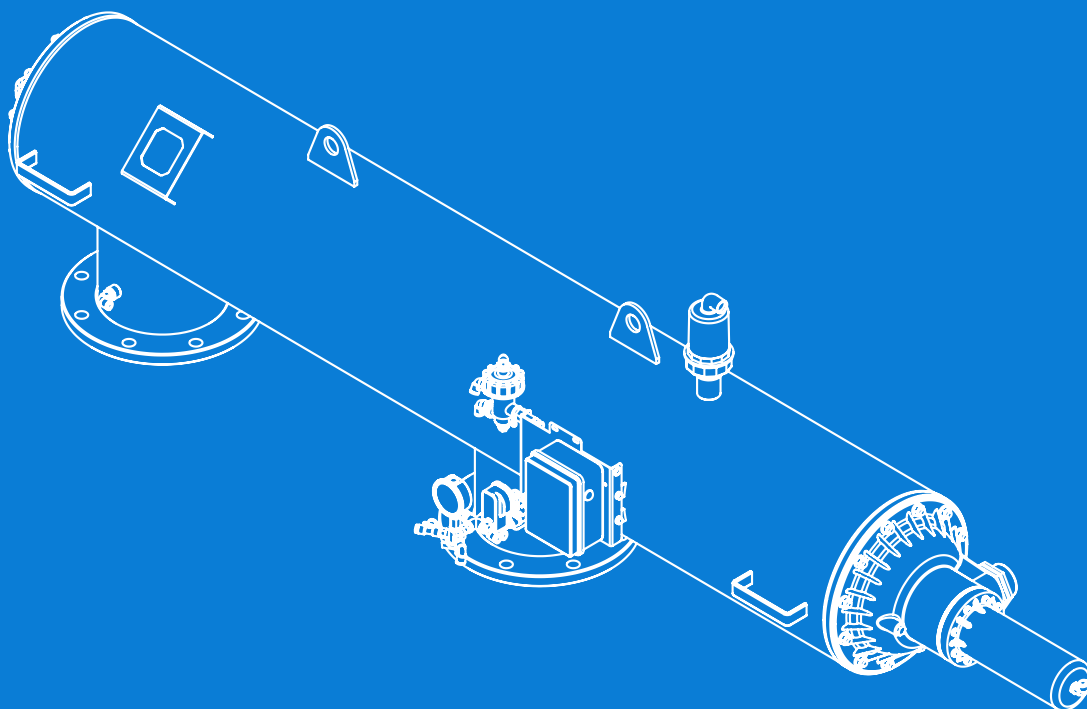


# SCREENGUARD™

## Automatic Horizontal Screen Filter

2025 v007

### / Installation and User Manual



Precision  
Agriculture



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# Introduction

## → Aim of this manual

This document is the user-manual of the Netafim™ ScreenGuard™ vertical hydraulically controlled automatic screen filter series. It describes the installation, operation, maintenance and troubleshooting procedures of the filters.

## → General

Netafim™ congratulates you on purchasing the ScreenGuard™ self-cleaning filter. This filter is part of the wide family of filters produced and supplied by Netafim™ for agriculture, municipal water and sewage systems, and all types of industrial applications. All products manufactured by Netafim™ are easy to install, use and service and don't require special skills to operate them.

The ScreenGuard™ self-cleaning filter enables high quality filtration from various types of fluid sources such as sewage, reservoirs, rivers, lakes, and wells.

## → Contact for support

This manual offers a full explanation of the the installation, operation, maintenance and troubleshooting procedures of the ScreenGuard™ vertical filter. However, in any case you need additional support, contact your Netafim™ local representative.

# Safety Instructions

## → General

- Carefully read the installation and operation instructions prior to installation or handling of the filter.
- While working with the filter all conventional safety instructions should be observed in order to avoid danger to the workers, the public or to property in the vicinity.



### **WARNING**

Fully release the pressure in the filter before performing installation or maintenance operations involving opening the filter. Check the pressure gauge to be sure it is at 0 before proceeding.



### **WARNING**

The filter may start a flushing cycle automatically at any time, without any prior indication.

- No changes or modifications to the equipment are permitted without written consent provided by the manufacturer or by its representative, on the manufacturer's behalf.
- Work only with proper and standard tools. (see [Tools required for installation](#), page 13; and [Tools required for maintenance](#), page 25).
- Use only original parts supplied/approved by Netafim™.

## → Operation, Control and Maintenance

- Loosening or unscrewing bolts should be done only after the pressure in the filter has been released.
- Avoid splashing and water leakage in order to reduce danger of slipping, electrical danger or damage to the equipment caused by moisture.
- Always open and close valves gradually to prevent water-hammer.
- Remove grease and fat material residues to avoid slipping.
- Manual cleaning of filter assembly using high water pressure should be performed in accordance with the cleaning system instructions and without endangering the operator or his working area.
- When using acid or other chemical agents for the maintenance of the irrigation system or for the cleaning of filter assembly, it should be performed in accordance with the relevant material safety instructions and without endangering the operator or his working area.

## → Use of Lifting Equipment

- While using lifting equipment, make sure that the filter or the lifted part is strapped securely and in a safe manner.
- Avoid working below lifted equipment.
- Wear a safety helmet while using lifting equipment.
- Lift the filter by the lifting anchors using hoisting straps in order to avoid damage to the filter's coating.
- Carry the filter by the carrying handles or by the metal body.
- The filter should not be carried by the filter caps, piston and piston chamber.

# Filter Selection

## → Automatic vertical screen filter selection

Netafim™ offers a selection of ScreenGuard™ automatic, horizontal screen filters to fit any filtration requirement:

Model	Description	Filtration area (cm <sup>2</sup> )	Max. Operating pressure (bar/PSI)	Max. recommended flow rate (m <sup>3</sup> /h)	Min. backflush pressure (bar/PSI)	Backflush flow rate (m <sup>3</sup> /h)
SG H 4"	4" flanged	5,300	10/150	80	2/30	24
SG H 4" S	4" Super, flanged	7,900	10/150	100	2/30	36
SG H 6"	6" flanged	5,300	10/150	120	2/30	24
SG H 6" S	6" Super, flanged	7,900	10/150	150	2/30	36
SG H 8"	8" flanged	7,900	10/150	250	2/30	36
SG H 10"	10" flanged	7,900	10/150	300	2/30	36
SG H 210	System, 2 units, 10" flanged	15,800	10/150	500	2/30	36
SG H 312	System, 3 units, 12" flanged	23,700	10/150	750	2/30	36
SG H 414	System, 4 units, 14" flanged	31,600	10/150	1000	2/30	36



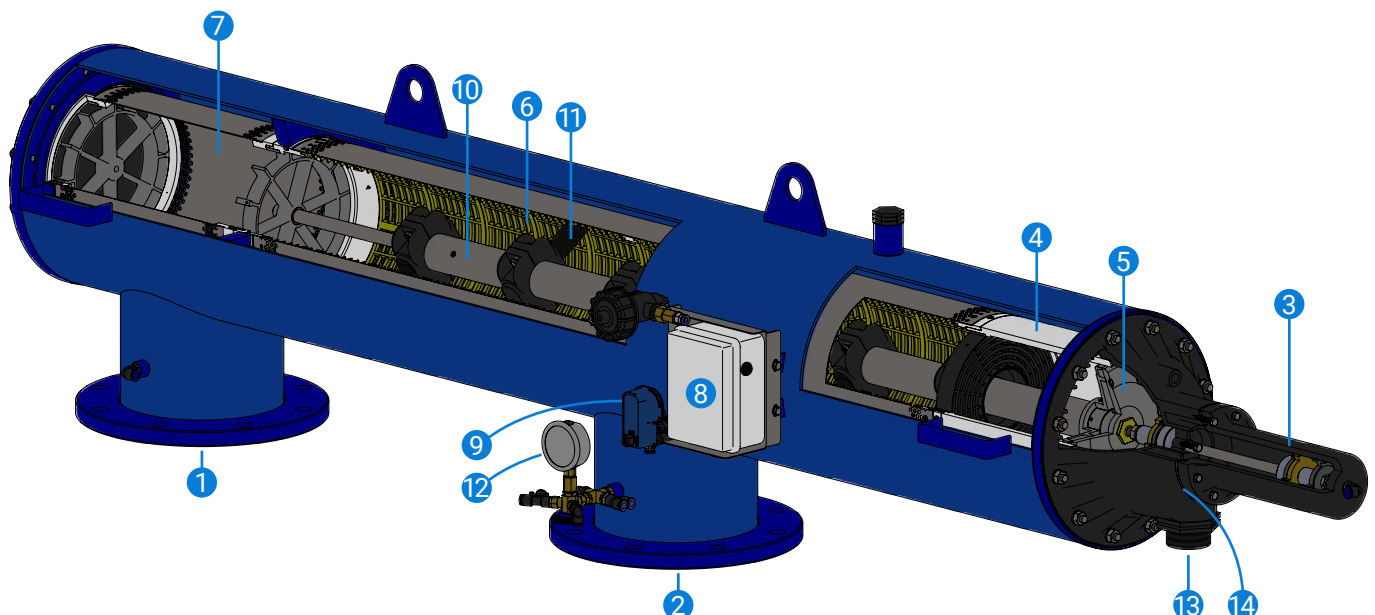
### NOTE

- All horizontal filter models are available with BSTD, ANSI, ISO10 or ISO16 flanges.
- All filter models are available with 100, 130 or 200 micron (150, 115 or 80 mesh) filtration grade. (Other filtration grades are available upon request).

## Components and Structure

A ScreenGuard™ automatic horizontal screen filter is comprised of the following components:

- |                                      |                                |                  |
|--------------------------------------|--------------------------------|------------------|
| ① Inlet                              | ⑥ Fine screen assembly         | ⑪ Suction nozzle |
| ② Outlet                             | ⑦ Strainer                     | ⑫ Pressure gauge |
| ③ Hydraulic piston                   | ⑧ Flush controller             | ⑬ Drain port     |
| ④ Hydraulic flushing turbine chamber | ⑨ Aquative operator (solenoid) | ⑭ Flushing valve |
| ⑤ Hydraulic flushing turbine         | ⑩ Suction assembly             |                  |



# Filter Operation - General Description

## → The Filtration Process

Water enters the filter through the inlet [1] and passes through the strainer [7] from the outside in. The strainer is designed to protect the cleaning mechanism from large dirt particles (The strainer is not cleaned automatically).

The water then flows through the screen filter [6] from the inside out to the outlet [2]. The entrapped particles form a "filtration cake" which accumulates on the screen inner surface. Over time the "cake" build-up increases the pressure differential across the screen, and at a pre-set value (0.5 bar; 7 PSI) the automatic self-cleaning cycle begins.

## → The Self-Cleaning Process

The self-cleaning process utilizes the backflush technique to effectively remove the dirt particles from the screen. The automatic flushing cycle takes 10-30 seconds and does not interrupt the supply of process water.

As water flows from the inlet through the strainer and screen to the outlet, at a pre-set pressure differential (0.5 bar; 7 PSI) the flush controller [8] activates the hydraulic piston [3] and opens the flushing valve [14].

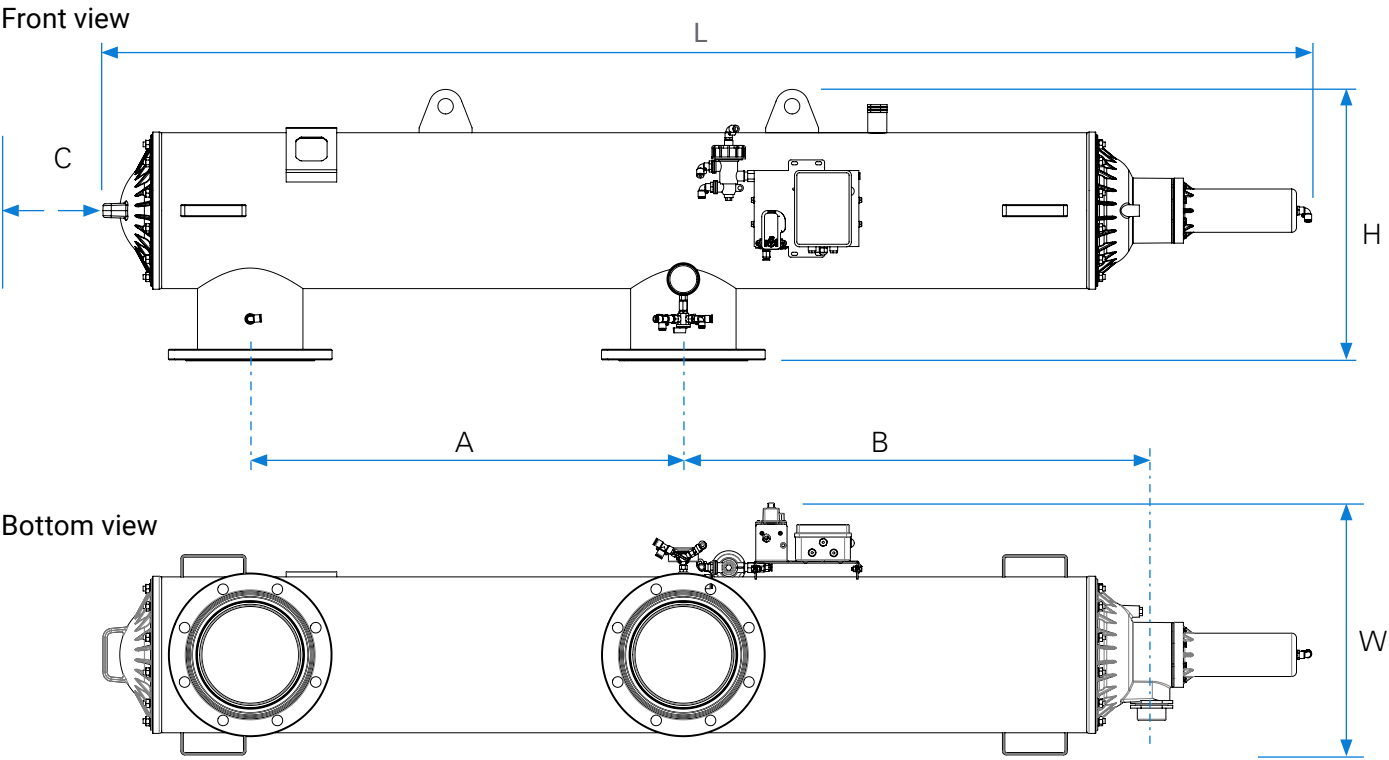
The pressure in the hydraulic flushing turbine [5] chamber drops, creating suction at the flushing nozzle [11] tips. The water and particles passing through the hydraulic flushing turbine cause the suction assembly [10] to rotate, while the hydraulic piston [3] moves the suction assembly in an axial motion to the opposite end of the filter. The combination of rotational and axial motion of the suction assembly ensures that the suction nozzles sweep the entire inner surface of the screen.

When the first backflush stroke is completed, the flushing valve [14] closes, and after a very short interval the second backflush stroke is hydraulically triggered and the flushing valve reopens. The suction assembly [10] rotates, moving with the piston in the opposite direction and returning to its original position.

The ScreenGuard™ screen filter series are hydraulically operated units. No external power source is required. This type of control enables operation at remote installation sites.

# Dimensions

## → Horizontal filters



Model	External dimensions			Inlet and outlet location		Clearance for maintenance [C]
	Length [L]	Height [H]	Width [W]	Inlet to outlet [A] (Center to center)	Outlet to drain [B] (Center to center)	
SG H 4" F	2082	515	480	900	545	1500
SG H 4" SF	2512	565	530		973	2000
SG H 6" F	2082	515	480		545	1500
SG H 6" SF	2512	565	530		973	2000
SG H 8" F	2512	565	530		973	2000
SG H 10" F	2512	565	530		973	2000

## → Box dimensions

Model	Length [L]	Height [H]	Width [W]
SG H 4" F	2,220	570	710
SG H 4" SF	2,620		760
SG H 6" F	2,220		710
SG H 6" SF	2,620		760
SG H 8" F	2,620		760
SG H 10" F	2,620		760

Model	
SG H 210 F	Supplied in multiple separate boxes
SG H 312 F	
SG H 414 F	

## Connection Diameter

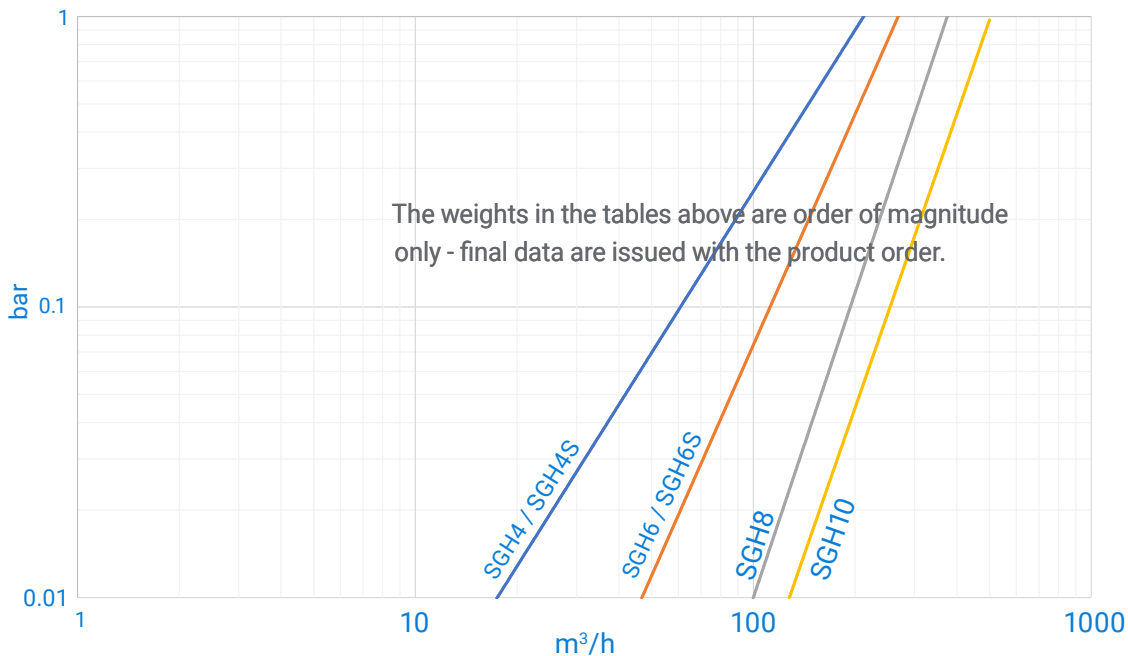
Model	Inlet/outlet connection diameter	Backflush connection diameter
SG H 4" F	4"	50mm
SG H 4" SF	4"	
SG H 6" F	6"	
SG H 6" SF	6"	
SG H 8" F	8"	
SG H 10" F	10"	
SG H 210 F	10"	
SG H 312 F	12"	
SG H 414 F	14"	

## Weights

Model	Weight (kg)	
	Net	Packed
SG H 4" F	90	118
SG H 4" SF	124	156
SG H 6" F	92	120
SG H 6" SF	131	163
SG H 8" F	137	169
SG H 10" F	143	175
SG H 210 F	Supplied in multiple separate boxes	
SG H 312 F		
SG H 414 F		

The weights in the tables above are order of magnitude only - final data are issued with the product order.

