

SEMI-MOUNTED REVERSIBLE PLOUGHS
EUROTITAN
AND
VARITITAN





Performance in a New Dimension



The concept

The requirements for modern, semi-mounted reversible ploughs are always rising along with the continually expanding farm sizes. Due to individual influencing factors such as yield potential, precipitation and various crop rotations, farm managers still



want to have powerful and efficient plough technology.

Handling, quality of work and increase in productivity play an important role. With EuroTitan and VariTitan, LEMKEN fulfils the farmers' high demands

The VariTitan semi-mounted reversible plough

The VariTitan from LEMKEN offers infinitely variable, hydraulic working width adjustment from 30 to 55 cm per plough body. It is available from nine to twelve furrows in working widths of 270 cm to 660 cm, also with automatic non-stop overload protection. The semi-mounted reversible ploughs can be used to plough on-land as well as in-furrow.

Machine Features

The plough is exceptionally maneuverable for rapid turning on narrow headlands for maximum acreage performance

- Varying soil and weather conditions call for the easy-to-operate furrow width adjustment on the VariTitan.
- Titan ploughs can be specified to work on-land if required. This is particularly useful with larger ploughs as it reduces the level of load offset to one side.

- The skimmers can be easily and quickly adjusted without tools.
- Safe road transport, even at high speeds, without straining the tractor.
- Longer service life of the wear parts results in lower plough costs.

The EuroTitan semi-mounted reversible plough

The working width of the EuroTitan from LEMKEN can be adjusted in four steps from 33 to 50 cm per plough body. It is also offered with nine to twelve furrows in working widths of 297 cm to 600 cm, also with automatic non-stop overload protection.

Robust, Reliable, Big and Maneuverable



The strong headstock

The height of the Category III or IV cross shaft is easy to adjust.

- It absorbs stronger impact loads, relieving the tractor and headstock.
- The turnover axle is surface hardened, mounted on tapered rollers and easy to lubricate. This means high strength and a long service life.



The simple pull point adjustment

The height of the horizontal pull point is easy to adjust by repositioning a pin.

- This allows a precise load transfer to the rear axle of the tractor.
- When using a crawler tractors, the pull point is set very low to achieve equal loading of the tracks.
- Slip is minimised on all tractors through the ideal tractive force transfer.



The reliable turnover device

Two telescope cylinders turn the plough powerfully and smoothly by 180 degrees. The required hydraulic working pressure is low.

- The precise angle adjustment is performed separately for each side with adjustment bolts.
- With the sturdy stands, the plough can be easily dismounted when in transport position and parked compactly in the machinery shed.



The Connection



The large clearance

The large clearance between the tractor and the headstock enables a turning angle of up to 90 degrees.

