NL

Smart Technical Solutions

Filter Unit User Manual Pro

Version: 2.02.04

HMI version: 2.02.10

PLC version: 2.02.10

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CE

Contents

THIS MANUAL SHOULD BE KEPT SAFE FOR FUTURE REFERENCE!

For the duration and conditions regarding the warranty, we recommend that you contact your supplier. We also refer to our General Terms and Conditions of Sale and Delivery which are available on request. JB Groep B.V. disclaims all responsibility for damage or injury resulting from failure to closely follow this manual and to observe customary caution in transport, assembly, use, and maintenance of the product. As a result of continuous efforts to improve, the product may deviate in detail from what is described in this manual. For this reason, the instructions given serve only as a guide for installing the product mentioned in this manual. This manual has been compiled with all due care, but JB Groep B.V. cannot take responsibility for any errors in this manual or for the consequences thereof. Furthermore, all rights are reserved and no part of this manual may be reproduced in any way.

1. Introduction

Congratulations on the purchase of your Filter installation!

This user manual provides the important and necessary information about the installation and use of your controller. Please read this manual thoroughly so that you are fully aware of the contents of this manual.

This manual should be stored in a safe, dry and shaded place to become. In the event of damage or loss, the user must install a new request a copy of the manual from the supplier.

2. Safety Precautions and Warnings

Important:

When using electrical equipment, all safety rules must be observed to avoid the risk of fire, electric shock or injury, etc. Therefore, read the safety instructions, the instructions for installation, operation, as well as the use maintenance before installing the installation.

- When installing, carefully follow the instructions and guidelines described in this manual. Never change the order of the actions to be performed. If this is not clear about the installation, please contact your supplier.
  We reserve the right to make technical changes without written notification.

Mounting:

- Observe the applicable standards and legal regulations during installation.
- We recommend that the installation of the unit be carried out by (qualified technicians / certified installers) as standard.
- Please check the delivery immediately upon receipt. In case of damage or incomplete delivery, please contact your supplier immediately.
- The materials should be stored in a dry, ventilated area, out of direct sunlight.
- Open the package carefully. Be careful not to damage the product.
  Remove any protective film and transport packaging from the installation.
- To avoid damage to your installation, place it on a clean and level surface.
- Adding or omitting parts, or processing or processing materials other than in the prescribed manner can have a detrimental effect on the safety of the installation and is therefore strictly discouraged!
- Be sure to remove the installation site by means of safety tape so that third parties are kept at a distance.

- Always wear the appropriate protective clothing (work gloves, dust mask, safety goggles, shoes with anti-slip, etc.) when carrying out the work.

3. Safety Precautions and Warnings (continued..)

Location:

- The installation is only intended for indoor use in a well-ventilated area. An unventilated area can lead to overheating.
- Do not expose the installation to rain, snow, mist, excessive contamination and condensing conditions.

- The location of the installation must:
  • Be dry.
  • Be free of dust and polluted air particles.
  • Be well-ventilated air.
  • Be free of vibrations.
  • Be between -25 °C and 50 °C and below 80% humidity.
  • Be well-lit.
  • Be free of flammable materials.
  • Be free of explosive gases and liquids.

- Place the installation freestanding. Make sure that the installation has at least 50 cm of clearance all around.
- Always place the system in an easily accessible place so that the device can be switched off "quickly and easily".

- Place the installation on a flat, stable, non-flammable/heat-resistant surface with sufficient load-bearing capacity. Make sure the surface is clean and dry and that the installation is level.
- Make sure all fasteners are properly tightened. Check this regularly.
- Only use the installation on your own light group and earth leakage circuit breaker.

- Only use the installation in sockets equipped with an earth conductor.
- Before use, check that the voltage, indicated on the installation, corresponds to the voltage of the electrical point to which you want to connect it. The power supply must comply with the applicable legal standards and national regulations.

- Make sure that the electrical cable does not hang over (sharp) edges, does not have to make sharp bends, cannot be dragged along and does not touch hot surfaces.
  Keep the cable out of the walking route.
- Make sure that the installation and cords are placed in a safe location so that no person can slip, trip or fall over it. Tape the cords like this necessary to the floor.
- Place the installation free-standing and out of reach of highly flammable materials or liquids.

- Do not use the installation in a flammable environment such as near gas tanks, gas pipes or aerosols. This poses a risk of explosion and fire!
- In the event of a fire, use a fire extinguisher suitable for extinguishing an electrical installation.

User:

- The installation should only be used by persons who are fully aware of what is stated in this user manual.
- It is a control system for a spraying system. Only use the installation for its intended purpose. Otherwise, life-threatening situations can arise.

4. Safety Precautions and Warnings (continued..)

- CAUTION: The parts of the installation may have sharp metal edges.

