### Mounted sprayer **UF 02**



### **UF 02 mounted sprayer**





On request, all new AMAZONE sprayers can be provided with a country-specific sprayer proficiency certificate. The proficiency certificate meets current EU regulations according to EN ISO 16122, which is, for European member states, supported also with the CEMA label. The UF 02 mounted sprayer is available in tank capacities from 1,000 to 2,000 litres and with booms in working widths from 12 to 30 metres. The UF 02 is outstanding in its compact design, as well as its simple, comfortable operation. In combination with the FT front tank, the tank capacity of the highly manoeuvrable, tractor-mounted combination can be increased to 3,500 litres. That sets the standards!

The AMAZONE UF 01 mounted sprayer is available in smaller boom widths of 12 to 24 m and tank capacities of 900 or 1,200 l. Further information can be found in the UF 01 brochure.



### **UF 02** highly efficient - comfortable operation

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### **UF 02 mounted sprayer**









1,000 l to 2,000 l up to 3,500 l with FT



up to 60 part-width sections



150, 200, 250 or 300 l/min pump capacity

The advantages at a glance



# The advantages at a glance:

- ♣ Lifting force optimised design with a favourable centre of gravity mounting
- Ingenious quick coupling system and convenient parking aid for easy mounting and demounting
- ◆ SmartCenter: tailored operating systems from the intuitively operated Standard-Pack to the Comfort-Pack with TwinTerminal 3.0
- High-performance 60 litre induction bowl and with a suction capacity of up to 150 l/min ensures the shortest possible fill times and homogeneous spray liquid mixing
- Outstanding multi-facet spring suspension for a smooth boom ride
- DUS and DUS pro pressure recirculation systems for a continuous circulation of the spray liquid
- ◆ 50 cm part-width sections thanks to the AmaSwitch plus electric individual nozzle control
- Automatic cleaning programme for perfect cleaning results under all conditions

#### **MORE INFORMATION**

www.amazone.net/uf02



PRODUCT FILM Find out more



**DOWNLOADS** mySprayer App



SMARTLEARNING www.amazone.net/ smartlearning

### High output – compact – safe



#### **Exceptional performance**

With its teamwork of shape and performance, the UF 2002 convinced and inspired the iF Jury, consisting 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.



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Spray agent tank



UF 1002 mounted spreader with a tank capacity of 1,000 I



UF 1302 mounted spreader with a tank capacity of 1,300 I

#### Large volume spray agent tanks

The UF 02 mounted sprayer is available in tank capacities of 1,000 l, 1,300 l, 1,600 l and 2000 l. The specially shaped, polyethylene tank is integrated into the main frame to give a favourable centre of gravity. The advantages of this tank design are the absolutely smooth internal and external walls of the tank, the rounded internal design and the low positioned sump on the bottom of the tank. This allows for quick, effective tank cleaning as well as minimal residual volumes.

Filling of the tank is carried out, both when suction filling and also when pressurised filling, close to the bottom of the tank. This eliminates any tendency to foam during the filling procedure. For an intensive agitation capacity and to prevent any deposits settling in the tank, the agitator is also positioned down on the tank floor. The internal cleaning nozzle, the tank breather and the easily opened, domed lid are positioned right up in the tank.

Model	Nominal volume	Fresh water tank	
UF 1002	1,000 l	160   / 260	
UF 1302	1,300 l	160   / 260	
UF 1602	1,600 l	200   / 350	
UF 2002	2,000 l	200   / 350	



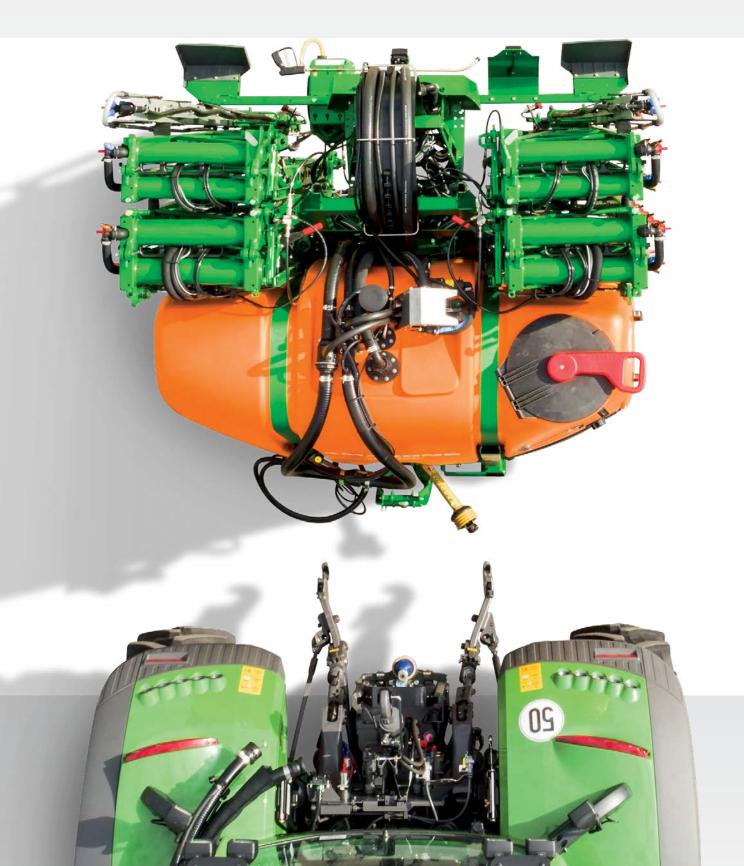
UF 1602 mounted spreader with a tank capacity of 1,600 I



UF 2002 with a tank capacity of 2,000 I

### Hitch up, fill up, and off we go!

For every tractor the optimum mounting position!



Model

Lower link

Top link pin without

quick coupling system

Top link pin with

quick coupling system

coupling dimensions
Lower link pins

**UF 1002\*** 

**UF 1302\*** 

Cat. 2

Cat. 2

Cat. 2

Cat. 2

8

\* with 2 lower link mounting positions

UF 1602\*

**UF 2002\*** 

Cat. 3

Cat. 3

Cat. 2/3

Cat. 3

with integrated balls



### Favourable centre of gravity – perfect frame design

Due to the large tank volumes of the UF 02, it is of importance to link the machine to the tractor with an as favourable a centre of gravity as possible. To ensure this, the UF 02 is equipped with two different link arm positions for different tractors. Guide plates in front of the frame help to link the lower link arms to the non-rotating, lower link pins.

### Comfortable hitching up – the quick coupling system

For an even more stress-free coupling and uncoupling of the UF 02, it can be equipped with the optional quick coupling system. In conjunction with the TeleSpace PTO shaft, or the hydraulic pump drive, the machine can easily be hitched on and off.

### Comfortable demounting – the parking system

The new parking system is completely integrated in the frame. As an option, the patented system can be equipped with castor wheels that remain on the machine even during operation. Via its simple and robust mechanical design, the parking stands or rollers can be quickly swivelled from the transport position up into the work position. Any trouble-some removal of parking rollers or skids is avoided.



Easy swivelling in and out of the parking device

### Perfect down to the last detail

#### Stepless hydraulic main agitator

The intensity of the hydraulic agitator can be steplessly reduced down to nothing in order to avoid any foaming of the crop protection agent or to facilitate spraying out the remaining tank contents.

### **Everything thought of!** Fill level and cleaning

The fill level can be read off both via a pointer or from the operator terminal.

High-performance, rotating nozzles clean the spray agent tank internally. Short pipe runs and hose cross-sectional areas as small as possible make for low residual volumes. Continuous internal cleaning is available as an option (not with Flow Control<sup>+</sup>).