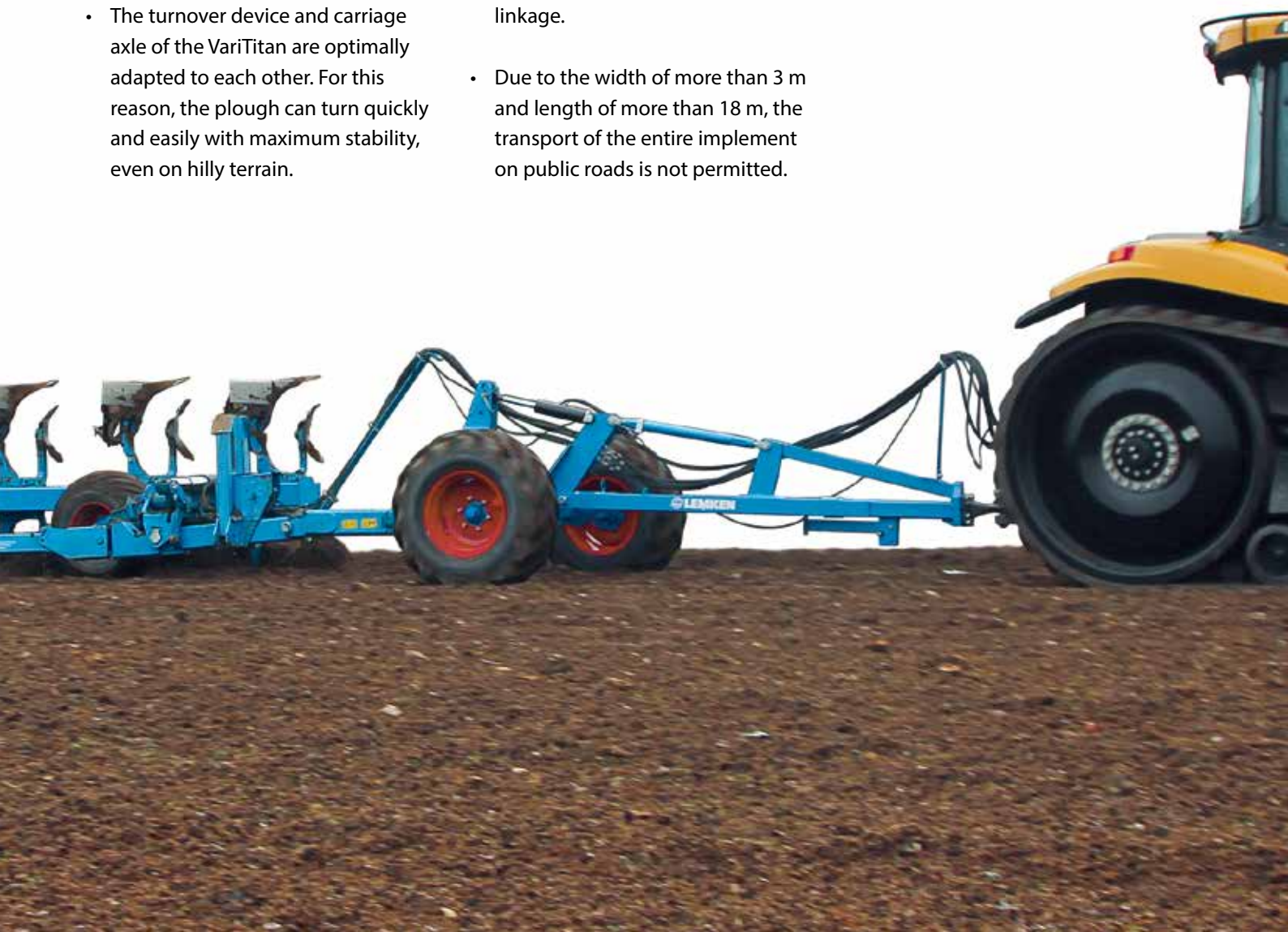
- This improves maneuverability at the headlands and facilitates ploughing with dual-wheeled tractors.
- The turnover device and carriage axle of the VariTitan are optimally adapted to each other. For this reason, the plough can turn quickly and easily with maximum stability, even on hilly terrain.



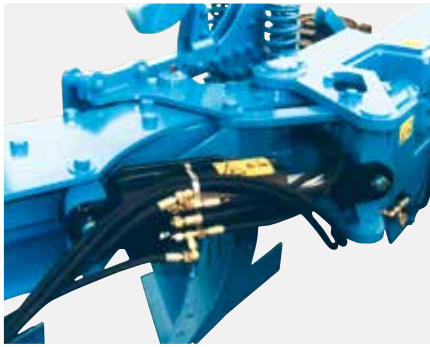
Coupling carriage for tractors without three-point hydraulics

If there is no three-point linkage available on the tractor for attachment, all LEMKEN EuroTitan and VariTitan ploughs can be equipped with a coupling carriage.

- The coupling carriage then assumes the lifting function that is otherwise performed by the three-point linkage.
- Due to the width of more than 3 m and length of more than 18 m, the transport of the entire implement on public roads is not permitted.



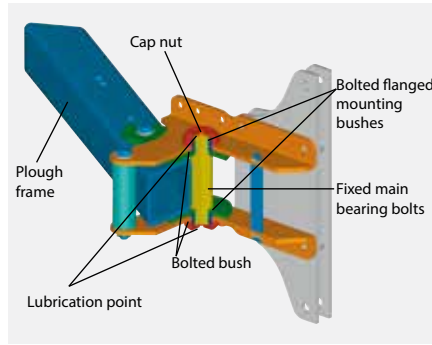
Always Perfect Results



The working width adjustment

The cutting width of the VariTitan semi-mounted reversible plough can be continuously adjusted from approx. 30 to 55 cm per plough body, always ensuring the best possible work results.