- PLEASE NOTE: The installation is a pressure vessel in accordance with the Pressure Equipment Directive 97/23/EC. Strictly observe all necessary safety precautions.
- The system may only be operated at the permissible output pressure and temperature (see device plate and factory setting).
- Only use clean water in the installation.
- Use of other liquid substances may result in serious injury and the device may be irreparable damage.
- In the event of a leak, do not use the system again. When the system is in operation, the power supply must be shut off. Before using it again, the installation should be checked and defective parts replaced.
- Always turn off the installation when you are no longer using it. Unplug the power cord from the wall outlet.

- If you notice any imperfections or a malfunction while using the installation, immediately take the device out of service and disconnect the power connection. There is a risk of fire, injury or damage!

- If the installation, the electrical cable or the plug is damaged or malfunctioned, contact your supplier, the manufacturer or an authorized service center for repair or replacement. Do not carry out any repairs yourself, it can be dangerous!
- NEVER open the components of the installation. Doing so may cause electric shock and will void any warranty.

Cleaning & Maintenance

- We recommend cleaning the installation regularly.
- It is not permitted to clean the system during use.
- For your own safety, disconnect the power from the unit before cleaning the unit.

- Clean the components of the installation with a damp soft cloth and/or with an approved neutral detergent. Do not use aggressive cleaning and/or abrasive agents.
- The installation should be inspected at least once a year for connections and damage. Defects such as loose connections, etc. remedy immediately.
- If the device is damaged, do not use the device.
- Repairs and maintenance of parts of the installation may only be carried out by qualified personnel / qualified installers and/or electricians.

Remove

- Please dispose of the product in accordance with local laws and regulations.

– JB Groep B.V. does not accept any liability for damage or injury caused by non-(strict) compliance with the safety rules and instructions in this manual, or by negligence during assembly, use and maintenance of the product and any associated accessories. JB Groep B.V. is not responsible for any kind of damage.

5. Product Description

5.1 Product Description

The function of this installation is to filter "dirty" input water into very finely filtered clean water.

The entire control system aims to fill the target tank through the filters, everything is based on this. Most alarms are therefore only triggered when the filter unit has been cleared for filling.

The control system is equipped with circuit breakers, relays and a PLC.
This PLC controls the respective functions to ensure that the filtration and rinsing of the filters is automatic and correct.

5.2 Parts overview & bill of materials

Note: Always check the delivery note of the delivered parts carefully for quantity and quality. Any visible defects must be reported in writing within 7 days of delivery.

6. Technical Specifications

	Filter installation
Voltage	AC 400V 50Hz (3 phase + null)
Ability	See type plate inside control panel
Material	RVS/messing
Switching block protection class	IP54
Safety class	Class 1
Earthing	Standard earth relay, incl. earth point
Overheat protection	yes
Operating Temperature:	+5 °C to +40 °C
Ambient temperature	+5 °C to +30 °C
Transport/Storage Temperature	–5 °C to +50 °C
Humidity	Up to 60%
Maximum discharge pressure	See pump
Liquid	Water
Liquid content	0 Litres
CE	In accordance with EC directives and standards

7. Installation / Assembly

7.1 Installation Placement and Level Adjustment

Place the installation freestanding. Make sure installation has at least 50 cm of clearance all around. Always place the system in an easily accessible place so that it can be switched off "quickly and easily" during installation. Place the installation on a flat, stable, non-combustible/heat-resistant surface with sufficient load-bearing capacity. Make sure the surface is clean and dry.

7.2 Check All Electrical Connections/Control Box

Make sure the power supply is correctly connected by an experienced electrician!

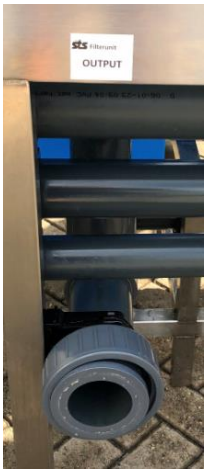
Check all electrical connections in the electrical diagram added in the document holder in the control panel.

7.3 Connecting power cable

CAUTION: Before use, check that the voltage, indicated on the installation, corresponds to the voltage of the electrical point to which you wish to connect it. Only use an installation with a protective earth for the control system. Make sure that the cabling does not hang over (sharp) edges, does not make sharp turns and cannot be dragged along. Keep the cabling out of the walking route at all times. At the very least, make sure that the wire thickness (mm2) is sufficient.

7.4 Connecting Mechanically

The supply water is connected to the "Input".
This is the water that needs to be filtered.



"Waste": This is the waste water after rinsing one of the filters. Connect it to the return to the waste water silo or to the sewer.

"Output": This will fill the clean water tank or silo (TT). This water is the clean water that comes out of the ultrafilters.

The air connection is necessary to provide the ultrafilters with a correct flushing cycle.
This should be at least 0.2 MPa (2 bar).

