

Mounted reversible plough

# VARI-MASTER L



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



be strong, be **KUHN**



VARI-MASTER L

# THE NEW VISION OF PLOUGHING

The future of farming lies in competitiveness and profitability.

The VARI-MASTER L 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 - crop yields will be increased.
- Have at your disposal a wide range of working width settings and an excellent overall manoeuvrability - "in field" costs will be 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 optimizing financial results all starts with high quality ploughing.

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





VARI-MASTER L

## SIMPLY THE BEST

The VARI-MASTER L is the new mounted plough designed and manufactured by KUHN. This new series with a neat and robust design fits between the MASTER 153 and 183 series for tractors from 200 to 300 hp. It combines power, reliability and quality of work to provide the best ploughing performance.

The VARI-MASTER L series retains the strengths that have made KUHN ploughs famous: variable width linkage integrated into the frame for optimal protection against impacts and corrosion, uneven-layer TRIPLEX mouldboards for 40% longer life and one-piece headstock to accept up to 300 hp. Available from four to six bodies, it also has many exclusives and a wide choice of equipment to meet the expectations of farms, ETA (Farm work companies) and CUMA (Cooperatives of Use of Agricultural Equipment).

The VARI-MASTER L was created with the aim of becoming the new benchmark for high precision ploughing thanks to its simple and ingenious adjustments.

VARI-MASTER L Furrow version



VARI-MASTER L On Land version



VARI-MASTER L

# A UNIQUE KNOW-HOW

High quality ploughing is achieved when the soil is worked uniformly and costs are controlled.

With more than 100 years of experience in the design and marketing of ploughs, KUHN is the benchmark in ploughing technology. The unique design of KUHN ploughs offers superior performance, guaranteeing high yields and optimal financial results.

The resale value of MASTER ploughs surpasses the competition thanks to KUHN's notoriety and expertise in ploughing performance.



## DESIGN

The new VARI-MASTER L with its sleek lines, stands out from all the others. Agility and efficiency are key advantages, with forged stanchions, and the many moulded parts which provide a unique design and ensure top quality performance.



## FLEXIBILITY

### ➤ The furrow version

The VARI-MASTER L benefits from the «Pro-Set» system for a simple start-up. The settings grouped in the middle part means all the tyres on the market from 1.15 m to 1.60 m can be rapidly adapted. The indicator is visible from the cabin. With the «Pro-Set» system, the user is guaranteed perfect alignment at work thanks to the possible tilt correction, limiting wear and facilitating traction.



The Pro-Set adjustment system offers a quick start-up of the VARI-MASTER L

### ➤ The On land version

You can plough both in-furrow and on-land, making the machine extremely versatile and increasing your options. The on-land system provides high quality ploughing with tractors equipped with wide tyres ( $\geq 800$  mm) or even tracks.



One action to transform the On Land version to the furrow version

## COMFORT

When ploughing, the settings are of paramount importance. Small adjustments can result in big savings by reducing fuel consumption and protecting wear parts. To make things easier, you don't need any tools to make adjustments to the VARI-MASTER L. And for fields with uneven terrain, all settings can be directly controlled from the cab (optional).