- The individual adjustment of the furrow width to the soil type, moisture levels and working depth fulfils all the agricultural requirements for ploughing. At the same time, the tractor's capacity is fully exploited.
- The working width is continuously adjustable via double-acting hydraulic cylinder for the front and rear parts of the plough together.



The non-wearing Vario bearing

The main bearing bolt of the Vario adjustment brackets is equipped with bushes and locked securely with the frame plates.

- The Vario adjustment bracket is also equipped with securely tightened collar bushes. The two bushes of the furrow width adjustment run within each other and can be lubricated, ensuring a long service life of the bearing points.
- Each part can be separately replaced.



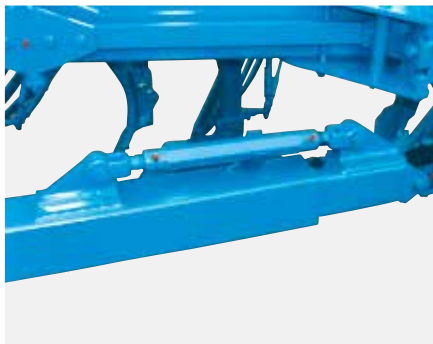
The plough body adjustment bracket

The adjustment brackets of the EuroTitan are solidly bolted onto the frame. This provides great strength, reliable fatigue strength and high fitting accuracy.

- Four different working widths can be easily and quickly set by loosening the central bolt and repositioning the adjustment bolt.
- Skimmers and coulter are automatically adjusted.



Details for all Conditions



Adjustment of the front furrow width

When ploughing in-furrow, the front furrow width is adjusted with a turnbuckle.

- When ploughing on-land, this turnbuckle is used to change the distance of the tractor to the furrow.



The articulated frame

The VariTitan semi-mounted reversible plough is characterised by its perfect ground adaptation, even on undulating terrain.

- The frame joint between the front and the rear plough sections enables bending both in the working depth and in the direction of travel.
- The bearing pin is mounted in surface hardened guiding elements. For the turning procedure, the frame joint is automatically locked with a double-acting cylinder.
- The frame joint precisely maintains the working depth over the whole width of the plough.



Uniform working depth

The working depth is precisely adjusted in fine steps without tools using pins both on the carriage and on the rear support wheel.

- The rear support wheel is automatically put into working position when the plough is set into the ground. This prevents undesirable swivelling of the wheel towards the front when ploughing on uneven terrain.



On-Land Today / In-Furrow Tomorrow



The on-land adjustment

The Titan semi-mounted reversible plough can be rapidly switched from on-land to in-furrow ploughing.

- The adjustment system on the front turning mechanism enables on-land ploughing with tractors up to a width of 3.80 m.



The front support wheel

The front support wheel is installed inside the plough frame. This position makes the Titan particularly easy to handle at the headlands, because there is no support wheel interfering with the steering angle.

- The working depth of the front plough element can be adjusted without tools via the support wheel.
- When turning, the wheel automatically swivels around and locks itself independently.
- The large wheel diameter (400/60-15.5) ensures a continuous drive even under difficult conditions.



The strong plough frame

The robust square tube frame, made of microalloyed fine-grained steel with a wall thickness of 10 mm, is characterised by its low weight, high strength and long service life.

- The frame plates for the mounting of the adjustment brackets are bolted to the frame. This ensures a perfect fit and high fatigue strength.



Easy Operation for Maximum Performance



The plough on the headlands

At the headlands, the plough is first lifted at the front, and then at the rear. At the same time, the plough is slightly twisted out of the soil. Finally, the rear plough frame is lifted out and the articulated frame is locked.

- The time-controlled lifting and lowering significantly reduces the operational triangle that is otherwise very large with big ploughs.
- For optimal operation of the Titan with electronic plough control, it is advantageous to have load-sensing hydraulics on the tractor.



The rear plough frame

In addition to the level adaptation of the plough in working position and the lowering of the front plough frame, the articulated frame also enables separate lifting of the rear plough frame using the electronic plough control.

- For example, it is possible to plough with 12 furrows in one direction, and only 8 in the other direction.



The Cost-Effective Plough Body



The Dural body

The frog of the Dural body is tempered and extremely strong.

- The pitch of the plough bodies is adjustable, always ensuring good penetration of the plough into the soil.
- The smooth transition from the share to the mouldboard and the low-resistance shape make the plough even easier to pull.
- The mouldboards made of hardened boron steel are low-wear and have no bolts in the main wearing zones.
- The extra large shin can be individually replaced.



