

Independent disc stubble cultivator

# OPTIMER XL



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be strong, **be KUHN**



OPTIMER XL

# INTENSIVE MIXING AT HIGH SPEED



The future of agriculture lies in competitiveness and profitability. The OPTIMER XL large-diameter independent disc stubble cultivators offer exceptional stubble cultivation quality from 5 to 15 cm deep, even in heavy crop residue.

In particular, the KUHN independent disc stubble cultivators provide:

- Shallow stubble cultivation (5 to 8 cm) to:
  - Force seed emergence
  - Interrupts capillary action
  - Mechanically destroy weeds and cover crops
- Carry out a median stubble ploughing (8 to 15 cm) to incorporate large quantities of residue (corn, manure, etc.), maximize the straw/soil mixture, accelerate their decomposition through a mulch effect and control pests (slugs, mice, etc.)
- Sow your cover crop in a single pass
- Benefit from simple and tool-free adjustments for unrivalled comfort and speed in adjusting the working depth.

## The KUHN independent 620 mm disc stubble cultivator overview :

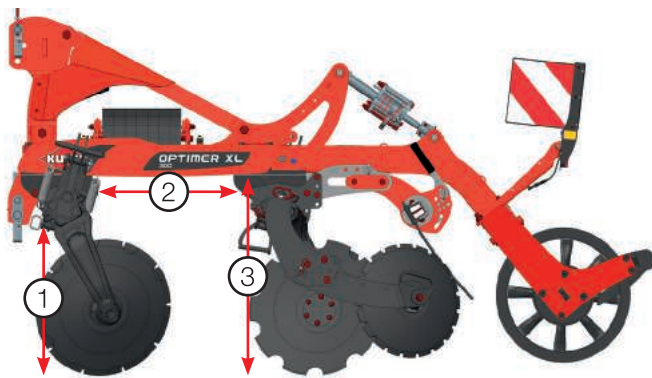
| Models           | Number of discs | Working width (m) |
|------------------|-----------------|-------------------|
| OPTIMER XL 300   | 24              | 3                 |
| OPTIMER XL 350   | 28              | 3.5               |
| OPTIMER XL 400   | 32              | 4                 |
| OPTIMER XL 4000  | 32              | 4                 |
| OPTIMER XL 5000  | 40              | 5                 |
| OPTIMER XL 6000  | 48              | 6                 |
| OPTIMER XL 7500  | 58              | 7.2               |
| OPTIMER XL 9000  | 72              | 9                 |
| OPTIMER XL 12000 | 96              | 12                |



# THE GUARANTEE OF A SUCCESSFUL STUBBLE CULTIVATION

Proper stubble cultivation depends on how well the residue is cut and mixed with the soil. Good residue incorporation promotes rapid decomposition in the soil. The OPTIMER XL's strong point is having one disc on each arm and a high underbeam clearance, which reduces clogging, even when working heavy residue (grain corn, manure). The OPTIMER XL range provides intensive stubble cultivation at speeds of up to 10 km/h.

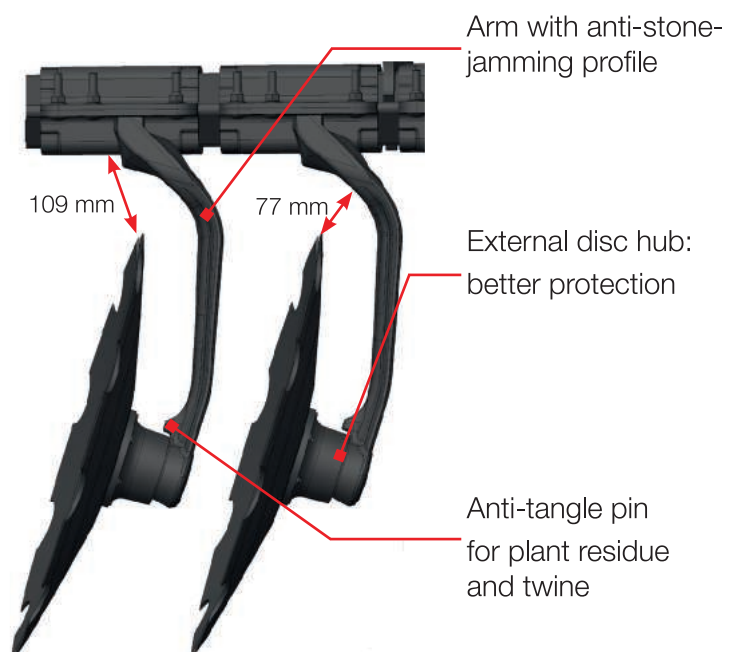
## LARGE CLEARANCE



- ① Clearance under disc train = 70 cm
- ② Clearance between disc trains = 95 cm
- ③ Underbeam clearance = 91 cm

- **ONLY ONE DISC PER ARM**

The OPTIMER XL has only one disc per arm to allow you to work calmly without the risk of clogging even in heavy residue.



