



TS-DRILL
TINE SEEDER

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.



SPEED

PERFORMANCE

EFFICIENCY

VERSATILITY



EFFECTIVE SOWING TO GIVE YOUR CROP A HEAD START

Speed

When the time is right, you want to seed immediately. Tomorrow conditions may be worse, so speed is important. You need a machine that has the right equipment and capacity to finish the job in time. To give your crop a headstart.

Versatility

Soil structure is not the same on every field, nor are working conditions. So you often have to adjust your seeder. That's why we have developed seeders that can be adjusted easily, mainly from the tractor cab.

Performance

Especially in extreme conditions, for example, humid soil or high straw residues, the advantages of the ts-drill become evident. In a single pass, the auto-reset tines take care of tilling and seeding, which in turn reduces soil compaction whilst saving fuel and time.

Efficiency

You invest in the best equipment for seeding your crop. In return, you want the best results and low cost of operation. Our seeders are developed with the lowest weight possible. Less pulling force needed means saving on fuel costs.

The highest possible efficiency in sowing.



TINE SEEDER ts-drill

THE COST-EFFICIENT ALTERNATIVE

The Kverneland ts-drill is setting the benchmark within this class of machinery. The ts-drill allows cultivation and sowing in one pass, saving time and fuel.

Profitable and versatile.

1

Passive tools - large capacity

The passive tools allow operation at high working speed and the large hopper capacity of 1,700 litres reduces the set-up time. Due to the optimised position of the hopper, the centre of gravity is close to the tractor.

2

Various tips for different requirements

The ts-drill has been designed to work in extreme conditions i.e. in dry and wet soil. Established in conventional tillage after the plough, it is also perfect for reduced tillage. A straight coulter tine as standard or an optional narrow tine for less soil disturbance meet the different requirements.

3

Even depth control

Due to the floating wing sections of the ts-drill with 5.00m and 6.00m working width, the ts-drill works fine on slopes or uneven ground. The central position of the landwheels within the main frame adapts perfectly to the ground contours thus ensuring an even depth control. The seeding depth is adjusted with no need of tools.

