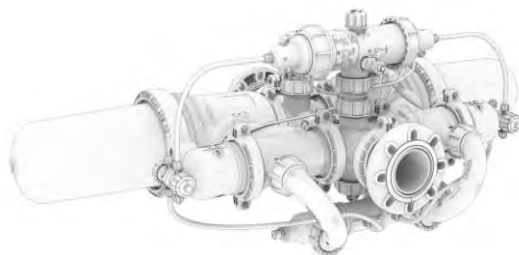
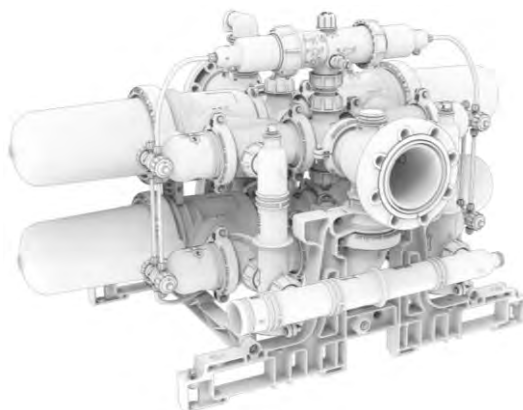


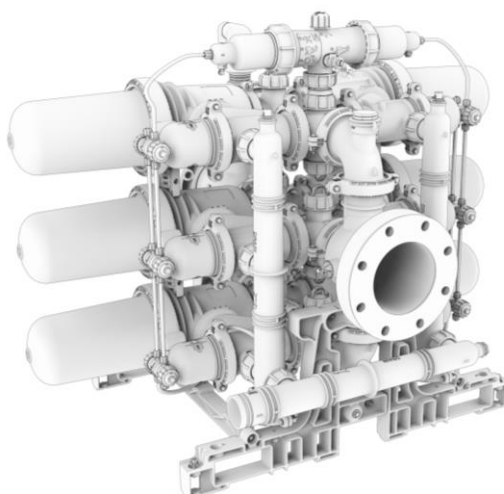
Installation, Operation & Maintenance Instructions



Spin Klin™ Nova Plus



Spin Klin™ Nova Plus Dual



Spin Klin™ Nova Plus Trio

Disclaimer

Copyright © 2021 Amiad Water Systems Ltd. All rights reserved.

The contents of this document, including without limitation all information and materials, images, illustrations, data, drawings, names and any other such materials that appear in this document are the sole property of Amiad Water Systems Ltd, including any intellectual property rights, whether registered or not, and all know-how contained or embodied therein. Amiad may alter, remove or change the Content without any further notice. You may not reproduce, copy, modify, create derivative works from, sell or participate in any sale of, or exploit in any way, in whole or in part, any of this document or its content.

The confidential nature of and/or privilege in the file enclosed is not waived or lost as a result of a mistake or error in this file. If you received this file in error, please notify Amiad immediately at info@amiad.com.

This document does not replace any certified drawing, procedure or information provided by Amiad in reference to a specific customer, site or project.

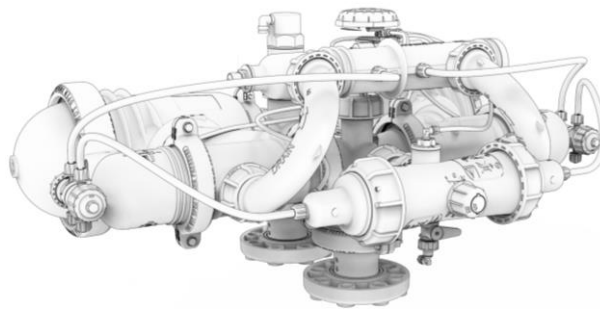
Amiad assumes that all users understand risks involved within this file and/or its attached materials. This document is given in good faith and is not intended to impose any obligation to Amiad. While every effort has been made to ensure the information in this manual is accurate and complete, we would appreciate if you can bring any errors or omissions to the knowledge of Amiad or consult Amiad experts or its authorized representatives if you have any questions.

Amiad Water Systems Ltd. D.N. Galil Elyon 1, 1233500, Israel Tel: 972 4 690 9500 | Fax: 972 4 814 1159
Email: info@amiad.com

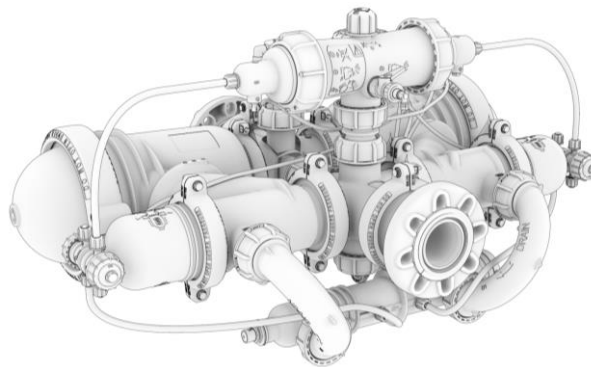
Table of Contents

Spin Klin™ Nova Series.....	4
Spin Klin™ Nova Plus Series	5
Spin Klin™ Nova Dual Series	6
Spin Klin™ Nova Trio Series	7
Product Overview.....	8
Dimensional Drawings.....	10
Technical Specifications – Spin Klin™ Nova	16
Technical Specifications - Spin Klin™ Nova Plus.....	17
1. Introduction.....	18
2. General Safety Instructions.....	18
3. Spin Klin™ Disc Technology	22
4. Unpacking Single.....	25
5. Unpacking Battery Filter	28
Spin Klin™ Nova Multi-tool.	33
6. Installation & Initial Operation	34
7. Control Schematic.....	40
8. Maintenance Procedures	41
9. Filter Disassembly / Assembly.....	42
9.1. Flushing Valve Disassembly	42
9.2. Flushing Valve Assembly.....	51
9.3. Main Cover and Filter Element	54
9.4. Command Filter	65
9.5. Finger Filter.....	70
10. Disc Cleaning Procedure	73
11. Winterization.....	77
11.1. Filter Disassemble for Water Draining.....	79
11.2. Assembly After Water Draining	83
12. Bill of Materials.....	88
13. Troubleshooting.....	100
14. Amiad Limited Warranty.....	102

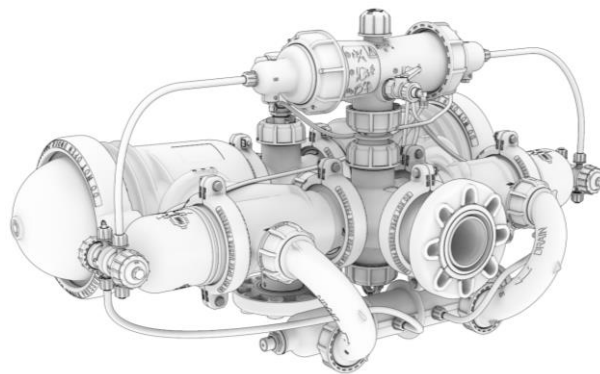
Spin Klin™ Nova Series



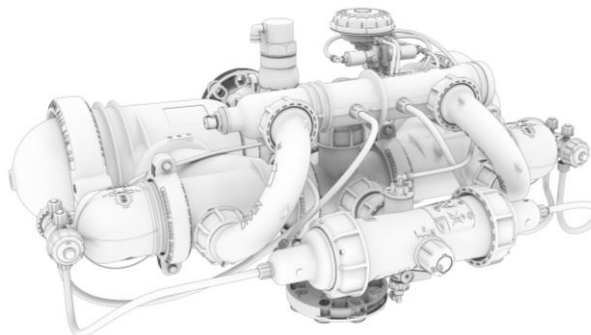
3" Spin Klin™ Nova On-line



3" Spin Klin™ Nova In-line

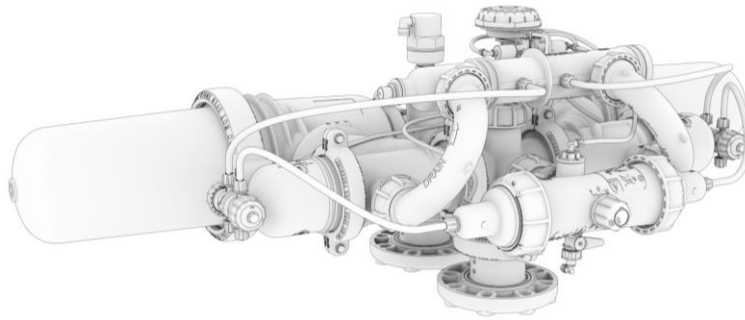


3" Spin Klin™ Nova Angle

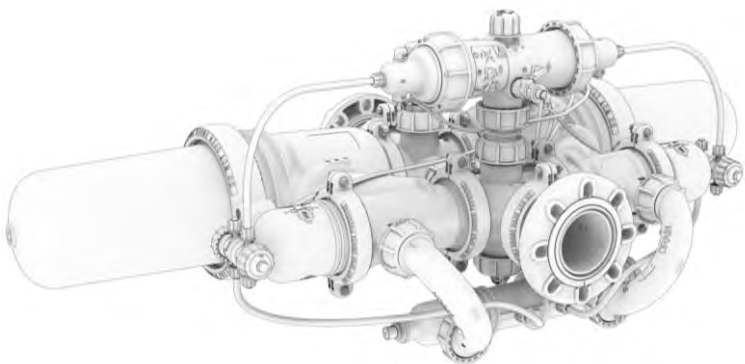


3" Spin Klin™ Nova Reverse Angle

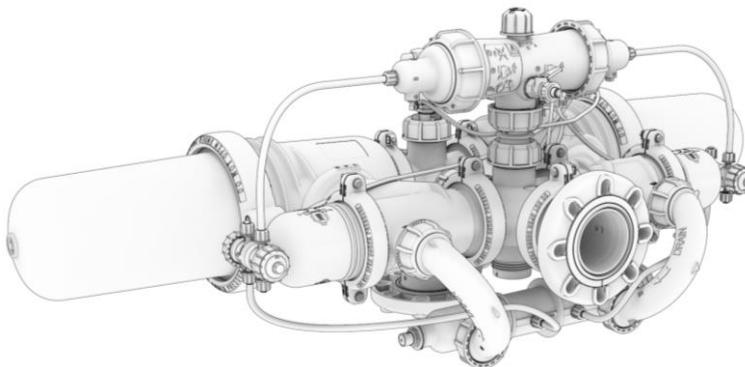
Spin Klin™ Nova Plus Series



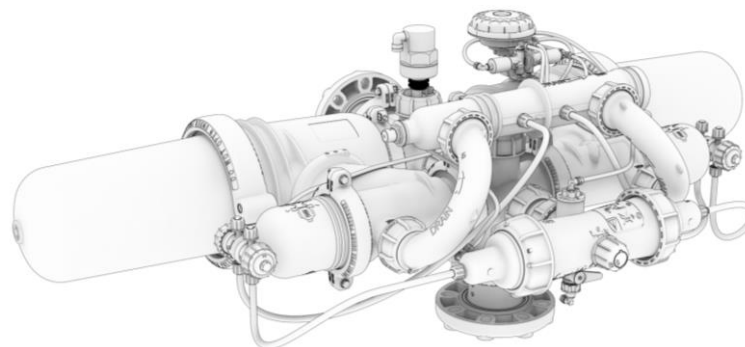
4" Spin Klin™ Nova Plus On-line



4" Spin Klin™ Nova Plus In-line

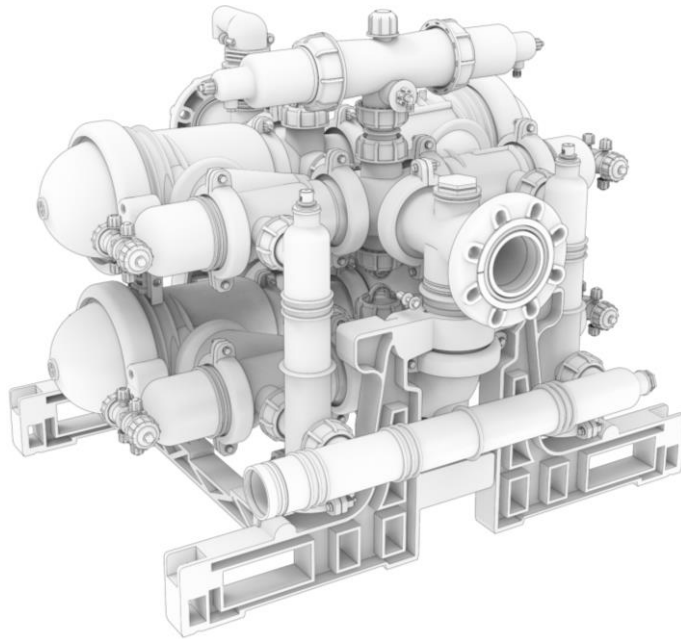


4" Spin Klin™ Nova Plus Angle

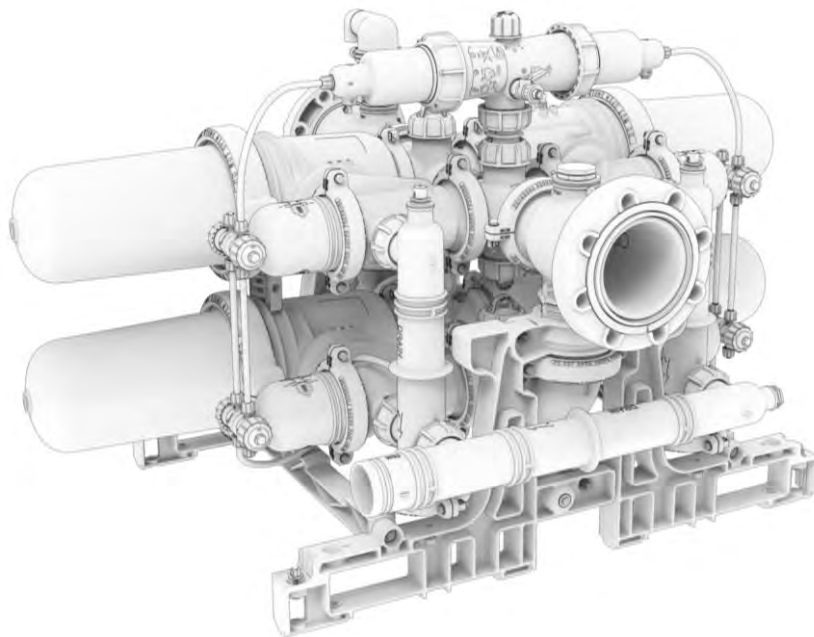


4" Spin Klin™ Nova Plus Reverse Angle

Spin Klin™ Nova Dual Series

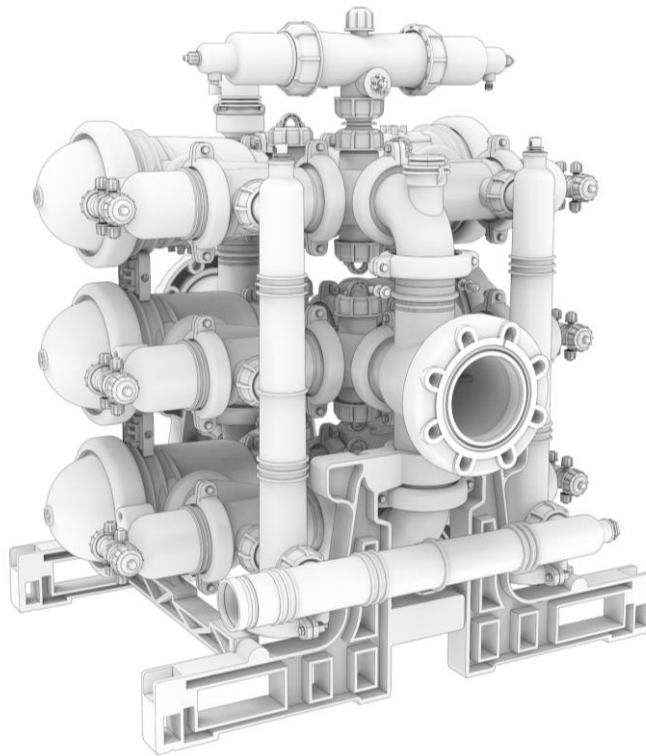


4" Spin Klin™ Nova Dual

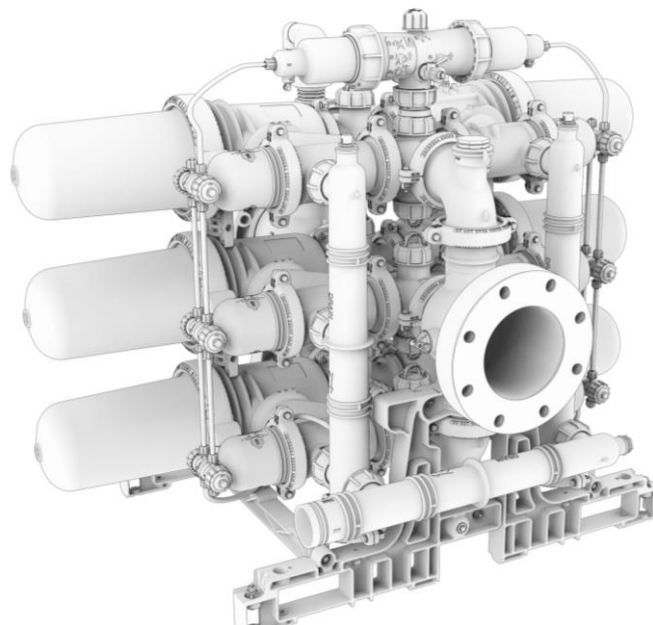


6" Spin Klin™ Nova Plus Dual

Spin Klin™ Nova Trio Series



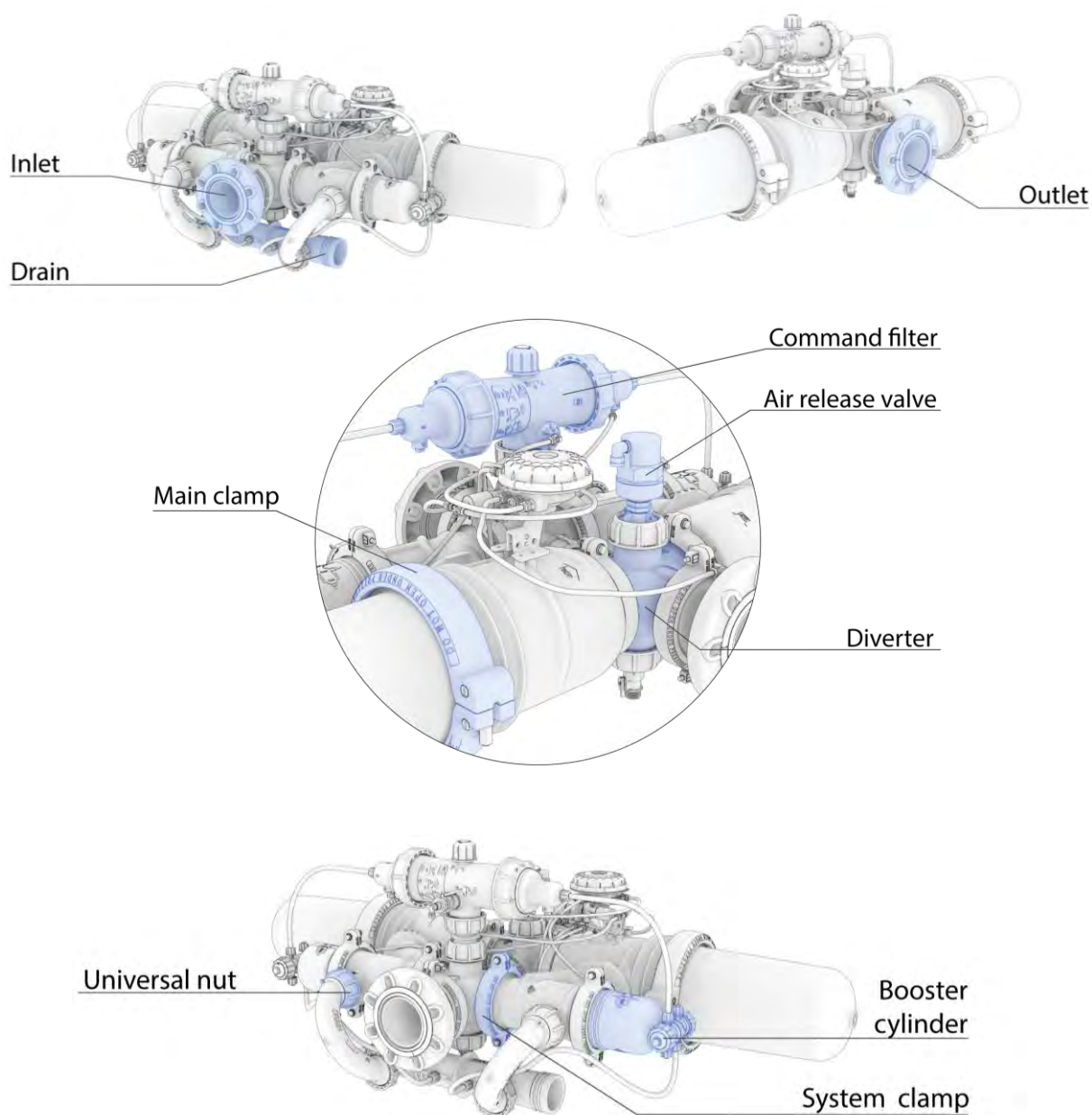
6" Spin Klin™ Nova Trio



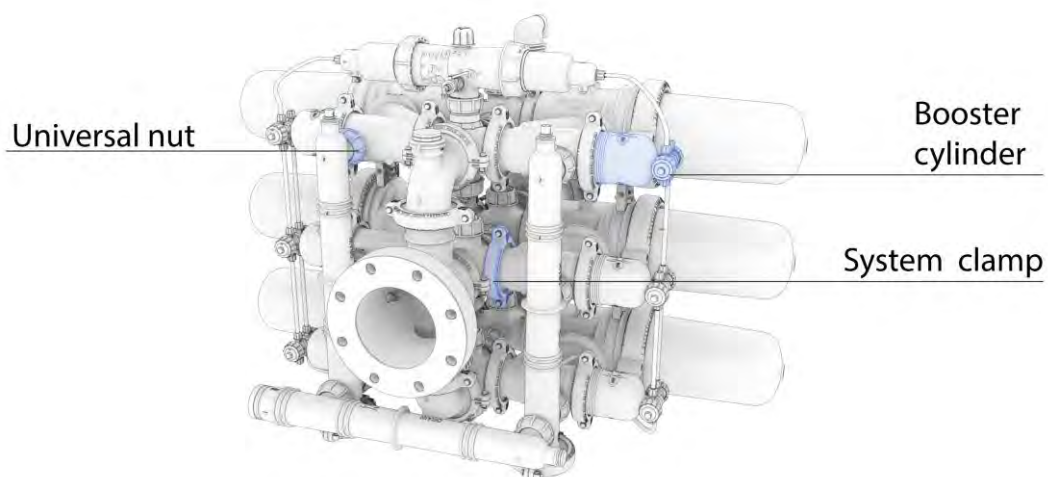
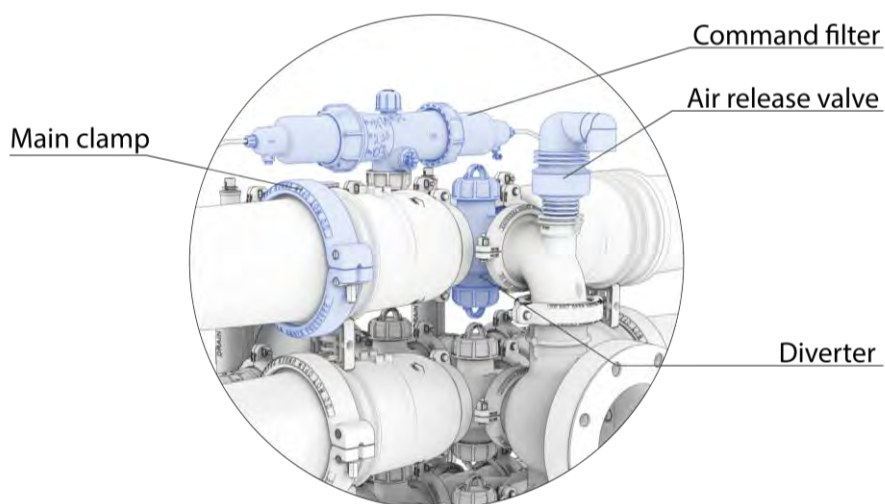
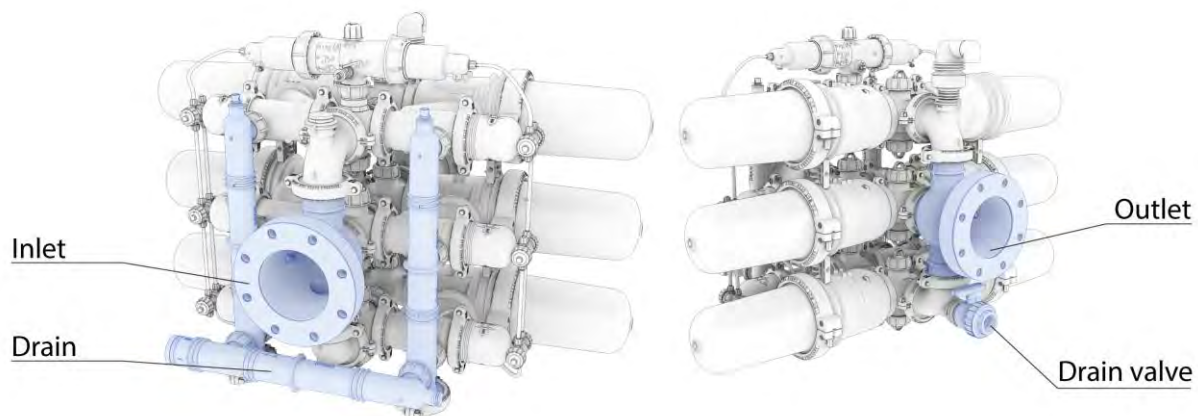
8" Spin Klin™ Nova Plus Trio

Product Overview

Single

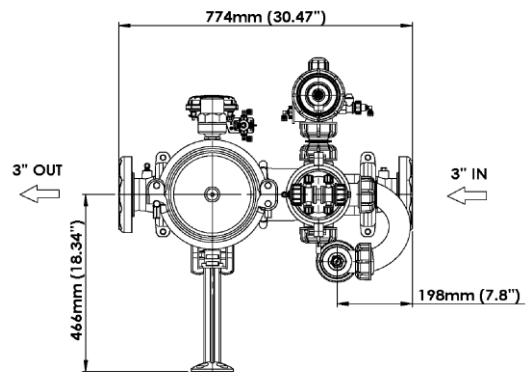
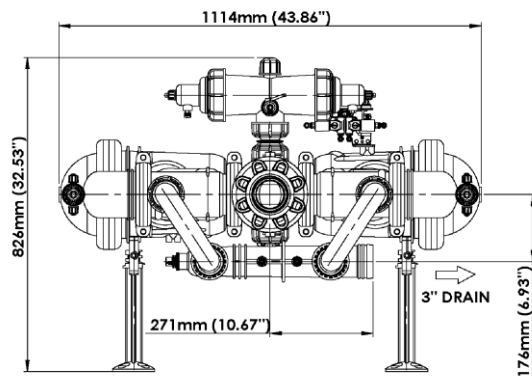


Battery

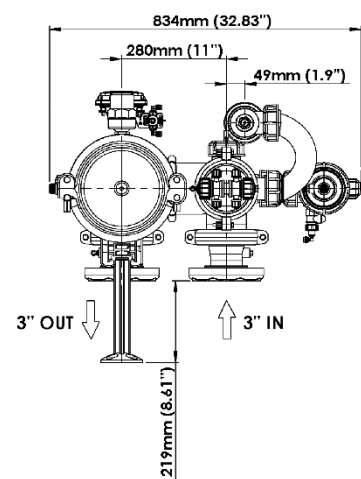
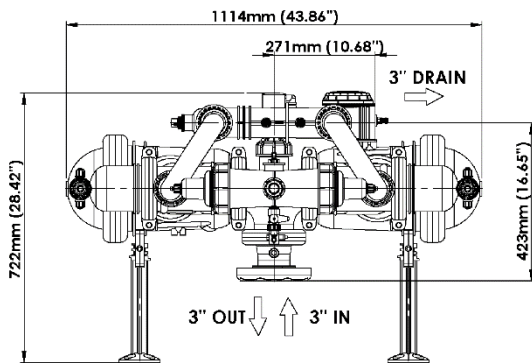


Dimensional Drawings

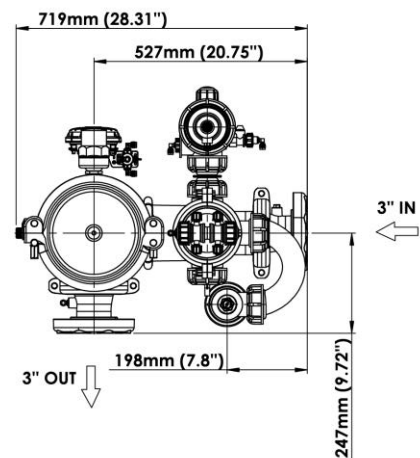
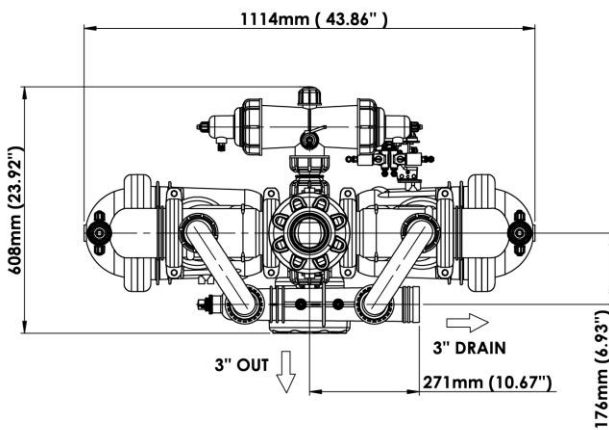
3" Spin Klin™ Nova Single In-line



