







# FERTILIZER SPREADER

### HIGH SPREADING PERFORMANCE

Fertilization is a crucial step to ensure an effective vegetative response and optimal yield. The dosage of nutrients must be well-calibrated and evenly spread to avoid product waste or crop damage.

MASCHIO GASPARDO presents the PRIMO range, the new double-disc centrifugal fertilizer spreader. Thanks to intuitive adjustments and low maintenance, it's always ready for use, delivering optimal crop performance.





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# Large Capacity

# Full control

The PRIMO fertilizer spreader is MASCHIO GASPARDO's **flagship model** for fertilization operations. The **PRIMO range** comes in four versions:

- **PRIMO M:** Manual control of distribution;
- **PRIMO E:** Continuous electronic control of distribution;
- **PRIMO EW:** Continuous electronic control of distribution and weighing;
- **PRIMO EWH ISOTRONIC EXCLUSIVE:** Independent control of discs with hydraulic command.

The **E and EW** versions are also available in **ISOTRONIC** configuration, with ISOBUS communication protocol. The **EFFICIENT** and **EXCLUSIVE configurations** offer features like 32-section spreading control, anti-wear coated discs, and electronically controlled fertilizer drop points.

PRIMO offers great versatility, with **transport** widths of 254 or 292 cm, **loading heights** from 109 to 154 cm, and **hopper capacities** ranging from 1,270 to 4,450 liters. For all models, the **maximum load capacity** is 3,200 kg, with ISOTRONIC versions reaching 4,500 kg.













### Adjustable fertilizer drop point

Thanks to the ability to **adjust** the fertilizer drop point on the spreading disc, it is possible to easily, effectively and intuitively **intervene** on the **working width**, **optimizing the distribution quality**.

### **Spreading guide**

A fertilizer conveyor is mounted in each **discharge opening,** with **bristles** that graze the top edge of the spreading vanes. This ensures that fertilizer is properly **directed onto** the disc.

#### Spreading disc and spreading vanes

3 stainless steel discs:

- L10: 12-21 m;
- L20: 21-36 m;
- **L30:** 30-48 m (only on versions with 292 cm hopper).

# Deflector for Border Spreading (Patented)

Designed for fertilizing near headlands or watercourses **without product** loss or contamination by **limiting** the width of the spray pattern.

#### **Quality Spreading**

The high-quality standards and **specialized treatments** applied to the painted surfaces give the PRIMO fertilizer spreader exceptional **resistance to corrosion.** 

# **HEAVY DUTY Frame**

# Modularity and versatility in a single machine

### 2 frames, 11 different hopper capacities!

Thanks to two frames with **different maximum capacities** (3,200 kg or 4,500 kg) and **stackable hopper extensions** of 535 liters (road width of 254 cm) or 620 liters (road width of 292 cm), PRIMO offers a wide **range of hopper volumes**, varying from 1,270 liters to 4,450 liters.

MODEL		Transport width (cm)		Hopper capacity (I)				
	Capacity (kg)		Filling width (cm)	Number of extensions				
				0	1	2	3	
7200	7 200	254	234	1.270	1.805	2.340	2.875	
3200	3.200	292	272	1.350	1.970	2.590	3.210	



0 elevations

1 elevation

2 elevations

3 elevations

		_		н	opper capacity (I	)
MODEL	(ka)	Transport width (cm)	Filling width (cm)	Nui	nber of extensio	ns
	(			3	4	5
4500	4.500	292	272	3.210	3.830	4.450



# Details that make the difference

### **Screen Grates**

Inside the hopper, there are **two removable grates** that sieve any fertilizer clumps. Below each grate is a cone that ensures a constant flow of fertilizer towards the outlet, regardless of the amount present in the hopper.

# PRIMO even in minimal and maximum flow rates: up to 640 kg/min!

PRIMO models feature specially **designed openings** to allow a material flow of up to 640 kg/min, improving **daily efficiency** to unprecedented levels.

This feature is **ideal** for spreading organic and pellet fertilizers, where dosing requirements exceed 1,000 kg/ha. Additionally, **the gates** regulating the product dose are designed to **handle very small amounts**, such as **see**ds or **slug pellets**.



