Kverneland

F-DRILL / F-DRILL CB

FRONT HOPPER AND COULTER BAR

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.

SOW

Effective sowing means speed 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


EFFICIENCY
SUSTAINABILITY
Kverneland
FLEXIBILITY
INTELLIGENCE

EFFECTIVE SOWING
WITH FLEXIBILITY READY FOR THE FUTURE

Flexibility
You want a machine that is flexible in use: ready to be combined with different implements, ready for multi-crop application, ready for operation in different working widths, ready for all kinds of different farming systems, ready for a wide range of seeds (from fine to large) and fertilisers, ready for the combined application of fertiliser and seeds, ready for the combined application of seeds and companion crops and ready for future challenges.

Intelligent
You want an implement that is very precise in application, easy to calibrate, steer and monitor. You want a machine that is ready for farming 4.0. You can rely on the Kverneland ISOBUS systems – and concentrate on your business.

Sustainability
Soil is your most valuable asset. A good soil structure is key for optimum plant development. An even seedbed will ensure consistent field emergence. Therefore, good weight balance, reduced passes and the right timing are key to avoid any soil compaction and wheeling. In addition, multi-cropping is supporting biodiversity and protecting the soil. A defined and precise application of fertiliser have been and will be one additional important aspect of your future farming practices.

Efficiency
You invest in the best equipment for seeding and fertilising. In return, you want the best results and low cost of operation. The f-drill has been developed with a positive load balance to reduce axle loads. The proven venturi system keeps it easy and always in functionality. Increased manoeuvrability and the flexibility to combine the f-drill with different implements makes the machine highly efficient.

In short, it's effective

F-DRILL - FOR EXTRA FLEXIBILITY
READY FOR THE FUTURE

The range of Kverneland f-drill front hoppers are available in two sizes and each volume in two versions. The f-drill compact has a capacity of 1600 litres and the f-drill maxi up to 2200 litres. The standard version is equipped with one ELDOS metering unit. Either seeds or fertiliser can be filled into the hopper. Higher application rates can be achieved with the duo version, as two ELDOS units distribute two times up to 400kg/ha of one type of fertiliser or seeds.

The modern hopper design made from special plastic is lightweight but enables to take big volumes to distribute the weight and ensure good balance. The material is corrosion resistant and ensures a long lifetime. With the f-drill, it is possible to combine several jobs in one pass, which is saving time and money while protecting the soil.

Taking care of the environment

In **spring**, the Kverneland f-drill can be used as a fertiliser hopper with the Optima F or in combination with the Kultistrip for strip tillage. In combination with a power harrow/drill combination, such as the Kverneland e-drill, the f-drill can be used as an additional seed hopper for sowing companion or spring crops.

In **summer and autumn**, the hopper can be combined with the Kverneland power harrow range and the well-known coulter bars to have a compact combination from 3.0 up to 6.0m working width.
In combination with a stubble cultivator and a distribution system, the f-drill can be used for cover crop seeding and reduce one pass of operation. For precision rape seeding in rows the Optima F is the ideal partner for the f-drill range as fertiliser hopper.

Precise application at the right time is the basis for a good start. A quick vegetation through the simultaneous use of different crops at the same time e.g. companion crops, avoids the risk of erosion and ensures that weeds do not go out of control. It also enhances biodiversity. A healthy plant with good rooting is able to use the fertiliser and water efficiently, reduce leaching and increase humus and CO_2 storage.

Model	Liter	No. of ELDOS
f-drill compact	1,600	1
f-drill compact duo	1,600	2
f-drill maxi	2,200	1
f-drill maxi duo	2,200	2
f-drill plus	2,200	2 (hopper split 60:40)

Strip-Tillage: Defined seedbed preparation and fertiliser application in one pass.

Fertiliser and seeds in one pass in combination with a precision drill, seed drill or power harrow coulter bar.

Different seeds in one pass as main and companion crop (in picture sunflowers and clover).

Stubble cultivation and sowing of cover crops in one pass.

TWO HOPPER SIZES AND SYSTEMS
ONE PASS IN COMBINATION

The f-drill has been designed to give farmers and contractors additional flexibility as it adapts to all kind of farming systems. The f-drill is available with capacities of 1,600l as compact and 2,200l as maxi implement. The standard version is equipped with one ELDOS metering unit. Either one item seeds or fertiliser can be filled into the hopper. Higher application rates are obtained with the duo version, as two ELDOS distribute two times up to 400kg/ha of one sort of fertiliser or seeds. The hopper of the f-drill maxi plus model is divided. Either two types of seeds or seeds and fertiliser can be applied in one pass. The ratio of the hopper split is 60:40. The f-drill models are ISOBUS implements and can work as a stand alone seed drill or can be combined with other implements like planters, hoes, strip-tiller, cultivators and more.

