

# Maestria

*Mastering  
the art of time saving*



*Motorize your Future*





## ↘ *Maestria, the most awarded self-propelled sprayer:*

- *Winner of the Innov-Agri 2010 trophies (Press'n'Go system)*
- *Award winner of the Châlons d'Or 2007 (CLINAIR® system)*
- *Holder of the Spraying World Record since 2006 (122 ha. in 1 hour)*
- *Gold medal of the Innovation awards at SIMA 2005 (STABILIS option)*
- *Nominated for the Innovation awards at SIMA 2001*



## ↘ **Summary**

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- ↘ **Frame, transmission, engine, axles, steering**..... 6/7
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- ↘ **Driving cab, CLINAIR®** .....12/13
- ↘ **Equipment, options**..... 14/15

# Tailor-make your Maestria: 100 % personalized

## Maestria's 40 km/h range

<b>Two models</b>	17-40	21-40
<b>Two engines</b>	170 hp	210 hp
<b>One tank capacity</b>	4000 liters	
<b>Boom width</b>	From 24 to 44 meters	
<b>Stabilis option</b>	YES	YES



Save on the driving time between your farm and your fields: go for the 40 km/h.

## Maestria's 25 km/h range

<b>Three models</b>	17-39	21-39	23-45
<b>Three engines</b>	170 hp	210 hp	235 hp
<b>Two tank capacities</b>	3900 liters	4500 liters	
<b>Boom width</b>	From 24 to 50 meters		
<b>Stabilis option</b>	YES	YES	NO
<b>High ground clearance (1,30 m)</b>	YES	YES	NO



Conforming to standards helps you work in full security



## ➤ More than ten different models in one single range of self-propelled sprayers:

The Maestria is the only range of self-propelled sprayers available which offers that much of different configurations:

- Three tanks capacities: 3900, 4000 and 4500 liters
- Three engines: 170, 210 and 230 hp
- Two heights of ground clearance, one of which is a heightened version upto 1,30 m
- The option to choose between driving speeds of 25 and 40 km/h

All self-propelled sprayers are tailor-made according to your needs. Our business network is at your disposal to help you choose the product that best meets your full expectations.

## ➤ Matrot: machines approved for safe driving

Matrot strictly conforms to road safety regulations. The entire Maestria range, similarly to all of the Matrot brand equipment, was designed to pass the rigorous tests of the RDEPH/DREAL: curb weight, full tank weight, loading gauge dimensions, axle loads, pneumatic sheet, braking distances...

- You can enjoy driving our completely legal and safe self-propelled sprayers (maximum width complying with a consistent road drive at 40 km/h)
- All our tanks and tires are registered at, and validated by, the RDEPH/DREAL

Ask for the registration document: each unit is released from the plant with its own official document.

## ➤ More power made possible thanks to the hydromechanical transmission

For 25 years already, Matrot's self-propelled sprayers are equipped with a hydromechanical transmission. This latter has the following numerous advantages when compared to a hydraulic transmission:

- More strength
- More torque
- Less energy wastage
- Less maintenance
- Improved transmission performance: wheels get over 90% of the engine's power

As a result, it would be easier for you to treat steep and uneven plots and it would be easier for you to cross landscapes than with any other self-propelled sprayer, even when carrying 4500 liters in the tank.





## Complete product range

- ↘ 3 engines
- ↘ 3 tank capacities
- ↘ 25 or 40 km/h driving speeds
- ↘ Boom width of upto 50 meters

## ↘ The **STABILIS**<sup>®</sup> exclusively at Matrot Equipments

Since its introduction in 2005, Stabilis has so far won two awards: the first was a gold medal of the Innovation Awards at SIMA, a reward to the hard work of our research department for having developed this unique and patented equipment. The second was won in the fields: it is bestowed daily by users conquered by this essential tool.



### Cross any side-hill with ease

"I no longer treat certain plots without my Maestria Stabilis. I'm able to overcome the burden of a 28% side-hill: there is no other equipment that can cross it while having a filled tank". The Stabilis was designed to meet the needs of farmers, as well as ETA and CUMA groups who encounter difficulties in safely treating certain plots, as in the case of this farmer from the Midi-Pyrenees.

The Stabilis is an automatic system used to counter the burden of a side-hill experienced by the unit by straightening the tank and the cab: these would remain horizontal while the boom is held parallel to the ground. The whole unit is automatically activated by sensors and hydraulic rams making it react almost instantly.