8. Commissioning and operation

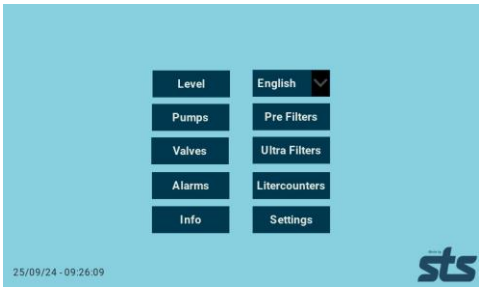
8.1 Switching Main Switch On/Off

Turn the installation ON by setting the red or black main switch on the side of the control box to 1 (photo 1). Then switch on the circuit breakers (type F, photo 2), the control and the PLC will now start up. There is now voltage on the installation.

Photo 1

Photo 2

8.2 Setting up controls.

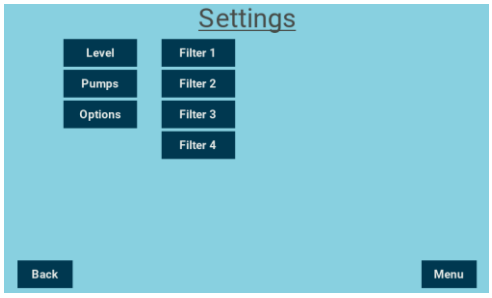


When starting up the PLC, the home page will be displayed.
This is the main menu, all buttons "MENU" end up here.

On the "information" page you will find the contact details in case of a malfunction.

Also important for the more specific malfunctions; the version numbers of the HMI and PLC can be requested. So keep these handy.

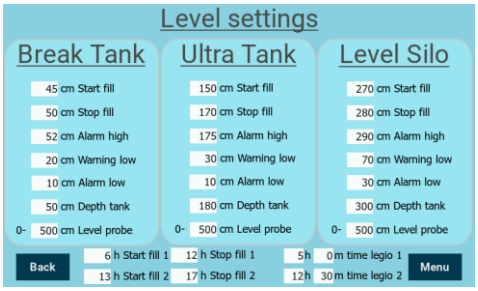
Press the "Settings" button in the bottom right corner to get started.



In the settings menu, changes can be made to:
- Level Fill Tanks
- Pump
- (Automatic) screen filter (Filter 1)
- Glass/cloth filter (Filter 2)
- Candle Filter (Filter 3)
- Ultrafilters (Filter 4)

All other options and settings have already been done by your installer. If you suspect that this is not correct or that the operation of the filter unit is abnormal, please contact your installer.

8.3 Level Settings.



Here the Level settings are done for the tank to be filled measured by a level probe.

Break Tank: (BT)Tank filled with pre-filtered water.
Ultra tank: (UT)Tank filled with ultra water, is used for backwashing the ultra-filters.
Silo level: (TT)clean water silo/tank.

cm Start fill: When the water level has dropped to this level, the installation will start filling again.

cm Stop fill: When the water level has reached this level, the installation will stop filling.

cm Alarm high: High water alarm tank.

cm Warning low: Low water warning tank.

cm Alarm low: Low water alarm tank.

cm Depth tank: This is the depth/height of the tank/silo to be filled.

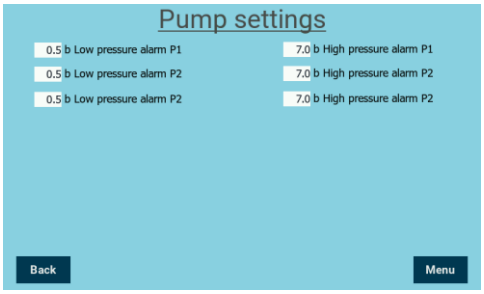
0-500 cm level probe: The range of the level probe, this can be read on the probe.

h Start fill: This is the set time from which the target tank will be filled.

h Stop fill: This is the set time until the target tank is filled.

H/M Time Legion: This is the set time when the legionella flush takes place.

8.4 Pumps



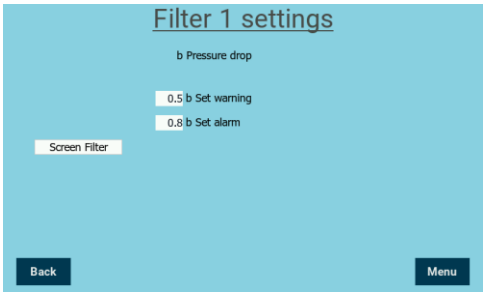
Here you will find the settings for the pumps.

The pressure is measured by a pressure sensor on the pump.

b Low pressure alarm P1-4: Under this pressure in bar, the control unit gives an alarm and the entire system shuts down.

b High pressure alarm P1-4: Above this pressure in bar, the control unit gives an alarm and the entire system shuts down.