One concept from one hand - Thats fits together!

1 Easy filling and lifting

The f-drill has the complete seeder functionality "without" distribution system: integrated electronics, fan and metering device. The hopper made from plastic can easily be filled using e.g. big bags, a front loader or a telescopic handler. The large hopper capacity of up to 2,200 litres reduces the set-up time. The hopper covers open sidewise and lock automatically supported by gas cylinder.
The hopper is resistant against corrosion, especially important by fertiliser. Parking wheels are available for quick and easy storage. The f-drill can easily be hitched as there is no PTO shaft needed. Pipes installed on the side of the cab convey the seed or fertiliser to the coulters by an air stream.

2 ISOBUS electronics and ELDOS

The easily accessible electric driven metering device, ELDOS, with exchangeable rotors is easy to adjust, without any tools. ELDOS is steered by Kverneland e-com software, which is fully ISOBUS compatible. By the automatic section control (GEOCONTROL), the metering device stops/starts automatically for optimal driver comfort. Calibration is automatic and the sensors monitor the metering rotors and give a warning if a wrong metering rotor is accidentally installed. Calibration tests can be stored and reused afterwards when needed. Easy plug and play is possible due to the ISOBUS compatibility.

3 Weight balance

The f-drill is well-balanced and offers even weight distribution. The optimised position of the hopper keeps the centre of gravity close to the tractor. Weights are important, and in many countries the permissible axle loads are regulated. In Germany, for example, a minimum front axle load of 20 % must be maintained. Instead of having only one implement at the rear, the front hopper combination already provides weight at the front. The additional wheel packer with lifting function relieves the load on the front axle while maintaining good steering ability. The packer is self-steering and pull-attached, which reduces power requirement and fuel consumption. A basic or ISOBUS steered comfort version is available. Optionally, a weight kit can be fitted.


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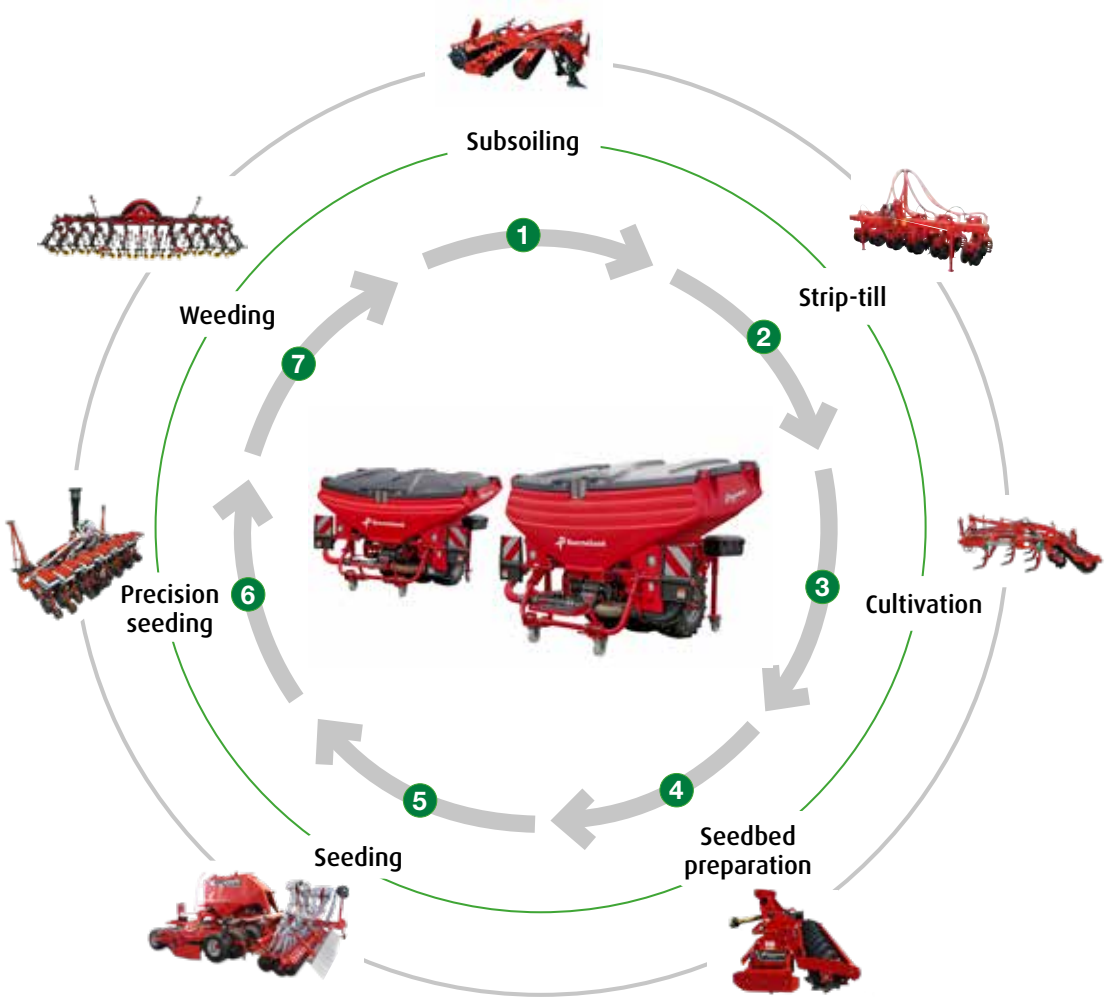


