GASPARDO
PRECISION SEED DRILLS

GASPARDO
distributed by OPICO
OPICO are the sole UK importer for the GASPARDO range of Vacuum Precision Drills, the range currently consists of three main types of Precision Drilling units with a variety of frame types. These offer precision drilling for a wide range of crops.

GASPARDO started producing planting machines for delicate seed types in 1834. In 1950 they made their first precision drill and later developed vacuum precision drills in 1972. 50 years on they are one of the largest manufacturers of vacuum precision planters in Europe producing approximately 28,000 planter units in 2011, exporting them all over the world including Europe, Russia and America to name a few.

It is clear to see with the current volume of vacuum precision drilling units sold across the world the GASPARDO machines are tried and tested to say the least! Around 500 machines have been sold in the UK since 1952 when they were first imported so they have also been well proven in the UK.

Every model is built under extreme scrutiny ensuring excellent quality, reliability and very low maintenance.

The GASPARDO philosophy “EASY MAINTENANCE” can be clearly seen throughout every machine, each one is fully loaded with simple but great ideas enabling maintenance and setup modification to be carried out quickly at the most part without the need of any tools.

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**Key Features**

**Easy Maintenance**

One of GASPARDO’s main philosophies is “Easy Maintenance” all machines should be easy to maintain on farm or even in the field. This philosophy keeps running costs down to a minimum as most functional parts are designed to have a long lifespan and be MAINTENANCE-FREE.

**Super Sealed Hub**

The double row ball bearing is oversized and guarantees great reliability in the most demanding working conditions. Long life is guaranteed by triple seal protection, meaning the hub is dust proof and ideally suited to work in wet or dry conditions.

**Metering Unit**

All the vacuum metering systems across the full range of precision planters are constructed from the highest quality materials. The main body is made from light weight cast aluminium with a Teflon gasket. A large variety of stainless steel seeding plates are available to suit different seed types and sizes.

Seeding plate replacement, checking and seed unload are easy to do thanks to the hinged cover and the lower hatch for seed discharge. The seeding plate can easily be changed without the use of tools (this can be done in less than 30 seconds per unit). The two singulators prevent seed doubles.

The fixed kicker singulation is carried out from the bottom of seed holes while the adjustable kicker action is from the top.

**Shaft Drive**

Throughout the entire Precision Planter range each unit utilises SHAFT DRIVE rather than traditional chains etc. SHAFT DRIVE units are maintenance free and each row can be manually disengaged to prevent overlapping on finishing passes. Optional in cab row shut-off control is available on request allowing the operator to disengage single units on the move without leaving the tractor cab.

**Self-lubricating Bushes**

Specialised oil impregnated bush is used on the main parallelogram connecting each precision planter unit to the main frame; these are also MAINTENANCE-FREE! No need to oil or grease. There are only two greasing points on the complete unit.

**Arm Strong (MTR only)**

This planting unit is designed for seeding in rough conditions and at high working speeds. The parallel linkage arm is made of one high tensile cast steel piece. This design prevents from twisting and bending under loads and impacts which can occur in the toughest working conditions.

**Fertiliser Units**

Muller Precimat All Precision drills come with the Muller PRECIMAT control box. It has been designed to be very simple to use, all the different reading modes can be displayed at a press of a button. Most commonly used readings i.e. hours worked or area worked have their own buttons.

PRECIMAT control box features:

- Digital display
- Start / Stop
- Precision planter unit “switch-off” (each unit can be de-activated when fitted with electronic disengagement option)
- Precision planter unit “all-on” (all planter units can be re-activated with one touch when fitted with electronic disengagement option)
- LED showing each unit is active or inactive (when fitted with electronic disengagement option)
- Fitted with electronic disengagement option
- Seeds per hectare
- Fan rpm
- Hours worked
- Area worked (ha)
- Total area worked (ha)
- Current area performance (ha/h)
- Distance (km)
- Speed (km/h)

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SP Seeding Unit

The GASPARDO SP Planter is designed for precision planting on soils that have been worked down to a fine seedbed with little or no crop residues. The SP Precision Planting unit comes in two different versions. Both units are equipped with a shoe furrow opener and a very short dropping distance between the metering unit and the seed trench to prevent seed bounce or roll, greatly improving seed placement accuracy.

SARA Precision Drill

6 Row, Min 90hp, Telescopic Frame
The Gaspardo SARA model is a 6 row precision drill primarily designed for planting maize. It utilises the SP planting unit, has 75cm row spacing and comes equipped with a double telescopic frame that closes down to 2.5m for easy and safe road transport.