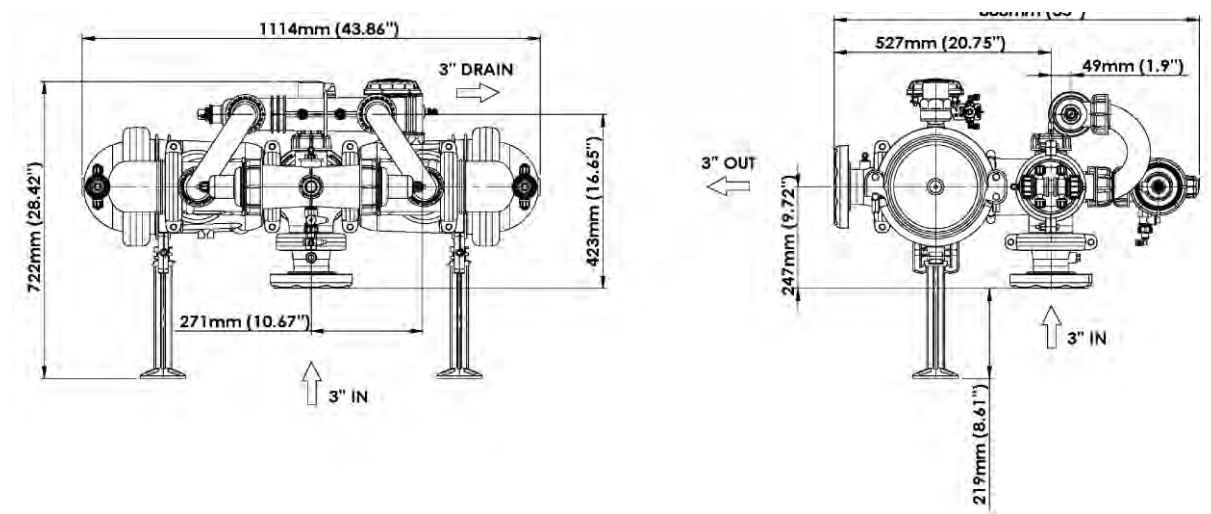
3" Spin Klin™ Nova Single On-line



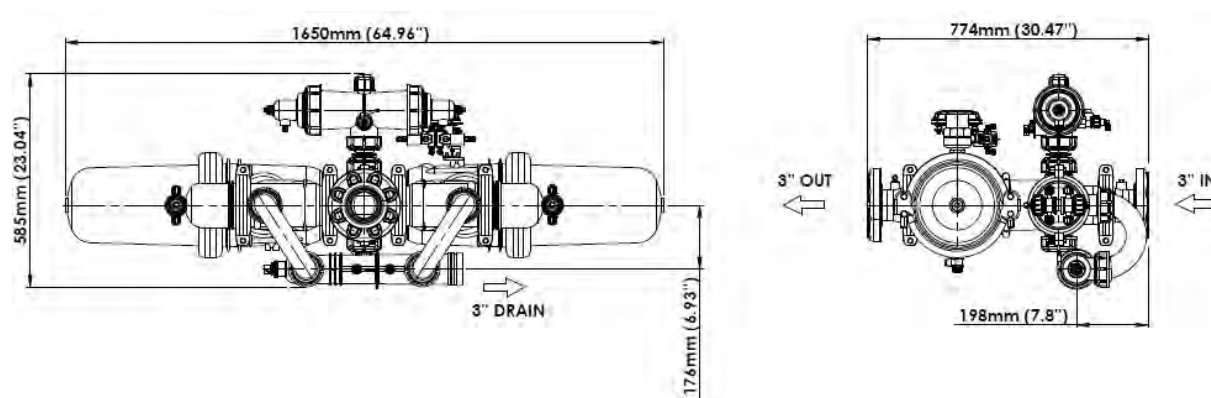
3" Spin Klin™ Nova Single Angle



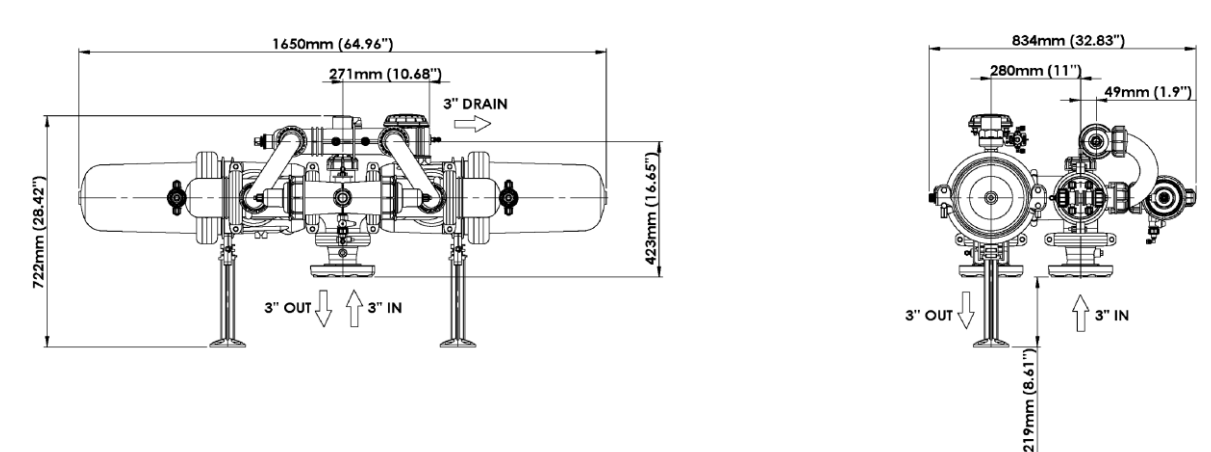
3" Spin Klin™ Nova Single Reverse Angle



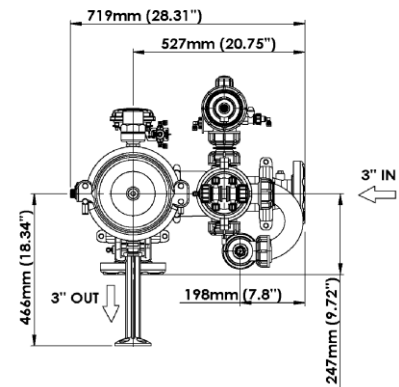
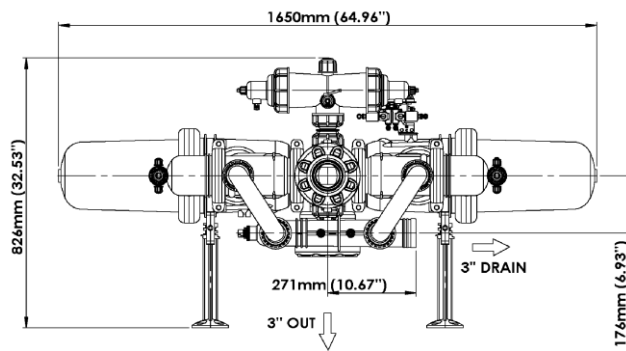
3" Spin Klin™ Nova Plus Single In-line



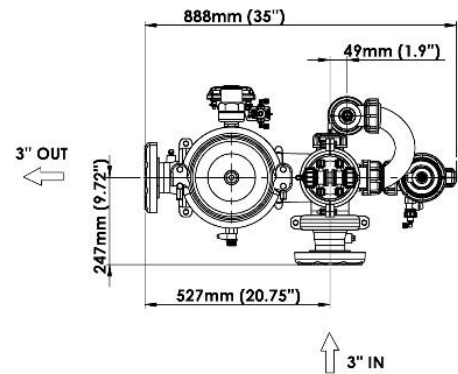
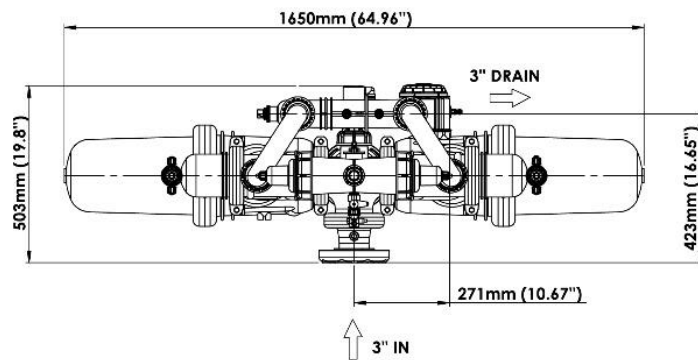
3" Spin Klin™ Nova Plus Single On-line



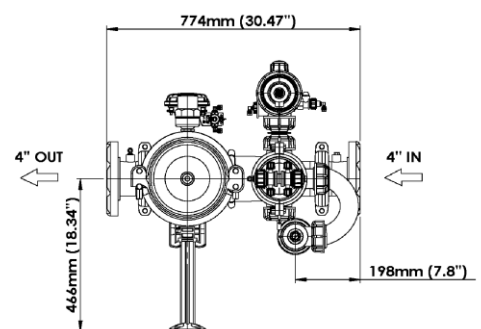
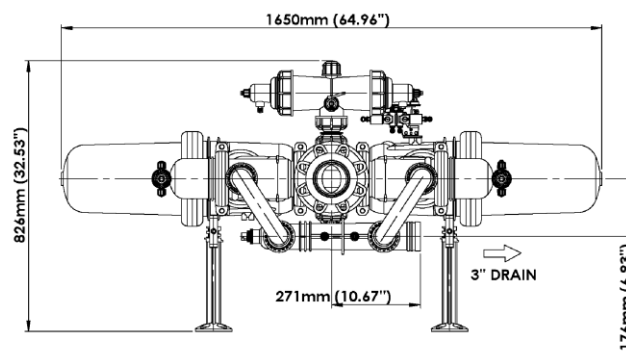
3" Spin Klin™ Nova Plus Single Angle



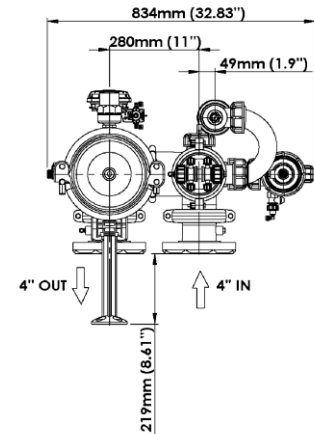
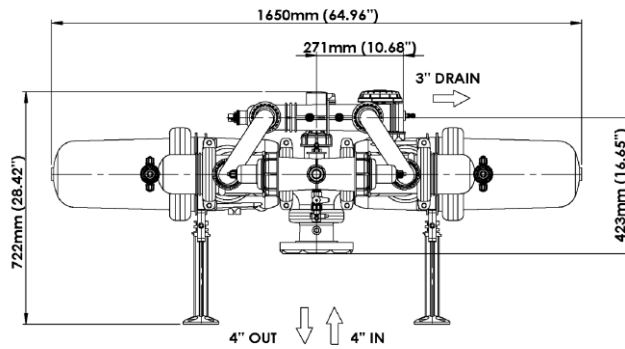
3" Spin Klin™ Nova Plus Single Reverse Angle



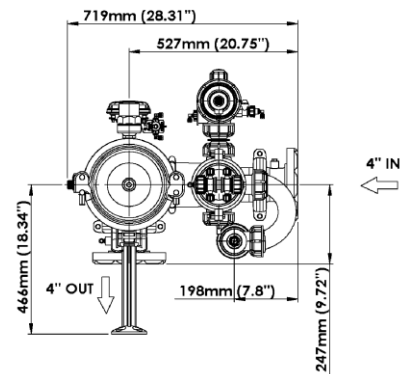
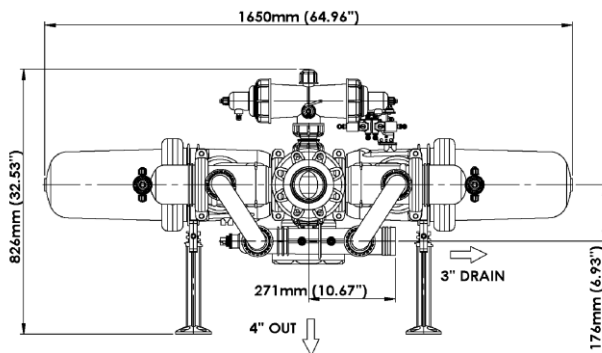
4" Spin Klin™ Nova Plus Single In-line



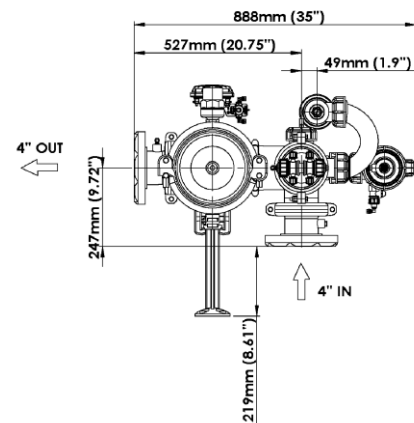
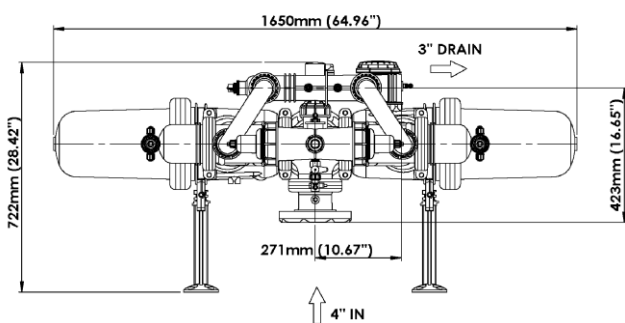
4" Spin Klin™ Nova Plus Single On-line



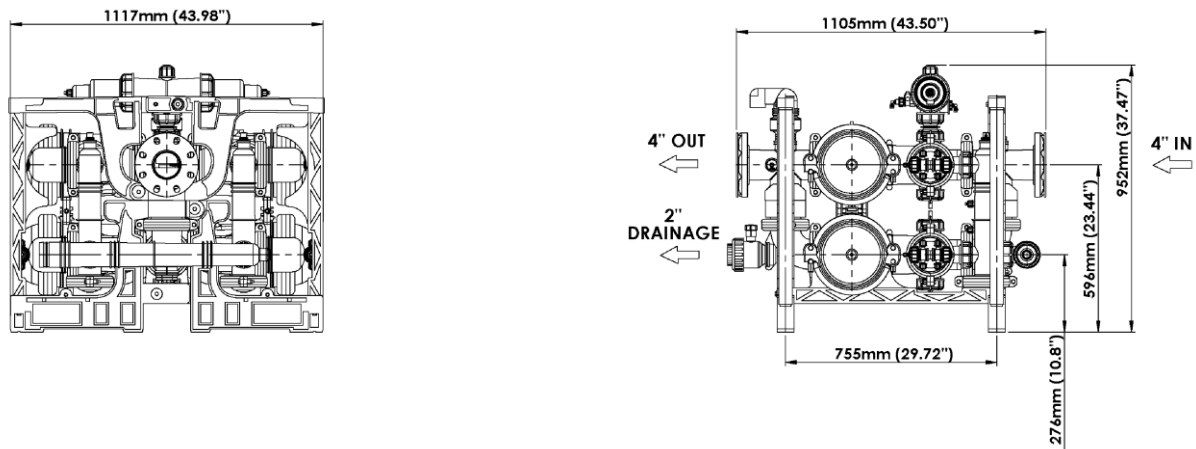
4" Spin Klin™ Nova Plus Single Angle



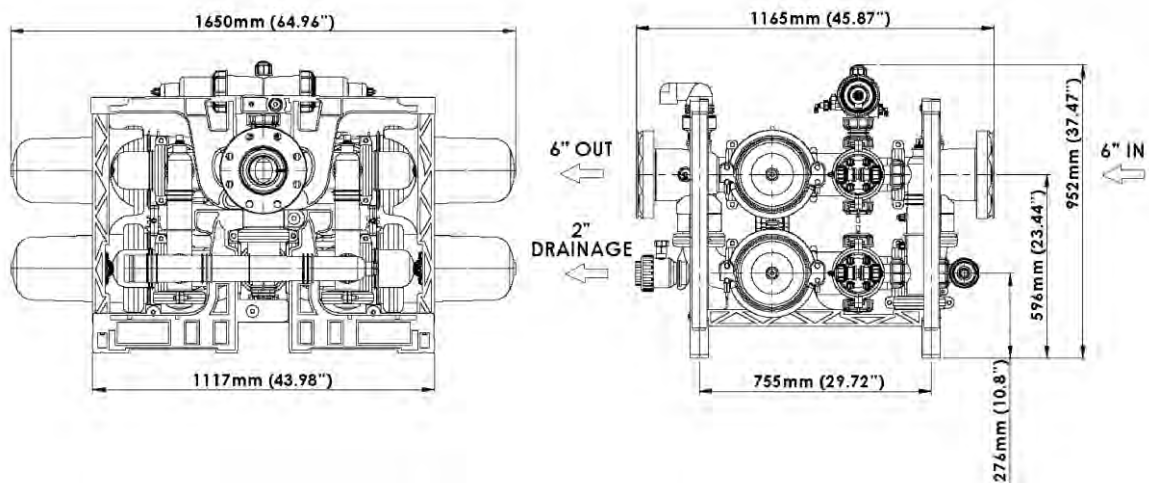
4" Spin Klin™ Nova Plus Single Reverse Angle



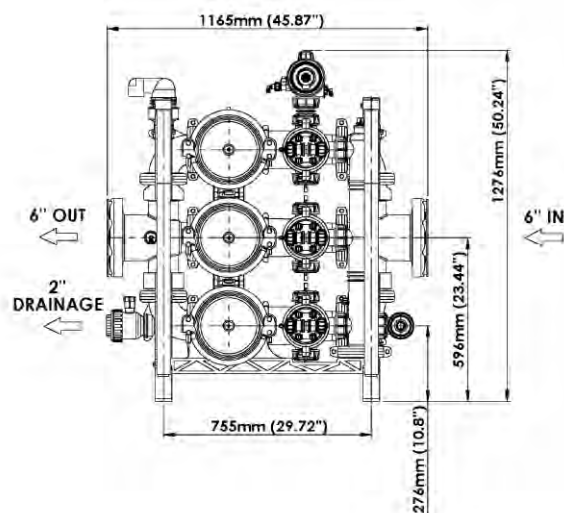
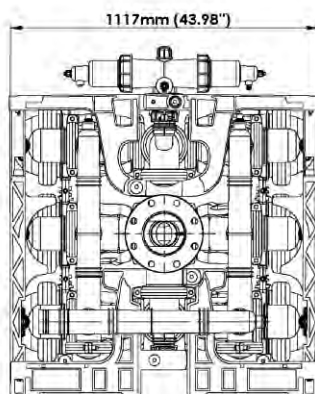
4" Spin Klin™ Nova Dual



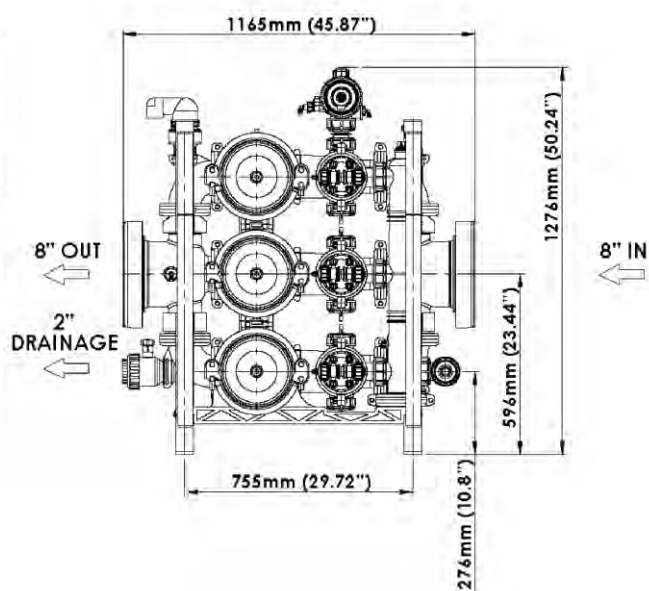
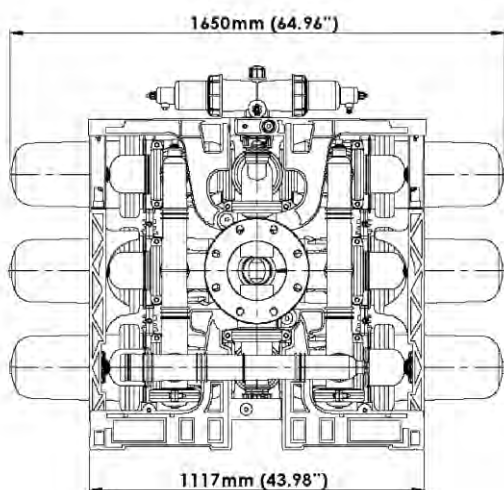
6" Spin Klin™ Nova Plus Dual



6" Spin Klin™ Nova Trio



8" Spin Klin™ Nova Plus Trio



Technical Specifications – Spin Klin™ Nova

General data	3" Spin Klin™ Nova Single	4" Spin Klin™ Nova Dual	6" Spin Klin™ Nova Trio
Max. flow rate (130μ)*	50 m³/h (220 gpm)	100 m³/h (440 gpm)	150 m³/h (660 gpm)
Min. operating pressure when cleaning	1.5 bar (22 psi)		
Max. operating pressure	10 bar (145 psi)		
Operating temperature	5-60°C		
Filtration area	1,760 cm² (272 in²)	3,520 cm² (544 in²)	5,280 cm² (816 in²)
Inlet/Outlet diameter	3" (80 mm) Grooved coupling / Universal flange	4" (100 mm) Grooved coupling / Universal flange	6" (150 mm) Universal flange
Weight (empty)	54 kg (118 lb)	115 kg (253 lb)	156 kg (344 lb)
* Consult Amiad for optimum flow depending on filtration degree and water quality.			

ELECTRONIC CONTROL (ADI-P, SINGLE UNITS ONLY)

Control power supply	4 x AA type 1.5V batteries / External 7-14V DC
Solenoid operation data	9-12V DC latching solenoid
DP switch	Integral sensors

ELECTRONIC CONTROL (ADI-X)

Control power supply	4 x D type 1.5V batteries / External 7-14 VDC
Solenoid operation data	9-12 V DC latching solenoid
DP switch	Integral sensors

FLUSHING DATA (AT 1.5 BAR, 22 PSI)

Exhaust valve	3" (80 mm) Grooved coupling
Flushing time	18 sec
Reject water volume per flush cycle	36 liters (9.5 gallons)
Flushing flow rate	7.2 m³/h (44 gpm)

CONSTRUCTION MATERIALS

Filter housing and lid	RPA (Reinforced Polyamide)
Discs	PP (Polypropylene) or PA (Polyamide)
Cleaning mechanism	All-polymeric
Exhaust valve	All-polymeric

When the pressure on downstream is over 6 bar during backwash, installing an orifice valve in the drain manifold is recommended to prevent damage to the SK spines.

Flow Rate (130 micron)							CCM Clogging
3" Single		4" Dual		6" Trio			
		m³/h	gpm	m³/h	gpm	m³/h	gpm
	 GOOD	50	220	100	440	150	660
	 AVERAGE	40	176	80	352	120	528
	 POOR	35	154	70	308	105	462
	 VERY POOR	25	110	50	220	75	330

	 GOOD	>15
	 AVERAGE	5 - 15
	 POOR	2.5 - 5
	 VERY POOR	1.5 - 2.5

Availability of disc type and micron size

Micron	10	20	40	55	70	100	130	200	400
PP / PA (Nylon) 2" Discs	PP	PP, PA	PP, PA	PP, PA	PP, PA	PP, PA	PP, PA	PP, PA	PP

Technical Specifications - Spin Klin™ Nova Plus

General data	3" Spin Klin™ Nova PLUS Single	4" Spin Klin™ Nova PLUS Single	6" Spin Klin™ Nova PLUS Dual	8" Spin Klin™ Nova PLUS Trio
Max. flow rate (130μ)*	80 m³/h (352 gpm)	110 m³/h (484 gpm)	220 m³/h (968 gpm)	330 m³/h (1,452 gpm)
Min. operating pressure when cleaning	1.5 bar (22 psi)			
Max. operating pressure	10 bar (145psi)			
Operating temperature	5-60°C			
Filtration area	5,240 cm² (383 in²)	5,240 cm² (383 in²)	10,480 cm² (1,624 in²)	15,720 cm² (2,437 in²)
Inlet/Outlet diameter	3" (90 mm) Grooved coupling / Universal flange	4" (100 mm) Grooved coupling / Universal flange	6" (150 mm) Universal flange	8" (200 mm) Universal flange
Weight (empty)	57 kg (126 lb)	58 kg (129 lb)	127 kg (279 lb)	182 kg (401 lb)
* Consult Amiad for optimum flow depending on filtration degree and water quality.				

ELECTRONIC CONTROL (ADI-P, SINGLE UNITS ONLY)

Control power supply	4 x AA type 1.5V batteries / External 7-14V DC
Solenoid operation data	9-12 V DC latching solenoid
DP switch	Integral sensors

ELECTRONIC CONTROL (ADI-X)

Control power supply	4 x D type 1.5V batteries / External 7-14 VDC
Solenoid operation data	9-12 V DC latching solenoid
DP switch	Integral sensors

FLUSHING DATA (AT 1.5 BAR, 22 PSI)

Exhaust valve	3" (80 mm) Grooved coupling
Flushing time	18 sec
Reject water volume per flush cycle	65 liters (17.2 gallons)
Flushing flow rate	13 m³/h (57.2 gpm)
Exhaust valve	

CONSTRUCTION MATERIALS

Filter housing and lid	RPA (Reinforced Polyamide)
Discs	PP (Polypropylene) or PA (Polyamide)
Cleaning mechanism	All-polymeric
Exhaust valve	All-polymeric
Seals	Seals

When the pressure on downstream is over 6 bar during backwash, installing an orifice valve in the drain manifold is recommended to prevent damage to the SK spines.

Flow Rate (130 micron)										CCM Clogging
3" Single PLUS		4" Single PLUS		6" Dual PLUS		8" Trio PLUS				
		m³/h	gpm	m³/h	gpm	m³/h	gpm	m³/h	gpm	
	 GOOD	80	352	110	484	220	968	330	1,452	>15
	 AVERAGE	60	264	90	396	180	792	270	1,188	5 - 15
	 POOR	55	242	80	352	160	704	240	1,056	2.5 - 5
	 VERY POOR	50	220	70	308	140	616	210	924	1.5 - 2.5

Availability of disc type and micron size

Micron	10	20	40	55	70	100	130	200	400
PP / PA (Nylon) 4" Discs	N/A	PP	PP, PA	PP, PA	N/A	PP	PP	PP	PP

1. Introduction

Thank you for purchasing the user-friendly, simply operated Nova Spin Klin™ filter.

For operation and maintenance, please follow the instructions in this manual.

The Nova Spin Klin™ series consists of automatic self-cleaning filters, designed for filtering water only, and must be operated within the pressure framework specifications.

2. General Safety Instructions

Note:

Applicable local or national safety rules and regulations for preventing accidents must be applied in all work procedures in addition to the following instructions.

2.1. General Safety Instructions

Amiad Water Systems (manufacturer) filtration products are operated as a core component in water systems. System designers, installers and operators must comply with all relevant safety standards.

Prior to installation, operation, maintenance and/or any other type of action carried out on the filter, carefully read the safety, installation and operation instructions.

During installation, operation and/or maintenance of the filter all conventional safety instructions must be observed in order to avoid danger to the workers, the public and/or to property in the vicinity.

No change or modification to the equipment is permitted without advanced written notification given by the manufacturer or by its representative(s) on the manufacturer's behalf.

Always observe standard safety instructions and good engineering practices whilst working in the filter's vicinity.

Use the filter only for its intended purpose as designed by Amiad Water Systems. Any misuse of the filter may lead to damage and may affect your warranty coverage. Consult with Amiad Water Systems prior to any non-regular use of this equipment.

Observe the safety stickers on the filter and do not perform any operation other than those given in this manual.

2.2. Shipment and Transporting

Shipping and transporting the filter must be done in a safe and stable manner and in accordance with relevant standards and regulations.

For shipping, lifting and positioning the filter, use only approved lifting equipment and authorized employees and contractors.

2.3. Safe Installation

Install the filter according to the detailed Installation Instructions provided with the filter by the manufacturer and according to the description given in this manual.

Make sure to leave enough clearance to enable easy access for safe maintenance operations.

Make sure to have suitable lighting at the filter's location to enable good visibility and safe maintenance.

Arrange suitable platforms and safety barriers to enable easy and safe access to the filter without needing to climb on pipes and other equipment. Verify that any platform, barrier, ladder or other such equipment is built, installed and used in accordance with the relevant local authorized standards.

Check and re-tighten all bolts during commissioning and after the first week of operation.

Use only appropriate standard tools and equipment operated by qualified operators when installing, operating and maintaining the filter.

When installation is required in hazardous environment sites, underground or high above ground, ensure that the site design and the auxiliary equipment are appropriate and that installation procedures are carried out in accordance with the relevant standards and regulations.

Ensure walking areas around the installation are slip resistant when wet.

2.4. Hydraulics

We recommend installing manual isolation valves before and after the filter. In order to prevent unexpected water hammer, it is highly recommended to install a quick pressure release valve.

Please note not to exceed the maximum working pressure indicated on the filter's specifications table.

In cases where the water system is higher than the filters, it is recommended to install a non-return valve in the filter's downstream.

In cases where the water system is lower than the filters, it is recommended to install a pressure sustaining valve in the filter's downstream.

In cases of low working pressure conditions and very poor water quality, installing a pressure sustaining valve is recommended to maintain efficient minimal flushing pressure.

When the pressure on downstream is over 6 bar during backwash, installing an orifice valve in the drain manifold is recommended to prevent internal damage.

2.5. Electricity

Electric wiring must be performed by an authorized electrician only, using standardized and approved components.

Install a lockable main power cut-off switch close to the control panel.

If due to site constraints, the control panel is installed without a clear line of vision to the filter, an additional lockable power disconnect cut-off switch should be installed near each filter unit.

2.6. Pneumatics

Install a lockable main cut-off switch, equipped with a pressure release mechanism, on the compressed air supply line close to the control panel.

If the control panel is installed without a clear line of vision to the filter, a lockable compressed air cut-off switch, equipped with a pressure release mechanism, should be installed near each filter unit.

Ensure that the compressed air supplied to the filter never exceeds the maximum designated pressure for the filter. An air-pressure reduction valve should be installed on the compressed air supply line upstream of the filter's pneumatic inlet port.

2.7. Civil Engineering

Ensure that any civil engineering work at the installation site such as construction, lifting, welding, etc., is performed by qualified workers / technicians / contractors and in accordance with relevant local standards.

While using lifting equipment, ensure that the filter or the lifted part is attached securely and in a safe manner.

Do not leave lifted equipment unsupervised. Avoid working below lifted equipment.

Wear a safety helmet while using lifting equipment.

Ensure that the flooring is sloped for drainage and to avoid accumulation of liquids.

2.8. Maintenance

Servicing the filter should be performed according to manufacturer's instructions.

Pause or shut-off the flushing controller.

When using external pneumatic pressure, close the pressurized air supply.

Isolate the filter from the water system by closing the inlet and outlet isolation valves.

Release pressure and empty the filter by opening the drainage valve.

Place warning signs around the work area as required by local standards and procedures.

Inspect the filter's safety stickers and replace any that are damaged or faded.

2.9. Mechanical

Use only appropriate standard tools when working on the filter.

Always open and close valves slowly and gradually.

Remove grease and oily material residues to avoid slipping.

Before disconnecting the filter from the water supply, electricity and pneumatics and before releasing the filter's residual pressure DO NOT:

- Loosen or unscrew bolts.
- Remove any protective covers.
- Open any service port flanges.

Avoid splashing and water leakage to minimize slippage, electrification or moisture damage to the equipment.

While using lifting equipment, ensure that the filter or the lifted part is attached securely and in a safe manner.

Do not leave lifted equipment unsupervised. Avoid working below lifted equipment.

Wear a safety helmet, goggles, gloves, and any other personal safety equipment required by local standards and regulations.

Entering a filter must be done in accordance with relevant local safety instructions, standards and regulations for working in hazardous environments.

Manual cleaning of filter media using high water pressure or steam should be performed in accordance with cleaning system instructions, local standards and regulations and without endangering the operator or the vicinity.

Manual cleaning of filter element using acid or other chemical agents should be performed in accordance with relevant material safety instructions, local standards and regulations and without endangering the operator or the vicinity.

2.10. Before Returning to Regular Operation

Re-assemble any protective covers or protection mechanisms removed during service or maintenance operations.

Ensure that all tools, ladders, lifting devices, etc., used during maintenance procedures are removed from the filter area and stored.