The slatted body

The slats of the slatted body are made of thick, completely hardened boron steel and can be individually replaced

- Slatted bodies and conventional mouldboards are based on the same basic body.
- The attachment bolts are deeply sunk to guarantee secure fixing of the slats for an extremely long service life.

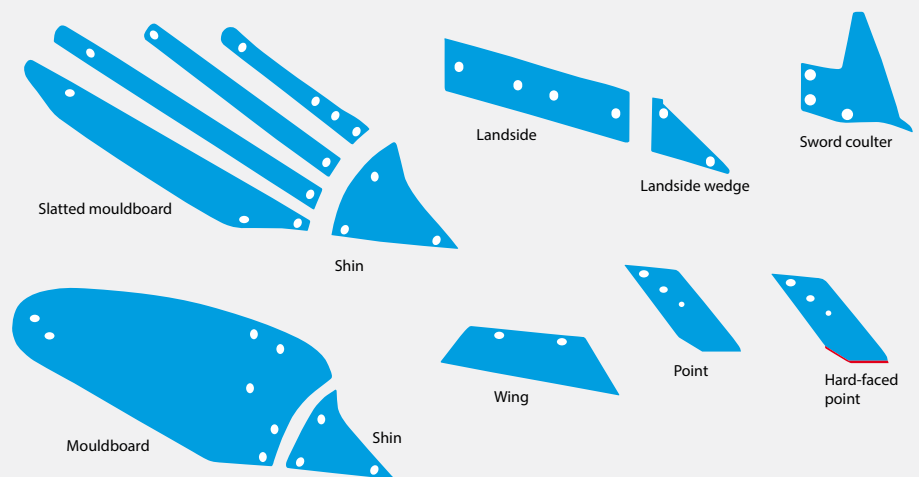
- High material density and firm attachment guarantee resistance to wear and breakage.
- The overlapping design prevents roots or foreign object from getting stuck.
- The wear zone of the share wings is much larger than with conventional shares.



The body structure

The material, cross section and shape of the exchangeable points guarantee low wear and good penetration into the soil. The extra broad landsides with a large surface area provide better plough guidance. They can be turned four times. A much larger proportion of wearing material surface enables an optimal utilisation of the sword coulter. The attachment lies in the shadow of the cutting tools and is therefore protected from wear and damage.

The cutting edge is slanted back and open to the top so that stones and



roots cannot get stuck. A special hard metal coating on the point provides an unprecedented long service life and much greater cost efficiency. The

point is coated from the bottom on one side. This creates a self-sharpening effect.



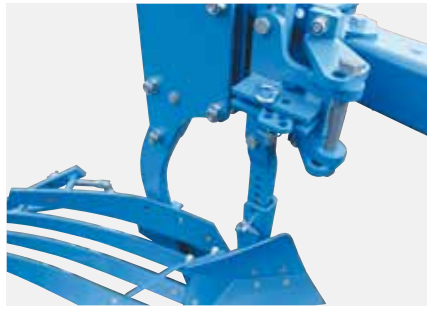
Ready for Action under Difficult Conditions



The flat stalk

The attachment of the basic body on the flat stalk prevents the skimmer from twisting

- All share and mouldboard variations can be interchanged without problems, because the basic body is the same for all skimmers.
- It can be easily removed for ploughing without skimmers.



The angle adjustment

Shear-bolt versions of the EuroTitan and VariTitan are available with a single-body quick angle adjustment for the skimmers upon request.

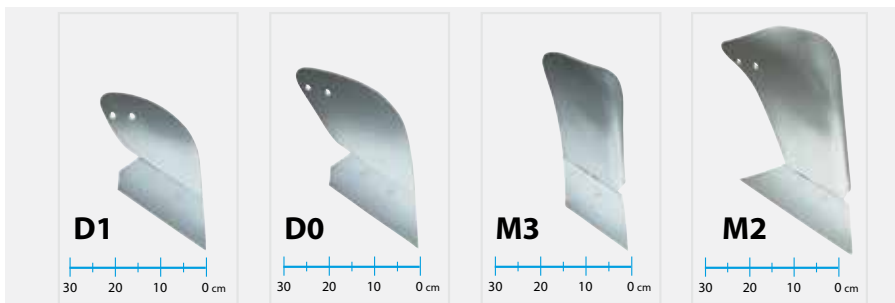
- This quick adjustment allows precise control how the organic matter is deposited.