Subsoiling, cultivation, strip-till, hoing and sowing - all can be done together with the f-drill

F-DRILL - FLEXIBILTIY
MANY POSSIBILITIES AND COMBINATIONS

The front hopper models are ready to combine with different implements and for operation in various working widths. Seeding and fertilising, seeding and cultivation or fertilising and cultivation as strip-tillage in one pass is possible as well as the combined application of seeds and companion crops. 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 balanced transport with good view in front and rear of the tractor. The combination makes it versatile to have everything done in one pass.

Flexible in combination

The modular structure of the Kverneland f-drill ensures an even weight distribution across the machine arrangement, giving the tractor the best balance by maximum capacity. This improves both safety and manoeuvrability, whilst at the same time giving the driver an unrestricted view of the entire machine set-up.

F-DRILL MAXI PLUS - TWO PRODUCTS IN ONE PASS
COMBINED APPLICATION INCREASE EFFICIENCY

The Kverneland f-drill maxi plus allows seeding and fertilising in one pass but also the combined application of seeds and companion crops. The dissolved set-up together with the combination of a power harrow and coulter bar shows an optimum weight balance and carries out seedbed preparation, fertilising and seeding in one pass.

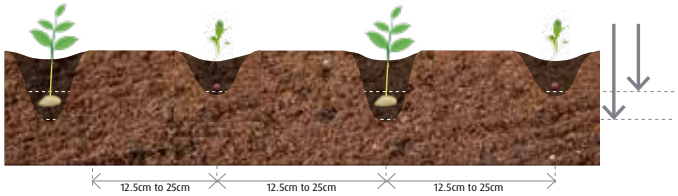
The f-drill maxi plus with a capacity of 2,200 litre hopper volume is using two independent electric driven metering ELDOS devices. The hopper of the f-drill maxi plus model is divided to a ratio of 60:40 and allows to meter and applicate two different products with different rates in one pass. If needed, the operator can also use the complete hopper for one product by quickly removing the separating wall, which is simply screwed in place. This offers full flexibility.

A plus for more

The Kverneland venturi metering system which is less sensitive enables also high application rates and allows the application of two types of different seeds or seed and fertiliser in one pass and in different application rates.

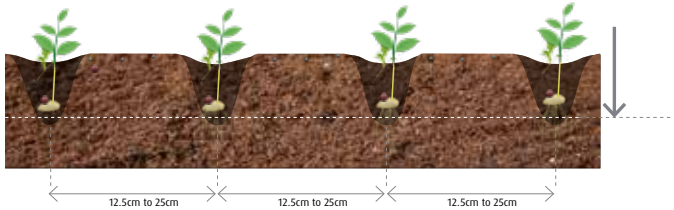
The flexible and individual depth setting of each CX-II coulter with press wheel via the hole and pin system allows different depth adjustment. This is extremely important when sowing two different products in one pass e.g. rape at a shallow depth and companion crops like beans deeper alternately row by row.

TWO PRODUCTS IN ONE PASS
TWO SORTS OF SEEDS ALTERNATING PER ROW AT DIFFERENT DEPTH LEVELS



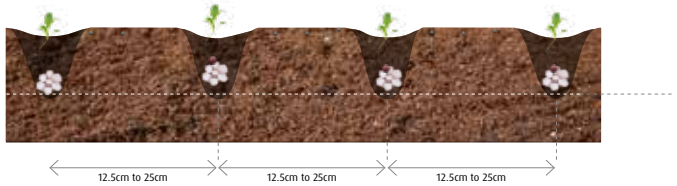
With the CX-II double-entry coulter with press wheel one sort of seed is placed in one row deeper e.g. beans as companion crop and in the next row another seed like rape is positioned shallower as main crop.

TWO PRODUCTS IN ONE PASS
TWO SORTS OF SEEDS IN ONE SEED FURROW



With the CX-II double-entry coulter two different sorts of seeds are placed in the same sowing row e.g. beans and ray grass as undersown seeds.

TWO PRODUCTS IN ONE PASS
FERTILISER AND SEEDS IN SEED FURROW



With the CX-II double-entry coulter one sort of seed is placed together with special fertiliser (without burning properties) in the same seed furrow.


