



Semi-mounted single-wheel plough  
**VARI-LEADER**





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## VARI-LEADER

Semi-mounted single-wheel plough

# THE KUHN SINGLE-WHEEL PLOUGH FOR MAXIMUM EFFICIENCY



### ENHANCING TRACTION POWER IS YOUR OBJECTIVE

The VARI-LEADER models, which are available in 6 to 8 body versions, were developed for tractors from 135 to 360 horsepower.

### WORK OUTPUT IS YOUR PRIORITY

The VARI-LEADER range provides ultimate manoeuvrability to save time on headland turns.

### TOP QUALITY WORK IS ABSOLUTELY ESSENTIAL

With simple, easily accessible, tool-free settings, you will obtain perfect results in any working conditions.

## VARI-LEADER

# INCREASED WORK OUTPUT RHYMES WITH SIMPLICITY

The VARI-LEADER range has been designed to make your job easier.



Smaller headlands (about 15 m) with turning radius of 110°



With sufficient space between the headstock and the first point, there is no risk of damaging the tractor, even in the sharpest U-turns.



For your comfort : fewer spool valves to operate in U-turns as the entire range is equipped with hydraulic sequencing as standard.

# ITS ROBUST STRUCTURE PROVIDES TOTAL RELIABILITY

THE DESIGN AND DIMENSIONING OF THE VARI-LEADER RANGE ARE SUITED TO THE MOST INTENSE WORKING CONDITIONS



**1.** A wide range of drawbar linkage categories is available (categories 3, 4N, 4, K700 and QuickCoupler 3 and 4N) to adapt to medium and high power tractors (135 to 360 hp). For more modularity, the spacers can be changed in order to change category !



**2.** Optimum comfort with progressive turning. With two telescopic single acting cylinders, U-turns are jolt-free, which also reduces stress on the tractor's lift arms.



**3.** A stub axle mounted on tapered roller bearings (system tried and tested on KUHN's MASTER plough range) makes this turning system so reliable.



**4.** For added serenity, the structure is made robust by a large dimensioned machine-welded frame = 180 x 180 mm.



**5.** A large sized wheel (500 x 1000 mm or 500 x 1200 mm) supported on both sides ensures stability in U-turns and provides a longer hub life !!



**6.** For more stability in transport as well as frame protection during road and path travel, the lifting cylinder is equipped with hydro-pneumatic suspension.

# SIMPLE SETTINGS FOR OPTIMUM QUALITY WORK

Quality ploughing makes seedbed preparation easier and reduces energy consumption. This is possible through precise, easily accessible settings. Level, working depth and offset adjustments are tool-free.



**1. Levelling :** by independent left / right crank screws for extra precision.



**2. Depth :** by spacers on the lift cylinder. All stress is axial = no constraint on the pivot pins. The number of spacers gives the point of reference.



**3. Offset :** by mechanical tie rod or hydraulic cylinder (as an option) makes the inter-tyre adjustment from 1.15 to 1.60 m. A gauge visible from the tractor cab facilitates setting precision.



# OPTIMIZED PLOUGHING

## ENHANCE YOUR SURFACE AREA BY REDUCING WHEEL OVERHANG

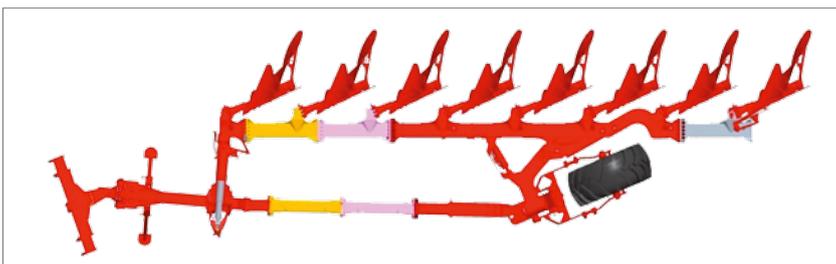
Working right up to the edge of the field is indispensable in order to get the most out of your surface area as well as limiting weed development there. To meet this requirement, we have been able to integrate the wheel extremely close to the frame thanks to its Z-shape. In this way the overhang is greatly reduced.

## OPT FOR LARGE SIZED WHEELS TO MAKE LIGHT WORK OF PLOUGHING

An extra-large wheel is necessary for reducing traction requirement, having good bearing capacity, and for passage in difficult end-of-season conditions. Two types of extra-large KUHN wheel are available :



Angled bar cleats



## MODULARITY THAT EVOLVES WITH YOUR POTENTIAL

VARI-LEADER range models are upgradable. A 6 body plough can be increased to 7 or 8 bodies, with extensions that are bolted to the front.