### No more dose effect

The dose effect is a **consequence** of changing the working parameters (speed, dose, working width) that involves **changing the machine settings** to maintain the correct distribution. In the PRIMO spreader, **the phenomenon** has been **eliminated.** The special shape of the dose damper and vanes allow for **constant distribution** under all dosing conditions.

#### Result in the field with dose effect



#### Field result with PRIMO



# **A Quality Spread**

# Precision spreading

# **Orbital agitator**

The **multi-arm head** is specifically shaped to guide fertilizer toward the distribution system. It's connected to the **agitator** shaft below via a freewheel bearing, which prevents excessive orbital movement and protects **against product breakage or damage** to the head if foreign objects are encountered.

# Eccentric agitator shaft

The agitator is connected to an eccentric shaft via a bearing, which receives movement from the underlying transmission gearboxes. This design facilitates the quick transfer of fertilizer to the distribution outlet, ensuring a more uniform flow. Additionally, the bearing connection prevents the **agitator from compacting the fertilizer** during operation.

# **Distribution guide**

The distribution guide helps concentrate the area where the product falls onto the disc. This ensures that the fertilizer **always falls in the desired position**, ensuring maximum precision to prevent turbulence.

### Quick-release disc system

The distribution disc mount has a quick-release system (patented) to allow the operator to **remove the disc quickly** for operations such as:

- Flow tests/calibration
- Product unloading
- Hopper cleaning
- Disc changes

These **operations** are **simple** and **intuitive**, requiring just one tool to remove the disc, along with the fertilizer chute (as shown in the image), both of which are included in the supply.











# Modularity at Any Time

### Fast Fertilizer Discharge

At the end of the work, you can position a **special chute** under the discharge openings to quickly empty any remaining fertilizer from the hopper. This accessory can also be used for flow tests.

### **Proven Quality**



Laboratory tests confirmed that PRIMO's spreading quality closely matches the **ideal spreading pattern**.

# Three types of discs, one unique spreading quality

Each disc is manufactured using stamping to ensure **a uniform and consistent surface**. The discs and spreading paddles, made of stainless steel, are designed to withstand fertilizer abrasion, ensuring **longer life** and **efficiency**. Three types of spreading discs are available: L10 (12-21 m), L20 (21-36 m), and L30 (30-48 m). On request, **HEAVY DUTY** distribution paddles with anti-wear coating are available, standard in **EXCLUSIVE** configurations.



Model	Prilled Urea (m)	Granular Urea (m) NPK (m)		Ammonium Nitrate (m)	Potassium Chloride (m)
L10 (12-21 m)	21	21	21	21	21
L20 (21-36 m)	24	30	36	36	32
L30 (30-48 m)	32	39	44	48	34

\*Maximum spread measurements in the table are in meters.

# Manual Distribution Control

# A simplified and effective mechanism

**PRIMO M**, with manual control of distribution, is designed to be practical and efficient. The ON/OFF gate is controlled by a double-acting hydraulic cylinder, enabling a quick stop to the fertilizer flow. The fertilizer drop point and dosage can be adjusted using two specific levers. The bottom of the hopper and all adjustment parts are made of stainless steel to resist corrosion and ensure long-lasting durability.



#### The TSS (Twin Shutter System)

The PRIMO range's spreading system (available from **PRIMO E-EW**) is characterized by the combined and simultaneous use of 2 gates:

SHUTTER

- **ON/OFF gate (A):** Used for opening and closing the spreading operation. Its very fast opening ensures better operator responsiveness.
- **DOSE gate (B):** Controls the fertilizer flow. Its position is directly linked to the tractor's speed and the required dosage (automatic management with DPAE).

# PRIMO E/EW

# **Continuous Electronic Distribution Control**



### Electronics that work for you

**PRIMO E**, with proportional electronic distribution control based on forward speed (DPAE), allows the ON/OFF gates and dosage to be adjusted via electric actuators.

**PRIMO EW** integrates continuous weighing to maximize performance and simplify the use of the spreader. All parameters and operating modes can be modified via the monitor provided.