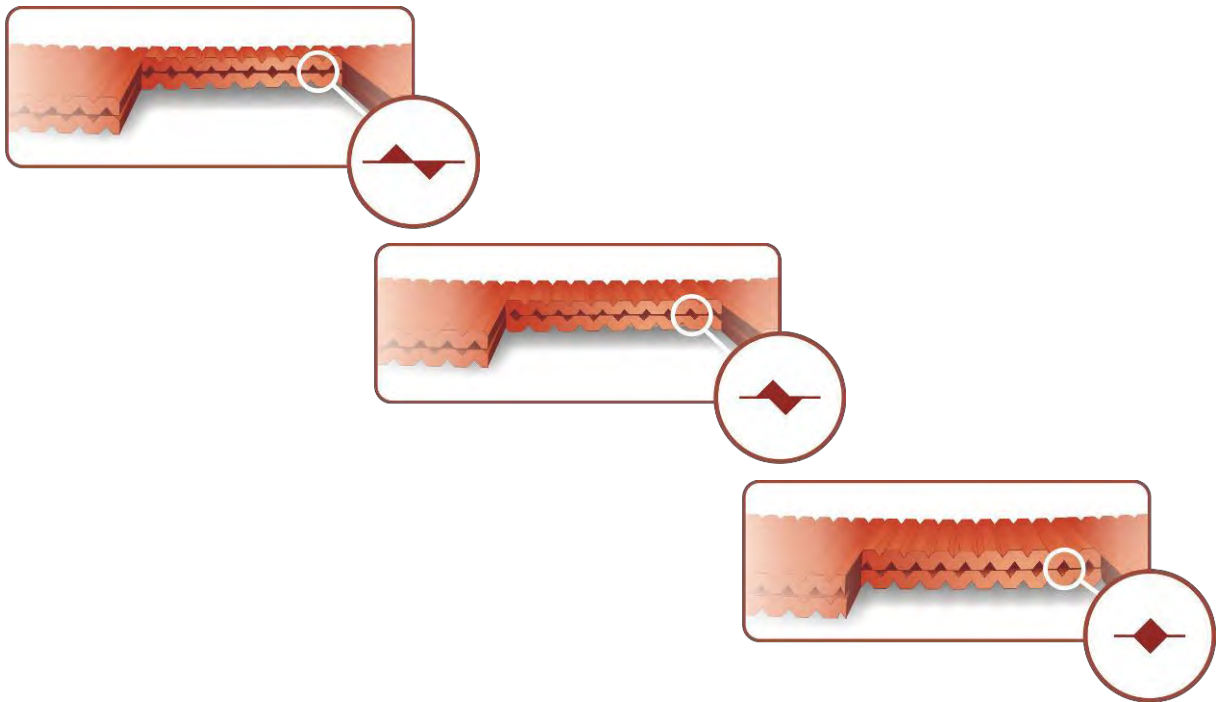
In order to return the filter to regular operation, follow the First Start-up Operation instructions as detailed in your user manual.

Filters used in potable water systems must be disinfected according to local water authority standards and regulations before putting it back into service.

3. Spin Klin™ Disc Technology

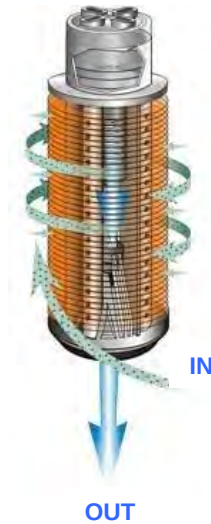
Amiad Water Systems uses a specially designed disc filtration technology. Thin, color-coded polypropylene/nylon discs are diagonally grooved on both sides to a specific micron size. A series of these discs are then stacked and compressed on a specially designed spine. When stacked, the groove on top runs opposite to the groove below, creating a filtration element with a statistically significant series of valleys and traps for solids. The stack is enclosed in corrosion and pressure resistant housing.

During the filtration process, the filtration discs are tightly compressed by a spring power and differential pressure, thus providing high filtration efficiency. Filtration occurs while water is percolation from the outer diameter to the inner diameter of the element. Depending on the micron rating, there are from 18 (in 400-micron discs) to 32 (in 20-micron discs) stopping points in each track, thus creating the unique in-depth filtration.



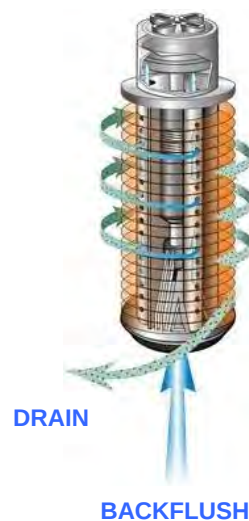
3.1. Spin Klin™ Spine – The Core of the Spin Klin™ Filtration System

The Spin Klin™ discs are stacked on the Spin Klin™ spine. The discs are color-coded according to micron size and are assembled to suit the water filtration requirements. The spine assembly has a spring compression unit and an internal piston, which operate during alternate filtration or back-flush modes. Inside the housing the spring and the pressure difference compress the discs tightly during the filtration process, forcing the water to flow between the grooves and trap the solids.

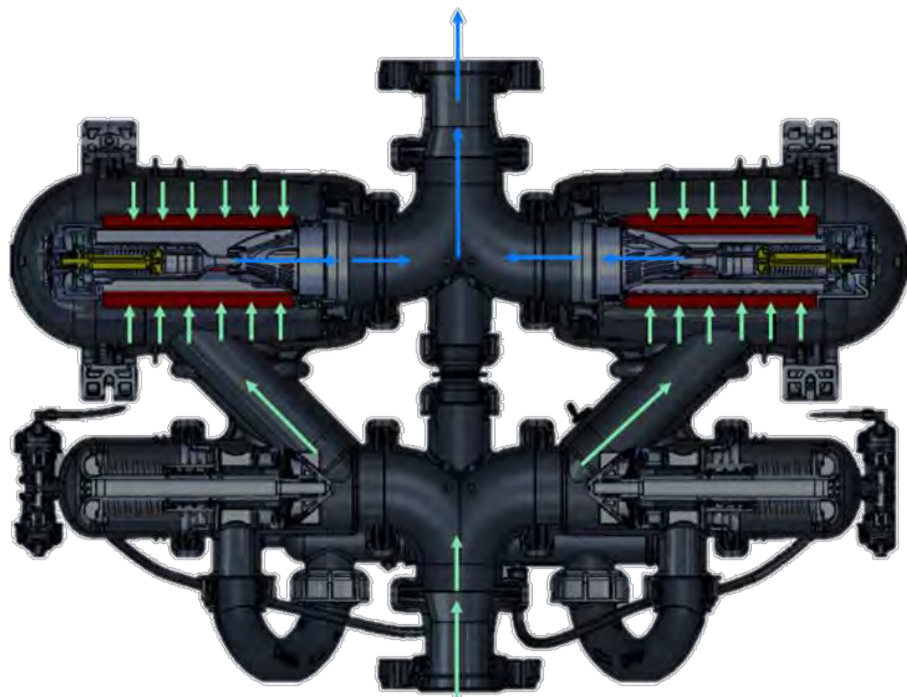


3.2. Spin Klin™ Automatic Flushing Operation

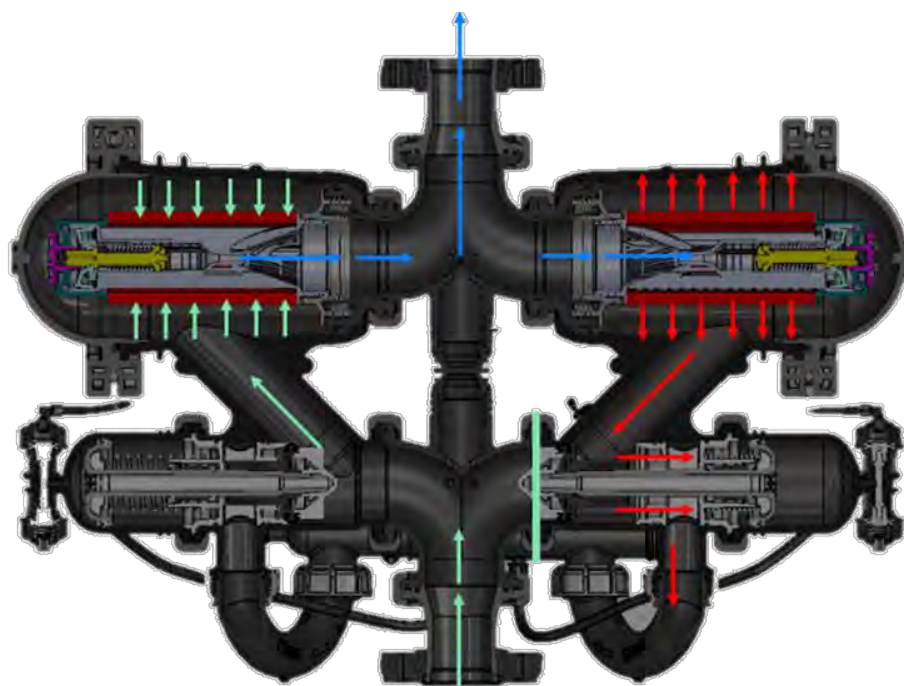
Differential pressure or backup time triggers the flushing controller to activate the flushing cycle. Solenoid number one sends a hydraulic command that closes the inlet 3-way valve and opens the drain. The compression cylinder on the disc element is released. Tangential jets of filtered water flow through special nozzles in opposite directions causing the discs to spin, flushing out the trapped solids.



3.3. Nova Spin Klin™ Filtration Process



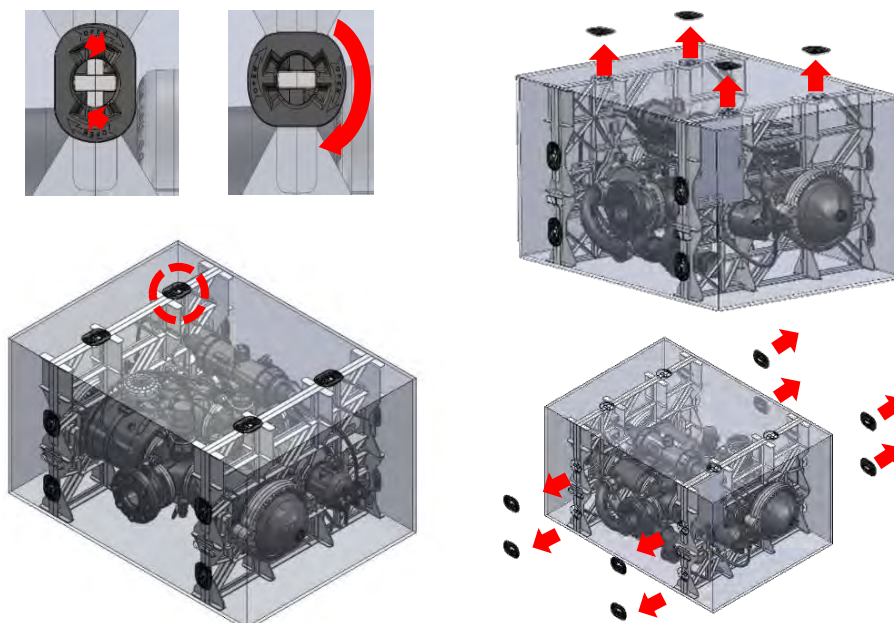
3.4. Nova Spin Klin™ Backwash Process



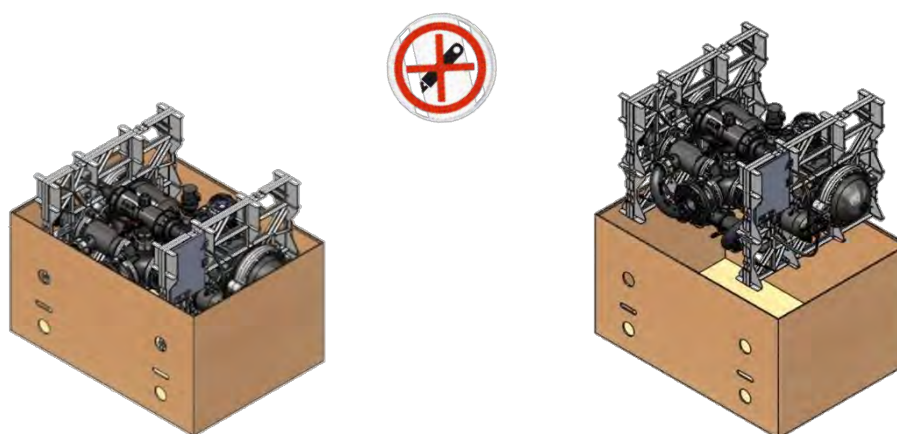
- Upstream water
- Downstream water
- Backwash water

4. Unpacking Single

1. Remove the 12 lockers, rotate each one clockwise using your fingers in the designated grooves.



2. Open the top of the carton box and remove the filter.



Note:

Inside the carton box you will find:

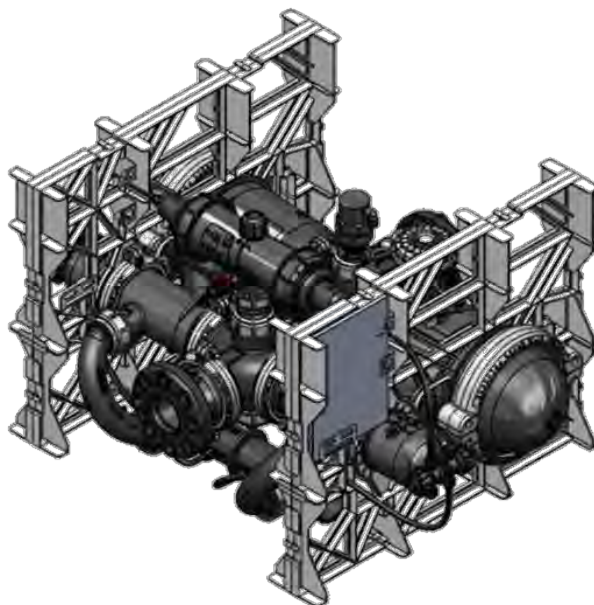
Multifunction tool

Installation, operation and maintenance instructions

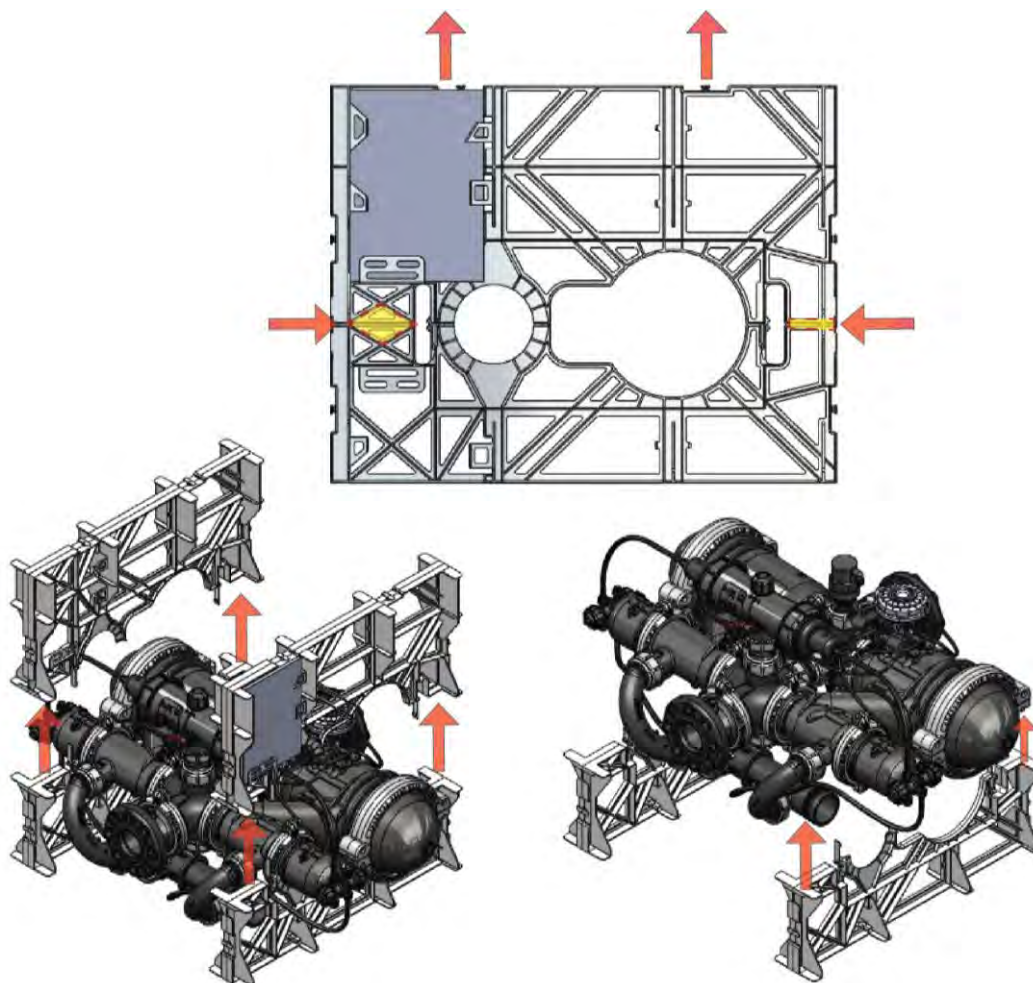
Support legs x 2

Control tubes

3. Place the Spin Klin™ Nova on a flat surface to extract the product from the supporting bridges.



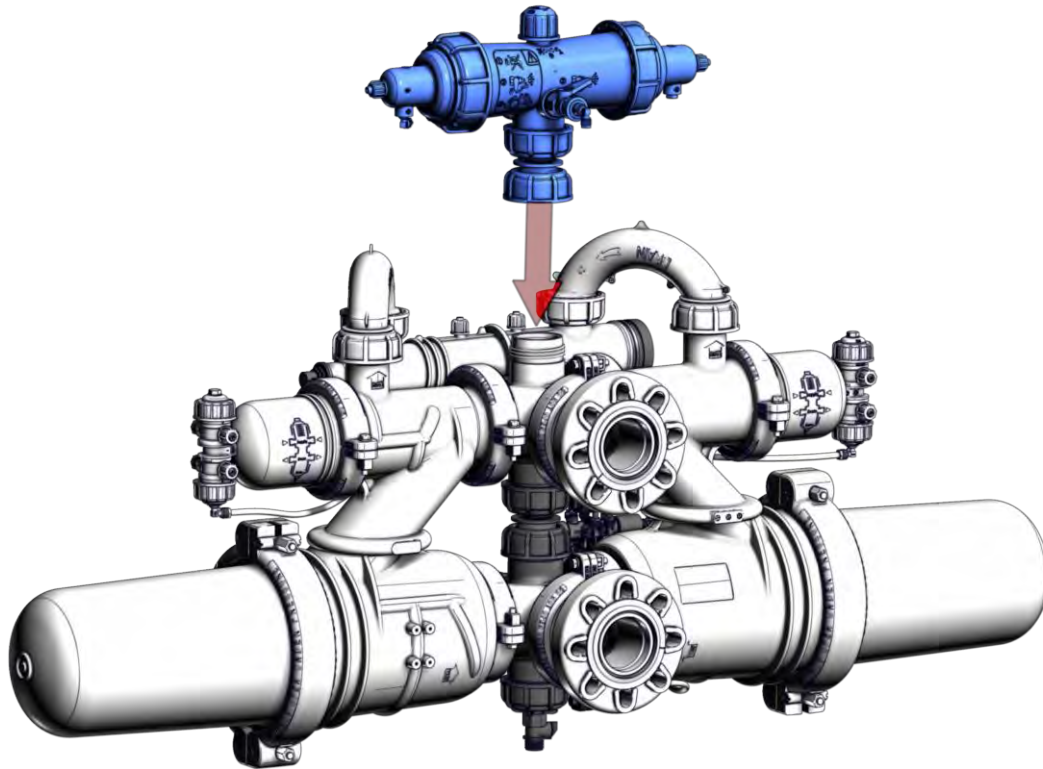
4. Prior to installation, cut the plastic strips and lift the supporting bridge to release the product. Repeat this procedure on the other side to release the product completely.



Note:

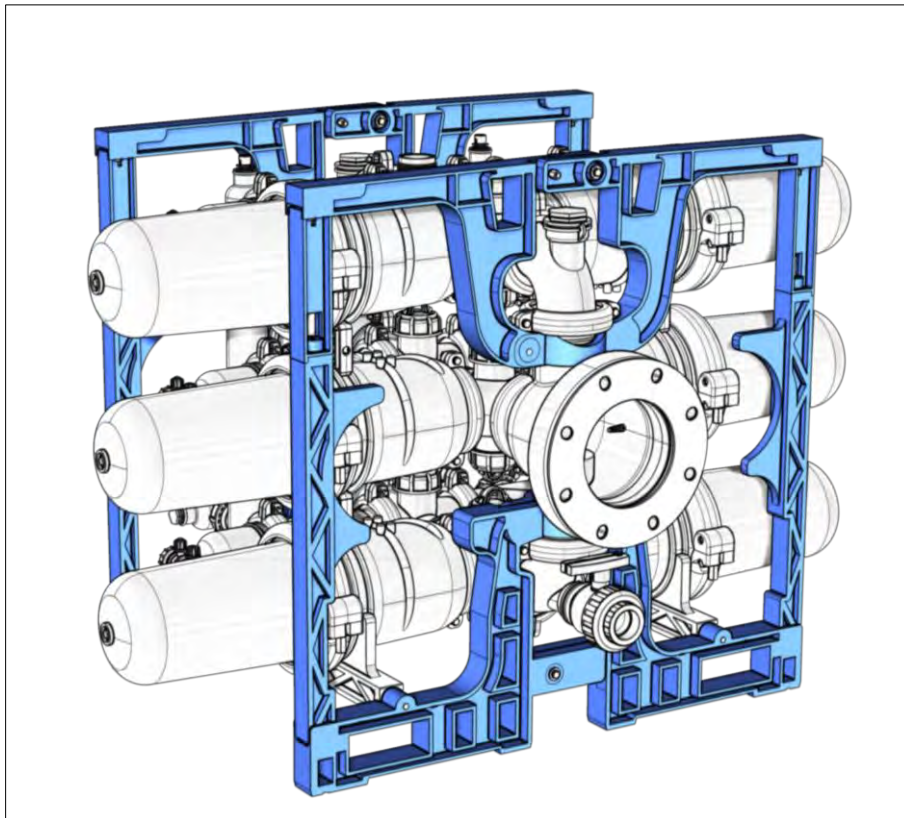
In the On-line configuration, the command filter is disconnected during shipment

4. Install the command filter

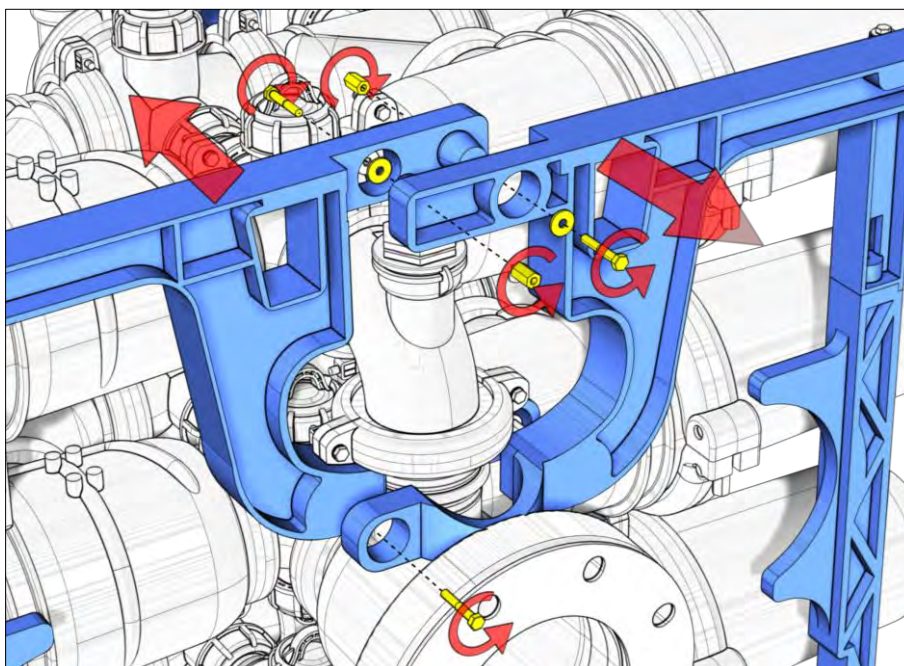


5. Unpacking Battery Filter

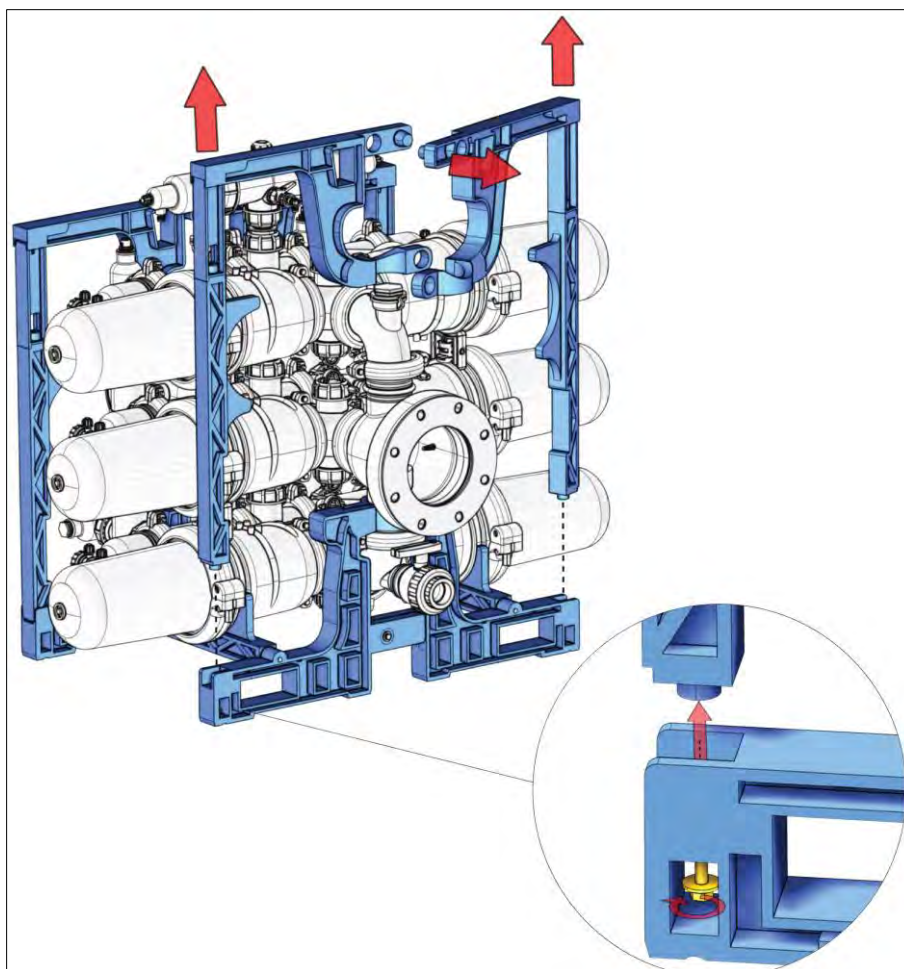
1. Remove the plastic shrink wrap that covers the filter.
2. Place the Spin Klin™ Nova on a flat surface in its final installation position.



3. Disconnect the three screws and separate the horizontal beams.

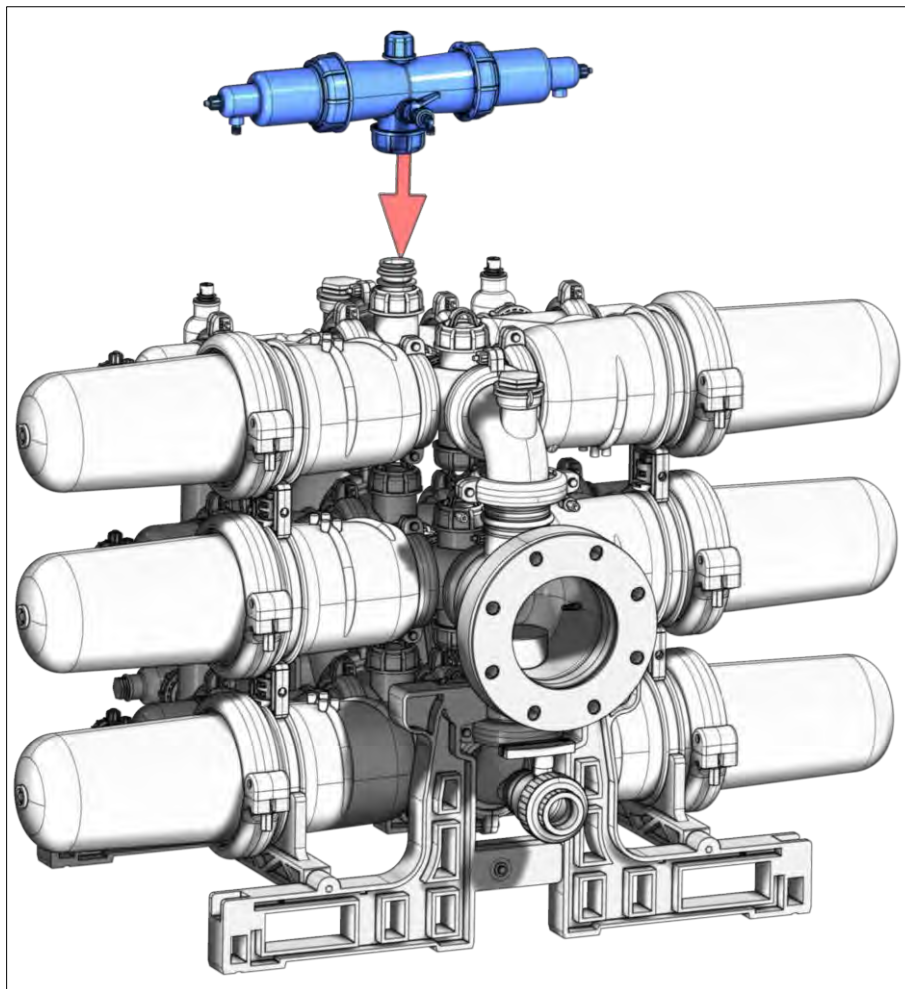


4. Disconnect the vertical beams by releasing the bottom screws on each corner.



Note: The command filter is disconnected during shipment.

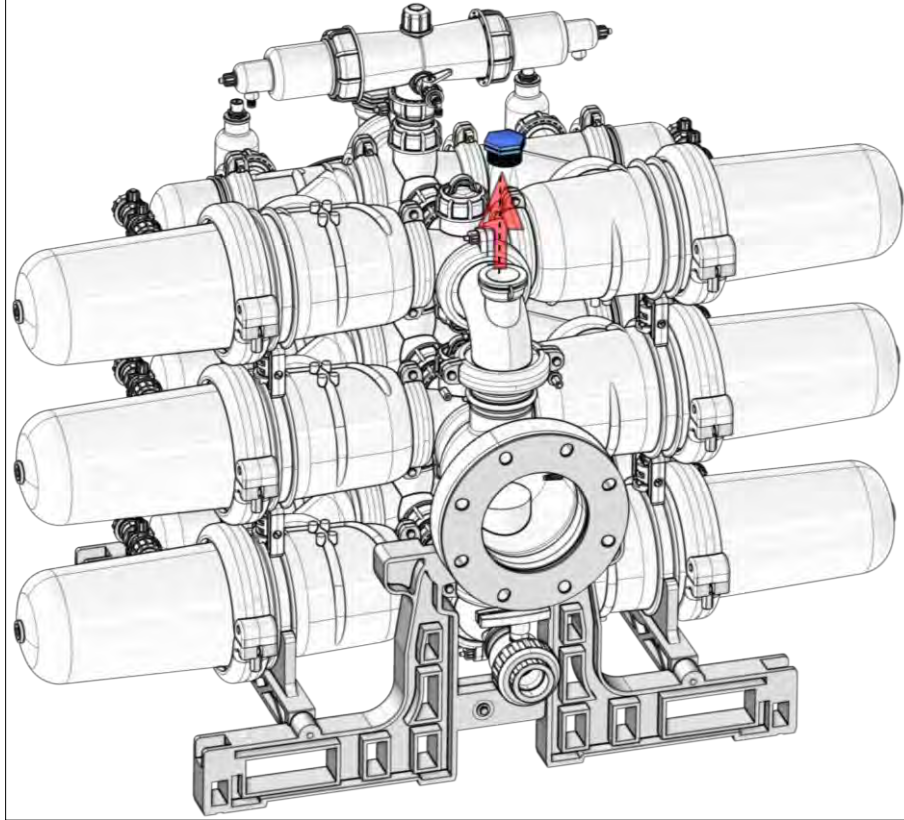
5. Connect the command filter.