Fill level indicator

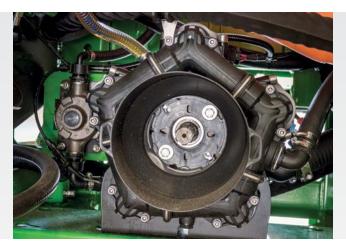


**❸** High-performance, rotating nozzles

Pump technology | Agitator 10 | 13

#### Possible pump options:

Model	Pump capacity I/min		
UF 1002	150 / 200 / 250		
UF 1302	150 / 200 / 250		
UF 1602	200 / 250 / 300		
UF 2002	200 / 250 / 300		



The pumps of the UF 02 are high-performance, dry-run safe and liquid-fertiliser proof

### High performance and reliable pump technology

The UF 02 can be equipped with a single pump system with a choice of 150 l/min, 200 l/min, 250 l/min or 300 l/min as required. During the filling procedure at a nominal pump speed, the full pump capacity is available for filling the spray agent tank. At the same time, either the contents of the induction bowl can be drawn out via the venturi or the total fill capacity can be increased up to 450 l/min.

#### Benefits of a piston diaphragm pump:

- Simple handling due to its self-priming capability at the start of the filling procedure
- ✔ Very high, consistent application rates with system pressures of up to 10 bar
- Can run dry and is liquid-fertiliser proof
- Long service life

#### Hydraulic pump drive

The UF 1602 and UF 2002 can be equipped with the new hydraulic pump drive as an option. The hydraulic pump drive is completely integrated in the load-sensing hydraulics of the sprayer and offers a comfortable and flexible option for driving the spray pump.

#### Advantages of the hydraulic pump drive:

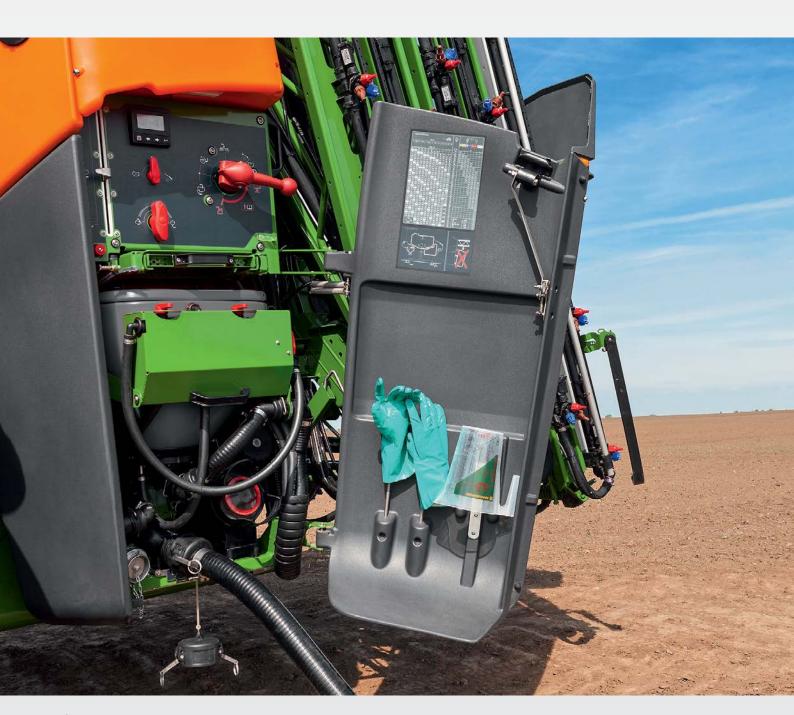
- Pump drive independent of the tractor
- Protects the pump due to no excessive speeds
- **©** Easy coupling to, and uncoupling from, the tractor
- Fuel-efficient
- Maintenance-free



Hydraulic pump drive for the 300 l/min pump on the UF 02

### **SmartCenter**

Perfect operator comfort via the simple and centralised controls



• The inside of the swing door offers storage space for a pair of gloves and a measuring jug

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#### Centralised control all via the SmartCenter

The SmartCenter operator station is equipped with a neat, hinged door that protects all the relevant operating controls and the induction bowl from dirt and water ingress. A holder for gloves and a measuring jug are provided in the inner panel of the swing door. As the swing door opens backwards towards the boom, it protects the operator from chemical contact on his clothing from the booms plus, at the same time, creates plenty of free space between it and the tractor. With Standard-Pack, or the optional Comfort-Pack, AMAZONE offers two particularly comfortable solutions for the operation of the UF 02.



The 20 I hand wash tank is positioned above the induction bowl and it is completely integrated into the machine design. The wash water runs directly into the induction bowl and is sucked into the tank. In addition, an easily accessible soap dispenser is positioned underneath the hand wash tank. The UF 02 comes as standard with a splash-proof clothing locker split into two with a capacity of 30 I in total for clean and contaminated protective clothing.



**▼** SmartCenter with Comfort-Pack

The UF 2002 is a state-of-the-art sprayer with so many features. The new operator centre is well thought-through and logically designed."

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)

#### The benefits:

- Central layout of all the relevant controls, perfectly accessible
- Operator station, protected against dirt and splashes
- Splash-proof clothing locker with a capacity of 30 l
- Integrated hand wash tank with a tank volume of 20 I



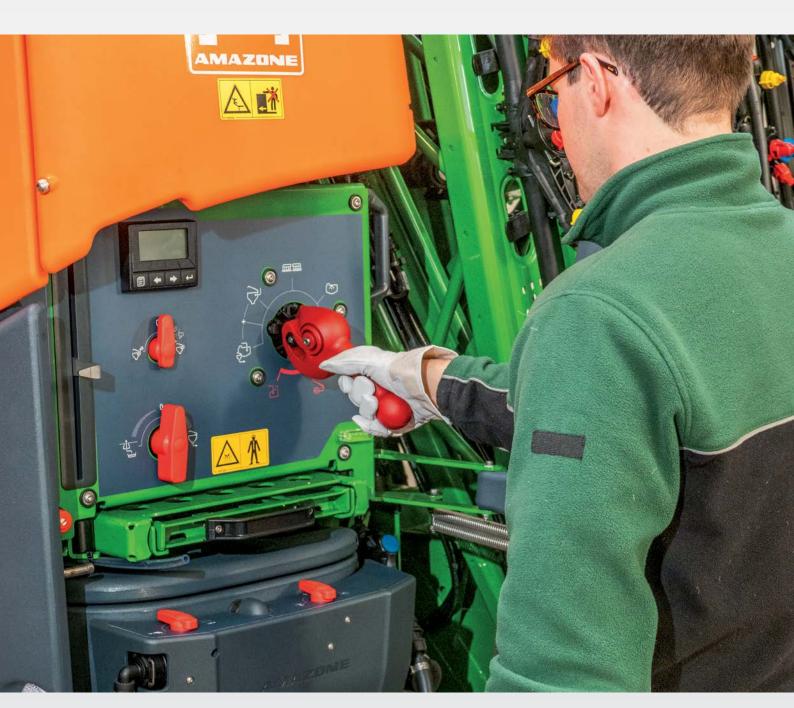
**②** Easily accessible soap dispenser underneath the hand wash tank



Splash-proof clothing locker

### Intuitive, simple, efficient –

The right solution for any application

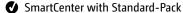


"Striking is the new 7-way pressure tap which serves all the functions on the pressure side. Because of this, operator errors are virtually impossible."

("agrarheute" magazine – Test report UF 2002 with FT 1001  $\cdot$  03/2018)

**▼** SmartCenter with Comfort-Pack







Easy actuation via the 7-way pressure tap

### SmartCenter with Standard-Pack – simple and intuitive operation

The UF 02 is operated mainly using a suction and a pressure tap with the Standard Pack. The suction tap determines from where the pump is going to draw the liquid from, whereas, correspondingly, the pressure tap determines where the pump will send the spray liquid to. In addition, the in-house developed 7-way pressure tap from AMAZONE simplifies control of the pressure side.