## Head Loss (Clean Filter)



## SG Plus Smart Bluetooth Flush Controller

New hardware and UI design, professional properties, and high reliability make the SG Plus the most efficient solution for the management of the SG filter.

The SG Plus features 3 outputs enabling various operations:

- Controlling 3 different filters.
- Controlling the main valve:
  - In case that during flushing the system pressure decreases below the minimum allowed pressure (2 Bar), a downstream valve may be required.
  - The downstream valve shuts down before the filter flushes, diverting the full pump pressure to flushing during the flush action.
  - Once the flushing operation has ended – the valve re-opens and the irrigation proceeds.
  - Setting an external device (signal, SMS, Alarm, etc.) during the flushing operation.

## → Main features

PD based flushing cycle activation

The controller monitors the pressure differential between the inlet and outlet by means of a built-in PD sensor and triggers flushing cycles accordingly.

Smartphone application

Feature a user-friendly Smartphone application that communicates with the controller via Bluetooth (10 meter range of the controller!)

## → The application allows:

- Monitoring all the parameters of the filter's activity
- Reviewing the filter activity history
- Setting operational parameters: PD (pressure differential ), PD delay, Flushing interval and operation mode
- Starting a flushing cycle
- Monitoring battery state

The application interfaces with multiple SG Plus controllers, allowing monitor and control of many filters.

Manual flushing cycle activation

An external START button enables manual activation of a flushing cycle.

Endless looping detection

The SG controller monitors the number of consecutive flushing cycles triggered by the PD sensor before deciding that there is an endless looping problem. The options, controlled and monitored through the cellular application, are: 1-10 or "no," ignore the looping problem.

The flush controller does not require any adjustment, it is entirely factory adjusted for best operation.

- PD (pressure-differential) is set to 5 meters (0.5 bar)
- PD delay is set to 5 seconds
- Flushing interval is set to 4 hours
- The operation mode is set to Time & PD
- The controller is fully functional with or without the cellular application.



## → Batteries

The controller is powered by 4 x 1.5v C-size alkaline batteries (not supplied).



### NOTE

If electricity is available at the filter location, the flush controller can be powered by an external 100-240v AC to 5v DC power supply (not supplied).

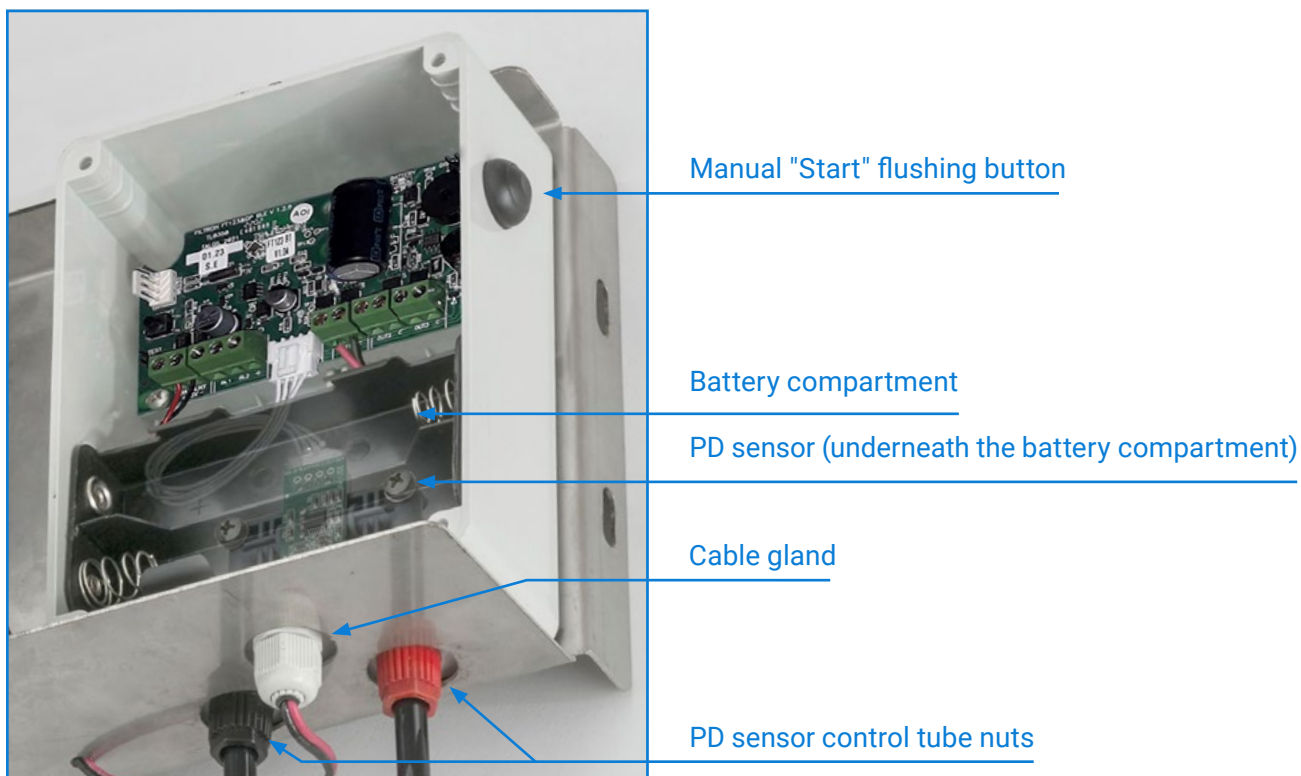
(see page 17)



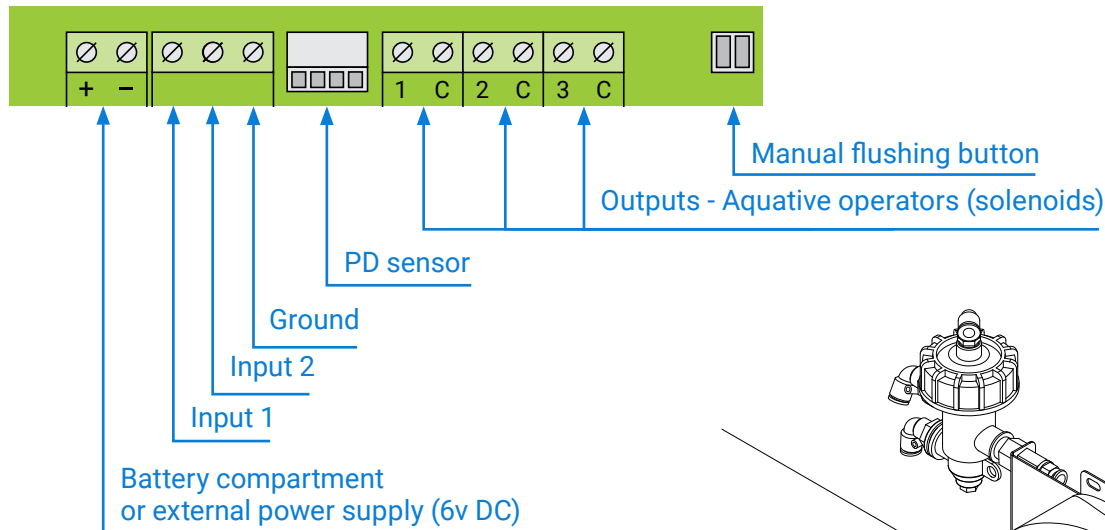
### WARNING

When operating the controller with the external power supply, make sure that the battery compartment is not inside the flush controller (its loose wire ends could cause short-circuit).

## → Main parts



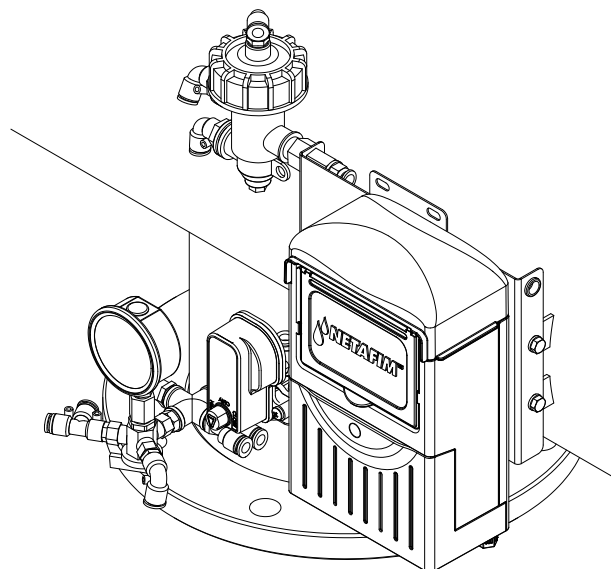
## → Wiring



## → Option: Filtro 1-10 flush controller

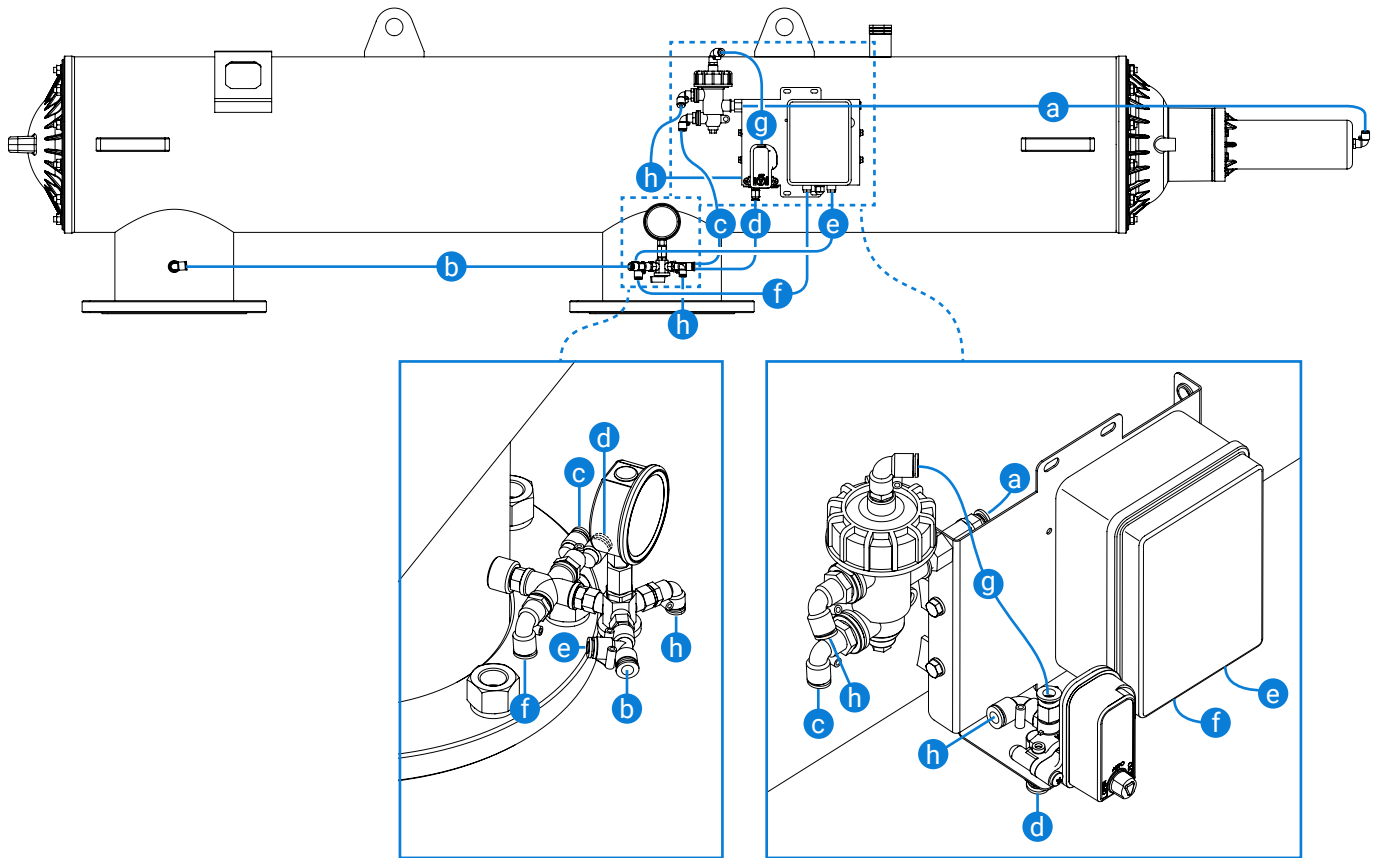
Optionally, SG filters can be supplied equipped with the Filtron 1-10 flush controller for additional control features.

For operation of the Filtron 1-10 flush controller see its User Manual enclosed with it.



# Control Tubes

The PE 8 mm command tubes are factory-installed and do not require any intervention during installation of the filter.



## → Legend

- a** From the hydraulic valve to the filter hydraulic piston cap (10mm).
- b** From the filter inlet pressure point to the pressure gauge 3-way valve (8mm).
- c** From the filter outlet to the flush controller PD sensor low-pressure connection port (left) (8mm).
- d** From the filter outlet to the Aquative solenoid (8mm).
- e** From the pressure gauge 3-way valve to the flush controller PD sensor high-pressure connection port (right) (8mm).
- f** From the filter outlet to the hydraulic valve (10mm).
- g** From the Aquative solenoid to the hydraulic valve (8mm).
- h** Drain tube (no more than 2 meter long each) (6mm).

# Pre-installation Preparations

## → Design recommendations

- If a long pipeline fill time causes a temporary high flow and low pressure situation, it is recommended to install a pressure-sustaining valve (PSV) downstream from the filter. The PSV will ensure a controlled fill-up of the line.
- It is highly recommended to install isolation valves upstream and downstream from the filter for maintenance and troubleshooting purposes.
- In case a PRV is required, it is highly recommended to install it downstream from the filter.
- It is highly recommended to install a mechanical non-return valve downstream of the filter to prevent backflow damage to the screen.
- Make sure that the filter location offers sufficient clearance to remove the cover assembly and the screen assembly from the filter for troubleshooting (see page 8).
- Avoid placing the flush pipe on a rising slope to prevent backpressure.
- Flush pipe diameter: Minimum 2".

## → Preparations for installation

- Prepare the inlet and outlet pipes according to the dimensions and type of connection (thread/flange) of your filter (see page 9).
- Ensure suitable lighting at the area of the filter to enable good visibility and safe maintenance.
- Arrange suitable platforms and safety barriers to enable easy, safe access to the filter.
- Allow a convenient access and adequate space around the filter for dismantling and maintenance.

# Tools Required for Installation

- Lifting device
- Hoisting straps
- Crosshead screwdriver
- Teflon thread seal tape (for drain pipe)

- Spanners

Flange size	Bolt and nut size	Wrench size
up to 8"	5/8" (17mm)	15/16"
10" to 14"	7/8" (24mm)	1.1/8"

# Unpacking and Placement

- Open the cardboard package and remove cardboard and support wooden frames.
- Attach straps to the hoisting points and secure the filter using a lifting device or support it manually.



### ATTENTION

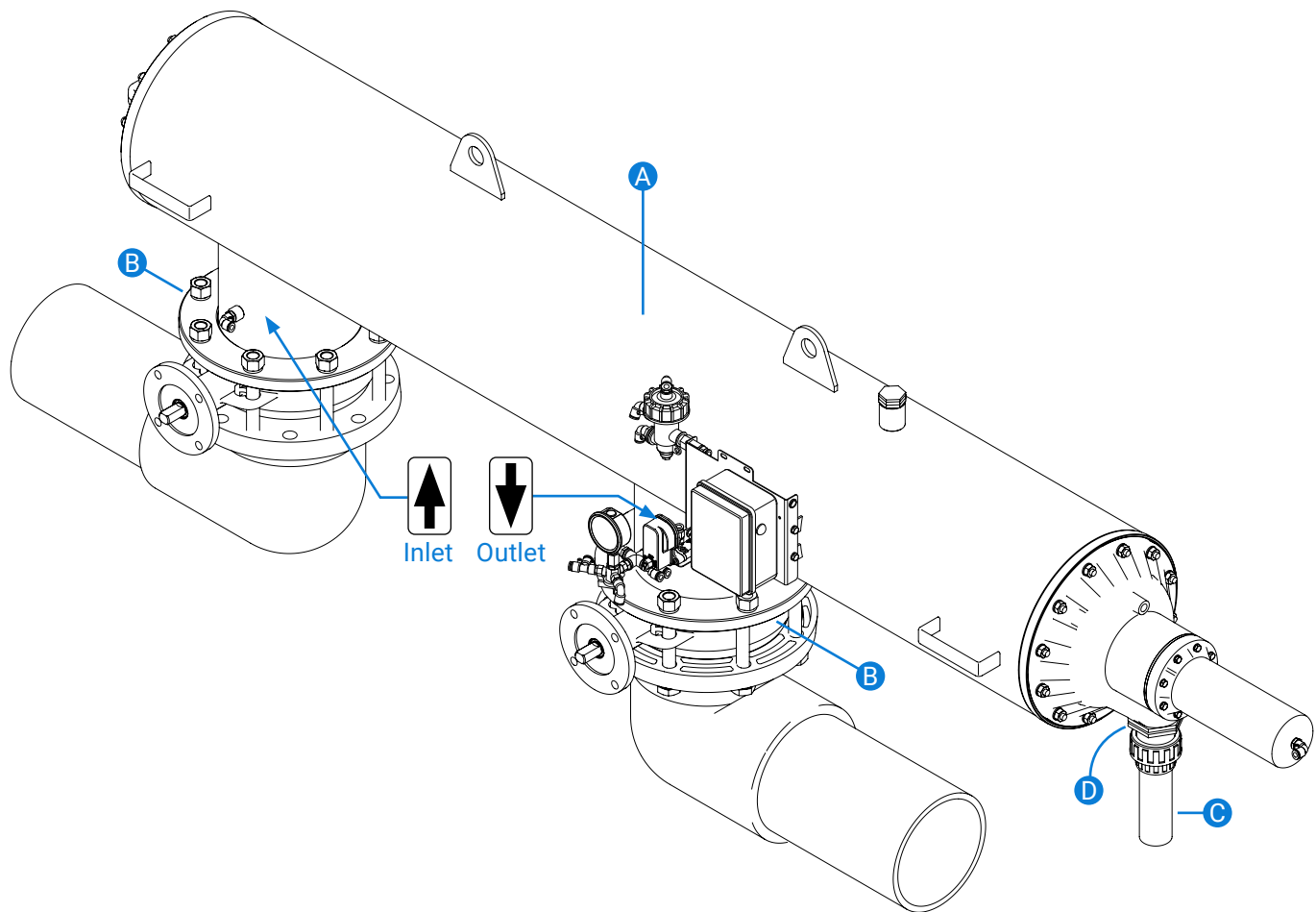
Note the filter weight before operation and follow the safety instructions.

- Detach the filter from the wooden pallet.

