

Pantera

Pantera 4504 self-propelled sprayer



The Pantera 4504 self-propelled sprayer has a nominal tank capacity of 4,500 l and is available in boom widths from 21 m to 42 m. Stepless track width adjustment as standard makes the Pantera a universal all-rounder, particularly when shared with neighbouring farms. A wide variety of requirements can be met thanks to the different chassis types offered by the Pantera, Pantera-W, Pantera-H and Pantera-HW. The new generation focuses on increased work rates and reducing the work load on the driver.



Pantera 4504

More intelligence, more precision

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Learn more about operating the machine Click here to go to SmartLearning:



www.amazone.net/smartlearning

Pantera

Pantera 4504

Slick – Sleek – Sly

Hydrostatic drive from

0 to 50 km/h

Spraying speeds of

up to 30 km/h

The advantages at a glance:

Spele goraying

- Outstanding tandem chassis design for a smooth horizontal boom ride and better stability on slopes
- Intelligent chassis management with front wheel, all-wheel and dog leg steering for even greater manoeuvrability
- Infinitely-variable hydrostatic single range drive for speeds from 0 to 50 km/h
- Spraying speeds of up to 30 km/h ensure high outputs
- Performance when it is needed. ECO mode and POWER mode
- Pantera⁺ drive hubs for improved climbing ability in hilly terrain
- DistanceControl or DistanceControl plus fully automatic boom guidance system

• For difficult terrain conditions:

- ContourControl active boom guidance for optimum vertical boom guidance
- SwingStop active boom tip swing compensation reduces horizontal boom movements
- DUS or DUS pro pressure recirculation systems ensure continuous circulation of the spray agent
- 50 cm part-width sections and optimum nozzle choice when using AmaSwitch or AmaSelect electric individual nozzle control
- True 25-cm nozzle spacing with AmaSwitch or AmaSelect

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Standard equipment for the Pantera 4504

- Hydro-pneumatic suspended tandem chassis with automatic level regulation as well as level-regulated and forward-speed related suspension control
- Track widths from 1.80 m to 3.20 m (will differ depending on the chassis type and tyres); the track width can be adjusted steplessly from the AmaDrive vehicle terminal
- Hydraulic front-wheel steering, all-wheel steering and dog-leg steering; steering angles tailored to the speed and operation
- Headland management with automated switch from front-wheel to all-wheel steering, boom lift with AutoLift

- Forward speeds up to 50 km/h, infinitely variable hydrostatic single range transmission with traction control
- Hydraulic braking system with disc brakes and hydraulic parking brake
- 6 cyl. Deutz turbodiesel engine, Common-Rail injection technology, maximum power 160 kW (218 HP) according to ISO 14396, Stage 3A or Stage 5 exhaust emissions compliant
- ECO-Mode: fuel saving, performance-related engine rev regulation on the road and in the field





- 290 I fuel tank; Stage 5 exhaust emission compliant with 20 I DEF tank (Diesel Exhaust Fluid, e.g. AdBlue)
- Claas Vista cab, climate control, heating, air-suspended comfort seat, adjustable steering column, radio with USB SD slot, Bluetooth hands-free phone connectivity, windscreen and rear window sunblinds
- AmaDrive vehicle terminal with colour touchscreen (7") for vehicle operation
- AmaPilot multi-function joystick⁺ for drive control and sprayer operation

- Side lights, dip and main beam headlights, 4 front work lights, 2 side work lights and 2 side view work lights in the cab roof, front illumination of the boom as well as illumination of the operator station.
- 4,500 I spray agent tank with agitator, fill level indicator, tank cleaning nozzles; 500 I fresh water tank and induction bowl
- 520 I/min pump capacity with 3" suction port, max. suction capacity 700 I/min
- Pump speed set from the terminal and remote control of the pump via the operator terminal
- Suction valve with 3" suction filter (32 mesh) and fill port for fresh water tank
- Valve chest, self-cleaning 1 1/4" pressure filter (50 mesh) and part-width section control, quick emptying
- Comfort-Pack with digital external fill level indicator, automatic fill stop, fill-level dependent and auto-dynamic agitation regulation and remote-controlled cleaning from the cab
- Super-light and super-stable Super-L boom
- Spraying height 0.35 m 2.65 m, up to 3.15 m on the Pantera-HW and Pantera-H (with 380/90 R50 tyre sizes)

product design award

2014

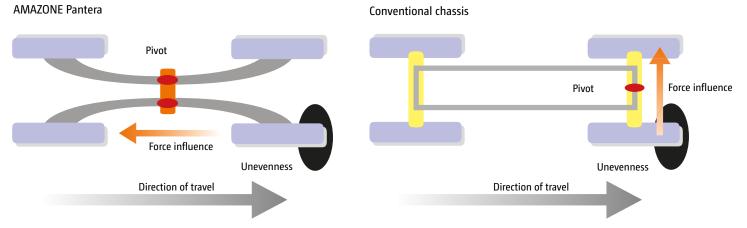
The interaction of style and performance of the Pantera, which was included in the "transportation design/special vehicles" category, convinced and impressed the iF jury composed of experts and designers from all over the world. The jury's evaluation criteria included, in addition to the quality of design, the finish and material choice, the degree of innovation and the environmental compatibility, its functionality and ergonomics and, finally, a visualisation of use and safety.

Pantera 4504

Intelligent chassis management



The outstanding longitudinal tandem chassis



The unevenness under the right hand front wheel is compensated by the elongated tandem. The pivot point is only slightly lifted. Only a slight transmission of the forces onto the frame.

The advantages of the Pantera chassis:

- Pendulum frame for optimised soil contact and reduced slip
- Comfortable and safe driving behaviour from the longitudinal tandem
- U Hydro-pneumatic suspension system with level regulation
- Super-robust frame

- Reliable hydraulic system no air regulation
- Stepless track width adjustment
- High ground clearance
- Headland management for steering and boom functions
- Stress relief for the driver and gentle boom treatment

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Weight distribution when full and with the booms folded out

Pantera 4504, 24 m, 520/85R38, unladen weight 9,850 kg

Pantera – with light-footed intelligence

The special tandem chassis design of the Pantera not only ensures perfect adaptation to ground undulations but also an optimum boom ride – especially of course, in sloping terrain. Thanks to the level regulated hydro-pneumatic suspension, the Pantera operator also enjoys the maximum level of comfort.

The combination of this unique chassis design and the proven AMAZONE boom suspension additionally ensures an optimally smooth boom ride even under the most arduous of conditions.

Weight distribution at the optimum!

Even weight distribution between the front and rear wheels is one of the basic requirements for efficient power transfer to the ground.

The Pantera 4504 was therefore designed to have an optimal weight distribution of approximately 50% on both the front and the rear axles when the tank is full. Depending on the tank level and the boom type, the weight distribution varies only by around 5%.

Nearly unbounded – exceptional ground clearance

The high ground clearance of 1.20 m also proves to be an important advantage for the Pantera in practice. The Pantera-H and Pantera-HW even have a ground clearance of 1.70 m. This is an advantage that is of particular benefit when spraying rape during flowering or also in taller maize crops. The SunflowerKit is available for the Pantera-HW, in order to enhance the plant care (see page 13).



High ground clearance for minimisation of crop damage

Pantera 4504

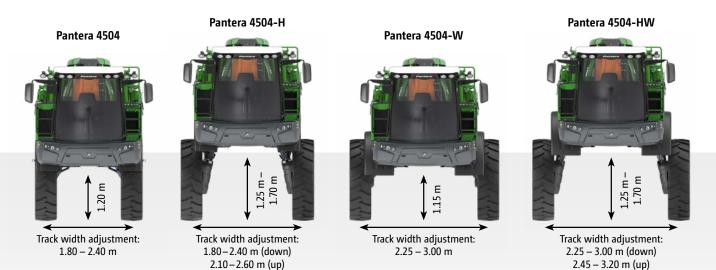
Track width adjustment in no time at all

Maximum flexibility offered by the chassis variants on the Pantera 4504

The standard, automatic track width adjustment allows a quick response to different applications and crops. Once the desired track width has been pre-selected, the exact centimetre precise setting is carried out automatically.



Wheel motor guards on the Pantera 4504 as standard



Track width and ground clearance respectively with tyre sizes 380/90 R50 (offset depth + 50 mm)

Pantera 4504-H

Ground clearance up to 1.70 m



Increased flexibility

The driver can lift the machine up to a ground clearance of 1.70 m at the touch of a button on the operator terminal. The track width can be adjusted between 2.10 m and 2.60 m with the machine in the lifted position.

The broad track width spectrum makes it possible to vary the track width of the machine from 1.80 m to 2.40 m in normal applications which only require a 1.25 m ground clearance.

The advantages of the Pantera-H chassis:

- Ground clearance from 1.25 m to 1.70 m, depending on the tyre sizes
- Sufficient room in all crops without plant damage

Pantera 4504-W

Track width adjustment up to 3 m

Enhanced flexibility

The Pantera 4504-W is equipped with track width adjustment from 2.25 m to 3.00 m. In "Controlled Traffic Farming" systems, the track width potential of the Pantera-W provides the ideal alternative. This specification is also of advantage if working in potato crops without tramlines: four rows of potatoes under the machine provide high stability and ensure minimal plant damage.

The advantages of the Pantera-W chassis:

- Stepless track width adjustment from 2.25 m to 3.00 m, depending on the tyre sizes
- High flexibility and therefore minimal damage to plants
- Compliance with the permissible transport widths



3 m

Pantera 4504-HW

For tremendous stability

Maximum flexibility

The Pantera-HW self-propelled sprayer is extremely versatile with a track width adjustment range from – 2.25 m to 3.00 m with a 1.25 m ground clearance or – 2.45 m to 3.20 m (3.30 m) with a 1.70 m ground clearance.

In spite of its higher centre of gravity, the Pantera 4504-HW turns out to be very stable and can be flexibly used in a wide variety of crops and row spacings. In particular, con-tractors looking to offer a flexible plant protection service across a wide range of customers and crops can clearly increase the scope of crop protection treatments possible.



The advantages of the Pantera-HW chassis:

Angled lifting cylinders provide tremendous stability

Larger track width in combination with the high-clearance chassis for maximum flexibility

Lift module

The optional Lifti module 700 can be used to raise the Super-L2 boom by a further 70 cm. In combination with this Lift module, the Pantera-H or Pantera-HW has an application height of 3.85 m* measured from the lower edge of the nozzle. The Lift module is available for the Super-L2 boom and across all chassis versions.



1.70 m ground clearance

3.85 m lift height (*with tyre sizes 380/90 R50)



Wheel motor guards on the Pantera-H and Pantera-HW



Wheel gearbox cover

Crop divider

Better protection for both machine and plants

In addition to the standard wheel motor guards, AMAZONE offers three more special features on the Pantera-H which provide even more protection: wheel gearbox covers, crop dividers and the underbelly cover.



SunflowerKit

Crop-saving SunflowerKit

The SunflowerKit was specially developed for the Pantera-HW, in order to be able to carry out plant protection and fertiliser applications in tall sunflower crops without causing too much plant damage. The kit consists of crop dividers, wheel housings and a shaped, flexible underbelly sheet. The crop dividers precisely separate the plants between the rows directly in front of the tyres. Thanks to the profile of the underbelly sheet and the properties of the flexible material, the sunflowers gently slide under the machine without hindrance.



