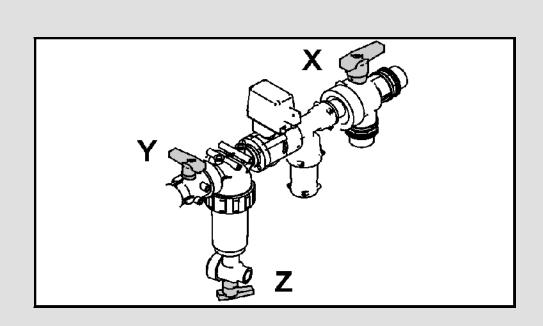
Operating manual

AMAZONE

High-Flow high performance liquid fertiliser application



MG4477 BAG0115.0 08.12 Printed in Germany Please read this operating manual before commissioning.

Keep it in a safe place for future use!

en





Reading the instruction

Manual and following it should seem to be inconvenient and superfluous as it is not enough to hear from others and to realize that a machine is good, to buy it and to believe that now everything should work by itself. The person in question would not only harm himself but also make the mistake of blaming the machine for possible failures instead of himself. In order to ensure success one should enter the mind of a thing, make himself familiar with every part of the machine and get acquainted with how it's handled. Only in this way could you be satisfied both with the machine and with yourself. This goal is the purpose of this instruction manual.

Leipzig-Plagwitz 1872. Dug. Sark!



Identification data

Enter the machine identification data here. You will find the identification data on the type plate.

Machine identification number:

(ten-digit)

Type: HighFlow

Permissible system pressure (bar) Maximum 200 bar

Year of manufacture:

Factory:

Basic weight (kg):

Permissible total weight (kg):

Maximum load (kg):

Manufacturer's address

AMAZONEN-WERKE

H. DREYER GmbH & Co. KG

Postfach 51

D-49202 Hasbergen, Germany

Tel.: + 49 (0)5405 501-0 Fax: + 49 (0)5405 501-234

E-mail: amazone@amazone.de

Spare part orders

Spare parts lists are freely accessible in the spare parts portal at www.amazone.de.

Please send orders to your AMAZONE dealer.

Formalities of the operating manual

Document number: MG4477 Compilation date: 08.12

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Foreword

Dear Customer,

You have chosen one of the quality products from the wide product range of AMAZONEN-WERKE, H. DREYER GmbH & Co. KG. We thank you for your confidence in our products.

On receiving the machine, check to see if it has been damaged during transport or if parts are missing. Using the delivery note, check that the machine has been delivered in full, including any special equipment ordered. Damage can only be rectified if problems are signalled immediately.

Before commissioning, read and understand this operating manual, and particularly the safety information. Only after careful reading will you be able to benefit from the full scope of your newly purchased machine.

Please ensure that all the machine operators have read this operating manual before the machine is commissioned.

Should you have problems or queries, please consult this operating manual or give us a call.

Regular maintenance and timely replacement of worn or damaged parts increases the lifespan of your machine.

User evaluation

Dear Reader.

We update our operating manuals regularly. Your suggestions for improvement help us to create ever more user-friendly manuals. Send us your suggestions by fax.

AMAZONEN-WERKE

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Postfach 51

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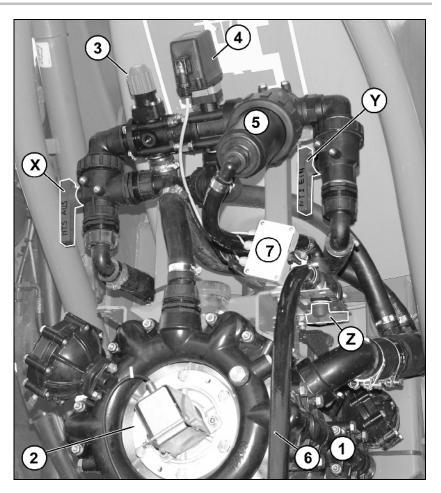


1 Structure and function

1.1 Function

- Spray rate can be increased (optional) for applying liquid fertiliser. The maximum spray rate can be increased to up to 400 l/min.
- The agitator pump is used here to increase the spray rate, and is not (or only partly) used as a drive for the agitator.
- The high-performance liquid fertilisation is switched on and off via the operating terminal and the HighFlow switch tap.