STELLA Precision Drill

6 Row, Min 80hp, Telescopic Frame
The Gaspardo STELLA model is a 6 row precision drill primarily designed for planting maize. It utilises the SP planting unit, has 75cm row spacing and comes equipped with a telescopic frame that closes down to 3m for easy and safe road transport.

FEA TURES

1. Short Parallelogram The short parallelogram enables the planter to stay level whilst seeding on undulating ground, ensuring the seed is placed at a constant depth.

2. Pressure/Relief Spring The adjustable Pressure or Relief Spring controls the pressure applied to the opener.

3. Locking System Each SP Planting Unit can be put into a locked position for safe transport.

4. Hinged Metering Unit Cover The Hinged Metering Unit Cover enables quick access to the inner metering unit, allowing the operator to change the metering disc or perform any maintenance required.

5. Teflon Gasket A hard wearing Teflon gasket inside the metering unit prevents air leakage even after hours of use due to the Teflon’s low coefficient of friction.

6. 34L Plastic Hopper The SP Precision Planter unit comes as standard with a large 34L plastic hopper.

7. Rear Wheel Adjuster The planting depth is precisely controlled by the rear wheel adjuster.

8. Cast Aluminium Unit The metering/vacuum unit is made from light weight corrosion resistant cast Aluminium.

9. Twin Seed Singulators The Twin Seed Singulators give the SP Planter Unit very accurate seed singulation with all seed shapes and sizes. The fixed Singulator runs along the inside of the metering disc holes. There is also special lower seed Singulators on the sugar beet versions, the adjustable Singulator runs along the top connected to a lever system and gauge. The inspection hatch is spring loaded and can be opened without the need of any tools. It allows the operator to inspect how the seed is being metered, how well both the Seed Singulators are working and to make any fine adjustments that maybe needed.

10. Seed Removal Hatch The Seed Removal Hatch allows the metering unit to be emptied and prevents the loss of seed when having to perform maintenance or whilst changing the metering disc.

11. Metering Disc The seed metering disc can be chosen according to the seed type and spacing required (see back cover of leaflet).

12. Furrow Closer There are two types of Furrow Closer, the SP standard planter unit utilises the finger type whilst the sugar beet versions have an extra press wheel that ensures seed placement accuracy.

13. Furrow Opener The Furrow is created by a hard wearing cast shoe.

14. Clod Pusher A height adjustable Clod Pusher clears any large clods or debris that might be on the surface that could potentially interrupt the seed placement accuracy.

15. Shaft Drive Reliable quick disengaging Shaft drive transmission is used to drive the metering unit, it comes with a mechanical alarm and is totally maintenance free! An electronic disengagement system is available as an option to allow the operator to start and stop each seeding unit from the tractor cab.

16. Lubricated Bushes Maintenance free self-lubricating, oil impregnated steel bushings slowly release oil whilst being used. This makes them extremely hard wearing and means they should last most other similar forms of bushing on Precision Seed drills.

17. Optical Seed counter Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab. The sensors are enclosed under the metering unit and above the seed tube to prevent dust and soil particles being counted as seed and potentially causing an inaccurate seed count readings.

18. Mechanical Gear Shift The mechanical gear shift allows quick and easy changes to the Precision Seed drills. Various configurations are available to adapt the units to different soils and crops.

SP Planter Unit specifications

<table>
<thead>
<tr>
<th>Model Description</th>
<th>Rows No.</th>
<th>Frame Width cm</th>
<th>Row Width cm</th>
<th>Power Req’d hp</th>
<th>Fertiliser Coulter Type</th>
<th>Transport m</th>
<th>Microgranulator</th>
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</table>
MT Seeding Unit

The MT Planter unit is designed for precision planting on tilled or minimum tilled soils and able to cope with clods and uneven surfaces. MT Precision planter unit is extremely reliable and works with high accuracy, the furrow is created using a DOUBLE DISC with the depth controlled by dual gauging wheels.

MTE Precision Drill

6 Row, Min 90hp, Telescopic Frame

The Gaspardo MTE model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It is fitted as standard with MT planting units at 75mm spacing and has a telescopic frame that closes down to 3m for easy and safe road transport.

MARTA Precision Drill

6 Row, Min 90hp, Telescopic Frame

The Gaspardo Marta model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It is fitted with MT planting units, has a row spacing of 75mm and a double telescopic frame that closes down to 3m for easy and safe road transport.

MONICA Precision Drill

6 Row, Min 90hp, Telescopic Frame

The Gaspardo Monica model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It utilizes MT planting units which can be set at variable planting widths and has a telescopic frame that closes down to 2.55m for easy and safe road transport.