**VARI-MASTER L**

**One-piece headstock**

Designed to accept up to 300 hp

**Double wheel attachment**

5 or 6 bodies, stay versatile and control the wheel overhang

**Fixed pick-up cups**  
For easy hitching.

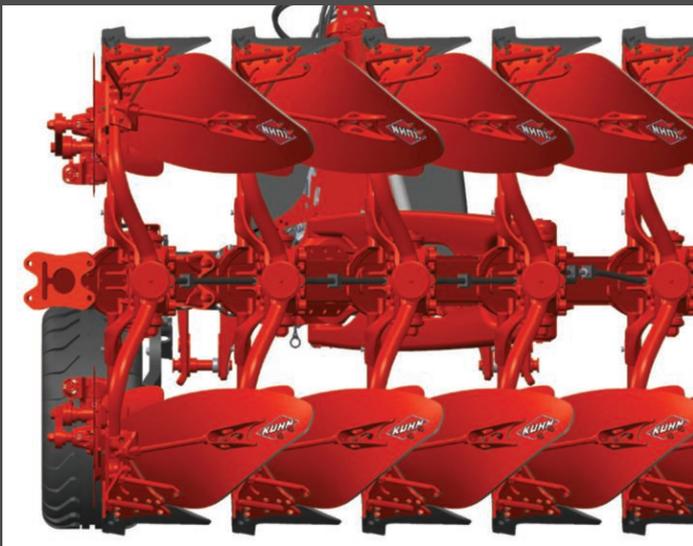
**Moulded main link**

A special robust shape to achieve a maximum offset without adding weight to the plough.

**95 cm in 5E or 101 cm in 4E**

Point-to-point clearance to easily clear obstacles.

**Mouldboards with Triplex steel unequal layers "Exclusive to KUHN"**  
40% longer life



**Limited Overhang**

Completely independent of the number of bodies, the overhang of the side wheels is controlled. The double attachment lets you move the wheel forward or backward for less overhang or more stability. The new arched plough beam causes less wheel overhang, in order to work as close as possible to the edges of the field and provide a clean finish.

**Depth wheels**

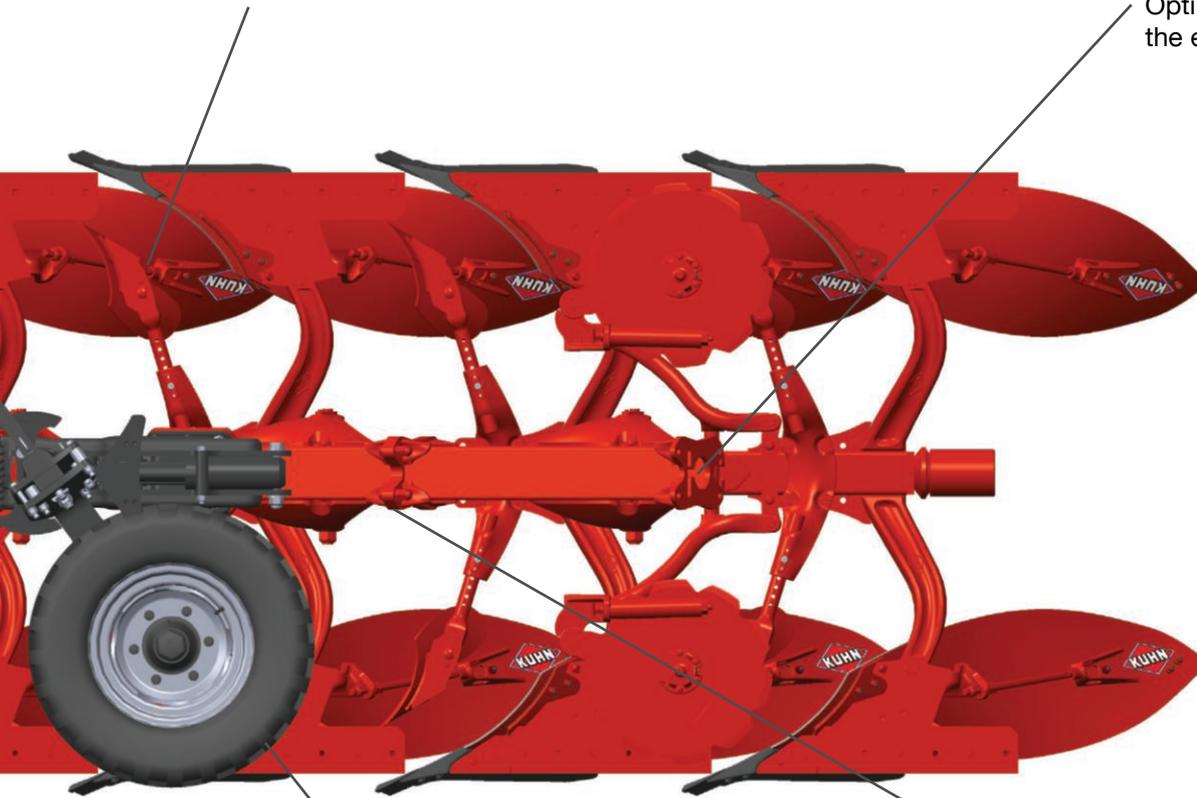
Control the depth working  
High diameter for a good stability  
Available in 690x320 and 760x370 mm  
Mechanical adjustment without tools or hydraulical adjustment controlled from the cab

**Adjustable skimmer «KUHN patented system»**

Just one movement lets you choose the correct angle to adapt to the speed and depth for total incorporation of vegetation.

**Integrated Linkage «Exclusive to KUHN»**

Optimum protection against the external aggressions.



**80 cm clearance**

With forged legs to ensure the long life of the Hydro-Safe leg protection.

**Up to 90 cm\*** of underbeam clearance for easy passage over crop residue.

\*only with the traction Safe-T bolt

**Wide choice of wheels**

To adapt to all working and transport conditions.

**Modular frame**

The plough frames can easily adapt to changes on your farm.



**Combined Side Wheel**

This wheel ensures little overhang while offering a dual function: a working position to regulate the depth and a second position for safe road transport.



**Transport wheel**

Designed for road requirements  
Available in 660x225 mm  
Easy preparation for placing in transport position

# ADAPTABILITY TO ALL CONDITIONS

## THE HEADSTOCKS

Standard Headstock



The headstock of the VARI-MASTER L is available in category 3N, 3 and 4N. With fixed coupling hands, it is simple to couple the plough and easy to adjust the height of the lower coupling points to maximise the tractor's traction.

EasyDrive headstock



The EasyDrive headstock makes it easy to switch between work/transport position. No more need to unhook and disturb the 3rd point for setting into road position.

OptiDrive headstock



As well as simplifying work/transport transition, the OptiDrive headstock provides a shock absorption system. Fully integrated into the structure of the headstock, the suspension significantly improves driver comfort during the turnaround and transport phases while protecting the plough and the tractor.



# PLOUGH LEG PROTECTION SYSTEMS

## HYDRO-SAFE LEG PROTECTION

Designed for stony and / or heavy conditions the Hydro-Safe 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.

### BENEFITS OF THE HYDRO-SAFE 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 Hydro-Safe system is 25kg lighter per leg.
- **Ease of use** - the pressure at the share point can be quickly adjusted from 600 to 1500kg 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 Hydro-Safe 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.

**VARIBAR system:** An optional system allowing instant control from the tractor cab of the Hydro-Safe pressure at the share point - either with or without Maxibar.

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



## SAFE-T LEG PROTECTION

Abrupt breakage of the 16mm traction bolt following a force at the plough point in excess of 4000kg avoids risk of too frequent a breakage.

- The bolt uns 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 never deforms and never becomes rounded with use.
- It is impossible for the bolt A 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.



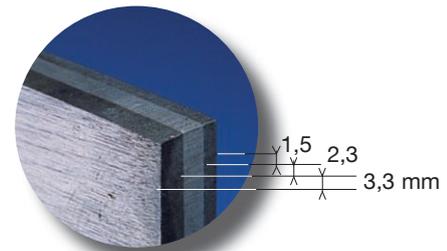


# PLOUGHING BODY

KUHN's nearly 150 years of experience in the domain of ploughing has made it possible to develop a range of bodies adapted to the needs of all farmers. KUHN plough bodies are made from high-quality, robust materials and are designed to optimally penetrate all soil conditions and have a maximum service life.

## MOULDBOARDS WITH UNEQUAL LAYER TRIPLEX STEEL

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



## KUHN PLOUGH BODIES



### T HELICAL

New generation high capacity, long helical mouldboard Scandinavian type, giving well formed ploughing. Especially suited to a wide variety of soils. Wide clearance of the furrow bottom for passage of large tyres.



### L HELICAL

Multi-purpose mouldboard for set-up furrows or reversible ploughing according to work speed. Wide clearance of the furrow bottom for passage of large tyres.



### HC HELICAL

HC Body. High capacity, long helicoidal mouldboard, Scandinavian type, giving well formed ploughing to a depth of 30cm. Especially suited to heavy and damp clays. (also available in plastic)



### N HELICAL CYLINDRICAL

Versatile mouldboard. Cylindrical at front part and helical at the rear part.



### P CYLINDRICAL

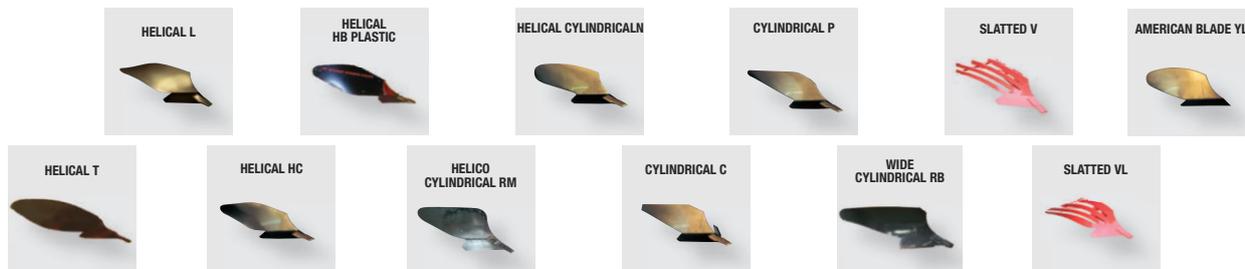
Spring soil preparation with good surface crumbling for immediate seeding. High-speed capacity.



### V SLATTED BODY

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

# A COMPLETE RANGE



	T	L	HC	HB plastic	RM	N	C	P	RB	V	VL	YL
	Helical body	Helical wide	Helical scandinavian	Helical scandinavian	Helical-cylindrical	Helical-cylindrical	Short cylindrical	Long cylindrical	Cylindrical wide	Cylindrical slatted	Wide helical slatted	American blade
<b>Features</b>	Working depth 12 to 25 cm	20 to 35 cm	15 to 30 cm	15 to 30 cm	15 to 30 cm	15 to 30 cm	20 to 35 cm	20 to 35 cm	20 to 35 cm	20 to 30 cm	15 to 25 cm	12 to 25 cm
	Dimension 430x490x1400	430x490x1220	390x400x1250	390x400x1250	380x400x1000	380x395x990	370x390x1000	380x380x1095	460x470x1250	500x400x1170	430x490x1220	340x400x865
	Bow type				Curved (Opt)							
<b>Working conditions</b>	Light soil (sand)	+	+	+	o	+	o	o	o	o	+	++
	Medium soil	++	++	++	+	++	+	+	+	++	+	+
	Heavy soil	o	+	+	+	++	++	++	++	++	+	o
	Light and sticky conditions	+	o	+	++	o	o	o	o	++	+	+
	Heavy and sticky conditions	o	+	++	++	o	+	++	++	++	+	o
	Stony conditions	++	++	++	x	++	++	++	++	o	o	++
<b>Ploughing type</b>	Sloping ground	++	++	+	+	+	o	o	o	o	+	o
	Crumbling	+	+	+	o	++	+	++	++	o	++	+
	Line bottom clearance	++	++	+	+	++	o	o	+	o	++	o
	Low traction requirement	+	o	+	+	++	++	++	+	++	+	++
	Turning capacity	++	++	++	++	+	+	+	++	+	++	+
<b>Working speed (kph)</b>	6 - 10	6 - 10	6 - 8	6 - 8	6 - 8	6 - 8	4 - 6	4 - 6	6 - 8	4 - 6	6 - 10	6 - 8

Not adapted    Suitable    Adapted    Perfect

# SHARE POINTS

KUHN share points are forged and treated to make sure they deliver optimum ploughing performance all throughout their service life. The material is concentrated in the high-wear areas on the point. Plus, the high quality steel on KUHN points ensures durability.

KUHN has developed a range of carbide points to give you five times the life of a traditional share point. The optimised profile on the KUHN carbide points features thicker plates at the back of the share where most of the wear happens.

