

Combination & Tine Drills



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SEED DRILLS



MASCHIO SEED DRILLS *...growing together*

Maschio have been producing seed drills since 1991 and the range sold in the UK includes models to suit most applications, with many clever features, that set them apart from others. The range includes gravity fed and pneumatic machines to provide drilling solutions for combination and tine drilling with a variety of coulter options to suit minimum tillage and plough based cultivation systems.

The DAMA gravity fed drill is designed to be coupled with a power harrow to provide a simple economic combination drill. The ALITALIA provides a power harrow drill for the professional user and the Centauro gives the option of front tank, rear power harrow and coulter bar.

The key advantage, that all these combination drills have in common, is that they are designed and built by one company, hence they complement each other in work.

The PRIMAVERA is a high speed tine drill primarily for minimum tillage systems, its tine coulter is set in four staggered rows and enables it to be used in extremely high levels of crop residue providing a low cost drilling solution.

CONTENTS



FEATURES **3**

COMBINATION DRILLS

DAMA Gravity fed (120-300hp) **4-5**

ALITALIA Pneumatic (140-300hp) **6-7**

CENTAURO Pneumatic (180-400hp) **8-9**

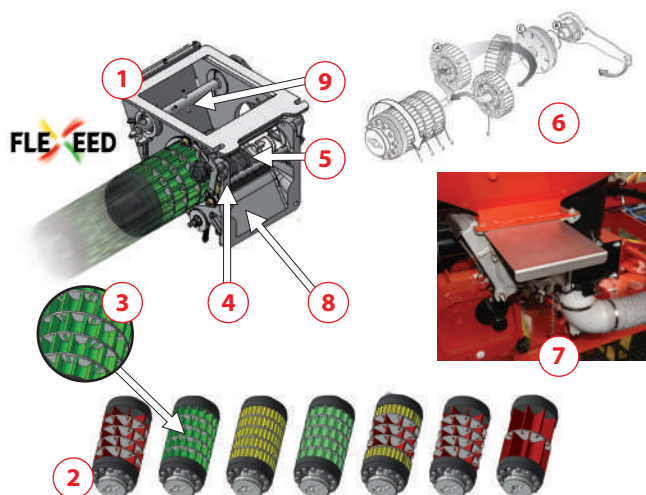
TINE DRILL

PRIMAVERA Pneumatic (120-250hp) **10-11**

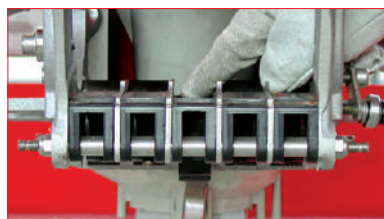
METERING DRIVE / CONTROL SYSTEMS **13**

METERING SYSTEM

Maschio's patented FLEXEED cartridge type metering system is utilised on all Maschio pneumatic drills, a choice of up to seven types of metering rollers is available allowing it to cope with all different sizes of seed and a wide range of different seed rates. The graduated fluted rollers ensure accuracy and consistency of metering while the simplistic design allows easy calibration. The system incorporates features such as hopper isolation allowing the operator to change metering rollers whilst the hopper is full.



- 1 **Construction** - The metering unit is constructed from cast aluminium, stainless steel and polyethylene components to prevent rust and corrosion.
- 2 **Metering rollers** - Whether seeding OSR or beans, the FLEXEED metering system will have a roller to suit your seed type.
- 3 **Seed flutes** - Helical seed flutes give an even and consistent flow of seed.
- 4 **Seed feelers** - Spring loaded feeler clips enhance seed-rate precision by controlling the amount of seed in each flute. The feeler clips also prevent damage to delicate or fleshy seed types.
- 5 **Cleaning clips** - Prevent oily seeds from getting stuck in the fluted segments.



- 6 **Disengaging segments** - The F25-125 metering roller segments can be disengaged to lower the seed-rate further.



- 7 **Inlet shut-off sliding plate**
- 8 **Easy un-loading**
- 9 **Agitator engage/ disengage**

BUILD & FINISH

Maschio's attention to detail in production and extremely modern production facilities ensure that products are built and tested to the highest standards both in terms of robustness to do the job and finish to stand the test of time.



EASE OF CALIBRATION/SET-UP

The seed-rate on mechanical drive machines (DAMA only) is controlled by a triple cam stepless gearbox which ensures the seed metering shaft turns consistently at the designated speed. A simple winding handle and trays ensure easy calibration.