Kverneland
DEUTZ-FAHR

F-DRILL - EFFICIENT IN USE
OPERATOR'S SAFETY AND EASY MANOEUVRABILITY

The compact design of the f-drill front hopper still gives the tractor driver excellent visibility. The f-drill will give optimal balance to the rear and front combination. With tractors able to carry much higher loads on their rear linkages, the need for ballast weight on the front of the tractor is essential. With a nominal volume of up to 2200 litres, the f-drill is that front end weight, adding stability to the tractor, but only when needed. From the tractor cab the operator has the entire machine in view, the working procedures can be monitored constantly and conveniently. The Kverneland f-drill offers the perfect balance between size and compactness!

We make your life easier and more comfortable

The hopper is fitted with an access platform, ideal for maintenance purposes and for the filling operation. A close-fitting 2-part hopper cover protects from dust and water and can easily be opened and closed. The wide opening of the hopper allows filling with a big bag or filling auger. The pyramid sieves of the hopper protect the ELDOS from stones etc. The positioning of all the major components is well-organised and clear. The hydraulic fan and the ELDOS metering device are located in front of the hopper for best access. A radar sensor records the speed in order to maintain the relevant distribution rate at the correct time.

The f-drill made of plastic has a modern design which ensures good emptying, low maintenance and long lifetime, especially when working with corrosive material such as fertilisers.

1,500kg

Load support

F-DRILL - SOIL THE MOST VALUABLE ASSET
WEIGHT BALANCE

Soil compaction caused by the use of heavy agriculture machinery in not optimal soil conditions affects crucial soil functions. Tire pressure, traction and wheel load are well-known key drivers of compaction. Soil structural deformation increased with higher drawbar pull and number of wheeling passes. Especially in wet periods, the separate tillage and seeding system reduced the impact on the soil structure due to better weight distribution.

The optional self-steering and pull-attached wheel packer with lifting function relieves the load on the front axle while maintaining good steering ability. The packer consists from three wheels (3x 31x15.50-15) and takes a bearing load of up to 1,500kg. A bulldozing effect is avoided. The packer can pivot 15° to the right and left while driving and ensures the self-steering effect. The passive self-steering and pull-attached packer reduce power requirement and fuel consumption.

A basic or ISOBUS steered comfort version with an intelligent overload protection is available. The comfort packer is lowered/lifted automatically, if ELDOS will start or stop.

Optionally, weight kits from 100kg up to maximum 600kg are available and can be used as additional ballast for the front axle.

Precision, flexibility and adaptability

PRECISE SEED METERING WITH ELDOS

AUTOMATIC AND SAFE

ELDOS metering device fully controlled via the ISOMATCH Kverneland Tellus Pro or Tellus GO+ terminals.

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 software, which 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.

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 give a warning if the wrong metering rotors are accidentally installed. Additional rotors, a scale and calibration bag are always ready to hand and stored well-protected against dust in a tool box near the metering device.

Good results of seed rate variation across the drill.

The f-drill is available with one or two ELDOS metering units. As duo version, two ELDOS are installed for higher application rates.

The entire system is based on the venturi principle. No additional effort is required to keep the system tight, as with a pressurised system. The venturi system guarantees the accuracy of the desired dosage and also the adherence to the higher application rates are achieved with the Kverneland conveyor system.


ELDOS


DUO

SAFE ON THE ROAD –
UNRESTRICTED VIEW, WELL-BALANCED AND EASY

The front hopper gives the driver an unrestricted view onto the field and the road during transport. This is ensured by its low height and by the distribution pipes running alongside the tractor.

Increasing driver's comfort -
reducing tractor's wear and tear

Made of special plastic the hopper offers large capacity and is at the same time light to carry. Fitted in front of the tractor, the weight balance on both axles is optimal for a smooth run – which is good for both the tractor and driver's comfort.

Quick in the field and quick on the road – easy conversion of the fold coulter bar versions from working to transport position (< 3m) from cab. For better load balance, extra stability and legal road transport, an extra support wheel is available which can be mounted at the power harrow or coulter bar. No uncoupling of the top linkage is needed. The constant hydraulic supporting force on the wheel ensures smooth run and increase driver's safety and comfort. The Rotago F models with support wheel are homologated* at 40km/h in Europe.

The LED road light kits of the f-drill and f-drill CB coulter bars are standard. Optional LED working lights ensure safe operation during the night shifts.

* see local road regulations

Automatically steered folding sequence of power harrow and coulter bar increase drivers comfort.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F-DRILL CB - IN COMBINATION
FOR HIGHER UTILISATION

Increasing performance and utilization is important to reduce farm and production costs. Combining machines and applications by reducing passes is a key strategy for maximizing productivity on the farm. The one pass operation will not only saves time and labour but also minimises fuel consumption and reduces wear and tear on machinery.