Drive-line management with optimised fuel efficiency

Pantera – high-powered intelligence

New Stage 5 emissions compliant engine

The new Stage 5 emission complaint engine from AMAZONE uses exhaust gas recirculation, a diesel oxidation catalyst and a diesel particle filter to help protect the environment. The diesel particulate filter is continuously regenerating during operation. The SCR catalytic converter reduces the levels of nitrogen oxide with the aid of a diesel exhaust fluid (DEF) injection. The new 20 litre DEF tank is positioned at the side of the 290 litre diesel tank. The DEF consumption amounts to approximately 2.5% of the fuel consumption. This means that the DEF only requires refilling every 3 or 4 tankfuls.

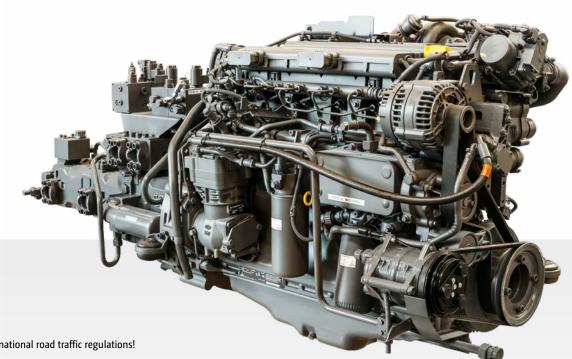
The benefits:

- Stepless hydrostatic drive from 0 to 50 km/h*
- State-of-the-art fuel management on the road and in the field with ECO and POWER mode
- Tailor-made speed regulated radiator fan drive
- Proven Deutz technology with a comprehensive service network

The heart as a unit: engine and hydrostatic drive

Deutz 6-cylinder diesel engine with a maximum output of 160 kW (218 HP)

- Turbocharger with intercooler
- Common-Rail injection technology
- 6.06 litre capacity
- Country-specific execution according to either Stage 3A or Stage 5 emission compliance
- The Amazone Pantera impresses with its low diesel consumption, the minimal noise level, the good weight distribution and sufficient payload." (profi 12/2011)



The benefits of a clever cooling system:

- Revs on demand
- The fans even switch off under low power demands and cool temperatures
- Positioned beyond the reach of dirt left: charge air, hydraulics right: engine, air-conditioning



Operation at optimum fuel saving: ECO or POWER

The new and optimised engine rev regulation mean that you can always operate the Pantera at the optimum fuel consumption efficiency.

When ECO Mode has been selected in the AmaDrive vehicle terminal, the engine will search for the optimal operating point for torque and revs in the given driving situation.

When spraying on the flat, an engine rev reduction down to 950 rpm is possible. This finely-tuned, automatic adaptation of engine speed takes place continuously between 950 and 2,000 rpm.

However, when working on steep slopes, or operating with a full tank in hilly terrain, maximum power at up to 2,000 rpm can be drawn upon by using the POWER Mode.

Example in ECO mode

- 1) Around 80 kW is required on the flat
- 2) When the machine is climbing a hill, the torque increases under load. The speed remains constant.
- 3) The climb is harder: the power consumption increases to 120 kW. The speed remains constant with slightly increased fuel consumption.

Infinitely variable power

The powerful Deutz 6-cylinder diesel engine with Common-Rail injection technology provides 218 HP and impresses by its high performance yet low fuel consumption. Thanks to the modern hydrostatic drive mechanism, you can drive the Pantera with absolute infinite variability.

This system allows, even at a low engine speeds, high start-up torques and a very dynamic acceleration.

Good power/weight ratio

The low unladen weight of the Pantera 4504 (9,900 kg in a 24 metre working width) is another advantage with regard to its low fuel consumption. So, the fuel tank volume of 290 litres enables high work rates over long days.



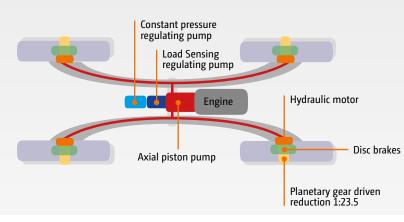
Integrated DEF tank for the Pantera with its Stage 5 emission compliant engine

Drive and braking management

Your safety is paramount!



The Amazone Pantera shows very good driving behaviour with a speed of 42 km/h at just 1400 revs." (profi 12/2011)



Drive and braking management

Pantera – reliable intelligence

Due to the large wheel diameter, particularly high torques are necessary when starting of. The intelligent drive concept of the Pantera does not build up these high forces hydraulically but mechanically via the fixed reduction ratio of the planetary gearbox. This is an extremely reliable drive under difficult ground conditions and when starting off.

Pantera⁺ drive concept – powerful intelligence

With the Pantera⁺, AMAZONE offers a drive concept that is particularly suitable for extreme terrain in hilly areas. Instead of the standard wheel drive hubs, all the Pantera models can be equipped with an alternative wheel hub with a gear reduction ratio of 1:30 (instead of 1:23.5). The Pantera⁺ has significantly more power with the alternative wheel drive hubs. The maximum speed is 40 km/h.

Traction control as standard

The drive torque of the four wheel motors is constantly being monitored electronically and then regulated to ensure the optimum vehicle behaviour even under difficult conditions. Power-consuming differential locks are avoided. Traction control (TCS) also ensures safe driving on the road at all times.

Pantera – safe intelligence

When the speed is reduced via the drive lever, the Pantera's hydrostatic brake is activated and the vehicle is braked down to a complete stop without fuss. In addition, the Pantera has a hydraulic braking system with disc brakes, which are applied via a foot pedal. The drive stops automatically when they are applied.

Advantages of the drive system:

- High torque at all times
- No speed change steps
- Possibility of larger wheel diameters
- A fixed reduction ratio in the planetary gearbox drives the wheel

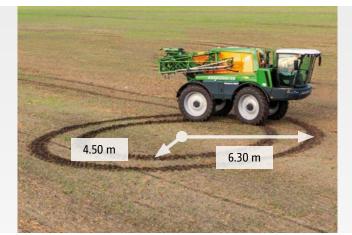
Advantages of the braking system:

- Safe and elegant driving performance
- Reliable braking performance, even during emergency stops from 50 km/h
- Automatic activation of the parking brake when standing still
- Autohold assist when starting off on a slope

Steering management

It has to be manoeuvrable, compact and flexible!







AmaPad 2 ISOBUS terminal for automatic track guidance

Relax and enjoy your work – even on the headland

In spite of the size of the vehicle, the minimum turning circle of the Pantera is only 4.50 m when in all-wheel steer. This extreme manoeuvrability significantly increases work rates, particularly in small fields. Switching between all-wheel and front-wheel steering as well as the steering correction is carried out by using the AmaPilot⁺ multi-function joystick. Dog leg steer helps you keep perfectly on track, even on a side slope. Driving in an offset track in dog leg steering mode provides positive advantages when in wet conditions on pressure-sensitive soils.

The Pantera also shows its intelligence on the headland: If headland management has been activated on the AmaDrive 7.0 vehicle terminal, switching off the nozzles automatically switches to all-wheel steering and the boom is lifted. Front-wheel steering is restored when the nozzles are switched on after turning has been completed.

Automated steering systems

AMAZONE offers the Steer-Ready kit as a GPS-based automated steering solution which controls the hydraulic steering. When equipped with the Steer-Ready kit, connection to a GPS receiver, such as the AGI-4, is possible.

RTK solutions are available for high track-to-track accuracy.



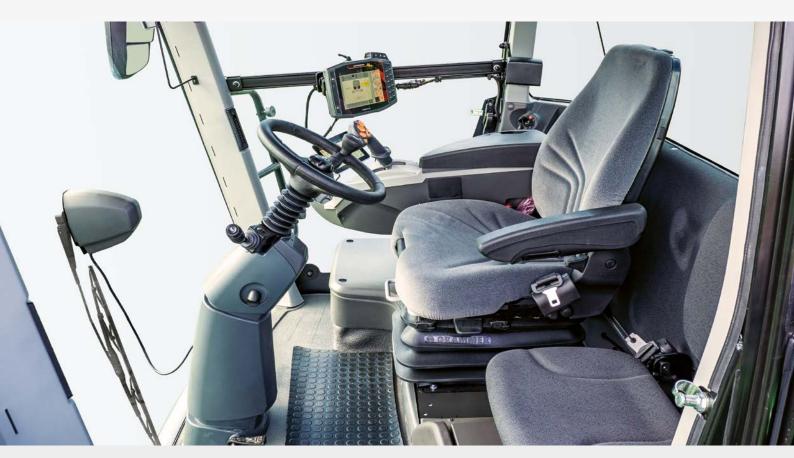
AmaDrive 7.0 vehicle terminal



 AGI-4 receiver for part-width section control and automated steering (optional equipment)

Cab management

A professional working environment – get on board and off you go!



 "The cab [...] is spacious and pleasantly quiet." (traction magazine "Working Test Pantera 4502-H" · 2/2015)

Relax ...

... when you sit in this cab

Advantages of the cab:

- Good all-round visibility
- Superb sound insulation
- Convenient, wide access with hydraulically folding ladder
- Individually adjustable air-suspended comfort driver seat with leather cover, seat ventilation and optional seat heating
- Large folding passenger seat
- Adjustable steering column
- Height and longitudinally adjustable arm rest with integrated controls

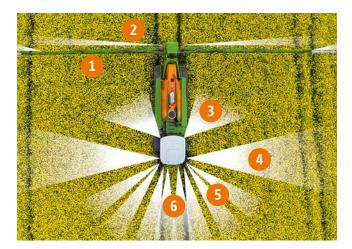
- Climate control
- Active carbon filters or optional Category 4 cab air filtration system
- Electrically adjustable and heated exterior mirrors
- Additional mirror for best view of the front wheel
- Ocument compartment
- Large cool box under the passenger seat
- Radio with USB SD slot, Bluetooth hands-free connectivity
- Sun blinds for front and rear windscreens



The optional Category 4 cab air filtration system creates an overpressure, so that the ingress of dust and vapour is prevented.

By day and night - illumination for long and safe working days

- 1) LED individual nozzle lighting (option)
- 2) Work lighting (2 halogen spotlights)*
- 3) Boom work lights (2 halogen spotlights)*
- 4) Side-view work lights (2 halogen spotlights)*
- 5) Side work lights (4 halogen spotlights)*
- 6) Front headlights (4 halogen spotlights)*
- * Lights 2) to 6) also optionally available as LED lights





Everything safely stowed!

The storage compartment under the cab offers sufficient space for convenient storage, for instance of the suction hose.

An additional, sealed clothing locker is located under the steps to the cab.



Convenient and large – the compartment for the suction hose





Sealed clothing locker under the cab

Operational management

Everything under control, everything in view

Twin terminal solution for comfortable operation

ISOBUS terminal for operation of the sprayer

The AmaTron 4 operator terminal with an 8" display and the AmaPad 2 operator terminal with a 12.1" display are offered for ISOBUS control. Both terminals have a multi-touch colour display. The practical MiniView layout means that handling is extremely comfortable and meets the highest demands of Precision Farming. The sprayer can be conveniently operated via the freely programmable AmaPilot⁺ multi-function joystick.

AmaDrive 7.0 vehicle terminal

The new AmaDrive 7.0 vehicle terminal is integrated in the ergonomic armrest. All machine-specific functions can be clearly displayed and intuitively operated on the colour 7" touchscreen. This is provided by the self-explanatory operating structure without multi-level sub-menus, which can be used to control the most important settings from the main screen. The freely configurable status bar means that particularly relevant information is always in view. Switching between day and night mode also makes operation easier.



