



**CLI, CLG-II, FLATLINER AND DTX**

KVERNELAND SUBSOILERS



# WHEN FARMING MEANS BUSINESS

Realising the full potential of farming is about growing and developing your business, not only your crop or livestock, but also your profit. Improve productivity and profitability by focusing on the positives and minimising disadvantageous aspects, through strong, dedicated management.

Success springs from determination and clear targets, from laying down the appropriate strategy and allocating correct investments for the future. Quality results require the right ideas and equipment. When there is work to be done, you need the optimal setup and smart solutions that support you towards an easier, more profitable way of working. You need solutions that make tough and demanding conditions less complicated.







## TILLAGE

Preparing and cultivating your soil in order to achieve the highest possible yield is about choosing the correct tillage system.





GROWTH

STRENGTH

EFFICIENCY





## SUBSTAINABILITY

### KEEP UP YOUR ASSETS

#### **Growth**

The key to a successful harvest is good preparation. Eliminating compaction in the soil to maximise the roots' uptake of moisture and nutrients is vital, as is the preparation of a fine, level, weatherproof seedbed. Ensure a sound soil structure for your growth.

#### **Efficiency**

You want the best equipment for your specific conditions. Kverneland offers a large range of models and accessories to meet your requirements for subsoiling, stubbling operations or seedbed preparation.

#### **Strength**

You want a machine that lasts, that keeps up with the stress on the material over a long time. Still, you don't want to pay for extra power. With the special design of the tines and frame, the pulling traction has been reduced. Better traction of the tractor means increased strength, which leads to savings on fuel and tires.

*Harvest starts here.*



### Why subsoiling?

Overcome compaction for a sound soil structure.

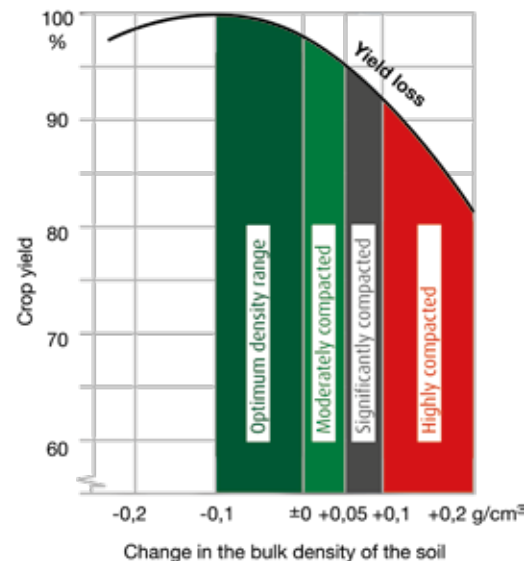
- Improved drainage
- Strong root development
- Better soil aeration

# HIGHER YIELDS

## STRONG ROOT DEVELOPMENT

Subsoiling for good soil structure, root growth and increased yield stability!  
Soil loosening is an essential operation for long-term soil management and maintenance. A sound soil structure increases yields by up to 30% depending on soil type and crop.

Visible strips showing erratic emergence of the germinating seed are a common problem. Often this is the consequence of over-compacted subsoil at the headland and / or in the tramlines, caused by the use of heavy implements or working on waterlogged soil.



The roots of the crop cannot penetrate these compacted zones. This leads to an insufficient supply of water and nutrients resulting in significant loss in yield. Sub-soiling breaks up compaction in the subsoil and restores the gaseous exchange capability. In addition conservation tillage is requesting the respect of different soil layers in a protective farming system. Subsoiling is the first step towards successful seed germination and emergence.