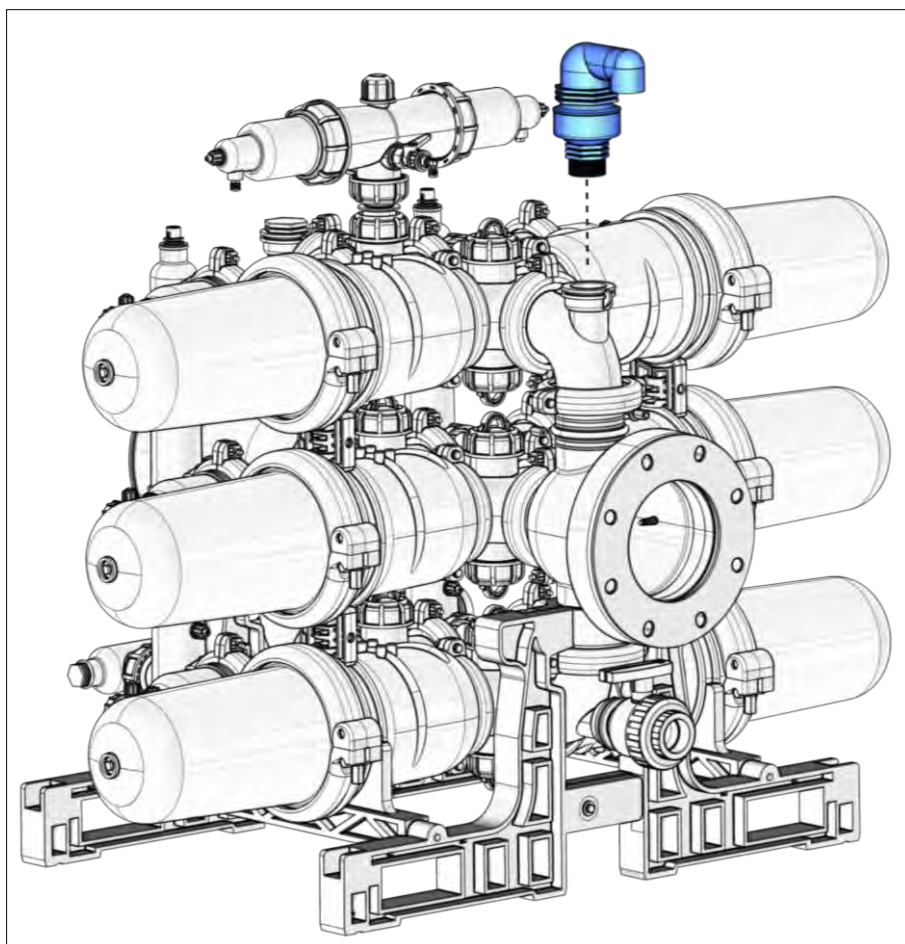
Note:

The air release valve is removed during shipment and needs to be reinstalled after the Spin Klin™ Nova is in its final position.

6. Remove the air release cap.



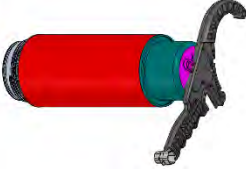
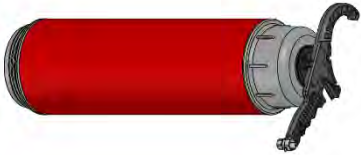
7. Install the air release valve.



Spin Klin™ Nova Multi-tool

A multifunction tool is provided with each Spin Klin™ Nova unit.

See below various usage options:

Finger filter servicing	
Universal nut	
Command filter cover nut	
System clamp joining bolts (M8 bolts – eq.13mm (½") spanner)	
Main clamp joining bolts (M10 bolts – eq.17mm (1 1/16") spanner)	
2" spine - Butterfly tightening nut	
4" spine - Butterfly tightening nut	

6. Installation & Initial Operation

Prior to installation, flush the main line thoroughly to remove large objects that may damage the filter's internal mechanism.

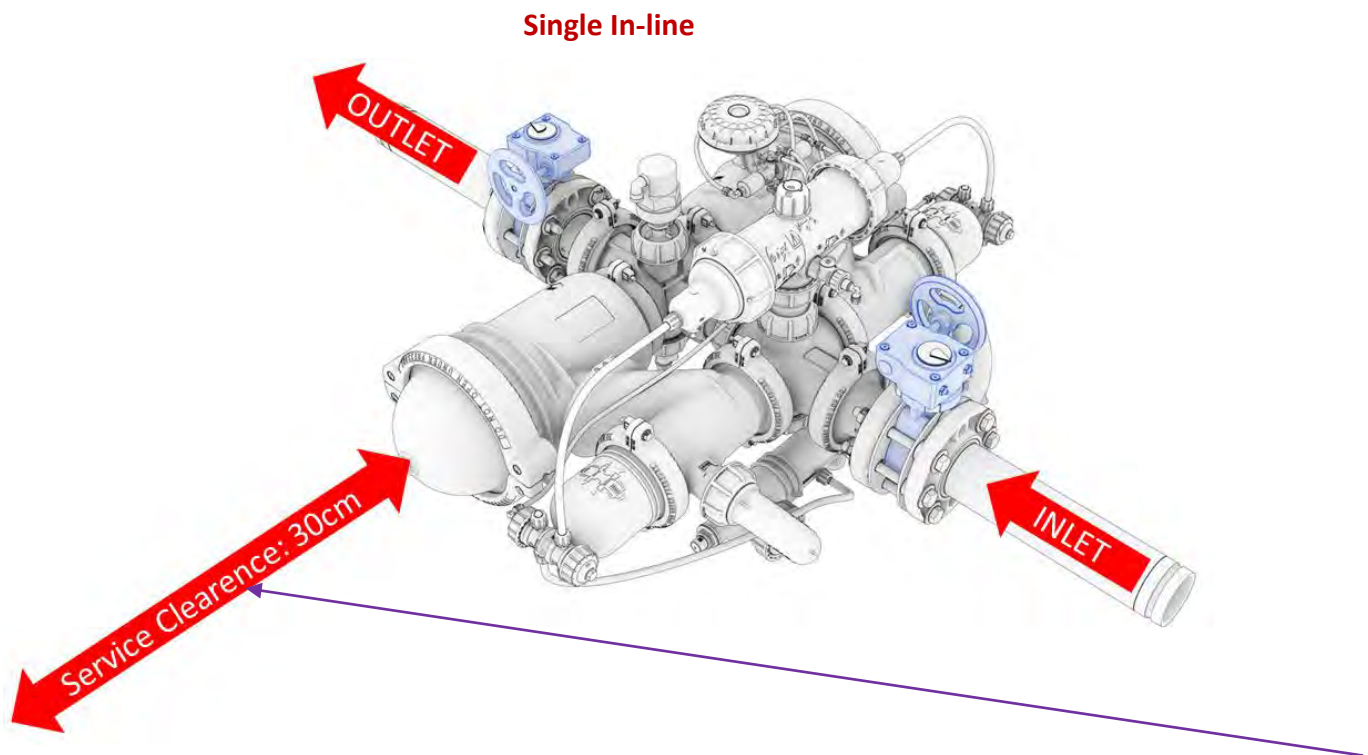
6.1. Inlet and Outlet Installation

Connect the inlet and outlet ports according to the installation configurations described below, keep the service clearance from both sides, as shown:

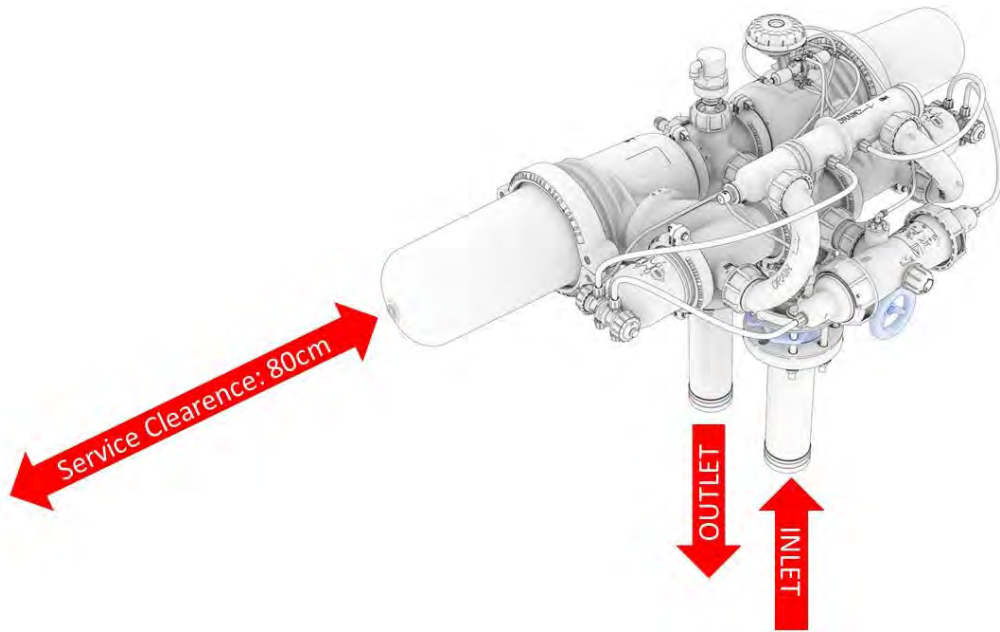
Note:

Ensure that the direction of the flow is aligned with the arrows marked on the filter housing. It is recommended to install inlet and outlet isolation valves.

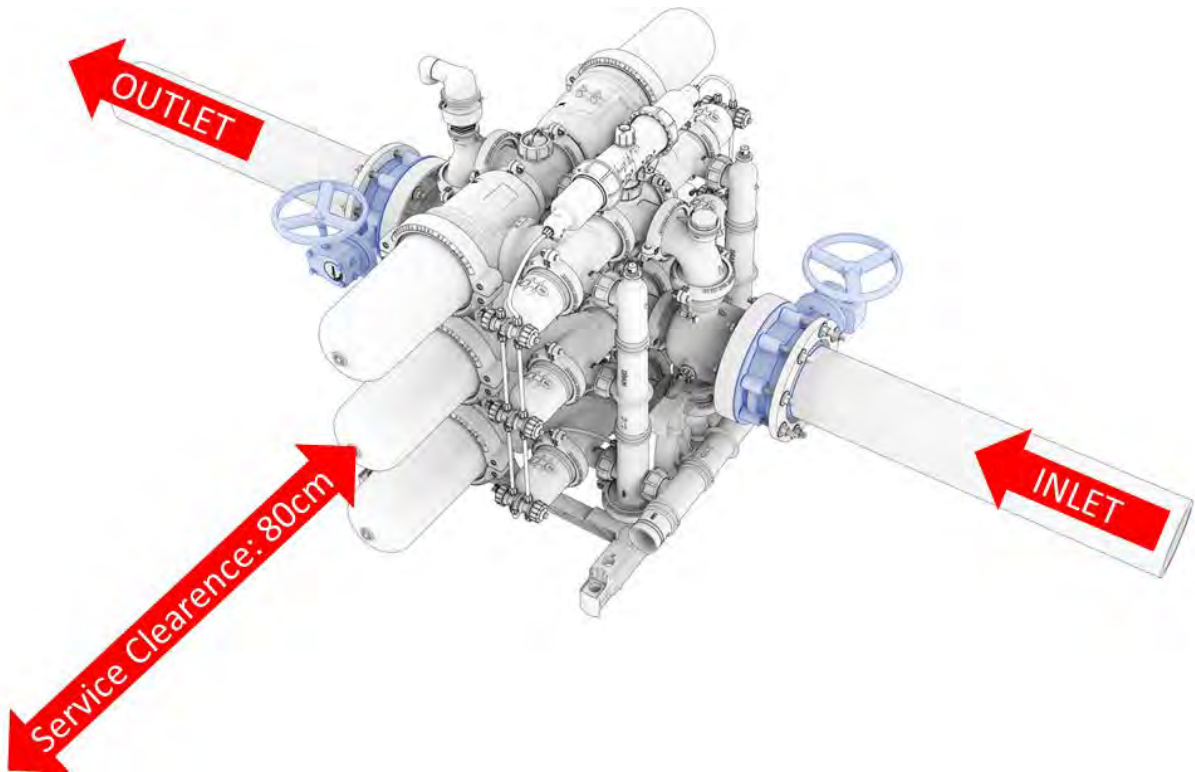
For added support, the legs included in the carton box may be installed on the single unit (see the single unit drawings on pages 10-13).



Single On-line



Battery

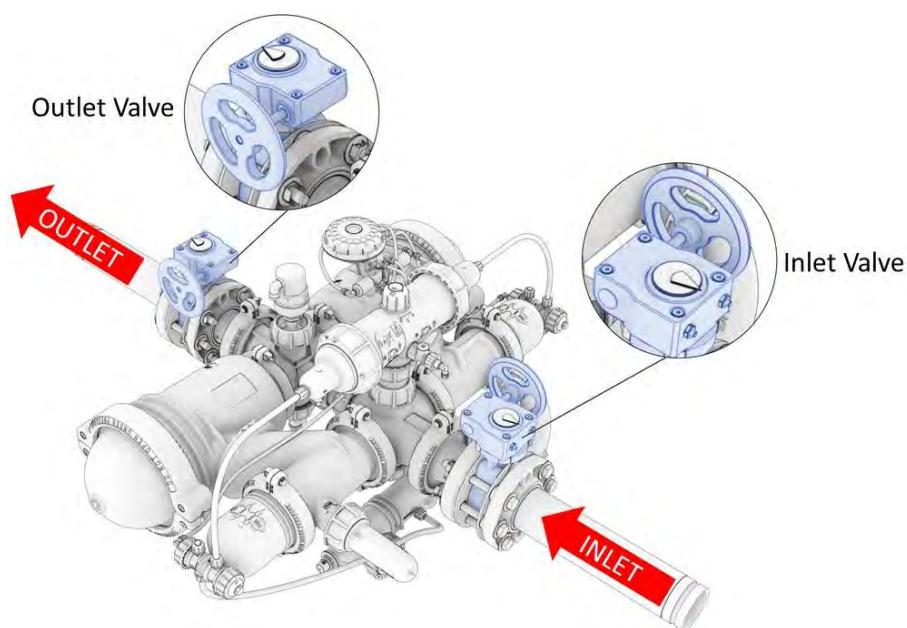


6.2. Initial Operation

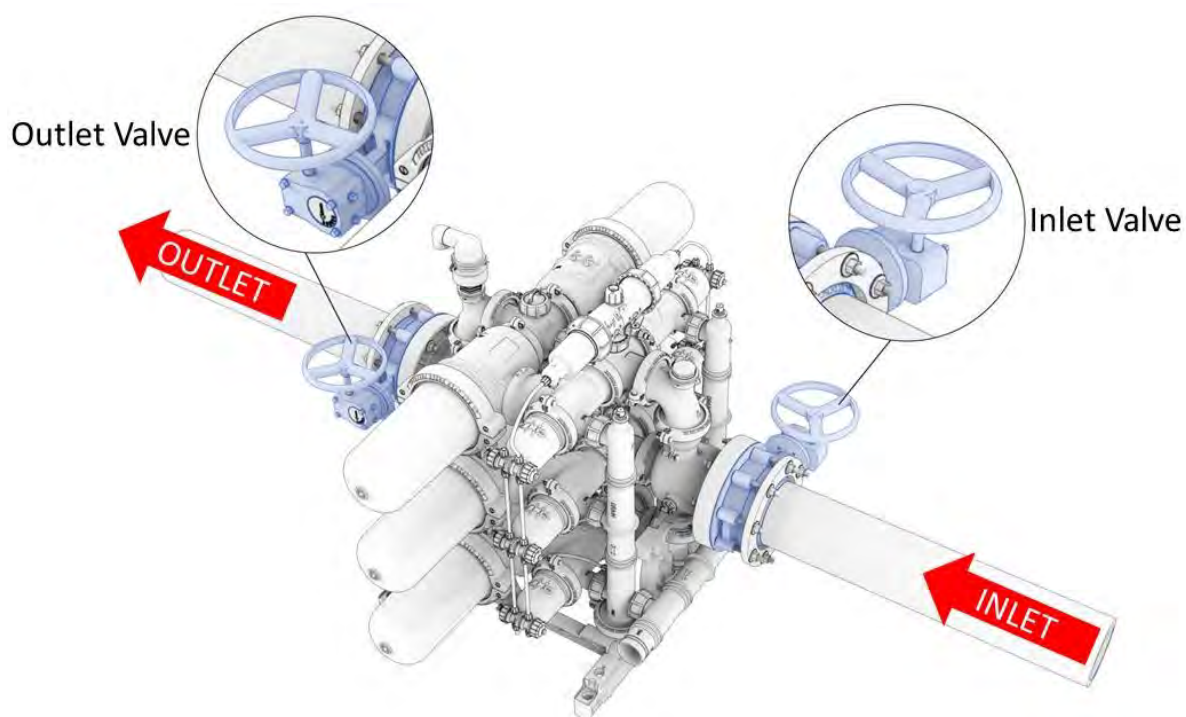
For initial operation or operation after maintenance, follow these steps:

1. Retighten the system's universal nuts.
2. Open the outlet valve.
3. Open the inlet valve slowly.
4. Make sure there are no leaks in the filter.
5. Initiate 1 flushing cycle by manually operating the controller.
6. Examine the filter again for any leaks.

Single



Battery



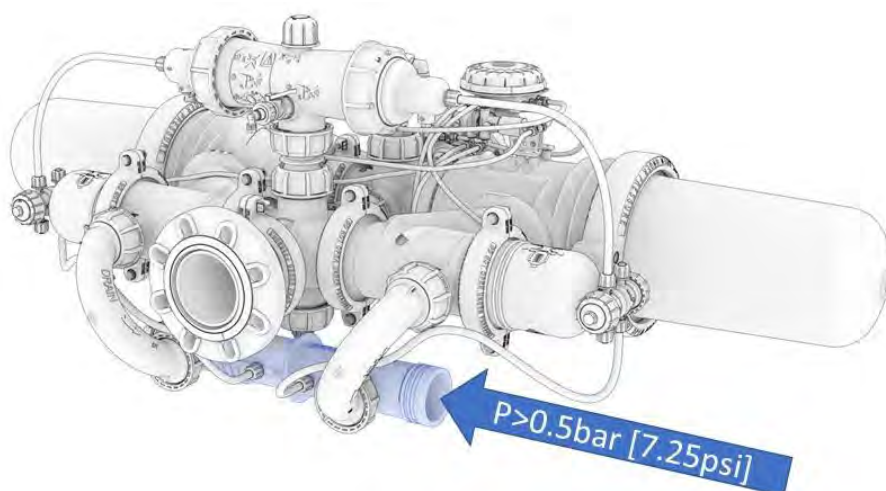
Note:

Check that the back pressure in the drain manifold during flushing **does not exceed 0.5 bar (7.5 psi)**. If it does, disconnect the accelerator's drain tubes to ensure optimal performance.

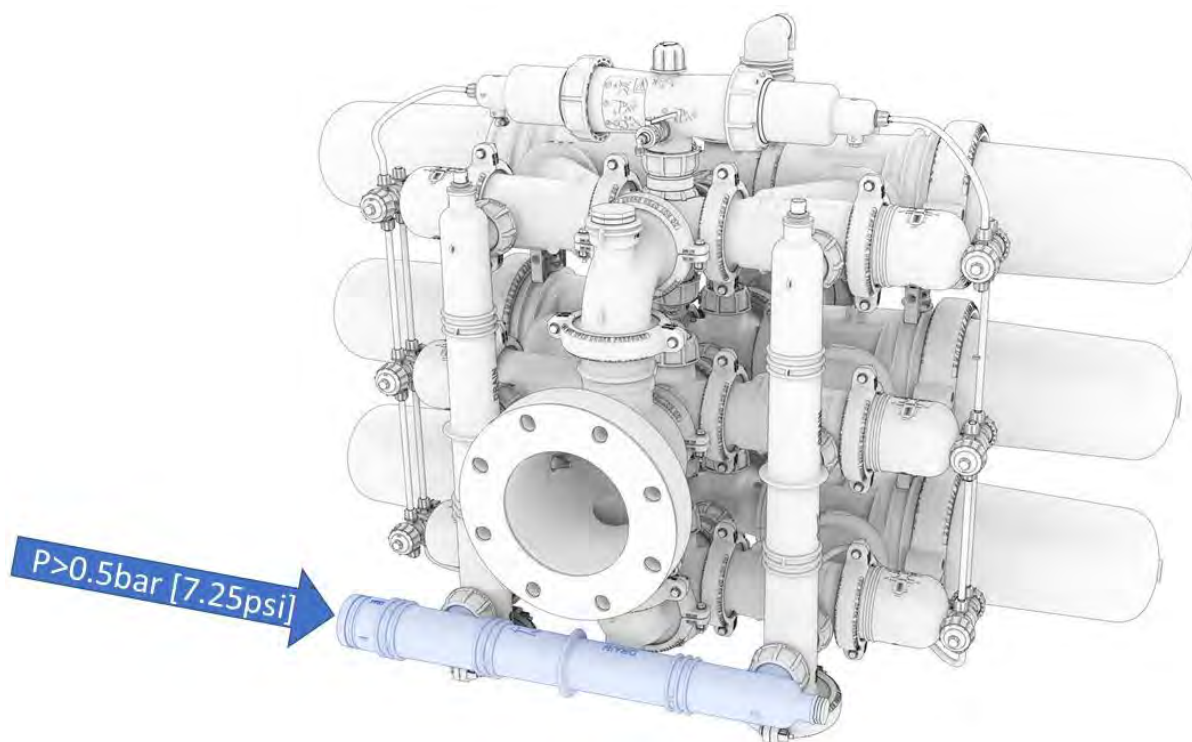
See instructions below.

The filter is supplied with disconnected drain tubes.

Single



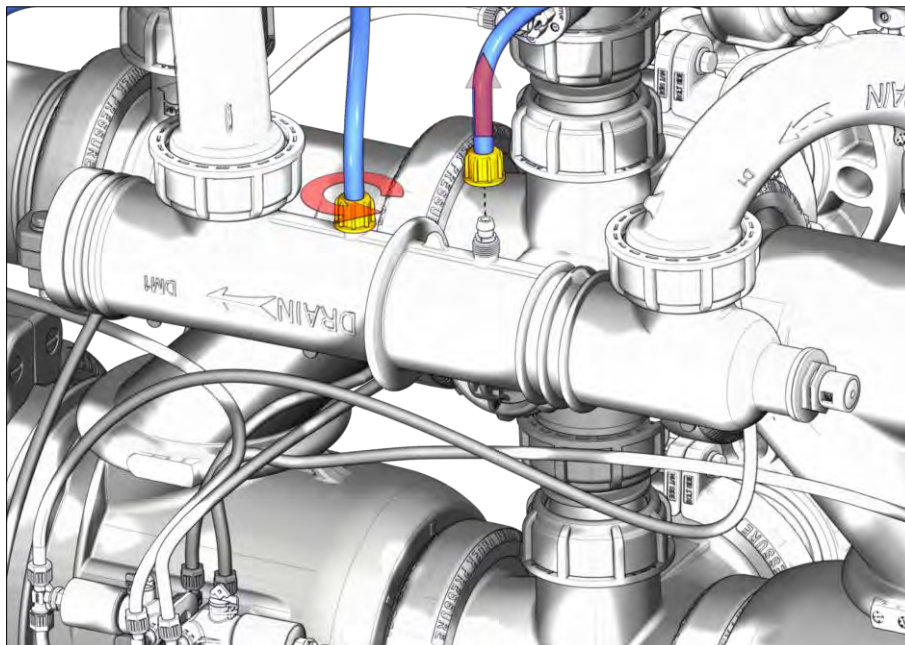
Battery



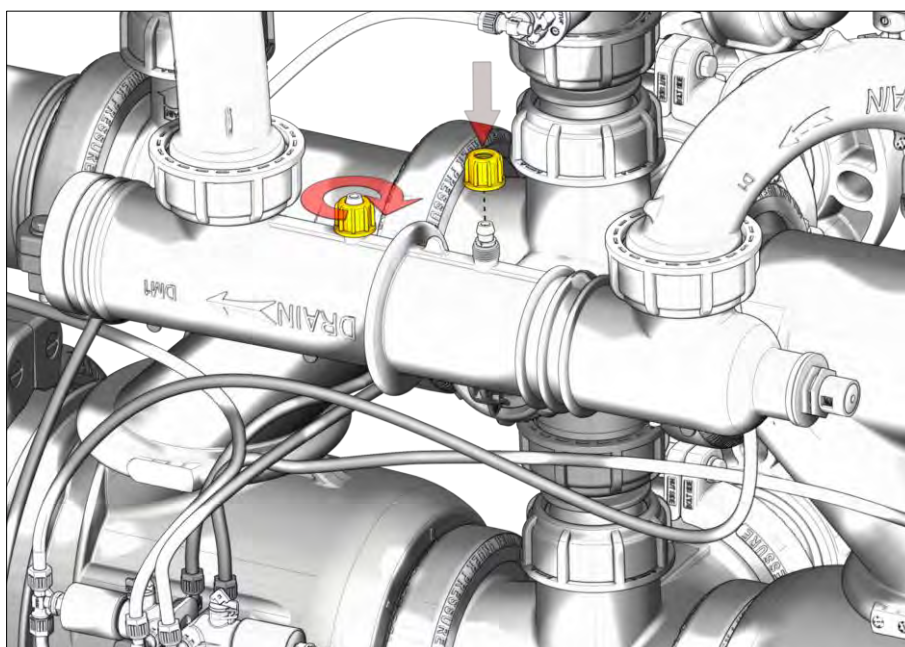
6.3. Booster Drain Tubes Disconnection

Single

- a. Disconnect the booster drain tubes and keep the tube ends open to the atmosphere.

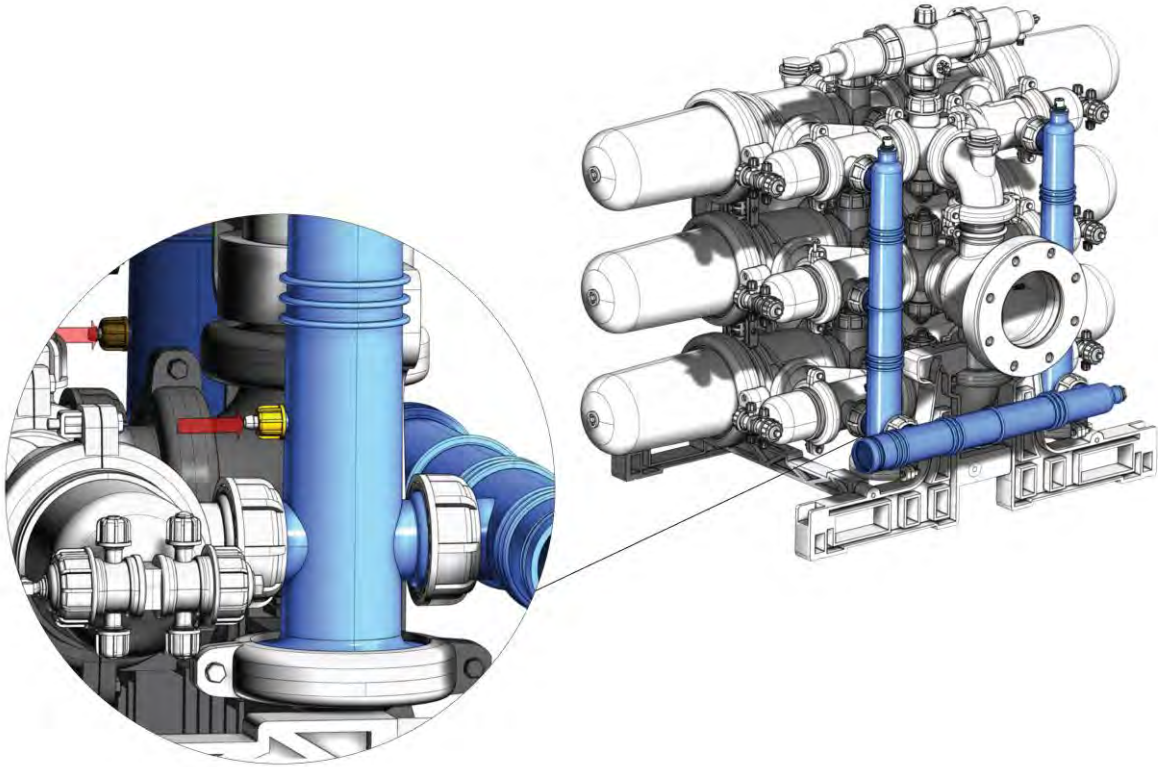


- b. Plug in the two open connection ports with the supplied caps.
- c. Initiate a manual flush and listen for correct operation.



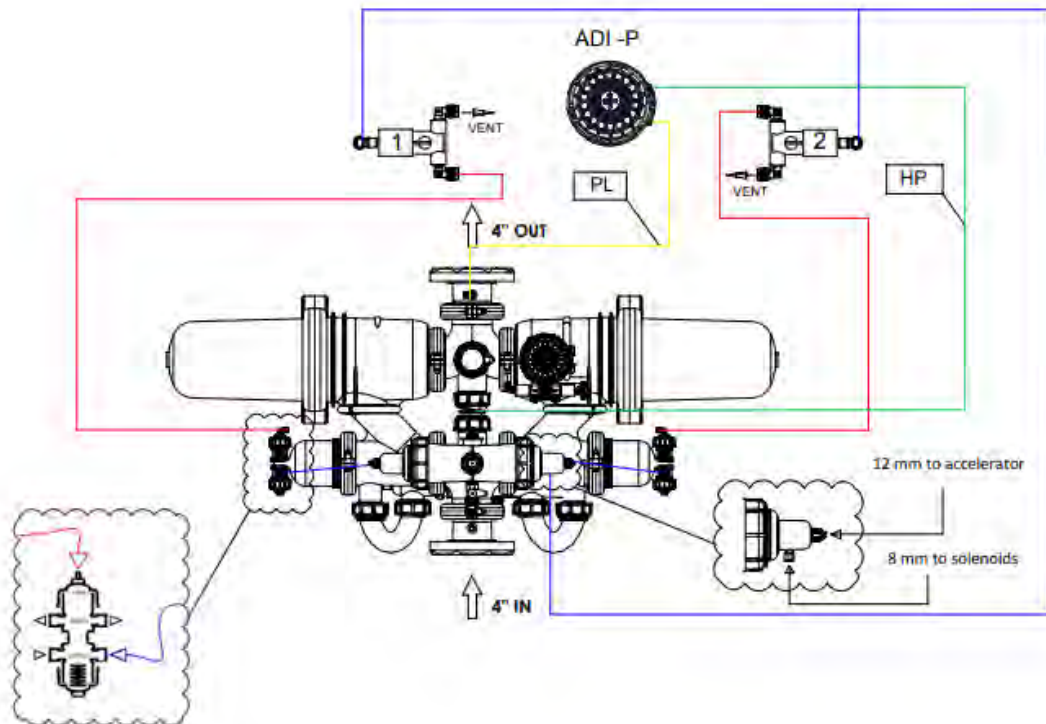
Battery

- a. Disconnect the booster drain tubes and keep the tube ends open to the atmosphere.
- b. Plug in the two open connection ports with the supplied caps.
- c. Initiate a manual flush and listen for correct operation.