The working depth adjustment

The skimmers Titan ploughs can be adjusted on the beam.

- Here also, the working depth is adjusted without tools using a pin.
- If a throw angle adjustment is required, a round stalk with a bolt attachment can be installed.

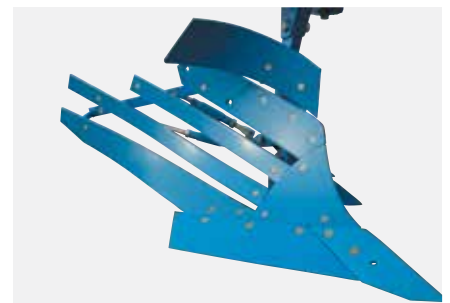


The skimmers

The skimmers with various share lengths ensure ploughing without clogging, even under difficult conditions.

- The special shape of the shares minimises wear and lengthens the service life. Their mode of action creates a very good flow of soil.

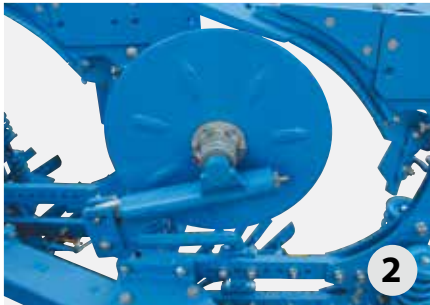
- The specially shaped mouldboard cleanly folds the organic matter into the soil.
- A plastic mouldboard is available for sticky soil conditions and soils that put little pressure on the skimmers.



The trashboards

The trashboards are mounted directly on the leg and can be adjusted in many ways.

- They ensure working without clogging and clean burial of plant residues.
- The trashboards are also available in a plastic version for sticky soil conditions.



The disc coultter

The smooth disc coultter is corrugated at the sides. This ensures a constant drive even when cutting through large amounts of organic matter.

- The depth is adjusted through vertical swivelling of the disc coultter arms, which can be fastened with a bolt in the indentation.
- The smooth bearing arranged on the unploughed side is double-sealed against dirt.

- The disc coultters are available in different versions:
 - 0 500 mm, beside the skimmer (1)
 - 0 500 mm, spring-suspended (2)
 - All diameters also available in serrated form 3)



The subsoiler

Through its special shape, the subsoiler achieves a particularly good loosening effect.

- The depth of the subsoiler can be adjusted without tools, and can also simply be removed if necessary.
- All wear parts can be individually replaced. The stalk guard prevents wear on the stalk.



Safe and Efficient on Field and Road



The carriage

The large wheels minimise soil compaction during ploughing and ensure the required safety for road transport.

- The carriage axle is equipped with 400/70 R 20 tyres.
- For quick and safe road transport, the Titan is turned to the middle position and secured with two stop valves. It can be safely towed (like a one-axle trailer) behind the tractor.
- Tractor and plough are effectively protected from overloading.
- The Titan from LEMKEN can be equipped with a brake system upon request.





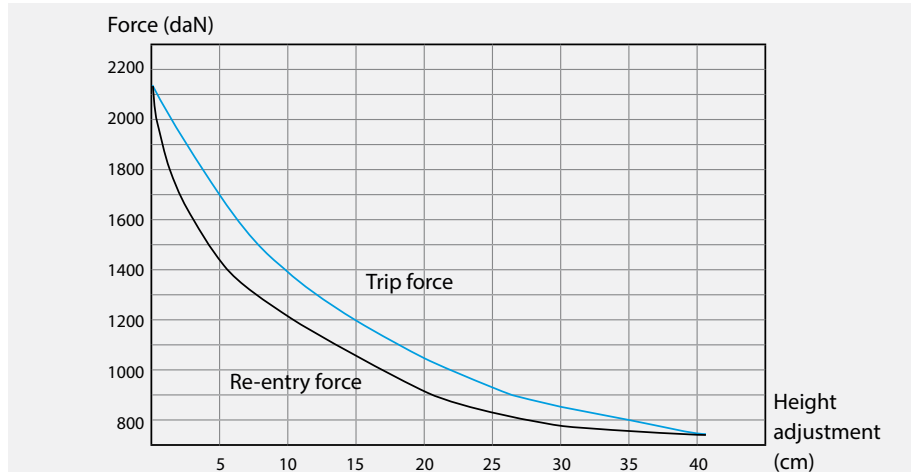
The Auto-reset Overload Protection



The soft, smooth tripping

The auto-reset overload protection from LEMKEN is equipped with short double pressure springs, which ensure high tripping and re-entry forces.