### Enhance your operating speed

As much as the Stabilis turns to be essential for crossing side-hills, it is very useful as well on flat landforms, especially on side-hills: the frame tilts while the unit is making turns and the boom realigns itself automatically over crops. As a result, you can make U-turns while towing crops at a high speed reaching 14 km/h! "For a day's work, time saving is substantial".



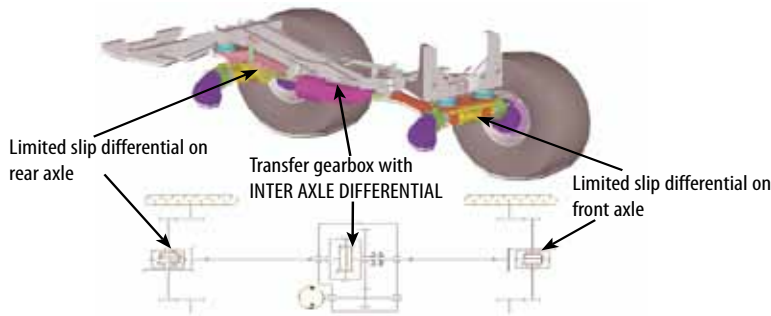
The Stabilis: A must-have for crossing certain side-hill, very useful for making turns at high speed (upto 14 km/h).



Take control of all the Stabilis settings with the help of a highly legible digital control box: display of the side-hill percentage, sensors control, security alarm.

# A strong, swift and skilful machine

The mechanical transmission provides more torque to the 4-wheel drive



Automatic engine control and treatment speed: Automotive, Cruise Control and EcoControl for your comfort

A balanced machine: the variable weight is located between the axles (tanks) while the fixed weight is distributed on both sides of the machine, on the rear (55%) and front (45%) axles.



Long wheelbase between the axles (4 meters, except for 23-45 : 4,40 m)

Work at higher speeds while maintaining a very stable boom: Suspension guaranteed by three air shock absorbers (two rear, one front).



Plants are safeguarded:

- The upward shaped axle does not hinder the crops
- The reducer is discreetly placed in the dished wheel centre
- Optional axle of 1,30 m for elevated crops

## A multipurpose machine

The simply designed Maestria drivetrain helps this self-propelled sprayer adequately meet the driver's expectations and defeat terrain obstacles. Models 17 and 21 include a transmission integrating a high yield hydraulic pump, a 4 speed hydraulic motor with to a transfer gearbox and two axles with limited slip differential. The most effective way to directly transfer maximum power to all four wheels. Model 23-45 includes a configuration that is substantially identical with two standard 2 speed hydraulic motors.

## Are you looking for more comfort and ease? Try our engine control

If you've already tried an automatic transmission, you would know how driving becomes extremely natural, simple and comfortable so you would not want to do without it. The Automotive driving mode of the Maestria gives you these exact feelings. Never worry anymore about changing speeds on the road, the Automotive mode does it for you. While in the fields, the Cruise Control mode takes over to ensure a continuous treatment at the desired speed. turning to EcoControl, this engine control system allows working in the best torque range, from 0 to 40 km/h, thus reducing your fuel consumption.

## Treatment comfort and quality: fully suspended frame

Thanks to the Maestria three air shock absorber suspension, your driving turns easy and enjoyable. You will earn:

- On comfort
- On flexibility
- On work speed
- On frame and booms' lifetime
- On treatment quality

## Less maintenance means fewer costs

By the very structure of the frame, the number of hoses and fittings is reduced to its minimum. One single pump, one single engine (two on a more powerful model) and technically simple and proven mechanical components... That's the guarantee of an easier maintenance.





