



# CD1000 - CD2000 SERIES

Optimum soil and residue incorporation



# 15% LIGHTER AND EASIER TO LIFT



### **Ideal for reducing soil compaction**

The CD1000 serie is a lighter execution of the CD2000 series for more shallow use from 2,5 m to 5 m mounted. This machine is for farmers who want to use the compact disc harrow up to 10 cm deep. Consequently, the machine is 15% lighter, easier to lift, ideal for reducing soil compaction and more economic for farmers. The frames have been designed to carry the heaviest roller like the Actipack.

A new disc arm is used that has the heat treated disc of 520 x 5 mm – (hardness 200 kg/mm²). The arm cover avoids any lateral movement during work for a constant cutting quality.

This disc hub is maintenance-free and has a long life time under large pressure at high working speed. The working depth is very easy to adjust by pivoting spacers according to the required depth. If the full roller weight is required, only one action on the hydraulic is necessary.

Simple, friendly and efficient!
For a nice leveling on the edge, the soil flow is controlled by lateral deflectors.
A finger harrow can be fitted in between to increase the residues incorporation.
The CD1000 range can be combined with SH200 or 500 for establishing cover crops or grass in one pass during the stubbling action. A wide range of packer rollers is available.

## FEATURES AND BENEFITS



### A strong disc arm performed by FEM

The CD1000 serie disc arm gets a special profile which has been performed by FEM (Finite Element Method) calculation. It allows high stress (lateral or radial) at high speed.

### **Perfect cutting angle**

The CD1000 serie gets the same working angle than his big brother the CD2000 serie. The disc arm doesn't allow any lateral movement that could damage the cutting quality: The bottom profile is then regular without ridges.

### A rubber shock system dimensioned for the disc arm

Each single disc is protected by 4 rubbers shock system : it means that when one disc releases, the others still work at the correct depth.



### **Maintenance-free bearings**

The CD1000 serie is equipped with maintenance free bearings. The strong 35 mm shaft carries 2 rows of ball bearings specially adjusted to face against the high axial and radial loads. The seals have been specially designed to prevent any pollution and this is the reason why Kubota covers 2 years of warranty on the machine.



### Heat treated disc 200 kg/mm<sup>2</sup>

Kubota extends the lifetime standards of the discs by 25%: the hardness has been raised from 160 kg/mm² to 200 kg/mm². It means that you make more hectares and save maintenance costs. The 520 mm disc has a conical shape to ensure a constant cutting angle independently of the disc diameter.



### **Easy to adjust**

Kubota proposes 2 types of friendly adjustment by spacers: mechanically or hydraulically. This always allows an accurate and constant depth especially on fold machines. On both case, the roller weight can be used to improve the penetration.

# FROM 3 TO 5 METRES

### **KUBOTA CD2000 RIGID AND FOLDABLE**



### Working quality, multifunctional and high output

Stubble cultivation is of major importance within conservation tillage: It incorporates weed and volunteer cereal seeds into the soil with intensive mixing and promotes their germination for a more efficient subsequent treatment. The even incorporation of the straw presents a key factor for seed germination. Therefore, Kubota has designed the CD2000 serie to comply with these requirements, but also offers the farmer a versatile ma-

chine which is ready for shallow as well as for deeper cultivation and not to forget, the mixing of the straw, performance with large amounts of residue (straw, intermediate green crops, etc.) good penetration and cutting quality, output, simple adjustment and minimum maintenance costs.



CD2300 rigid mounted with SH500

# COMPACT AND ROBUST!



The CD2000 Serie is extremely sturdy as it is fitted with a frame that is well proven with the Kubota cultivator range. With a reinforced headstock and a frame size of  $100 \times 100 \times 8$  mm, it can be equipped with the heaviest roller. The brackets of the roller are fixed at the front bar of the frame for a better weight transfer during road transport and also at higher driving speeds. Even with a distance of 900 mm between the disc sections, the CD2000 Serie only requires a lower lifting capacity (2.74 m of length).