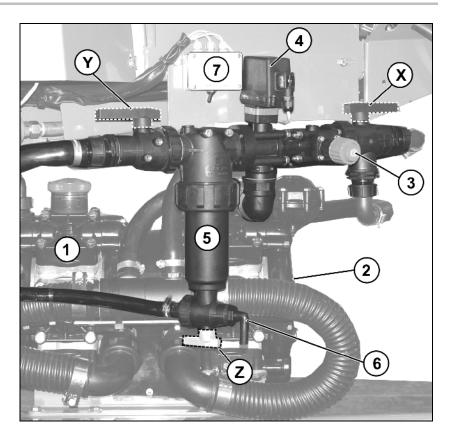
1.2 Structure HighFlow Pantera



- X High-Flow spray line switch tap
- Y Switch tap for non-return lock
- **Z** Switch tap for agitator / draining residue
- 1. Spraying pump
- 2. Agitator pump
- 3. Pressure relief valve
- 4. Control valve for agitator pump spray rate
- 5. Additional pressure filter
- 6. Drain hose
- 7. Control box



1.3 Structure HighFlow UX



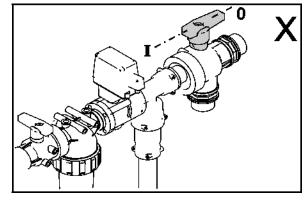
- X. High-Flow spray line switch tap
- Y. Switch tap for agitator / draining residue
- Z. Switch tap for non-return lock
- 1. Spraying pump
- 2. Agitator pump
- 3. Pressure relief valve
- 4. Control valve for agitator pump spray rate
- 5. Additional pressure filter
- 6. Drain hose
- 7. Control box



1.4 Switch tap HighFlow

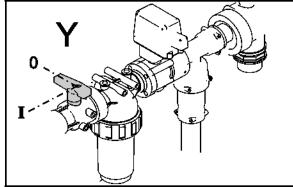
Switch tap HighFlow X

- Position I: HighFlow spray line ON
- Position 0: HighFlow spray line OFF (main agitator ON)



Switch tap for non-return lock Y

- Position I: HighFlow spray line open (for HighFlow - mode)
- Position 0: HighFlow- spray line closed



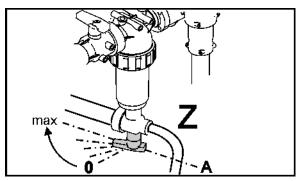
Agitator switch tap Z

- max: additional agitators, one at most.
- 0: additional agitator completely off, maximum spray rate.



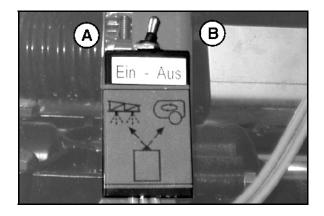
The switch tap divides the flow rate into agitator and HighFlow. It can be set anywhere between positions A and B.

Position A: Drain HighFlow - equipment.



1.5 Control box with switch

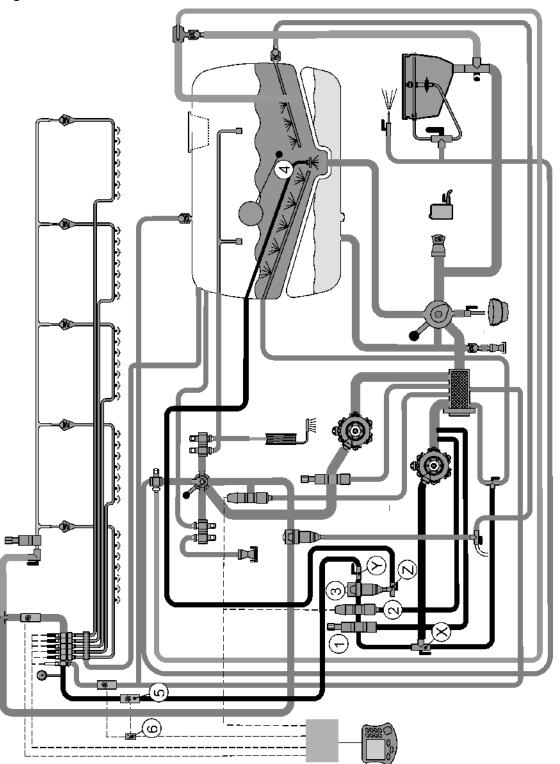
- Position A: HighFlow ON
- Position B: HighFlow OFF