## Highlights

- *Engine control: performance and confort*
- *Best weight to power ratio in its category*
- *Excellent stability on side-hills*
- *Suspension guaranteed by three air shock absorbers*

### ➤ *4 wheel steering with electronic control*

Thanks to the ergonomic console, you'll feel totally comfortable and productive. You'll easily maneuver the 4 wheel drive system using only two main buttons:

- 1/ Electronics On/Off switch
- 2/ Choice of a driving mode: road, field, side-hill and turning positions

The electronic steering, combined to a 4-wheel driven hydromechanical transmission, offers you many advantages:

- Ability to work in very difficult conditions
- Preservation of the crops
- Improvement of the machine maneuverability

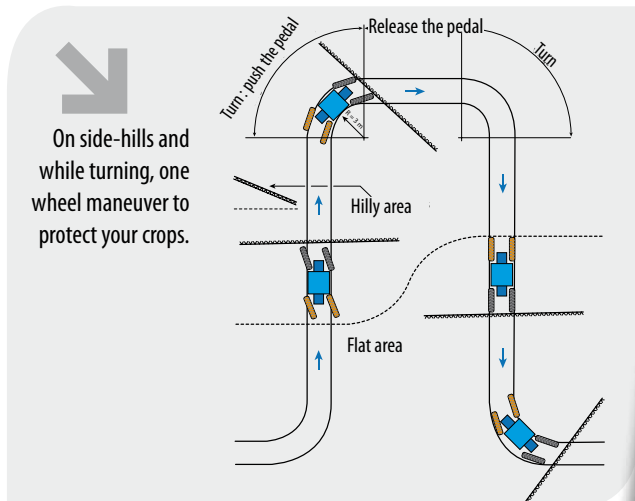
### ➤ *Good performance on side-hills*

Side-hill correction is electronically controlled by a progressive button allowing an incremental orientation of the angle between front and rear wheels.

### ➤ *Easy to manage turnings on headlands*

By simply pressing a foot pedal, rear wheels will start tracking with the front wheels for a turning operation. This may be done in either field or side-hill positions.

While in a road position, however, and for obvious safety reasons, the rear wheels would be locked.



On side-hills and while turning, one wheel maneuver to protect your crops.

➤ **Hillside option for models 17 and 21: 2 hydraulic engines**

# Boom width of upto 50 meters: your field productivity is flying high



↙ *The widest choice of booms in the market*

Boom width	Nbr. of sections
24 m	4
	6
28 m	7
28 / 24 m	7
28 / 27 m	7
30 m	5
	6
	7
	8
30 / 28 m	5
	6
	7
30 / 29 m	5
32 m	7
	8
	9
36 m	6
	8
	9
36 / 20 m	8
36 / 24 m	6

Boom width	Nbr. of sections
36 / 33 m	6
	8
38 m	6
	8
	9
38 / 36 m	6
	7
	8
	9
38 / 37 / 36 m	8
39 m	6
	8
39 / 36 m	8
40 m	8
40 / 24 m	8
40 / 38 / 36 m	8
41 / 40 m	8
42 m	7
	9
42 / 40 m	7
44 m	8
	9

Boom width	Nbr. of sections
44 / 42 m	7
	8
	9
45 m	8
	9
48 m	8
	9
49 m	8
49 / 48 m	8
	9
50 m	9
50 / 48 m	8

## ↘ *Frontal boom, since you can't see behind your neck*

Why are booms positioned in front of the unit? Simply because it's more convenient and comfortable to look forward at what you need to monitor and because such comfort reflects on your daily work quality:

- You work in total security
- Your spraying is controlled calmly and fatigue-free
- You manage the boom working height
- You anticipate rough passages and easily make corrections for side-hills and landforms
- You limit the spraying drift
- You don't need to look backward
- You perfectly control your movements on a headland

## ↘ *You have a low volume to treat?*

Forget the idea that low capacity self-propelled sprayers are the best for dealing with low volume treatment! You can still combine treatment speed, 4500 liters tank and excellent stability boom in one single machine. Add the Stabilis option to your Maestria and enjoy the most efficient, accurate and fastest self-propelled sprayer of its class.



### Let's talk productivity and range...

- With your Maestria, you can treat upto 20 km/h at a low rate (30 l/ha). This makes a good 135 ha with a single tank of 4000 l.
- For the treatment of 45 l/ha with a 4500 l, your range would be equal to 100 ha.





Product range

Frame, transmission, engine, axles, steering

Booms

Spraying

Driving cab

Technical specifications, Equipment, options

## ➤ Highlights

- Optimal productivity
- Excellent stability
- Clear view of the field
- High spraying quality

### ➤ *Press'n'Go system: boom folding and unfolding made easy!*

You were longing for a simple system that would ease the task of folding and unfolding the booms? Matrot has just developed a patented automatic boom unfolding and folding system, the Press'n'Go that's activated by simply pressing a foot pedal. You will gain in terms of comfort, safety and time from a maneuver that you endlessly repeat during the day. To further optimize your production time, Press'n'Go can be activated while driving into the field (speed limited to 5 km/h).