On electronic drive machines the Genius Master (ISOBUS compatible) electronic metering systems allow calibration at the press of a button.



COULTER OPTIONS

Suffolk coulters - The Suffolk coulters are suitable for cultivated soil with very little or no crop residues. Two or three rows of coulters assist with the flow of soil and residues through the drill fitted with hard wearing replaceable coulters tips.



Single disc VORTEX - Suitable for heavier soil types, damper drilling conditions and high crop residues. The VORTEX disc incorporates a rotary scraper and a depth limiter with the option of a depth wheel for each coulters.



COMBINATION DRILLS

DAMA

120-300 hp

The Maschio DAMA box drill utilises a simple gravity feed and forward speed related mechanical metering system to accurately deliver seed to a variety of coulter configurations. Metering can also be driven electronically if required. The DAMA box drill is available in 3m and 4m working widths. The QUICK-MATCH system allows fast and easy hook-up to a large range of Maschio power harrows.

The drill is mounted to the rear roller on the power harrow which ensures it follows the contours of the ground and places the seed at a constant depth even on very undulating land.

Coupled with a 3m or 4m power harrow, the DAMA provides a combination drilling solution for tractors from 120 to 300hp.



SEED METERING SYSTEM

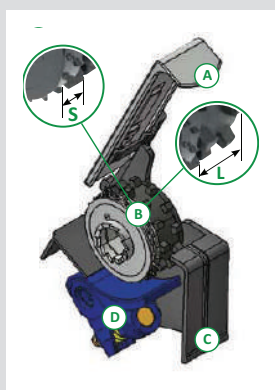
Seed distribution - The DAMA utilises a tried and tested multi-stage peg wheel metering system that guarantees constant precision and reliability.

A) The regulator slide on the diagram has three positions for different size seed types, normal seeds, small seeds and a shut-off position.

B) The multi-staged peg metering roller has two sections, one for large and one for small seed types, one or the other can be easily disengaged depending on what size seed is to be used.

C) Corrosion proof distributor body.

D) Spring feeler - Whether you are using large size seeds or small delicate seed the spring feelers ensure all are handled gently and prevent the seed from damage during the metering process.



Calibration tray - Two trays make the calibration process quick and easy.



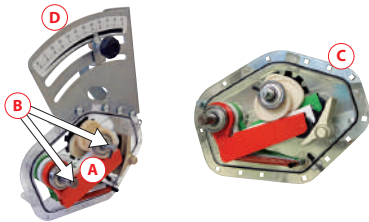
Half side shut-off - Can be engaged to stop half of the drill from seeding, this is done with a locking device that you push, turn and slide back to disengage one side.



Agitator disengagement - The agitator can be disengaged by removing the pin on the agitator pulley, to prevent seed damage when drilling fine seeds at low seed-rates.



Transmission - As with any drill one of the most important aspects is seed rate consistency and control. The metering is land wheel driven on the DAMA and a triple cam stepless gearbox is used to transmit drive to the seed rollers (A). A simple slide and marker make it easy for the operator to set and adjust the seed-rate (D). Reliability of the gearbox is ensured as the cams and bearings inside are submerged in oil, preventing wear (B,C).



Roller mounted - As the whole drill is carried by the roller the coulter depth can be set in relation to the rear roller which follows the ground contours. In this way the coulters stay at a consistent depth ensuring accurate seed placement which in turn gives even plant emergence.



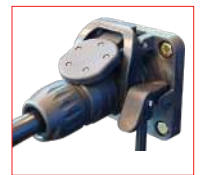
Large hopper - All DAMA box drills boast large hopper capacities as standard. 3m = 500L hopper capacity, optional 280L hopper extension. 4m = 650L hopper capacity, optional 400L hopper extension. Both the 3m and 4m come as standard with a mechanical seed level gauge. An electronic seed level sensor is available as an option. The loading foot board and step ensures safe access for the filling operation.



Balanced weight - Maschio's drill design department have optimised the ratio between the weight and structural integrity, making the DAMA an extremely strong drill. The centre of gravity is very close to the tractor in order to reduce stress on the rear linkage, this also allows the DAMA to be suitable for medium size tractors from 120hp and improves fuel consumption.