8.5 (Automatic) Screen Filter



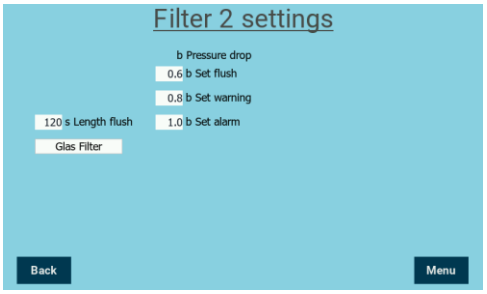
Here you will find the settings for the (Automatic) screen filter. This is the first filter.

The differential pressure is measured by two pressure sensors, one before the filter and one after the filter.

b Set warning: In the event of this differential pressure, the control system gives a warning.

b Set alarm: With this pressure difference in bar, the control gives an alarm and the entire installation goes out, in this case the filter could no longer clean itself.

8.6 Glass/cloth filter



Filter 2 can consist of a Glass Filter or a Cloth Filter, these settings refer to the Glass Filter.

These settings do not apply to a cloth filter.

The differential pressure is measured by two pressure sensors, one before the filter and one after the filter.

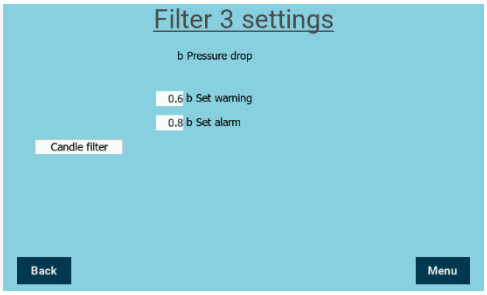
b Set flush: At this pressure difference in bar, the filter will try to clean itself.

b Set warning: In the event of this differential pressure, the control system gives a warning.

b Set alarm: With this pressure difference in bar, the control gives an alarm and the entire installation goes out, in this case the filter could no longer clean itself.

s Length flush: This is the set time in seconds how long a rinse cycle lasts.

8.7 Candle filter



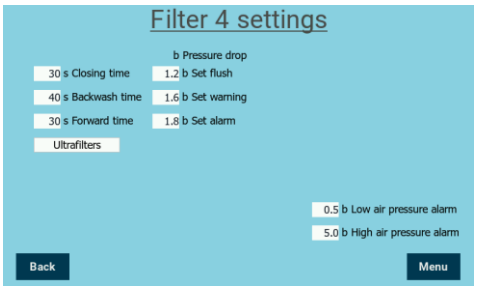
Here you will find the settings for the Candle filter.
This filter does not flush itself and cannot be rinsed out.
It must therefore be replaced if the pressure difference is too high.

The differential pressure is measured by two pressure sensors, one before the filter and one after the filter.

b Set warning: In the event of this differential pressure, the control system gives a warning.

b Set alarm: At this pressure difference in bar, the control gives an alarm and the entire installation goes out, in this case the filter must be replaced.

8.8 Ultra Filter



Here you will find the settings for the Ultra filters. These are the last filters. These filters flush themselves at the set pressure difference (set flush).

The differential pressure is measured by two to four pressure sensors, one before the filters and one after each set of filters.

Length flush: This is the set time in seconds how long a rinse cycle lasts.

- **s Closing time:** The time it takes for the electric inlet valve to close and at the same time the first air pulse.
- **s Backwash time:** The length of the backwash pulse.
- **s Forward time:** The length of the front wash pulse.

b Set flush: At this pressure difference in bar, the filter will try to clean itself.

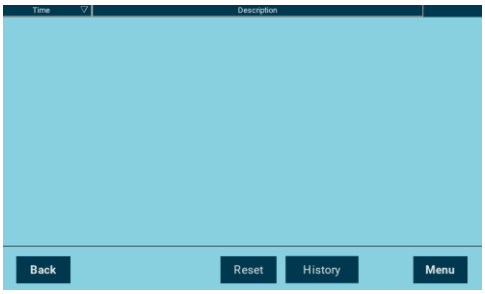
b Set warning: In the event of this differential pressure, the control system gives a warning.

b Set alarm: With this pressure difference in bar, the control gives an alarm and the entire installation goes out, in this case the filter could no longer clean itself.

b Low air pressure alarm: Under this air pressure in bar, the control unit gives an alarm and the entire installation is switched off.

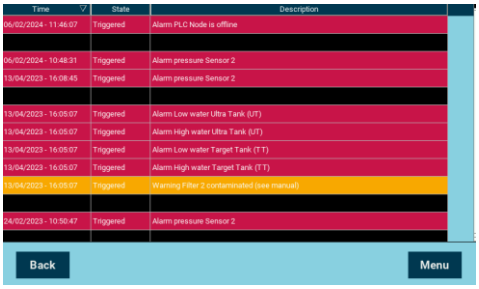
b High air pressure alarm: Above this air pressure in bar, the control gives an alarm and the entire installation goes out.