## HIGH PENETRATION CAPACITY

The OPTIMER XL stands out from its competitors thanks to its better penetration in dry conditions. This is due to a unique design:

- only one disc per arm and independent disc safety for optimal control of the penetration capacity,
- an optimization of the disc attack angle ( $12^\circ$  vertical -  $14^\circ$  horizontal),
- an elastomer safety system combining penetration power and clearance when obstacles are hit,
- a wide flange to prevent side slippage.



### THE DISC: THE ESSENTIAL COMPONENT

- **Diameter: 620mm**
  - Good scalping
  - Good mixing
  - Creates fine tilth
  - Working depth from 5 to 15 cm
  - Working speed of 7 to 15 km/h
  - Good wear resistance
- **Conical disc**
  - Angle is maintained despite disc wear:  
 $12^\circ$  vertical and  $14^\circ$  horizontal
  - Maintained work quality
- **Thickness 6mm**
  - Good wear resistance
  - Ideal penetration capacity





# EASY-TO-OPERATE

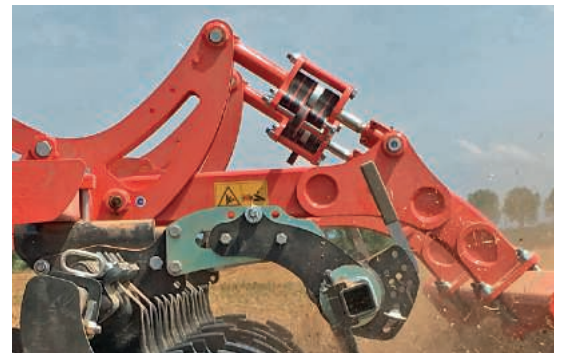
KUHN makes sure its machines are fitted with simple and quick adjustments for easy use. The OPTIMER XL range is equipped with mechanical adjustments using spacers as standard and optional hydraulic spacers. Working comfort also means limited maintenance. The OPTIMER XL range is designed with quality parts that guarantee exceptional reliability, such as the hubs that are lubricated for life for hassle-free stubble ploughing.

## TOOL-FREE ADJUSTMENTS

- **MECHANICAL ADJUSTMENT BY SPACERS**

Upper stop spacers: working depth

Lower stop spacers: load transfer of the roller on the machine



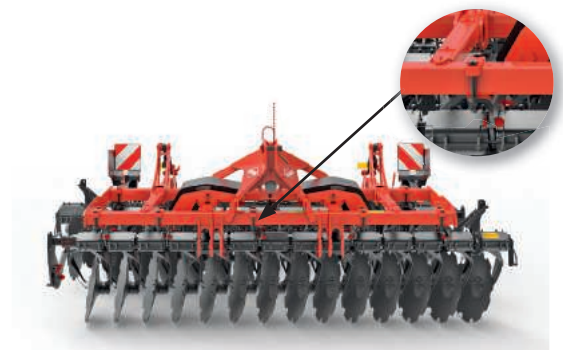
- **OPTIONAL HYDRAULIC ADJUSTMENT**

Continuous hydraulic adjustment of the working depth from the tractor cab. The OPTIMER XL 6000-7500-9000-12000 are hydraulically adjustable with a lower stop.



- **ADJUSTMENT OF THE DISC CROSSOVER**

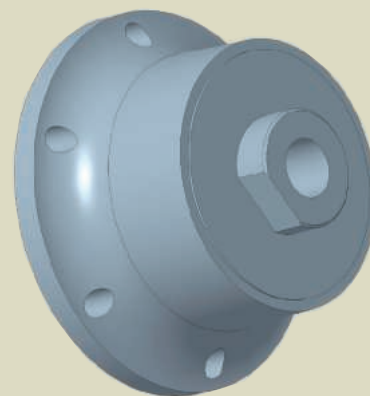
Possibility to adjust the crossing of the front and rear disc assemblies. The overlapping of the front and rear disc areas ensures a homogeneous work on 100% of the field despite disc wear.