### ➤ *Aluminum booms, where's the catch?*

- Strong and lightweight
- Corrosion-resistant
- Zero paint maintenance
- Stability (low inertia)

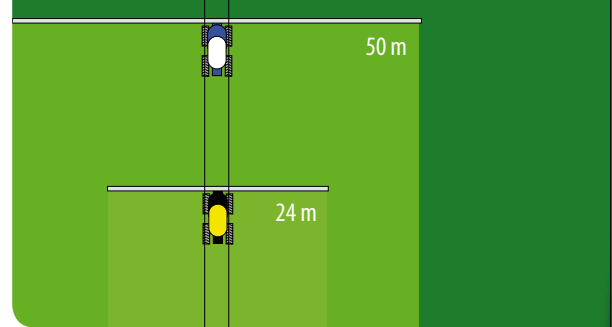


The Press'n'Go : fold and unfold booms in a single move!



## ➤ Booms of 50 m: double your productivity !

- ➔ Half of the passages needed with a machine fitted with a 24-meter boom
- ➔ Twice the time needed to treat other plots



Double the surface you can treat in a single working day. If you're looking to save time, look no further...

# Expose your asset: an excellent spraying quality



The control box includes an intelligent regulation feature which helps avoid the occurrence of overdoses when restarting the spraying process. A practical and reliable system that ensures greater security to your crops.



Programming capacity for 12 types of jets, out of which 5 are non linear (fertiliser jets).



Two manual valves providing the full set of functions: filling, incorporation, mixing, transfer, rinsing...

## ➤ *Reliable & intuitive regulation control box*

Easy to use and read, the Maestria regulation control box offers you a good load of very useful information to help you control your spraying operation. Its dial continuously displays four values:

- Spreading rate (l/ha)
- Spraying pressure
- Treatment speed
- A user-defined value: treated surface, spread volume, mileage, hour meter, flow rate

Its high capacity memory lets you store the data of the last 15 treated plots. It also includes a program to help you avoid overdosing at the time of entering a new path, which is very harmful to the crops and the environment.

## ➤ *The DGPS technology: go for high precision*

Working with a DGPS system is nowadays an essential practice to follow: its very high precision and multiple applications make it an essential tool for improving the accuracy of your treatment task. The Maestria regulation control box combines easily with this technology. The DGPS allows you to:

- Automatically fraction the sections
- Advance with a guide bar and take advantage of an efficient automatic guidance system
- Have an instant and precise velocity information that is always correct regardless of the machine wheel slide.
- Reduce treatment recoveries and, thus, your consumption of crop protection products.

## ➤ *Quick and simplified tank filling (electronic gauge option)*

The centrifugal pump of 700 l/min allows a quick filling time of the main tank.

For your comfort, and if you choose to have the optional electronic gauge, you will enjoy an automatic shutoff with an overflow safety device and filling volume programming.

## ➤ *Tank rinsing: no need to leave your cab*

Rinsing the bottom of the tank can be operated in two ways: manually using the valves or automatically using an exclusive Matrot option. You could, from your cab, directly activate the rinse cycle by transferring the clear water of the rinse tank to the main tank. A real advantage in terms of comfort, security and time saving.





Product range

Frame, transmission, engine, axles, steering

Booms

Spraying

Driving cab

Technical specifications, Equipment, options

## Highlights

- Easy to use regulation
- High precision of transmitted data
- Easy handling of all implementations
- Minimized dead volumes

### The AIS circulation: spray at the right pressure from the very beginning!

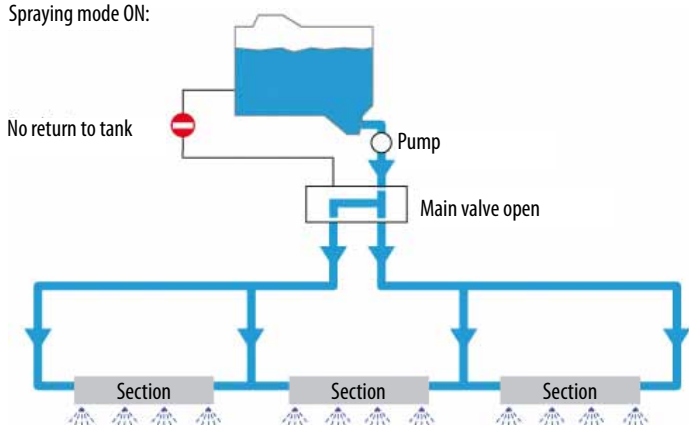
Innovation has come to the spraying world! Matrot offers you now a proprietary circulation system with pneumatic jet opening. This system is called AIS ("Accurate and Instant Spraying"). This circulation process is characterized by the absence of a return to the tank while spraying. It also offers many advantages:

- Attain the desired pressure from the very beginning
- Avoid any risk of jet clogging
- Minimize dead volumes within the spraying system
- Rinse your machine faster, easier and more efficiently, using a lesser quantity of water.

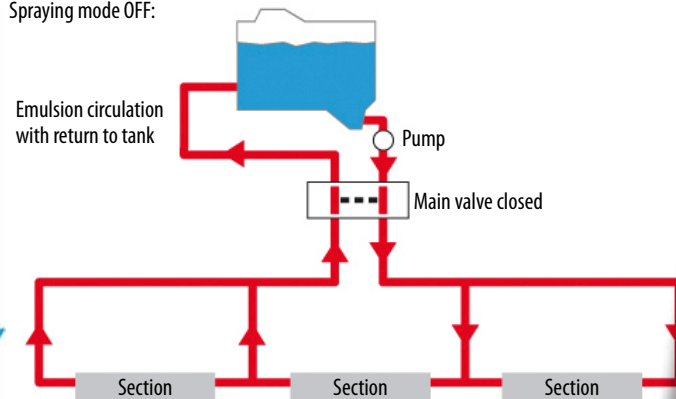
**i** Three automatic guidance modes using the DGPS:

- Straight line
- In curves
- In perimeter mode

Spraying mode ON:



Spraying mode OFF:



Now the AIS circulation with no return to tank while spraying: minimize your dead volumes!

# Visually and physically control your treatment process



On-road visibility



Press'n'Go activation with a single move.



Allying panoramic view cab glass with a frontal boom: perfect visibility of your work.



- Convenient forward handgrip:
- General Open/Close of spraying,
  - Ascent/descent of the boom,
  - Right and left geometry,
  - Side-hill correction,
  - Section cut-off (optional).



Section cut-off done manually through the console or the forward handgrip (optional) or automatically through DGPS (optional).

## ➤ *The advantage of comfortable and pleasant working conditions*

The Maestria driving cab is mounted on silentblocs, hence optimizing the soundproofing of the cab. You also benefit from a wide angle vision through the panoramic glass. The tinted glass filters sunlight and improves your visual comfort. Accessing the cabin is done through a hydraulically controlled ladder, thereby facilitating entry to the cab. Seating-wise, the steering column can be adjusted by tilting it. This also applies to the seat that can be adjusted upwards through the use of an air suspension.

## ➤ *Perfect visibility for a highly controlled job*

Total visibility:

- Of the boom
- Of the front wheels and tramlines
- Of control and command devices

## ➤ *The H-Tronic: set and easily adjust your working height*

When moving from one plot to another and from one type of crop to another, you probably have to frequently change your boom working height. Matrot has developed a patented boom height control system, the H-Tronic: set the desired height, activate and voila! In the case of models fitted with the Press'n'Go system, the boom height control function is part of that system.

Positioned above the console: the Stabilis control box.



Highly ergonomic, the console comprises all of the electrical controls: regulation control box, boom maneuvers, manual section cut-off, electronic steering box and H-Tronic control (optional).





Product range

Frame, transmission, engine, axles, steering

Booms

Spraying

Driving cab

Technical specifications, Equipment, options

## CLINAIR®, protecting the driver while in the cab

Enjoying an experience of over 20 years in the construction of self-propelled sprayers, Matrot developed in 2007 an ingenious cab air recirculation system. The CLINAIR® is nowadays a standard component of all Matrot brand self-propelled sprayers.

### Thanks to CLINAIR®, breath pure air

The system is simple and efficient: a flap is positioned at the air admission point in the cabin. When you're not spraying, the flap remains opened and allows the air into the cabin. As soon as you start a spraying task, the flap closes automatically. Ventilation, hence, runs on a closed circuit basis: the driver would then keep breathing healthy and recirculated air from inside the cabin.