CD2500F mounted foldable



The robust frame can carry the SH 2001 or 5001

# HIGH PERFORMANCE AND SAFE



### **Semi-mounted trailed**

Available in working widths of 4m to 5m, the semi-mounted CD2000T is ready for high performance.

Linked to the lifting arms, the CD2000T can be driven by medium-sized tractors even when equipped with the heaviest rollers like the Actipack.

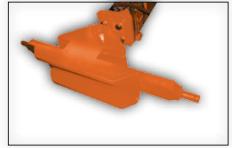
The individual adjustments are easily done: most of them by hydraulic from the tractor cab (hydraulic/mechanic depth adjustment, folding/unfolding, lifting by spacers of the carriage.

With a hydraulical lock device to prevent any unforeseen unfolding, the strong carriage and a tranport width of 2.75m ensure a safe road transport.

For additional stability on the road, the CD2000T is equipped with a hydraulic suspension as standard equipment.

The CD2000T can be can be fitted with several tyre sizes depending on the requirements:

400/60x15.5, 480/45x17 or 520/50x17.



Cross shaft Cat. III

The crosshaft allows an angle of steering lock of up to 180° for an excellent manoeuvrability.

# **ROAD TRANSPORT**





### **Stable working position**

For a large stability of the machine during operation, land wheels of 340/55x16 (option) ensure the depth control in front of the discs. Due to this close distance between the land wheels and the roller, the discs in front and at the rear work at a constant depth and prevent any lateral movement of the machine during operation.

The working depth can be easily adjusted by spacers at the depth cylinders as with the rollers.





#### Ball coupling ø80 mm

The ball coupling ensures a linkage without any gap and allows to work in hilly conditions up to  $\pm$ 0°.



Fix pulling eye ø50mm

It is used to link the Qualidics to a fixed hitch.

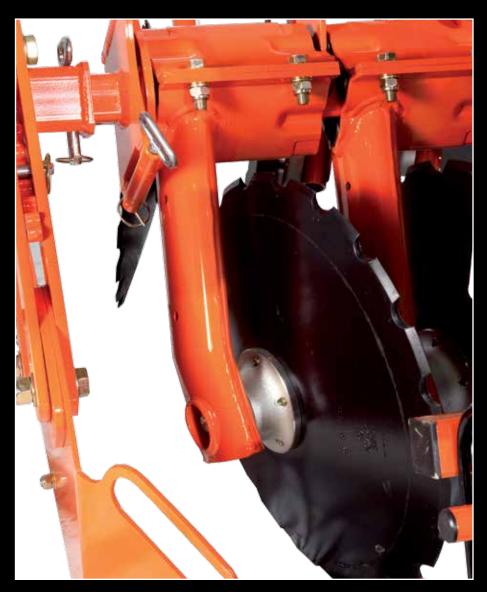


### Pivoting pulling eye ø 50mm

It is used on fixed hitch and allow to work in hilly conditions up to +/- 14°.

- For tractors with twin or wide wheels, the CD2000T can have a drawbar extension of 85 cm to ensure short turns in headlands
- Machines equipped without cross-shaft must have the parallel lifting

# **UNIQUE FEATURES**



### Robust Disc Arms, Maintenance-free, High Capacity Bearings and Large Conical Discs.

### A light and strong arm

The unique design feature allows for a reduction in weight and an increase in strength. The hollow design also ensures the arm can withstand high front and lateral loads and the special profile provides good soil flow even with larger volumes of plant residues.

### Perfect cutting angle

The upper part of the arm is fitted with special brackets to avoid any lateral movement: the cutting angle is fixed to ensure an optimum cutting quality even under the driest of conditions. The rear disc section operates offset to the front unit to provide optimum performance and trash incorporation.

## A rubber shock system adjusted to the size of the disc and working speed

The rubber buffers absorb any shock loads from contact with unforeseen obstacles. If the forces become too high, the disc arms will rotate to overcome the obstacle thus protecting the implement.