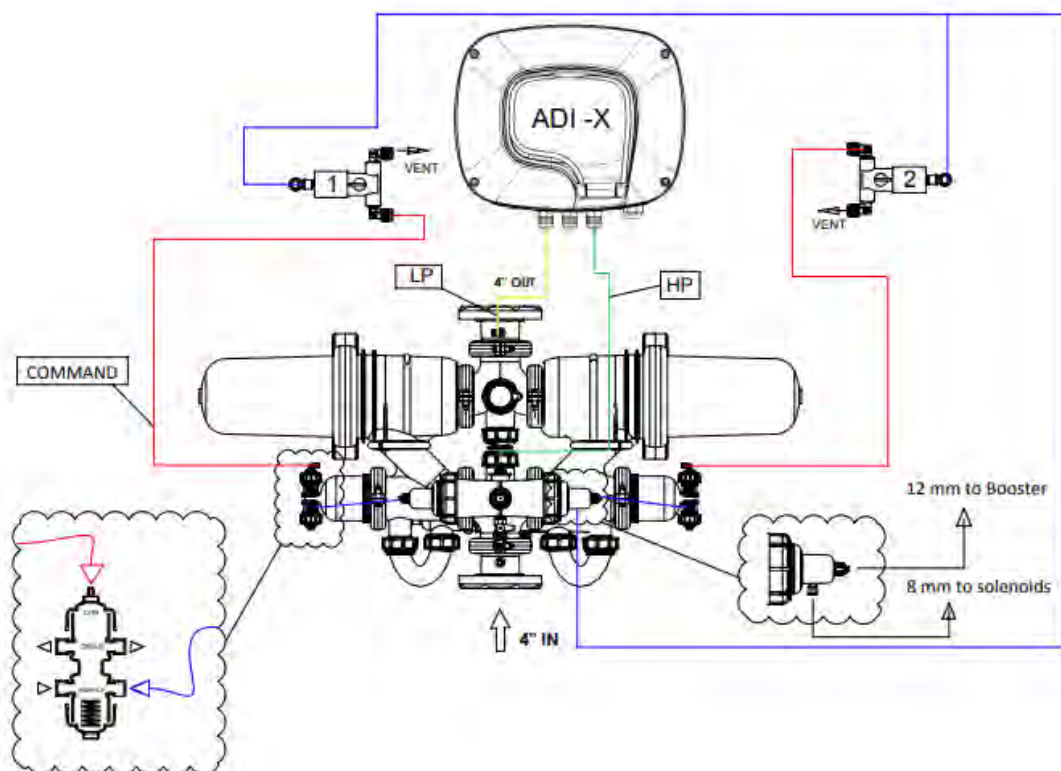


7. Control Schematic

7.1. ADI-P



7.2. ADI-X



8. Maintenance Procedures

8.1. Periodical Inspection

A general inspection of the filter operation should be done regularly and prior to any scheduled maintenance.

This includes pre-season, post-season, and seasonal check-ups.

8.2. Recommended Procedures:

- Inspect the filter visually for any leakage and repair if needed

- Make sure the filter's area is clean and dry. Remove any disturbances.

- Check the inlet and outlet pressure, make sure that the filter is working under its designed flowrate.

- Use your smartphone to export data from your controller.

- Clean the command filter manually.

- Inspect the flushing valve seals, apply silicon grease periodically, and replace the seals if needed.

- Visually inspect the discs, and in cases of non-washed sediments clean the discs according to Amiad's recommendations (see page 74).

- Initiate one flushing cycle by manually operating the controller.

9. Filter Disassembly / Assembly

A multifunction tool is provided with each Spin Klin™ Nova unit (see page 32).

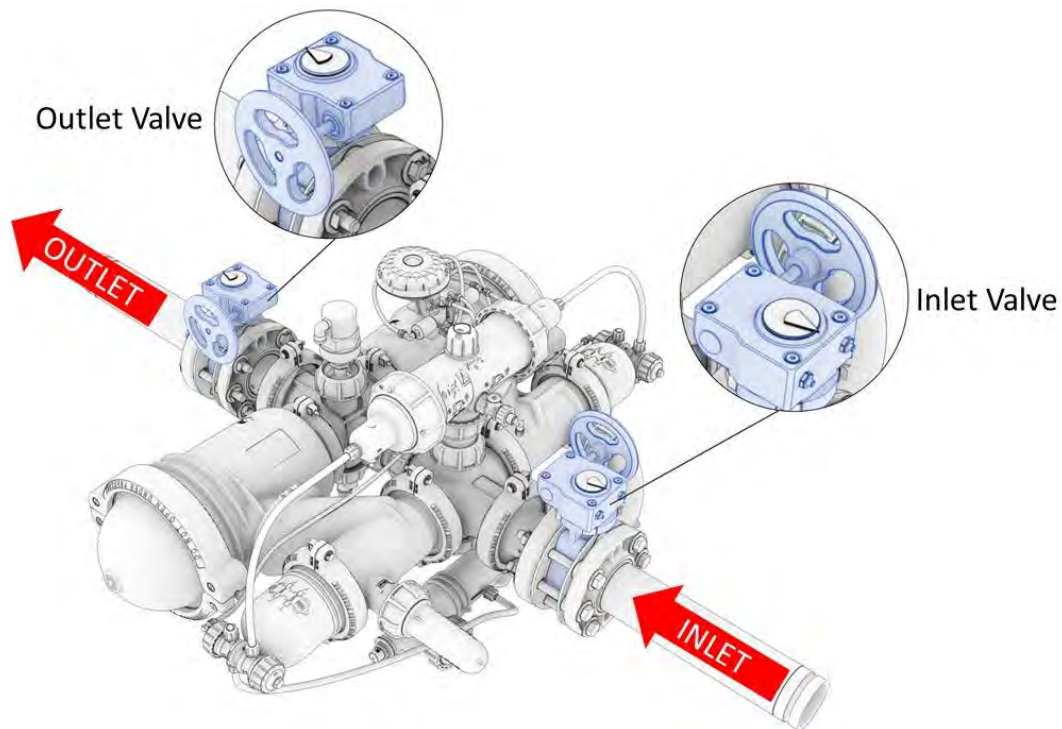
9.1. Flushing Valve Disassembly

Note:

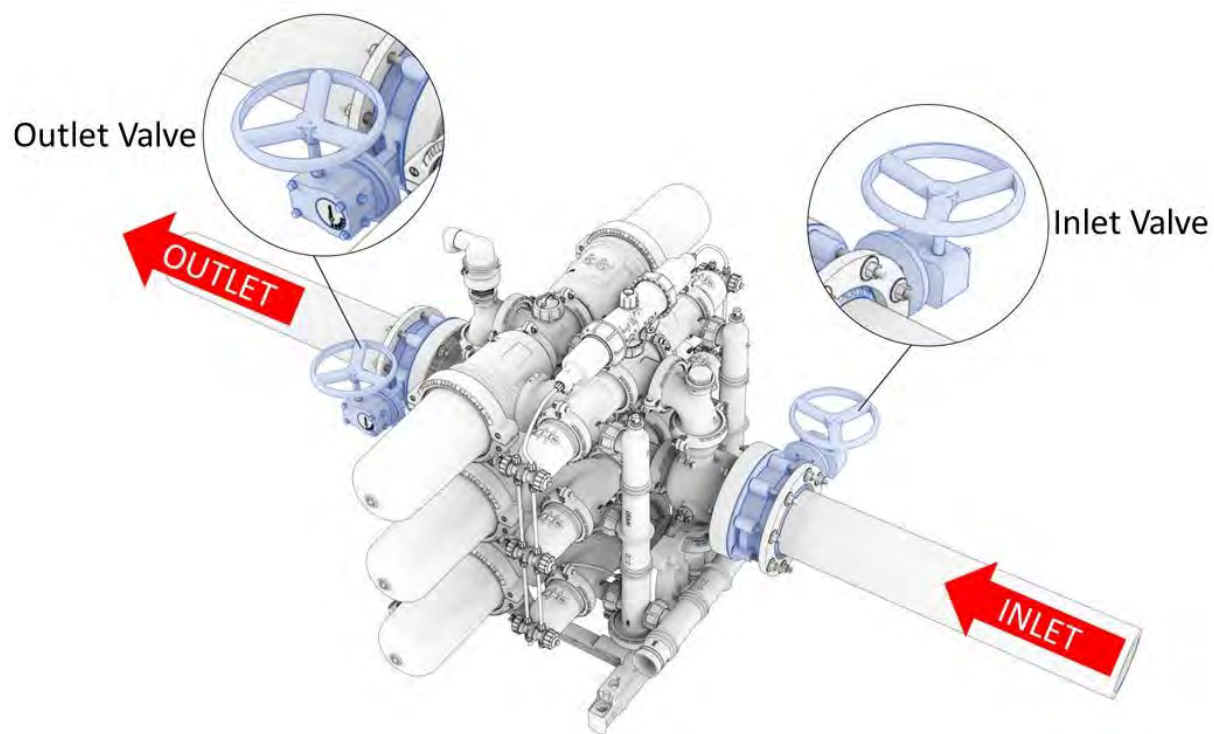
Before any maintenance procedure, please depressurize and empty the filter.

1. Close the inlet & outlet valves.
2. Open the drain valve located at the bottom part of the filter.
3. Open the command filter drain valve.
4. Close the inlet & outlet valves.

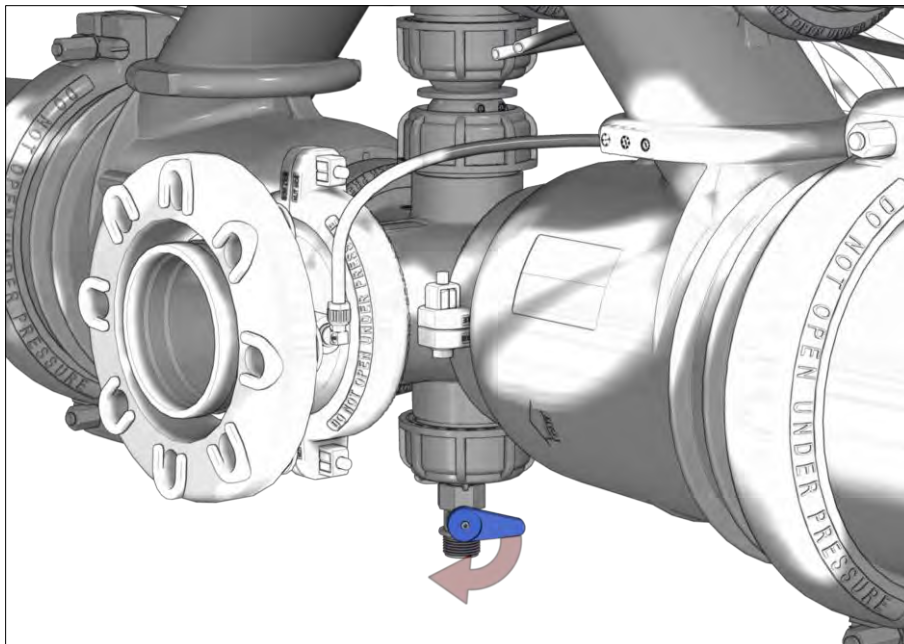
Single



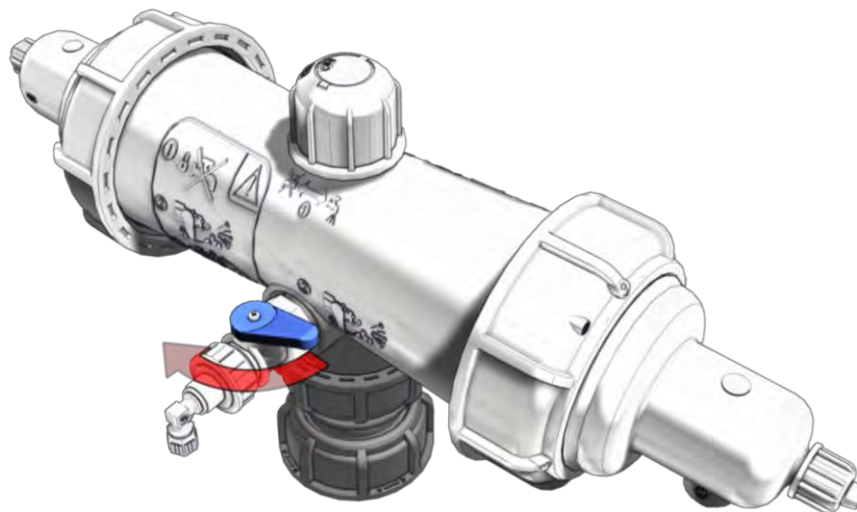
Battery



5. Open the drain valve located at the bottom of the filter.

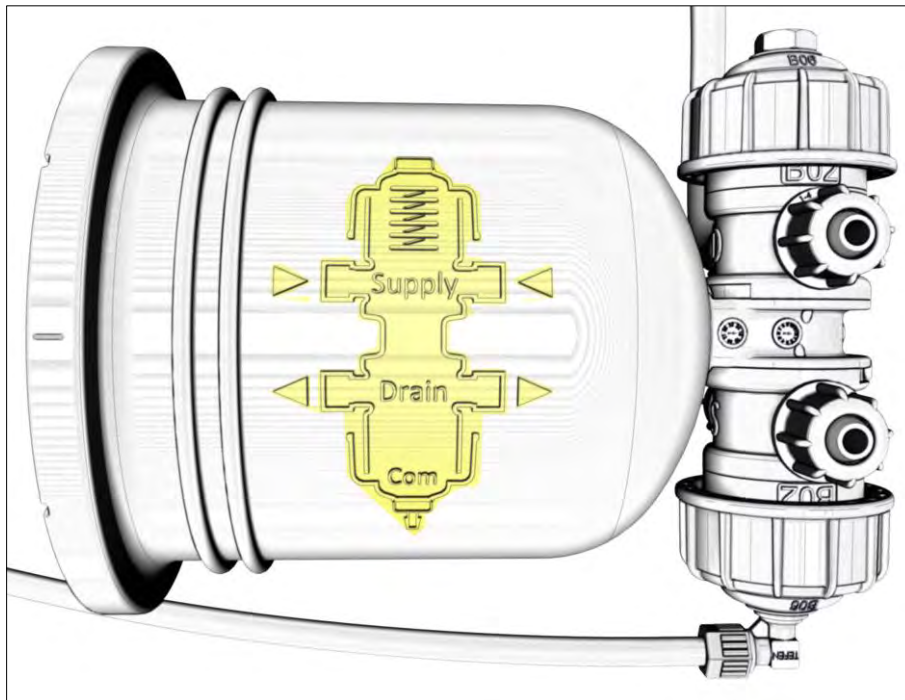


6. Open the command filter drain valve, in the On-line configuration the drain is located at the bottom.



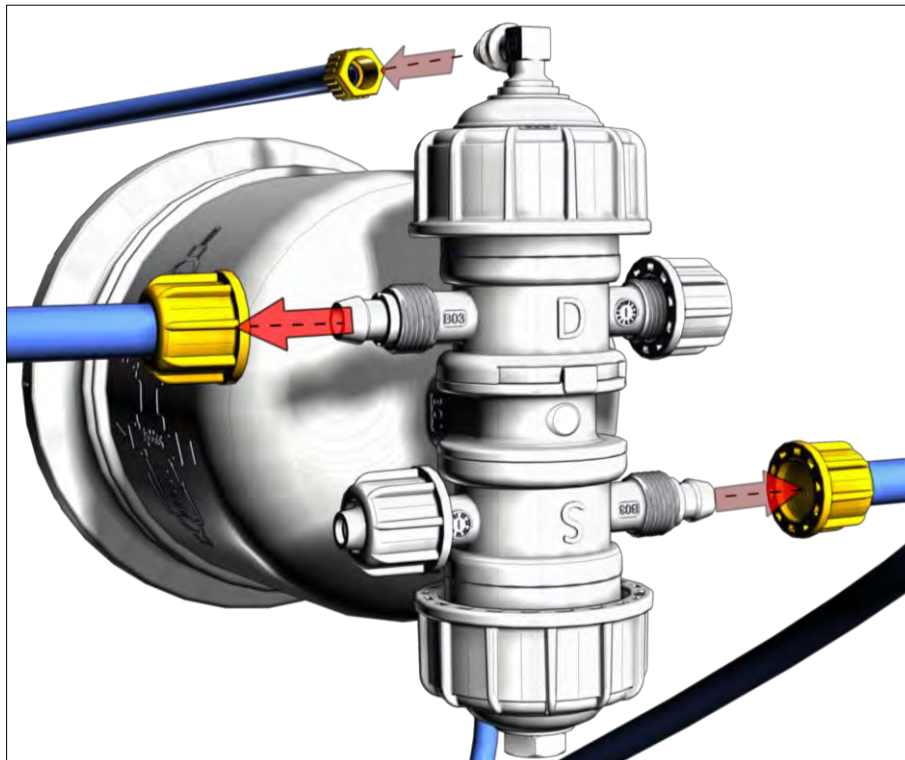
Note:

For an overview of the location of the Supply, Drain and Command tubes, please refer to the diagram located on top of the booster cylinder cover.

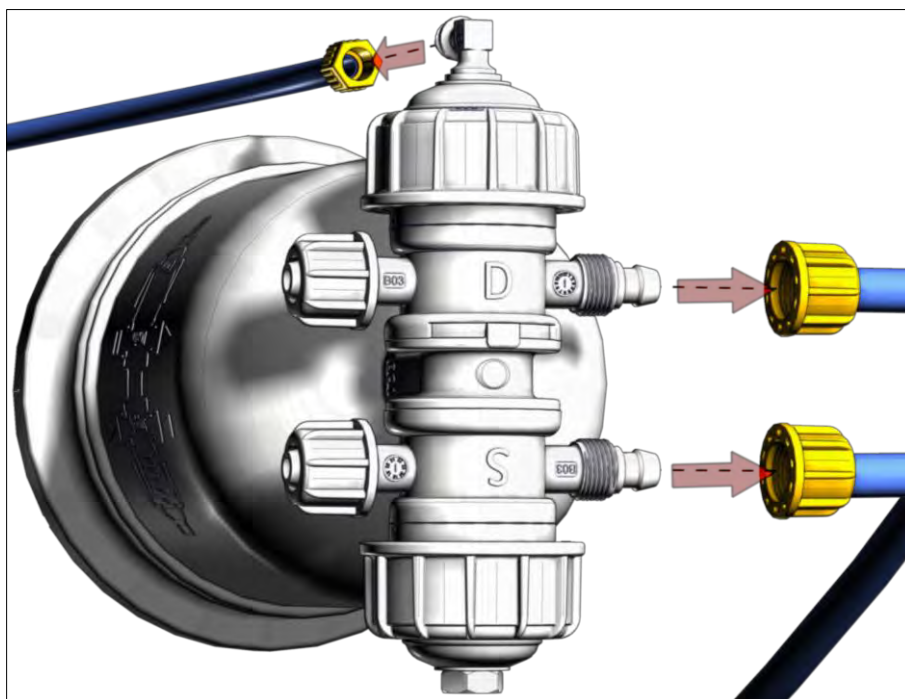


7. Disconnect the tubes of the water supply (S), water drainage (D) & command tube (C) from the booster cylinder (the location of the connection may be different in other configurations).

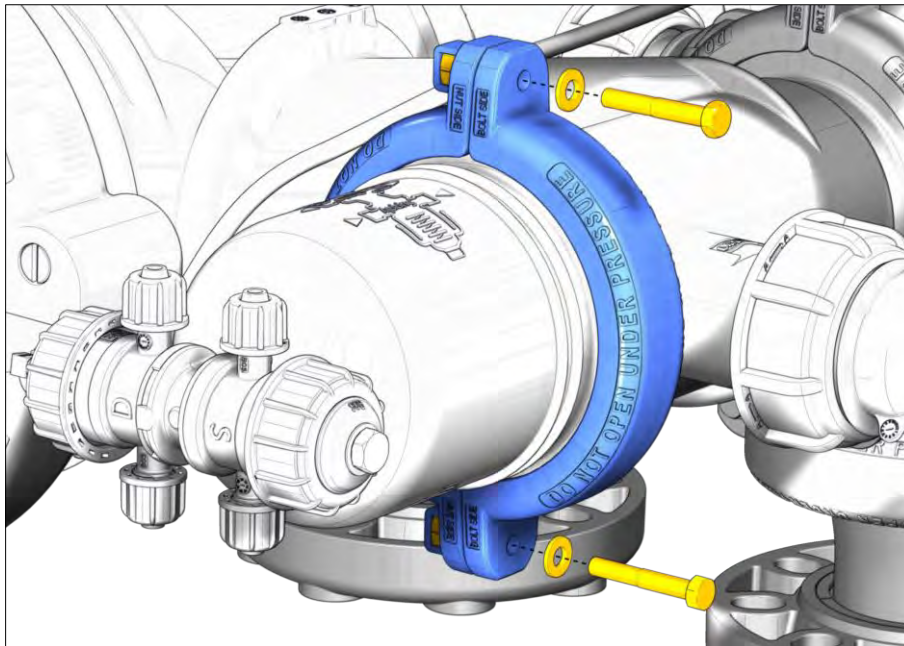
In-line



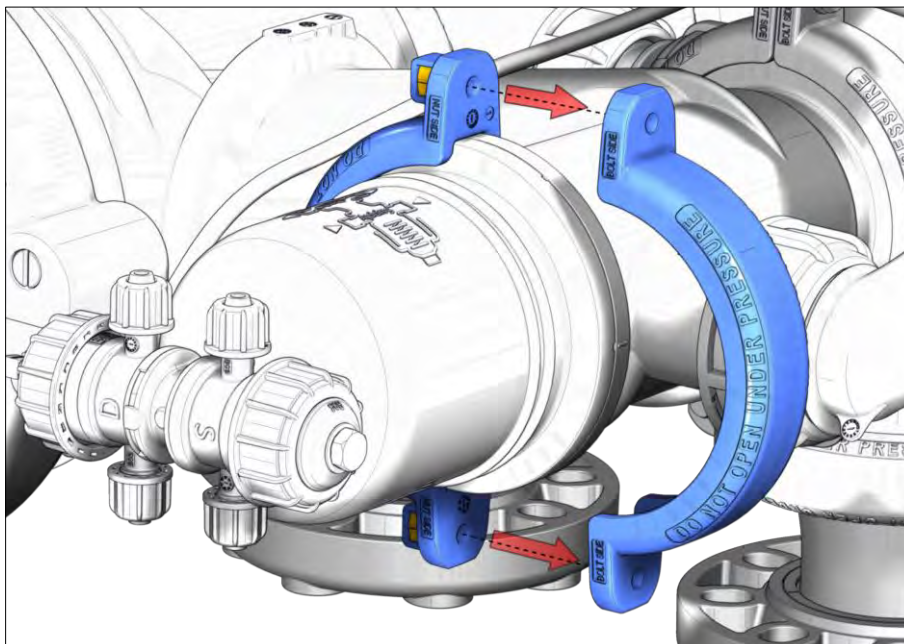
On-line



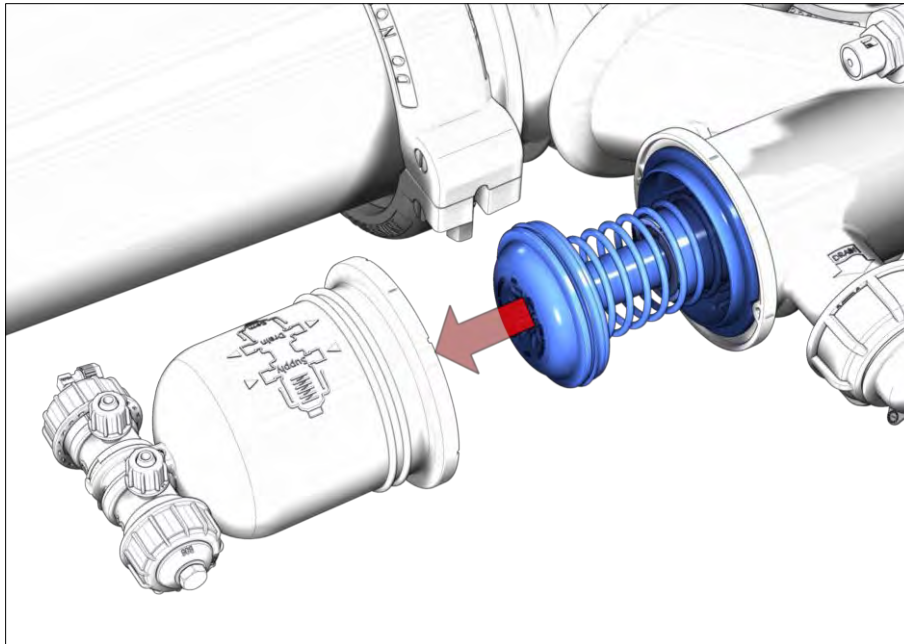
8. Unscrew the two bolts that join the system clamps using a 13mm (½") spanner and remove them.



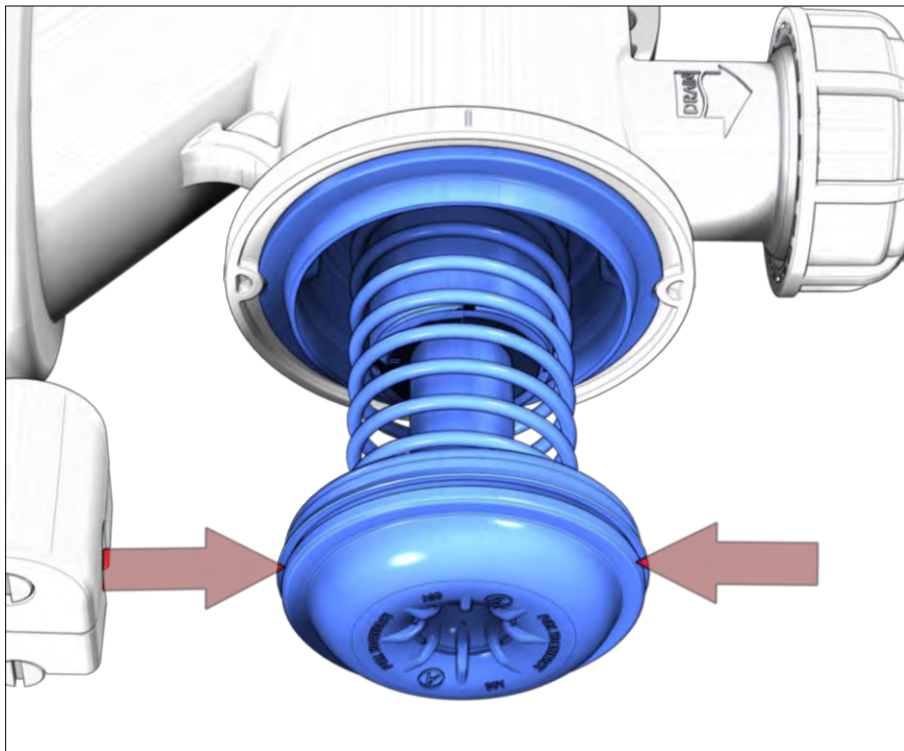
9. Remove the clamps (you may need to use a flat screwdriver to separate them).



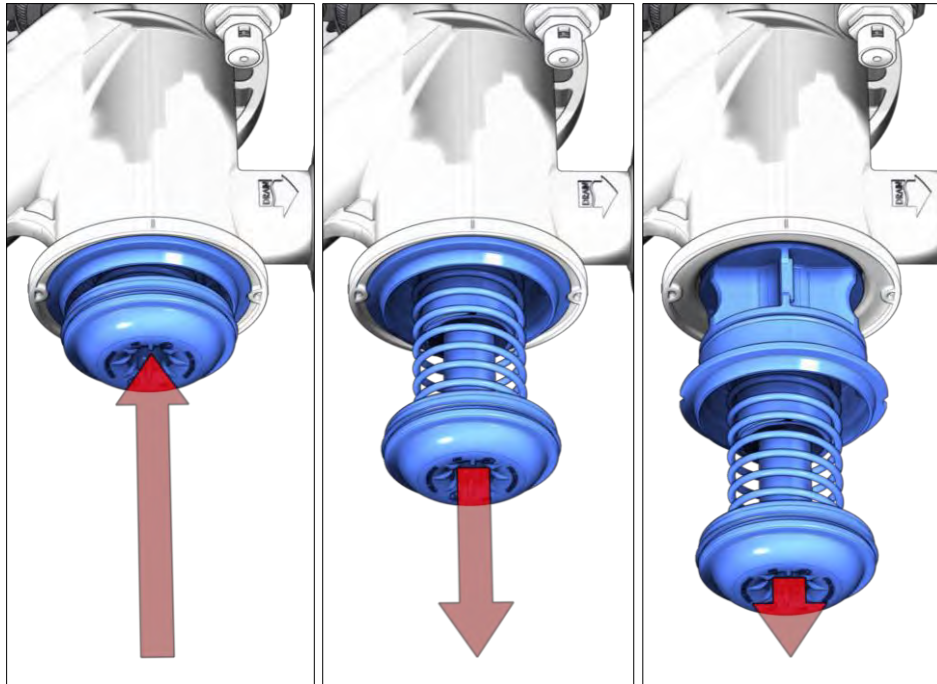
10. Remove the booster cylinder by pulling it backwards.



11. For removing the valve assembly please, use both hands on the valve piston.



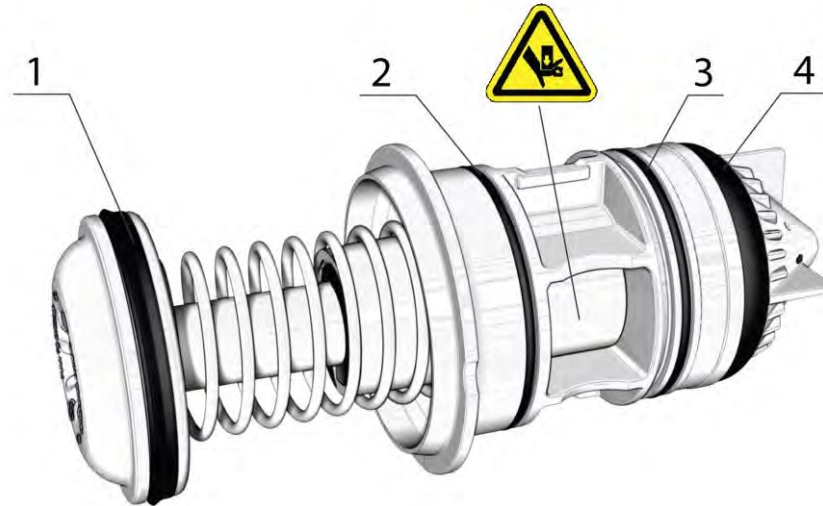
12. Push the piston valve forward and pull it back rapidly, until released.



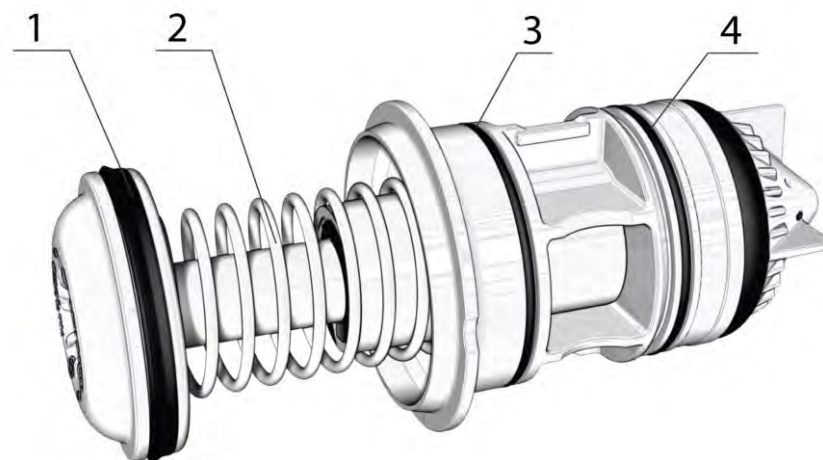
13. Visually inspect the valve for damage, paying close attention to the seals.

Caution:

Do not insert your finger into the marked area. The valve is spring-loaded.