GENIUS MASTER ISOBUS - Optional GENIUS MASTER makes ISOTRONIC communication extremely simple through the tractor's ISOBUS terminal: a single connecting cable is used to connect the drill to the tractor terminal for monitoring and controlling all drilling functions.



COULTER OPTIONS

Suffolk coulters - The Suffolk coulters are suitable for cultivated soil with very little or no crop residues. Two or three rows of coulters assist with the flow of soil and residues through the drill fitted with hard wearing replaceable coulters tips. 35kg pressure per coulters.



Single disc VORTEX - Suitable for heavier soil types, damper drilling conditions and high crop residues. The VORTEX disc incorporates a rotary scraper and a depth limiter with the option of a depth wheel for each coulters.



One matches all - The DAMA is compatible with most of the rigid power harrow range, these include the DRAGO DC, DOMINATOR DM Rapido Plus and the ORSO Rapido Plus. Compatible rollers: packer roller 500-600 mm and combi-packer 500mm.

QUICK-MATCH system - Allows quick and easy attachment of a Maschio power harrow to the DAMA drill using a 3 point linkage, the drill and power harrow combination can be detached by one operator in approximately 1 – 2 minutes, quickly and safely. The harrow can then be used independently.



Please check with OPICO if you plan to use a DAMA drill with your existing Maschio power harrow as some older models may not be compatible.

DAMA COMBINATION DRILL SPECIFICATIONS

Models	HP*	Working width (m)	Total width (m)	No. of Coulters	Row Distance (cm)	Hopper Capacity L (Extension)	Coulters	Weight kg
3000	120-300*	3.0	3.05	24	12.5	500 (280)	Suffolk	1065
4000	160-300*	4.0	4.05	32	12.5	650 (400)	Suffolk	1150
3000	120-300*	3.0	3.05	24	12.5	500 (280)	Disc	1190
4000	160-300*	4.0	4.05	32	12.5	650 (400)	Disc	1335

*MIN & MAX hp depends on which power harrow combination is used.

COMBINATION DRILLS

ALITALIA

140-300 hp

The ALITALIA pneumatic seed drill is available in 3m and 4m working widths, it utilises Maschio's own FLEXEED metering system to accurately deliver seed to a variety of coulter configurations.

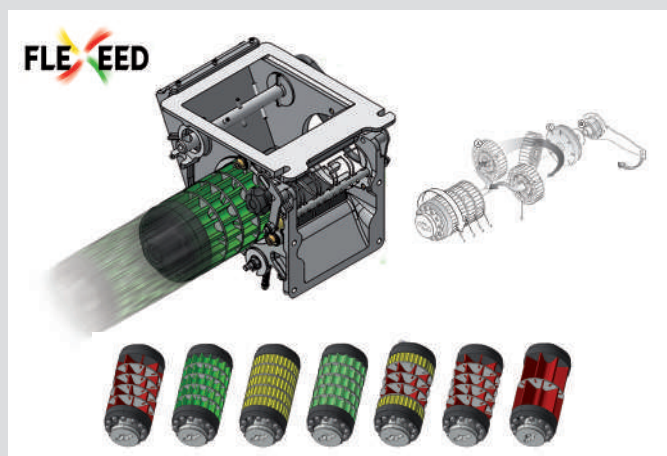
The QUICK-MATCH system allows fast and easy hook-up to a large range of the Maschio power harrows. The drill is mounted on to the rear roller of the power harrow which ensures the drill follows the contours of the ground and places the seed at a constant depth even on very undulating land. The power harrow is free from additional weight allowing it to work better in hard and stony conditions.

Coupled with the DRAGO DC/DOMINATOR DM/ORSO Rapido power harrows the ALITALIA provides a combination drilling solution for tractors from 140 to 300hp.



SEED METERING SYSTEM

FLEXEED system - Designed and patented by Maschio the FLEXEED seed metering unit is as flexible as any metering unit can be, with up to seven metering roller options suitable for every kind of seed and seed-rate. The unit can distribute a large variety of seed sizes with ease, and is capable of achieving very high seed-rates.

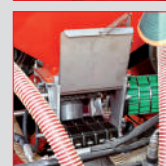


Electronic driven transmission - The ALITALIA boasts a fully electronic metering system driven by an electric motor and controlled by the ISOBUS control box inside the tractor cab. Seed-rate can be adjusted on the move and, with the optional GPS interface, the system can be pre-programmed for precision farming.