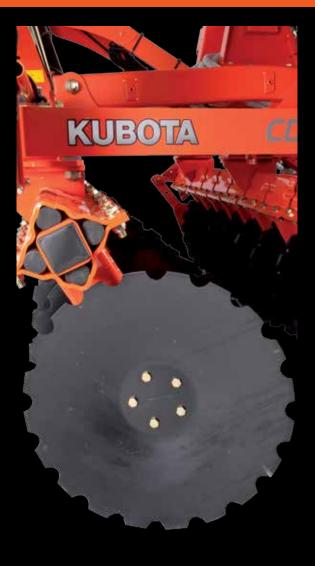


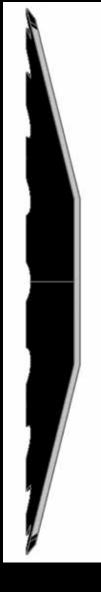
### **Maintenance-free bearings**

Each angled arm is fitted with a large maintenance free double ball bearing and 35 mm axle. This high quality bearing is able to carry heavy radial and axial loads. Special protection on the side of the arm is achieved by a special seal of 5 sealing lips and by the joint protecting the bearing. On the other side the disc is protected against dust by an O-ring.

The quality of the bearing and the material used allows a warranty period on the machine for two years. The disc hub is fixed onto the arm by a bolt and special washers that prevent any loosening. The bolt is protected against soil by its position inside the arm.

# **IMPECCABLE CUTTING QUALITY!**





### A large disc diameter

In order to achieve a perfect cutting quality even at a shallow working depth, the CD2000 Serie is fitted with a disc of large diameter (600mm). This increase in diameter allows ease of operation in the highest volumes of vegetable residues, as for example: intermediate crops which have to be destroyed before the seeding of the following crop. The notched discs improve its penetration and rotation irrespective of any plant residues. Another disc of 520 x 5 mm is also available.

### A constant cutting angle

Irrespective of the diameter of the disc, the cutting angle is always constant due to its conical design.

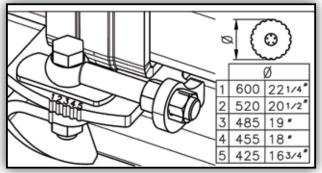
#### Long lasting discs

The discs of 6mm thickness (5mm for the 520mm diameter) are given a special heat treatment for a long durability and strength. Thus the machine longevity has been increased and the maintenance costs reduced. Ask for the quality of Kubota!



### A lateral adjustment for perfect cutting quality

In order to maintain the optimum cutting quality, the CD2000 Serie is fitted with a lateral adjustment which allows the



gangs to be positioned correctly as the disc diameter reduces.

A decal on the frame shows the adjustment of the disc sections according to the diameter – simple and efficient!

# **SIMPLE ADJUSTMENTS!**



The working depth can be easily adjusted by pivoting spacers, even if it is manually or hydraulically adjusted. At any time during operation the weight of the roller can be used to improve penetration with both systems.

With the cylinders locked via a special lock valve, the depth will be constant.



With mechanical adjustment, the pin is used to transfer the roller weight to the main frame and then improve the penetration.



### Common equipments for Series CD1000 and CD2000

The adjustable lateral side deflectors on the right and left hand side control the soil flow to provide a perfect level finish. All discs are working at the same depth. even the outer ones



The lateral deflectors are parallelogrammounted which allows them to follow the ground contours and control the soil flow at the same time. They are equipped with an abutment to limit the working depth especially at the end of the field (whilst reversing).



The following harrow, positioned just in front of the roller, is designed to cut the flow of the soil and to level the soil depending on the aggressiveness selected. The finger harrow bent at the root allows a progressive soil flow without too much power requirement.

