Mechanical Precision Drill
Monopill

Kverneland Accord

Precise Seed Placement and Singulation

Monopill - proven precision

Sowing with Monopill e-drive II, 9.30m, 18 rows, hydr. folding frame after strip-till with Kverneland Kultistrip

Precision seeders for farmers who seeding their crops in an accurate and durable way.

For modern farmers optimal seed placement means avoiding overlap.

Kverneland precision seeders guarantee accurate seeding, are easy to operate and provide many years of trouble free usage.

For the farmer:
- higher yields,
- lower costs and
- less waste.

Content

Technology and Innovation for Maximum Field Eemergence and Yield

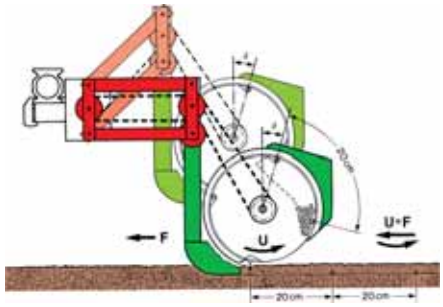
Kverneland Accord - the pioneers for precision seed drills using "zero speed effect seed deposition" technology.
The Monopill S with mechanical and Monopill e-drive II with electrical drive are designed for professional precision drilling of beet, rape and chicory. The IsoMatch Tellus is an ISOBUS-enabled tractor terminal, making operation easier whilst guaranteeing precise and exact sowing.

Uniform sowing depth and exact covering are key requirements for increased field emergence and maximum yields.

With the Monopill, the peripheral speed of the seed disc matches exactly the forward speed of the machine; therefore the seed has “zero speed effect” which eliminates seed bounce. The seeding heart positioned deep inside the seeding coulter provides a maximum drop height of only 3 cm. Together this guarantees precise placement without pellet bounce or roll. This enables the Monopill to operate at high forward speeds and consequently maximises the work rate, optimising crop establishment.

The patented second seed chamber prevents double sowing and seed damage. Specially moulded seed cells around the edge of the seed disc pick up individual pellets, any surplus pellets falling back into the second seed chamber.

Even under the most difficult conditions the parallelogram mounting of the Monopill S & e-drive II sowing unit guarantees precise depth control.



The lowest drop height on the market, plus zero speed effect sowing provide precise placement for both mechanical and electric drive Monopill S.

The seeding depth can be adjusted easily, without the need of any tools using the ingenious depth control system. Spring loaded intermediate seed press wheel and coverer along with trailing press wheel ensure excellent seed soil contact and recompaction.

The seeding hoppers can be easily filled via the sliding dust proof hopper covers. Emptying via a spring-loaded quick release discharge flap on the side of the sowing unit, ensures the seed hoppers are emptied quickly and completely.

(Normal seeding row) The parallelogram mounted sowing unit ensures precise depth control even under the most difficult field conditions.

ISOBUS

A wide variety of electronic controls are available for the Monopill to suit varying customer requirements.

The ISOBUS technology opens the possibility of using the ISOBUS compatible tractor terminal to control machines without the need of separate control units. Alongside the IsoMatch Tellus and Tellus GO terminals from Kverneland some tractor and machine manufactures now offer their own terminals for ISOBUS compatible machines e.g. Fendt, John Deere and Deutz-Fahr.

Machines for all Farm Sizes

The Monopill S & e-drive II is available from 6 to 24 sowing units.

The rigid end-tow toolbars are available in working widths of 3m, 6m, 9m and 12m. The convenient and time saving parallel hydraulic folding is available in 6 m and 9 m toolbar versions. The transport width of all Monopill S & e-drive II models is a maximum of 3 metres.