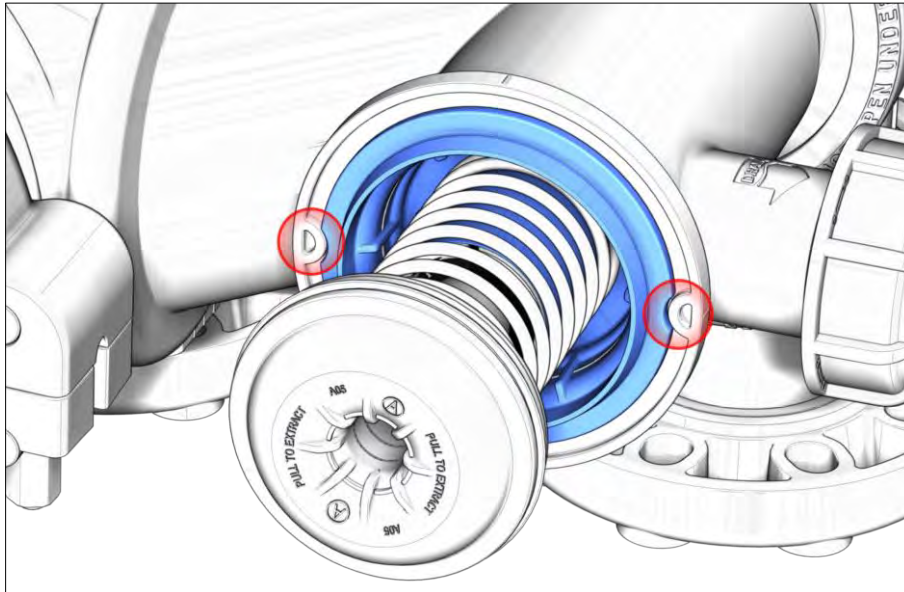


14. Apply silicon grease (catalog number: 760190-000127) at the specific locations as shown.

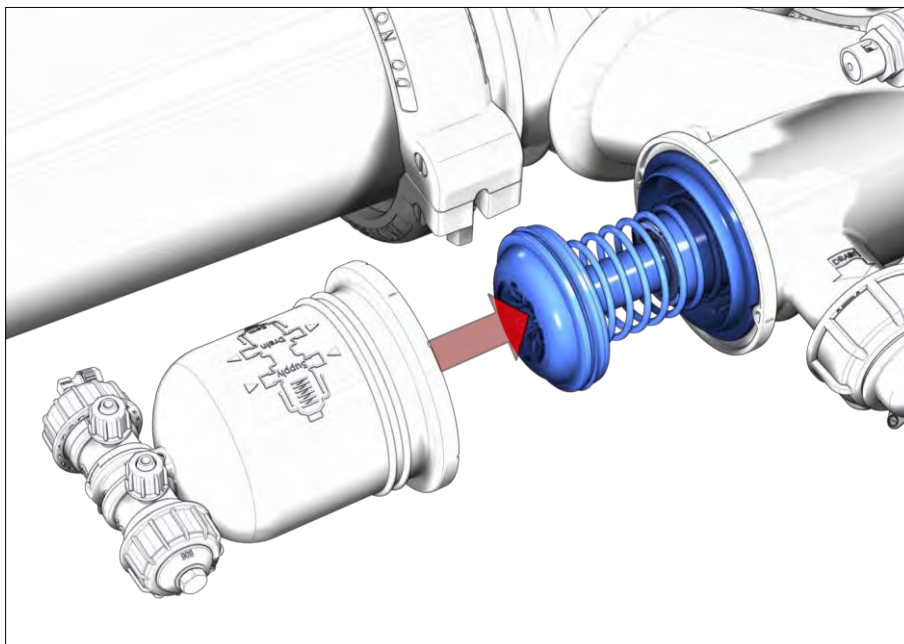


9.2. Flushing Valve Assembly

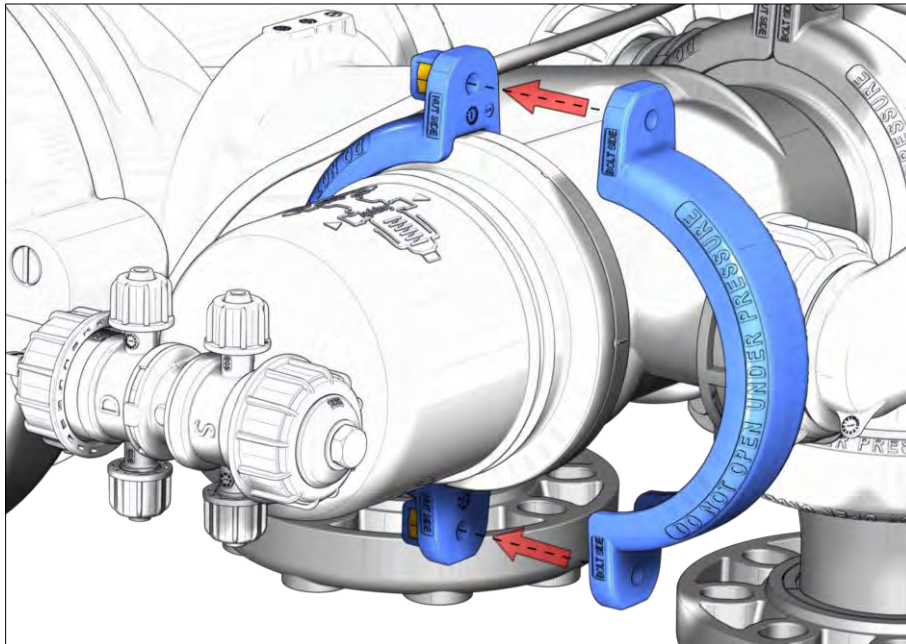
15. Insert the piston valve by pushing the marked area. Please make sure that the orientation grooves are aligned and the valve sits properly.



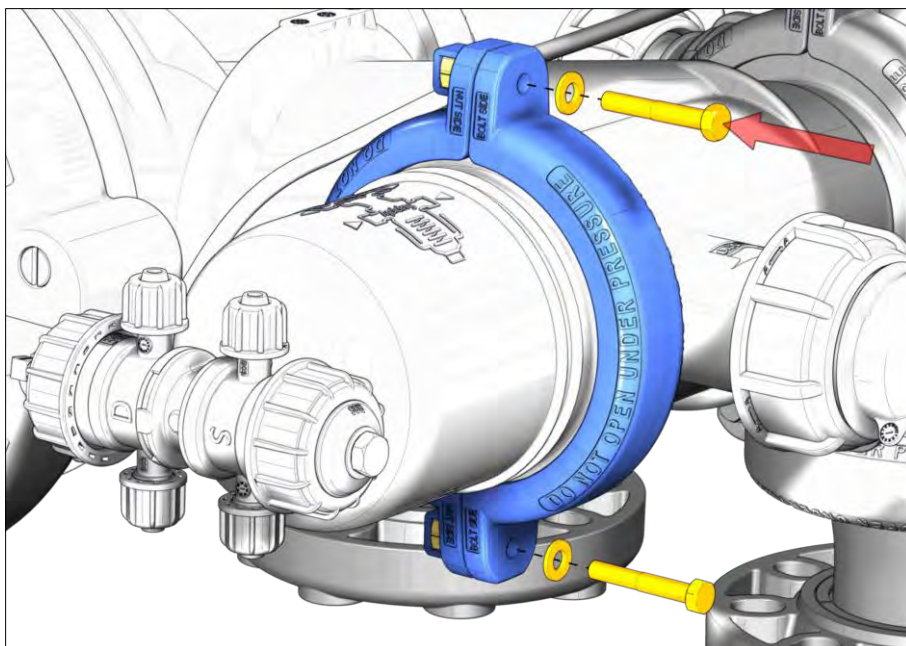
16. Place the booster cylinder on the flush valve.



17. Place the system clamps.

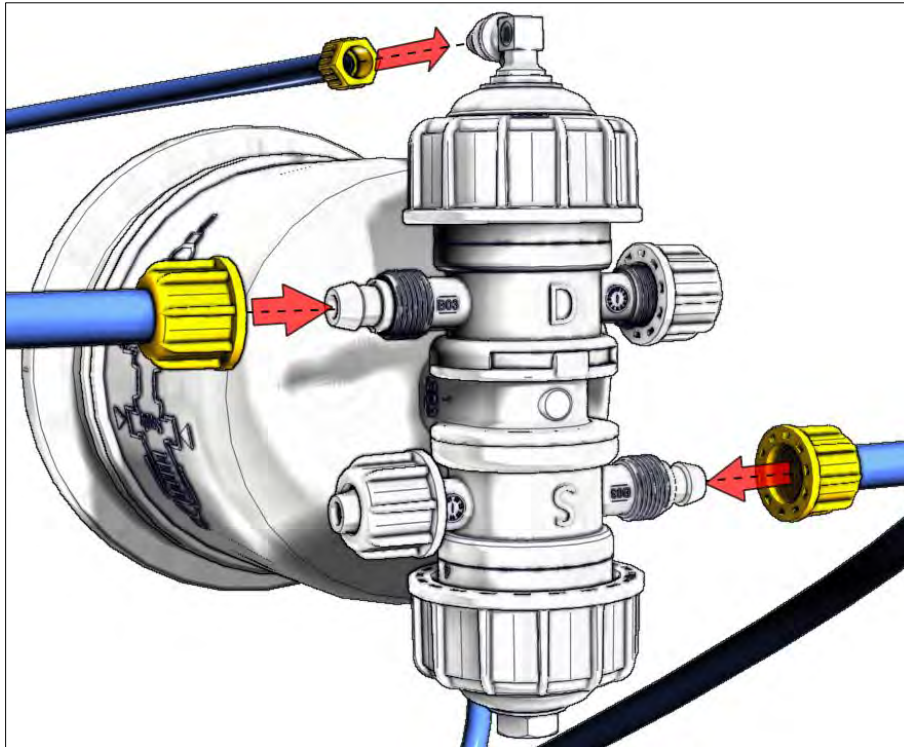


18. Tighten the system clamps by using the two bolts with a 13mm (½") spanner.

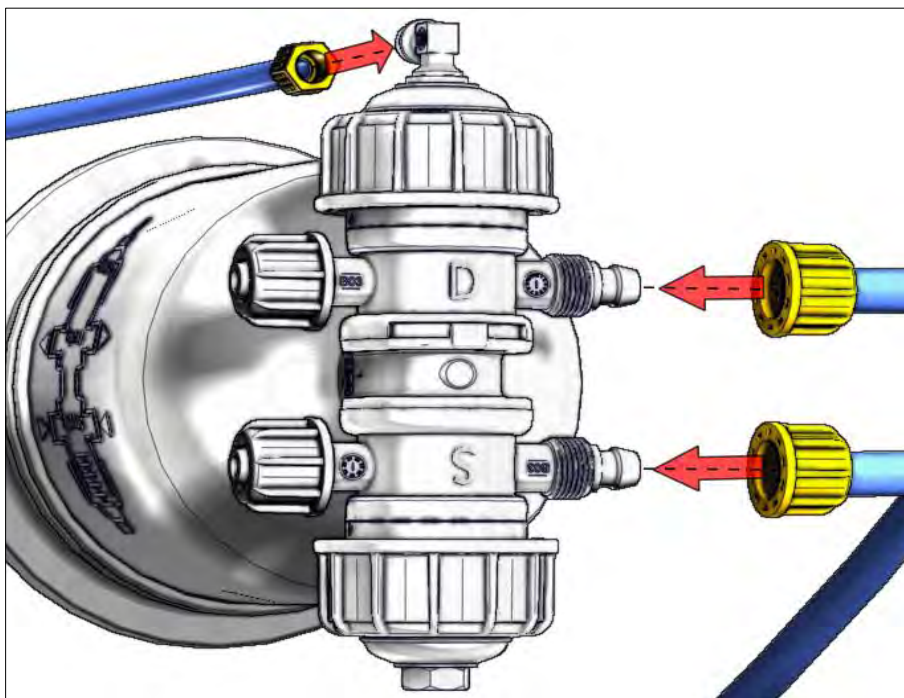


19. Connect the tubes of the water supply (S), water drainage (D) & command tube (C) to the booster cylinder.

In-line



On-line



20. Close drain valve and command filter drain valve.
21. Initiate a manual flushing procedure in order to test the system.

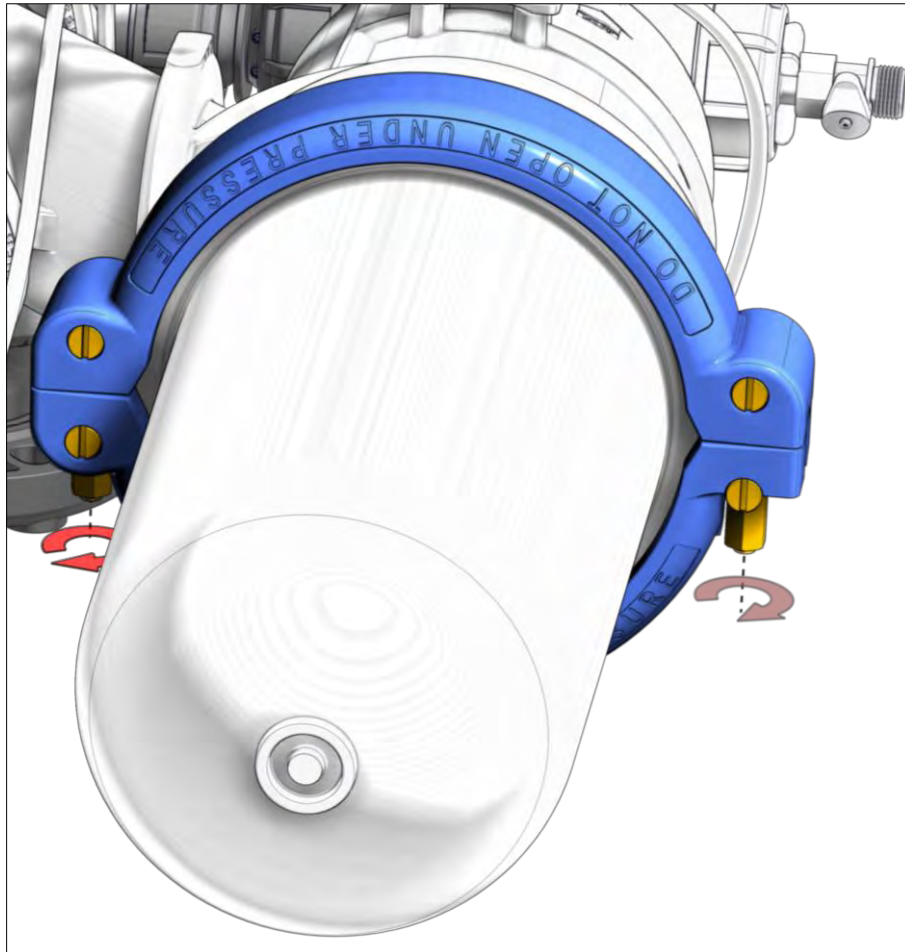
9.3. Main Cover and Filter Element

9.3.1. Disassembly

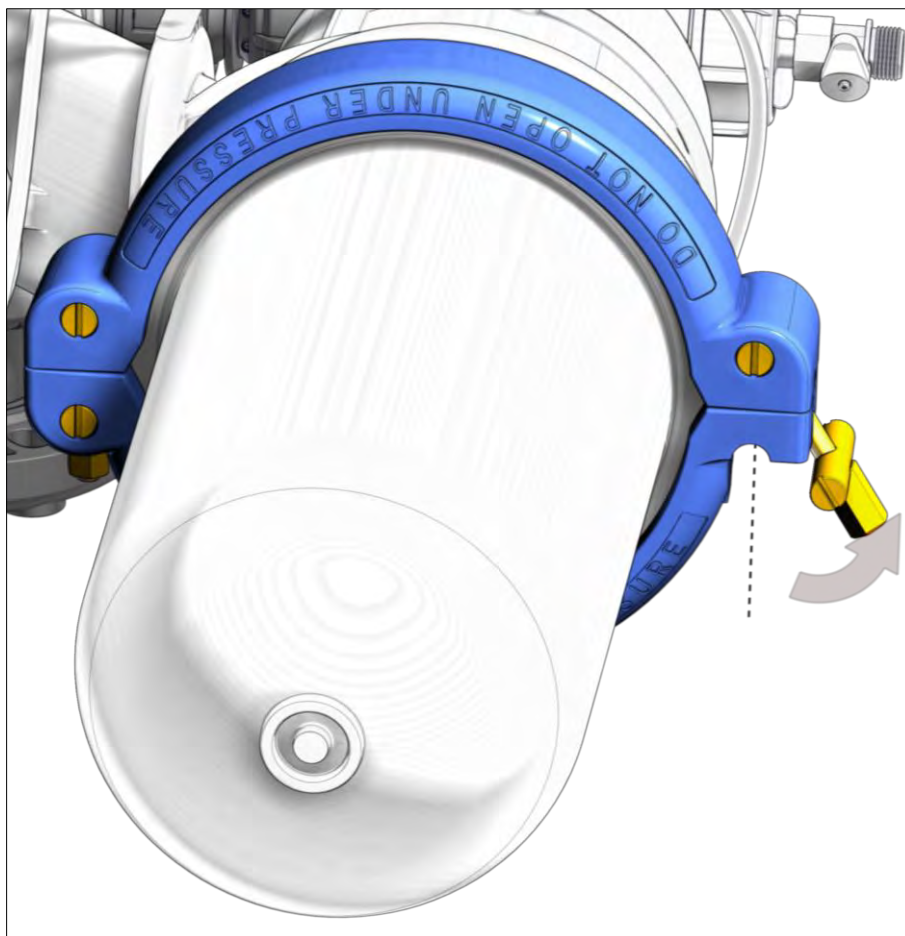
Note:

Before any maintenance procedure, please depressurize and empty the filter (see page 42).

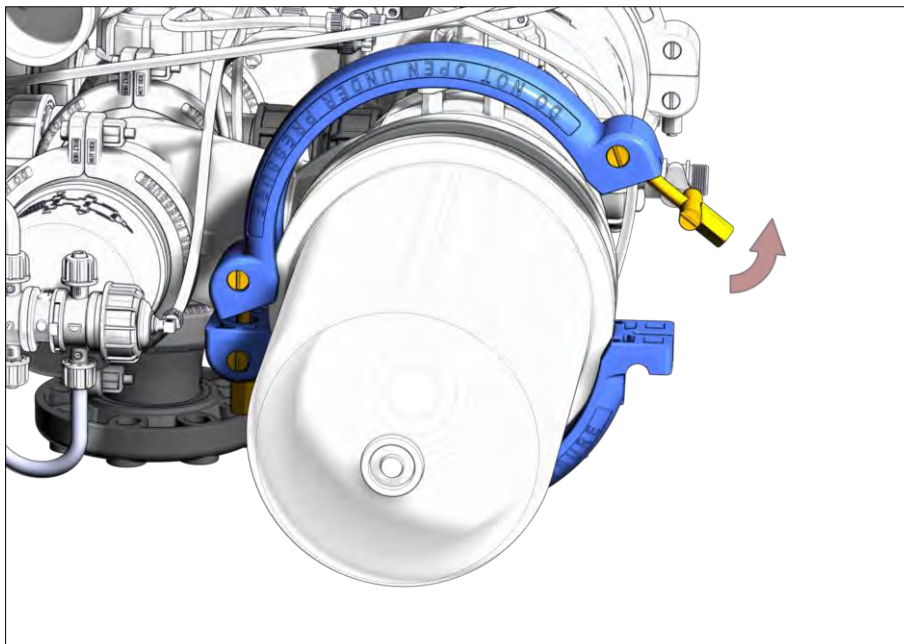
1. Release the two hex nuts (17mm ($1\frac{1}{16}$ ") spanner) that join the main clamps. Do not release them all the way, one side is acting as a hinge as shown.



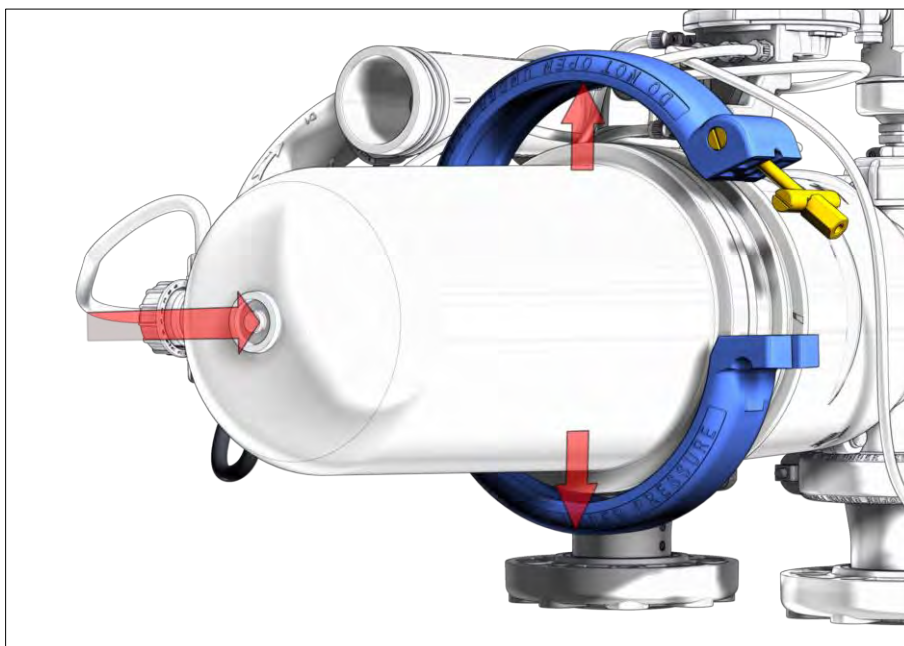
2. Remove the connection from the slot using the connection as a lever to release the clamps by pulling it upwards. One side is acting as a hinge as shown.



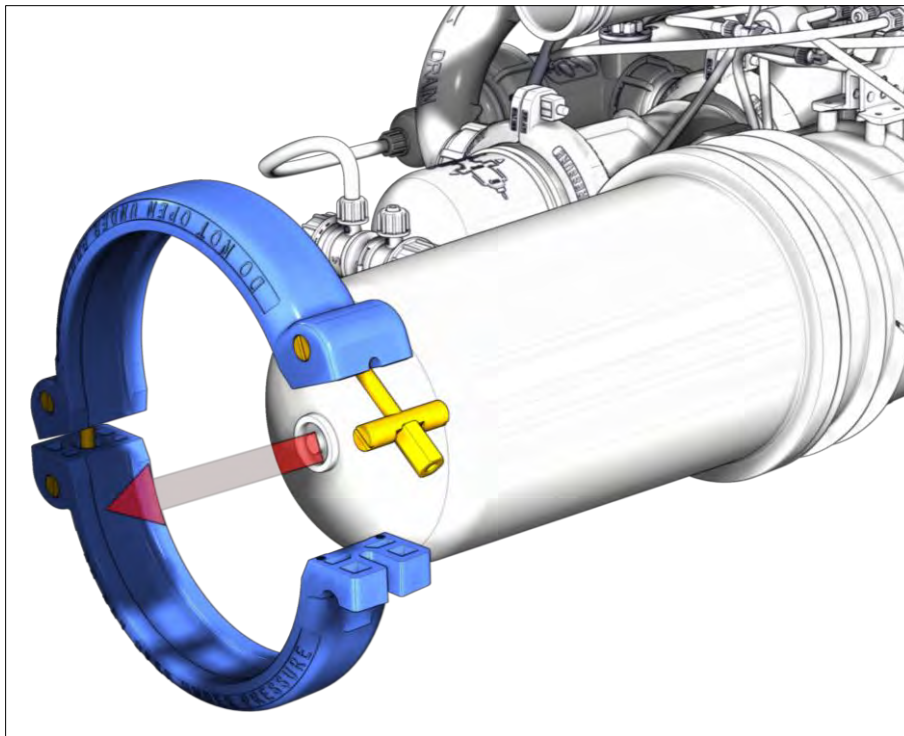
3. Push the bottom part of the main clamp downwards . Make sure to support the cover while doing this procedure.



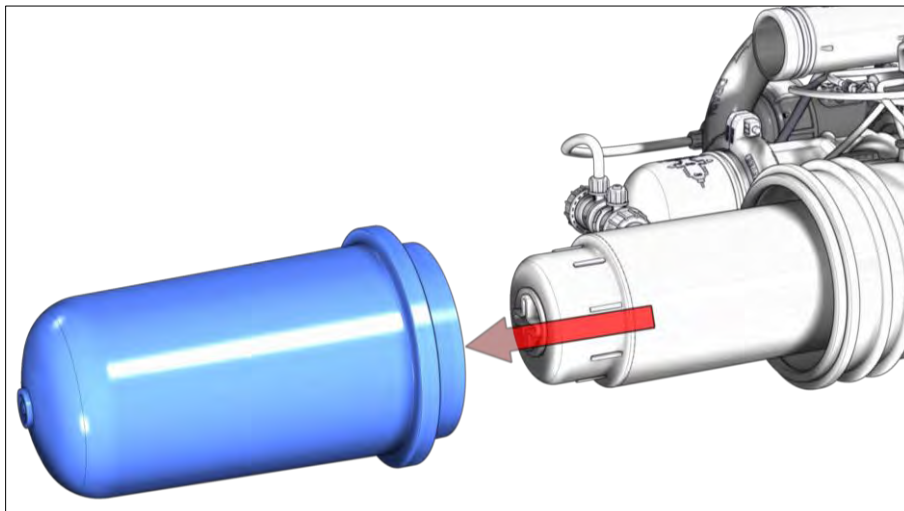
4. Keep pushing until the bottom clamp is fully released.



5. Remove the main clamps.



6. Remove the main cover.

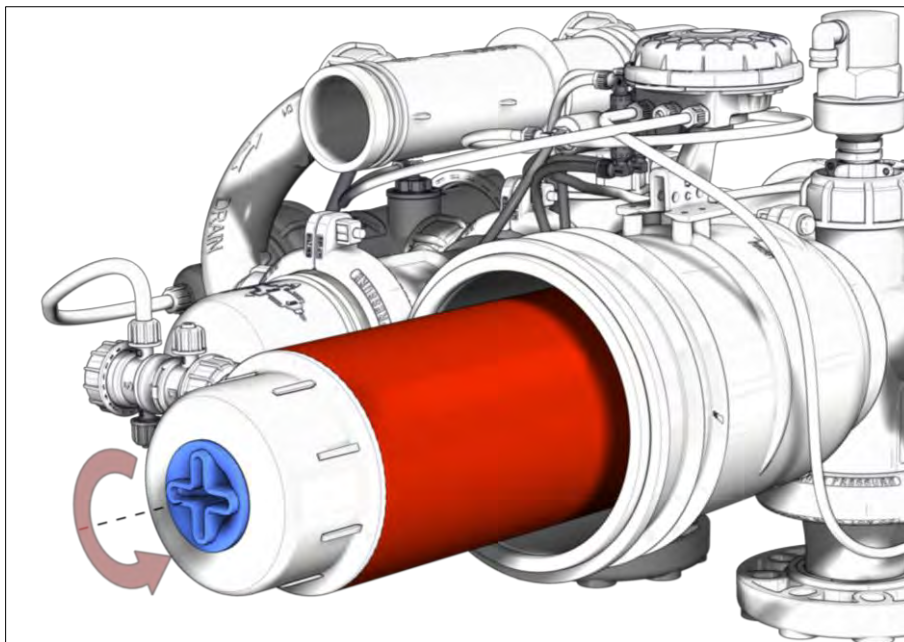


Note:

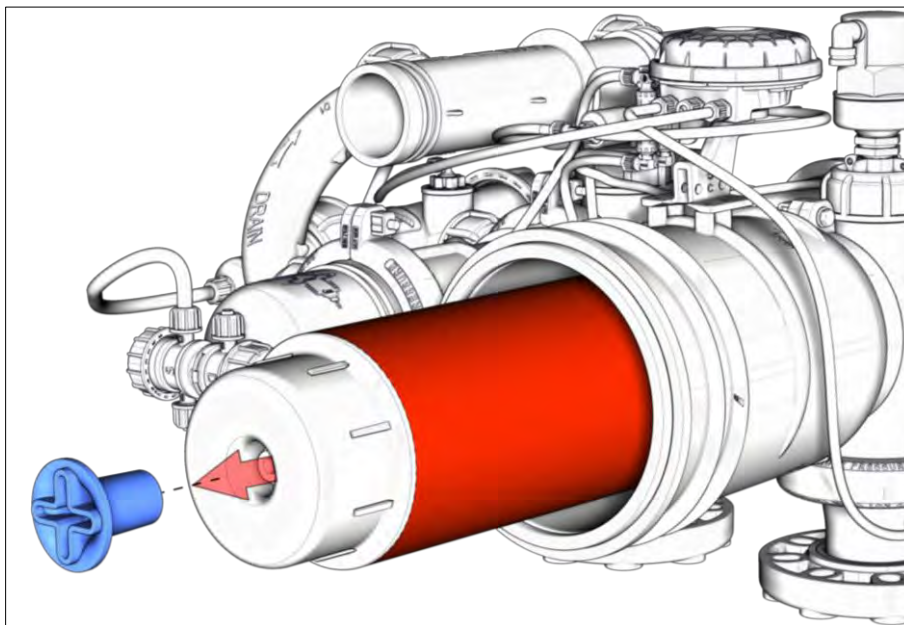
Cover disassembly procedure is identical for Spin Klin™ Nova & Spin Klin™ Nova Plus

Perform the following steps to extract the discs for the cleaning procedure.

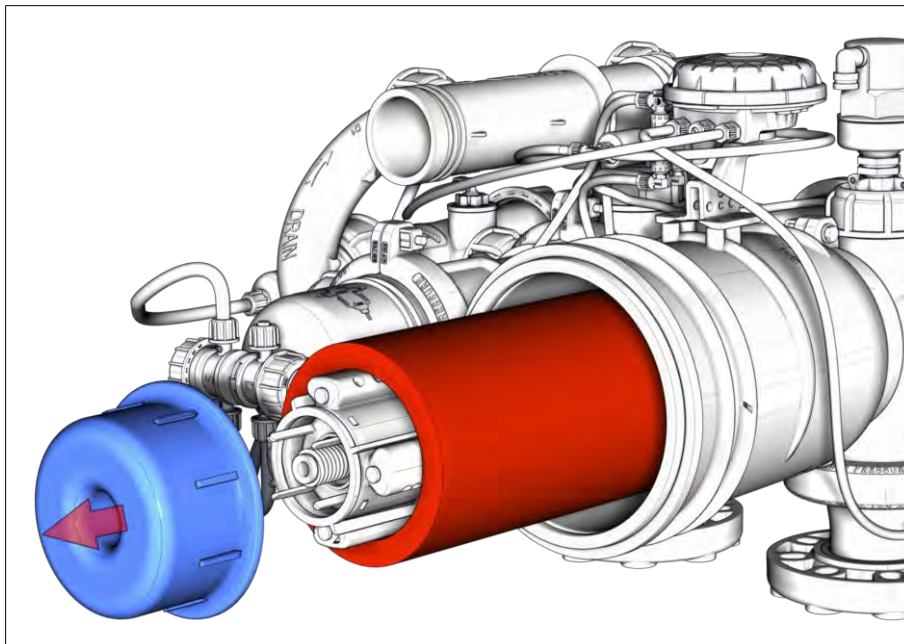
7. Open the butterfly nut by rotating it counterclockwise.



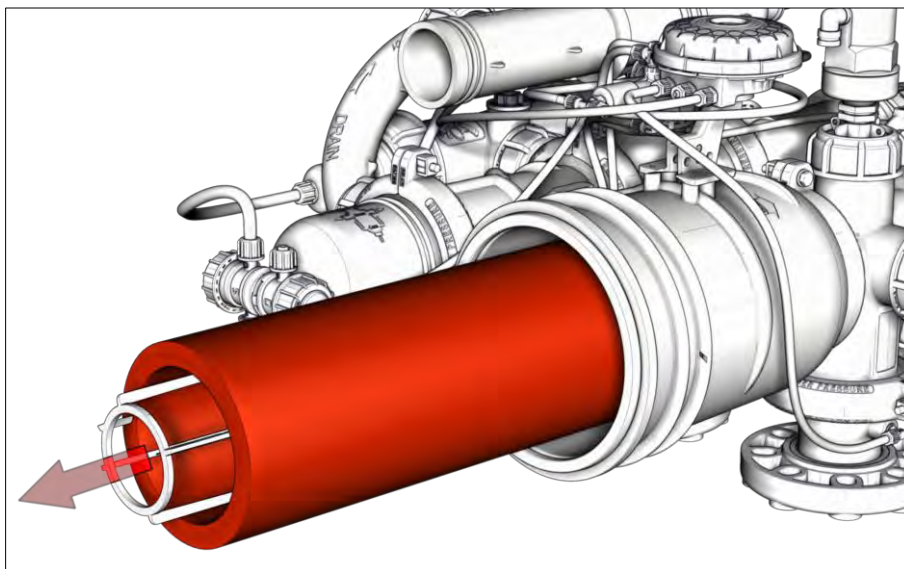
8. Remove the butterfly nut.