The modular structure of the Kverneland coulter bars ensure an even weight distribution across the machine arrangement.

The foldable coulter bar versions perfectly complements for the Rotago F power harrow. It is available in working widths from 4 to 6m and allows a quick coupling with the Rotago F power harrow. The rigid coulter bars are easily combined to the power harrow via the Kverneland EURO CONNECTION.

High performance in combination

Different distribution heads and a certain amount of shut-off valves are available to regulate the seed flow. Both items in one coulter e.g. as seed mixture or seeds together with special fertiliser which will not burn the seeds.

The coulter bars in combination with the front hopper f-drill can be fitted with CX-II or CX-II double entry coulters which allow an additional application of seeds, the combined application of seeds and fertiliser as well as of seeds and companion crops. The coulters are clamped to the toolbar to allow various sowing distances. The coulter bar can be ordered with 12.5cm and 25cm row spacing in order to meet the individual farming system. The right finish is ensured by the S-tine following harrow.

Solo power harrow operation at the headland is made possible by the ability to lift the coulter bar.

CX-II COULTER WITHOUT PRESS WHEEL

CX-II coulter with press wheel

CX-II double entry coulter

CX-II coulter without press wheel

Fixed press wheel setting

Flexible press wheel setting

Lifted press wheel setting

The coulter depth adjustment via the press wheel carried out without using any tools. Three settings guarantee perfect seed placement. For level and even ground it can be set in the **fixed** position. In cloddy or stony conditions in the **flexible position** to ensure smooth running and a perfect ground following. In extreme wet conditions the press wheel can be **lifted** to work without.

CX-II COULTERS FOR PRECISE APPLICATION
TO ENSURE BEST GERMINATION CONDITIONS

Precision in the placement of seeds and fertilisers is crucial for efficient and sustainable agriculture. The development of the f-drill CB coulter bars, along with the CX-II coulters, aims to achieve high yields while minimising environmental impact through reduced soil disturbance, targeted application and wheel compaction.

The CX-II disc coulter ensures smooth operation, minimal soil disturbance, and precise seed placement. Its flat cutting angle of only 5.4° requires less pulling force to reach a constant sowing depth of up to 6cm. By combining a 325mm steel disc with a flexible plastic disc, independent scrapers are unnecessary. The CX-II coulters are maintenance-free and can achieve up to 50kg coulter pressure with a pre-loaded spring. Safe operation is ensured even at high working speeds and with plant residues on the soil surface. With an inter-row coulter staggering of 445mm and a following press wheel for optimum seed/soil contact, it performs well in all conditions.

CX-II coulter with press wheel
Press wheels can be adjusted in fixed, flexible position or can be lifted out to adapt quickly to changing conditions. The individual depth settings allow different depths even within one machine width alternately row by row. This can be crucial for sowing multiple products in a single pass e.g. rape at a shallower depth and companion crops like beans deeper.

CX-II coulter without press wheel
Alternatively, Kverneland provides a cost-efficient CX-II coulter version without a press wheel for wet and sticky soils. The special curved disc design provides sufficient bearing capacity even in lighter conditions. This option may also be appealing for reducing lifting capacity, allowing smaller tractors to operate the seed drill.

CX-II coulter double entry
The CX-II coulter with double entry application tubes allows to applicate two items in one pass. Different distribution heads and a certain amount of shut-off valves are available to regulate the seed flow. Two products placed with one coulter 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.

Clamped CX-II coulter to be flexible in row spacing.

On slightly sticky soils an optional scraper is recommended.

CX-II coulter with double entry for two sorts of application and seeding in one pass.

MANAGE YOUR FARM AS A BUSINESS

WITH OUR ISOMATCH PRECISION FARMING OFFERING

Our precision farming offering is essential in managing your farming business with success. Applying electronics, software, satellite-technology, online tools and Big Data enables you to use your farming equipment more effectively and reach higher profitability of your crops.

iM FARMING - smart, efficient, easy farming

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.

Enhance your success with e-learning

IsoMatch Simulator is a free downloadable virtual training program. It simulates all functions of the IsoMatch Universal Terminals and Kverneland ISOBUS machines. Train yourself and make yourself familiar with your machine to avoid errors and enhance your machine performance.

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.

