

## 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.





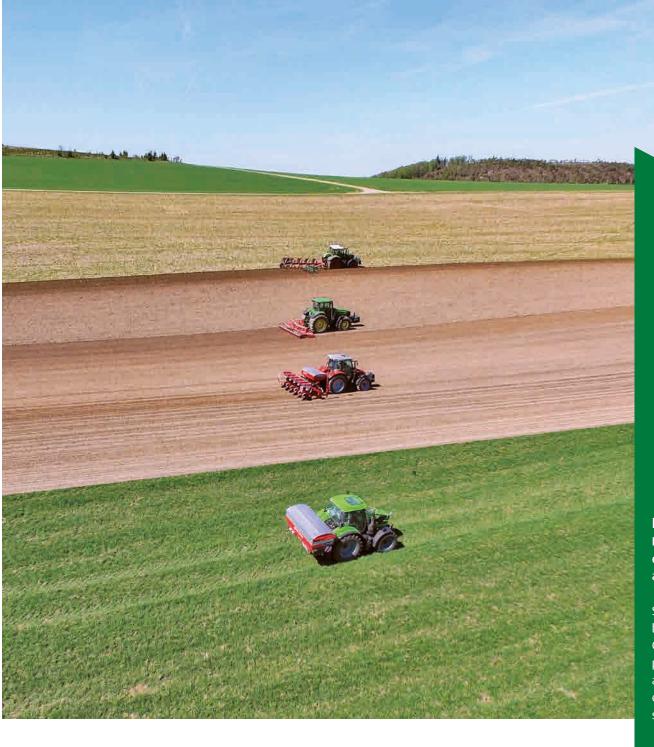
## YOUR KVERNELAND INTELLIGENT FARMING SOLUTIONS



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 has to 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.



#### **Kverneland Group**

Kverneland Group is a leading international company developing, producing and distributing agricultural machinery and services.

Strong focus on innovation allows us to provide a broad product range with high quality. Kverneland Group offers an extensive package aimed at the professional farming community, covering the areas of soil preparation, seeding, forage and bale equipment, spreading, spraying and electronic solutions for agricultural tractors and machinery.

### **SMART FARMING**

### CONVENTIONAL AND CONSERVATION TILLAGE

#### **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 absorbation

#### **CONSERVATION TILLAGE**

#### Mulch Tillage

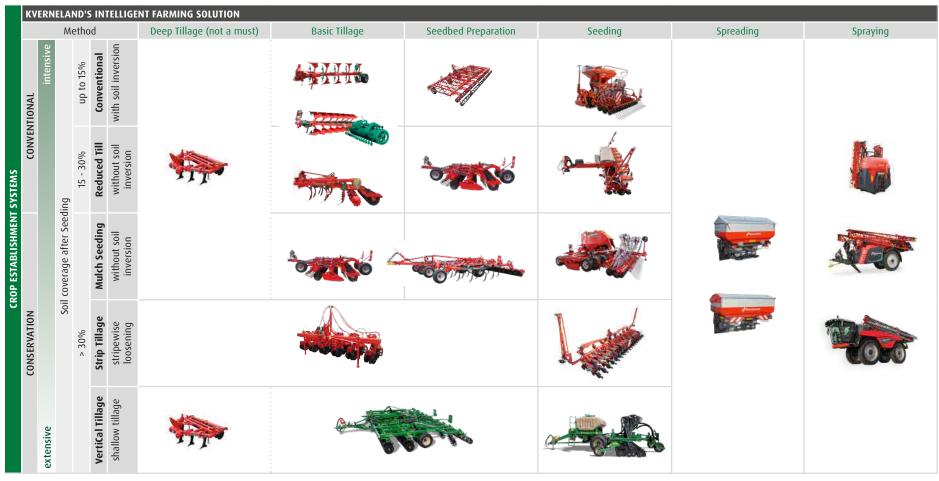
- Reduced intensity in terms of depth and frequency
- More than 30% of residues are left on soil surface
- Extended repose period of the soil
- Cultivator and/or discs incorporate the crop residues within the top 10cm of soil for stable bearing soil
- Full-width tillage seedbed preparation and seeding 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