The same functionality is maintained during headland turns (with gate "A" closed). When resuming field spreading (with "A" open and very fast movement), gate "B" will already be correctly positioned based on tractor speed and the required dosage.

> Gate A: ON-OFF - maximum speed Gate B: DOSE - maximum precision



# **PRIMO E/EW ISOTRONIC**

# Continuous Electronic Distribution and Weighing Control

# **Fully automatic**

**PRIMO E-EW ISOTRONIC**, using ISOBUS communication protocol with internally developed and AEF-certified software, is designed for Precision Farming: variable rate (VR) management, section control (SC), and data import/export. ON/OFF and dosage controls are handled by electric actuators to always ensure maximum precision in distribution. Working width can also be adjusted by changing the fertilizer drop point either manually (in EFFICIENT configurations) or automatically (in EXCLUSIVE configurations).





# Section Control (SC)

For more efficient work organization, **PRIMO ISOTRONIC** can manage the spreading sections as follows:

- 8 sections in the EFFICIENT setup, where sections are managed via product flow variation (dose actuator);
- 32 sections in the EXCLUSIVE setup, where sections are managed by combining product flow (dose actuator) with the fertilizer drop point, controlled by an independent electric actuator (1 per side). This configuration also allows for the management of two different doses on both sides.



# **PRIMO EWH ISOTRONIC**

# Continuous Electronic Distribution and Weighing Control with Independent Hydraulic Disc Action

# Top of the line for Precision Farming

The **EWH ISOTRONIC EXCLUSIVE** version, using the ISOBUS communication protocol, is tailored for Precision Farming: independent variable rate (VR) distribution on each disc and up to 32 section control (SC) for maximum field performance. The latest feature introduced is the rotation of the spreading discs via two independently controlled gear motors powered by the tractor's hydraulic system. These allow independent speed control of the two discs for more precise and efficient spreading. The ON/OFF and DOSE gate controls are handled by two electric actuators to always ensure maximum precision in distribution. The drop point regulation on the disc is automatically controlled by two independent electric actuators (right and left).

(\*) connection to Load Sensing hydraulic line or directly to hydraulic system (minimum 70 l/min)

Electric actuator to adjust of the point of fertilizer fall on the disc

Electric actuator to control the metering damper

Hydraulic Disc Drive (EWH)

The advantages of hydraulic disc transmission are numerous: it allows for independent rotation speeds of the two discs, better section control, fuel savings, and reduced noise.

The hydraulic distributor enables the **PRIMO EWH** to connect to both tractors equipped with variable displacement pumps (LS line) and fixed displacement pumps. Additionally, the system features a filter with an electronic sensor that signals when it needs to be replaced. Electric actuator for ON/OFF gate control





# **PRIMO EW/EWH** The Weighing System

### Precise weight, guaranteed savings

The parallelogram connection system facilitates easy attachment to the tractor and mechanically transfers the weight from the hopper to the weighing cell without any alterations. Its goal is to improve product flow through more accurate readings, thereby reducing waste and minimizing environmental impact.

In PRIMO EW/EWH models, the spreader consists of a **3-point hitch** and a loading hopper. These two components are connected by 3 connecting rods that form a system parallelogram shape.

This system allows the weighing cell, located under the 3rd point of the hitch, to accurately measure the entire weight of the spreader and product, without being affected by tractor vibration, ensuring accurate weighing while working.









### Each kilogram counts

**PRIMO EW** models include a weighing cell that allows real-time reading of the amount of fertilizer in the hopper. The onboard electronics calculate the quantity distributed per unit area and, if necessary, adjust the flow to optimize the dose.

The sensor used has been tested to withstand high stress levels and maintain maximum precision over time. In ISOTRONIC versions, a special algorithm manages the weighing and adjusts the DOSE gates every 15 kg of product distributed, offering unparalleled accuracy.

# Heading for the goal

On slopes, an inclination sensor standard on all PRIMO EW models adjusts the weighing cell reading to ensure the correct fertilizer dosage according to the work program requirements.