# Hydraulic Installation

## ATTENTION

The inlet pipe should be of a diameter equal to or larger than the filter inlet diameter.  
Never connect a the SG filter to an inlet pipe of a diameter smaller than the filter inlet diameter.



- Ensure the direction of flow is according to the arrows marked on the filter inlet and outlet.
- Place gaskets on the inlet and outlet flanges **B**
- Position the filter in place.
- Fasten the inlet and outlet flanges bolts.
- Connect a pipe **C** to the port **D**. Water should be allowed to flow to the atmosphere freely from the flush pipe.

Diameter	Length
2"	up to 10 m
3"	10-20 m (maximum 20m)

- Secure the open end of the flush pipe to prevent movement during the flushing cycle.
- Avoid placing the flush pipe on a rising slope to prevent backpressure.

## ATTENTION

If a PRV is required in order to protect the irrigation system, it is highly recommended to install it downstream of the filter.

# Bluetooth Flush Controller Activation

## → Insert batteries into the Bluetooth flush controller

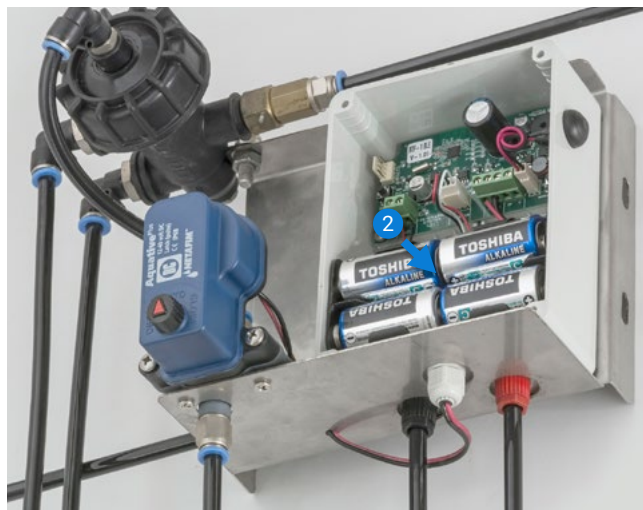
### NOTE

Always use a whole set of 4 new batteries. Never use new and old batteries together.

- 1 Open the flush controller box using a cross-head screwdriver.



The controller should turn on automatically.  
3 short beeps followed by a long one should be heard.



- 2 Insert a set of 4 new batteries (Match the poles to the markings inside the battery housing).



- 3 Close the flush controller box (mind the alignment of the cover gasket to ensure sealing).



If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

### → **Download the SG filter application to your Smartphone**

1. Scan the QR code (also on the flush controller) or download it from the appropriate app store and install it. Notice that there are two application versions.

- For Android - On Google play
- For iOS - On Apple store

2. Follow the on-screen instructions.



**TIP**

After the installation, it is recommended to create a shortcut on your Home screen.

### → **Link the SG filter application to the filter flush controller**

1. Enter the SG Plus Smartphone application and select your filter (BT pairing is automatic).
2. Scan the QR code on the flush controller to enter the user manual.

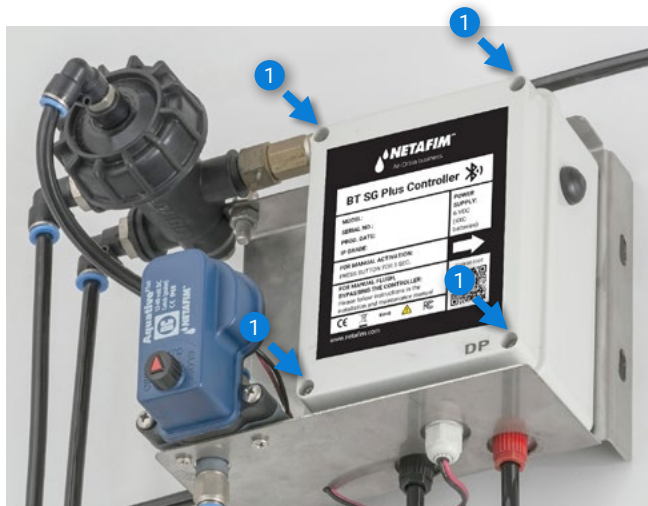
# External Power Supply

## → Power the flush controller by an external power supply

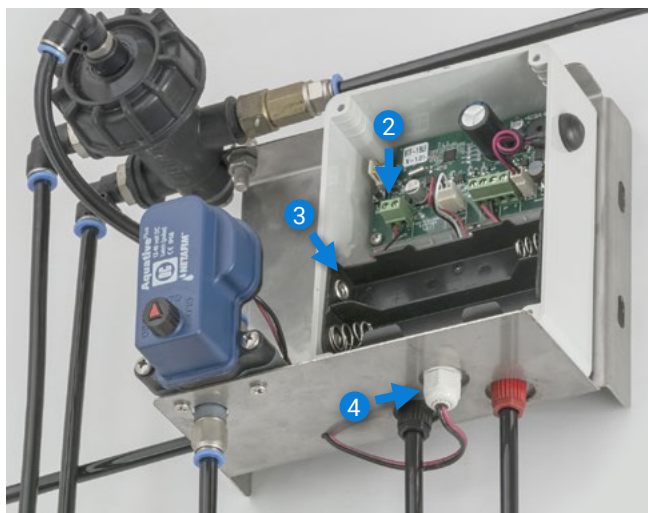
If electricity is available at the filter location, the flush controller can be powered by an external 100-240v AC to 5v DC power supply (not supplied).



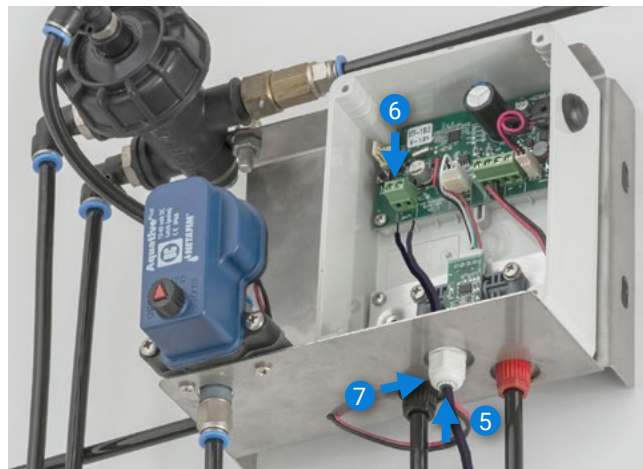
- 1 Open the flush controller box using a cross-head screwdriver.



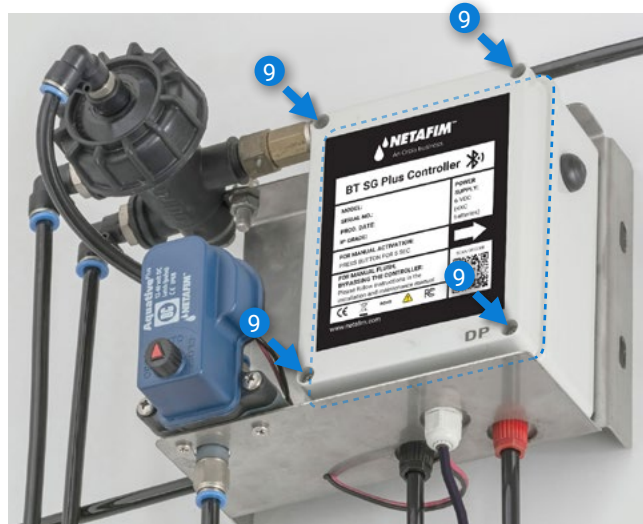
- 2 Disconnect the battery compartment wires from the terminal block using a flat-head screwdriver.
- 3 Remove the battery compartment and keep it separately for possible future use.
- 4 Loosen the cable gland nut by hand.



- 5 Gently thread the power supply wires through the cable gland.
- 6 Connect the power supply wires to the terminal block (mind polarity).
- 7 Refasten the cable gland nut by hand.
- 8 Plug the power supply to the mains and make sure the flush controller turns on.



- 9 Close the flush controller box (mind the alignment of the cover gasket to ensure sealing).



### WARNING

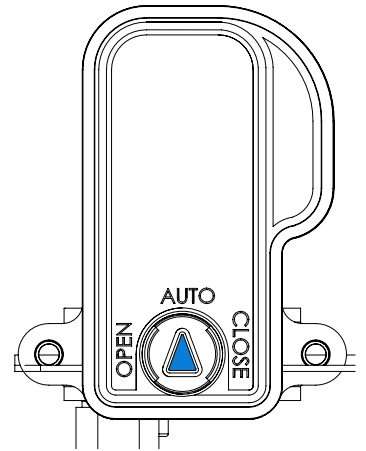
When operating the controller with the external power supply, make sure that the battery compartment is not inside the flush controller (its exposed wire ends could cause short-circuit).

If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

# Preparations

Before activating the filter for the first time, go through the following check-list carefully (No special training is required to carry out these activities).

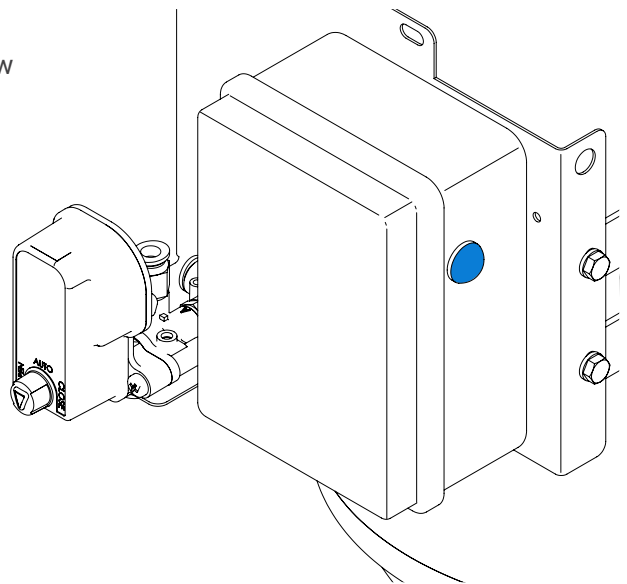
- Check that the filter is mounted in the correct flow direction.
- Check that all nuts and bolts are firmly tighten.
- Check that all the command tubes are connected properly and that all connections are tight (see page 12).
- Ensure the filter is well supported and stable.
- Check that the Aquative operator (solenoid) selector is turned to the AUTO position.
- Make sure that the flush pipe is installed in conformity with the specifications (see Hydraulic installation, page 14).
- Make sure the controller is active by initiating a manual flush (The solenoid should click). (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application.)



## First Operation

After completing the preparation check-list above, perform the following steps:

1. Slowly open the isolation valve at the filter inlet. Water will flow into the filter.
2. Check for leaks and repair if necessary.
3. Slowly open the isolation valve at the outlet of the filter.
4. Ensure the flow through the filter does not exceed the filter's maximum flow rate (see page 6).
5. Start a manual flushing cycle. (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application.)
6. Check the upstream pressure during the flushing cycle, it should not drop below 2.0 bar (30 PSI).
7. Perform 2 additional consecutive manual flushing cycles to evacuate air from the system.
8. Monitor the upstream pressure during the flushing cycles, it should not drop below 2.0 bar (30 PSI). If this cannot be ensured, consult Netafim™.



### NOTE

The filter flushes in two, separate consecutive flushing cycles with a few seconds pause between them (During the pause the filter does not flush).

# Application Operation

The SG Plus Smartphone application is easy-to-use and intuitive. The following is a quick guide to the SG Plus app. (If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it).



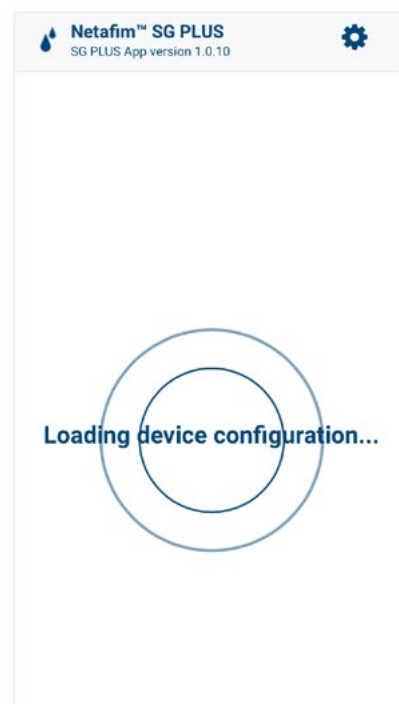
## Welcome screen

When the user taps on the app shortcut, a welcome screen appears...



## Scanning result screen

The results of the controllers in the vicinity will appear on the Scanning result screen.  
Select your controller.



## Scanning process screen

Then, a Scanning process of the controllers in the vicinity will start.

## Your controller home screen

This screen displays the main parameters of the filter operation:

- Operation mode
- Flushing interval
- Cycle duration
- PD set point
- Time to next flush cycle

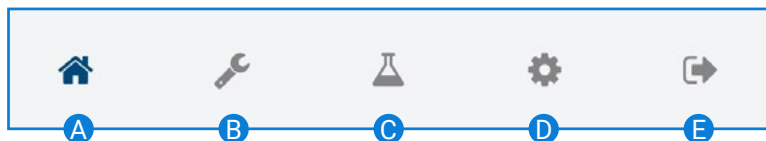
### NOTE

The SG Plus controller does not require any adjustment, it is entirely factory adjusted for best operation.

However, you can edit a parameter by pressing it.

WAIT PD - the application is acquiring PD data from the controller (wait before proceeding).

START - Press to start or stop a flushing cycle.



### A. Home

1. Mode
2. Flushing interval
3. Cycle duration
4. PD set point
5. Manual operation

### B. Settings

1. Output mapping
2. Main valve ON/OFF
3. Alarm output ON/OFF
4. Pre dwell time screen
5. Number of filters
6. Dwell time
7. PD delay
8. Looping limit
9. Pressur units bar/PSI
10. PD calibration
11. Device name
12. Sound
13. Factory reset

### C. Flushing log

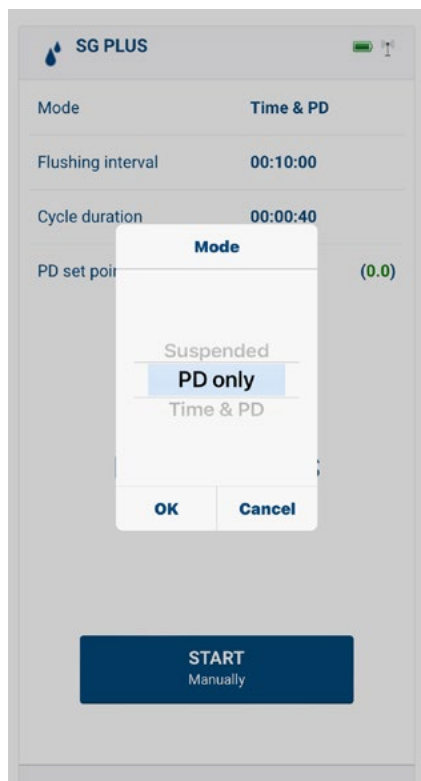
1. Based on time
2. Based on pressure differential
3. Manual flushings
4. Clear counters

### D. Preferences

1. Select language
2. Select font size
3. Technician mode (Only Netafim qualified technicians are authorized to this section by personal password).

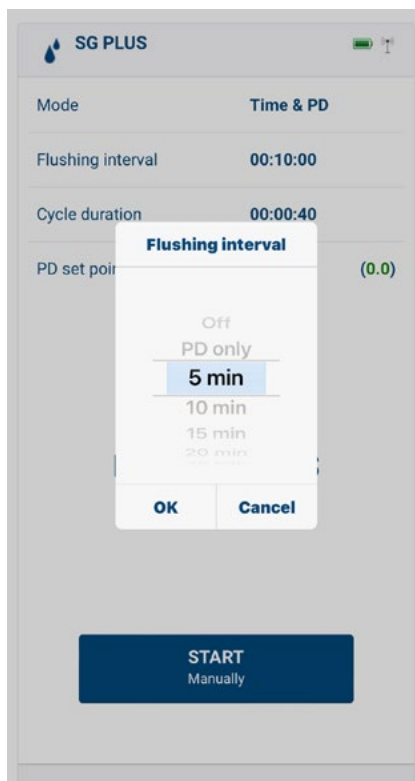
### E. Exit the SG Plus app.

## A. Home



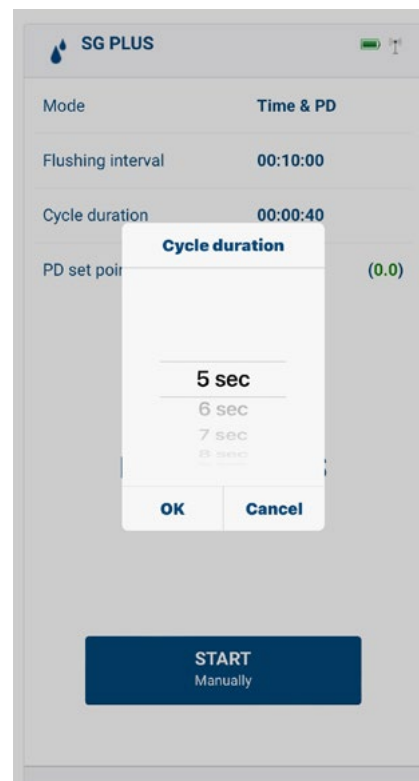
### A1. Operation mode selection screen

- Select
  - Suspended
  - PD only
  - Time and PD



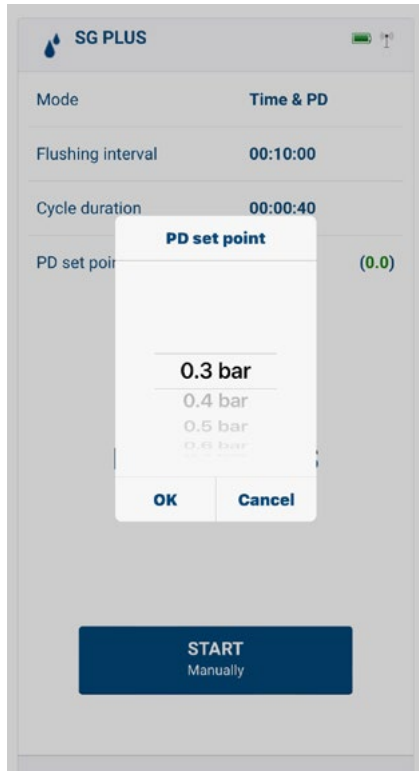
### A2. Flushing interval adjustment screen

Set flushing interval time

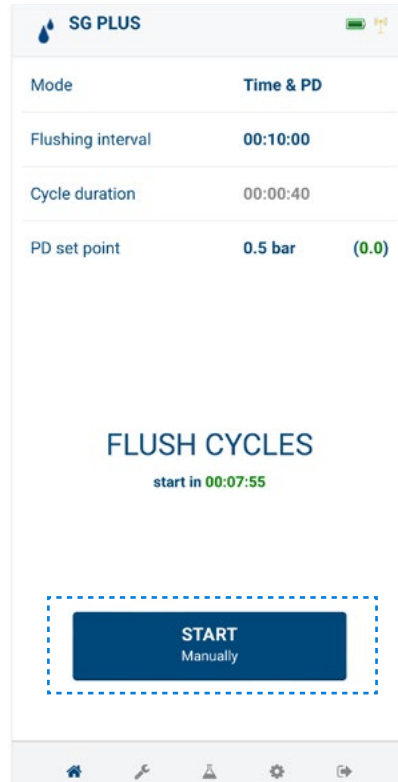


### A3. Cycle duration adjustment screen

Set filter flush duration



**A4. PD setpoint adjustment screen**  
Set PD setpoint



**A5. Manual operation**

# B. Settings



## B. Settings screen

This screen displays additional parameters of the filter operation:

- PD delay (not editable)
- Looping limit
- Controller's name
- Pressure unit - bar/PSI
- Sound - ON/OFF
- PD calibration activation
- Factory reset

Press a parameter to edit it.