### SmartCenter with Comfort-Pack – Operation made easy!

With Comfort-Pack, the TwinTerminal 3.0 comes as standard. Also, in addition, automatic fill stop for the suction fill is also included and, as an option, fill stop is also available when filling under pressure 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 low tank volumes. In addition, the automatic agitation regulation offers auto-dynamic agitator control. This means: if larger application rates are required at the nozzle, the agitator output is reduced. When the nozzles are switched off on the headland, the agitation is automatically restored.

"Via the electronics, spraying is made almost child's play. The automated system controls the filling and the spraying processes."

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)

#### 7-way pressure tap

The UF 02 is equipped with a 7-way pressure tap. As oppose to a normal rotary ball valve, the in-house developed valve from AMAZONE consists of a cam and valve seats. Exclusive: when swivelling in and out the pressure tap, the relevant route for the liquid is reliably opened or closed.

After the spraying operation is finished, Comfort-Pack provides fully automatic cleaning which can be controlled completely remotely from the tractor cab.

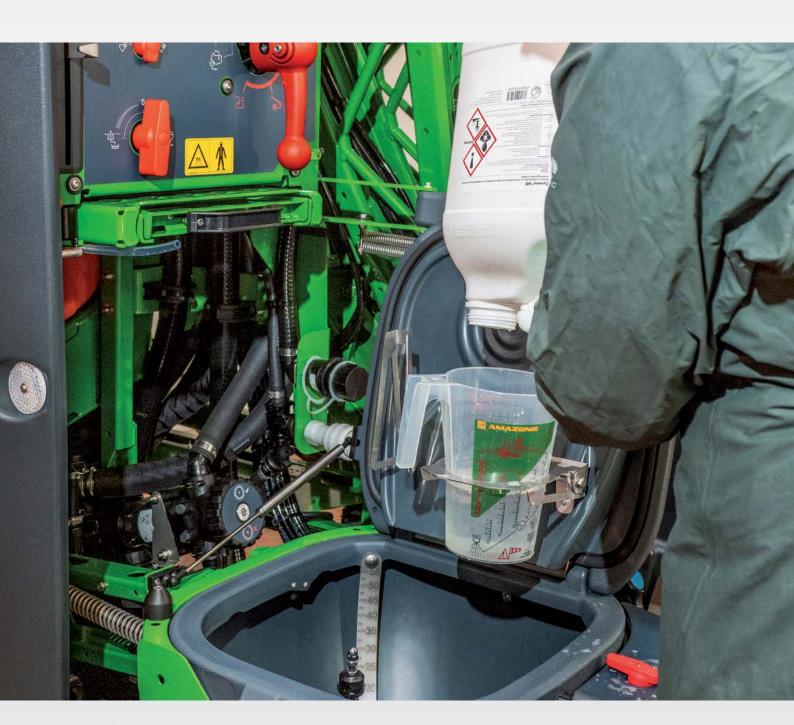
Additional functions such as boom rinsing, cleaning the spray liquid circuit from heavy deposits or a defined dilution of a subsequent tank mix in the field are all functions included within Comfort-Pack.



TwinTerminal 3.0

### **Exact mixing**

Quick and safe with the induction bowl



#### The benefits:

- **▼** Extremely quick and absolutely trouble-free filling
- **⊘** Suction capacity of 150 l/min
- ✔ Fresh water supply during both suction and pressure filling
- **⊘** Safe induction even of powder and granular spray agents, thanks to the additional mixing nozzle
- Practical folding measuring jug holder in the induction bowl lid

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• "Everything has been thought of for the induction bowl; even canisters can be left to drain."

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)

The 60 I induction bowl copes with anything. We experienced this when inducting Epsom salts."

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)

### **Trouble-free filling with** top performance

The 60 litre induction bowl is located directly below the operator controls. The phenomenal suction capacity of 150 l/min guarantees the quick, absolutely trouble-free filling and a complete emptying. For inducting powders or granular spray agents effectively, an additional mixing nozzle is positioned underneath the suction aperture which reliably prevents any blockage of the suction aperture. The mixing nozzle is infinitely-variable and can be operated in parallel to the infinitely adjustable output of the high-capacity rinse ring.

When suction or pressure filling, the induction bowl can be also supplied with fresh water using a steplessly adjustable 3-way valve!

The canister cleaning nozzle is activated simply by pushing down the canister or measuring jug. In the upper zone of the canister cleaning nozzle there is an additional, smaller contact area which is positioned where the nozzle can be activated, specifically for a more effective cleaning of the canister neck.

Details, such as the measuring jug holder and the drip tray for the canisters, located inside the dustproof and liquid-tight lid, provide the operator with an exceptionally pleasant operating environment. When the induction bowl is closed a complete internal cleaning can be carried out with the aid of the canister cleaning nozzle. The spray lance, included in the standard execution, is positioned to the right hand side of the induction bowl.



Induction bowl with drain off facility for empty canisters



• A holder for gloves and a measuring jug are provided in the inner panel of the operator station cover

### AMAZONE aircraft-style boom design



"Very smooth boom ride in the field during work from the 30 m booms"

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)

Booms | Profile

UF 1002 with Super-Q-Plus boom

### Simultaneously superbly strong and superbly light

Due to the special profile design, AMAZONE sprayer booms are very light yet, at the same time, very robust. 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. For any operational use and any application rate, the right nozzles are available, for example, for optimum wetting, anti-drift or for liquid fertiliser use.

### 3-fold shock absorbed suspension for the most arduous of operating conditions

As standard, all AMAZONE booms are equipped with

- springs and shock absorber pack for damping the vertical roll movement
- vrubber buffer damping elements with ball suspension to damp down the horizontal yaw movements and
- tension springs for the shock absorbed suspension of the entire boom.

The hydraulic height adjustment and guide skids also come as standard and ensure precise longitudinal and lateral distribution of the spray agent.

### **Boom designed to perfection**

In hilly terrain and with large working widths, hydraulic tilt adjustment makes sense. The quick and precise tilting and return of the boom into the level position is possible via a tractor spool valve or via the electro-hydraulic functions in the ISOBUS terminal.

The AMAZONE Super-S series booms are JKI approved. They therefore comply with the highest European demands for crop protection implements!



### **Compare for yourself!**

It's those important quality features that make the difference!



#### Compactness matters!

It is easy to carry due to the low centre of gravity and the light and robust design of the machine. The front axle weight load is lower than that of many competitors.

#### Drive safely!

The visibility in road transport is exemplary. Anywhere the tractor can go, the sprayer, with its narrow boom fold, goes as well. No protruding parts, no boom damage, minimal transport width.

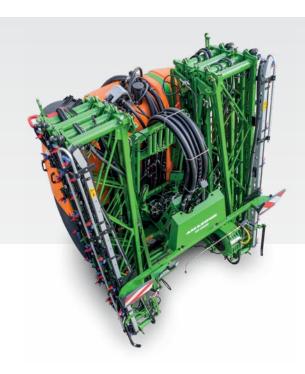
#### **Everything in its place!**

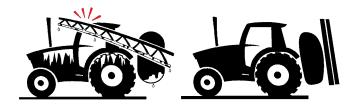
The boom locates safely in the transport hooks. No rattling. No susceptible wear on the boom pivots. High road speeds are not a problem.

### Maintenance-free and with a long service life

The decades of experience in boom design pay off: the conical hinge pin is the intelligent centre of a well thought-out boom philosophy! The boom pivot points self-adjust against any play on the conical hinge pins, thus ensuring an optimal boom function for the operator, even after many years.

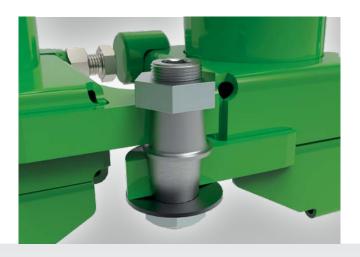
The standard use of stainless steel, the use of automotive-industry standard, cathodic dip painting process and the targeted use of plastics and aluminium are the perfect guarantee of a long service life.





#### Clean working!

No spray agent from the booms drips on to the tractor or the operator station and the booms also do not hit the tractor cab.