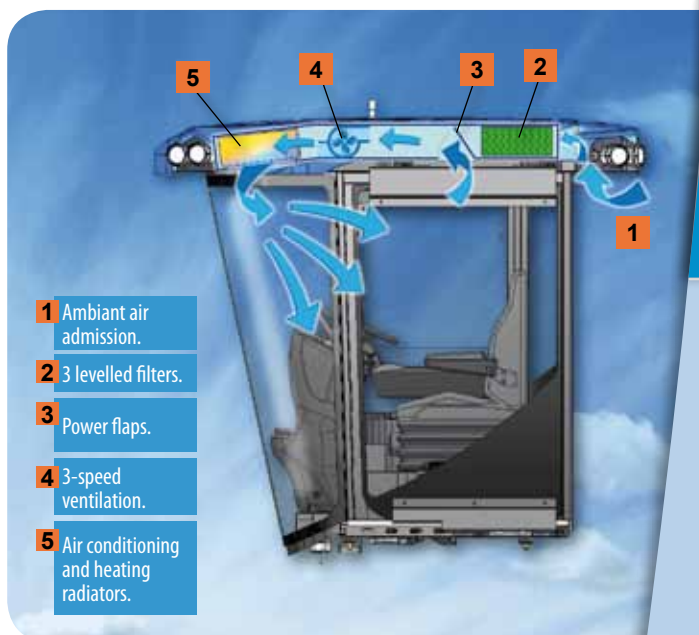
### The numerous advantages of CLINAIR®:

- You work in a healthy and pleasant atmosphere
- Ventilation filters are less consumed which, in turn, reduces maintenance costs and improves efficiency
- Air conditioning and heating use less energy



## Highlights

- *Comfort*
- *Treatment and on-road visibility*
- *User protection*
- *Ergonomically designed controls*



The CLINAIR® at work:  
An automatically controlled and recirculated ambient air.

# A wide range of equipments and options

General features					
MODELS	Maestria 17-39	Maestria 21-39	Maestria 23-45	Maestria 17-40	Maestria 21-40
Authorized speed	25	25	25	40	40
Stabilis included	<b>STABILIS</b>	<b>STABILIS</b>		<b>STABILIS</b>	<b>STABILIS</b>
<b>ENGINE</b>					
Manufacturer and type	DEUTZ 170 hp Euro 3 standard	DEUTZ 210 hp Euro 3 standard	DEUTZ 235 hp Euro 3 standard	DEUTZ 170 hp Euro 3 standard	DEUTZ 210 hp Euro 3 standard
Rated engine speed	2300 rpm	2300 rpm	2400 rpm	2300 rpm	2300 rpm
Number of cylinders	6				
Cylinder specs	6000 cm <sup>3</sup>	6000 cm <sup>3</sup>	7200 cm <sup>3</sup>	6000 cm <sup>3</sup>	6000 cm <sup>3</sup>
Cooling	Liquid				
<b>TANKS</b>					
Fuel tank	300 liters				
Hydraulic tank	170 liters				
<b>TRANSMISSION AND STEERING</b>					
Hydro-mechanical 4-wheel steering transmission					
Details	1 4-speed hydraulic engine, 1 inter-axle differential, 2 mechanical axles with limited slip differential		Same as other models, except for the number of hydraulic engines: 2 standard	1 4-speed hydraulic engine, 1 inter-axle differential, 2 mechanical axles with limited slip differential	
Option	2 hydraulic engines (hillside option)			2 hydraulic engines (hillside option)	
<b>SUSPENSION</b>					
Front and rear air suspension with shock absorbers (3 vacuum actuators) and leveling valve (4 vacuum actuators on model 23-45) Electronically controlled rear steering					
<b>STANDARD TIRES</b>					
Front and rear	18.4 R 42 Alliance or 300/95 R 52 Kléber		380/90 R 46 Alliance	380/90 R 46 Michelin	
Other available wheels	Extra tires available, please contact us				
<b>AXLES (seek advice from our dealers: tracks and ground clearances are dependent on the tire mounting method)</b>					
Available tracks	From 1,80 m to 2,70 m		From 2,25 m to 2,70 m	From 1,95 m to 2,70 m	
Standard ground clearance	Around 1 meter, depending on tire mounts				
Option	Heightened version 1,30 m				
<b>FORWARD SPEED</b>					
Number of gear ranges	4 electrically controlled gear ranges			2 mechanical gear ranges and 4 stages, electrically controlled	
Details	0 to 10 km/h 0 to 13 km/h 0 to 17 km/h 0 to 25 km/h			Field range: 0 to 12 km/h - 0 to 15 km/h 0 to 19 km/h - 0 to 21 km/h Road range: 0 to 22 km/h - 0 to 28 km/h 0 to 35 km/h - 0 to 40 km/h	
<b>BREAKS</b>					
On all models: main disc brakes, emergency disc brakes and parking disc brakes on each axle					
<b>CABIN</b>					
Ventilation circuit	Pressurized and soundproof cabin - Heating - Air Conditioning - 3-level air filtering - CLINAIR®				
Equipment	Standard: pneumatic suspension seat - car radio Optional: printer for electronic regulation - weather station - folding table				
Cabin glass	Tinted panoramic view glass for front, side and rear visibility				
Lighting	Standard : 8 working lights Optional : special blue color lights for night time mounted on the boom - extra flashing light (at the rear of the unit)				
Access to cabin	Hydraulically controlled and lifted access ladder Optional: electrical lift for persons with reduced mobility				





