

Reversible ploughs

MASTER 113 series



www.kuhn.com



be strong, **be KUHN**



The KUHN Plough



The future of farming lies in competitiveness and profitability. The MASTER range concept with its advanced features will contribute to a quick return on your investment.

The Kuhn plough will allow you to:

- Maintain a high quality soil structure with an efficient burial of organic matter and an even aggregate spread throughout the soil profile - your crop yields will be increased.
- Have at your disposal a wide range of working width settings and an excellent overall manoeuvrability - your "in field" costs will be reduced.
- Benefit from a number of technological innovations such as the reinforced box section, the variable width, the plough structure protection systems (Hydraulic non-stop or traction bolt) - the working life of the plough is increased and your maintenance costs reduced.
- Profit from a renowned reliability and long working life allowing you to work throughout the day without interruption - your plough will also keep a high second-hand value.

Opt for a Kuhn plough - because obtaining high yields and optimising financial results all starts with high quality ploughing.

KUHN offers solutions for ploughing while meeting your requirements with regards to :





MASTER 113

A LIGHT YET ROBUST PLOUGH EASY TO ADJUST FOR DIFFERENT TRACTORS AND PLOUGHING CONDITIONS

The Multi-Master 113 is the plough to meet all your demands: robust, reliable and easy to set-up. With good underbeam and point to point clearances the plough can cope easily with large quantities of trash.

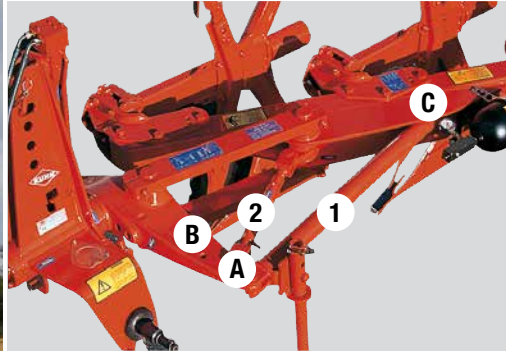
Easy adjustments include:

- Setting the plough offsetting in relation to the tractor tyre spacing by simple pin positions.
- Offsetting and angling combined to give perfect plough alignment for any given 1st furrow setting.



ONE PIECE HEADSTOCK

- Quick hitch cross-shaft.
- High strength heat treated turnover shaft, 85mm diameter on 3E/4 furrow, 105mm on 4E/5 furrow.
- Vertical levelling adjustment by turnscrew.
- Sealed integrated tool box with spanners and exchange traction bolts.



ADJUSTMENT OF THE 3E/4

The linkage **1** ensures a precise adjustment in relation to the tractor tyre spacing. This adjustment only has to be carried out once to match the plough up to your tractor.

The pin **A** represents a large inter-tyre distance setting and pin **B** a small inter-tyre setting. The pin **C** positions are to set the chosen working width of either 14" - 16" or 18". The link **2** enables adjustment of the combined offsetting/angling. One adjustment only is necessary to set the correct 1st furrow width and the correct plough alignment.

EXCLUSIVE TO KUHN

COMBINED OFFSETTING/ ANGLING

The optional ram **2** allows adjustment in one operation. This patented system makes for quicker and easier plough adjustments.



MULTIPLE WIDTHS 14", 16" AND 18"

The working width can be quickly altered by simply pivoting the plough legs on the beam and re-bolting in the new position hole. The leg is fixed to the beam by 3 bolts for added strength and reliability.



HIGH TECHNOLOGY DESIGN AND MANUFACTURE



BEAM WITH HIGH STRENGTH LINKAGE TO HEADSTOCK



- Beam section 120 x 120. The beam is reinforced in the area surrounding the 1st furrow for extra strength and further supported by a tubular drawbar. All adjustments are simple and straight forward. One mechanical turnbuckle adjusts the combined offsetting/angling. This can be fitted with an optional hydraulic ram adjuster on the 4E/5 furrow model.

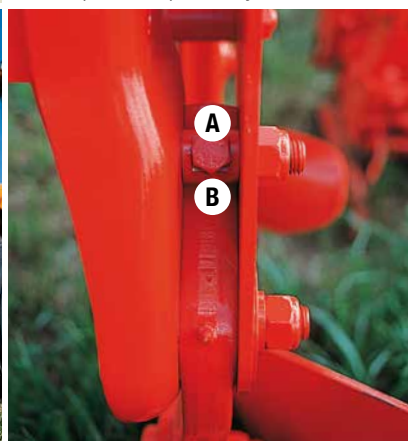


TRACTION BOLT LEG PROTECTION



Abrupt breakage of the 16mm traction bolt following a force at the plough point in excess of 3000kg avoids risk of too frequent a breakage.

