prevent damage caused by stones and ensure even levelling.

This reduces also peak loads on the driveline and results in smoother running and less fuel consumption.

FOLDABLE FOR LARGE SCALE P



All Kubota foldable power harrows are equipped with a change gearbox. With an overload protection rated from 1800Nm to 2500Nm they ensure a robust driveline up to 300HP tractors. The rotor speed setting is varying from 246 to 450rpm at 1000rpm between the PH1000F and PH2000F Series.

PERFORMANCE



The Kubota range of foldable power harrows (4.0 – 5.0m) offers maximum performance with narrow transport abilities. A heavy-duty headstock and a robust transmission system ensure years of effective and trouble free operation. The advanced parallelogram hydraulic depth control system guarantees a perfect seedbed.



Kubota Foldable Power Harrows – Wide in operation – narrow in transport

Quick in the field and quick on the road – they can easily be brought into transport position from the tractor cabin.

FOR TRACTORS FROM 130HP

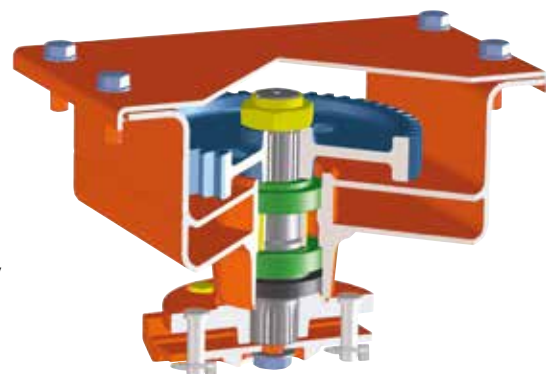
KUBOTA PH2000F



Innovative and robust trough concept

The Kubota foldable power harrow PH2000F Series has a new trough design that does not require any lateral frame. This saves weight and gives a tidy look to the machine. For optimum performance the new trough design provides a high clearance of 95mm between the tine holder and trough bottom. The PH2000F power harrow is available in working widths from 4.0 to 5.0m.

By a simple and clear design the PH2000F Series trough offers excellent performance with a limited weight. Double conical bearings and rotor shaft of 50mm diameter in combination with removable tine holders and Quick-Fit tines guarantees high reliability and very low maintenance requirements.



FOR TRACTORS FROM 110HP

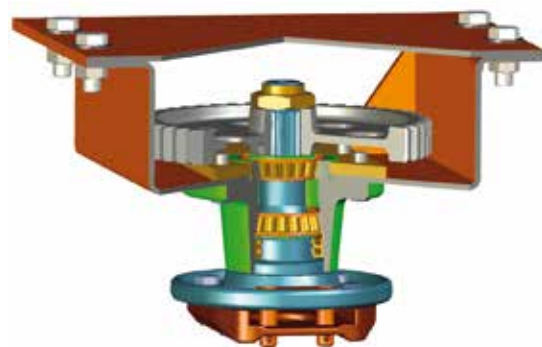
KUBOTA PH1000F



Simple and reliable trough design

The Kubota foldable power harrow Kubota PH1000F is the ideal implement for mid class tractors up to 200HP. During the development process special emphasis has been given to reliability, performance and a strong trough design. Nonetheless the PH1000F Series stands out for its light weight and is available in working widths of 4.0 and 5.0m.

The proven trough design is taken from the rigid PH1000 Series. The 120 x 400mm trough is made from a 5mm profiled steel plate. The 10mm bottom plate is precisely positioning the rotors. In combination with vertical ribs at each rotor, this gives a light but strong and bending resistant trough. The PH1000F Series is equipped with bolt on tines, Quick-Fit Tines are available as an option.



RIGID FOR TOUGH CONDITIONS



Kubota PH1000 Series – for tractors up to 140HP

Trough construction

A 5mm profiled plate together with a 5mm top plate form the 120 x 400mm trough. In combination with a 10mm reinforcement plate, precise positioning of the rotors gives a light but strong bending resistant trough.

Tine dimension

12 x 280mm



Kubota PH2001 Series – for tractors up to 180HP

Trough construction

Two profiled 6mm plates ensuring precise rotor spacing, high bending resistance in the 140 x 400mm trough to avoid torsional stress.

Tine dimension

15 x 330mm



Kubota PH3000 Series – for tractors up to 250HP

Trough construction

Two 10mm profiled plates forming the 150 x 400mm trough. The fully welded rotor housings add additional strength and bending resistance to the trough.

Tine dimension

18 x 330mm

FOR TRACTORS FROM 100HP

KUBOTA PH3000



The PH3000 trough – designed for reliability and optimum performance

A heavy-duty power harrow for all kinds of operations in all types of soil conditions. Robustly designed for use on tractors up to 250HP, with the Kubota heavy-duty trough design and Quick-Fit tines this power harrow is the right alternative for large farms and farm contractors.