## B1. Output mapping

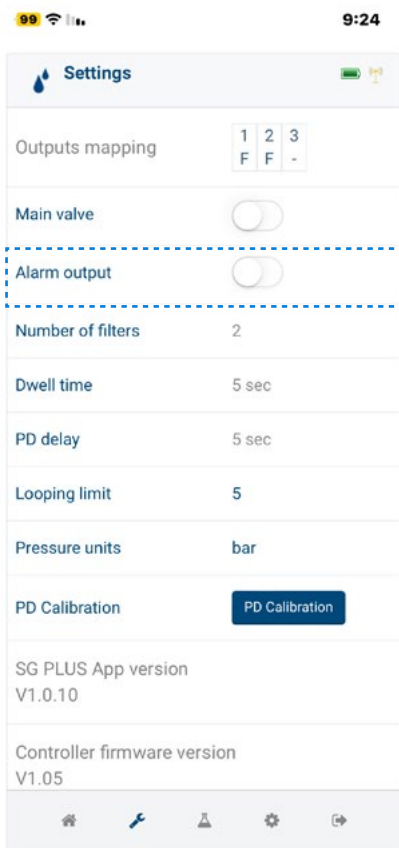
Displays the active outputs and their type. Values will be added based on the modification in setting B2, B3 and B5.

Possible outputs combinations will be as follow:

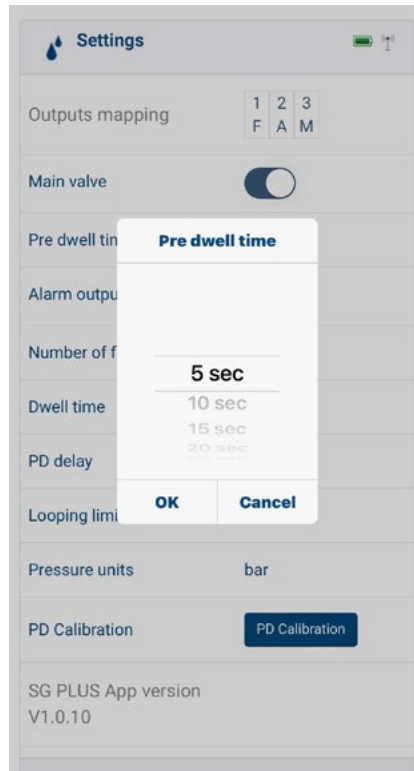
Output No'	1	2	3
Option A	Filter #1	Filter #2	Filter #3
Option B	Filter #1	Filter #2	Main valve
Option C	Filter #1	Filter #2	Alarm
Option D	Filter #1	Alarm	Main valve
Option E	Filter #1	Filter #2	---



## B2. Main valve ON/OFF

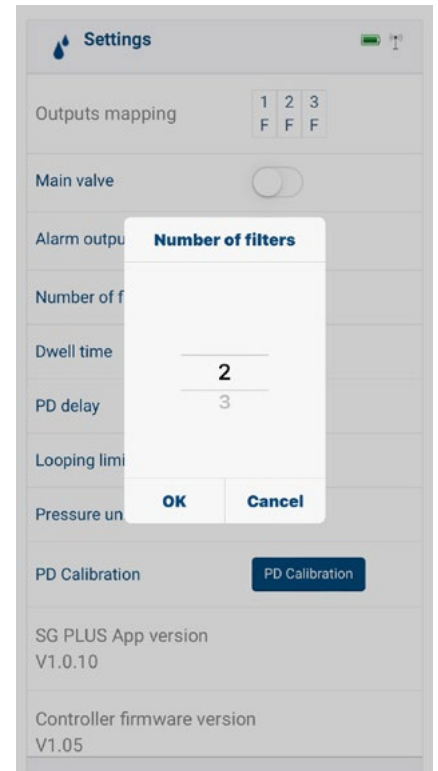


### B3. Alarm output ON/OFF



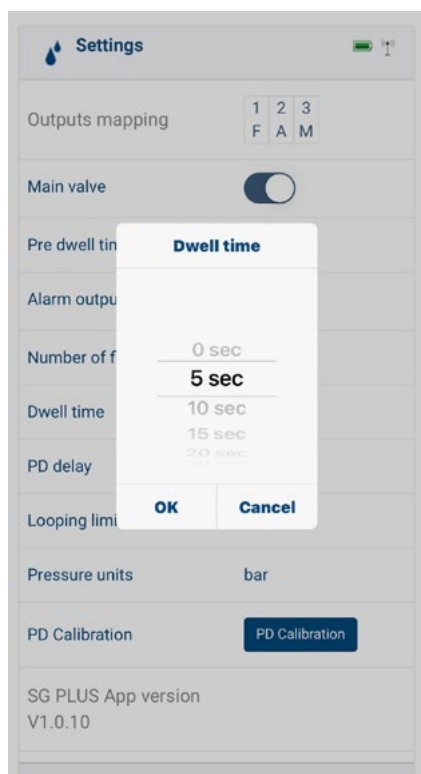
### B4. Pre dwell time screen

Only when main valve is active  
Set dwell time between main valve  
and filter flush



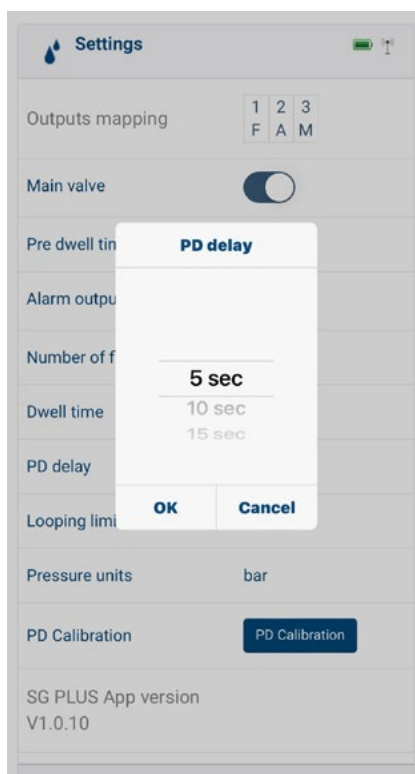
### B5. Number of filters screen

Set number of filters (1, 2 or 3)



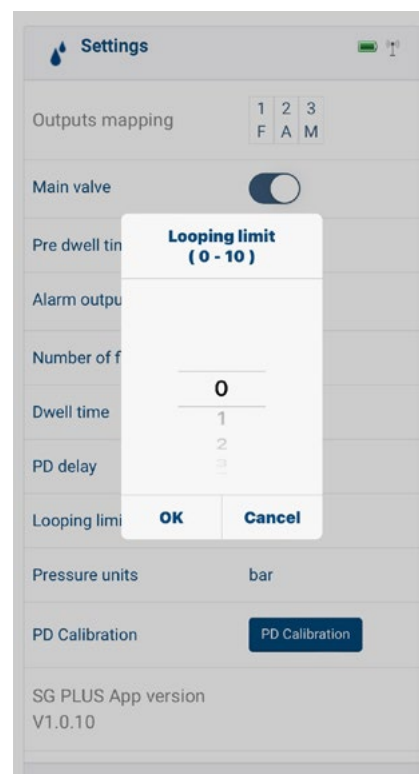
#### B6. Dwell time screen

Set dwell time between filter flush operations



#### B7. PD delay screen

Set PD delay time

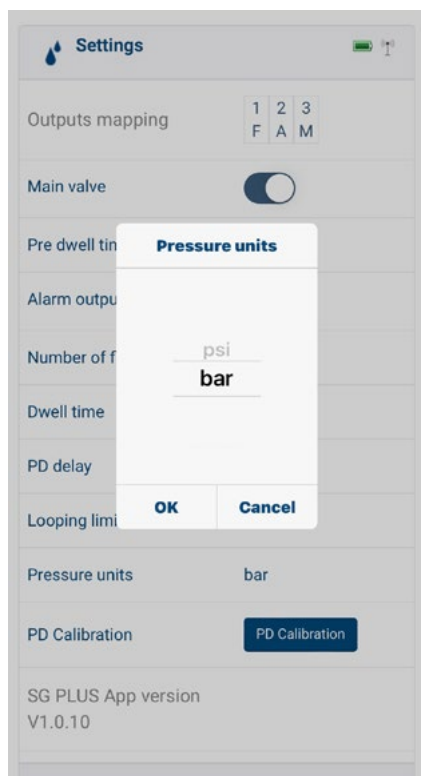


#### B8. Looping limit screen

Set the number of consecutive flushing cycles triggered by the PD sensor before deciding that there is an endless looping problem.\*

Enter a number - 1-10, or 0 - to ignore the looping problem.

\*If the looping limit is attained, the controller will cease flushing and display a looping error warning on the top right corner of the screen.

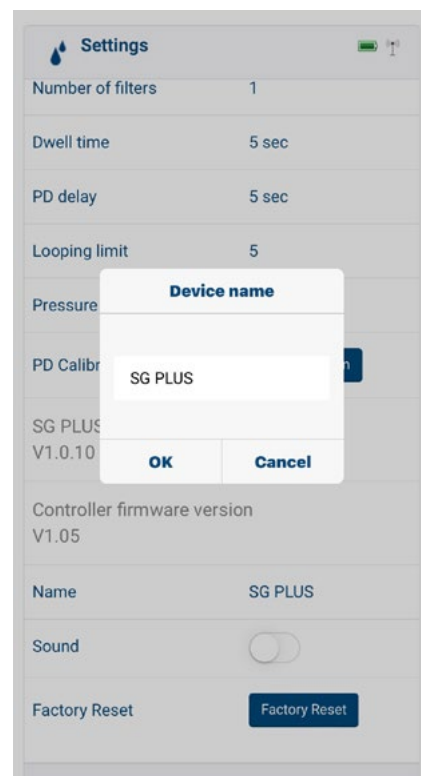


### B9. Pressure units screen

Select the pressure unit - bar/PSI



### B10. PD calibration



### B11. Device name screen

Name your device for future identification.

**Settings**

Outputs mapping	<div> <div>1</div> <div>2</div> <div>3</div> </div> <div> <div>F</div> <div>F</div> <div>-</div> </div>
Main valve	<input type="checkbox"/>
Alarm output	<input type="checkbox"/>
Number of filters	2
Dwell time	5 sec
PD delay	5 sec
Looping limit	5
Pressure units	bar
PD Calibration	<div>PD Calibration</div>
SG PLUS App version V1.0.10	
Controller firmware version V1.05	
Name	SG PLUS
Sound	<input type="checkbox"/>
Factory Reset	<div>Factory Reset</div>

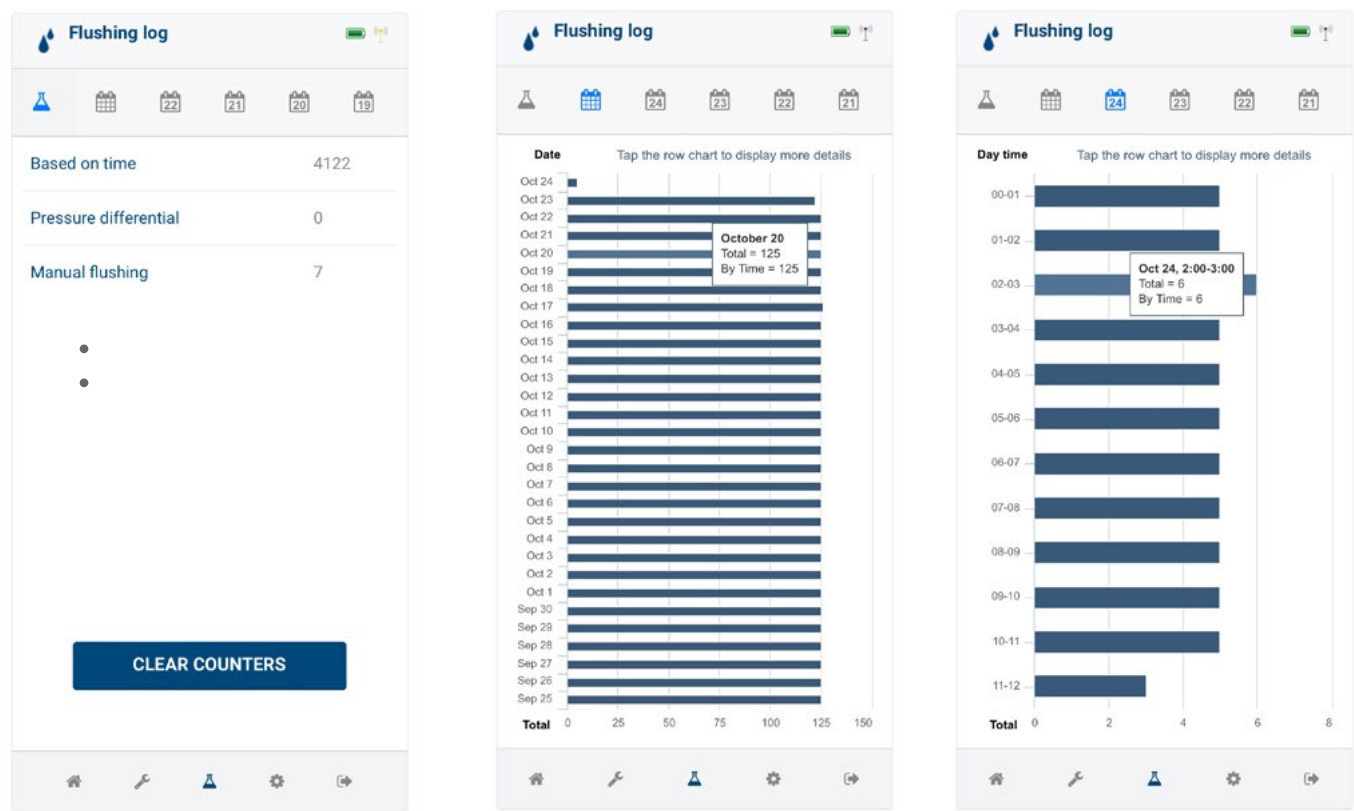
**B12. Sound**

**Settings**

Outputs mapping	<div> <div>1</div> <div>2</div> <div>3</div> </div> <div> <div>F</div> <div>F</div> <div>-</div> </div>
Main valve	<input type="checkbox"/>
Alarm output	<input type="checkbox"/>
Number of filters	2
Dwell time	5 sec
PD delay	5 sec
Looping limit	5
Pressure units	bar
PD Calibration	<div>PD Calibration</div>
SG PLUS App version V1.0.10	
Controller firmware version V1.05	
Name	SG PLUS
Sound	<input type="checkbox"/>
Factory Reset	<div>Factory Reset</div>

**B13. Factory reset**

# C. Flushing log



C1. Your filter's Flushing log screen

This screen displays the accumulated number of flushings performed:

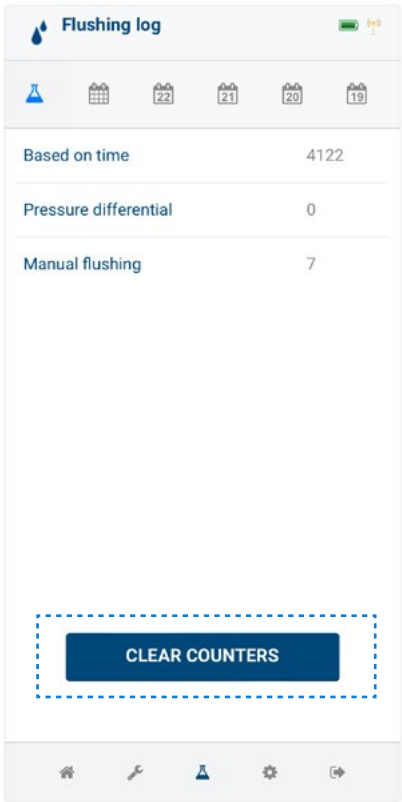
- Based on time
- Based on PD
- Manually triggered
- Detailed log
  - Monthly
  - Daily

This screen is not editable.

CLEAR COUNTERS - press to reset all the counters.

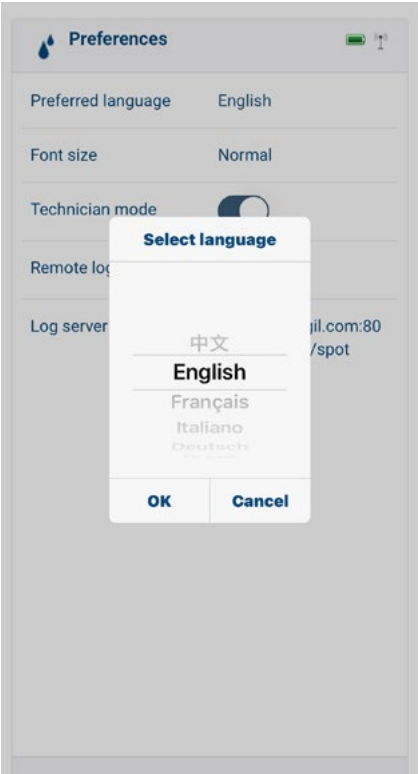
C2. Monthly flushing log screen

C3. Daily flushing log screen



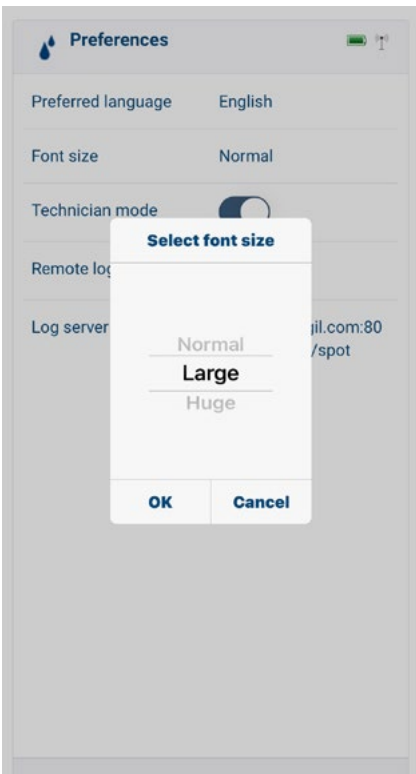
C4. Clear counters

# D. Preferences



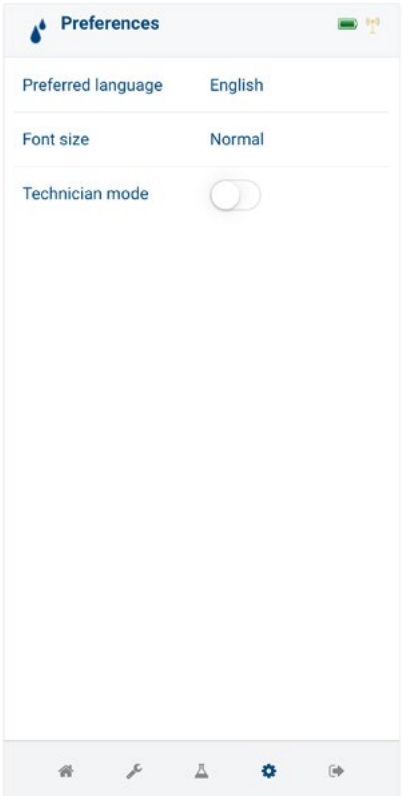
D1. Select language screen

Select the app's UI language



D2. Select font size screen

Select the app's UI font size



D3. Preferences screen

This screen allows to select the app's UI language and font size.