8.9 Resetting alarms



When one or more alarms occur, the alarm screen is automatically displayed. Here you will see the description of the alarm in question.

Once you have cleared the alarm, you can press "Reset". (refer to Chapter 10)



When you press the "History" button, you can view all previous alarms. This is sorted by date.

Next to the date is a "triggered" or "not triggered".
If the alarm is triggered, the alarm has been triggered, and if it is not triggered, the alarm has been dropped or reset.

9. Maintenance

9.1 General

The filter installation must be checked for connections and damage at least once a month. Check the pumps and taps for leaks. Perform maintenance after 2000 operating hours or twice a year. Check that the screw connections are tight. If not, tighten them properly. If the filter installation is damaged, you may not use it. NEVER open the components of the filter installation. This can cause electric shocks and will void any form of warranty. Repairs and maintenance of components may only be carried out by qualified mechanics or qualified electricians.

9.2 Perform maintenance

- Visual check pre-filter
- Visual check glass filter
- Visual check cloth filter
- Visual check candle filter(s)
- Check and record pressure differences
- Record capacity litre counter(s)
- Flow according to capacity of filters?
- Check status/condition break tank
- Check status/condition taps
- Check status/condition valves
- Check status/condition dosing pump and liquid
- Check PPM measurement value
- Number of pump starts
- Number of pump hours
- Pump amperage
- Check level probe and/or floats
- Check settings
- Check piping
- Is the unit online?
- Manual flushing glass filter
- Manual flushing ultra filters
- Check non-return valves of the air line
- Replace ultra filters?
- Manual flushing filter(s)
- Additional comments

9.3 Dosing pump

A dosing pump is mounted on the filter unit.

The dosing pump should be set to 1:N.

Make sure that the dosing pump is always vented.

For further explanation, please refer to the manual of the dosing pump.
This can also be requested from your installer.

Dosage of hydrogen peroxide:
In order for the filter unit to do its job optimally, it is necessary to dose a small amount of hydrogen peroxide.
Minimum hydrogen peroxide of 35%, Huwa-San TR-50 is recommended.

The dosage depends on the quality of the water.
In general, we want to create a dosage of around 10 ppm.

Acidic unit:
Optionally, an acid unit is also available with the filter units to ensure the capacity for longer, on which a dosing pump is also installed.

Sulfuric acid is used in the acid unit.
The sulphuric acid is produced with clean ultra water in the appropriate tank.

Warning:
Consult your crop advisor if this is possible with your crop, the installer can never be held responsible for any damage that comes from the use of chemicals.

10. Failures

If you notice any imperfections, malfunction or leak while using the installation, immediately decommission the installation and disconnect the power connection.
There is a risk of fire, injury or damage! Please contact your supplier directly.
Do not carry out any repairs yourself, it can be dangerous!

10.1 Red Lamp Display

If the red light is lit on the installation, it means that there is a malfunction / alarm. The alarm message can be read on the display of the HMI. The following alarms are possible:

10.2 Possible alarm messages

Error Tag	Alarm notification	Explanation
M129-M138	Alarm sensor 1-10	Sensor 4-20 mA error. Check the connections of the sensor. If it cannot be reset after this, the sensor is defective.
M139-M141	Alarm probe level 1-3	Probe level 4-20 mA error. Check the connections of the probe. If it cannot be reset after this, the sensor is defective.
M142	Air Pressure Sensor Alarm	Sensor 4-20 mA error. Check the connections of the sensor. If it cannot be reset after this, the sensor is defective.
M143/ M155	Warning Filter 1-4 dirty (see manual)	Warning for the filter 1-4. This one has more differential pressure than you'd like. This is just a warning and the installation will continue to filter. Check that the rinse cycle is working properly, or that a filter needs to be replaced.
M144/ M156	Alarm Filter 1-4 dirty (see manual)	Alarm for the filter 1-4. This one has more differential pressure than you'd like. This is an alarm and the installation will stop filtering. Check that the rinse cycle is working properly, or that a filter needs to be replaced.
M157-M159	Low Water Float Alarm: Storage Tank/ Break tank/ Target Tank	Low water alarm in the tank. Check the lowest float in the tank. If it is working properly, check that no more water is taken out than comes in. If this is the case, check the filters for the tank in question.
M160	Alarm cleaning unit	If present, check the cleaning unit. This will indicate the relevant alarm itself.
M161-M166	Alarm high water-low water tank (BT/TT/UT)	Alarm High/Low water break/target/ultra tank. Check the tank in question and the flow rate.
M167-M169	Warning Low Water Tank (BT/TT/UT)	Warning before low tide. This is just a warning and the installation will continue to filter.
M170-M175	Alarm Low/High Pressure Pump 1-3	Alarm pressure too low or too high on pump 1-3. Check the operation of the pump and whether it pressurizes neatly.
M176-M177	Low/High Air Pressure Alarm	Alarm: pressure too low or too high on the incoming air pressure. Check that the air pressure supply is good. If the air pressure is too high, the pressure reducing valve may be defective.