## LIMITED MAINTENANCE

The OPTIMER XL 100 and 1000 series have the benefits of the OPTIMER+ range with low maintenance thanks to the lubricated-for-life hubs.

- Bearing diameter: inner 45 mm / outer 84 mm
- Bearing width: 45 mm
- O-ring: waterproof on the disc side
- 5-lip cassette sealing ring: increased waterproofing on hub side
- Synthetic grease: better resistance over time and increased durability



## HIGH ADAPTABILITY

The OPTIMER XL mounted models benefit from a centre of gravity close to the tractor, limiting the balance point. It is therefore possible to use the OPTIMER XL with small tractors. You save fuel and enjoy better comfort on the road thanks to a more compact design.



### Extra weights

Additional weights of 460 kg can be added to the OPTIMER XL 100 models to improve penetration capacity in difficult terrain. The weights work in combination with the SH small seed drill.



### Levelling harrow

The levelling harrow, mounted between the discs and the roller, considerably improves the levelling quality of your plot. It guarantees a good distribution of straw and ensures soil and residue flow evenly.



### Gauge wheels

Front gauge wheels are available on the OPTIMER XL 1000 models. They allow you to work with the drawbar in the float position for excellent ground tracking and stability. In addition, the working depth is adjusted from the cab via the gauge wheels combined with the roller.



### Multi-purpose SH seed drill

To sow your cover crops while stubble ploughing, the OPTIMER XL can be equipped with an SH. It can be used to sow cover crops such as: mustard, phacelia, clover, ray grass and cereals... in a single pass.



# OPTIMUM TAMPING

The roller plays a key role in providing a clean finish to your stubble cultivation. That's why KUHN offers a wide selection of rollers to help you choose the one that best suits your needs. The roller controls the working depth, tampers the soil after the discs have passed, levels the ploughed area and crumbles the soil.

## CHOOSE THE RIGHT ROLLER

- **TAMPER**

The roller restructures the soil more or less superficially to promote good soil-to-seed contact and accelerate germination. In addition, it limits soil moisture loss by capillary action and prevents it from drying out.



- **LEVELLING**

The roller evens out the passage of the OPTIMER XL throughout the entire plot. Proper distribution of clods and soil creates the perfect conditions for germination. Working comfort is improved thanks to less impacts and jolting during subsequent tasks. Levelling is also beneficial for harvesting tools as it allows them to work as close to the ground as possible.



- **CRUMBLING**

Depending on the work required and the structure of the soil, the crumbling action should vary. False seedbeds require fine tilth to promote optimal emergence of volunteers and weeds. The roller is used to break up clods and create a fine tilth. However, caution is needed in silty soils because too much crumbling can accentuate capping.





## A COMPLETE RANGE



### **TUBE ROLLER Ø550 MM - 75 KG/M**

A lightweight, cost-effective roller that offers quality tamping and machine stability on light-to-medium soils.



### **T-RING ROLLER Ø600 MM - 130 KG/M**

A lightweight, aggressive roller on clods and straw; it maintains quality coarse soil. Ideal for silty soils.



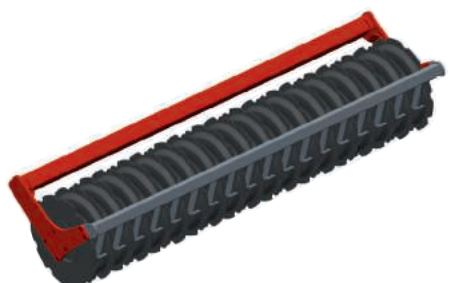
### **T-LINER ROLLER Ø600MM - 140 KG/M**

It has the advantages of the T-Ring while adapting perfectly to stony conditions. It provides perfect surface crumbling on clay and/or clumpy soils.



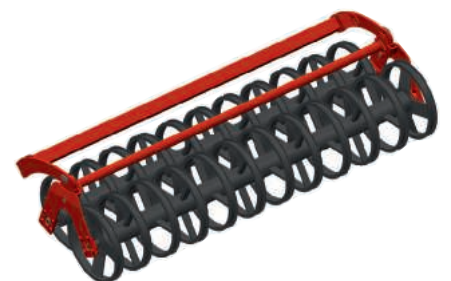
### **V-LINER ROLLER Ø600MM - 145 KG/M**

It provides excellent crumbling and levelling in any type of soil.



### **HD-LINER ROLLER Ø600MM - 180 KG/M**

A heavy roller, it delivers quality work in wet and stony conditions. Its V-shaped profile reduces runoff and improves water infiltration into the inter-rows. In addition, it has a high tamping and consolidation capacity.