Monopill e-drive II,
6 metres, 12 rows with
parallel hydraulic folding

Monopill e-drive II,
3 metres, 4 rows with
rigid frame

Monopill e-drive II, 9 mtr, 18rows parallel hydraulic folding in working position

The optional pre-emergence markers assist first spraying operations before seed emergence

Strong Construction, Maximum Clearance, Smooth Running Drivelines

Monopill S & e-drive II precision drills are produced to meet all the practical requirements of today's agriculture, utilising the proven stability and open design of its toolbars.

Using the simple electro-hydraulic control the parallel folding frames can be operated easily and safely from the tractor seat.
Additional equipment such as micro-granular applicators, tramlining control system or pre-emergence markers can easily be fitted.
Monopill S is equipped with maintenance free ball bearing lever change gearboxes, which are easily accessible and enable quick setting of seed sowing distances.
Monopill e-drive II: The seeding heart is driven directly by a variable speed electric gear motor. There are no mechanical drive parts.

Monopill e-drive II,
6 metres, 12 rows with parallel hydraulic folding in transport position and micro-granule applicator

12 mtr 24 row rigid frame Monopill e-drive II with end-tow transport attachment

Electrically or Mechanically Driven Sowing Units

Monopill e-drive II:

Monopill e-drive II-row for mulch seeding
- 12 volt drive motor
- Monoflex press wheel
- intermediate press wheel
- disc coverer

Electric drive with control directly from the tractor cab using ISOBUS technology.

Monopill e-drive II is the ideal option for large-scale farms and contractor use. It is identical to the mechanical Monopill S in its basic design, with the exception of the seeding hearts which are driven directly by a 12-volt motor. This eliminates the need for mechanical parts such as gearboxes, drive shafts and chains. With its wide variety of functions and operating safety, the Monopill e-drive II utilises state of the art technology, allowing exceptional versatility for the operator.

The most important features:

- Infinite adjustment of sowing distances from 12.5 to 25 cm, optimising seed populations to soil type within the same field from the tractor cab.
- Multi choice integrated tramlining and pre-emergence marking systems (optional).
- Ability to increase plant population in the rows adjacent to the tramlines.
- Half-width shut-off.
- Individual sowing units can be switched off. Ideal, for example, when sowing in the corner of awkward shaped fields.
- Opto-electronic control for seed counting as standard.
- Safety through constant control: the electronics permanently monitor all operating functions of each sowing unit constantly displaying the “real time” data on the in cab terminal.

Monopill S:

Ball-bearing drivelines of the Monopill S are located in the parallelogram linkage to the unit, therefore there is no relative influence on the seed disc during up-and-down movement of the sowing element.

Monopill S series for mulch seeding, chain drive and finger press wheel

Press Wheels for all Conditions

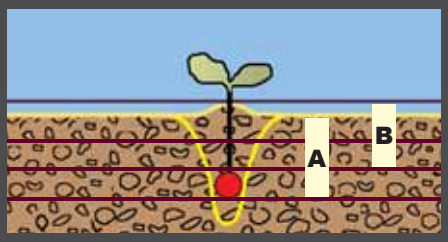
The Monopill sowing units can be equipped with Monoflex or finger press wheels.

Maximum field emergence and yield

The Monopill sowing units are equipped with the Monoflex press wheel as standard. The zero pressure rubber tyres do not allow soil to stick and provide excellent operation under both wet and dry conditions.

Finger press wheels are recommended for heavy dry soil and soils susceptible to late frost.

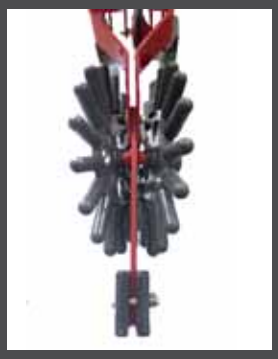
Monoflex press wheel

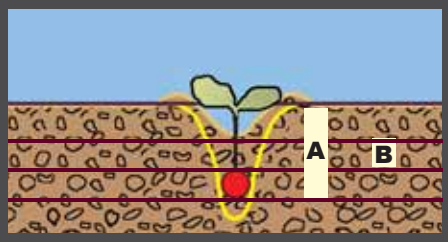


Coverer with conical press wheel
The V-shaped coulter opens the furrow. The seed is covered with loose soil by adjustable coverer. The amount of covering soil (B) is similar to that of the sowing depth (A)

→ **Ideal for wet and loamy soils**

Finger press wheel





Coverer with finger press wheel
V-shaped coulter opens furrow. The seed is covered with loose soil by the adjustable coverer. The covering soil (B) is lower than the sowing depth (A).