Product range

Frame, transmission,  
engine, axles, steering

Booms

Spraying

Driving cab

Technical specifications,  
Equipment, options

Spraying system			
MODELS	Maestria 17-39 and Maestria 21-39	Maestria 23-45	Maestria 17-40 and Maestria 21-40
<b>CAPACITIES</b>			
Main tank	3900 liters	4500 liters	4000 liters
Rinsing tank	400 liters	500 liters	400 liters
Hand wash	20 liters		
Incorporator	15 liters		
<b>BOOMS</b>			
Type and material	Front booms made of aluminum		
Width	From 24 to 50 meters		From 24 to 44 meters
Nozzles	3 sets of Nozal nozzles to choose from, with Quadrix drip control Optional: pentajet and headland nozzles		
Boom suspension	Pendular system		
Side-hill cylinder	Controlled from the multifunction handle - variable geometry and hoisting dampened by nitrogen accumulator		
Folding and unfolding	Standard: independent folding of outer arms - simultaneous folding of inner arms Optional: Press'n'Go system for automatic boom folding and unfolding		
Boom height control	Standard: manual Optional: automatic through H-TRONIC system, or integrated to AIS circulation system (optional)		
<b>SECTIONS</b>			
Number of sections	From 4 to 9, depending on width (see page 8 for details)		
Section cut-off	Standard: manual on console Optional: manual on handgrip - automatic through DGPS (with guide bar and gear change)		
<b>CIRCULATION</b>			
Standard	Semi-continuous		
Optional	Continuous with pneumatic halts AIS: continuous without return to tank and with pneumatic halts		
<b>IMPLEMENTATION AND RINSING</b>			
Standard	Incorporator - can-rinsing - tank gyrowasher - electrical bottom of tank valve - 6-meter suction hose with fittings and filter - air gun - hand wash		
Rinsing options	Emulsion/powder suction facility - automatic transfer of water from the rinsing tank to the main tank (controlled from the cabin) - electrical bottom of tank valve (controlled from the cabin) - bottom of tank spraying with rear jets - rear jets		
Tank level control	Standard: mechanical gauge with float fitted on all models Optional: electronic gauge		
<b>ELECTRONIC REGULATION CONTROL BOX</b>			
Single command and control box including: speed display - flow rate - spraying pressure - treated surface - spread volume...			
<b>DGPS OPTIONS</b>			
Gear change - section cut-off and guide bar - automatic guidance and guide bar			

# Maestria



## **MATROT, research at the service of innovation.**

Having its research department in direct interaction with its clients, MATROT strives to offer you highly efficient and innovative machines. Our objectives: tackle your daily concerns while relying on the strictest and latest standards.

## **MATROT, an organization at your service:**

### **A network of dealers near you,**

- offering all kinds of spare parts,
- well-trained technicians,
- sought after usage and maintenance consultants,

### **Relying on all of MATROT professional teams:**

- storekeepers,
- competent telephone assistance,
- responsive, receptive and mobile customer service.



## **MATROT Equipments**

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Your authorized dealer

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