#### **Precision Farming**

**PRIMO ISOTRONIC** fully applies the ISOBUS functionalities related to Precision Farming, increasing **crop productivity**, reducing working time, and facilitating successful farm management.

Thanks to section control and variable rate (VR) functionality, **spreading** is performed **uniformly**, **minimizing waste** and preventing crop damage, which leads to both environmental and economic benefits. Each plant receives precisely the amount of treatment it requires.

### Variable Gate (VG)

With **PRIMO ISOTRONIC**, it is possible to work using **prescription maps** that specify a variable fertilizer dose according to the diverse production potential of often heterogeneous fields.

This improves fertilizer **use efficiency**, benefiting the crop and the environment, while reducing operating costs. In EXCLUSIVE setups, the machine can manage two independent target doses (right-left) to maximize PRIMO's performance (\*\*).

(\*) VR license required on the VT (\*\*) MULTICONTROL license required on the VT

#### Section Control (SC)

When there is already a fertilized area or in fields with irregular borders, automatic section shutdown avoids spreading overlaps. PRIMO spreaders **maximize fertilizer distribution efficiency** through section control (\*\*\*), preventing waste or crop damage:

- 8 sections for the EFFICIENT setup (4 right and 4 left)
- 32 sections for the EXCLUSIVE setup (16 right and 16 left)

#### Required prescription map



Planned Date: March 4, 2024 Products: 0-46-0 TSP Average product dosage: 211,8 kg/ha Total units: 2,93 t

#### Distribution map obtained with PRIMO



Notes Total product applied: 2.96 t Area applied: 13.9 ha Average product dosage: 212.3 kg/ha Speed: 12.2 km/h



# **CONTROL TERMINALS**

# Monitor ICON for PRIMO E-EW

# Monitor ICON per PRIMO E-EW

**PRIMO E-EW** is operated via a terminal that offers various functions to better control the fertilizer spreading.

Key features:

- Controlled dosage that varies with the tractor's forward speed
- Continuous flow calibration of fertilizer.
- Satellite speed sensor (provided as standard).
- Easy fault diagnosis of electric actuators.
- Work reports.
- USB software updates.

### Four modes of operation:

- Automatic
- Semi-Automatic
- Speed (DPAE)
- Manual





# **ISOSPREADER Software**



All machine operating parameters are concentrated in one screen: ISOSPREADER. At a glance, the operator will have the following under control:

- 1. Working program parameters: material quantity in the hopper, spreading dosage, working width, and product flow factor.
- 2. Operating modes: Automatic, Semi-Automatic, and DPAE.
- 3. Working program name.
- 4. Machine regulation status: actuator positions, drop point (if present), gate opening percentage, disc rotation speed (if present).

- 5. Machine regulation commands: to modify all operating parameters even during automatic phases.
- 6. Summary of working data:
  - Area spread;
  - Spreading autonomy with product in the hopper;
  - · Quantity of product spread;
  - Distance traveled.
- 7. Machine diagnostics.



# **ISOSPREADER Software**

# VIRTUAL TERMINAL CANVIEW 7

A simple and effective solution for manually controlling PRIMO ISOTRONIC in all its functions.

# **TOUCH 800**

The TOUCH 800 monitor is the solution for non-ISOBUS tractors, enabling communication with the spreader easily and efficiently. Suitable for Precision Farming operations: Variable Rate (VR) and Section Control (SC).

### ITC

The new ITC monitor from MG is a Precision Farming tablet that, thanks to wireless connection, can be used for various operations near the machine.







# Easy Adjustment via App

### App - MY MG

The MY MG App allows quick and effective adjustments of all models in just a few minutes, making fieldwork easier and more precise. The SPREADER SMART SET feature gives the operator all the PRIMO settings directly on their smartphone.

Simply enter the spreading parameters (fertilizer type, working width, and required dosage) to get the correct spreader setup parameters and a quick overview of the fertilizer specifications.



# Steps for Easy Adjustment:



Enter the fertilizer type, the working width, and the required dosage. Insert forward speed and dosage in kg/ha.

The values for adjusting the shutter are obtained, the drop point and the working height.

Values for the adjustment of the edging kits are obtained.