<b>Width (mm)</b>	500	500
<b>Diameter (mm)</b>	1 000	1 200
<b>Tyre type</b>	Overlapping bar cleats	Angled bar cleats

Note = NSH safety system with 7 and 8 bodies, opt for the 1200 x 500 mm wheel.

# ADAPTABILITY IN THE BLINK OF AN EYE

Continuous CUTTING width adjustment from the driver's seat (from 14 to 22») to adapt to :

- **Available traction power**
- **Working width**, which will get larger and larger in the coming years in order to save on fuel whenever possible
- **The type of ploughing** : flat autumn ploughing for example for cereal drilling or furrowed winter ploughing to get the benefit from the frost on heavy clay
- **The shape of the plot**



### PATENTED

VARI-LEADER : la seule charrue monoroue largeur variable du marché avec tringlerie intégrée jusque dans le «Z» du bâti pour une longévité assurée!

The integral protection of the variable width system gives it an exceptionally long life span because it is no longer exposed to external aggressions such as =

- Impacts from falling earth or stones when turning the soil
- Dust.
- Humidity (corrosion)



For additional serenity, this variable width system is maintenance-free. All pivot points are stopped from rotating and fitted with bushes.

Working width per body		Total working width (m)		
Inches	cm	Number of bodies		
		6	7	8
14"	35	2,1	2,45	2,8
16"	40	2,4	2,8	3,2
18"	45	2,7	3,15	3,6
20"	50	3	3,5	4
22"	55	3,3	3,85	4,4



For extra comfort, a cutting width gauge is visible from the driver's seat.

# MAXIMUM VERSATILITY : ON-LAND AND IN-FURROW PLOUGHING



**On-Land offset is available to enhance:**

**- Traction power and reduce fuel consumption.**

Power transmission to the soil sometimes requires wide tyres or double tyres that cannot carry out in-furrow ploughing.

**- The tractor.**

If the tractor is designed for other applications that require double or wide tyres, with the on-land kit, it is no longer necessary to dismount the wheels in order to use it for ploughing.

In addition, on-land ploughing has other advantages such as =

- No smoothing effect at the bottom of the furrow,
- Reduced wear on the sidewalls of the tyres in stony conditions.



**Versatile On-Land kit:**

- Can be used with tractors up to 3.20 m overall width,
- Possible to work in-furrow when grip conditions are unsatisfactory on fallow land.



**Working quality :**

- 100% control over depth,
- Two large diameter wheels (690 mm) ensure that the bodies work at a constant depth. Each wheel can be adjusted separately to obtain perfect results.



**User comfort:**

- Ever easier manoeuvring on headlands.
- There are fewer hydraulic valves to operate on headlands. Hydraulic sequencing automatically folds the compass when the plough is lifted.

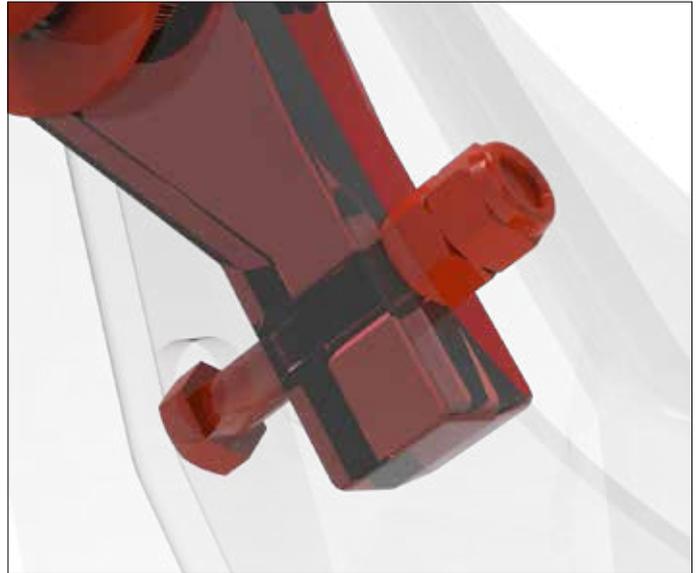
# SAFETY SYSTEMS FOR OPTIMUM PROTECTION

## IN SOIL WITH FEW STONES

### T traction bolt safety

Tensile breakage at a share point load of 4 700kg avoids too frequent stresses on the safety device.