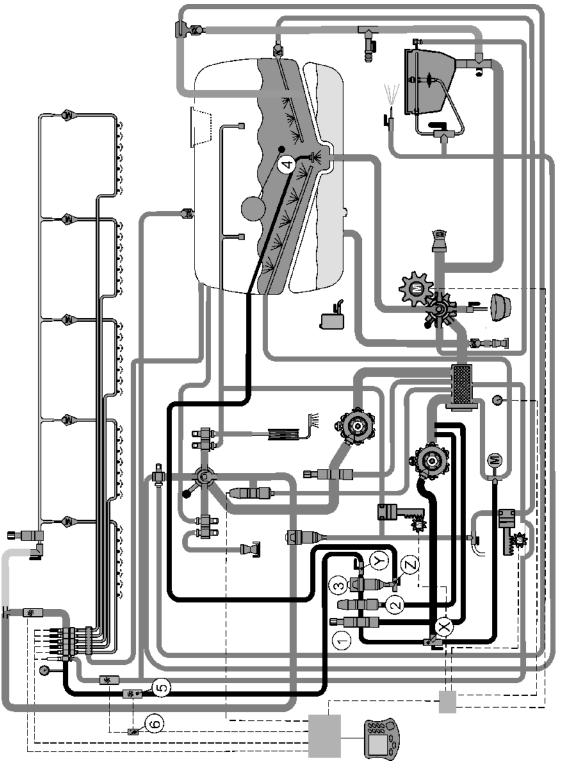
1.6 Liquid circuit

HighFlow:





HighFlow with comfort equipment:



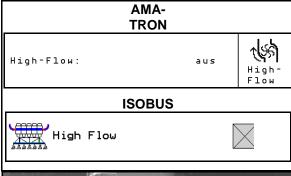
- (X) High-Flow spray line switch tap
- (Y) Switch tap for non-return lock
- (Z) Switch tap for agitator / draining residue
- (1) Pressure relief valve
- (2) Control valve for agitator pump spray rate
- (3) Pressure filter HighFlow
- (4) Additional agitator HighFlow
- (5) Flow meter 3
- (6) Control box



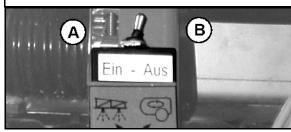
2 Operation HighFlow

Proceed as follows to switch on the HighFlow and thereby increase the maximum spray rate:

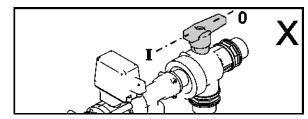
- 1. Operating terminal: machine data menu:
 - o HighFlow: **on /** ⊠.



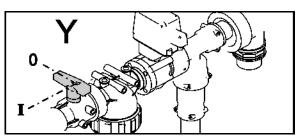
2. Switch on the dashboard to position A.



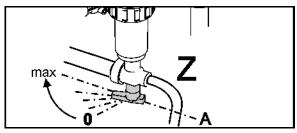
3. High-Flow switch tap X to position I.



4. Open return stop switch tap Y, position I.

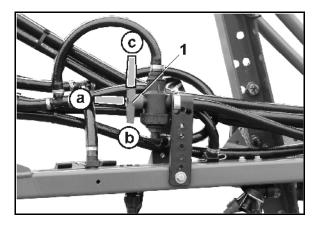


5. Set agitator switch tap **Z** between 0 and maximum.





- 6. If necessary, select the spray line switch tap of both spray lines..
- (1) One setting tap for each partial width:
 - **a** Spraying via both spray lines using trailing hoses
 - **b** Spraying using standard spray lines
 - c Spraying only via the 2nd spray line





Comfort equipment: automatic agitator control is not possible in High-Flow mode.

For normal spraying operation:

- 1. Operating terminal: HighFlow off.
- 2. Switch on the dashboard to position B.
- 3. Close return stop switch tap Y, position B
- 4. Switch tap HighFlow X to position B.



The operating terminal indicates the incorrect spray rate with the HighFlow when:

- the HighFlow is switched on / off incorrectly on the operating terminal.
- the switch on the dashboard is incorrectly on position A / B.



3 Cleaning the sprayer



WARNING

Crop damage caused by spray liquid left in the lines after changing the preparation.

After using the machine, with or without HighFlow, the HighFlow fluid path as well as the main agitator fluid path have to be cleaned.



- Clean the spray liquid tank on a daily basis!
- The flushing water tank must be filled completely.
- The cleaning process should be carried out in a threefold reduction procedure.



3.1 Cleaning UX

3.1.1 Cleaning the sprayer with the tank empty

Cleaning cycle A

- 1. Activate the pump, adjust pump speed to 450 rpm.
- 2. Manually move suction chest **G** to position H,O
- 3. Move the pressure gauge switch tap **A** to position
- 4. Move switch tap X to position 0.
- 5. Open the agitator I completely.
- → Flush the agitator with 10% of the flushing water supply.
- 6. Switch off agitator I.



DUS: Spray lines are flushed automatically. Use 10 % of the flushing water supply for this purpose.