Twin terminal solution with the AmaPad 2 ISOBUS terminal and AmaDrive 7.0 vehicle terminal as well as the AmaPilot⁺ multi-function joystick

Control the following functions with the AmaDrive 7.0 vehicle terminal:

- Cruise control
- Engine management with ECO or POWER mode
- Steering and headland management
- Track width adjustment
- Vehicle lighting
- Control of the central lubrication system

Display of:

- Forward speed and engine revs
- Fuel tank level and engine temperature
- Diagnostic data of engine and hydraulic system
- Field and road modes



Perfect ergonomics thanks to an adjustable palm rest

AmaPilot⁺ multi-function joystick – Many functions in one hand

"Get in and drive off" is the motto! Drive the machine steplessly and intuitively using the AmaPilot⁺ multi-function joystick. In cruise control, and with the maximum forward position of the multi-function joystick, the Pantera achieves speeds of up to 50 km/h on the road and the pre-selected desired operating speed in the field (the permissible maximum speed may vary depending on the national road traffic regulations).

If you pull the driving lever back, the hydrostatic brake is automatically applied. This automatically actuated hydraulic brake assists the driver in all situations. The highest sensitivity on start-up and when manoeuvring is guaranteed. All functions of the sprayer can also be controlled via the multi-function joystick. In this way, you can use AmaPilot⁺ for all the functions of steering management, part-width section and boom control and additional functions such as end nozzle control as well as the +/- application rate button.

Advantages of AmaPilot+:

- Perfect ergonomics
- Almost all the functions directly to hand via the 3 levels
- Adjustable palm rest
- Freely-programmable individual key layout

Camera systems

The image from the optional reversing camera, which provides a view to the rear or of the manoeuvring device, is fully integrated in the AmaDrive 7.0 vehicle terminal. The display is automatically activated when reverse gear is engaged.

A second optional camera system with a separate screen can be used to permanently display the image from a camera pointed at the right front wheel.



Reversing camera on the rear of the Pantera

✓ Large 135° viewing angle

- Camera with heating and lotus coating
- Clear picture even after dark thanks to infrared night vision technology
- Automatic back light function





Simple and convenient operation as intuitive as your tablet

Why not handle a terminal as intuitively as a tablet or a smartphone? With this in mind, AMAZONE has developed the operator-friendly AmaTron 4 which offers a noticeably smoother operational procedure, especially when it comes to job management. The AmaTron 4, with its 8" multi-touch colour display meets the highest expectations and offers maximum user-friendliness. A swipe of the finger or use of the App carousel allows quick changes between applications and the simple and clearly structured operating menu. A useful MiniView, a freely configurable status bar as well as a virtual light bar make the use of the AmaTron 4 particularly clear and convenient.

Machine operation (UT, Universal Terminal) in day and night mode

Benefits of AmaTron 4:

- Automatic full screen mode when not in use
- Automatic control button display via a proximity sensor
- Practical MiniView concept
- Actuation via multi-touch colour display or soft keys
- Separate Sep
- Field-related documentation
- Practice oriented and intelligent menu navigation
- Practical quick-start menu with import and export of job data, help windows, day/night mode and the AUX-N assignment
- One camera input and automatic reversing detection
- Free trial period for all chargeable licences
- AmaTron Connect for yet more access to the digital age

Equipped as standard with: **GPS-Maps&Doc**



AmaTron Connect

New ways of comfortable networked operation

With AmaTron Connect, AMAZONE provides a digital interface to a smartphone or tablet. The mobile device and AmaTron 4 are simply connected as a hotspot. AmaTron Connect enables use of the AmaTron Twin App as well as data exchange via agrirouter and the myAmaRouter App.

AmaTron Twin App

Clear display enhancement

The AmaTron Twin App offers the driver even more comfort in work, as GPS functions in the map view can also be operated via a mobile device, such as a tablet, in parallel with machine operation in AmaTron 4.

Now download the free App and try the DEMO in the App.



Advantages of the AmaTron Twin display enhancement:

- Use of an existing mobile device
- Greater clarity all applications in view
- Comfortable control of GPS functions in the map view in parallel via the mobile device
- Clear, authentic representation of the working machine and its part-width sections



Alternative map views with AmaTron Twin – Clear display of the machine and its part-width sections, as well as buttons on the right of the mobile device.

AmaPad 2

An especially comfortable method of controlling agricultural machinery



The most important information at a glance – in full screen mode or in the MiniView

The new dimension in control and monitoring

With AmaPad 2, AMAZONE offers a particularly high-quality operator terminal. The 12.1" multi-touch colour display is particularly user-friendly and fulfils the highest demands of Precision Farming. AmaPad 2 is operated solely via touch.

With the practical "MiniView concept", applications which aren't being actively operated at that moment, but need to be monitored, are clearly displayed at the side. When needed, these can be enlarged using "a finger swipe". The possibility of individualising the "dashboard panel" with a choice of display rounds off the user ergonomics.



Benefits of AmaPad 2:

- High-end ISOBUS operator terminal with a large touch display
- Extended MiniView concept enables the parallel display of up to a maximum of four menus
- Quick-start button and integrated light bar
- Two camera inputs
- O Day-night mode

Equipped as standard with:

GPS-Maps&Doc GPS-Switch basic GPS-Switch pro GPS-Track

Two cameras enable continuous monitoring of the surroundings during field work or on the road



AmaPilot⁺ – Everything to one hand!

Thanks to the AUX-N feature, you can operate multiple functions of the machine via AmaPilot⁺ or any other ISO-BUS multi-function joysticks.

The benefits of AmaPilot+:

- Almost every function directly controlled across 3 levels
- Adjustable palm rest
- Freely-programmable, individualised key layout



Overview of ISOBUS terminals	AmaTron 4	AmaPad 2	
Display	Large 8" multi-touch colour display	Large 12.1" multi-touch colour display	
Mode of operation	Touch and 12 soft keys	Touch	
Interfaces	Serial interface for GPS Two USB ports		
Sensor connection, e.g. nitrogen sensor	via SCU-L adapter	via SCU-L adapter or PeerControl	
Job management and running of application maps (ISO-XML or Shape file formats)	GPS-Maps&Doc		
Automatic part-width section control (SectionControl**)	GPS-Switch basic * with up to 16 part-width sections or GPS-Switch pro * with up to 128 part-width sections	GPS-Switch basic + pro with up to 128 part-width sections	
Parallel guidance aid	GPS-Track * with virtual light bar	GPS-Track with virtual light bar	
Automatic track guidance	_	Steer-Ready kit * for the Pantera self-propelled sprayer	
Camera connection/licence *	Single camera connection / AmaCam * with automatic reversing detection	Twin camera connections / AmaCam *	

* = optional / ** = Note the max. no. of machine part-width sections

Automatic part-width section control GPS-Switch with Section Control

GPS-Switch

If the operating terminal facilitates Section Control, such as GPS-Switch part-width section control from AMAZONE, the part-width sections are activated completely automatically and in relation to the GPS position. Once a field has been created, the driver can concentrate fully on operating the vehicle in automatic mode, since the part-width sections are switched automatically in wedge shaped fields and on headlands.

Benefits of automatic part-width section control:

- Stress relief on the driver
- Increase in precision especially at night or at higher speeds
- Fewer overlaps and gaps
- Saving on resources
- Less crop damage and less environmental pollution
- With Section Control, the ISOBUS terminal takes a lot of work away from the driver."

("dlz agrar magazine" – test report ZA-TS fertiliser spreader · 02/2017)

With GPS-Switch, AMAZONE offers GPS-based, fully automatic part-width section control for all AMAZONE operator terminals and ISOBUS-compatible fertiliser spreaders, crop protection sprayers or seed drills.

GPS-Switch basic

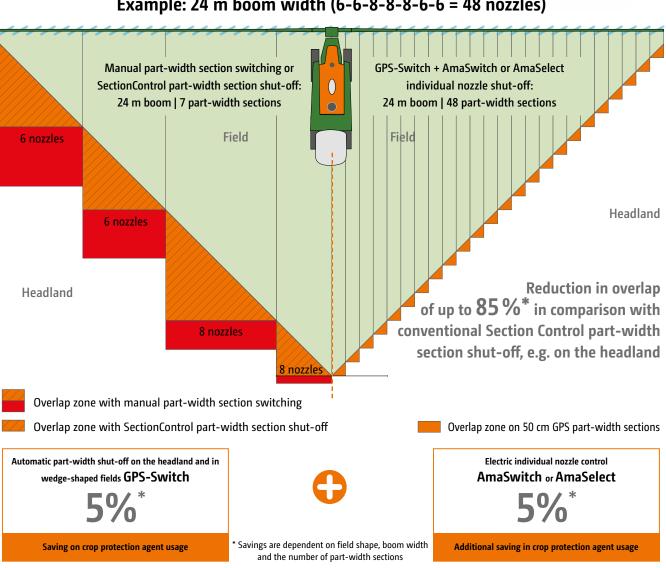
- Automatic part-width section control with up to 16 part-width sections
- Creation of a virtual headland
- Automated boom lowering on AMAZONE crop protection sprayers
- Supplied as standard with AmaPad 2
- Optional with AmaTron 4

GPS-Switch pro (as an extension of GPS-Switch basic)

- Automatic part-width section control with up to 128 part-width sections, in particular for crop protection sprayers with individual nozzle control
- Marking obstacles (e.g. water holes, pylons)
- Auto-zoom when approaching the headland
- Supplied as standard with AmaPad 2
- Optional with AmaTron 4



Overlaps on the headland or in wedge shaped fields are prevented via precise switch points with GPS-Switch.



Example: 24 m boom width (6-6-8-8-8-6-6 = 48 nozzles)

Precise switching with 50 cm part-width sections

The decisive benefit of individual nozzle control is the possibility to operate with small part-width sections giving an even greater degree of accuracy in wedge shaped fields, short work and on the headland. The automatic switching of individual nozzles on 50 cm part-width sections is made possible by combining AmaSwitch or AmaSelect and the automatic GPS-Switch part-width section control.

Overlapping is reduced by up to 85% in comparison with conventional Section Control part-width section shut-off. So, the combination of GPS-Switch and individual nozzle control results in, depending on field shape and size, the working width and number of part-width sections, significant savings in spray agent compared with a normal spraying system used thus far.

Workday made easy –

Make the most of the possibilities!

GPS-Maps&Doc

All standard ISOBUS terminals from AMAZONE can collect and save machine and site-specific data using Task Controller. Part-area, site-specific operation via application maps in either Shape file or ISO-XML formats is also possible.

- Easy creation, loading and processing of jobs
- Start a new task straight away and decide later whether the data is saved or not
- Import and export of jobs in ISO-XML format
- Job summary via PDF export
- Intuitive system for running application maps in Shape file or ISO-XML formats
- Automatic part-area, site specific regulation of the application rate
- Indication of inactive field boundaries and automatic field detection when approaching the area
- Optimum crop management using need-oriented application
- Standard on AmaTron 4 and AmaPad 2

GPS-Track

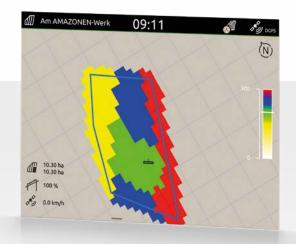
The GPS-Track parallel guidance greatly helps with orientation in the field, especially on grassland or in areas without tramlines.