- A special link system causes the forces acting on the point when tripping to slowly decrease and to increase again when coming back into position.



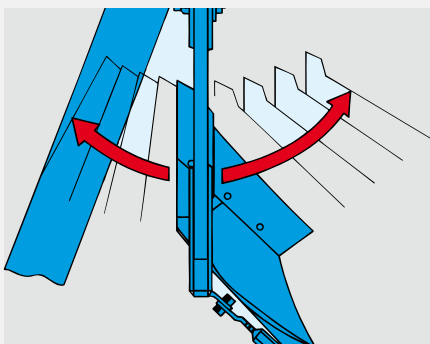
The tripping force on the point

The plough body deflects softly and gently, while the re-entry takes place with exceptionally high force.

- There are no impact loads on the plough frame and tractor.

- The spring pre-load adjustment is infinitely variable. The tripping and re-entry forces can be adjusted to the respective soil conditions.

Ideal on Stony Soils



The lateral deflection possibilities

When hitting an obstacle, the elastic, high-quality surface-hardened spring steel beam and legs can deflect far to the side.

The beams are firmly guided, so that they do not jump out of the bearing under any circumstances.

Both the leg brackets and the beams are bolted and not welded.

This means high strength and a long service life of the overload elements.

Hydrix Hydraulic Auto-reset Protection



The variable pressure adjustment

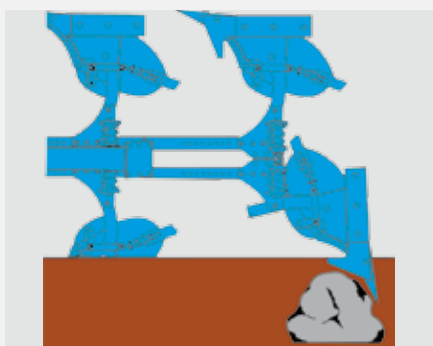
Especially when ploughing under stony conditions with highly variable soils, working with a plough where the tripping force can be easily adjusted is recommended.

With the hydraulic version HydriX from LEMKEN, the pressure in the hydraulic system can be easily and individually adjusted:

- When ploughing in light soil conditions, the lowest possible tripping force is used, so that existing stones remain in the soil.
- When switching over to heavier or harder conditions, the tractor driver increases the pressure using the control unit, so that the plough bodies still sit firmly in the soil under such conditions.
- The pressure can be adjusted across a range from 50 to 140 bar using the hand wheel on the control block.
- Individual area boundaries can be set on the plough's control block and driven using the tractor's control unit.
- It is not necessary to readjust according to the manometer.
- The solid connection between the beam and the frame enables low system pressures with the HydriX auto-reset protection.



Adjustment and maintenance



The double safety

Even if the point should get caught under a stone, a tree root or solid rock, all LEMKEN ploughs are protected against damage by an additional standard shear-bolt safety.

The shear bolt is quick and easy to replace, and you can get back to work!