- No shearing effect as the bolt is only loaded in tension.
- No ovality of the support nut.
- No jamming of the bolt after breakage, it is very easy to replace.
- The ploughing depth is maintained despite the triggering of the T safety device.



## IN VERY STONY SOIL :

### NSH safety

The general design of non-stop safety systems allows for an increasing or decreasing release curve upon encountering the obstacle.

As the body is lifted, the resistance to the tip increases, giving it more energy to return to the ground.

The integration of all the elements increases the flow channel of the soil and residues.

Exceptional clearances : + 70 cm vertically and 20 cm laterally, on both sides ; the highest values on the market.

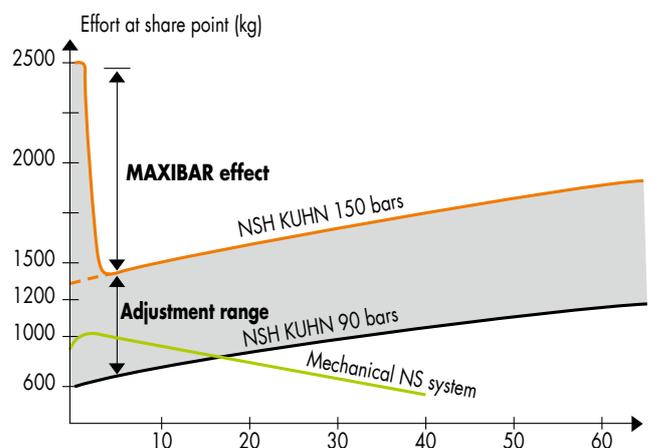
Weight saving : - 25 kg / ploughing body compared to a mechanical non stop.

- **VARIBAR option** : allows the pressure at the share tip to be varied from the tractor while ploughing; immediate adaptation to working conditions.
- **MAXIBAR option** : instantaneous overtrimming (600 to 2500 kg) of the safety devices to work on very heavy soils.



### Highly resistant toggle and tie-rod mechanism

- All holder surfaces undergo specific heat-treatment.
- 1 single pivot point and direct transmission of forces down the plough leg via a one-piece forged and treated tie-rod.



KUHN decided on an increasing curve for your satisfaction and to bring the body back to work instantaneously.

# PLOUGH BODIES AND SHARE POINTS

Backed by nearly 120 years of experience in ploughing, KUHN has developed a range of bodies adapted to all the requirements of farmers. KUHN plough bodies are made from high quality, robust materials, and are designed to ensure optimum penetration in all soil conditions and maximum service life.



		T	L	HC	HB Plastic	RM	N	C	P	RB	V	VL	YL	RH
		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	Long helical
Features	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	15 to 30 cm
	Dimension	430x490x1400	430x490x1220	290x400x1250	390x400x1250	380x400x1000	380x395x990	380x395x990	380x380x1095	460x470x1250	460x470x1250	460x470x1250	340x400x865	380x400x1000
	Bow type					Curved (Opt)								Curved (Serial)
Working conditions	Light soil (sand)	++	+	+	+	o	+	o	o	o	o	+	++	+
	Medium soil	++	++	++	++	+	++	+	+	+	++	+	+	++
	Heavy soil	o	+	+	+	++	++	++	++	++	++	+	o	++
	Light and sticky conditions	+	o	+	++	o	o	o	o	o	++	+	+	o
	Heavy and sticky conditions	o	+	++	++	o	o	+	++	++	++	+	o	o
	Stony conditions	++	++	++	x	++	++	++	++	++	o	o	++	++
Ploughing type	Sloping ground	++	++	+	+	+	+	o	o	o	o	+	o	+
	Crumbing	+	+	+	o	++	+	++	++	o	++	++	+	+
	Furrow bottom clearance	++	++	+	+	++	o	o	o	+	o	++	o	++
	Low traction requirement	+	o	+	+	++	++	++	++	+	++	+	++	++
	Turning capacity	++	++	++	++	+	+	+	+	++	+	++	+	++
Working speed (kph)	6 - 10	6 - 10	6 - 8	6 - 8	6 - 8	6 - 8	6 - 8	4 - 6	4 - 6	6 - 8	4 - 6	6 - 10	6 - 8	6 - 8

Not adapted      Suitable      Adapted      Perfect





3.3 mm hard  
Wearing surface

2.3 mm soft  
Mouldboard elasticity

1.5 mm hard  
Mouldboard structure

### Increase the service life of your mouldboards by 40%

The mouldboards are made with unequal layers of TRIPLEX steel, with a thicker wearing layer where it counts and a softer layer in the middle to guarantee the best compromise between wear resistance and ploughing quality.