M178-M180	Alarm Motor Protection Pump 1-3	Alarm motor protection Pump 1-3. Check the thermal protection of the pump (this can also mean that the frequency converter is in alarm). You can reset this 1 time, if the alarm keeps coming back, contact your installer.
M181-M183	Alarm Temperature Protection Pump 1-3	Alarm temperature protection. Check the temperature on the pump. It is possible that the pump has been running without drawing water, or that the supply water is too hot. If the water has not cooled down sufficiently, the alarm will go back.
M184	Alarm Cloth Filter	Alarm cloth filter, check if the filter needs to be replaced.
	Alarm PLC node is offline	Alarm PLC node offline, this means that there was temporarily no contact with the PLC over the Bus connection.

If a problem cannot be resolved, contact the installer.

In case of an alarm on the frequency controller, please check the manual of the controller:

11. Conditions and applications Ultrafiltration

11.1 Features of Ultrafiltration:

The Ultrafiltration has filter membranes with a pore size of 0.02 microns. These membranes remove viruses (LOG4 99.99%) and bacteria (LOG6 99.9999%).

The proposed capacity in m^3 per hour may differ from the actual net capacity. This often has to do with the quality of the input water. Poor quality of the input water results in a lower flow of the usable filtered water. Good water quality results in a greater amount of usable water.

Ultrafiltration is able to remove undissolved contamination from the extracted water. When nutrients and nutrients are dissolved in the water, ultrafiltration is not able to remove everything. The customer is aware of this and is responsible for the quality of the input water.

If the filters are not maintained or replaced regularly when the system indicates this, the capacity of ultrafiltration will decrease. The customer is responsible for replacing/maintaining their candle- or screen filters in a timely manner to keep the system performing optimally.

11.2 Required On-Site Facilities:

Prior to the delivery of your new ultrafiltration, the room in which it is installed must meet a number of requirements. In order not to be surprised, all requirements are specified below.

Depending on the type of ultrafiltration you choose, the dimensions will differ. For this purpose, sufficient space will be freed up in advance in the room where the machine will be placed. It is assumed that the customer will facilitate this.

The room where the machine will be placed must be free of leaks as a result of rain, snow showers, sprinkler or irrigation systems from the adjacent rooms.

The room where the machine will be placed must be reasonably or well resistant to fluctuations in temperature, such as frost. This can be detrimental to the performance of the electrical and water connections.

11.3 The customer must have the room equipped with the following connections in advance:

- Compressed air connection at least 1m3/h at 3 bar.
- Power connection: 3x 400V + N + PE, 50Hz with sufficient capacity according to model.
- Input water (suction) pipe.
- Compressed water pipe.
- Waste water pipe for the polluted rinse water from the flushing cycle.
- Backwash connection for the flush function (only with the Easy5).
- Ethernet connection.

11.4 Additional Notifications:

During the start-up phase, the system will be adjusted according to the quality of the input water. Think of adjustments of the pre-filtration.

Warning: The Ultrafiltration is capable of removing bacteria and viruses. Nevertheless, there is a chance that bacteria and viruses can be measured after the filtration process. Think of storage silos, etc. The supplier is not responsible for this. The recipient is requested to maintain their belongings in good condition and to take regular water measurements.

When purchasing the ultrafiltration, the customer/customer is aware of all previously characterized features and conditions. If the ultrafiltration meets the performance, but the customer/buyer is not satisfied with the intended result, the selling party will dismantle the ultrafiltration on site, and the costs incurred can be recovered from the customer/customer.

The Ultrafiltration has a predetermined maximum running time per day. This has to do with the rinsing cycle to make the membranes ready for use again for the next day. The lead time of the maximum running time and the rinsing cycle vary depending on the model.

We work exclusively with renowned manufacturers to ensure the highest quality and reliability of our products. This collaboration enables us to offer you the best solutions.

Detailed manuals are available for all our products. Should you require a manual, please do not hesitate to request one from us. We will be happy to provide you with the correct documentation.

For your safety and to safeguard the warranty, it is essential that you always consult the manufacturer before carrying out any work on the product yourself. This applies to all forms of maintenance, repairs or adjustments.

By following these guidelines, you ensure safe and optimal use of your product, while also respecting the warranty conditions.