→ **A "Micro climate" then protects the germinated plant**

Simple filling and emptying

Normal and Mulch Seeding with the same Machine

For mulch seeding, the front Farmflex wheel is simply replaced with a double cutting disc equipped with side zero pressure tyres. The trailing coulter draws a clean seed furrow for precise seed placement.

In order to cleanly cut through surface residues, the Monopill operates with a double cutting disc and side zero pressure tyres.

No hair-pinning, no diving, just simple cutting. The mulch-seeding version can also be used without any modifications for normal seeding.

Sowing Rape and Chicory with the Monopill

Enhanced range of applications increases the working capacity of the Monopill.

Synergy effects with existing mechanisation

The Monopill can also be used for sowing rape and chicory, this allows for the extended use of the machine, earning an improved pay back of the machine cost.

Precision drilling of rape has been used in seed multiplication for a number of years. Through increased use of hybrid rape varieties it is also becoming of interest to farms who wish to sow seeds in exact numbers per square metre, thus saving seed costs.

Precision-drilled rape is generally sown in row widths of 45cm. This row distance allows the use of mechanical weeding machines. Down the row spacing will vary depending on location and variety between 5 and 8cm.

Results from various testing facilities show that precision-drilled rape can achieve the same yields. Whilst at the same time saving seed quantity and overall costs.

Pelleted chicory can also be sown with the Monopill, the chicory is used for sugar extraction by the food industry.

The row width is also 45cm. The seed is sown at a distance of 10cm in the rows, the sowing depth is extremely shallow at 0.5cm.

Micro-granule applicator

Most models of the Monopill S & e-drive II can be equipped with micro-granule applicator.
The hoppers, made from special grade plastics, have a capacity of 35 litres. The hoppers are mounted according to the working width with 2 or 3 outlets per unit.

Metering wheels of different sizes and materials are available to suit the application requirements of most types of micro-granule.

The micro-granule applicator is mechanically driven via the land wheel drive of the Monopill S & e-drive II.

Electronics

The latest Virtual Terminal developed by Kverneland Group, is the IsoMatch Tellus. Using ISOBUS as the interface, the IsoMatch Tellus can communicate with all machines and is equipped to drive with GPS systems.
The easy-to-use touch screen is designed for long working days. You have an excellent view of the two screens, which allows you to follow the performance of both the implement and the tractor. You can also call up the images from the optional cameras via one of the screens.

- Two ISOBUS screens at a glance
- Integrated tractor ECU program
- RS-232 connection for a GPS receiver or other external sources
- Option to connect 4 cameras
- Multifunctional, ergonomic, user-friendly design

As an innovative implement supplier Kverneland Group has been leading the way in the field of electronic solutions for implements, based on the ISOBUS protocol.
The communication concept iM Farming describes and presents our offering on ISOBUS machines and solutions for electronic steering. All aimed at giving an insight into the benefits and efficiency of our extensive offering.

For more information on iM Farming please visit: http://www.imfarming.kvernelandgroup.com/

Precise Seeding with GEOcontrol & GEOseed®

GEOcontrol - Cost saving with immediate payback

The more precisely and evenly a seed is sown, the easier it is to work and harvest, and the greater is the possible yield.
Seeding with GPS and GEOcontrol in combination with an electric driven precision drill is a major step towards precision and cost saving. These machines are all equipped with ISOBUS technology which, with the help of the IsoMatch Tellus terminal, can be easily controlled.
Each electric driven seeding element, in combination with GPS and GEOcontrol, is automatically switched on or off in exactly the right place, ensuring there is no overlap with any row that has already been seeded. This is especially handy in triangular fields, on curved or irregular shaped headlands. You can also continue seeding at night since the switching on/off of the seed elements is completely reliable.