- With a virtual light bar in the status bar
- Automatic tramline control via GPS for seed drills
- Various track modes such as A-B lines or contour driving
- Supplied as standard with AmaPad 2
- Optional with AmaTron 4

AmaCam

Software licence for the display of one camera image on AmaTron 4 and up to two camera images on AmaPad 2.

Automatic display of the camera image on AmaTron 4 when reversing



Display of the application map in AmaTron 4



Display of the camera image in AmaTron 4

agrirouter –

the independent data exchange platform for agriculture

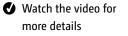
Secure data exchange

agrirouter is an independent data exchange platform for farmers and contractors. It enables simple and cross-manufacturer data exchange between machines and agricultural software applications, thereby reducing administration. The user retains full control over the data at all times.

myAmaRouter App

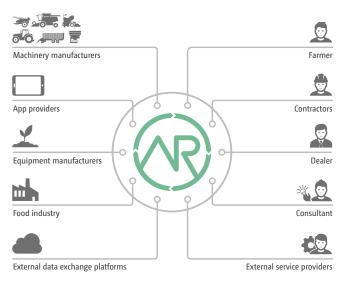
For the on-line transfer of data between AmaTron 4 and agrirouter

The myAmaRouter App enables data to be exchanged between the AmaTron 4 ISOBUS operator terminal and the agrirouter manufacturer-independent data exchange platform. If an AMAZONE machine is to be used to carry out a task with job data (e.g. application maps), the data can be easily transmitted from a Farm Management Information System (FMIS) to AmaTron 4 via agrirouter and the myAmaRouter App. After the work has been completed, the job can be sent back and is available for documentation in an agricultural software application.





ready_for **agrirouter**



The manufacturer-independent agrirouter enables secure and uncomplicated data exchange.

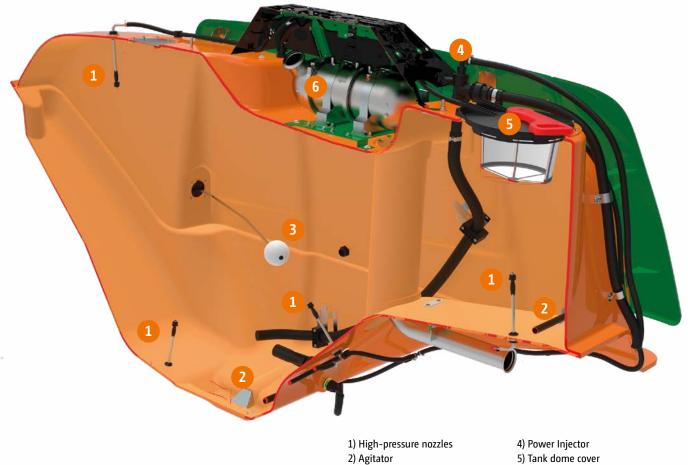
Benefits of agrirouter:

- Simple data exchange between the AmaTron 4 ISOBUS operator terminal and the manufacturer-independent agrirouter data exchange platform
- Easy and rapid transfer of job and task data without the need for a USB stick
- More flexibility for data exchange and documentation

Uncomplicated data transfer. Transparent and secure!



Intelligent liquid management: integrated into the total concept



3) Fill level sensor

6) Exhaust gas system

Optimised for professional use

The 4,500 litre spray agent tank (actual volume 4,750 litre) positioned deep in the frame ensures a favourable centre of gravity and an even weight transmission to all four wheels of the Pantera. The spray agent and fresh water tank consist of high grade glass fibre reinforced plastic with smooth internal and external walls. The low positioned outlet sump

ensures the smallest of residual volumes even in sloping terrain. Electronic fill level indication and four rotating high-pressure nozzles for internal cleaning are standard. The 500 litre fresh water tank with fill level indicator is located at the rear of the Pantera.



Pump system on the right-hand side of the machine



Securely closing tank dome cover

High-capacity pumps

The two high-capacity piston diaphragm pumps (520 l/min) ensure that is it also possible to spray at high water rates and high forward speeds and yet sufficient agitator capacity is still available. The pump rotation speed from 380 to 580 rpm can be chosen in the AmaDrive terminal. The pumps are positioned on the right-hand side of the machine and are easily accessible.

Tank dome cover

The tank dome cover is completely developed and manufactured by AMAZONE and is unique on the market. The ergonomic handle makes it simple to open and close with little effort. The tank dome lid is robustly designed and optimally closed by the 8-fold locking system.

Bowser fill connection with automatic fill stop

The automatic fill stop prevents overfilling of the machine when filling via the suction hose. Automatic fill stop is optionally available for the bowser fill port. The bowser fill port is located up front in the storage compartment, which allows pressure filling from the edge of the field without having to fold in the boom.

High application rates thanks to HighFlow⁺

HighFlow⁺ allows both pumps to be used for spraying. If the normal spray output of 200 l/min is not sufficient, the liquid flow from the agitation pump is automatically used as required until the desired application rate is reached. The remaining capacity of the agitation pump continues to be used for agitating the liquid in the spray agent tank.

- It allows large quantities of liquid fertiliser to be applied at higher speeds.
- For vegetable applications, then rates of 2,000 l/ha at 5 -6 km/h are possible.



Bowser fill port in the storage compartment with automatic fill stop



HighFlow⁺ is equipped with an additional, self-cleaning pressure filter

SmartCenter with Comfort-Pack

Handling made easy



The operating components of the Pantera with Comfort-Pack

- 1) Induction bowl
- 2) Hand lance pistol for rinsing out the induction bowl
- 3) Self-cleaning pressure filter
- 4) Suction filter
- 5) 7-way pressure tap
- 6) Soap dispenser
- 7) Control tap for induction bowl
- 8) TwinTerminal 3.0
- 9) Pressure filter drain
- 10) Hand wash tank tap
- 13) 3" Camlock suction port
- bowl draw-out/additional filling capacity

Gardena coupling

11) Fill port for fresh water tank incl.

12) Control tap for venturi/induction



Comfort-Pack with TwinTerminal 3.0

Comfort-Pack – simple and intuitive operation

In conjunction with Comfort-Pack, the TwinTerminal 3.0 is also utilised. In addition, automatic fill stop for the suction fill is also included. As an option, fill stop is also available when pressure filling from a bowser. During application, the intensity of the agitation is regulated depending on the tank fill level. As the fill level decreases, the agitation capacity is automatically reduced down until it is completely switched off preventing the formation of foam at a low fill level. In addition, the automatic agitation regulation offers auto-dynamic agitator control. This means: the auxiliary agitator is closed when a higher application rate is required at the boom.

After the spraying operation is finished, Comfort-Pack provides fully automatic cleaning which can be controlled completely remotely from the cab. Additional functions such as boom rinsing, cleaning the spray liquid circuit from heavy deposits or a defined dilution of a subsequent tank mix in the field are all functions included within Comfort-Pack.

The benefits:

- Comfortable filling of the spray agent and fresh water tanks via the automatic fill stop
- No foaming of the spray agent due to the automatic fill-level dependent control and switching off of the agitator
- Always maximum capacity when spraying and agitating thanks to the auto-dynamic agitator control
- Remote-controlled, automatic cleaning programmes for complete sprayer wash-out



In-house developed 7-way pressure tap

7-way pressure tap – safe changeover with cam and seat valves

The 7-way pressure tap provided in the Pantera with Comfort-Pack is extremely practical. As opposed to a normal pressure tap, the in-house developed valve from AMAZONE consists of a cam and seat valves. Exclusively by swivelling in and out the handle on the pressure tap, the relevant liquid paths are reliably opened or closed.

The benefits:

- All functions on the pressure side are actuated via a tap
- Minimal wear of the seals and insensitivity to sand and suspended matter in the water
- No unwanted route is activated when changing the function

SmartCenter with Comfort-Pack plus

Operation with maximum comfort



The operating components of the Pantera with Comfort-Pack plus

- 1) Induction bowl
- 2) Hand lance pistol for rinsing out the induction bowl
- Closed Transfer System, pressure connection ¾"
- 4) Suction filter
- 5) Self-cleaning pressure filter
- 6) TwinTerminal 7.0
- 7) Soap dispenser
- 8) Control tap for induction bowla) Used used target target
- 9) Hand wash tank tap
- 10) Fill port for fresh water tank incl. Gardena coupling
- 11) Closed Transfer System, pressure connection 1"
- 12) 3" Camlock suction port



TwinTerminal 7.0 can be operated with gloves without any problems

TwinTerminal 7.0 with pressure-sensitive touchscreen

Handling is made especially comfortable by Comfort-Pack plus. Instead of operating taps, TwinTerminal 7.0 makes machine operation much easier with its pressure-sensitive touchscreen. The complete control of the spray agent circuit is carried out solely via the pressure-sensitive touch screen which functions perfectly even when wearing gloves. The user just selects the desired function and the sprayer adjusts itself automatically!

In the job computer, two individual filling profiles for different operators or applications can be stored. Then only the hose has to be coupled for filling, and the machine automatically fills the spray agent tank and fresh water tank up to the desired tank fill level. As an option, the operator can select individually an adjustable pause in the filling of the spray agent tank.



The fresh water pump (160 l/min) is located next to the two powerful piston diaphragm pumps (520 l/min)

Fresh water pump

Comfort-Pack plus includes a fresh water pump with a pump capacity of 160 l/min. This can be used to supply the induction bowl with fresh water from the fresh water tank during bowser filling.

The fresh water pump can be used to fill the fresh water tank and the spray agent tank in parallel via the suction port. The additional fresh water pump also enables faster cleaning of the Pantera.

Automatic and independent cleaning

The complete sprayer along with the induction bowl can be cleaned fully automatically. For this purpose, the Pantera with Comfort-Pack plus is equipped with the following cleaning programmes: intensive clean, quick clean and boom rinsing.

In addition, after every fill , the induction bowl rinses itself on its own.

The benefits:

- Simple operation: choose the function and the machine adjusts everything fully automatically
- Maximum comfort: automatic filling and automatic fill stop for both suction and bowser filling
- Maximum safety: fully automatic cleaning of the entire machine including the induction bowl
- Maximum capacity: automatic quick fill via the venturi when the chemical induction is completed
- Auto-dynamic agitation control

Operating options at a glance

		Comfort- Pack	Comfort-Pack plus
Operation:	Electrically-actuated via TwinTerminal 3.0		-
suction side	Electrically-actuated via pressure-sensitive TwinTerminal 7.0	-	
Operation:	7-way pressure tap		-
pressure side	Electrically-actuated via pressure-sensitive TwinTerminal 7.0	-	
Bowser fill	- fresh water tank with Geka coupling		
	- with non-return valve		
	- free-flow return (from above into the tank with lid opened)		
	- automatic fill stop for the spray agent tank and the fresh water tank		
Functions	Drawing in via the suction port		
Suction valve	- automatic fill stop for suction port		
	Drawing in via spray agent tank / fresh water tank		
	Dry coupling connection port		
Functions	Filling the spray agent tank & drawing out of the induction bowl via the venturi		
Pressure valve	Liquid at the induction bowl (rinse ring, high-pressure nozzle, jet nozzle, hand lance)		
	Forced emptying		
	Internal cleaning		
	External cleaning with fresh water		
	Spraying		
	Filling of fresh water tank		
	- with automatic fill stop	-	
Additional	Automatic cleaning of the induction bowl	-	
functions	2 individually programmable fill profiles	-	
	Adjustable filling and foam damping function	-	
	Electric emptying of spray lines and filters	-	
	Capacity increase for canister cleaning		
	Fresh water pump with continuous internal cleaning	-	
Agitation	Fill level dependent agitator output		
Cleaning	Remote cleaning control from the in-cab terminal		
	XtremeClean		
Other	HighFlow+		



Comfort-Pack

Comfort-Pack plus

The induction bowl

Perfect operator comfort via the simple and centralised controls



The new control tap feature means that fresh water is always available at the induction bowl during both suction and bowser filling.