7. Move the pressure gauge switch tap **A** to



- 8. Open switch tap B.
- → Carry out the internal cleaning with 10% of the flushing water supply.
- 9. Close switch tap **B**.
- 10. Manually move suction chest **G** to position
- 11. Move the pressure gauge switch tap **A** to

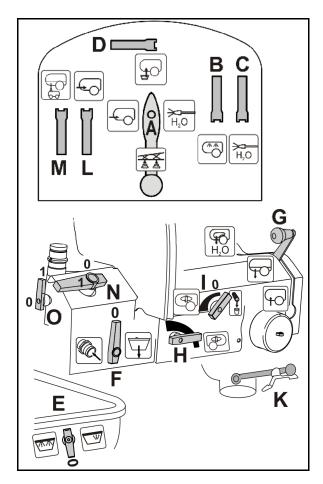


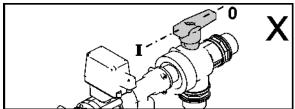
- 12. Spread the diluted residues on the area already treated while driving.
- Switch the sprayer off and back on again several times for a few seconds via the onboard computer.



The valves and the return lines are flushed by this switching on and off.

→ Keep spreading the diluted residues until only air comes out of the nozzles.







Cleaning cycle B

- 14. Manually move suction chest **G** to position H,0
- 15. Move switch tap X to position I.
- 16. Open the agitator I and Z completely.
- → Flush the agitator with 10% of the flushing water supply
- 17. Switch off agitator I and Z.



DUS: Spray lines are flushed automatically. Use 10 % of the flushing water supply for this purpose.

18. Move the pressure gauge switch tap **A** to



- 19. Open switch tap **B**.
- → Carry out the internal cleaning with 10% of the flushing water supply.
- 20. Close switch tap B.
- 21. Manually move suction chest **G** to position
- 22. Move the pressure gauge switch tap **A** to



- 23. Spread the diluted residues on the area already treated while driving.
- Switch the sprayer off and back on again several times for a few seconds via the onboard computer.



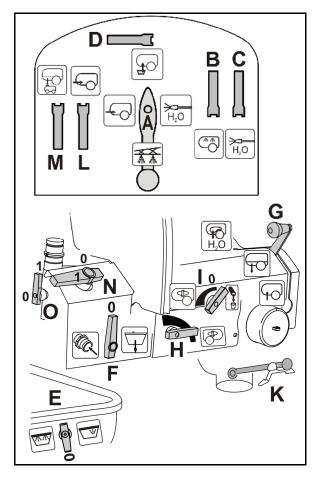
The valves and the return lines are flushed by this switching on and off.

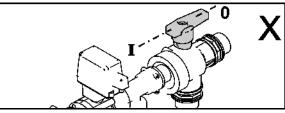
 Keep spreading the diluted residues until only air comes out of the nozzles.

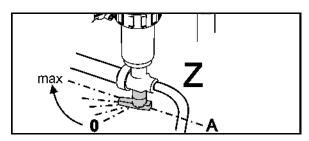
Repeat the cleaning cycle B.

Clean internally using the rest of the flushing water supply and then discharge until only the final residue remains.

- 25. Drain the final residue, see page 30.
- 26. Clean the suction filter and pressure filter, see page 31, 31.









3.1.2 Cleaning the sprayer with a full tank (work interruption)



If spraying operations must be interrupted because of bad weather, by all means clean the suction chest (suction filter, pumps, pressure controller) and the spray line.

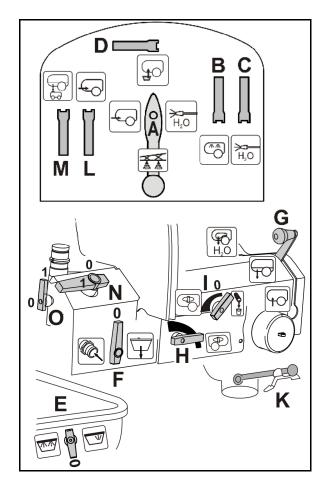
- 1. Interrupt pump operation.
- 2. Switch off agitator (e) Z, I.
- 3. Manually move suction chest **G** to position H,O
- 4. Activate the pump, adjust pump speed to 450 rpm.

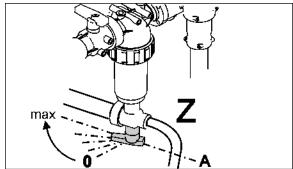
Without nozzle control:

- 5. Spread at least 50 litres of flushing water over an untreated area while driving.
- → The sprayer is cleaned with flushing water.
- Tank, agitators are not clean!
- The spray liquid concentration in the tank is unchanged.