4

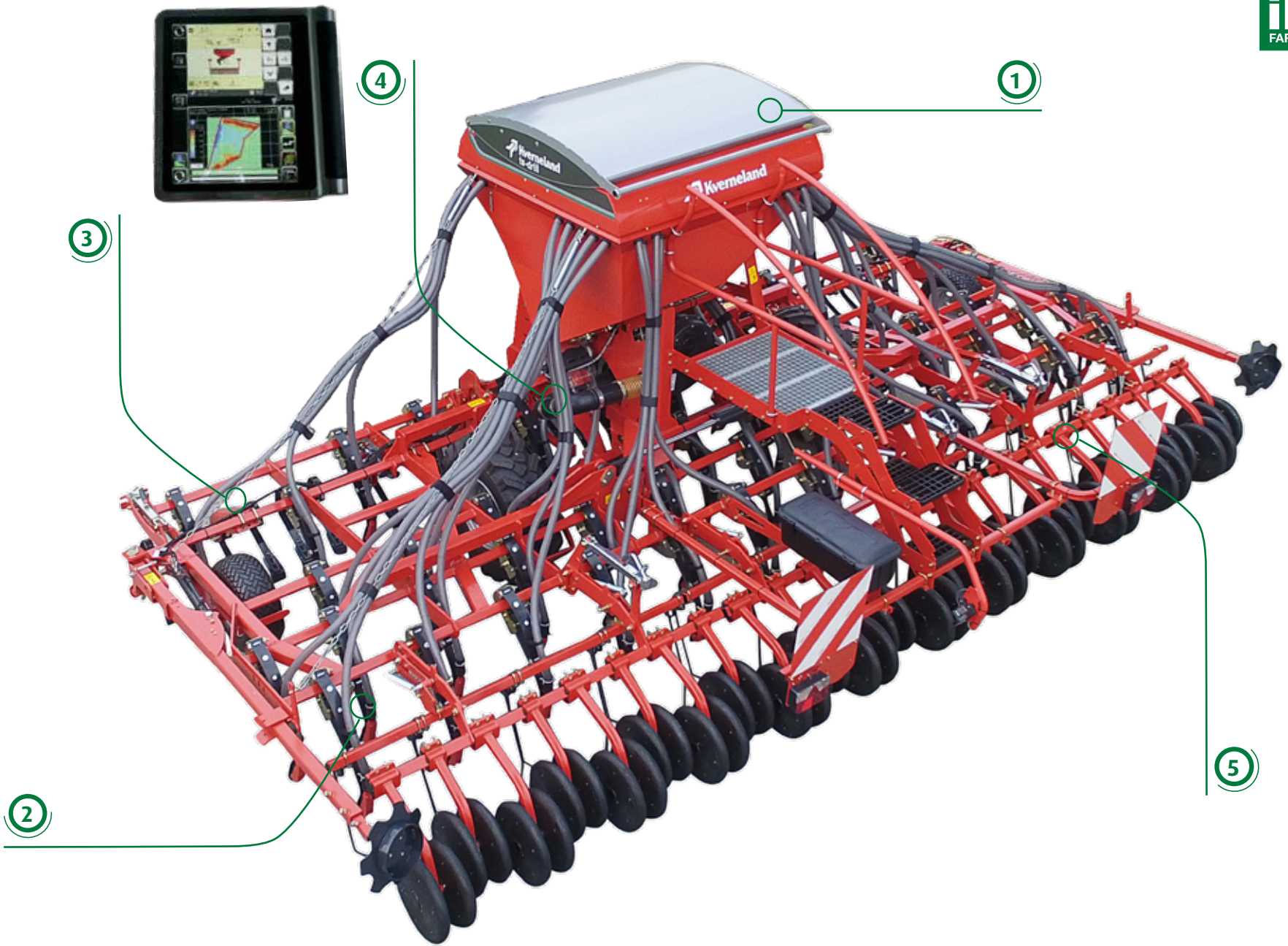
ELDOS - electric driven metering device

The easily accessible electric driven metering device, ELDOS, with exchangeable rotors is easy to adjust, without any tools.

5

Steadiness and strength

Durable steadiness of the ts-drill offers reliable operation. The high-quality box section frame together with the well-established pneumatic system provide a long working life.