High performance and efficient

The induction bowl is located directly in front of the control panel and holds 60 l. The conical form of the bowl, with central outlet and an enormous suction rate of more than

Advantages of the induction bowl:

- Oraw out rate of up to 200 l/min for fast and trouble-free filling and complete emptying
- Infinitely variable mixing nozzle prevents any clogging of powdery and granular spray agents
- Infinitely variable high-capacity rinse ring
- In conjunction with Comfort-Pack plus, the induction bowl can be permanently supplied with high water pressure via the fresh water pump during bowser filling.
- Dust- and leak-proof induction bowl lid as a practical storage option with integrated drain-off device

200 l/min, ensures fast and trouble-free filling and complete emptying.

- Canister rinse nozzle with practical pressure plate for cleaning the measuring jug and chemical canisters
 Small contact area on the canister rinse nozzle where
- the nozzle can be activated for cleaning the canister neck



The lid is provided with holders for measuring jugs or spray agent canisters, in order to allow them to drain after rinsing.



The closed induction bowl can be flushed for self-cleaning.

Boom in aircraft wing design



Large height adjustment range from 0.35 m to 2.65 m via the sprung parallelogram (on Pantera 4504 with 380/90 R50 tyre sizes)

Super-light yet super-stable

Thanks to the special profile design, AMAZONE booms are at the same time superbly light and superbly strong. The boom working widths from 21 to 42 m allow optimum adaptation of the sprayer to the structure of the farm. The exceptional high quality ensures a long operational life even over very high acreages. Compact transport dimensions with transport widths from 2.55 m contribute to safe road transport.





The hydraulic fittings made from stainless steel ensure a long service life and a high resale value.

Maintenance-free and with a long service life

The decades of experience in boom design pays off: The conical hinge pin is the intelligent centre of a well thought-out boom philosophy! The boom pivots self-adjust against any play on the conical hinge pins, thereby ensuring an optimised boom function for the end user, even after many years.

The standard use of stainless steel, the use of automotive-industry standard, cathodic dip painting process and the targeted use of plastics and aluminium are the perfect guarantee of a long service life.



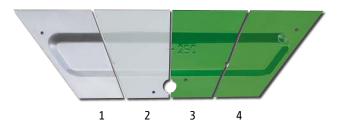
A pivot joint that lasts!

The boom pivots self-adjust against any play on the conical hinge pins, thereby ensuring an optimised boom function for the end user, even after many years.

High-quality, multi-layer paint

A high-quality multi-layer paint finish guarantees top quality that lasts

- 1) Sheet steel
- 2) Zinc phosphate (galvanising layer)
- 3) CDP priming
- 4) Top coat





Everything is shipshape: The boom is located safely without movement in its transport position. The parallelogram suspension dampens shock loads in the field as well as in the transport position. This is pure comfort and, above all, ensures the long service life of the boom.

Compact transport dimensions:

- 2.55 m wide - 3.90 m high

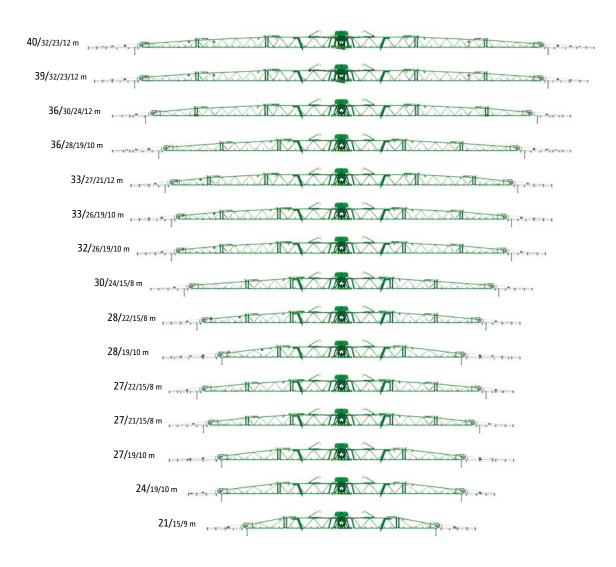


39 m Super-L2 boom, folds down to 32 m, 23 m and 12 m

Super-L2 boom in working widths from 21 to 40 metres

Even with the maximum boom width of 40 m, the transport width of the Super-L2 boom is only 2.55 m. In the transport position, the boom finishes well behind the cab. This means: no limitations in the field of vision for the driver and no liquid drips in and around the cab area.

The booms can be folded in either side independently or both sides together. This means that a variety of tramline widths can be covered making it the ideal solution for contractors" (dlz magazine "Test report Pantera 4502" 2/2016)





36 m Super-L3 boom, usable at both 24 m and 12 m as well

Super-L3 boom in working widths from 36 to 42 metres

AMAZONE designed the Super-L3 boom for the most extreme of demands and it offers an absolutely smooth boom ride. Alongside the 36 m boom, a 42 m version is now also available which has an additional boom section on either side. The boom can be used at a reduced working width with pivot points at 12, 24 and 33 m.

On the basis of the 42 m boom, smaller working widths such as 40 m or 39 m can also be implemented by means of a shortened end section. Furthermore, a reduction joint can also be fitted to the outer boom section. This can be used to manually reduce the working width e.g. from 42 m to 39 m.

Super-L3 booms from a working width of 39 m are equipped as standard with ContourControl active boom guidance, SwingStop boom tip swing compensation and AmaSwitch or AmaSelect individual nozzle control with DUS pro in each case.

The substantial boom sections with hydraulically pressurised break back joints in the boom ends ensure an absolutely smooth boom ride under any conditions. If any vibrations caused by cornering or acceleration occur in spite of the substantial design, they are directly reduced by SwingStop.

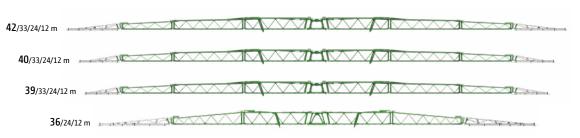


Wide boom profiles with multiple folds provide maximum rigidity yet with a very low weight.



The hydraulically-pressurised break back system on the boom end (which works just like the saloon door principle) can cope with obstacles from the back, front or from the top and ensures a reliable return to the working position and a long service life.

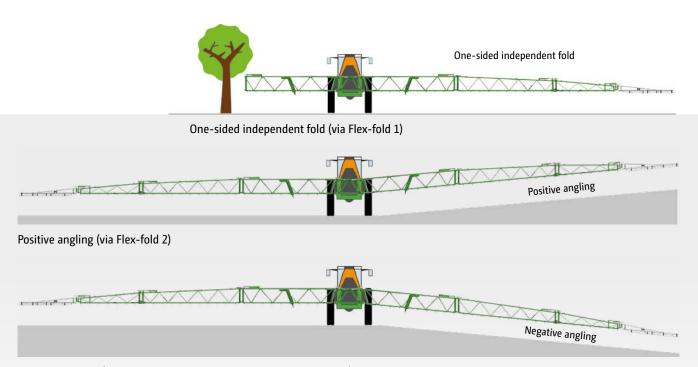
Working widths of the Super-L3 boom



The outstanding made easy



The Pantera 4504 with Flex-fold 2 and ContourControl enables optimum boom guidance with positive and negative angling of the boom, suitable even in the most challenging of terrain conditions.



Negative angling (via Flex-fold 2 in combination with ContourControl)

Flexible, fast and accurate

Reduction, angling, one-sided independent fold

Flex-fold for Super-L2 and Super-L3 booms

AMAZONE offers two electro-hydraulically actuated boom fold options, Flex-fold 1 and Flex-fold 2. Each boom folding joint is equipped with an electro-hydraulic valve block that is directly controlled by the machine software. This enables faster folding. As soon as the first boom section is folded in or out by approximately 70%, the next section automatically starts to fold in or out.

Individual user profiles for reduced working widths

Via the user profiles in the machine software, individual profiles that recognise a reduced working width can be stored. If e.g. it is intended to fold out a 36/30/24 m boom to just 30 m, this can be carried out quickly and simply via a profile change. After folding out, the active working width is automatically detected and the outer nozzles are deactivated via the AmaSwitch or AmaSelect individual nozzle control. The reduced working width is automatically stored for Section Control.

Flex-fold 1

In addition to the benefits already outlined, Flex-fold 1 provides the following extra functions:

- Height adjustment
- Folding in and out
- One-sided independent fold at reduced speeds (max. 6 km/h)
- Boom width reduction
- Tilt adjustment

Flex-fold 2

In addition to the advantages mentioned previously, Flex-fold 2 offers the following functions:

- One-sided/bilateral positive boom angling
- One-sided/bilateral negative boom angling (in combination with ContourControl)
- "To speed up the folding procedure, AMAZONE has replaced the simple sequence control by a sensor controlled process. With this we clocked a quick 19 seconds for folding out and 27 seconds for folding in – great!"

("profi" – Test report Amazone UX 5201 Super - 10/2017)

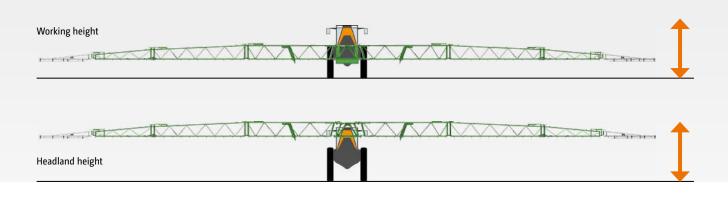
Boom guidance

With maximum comfort and even more precision



O Automatic boom pre-lowering in GPS-Switch

The GPS-Switch function in the operator terminal can be used to start lowering the boom before it reaches the untreated area. This means that the boom is already at the correct working height when the nozzles come on. Requirements for this function are just a field boundary saved within the GPS-Switch in the AMAZONE ISOBUS terminal.



AutoLift – the comfortable automatic headland system

AutoLift automatic boom lift (standard equipment) lifts the boom to a pre-selected height every time the machine is switched off.

DistanceControl or ContourControl? Decide for yourself!

The DistanceControl and ContourControl automatic boom guidance systems offered by AMAZONE provide a suitable solution for every demand. The fully automated DistanceControl boom guidance leaves the control of your sprayer boom in the hands of the machine.

The innovative ContourControl boom control is AMAZONE's high-end solution, ideal for customers with difficult terrain conditions. ContourControl provides maximum precision, even at high forward speeds.

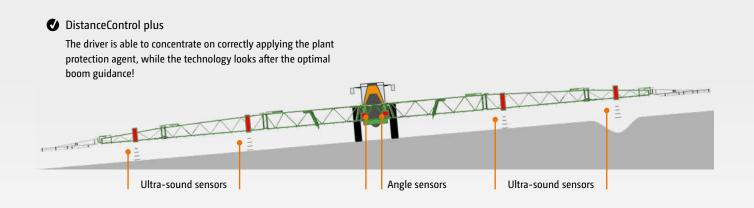
It lowers back down again to the target height when the sprayer sections are switched on. This reduces the risk of damage to the boom while turning on the headland.