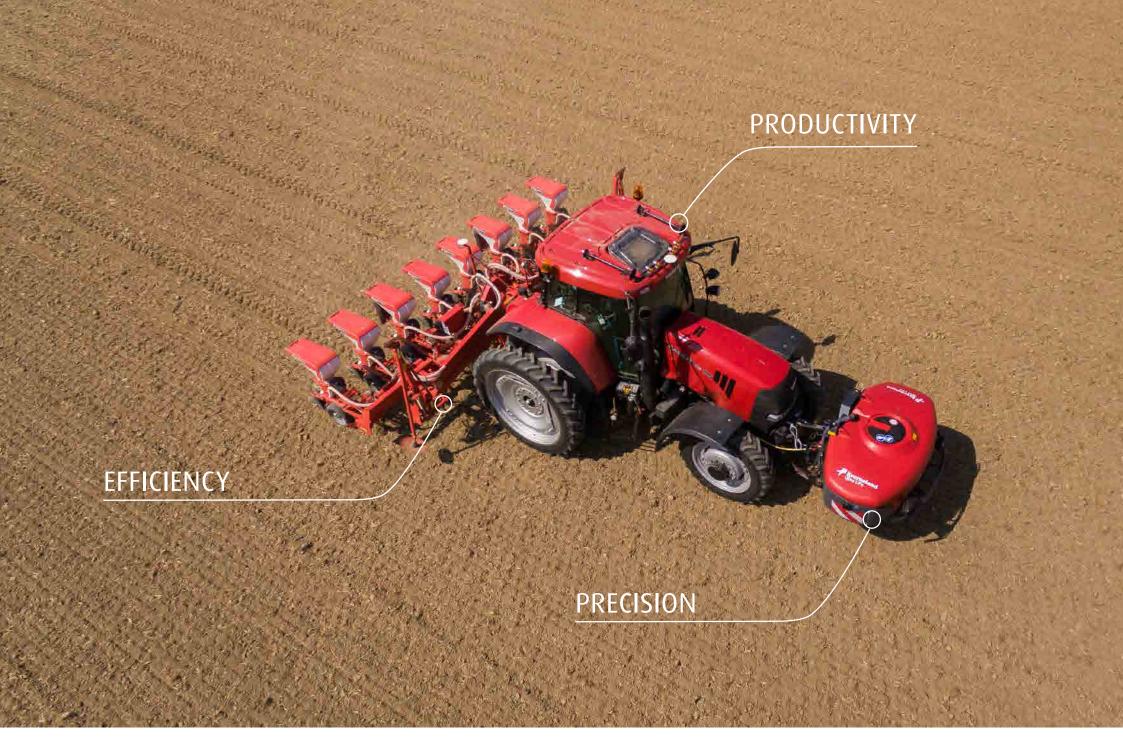
- Zonal strip loosening before or during seeding of up to 1/3 of the row width (Loibl, 2006). Up to 70% of the soil surface remains untouched
- Strip-till combines the soil drying and warming benefits of conventional tillage with the soil-protecting advantages of no-till by disturbing only the area of 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



CLASSIFICATION OF TILLAGE METHODS KVERNELAND (Source: adpated from KTBL)





## PRECISE, EASY AND COST EFFECTIVE SPRAYING EVERY CROP DESERVES THE BEST CARE

#### **Efficiency**

When farming means business, efficient management of your crop protection to secure a profitable harvest is a decisive factor. Every crop deserves the best care: the right actions at the right moment.

#### **Productivity**

When farming the land you need to respond to specific demands of your crop. Raising productivity and output requires more precision in farming. You are facing specific field conditions, that may vary a lot, and weather conditions that could change per hour. Details in timing and execution can have a major impact.

#### **Precision**

High precision spraying is an important factor. You want to be sure that the product you apply is perfectly dispersed giving value out of every drop of spray liquid or liquid fertiliser, even at high speed. The job has to be done with the highest possible efficiency. You want to cut back waste, reduce input costs and minimise the impact on the environment.

With the Kverneland iXtra LiFe you are sure that your crop gets the best care

## KVERNELAND IXTRA LIFE IN FRONT OF A GOOD START

The iXtra LiFe is not only a front tank to apply liquid fertiliser in combination with a seeder, but has evolved into a universal row crop sprayer. It is an ISOBUS implement for row application for all kind of liquids. The iXtra LiFe has it's own sprayer pump, pressure regulator, electronics and section valves, so it can work stand alone or together with other implements like seeders, planters, hoes and cultivators.