FEATURES

1. Short Parallelogram: The short parallelogram enables the planter to follow the soil level and spread the seed accurately.
2. Pressure/Relief Spring: The adjustable Pressure or Relief Spring controls the pressure applied to the disc cover.
3. Hinged Metering Unit Cover: The Hinged Metering Unit Cover enables quick access to the inner metering unit, allowing the operator to change the metering disc or perform any maintenance required.
4. Teflon Gasket: A hard-wearing Teflon gasket inside the metering unit prevents feed at soil depth, even when it's moving at a slower speed of 2.57m per hour due to the Teflon’s low coefficient of friction.
5. 36L Plastic Hopper: The MT Precision Planter unit comes as standard with a large 36L plastic hopper.
6. Rear Wheel Adjuster: The planting depth is precisely controlled by the rear wheel adjuster.
7. Cast Aluminium Unit: The metering vacuum unit is made from light-weight, corrosion-resistant cast aluminium.
8. Twin Seed Singulators: Twin Seed Singulators give the MT Planter unit very accurate seed singulation with all seed shapes and sizes. The fixed Singulator runs along the inside of the metering disc holes, the adjustable Singulator runs along the top connected to a linear system and gauge. The inspection hatch is spring loaded and can be opened without the need for any tools, it allows the operator to inspect how the seed is being metered, how well both the Seed Singulators are working and to make any adjustments that maybe needed.
9. Seed Removal Hatch: The Seed Removal Hatch allows the metering unit to be emptied and prevents the loss of seed when having to perform maintenance or whilst changing the metering disc.
10. Steel Metering Disc: The seed metering disc can be chosen according to the seed type and population spacing required. Suction from the vacuum unit gently holds each seed “one by one” into the metering disc holes. The metering disc can be changed quickly and easily, no tools are needed. It is possible to switch crops or seed size in less than 30 seconds per unit.
11. Seed Delivery Pipe: The graduated seed tube gives consistent seed delivery, the long tube prevents the seed from bouncing.
12. Furrow Opener Disc: The Double Disc opener creates a perfect furrow in all soil types and conditions. The disc is 27mm thick and 370mm in diameter providing a long working life whilst at the same time reducing operating costs. The unit also comes as standard with high quality bearings protected by the SUPER SEAL sealing system. The SUPER SEAL contains three levels of ingress protection preventing contamination or lubricant loss that might cause premature bearing failure, this gives a long-term maintenance-free unit.
13. Clod Pusher: 1 Height-adjustable clod pusher mounted in front of the DOUBLE DISC furrow opener, covers large areas of loose or trash that might sit on the surface that could potentially interrupt the seed placement accuracy. 2. The optional depth adjustable disc mounted in front of the DOUBLE DISC furrow opener, increases the furrow opening capability.
14. Shaft Drive: Reliable quick disengaging shaft drive transmission is used to drive the metering unit. It comes with a mechanical alarm and is totally maintenance free! The electronic disengagement system is available as an option to allow the operator to stop the seeding of each row unit from the tractor cab.
15. Lubricated Bushes: Maintenance-free self-lubricating, oil impregnated bushings already release oil whilst being used, this makes them extremely hard wearing and they should last well, less such forms of bushing on precision drills.
16. Optical Seed Counter: Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab for the operator. The sensors are enclosed under the metering unit and above the seed tube to prevent dust and soil particles being counted as seed and potentially causing an inaccurate seed count readings.
17. Seed Depth Adjuster: The working depth is controlled by a manual adjuster that raises and lowers the disc.
18. Break-Back Regulator: The Break-Back depth regulator keeps a constant seeding depth by allowing each rubber depth wheel to move independently as a single unit. This is achieved by using a cast rocker that enables one rubber depth wheel to raise over large clods and follows without affecting the disc and other rubber depth wheel, the rocker system also makes sure each planting unit follows the contours of the soil, so for instance if you hit a sudden rise in the soil level both rubber depth wheels raise up at the same time. This limits the range of movement to ensure the planting depth is accurate.
19. Mechanical Gear Shift: The mechanical gear shift allows quick and easy changes to the precision drill. Various configurations are available to adapt the units to different soils and crops.