### **Q-plus boom**

12 - 12.5 - 15 metres

#### The robust, entry-level boom

With the horizontally folded Q-Plus boom in working widths of 12 m, 12.5 m and 15 m, AMAZONE offers an entry-level boom that is second to none when it comes to quality and reliability. Folding in and out is hydraulic as standard, as are the boom height adjustment and one-sided folding in the left-hand direction of travel.

#### The benefits:

- **⊘** Super-stable, yet super-light
- **♂** 3-fold shock absorption
- Hydraulic height adjustment as standard
- One-sided folding on the left-hand side as standard
- **◆** Available with hydraulic tilt adjustment

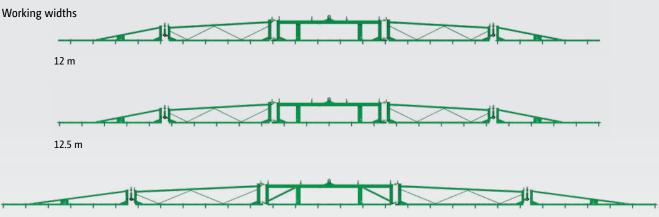


UF 1002 with Q-Plus boom

#### Centralised hose guidance

The central hose guidance ensures a clean and kink free routing of all hoses and cables.

#### Boom layout and folding variants for the Q-Plus boom



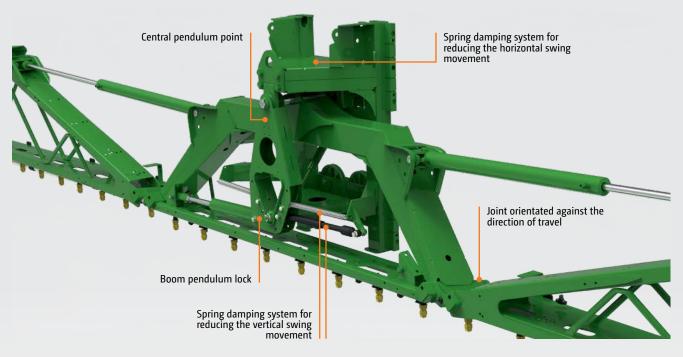
### **Super-S boom**

The top class boom in widths from 15 to 30 m



UF 2002 with Super-S2 boom in a width of 30 m and FT 1502 front tank

### Super-S1 and S2 boom suspension without ContourControl



The 3-fold, shock-absorbed suspension, the hydraulic height adjustment, and resilient crop height skids, guide the Super-S boom reliably over the crop at the right distance.

Super-S | boom 22 | 23



### The comfortable, industry-leading boom in working widths up to 30 metres

The vertically folding Super-S boom is available in working widths from 15 m to 30 m. Due to the layout of the boom, there are only a few pivot points, which enables a quick folding and, more importantly, a transport width of just 2.40 metres. When equipped with Profi-fold electro-hydraulic boom actuation and DistanceControl height control, operation is made so much easier.

The Super-S boom is available as the Super-S1 from 15 m to 21 m and the Super-S2 from 15 m to 30 m.

### More than just a solid core: Profiles made from high tensile steel

What has been taken away from the boom in weight has been returned in output. The clever lightweight design makes use of the material where it makes sense. For instance, aluminium for weight reduction at the outer boom sections of the Super-S2 boom, but not however, in the middle of the boom. There, high tensile steel is necessary so that the boom is kept rigid and in line and so any spray errors due to movement are prevented.



#### The benefits:

- Super stable, yet super light
- Super narrow transport width of 2.40 m
- 3-fold shock absorption
- **▼** Hydraulic height adjustment as standard
- Can be specified with hydraulic tilt adjustment
- **♥** Can be specified with edge nozzle control
- Can be specified with electro-hydraulic actuation of Profi-fold
- Can be specified with fully automatic DistanceControl height control
- ◆ Can be specified with ContourControl active, fully automatic, hydraulic boom guidance (for Super S2 booms in widths of 20 to 30 m)



▼ The Super-S2 boom is super-robust and, at the same time, super-light

### Super-S1 boom

15 – 18 – 21 metres

Due to the layout of the boom sections, there are only a few pivot points, which allows faster folding. The well-known, robust profile construction convinces completely. Despite the individual sections of the Super-S1 boom being 50 centimetres longer in comparison with the Super-S2 boom, the machine height comes to just 3.48 metres.

The Super-S1 boom, in working widths of 18 and 21 metres, can be easily reduced to 15 metres by folding in the outer boom sections.

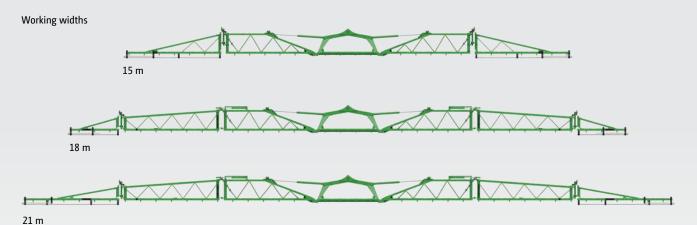
The boom is so robust and, during our use of it, the boom ride was pleasantly smooth."

("dlz agrar magazine" – Field test UF 1201 "Super also in small widths" · 05/2016)



UF 1602 with Super-S1 boom in a 21 m width

### Boom layout and folding variants for the Super-S1 boom



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### Super-S2 boom

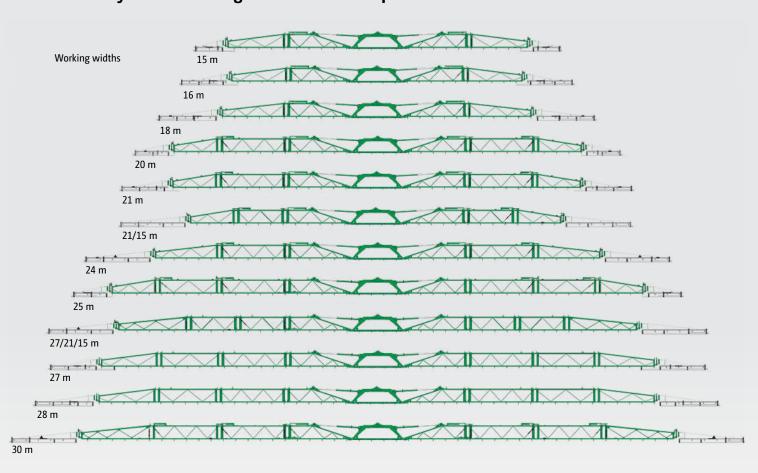
15 - 16 - 18 - 20 - 21 - 24 - 25 - 27 - 28 - 30 metres

Due to the shorter, individual sections, a machine height of just 3.28 m is achieved.



UF 2002 with Super-S2 boom in a 30 m width

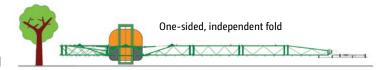
### Boom layout and folding variants of the Super-S2 boom



## With maximum comfort and even more precision

#### **Pre-select folding**

Independent folding is possible via either the AmaSpray<sup>+</sup> in-cab terminal or an ISOBUS terminals via the tractor spool valves.



#### Profi-fold – flexible and comfortable

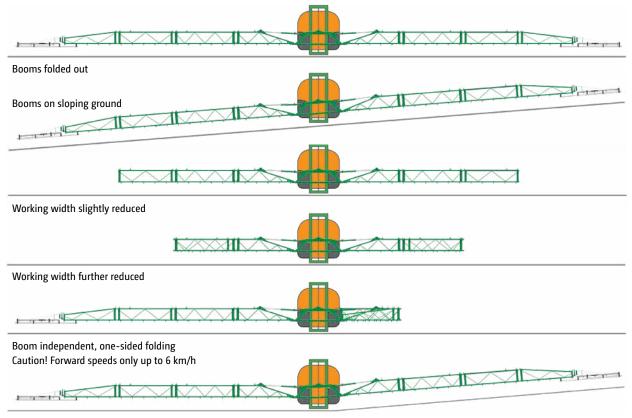
As an option for all Super-S booms, AMAZONE offers the Profi-fold electro-hydraulic actuation system. All hydraulic functions can be performed reliably and easily from the cab using the ISOBUS terminal. The multi-function joystick makes handling particularly comfortable.

#### Profi-fold 1:

Height adjustment, folding in and out, independent, one side folding at reduced speeds (max. 6 km/h), boom width reduction, and tilt adjustment.

#### Profi-fold 2:

In addition with variable geometry, individual boom tip angling.



Boom with one side angled Profi-fold 2

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Sensors precisely detect the target height distance and look after the operation

### DistanceControl with 2 sensors or DistanceControl plus with 4 sensors

As an option for the Super-S boom, AMAZONE offers, either DistanceControl fully automated boom height control with two sensors or DistanceControl plus with four sensors. If the crop height varies greatly, or there are areas with partially lodged corn, the boom could dip into the crop if equipped with just 2 sensors. In this case, equipping the boom with four sensors will prevent this. The sensors are electrically connected in parallel and so it is always the sensor that is closest to the target surface that is sensing.

The driver is able to concentrate on applying the plant protection agent correctly, while the machine ensures optimum boom guidance!

#### Benefits of the DistanceControl boom guidance

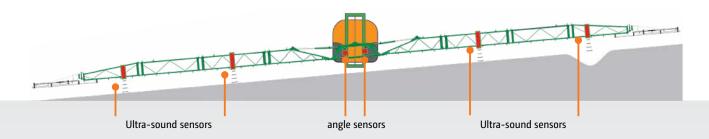
Fully automatic boom guidance including boom height, tilt adjustment and boom lifting on the headland



DistanceControl when equipped with two sensors: measuring to the crop



DistanceControl when equipped with two sensors: the boom can dip into the crop, for example, where there is lodged corn



#### DistanceControl plus:

remedy for difficult operating conditions by equipping with four sensors

### ContourControl boom guidance

For the UF 1602 and 2002 with boom working widths from 20 m



The UF 2002 mounted sprayer with ContourControl for fully automatic boom guidance

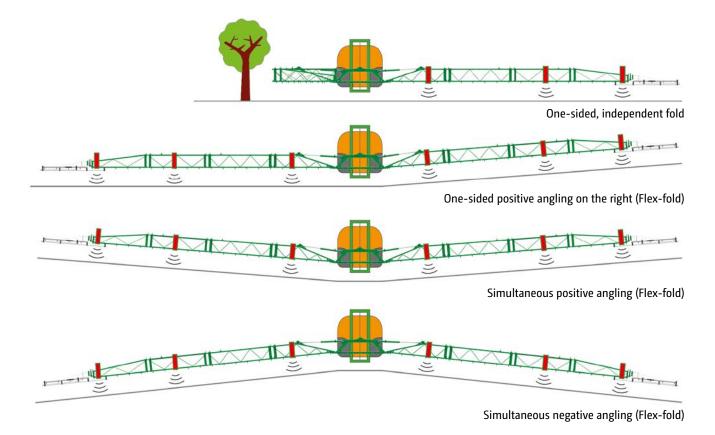
#### ContourControl

The AMAZONE ContourControl active boom guidance is a ground-breaking fully automatic hydraulic boom guidance system which now can also be used on mounted sprayers. The boom tilt is controlled by a hydraulic cylinder which is pre-pressurised on both sides. Rapidly actuated hydraulic valves bring the boom to the desired position. This actively reduces any of the various effects caused by uneven

ground and other influences while driving. The cylinders for positive and negative angling of the two outer ends of the boom are controlled using the same principle. This allows the boom to follow highly uneven topography in order to maintain an optimal distance to the target surface across the entire working width, even on extremely hilly terrain.

The standard, electro-hydraulic Flex-fold mechanism of the boom with ContourControl controls each pivot point on the boom separately. Folding the boom out to a reduced working width, and one-sided folding, are possible very comfortably from the tractor seat. The overload protection within the hydraulic system is simultaneously used

as break back protection when working at these reduced working widths. The individual control of the hydraulic cylinders at each pivot point allows up to two segments to be folded out at a time on each side of the boom. This considerably reduces the downtime when folding the boom in and out.



### TG part-width section control



### Electrically controlled TG valve chest

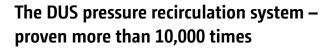
The TG part-width valve chest is available for either ISOBUS control or AmaSpray<sup>+</sup>. The part-width boom sections are quickly switched on and off without drips via electric motor valves with pressure relief.

The amount applied is accurately and directly controlled by the operator terminal for all situations. An equal pressure unit is not required with this technology.



# DUS pressure recirculation system

With DUS you set the pace



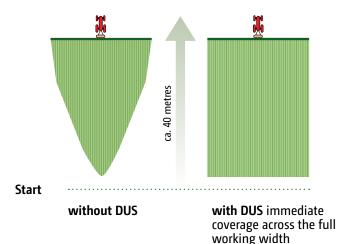
The AMAZONE DUS pressure recirculation system ensures a reliable circulation throughout the entire system. When starting the spraying operation, all the hoses including the spray lines are filled under pressure in the reverse direction with the mixed spray agent. This means the spray lines are always full and immediately ready to use across 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.



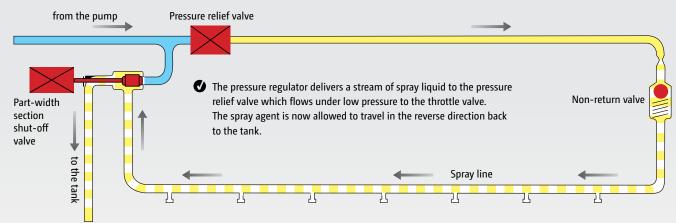
DUS pressure recirculation system





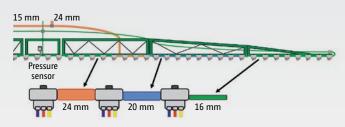
Incorrect application of plant protection agents without the DUS pressure recirculation system

### DUS pressure recirculation system: feeds each individual part-width section



### AmaSwitch plus

Electric individual nozzle control with 50 cm part-width sections



DUS pro high pressure recirculation with conical spray line on here, for example, AmaSwitch plus

### Automatic 50 cm part-width section switching

With AmaSwitch plus, AMAZONE offers a precise solution for automatic part-width section control with 50 cm part-width sections. AmaSwitch plus is the ideal alternative for operators 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.

The standard equipment for the AmaSwitch plus includes the DUS pro high pressure recirculation system and, in addition, it can be equipped with LED individual nozzle lighting.

### Triple nozzle body, with electric on/off switching

AmaSwitch plus is based on a conventional, manually-operated triple nozzle body with electrically controlled nozzles. Opening and closing is achieved via an electric valve which is mounted directly ono 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.

#### **DUS** pro

With DUS pro, the spraying pressure is constant right up to each individual nozzle and at the set spraying pressure. Thanks to the conical spray lines, residual volumes are largely minimised.

#### **Conical spray line:**

the dimensions of the spray line vary along the boom

- Minimal residual spray volumes
- Even flow rate

### Quad nozzle body, with the additional 25 cm nozzle spacing

In addition to the triple nozzle body, AmaSwitch plus electric individual nozzle control can also be equipped with a quad nozzle body. In addition, a true 25 cm nozzle spacing can be achieved with the aid of an optional extension kit. In combination with special 80 ° nozzles this provides the advantage of reducing the target surface distance to less than 50 cm.



AmaSwitch plus triple nozzle body with electric individual nozzle lighting



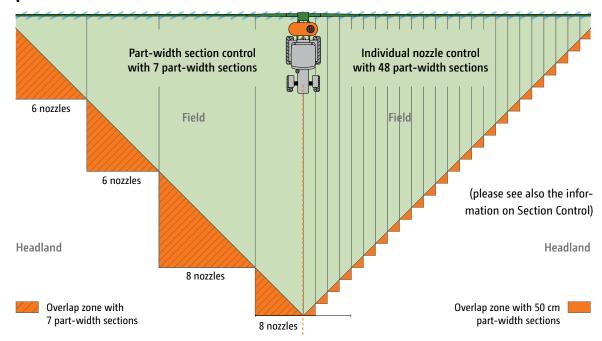
AmaSwitch plus quad nozzle body



AmaSwitch plus with quad nozzle body and offset kit for a true 25 cm nozzle spacing

32

#### Example: 24 m boom width

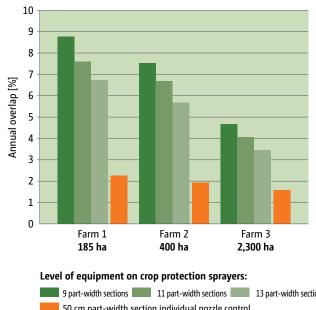


#### **Calculated example:**

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 the annual potential savings
- 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





= optional

– = not possible

### **Comparison of systems:**

		Electric individual nozzle control	
The benefits	Part-width section valves TG	AmaSwitch plus triple	AmaSwitch plus quad
Multiple boom sections	up to 11	up to 60	up to 60
50 cm part-width sections	-		
Number of nozzles per nozzle body	1 or 3	3	4
Manual nozzle switching			
Low pressure recirculation (DUS)		_	-
High pressure recirculation (DUS pro)	-		
25 cm nozzle spacing	-	_	
Individual programming of the part-width sections	-		
No need for compressed air			
LED individual nozzle lighting			

= included

Nozzle switching -system overview

### The right nozzle choice

The basis for success in crop protection



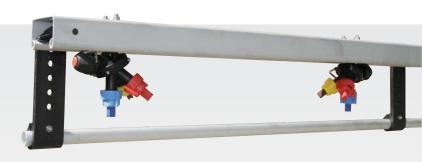
### Less drift also at higher wind speeds

With the air-assisted injector nozzles, crop protection agents can be applied with very little drift. 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.

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

### 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 triple or quad nozzle bodies are suitable for frequent nozzle changes caused by different applications and crops. Nozzle protection tubes, as standard on the outer sections, or, if desired, over the entire boom working width, ensures protection for long injector nozzles and multiple nozzle bodies.







Everyone purchasing an AMAZONE crop protection sprayer receives, free of charge, an AMAZONE nozzle fitting tool that makes for a much easier nozzle change.

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.

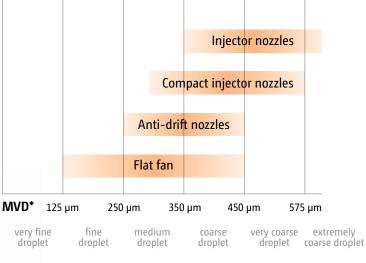
If coverage quality is at the foreground of the application, the use of standard or anti-drift fine droplet nozzles, such as XR or AD, is recommended. Special care is required here due to their tendency to drift above 3 bar.

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. The split spray pattern ensures a more even deposit on the front and back of the plant and is an interesting alternative in many applications.

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

#### Distribution of the droplet size

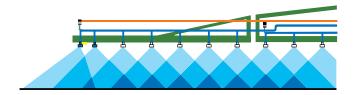


\* mean volumetric diameter



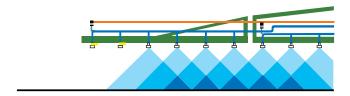
### **Options for every application**

### Electric boundary nozzle switching For environmentally-friendly spray application at the field edge



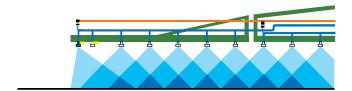
#### Additional nozzle switching

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.







### **Liquid fertilisation**

In conjunction with the AMAZONE booms, a separate drag hose kit for risk-free late fertilising is available. The self-contained aluminium profiles can be attached with a few hand clamps. Stainless steel weights help keep the position of the drag hoses within the crop. AMAZONE offers 3-hole, 5-hole or 7-hole nozzles for coarse droplet distribution of liquid fertiliser.

### **Under-leaf spraying**

Elegant solutions for successful under-leaf spraying are also possible in combination with AMAZONE crop protection sprayers. The Dropleg system from Lechler, for instance, is an easy and robust under-leaf spraying system that hangs freely between the rows and which fully meets the demands of the professional grower.

## **LED** individual nozzle lighting

Professional work lighting is today the basis of a flexible, output-increasing solution when operating in twilight and at night. LED individual nozzle lighting picks out each individual spray fan. An absolutely immediate assessment of their operation down to the very last nozzle on the boom can be made.

### **LED boom lighting for Super-S booms**

For flexible and efficient operation at twilight and in the dark, LED boom lighting is available.

Two far-reaching LED work lights, mounted in the middle of the boom, ensure excellent visibility of all the nozzles at a glance.





# FT 1001 and FT 1502 front tank

For an affordable self-propelled machine with up to 3,500 I tank capacity



High-capacity and compact, UF 02 with FT front tank

# Self-propelled sprayer: UF with FT for even higher outputs

The FT front tank means that the tank volume of the UF mounted sprayer can be very easily extended by either 1,000 l or 1,500 l. Thanks to the optional FlowControl<sup>+</sup> System and the compact design, the UF front tank is the ideal solution for increasing the overall capacity of the UF.

### From mid-April to mid-May...

... huge tulip fields light up North Holland. For targeted plant protection, tulip grower Siem Munster relies on a UF 2002 mounted sprayer and a FT 1001 front tank. The core characteristics of this combination are particularly important when working in his tulip crop: efficient, comfortable, compact and precise!

● "With the FT 1,000 I front tank one gets a highly manoeuvrable sprayer with the capacity of a small self-propelled machine."

("agrarheute" magazine – Test report UF 2002 with FT 1001 · 03/2018)



### The advantages at a glance:

- FlowControl<sup>+</sup> intelligent fill level management for optimum weight distribution
- Improved driving stability on slopes due to the intelligent loading of the front axle
- Extremely compact design thanks to front linkage better manoeuvrability in the field and for safer road transport

Model	Nominal volume						
Front tank FT 1001	1,000 l						
Front tank FT 1502	1,500 l						

The special advantages offered of more manoeuvrable tractors with a mounted implement compared with trailed sprayers in smaller and more awkward shaped fields as well as the better behaviour on slopes are the major arguments for the front tank solution.

But also in the 3,500-litre self-propelled sprayer class, a comfortable tractor equipped with a high-quality combination of mounted sprayer and front tank makes an interesting alternative.

Growers, for whom the volume of their UF 02 mounted sprayer is not large enough, can expand the nominal volume up to 3,500 litres by combining it with a front tank. With the aid of FlowControl<sup>+</sup>, the front tank is completely integrated into the spray liquid circuit of the UF 02.

### Benefits over a self-propelled sprayer

- Huge advantage on price
- **●** 80 km/h permissible speed with a Fasttrac
- tractor which can also be used for other operations

### Benefits over a trailed sprayer

- Compact unit
- Less crabbing on side slopes
- Perfect ballasting of the front axle provides good driving stability on slopes
- Faster manoeuvring on the headland
- Easy manoeuvring in smaller and wedge-shaped fields
- Compact transport on narrow country lanes and along roads
- ▼ The front tank simultaneously serves as front weight ensuring an optimum balance
- Reduction of soil compaction



# Automatic regulation via FlowControl+

Operates just like using one large tank





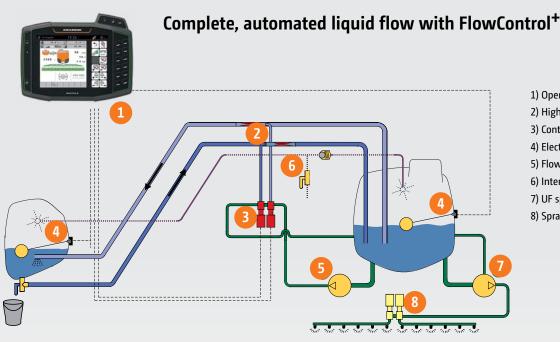
The operator terminal controls the liquid circuit. Only when the fill level of the rear mounted sprayer drops to the 30% mark is the spray agent pumped from the front tank to the rear.