*Yield increase up to 30%*

Yield loss through soil compaction  
Source: Department of the  
Environment, Conservation  
and Geology of the Land  
Mecklenburg-Vorpommern



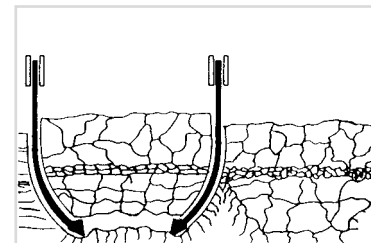
## CLI - SHORT MOUNTED SINGLE BEAM SUBSOILER SOLO OR IN COMBINATION

The single-beam subsoiler Kverneland CLI has all the advantages of the curved tine and can be used on its own or in combination with short disc harrows, power harrow and/or seed drill.

An oversized beam of 200x200x10mm is fitted with all the tine supports and front and rear linkages (option). The single-beam concept provides the most robust rational design, allowing an underbeam clearance of 1,175mm, to guarantee operation without blockages, at depths from 15 to 40cm. This substantial clearance allows the combination with other tools and the passing of the power-takeup under the beam.

### *From 15 to 40cm working depth*

The curved tine of the CLI acts by lifting up the soil volume without disrupting the surface. The curved tines exercise vertical and steady pressure while maintaining good vibration capacity to intensify cracking of the soil. Due to the tine profile of the CLI, even in combination with Qualidisc or Qualidisc Farmer a 3.0m version requires only approx. 160hp at 30cm depth, limiting consequently the fuel consumption.













## CLG-II CHISEL PLOUGH FOR TOUGH CONDITIONS

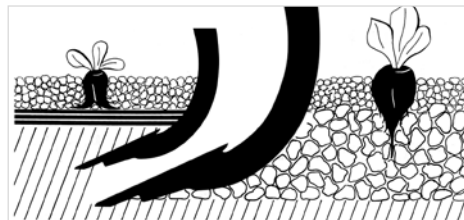
Designed to loosen subsoil and break up wheel tracks, to improve soil structure and promote good drainage. By increasing the soil's permeability, the seedbed conditions are improved for faster and better germination. Better drainage and efficient gaseous exchange lead to an effective nutrient uptake.

The tines (choose from CLC tines or CLG tines) provide good penetration, even in hard and dry conditions and create an intensive crumbling thanks to their unique design using heat-treated hollow tubes. The long tines are able to move up to 20cm side ways.

### *Efficient penetration*

The CLG-II is fitted with the well-known Kverneland auto-reset leaf spring system. The leaf spring protection system is very simple and strong with little or no maintenance. The individual leaf springs allow each leg to ride over any obstacle for a trouble-free operation and return to their original position automatically.

The flexible design offers optimal possibilities to adjust the tine spacing and to increase the implement size. The unique connection clamp bolts the whole construction together. The less welding, the more robust - the flexible "bolt-on" construction.





## FLATLINER -MAXIMUM SOIL SHATTER MINIMUM SURFACE DISTURBANCE

The benefits of selective soil loosening should never be underestimated, particularly following a wet autumn. Healthy root growth is essential if crop yields are to remain high. Any sub-surface pans must be identified and then removed. Incorporating the latest technology, the Kverneland Flatliner with the modern V-frame offers the perfect solution.

*Down to max. 50cm*

The Flatliner provides maximum shatter of deeply embedded compaction layers with minimum surface disturbance across the working width. It works to a depth from 30cm to 50cm. The frame equipped with bolted clamps for tine fixing allows adjustment of the tine spacing. The curved shape of the Pro-lift and LD tines and the high quality chrome-boron steel reduce the wear, limit the power requirement and prevent the rising of clods and stones to the surface.



The **Pro-Fit tine** available with 3 different widths of wing shares is composed of 5 wearing parts for extend lifetime.



The **low disturbance tine LD tine** loosens without surface heave and smearing at depth. The soil flow closes directly behind the tine.

### **'V' Profile toolbar**

The 'V' form toolbar is designed to ensure progressive subsoiling with the minimum power requirement, ease of trash passage through the machine, and optimum shatter.

### **Pro-lift tines**

The Pro-Lift tine and point provide a very effective soil conditioning action with prolonged wear rates. The tines can work down to max. 50cm depths.