Inlet shut-off sliding plate - A sliding plate enables the operator to completely shut-off all seed to the metering unit, allowing maintenance or metering roller changes whilst the hopper is still full.

Easy un-loading - Un-loading couldn't be easier. Un-lock and open the access panel to the metering unit and remove the metering roller. Control the speed of the seed flow by moving the "shut-off sliding plate".

Agitator disengagement - The agitator can easily be disengaged, when seeding with delicate or fleshy seed types by removing the rubber belt.



Balanced weight - Maschio's drill design department have optimised the ratio between the weight and structural integrity, making the ALITALIA an extremely strong drill. The centre of gravity is very close to the tractor in order to reduce stress on the rear linkage, this also allows the ALITALIA to be suitable for medium size tractors from 140hp and improves fuel consumption.



Large hopper - The ALITALIA boasts a large hopper capacity with 1500L as standard with an optional 500L extension.



Roller mounted - As the whole drill is carried by the roller the coulters depth can be set in relation to the rear roller which follows the ground contours. In this way the coulters stay at a consistent depth ensuring accurate seed placement which in turn gives even plant emergence.

One matches all - The ALITALIA drill models are compatible with most of the rigid power harrows in Maschio's range, these include the DRAGO DC, DOMINATOR DM Rapido Plus and the ORSO Rapido Plus. Compatible rollers: packer roller 500-600 mm and combi-packer 500mm.



Easy calibration - The ALITALIA seed drill is fully electronic and allows the operator to complete the calibration process quickly and easily by simply setting the tray in its position, lowering the distributor, opening the calibration gate and then pushing the start button. The collected seed is weighed, the value from the scales is entered into the control box, using the keyboard, and the required seed-rate can be set. High precision regardless of calibration setting.



GENIUS MASTER ISOBUS - GENIUS MASTER makes ISOTRONIC communication extremely simple through the tractor's ISOBUS terminal: a single connecting cable is used to connect the drill to the tractor terminal for monitoring and controlling all drilling functions.



COULTER OPTIONS

Suffolk coulters - The Suffolk coulters are suitable for cultivated soil with very little or no crop residues. Two or three rows of coulters assist with the flow of soil and residues through the drill fitted with hard wearing replaceable coulters tips. 35kg pressure per coulters.



Single disc VORTEX - Suitable for heavier soil types, damper drilling conditions and high crop residues. The VORTEX disc incorporates a rotary scraper and a depth limiter with the option of a depth wheel for each coulters.



QUICK-MATCH system - Allows quick and easy attachment of the Maschio power harrow to the seed drill using a 3 point linkage, the drill and power harrow combination can be detached by one operator in approximately 1 – 2 minutes, quickly and safely. The harrow can then be used independently.

Please check with OPICO if you plan to use an ALITALIA seed drill with your existing Maschio power harrow as some older models may not be compatible.

ALITALIA COMBINATION SEED DRILL SPECIFICATIONS

Models	HP*	Working width (m)	Total width (m)	No. of Coulters	Row Distance (cm)	Hopper Capacity L (Extension)	Coulters	Weight kg
3000	130-300*	3.0	3.05	24	12.5	1500 (500)	Suffolk	1150
4000	160-300*	4.0	4.05	32	12.5	1500 (500)	Suffolk	1325
3000	130-300*	3.0	3.05	24	12.5	1500 (500)	Disc	1330
4000	160-300*	4.0	4.05	32	12.5	1500 (500)	Disc	1525

*MIN & MAX hp depends on which power harrow combination is used.

COMBINATION DRILLS

CENTAURO

180-400 hp

The Maschio CENTAURO pneumatic drilling system utilises Maschio's own FLEXEED metering system to accurately deliver seed from a front hopper to a rear folding power harrow mounted coulter bar with a variety configurations. With its generous load capacity and width the CENTAURO is ideal for medium to large farms and for demanding contractors. Excellent weight distribution is a clear advantage when it comes to traction and reducing the size of tractor required.