## SEMI-MARATHON



For stony soil, its shape guarantees a continuous penetration and avoid ejecting rocks. More resistance than a duck beak share.

## MARATHON



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

## OLYMPIC (de série)



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.

# THE SKIMMERS

## 3D-SKIM

A new setting parameter to improve the burying : «3D-Skim» intuitive adjustment of the skimmer

attack angle.

Quick adaptation without tools at all conditions.

Just one manipulation to adjust working depth and angle of attack.

An ergonomic shape to facilitate the flow of residues.



KUHN offers a wide selection of skimmers for better trash burial and soil turning. Depending on the type of soil and crop, the skimmer you choose will determine the ploughing quality.



		Straight skimmer ZD	Versatile skimmer ZX	Large capacity skimmer ZGC	Helical skimmer ZH	Corn skimmer ZRL	Deflector DF
Working conditions	Living plant residues rooted and shredded	++	+	+	++	+	o
	Living plant residues rooted and not shredded	++	+	++	o	+	+
	Meadow	+	o	+	++	o	o
	Stubble with shredded straw	o	++	++	o	++	+
	Stubble with straw removed	o	++	+	o	+	o
	Non shredded large residues	o	o	+	o	++	++
Working quality	Distribution of residues over the entire ploughing profile	+	+	+	o	+	++
	Intermediate ploughing (residues scattered on the surface)	++	++	++	+	++	++
	Deep ploughing (with no residues on the surface)	+	++	+	++	+	o
Working speed		4 - 6 km	6 - 10 km	6 - 8 km	4 - 6 km	6 - 10 km	6 - 8 km

Nearly adapted    Adapted    Perfect

## Technical Specifications

Models		MASTER 153	VARI-MASTER L	MASTER 183
Recommended power (kW/hp) 73		73 - 202/100 - 275	110 - 220/150 - 300	132 - 282/180 - 385
Maximum power per body (kW/hp)		33/45	36/50	40/55
Number of bodies	4	✓	✓	
	5	✓	✓	✓
	6	✓	✓	✓
	7			✓
Leg protection	Safe-T	✓	✓	✓
	Hydro-Safe	✓	✓	✓
Cutting width system	Multi	✓	✓	✓
	Vari	✓	✓	✓
On Land Version		-	○	○ (only multi)
Clearance under beam (cm)		80	80 Hydro-Safe - 85 Safe-T	80
Clearance point-to-point (cm)		96 (5E) - 102 (4E)	95 (5E) - 101 (4E)	96
Turnover shaft diameter (mm)		120	130	140
Beam section (mm)		150x150	150x150	180x180
Hitch category		Cat. 2 - 3	Cat.3N - 3/4N	Cat.3 - 4N
Hitch type		Crossbar	Pick-up cups	Crossbar
Wheels				
Combined Side Wheel 690		○	○	○
Combined Side Wheel 780		○	○	○
Combined Rear Wheel 690		○	-	-
Side depth wheel with shock absorber 600		○	-	-
Side or rear depth wheel with shock absorber 690		○	○	○
Side or rear depth wheel with shock absorber 760		○	○	○
Transport wheel 540		○	-	-
Transport wheel 660		○	○	○
Hydraulic				
Automatic hydraulic fold-up with turnover		●	●	●
Hydraulic depth		○	○	○
Hydraulic offset		○	●	●
Hydraulic levelling		○	○	○
Varibar		○	○	○
Maxibar		○	○	○
KTH 12		○	-	-
KTH 105		○	○	○
Comfort				
Easydrive		-	○	-
Optidrive		-	○	●
Smart Ploughing 		-	○	-

● : as standard    ○ : optional    - : not available

# THE NEW VISION OF PLOUGHING

## Discover the plough range

### 1. MOUNTED



1. MASTER 103 - 2. MASTER 113 - 3. MASTER 123 - 4. MASTER 153 - 5. MASTER 183

### 2. SEMI-MOUNTED



6. LEADER - 7. VARI-MANAGER - 8. CHALLENGER / VARI-CHALLENGER

For more information about your nearest KUHN dealer, visit our website [www.kuhn.com](http://www.kuhn.com)



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