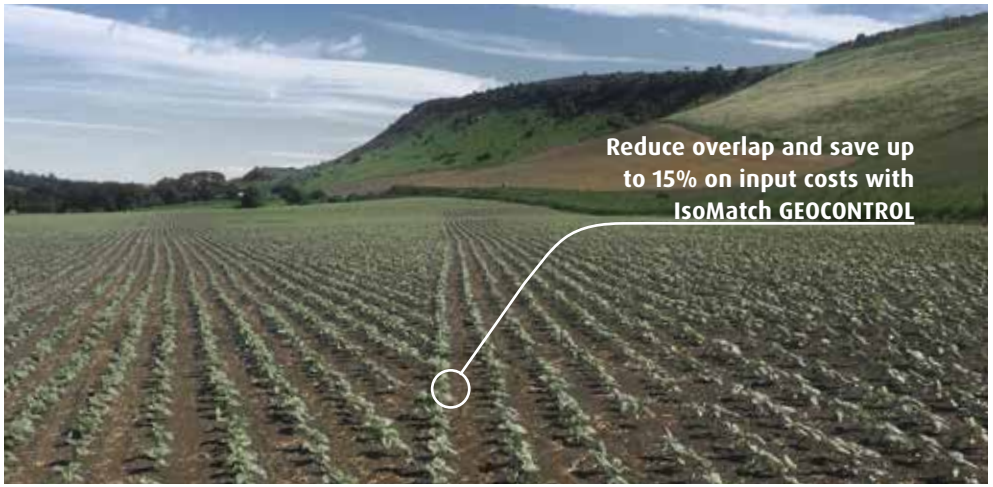
Improve your performance
Maximum efficiency, minimum waste

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.



Maximum savings!
*The **IsoMatch GEOCONTROL** precision farming application includes Manual Guidance and Data Management free of charge. It is possible to expand this application with Section Control and/or Variable Rate Control.*

IsoMatch Grip

This ISOBUS auxiliary device is made for maximum machine control and efficient farming. Operate up to 44 implement functions from one device.

IsoMatch Global 3

The IsoMatch Global 3 is a GPS antenna system with DGPS accuracy for the best precision and productivity possible.

IsoMatch InLine

Light bar for manual guidance including section status information. Manage the distance from the A-B line and steer for the ideal position.

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.

ORIGINAL PARTS & SERVICE
LET'S FOCUS ON YOUR BUSINESS

MYKVERNELAND
SMARTER FARMING ON THE GO

A personalised online platform tailored to your machine needs

With MYKVERNELAND you will benefit from easy access to Kverneland's online service tools.

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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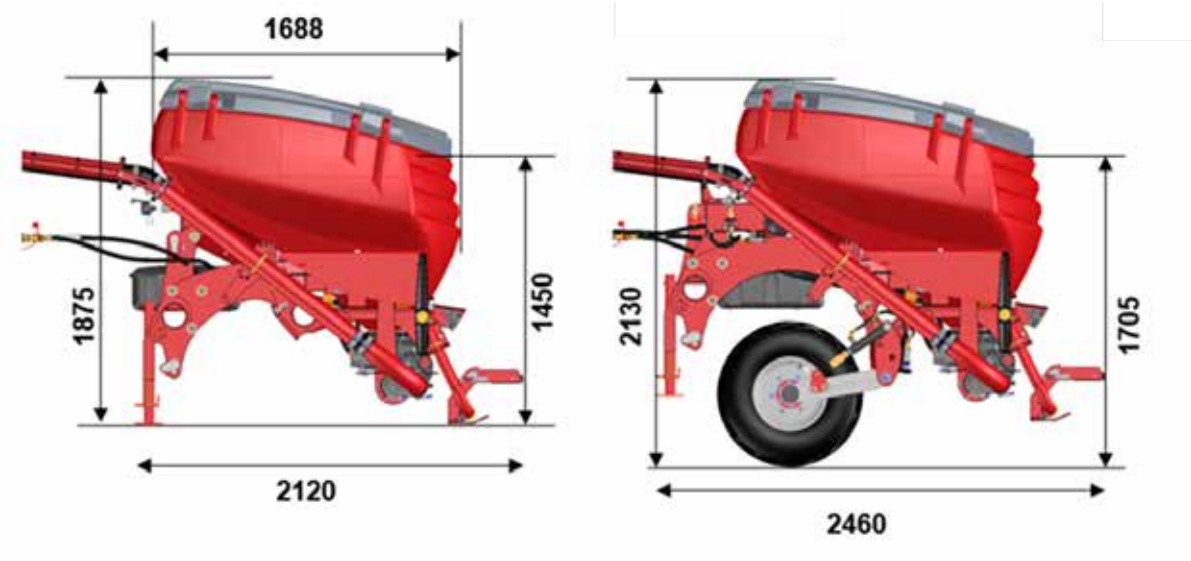
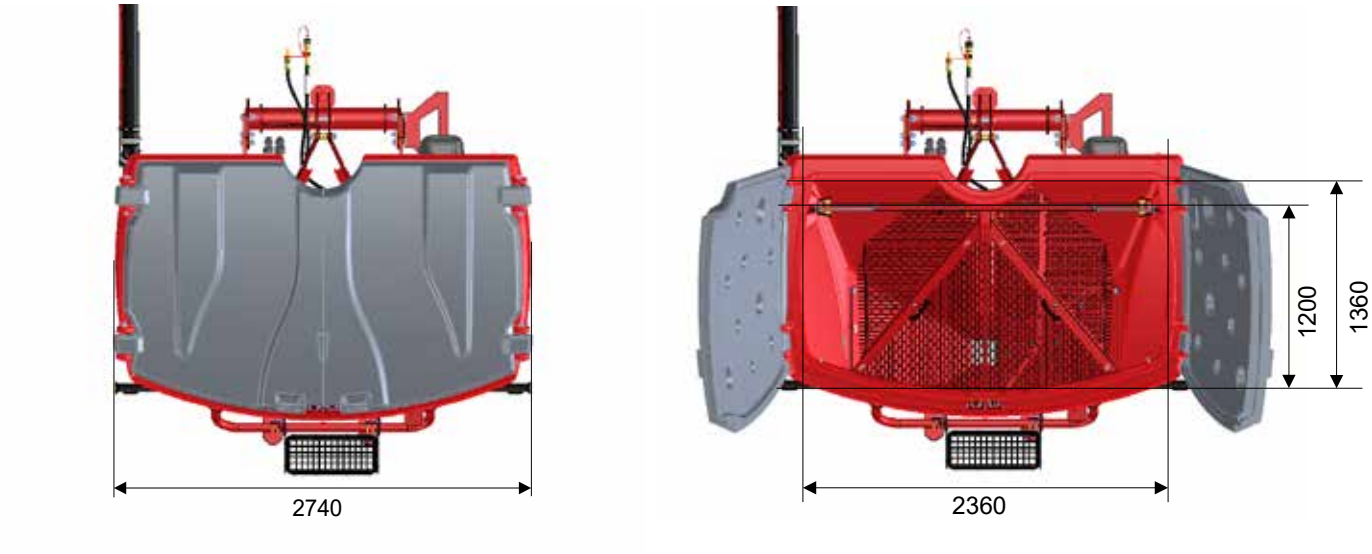
TECHNICAL DATA