Maximum output



#### Large Capacity

With a maximum tank volume of 1300 litres of liquid fertiliser (nominal volume of 1100 litres) the iXtra LiFe is well balanced and gives an equal weight distribution with 65 litre clean water on both sides of the front tank.



#### Ease of Use

The iXtra LiFe can easily be hitched. There is no PTO shaft needed because it has its own hydraulic driven pump available.

Easy plug and play is possible due to the ISOBUS compatibility. Parking wheels are available for quick and easy storage.



#### **ISOBUS Electronics**

Up to 18 individual sections combined with electric driven seeding rows on the seed drills and planters ensure an exact row switching without overlap on both seeds and fertiliser. The IsoMatch Tellus with IsoMatch GEOCONTROL® with GPS control row by row automatically for optimal driver comfort.



#### **Compact and Complete**

Complete sprayer functionality "without" boom: integrated electronics, pressure regulator, section valves and cleaning system.



#### iXclean®

The iXtra LiFe has an integrated agitation and cleaning system as standard: ENFO inside®. This smart technology optimises filling and cleaning, even when the tank is still filled. Accurate application, no waste of liquid and saving water are the benefits for you and your environment.





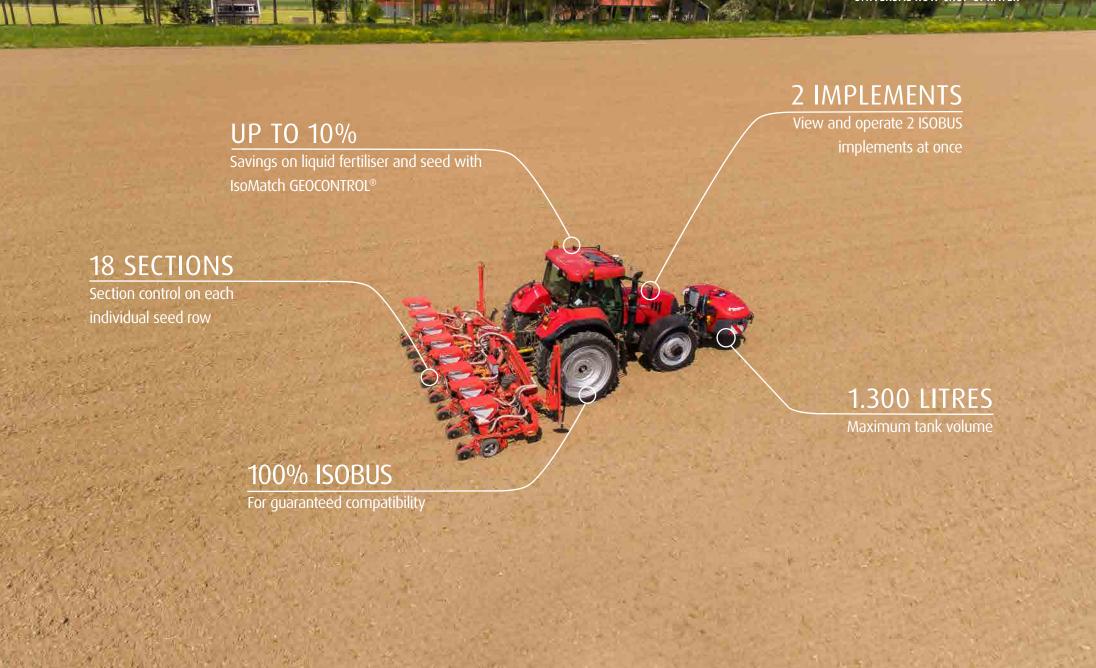
# IXTRA LIFE THE COMBINATION THAT GIVES MORE STRENGTH TO YOUR CROP

The innovative combination of an iXtra LiFe and precision seeder ensures that seeds are sown at the right place and applies the correct amount of liquid fertiliser at the same time. For the best start of the crop, the liquid fertiliser is placed close to the seed.

With the iXtra LiFe it is possible to combine 2 tasks in 1 pass, so saving time and money and less soil compaction at the same time.