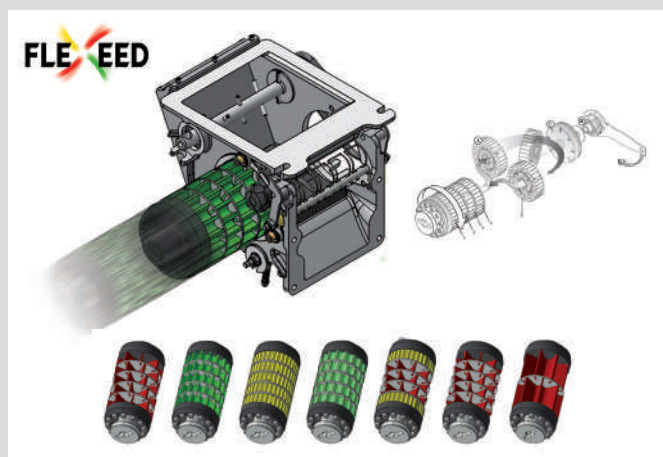
The QUICK-MATCH system allows fast and easy hook-up to Maschio power harrows. The coulter bar is mounted on to the rear roller on the power harrow which ensures the drill follows the contours of the ground and places the seed at a constant depth even on very undulating land.

The CENTAURO can be combined with a GABBIANO, AQUILA or TORO power harrow the CENTAURO provides a drilling solution.



SEED METERING SYSTEM

FLEXEED system - Designed and patented by Maschio the FLEXEED seed metering unit is as flexible as any metering unit can be, with up to seven metering roller options suitable for every kind of seed and seed-rate. The unit can distribute a large variety of seed sizes with ease, and is capable of achieving very high seed-rates.



Metering rollers - Whether seeding OSR or Beans, the FLEXEED metering system will have a roller to suit your seed type. Three rollers come as standard, the yellow F25-125 roller for small quantities and specifically small seeds, the green N500 roller for medium quantities (max 200 kg/Ha) and the red G1000 standard for high quantities (up to 400 kg/Ha).

Electronic driven transmission - The CENTAURO boasts a fully electronic metering system driven by an electric motor and controlled by the ISOBUS control box inside the tractor cab. Seed-rate can be adjusted on the move and with the optional GPS interface the system can be pre-programmed for precision farming.



Staggered seed flutes - The seed flutes are in a staggered or helical arrangement to ensure the seed leaves the metering roller evenly.



Agitator disengagement - The agitator can easily be disengaged, when seeding with delicate or freshly seed types by removing the rubber belt.

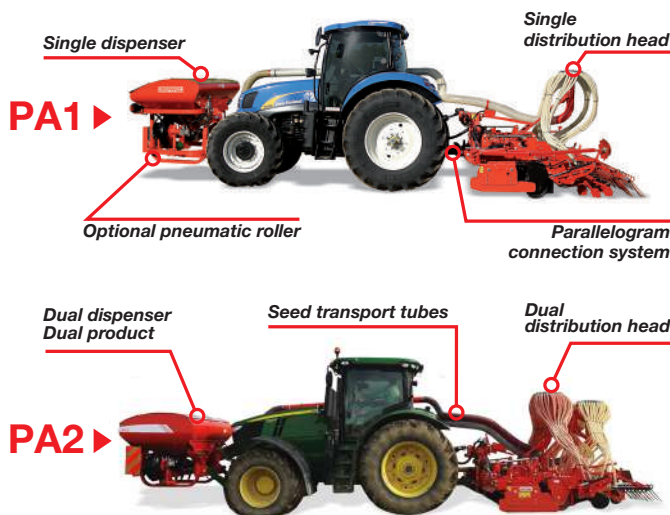


Roller mounted concept - The QUICK-MATCH uses a parallelogram system to keep the seeding bar perpendicular to the ground. As the whole seeding bar is carried by the roller the couler depth can be set in relation to the rear roller which follows the ground contours. In this way the coulters stay at a consistent depth ensuring accurate seed placement which in turn gives even plant emergence.



Large hopper

PA1: front hopper with a capacity of 1100L with only one electrically operated distributor and ISOTRONIC communication.
PA2: capacity of 2000L, dual product (1200L + 800L) with electrically operated dual distributor and ISOTRONIC communication.



Loading platform - The loading platform comes as standard, the step is attached to the front hopper, low enough for the operator to climb with ease and folds up neatly away when working or during transport.

One matches all - The CENTAURO seed drill models are compatible with the GABBIANO, AQUILA Rapido Plus and the TORO Rapido Plus. Compatible rollers: packer roller 500-600 mm and combi-packer 500mm.