## **Electronic fill level** management system

The special feature of the FT front tank is the complete integration of the front tank into the mounted sprayer liquid circuit using the FlowControl<sup>+</sup> electronic fill level management via the ISOBUS terminal. The technology behind FlowControl<sup>+</sup> is the two electronic fill level indicators in the tanks and the two high-capacity injectors. The transfer rate in each direction is up to 200 l/min. The liquid in both spray tanks is always ideally homogenised.

The ISOBUS terminal automatically controls the liquid circuit, so that there is always an optimised weight distribution. Premature reduction of the load on the front axle is prevented. Depending on the fill level, new liquid is delivered from the front tank early enough so that the rear sprayer tank is never emptied before the front tank. The tank mix always remains homogeneous.

The manual control also enables the transfer of just fresh water to the front tank. In practical terms, the FlowControl+ pump additionally assists the filling procedure so that a maximum suction capacity of up to 400 l/min is possible.



- 1) Operator terminal
- 2) High-capacity injectors
- 3) Control valves for injectors
- 4) Electronic fill level indicators
- 5) FlowControl<sup>+</sup> pump 150 l/min
- 6) Internal cleaning
- 7) UF spray pump
- 8) Spray line

# In handling and in transport ... ... superb!





# Sophisticated design for the utmost in safety

In the yard or in the barn: the compact combination, carried on its transport wheels, stores easily away. The system's simple handling is already convincing even after just a few hours in the field. The internal cleaning of the sprayer combination is carried out via the fresh water rinse tank on the UF.

The compact sprayer-tractor unit is especially favourable in narrow lanes with hardly any obstruction to the view thanks to the well thought out design.



The optional road lighting kit is necessary in cases where the lights of the tractor are obscured. The hidden headlights of the tractor must be duplicated on the tractor roof. The fitting on the front tank is not allowed.





### Optional camera system

In difficult driving situations, such as when pulling out of road junctions, the optional camera system on the front tank and on the mounted sprayer provides better visibility, and thus more safety, to the front and the rear. The high resolution, antiglare monitor is backlit and can also display two camera images at once.

The certification of the system by the DLG (German Agricultural Society) allows farmers to dispense with an escort, even if the front attachment protrudes far forward.

# Operation from simple to high-end, everything and anything is possible





UF 1002 with Q-Plus boom

# AmaSpray+ operator terminal

The handy AmaSpray<sup>+</sup> is specifically designed for the operation of AMAZONE sprayers and offers simple, but nevertheless, automatic control of the UF mounted sprayer. Switches integrated into the operator terminal enable the control of 5, 7 or 9 part-width sections. AmaSpray<sup>+</sup> has a digital pressure display and digital tank level indicator. It records the quantity applied and area worked. The hydraulic functions are operated using the spool valves on the tractor. Boom tilt and pendulum lock are also displayed in the AmaSpray<sup>+</sup>. As an option, AmaSpray<sup>+</sup> enables one-sided folding of the boom or, alternatively, access to the boundary and end nozzle spraying systems.

The AmaSpray<sup>+</sup> operator terminal with serial interface can also be used for automatic documentation (ASD) and part area, site-specific application via a GPS terminal.

### Functions of AmaSpray<sup>+</sup>:

- Single, high-contrast, backlit screen
- Main control valve and part-width section control
- Up to 9 part-width sections
- Digital pressure indication
- Digital fill-level indicator
- **O** Display of the boom position and lock status
- Hectare meter (total and daily counter)
- **4** +/- 10% kev
- Field record management system

#### Option possible:

- Pre-select fold for independent boom folding
- End nozzle or boundary nozzle switching for Super-S boom (as an alternative to pre-select fold)
- Fold or tilt via 1 double-acting spool valve (electrohydraulic changeover valve)
- ◆ ASD inside: serial interface for documentation and GPS terminal versatility







# ISOBUS as the basis for intelligent communication

### One language, many benefits!

Each ISOBUS-enabled machine from AMAZONE comes with the latest technology and almost unlimited possibilities. It makes no difference whether you use an operator terminal from AMAZONE or an ISOBUS terminal fitted directly in the tractor. ISOBUS is an internationally recognised standard for communication between the operator terminal, tractors and connected implements on the one hand and Farm Management Information Systems on the other.

## Operation via a wide-range of ISOBUS terminals

Which means that ISOBUS enables you to take control of all your ISOBUS compatible equipment. You only have to connect the machine to the respective ISOBUS terminal and the usual operator interface appears on the monitor in your tractor cab.

#### Benefits of ISOBUS at a glance:

- This worldwide standard provides a uniform interface and data exchange format that ensures compatibility even with third party manufacturers
- Plug and Play between machine, tractor and additional ISOBUS implements





# Perfectly designed Machine control by AMAZONE

AMAZONE machinery and operator terminals offer a range of functions which are very easy and safe to operate:

- Highest compatibility and function flexibility of your ISOBUS equipment
- No additional modules on the machine side. All ISOBUS machines from AMAZONE come ready-equipped with the necessary ISOBUS functions as standard
- Practice-oriented machine software and logical menu structure
- MiniView display with all AMAZONE terminals and additional ISOBUS terminals. See, for instance, the machine data in the map view
- Possibility of operating the machine via the tractor terminal or a twin terminal solution
- ✔ Flexible assignment of the map and machine view between the tractor terminal and the operator terminal
- Unique operating concept. Freely configurable displays and individual user interfaces for each driver
- Useful additional functions such as automatic boom lowering on AMAZONE crop protection sprayers
- **▼** Integrated TaskController data logger function



Clearly-structured AMAZONE machine operation

#### Advantages of the AMAZONE machine software:

- User-oriented and intuitive
- Tailored to the machine
- Function scope above and beyond the ISOBUS standard

# AmaTron 4 ISOBUS terminal

**Full functionality** 



The AmaTron 4 ISOBUS operator terminal, developed in-house by AMAZONE, enables convenient tablet-style, touch-screen control of any ISOBUS-enabled agricultural machine. AmaTron 4 makes all ISOBUS functionality possible – with added convenience, user-friendliness and overviews. And yet: it performs even better in combination with AMAZONE agricultural machinery and guarantees full functionality when it comes to precision farming.



#### STURDY!

- **♦** Low-reflection, 8" display with waterproof and dustproof aluminium housing
- Rear-mounted hand rest for a secure grip



#### WELL THOUGHT THROUGH!

- Practical and clear menu navigation for simple and intuitive use
- Actuation via touch screen or soft keys
- Simple documentation and job management: work first then save the data
- Optional software licences for maximising every opportunity in precision agriculture



#### **COMFORT!**

- App carousel for quick and easy navigation at the swipe of a finger
- ◆ Freely configurable status bar the most important parameters available at a glance, all of the time
- The practical quick-start menu allows quick and easy import and export of job data

Extended functionality via licences	Functions in AmaTron 4 for the UF 02
GPS-Maps&Doc	<ul> <li>Inactive field boundaries and automatic field detection</li> <li>Documentation via ISOBUS Task Controller or PDF export</li> <li>Application maps in ISO-XML format and Shape file format</li> <li>Online data exchange via the AmaTron Share App</li> </ul>
GPS-Switch basic	<ul> <li>Section Control with up to 16 part-width sections</li> <li>Virtual headland</li> <li>Automatic boom lowering</li> </ul>
GPS-Switch pro	<ul><li>Section Control with up to 128 part-width sections</li><li>Auto-zoom, obstacle marking</li></ul>
GPS-Track	<ul><li>Optical parallel guidance aid</li><li>Various different track modes</li></ul>
AmaCam	Display of a camera image on the AmaTron 4 including reverse detection
AmaTron Twin	Display extension using the AmaTron Twin App

# More comfortable machine operation

## AmaTron Twin App - extended display for user-friendly operation

The AmaTron Twin App offers the driver even more comfort during work, as GPS functions in the map view can also be displayed on a tablet in parallel with the machine operation on the AmaTron 4.