Press a parameter to edit it (see the 2 next pages).

Technician mode - ON/OFF

**ATTENTION**

Technician mode allows modification of additional parameters.

This section is accessible only with a Netafim™ qualified technician personal password.

For assistance contact your Netafim™ local representative.

## → Safety instructions



### **WARNING**

When under pressure, the filter may start a flushing cycle automatically at any time, without prior indication. Fully release the pressure in the filter before performing installation or maintenance operations involving opening the filter. Check the pressure gauge to be sure it is at 0 before proceeding.

## → Tools required for maintenance

- Spanners - 17mm for the filter body, and 10mm for the piston
- Crosshead screwdriver
- Lubrication Grease - water resistant graphite/silicone grease

# Maintenance Schedule

## → Once a week

1. Visually inspect the filter and its control apparatus for leaks. Repair if necessary.
2. Perform a manual flushing cycle. (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application).
3. Make sure that during the flushing cycle the inlet pressure does not drop below 2.0 bar (30 PSI).
4. Make sure the filter flushes in two, separate consecutive flushing cycles with a few seconds pause between them. In case a clear pause between the two flushing cycles is not noticeable, consult Netafim.

## → At the end of the irrigation season

1. Close the filter's downstream (outlet) valve.
2. Immediately perform 3 consecutive manual flushing cycles. (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application.)
3. Turn the pump off.
4. Close the filter's upstream (inlet) valve.
5. Remove the batteries from the controller (see page 27).
6. Drain the filter.
7. Visually inspect the filter's body coating for damage. Repair if necessary (see Paint retouching on the filter body, page 28).

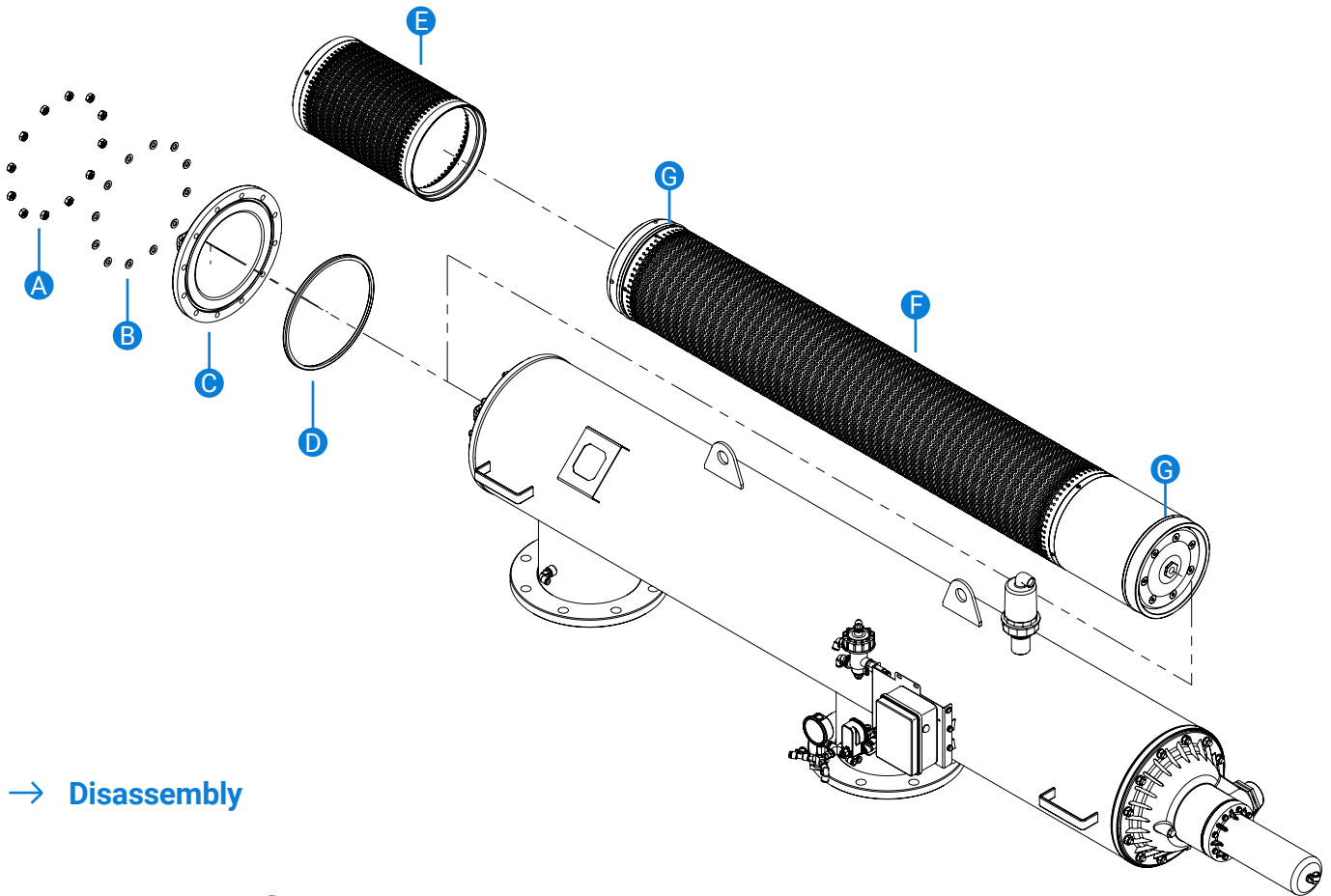
## → At the beginning of the irrigation season

1. Extract the fine screen assembly and clean it with pressurized fresh water (see page 26). If the screen is dirty with hard to remove organic dirt: Perform chemical cleaning of the filter screen assembly (see Algae growth control, page 28).
2. Visually inspect the gaskets. Replace if necessary.
3. Visually inspect the upper bearing. Replace if necessary.
4. Visually inspect the lower bearing. Replace if necessary.
5. Visually inspect the suction nozzles for cracks and/or other mechanical damage.
6. Apply grease to the O-rings.
7. Install new batteries in the controller (see page 27).
8. Activate the filter (see First operation, page 18).
9. Perform 3 consecutive manual flushing cycles (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application.)
10. Make sure that during the flushing cycles the inlet pressure does not drop below 2.0 bar (30 PSI).

# Screen Assembly Cleaning

## ATTENTION

Do not attempt to extract the screen assembly from the piston-side of the filter, it might damage the filter.



## → Disassembly

1. Unscrew nuts **A** with a 17mm wrench.
2. Remove washers **B**.
3. Remove plastic cap **C** and gasket **D**.
4. Pull strainer **E**, flush with fresh water and remove dirt and debris.
5. Pull screen assembly **F**.
6. Flush screen assembly **F** from the outside in with pressurized water and remove dirt.

If the screen is still dirty, separate the flushing assembly from the screen assembly (see page 32) and flush screen assembly **F** from the inside out with pressurized water and remove remaining dirt.

## → Assembly

If the flushing-assembly has been separated from the screen assembly, rejoin them (see page 32).

1. Lubricate screen assembly O-rings **G**.
2. Insert screen assembly **F** (mind screen direction) and push all the way in.
3. Insert the strainer **E**. Make sure the strainer **E** is aligned and positioned inside the socket of the screen assembly **F**.
4. Make sure gasket **D** is in place, and position plastic cap **C** in place.

# Replacing the Batteries

The controller is powered by 4 x 1.5v C-size batteries (6v DC):

## NOTE

Always replace the whole set of 4 batteries. Never use new and old batteries together.

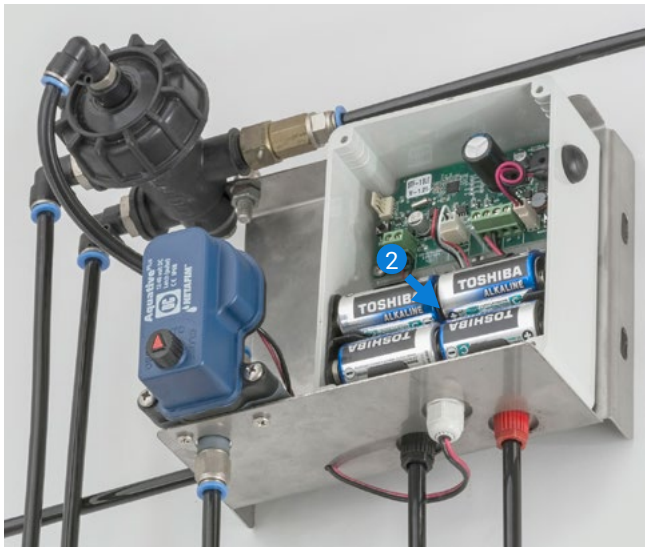
- 1 Open the flush controller box using a cross-head screwdriver.



- 4 Close the flush controller box (mind the alignment of the cover gasket to ensure sealing).



- 2 Extract the batteries.



- 3 Insert a set of 4 new batteries (Match the poles to the markings inside the battery housing).

The controller should turn on automatically.

3 short beeps followed by a long one should be heard.

If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

# Paint Retouching on the Filter Body

## **WARNING**

If the protective coating (inside and outside) of the filter body is damaged and the bare metal is exposed, it will rust in contact with irrigation water and chemicals. If neglected, this will lead to a leak.

Any damage to the protective coating of the filter body must be repaired as soon as possible.

Use Interseal® 670HS Surface Tolerant Epoxy protective paint, color: RAL 5010.

1. Sand the damaged area or spot with sandpaper and clean it with a wire brush.
2. Apply the protective paint.
3. Let the paint completely dry for at least 24 hours before exposing the mended spot to water.

For further assistance, contact your local Netafim™ representative.

## → **Algae growth control**

## **WARNING**

Sodium hypochlorite (NaClO) is dangerous toxic and corrosive chemicals. All application regulations and safety rules must be observed. Store and handle according to safety regulations.

Before handling sodium hypochlorite (NaClO), carefully read all the specific safety, health protection and first aid information and instructions. Be sure you have all required first aid at the site, as instructed.

Concentrated liquid sodium hypochlorite (NaClO) can damage exposed metal (especially threads that are exposed to water). Be careful when applying them and avoid the spillage of any of the liquid onto exposed metal parts. Should any of the liquid come into contact with metal parts, immediately wash thoroughly with fresh water.

1. Prepare a 15% sodium hypochlorite solution in an acid resistant container able to contain the filter screen assembly.
2. Remove the gaskets from the screen assembly.
3. Dip the filter screen assembly in the solution for 30 minutes (it should be completely submerged in the solution).
4. Rinse the filter screen assembly with fresh water.

For further assistance, contact your Netafim™ local representative.

# Winterization

**Filter operation should be suspended in climates where the filter is exposed to freezing temperatures.**

## → At the end of the irrigation season

- Close the downstream isolation valve and perform 3 manual flushes. (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application).
- Turn the pump off.
- Close the inlet valve to the filter and release the pressure.
- Drain the filter.
- Disconnect all command tubes from the valves, relay and flush controller. Drain them of water and re-connect (Mind the command tube connection scheme, page 12).
- Open the relay to make sure that there are no water inside, and if any remain it should be cleared.
- Visually inspect the filter's body coating for damage. Repair if necessary (see Paint retouching on the filter body, page 28).

## → At the beginning of the next irrigation season

See First Operation, page 18.

# General Malfunctions

Problem	Possible causes	Solution
No water pressure or too low water pressure at the field valve/s.	<ul style="list-style-type: none"> <li>• Pump malfunction.</li> <li>• PSV/PRV malfunction.</li> <li>• Pipe breach.</li> <li>• The filter is heavily clogged.</li> </ul>	<p>Check the pump, the PSV/PRV and the mainline pipe upstream from the filter. If found in working order: check the filter outlet and inlet pressures. If the pressure differential is higher than 0.5 bar (7 PSI):</p> <ol style="list-style-type: none"> <li>1. Close the filter's downstream (outlet) valve.</li> <li>2. Immediately perform 3 consecutive manual flushing cycle (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application.) Make sure that during the flushing cycle the pressure does not drop below 2.0 bar (30 PSI).</li> <li>3. Open the downstream valve.</li> </ol> <p>If normal functioning is not restored, perform Screen assembly cleaning (<a href="#">see page 26</a>).</p>
Filter flushing occurs at a much higher frequency than usual.	<ul style="list-style-type: none"> <li>• Degraded water quality</li> <li>• Seasonal algae growth.</li> <li>• Too low inlet pressure.</li> <li>• The filter is heavily clogged.</li> <li>• Restriction on the flush line.</li> </ul>	<p>If water quality problems and algae presence have been dismissed, check the filter inlet pressure. If it is in range:</p> <ol style="list-style-type: none"> <li>1. Close the filter's downstream (outlet) valve.</li> <li>2. Immediately perform 3 consecutive manual flushing cycle (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application).</li> </ol> <p>If normal functioning is not restored, perform Screen assembly cleaning (<a href="#">see page 26</a>).</p>
Filter PD > 0.5bar	<ul style="list-style-type: none"> <li>• Controller is not working.</li> <li>• Control valve is not working.</li> <li>• PD sensor is not working.</li> </ul>	<ol style="list-style-type: none"> <li>1. Make sure the controller is in working order by initiating a manual flushing cycle (To initiate a manual flush hold the MANUAL button on the flush controller pressed for 5 seconds or use the START command in the application). If it does not work, replace the batteries (<a href="#">see page 27</a>). If it still does not work, consult your Netafim™ local representative.</li> <li>2. Operate the Aquative manually (<a href="#">see page 18</a>). If not working, perform Screen assembly cleaning (see page 26). If working, replace the Aquative (<a href="#">see page 35</a>).</li> <li>3. Compare PD in the application to actual PD. If inconsistent, perform callibration (<a href="#">see page 22</a>). If the problem persists, replace the PD sensor (<a href="#">see page 36</a>).</li> </ol>

## → Operation

The following pages present all the technical processes needed to address any of the above malfunctions.



### WARNING

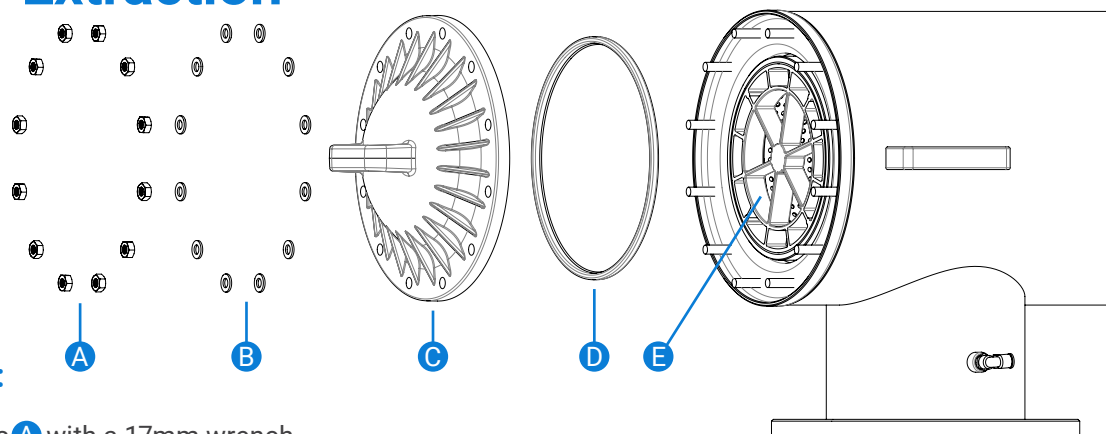
Do not attempt any dismantling of the filter beyond the processes described in this chapter.  
For further assistance contact your Netafim™ local representative.



### WARNING

Do not attempt to extract the screen assembly from the piston-side of the filter, it will damage the filter.

## Filter Body Opening - Strainer Side and Screen Assembly Extraction



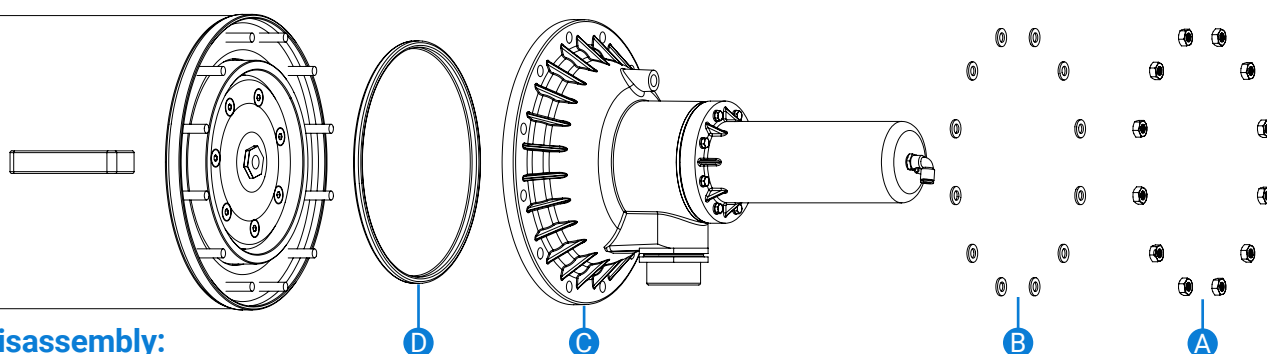
### → Disassembly:

1. Unscrew nuts **A** with a 17mm wrench.
2. Remove washers **B**
3. Remove Piston Cover Assembly **C** and gasket **D**.
4. Pull the screen assembly **E** out of the filter body.

### → Assembly:

1. Lubricate screen assembly O-rings (see Screen assembly cleaning, page 26)
2. Insert screen assembly **E** into the filter body (mind screen direction), and push all the way in.
3. Place gasket **D** in its groove (make sure it is properly placed).
4. Place Piston Cover Assembly **C**.
5. Place washers **B** and nuts **A** and tighten the nuts.