### **Low Disturbance tines (LD)**

LD (Low Disturbance) tines are available on all Flatliner models for a minimum impact on the different layers. The tip is protected by a carbide piece to extend the life.



MAX. 50CM

Positive control of the working depth.

Max. 87CM

Adjustable tine spacing  
with clamps.

Ø600MM

DD rings for weather proof re-  
compaction and levelling.

3 OR 5 TINES

Lifting the soil and  
loosening compaction.





- Easy hydraulic depth adjustment via the rear DD roller
- Adjustable Qualidisc Farmer disc section in two positions
- Subsoiling down to 40cm and shallow cultivation 10cm deep



## DTX - ONE PASS PREPARATION

### VERSATILE AND COST-EFFECTIVE

As a result of growing farms and shorter weather periods, time has become a valuable factor. Therefore, the DTX combines different operations in one pass to save time.

*Deep loosening, shallow cultivation*

Designed as a mounted one-pass stubble incorporator/soil loosener for tractors in the 200-360hp range, the DTX is extremely versatile. It can be used for first entry with non-inversion tillage or to knock down ploughing whilst loosening down to 40cm. It is also ideally suited to establish oilseed rape straight into stubble as it leaves a very levelled, fine and consolidated seedbed. The DTX also offers very good trash clearance. The front tines are staggered and the rear discs allow a full cut and mix from 2 to 10cm deep.

The Kverneland DTX combines the tines (Pro-Lift or LD) with the proven disc section of the short disc harrow Qualidisc Farmer (Ø 520mm). Soil can be loosened with the Pro-Lift or LD tines down to 40cm while the top soil layer up to 10cm is incorporated with the disc sections. Tines and disc segment as well as the roller DD600 are connected in a high quality frame box which allows the operation even in heavy conditions. The DTX is equipped with side deflectors which are well-known from the Qualidisc range. This ensures perfect levelling in all types of conditions.



The Pro-Fit tine as hydraulic auto-reset version available on DTX.

#### Pro-lift tines

The Pro-Lift tine and point provide a very effective soil conditioning action with prolonged wear rates. The DTX proposes 2 different tine options: shear-bolt or auto-reset version. On models with hydraulic auto-reset, the point pressure can easily be adjusted from 1700kg to 2925kg for the hardest soils.

#### Low disturbance tines (LD)

LD (Low Disturbance) tines reduce the impact on the different layers without smearing at depth. The soil flow closes directly behind the tine. The tip is protected by carbide to extend the life time.







- Long durability
- Low power requirement
- Improved trash flow
- Deep loosening
- Respecting the soil structure



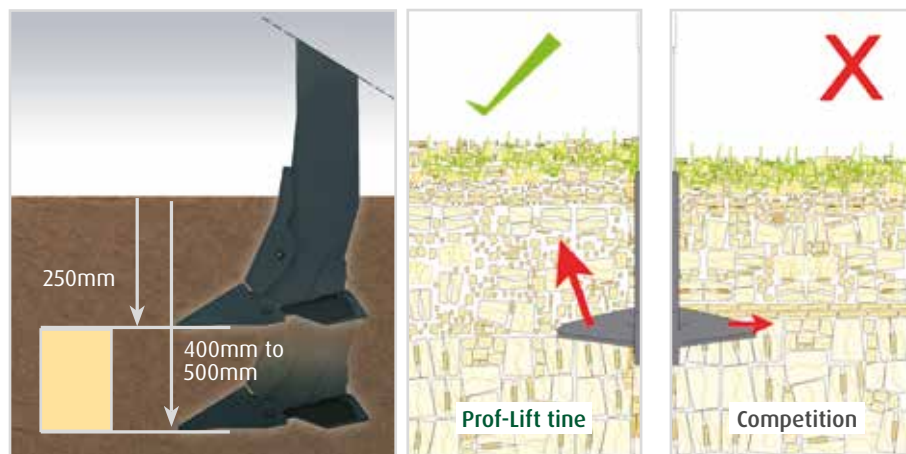
## PRO-LIFT TINE - LIFTING AND LOOSENING EXCELLENCE IN HEAVIER SOILS

The Pro-Lift tine lifts and loosens the soil above it, reducing bulk density and compaction, whilst minimising disturbance at the surface.