GEOseed® - Precision at high end

The patented GEOseed® system is the most advanced option for Monopill e-drive II.

GEOseed® is offered in two different levels:
GEOseed® Level 1 is the synchronization in the machines working width. This improves the distribution of seeds up to perfection in parallel or diamond pattern: Positive effects are the best use of nutrients, water and sun. Also the wind and water erosion is decreased.
GEOseed® Level 2 is the synchronization in the whole field. This is the necessary requirement for interrow cultivation, also across the seeding direction. GEOseed® is the only system in the world that makes this mechanic weeds control possible!

Technical Data

Monopill frame	6 r. rigid	12 r. rigid	18 r. rigid	24 r. rigid	12 r. PH	18 r. PH
Mechanic drive with 7 gear lever gearbox	●	●	●	—	●	●
e-drive II	●	●	●	●	●	●
Tyres 5.00-15	●	●	●	—	●	●
Tyres 26x12 STG	—	—	—	●	—	—
Manually operated Track marker	●	—	—	—	—	—
Hyraulic operated track marker arms	❍	●	●	●	●	●
Pre Emergence markers	❍	❍*	❍*	on request	❍	❍
Mechanic Hectaremeter	❍	❍	❍	—	❍	❍
Lighting Equipment	❍	❍	❍	❍	❍	❍
Drift prevention disc	❍	❍	❍	❍	❍	❍
Microgranule applicator	❍	❍	❍	—	❍	—
Row width	45/50	45/50	45/50	45/50	45/50	45/50
Total weight (kg) for basic version	400	910	1750	2800	1250	2180

* Possibility of collisions between PEM and Lengthwise transport device

Monopill S sowing unit (without seed disc)	Normal seeding	Tandem row	Mulch seeding
Parallelogram hitch with	●	●	●
Clod deflector	❍	❍	-
Parallel clod deflector	-	-	❍
Rotating coverer	❍	-	●
Rigid coverer	●	●	❍
Monoflex press wheel	●	●	●
Finger press wheel	❍	❍	❍
Single hopper, content (l)	9	9	9
Weight of one sowing unit (kg)	50	59	64

● Standard equipment ❍ Accessories — Not available for this type

Sowing distances for 7-speed lever change gearbox

Stage	Seed disc					
	Beet		Chicory		Rape	
	A4	A5	A6	B8	C12	C18
1	18,0	14,0	12,0	8,8	6,0	3,9
2	19,0	15,0	12,5	9,4	6,3	4,2
3	20,0	16,0	13,0	9,8	6,6	4,4
4	21,0	16,5	14,0	10,4	6,9	4,6
5	22,0	17,5	14,5	10,8	7,3	4,8
6	23,0	18,0	15,0	11,4	7,6	5,0
7	24,0	19,0	16,0	11,8	8,0	5,3

Electronic Terminals for electric drive

IsoMatch Tellus GO

Kverneland Group is extending its range of Universal ISOBUS Terminals with the IsoMatch Tellus GO. This new multifunctional one-screen terminal is developed for fast and simple control of any ISOBUS implement, giving the farmer a 'custom made' experience as it suits all needs for plain and efficient handling of farming machinery and tasks. IsoMatch Tellus GO is the farmers first step into Precision Farming. With the easy to use application, IsoMatch GEOcontrol, it is possible to boost efficiency and save time and costs. The application includes Manual Guidance, Section Control and Variable Rate. Precision Farming is just one click away.

iM FARMING

smart efficient easy FARMING

iM FARMING makes mechanical work smarter, more efficient and simpler. The use of ISOBUS technology makes machines easier to connect, operate, control and monitor.