Model	f-drill				
Model	f-drill compact	f-drill maxi	f-drill compact duo	f-drill maxi duo	f-drill maxi plus
Machine type	modular mounted				
Hopper capacity (l)	1,600	2,200	1,600	2,200	2,200 (60:40)
Machine width (m)	2.75	2.75	2.75	2.75	2.75
Weight base machine (kg)	658	678	732	752	767
Weight optional front packer (3x 31x15.50-15) (kg)	361	361	361	361	361
Ballasting weights 100 - 600kg (steps 2 x 50kg)	Option	Option	Option	Option	Option
Min. power requirement (HP/Kw)	106/80	173/130	106/80	173/130	173/130
Hydraulic fan drive closed centre	Standard	Standard	Standard	Standard	Standard
Hydraulic fan drive open centre with adjustment valve	Option	Option	Option	Option	Option
Hydraulic fan drive power beyond load sensing	Option	Option	Option	Option	Option
Oil charge hydr. fan (l/min)	30	30	40	40	44
ELDOS electric driven metering device (no.)	1	1	2	2	2
Metering units in relation to the no. of distribution heads	1	1	2	2	2
e-com electronic (IsoMatch Tellus GO+ / Tellus Pro)	Standard	Standard	Standard	Standard	Standard
Working switch for metering unit (start/stop) on top link for older tractors	Option	Option	Option	Option	Option
Metering device control	Standard	Standard	Standard	Standard	Standard
Seed rate adjustment	Standard	Standard	Standard	Standard	Standard
Seed quantity (min-max.) - kg/ha*	1-400	1-400	2-600	2-600	2 x 1-400
Ø 100mm distribution system	Standard	Standard	Standard	Standard	Standard
Ø 135mm distribution system	Option	Option	Option	Option	Option
Radar speed signal	Standard	Standard	Standard	Standard	Standard
Calibration set	Standard	Standard	Standard	Standard	Standard
Quick emptying chute	Standard	Standard	Standard	Standard	Standard
Low level sensor (no.)	Standard (1)	Standard (1)	Standard (2)	Standard (2)	Standard (2)
Platform	Standard	Standard	Standard	Standard	Standard
Lighting equipment	Standard	Standard	Standard	Standard	Standard
Working lights	Option	Option	Option	Option	Option
Working width seed coulter bar grain (m)	rigid: 3.0m; 3.5m; 4.0m /fold: 4.0m; 4.5m		fold: 5.0m; 6.0m		rigid: 3.0m; 3.5m;4.0m / fold: 4.0m (CX-II double entry)
No. of precision planter rows	4 - 8	4 - 8	9 - 16	9 - 16	-
Hydr. spool valves 1 sa + pressless return for fan drive	Standard	Standard	Standard	Standard	Standard
Hydr. spool valves 1 sa + pressless return for fan drive and optional comfort front packer	Option	Option	Option	Option	Option
Additional hydr. spool valves 1 da for optional basic front packer lifting	Option	Option	Option	Option	Option