### **DOUBLE U ROLLER Ø600M - 175 KG/M**

Adapts to any type of soil. Its U-shaped profile and 12.9 cm spacing ensure surface tamping and perfect crumbling thanks to the soil-to-soil contact. It is self-cleaning and resistant to clogging.

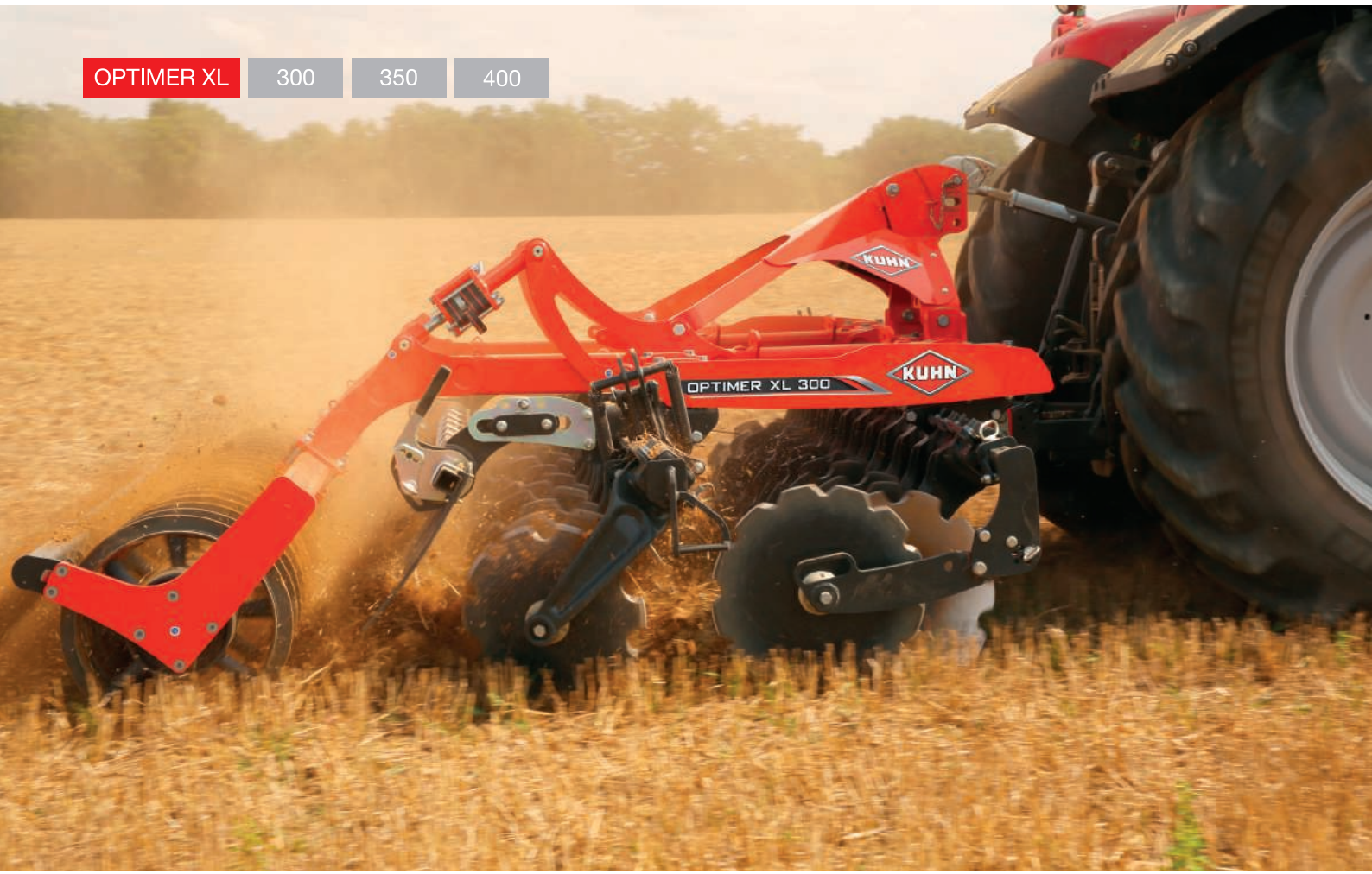
# A FULL RANGE FROM 3 TO 12 M

OPTIMER XL

300

350

400



OPTIMER XL

4000

5000



# METRES WORKING WIDTH

OPTIMER XL

6000



OPTIMER XL

7500



# A FULL RANGE FROM 3 TO 12 M

OPTIMER XL 9000



OPTIMER XL 12000



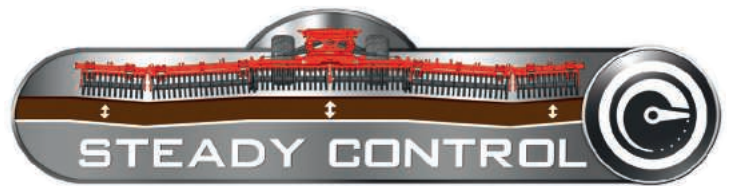
# METRES WORKING WIDTH

## **BETTER GROUND FOLLOWING WITH STEADY CONTROL**

The Steady Control innovation offers a perfect control of the working depth whatever the soil conditions. Steady Control provides immediate response to soil conditions and reduces fuel consumption. The quality of work is regular and homogeneous over the entire field, even at high speed.

Steady Control works by channelling the oil between the tractor and the extension cylinders without pressure variations. The pressure on the extension cylinders is hydraulically controlled to ensure that the discs penetrate in all conditions.

Based on a 3-part structure, OPTIMER XL 6000 and 7500 will be just as at ease on flat, homogeneous terrain with a version without gauge wheels and rigid extensions as on hilly ground with the gauge wheel option combined with the Steady Control ground following device.



The OPTIMER XL 9000 independent disc harrows are built with 3 independent sections and 2 gauge wheels while the 12 metre models are equipped with 5 sections and 4 gauge wheels. The gauge wheels are located at the front of the machine to ensure uniform depth.

The innovative Steady Control is standard on the 9 and 12 metre models.



# STUBBLE CULTIVATION, A KEY STEP IN SOIL TILLAGE

Stubble ploughing is the first tillage operation after harvesting. As the soil has been left to rest for several weeks, this step is essential in reactivating soil life. Stubble ploughing offers several agronomic benefits:

- Incorporate stubble and straw mulches (working depth: 2-3 cm)
- Destruction of unwanted weeds and crop regrowth (2-3 cm)
- Controlled populations of slugs and other pests (3 to 5 cm)
- Reduced weed seed stock through forced seed emergence (3 to 5 cm)
- Restructuring of the soil and creation of a seedbed favourable to the establishment of the next crop or cover crop (9 to 15 cm)

Thus, when choosing your soil tillage tool, you should consider all these objectives. OPTIMER XL independent disc stubble cultivators promote rapid decomposition of plant residue and weeds. The discs provide considerable soil expansion which ensures an excellent quality of soil/straw mixture and pushes the weed seeds back to the surface. The roller presses the soil against the seeds to promote rapid and optimal emergence of volunteers and weeds. OPTIMER XL enables you to mechanically destroy false seedlings and finish soil preparation at least 2 weeks before planting the next crop.



## Stubble ploughing, a weeding technique

Resistance to certain plant protection products, soil pollution, especially surface and groundwater pollution, are many arguments in favour of mechanical weeding. Surface stubble ploughing (up to 15 cm) helps to control adventitious flora by reducing seed stock. The realization of false seedlings must take into account the targeted weed and its optimal germination period. The exhaustion strategies to be implemented vary according to the species. Several false seedlings may be necessary to achieve the complete disappearance of the targeted weed.

In addition, soil and climate conditions are very important for the success of false seedlings. Thus, it is advisable to carry out false sowings before a rainy period to ensure effective germination of weeds.