Please check with OPICO if you plan to use a CENTAURO seed drill with your existing Maschio power harrow as some older models may not be compatible.

CENTAURO COMBINATION SEED DRILL SPECIFICATIONS

Models	HP*	Working width (m)	Transport width (m)	Total width (m)	No. of Coulters	Row Distance (cm)	Hopper Capacity L (Extension)	Coulters	Weight kg
4000	180-400*	4.0	2.5	4.37	40	12.5	1100	Suffolk	4130
5000	180-400*	5.0	2.5	5.37	40	12.5	1600	Suffolk	4550
6000	180-400*	6.0	2.5	6.37	48	12.5	1600	Suffolk	5310
4000	180-400*	5.0	2.5	4.37	40	12.5	1100	Disc	4275
5000	180-400*	5.0	2.5	5.37	40	12.5	1600	Disc	4830
6000	180-400*	6.0	2.5	6.37	48	12.5	1600	Disc	5525

*MIN & MAX hp depends on which power harrow combination is used.

Balanced weight - Maschio's drill design department have optimised the ratio between the weight and structural integrity. The weight is distributed across the tractor in order to reduce stress on the rear linkage. The CENTAURO is suitable for medium to large size tractors from 400hp. The weight distribution improves fuel consumption.



Easy calibration - The CENTAURO metering system and electronic drive are fully ISOBUS compatible and allow the operator to complete the calibration process quickly and easily by simply setting the tray in its position, lowering the distributor, opening the calibration gate and then pushing the start button. Then the collected seed can be weighed, the value on the scales entered into the control box using the keyboard and the required seed-rate can then be set. High precision regardless of calibration setting.

GENIUS MASTER ISOBUS - GENIUS MASTER makes ISOTRONIC communication extremely simple through the tractor's ISOBUS terminal: a single connecting cable is used to connect the drill to the tractor terminal for monitoring and controlling all drilling functions.



COULTER OPTIONS

Suffolk coulters - The Suffolk coulters are suitable for cultivated soil with very little or no crop residues. Two or three rows of coulters assist with the flow of soil and residues through the drill fitted with hard wearing replaceable coulters tips. 35kg pressure per coulters.



Single disc VORTEX - Suitable for heavier soil types, damper drilling conditions and high crop residues. The VORTEX disc incorporates a rotary scraper and a depth limiter with the option of a depth wheel for each coulters.



TINE DRILLS

PRIMAVERA

120-250 hp

The Maschio PRIMAVERA pneumatic tine drill is an efficient low cost seed drill packed with features to ease everyday use and still keep running cost down to a minimum. It utilises Maschio's own FLEXEED cassette type metering system in a cultivator drill format to provide a high speed solution for plough based or minimum tillage systems.

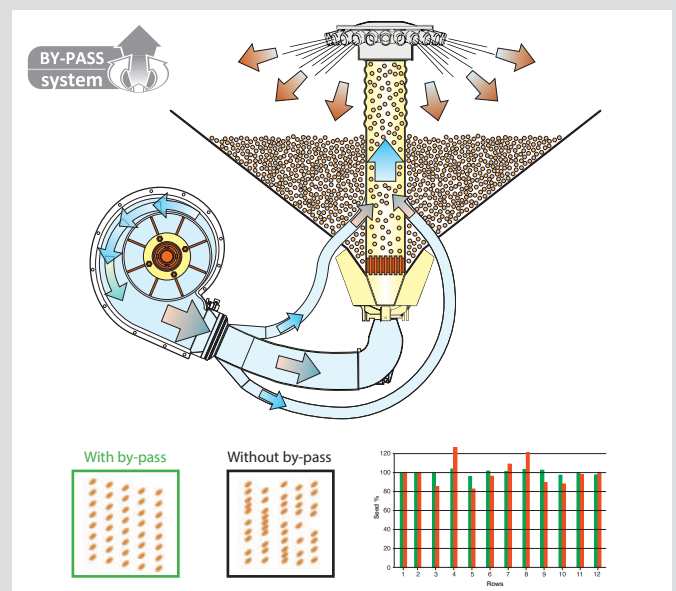


SEED METERING SYSTEM

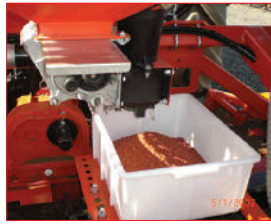
FLEXEED system - Designed and patented by Maschio the FLEXEED seed metering unit is as flexible as any metering unit can be, with up to seven metering roller options suitable for every kind of seed and seed-rate. The unit can distribute a large variety of seed sizes with ease, and is capable of achieving very high seed-rates.