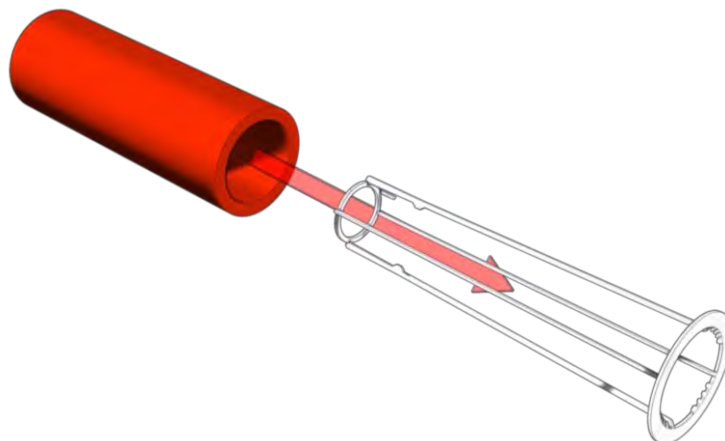
9. Remove the spine's cylinder on top of the spine.



10. Remove the discs.

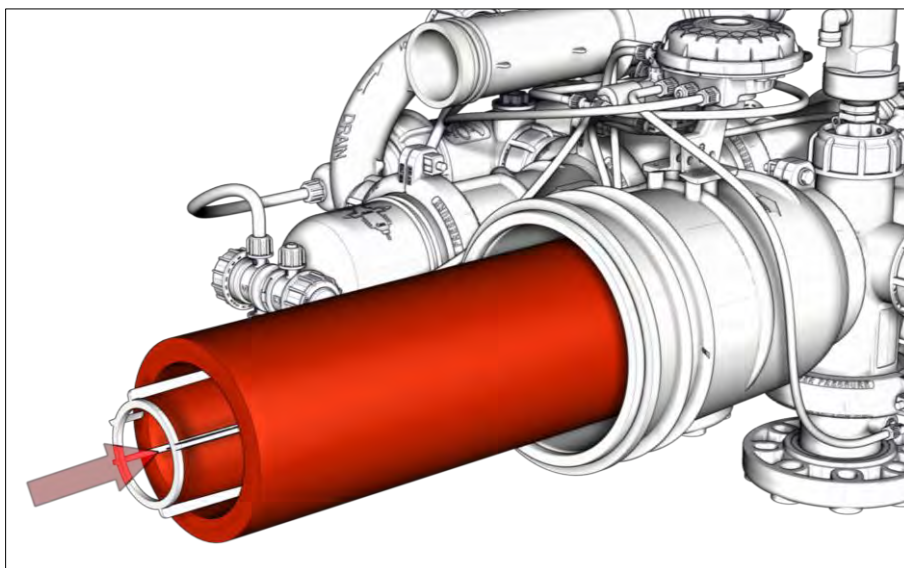


11. Pull out the disc holder (4" discs only)

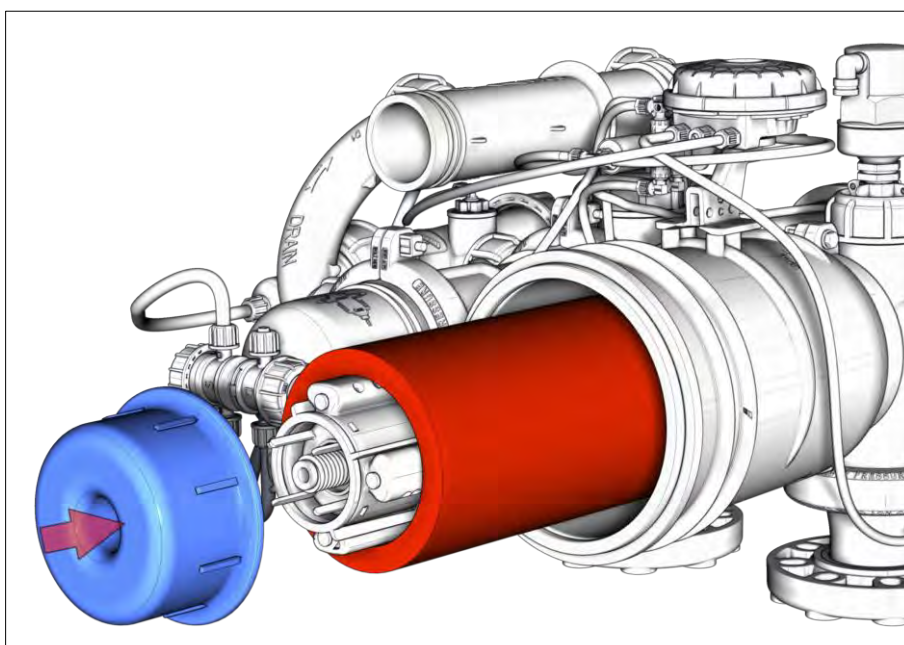


9.3.2. Assembly

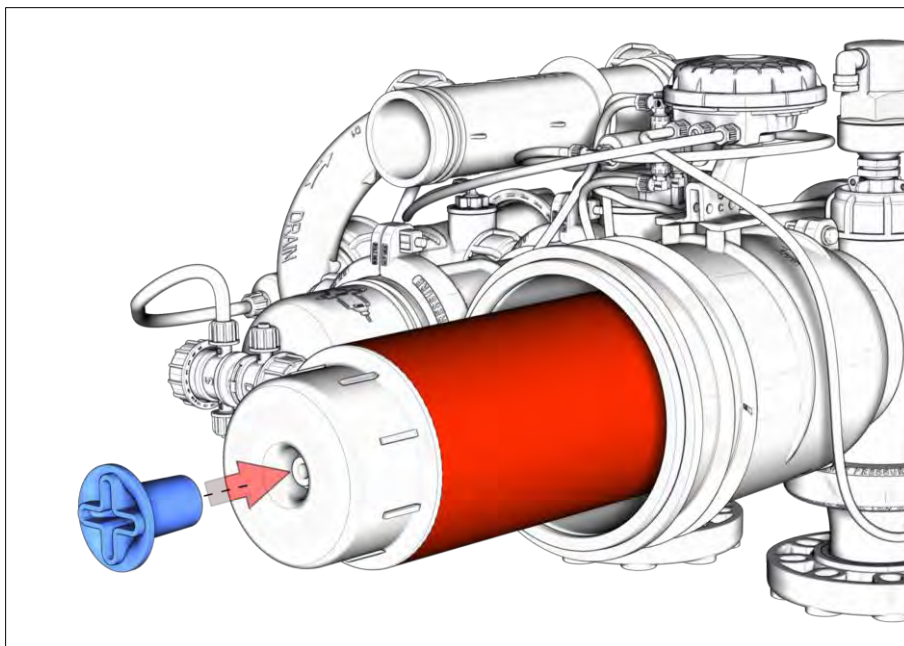
1. For disc reassembly, please follow these steps according to your designated system:
2. Insert the discs onto the spine.



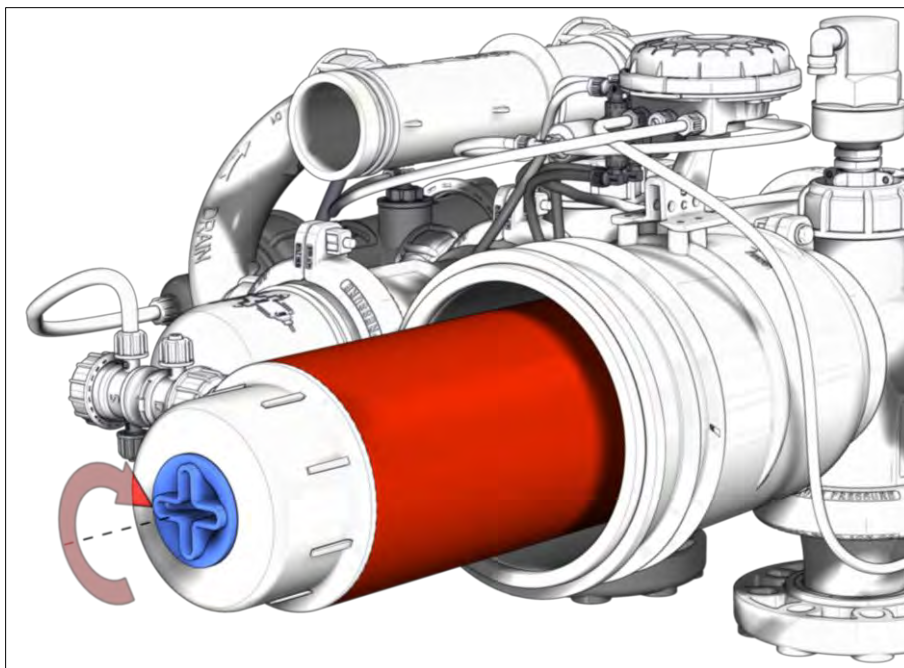
3. Place the spine cylinder on top of the spine.



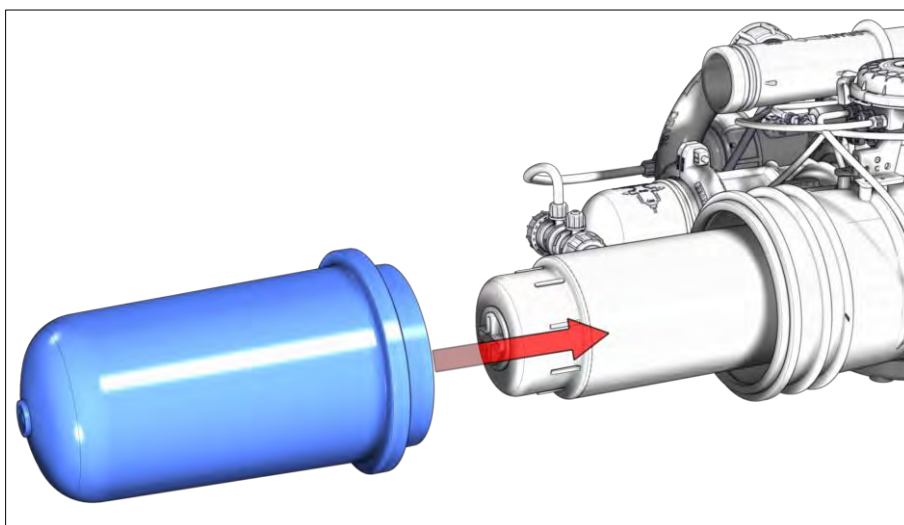
4. Place the butterfly nut on top of the cylinder.



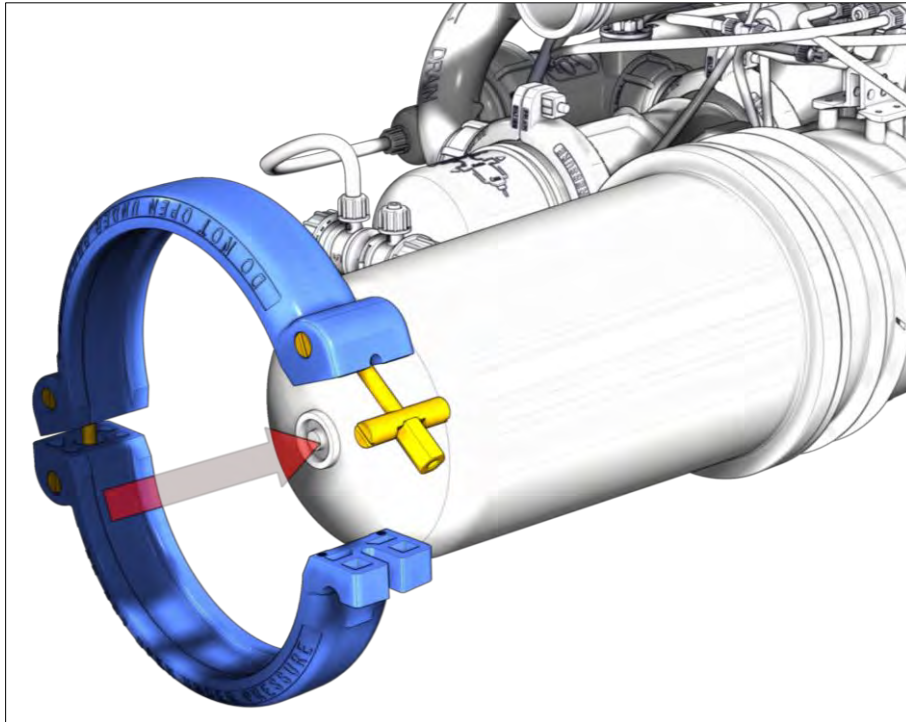
5. Tighten the butterfly nut clockwise, using the provided tool.



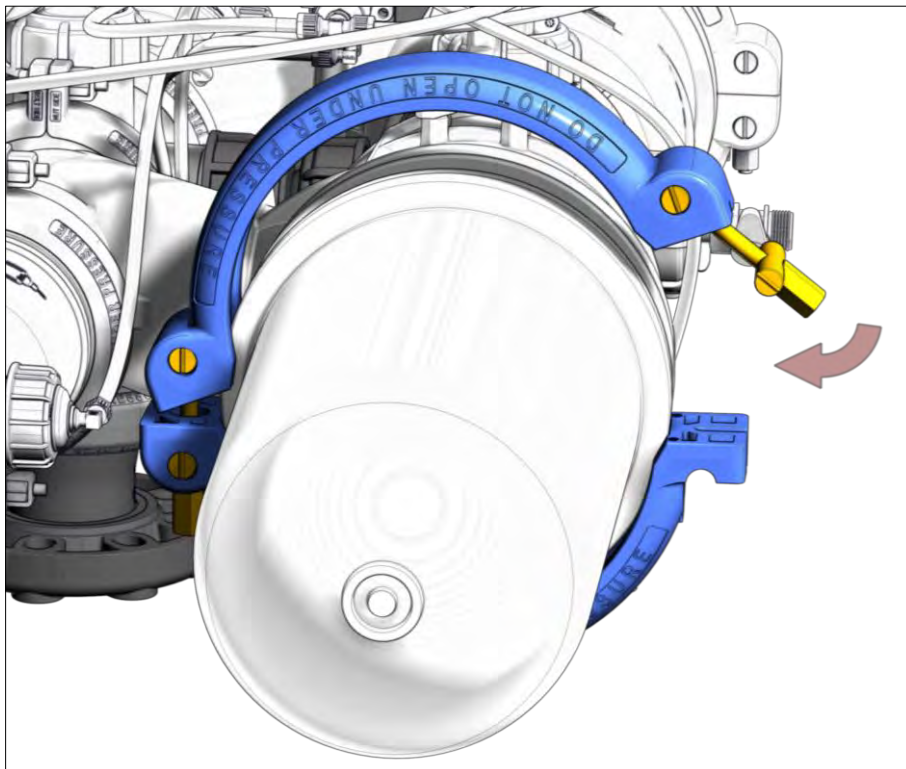
6. Reassemble the filter cover.



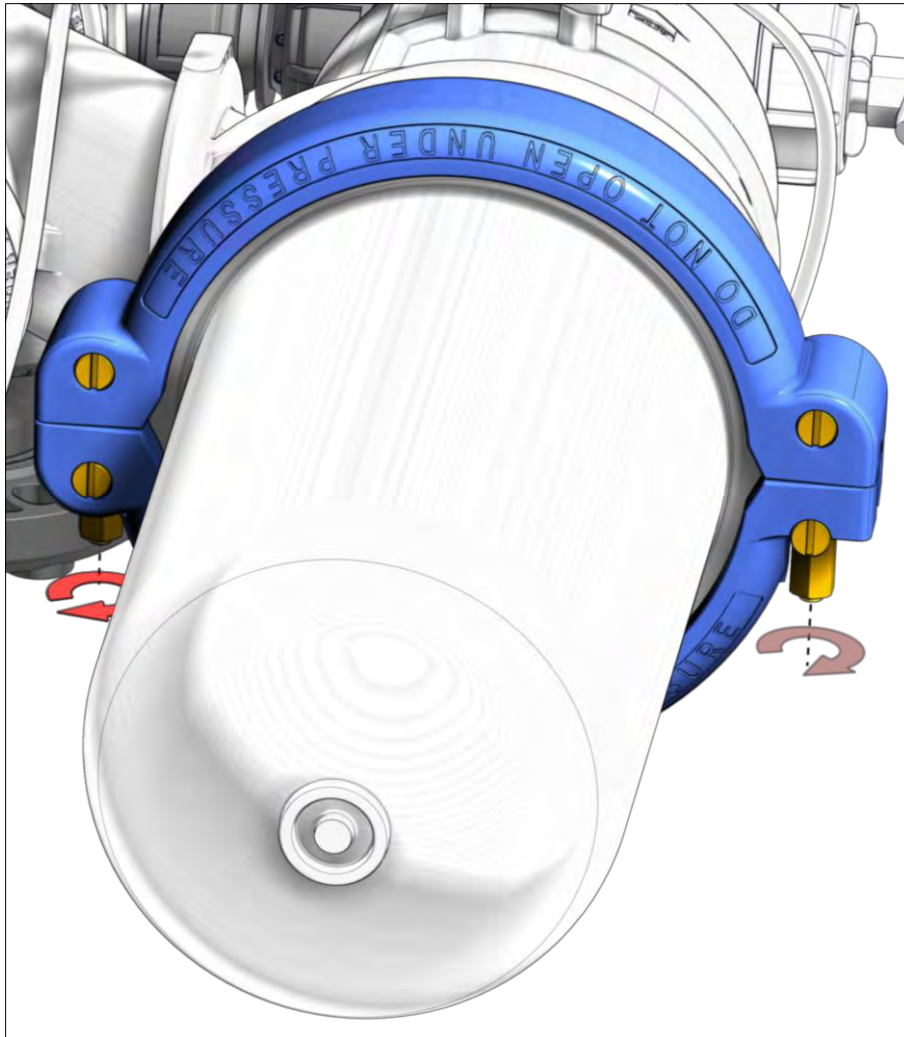
7. Reassemble the main clamps.
8. Keep pushing the cover while placing the upper clamp and then place the bottom clamp.



9. Place the **tie bar** back to the slot.



10. Tighten the two hex nuts (17mm (1¹/₁₆") spanner) that join the main clamps.

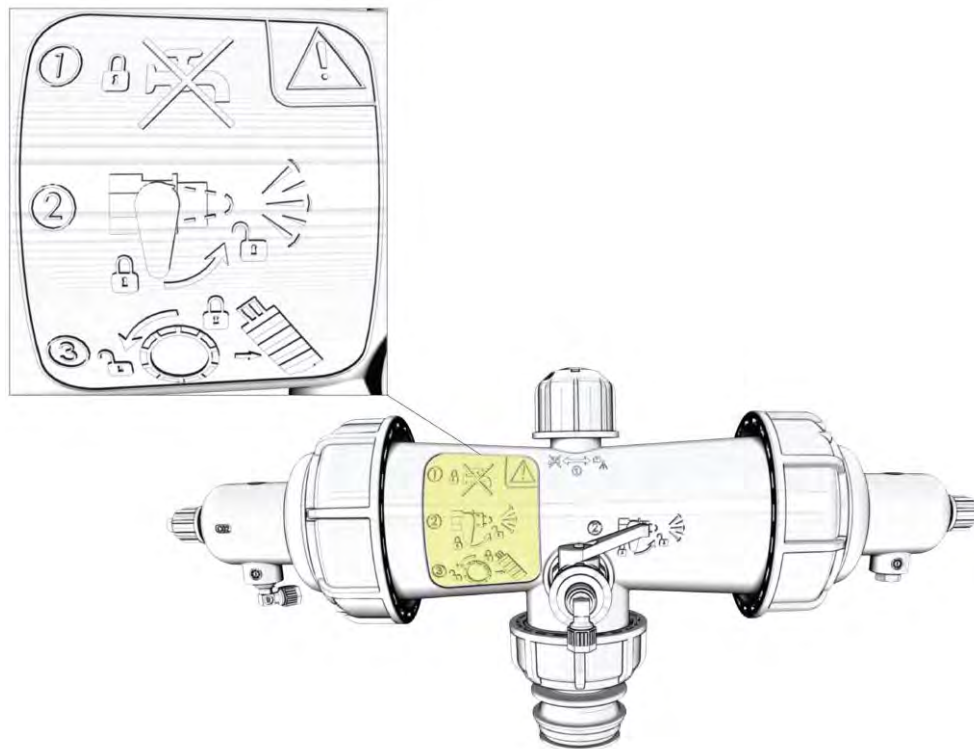


9.4. Command Filter

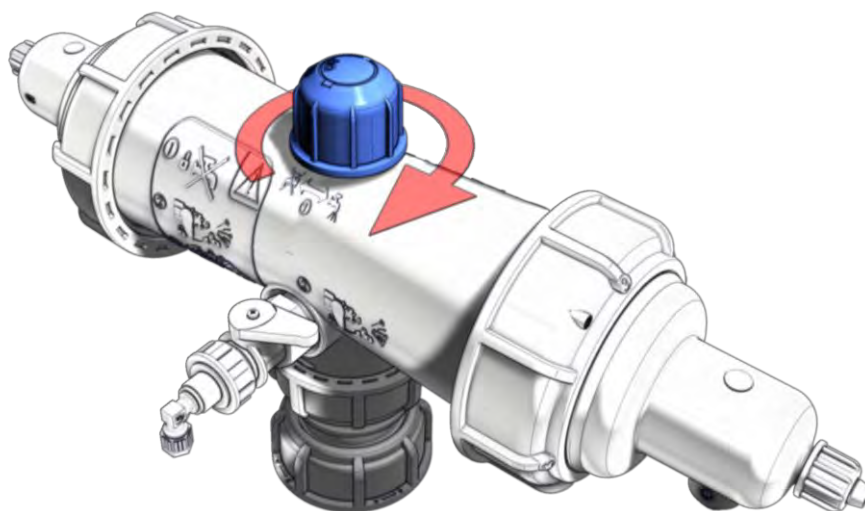
9.4.1. Disassembly (both sides)

Note:

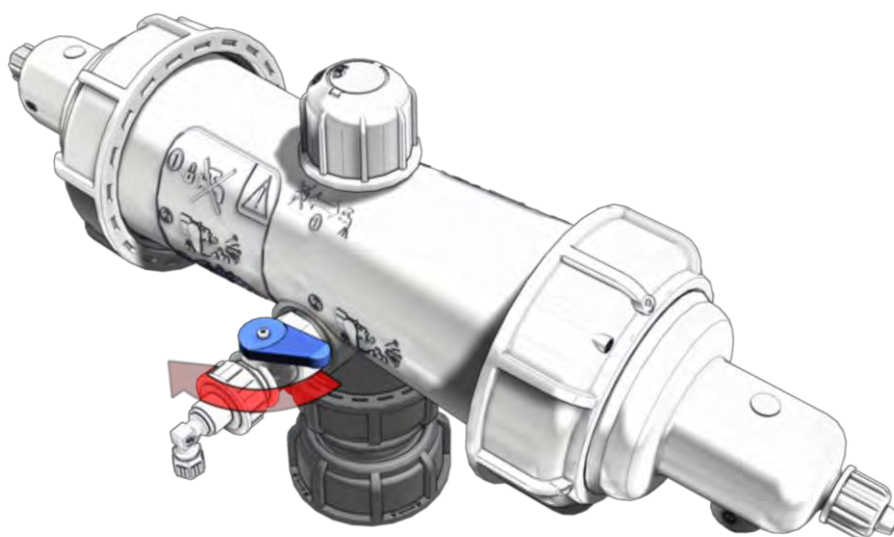
For an overview of the command filter cleaning procedure, please refer to the diagram located on the side of the command filter body. For each step you will find a designated number on the command filter body.



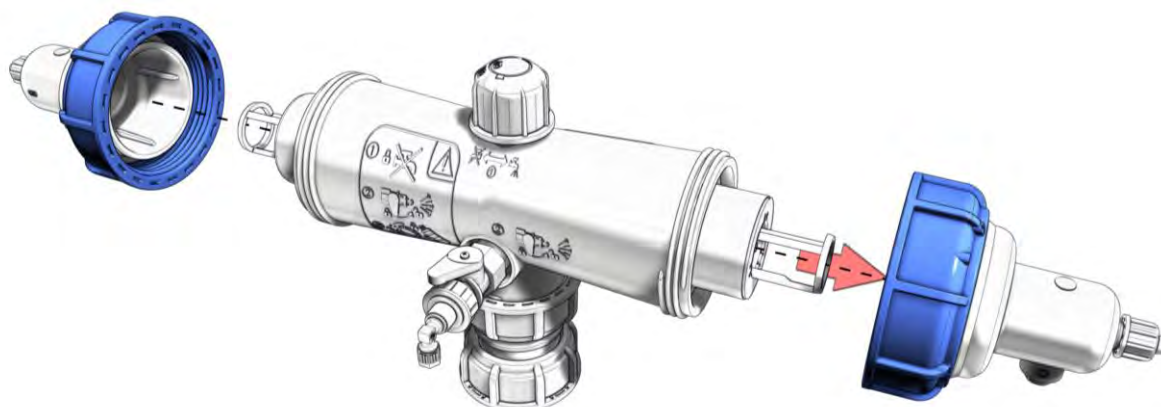
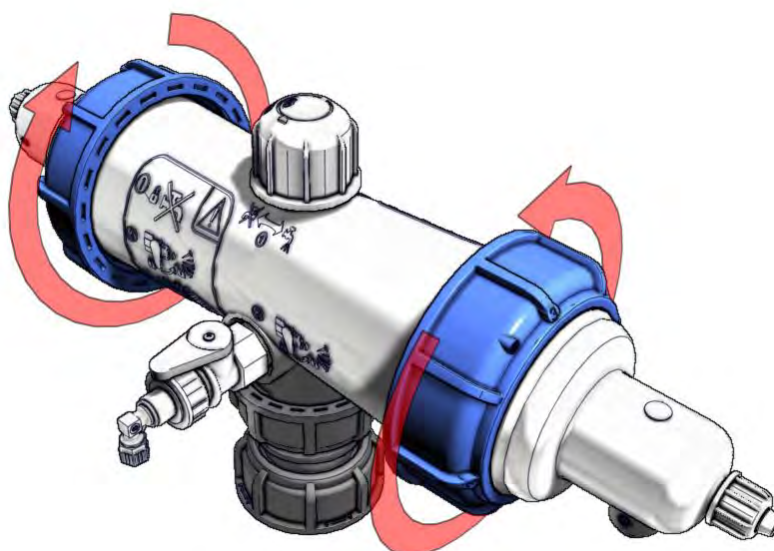
1. Close the supply valve.



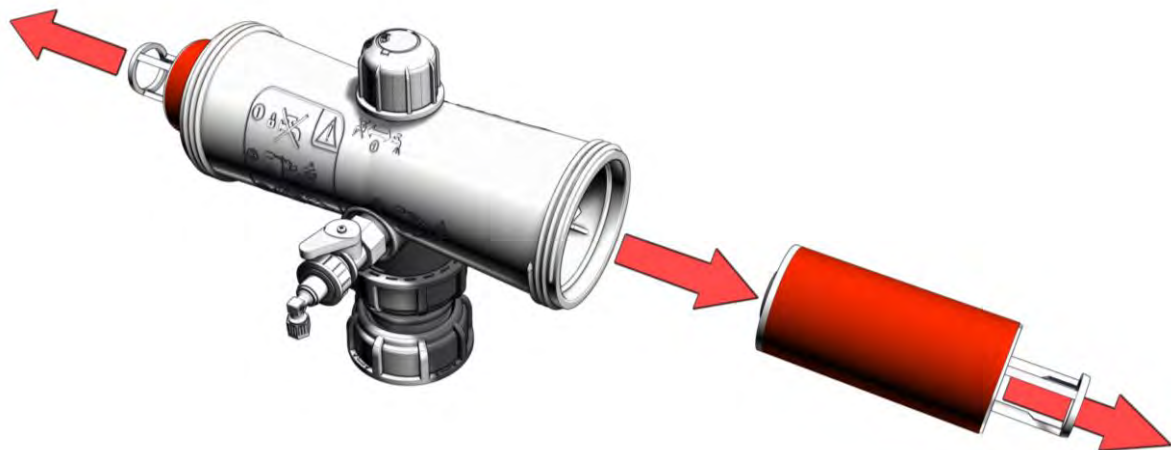
2. Open the drain valve.



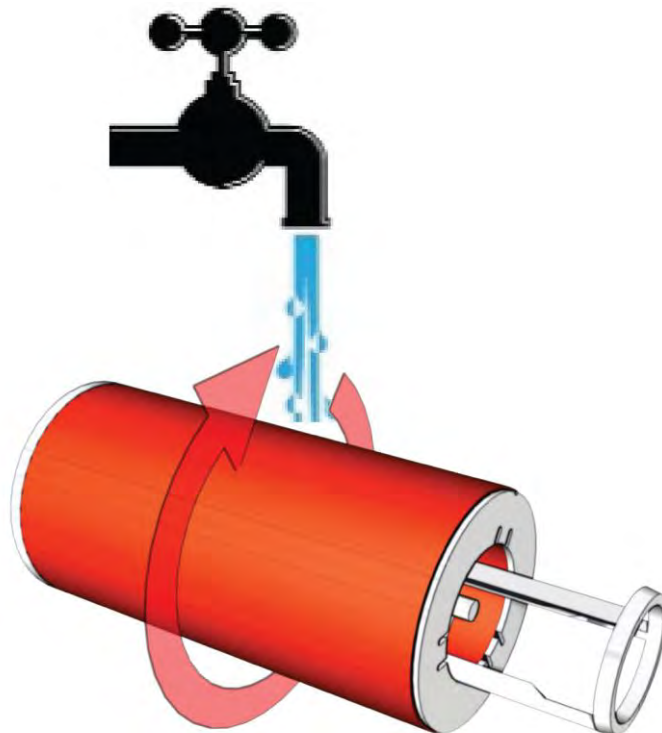
3. Release and open the cover nut (both sides).



4. Extract the 1" spine.

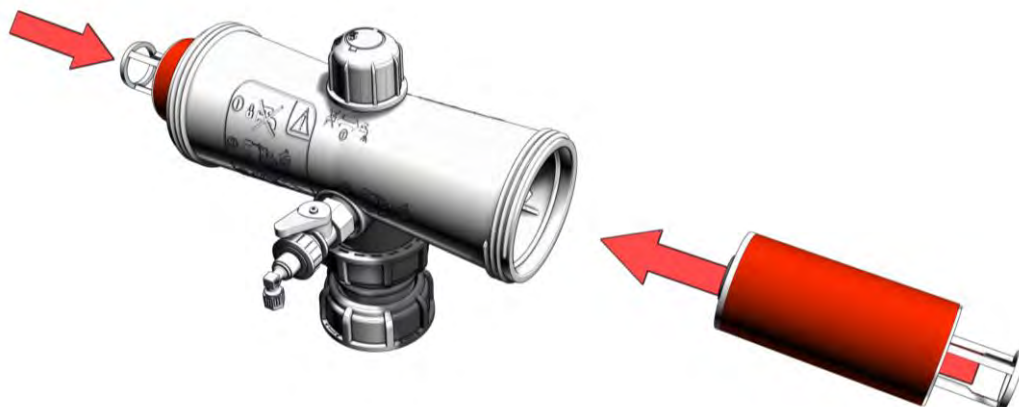


5. Wash the discs thoroughly under running water (make sure the discs are separated and spinning during the cleaning process).