Taking care of the environment

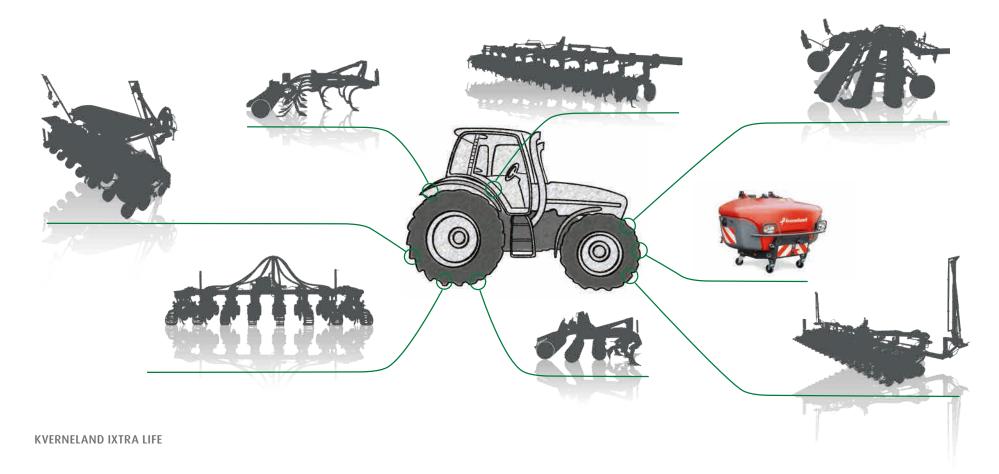
By running IsoMatch GEOCONTROL® the overlap can be reduced with section control for seed and liquid fertiliser. With variable rate application it is also easy to adapt to a local (soil) situation, because of relatively small working widths.



### **KVERNELAND IXTRA LIFE**

### FOR UNIVERSAL USABILITY

The iXtra LiFe universal row crop sprayer can be used in combination with all machines who are prepared to work in combination with the application of liquid fertiliser.



#### Precision seeding

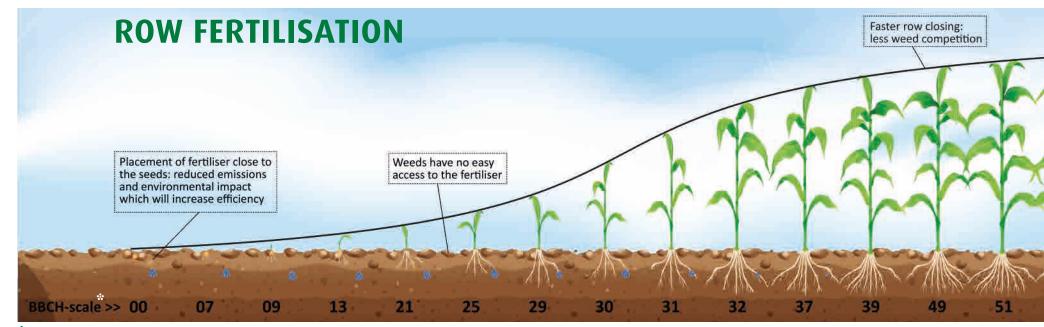
"A big advantage of the iXtra LiFe front tank is that we can operate and control the iXtra LiFe and the seeders (Monopill and Optima seeding machine) via the same screen and terminal, the IsoMatch Tellus, and they are also connected to each other. One of the main reasons we have chosen for the iXtra LiFe and the two seeding machines is the option to be able to switch on- and off sections of the rows at the headland, in tramlines and wedged shaped fields, mainly to avoid overlap.

The ISOBUS compatibility makes it possible to change from the Monopil seeder to the Optima seeder very quickly. By plugging in the IsoMatch Tellus all data from the seeder is immediately available at one screen, avoiding any mistakes regarding working widths, row distance and other issues.