Air BY-PASS System[®] - Enhances the effectiveness and evenness of the air flow resulting in a 25% increase in consistency of the amount of seed that is delivered to each outlet, guaranteeing reliable rates even on sloping ground.



Easy calibration - The seed-rate is controlled by a triple cam stepless gearbox which ensures the seed metering shaft turns consistently at the designated speed. The metering unit is easy to access, which makes calibration a simple task.



Large hopper - The PRIMAVERA boasts a large hopper capacity 1500L as standard with an optional 200L extension.



LARGE HOPPER



BALANCED WEIGHT

Balanced weight - Maschio's drill design department have optimised the ratio between the weight and structural integrity, making the PRIMAVERA an extremely strong drill. The centre of gravity is very close to the tractor in order to reduce stress on the rear linkage, this also makes the PRIMAVERA suitable for medium sized tractors from 120hp. The weight distribution improves fuel consumption.

Loading platform - The loading platform comes as standard, the platform has full safety handrails reachable from the first step to the top of the platform to allow easy and safe access to the hopper.



Hydraulic fan drive - The pneumatic distribution of the seed is carried out by a fan with hydraulic drive that is easily managed and adjusted from the tractor cab. This way the seed is distributed equally to all the seeding elements.



Following harrow - Dual covering harrows to ensure the seed is covered sufficiently.



High work rates - At 5m or 6m working widths and travelling at speeds of 12 – 16kph the PRIMAVERA tine drill is more than capable of producing impressive work rates per day.

Low running costs - The PRIMAVERA tine drill has very few wearing parts keeping running costs down to a minimum.



GENIUS MASTER ISOBUS - GENIUS MASTER makes ISOTRONIC communication extremely simple through the tractor's ISOBUS terminal: a single connecting cable is used to connect the drill to the tractor terminal for monitoring and controlling all drilling functions.



COULTERS

Tine coulters - For coarse, compact and/or stony soils. The adjustable load spring adapts to the different field conditions by optimising the pressure on each individual coulter.



PRIMAVERA SEED DRILL SPECIFICATIONS

Models	HP	Working width (m)	Total width (m)	No. of Coulters	Row Distance (cm)	Hopper Capacity L (Extension)	Weight kg
5000	140-250	5.0	5.05	40	12.5	1700*	2000
6000	175-250	6.0	6.05	40	15	1700*	2050
6000	175-250	6.0	6.05	48	12.5	1700*	2100

*With hopper extension

METERING DRIVE / CONTROL SYSTEMS



MECHANICAL DRIVE (DAMA ONLY)

The transmission is derived from a toothed wheel and transferred to the metering roller by means of the continuously variable transmission. The rate is adjusted using a convenient lever. Simple, affordable solution for everyone.



ELECTRONIC DRIVE **ISOTRONIC**

The seed roller is driven directly by an electric motor, with metering managed via ISOBUS from the control terminal in the tractor cab.



JOHN DEERE® GREENSTAR™ 3



CASE IH® PRO 700/
New Holland IntelliView™ IV



GENIUS MASTER ISOBUS



GENIUS MASTER makes communicating with ISOTRONIC extremely simple through the tractor's ISOBUS terminal: a single connecting cable is used to connect the drill to the tractor terminal for monitoring and controlling all drilling functions.

SOLUTIONS FOR NON-ISOBUS TRACTORS

MASCHIO supplies a compatibility kit, which comprises an ISOBUS terminal and cabling to enable communication between **ISOTRONIC** and non-ISOBUS tractors.



TERA 7

- Seed rate control
- Easy and fast calibration
- Pre-start and pre-stop function
- Automatic tramlining
- Hopper level indicator
- Records partial and total drilled area



TOUCH 800

- TERA 7 functions **PLUS**
- Hectare counter
- Speed
- Variable rate control
- Tram line
- Half-width machine
- Auto shut-off



SIMPLE TSH (DAMA)

- Records partial and total drilled area
- Easy and fast calibration
- Pre-emergence tramline row markers
- Automatic tramlining



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A full range of genuine MASCHIO wearing parts are available from your local dealer.

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