## Filter Body Opening - Piston Side



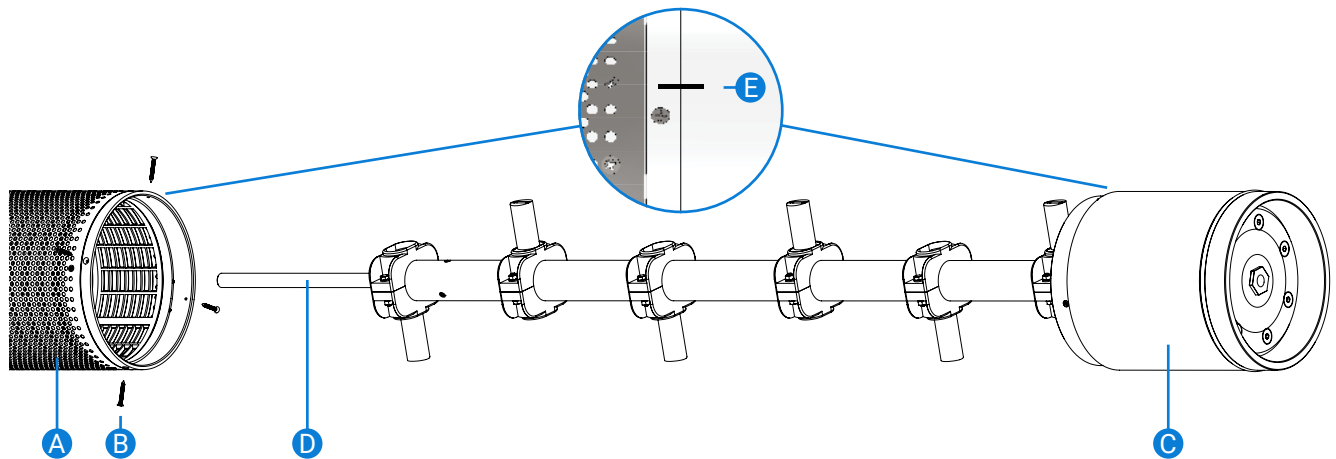
### → Disassembly:

1. Unscrew nuts **A** with a 17mm wrench.
2. Remove washers **B**.
3. Remove Piston Cover Assembly **C** and gasket **D**.

### → Assembly:

1. Place gasket **D** in its groove and make sure it is properly placed.
2. Place Piston Cover Assembly **C**.
3. Place washers **B** and nuts **A** and tighten the nuts.

# Flushing-assembly Release



## → Disassembly:

1. Manually unscrew 4 screws (B) with a crosshead screwdriver.
2. Release the flushing assembly (C) from the screen assembly (A). TIP To facilitate separation: First, gently push the main shaft (D) from the other side of the screen assembly (A) until the two parts are separated.
3. Pull the flushing assembly (C) from the screen assembly (A) holding the screen assembly (A)
4. (do not hold the main shaft (D)).

## → Assembly:

1. Insert the flushing assembly (C) to the screen assembly (A).  
Make sure the alignment mark (E) is aligned.
2. Make sure the 4 screw-holes are aligned between the two assemblies (A and C).
3. Hand tighten the 4 screws - do not use electric or impact tools.
4. Check that the suction element (D) moves and rotates freely inside the screen assembly.

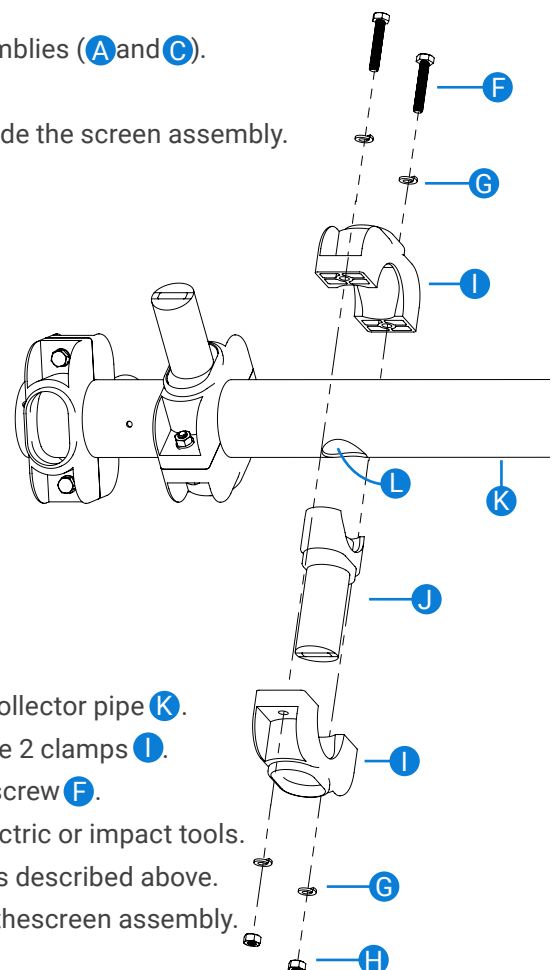
# Flushing-nozzle Replacement

## → Disassembly:

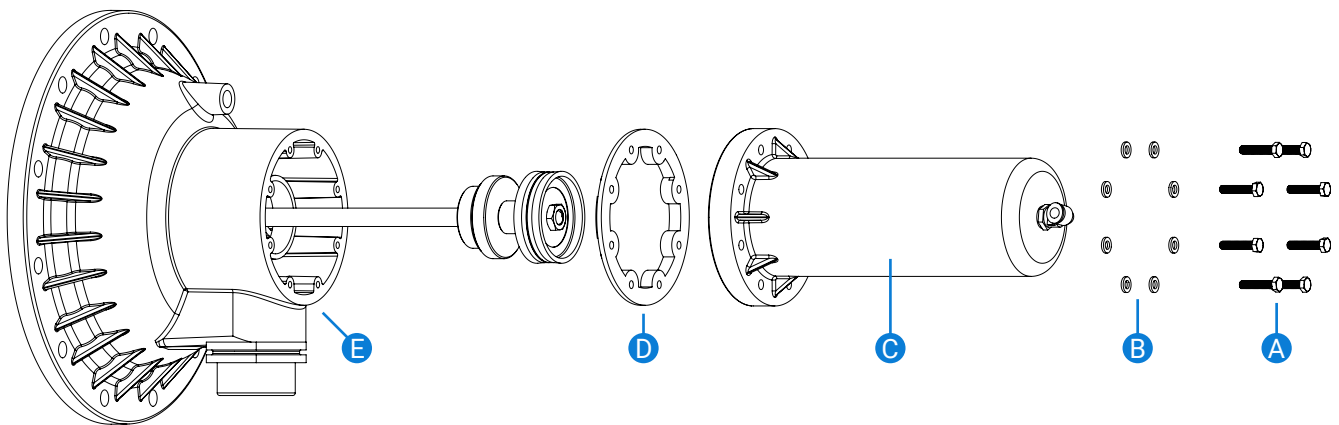
1. Release the flushing assembly (C) from the screen assembly (A) as described above.
2. Unscrew 2 screws (F) with a 10mm wrench.
3. Separate the nozzle clamp set from the collector pipe (K).

## → Assembly:

1. Place the flushing nozzle (J) on top of the hole (L).
2. Place one clamp (I) onto the flushing nozzle (J).
3. Place the second clamp (I) opposite the first one, clenching the collector pipe (K).
4. Place a spring washer (G) on each screw (F) and insert through the 2 clamps (I).
5. Place a spring washer (G) and a nut (H) on the other end of each screw (F).
6. Hand-tighten the 2 nuts (H) with a 10mm wrench - do not use electric or impact tools.
7. Reattach the flushing assembly (C) to the screen assembly (A), as described above.
8. Check that the suction element moves and rotates freely inside the screen assembly.



# Piston-gasket Replacement



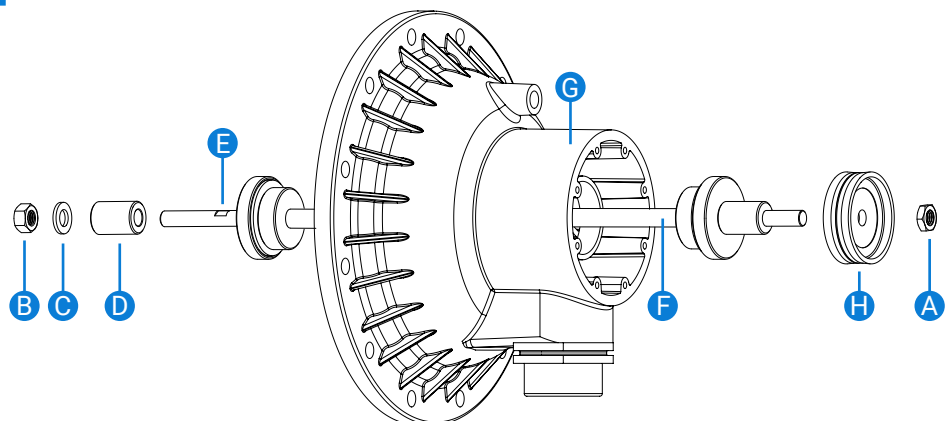
## Disassembly:

1. Remove 8 screws **A** with a 10mm wrench
2. Remove washers **B**
3. Pull piston cylinder **C**
4. Remove gasket **D**

## Assembly:

1. Place gasket **D** inside piston cylinder **C**  
(Mind gasket orientation, flat side towards piston cap)
2. Place piston cylinder **C** on piston cap **E**
3. place washers **B** and hand-tighten screws **A**

# Piston-seal Replacement



## Disassembly:

1. Release nut **A** while holding nut **B** with two 19mm wrenches.
2. If nut **A** is released: Remove the piston seal **H**.
3. If nut **B** is released:
4. Remove washers **C** and plastic spacer **D**. Under the plastic spacer **D** you will find a recess **E** on the rod **F**.
5. Hold this recess **E** to prevent rotation of the rod **F** and release nut **A** with a 19mm wrench.
6. Do not extract the rod **F** from the piston cover **G**.
7. Remove the piston seal **H**.
8. Put the plastic spacer **D**, washers **C** and nut **B** back in place.

## Assembly:

1. Place a new piston seal **H**.
2. Hold nut **B** to prevent rotation of the rod **F** and tighten nut **A** with a 19mm wrench.
3. Apply grease to the piston seal **H**.

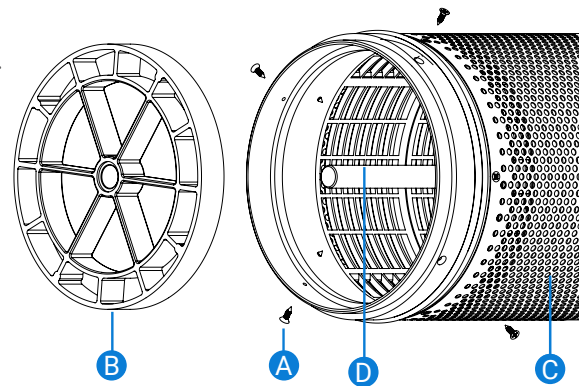
# Center Ring with Bearing Replacement

## → Disassembly:

1. Manually unscrew 4 screws **A** with a crosshead screwdriver.
2. Pull the centering ring with bearing **B** from the screen assembly **C**.

## → Assembly:

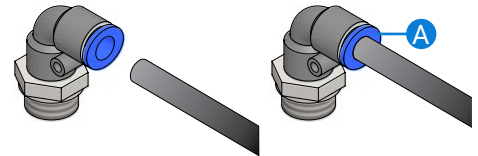
1. Insert a new centering ring with bearing **B** into the screen assembly **C**. Make sure the suction assembly shaft **D** is aligned and properly inserted into the bearing **E**.
2. Manually rotate the suction assembly. It should rotate freely.
3. Hand-tighten 4 screws **A** with a crosshead screwdriver. Do not use electric or impact tools.



# Control Tube Fast Connector

## → Connection:

1. Make sure the tip of the tube is cut neatly and straight.
2. Simply insert the tube all the way into the fast connector.
3. Slightly pull the tube back to make sure it is properly inserted.



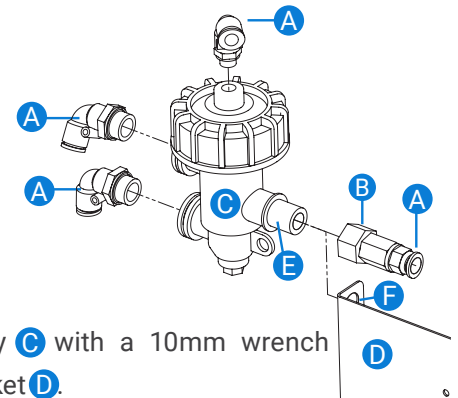
## → Disconnection:

1. Push back and hold the blue locking ring **A** and pull the tube out of the fast connector.

# Hydraulic Relay Replacement

## → Disassembly:

1. Disconnect the control tubes from the 4 fast connectors **A**.
2. Disconnect the brass connector adaptor **B** from the hydraulic relay **C** with a 10mm wrench to release the hydraulic relay assembly from the controller support bracket **D**.
3. Disconnect the 3 fast connectors **A** from the hydraulic relay **C** with a 20mm wrench.



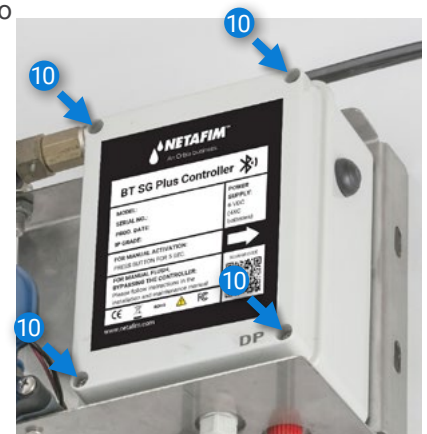
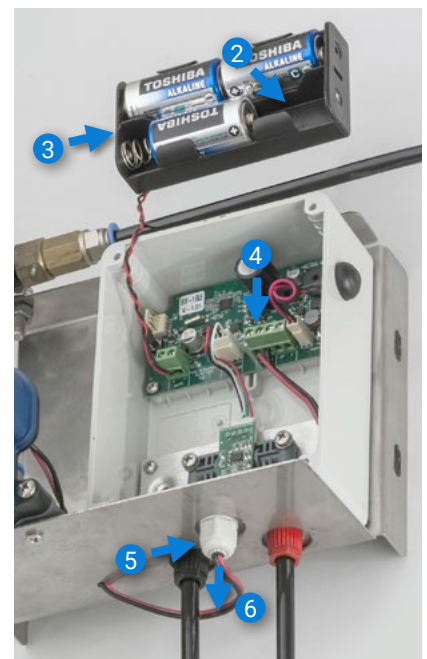
## → Assembly:

1. Connect the 3 fast connectors **A** to the new hydraulic relay **C** with a 20mm wrench. Make sure to connect each fast connector to its original location.
2. Pass the hydraulic relay **C** thread **E** through the hole **F** of the controller support bracket **D**.
3. Gently fasten the brass connector adaptor **B** to the hydraulic relay **C** thread **E** with a 10mm wrench.
4. Connect the control tubes to the 4 fast connectors **A**. Make sure to connect each control tube to its original location (see control-tube connection scheme, page 12).

# Aquative Solenoid Replacement

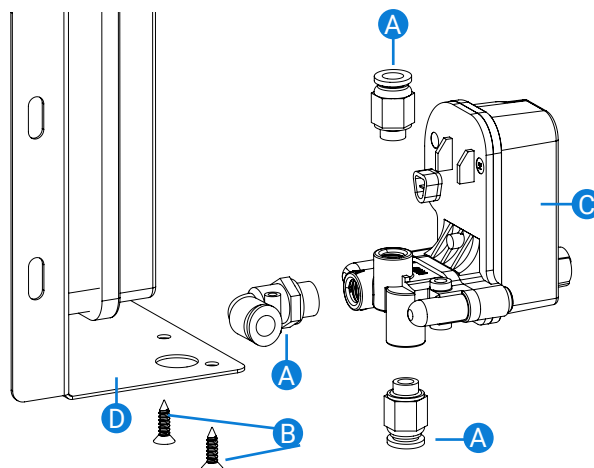
## → Disassembly:

- 1 Open the flush controller box using a cross-head screwdriver.
- 2 Extract one battery to deactivate the controller during the procedure.
- 3 Take the battery compartment out.
- 4 Disconnect the solenoid wires from the terminal block.
- 5 Loosen the cable gland nut by hand.
- 6 Gently pull the solenoid wires through the cable gland.
- 7 Disconnect the control tubes from the 3 fast connectors A.
- 8 Manually unscrew 2 screws B with a crosshead screwdriver.
- 9 Release the Aquative solenoid C from the Controller Support Bracket D.
10. Disconnect the 3 fast connectors A from the Aquative solenoid C with a 14mm wrench.



## → Assembly:

- 1 Connect the 3 fast connectors A to the new Aquative solenoid C with a 14mm wrench.
  - 2 Place the Aquative solenoid C on Controller Support Bracket D.
  - 3 Manually fasten 2 screws B with a crosshead screwdriver.
  - 4 Gently thread the solenoid wires through the cable gland.
  - 5 Connect the solenoid wires to the terminal block (mind polarity).
  - 6 Refasten the cable gland nut by hand.
  - 7 Connect the control tubes to the 3 fast connectors A.
- (Mind proper location, see control-tube connection scheme, page 12.)
- 8 Put the battery compartment back in place (make sure that the solenoid wires pass under the battery compartment in a tidy manner).
  - 9 Put the extracted battery back in place to reactivate the controller.
  10. Close the flush controller box (mind the alignment of the cover gasket to ensure sealing).



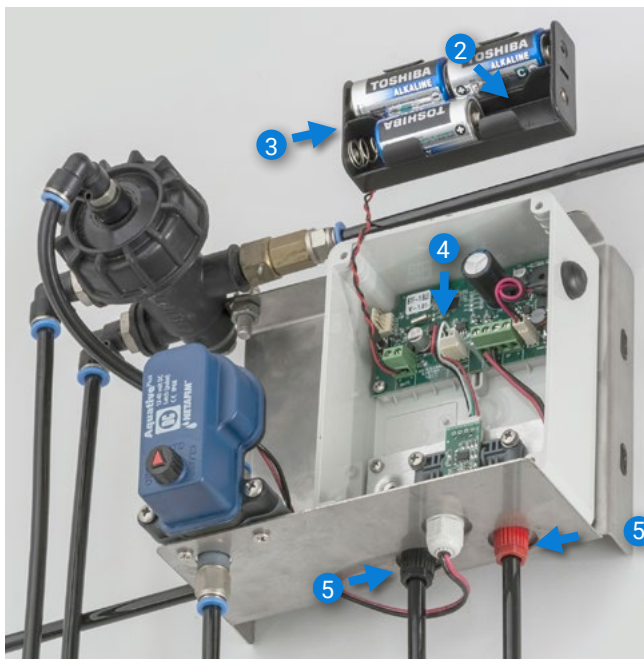
If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

# PD Sensor Unit Replacement

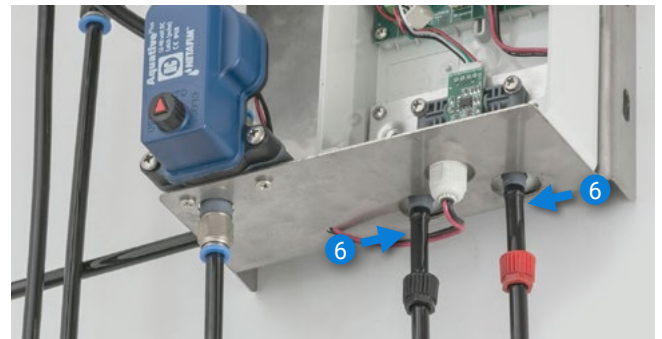
- 1 Open the flush controller box using a cross-head screwdriver.