* with 15km/h working speed


1688
1875
1450
2120
2130
1705
2460


2740
1200
1360
2360

TECHNICAL DATA

Model	f-drill CB			f-drill CB F			
Type	Coulter bar	Coulter bar	Coulter bar	Coulter bar	Coulter bar	Coulter bar	Coulter bar
Frame	rigid	rigid	rigid	foldable	foldable	foldable	foldable
Working width (m)	3.00	3.50	4.00	4.00	4.50	5.00	6.00
Transport width (m)	3.00	3.50	4.00	3.00	3.00	3.00	3.00
Linkage to power harrow	EURO CONNECTION	EURO CONNECTION	EURO CONNECTION	CAT. II - Rotago F	CAT. II - Rotago F	CAT. II - Rotago F	CAT. II - Rotago F
CX-II coulter with press wheel	Standard	Standard	Standard	Standard	Standard	Standard	Standard
CX-II coulter without press wheel	Option	Option	Option	Option	Option	Option	Option
CX-II double entry coulter with press wheel*	Option	Option	Option	Option	-	-	-
Row distance (cm)	12.5 / 15.0	12.5 / 15.0	12.5 / 15.4	12.5 / 25	12.5 / 25	12.5 / 25	12.5 / 15 / 25
No. of coulters	32 / 16	32 / 16	32 / 16	32 / 16	36 /18	40 / 20	48 / 40 / 24
No. of conveyor line	1 / 2*	1 / 2*	1 / 2*	1 / 2*	1	2	2
Press wheel Ø (mm)	250 x 42	250 x 42	250 x 42	250 x 42	250 x 42	250 x 42	250 x 42
Press wheel scraper	Option	Option	Option	Option	Option	Option	Option
Coulter pressure CX-II coulter (kg)	5 - 50	5 - 50	5 - 50	5 - 50	5 - 50	5 - 50	5 - 50
Coulter bar lifting	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Mechanic coulter pressure adjustment by crank	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Hydraulic coulter pressure adjustment	Option	Option	Option	Option	Option	Option	Option
Hydraulic central seed depth setting	Standard	Standard	Standard	Standard	Standard	Standard	Standard
S-tine harrow (10mm)	Option	Option	Option	Option	Option	Option	Option
Ø of the distribution system (mm)	1 x 100 2 x 100*	1 x 100 2 x 100*	1 x 100 2 x 100*	1 x 135 2 x 135*	1 x 135	2 x 100	2 x 100
Weight with CX-II coulter with press wheels, 12.5cm row distance and following harrow (kg)	-	-	-	1220	1325	1395	1520
Weight with CX-II double-entry coulter, 12.5cm row distance and following harrow (kg)	-	-	-	1275	-	-	-
Weight with CX-II coulter with press wheels, 12.5cm row distance and following harrow and transport supporting wheel (kg)	-	-	-	-	-	1610	1735
Combination with Kverneland front hopper	f-drill compact f-drill maxi f-drill maxi plus*	f-drill compact f-drill maxi f-drill maxi plus*	f-drill compact f-drill maxi f-drill maxi plus*	f-drill compact f-drill maxi f-drill maxi plus*	f-drill compact f-drill maxi	f-drill compact duo f-drill maxi duo	f-drill compact duo f-drill maxi duo

*Only in combination with front hopper f-drill maxi plus and coulter bar with CX-II double entry coulters

Matrix of f-drill combinations with coulter bar or precision drill rows																	
Front hopper f-drill	No. of ELDOS	Seed coulter bar											Precision drill row				
Coulter/rows		CX-II					CX-II double entry			CX-II			Optima rows				
Machine type		rigid			fold		rigid			fold							
Working width		3.0m	3.5m	4.0m	4.0m	4.5m	3.0m	3.5m	4.0m	4.0m	5.0m	6.0m	4	6	8	12	16
f-drill compact (1,600l)	1	✓	✓	✓	✓	✓							✓	✓	✓		
f-drill maxi (2,200l)	1	✓	✓	✓	✓	✓							✓	✓	✓		
f-drill compact duo (1,600l)	2										✓	✓				✓	✓
f-drill maxi duo (2,200l)	2										✓	✓				✓	✓
f-drill maxi plus (2,200l)	2						✓	✓	✓	✓							
ø 100mm distribution system		✓	✓	✓	✓		✓				✓	✓	✓	✓		✓	
ø 135mm distribution system						✓		✓	✓	✓					✓		✓

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