### **Consolidated Paint Quality**

Fertilizers can be highly corrosive, especially in humid environments. To ensure continuous efficient operation of the spreader, high-quality paint is essential to protect the materials from corrosion.

#### **PAINTING TREATMENT**

Starting in September 2024, PRIMO will have a 7-year warranty against corrosion and frame perforation. Thanks to the treatments applied to all painted surfaces:

- Sandblasting.
- Pickling.
- Cataphoresis coating.
- Powder coating.

This maximizes resistance to the corrosive action of fertilizers and moisture.





# **Key Features of PRIMO**

		Non-ISOBUS Versions	:		
	PRIMO M	PRIMO E	PRIMO EW		
ON/OFF gate control	HYDRAULIC				
DOSE gate control	MANUAL	ELECTRICAL control (TSS)			
Fertilizer drop point adjustment	MANUAL	MANUAL			
DPAE	-	•	•		
Continuous weighing system -		-	•		
Tilt system -		-	•		
Empty hopper sensor	-	0	0		
Disc RPM sensor	-	o	0		
HD Paddles	0	0	0		
Hydraulic PTO	-	0	0		

AEF Certified UT TEEU AUX-N								
	PRIMO E ISOTRONIC EFFICIENT	PRIMO EW ISOTRONIC EFFICIENT	PRIMO E ISOTRONIC EXCLUSIVE	PRIMO EW ISOTRONIC EXCLUSIVE	PRIMO EWH ISOTRONIC EXCLUSIVE			
TWIN SHUTTER SYSTEM (TSS)		E	LECTRICAL cont	rol				
Fertilizer drop point adjustment	MAN	IUAL		ELECTRIC				
DPAE	•	•	•	•				
Continuous weighing system	-	•	- •		•			
Tilt system	-	•	-	•	•			
Variable Rate (VR)	•	•	•	•	•			
Section Control (SC)	8	8	32	32	32			
HD Paddles	ο	ο	٠	•	•			
Empty hopper sensor	ο	ο	٠	•	•			
Disc RPM sensor	ο	0	o o		•			
Hydraulic PTO	ο	ο	ο	0	-			
Independent hydraulic disc drive	-	_	-	_	•			

- Not available
- Standard
- Optional

# **Accessories**

# **High Customization**









Hopper Extension Kits: With or without inspection windows.

Side Inspection Ladder Kit Rear Inspection Ladder Kit Fender Kit (optional for (starting from 3 extensions) PRIMO M)





Hopper Cover Kit

Curved Cover Kit

Curved Electric Cover Kit (with integrated push-button, for ISOTRONIC models)



Parking Wheel Kit



Virtual Terminal **Connection Cable** 



GPS Antenna for Speed Measurement



GPS Antenna for Position Detection



Cable speed



Central limiter kit



Limiter kit for left field edge



Limiter kit for right field edge









Trailer Conversion Kit (non-homologated)

Hydraulic PTO Kit

Empty hopper sensors (standard on EXCLUSIVE)

Disc RPM sensors

and in and



VISION Light Kit (standard on PRIMO EWH)

LED Rear Light Kit (standard on PRIMO E/EW)

# Technical Data

	213	218	224	229	314	320	326	332	432	438	445
Working Width (m)	12-36			12-48							
Hopper Volume (I)	1.270	1.805	2.340	2.875	1.350	1.970	2.590	3.210	3.210	3.830	4.450
Max Hopper Volume (I)		2.8	375			3.2	210		4.450		
Loading Height (cm)	109	124	139	154	109	124	139	154	154	169	184
Spreading Management (cm)	3.200						4.500				
Max Road Width (cm)		2	54					292			
	$M \rightarrow manual control$ $E \rightarrow electric control (DPA with TSS)$ N.D.										
Spreading Control	EW> electric control (DPA with TSS) with continuous weighing EWH> electric control (DPA with TSS) with continuous weighing and independent hydraulic disc drive										
Category Hitch	II-IIIN										
Weight (kg)*	439	471	503	535	448	482	516	570	680	734	788

\* Note: Weight is empty without accessories.



# Growing Together

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