- 2 Extract one battery to deactivate the controller during the procedure.
- 3 Take the battery compartment out to allow access to the PD sensor unit.
- 4 Disconnect the PD sensor from the terminal block.
- 5 Release the 2 control tube nuts by hand.



- 6 Disconnect the 2 control tubes.

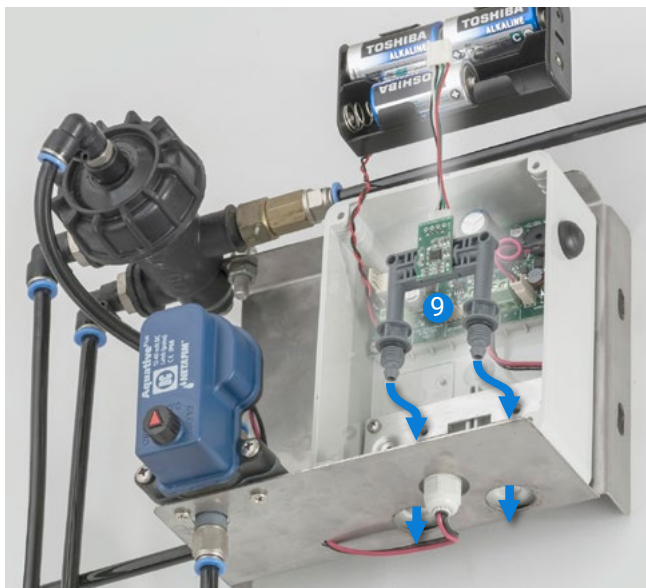


- 7 Release the PD sensor unit 2 screws using a cross-head screwdriver (mind the washers).
- 8 Remove the PD sensor.

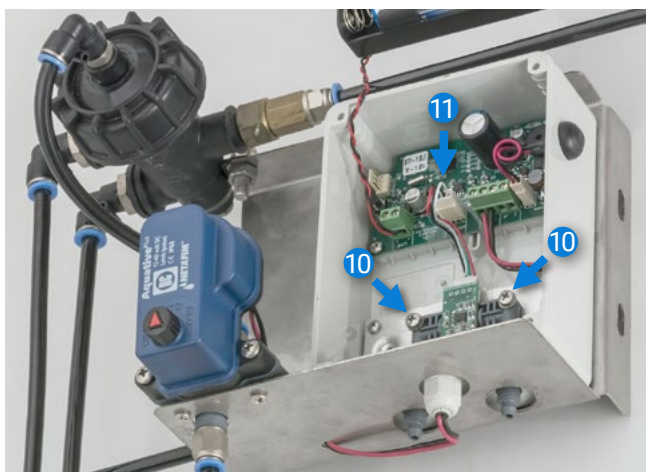


If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

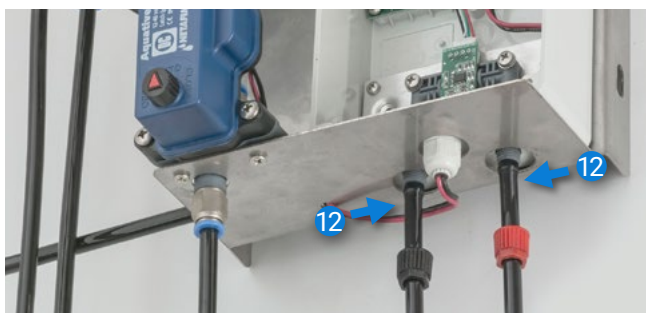
- 9 Put the new PD sensor unit in place.



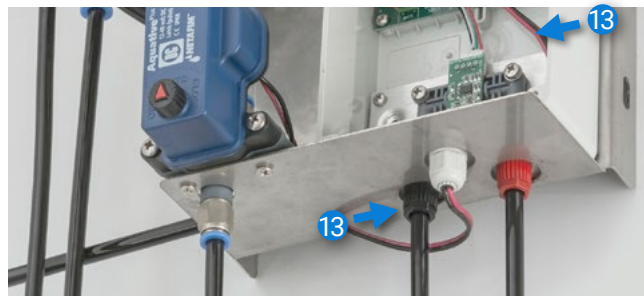
10. Refasten the PD sensor unit 2 screws (mind the washers).  
11. Connect the PD sensor to the terminal block.



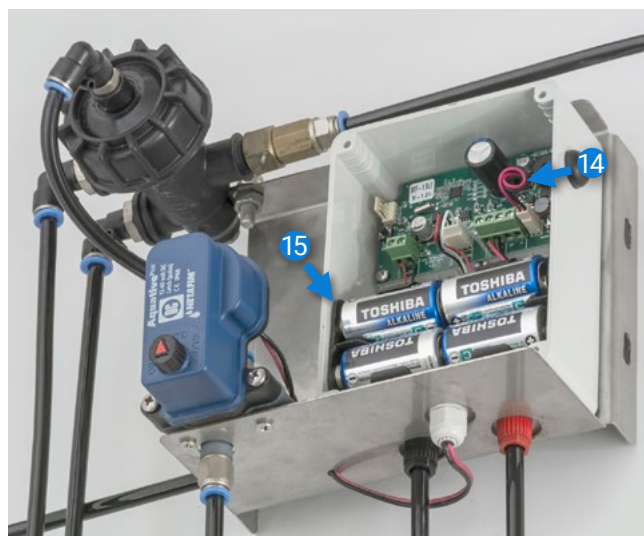
12. Reconnect the 2 control tubes:  
Left = low pressure (black nut),  
Right = high pressure (red nut).



13. Refasten the 2 control tube nuts by hand.



14. Put the battery compartment back in place.  
15. Put the extracted battery back in place to reactivate the controller.



16. Close the flush controller box (mind the alignment of the cover gasket to ensure sealing).



# Filters



## NOTE

All filter models are available with 100, 130, 200, 300 or 500 micron (150, 115, 80, 50 or 35 mesh) filtration grade. (Other filtration grades are available upon request). All filters with DC controller and DC solenoid.

### SG A H 4" 5300 DC

Filtration grade (micron)	Cat. No.		
	ANSI	BSTD	DIN
100 µm	71960-000252	71960-000269	71960-000272
130 µm	71960-000253	71960-000270	71960-000273
200 µm	71960-000254	71960-000271	71960-000274
300 µm	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request

### SG A H 4" S 7900 DC

Filtration grade (micron)	Cat. No.		
	ANSI	BSTD	DIN
100 µm	71960-000275	71960-000299	71960-000302
130 µm	71960-000276	71960-000300	71960-000303
200 µm	71960-000277	71960-000301	71960-000304
300 µm	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request

### SG A H 6" 5300 DC

Filtration grade (micron)	Cat. No.		
	ANSI	BSTD	DIN
100 µm	71960-000305	71960-000319	71960-000322
130 µm	71960-000306	71960-000320	71960-000323
200 µm	71960-000307	71960-000321	71960-000324
300 µm	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request

### SG A H 6" S 7900 DC

Filtration grade (micron)	Cat. No.		
	ANSI	BSTD	DIN
100 µm	71960-000325	71960-000339	71960-000359
130 µm	71960-000326	71960-000340	71960-000360
200 µm	71960-000327	71960-000341	71960-000361
300 µm	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request

### SG A H 8" 7900 DC

Filtration grade (micron)	Cat. No.			
	ANSI	BSTD	DIN PN10	DIN PN16
100 µm	71960-000379	71960-000399	71960-000419	71960-000439
130 µm	71960-000380	71960-000400	71960-000420	71960-000440
200 µm	71960-000381	71960-000401	71960-000421	71960-000441
300 µm	Upon request	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request	Upon request

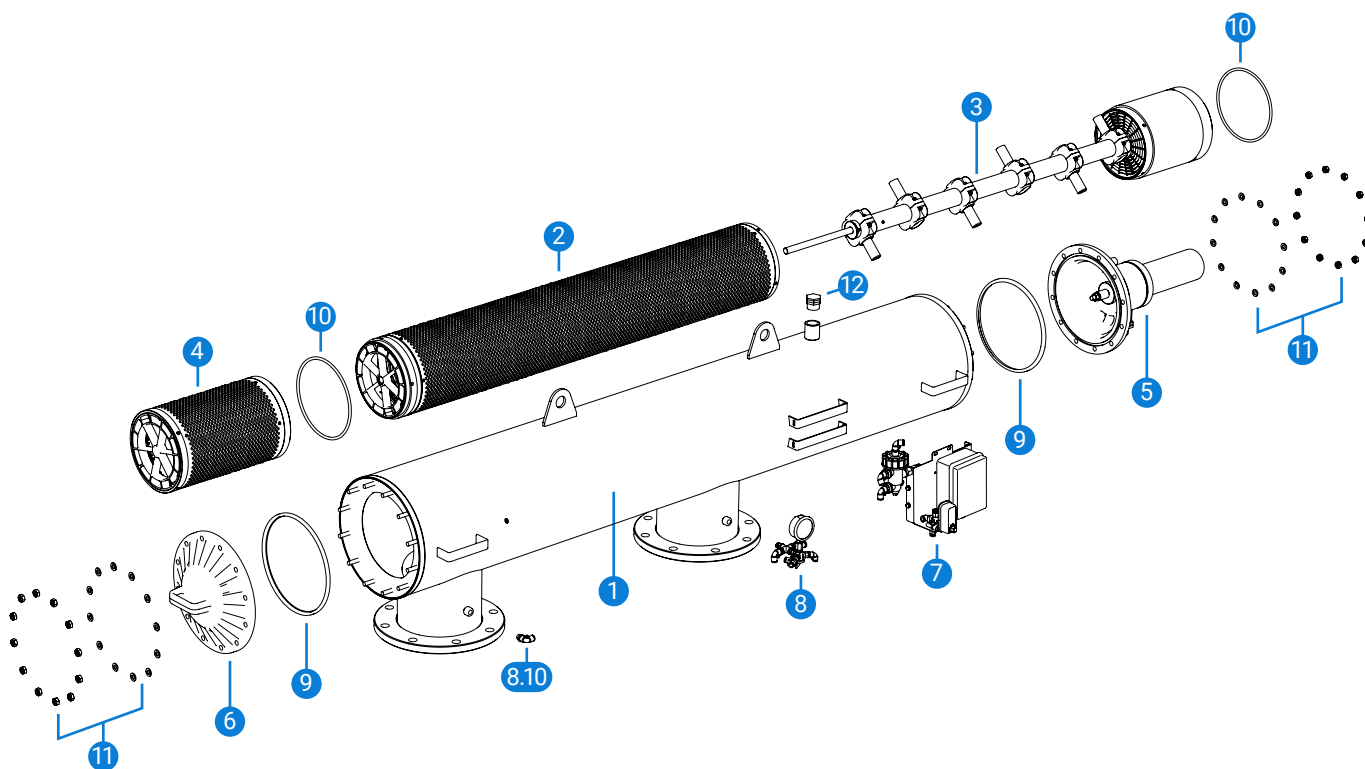
### SG A H 10" 7900 DC

Filtration grade (micron)	Cat. No.			
	ANSI	BSTD	DIN PN10	DIN PN16
100 µm	71960-000450	71960-000460	71960-000470	71960-000480
130 µm	71960-000451	71960-000461	71960-000471	71960-000481
200 µm	71960-000452	71960-000462	71960-000472	71960-000482
300 µm	Upon request	Upon request	Upon request	Upon request
500 µm	Upon request	Upon request	Upon request	Upon request

# Spare Parts

## Main parts and assemblies

Part	Description	Cat. No.	Qty.	See details on page:
1	Metal Body		1	39
2	Fine Screen Assembly kit		1	40
3	Flush assembly		1	40
4	Coarse Screen Assembly	71965-000401	1	
5	Piston Cover Assembly	71965-000402	1	42
6	Filter Body Cap	71965-000403	1	
7	Electronic Controller Assembly	71965-000510	1	44
8	Pressure Gauge Assembly	71965-000405	1	45
9	Cover Gasket	71965-000406	2	46 (Seal Kit)
10	O-ring	71965-000407	2	46 (Seal Kit)
11	10mm SS Washer and Nuts - 12 pcs set	71965-000256	2	46 (Washers and Nuts set)
12	SGH PE 1" M Cap	71965-000409	1	
13	Complete O-ring and gasket kit for SG Filters	71965-000450	1	46 (Seal Kit)



## Metal Body

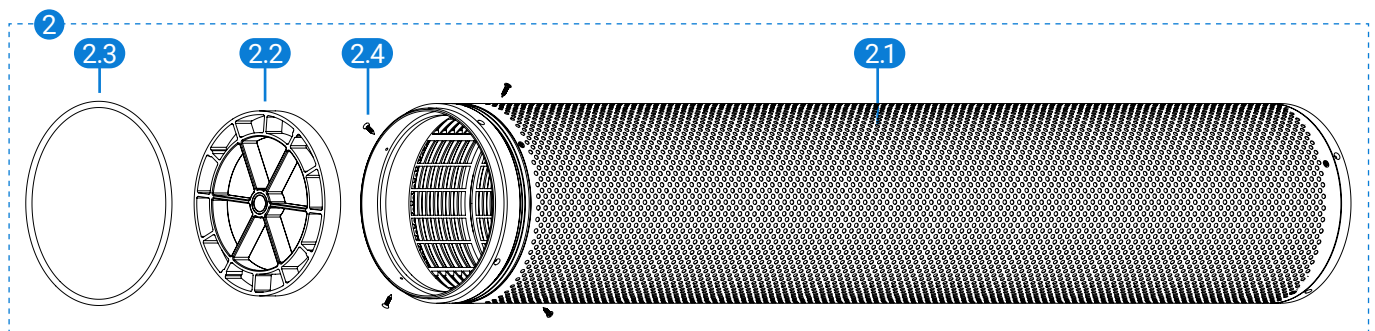
Part	Connection type	Cat. No.						Qty.
		SGH 4"	SGH 4"S	SGH 6"	SGH 6"S	SGH 8"	SGH 10"	
1	DIN	71965-000115	71965-000118	71965-000121	71965-000124	71965-000127	71965-000130	1
	BSTD	71965-000116	71965-000119	71965-000122	71965-000125	71965-000128	71965-000131	1
	ANSI	71965-000117	71965-000120	71965-000123	71965-000126	71965-000129	71965-000132	1

## Fine screen Assembly

Part	Filtration grade (micron)	Cat. No.						Qty.
		SGH 4"	SGH 6"	SGH 4"S	SGH 6"S	SGH 8"	SGH 10"	
2	100 µm	71965-000300			71965-000303			1
	130 µm	71965-000301			71965-000304			1
	200 µm	71965-000302			71965-000305			1

The Fine screen Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
2.1	Fine Screen 100/130/200µm		1
2.2	Centring Ring with Bearing	71965-000267	1
2.3	O-ring (See Seal Kit, page 46)		1
2.4	Countersunk Flat Head Cross Recess Screw 4x16H A2x70		4

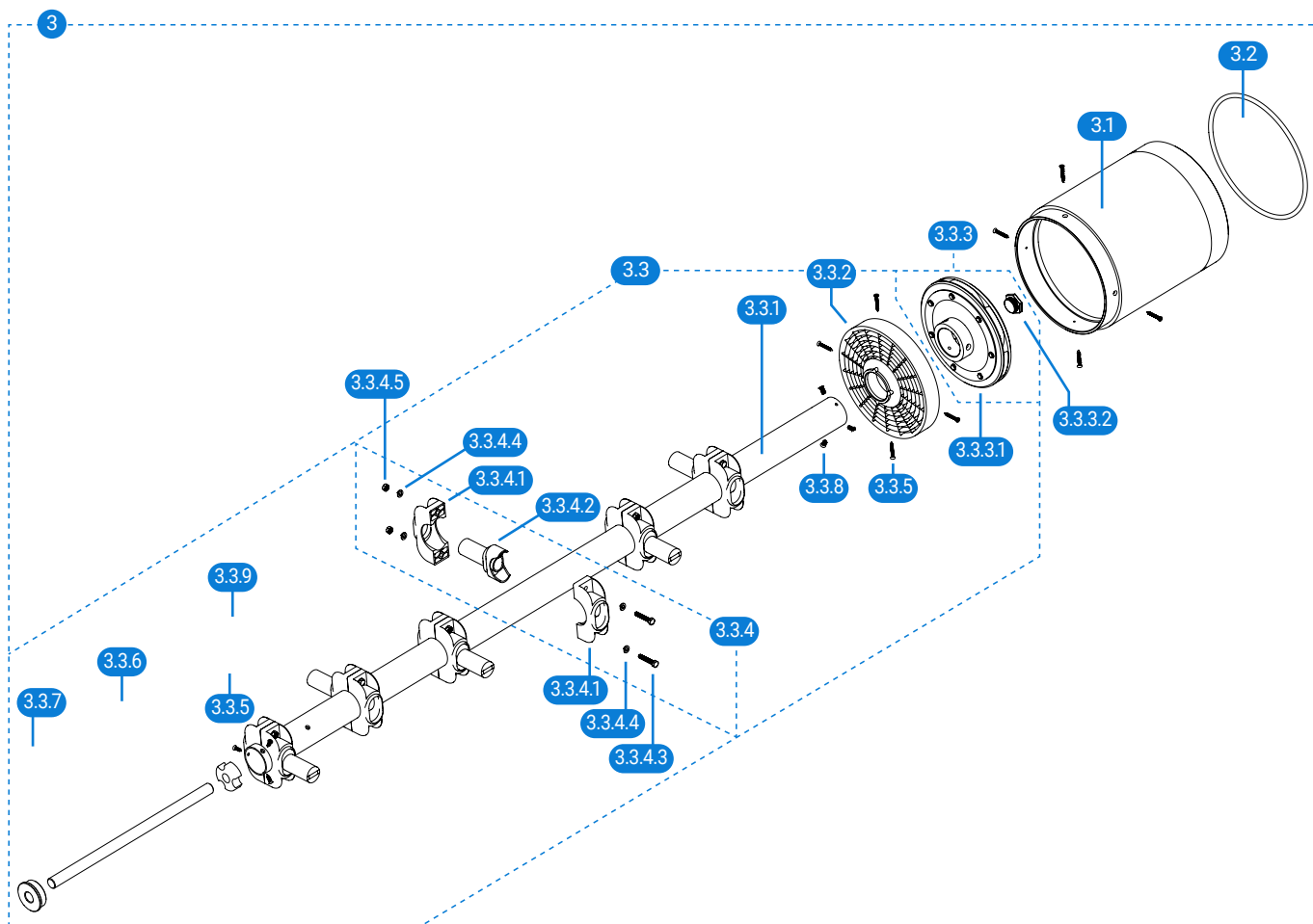


## Flush Assembly

Part	Description	Cat. No.						Qty.
		SGH 4"	SGH 6"	SGH 4"S	SGH 6"S	SGH 8"	SGH 10"	
3	Flush Assembly	71965-000400			71965-000415			1