Maximum return from your investments, that is the core of Kverneland Group's iM FARMING solutions. iM FARMING describes and presents our offering on ISOBUS machines and solutions for electronic steering of implements.

All aimed at giving an insight into the benefits and efficiency of our extensive offering, adapted to your requirements. That is what you can expect from Kverneland Group. Now and in the future. Intended to make life easier for farmers.

Intelligent Precision Seeding – Prepared for The Future

Smart and modern technology prevents waste of expensive seeds and ensures perfect alignment on the headlands and in the triangles. Overlap is a thing of the past, which not only saves on seeds, fertilisers and crop protection agents, it also ensures a more equal crop yield and quality. Each plant receives exactly the same place and position; iM FARMING precision solutions make it as easy as possible.

Precision with GEOcontrol and GEOseed®

How clever would you like to be? Why place seeds when you have already been there? That's why we have developed GEOcontrol and GEOseed®. It allows you to aligne the seed placement in parallel or diamond pattern. The machine can be divided into sections. It is up to you to decide how to work, from the centre outwards, or from left to right.

Using GEOseed® you are able to increase the yields from your row crops significantly. The main idea of this development is that seeds are placed perfectly in line down the row but also in relation to each other across the field.

Activating the GEOseed® function with just one click:

- Utmost benefit from nutrients, water and sun because the plants are perfectly spaced within the machine pass
- Less erosion (water & wind)
- Increased harvesting speed with sugar beet
- Increase in yield of up to up to 5% per hectare

iM Ready
ISOBUS WORKING - THAT'S WHAT I CALL SMART

iM inControl
ONE TERMINAL TO CONTROL ALL OF MY ISOBUS MACHINES

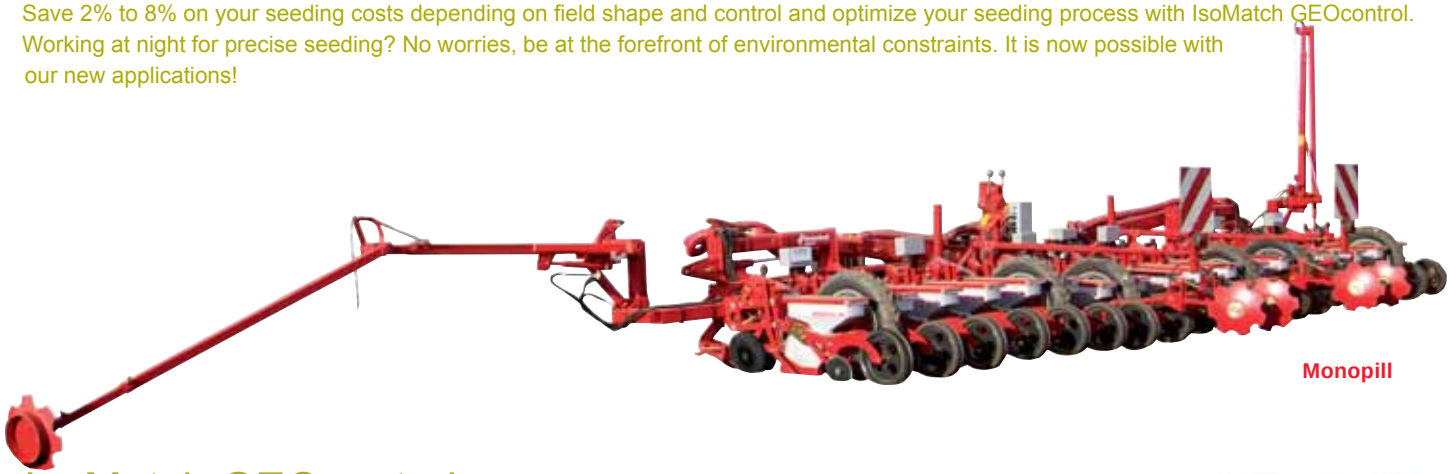
iM Global
WITH GPS IT'S SIMPLE AND MORE EFFICIENT

iM Intelligent
EASY, I JUST USE INTELLIGENT MACHINERY

IsoMatch GEOcontrol and SEEDERcontrol

Would you like to have some clear benefits? You just have to buy the IsoMatch Tellus terminal, a license and one of our ISOBUS compatible seeders, like precision drill Monopill e-drive II or Optima e-drive/e-drive II models.