MT Planter unit specifications

<table>
<thead>
<tr>
<th>Model Description</th>
<th>Rows No.</th>
<th>Planting width cm</th>
<th>Row unit cm</th>
<th>Pressure: 300Bar</th>
<th>Performance Capacity: kg/s</th>
<th>Weight kg</th>
<th>Applicator</th>
<th>Fertilizer Coulter Type</th>
<th>Transport</th>
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<td>Sulfuric</td>
<td>Double Disc</td>
<td>3</td>
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MTR Seeding Unit

The MTR Planter unit has evolved from the MT unit and is designed for precision planting at greater speeds giving higher outputs for the professional farmer. It is suitable for working on tilled or minimum tilled soils and able to cope with clods, uneven surfaces and crop residues. The MTR Precision Seed Drill Unit boasts the largest opening disc in its category at 420mm diameter and the new ARMS-TRONG cast steel parallelogram linkage which is 30% stronger than the traditional linkage. These two features combine to guarantee greater stability which is a fundamental requirement whilst working at higher speeds and still ensuring constant seeding depth.

The MTR Planter unit can work faster in harder conditions and still maintain constant seeding depth. 30% stronger than the standard linkage systems it enables increased stability at faster working speeds and in hard conditions.

**Features**

1. **Short ARMSTRONG Parallelogram** The short cast steel ARMS-TRONG parallelogram enables the planter to stay level during seeding on undulating ground ensuring the seed is placed at a constant depth. 30% stronger than the standard linkage systems it enables increased stability at faster working speeds and in hard conditions.
2. **Pressure/Relief Spring** The adjustable Pressure or Relief Spring controls the pressure applied on the unit, up to 150kg per unit.
3. **Hinged Metering Unit Cover** The Hinged Metering Unit Cover enables quick access to the inner metering unit, allowing the operator to change the metering disc or perform any maintenance required.
4. **Teflon Gasket** A hard wearing Teflon gasket inside the metering unit prevents at leakage even after hours of use due to the Teflon low coefficient of friction resistance.
5. **SOL Plastic Hopper** The MTR Precision Planter unit comes as standard with a large SOL plastic hopper (36L on Marta and Monica) for reliable and constant seed delivery, the long tube prevents the seed from bouncing keeping the seed delivery consistent. The Gaspardo Marta(R) model is a 6 Row, Min 90hp, Telescopic Frame 6 Row, Min 90hp, Telescopic Frame 2.55m for easy and safe road transport.

**Row Equipment**

- **Cloth Pulser** Height adjustable cloth pulser (available in front of the DOUBLE DISC option). The reeled cloth or trash that might still be on the surface that could potentially interrupt the seed placement accuracy. Optional CLOTH PULSER:
  - **Coudre** Choice of front mounted or rear mounted front of the Double Disc option. These seeder pulser, increases the furrow opening capability. Optional Trash Wheels: attached in front of the double disc opener and removes crop residues away from the planter row. Seed Press Wheel: Seed to soil contact maximised by eliminating the possibility of air pockets in the seed furrow using the optional Seed Press Wheel. The wheel pressure can be adjusted and a Tungsten carbide coated scraper keeps the wheel clean.

**Shaft Drive** Reliable quick disengaging shaft drive transmission is used to drive the metering unit, comes with a mechanical alarm and is totally maintenance free! The electronic disengagement system is available as an option to allow the operator to stop the seeding of each planter unit from within the tractor cab.

**Self-lubricating Bushes** Maintenance free self-lubricating, oil impregnated steel bushings silently release all of their being used. This makes them extremely hard wearing and they should last out most similar forms of bushing on precision drills.

**Optical Seed counter** Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab for the operator. The sensors are enclosed under the metering unit and above the seed tube to prevent dust and soil particles being counted as seed and potentially causing an inaccurate seed count readings.

**Seed Depth Adjuster** The working depth is controlled by a Manual adjuster that raises and lowers the disc.

**Break-Back Regulator** The Break-Back depth regulator keeps a constant seeding depth by allowing each rubber depth wheel to move independently as a single unit. This is achieved by using a cast roller that enables one rubber depth wheel to raise over large clods and stones without effecting the disc and other depth wheel, the rooter system also makes sure each planting unit follows the contours of the soil, so for instances if you hit a sudden rise in the soil level both rubber depth wheels raise up at the same time. This limits the range of movement to ensure the planting depth is accurate.

**Mechanical Gear Shift** The mechanical gear APR allows quick and easy changes to the precision drill. Various configurations are available to adapt the units to different soils and crops.

