ESD (Electronic Seed Driver) is a simple and modular system for precision seed drills that electrifies the sowing distributors (one per single row) and fertiliser distributors, by means of Brushless motors, eliminating all mechanical seed drill transmission.

The system is set up to be interfaced with the main GPS devices on the market (ISOBUS) in order to automatically manage closure of the rows, thus avoiding overlapped sowing and resulting in savings on seeds, sowing through variable rate.
**ADVANTAGES**

- More precise and even sowing, eliminating double and missing seeds
- Variable rate sowing, thanks to prescription maps
- Variation of the sowing distance directly from the tractor cab
- Automatic closure of rows with GPS or manual interface, eliminating overlaps
- Reduction of work times and maintenance costs
- Increase in yield and economic performance
- Greater level of safety for the operator due to the lower number of moving mechanical parts
- Simplified seed drill resulting in a reduction in set-up times during seed drill preparation according to the crop to sow
- Increase in sowing speed up to 18 Km/h, if permitted by the seed drill
- Interfacing with the main ISOBUS monitors. Adding a module to standard components of the system makes the seed drill compatible with ISO-BUS 11783 using Universal Terminals on the tractors

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Sowing meshes (manual)

One of the main advantages of the ESD system is VARIABLE RATE sowing, meaning that it deposits the exact number of seeds/sq.m depending on the texture of the soil and the organic properties, established by previous analyses and entered in the GPS, using a prescription map.

The ESD system is set up for VARIABLE RATE sowing even without the use of GPS, by setting the “RECORD” function on the monitor, entering the number of seeds/sq.m for every different grid square. The system will automatically distribute what has been set.

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**VIRTUAL TERMINAL SLIM 7” (optional)**

A Virtual Terminal series SLIM 7” with a colour touch-screen display and backlit keyboard, to manage all seed drill functions, electric motors, sowing control and row shut-off control.

**ESD MODULE**

The ESD modules for seeds installed per single row that include a Brushless motor and the related electronic driver, make it possible to adjust the rotation of the sowing disc in proportion to the feed rate based on the programmed sowing distance.

The same modules used for the seeds can also be installed on the microgranulators (for fertiliser distribution), allowing for integrated management in the monitor, variable rate and automatic control of the sections.

**UNI-SEEDER photocell**

UNI-SEEDER is a special seed sensor which, unlike traditional ones, can be configured to vary its performance. Thanks to a microcontroller it assures a direct analysis of the analogue signals from the IR receivers. Using sophisticated digital analysis techniques, it can see very small and fast seeds and can distinguish them from dust or ground seed residues during the sowing operation.

**ECU BRIDGE ISOBUS**

The ECU BRIDGE ISOBUS control unit makes it possible to interface the electronic MC systems with any UNIVERSAL TERMINAL or ISOBUS tractor (of different brands and features).