DistanceControl with 2 sensors or DistanceControl plus with 4 sensors

As an option on the Super-L boom, AMAZONE offers the DistanceControl fully automated boom guidance system with 2 sensors or DistanceControl plus with 4 sensors for the Pantera self-propelled sprayer. DistanceControl with 4 sensors is recommended if the crop height varies greatly or there are areas with partially lodged corn. The sensors are electrically connected in parallel and so it is always the sensor that is closest to the target surface that is sensing.

Benefits of the DistanceControl boom guidance

- Fully automatic boom guidance including boom height, tilt adjustment and boom lifting on the headland
- Automated simultaneous boom angling, in combination with Flex-fold 2



ContourControl and SwingStop

Active boom guidance and boom tip swing compensation under difficult conditions

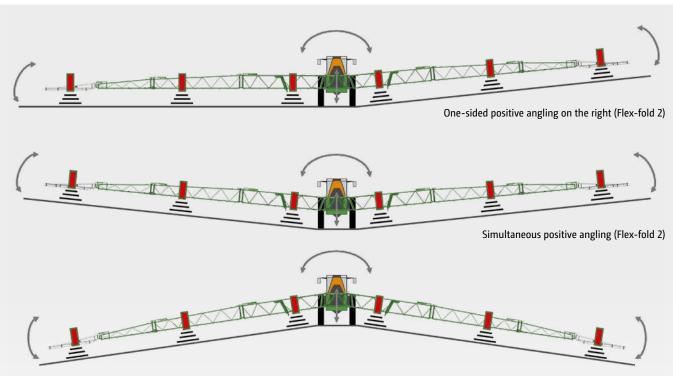
ContourControl – reduces those vertical boom movements

With the active boom guidance system, ContourControl, AMAZONE offers a fully automatic boom guidance system for booms from 21 m working width. This meets the increasing demand for higher precision during application owing to the minimal deviations in the distance from the target surface, even at high forward speeds and large working widths. ContourControl can be used with Super-L booms in conjunction with either Flex-fold 1 or Flex-fold 2.

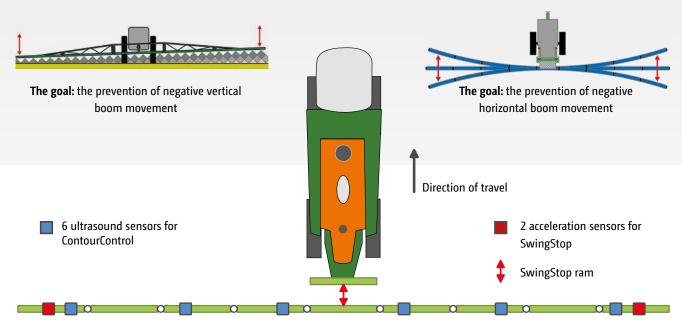
The basis of the new boom guidance system is a highly responsive electro-hydraulic system and 4 sensors, or as many as 6 sensors in combination with Flex-fold 2, which enable both automatic positive and negative angling.

The benefits of ContourControl:

- Optimum lateral distribution
- Precise, super-fast automatic height guidance
- Target surface distance below 50 cm less drift
- Very quick folding processes
- Higher accuracy at faster working speeds
- Elegant boom control for those wider working widths



Fast and precise – at the same time



SwingStop – for reducing the horizontal boom movement

In order to tailor the horizontal boom ride to the growing demands, e.g. wider working widths and higher forward speeds, AMAZONE offers SwingStop active boom tip movement prevention as an option for the ContourControl boom guidance system. By external influences, such as ground undulations, driving round bends, acceleration and deceleration and increasing operating speeds the boom is under extraordinary strain in the horizontal plane. This may result in the boom ends swinging back and forth and thus negatively affecting the lateral distribution at the outer ends of the booms. Since horizontal movement occurs more at the boom ends, this effect is amplified by large boom widths. To reduce this horizontal tip swing effect, SwingStop measures, via acceleration sensors, the resulting acceleration at the boom ends. The two actively-operating hydraulic rams in the boom suspension compensate live for these swing movements and in this way provide a very smooth horizontal boom ride.

The benefits of SwingStop:

- Optimum longitudinal distribution
- Reduction of the horizontal boom movement for a very smooth boom ride
- A system which operates very quickly and precisely, even at high working speeds
- Highest performance and outstanding precision

- A total of six ultrasound sensors take care of the height guidance of the parallelogram frame, the adjustment of the slope compensation and the control of the boom angling (positive and negative). It is fantastic in hilly terrain, particularly when it comes to being able to spray more quickly and with a shorter distance above the target surface."
- And now when it comes to the keyword "fast", then "Swing-Stop" also comes into play: This is an active, hydraulic control system with acceleration sensors in the ends of the boom which counteracts horizontal swinging and does so before any movement visible to the eye occurs.

("profi" - "Practice test Amazone UX 4201 Super" 02/2020)

("profi" - "Practice test Amazone UX 4201 Super" 02/2020)

Overview: boom guidance

The right solution for any requirement



The new Pantera 4504 sets the highest standards in precise plant protection and ease of operation.



Boom functions	Pantera 4504				
Folding	Flex-fold 1	Flex-fold 2	Flex-fold 1	Flex-fold 2	
Automatic boom guidance (option)	DistanceControl (plus)		ContourControl		
Number of relevant sensors	2 (4)		4	6	
Sprayer boom folding in and out	remotely controlled (ISOBUS terminal)				
One-sided, independent boom fold	remotely controlled (ISOBUS terminal)				
Folding in to a reduced working width	automatic				
Break back protection at reduced working width	Standard				
Folding time	quick		very quick		
Height adjustment	remotely controlled (ISOBUS terminal) / automatic with DistanceControl or ContourControl				
Boom lift on the headland	remotely controlled (ISOBUS terminal) / automatic with DistanceControl or ContourControl				
Adjustment of tilt	remotely controlled (ISOBUS terminal) / automatic with DistanceControl or ContourControl				
One-sided / simultaneous positive boom angling	_	automatic	-	automatic	
One-sided / simultaneous negative boom angling	_		-	automatic	
Active horizontal boom tip swing compensation (option)	-		Swin	wingStop	
Boom guidance (overall view)	good		excellent		
Recommendation for working widths	_		> 30 m		
Recommendation for operating speeds	medium extremely		ely high		
Recommendation for ground conditions	level	hilly	level	hilly	

TG part-width section valves



Electrically-controlled TG valve chest

The TG part-width valve chest with up to 13 part-width sections is available with ISOBUS control. The part-width sections are switched quickly and without drips via electric motor valves with pressure relief. The spray rate is precisely and quickly controlled directly by the machine's job computer in all situations.

Single and multi-nozzle bodies

The nozzle bodies with integrated diaphragm non-return anti-drip valves fit up into the boom profiles reliably preventing any dripping at the nozzle. Self-adjusting bayonet fixings ensure a tool-less quick nozzle change. The 3-fold or 4-fold nozzle bodies are suited to frequent nozzle changes due to different applications and crops.

AMAZONE offers a wide range of nozzles from agrotop, Lechler and TeeJet.



DUS pressure recirculation system

Efficient and reliable



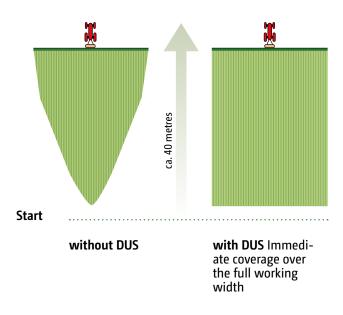
DUS pressure recirculation system

The DUS pressure recirculation system – proven more than 10,000 times

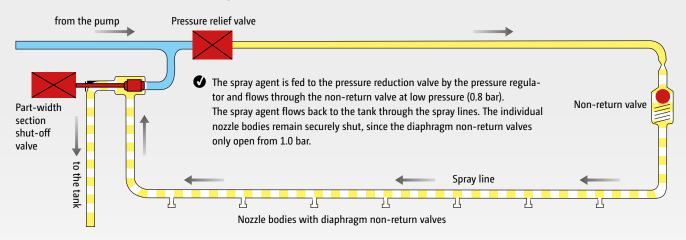
The AMAZONE DUS pressure recirculation system ensures a reliable circulation throughout the entire system. When starting the spraying operation, all the hoses including the spray lines are filled under pressure in the reverse direction with the pre-mixed spray agent. This means the spray lines are always full and immediately ready to use over the entire working width. There is no waiting on the headland.

Every time individual part-width sections are shut off, during the turning operation and during transport, the spray liquid circulates continually thanks to the pressure recirculation system. This reliably prevents deposits, blockages or segregation in the spray lines.

During the cleaning operation, fresh water flushes the spray lines out right up to the nozzles without any spraying being necessary. During this cleaning procedure, the concentrated spray liquid is returned back to tank via the pressure recirculation system leaving the spray lines clean.



DUS pressure recirculation system with part-width section switched off



AmaSwitch

Electric individual nozzle switching with 50 cm part-width sections

The simple solution for automatic 50 cm part-width section control

With AmaSwitch, AMAZONE offers the precise solution for automatic part-width section control on 50 cm sections. AmaSwitch is the ideal alternative for users who want to maximise the benefits of very precise switching in wedge shaped fields and areas of overlap, thanks to the 50 cm part-width section control.

AmaSwitch includes the DUS pro high-pressure recirculation system as standard and can also be equipped with LED individual nozzle lighting.

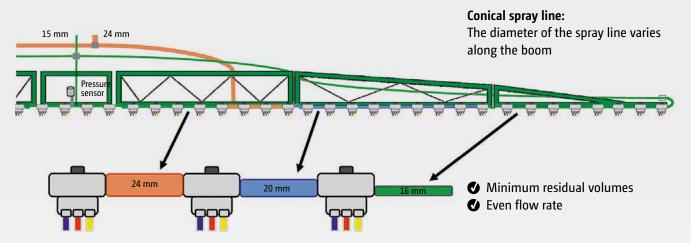
Equipped with the DUS pro pressure recirculation system as standard

As in the case of DUS, the spray pressure in DUS pro is constant up to the individual nozzle and remains at the pre-set spray pressure. In addition, minimal residual spray volumes are achieved thanks to the conical spray lines.



AmaSwitch 3-fold nozzle body

DUS pro – constant spray pressure with minimal residual volumes



DUS pro high-pressure circulation system with conical spray line, such as with AmaSwitch, as an example



AmaSwitch triple nozzle body with LED individual nozzle lighting

Triple nozzle body with electric on/off switching

The technology behind AmaSwitch is based on a conventional, manually-rotated, triple nozzle body with electric individual on/off. The opening and closing is achieved via an electric valve which is fixed directly onto the nozzle body. In conjunction with GPS-Switch, it is thus possible to very precisely control 50 cm part-width sections in short work and on the headland. In addition to the automatic switching using 50 cm part-width sections, it is also possible to configure the amount of part-width sections from choice.

Quad nozzle body with electric on/off switching

In addition to the triple nozzle body, AmaSwitch electric individual nozzle control can also be equipped with a quad nozzle body.

With true 25 cm nozzle spacing

The quad nozzle body enables a perfect 25 cm nozzle spacing to be achieved with the aid of the optional off-set kit. This offers the benefit, in combination with specific 80° nozzles, to reduce the boom to target surface distance down to less than 50 cm.