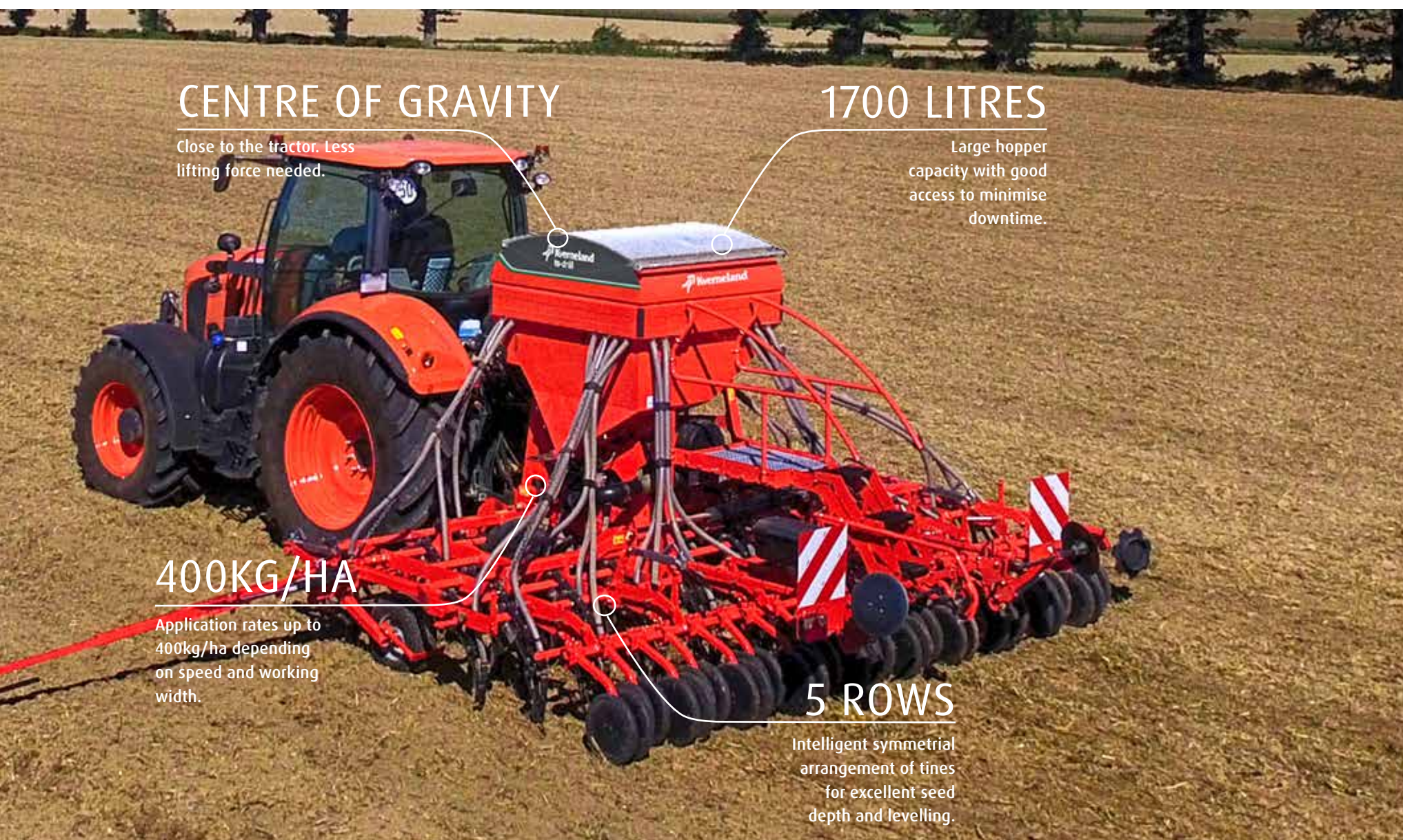
Operator-friendly

- Excellent overview
- Electronic monitoring of all functions
- Complete control of the machine from the cab on the move

Environmentally-friendly

- Close centre of gravity saving fuel
- Versatile operation: conventional after the plough or after conservation tillage

State-of-the-art technology for the professional farmer.



CENTRE OF GRAVITY

Close to the tractor. Less lifting force needed.

1700 LITRES

Large hopper capacity with good access to minimise downtime.

400KG/HA

Application rates up to 400kg/ha depending on speed and working width.

5 ROWS

Intelligent symmetrical arrangement of tines for excellent seed depth and levelling.

EASY ADJUSTMENT OPERATOR-FRIENDLY

In particular the ease of handling and the wide range of equipment characterise the ts-drill. Various options combined with high performance make the ts-drill a real alternative among crop establishment systems.

User-friendly adjustment and clear scales facilitate easy setting of the machine depth and allow quick return to previous positions. The horizontal alignment of the machine is controlled by a simple indicator at the hopper.

The seeding depth is adjusted **without the need of any tools** using a series of spacers which control the depth wheels mounted in the centre of the drill. Thus, the ts-drill can be changed from shallow rape seeding to deeper wheat seeding within a short time.

Easy access to all elements.

The **patented lateral position** of the metering device **ELDOS** provides ergonomic access for calibration process.

An **electronic low level sensor**, adjustable from the outside of the tank, monitors a range of seeds from small quantities of oil-seed rape to bigger seeds and larger quantities.



- User-friendly adjustment by spacer
- Clear scales
- Side depth control wheels
- From shallow sowing of rape to deep placement of field beans





OPTIMUM SEED METERING WITH ELDOS AUTOMATIC AND SAFE

ELDOS is the **electric driven metering device** for Kverneland pneumatic seed drills. It provides 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 and starts automatically. Double and/or missed seeding on headlands or odd-shaped fields are avoided. Special sensors ensure complete functionality from the tractor cab.

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 with ELDOS 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.



For even more precision, connect implement with an **ISOBUS terminal**.





- 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



- 5 rows of tines
- Straight or XHD narrow tines
- Offset configuration
- Centrally mounted depth wheel
- Toolless depth adjustment via spacers

AFTER CONSERVATION OR CONVENTIONAL TILLAGE LEAF-SPRING TINE PROTECTION

The seeding tines of the ts-drill are made of high quality spring steel fitted with the Kverneland leaf-spring auto-reset overload protection. To ensure the free flow of crop residues through the machine, the tines are arranged in an offset configuration over five rows.

Perfect sowing results also in extremely humid and sticky soil conditions.

The ts-drill can be ordered with either **12.5cm or up to 15cm row spacing** depending on working width and tine spacing. The special design of the tines reduces the tractor power requirements and ensures a constant depth control.

The standard **straight coulter tines** ensure optimal seed placement and soil flow.

The alternative **narrow tines** with XHD carbide tip minimise additionally soil disturbance and improves the ts-drill's flexibility for conventional and conservation tillage systems thanks to its ability to break up the surface. The XHD carbide tip increases the life time and makes working in stony conditions easier.

Due to the **patented seed outlet** without any screws in the tube, the ts-drill allows perfect seeding results also in extremely humid and sticky soil. With the patented outlet it is also easier to change the share tip.





PERFECT GROUND ADAPTATION

SMOOTH AND STEADY RUNNING

With the ability to follow undulating land, the ts-drill proves its quality. Due to the central position of the landwheels within the main frame, the ts-drill adapts perfectly to the ground contours.

In comparison to implements with front mounted landwheels, the design of the ts-drill equalises the distance between the tine rows and the landwheels. Therefore the impact on the sowing depth when working on slopes or uneven ground is reduced considerably.