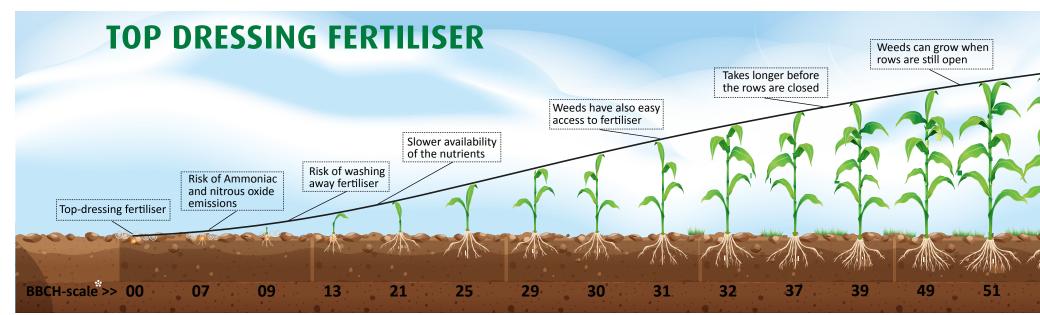
Due to the innovative technology from Kverneland we are able as a contractor, by using the iXtra LiFe front tank and the seeders, to make better use of the minerals in the root zone of the soil by applying them in the row during seeding. At the same time, we are taking better care of the environment by saving fertiliser and minerals."

Arjan Breure, The Netherlands Contracter Seeding, planting, nursing and harvesting. Silage maize, sugar maize and pumpkins

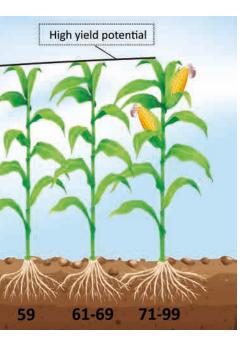




<sup>\*</sup>BBCH Biologische Bundesanstalt, Bundessortenamt und Chemische Industrie). The BBCH-scale is used to identify phenological development stages of plants.



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### KVERNELAND IXTRA LIFE ROW FERTILISATION

The iXtra LiFe front tank stands for precision farming. The ISOBUS compatible electronics ensure there is no overlap by operating with section control for seed and fertiliser.

#### Efficient

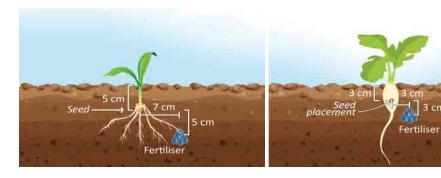
Row fertilisation is a way to increase efficiency and save money due to a better placement of the fertiliser near the seeds, close to the roots. Because of the increased efficiency lower rates can be used, creating space in tight fertilisation plans for additional use of organic fertilisers. This contributes to increase soil organic matter content and improve soil fertility.

#### Smart

The iXtra LiFe nozzles follow the status of the ISOBUS planter when switching on or off sections and regulates the application rates based on driving speed. The iXtra LiFe can also work standalone, for example in combination with inner row cultivators or mechanical weeding machines.

#### **Easy**

IsoMatch GEOCONTROL® manages your dosing rates and section status for both the liquid application and the planters seed rows automatically, so the driver can focus on the seeding process.





## ISOMATCH GEOCONTROL® BRINGS CLEAR BENEFITS

#### IsoMatch GEOCONTROL®

IsoMatch GEOCONTROL® is an additional software application within the IsoMatch Tellus GO or PRO that helps you to control all ISOBUS compatible Kverneland Group machines such as sprayers, spreaders or seeders. Combined with a GPS receiver it fulfils the future needs in terms of easy, smart and efficient farming.

#### Section Control

Automatic switching on and off implement sections on headlands, boundaries and already covered areas to minimise overlap.

#### **Variable Rate Control**

Automatically adjusts the implement application rate based on input from the field prescription or crop sensors.

#### **Documentation**

Saves all operational job data and field maps for exchange via USB to farm management information systems.

#### Manual Guidance

- Advised driving position using guidance lines (straight, curved or combined) in the field and on headlands.
- Extendable using the optional IsoMatch InLine light bar, to place guidance in line of sight.
- Smart boundary recording: independent from the working width, even without any connected implement.
- Boundary shrinking: create new inner boundaries by setting the desired width of the headland.
- Manual guidance for all operations, includes non-electric or non-ISOBUS implements. e.g. cultivators, mowers, tedders etc.

#### **Clear Benefits**

- Easy and comfortable operation, due to not having to manually switch on or off sections or change the application rate. You can focus 100% on the driving in the field.
- More efficient work and avoiding overlap leads to cost savings of 5-10% on e.g. fertiliser or pesticides.
   Better growing conditions and increased yield.
- With IsoMatch GEOCONTROL®, working at night becomes very easy.