12. Declaration of Conformity

EC Declaration of Conformity

Manufacturer: **JB Groep B.V.**
Veilingweg 27B
2675 BR Honselersdijk
Netherlands

Declares with some justification that the product is the *filter unit,* an installation that allows a certain amount of water to be filtered.
Item number / project number: **See type plate on the side of the control panel**

In accordance with the following standards:

Machinery Directive 2006/42/EC
Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC
Pressure Equipment 97/23/EC

According to the harmonized standards under the Directive:

-NEN-EN-ISO 12100
-NEN-EN-ISO 60204-1

Place: Honselersdijk
Date:
Name: JB Groep B.V.

Director: Mr. J. van den Berg

13. Waste disposal

Dispose of the product according to local laws and regulations.

14. Warranty conditions

Warranty conditions for the filter system:

1. After the commissioning of the filter system, the standard warranty covers the manufacturing defects for a period of one year.

2. The warranty period extends to two years if the Filter system is cloud-connected and the installer adheres to the provided maintenance instructions.

3. Maintenance carried out by JB GROUP results in an extension of the warranty to three years.

Please note: Warranty coverage applies when the system has a stable internet connection and maintenance is accurately documented by the installer. The installer documentation must meet condition number two.

It is important to understand that wear parts and consumables are not covered by the warranty. This means that parts that are subject to wear and tear through normal use are not covered by the warranty.

In addition, it is essential to note that the warranty also depends on the use of the product. This means that:

• Incorrect or careless use can lead to the warranty being void.

• Regular maintenance and correct application of the product can safeguard the warranty.

Make sure that you always follow the instructions for use and use the product correctly in order to be able to claim the warranty.

15. Contact

JB Groep B.V. is your first point of contact for questions and comments.

JB Groep B.V.
Veilingweg 27B
2675 BR Honselersdijk
Netherlands

Moment: 0174 - 28 77 63
Email: info@jbgroep.nl
Web: www.jbgroep.nl

16. Appendices

16.1 Changing the candle filter

SCAN ME

spare filter

Big One 5-20µm

Open the filter and remove the contaminated filter (do not reuse!)

Put in a new filter and close the filter (hand tight)

16.2 Pumps

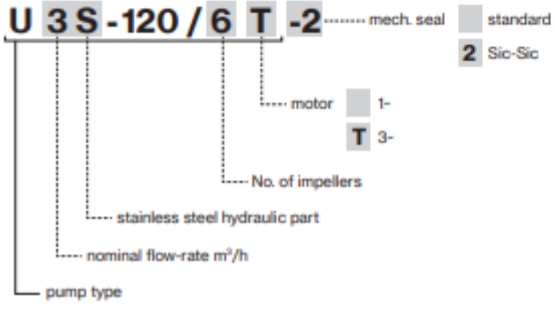
ULTRA S

Multistage Horizontal

Stainless steel multistage horizontal pumps. Pumping of clean non-loaded fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, heating and air conditioning, washing system.

Construction features	
Pump body, mechanical seal housing	stainless steel AISI 304
Motor bracket	aluminum
Impellers, diffusers	stainless steel AISI 304
Mechanical seal	ceramic-graphite-EPDM ≤ 6 impellers graphite-silicon carbide-EPDM ≥ 7 impellers
Motor shaft	stainless steel AISI 303
Liquid temperature	-15 ÷ +110 °C
Operating pressure	max 8,5 bar

Motor	
2 poles induction motor	3~ 230/400V - 50Hz 1~ 230V - 50Hz (with thermal protection up to 1,85 kW)
Insulation class	F
Protection degree	IPX4



ULTRA 3S

ULTRA 5S

ULTRA 7S

ULTRA 9S

ULTRA 18S

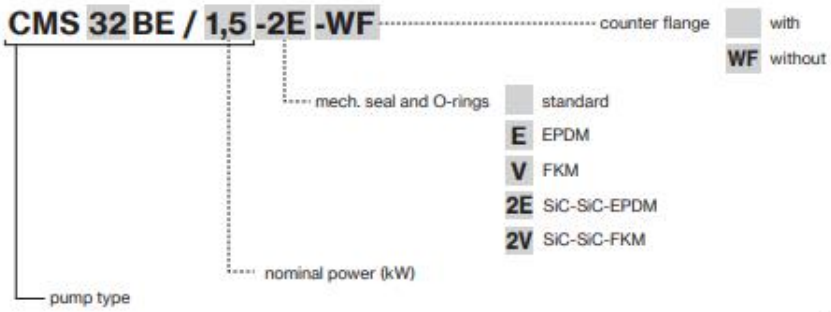
CMS

Centrifugal Flanged

Monobloc horizontal centrifugal pumps made of stainless steel. Widely used in water supplies, pressurization, cooling, and industrial applications. The pumps guarantee small change in pressure for large flow variation.