### MTR Planter Unit Specifications

<table>
<thead>
<tr>
<th>Model Description</th>
<th>Model Code</th>
<th>Frame Width</th>
<th>Seed Size</th>
<th>Min. Linkage</th>
<th>Max. Linkage</th>
<th>Weight</th>
<th>Size Applicator</th>
<th>Standard Plastic Hopper</th>
<th>Type of Hopper</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTE(R) Base Drill with MTR Units</td>
<td>MTE(R)</td>
<td>6</td>
<td>4.5</td>
<td>75</td>
<td>50</td>
<td>1475</td>
<td>3</td>
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<tr>
<td>MTE(R) with MTR Units &amp; Microgranulator</td>
<td>MTE(R)</td>
<td>6</td>
<td>4.5</td>
<td>75</td>
<td>50</td>
<td>1475</td>
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<td>-</td>
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<tr>
<td>MTE(R) with MTR Units &amp; Big Bag Fert/Sulfur</td>
<td>MTE(R)</td>
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<td>4.5</td>
<td>75</td>
<td>50</td>
<td>1475</td>
<td>-</td>
<td>Sulfur/Coir</td>
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<tr>
<td>MTE(R) with MTR Units &amp; Big Bag Fert/Sulfur &amp; Micro</td>
<td>MTE(R)</td>
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<td>75</td>
<td>50</td>
<td>1475</td>
<td>-</td>
<td>Sulfur/Coir</td>
<td>-</td>
</tr>
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<td>1475</td>
<td>-</td>
<td>Double Disc</td>
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<tr>
<td>MTE(R) with MTR Units &amp; Big Bag Fert/Disc &amp; Micro</td>
<td>MTE(R)</td>
<td>6</td>
<td>4.5</td>
<td>75</td>
<td>50</td>
<td>1475</td>
<td>-</td>
<td>Double Disc</td>
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### MARTA(R) Precision Drill

- **6 Row, Min 90hp, Telescopic Frame**
  - The Gaspardo Marta(R) model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It is fitted with MTR planting units, has a row spacing of 75cm and a double telescopic frame that closes down to 1.5m for easy and safe road transport.

### MONICA(R) Precision Drill

- **6 Row, Min 90hp, Telescopic Frame**
  - The Gaspardo Monica model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It utilises MTR planting units which can be set at variable planting widths and has a telescopic frame that closes down to 2.55m for easy and safe road transport.

### MTE(R) Precision Drill

- **6 Row, Min 90hp, Telescopic Frame**
  - The Gaspardo MTE(R) model is a 6 row precision drill primarily designed for planting maize in cultivated seedbeds. It is fitted with MTR planting units, has a double telescopic frame that closes down to 1.5m for easy and safe road transport.
**MTR Seeding Unit**

The MTR Planter unit has evolved from the MT unit and is designed for precision planting at greater speeds and giving higher outputs for the professional farmer. It is suitable for working on tilled or minimum tilled soils and able to cope with clods, uneven surfaces and crop residues. The MTR Precision Seed Drill Unit boasts the largest opening disc in its category at 420mm diameter and the new ARMSTRONG cast steel parallelogram linkage is 30% stronger than the traditional linkage. These two features combine to guarantee greater stability which is a fundamental requirement whilst working at higher speeds and still ensuring constant seeding depth.

**Features**

1. **Short ARMSTRONG Parallelogram** The short cast steel ARMSTRONG parallelogram enables the unit to stay level during seeding on undulating ground ensuring the seed is placed at a constant depth. 30% stronger than the standard linkage systems, this enables an increased stability at faster working speeds and in hard conditions.

2. **Pressure/Relief Spring** The adjustable Pressure or Relief Spring controls the pressure applied to the unit, up to 150kg per unit.

3. **Hinged Metering Unit Cover** The Hinged Metering Unit Cover enables quick access to the inner metering unit, allowing the operator to change the metering disc or perform any maintenance required.

4. **Teflon Gasket** A hard wearing Teflon gasket inside the metering unit prevents air leakage even after hours of use due to the Teflon low coefficient of friction resistance.

5. **Self-Lubricating Bushes** Maintenance free self-lubricating, oil impregnated steel bushings slowly release oil whilst being used, this makes them extremely hard wearing and should outlast most other similar forms of bushing on precision drills.

6. **Optical Seed counter** Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab for the operator. The sensors are encased under the metering unit and above the seed tube to prevent dust and soil particles being counted as seeds and potentially causing an inaccurate seed count readings.

7. **Seed Depth Adjuster** The working depth is controlled by a manual adjuster that raises and lowers the disc.

8. **Break-Back Regulator** The Break-Back depth regulator keeps a constant seeding depth by allowing each rubber depth wheel to move independently as a single unit. This is achieved by having a cast rocker that enables one rubber depth wheel to raise over large clods and stones without affecting the disc and other depth wheel, the rocker system also makes sure each planting unit follows the contours of the soil, so for instance if you hit a sudden rise in the soil level both rubber depth wheels raise up at the same time. This limits the range of movement to ensure the planting depth is accurate.