Save 2% to 8% on your seeding costs depending on field shape and control and optimize your seeding process with IsoMatch GEOcontrol. Working at night for precise seeding? No worries, be at the forefront of environmental constraints. It is now possible with our new applications!



Monopill

IsoMatch GEOcontrol

Once you have an IsoMatch Tellus terminal you can simply unlock the IsoMatch GEOcontrol application (after you have purchased a license key) and you get access to all precision farming applications: automatic switching on and off implement sections, variable rate control and easy exchange of data between the IsoMatch Tellus and your PC. To get familiar and convince yourself about the customer benefits of IsoMatch GEOcontrol you are entitled to 10 hours free use of the application, before purchasing a license. No doubt for us, you will quickly become an enthusiastic follower of this new technology!

Section control

Variable rate control

IsoMatch Global*

IsoMatch Eye

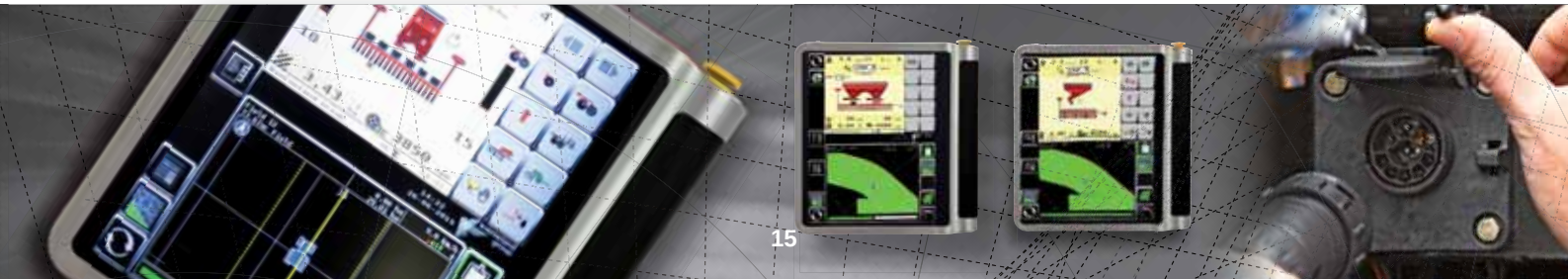
GEOseed ®

** For seed drill operations a RTK-GPS is recommended.*

Documentation

IsoMatch GEOseed®

- Alignment of the seed placement in parallel or diamond pattern - beyond the machine width
- Optimum use of nutrients of the soil - by even plant distribution
- Avoiding water - and wind erosion in hilly conditions
- Depending on seed distance “cross” - interrow cultivation possible
- Patented system



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 unique and 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.

Original Spare Parts

Kverneland Group spare parts are designed to give reliable, safe and optimal machinery performance - whilst ensuring a low cost life-cycle. High quality standards are achieved by using innovative production methods and patented processes in all our production sites.

Kverneland Group has a very professional network of partners to support you with service, technical knowledge and genuine parts.
To assist our partners, we provide high quality spare parts and an efficient spare parts distribution worldwide.

Watch us on YouTube
www.youtube.com/kvernelandgrp

Like us on facebook
www.facebook.com/KvernelandGroup
www.facebook.com/iMFarming

Follow us on Twitter
#KvernelandGroup
#iM_Farming

Kverneland Group UK Ltd.
Walkers Lane, Lea Green, St. Helens
Merseyside, WA9 4AF
Phone + 44 1744 8532 00

uk.kverneland.com

AC758207
GB-11/2015