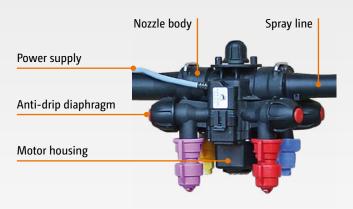
AmaSwitch quad nozzle body



AmaSwitch with quad nozzle body and off-set kit for a perfect 25 cm nozzle spacing

AmaSelect

Electric individual nozzle control with 50 cm part-width section and nozzle switching



AmaSelect - components of the system

Quad nozzle body with automatic electric nozzle switching

The electric AmaSelect individual nozzle control consists of a quad nozzle body with electric on/off control plus the additional switching over of either a nozzle or a combination of nozzles. In addition to the 50 cm part-width sections, which can be switched automatically via GPS-Switch, the system offers electrical switching between the four mounted nozzles via the operator terminal or even completely automatically if the forward speed or application rate is changed. This offers the possibility, for instance when leaving the optimum pressure range of a nozzle, to switch on a second nozzle or to changeover to a larger nozzle.

Flexible configuration of working widths and part-width sections

AmaSelect enables any number of part-width sections with any number of nozzles to be freely configured. So for farmers or agricultural contractors with different tramline systems, a simple matching of the nozzle switching with the relevant working width is possible.

Automatic 50 cm part-width section control via GPS-Switch with Section Control

The automatic control of individual nozzles in 50 cm part-width sections is made possible by combining the AmaSelect individual nozzle control with GPS-Switch (with Section Control). This enables the amount of overlap to be considerably reduced, meaning that there is a significant saving in spray agent.

With true 25 cm nozzle spacing

As an option, the AmaSelect nozzle body can also be equipped with an off-set kit giving 25 cm nozzle spacing. This offers the benefit in combination with specific 80° or 90° nozzles of reducing the boom to target surface distance to less than 50 cm.



AmaSelect electric individual nozzle control with quad nozzle body and 50 cm and 25 cm nozzle spacing



HeightSelect – always the optimum target surface distance

With the aid of HeightSelect (only in conjunction with AmaSelect), the distance between the boom and the target crop is now also continuously adjusted automatically depending on the nozzle spacing and nozzle type. When the nozzle has been switched on, the automatic boom guidance system controls the appropriate target distance. This automisation improves the efficiency of the crop protection agent used as well as decisively relieving the stress on the driver.

High-End as standard – LED individual nozzle lighting and DUS pro

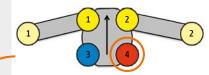
AmaSelect is equipped with the DUS pro high-pressure recirculation system and LED individual nozzle lighting as standard.

The crop protection technology of the future is already here

AmaSelect individual nozzle control offers the potential for absolute precision with the additional optional functions AmaSelect Curve-Control, AmaSelect Row and AmaSelect Spot.

Principle of function of HeightSelect



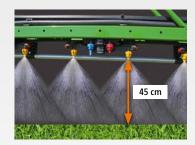


Automatic spraying height: 57 cm

Automatic spraying height: 45 cm



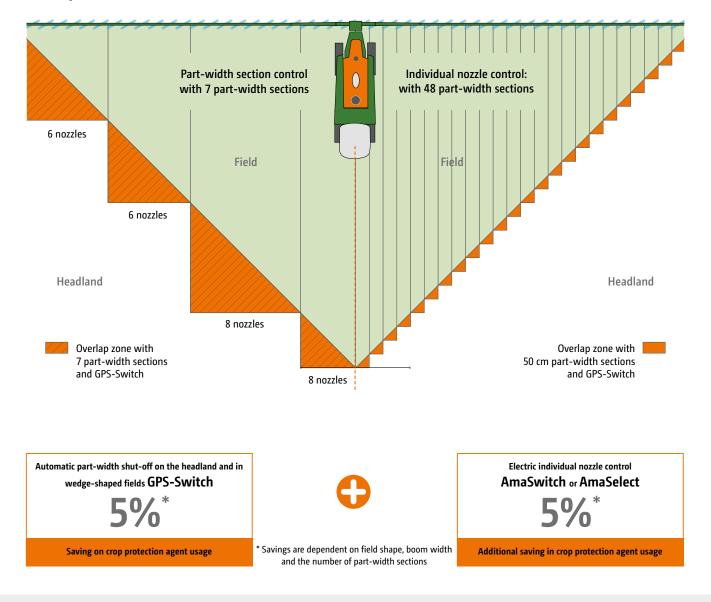
110° nozzles: 50 cm nozzle spacing



80° nozzles: 25 cm nozzle spacing

Electric individual nozzle control AmaSwitch and AmaSelect

Example: 24 m boom width





AmaSwitch electric individual nozzle control



AmaSelect electric individual nozzle control

Calculated example:

Annual average overlap of conventional part-width sections vs 50 cm part-width sections in combination with Section Control

Important knowledge for field analysis

- Average overlap with 50 cm part-width sections only 1.92 %
- Average overlap with 9 part-width sections 7 %
- Short payback period for larger farms due to annual saving potential
- Due to smaller field sizes, smaller farms save proportionally more
- When growing crops with a high crop protection demand (e.g. potatoes, sugar beet), 50 cm part-width sections are particularly cost-effective

10 9 8 7 Annual overlap [%] 6 5 4 3 2 1 0 Farm 1 Farm 2 Farm 3 185 ha 400 ha 2,300 ha Level of equipment on crop protection sprayers:

9 part-width sections 11 part-width sections 13 part-width sections 50 cm part-width section individual nozzle control

Comparison of systems:

The benefits	Standard valve chest	AmaSwitch Triple	AmaSwitch Quad	AmaSelect
Multiple boom sections	up to 13	up to 84	up to 84	up to 84
50 cm part-width sections	-			
Number of nozzles per nozzle body	1, 3, 4	3	4	4
Manual nozzle switching				_
Automatic nozzle changeover and switching	-	_	_	
Nozzle selection from the cab	-	_	_	
Nozzles used in combination	-	_	_	
High-pressure circulation system (DUS pro)	-			
25 cm nozzle spacing (off-set kit)	-	_		
Individual programming of the part-width sections (TB)	-			
LED individual nozzle lighting				
Switching to band application from the cab (AmaSelect Row)	_	_	_	
Optimised application rate during cornering (AmaSelect CurveControl)	-	-	-	
Part-area, site-specific application on the basis of spot application maps (AmaSelect Spot)	_	-	-	

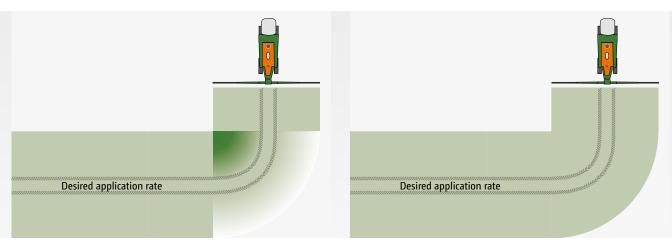
= included

= optional

AmaSelect CurveControl

Optimised application when driving round bends





Without AmaSelect CurveControl – uneven application rate when negotiating bends

Over- and under-dosing when negotiating bends

In the past, application of plant protection products when driving round bends has led to an over-application on the inside of the bend and an under-application on the outside of the bend. The problem increases with increasing boom widths. Over-applying on the inside of the boom must be viewed more critically, as potential overdose levels of more than 300% are possible.

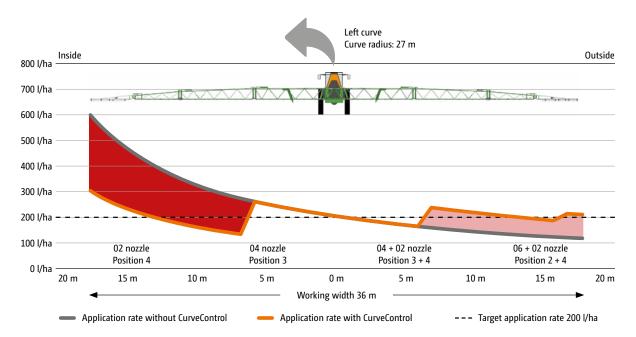
AmaSelect CurveControl

AmaSelect CurveControl offers a precise solution for keeping the application rate as constant as possible across the whole of the working width when driving round bends. The CurveControl function is equipped as standard in conjunction with AmaSelect individual nozzle control and ContourControl active boom guidance. With AmaSelect CurveControl – a more even application rate when negotiating bends

In addition to the nozzle pressure, AmaSelect CurveControl uses sensors to determine the curve radius and automatically calculates the pressure adjustment for the changed flow rate. The system then balances the application rate in the boom independently of the part-width section by means of automatic nozzle changing in the boom.

Benefits of AmaSelect CurveControl:

- Virtually uniform application rates when negotiating bends over the entire working width
- Optimum crop management
- Prevention of resistance caused by under-dosing



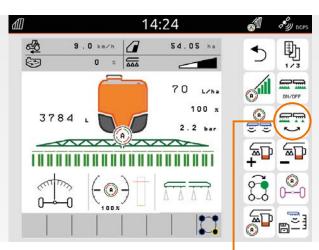
Comparison of application rates on bends with and without CurveControl (left hand curve)

AmaSelect Row

Accurate band spraying at the press of a button to reduce usage of plant protection agents







Easy switching between band spraying and full-width application at the push of a button

Row-specific band spraying

AMAZONE offers the AmaSelect Row function for the AmaSelect electric individual nozzle control for remote switching from full-area application to row-specific band spraying. Row-specific band spraying with special 40° nozzles makes it possible to reduce the consumption of plant protection agents by up to 65 %.

Different row spacings

Row specific applications in crops with a 50 cm row spacing can very easily be implemented without any further retooling. However, the optional off-set kit for the AmaSelect nozzle body to give a 25 cm nozzle spacing also enables band applications to be implemented in crops with a 75 cm row width. Only the nozzles at the desired spacing are switched on for that purpose. Alternative row widths, e.g. 45 cm for sugar beet, can also be realised with an additional nozzle arrangement and a connecting hose.



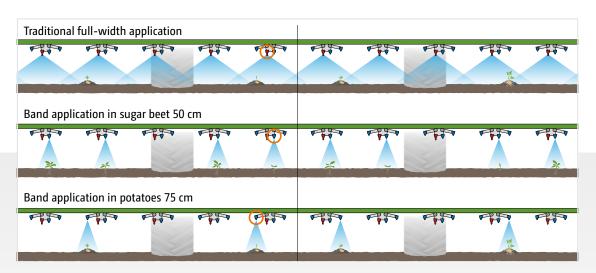
Useful fill menu for determining the required filling quantity

Maximum operational comfort

Via the fill menu, the area to be treated by band and fullwidth spraying as well as the desired application rates of the two types of spraying is stored, and the required filling quantity is automatically calculated so as to minimise residual spray volumes. The row spacing, spraying angle and application height of the nozzles are easily adjusted via a separate menu in the ISOBUS machine controller. The selection of the right nozzle and the associated nozzle positions to the band needing to be treated is carried out automatically. It is then possible to switch between band and full-width spraying in a matter of seconds at the push of a button on the ISOBUS terminal.

Benefits of AmaSelect Row:

- Highly efficient band spraying in row crops and all at the touch of a button
- Different row spacings possible thanks to the optional off-set kit at 25 cm
- High operating comfort with an integrated filling menu with fill quantity calculation
- Reduction in plant protection agent usage by up to 65 %.