Trough

Two 10mm profiled plates forming the 150 x 400mm trough. The fully welded rotor housings add extra strength and

bending resistance to the trough.

Tine shaft of 60mm

With two large conical bearings, Ø 55 and Ø 60mm with a distance of 80mm and heat-treated 50mm gears.

Ample clearance

125mm clearance between the trough bottom and the tine holder ensure good soil flow and allow residues to pass easily through the machine.

Tine dimension

18 x 330mm.



FOR TRACTORS FROM 85HP

KUBOTA PH2001



The PH2001 –Less weight, less maintenance, simple adjustment

Starting from the well-known PH2000 the PH2001 is the next generation of robust medium sized power harrow for effective operation but with reduced weight and improved centre of gravity for less lifting capacity. The important features like the rotor distance of 25cm, the double conical bearing and the modular tine carrier have been kept.

Designed for use on tractors up to 180HP, with the Kubota heavy-duty trough design and Quick-Fit tines this power harrow is the ideal choice for medium sized farms.

Trough

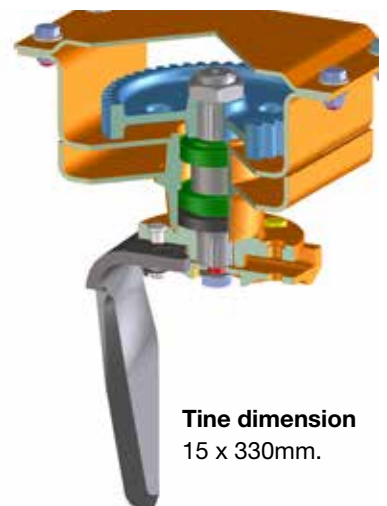
Two profiled 6mm plates ensuring precise rotor spacing, high bending resistance of the 140 x 400mm trough.

Tine shaft of 50mm

With two large conical bearings, Ø 45 and Ø 50mm with a distance of 55mm and 40mm hardened gears.

Ample clearance

95mm clearance between the trough bottom and the tine holder ensure good soil flow and allow surface residues to pass easily through the machine.



Tine dimension
15 x 330mm.

FOR TRACTORS FROM 70HP

KUBOTA PH1000



The PH1000 trough – high technology brought to the basic model

The Kubota PH1000 Series is a medium sized power harrow for tractors up to 140HP. The self-supporting trough construction, as well as optional 'Quick-Fit' tine holders and conical bearings offer optimum performance.

Trough

One 5mm profiled plate and a 5mm top plate form the 120 x 400mm trough. In combination with a 10mm reinforcement plate, precise positioning of the rotors, and vertically strengthening ribs, it forms

a light but strong bending resistant trough.

Tine shaft of 45mm

Two large conical bearings, Ø 40 and Ø 45mm with a distance of 47mm and robust 30mm gears.

Ample clearance

90mm clearance between the trough bottom and the tine holder.

Tine dimension

12 x 280mm.



KUBOTA PACKER ROLLERS



Soil conditions as well as crop establishment systems are different from one location to another. The choice of suitable equipment is vital with regards to preparing an optimal seedbed as a good start for perfect growth and high yields. When it comes to power harrows it is the rear roller which makes the difference. Though being a part of the machine, some roller types might even be mentioned as a soil working tool themselves. Finally, it should be the farmer, knowing

best about his demands. The Kubota range of rollers makes sure that this demand will be met, in the best possible way. The choice includes all roller variants being available in combination with a power harrow from:

- Cage Roller Ø 550mm
- Tooth Packer Roller
Ø 500, 575 and 585mm
- Flexline Roller Ø 585mm
- Cracker Roller Ø 550mm
- Actipack Roller Ø 560mm



Tooth Packer Roller Ø 500, 575 and 585mm

- Optimum performance on medium to heavy soils
- Good carrying capacity
- Good self cleaning effect
- Central adjustable scraper bar with independently adjusted scrapers
- Carbide-coated scrapers on request
- Most versatile roller – especially as part of heavy power harrow/seed drill combinations



Flexline Roller Ø 585mm

- For light to medium-heavy soils – especially under varying soil conditions
- Large diameter gives perfect carrying capacity
- Stripe-wise reconsolidation (12.5cm) in front of seed coulters but roller resting on soil surface completely
- Scraper bar with independently adjustable scrapers
- Smooth roller surface – no blocking when used in mulch conditions



Cracker Roller Ø 550mm

- Real stripe-wise reconsolidation (12.5cm) in front of seed coulters
– only 50% of the soil surface is rolled
- Good absorption of water
- Sufficient soil left loose for covering of seeds
- Optimum performance on medium to the heaviest of soils
- Good crumbling effect on heavy soils
- Smooth rings and passive-angled knives
– no blocking when used in mulch conditions