#### iM Calculator App - Free to Download

After filling in the required data, the calculator clearly shows what you can save in terms of money. With GPS it is possible to accurately seed, spread and spray without any overlap. The iM Calculator App calculates the cost saving by using those GPS functionalities.

The amount of liquid fertiliser and seed saved depends on the size and shape of the field and may amount to more than 10%.\* The iM Calculator App suitable for tablets is free to download from the App Store or Google Play. The desktop version of the calculator can be found at: http://imcalculator.kvernelandgroup.com



according to internal tests



#### Overlap of Seed or Fertiliser in a Row

The electric driven seeding elements in combination with GPS and IsoMatch GEOCONTROL® automatically switch on or off in exactly the right place, ensuring that there is no overlap in the headland or in any row that has already been seeded. This is especially the case in triangular shaped fields and on curved or irregular shaped headlands.



#### Two Screens - One Terminal

The IsoMatch Tellus PRO terminal has the capability to view and operate with 2 different ISOBUS interfaces at once. This allows to direct control of 2 implements at the same time, like the iXtra LiFe and the seeding machine, without switching between screens. You will always have a clear overview of your work.





## 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 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

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



#### IsoMatch InLine

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

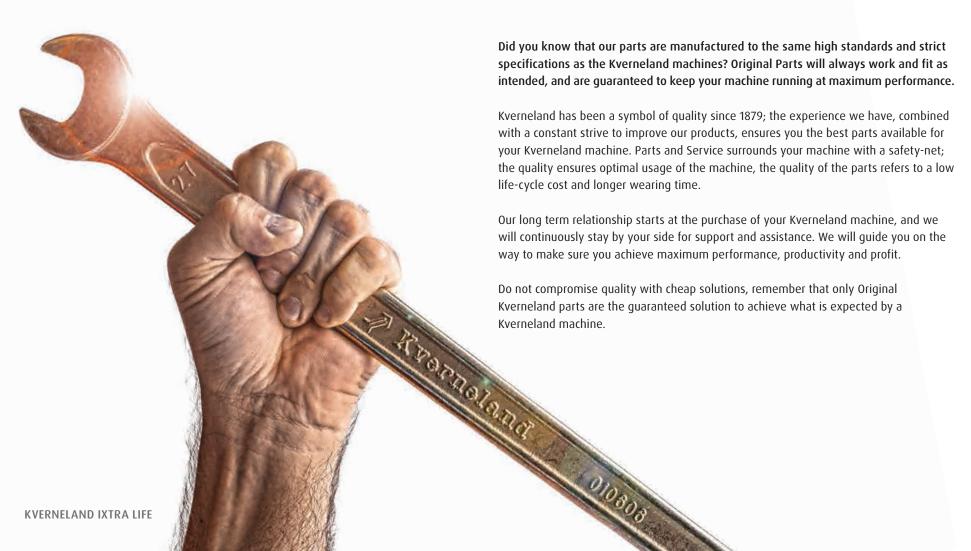


#### IsoMatch (Multi)Eye

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 ONLY ORIGINAL PARTS WILL KEEP YOUR MACHINE A KVERNELAND



### **TECHNICAL DATA**

Kverneland iXtra LiFe	
Sections	4-6-8-12-16-18
Nominal tank capacity (I)	1100
Maximum tank capacity (I)	1300
Clean water tank capacity (I)	2 x 65
Empty weight (kg)	221
Front linkage	Cat. II
Piston membrane pump (hydraulic driven) (l/min)	200
Electrical level indicator	Standard
Control panel	Electrical (ISOBUS)
Accessories (Also Loose Available)	
Hand wash tank	•
Road lights	•
Parking wheels	•
ITH Front to Rear	•
Suction hose frame	•
IsoMatch Tellus Terminal	•
IsoMatch Global	•
IsoMatch Eye (camera)	•
IsoMatch MultiEye	•



#### **Easy Filling**

With a 2" CAMlock connection on the front side there is a possibility for filling or pumping back the liquid fertiliser. Another possibility for filling is via the manhole on top of the tank.



#### **Electrical Level Indicator**

An electrical level indicator provides the actual tank volume to the terminal in the tractor cabin.



#### **Clean Water Tank**

The hoses from the iXtra LiFe can easily be rinsed with water from the clean water tanks and the operator can stay in the tractor cabin.



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