Construction features	
Pump body	stainless steel AISI 304
Motor bracket	cast iron
Impeller	stainless steel AISI 304
Mechanical seal	ceramic-graphite-NBR
Mechanical seal housing	stainless steel AISI 304
Pump shaft end	stainless steel AISI 304
Liquid temperature	-10 ÷ +90 °C
Operating pressure	max 10 bar

Motor	
2 poles induction motor	3- 230/400V - 50Hz P ≤ 4kW 3- 400/690V - 50Hz P > 4kW 1- 230V-50Hz
Insulation class	F
Protection degree	IPX5
Motor efficiency	IE3



16.3 Screen filter

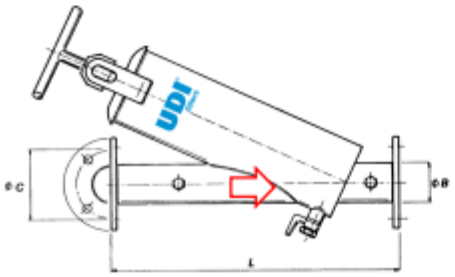
Screen filters series 1000 and 2000
Technical Data

Manual

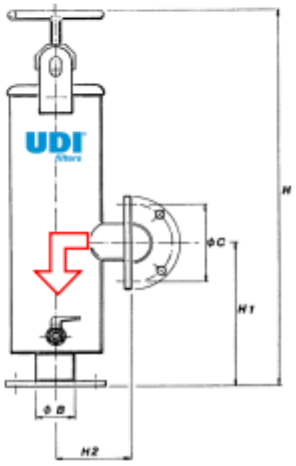
Model
- Angle model
- In-line model

Materials:
- Polyester-coated steel
- Neoprene rubbers
- PVC interior elements with stainless steel filter screen
  Perforation: 75, 100, 130, 200, 300, 435, and 800 microns (other perforations upon request)

Technical specifications:
- Max pressure: 10 bar
- Working pressure: 8 bar
- Max operating temperature: 55°
- Ph 5-9 resistent
- Filter screen on the outside of the element



In-line (2000 series)



Angle (1000 series)

Type: angle	Unit	4U1015D	4U1020D	4U1020F	4U1030F	4U1040F
Connection Ø B	inch	1,5"	2"	2"	3"	4"
Capacity	m³/h	10 - 15	15 - 25	15 - 25	28 - 38	35 - 75
Flange (ISO 7005 PN10)		threaded	treaded			
Bolt circle diameter C	mm	-	-	125	160	180
Bolt holes	mm	-	-	4 x Ø18	8 x Ø18	8 x Ø18
H	mm	420	470	480	730	850
H1	mm	240	170	250	275	400
H2	mm	100	140	140	140	180
Weight	kg	6	13	16	22	32

Type: in-line	Unit	4U2020F	4U2030F	4U2040F	4U2260F	4U2280F
Connection Ø B	inch	2"	3"	4"	6"	8"
Capacity	m³/h	15 - 30	30 - 40	40 - 80	80 - 200	140 - 300
Flange (ISO 7005 PN10)						
Bolt circle diameter C	mm	125	160	180	240	295
Bolt holes	mm	4 x Ø18	8 x Ø18	8 x Ø18	8 x Ø22	8 x Ø22
Overall length L	mm	480	555	690	900	1110
Weight	kg	17	25	40	72	91

16.4 Cloth filter

Commissioning

As soon as the 230V plug is connected the filter is active, if the vibrating fork detects water the filter cloth will be fed through after a few seconds.

Filter cloth change

Press emergency stop > **log in with code 11** > press "cloth continuous forward" > insert filter roll, roll must clamp between roll holders > manually feed cloth through back side > operate emergency stop for manual feed through > press "cloth continuous forward" again > press left arrow to return to main menu.

!Important is that the distance between the filter roll holders is 5mm smaller than the width of the filter roll!


Normal load or Heavy load

There are 2 programs available:

Normal load for filtration of lightly polluted water, the filter reacts slowly, this mode saves the use of filter cloth.

Heavy load for filtration of heavily polluted water, the filter reacts quickly, applicable to backwash water from filters, water from barrel washers or water with a lot of potting soil.

Red alarm lamp

*Short flash***,** something is wrong with the filter, see message on the screen, the filter is still running normally and not generating a fault yet.

*Long flash***,** the filter is malfunctioning and does not work anymore, see message on the screen, solve the problem, alarm is automatically reset.

Control Screen

The touch screen is protected by a code for the user and a separate code for the dealer. The user code is 11. User operating options:

1. Fabric filter 1 step forward 2. Fabric filter continuous forward 3. Operate supply valve / pump (if connected by your dealer) 4. Language selection 5. Other password 6. Choice of standard load or heavy load 7. Furthermore, all timer settings are visible but cannot be changed

Instructional video Scan the QR code for further instructional videos (this is Dutch spoken)

Controls operations

Change filter roll

Manuals