With nozzle control:

- The sprayer is cleaned with flushing water. This is done using two litres of flushing water per metre of working width (observe the filling level).
- 6. Switch on the sprayers for a short period.
- → The nozzles are flushed.
- 7. Switch the pump off immediately because the agent concentration drops.
- Tank, agitators are not clean!
- The spray liquid concentration in the tank has changed.





Continuing the spraying operation



Before continuing with the spraying operation, activate the pump for five minutes at 540 min⁻¹ and switch on the agitators completely.

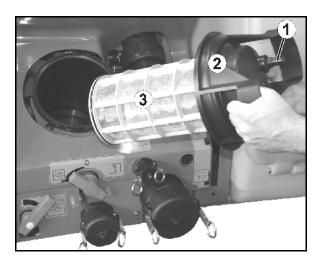


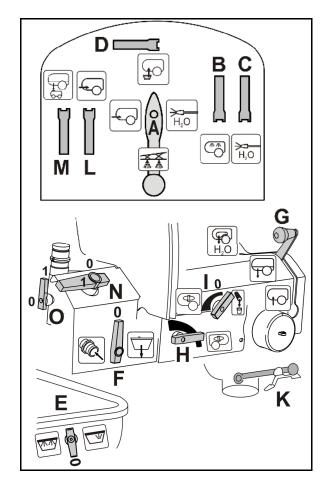
3.1.3 Cleaning the suction filter when tank is full

- 1. Activate the pump, adjust pump speed to 300 rpm.
- 2. Manually move suction chest **G** to position

Attention: The Cam Lock Coupling must be mounted on the suction port.

- 3. Move the pressure gauge switch tap **A** to position ...
- 4. Open switch tap L.
- 5. Open agitator **H** completely.
- 6. Unscrew the cover of the suction filter (2).
- 7. Activate the relief valve on the suction filter (1).
- 8. Remove the cover (3) with suction filter and clean with water.
- 9. Reassemble the suction filter in the reverse sequence.
- 10. Check the filter cover for leaks.







3.1.4 Cleaning the pressure filter when the tank is full

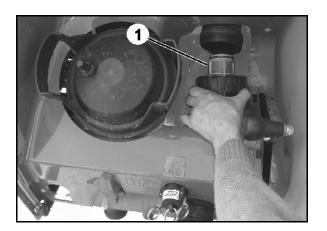
1. Manually move suction chest **G** to position

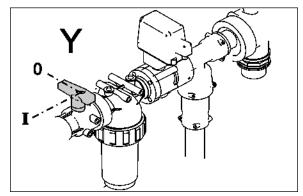


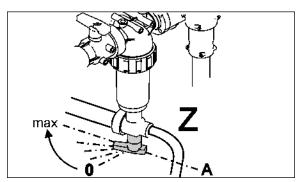
2. Close switch tap Y.



- 3. Move switch tap I to position
- 4. Move switch tap **Z** to position **A**.
- → Drain the residue into the pressure filter.
- 5. Undo the sleeve nuts.
- 6. Remove the pressure filter and clean with water.
- 7. Refill the pressure filter.
- 8. Check the screw connection for leaks.
- 9. Move switch tap I to position **0**.
- 10. Switch tap **Z** between 0 and maximum.
- 11. Open switch tap Y again.









3.2 UX with comfort equipment / clean Pantera (AMATRON)

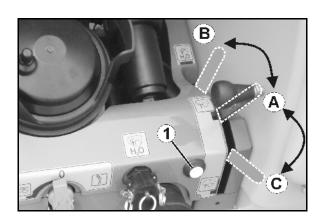
\$\tag{\tag{\tag{\tag{\tag{\tag{\tag{	Calling up the Comfort package menu
	Switch between spraying/flushing
© /	Dilute the spray liquid
	Switch cleaning on/off
P	Agitator automatic/manual
\$	Increase agitator intensity
<u> </u>	Decrease agitator intensity

The Comfort package enables the intake side to be switched using

- the AMATRON⁺,
- the button on the control terminal (1).

Remote-controllable settings:

- Spraying (position A)
- Flushing/diluting (position B)
- Filling via suction coupling (position C, in filling menu only)





3.2.1 Dilute the spray liquid with rinsing water



1. Start dilution.

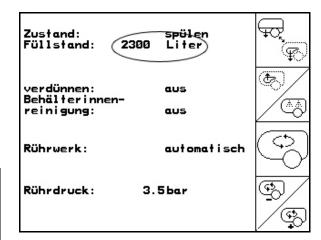
- → Flushing water is fed to the tank via the auxiliary agitator.
- 2. Observe the fill level of the tank.



End dilution.



For a machine with a pressure circulation system (DUS), the spray line is flushed. When spraying is restarted, two to five minutes pass before concentrated spray liquid can be sprayed.



3.2.2 Cleaning the sprayer with the tank empty

Cleaning cycle A

Cleaning:

Prerequisite: Fill level of the tank < 1% (tank empty if possible).

- 1. Move switch tap **X** to position **0**.
- 2. Run the pump with 450 rpm.

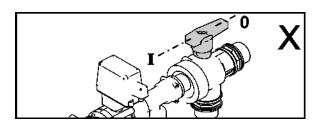


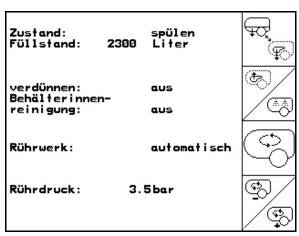
Start cleaning.

- → Main and auxiliary agitator are flushed, tank inside cleaning switched on.
- → When the fill level of the tank is 4%, cleaning is cancelled automatically.



For machines equipped with a pressure circulation system (DUS), the spray line is also cleaned automatically.





Empty tank:



Switch on spraying.

Spread the diluted residues on the area already treated while driving.

Switch sprayers on/off at least ten times while in motion.

→ Keep spreading the diluted residues until only air comes out of the nozzles.



Switch off spraying.

Zustand: spülen Füllstand: 2300 Liter





Cleaning cycle B

Cleaning:

- 1. Move switch tap **X** to position **I**.
- 2. Open agitator **Z** completely.



Reinigung starten.

- → Both ancillary agitators are flushed, tank cleaning is switched on.
- → When the fill level of the tank is 4%, cleaning is cancelled automatically.
- → Flush the agitators with 10% of the flushing water supply.

Empty tank:



Switch on spraying.

Spread the diluted residues on the area already treated while driving.

Switch sprayers on/off at least ten times while in motion.

→ Keep spreading the diluted residues until only air comes out of the nozzles.

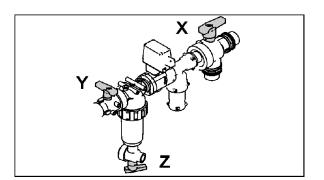


Switch off spraying.

Repeat the cleaning cycle B.

Clean internally using the rest of the flushing water supply and then discharge until only the final residue remains.

- 6. Drain the final residue, see page 30.
- 7. Clean the suction filter and pressure filter, see page 31, 31.





3.2.3 Cleaning the sprayer with the tank filled (work interruption)



1. Switch the intake side to flushing.

→ Flushing water is sucked in, close agitators.



You can also switch between spraying/flushing using the key on the operating panel.

Zustand: Füllstand: 23	spülen 300 Liter	F, F,
verdünnen: Behälterinnen- reinigung:	aus aus	* /
Rührwerk:	automatisch	9
Rührdruck:	3.5bar	\$ /

Machines without pressure circulation system DUS:



2.

Switch on spraying.

→The spray lines and nozzles are flushed with flushing water.



Switch off spraying.

4. Switch off the pump drive.



Switch the intake side back to spray-

- Tank, agitators are not clean
- The spray liquid concentration in the tank is unchanged.

Machines with pressure circulation system DUS:

- Wait until 2 litres of rinsing water have rinsed through the lines per meter working width.
- 3. Briefly switch spraying on to clean the nozzles.



Switch off spraying.

5. Switch off the pump drive.

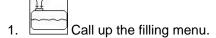
- 6. Switch the intake side back to spraying.
- Tank, agitators are not clean!
- The spray liquid concentration in the tank has changed.

Zustand: Füllstand: 230	spülen 00 Liter	Shift	
verdünnen: Behälterinnen- reinigung:	aus		
Rührwerk:	automat	isch	
Rührdruck:	3.5bar		



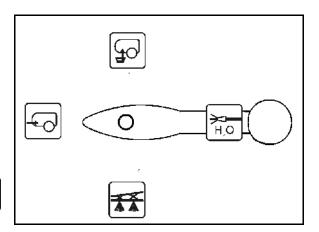
3.2.4 Cleaning the suction filter when tank is filled

To clean the suction filter when the tank is full, the filling menu must be called up.



- 2. Attach the sealing cap to the suction coupling.
- 3. Pressure gauge switch tap in position
- 4. Switch to filling using the button on the intake side.
- The contents of the filter cup are sucked out.
- 5. Unscrew the cover of the suction filter.
- 6. Activate the relief valve on the suction filter.
- 7. Remove the cover with suction filter and clean using water.
- 8. Reassemble the suction filter in the reverse sequence.
- 9. Check the filter cover for leaks.
- Switch to spraying using the button on the intake side.
- 11. Pressure gauge switch tap in position







3.3 UX with comfort equipment / clean Pantera (ISOBUS)

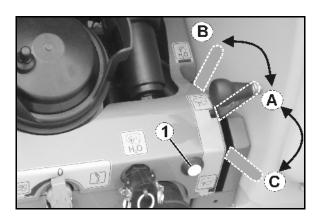
(5)	Calling up the Comfort package menu!
	Switch between spraying/flushing
	Dilute the spray liquid
	Switch cleaning on/off
	Agitator automatic/manual
	Increase agitator intensity
	Decrease agitator intensity

The Comfort package enables the intake side to be switched using:

- The operating terminal,
- The button on the control terminal (1).

Remote-controllable settings:

- Spraying (position A)
- Flushing/diluting (position B)
- Filling via suction coupling (position C, in filling menu only)





3.3.1 Dilute the spray liquid with rinsing water



1. Start dilution.

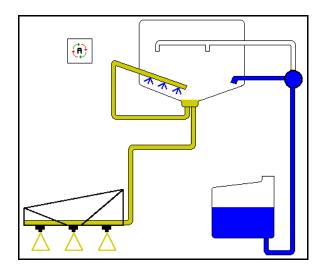
- → Flushing water is fed to the tank via the auxiliary agitator.
- 2. Observe the fill level of the tank.



B. End dilution.



For a machine with a pressure circulation system (DUS), the spray line is flushed. When spraying is restarted, two to five minutes pass before concentrated spray liquid can be sprayed.





3.3.2 Cleaning the sprayer with the tank empty

Cleaning cycle A

Cleaning:

Prerequisite: Fill level of the tank < 1% (tank empty if possible).

- 1. Move switch tap Xto position 0.
- 2. Run the pump with 450 rpm.



- 3. Start cleaning.
- → Main and auxiliary agitator are flushed, tank inside cleaning switched on.
- → When the fill level of the tank is 4%, cleaning is cancelled automatically.



For machines equipped with a pressure circulation system (DUS), the spray line is also cleaned automatically.

Empty tank:



4. " Switch on spraying.

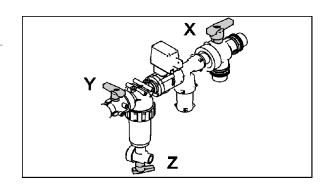
Spread the diluted residues on the area already treated while driving.

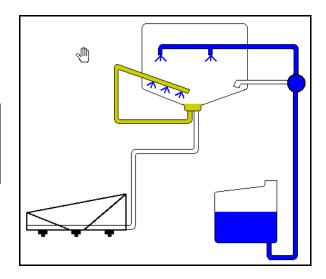
Switch sprayers on/off at least ten times while in motion.

→ Keep spreading the diluted residues until only air comes out of the nozzles.



Switch off spraying.







Cleaning cycle B

Cleaning:

- 1. Move switch tap **X**to position **I**.
- 2. Open agitator **Z** completely.



3. Start cleaning.

- → Both ancillary agitators are flushed, tank cleaning is switched on.
- → When the fill level of the tank is 4%, cleaning is cancelled automatically.
- → Flush the agitators with 10% of the flushing water supply.

Empty tank:



4. Switch on spraying

Spread the diluted residues on the area already treated while driving.

Switch sprayers on/off at least ten times while in motion n.

→ Keep spreading the diluted residues until only air comes out of the nozzles.

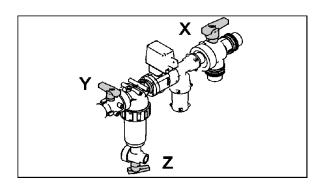


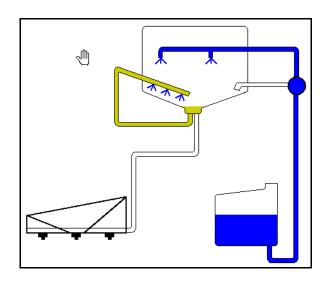
5. Switch off spraying.

Repeat the cleaning cycle B.

Clean internally using the rest of the flushing water supply and then discharge until only the final residue remains.

- 6. Drain the final residue, see page 30.
- 7. Clean the suction filter and pressure filter, see page 31, 31.







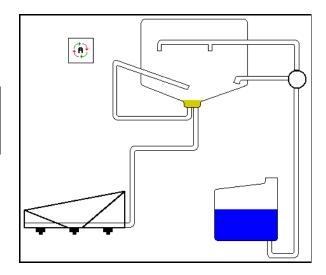
3.3.3 Cleaning the sprayer with the tank filled (work interruption)



- Switch the intake side to flushing. 1.
- Flushing water is sucked in, close agitators



You can also switch between spraying/flushing using the key on the operating panel.



Machines without pressure circulation system DUS:



- 0 / 1 2. Switch on spraying.
- The spray lines and nozzles are flushed with flushing water.



- 4. Switch off the pump drive.
- 5. Switch the intake side back to spraying.
- Tank, agitators are not clean
- The spray liquid concentration in the tank is unchanged.

Machines with pressure circulation system DUS:

- 2. Wait until 2 litres of rinsing water have rinsed through the lines per meter working width.
- (D) Briefly switch spraying on to clean the nozzles.
- (T) Switch off spraying.
- Switch off the pump drive.
- 6. Switch the intake side back to spraying.
- Tank, agitators are not clean!
- The spray liquid concentration in the tank has changed.



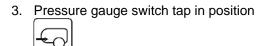
3.3.4 Cleaning the suction filter when tank is filled

To clean the suction filter when the tank is full, the filling menu must be called up.



Call up the filling menu.

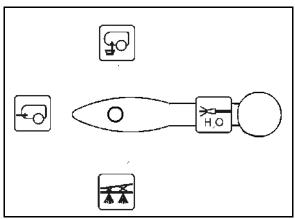
2. Attach the sealing cap to the suction coupling.



- 4. Switch to filling using the button on the intake side.
- The contents of the filter cup are sucked out.
- 5. Unscrew the cover of the suction filter.
- 6. Activate the relief valve on the suction filter.
- 7. Remove the cover with suction filter and clean using water.
- 8. Reassemble the suction filter in the reverse sequence.
- 9. Check the filter cover for leaks.
- 10. Switch to spraying using the button on the intake side.
- 11. Pressure gauge switch tap in position







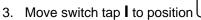


3.4 Draining the final residues



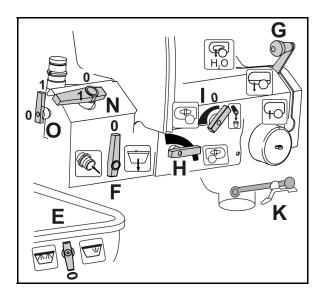
- On the field: Spread the final residues over the field.
- In the courtyard:
 - Place a suitable collecting container under the drain opening of the suction chest and the drain hose for the pressure filter and collect the final residues.
 - o Dispose of the collected spray liquid residue in accordance with the corresponding legal guidelines.
 - Collect the spray liquid residues in suitable containers.
- 1. Switch off the pump.
- 2. Manually move suction chest ${f G}$ to position

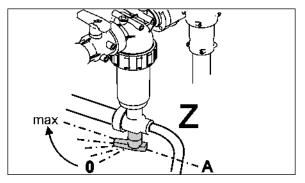






- 4. Open switch tap Z.
- 5. Open stop tap **K** öffnen.
- → Drain the technical residue.
- Close switch tap K again move switch tap I to position 0.
 Close switch tap Z.







WARNING

Frost damage!

Over the winter period, drain the remaining residue from the sprayer too.

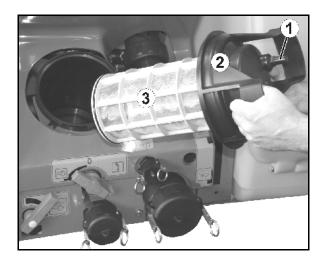


3.5 Cleaning the suction filter when tank is empty



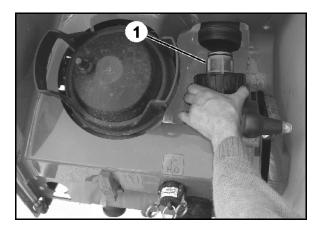
Clean the suction filter on a daily basis after cleaning the field sprayer.

- 1. Unscrew the cover of the suction filter (2).
- 2. Remove the cover with suction filter (3) and clean with water.
- 3. Reassemble the suction filter in the reverse sequence.
- 4. Check the filter housing for leaks.



3.6 Cleaning the pressure filter when the tank is empty

- 1. Undo the sleeve nuts.
- 2. Remove both pressure filters and clean with water.
- 3. Refill the pressure filter.
- 4. Check the screw connection for leaks..





3.7 Cleaning the sprayer during a critical agent change

- 1. Clean the sprayer in three runs as always.
- 2. Fill up the flushing water tank.
- 3. Clean the sprayer, two runs.
- 4. If the sprayer has been previously filled via the pressure connector:

Clean the induction bowl using the spray pistol and extract the content of the induction bowl.

- 5. Drain the final residue, see page 30.
- 6. By all means, clean the suction filter and pressure filter.
- 7. Clean the sprayer, one run.
- 8. Drain the final residue, see page 30.





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