When you choose a KUHN plough equipped with mouldboards made with unequal layers of TRIPLEX steel, you can be sure that you are getting one of the best cost-per-hectare deals on the market.

## SHARE POINTS



### 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

A patented manufacturing process with tungsten carbide. Carbide plates with return action offer better impact resistance.

## 6 reasons to choose KUHN forged wear parts

- 1. The type of steel** : offers the best compromise between hardness (wear resistance) and resilience (impact resistance).
- 2. Heat treatment** : prevents breakage and increases the parts' robustness.
- 3. Ease of assembly** : the forging process allows for consistent and uniform production with precise tolerances and a longer service life.
- 4. The distribution of the material** : we concentrate the material in the areas where it counts most to make sure you get a longer service life out of the parts.
- 5. + 20% compared to standard parts** : KUHN forged parts have a 20% longer service life than standard parts.
- 6. A well-developed distribution network** : optimal availability and short delivery times. You're guaranteed minimum downtime and optimised production costs.

# SKIMMERS

The skimmer is critical as it cuts the strip of soil to bury the organic residue at the bottom of the furrow before the plough body passes through.



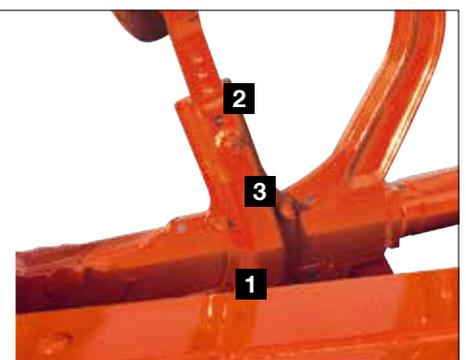
		Versatile skimmer ZX	Maize skimmer ZRL	Large capacity skimmer ZGC	Helical skimmer ZH	Deflector DF
Working conditions	Living plant residues rooted and shredded	+	+	+	++	o
	Living plant residues rooted and not shredded	+	+	++	o	+
	Meadow	o	o	+	++	o
	Stubble with shredded straw	++	++	++	o	+
	Stubble with straw removed	++	+	+	o	o
	Non shredded large residues	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 (kph)		6 - 10	6 - 10	6 - 8	4 - 6	6 - 8



## 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 coulter (where fitted).



## Specifications

	VARI-LEADER		
Number of bodies	6	7	8
Min. traction power (kW/hp)	99/135	116/158	132/180
Max. traction power (kW/hp)	199/270	235/315	265/360
Safety	T and NSH		
Under-beam clearance (cm)	80 and 85		
Inter-body clearance (cm)	102		
Cutting width per body (cm)	14 - 22" (35 - 55 cm)		
Beam section (mm)	180 x 180		
Extension (mm)	180 x 180		
Wheel	1000 x 500 mm or 1200 x 500 mm (As an option)		
Options	Hydraulic offset		
	On-land offset		
	Disc coulter on last body		
	VARIBAR		
	MAXIBAR		
	Press arms (incompatible with On-land offset)		

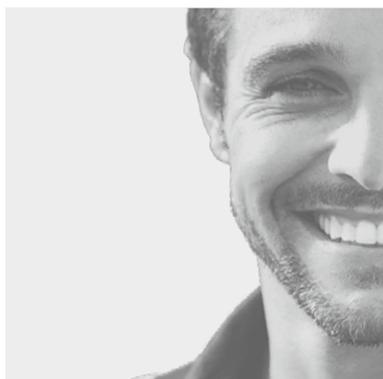


## KUHN PARTS



### Designed and manufactured to rival time

KUHN foundries and forge as well as a high-level manufacturing process allow the production of spare parts to defy time. You can truly rely on our know-how and our genuine parts. Farmers benefit from our client support and logistics services via any KUHN PARTS warehouse, which provide quick and reliable repair solutions in cooperation with your nearest authorised KUHN dealer.



## KUHN SERVICES\*

**KUHN sos order** - Express spare parts service 24/7

**KUHN protect+** - The choice of professionals!

**KUHN i tech** - For ever quicker repairs!

**KUHN finance** - Invest rationally!

\*Not all services and equipment are available in every country.

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## Discover the range of KUHN semi-mounted ploughs



1. VARI-LEADER - 2. VARI-MANAGER - 3. CHALLENGER - 4. VARI-CHALLENGER

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

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