# A LARGE CHOICE OF ROLLERS!

According to the soil specifications, the consolidation required, the mixing of the soil and straw, the surface of the soil requested and the lifting capacity available, Kubota offers a choice of rear rollers:

- Cage roller ø 550 mm 90 kg/m
- Double cage roller ø 400 mm -160 kg/m
- Actiring roller ø 540 mm 160 kg/m: active with the adjustable knives, ensuring a good mixture of soil and straw and consolidation.
- Actipack roller ø 560 mm 220 kg/m: heavier, for clod crushing and very firm recompaction of the soil.
   Adapted also for heavy and sticky soil conditions.
- Actiflex roller: ø 580 mm 160 kg/m:
   Its intensive mixing effect combined with a good recompaction makes this roller the ideal tool for the best volunteer's regrowth. Its large diameter of 580 mm ensures a good driving effect even in light soils. This roller is definitely a good compromise between the weight (160 kg/m) and mixing performances.



Actipack roller ø 560 mm



Actiring roller ø 540 mm



Double cage roller ø 400 mm



160kg/m

Cage roller ø 550 mm



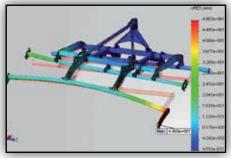
Actiflex roller ø 580 mm

#### **Load tests**

Before the CD1000 and CD2000 Serie was launched into the market, it had to pass a whole series of tests to ensure the impeccable quality of the product. It is our major aim to give complete satisfaction to our users:

- The machines are designed by highly qualified engineers with expert knowlegde in agricultural engineering.
- Sophisticated technologies are used for each development such us static load test, finite elements method (FEM) and shake-lifetime tests.
- The machines are tested in the field to confirm that the requirements as to functions and strength are met.





# **EXCELLENT PENETRATION CAPACITY**



Due to the agressive discs and the considerable weight (up to 100 kg/disc for mounted machines and up to 140 kg for trailed ones), the CD1000 and CD2000 models ensures an excellent working quality even under dry conditions. The ground is completely cut, the stubble abolished and correctly mixed on the surface for a good emergences of weeds and volunteer cereal seeds.



# **TECHNICAL SPECIFICATIONS**

Specifications	CD1000 series									
Model type	1250	1300	1350	1400	1400F	1500F				
Frame type		Ri	Fold							
Working width (m)	2.50	3.00	3.50	4.00	4.00	5.00				
Transport width (m)	2.50	3.00	3.50	4.00	2.45	2.45				
Disc diameter (mm)	520 x 5 mm									
Number of discs	20	24	28	32	32	40				
Inter row distance (mm)	900									
Frame box section (mm)		100 x	100 x 100 x 8 and 200 x 200 x 10 (central frame)							
Depth control	Mechanical or hydraulic by spacers									
Number of double acting valves	1 or 0 2 or 1									
Linkage		Cat. III and Cat. IV								
Disc spacing (mm)		2	250							
Roller equipment	Cage roller ø550mm, Double cage roller ø400mm, Actiring roller ø540mm, Actipack roller ø560mm, Actiflex roller ø580mm									
Weight* with Cage roller (kg)**	1307	1467	1728	1924	2405	2817				
Weight* with Actiring/Actiflex roller (kg)**	1481	1682	1983	2301	2671	3165				
Weight* with Actipack roller (kg)**	1638	1862	2185	2513	2939	-				
HP min. (HP)	55	70	90	110	110	130				
HP max. (HP)	120	150	180	200	200	250				