A choice of three different wings - each imparting a different degree of lift - enables the amount of work completed to be matched to the prevailing soil conditions and moisture levels.

*Minimal draught.*

Lifetime is significantly extended and waste of parts (partly worn out) is avoided by using five wearing parts. The Pro-Lift tines are protected against overload either by hydraulic auto-reset or shear-bolt safety system depending on model. In addition the tine can be reversed and swapped left to right to increase the operational life (like behind the tractor wheels).



Soil flow should be UPWARDS (as shown left of centre) rather than outwards or smearing downwards (as shown right of centre). Tines that move the soil SIDEWAYS will not remove compacted layers and may even make them worse.





- **Effective soil to seed/root contact for efficient nutrient transfer.**
- **Minimal moisture loss, especially important in dry years where crops lacking in moisture suffer badly.**
- **Improved drainage and water infiltration, especially in wet years where a good, consolidated soil structure ensures access to plant root systems for water, air and nutrients.**
- **Reduced soil erosion, as the soil is both structured and stable.**



# DD THE DOUBLE RINGS

## THE NEED FOR CONSOLIDATION

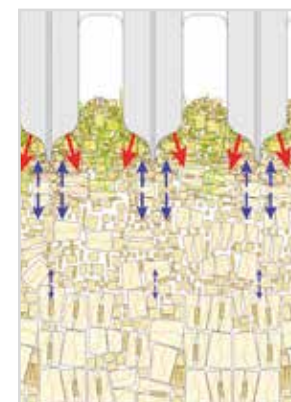
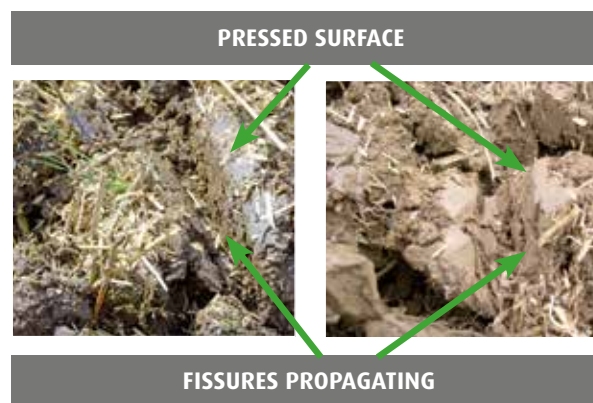


Clods are cut and fissures propagate through a result of the DD action, Broken or cracked clods are left in an ideal state for further weathering

Effective consolidation plays a crucial, but often under-appreciated part in modern arable farming. As part of a reduced tillage system, it can save valuable time, reduce costs and increase yields. Fundamentally, it plays a key role in combating the problem of compaction, which is a barrier to root growth and water infiltration and a major factor in poor soil structure leading to run-off and erosion.

The well-proven 600mm diameter DD rear roller provides positive depth control and leaves a high quality corrugated, weather-proof surface. Rollers are equipped with heavy-duty scrapers and sealed-for-life 'non-grease' bearings.

Manufactured from the highest quality Chrome Boron steel, the rings have a self-sharpening cutting edge mounted on a broad, carefully angled shoulder. This enables them to cut clods effectively, crushing the parted halves so they disintegrate, while also contacting over 80% of the soil surface to consolidate and level the seedbed, leaving a ridged, weather-proof surface.





## ORIGINAL PARTS & SERVICE

# ONLY ORIGINAL PARTS WILL KEEP YOUR MACHINE A KVERNELAND



Did you know that our parts are manufactured to the same high standards and strict specifications as the Kverneland machines? Original Parts will always work and fit as intended, and are guaranteed to keep your machine running at maximum performance.