Technical Data

Name	Working width per furrow approx cm	Interbody clearance cm	Number of furrows	Weight approx, kg
With double-cutting shear bolt device				
EuroTitan 10 6+3 L 100	33, 38, 44, 50	100	6+3	4,593
EuroTitan 10 6+3+1 L 100	33, 38, 44, 50	100	6+3+1	4,842
EuroTitan 10 7+3 L 100	33, 38, 44, 50	100	7+3	4,810
EuroTitan 10 7+3+1 L 100	33, 38, 44, 50	100	7+3+1	5,059
EuroTitan 10 8+3 L 100	33, 38, 44, 50	100	8+3	5,027
EuroTitan 10 8+3+1 L 100	33, 38, 44, 50	100	8+3+1	5,276
With additional mechanical non-stop overload protection				
EuroTitan 10 X 6+3 L 100	33, 38, 44, 50	100	6+3	5,178
EuroTitan 10 X 6+3+1 L 100	33, 38, 44, 50	100	6+3+1	5,493
EuroTitan 10 X 7+3 L 100	33, 38, 44, 50	100	7+3	5,460
EuroTitan 10 X 7+3+1 L 100	33, 38, 44, 50	100	7+3+1	5,775
EuroTitan 10 X 8+3 L 100	33, 38, 44, 50	100	8+3	5,742
EuroTitan 10 X 8+3+1 L 100	33, 38, 44, 50	100	8+3+1	6,057
With additional hydraulic non-stop overload protection				
EuroTitan 10 HydriX 6+3 L 100	33, 38, 44, 50	100	6+3	5,196
EuroTitan 10 HydriX 6+3+1 L 100	33, 38, 44, 50	100	6+3+1	5,513
EuroTitan 10 HydriX 7+3 L 100	33, 38, 44, 50	100	7+3	5,480
EuroTitan 10 HydriX 7+3+1 L 100	33, 38, 44, 50	100	7+3+1	5,797
EuroTitan 10 HydriX 8+3 L 100	33, 38, 44, 50	100	8+3	5,764
EuroTitan 10 HydriX 8+3+1 L 100	33, 38, 44, 50	100	8+3+1	6,081
With double-cutting shear bolt device				
VariTitan 10 6+3 L 100	30 - 55	100	6+3	5,070
VariTitan 10 6+3+1 L 100	30 - 55	100	6+3+1	5,379
VariTitan 10 7+3 L 100	30 - 55	100	7+3	5,340
VariTitan 10 7+3+1 L 100	30 - 55	100	7+3+1	5,649
VariTitan 10 8+3 L 100	30 - 55	100	8+3	5,590
VariTitan 10 8+3+1 L 100	30 - 55	100	8+3+1	5,899
With additional mechanical non-stop overload protection				
VariTitan 10 X 6+3 L 100	30 - 55	100	6+3	5,655
VariTitan 10 X 6+3+1 L 100	30 - 55	100	6+3+1	6,026
VariTitan 10 X 7+3 L 100	30 - 55	100	7+3	5,990
VariTitan 10 X 7+3+1 L 100	30 - 55	100	7+3+1	6,361
VariTitan 10 X 8+3 L 100	30 - 55	100	8+3	6,305
VariTitan 10 X 8+3+1 L 100	30 - 55	100	8+3+1	6,676
With additional hydraulic non-stop overload protection				
VariTitan 10 HydriX 6+3 L 100	30 - 55	100	6+3	5,673
VariTitan 10 HydriX 6+3+1 L 100	30 - 55	100	6+3+1	6,046
VariTitan 10 HydriX 7+3 L 100	30 - 55	100	7+3	6,010
VariTitan 10 HydriX 7+3+1 L 100	30 - 55	100	7+3+1	6,383
VariTitan 10 HydriX 8+3 L 100	30 - 55	100	8+3	6,327
VariTitan 10 HydriX 8+3+1 L 100	30 - 55	100	8+3+1	6,700

All information, measurements and weights are subject to continuing technical further development and therefore non-binding. Given weights are always based on the basic equipment. The right to change specifications is retained.

Service decides



When you have bought a machine from LEMKEN, the well known, almost proverbial LEMKEN service starts. 18 customer-oriented factory branches and outdoor storage areas in Germany as well as our own sales companies and importers in more than 40 countries, and a strong dealer network, ensure that machines and spare parts are supplied quickly.

If a part is not in stock, it can be delivered to the customer within 24 hours via the LEMKEN logistics centre which is manned round-the-clock 365 days a year.

Knowledge from the LEMKEN specialist

Well trained customer service technicians are available to

farmers, contractors and trade, who are using machinery for the first time, as well as for professional maintenance and repairs. Thanks to regular training courses, LEMKEN customer service is always up to date with the latest LEMKEN technology.

Original spare parts from LEMKEN

LEMKEN wearing parts are designed for a maximum service life. High-quality materials, the latest production methods, and an intensive quality control ensure a long service life. Therefore, all original spare parts bear a unique identification with the registered LEMKEN trademark. Original spare parts can be ordered at any time online on the Internet via the LEMKEN information and ordering system.



LEMKEN GmbH & Co. KG
Weseler Straße 5
46519 Alpen
Tel. +49 2802 81-0
Fax +49 2802 81-220
lemken@lemken.com
www.lemken.com



Your LEMKEN dealer:

