



**e-drill**

CULTIVATOR-MOUNTED PNEUMATIC SEED DRILL



# 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.





The iM Farming logo appears when the implement can be connected to our smart farming systems and accessories, essential for managing your business.



Effective sowing means speeding up when the soil is exactly right, in order to give your crop a head start.

# YOUR KVERNELAND

## INTELLIGENT FARMING SOLUTIONS

Choose the best farming solution for you and your land. Combine the highest possible yields with sustainability. This will start with the correct tillage. The choices you make depend on various factors and should match your specific circumstances, like soil structure, crop rotation, residue management, economic and ecological viabilities.

*The choice is yours!*

You must consider environmental and legal issues. From conventional methods to conservation tillage: the balance of operations at the right time has to be found to achieve high yields with the best soil condition (air, moisture, biological activity, etc.) with a minimum amount of energy, time and investment. For this, Kverneland offers a full range of intelligent farming solutions.

### CONVENTIONAL TILLAGE

#### Conventional Tillage

- **Intensive** method of cultivation
- Complete soil inversion e.g. by a plough
- Less than 15-30% crop residues left on soil surface
- Seedbed preparation done by an active tool or special seedbed harrow
- High phytosanitary effect by reduced pressure of weed and fungi diseases - fewer herbicides and fungicides needed
- Better dry-off and faster increase of soil temperature for better nutrients absorption

### CONSERVATION TILLAGE

#### Mulch Tillage

- **Reduced** intensity in terms of depth and frequency
- More than 30% of residues are left on soil surface
- Extended repose period of the soil
- Cultivator and/or discs incorporate the crop residues within the top 10cm of soil for stable bearing soil
- Full-width tillage - seedbed preparation and seeding in one pass
- Protection against soil erosion; reduce soil loss by run-off and improve water storage capacity.
- Improvement of soil moisture retention

#### Strip Tillage

- **Zonal strip loosening** before or during seeding of up to 1/3 of the row width (Loibl, 2006). Up to 70% of the soil surface remains untouched
- Strip-till combines the soil drying and warming benefits of conventional tillage with the soil-protecting advantages of no-till by disturbing only the area of the soil where the seeds are placed
- Exact fertilising deposit
- Soil protection against erosion and drought

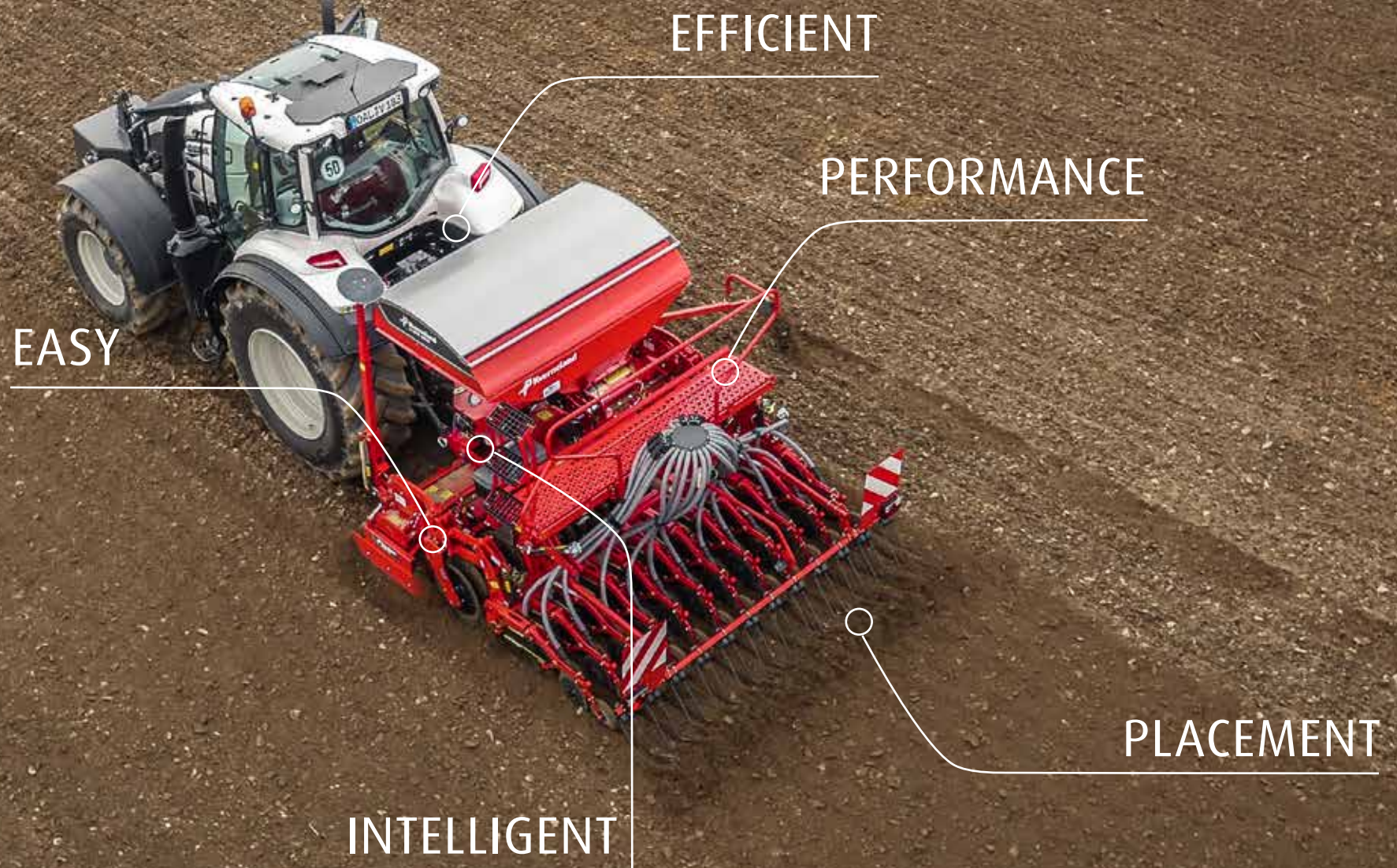
#### Vertical Tillage / No-Till

- **Extensive** method
- Working soil vertically avoids additional horizontal layers or density changes
- Increasing water infiltration, root development and nutrient take-up
- Plants' roots dictate the overall health of the plant, as they deliver nutrients and water throughout the season, contributing to a higher yield
- A strong set of roots make plants more resistant to wind and drought.
- Lower energy input required













## EFFECTIVE SOWING FOR BEST GERMINATION

### Performance

Seeding at the right moment is one of the critical decisions you have to take as an arable farmer. And the soil needs to be prepared with care. Seed bed preparation and seeding in one pass with the cultivator-mounted e-drill relieves this pressure.

### Efficient

You invest in the best equipment for seeding. In return you want the best results and low cost of operation. The Kverneland seeders have been developed with a close centre of gravity. Less horse power needed means saving on fuel costs and reduction of compaction.

### Intelligent

You want a seed drill that is easy to calibrate, steer and monitor. You can rely on the Kverneland ISOBUS systems – and concentrate on your business.

### Easy

Soil structure is not the same on every field, neither are working conditions. For best results you want to adjust the tine depth of the power harrow and the sowing depth independently from each other. Centrally – to be efficient, as with the e-drill.

### Placement

Once you have configured your machine, you want to rely on a perfect execution. The e-drill with CX-II coulter is excellent in precision placement of the seed. Not too deep, not too shallow. So it will germinate perfectly, to grow into a great crop.

*In short, it's effective*









# PERFECT SOWING

## SEEDING PARAMETER

"The harvest is only as good as the seeding", reflects the idea that the quality of our beginnings determines the outcome. Careful soil preparation and precise sowing lead to high yields, protect the environment, form the basis for subsequent care operations such as spraying, mechanical weed control, etc. and ensure long-term profits.

### **Sowing time**

The time of sowing varies from type of seeds, location, soil and weather conditions and based finally on the experience of the farmer. Risk may include fungicide infection, a higher weed pressure, water availability, temperature, hours of sunshine, higher amount of seeds and a shorter growing season.

### **Soil preparation, structure and fertility**

Target is a weatherproof seedbed to avoid erosion or capping effects after rain falls. Reduced passes and wheeling effects plus a good seed-to-soil contact receive a strong root development and nutrient supply. Humus, a key factor, increases the biological activity of soil life and has a favourable influence on the pore distribution of the soil and binding of CO<sub>2</sub>. This improves air circulation, heat balance and water storage capacity.

### **Sowing rate/seed density**

Unfavourable soil and tillage conditions increase the seed rate at the respective sowing date. The sowing rate calculation table (kg/ha) takes into account all significant influencing and "loss factors" for the required sowing rate. Individually, it depends on location. Knowledge of these influencing factors enables an adapted seed rate calculation.

### **Sowing depth**

The sowing depth depends on crop and soil condition. The higher the soil moisture or the amount of precipitation, the shallower the sowing depth can be chosen. Important is the achievement to get access to capillary water.

### **Fertilising and Crop Care**

The "Law of the Minimum" described by Liebig is important but also the timing of nutrients availability. In order to improve a good germination and development of the young plant an application already with the sowing at the right place in one pass can be beneficial. The crop care should be as less and as precise as possible.

### **Crop rotation/Biodiversity**

To optimize nutrients in the soil, and combat pest and weed pressure a wider crop rotation is one factor to consider. Crops should be rotated on at least a three to four year cycle. Crop rotation practices can result in increased soil carbon content through high crop cover periods, reduced frequency and tillage intensity, humus formation and a higher biodiversity. Crop rotation is of great benefit to both farmers and the environment.





# AT A GLANCE

## ONE PASS POWER HARROW SEED DRILL COMBINATION

The machine's clear layout and the high level of incorporated, intelligent technology offers the user maximum ease of use, from set-up and filling, to transport and the active seedbed preparation inclusive seeding operation. The combination makes it versatile to have everything done in one pass.

*On concept from one hand - Thats fits together!*

①

### Easy Filling and Lifting

The hopper can easily be filled using big bags, a front loader or a telescopic handler. The hopper can also be filled from a scissor trailer and grain auger or small amounts manually by hand. The large hopper capacity of up to 2,100 litres reduces the set-up time. Due to the optimised position of the hopper and the power harrow, the centre of gravity is as close as possible to the tractor. The power harrow is ready for solo operation in short time thanks to the coupling hook EURO-CONNECTION and the removable seed hopper.

②

### ELDOS - exact metering

The patented lateral position of the electric driven metering device ELDOS provides ergonomic access for calibration process. The ELDOS, with exchangeable rotors is easy to adjust, without any tools. The e-drill maxi plus has two ELDOS on each hopper side.

③

### Easy adjustment

A parallelogram and a quadruple joint of the e-drill ensure the optimum and independent adjustment of the power harrow and coulter bar for a precise seed application. The sowing depth can be adjusted without tools by spacers which are located at the two outer hydraulic cylinders or mechanically with a crank. The power harrow is ready for solo operation within a short time thanks to the coupling hook EURO-CONNECTION.

④

### Precise seed placement with CX-II coulter

The CX-II coulter is precise, and very easy to set up. It guarantees smooth running and requires less power to pull and less coulter pressure to reach a constant seeding depth of up to 6cm.

⑤

### Perfect covering of the seeds

Harrowing the soil completes the seeding. An S-shaped harrow ensures an optimum covering of the seeds. The working intensity can be set by the stepless pressure adjustment.





Kverneland E-DRILL





Kverneland e-drill compact



Kverneland e-drill maxi

# MAXI AND COMPACT

## THE RIGHT MODEL FOR YOU!

The Kverneland e-drill compact, e-drill maxi and e-drill maxi plus are part of a fully integrated power harrow and seed drill combination.



Kverneland e-drill maxi plus

The seed hopper is mounted directly on the three-point linkage of the Kverneland power harrow for a positive centre of gravity reducing the requirement for lifting power.

The distribution head is mounted directly on the coulter bar, allowing the hopper capacity to be increased to up to 2,100 litres with use of an optional hopper extension.

The patented hinged hopper cover can be fully opened for easy filling with a front-loader, big bags or filling auger. The cover is protected by a bump protection and can flex up to 15°. The loading platform between hopper and distribution head ensures safe access for filling and maintenance purposes. Working lights inside and outside the hopper allow safe use even in darkness.

*Easy access due to patented lateral position of the ELDOS*

Model	Hopper capacity (l)	
	Standard	with extension
e-drill compact	1,100	1,400
e-drill maxi	1,600	2,000
e-drill maxi plus	2,100 l Hopper can be divided for two items 0:100, 70:30 or 60:40	

The e-drill maxi plus is able to apply two items in one pass. It can be two types of seeds or seed and fertiliser or a combination with e.g. slug pellets or only one type of seed by using the complete hopper. The hopper can be divided into an adjustable hopper ratio of 60:40, 70:30 or 100:0 with two independently working metering devices ELDOS positioned either side. The full hopper volume can be used when sowing one sort of seed only. With the double entry CX-II coulter the seeds/fertiliser is applied precise in the seeding row in just one pass.

Electronic low level sensors, adjustable from outside the tank, monitor a range of seeds from small quantities of rape as well as larger quantities of e.g. beans and increase optimum sowing management.



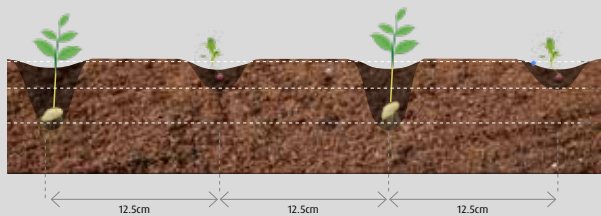
# THE PLUS

## TWO ITEMS IN ONE PASS!

PLACEMENT WITH CX-II DOUBLE-ENTRY COULTER (2 DISTRIBUTION HEADS)  
WITH E-DRILL MAXI PLUS OR E-DRILL COMPACT / MAXI IN COMBINATION WITH A FRONTHOPPER F-DRILL

### 1<sup>ST</sup> POSSIBILITY: 2 ITEMS IN ONE PASS

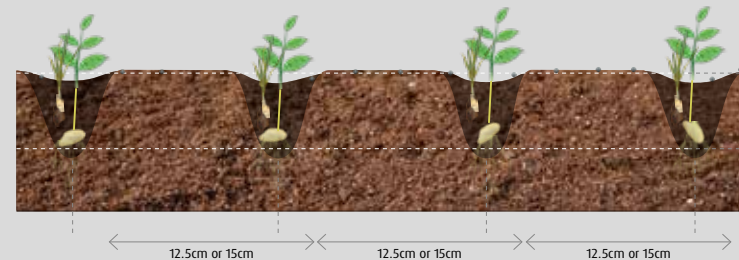
2 SORTS OF SEEDS ALTERNATING (E.G. BEANS / RAPE OR SUNFLOWERS).  
THE DISTANCE IN THE ROW AND THE REPITION BETWEEN THE ROWS IS  
DETERMINED BY THE NEEDS OF THE LEADING CULTURE



With the CX-II double-entry coulters one sort of seed is placed shallower and in a certain distance another seed is placed deeper. One seed is the companion seed.

### 3<sup>TH</sup> POSSIBILITY: 2 ITEMS IN ONE PASS

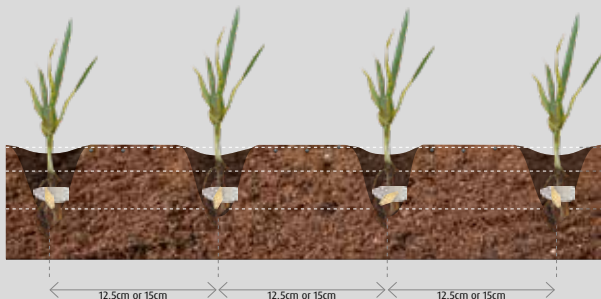
2 SORTS OF SEEDS IN THE SOWING ROW (E.G. BEANS & RYE)



With the CX-II double-entry coulters two sort of seeds are placed in the same sowing row e.g. as companion seed.

### 2<sup>ND</sup> POSSIBILITY: 2 ITEMS IN ONE PASS

1 SORT OF SEED & FERTILISER IN THE SOWING ROW



With the CX-II double-entry coulters one sort of seeds and fertiliser is placed in the same sowing row e.g. wheat with NPK.









- Application of an additional product
- Independent metering device
- Distribution into the soil flow of the following harrow
- Application rates from 50kg/ha (depending on working width and speed)
- Simple calibration
- Wide choice of rotors

## INTEGRATED SEED DRILL A-DRILL

### APPLICATION OF A THIRD ITEM



Control box 5.2



Control box 1.2

a-drill 200	
Hopper capacity (l)	200
No. of spreading deflectors	8
Electric fan drive	●
Hydraulic fan drive	●
Application rate/minute (50kg/ha; 4m working width at 12km/h)	4kg/min
Total weight (kg)	100-115

On all e-drill models (despite e-drill compact mounted on M series) can be mounted the integrated seeder a-drill with 200 litre capacity. The extra hopper with separate metering device allows to apply an additional sort of seeds, fertiliser or other products like slug-pellets into the soil flow of the following harrow in one pass.

There are many reasons to promote the establishment of additional crops or to apply extra nutrients. An additional crop will suppress weed growth and does not compete with the leading crop. The extra crop catch the mineral nitrogen in the soil as well as air nitrogen when mixing with leguminous plants and transform it into organic nitrogen. Thus, the nitrogen will still be available for the next crops. Fertilisers are applied to support plant growth specifically of the youth development and thus more precisely to prevent any losses into the groundwater. In addition soil structure, stability and fertility is improved by root development, diversity, humus build-up and erosion protection. The a-drill has 8 outputs which will spread the flow of seeds or fertiliser by the baffle plate uniformly into the soil flow of the following harrow over the entire working width.

The a-drill is delivered with different types of rotors: for small seeds (rape, mustard, cabbage, clover, etc ...), medium rotors for seeds like vetch, grass or sunflowers and for large seeds (peas, horse beans, etc ...) or fertiliser/ insecticides, it is strongly advised to choose the Flex rotors option, which is able of deforming with large seed diameter. The agitator placed above the rotor ensures a steady stream of seeds. A brush, located at the base of the rotor, will regulate the flow and improve the setting accuracy. Up to 8 different rotors are available for fine, medium and big sized seeds

Seed metering adjustment is released with the control box from the cab. Two control boxes are available:

**Version 5.2** which monitors and controls flow speed regulation, ha and hour counter, self-diagnosis, etc. It can be connected to a radar or Isobus 7-pin tractor speed information plug.

**Version 1.2** which controls rotor speed, the calibration test, the fan (on/off) and the level sensor.



## 3 ITEMS IN ONE PASS

PLACEMENT WITH CX-II DOUBLE-ENTRY COULTER (2 DISTRIBUTION HEADS) &  
APPLICATION WITH THE A-DRILL INTO THE SOIL FLOW OF THE FOLLOWING HARROW (BAFFLE PLATE)

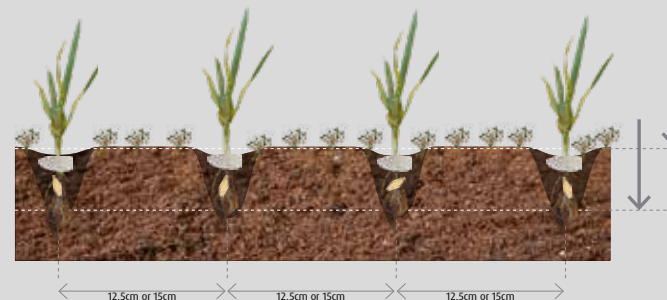
**1<sup>ST</sup> POSSIBILITY: 3 ITEMS IN ONE PASS**  
**1 SORT OF SEED (E.G. WHEAT, BARLEY, BEANS ETC.) & FERTILISER IN THE SOWING ROW AND SLUG PELLETS VIA THE FOLLOWING HARROW**



With the CX-II double-entry coulters one sort of seed e.g. beans, wheat or barley etc. is placed together with a specialized coated fertiliser/microgranule that does not burn the seed in the same sowing row. The fertiliser promotes the youth development of the plant. In addition, a third item such as slug pellet is applied via the baffle plate in one pass with the soil flow of the following harrow.

High yields start in the years before with the right tillage, crop rotation, trafficking, weed control, weather conditions, etc. A good start is provided with nutrients to support the youth development and protection against pests and weeds is also important. Wheat sown with fertiliser and slug pellets in one pass with the a-drill.

**2<sup>ND</sup> POSSIBILITY: 3 ITEMS IN ONE PASS**  
**1 SORT OF SEED (E.G. WHEAT/BARLEY) & FERTILISER IN THE SOWING ROW AND 1 SORT OF SEED (E.G. CLOVER) VIA THE FOLLOWING HARROW**

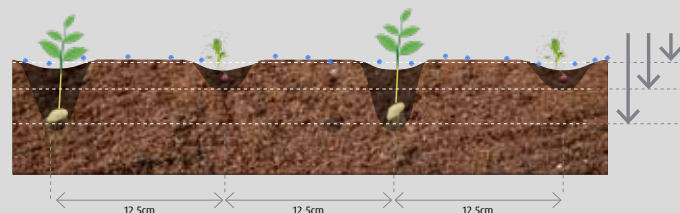


With the CX-II double-entry coulters one sort of seed e.g. wheat, barley etc. is placed together with specialized fertiliser/microgranule which will not burn the seed. With the soil flow of the following harrow a third item such as clover is applied for weed control and nitrogen fixation of the air. The soil is protected against erosion due to the quick plant cover and leaching of nutrients avoided.



Wheat after harvest and clover as a catch crop which was applied with the a-drill.

**3<sup>RD</sup> POSSIBILITY: 3 ITEMS IN ONE PASS**  
**2 SORTS OF SEED IN DIFFERENT SOWING ROWS (E.G. BEANS & RAPE) AND**  
**SLUG PELLETS/FERTILISER VIA THE FOLLOWING HARROW**

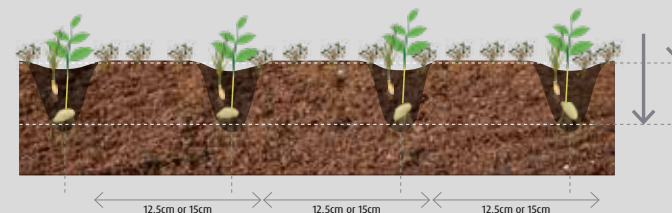


With the CX-II double-entry coulter two seed types are placed not in the same sowing row but in a certain sequence e.g. rape as main crop and beans as a companion crop. Slug pellets are applied with the a-drill via the baffle plate into the soil stream of the following harrow. The beans freeze over the winter and do not compete with the rape in spring time. In addition to N-fixation and the contribution to erosion control, companion crops can provide other benefits such as improved soil fertility, reduced pest pressure and a weed-suppressing effect until the end of vegetation. The coulter pressure to achieve the deeper sowing depth of the beans is very high. For the shallower rape sowing depth the setting of the press wheel of according coulter is adjusted differently via the hole pattern.



Sunflowers are planted in every fourth row, maintaining a distance of 50cm between each seed and sowing them at a depth of 5cm. To increase biodiversity, clover is sown in the remaining rows at a depth of 2cm. Slug pellets were applied using the a-drill. The clover will not freeze but will cover the soil, providing a greening effect. This improves soil stability and carrying capacity. The intensive rooting of diverse root systems protects the soil against erosion. Humus formation is enhanced, while water-holding capacity and infiltration are improved. Nutrients and CO<sub>2</sub> are bound. Additionally, clover being a legume, helps fix nitrogen from the air into the soil. Clover can also be used as forage and as an energy source.

**4<sup>TH</sup> POSSIBILITY: 3 ITEMS IN ONE PASS**  
**2 SORTS OF SEED IN THE SOWING ROW (E.G. BEANS & RYE) AND**  
**1 SORT OF SEED (E.G. CLOVER) VIA THE FOLLOWING HARROW**



With the CX-II double-entry coulter two seed types are placed in the same sowing row e.g. beans/peas and rye/triticale. With the soil flow of the following harrow a third seed is applied e.g. clover for weed control and increase soil fertility due to its ability to fix nitrogen from the air at the roots.



A mixture of small seed such as ray grass, phacelia and a bigger seed like peas in one sowing row and clover via the a-drill to cover the soil quickly.



## OPTIMUM SEED PLACEMENT WITH ELDOS AUTOMATIC AND SAFE

ELDOS is the **electric driven metering device** for Kverneland pneumatic seed drills. It is state-of-the-art technology for perfect seed placement.

ELDOS is steered by Kverneland e-com or e-bas software. The e-com version is fully **ISOBUS compatible**. By the automatic section control, GEOCONTROL, the metering device stops/starts automatically. Double and/or missed seeding on headlands or odd-shaped fields is avoided. Special sensors ensure complete functionality from the tractor cab. An even establishment is achieved by using application maps. Each zone of the field receives the optimum seed rate. The advantages of uniform growth make every subsequent input application more effective.

The e-bas system includes the basic electronics to run and monitor the machine functions via the Focus 3 terminal. The e-bas system controls the ELDOS metering device, the tramlining, the hectare metre and fan speed control.

*Self-controlled and fail-safe.*

Calibration is automatic, and a range of interchangeable seed metering rotors can be swapped - even when the hopper is full - without the need for tools. Sensors monitor the metering rotors and the calibration flap and give a warning if the wrong metering rotors are accidentally installed or the flap is not closed.



Rotor 1  
for high rate cereals



Rotor 2  
for grass or similar



Rotor 3  
for rape and small seeds



Rotor 4  
for low rate cereals



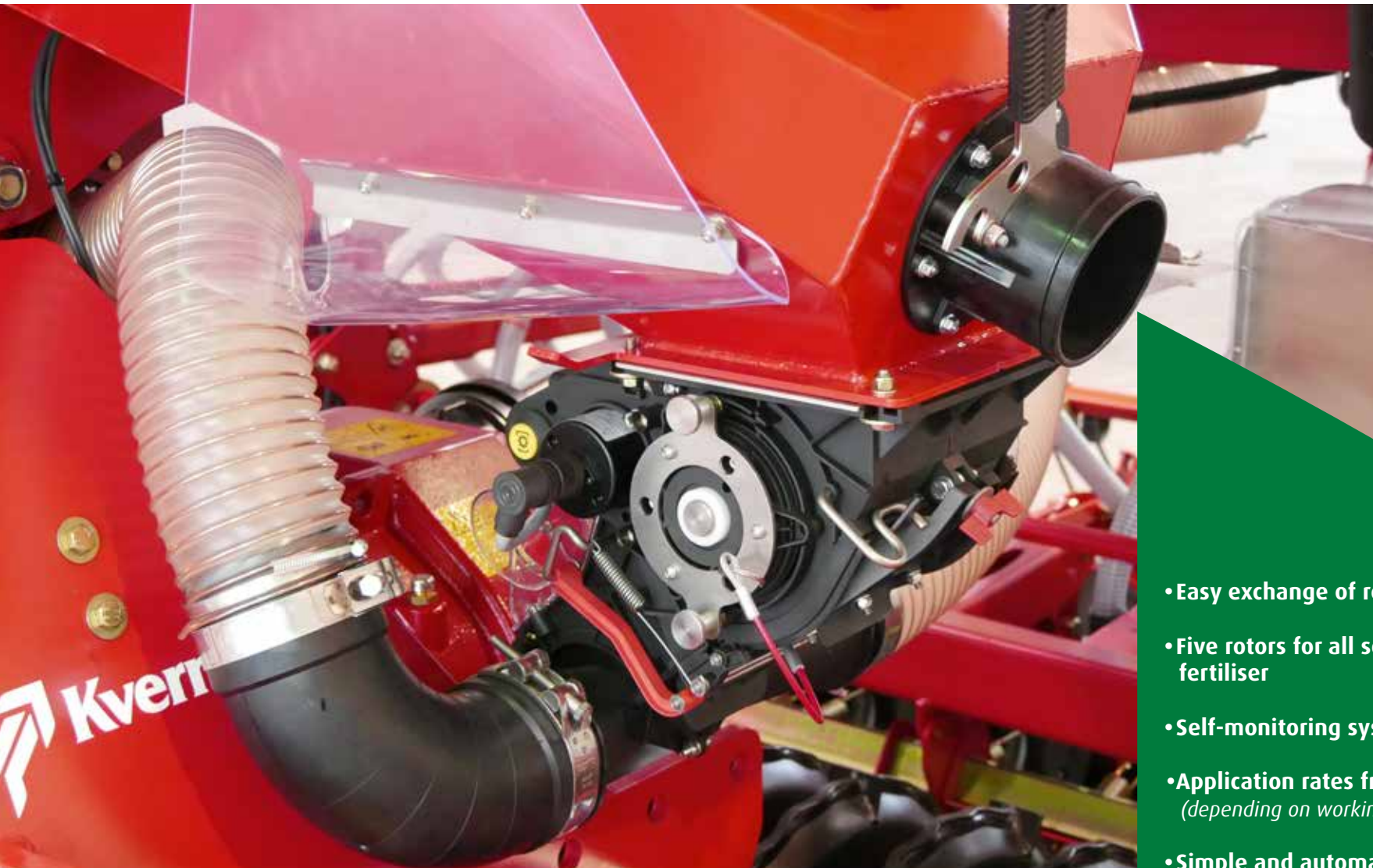
Rotor 5  
for maize, sunflowers and  
greening seeds



Tellus Pro the  
Kverneland  
ISOBUS terminal



A calibration bag and set of digital scales are supplied as standard. The calibration tests are carried out electronically rather than manually.



- Easy exchange of rotors
- Five rotors for all sorts of seeds and fertiliser
- Self-monitoring system
- Application rates from 1-400kg/ha  
(depending on working width and speed)
- Simple and automatic calibration



A green tractor with the number 50 on its side is pulling a red Kverneland drill compact through a field. The machine is creating a furrow in the soil. The background shows a line of trees under a cloudy sky.

### Precise smooth running

The 325mm steel disc and the flat profile disc angle of 5.4° draws a narrow furrow which reduce power requirement.

### User-friendly

The CX-II coulters are completely maintenance free and very easy to set-up. A pre-loaded spring ensures an optimum penetration.

### Optimum seed-to-soil contact

The press wheels (Ø 250mm x 42mm) can be set in flexible or fixed position or can be lifted out of work depending on soil conditions. A scraper is available for sticky soils.

### Centrally adjustment of seed depth

The seed depth adjustment can be controlled centrally via mechanical cranks or as option hydraulically via by two outer hydraulic cylinders.

### Maximum clearance

The coulter staggering of 445mm guarantees save soil flow even with higher rates of residues.

12.5 & 15cm

Two seed row distances are available.



## CX-II COULTER

### FOR PERFECT SEED PLACEMENT

The CX-II coulters are precise, and very easy to set up. The flat cutting angle of the steel disc requires less coulters pressure to reach a constant seeding depth of up to 6cm.

Thanks to the combination of steel disc and flexible plastic disc, there is no need for independent scrapers. The coulters are completely maintenance free!

*Good penetration with less force*

The press wheels ensure the optimum coulters-soil contact. Important for a constant seed depth is the distance between the coulters and the press wheel. The close coupling of the CX-II system increases the seed depth accuracy because the closer the distance the less influence on the seed depth.

The depth adjustment, carried out without using any tools. Three possible adjustments adapted to soil conditions guarantee perfect seed placement. For levelled and even ground it can be set in the **fixed** position. In cloddy or stony conditions it is set in the **flexible position** to ensure smooth running and a perfect ground following. In extreme wet conditions the press wheel can be **lifted** out of work completely. On slightly sticky soils an optional scraper mounted at the press wheel is recommended.



Scraper



Fixed press wheel setting



Flexible press wheel setting



Lifted press wheel setting





## DOUBLE ENTRY COULTER CX-II

### TWO ITEMS IN ONE PASS

The CX-II coulters with a double entry allows to applicate two items in one pass.

*Flexible in application of seeds or fertiliser and depths.*

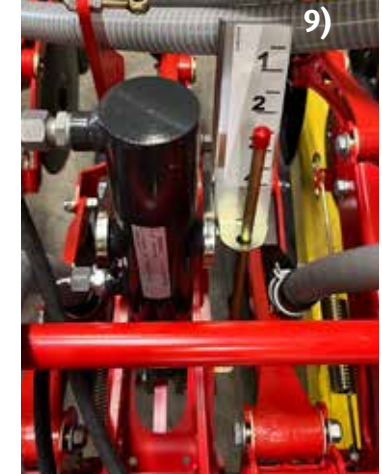
Different distribution heads are available to regulate the seed flow. Both items in one coulters e.g. as seed mixture or seeds together with special fertiliser which will not burn the seeds. This is especially suitable for example phosphoric fertiliser to support the initial germination and youth development of the plants in the most efficient way. Another possibility is to place the seeds alternately row by row with one type of seed per coulters with the option of different sowing depths as companion crops or undersown crops.

In combination with the front hopper or with the divided hopper of the e-drill maxi plus.





## ADJUSTMENT



- 1) Mechanical sowing depth adjustment
- 2) Hydraulic sowing depth adjustment
- 3) LED working lights inside the hopper
- 4) Pre-emergence marker for perfect crop care
- 5) Hydraulic track markers
- 6) The seed flow sensor monitors free seed flow
- 7) Easy access to the ELDOS due to patented lateral positioning
- 8) Mechanical coulter pressure adjustment with scale and crank
- 9) Hydraulic coulter pressure adjustment with scale
- 10) Quick emptying chute for easy hopper clearing
- 11) Low level sensor adjustable from outside the hopper
- 12) Radar speed sensor
- 13) Distribution heads outside the hopper with shut-off valves and half width switch-off
- 13) Road light kit for or safe road transport

## USER-FRIENDLY ADJUSTMENTS FOR PERFECT SOWING DEPTH

The sowing depth can be adjusted mechanically centrally via crank or hydraulically via spacers at the two cylinders without any tools.

The quadruple joint of the coulter bar ensures a constant seed application by the short and long coulters at any sowing depth. The parallelogram of the power harrow guarantees an independent adjustment of the tine depth without any impact to the sowing depth. The complete coulter bar can be lifted e.g. for the preparation of the headlands.

The patented lateral position of the metering device ELDOS ensures a good and ergonomic access. This also facilitates an easy rest emptying and cleaning of the hopper.

In addition the depth adjustment of the following harrow is organised centrally by a crank. The scale allows an easy control, even if the complete harrow is lifted up.

Always the right speed! A radar speed sensor records the speed in order to maintain the relevant distribution rate at the correct time.



The pressure and height of the S-tine following harrow are adjusted using a crank. The angle can also be modified to customise the aggressiveness of the operation.



The sowing depth can be adjusted centrally by spacers at the two hydraulic cylinders without any tools or as standard equipment mechanically by two outer cranks.

The coulter bar can be lifted completely for solo use of the power harrow.



## FLEXIBLE WITH EURO-CONNECTION SOLO OR IN COMBINATION

Despite the integrated concept, the coulter bar can be coupled or uncoupled quickly via EURO-CONNECTION, allowing the power harrow also to be used solo. In addition there is the possibility to remove the hopper too.

### *Flexibility is key*

The coulterbar is attached with the EURO-CONNECTION directly to the roller frame. The coupling hook is similar to the front loader coupling. This can quickly and easily be hitched thanks to the readily accessible hydraulic and electronic interface. Track markers are attached to the power harrow, therefore, the power harrow is ready for solo operation within short time.

The e-drill model is exclusively designed to be combined with Kverneland power harrows. The power harrows need to be equipped with the EURO-CONNECTION coupling system. Conversion made simple! In a matter of minutes, the solo machine can be converted into a power harrow seed drill combination.



Flexible use of the power harrow whether with seed hopper or in solo operation depending on soil conditions.





## iM CALCULATOR APP FREE TO DOWNLOAD

With GPS it is possible for the farmer to accurately seed, spread and spray without any overlap. The iM Calculator app calculates the cost saving by using those GPS functionalities.

*Save seeds and money!*

After filling in the required data, the calculator clearly shows what you can save in terms of money. The amount of seeds saved depends on the size and shape of the field and may amount to more than 5%.

The iM Calculator app for tablets is free to download from the App Store or Google Play.

Please scan the QR code or find the online calculator on our homepage:

<http://imcalculator.kvernelandgroup.com/#/>







### **ZONE A: SURFACE**

Larger aggregates on the surface — weatherproof

### **ZONE B: SEED HORIZON**

Smaller aggregates in the seed zone — good seed-to-soil contact

### **ZONE C: BELOW SEED HORIZON**

Mixed aggregates below seed zone with vertical fractures without restriction — good root development and capillary water access.



## POWERFUL SEEDBED PREPARATION FOR SUCCESSFUL GERMINATION

An optimal seedbed with a load-bearing seed horizon into which the seeds can be embedded at an absolutely even depth over the whole area of the field is the basis for high field emergence and thus for high yields. It requires an unbroken association between the seed horizon and the capillary water conducting lower layer to ensure germination in the absence of rainfall. Additionally, rapid heating of the soil and adequate oxygen supply to the germination seeds and a fine crumbled and uniform reconsolidated seedbed for an optimal seed coverage is important too.

The e-drill models are specifically designed for combination with Kverneland power harrows of the M, H, and S series. Rigid coulters bars can be easily connected to these series, while folding coulters bars are ideally suited for use with the folding Rotago F power harrows

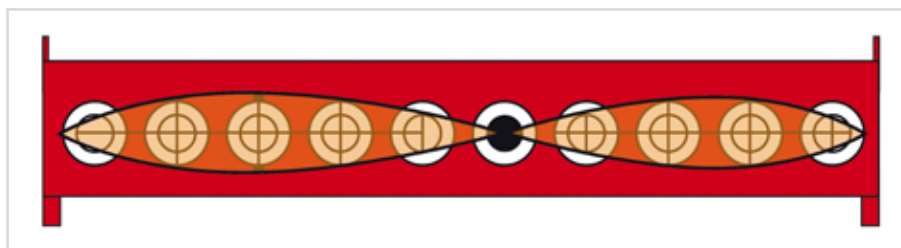
*Quality made in Germany*

Power harrows have long since become typical combination machines because they are largely independent of the soil conditions. On heavy soils it reaches an intensive crumbling. Under light conditions, it can work flat and at a lower rotor speed. Consequently, there is no better alternative for seedbed preparation.

A power harrow together with a seed drill is finally an economic high performance combination. Seed bed preparation and seeding in one pass!



The Quick-Fit tines makes is easy to exchange without any tools.



In order to prevent damage caused by stones and ensure even levelling 4 rotors per meter and the helical tine positioning reduces the peak loads on the driveline and results in smoother running and less fuel consumption.



## FLEXIBLE WITH EURO-CONNECTION SOLO OR IN COMBINATION



### M series

The Kverneland M series is a strong but compact power harrow for tractors up to 140hp. The self-supporting construction of the drive box and the tapered bearings ensure good performance.



### H series

The H Series is the perfect choice for medium-sized farms and contractors for solo seedbed preparation or in combination with a seeder. For tractors up to 180hp.



### S series

A heavy-duty power harrow for all types of work in all conditions. The robust design is suitable for use with tractors up to 250hp.

Kverneland power harrows	Frame	Working width (m)	Min - Max power requirement (HP)	Roller	Combination seed drill
M series	rigid	2.5 - 3.0	70 - 140	Tooth packer roller (ø 575mm), Actiline roller (ø 550mm), Actipack roller (ø 560mm)	e-drill compact
H series	rigid	3.0 - 3.5 - 4.0	85 - 180		e-drill compact,
S series	rigid	3.0 - 3.5 - 4.0 - 4.5	100 - 250		e-drill maxi, e-drill maxi plus,

### **Fantastic germination**

*"We struggled last autumn to get crops in with our previous drill due to constantly changing weather patterns," explains William Orr, of West Mains. Therefore the family-run farming business bought a 4m e-drill maxi, sitting above a 4m NG-S power harrow which create a close-coupled combination with the tractor. The outfit arrived in time to drill 100ha of spring barley. With 300ha of combinable crops, the farm ploughs ahead of the drill. He believes the power harrow's cracker packer provides the optimum level of consolidation directly behind the coulters.*

*"We're really pleased with the seed placement and germination," says William. A Tellus GO in-cab terminal takes care of drill set-up, with the farm yet to take advantage of ISOBUS.*

*"That said, it's already a very easy machine to use. Seed rolls are easy to swap and calibration is straight-forward," he adds. "I don't have auto start/stop on the drill, so I do need to allow for a little overlap."*

*"The e-drill has done a fantastic job." Mr Orr is so pleased with the e-drill that he plans to sow oilseed rape with it, this summer.*

William Orr, West Mains UK

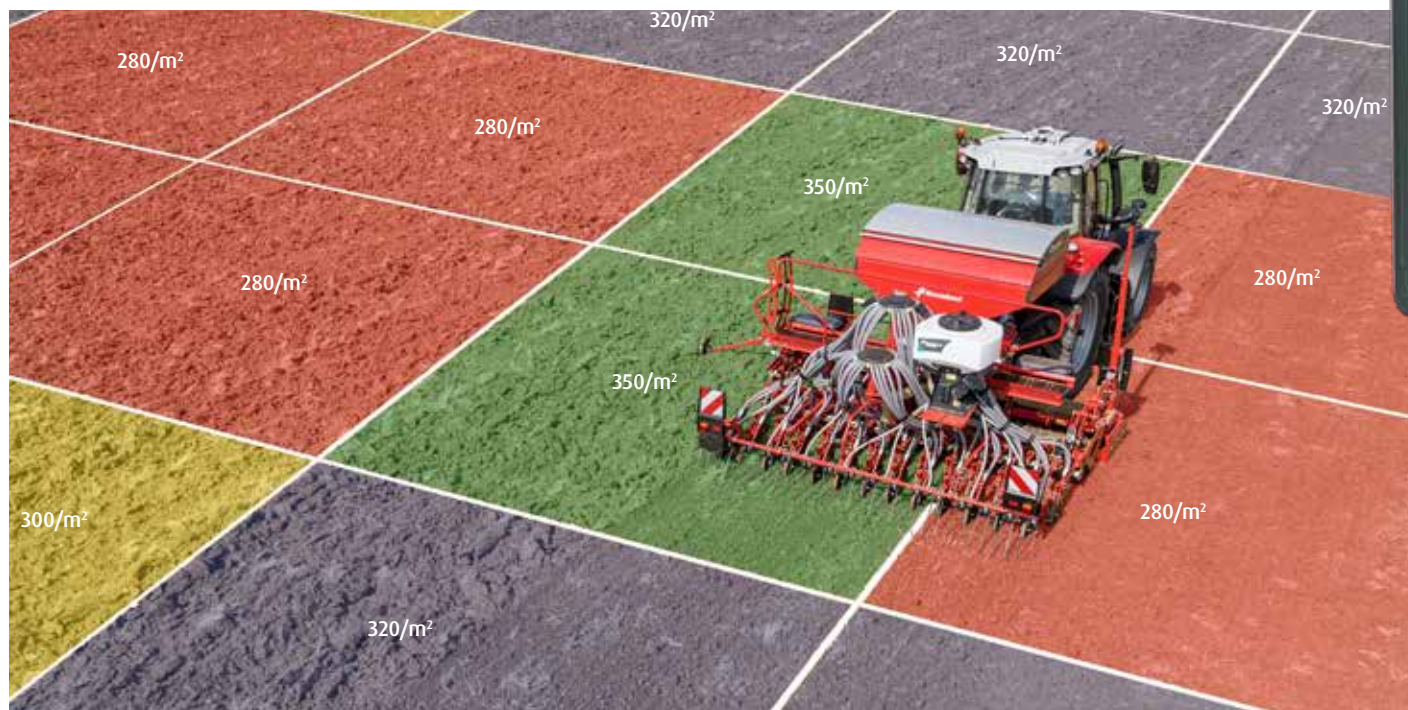






## E-DRILL'S ARE WITH E-COM FULLY ISOBUS COMPATIBLE VARIABLE RATE FOR EVEN ESTABLISHMENT OF CROPS

Variable rate control with an e-drill can be done via an application map, where in combination with GPS, the e-drill automatically changes its seed rate based on a pre-determined amount. The software, working alongside the electrically driven metering device ELDOS, controls and adjusts seed rates for specific areas efficiently. When most of the seeder is within a specific zone defined by the application map, the seed rate for that zone is applied.



*Speed up on the path towards connected agriculture. We offer you numerous options and solutions for how to produce more with less; utilise inputs more efficiently and thereby increase profits and sustainability.*

Example: wheat seeds/ha depending on yield expectation and soil condition. Grid 5x5m

NEW

## Kverneland Sync – the Implement Gateway

### Always Connected – Easy and Direct

With Kverneland Sync, your implement stays connected to Kverneland online services, ensuring efficient, user-friendly data transfer to IsoMatch FarmCentre and ServiceCentre.



#### Remote Service

**Minimize downtime** with remote diagnostics via ServiceCentre, enabling technicians to quickly resolve electronic issues from a distance. See how it works on YouTube.

#### Task Management

**Enhance reporting and transparency** with real-time tracking, performance measurement, and secure data storage in IsoMatch FarmCentre. Perfect for managing logistics and invoicing in machine cooperations.

#### GEOFENCING

**Protect your implement** against theft with GEOFENCING and a backup battery, ensuring localization even when the implement is not connected to a tractor.

## Be a PRO in increasing productivity

The **IsoMatch Tellus PRO** 12-inch terminal provides you with the optimal solution for an all-in-one control system inside the tractor cab. It is the centre for connecting all ISOBUS machines, running precision farming applications and Farm Management Systems. It offers everything you need to get the maximum out of your machines and crop, as well as cost savings in fertiliser, chemicals and seeds by using automatic section control and variable rate control. With the unique dual screen functionality it gives you the opportunity to view and manage two machines and/or processes simultaneously.



## Easy control management

The **IsoMatch Tellus GO+** is a cost-efficient 7-inch terminal, especially developed for managing the machine in a simple way. Easily set up the machine with the soft keys and simply use the hard keys and rotary switch for optimal control while driving.



*im FARMING -  
smart, efficient,  
easy farming*

## The best overview in farm management

**IsoMatch FarmCentre** is the first of a series of telematics solutions. This fleet management solution is applicable for your ISOBUS machines in combination with an IsoMatch Tellus GO+/PRO. Whether you wish to control your fleet, manage tasks remotely or analyse machine performance data, IsoMatch FarmCentre provides this in an efficient web application, linking implements, tractors, terminals and the cloud in one continuous flow of data and connectivity.



### IsoMatch Global 3

GPS antenna enabling satellite navigation for site-specific section control, variable rate application, manual guidance and field registration.



### IsoMatch (Multi)Eye

Connect up to 4 cameras to the IsoMatch Universal Terminals. It gives you full control and overview of the entire machine operation.



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Receive first hand access to information on future developments and updates, operator and spare part manuals, FAQs and local VIP offers. All information is gathered in one place.



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## TECHNICAL DATA

Model	e-drill compact			e-drill maxi			e-drill maxi plus		
Maschine type	cultivator mounted								
Working width (m)	3.0	3.5	4.0	3.0	3.5	4.0	3.0	3.5	4.0
Transport width (m)	3.0	3.5	4.0	3.0	3.5	4.0	3.0	3.5	4.0
Hopper capacity (l)	1,100			1,600			2,100 <sup>1)</sup>		
Hopper extensions (l)	○ 300			○ 400			● 400		
Quick emptying chute	●			●			●		
Low level sensor	●			●			●		
Integrated Seeder a-drill 200	○			○			○		
Combination with f-drill (CX-II double entry)	○			○			-		
Metering device & Tramline system									
Drive 1000 rpm <sup>3)</sup>	○			○			-		
Hydraulic fan drive (without valve)	●			●			●		
Hydraulic fan drive with valve	○			○			○		
Hydraulic fan drive Load Sensing	○			○			○		
ELDOS electric driven metering device (No.)	● (1)			● (1)			● (2)		
e-bas electronic (Focus 3)	●			●			-		
e-com electronic (IsoMatch Tellus Pro/Tellus GO+)	○			○			●		
Metering device control	●			●			●		
Seed rate adjustment	●			●			●		
Seed quantity (min. - max.)	1 - 400kg/ha			1 - 400kg/ha			1 - 400kg/ha		
Shut-off valves for tramlines	○			○			○		
Electric half-width shut-off	○			○			○		
Seed flow sensor	○			○			○		
Pre-emergence marker	○			○			○		
Vertical hydr. folding track marker with notched disc	○			○			○		
Others									
S-tine harrow (10mm)	○			○			○		
Toolbox and Calibration set	●			●			●		
Camera	○			○			○		
Loading step / Platform	●			●			●		
Lighting equipment	○ (LED)			○ (LED)			○ (LED)		
Oil charge hydr. fan (l/min)	30			30			30		
Min. power requirement (HP/kW)	100 / 74	115 / 85	125 / 92	130 / 96	140 / 103	150 / 110	130 / 96	140 / 103	150 / 110
Weight with coulters 12.5cm (kg) <sup>2)</sup>	1,120	1,270	1,350	1,220	1,300	1,390	1,520	1,600	1,910

Model	e-drill compact			e-drill maxi			e-drill maxi plus		
Maschine type	cultivator mounted								
Working width (m)	3.0	3.5	4.0	3.0	3.5	4.0	3.0	3.5	4.0
Coulters & adjustments									
No. of coulters 12.5cm distance (standard)	24	28	32	24	28	32	24	28	32
No. of coulters 15cm distance (option)	20	24	26	20	24	26	20	24	26
CX-II coulters incl. press wheel	●			●			-		
CX-II coulters disc Ø (mm)	325			325			325		
CX-II coulters double entry <sup>4)</sup>	○			○			●		
Press wheel Ø (mm)	250 x 42			250 x 42			250 x 42		
Coulter pressure CX-II disc coulters (kg)	5 - 50			5 - 50			5 - 50		
Mechanic coulters pressure adjustment by crank	●			●			●		
Hydraulic coulters pressure adjustment	○			○			○		
Mechanic central seed depth setting by spindle	●			●			●		
Hydraulic central seed depth setting by two outer cylinder incl. coulters bar lifting	○			○			○		
EURO-CONNECTION	●			●			●		

1) Possible hopper split: 0:100; 40:60 or 30:70

2) Weight without power harrow

3) Two versions of mechanic fan drive: H/S series for complete e-drill range or M series for e-drill compact

4) e-drill plus or e-drill compact/e-drill maxi in combination with f-drill front hopper



The Focus 3 terminal runs the e-bas system to control all basic electronic functions of the machines such as the ELDOS metering device, the hopper low level sensor and various tramlining systems. It provides information on hectare, km/h and fan speed. They are shown on a large, clear digital display. The Focus 3 also has a full diagnostic function for testing machine sensors and outputs. The **Focus 3 is not ISOBUS compatible** and it does not support GPS signals or applications.

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