Side depth control wheels for machines with working widths over 4.5m support the smooth running. The free-floating wing sections also follow lateral ground contours and provide an even depth control for precise seed placement.

Even depth control.

One tine in front of each landwheel levels the soil and ensures an even and steady running of the ts-drill - a prerequisite for the accurate depth control and seed placement with tine seeders. Seeding can be carried out in a crossways direction to the previous cultivation operations.

OPTIMUM GERMINATION

EFFECTIVE SEED COVERING

Various options for effective seed covering ensure best seed-to-soil contact for optimum germination.

1. A **two-row precision following harrow** (as standard) allows even high quantities of damp plant residues to pass without blocking.
2. For extremely stony conditions a **two-row finger harrow** is available. The harrow pressure and its aggressiveness can be adjusted via the spring pressure adjustment and the angle of the harrow bar.
3. The combination of a **one-row V-type following harrow with rubber suspended press wheels** ensures optimum results.

Like the following harrow the optional press wheels are divided into three sections. The pressure can be infinitely adjusted by screws. If the seed press wheels are not required due to very humid conditions, they can be completely lifted.



FOCUS 3

ECONOMIC CONTROL SOLUTION

The terminal Focus 3 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.



Focus 3: e-bas system not ISOBUS compatible

- Control of ELDOS
- Tramlining control
- Hectare metre
- Speed control
- Low level control
- km/h

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 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.



Reduce overlap and save up
to 15% on input costs with
IsoMatch GEOCONTROL®

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

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



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.

SAFE ON THE ROAD

EASY TO CONVERT

Easy conversion from working to transport position.

The threepart hydraulic folding gives a transport width of 3.00m and ensures smooth running and safe road transport. Lighting equipment is optional available.





ORIGINAL PARTS & SERVICE

LET'S FOCUS ON YOUR BUSINESS

ORIGINAL
PARTS

- 
- ① LONG LASTING, HIGH QUALITY SPARE PARTS
 - ② OVER 100 YEARS OF PARTS KNOWLEDGE
 - ③ SUPPORT FROM A WIDE NETWORK OF DEALERS
 - ④ 24/7 SPARE PARTS SERVICE
 - ⑤ HIGHLY SKILLED DEALER TECHNICIANS

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.



REGISTER YOUR PRODUCT NOW:
MY.KVERNELAND.COM

TECHNICAL DATA

Model	ts-drill 4800	ts-drill 5000	ts-drill 5600	ts-drill 6000
Working width (m)	4.80	5.00	5.60	6.00
Transport width (m)	3	3	3	3
No. of coulters (12.5cm distance)	38	40	-	48
No. of coulters (15.0cm distance)	32	-	40 (14cm)	40
Min. power requirement (HP/KW)	120 / 88	125 / 92	130 / 96	140 / 96
Weight (kg)	1,805	1,850	1,930	1,980
Hopper				
Hopper capacity (l)	1,350	1,350	1,350	1,350
Hopper extensions (max. 1,700l) (l)	○ (350)	○ (350)	○ (350)	○ (350)
Hopper cover plus gas pressure regulator	●	●	●	●
Quick emptying chute	●	●	●	●
Low level sensor	●	●	●	●
Lighting hopper inside	○	○	○	○
Metering section				
Mechanical fan drive	○	○	○	○
Hydraulic fan drive	●	●	●	●
Fan speed control	●	●	●	●
ELDOS electric metering device incl. 5 rotors	●	●	●	●
Metering device control	●	●	●	●
Seed rate adjustment	●	●	●	●
Seed quantity (min. / max.) (kg/ha)	1-400	1-400	1-400	1-400
Tramlining system with e-bas or e-com electronic steering	○	○	○	○
Shut-off valves for tramlines	○	○	○	○
Pre-emergence marker	○	○	○	○
Electr. half-width shut-off	○	○	○	○
Radar speed sensor	●	●	●	●
Calibration kit	●	●	●	●

Model	ts-drill 4800	ts-drill 5000	ts-drill 5600	ts-drill 6000
Track eradicator reversible tip (1 set)	○	○	○	○
Following harrow 2 rows precision: S-type (ø 8mm)	●	●	●	●
Press wheels (380 x 50mm) incl. 1 row V type harrow (ø 10mm)	○	○	○	○
Hydraulic clod board	○	○	○	○
Straight tines	●	●	●	●
Narrow XHD	○	○	○	○
Central landwheel	2 x 11.5/80-15.3 (10PR)			
Lateral control wheel	2 x 20.5x8.0-10 (6PR)			
Lighting equipment transport	○	○	○	○

- Standard equipment
- Option
- Not available



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

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