Kverneland has been a symbol of quality since 1879; the experience we have, combined with a constant strive to improve our products, ensures that the best parts are available for your Kverneland machine. Parts and service surround your machine with a safety-net. The quality of the machine ensures optimal usage and the quality of the parts provide a low life-cycle cost and longer wearing time.

Our long term relationship starts at the purchase of your Kverneland machine, and we will continuously stay by your side for support and assistance. We will guide you on the way to make sure you achieve maximum performance, productivity and profit.

Do not compromise quality with cheap solutions, remember that only Original Kverneland parts are the guaranteed solution to achieve what is expected by a Kverneland machine.





### YOUR PARTS SPECIALIST

Through our worldwide dealer network you will find your local dealer, whom is always prepared to assist you. Your Kverneland dealer knows every inch of your machine and will gladly provide the expertise needed to ensure that you are operating at maximum potential.

Your parts specialist has got all the parts that you need and will also have the facilities to service your machine. Make sure to visit your Kverneland dealer on a regular basis to be updated on promotions and product news that you will not find elsewhere.



### ALWAYS AVAILABLE

Time is money, and we know the importance of receiving the right parts at the right time! Your Kverneland dealer is supported by a massive distribution network to supply you with exactly what you need, when you need it.

Our main distribution centre is located in Metz, France. A strategic location for distributing parts to all corners of the world. With over 70.000 parts in stock and 24/7 service, we are ready to supply you with parts – at any time!



### EASY ACCESS TO INFORMATION

Are you looking for a complete overview of parts for your machine? Maybe you are searching for more technical information? Our Online Search Database, *Quest*, provides all information available for your machine.

Various documentation like Parts Manuals, Operation Manuals, Software updates and FAQ's, are all there. *Quest* is available in several different languages and can be accessed wherever and whenever. All answers are easy to find – just a few clicks away !

# TECHNICAL DATA

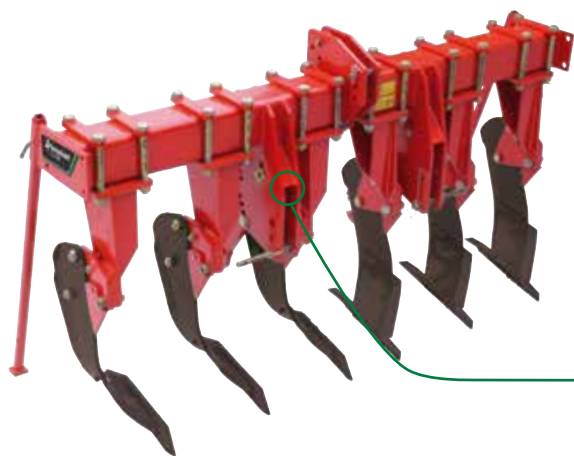
Model	CLI 300	CLI 400	CLG-II	Flatliner 300	Flatliner 350	DTX 300 SB**	DTX 300 AR**
Frame	mounted rigid	mounted rigid	mounted rigid	mounted rigid	mounted rigid	mounted rigid	mounted rigid
Working width (m)	3.00	4.00	2.20 - 5.60	2.61	3.15	3.00	3.00
Transport width (m)	3.00	4.00	2.20 - 5.60	3.00	3.50	3.00	3.00
Underbeam clearance (mm)	1,175		860	700	700	550	550
Frame size (mm)	200 x 200 x 10		100 x 100 x 6	150 x 150 x10		180 x 180 x 10	
Tines							
Tine	Curved CLI		CLC or CLG	Pro-Lift or LD		Pro-Lift or LD	
Number of tines	4 / 6	6 / 8	2 - 13	3 or 5	5	5	5
Tine spacing (cm)	70 / 50	62.5 / 50	60	87 / 57	63	60	60
Max. working depth (cm)	40	40	50	50	50	40	40
Tine overload protection	shear bolt		auto-reset leaf spring	shear bolt		shear bolt	hydraulic auto-reset
Max. release force (kg)	2000	2000	1200	5200	5200	4400	1740 - 2900
Other equipment							
Rear roller	○ (cage roller D550)		-	DD600		DD600	
Gauge wheels	○	○	○	-	-	-	-
Combination with a-drill 200/500	-	-	-	-	-	○	○
Disc section	-	-	-	-	-	●	●
Average power requirement (HP)	4 tines 100 / 6 tines 135	6 tines 135 / 8 tines 180	-	130-150	140-200	200-300	200-300
Max. power requirement (HP)	-	-	-	250	250	350	350
Weight (kg)	800 / 1,000	1,100 / 1,300	316 - 1,608	1,700	2,150	2,750	2,970