Specifications	CD2000 series										
Model type	2250	2300	2350	2400	2400F	2500F	2400T	2500T			
Frame		Mounted rigid				d folding	Semi-mounted folding				
Working width (m)	2.50	3.00	3.50	4.00	4.00	5.00	4.00	5.00			
Transport width (m)	2.50	3.00	3.50	4.00	2.55	2.55	2.75	2.75			
Disc diameter (mm)	600 x 6mm										
Number of discs	20	24	28	32	32	40	32	40			
Frame box section (mm)	100 x 100 x 8				100 x 100 x 8 and 200 x 200 x 10 (central frame)		100×100×8 (wing frame sections) and 300×200×10 (central frame)				
Depth control	Hydraulic or mechanic by spacer										
Number of double acting valves		1 or 0				or 1	3 or 2				
Linkage	Cat. II & Cat. III				Cat. III and Cat. IV		Cat. III or Cat. IV				
Underbeam clearance (mm)	794										
Distance between discs (mm)	245				250		250				
Roller available	Cage roller ø550mm, Double cage roller ø400mm (not trailed version), Actiring roller ø540mm, Actipack roller ø560mm, Actiflex roller ø580mm										
Weight* with Cage roller (kg)**	1518	1768	1973	2187	2768	3216	3945	4410			
Weight* with Actiring/Actiflex (kg)**	1692	1983	2228	2564	3034	3564	4211	4758			
Weight* with Actipack (kg)**	1847	2163	2430	2776	3302	-	4479	5072			
HP min. (HP)	70	90	110	130	150	170	180	200			
HP max. (HP)	180	200	220	240	250	300	250	300			

<sup>\*</sup> Weights are given as an indication

<sup>\*\*</sup> Rigid machines: Mentioned weight are calculated with deflectors, hydraulic depth adjustment and lighting equipment.

Trailed machines: Mentioned weight are calculated with levelling device, deflectors, hydraulic depth adjustment, lighting equipment and front gage wheels.

# STUBBLING AND SEEDING





The position of the Distribution outlet is before the roller. Position and angle are adjustable.





### Fans adapted to Seeds, Working Speed and Width

- The SH series can be equipped with two types of fan:
- An electric fan recommended for small seeds and allowing seed rates of 4 kg/min (for a machine 50kg/ha - 4m working width at 12km/h)
- A hydraulic fan for flow rates up to 14 kg/min

# IN ONE PASS



### Seeders for Cover Crops: One Response to the Nitrate Directive

The EU nitrate directive aims to protect water resources so-called vulnerable with a rate higher than 50 mg nitrate/l. One of the measures taken into account to avoid leaching, resulting in the generalization of the soil cover in the fall by vegetation cover, which will absorb nitrogen from the soil and air, to convert it into organic nitrogen. The cover crops will then release nitrogen to the next crop (1/3), protect soil against erosion and improve its structure.

SH200 an SH500 with 2001 resp. 5001 hopper capacity have been designed to meet a rapid implementation of cover

crop during stubble operations while minimizing their costs. In addition, they can also be used for establishing rape or mix of different diameters seeds (leguminous plant, crucifers, ...).

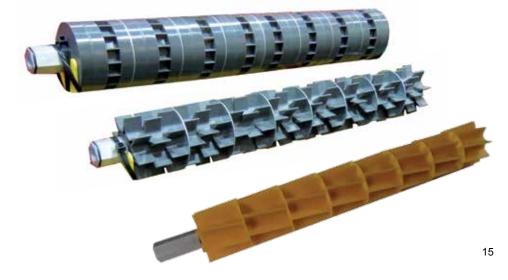
### **Precision and High Work Output**

Two models are available depending of the seed rate/ha and the output of the machine: The SH200 will be used for rather small seed sizes with a low seed rate/ha, whereas the SH500 would be preferred with higher seed rate (25 to 50 kg/ha - mix of seeds, grass, etc ...) in order to maintain a significant autonomy even with wide machines. Both models have 8 outputs which will spread the flow of seeds uniformly over the working width.



### **Seed Metering Rotors for all Conditions**

The SH200 and SH500 are delivered with two types of rotor: one for small seeds (rape, mustard, cabbage, clover, etc ...), and a medium rotor for seeds (vetch, grass, sunflower, ...). The agitator placed above the rotor ensures a steady stream of seeds. A brush, located at the base of the rotor, will regulate the flow and improve the setting accuracy. For large seeds (peas, horse beans, etc ...), it is strongly advised to choose the Flex rotor option, which is able of deforming with large seed diameter.



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. © 2016 Kverneland Group Les Landes Génusson S.A.S.



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