The Flush Assembly consists of the following parts

Part	Description	Qty.
3.1	Turbine Chamber Main Body PVC	1
3.2	O-ring (See Seal Kit, page 46)	1
3.3	Suction Assembly Without Housing (See page 41)	1



### Suction Assembly Without Housing

Part	Description	Cat. No.						Qty.
		SGH 4"	SGH 6"	SGH 4"S	SGH 6"S	SGH 8"	SGH 10"	
3.3	Suction Assembly Without Housing	71965-000410		71965-000416				1

### The Suction Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
3.3.1	Suction Assembly Center Pipe		1
3.3.2	Turbine Chamber Partition		1
3.3.3	Turbine Assembly	71965-000411	1
3.3.4	Nozzle Assembly	71965-000412	4
3.3.5	Center Pipe Shaft Connecting Plastic Bolt		1
3.3.6	Center Pipe Shaft		1
3.3.7	Center Pipe Top Plug		1
3.3.8	Countersunk Flat Head Cross Recess Screw 5x12H A2x70		3
3.3.9	Countersunk Flat Head Cross Recess Screw 4.2x16H A2x70		6

### Turbine Assembly

Part	Description	Cat. No.	Qty.
3.3.3	Turbine Assembly	71965-000411	1

The Turbine Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
3.3.3.1	Turbine Set		1
3.3.3.2	Turbine Brass Bearing	71965-000266	1

### Nozzle Assembly

Part	Description	Cat. No.	Qty.
3.3.4	Nozzle Assembly	71965-000412	1

The Nozzle Assembly consists of the following parts

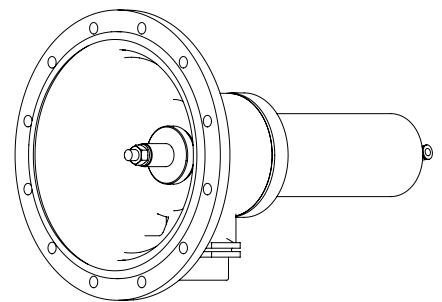
Part	Description	Qty.
3.3.4.1	Nozzle Clamp	2
3.3.4.2	Nozzle Round	1
3.3.4.3	M6x35 HEX Screw A2x70	2
3.3.4.4	M6 Washer A2x70	4
3.3.4.5	M6 Hex Nut A2x70	2

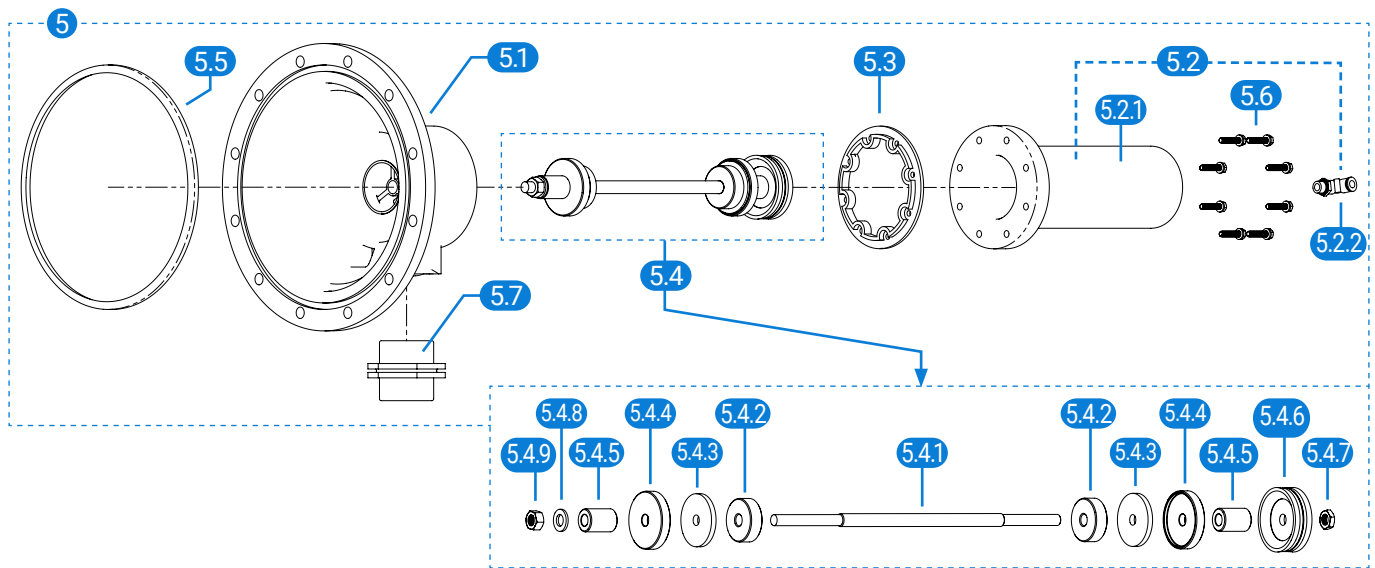
### Piston Cover Assembly

Part	Description	Cat. No.	Qty.
5	Piston Cover Assembly Stroke 200mm	71965-000402	1

The Piston Cover Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
5.1	Piston Cover		1
5.2	Piston Cylinder S200 + Plug (See below)	71965-000600	1
5.3	Cylinder Gasket (See Seal Kit, page 46)		1
5.4	Rod Assembly (See below)	71965-000413	1
5.5	Cover Gasket NBR (See Seal Kit, page 46)		1
5.6	M6 Bolts and Washers Kit (See below)	71965-000260	1
5.7	Plastic Nipple 2" BSP		1





### Piston Cylinder S200 + Plug Assembly

Part	Description	Cat. No.	Qty.
5.2	Piston Cylinder S200 + Plug Assembly	71965-000600	1

The Piston Cylinder S200 + Plug Assembly consists of the following parts

Part	Description	Qty.
5.2.1	Piston Cylinder S200	1
5.2.2	Plug in Plastic Connector 90 deg 10mm X 0.250	1

### Rod Assembly

Part	Description	Cat. No.	Qty.
5.4	Rod Assembly	71965-000413	1

The Rod Assembly consists of the following parts

Part	Description	Qty.
5.4.1	Rod	1
5.4.2	Plastic Spacer	2
5.4.3	Seal Disc	2
5.4.4	Brass Disk Seat	2
5.4.5	Plastic Disc	2
5.4.6	Piston Seal	1
5.4.7	M12 Half Hex Nut A2x35	1
5.4.8	M12 Plain Washer A2x70	1
5.4.9	M12 Hex Nut A2x70	1

\*If your SG filter is equipped with the Filtron 1-10 flush controller, see its User Manual enclosed with it.

## M6 Bolts and Washer Kit

Part	Description	Cat. No.	Qty.
5.6	M6 Bolts and Washer Kit	71965-000260	1

The Bolts and Washer Kit consists of the following parts

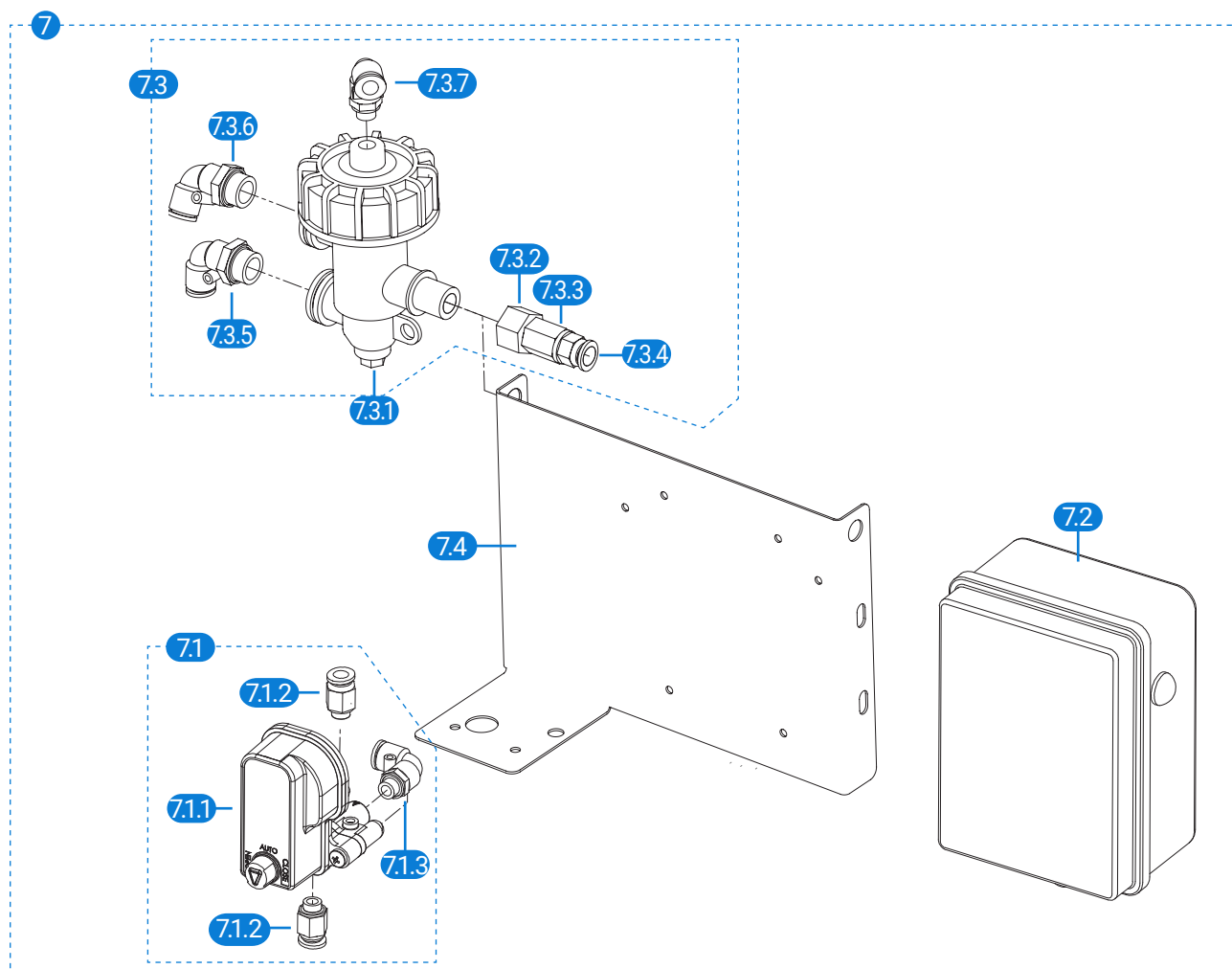
Part	Description	Qty.
5.6.1	M6 Plain Washer A2x70	8
5.6.2	M6x25 Hex Screw A2x70	8

## Electronic Controller Assembly\*

Part	Description	Cat. No.	Qty.
7	Electronic Controller Assembly	71965-000510	1

The Electronic Controller Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
7.1	Aquavive DC Assembly (See page 45)	71965-000261	1
7.2	Electronic Controller Box SG Plus	74310-000006	1
7.3	Hydraulic Relay Assembly	71965-000414	1
7.4	Controller Support Bracket SS		1



## Aquative DC Assembly

Part	Description	Cat. No.	Qty.
7.1	Aquative DC Assembly	71965-000261	1

The Aquative DC Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
7.1.1	Aquative DC	35500-001905	1
7.1.2	Plug in Metal Connector 8mm X 1/8"		2
7.1.3	Plug in Metal Connector 90 deg 8mm X 1/8"		1

## Hydraulic Relay Assembly

Part	Description	Cat. No.	Qty.
7.3	Hydraulic Relay Assembly	71965-000414	1

The Hydraulic Relay Assembly consists of the following parts

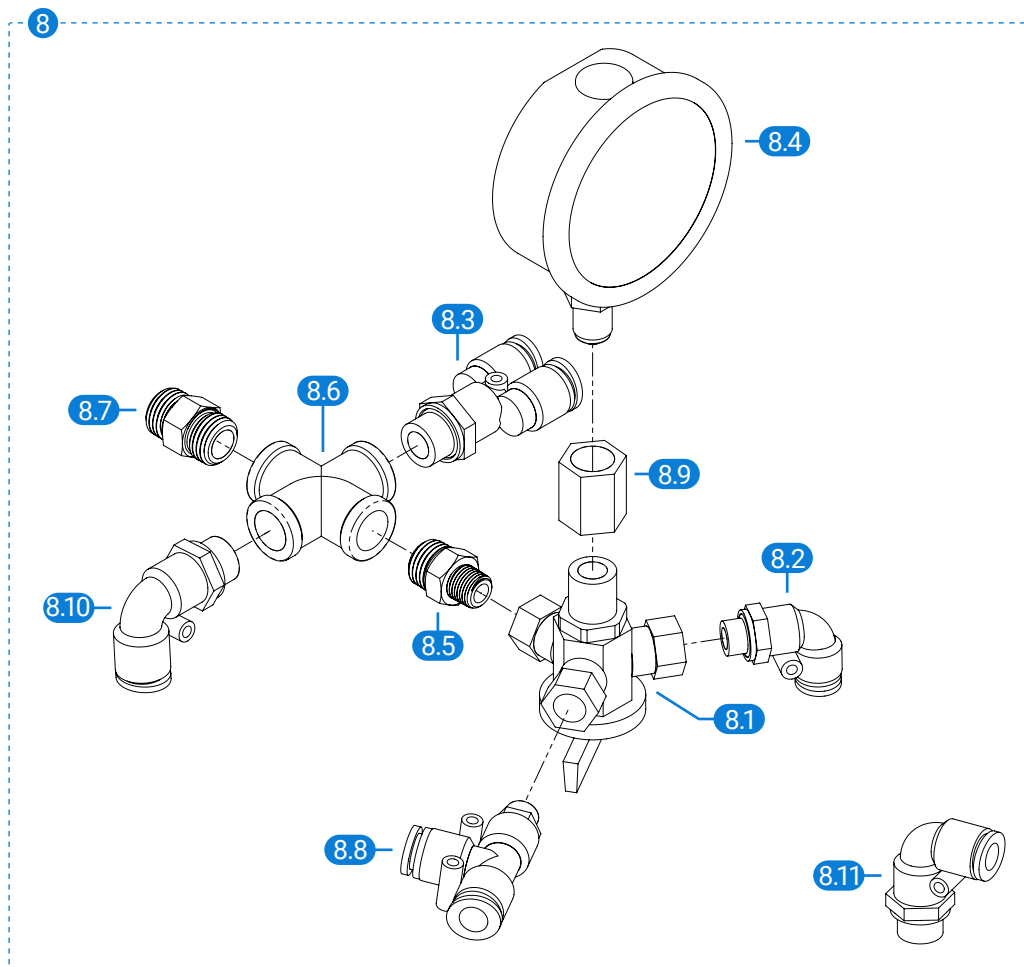
Part	Description	Cat. No.	Qty.
7.3.1	SG Hydraulic Relay	71680-000800	1
7.3.2	Brass Connector Adaptor 3/8" X 1/4"		1
7.3.3	Brass Connector 1/4" X 1/4" F-F		1
7.3.4	Plug in Metal Connector 10mm X 1/4"		1
7.3.5	Plug in Metal Connector 90 deg 10mm X 3/8"		1
7.3.6	Plug in Metal Connector 90 deg 6mm X 3/8"		1
7.3.7	Plug in Metal Connector 90 deg 8mm X 1/8"		1

## Pressure Gauge Assembly

Part	Description	Cat. No.	Qty.
8	Pressure Gauge Assembly	71965-000405	1 set

The Pressure Gauge Assembly consists of the following parts

Part	Description	Cat. No.	Qty.
8.1	Three Way Valve 3 x 1/8"		1
8.2	Plug in Plastic Connector 90 deg 8mm X 1/8"		3
8.3	Plug in Plastic Double Connector 8mm X 1/4"		1
8.4	Pressure Gauge 10Bar 1/4" BSP	77456-000153	1
8.5	Brass Connector Adaptor 1/4" X 1/8" M-M		1
8.6	Brass Connector Cross 1/4"		1
8.7	Brass Connector 1/4" X 1/4" M-M		1
8.8	Plug in Plastic Connector Side Leg 8mm X 1/8"		1
8.9	Brass Connector 1/4" X 1/4" F-F		1
8.10	Plug in Plastic connector 90 deg 10mm X 1/4"		1
8.11	Plug in Plastic connector 90 deg 8mm X 1/4"		1



### Washers and Nuts set

Part	Description	Cat. No.	Qty.
11	10mm SS Washer and Nuts, 12 pcs	71965-000256	1

The Washers and Nuts set consists of the following parts

Part	Description	Qty.
11.1	M10 Plain Washer A2x70	12
11.2	M10 Hex Nut A2x70	12

### O-ring and gasket kit

Part	Description	Cat. No.	Qty.
13	O-ring and gasket kit for SG filters	71965-000450	1

The Kit consists of the following parts

Part	Description	Qty.
5.3	Cylinder Gasket	1
9	Cover Gasket	2
10	O-ring	2

### Seal Kit

Part	Description	Cat. No.	Qty.
14	Seal kit for SGH Filters Rod	71965-000022	1

The Kit consists of the following parts

Part	Description	Qty.
5.4.3	Seal Disc	2
5.4.6	Piston Seal	1

# Warranty

Netafim™ warrants the ScreenGuard™ screen filter metal body to be free of corrosion, defects in material and workmanship for 5 (five) years from the date of installation.

Netafim™ warrants the ScreenGuard™ screen filter Piston Assembly and Cover in case of fracture under normal conditions of use, and to be free of defects in material and workmanship and for 5 (five) years from the date of installation.

Netafim™ warrants the ScreenGuard™ screen filter bearings, O-rings and seals for 2 (two) years from the date of installation, under normal conditions of use.

Netafim™ warrants the ScreenGuard™ screen filter consumable components, the SG! controller and the Aquative solenoid for 1 (one) years from the date of installation.

If a defect is discovered during the applicable warranty period, Netafim™ will repair or replace, at its discretion, the product or the defective part.

This warranty does not extend to repairs, adjustments or replacements of a Netafim™ screen filter system or part that results from reasonable wear and tear, misuse, negligence, alteration, force majeure, lightning, power surge, improper installation or improper maintenance.

If a defect arises in your Netafim™ product during the warranty period, contact your local Netafim™ representative.

## Limited warranty

This warranty is subject to the conditions in Netafim's official warranty statement.

(For the full text of Netafim's official warranty statement, please contact your local Netafim™ representative).



[www.netafim.com](http://www.netafim.com)