#### Advantages of the AmaTron Twin display enhancement:

- Use of an existing mobile device
- Greater clarity every application always in view
- Comfortable control of the 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 – easily visible display of the machine and its part-width sections, as well as buttons on the right hand side of the mobile device.

# AmaPilot<sup>+</sup> everything to hand!

Thanks to the AUX-N feature, you can operate multiple functions on the machine via the AmaPilot+ or any other ISOBUS multi-function joystick.







The AmaTron Twin App



#### Advantages of AmaPilot+:

- Nearly every function is controlled directly via the 3 levels
- Adjustable palm rest
- Freely programmable, individual key layout





# Workday made easy -

Make the most of the possibilities!

### GPS-Maps&Doc

# with data exchange via the AmaTron Share App

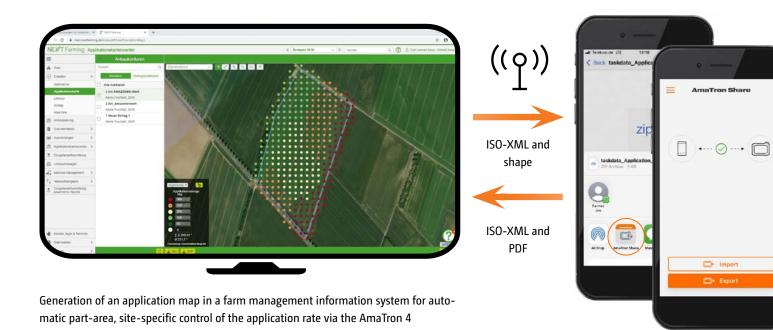
With the GPS-Maps&Doc licence, the AmaTron 4 can gather and document both machine data and georeferenced data via Task Controller (TC).

Part-area, site-specific operation via application maps in either Shape file or ISO-XML format is also possible.

### Advantages of GPS-Maps&Doc with the AmaTron Share App:

- Intuitive system for processing application maps
- Automatic part-area, site specific regulation of the application rate
- ✔ Indication of inactive field boundaries and automatic field detection when approaching the vicinity
- Optimum crop management via needs-based application
- Comfortable import of jobs in ISO-XML or Shape file format and export of completed jobs in ISO-XML format or as a job summary in PDF format via the AmaTron Share App
- Start a new task straight away and decide later whether the data is to be saved or not

# AmaTron Share App – for comfortable data management!





Display of the application map in AmaTron 4

Display of the camera image in the AmaTron 4

### **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 following
- Optional with AmaTron 4

### **AmaCam**

Software licence for displaying a camera image on AmaTron 4.

 Automatic display of the camera image on AmaTron 4 when reversing

# AmaTron Share App for digital data transfer. Try it now!

The AmaTron Share App, which is connected to the AmaTron 4 via a Wi-Fi hotspot, allows all data to be conveniently transferred online. For example, the App enables application maps to be easily sent from the office to the AmaTron 4 for completion. Job data can also be sent to customers or back to the office as PDF documentation via the cloud, email or messenger services such as WhatsApp after the job has been completed. This is user-friendly data management!



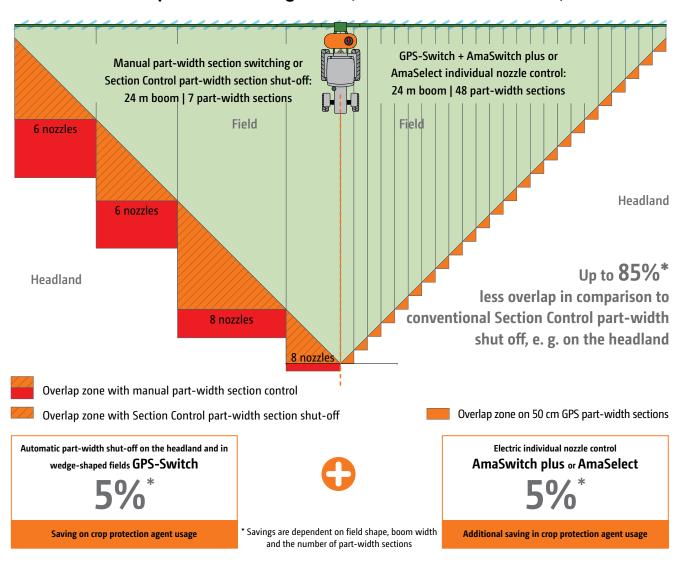


The AmaTron Share App



# Automatic part-width section control GPS-Switch

### Example: 24 m working 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. If AmaSwitch plus or AmaSelect is combined with the automatic GPS-Switch part-width section control, automatic switching of individual nozzles in 50 cm part-width sections is possible.

With this system, areas of overlap are significantly reduced and are, in comparison with a conventional Section Control partwidth section shut-off system, up to 85% less. 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.



Overlaps on the headland or in wedge shaped fields are prevented via precise switch points with 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, and then in automatic mode, the driver can concentrate fully on the operation of the towing vehicle, since the part-width sections are switched automatically in wedge shaped fields and on headlands.

#### Benefits of automatic part-width section control:

- Stress relief for the driver
- Increased precision, even at night or at higher speeds
- Fewer overlaps and gaps
- Saving inputs
- Less crop damage and environmental impact
- With Section Control, the ISOBUS terminal takes on so much of the work from the driver."

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

### **GPS-Switch**

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.

1 (c)

#### **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

### **GPS-Switch pro** (in addition to GPS-Switch basic)

- ◆ Automatic part-width section control with up to 128 part-width sections, ideal, in particular, for sprayers with individual nozzle control
- Auto-zoom when approaching the headland and obstacle marking

### AmaClick

Specialist crops and bed spraying often require the switching on/ off of the individual part-width sections in the middle of the boom. AmaClick is an additional ergonomic control unit that can be used either in conjunction with the AmaPilot<sup>†</sup> multi-function joystick or also as a standalone system alongside an ISOBUS terminal.





# Plant protection from AMAZONE

Benefit from more than 50 years of experience



Technical data

# **Technical data**

# UF mounted sprayer and FT front tank

Model	UF 1002	UF 1302	UF 1602	UF 2002				
Tank capacity (I)	1,100	1,400	1,680	2,125				
Nominal volume (I)	1,000	1,300	1,600	2,000				
Fresh water tank (I)	160 / 260	160 / 260	200 / 350	200 / 350				
Working width (m)	12 – 30							
Empty weight (kg)	850¹	1,200²	1,400³	1,5504				

Model	FT 1001	FT 1502
Tank capacity (I)	1,125	1,580
Nominal volume (I)	1,000	1,500
Empty weight (kg)	217	225

Sprayer boom		Q-plus Super-S1			Super-S2													
(m)	12	12.5	15	15	16	18	15	16	18	20	21	21/15	24	25	27	27/21	28	30
Transport width (m)	2.	.56	3.00	2.40														
Height (m) of parked machine		3.10	•	3.48			3.20										3.28	
Height adjustment (m)		0.50 – 2.20																

<sup>&</sup>lt;sup>1</sup> with 15 m Q-plus sprayer boom

Illustrations, content and technical data are not binding! Deviations of technical data are possible depending on the equipment. The illustrations may deviate from the requirements for local road traffic regulations.



<sup>&</sup>lt;sup>2</sup> with 21 m Super-S1 sprayer boom

 $<sup>^{\</sup>rm 3}$  with 21/15 m Super-S2 sprayer boom and Profi-fold 1

<sup>&</sup>lt;sup>4</sup> with 30 m Super-S2 boom and Profi-fold 2







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