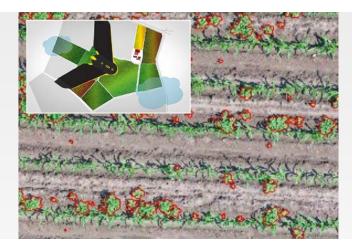
AmaSelect Row: Uniquely flexible options in plant protection

AmaSelect Spot

Part-area, site-specific plant protection treatment on the basis of spot application maps



DroneWerkers from the Netherlands is a producer of spot maps. The areas to be treated are overflown with drones and then analysed by means of artificial intelligence, in order to create a spot application map.





Processing of the spot application map in AmaPad 2

Part-area, site-specific weed treatment

To reduce the use of crop protection agents, AMAZONE offers AmaSelect Spot, a individual nozzle control system which allows part-area, site-specific weed treatment based on highly accurate spot application maps. External service providers produce the spot maps.

Scanning the area and creation of spot maps for weed treatment

In the first step, the field to be treated is scanned and a spot application map created. Depending on the service provider, various processes are used for scanning the area in this first step, such as overflying with a drone, by satellite or via special sensor booms.

Targeted spot application

The second step is the treatment of the weed areas in the field. All that is required for this is to load the spot application map in the AmaPad 2 ISOBUS operator terminal. In contrast to full-area treatment with the AmaSelect individual nozzle control system, only those areas where weeds are present are treated during the pass.

Benefits of AmaSelect Spot:

- Precise spot treatment of weeds with a standard AMAZONE crop protection sprayer
- Reduction in plant protection agent usage by up to 80 %.
- Better protection of the environment
- Minimal residual spray volumes, thanks to exact planning of the application rate using the spot application maps
- Prevents resistance, thanks to small-area spot application with 100% concentration of plant protection agent



State-of-the-art crop protection technology in use: targeted treatment of volunteer potatoes in a carrot crop on the basis of a spot application map with a standard UX 5201 Super trailed sprayer

The right nozzle choice

The basis for success in crop protection



Nozzle protection tubes are fitted as standard on the outer sections or, if desired, across the entire boom width and ensure optimum protection of the nozzle bodies.



Less drift also at higher wind speeds

Injector nozzles (ID, TTI) have a relatively coarse droplet spectrum and are particularly versatile with regard to their range of application. A pressure range of 2 to 8 bar is possible. They are universally usable in all crops and all classifications. Because of the coarse droplet application, these nozzles can also be used in higher wind speeds.

If coverage quality is at the foreground of the application, the use of standard or anti-drift fine droplet nozzles, such as XR or AD, is recommended. Special care is required here due to their tendency to drift above 3 bar.

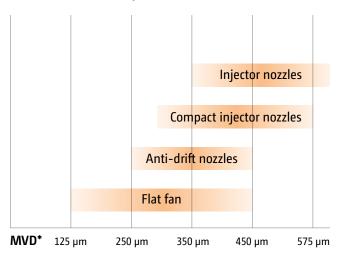
A good compromise is provided by the modern ID-K or Airmix compact injector nozzles. These have relatively little drift, but do not have too coarse a droplet spectrum and are operated at 2 to 4 bar.

When it comes to special coverage qualities, the double flat fan nozzle is an interesting alternative: the AVI Twin from Agrotop also produces droplets that are not too fine. Everyone purchasing an AMAZONE crop protection sprayer receives, free of charge, an AMAZONE nozzle mounting tool that enables a much easier nozzle change.

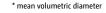
The split spray pattern ensures a more even deposit on the front and back of the plant and makes sense maybe, for example, in ear treatment.

For speeds greater than 10 km/h, the TD HiSpeed nozzle with its asymmetrical spraying angle is becoming a new industry trend.

Distribution of the droplet size



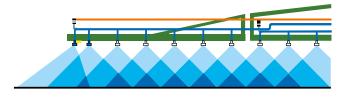
very fine fine droplet medium extremely coarse very coarse droplet droplet coarse droplet droplet droplet





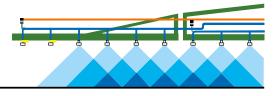
Electric boundary nozzle switching

For environmentally-friendly spray application at the field edge



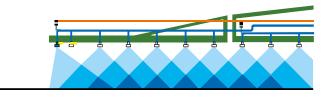
Additional nozzle switching

In order to extend the normal working width, an asymmetrical nozzle can also be switched on. This is particularly useful if the distances between tramlines are not precise enough.



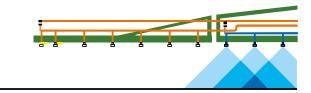
End nozzle switching

If a one metre buffer zone around the edge of the field needs to remain unsprayed due to distance constraints, end nozzle switching can be used.



Boundary nozzle switching

For precision border spraying between two sensitive crops, the boundary nozzles can be used to make sure the spray pattern is accurately defined.



Outer part-width section switched off - DUS is active Direct electric control of the boundary nozzles. Every nozzle body is integrated in the DUS circulation!





Drag hose equipment on the AmaSwitch individual nozzle control system with a quad nozzle body and an off-set kit on the Super-L2 boom

Liquid fertilisation

AMAZONE sprayers are particularly suitable for using liquid fertiliser: the use of high-quality plastics, the good paint finish and the use of stainless steel ensure a long service life, even when liquid fertiliser is used.

Elegant solutions for successful under-leaf spraying are

Drag hose equipment

The drag hose equipment for the Super-L boom consists of a drag hose set and can be used in conjunction with an AmaSwitch quad nozzle body or AmaSelect system plus an off-set kit for 25 cm nozzle spacing.

Stainless steel weights help keep the position of the drag hoses in the crop.

Multi-hole nozzles

For the distribution of liquid fertiliser in coarse droplet size, either multi-hole nozzles (3 or 7 hole) or the FD sluice nozzles are available on request.

Under-leaf spraying

also possible in combination with AMAZONE crop protection sprayers. For example, the Dropleg system is a light and robust under-leaf spraying system which hangs freely between the rows.





7 hole nozzle



Useful equipment to cope with many requirements





External wash kit

A spray lance on a 20 m long hose is used to clean off the outside of the self-propelled sprayer immediately after work whilst still in the field.

A 20-litre hand wash tank with a soap dispenser is available on the SmartCenter.

Central lubrication system

The central lubrication system offers maximum convenience by automatically supplying all lubrication points without the need for a time-consuming search and manual lubrication. This enables maintenance work to be significantly reduced and operational reliability further improved.

The central lubrication system is mounted in a clearly visible location in front of the spray agent tank. Central operation takes place conveniently via the AmaDrive 7.0 vehicle terminal.

Compressed air supply system

A compressed air supply system with a small compressed-air reservoir is available as option for machine cleaning and tyre pressure monitoring.

The compressed air connection is located under the cab on the right-hand side of the machine.

Manoeuvring device

A manoeuvring device is available for yard work.



AmaProTect The ultimate in peace of mind



Extended warranty up to 36 months

Extended warranty

Choosing a Pantera provides you with the highest quality and reliability. You can now stay absolutely relaxed for an even longer period, thanks to the AmaProTect extended warranty option.

The benefits:

- Your Pantera retains its value (when maintained according to the service schedule)
- Up to 3 years' complete protection against unexpected repair costs
- Repaired with AMAZONE original spares
- Fast and flexible handling through your AMAZONE contract partner
- Long-term financial security

Fast and flexible handling

Your AMAZONE partner will support you as usual to ensure a fast solution when you need it. They will take care of any repairs. The benefits: repairs are carried out free of charge, so you do not have to worry.









Special Black Pantera model to mark 50 years of crop protection technology from AMAZONE

Tyres

Dimensions	Pantera	Pantera-W	Pantera-H	Pantera-HW	Load index 40 km/h / 50 km/h	permissible load carrying capacity at 50 km/h / at a pressure of	Cross-sectional width in mm	Outer diameter in mm
300/95 R52	х	х	х	x	159A8 / 157B	4,200 kg/4.8 bar	310	1,890
320/90 R54	х	x	x	x	156A8 / 156B	4,000 kg/4.4 bar	319	1,948
340/85 R48	х	x			159A8 / 156D	4,200 kg/4.4 bar	345	1,805
380/90 R46	х	x	х	x	173D / 173D	6,500 kg/2.2 bar	383	1,842
380/90 R46	х	х	х	x	168D / 168D	5,600 kg/2.5 bar	389	1,842
380/90 R50	х	x	х	х	161A8 / 158B	4,250 kg/3.0 bar	380	1,954
380/90 R50	х	x	х	х	175D / 175D	6,900 kg/2.2 bar	385	1,947
420/80 R46	х				159D / 159D	4,380 kg/2.8 bar	418	1,840
480/80 R42	х	x			156A8 / 156B	4,000 kg/2.4 bar	494	1,858
480/80 R46	х	x	х	х	158A8 / 158B	4,250 kg/2.2 bar	499	1,948
480/80 R46	х	x	х	х	177D / 177D	7,300 kg/1.8 bar	480	1,950
520/85 R42	х	x	х	х	157A8 / 157B	4,125 kg/1.6 bar	516	1,951
520/85 R42	х	х	х	х	162A8 / 162B	4,750 kg/1.6 bar	537	1,937
620/70 R38	х				170A8 / 170B	6,000 kg/1.6 bar	608	1,864
650/65 R38	х				157D / 157D	4,125 kg/1.4 bar	645	1,811
710/60 R38	х				160D / 160D	4,500 kg/1.0 bar	712	1,814

Illustrations, content and technical data are not binding and may differ depending on the level of equipment. Country-specific road traffic regulations apply and must be complied with, meaning that special approval may be required.

Technical data:



Model	Pantera 4504	Pantera 4504-W	Pantera 4504-H	Pantera 4504-HW		
Nominal volume (I) / Actual volume (I)	4,500 / 4,750					
Fresh water tank (I)	500					
Working width (m)	21 – 42					
Delivery capacity pump (l/min)	520					
Max. suction capacity (I/min)	700					
Fuel tank capacity (I)		2	90			
DEF tank (I)	20					
Max. working speed (km/h)	20 (30 optional)					
Transport speed (km/h)	up to 50					
Length (m) (Transport position, incl. external wash down kit)	8.60					
Transport width (m)	2.55	2.75	2.55	2.75		
Spraying height min./max. (m) with tyre sizes 380/90 R50		– 2.65 ule 0.35 – 3.35	0.35 – 3.15 with lift module 0.35 – 3.85			
Part-width sections min./max. (number)	7 – 13					
No. of sections with individual nozzle switching: AmaSwitch or AmaSelect	up to 84					
Unladen weight (kg)	10,100	10,400	11,100	11,400		
Max. total weight (kg)	17,200 (depending on tyres)					
Turning circle, all-wheel steer (m)	4.50					
Track width (m) with tyre sizes 380/90 R50 (offset depth + 50 mm)	1.80 - 2.40	2.25 – 3.00	1.80 – 2.40 (bottom) 2.10 – 2.60 (top)	2.25 – 3.00 (bottom) 2.45 – 3.20 (top)		
Ground clearance (m) with tyre sizes 380/90 R50	1.20	1.15	1.25 / 1.70 in lower / upper working position	1.25 / 1.70 in lower / upper working position		
Engine power	max. 160 kW (218 HP) (Data according to ISO TR 14396)					

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