- The bolt **A** runs in the direction of the line of force contrary to the conventional scissor bolt method where the bolt runs across the line of force.
- Due to these "in-line" forces the bolt support **B** never deforms and never becomes rounded with use.
- It is impossible for the bolt to become trapped inside following a breakage. Once a force in excess of 3000kg is met at the furrow point the bolt breaks along its length and simply falls away for quick and easy replacement.
- Even after many bolt breakages the plough bodies remain at an identical depth and perfectly in-line.



PLOUGH LEG PROTECTION SYSTEMS FOR ALL WORKING CONDITIONS



AUTO RESET PLOUGH LEG PROTECTION (NON-STOP HYDRAULIC)



1 - Adapting to all working conditions

Designed for stony and / or heavy conditions the Non-Stop Hydraulic (NSH) system allows continuous ploughing with the plough legs automatically folding out of work upon hitting an obstacle and immediately returning into work again once the obstacle is passed. No need to get out of the tractor and no need to replace bolts. The system also acts as an excellent shock absorber when working in pebbly or flinty ground absorbing all the vibration, increasing the life of the plough and increasing comfort for the driver.

VARIBAR system: An optional system allowing instant control from the tractor cab of the NSH pressure at the share point.

MAXIBAR system: The Maxibar option allow the pressure at the share point to be increased giving an adjustment range of 600 to 2500kg yet conserving the suppleness of the system. The option is particularly useful in heavy compacted ground.

2 - A unique concept

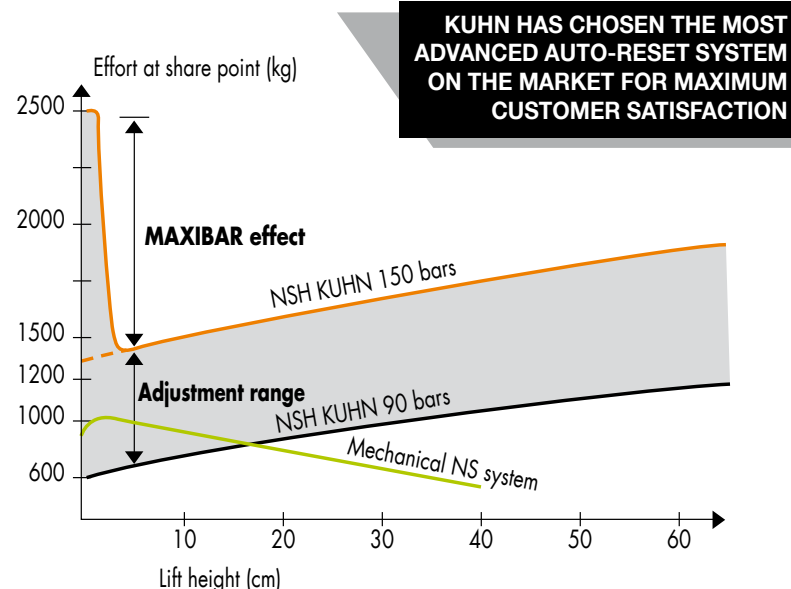
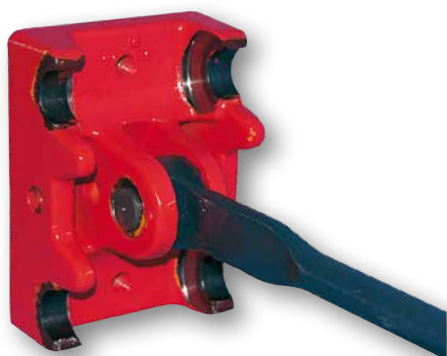
The basic concept of the hydraulic non-stop plough leg safety system gives a rapid break-away when an obstacle is met and yet an increase in pressure thereafter bringing the body quickly and firmly back into work.

ADVANTAGES OF THE NSH SYSTEM:

- Long life and reliability - hydraulic technology is more reliable with no wear or friction and fewer moving parts (just one articulation point and two moving parts per leg).
- Weight saving - compared to a mechanical auto reset system the NSH system is 25kg lighter per leg.
- Ease of use - the pressure at the share point can be quickly adjusted from 600 to 1300kg by simply inflating or deflating the accumulator mounted on the headstock.
- Excellent performance - plough leg resetting is quick and positive once the obstacle is passed with no "drumming" of the plough bodies in work.
- Compactness - the NSH tie rod is located inside the plough leg structure and the hydraulic cylinder incorporated into the leg profile for the maximum possible clearance and minimum obstruction to trash and vegetation.
- Exceptional obstacle clearance - the share point can lift 60cm vertically out of work and 20cm sideways.

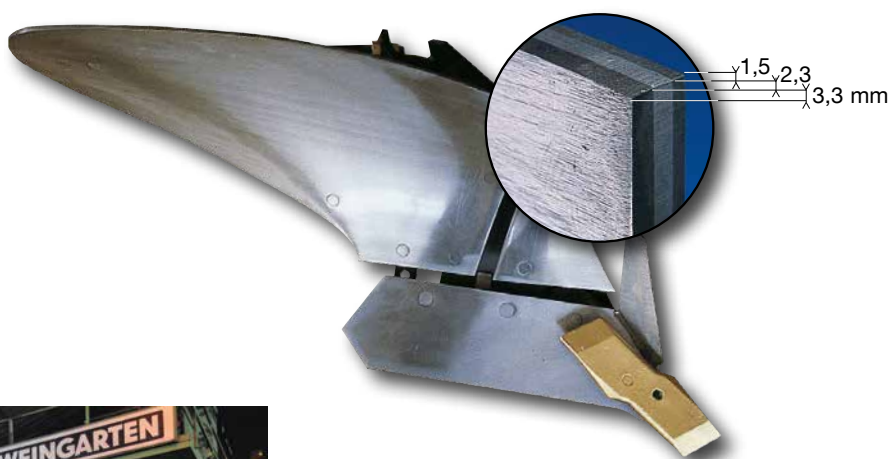
HEAVY DUTY PLOUGH LEG ARTICULATION AND TIE ROD

- All pressure points receive a specific heat treatment process.
- With just one articulation point all the forces put through the plough leg are transmitted in a straight line through a one piece forged and heat treated tie rod.



PLOUGH BODIES DESIGNED TO SAVE ON COSTS

1 - MOULDBOARDS WITH UNEQUAL LAYER TRIPLEX STEEL



EXCLUSIVE TO KUHN

- Kuhn mouldboards are made of unequal layer Triplex steel.
- The thickness of the wearing surface is increased to 3.3mm - an exclusive feature.

2 - PLOUGH BODIES DESIGNED TO REDUCE WEARING COST



Shares are forged with a force of 5500 tonnes ensuring:

- excellent wear resistance,
- self-sharpening profile due to the grain in the steel resulting from the forging process.



MARATHON®

Special heat treated forged steel. Reversible for maximum efficiency. Featuring a step giving better landside protection.



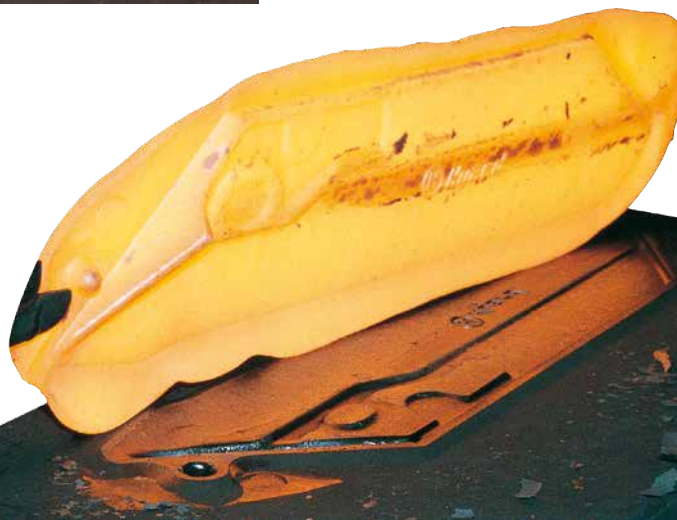
OLYMPIC®

Special heat treated forged steel. Reversible for maximum efficiency. More pronounced form at wearing zones on the point for longer life and better protection of the landside. Point is self sharpening for good ground penetration at all times.



SUPER MARATHON®

Special heat treated forged steel fitted with a tungsten carbide tip. High wear resistance. Four to five times the life of a traditional share point. A sharp working edge is maintained for excellent ground penetration.





CLASSIC TYPE PLOUGH BODIES



N BODY

Helicoidal cylindrical semi-digger. 15 to 30cm ploughing depth. Highly versatile body. Cylindrical at front, helicoidal at rear. Low draft, ensures a partly broken furrow, with excellent trash burial.



H4 BODY (ALSO AVAILABLE IN PLASTIC)

The capacity, long helical mouldboard, Scandinavian type, giving well formed ploughing to a depth of 30cm. Especially suited to heavy and damp clays. (H6 gives ploughing depth to 35cm).