\* Weights are given as an indication.

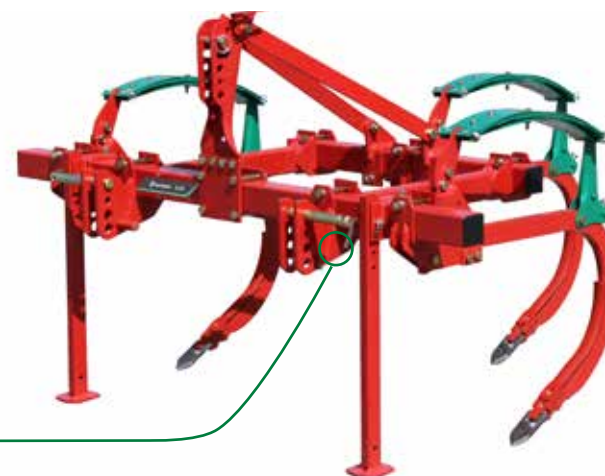
\*\* SB = Shear bolt; AR = Auto-reset

- Standard equipment
- Option
- Not available

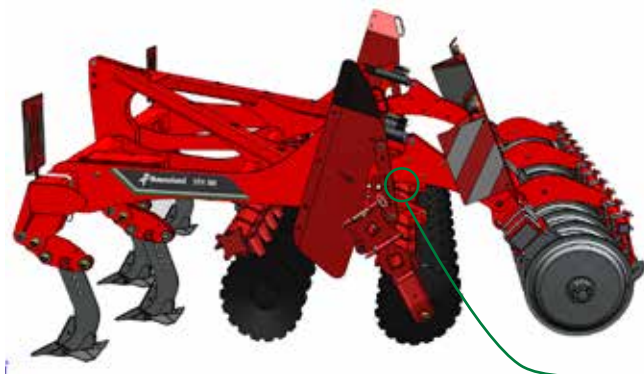




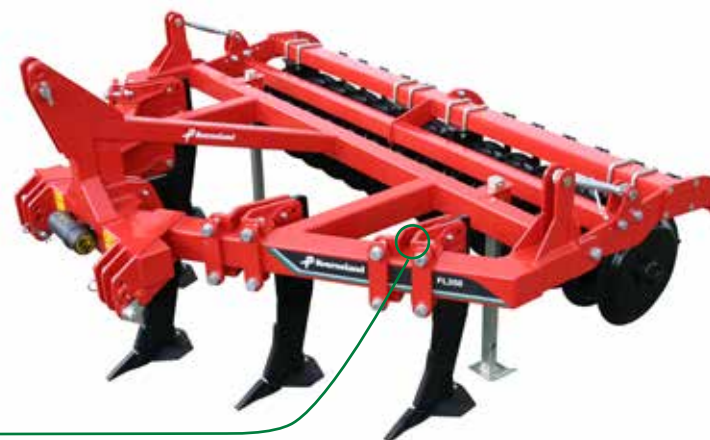
CLI single beam in  
3.00 and 4.00m; 15-40cm deep



CLG-II 2.20, 2.90, 3.80, 4.70 and 5.60m;  
50cm deep



DTX 3.00m; Pro-Lift tine 40cm deep;  
disc section 2 to 10cm deep



Flatliner 3.00m and 3.50m;  
50cm deep

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