Cage Roller Ø 550mm

- Basic variant; mainly for depth control of the power harrow
- Suitable for light to medium soils and dry working conditions
e.g. seed bed preparation for potato-planting
- Included in the front-mounting kit for additional depth control in front of the machine



Actipack Roller Ø 560mm

- Superb working quality especially on medium to heavy soils
- Scraper between the discs
- Optional knives for intensive crumbling effect
- Pressure on knives is adjustable and provides equal firming on the entire working width
- Out of work position possible to leave rough surface and protect the top layer

A PERFECT COMBINATION



KUBOTA PH2301 AND SD3301MP



Kubota PH2301 with seed drill SD2301MP



Kubota PH3300 with coulterbar CB1300 in combination with the front hopper SH1150.

The big difference Kubota "Pro-Fit" Active Tines

The "Pro-Fit" Active tines ensure optimum penetration in hard soil. The tine, due to its shape, pulls itself into the ground. This gives a constant working depth and also prevents the machine from lifting out of the ground in hard dry soil conditions. In addition it creates additional recompaction at the packer roller.

The "Pro-Fit" Active tine lifts the material and pushes it in front of the power harrow. This gives an optimum levelling effect even in tractor tracks. In mulch conditions the active tines can work directly into stubble and hard soil. The special shape of the tines keeps residues on the surface and this gives a big advantage against erosion.



TECHNICAL SPECIFICATIONS

Rigid Power Harrows

Kubota PH Series	PH1000		PH2001			PH3000			
Models	PH1250	PH1300	PH2301	PH2351	PH2401	PH3300	PH3350	PH3400	PH3450
Dimensions & Weight									
Working width (cm)	2.50	3.00	3.0	3.5	4.0	3.0	3.5	4.0	4.5
Transport width (cm)	2.50	3.00	3.0	3.5	4.0	3.0	3.5	4.0	4.5
Weight (kg)	1270*	1410*	1554**	1732**	1919**	1940*	2164*	2417*	2670*
Attachment to Tractor									
Pto input speed (rpm)	540 (1)		1000			1000			
Min-Max. power requirement (hp)	70 – 140		85 – 180			100 – 250			
Overload protection (Nm)	disc clutch 1600 (3)		automatic clutch 1800 – 2300			automatic clutch 2000 – 2500			
Rotor and Tine									
Number of rotors	10	12	12	14	16	12	14	16	18
Number of tines	20	24	24	28	32	24	28	32	36
Rotor speed (rpm)	311 std.(2) or 327(1)		336 std. (362, 450 optional)			298 std. (238, 365, 435 optional)			
Rotor clearance (mm)	80		95			125			
Tine dimension (mm)	12 x 280		15 x 330			18 x 330			
Linkage									
Oscillating lower link	Cat. II & III		Cat. II	Cat. II	Cat. II & III	Cat. II & III			
Ready to carry or integrate seeding eq.	yes		yes			yes			

1) 1000 rpm input as option

2) alternative rotor speed available as option

3) automatic clutch available as option

* weights with standard tines, packer 500mm, levelling bar - no PTO shaft weight included

** weights with standards tines, packer roller 575mm, levelling bar - no PTO shaft weight included



Foldable Power Harrows

Kubota PH Series Models	PH1000F Series		PH2000F Series		
Models	PH1400F	PH1500F	PH2400F	PH2450F	PH2500F
Dimensions & Weight					
Working width (cm)	4.0	5.0	4.0	4.5	5.0
Transport width (cm)	2.50	2.50	2.50	2.50	2.50
Weight with packer 500mm (kg) *	2370	2970	2550	2950	3250
Attachment to Tractor					
Pto input speed (rpm)	1000		1000		
Min-Max. power requirement (hp)	110 – 200		130 – 300		
Overload protection (Nm)	disc clutch 1800		automatic clutch 2200		
Rotor and Tine					
Number of rotors	16	20	16	18	20
Number of tines	32	40	32	36	40
Rotor speed (rpm)	327 std. (351, 435 optional)		336 std. (362, 450 optional)		
Rotor clearance (mm)	80		95		
Tine dimension (mm)	12 x 280		15 x 330		
Linkage					
Oscillating lower link	Cat. III		Cat. III		
Ready to carry or integrate seeding eq.	not possible		yes – brackets as option		



The company reserves the right to change the above specifications without notice. This brochure is for descriptive purpose only. Some of the items pictured in this brochure are optional and not standard equipment. Please consult your local Kubota dealer for warranty, safety or product information. For your safety, Kubota strongly recommend the use of a seat belt in all applications.

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