## OPTIMER XL 100 - 1000

| Technical data  |  |         |           |  |  |           |           |           |           |
|---|--|---------|-----------|--|--|-----------|-----------|-----------|-----------|
| Models  | 300  | 350     | 400       | 4000   | 5000   | 6000      | 7500      | 9000      | 12000     |
| Working width (m)   | 3  | 3,50    | 4         | 4  | 5  | 6         | 7.2       | 9         | 12        |
| Transport width (m)   | 3  | 3,50    | 4         | < 2,55   |  | 3         |           |           |           |
| Working depth (cm)  | 5 to 15  |         |           |  |  |           |           |           |           |
| Working speed (km/h)  | 7 to 15  |         |           |  |  |           |           |           |           |
| Min. tractor power (hp)   | 77/105   | 90/122  | 103/140   | 119/160  | 149/200  | 179 / 240 | 224 / 300 | 268 / 360 | 358 / 480 |
| Max. tractor power (kW/hp)  | 123/165  | 141/190 | 164/220   | 178/240  | 223/300  | 268 / 360 | 355 / 450 | 403 / 540 | 522 / 700 |
| Number of discs   | 24   | 28      | 32        | 32   | 40   | 48        | 58        | 72        | 96        |
| Disc diameter (mm)  | 620  |         |           |  |  |           |           |           |           |
| Disc thickness (mm)   | 6  |         |           |  |  |           |           |           |           |
| Side deflectors   | Right and left as standard   |         |           |  |  |           |           |           |           |
| Linkage   | Cat. 2/3N/3  |         | Cat. 3N/3 |  | K80, Cat. 3/4/4N cross-shaft<br>Ball ring (42/51/71) |           |           |           |           |
| Available rollers   | Tube, T-Ring, T-Liner, V-Liner, HD-Liner 600   |         |           | T-Ring, V-Liner, Double U, HD-Liner 600, T-Liner |  |           |           | Double U  |           |
| Roller adjustments  | Mechanical by spacers or optional<br>continuous hydraulic adjustment from the<br>cab |         |           | Continuous hydraulic adjustment<br>from the cab  |  |           |           |           |           |
| Weight (kg), with<br>Tube roller (mounted<br>models) / Double U<br>(trailed models) | 1985   | 2290    | 2595      | 5150   | 5600   | 6000      | 6800      | 10300     | 13700     |

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## BENEFITS TO HELP YOU GET MAXIMUM USE AND PROFITABILITY FROM YOUR EQUIPMENT

\* Some services are not available in all countries.

### KUHN sos order

#### Receive your parts 7 days a week; 24 hours a day

Do you need a spare part fast? With KUHN SOS ORDER, you benefit from express delivery

7 days a week, 362 days a year. So you can reduce your machine's downtime and improve your productivity rate.

### KUHN protect +

#### The professional's choice!

Enjoy 36 months of complete peace of mind with the KUHN Protect+ warranty coverage. This way you'll be able to concentrate exclusively on your work and your machine's performance. Because it's exactly what you expect when investing in high-tech farm machinery.

### KUHN i tech

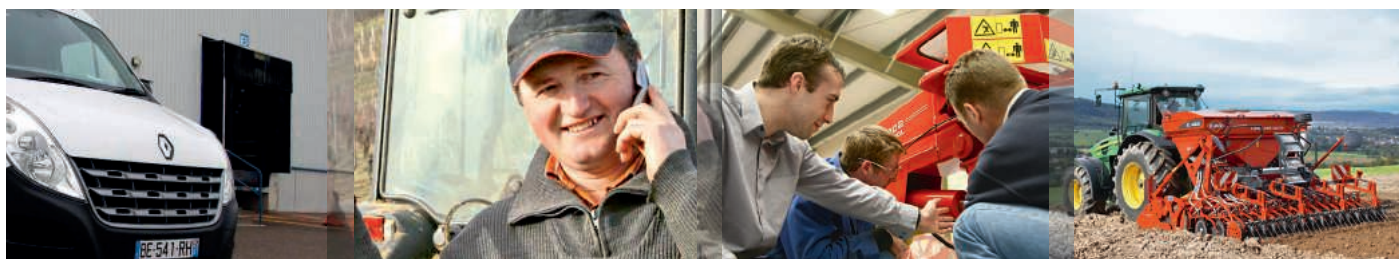
#### For the quickest repairs!

An unexpected technical hitch always occurs at the wrong time. Thanks to Kuhn I TECH, your Kuhn Approved Partner can get you up and running again quickly and efficiently. This tool is available online 24 hours a day, 7 days a week and enables quick and accurate diagnosis.

### KUHN finance

#### Invest rationally!

You need a new machine, but you're not sure about financing? Update your machinery and boost your farm's performance in total security and according to your needs and requirements with KUHN FINANCE. We offer personalised financing solutions adapted to your needs.



OPTIMER XL

300

350

400

4000

5000

6000

7500

9000

12000

# INTENSIVE MIXING AT HIGH SPEED

Farmers face different challenges but share common objectives: reduction of crop establishment costs, fast work outputs without compromising yield potential.

The OPTIMER XL models have been designed with this in mind, to offer you a versatile machine that is simple and quick to adjust, to increase your work output and preserve the quality of your soil.

## Discover the KUHN range of soil preparation equipment



**PROLANDER**



**CULTIMER M-L**



**PERFORMER**



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