L WIDE HELICOIDAL (20 TO 35 CM)

All round body for furrowed or flat ploughing finish depending on the forward speed. Cuts a particularly wide furrow bottom for the passage of wide tractor tyres

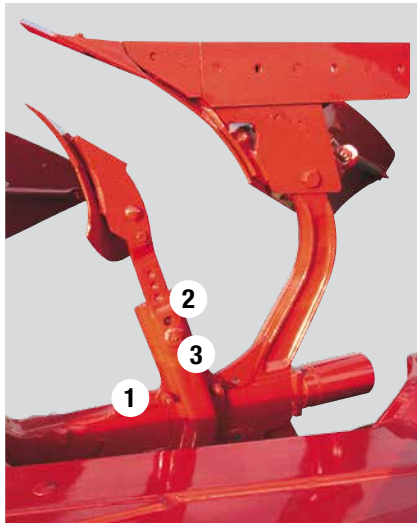


VP SLATTED BODY

Mouldboard composed of independant and interchangeable slats. Gives a reduction of traction force, due to a lower mouldboard surface area. Easy maintenance.



HIGH QUALITY EQUIPMENT



INDEPENDENT, EASY TO ADJUST SKIMMERS

Each skimmer is totally independent left from right and is firmly held in a sheath like support. The skimmers are shear bolt protected and are adjustable in three directions:

- 1** Forwards and backwards - with a choice of three positions the sheath bolts to the leg support via countersunk holes to avoid any risk of free play.
- 2** Up and down - rapid and precise height adjustment (20cm of adjustment) also with countersunk holes in the skimmer leg for easy locking of the leg at the desired height.
- 3** Side to side - for correct adjustment in relation to the disc coulters (where fitted).



DISC COULTERS

Discs have a diameter of 500mm plain or notched with the added choice on the traction bolt models of a 600mm disc. The disc serves to cut the furrow wall in front of the plough body giving a cleaner finish and improving trash incorporation.



TRASHBOARD

For trash burial in difficult conditions where the quantity of trash may otherwise block up the skimmers.



ALL PURPOSE ZX SKIMMER

Well adapted to ploughing on cereal or maize stubbles. ZXL : large share, ZXE : small share.



HELICOIDAL ZH SKIMMER

Helicoidal skimmer for deep trash burial. Well adapted to grassland ploughing.



ZRL HIGH CAPACITY SKIMMER

High capacity skimmer for trash incorporation throughout the soil profile. Excellent straw and maize trash burial.

PRESS ARMS WITH HYDRAULIC RELEASE



Available for the complete plough range the arm allows the use of a furrow press with easy hooking up and hydraulic push-off. On the pick-up hook part of the arm where there is most risk of damage all grease nipples and hydraulic hoses are protected inside the structure of the head. The arm folds up conveniently for subsequent transport.

A NUMBER OF DEPTH WHEEL POSITIONS ARE POSSIBLE ALONG THE BEAM ALLOWING EASY ADAPTATION TO ALL WORKING CONDITIONS.



SINGLE ADJUSTER SCREW DEPTH WHEEL

Available in 500mm steel or 540mm diameter with a tyre. The depth can be adjusted differently for each ploughing direction.



PIVOT WHEEL

Available with a 600mm diameter tyre the wheel is fitted with a vertical pivot allowing it to follow all changes in working width. The wheel features simple depth adjuster screws for each ploughing direction **1**.



TRANSPORT WHEEL WITH SUSPENSION

The plough can be transported on the road in complete safety thanks to a 540mm diameter transport wheel equipped with its own suspension system **2** serving to protect the plough and tractor from possible transport shocks. The wheel can be swung into the transport position in one sole movement by pulling on the locking pin no **3**.





MULTI-MASTER 113 5T



MULTI-MASTER 113 4 NSH

Specifications

MASTER 113

Model	Beam configuration E : Extensible	Max authorized tractor power (kW/hp)	Traction bolt leg protection				NSH leg protection			
			Weight* (kg)	Working width (inches/cm)	Clearances (cm)		Weight* (kg)	Working width (inches/cm)	Clearances (cm)	
					under beam	point to point			under beam	point to point
Multi-Master 113	3 E	66/90	795	14" - 16" and 18"	70 and 75	90 or 102	940	14" - 16" and 18"	70	90
	4 (3+1)	88/120	985				1160			
	4 E		1158	35 - 40			1363	35 - 40		
	5 (4 + 1)	110/150	1370	and 45 cm			1605	and 45 cm		

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Your KUHN dealer

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