9. **Optical Seed counter** Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab for the operator. The sensors are encased under the metering unit and above the seed tube to prevent dust and soil particles being counted as seeds and potentially causing an inaccurate seed count readings.

10. **Break-Back Regulator** The Break-Back depth regulator keeps a constant seeding depth by allowing each rubber depth wheel to move independently as a single unit. This is achieved by having a cast rocker that enables one rubber depth wheel to raise over large clods and stones without affecting the disc and other depth wheel, the rocker system also makes sure each planting unit follows the contours of the soil, so for instance if you hit a sudden rise in the soil level both rubber depth wheels raise up at the same time. This limits the range of movement to ensure the planting depth is accurate.

11. **Optical Seed sensory** Extremely accurate dual optical sensors count every seed then relay the readings back to the control box inside the tractor cab for the operator. The sensors are encased under the metering unit and above the seed tube to prevent dust and soil particles being counted as seeds and potentially causing an inaccurate seed count readings.

12. **MTR Planter Unit specifications**

<table>
<thead>
<tr>
<th>Model Description</th>
<th>Row No</th>
<th>Frame Width</th>
<th>Row Depth</th>
<th>Power Req’d</th>
<th>Fertiliser Tank</th>
<th>Weight kg</th>
<th>Microgranular</th>
<th>Seed Tube</th>
<th>Fertiliser Gland</th>
<th>Transport m</th>
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<tbody>
<tr>
<td>MIRKA(R) with MTR Units x 1 Big Bag Fertiliser</td>
<td>8</td>
<td>6</td>
<td>75</td>
<td>100</td>
<td>1x1400</td>
<td>4000</td>
<td>-</td>
<td>Disc</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIRKA(R) with MTR Units x 1 Big Bag Fertiliser &amp; Mono</td>
<td>8</td>
<td>6</td>
<td>75</td>
<td>100</td>
<td>1x1400</td>
<td>4000</td>
<td>Yes</td>
<td>Disc</td>
<td>3</td>
<td></td>
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<tr>
<td>MIRA(R) with MTR Units x 1 Big Bag Fertiliser</td>
<td>8</td>
<td>6</td>
<td>75</td>
<td>100</td>
<td>1x1400</td>
<td>2080</td>
<td>-</td>
<td>Disc</td>
<td>3</td>
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<tr>
<td>MIRA(R) with MTR Units x 1 Big Bag Fertiliser &amp; Mono</td>
<td>8</td>
<td>6</td>
<td>75</td>
<td>100</td>
<td>1x1400</td>
<td>3800</td>
<td>Yes</td>
<td>Disc</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Fertiliser Tank optional*
MTR Seeding Unit

The MTR Planter unit has evolved from the MT unit and is designed for precision planting at greater speeds and giving higher outputs for the professional farmer. It is suitable for working on tiled or minimum tiled soils and able to cope with clods, uneven surfaces and crop residues. The MTR Precision Seed Drill Unit boasts the largest opening disc in its category at 420mm diameter and the new ARMSTRONG cast steel parallelogram linkage is 30% stronger than the traditional design. These two features combine to guarantee greater stability which is a fundamental requirement whilst working at higher speeds and still ensuring constant seed depth.

FEATURES

1. Short ARMSTRONG Parallelogram

The short cast steel ARMSTRONG parallelogram enable the unit to stay level during seeding on undulating ground ensuring the seed is placed at a constant depth. 30% stronger than the standard linkages systems, this increases the stability of faster working speeds and in hard conditions.

2. Pressure/Relief Spring

The adjustable Pressure or Relief Spring (outside the pressure applied to the unit, up to 150psi per unit).

3. Hinged Metering Unit Cover

The Hinged Metering Unit Cover enables quick access to the inner metering unit, allowing the operator to change the metering disc or perform any maintenance required.

4. Teflon Gasket

A hard wearing Teflon gasket inside the metering unit prevents air leakage even after hours of use due to the Teflon low coefficient of friction resistance.

5. 36L Plastic Hopper

The MTR Precision Planter unit comes as standard with a large 36L plastic hopper.

6. Rear Wheel Adjuster

The furrow closing pressure is precisely controlled by the new extended rear wheel adjuster.

7. Cast Aluminium Unit

The metering vacuum unit is made from light weight corrosion resistant cast Aluminium.

8. Twin Seed Singulators

The Twin seed Singulators give the MTR Planter Unit very accurate seed angulation with all seed shapes and sizes. The fixed Singulator runs along the inside of the metering disc holes (special lower seed Singulator on the sugar beet versions), the adjustable Singulator runs along the top and connected to a lever system and gauge.

9. Seed Removal Hatch

The Seed Removal Hatch allows the metering unit to be emptied and prevents the loss of seed when having to perform maintenance or whilst changing the metering disc.

10. Steel Metering Disc

The seed metering disc can be chosen according to the seed type and population (spacing) required. Suction from the vacuum unit gently holds each seed “one by one” into the metering disc holes. The metering disc can be changed quickly and easy no tools are needed. It is possible to switch crops or seed size in less than 30 seconds per unit.

11. Seed Delivery Pipe

The redesigned seed tube gives consistent seed delivery, the long tube prevents the seed from bouncing keeping seed placement accurate.

12. Extra Large Furrow Opening Disc 420mm

The extra large 420mm Double Disc opener creates a perfect furrow in all soil types and conditions. The disc itself is 4mm thick and 420mm in diameter providing a long working life at the same time reducing operating costs. The large Double Disc also means the MTR Precision Planter Unit can work faster in harder conditions and still maintain constant accuracy and seed depth. The unit also comes as standard with high quality bearings protected by the SUPER SEAL system. The SUPER SEAL combines three levels of ingress protection, preventing contamination or lubricant loss that might cause premature bearing failure or loss material from the plant unit.

13. Row Equipment

Clod Pusher Height adjustable clod pusher (plunger in front of the DOUBLE DISC furrow opener), clears all large clods or clumps of soil which will be on the surface that could potentially interrupt the seed placement accuracy. Optional Coulter Disc: Depth adjustable mounted in front of the DOUBLE DISC furrow opener, increases the furrow opening capability. Optional Trash Wheels: installed in front of the double disc opener and removes sonic residues away from the planting row. Seed Press Wheel: Seed to soil contact maximised by eliminating the possibility of air pockets in the seed furrow using the optional Seed Press Wheel. The wheel pressure can be adjusted and a Tungsten carbide coated scraper keeps the wheel clean.

14. Shaft Drive

Reliable quick disengaging shaft drive transmission is used to drive the precision planting unit, comes with a mechanical alarm and is totally maintenance free! The electronic disengagement system is available as an option to allow the operator to stop the seeding of each planter unit from within the tractor cab.

15. Self-lubricating Bushes

Maintenance free self-lubricating, oil impregnated steel bushes slowly release whilst they being used, this makes them extremely hard wearing and they should last out last, most other similar forms of bushing on precision drills.

16. Optical Seed counter

Extremely accurate dual optical sensors (30cm) every seed from relay the readings back to the control box inside the tractor cab for the operator. The sensors are endowed under the metering unit and above the seed tube to prevent dust and soil particles being counted as seed and potentially causing an inaccurate seed count readings.

17. Seed Depth Adjuster

The working depth is controlled by a manual adjuster that raises and lowers the disc.

18. Break-Back Regulator

The Break-Back depth Regulator keeps a constant seeding depth by allowing each rubber depth wheel to move independently as a single unit. This is achieved by using a cast roller that enables one rubber depth wheel to raise over large clods and stones without affecting the disc and other depth wheels, the roller system also makes sure each planting unit follows the contours of the soil, so for instance if you hit a sudden rise in the soil level both rubber depth wheels raise up at the same time. This limits the range of movement to prevent the planting depth is accurate.

19. Mechanical Gear Shift

The mechanical gear shift allows quick and easy changes to the precision drill. Various configurations are available to adapt the units to different soils and crops.

MTR Planter Unit specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Rows</th>
<th>Row Width cm</th>
<th>Power hp</th>
<th>Fertilizer Applicator</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANTA(R) Base Drill</td>
<td>8</td>
<td>75</td>
<td>110</td>
<td>Double Disc</td>
<td>2340</td>
</tr>
<tr>
<td>MANTA(R) with Fertilizer</td>
<td>8</td>
<td>75</td>
<td>110</td>
<td>Double Disc</td>
<td>2340</td>
</tr>
<tr>
<td>MANTA(R) with Fert/Suffolk</td>
<td>8</td>
<td>75</td>
<td>110</td>
<td>Double Disc</td>
<td>2340</td>
</tr>
<tr>
<td>MANTA(R) with Fert/Suffolk &amp; Micro</td>
<td>8</td>
<td>75</td>
<td>110</td>
<td>Double Disc</td>
<td>2340</td>
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<tr>
<td>MANTA XL(R) Base Drill</td>
<td>12</td>
<td>75</td>
<td>140</td>
<td>Double Disc</td>
<td>2500</td>
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<tr>
<td>MANTA XL(R) with Fertilizer</td>
<td>12</td>
<td>75</td>
<td>140</td>
<td>Double Disc</td>
<td>2500</td>
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<tr>
<td>MANTA XL(R) with Fert/Suffolk</td>
<td>12</td>
<td>75</td>
<td>140</td>
<td>Double Disc</td>
<td>2500</td>
</tr>
<tr>
<td>MANTA XL(R) with Fert/Suffolk &amp; Micro</td>
<td>12</td>
<td>75</td>
<td>140</td>
<td>Double Disc</td>
<td>2500</td>
</tr>
</tbody>
</table>
OPTIONS (standard on some models - not available on all models)

- Disc Seeding Openers/Row
- Centre Line Marking
- Hydraulic Fan Upgrade
- Double Disc Fertiliser Coulter Upgrade/Row
- Upgrade Transmission Wheels to 7.50 x 16
- Fertiliser Inspection Steps
- 60L Seed Hopper Upgrade
- Electric Row Shut-Off Kit
- Hydraulic Unit Lifting System
- Tractor Wheel Eradicators
- Seed Covering Arms
- GPS Control Kit

FRONT MOUNTED FERTILISER TANKS PA1 & PA2

In-row fertiliser distribution reduces wastage and greatly improves operation efficiency; this gives the crop the much needed boost in its early stages of growth.

The Gaspardo precision drill range offers three different variations of fertiliser distribution units with hopper size to suit all requirements.

MINIMAX - Option

The MINIMAX distribution system is mounted on-board the precision drill unit and can distribute at rates from 50 – 700kg/ha.

1. Speedy Set Quick and easy centralised rate adjustment.
2. Patented Soft Feeder A Silicone metering roller and corrosion resistant plastic body prevents milling or grinding of the fertiliser inside the metering units.
3. Fertiliser Openers The planter can be supplied with a Suffolk Coulter opener or Double Disc opener to distribute the fertiliser separately from the main seed trench. A special kit is available if the fertiliser needs to be distributed into the seed furrow.

MICROGRANULAR - Option

The MICROGRANULATOR unit can be fitted to distribute micro-doses of soil fertilisers, pesticides, insecticides or weeds killers. EASY to set thanks to the precise and accurate MINIMAX metering system.

1. Patented Soft Feeder A Silicone metering roller and corrosion resistant plastic body prevents milling or grinding of the fertiliser inside the metering units.

Options

<table>
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<tr>
<th></th>
<th>1</th>
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(as standard)
### SEEDING DISC - TECHNICAL

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<thead>
<tr>
<th>No. of Holes</th>
<th>Diameter Ø (mm)</th>
<th>Seeds</th>
<th>Seeding Distance</th>
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<td>20</td>
<td>2.5</td>
<td>Sunflower</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>3.5</td>
<td>Cotton - Sweetcorn - Maize (small)</td>
<td>Min. 10.4cm</td>
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<td>Maize (large) - Pulses - Beans - Peanut</td>
<td>Max. 41.7cm</td>
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<td>7.0</td>
<td>Peanut - Lupin</td>
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<td>2.5</td>
<td>Sunflower</td>
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<td>3.5</td>
<td>Cotton - Sweetcorn - Maize (small)</td>
<td>Max. 32.1cm</td>
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<td>26</td>
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<td>Maize</td>
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<tr>
<td>36</td>
<td>1.0</td>
<td>Tomato</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>1.5</td>
<td>Lentil - Cucumber - Tomato Pilled Ø 2.5mm - 3.5mm</td>
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<tr>
<td>36</td>
<td>2.1</td>
<td>Beet - Squash - Melon - Watermelon - Sorghum - Sesame - Oilseed Rape</td>
<td>Min. 5.8cm</td>
</tr>
<tr>
<td>36</td>
<td>2.5</td>
<td>Tomato Pilled Ø 3.5mm - 4.5mm - Ginseng</td>
<td>Max. 23.2cm</td>
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<tr>
<td>36</td>
<td>3.5</td>
<td>Beans (small) - Peas - Soybeans</td>
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<tr>
<td>36</td>
<td>4.5</td>
<td>Beans - Peas - Field Bean - Maize</td>
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<tr>
<td>36</td>
<td>5.5</td>
<td>Beans</td>
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<td>4.25</td>
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<td>72</td>
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<td>Oilseed Rape</td>
<td>Max. 11.5cm</td>
</tr>
<tr>
<td>72</td>
<td>2.1</td>
<td>Swiss Chard - Sorghum</td>
<td>Min. 2.9cm</td>
</tr>
<tr>
<td>72</td>
<td>3.5</td>
<td>Beans (small) - Soyabeans</td>
<td>Max. 11.6cm</td>
</tr>
</tbody>
</table>