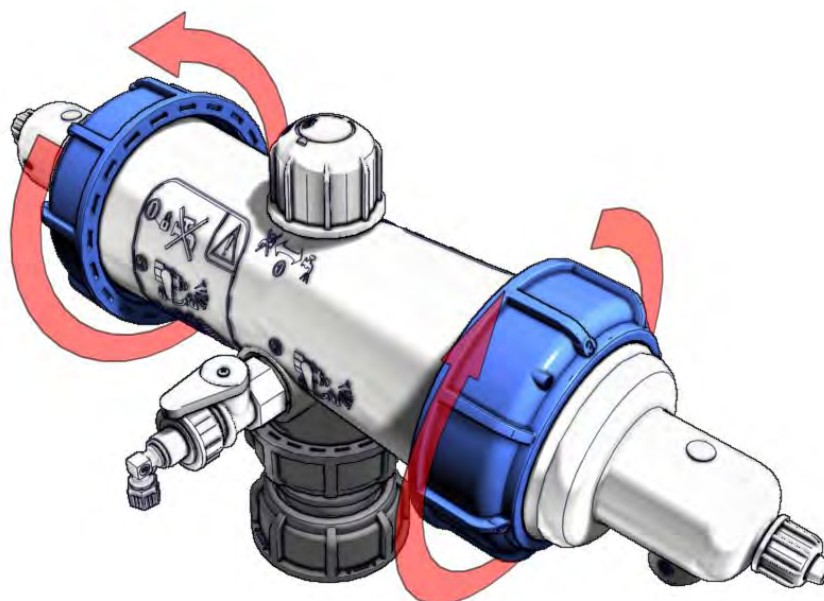
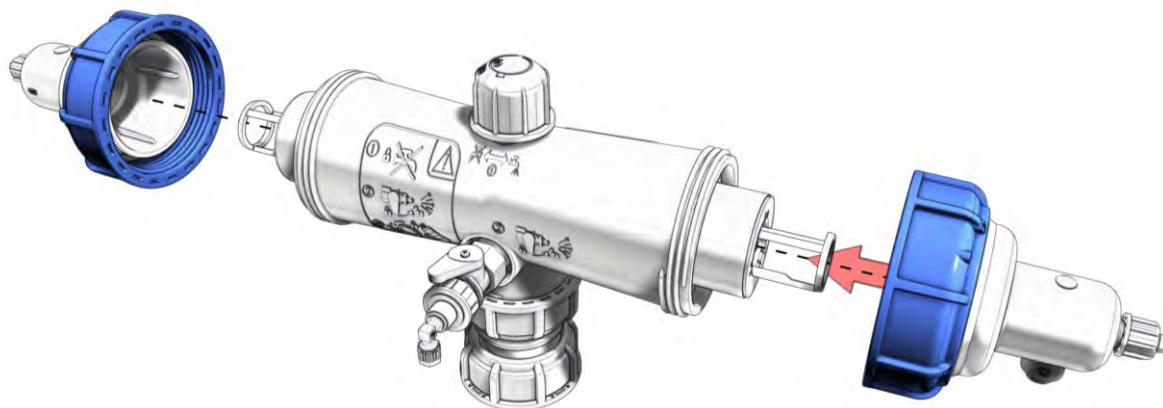


9.4.2. Assembly (both sides)

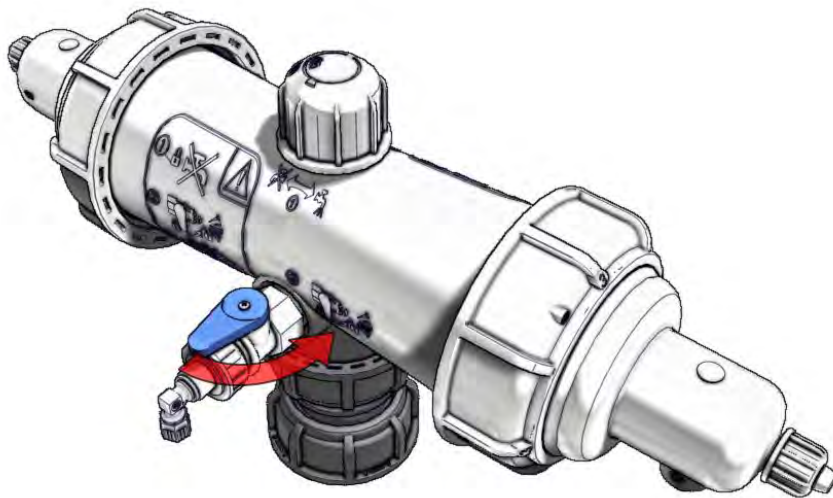
1. Insert the disc spine into the command filter body.



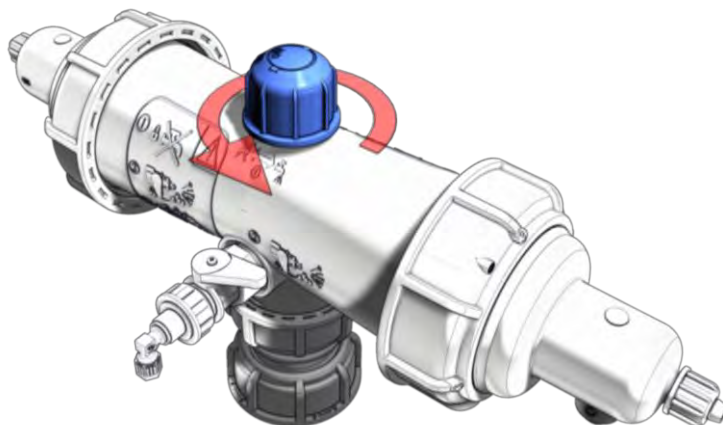
2. Close the command filter and tighten the cover nuts.



3. Close the drain valve.



4. Open the supply valve and initiate a manual **flushing** procedure in order to test the system.



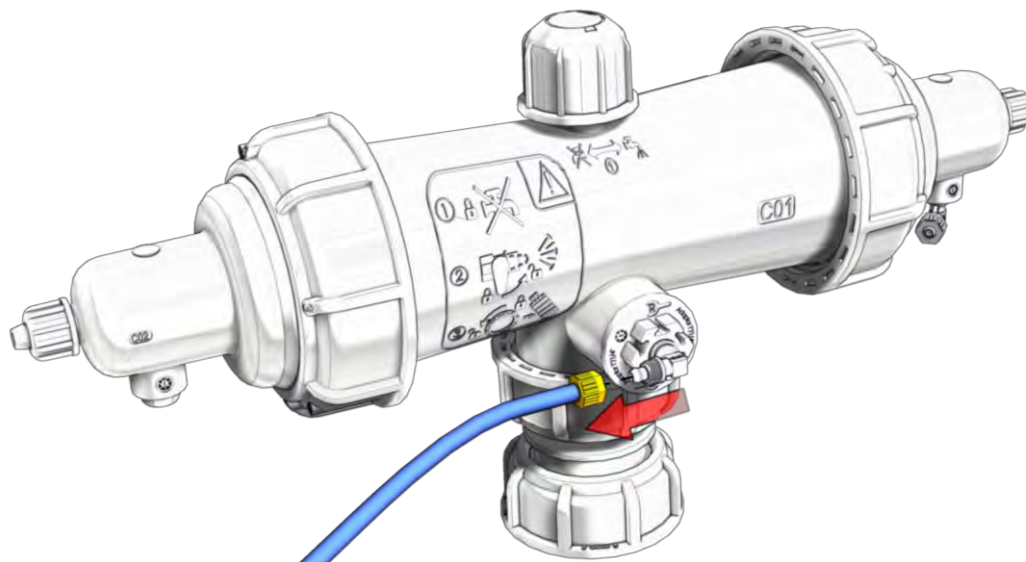
9.5. Finger Filter

9.5.1. Disassembly

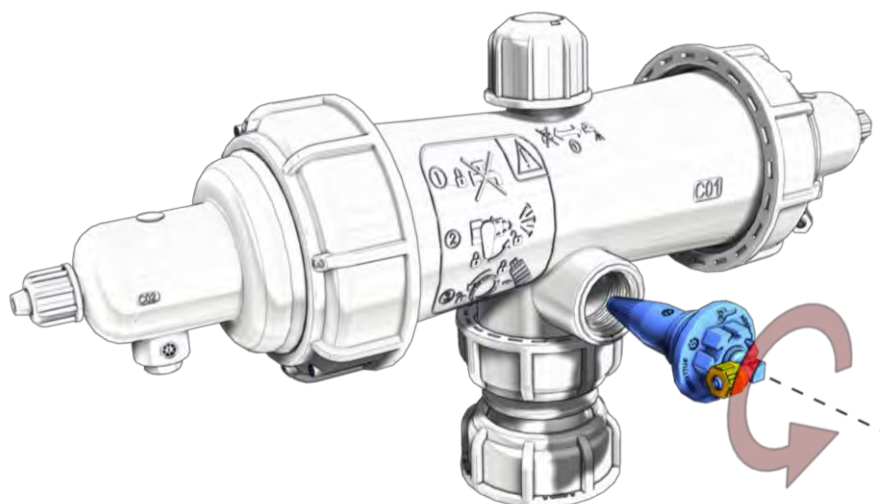
Note:

Before any maintenance procedure, please depressurize and empty the filter (see page 42).

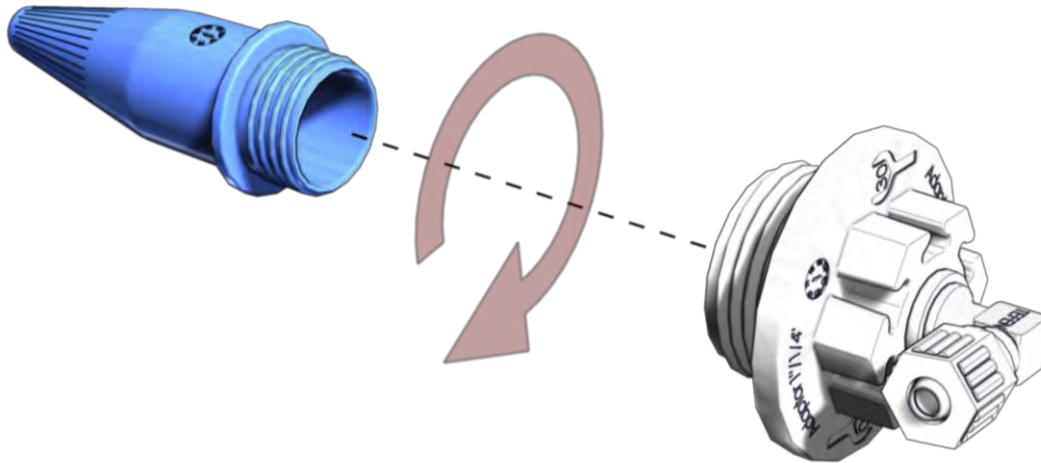
1. Disconnect the 8mm tube from the finger filter connection.



2. Release the finger filter counterclockwise (eq.30mm (1³/₁₆") spanner).



3. Open the finger filter counterclockwise (eq.30mm (1³/₁₆") spanner).

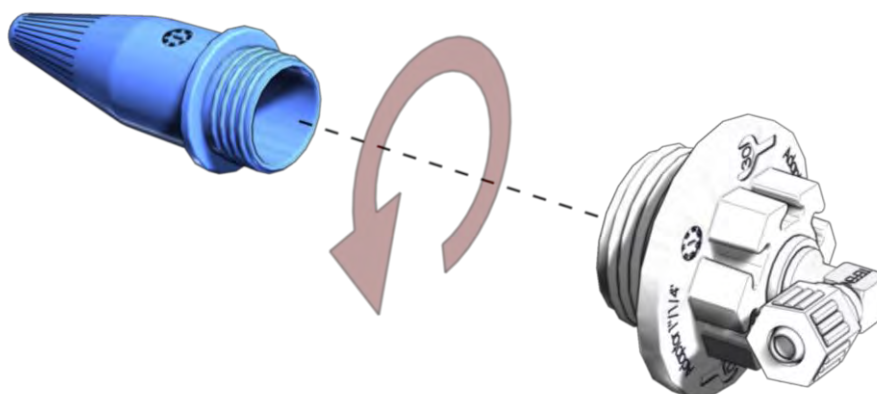


4. Wash the filter thoroughly under running water.

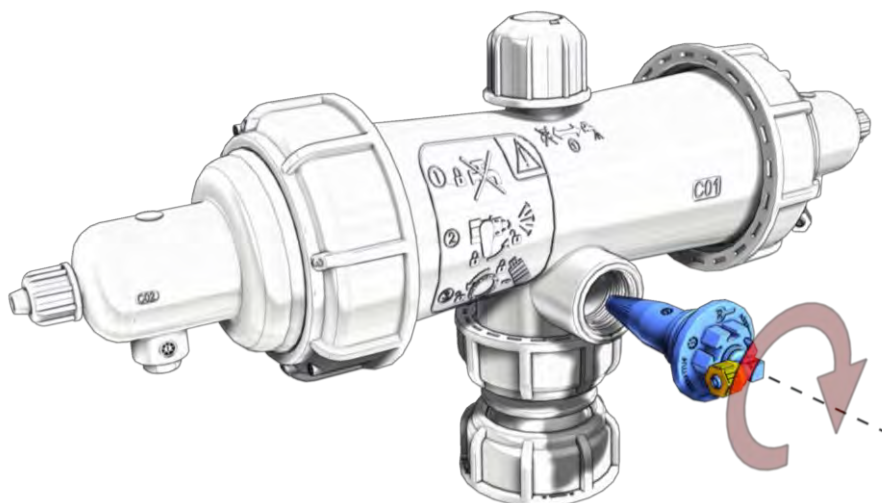


9.5.2. Assembly

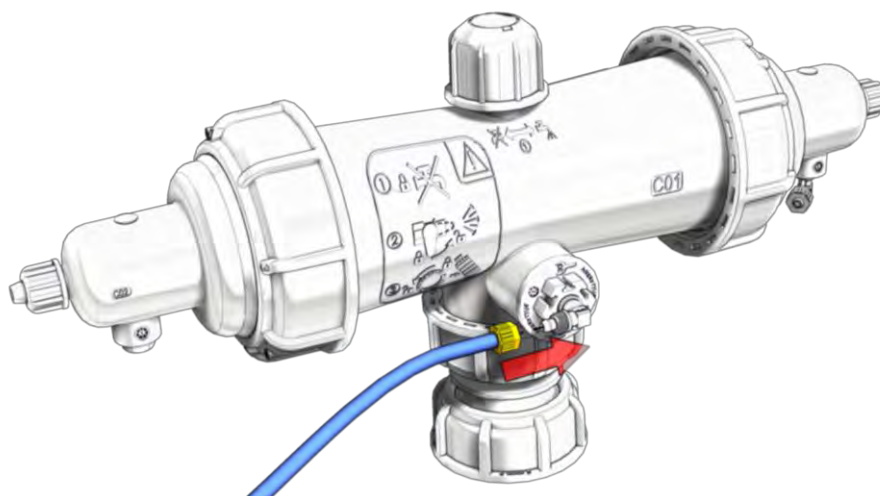
1. Close the finger filter clockwise (eq.30mm (1³/₁₆") spanner).



2. Attach the finger filter clockwise (eq.30mm (1³/₁₆") spanner).



3. Reconnect the 8mm tube from the finger filter connection. Initiate a manual flushing procedure in order to test the system and open the inlet valve.



10. Disc Cleaning Procedure

10.1. Seasonal Maintenance - Discs

To guarantee thorough cleaning the following steps should be taken

Attention:

*When carrying out any of the following seasonal maintenance, service, or cleaning the discs – after backwashing the system and after closing the water inlet, **make sure that there is no pressure in the system!***

10.2. Cleaning recommendations for clogged filtration discs

Water-formed deposits may cause clogging of the filter discs. The formation of these deposits depends on the quality of the filtered water and environmental conditions like temperature, pH, light, duration of filtration and more.

Common water-formed deposits are:

- Biological or organic deposits (mostly mucous or oily to the touch, beige, brown or green in color)
- Iron oxide (rust) or other metal oxides (brown or orange deposits)
- Manganese oxides (black deposits)
- Carbonates (white or gray deposit)
- Combinations of the above

If these deposits cannot be eliminated by pretreatment of the water, we recommend the following cleaning procedure:

10.3. Materials and Equipment

A well-ventilated working place.

1 small container (1 liter), 2 large containers (50 liter) and a stirring stick, all resistant to chemicals, preferably of polypropylene.

Plastic rope to tie up the disc.

Sodium Hypochlorite, NaOCl, CAS No. 7681-52-9

- Strong oxidizing liquid, commercial concentration: 10%.
- Oxidizes and removes organic and biological deposits.

Hydrogen Peroxide, H₂O₂, CAS No. 7722-84-1

- Strong oxidizing liquid, commercial concentration: 16% (35%). Oxidizes and removes organic and biological deposits.

Hydrochloric Acid, HCl, – CAS No. 7647-01-0

- Very corrosive liquid, commercial concentration: 30%.
- Dissolves and removes carbonates, iron oxide, and other deposits.

Citric Acid, C₆H₈O₇, CAS No. 77-92-9

- Organic acid, commercially available as solid white crystal salt.
- Dissolves and removes manganese compounds.

Safety equipment: safety glasses, gloves, long pants, long-sleeved shirt and shoes.

Attention!

While working with chemicals protect yourself with the necessary safety equipment:

Safety glasses, gloves, protective clothing

Work in a well-ventilated area

Follow the manufacturer's instructions

Store and discard chemicals according to local law.

10.4. Cleaning organic and biological deposits – with sodium hypochlorite (NaClO)

1. Open the filter and remove dirty discs.

Attention:

Never open the filter before the pressure has been released.

2. Arrange the discs loosely on the plastic rope.
3. Prepare a 5% sodium hypochlorite solution (amount per disc set):
 - a. Pour 15 liters (4") or 5 liters (2") of water into one of the large containers.
 - b. Add 15 liters (4") or 5 liters (2") of sodium hypochlorite (10%) into the water.
4. Soak the discs in the solution so that both sides are covered. To achieve maximum cleaning, agitate the discs from time to time with a stirring stick.
5. Contact time with cleaning solution: up to 8 hours.
6. Remove the discs carefully from the solution, put them in the second large container and rinse them very well with clean water before placing them back in the filter.
7. We recommend flushing the cleaned discs again in the filter to ensure that all deposits and chemical residues are removed.

The cleaning solution can be used for several sets of discs. As the cleaning activity of the solution deteriorates, it may be necessary to soak the discs for a longer period of time.

10.5. Cleaning organic and biological deposits – with hydrogen peroxide (H₂O₂)

1. Open the filter and remove dirty discs.
2. Attention – never open the filter before the pressure has been released.
3. Arrange the discs loosely on the plastic rope
4. Prepare a 5% peroxide solution (amount per disc set):
 - a. Pour 21 liters of water into one of the large containers.
 - b. Add 10 liters of hydrogen peroxide (16%) into the water.
5. Soak the discs in the solution so that both sides are covered. To achieve maximum cleaning, agitate the discs from time to time with a stirring stick.
6. Contact time with cleaning solution: up to 8 hours.
7. Remove the discs carefully from the solution, put them in the second large container and rinse them very well with clean water before placing them back in the filter.
8. We recommend flushing the cleaned discs again in the filter to ensure that all deposits and chemical residues are removed.

The cleaning solution can be used for several sets of discs. As the cleaning activity of the solution deteriorates, it may be necessary to soak the discs for a longer period of time.

10.6. Cleaning carbonates and iron deposits

1. Open the filter and remove the dirty discs.
2. Arrange the discs loosely on the plastic rope.
3. Prepare a 5% solution of hydrochloric acid (amount per disc set):
 - a. Pour 25 liters (4") or 10 liters (2") of water into one of the large containers.
 - b. Carefully add 5 (4") or 2 (2") liters of hydrochloric acid (30%) into the water. Soak the discs in the solution so that both sides are covered.

PLEASE NOTE: Carbonates react violently with hydrochloric acid (foaming, gas evolution). To achieve maximum cleaning, agitate the discs from time to time with a stirring stick.
4. Contact time with cleaning solution: 1 - 8 hours.
5. Remove the discs carefully from the solution, put them in the second large container and rinse them well with clean water before placing them back in the filter.
6. We recommend flushing the cleaned discs again in the filter to ensure that all deposits and chemical residues are removed.

The cleaning solution can be used for several sets of discs. It may be necessary to soak the discs for a longer period of time as the cleaning activity of the solution deteriorates.

10.7. Cleaning manganese deposits

7. Open the filter and remove the dirty discs.
8. Arrange the discs loosely on the plastic rope.
9. Prepare a 10% solution of citric acid:
 - c. 1) Pour 30 liters of water into one of the large containers.
 - d. 2) Carefully add 3 kg of solid citric acid into the water. Stir well until full dissolution of the acid.

Soak the discs in the solution so that both sides are covered.

To achieve maximum cleaning, agitate the discs from time to time with a stirring stick.
10. Contact time with cleaning solution: 2 - 8 hours.
11. Remove the discs carefully from the solution, put them in the second large container and rinse them well with clean water before placing them back in the filter.
12. We recommend flushing the cleaned discs again in the filter to ensure that all deposits and chemical residues are removed.

The cleaning solution can be used for several sets of discs. It may be necessary to soak the discs for a longer period of time as the cleaning activity of the solution deteriorates.

10.8. Cleaning complex deposits

If the composition of the deposit is not known, perform the following test:

1. Take 5 discs for the test.
2. Soak 2 discs in a 5% sodium hypochlorite solution.
Preparation of the solution:
Pour 1 cup of water into a small container, then add 1 cup of sodium hypochlorite (10% NaOCl).
3. Soak 2 discs in a 5% hydrochloric acid solution.
Preparation of the solution:
Pour 1 1/4 cups (= 250ml) of water into a small container, then carefully add 1/4 cup (= 50ml) of hydrochloric acid (30% HCl).
4. Keep one disc as a control.
5. Observe the cleaning process:
If one of the solutions removes all of the deposits, clean the discs in that solution according to the instructions above.
If neither solution removes the deposits completely, continue with the test procedure.
6. Remove the discs from both solutions, rinse them well with water and soak them in the second solution: put the two discs, which have been in the sodium hypochlorite solution, in the hydrochloric acid solution, and the other way around.
7. Check the cleaning process:
If one of the treatments removes all of the deposits, clean all of the discs following the same two-step procedure in the exact same order. Rinse the discs well between the two cleaning processes. If the deposits haven't been completely removed, send a set of untreated discs to the laboratory for further examination.

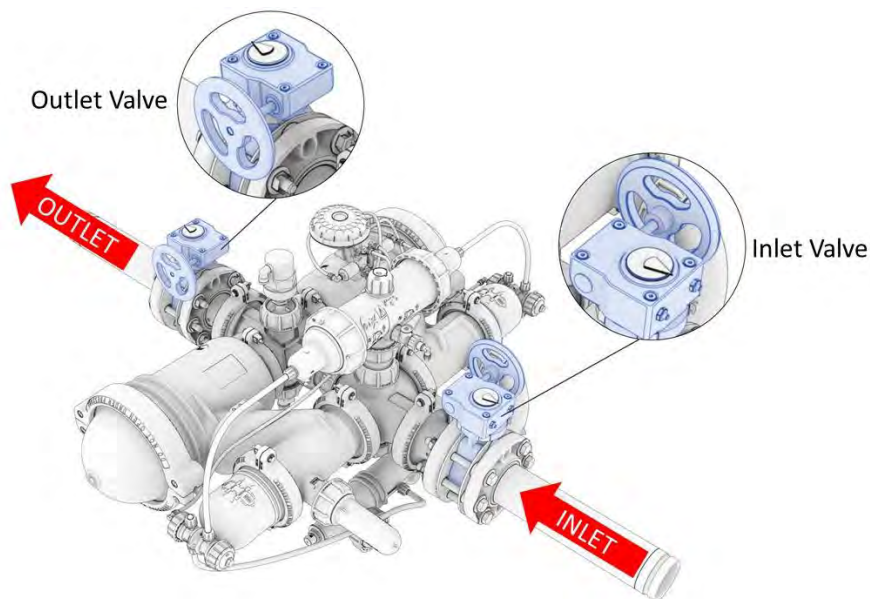
11. Winterization

In order to prevent the filter battery from becoming damaged during water freezing – drain all the water from the filter and the command filter and leave the drain valve open.

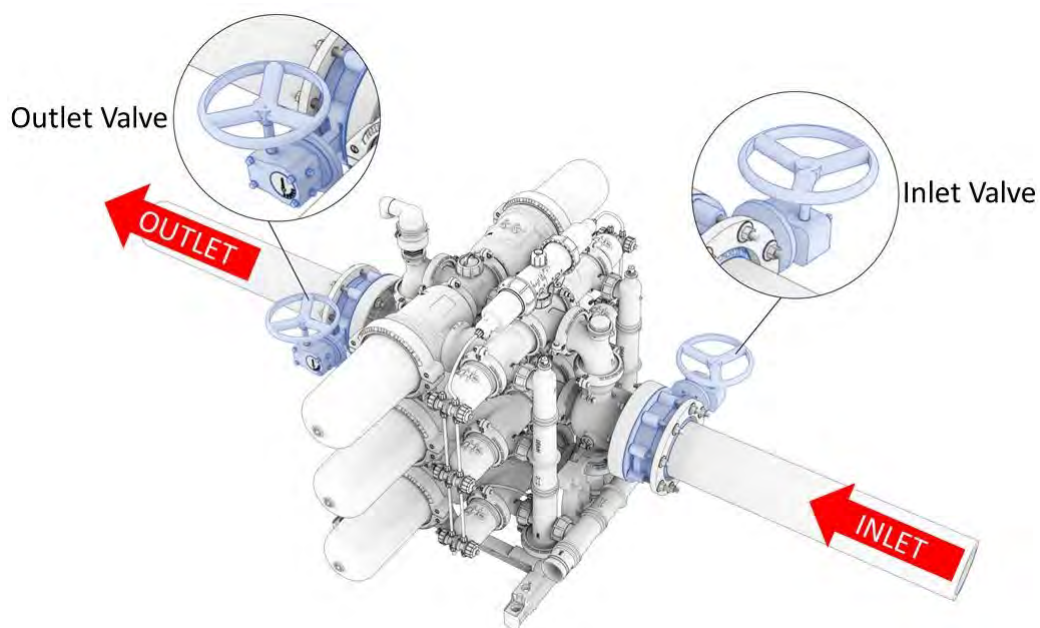
To avoid damage or breakage, the filter, solenoid and command tubes must be drained prior to frost periods.

1. Initiate a manual flush to make sure that the disc element is clean for the shutoff period.
2. Close the isolation valves (inlet and outlet if exist).

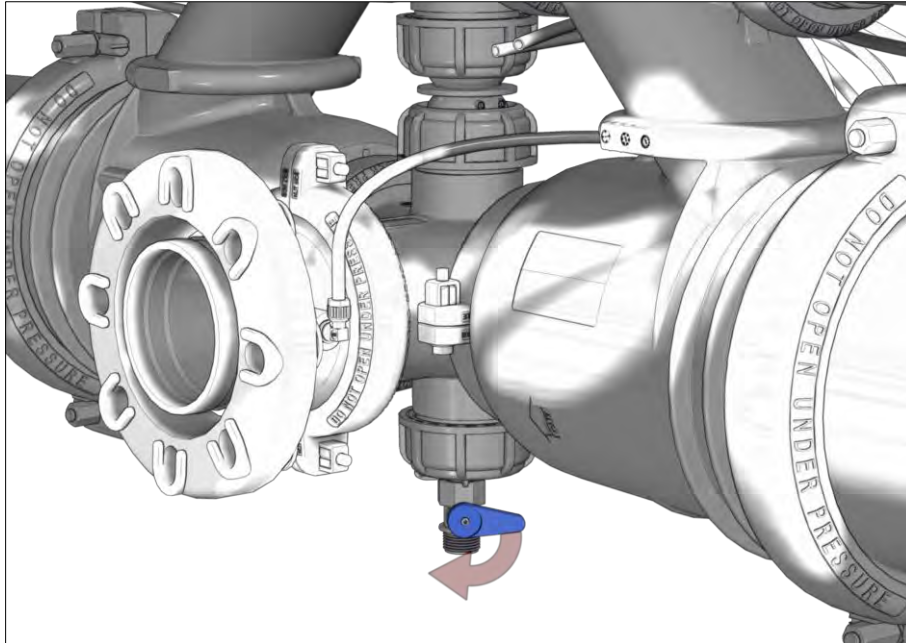
Single



Battery

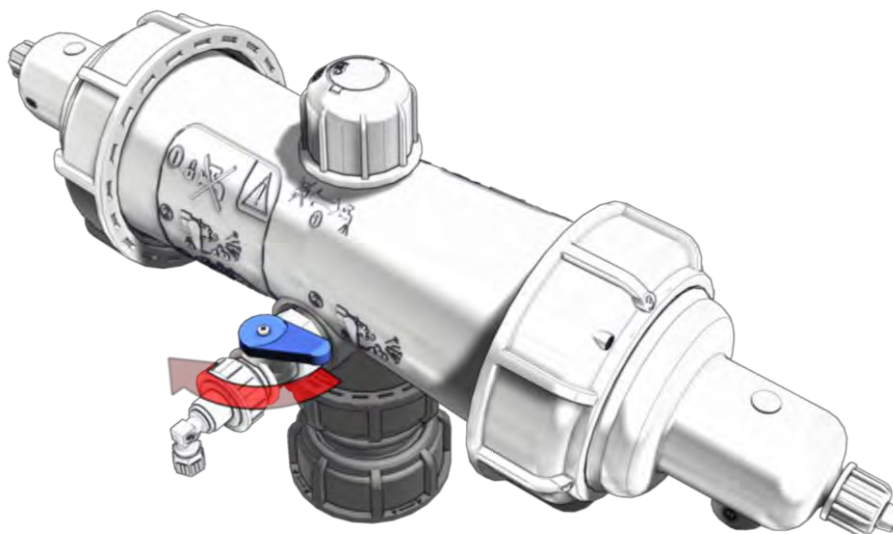


3. Initiate an additional manual flush to release the pressure inside the filter.
4. Open the drain valve located at the bottom of the filter.



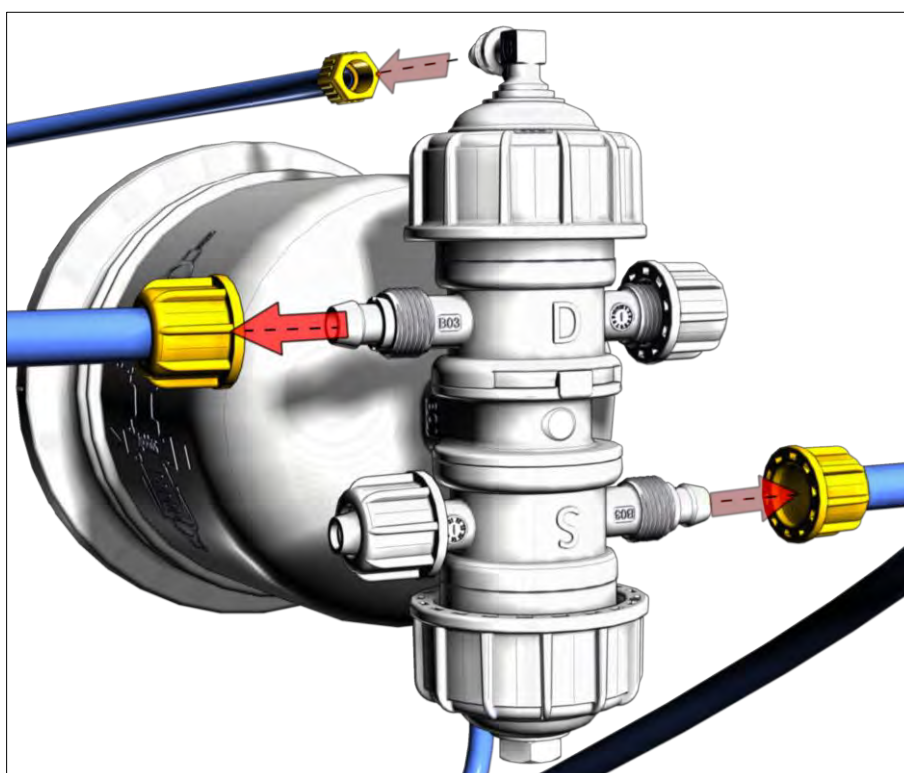
11.1. Filter Disassembly for Water Draining

1. Open the command filter drain valve.

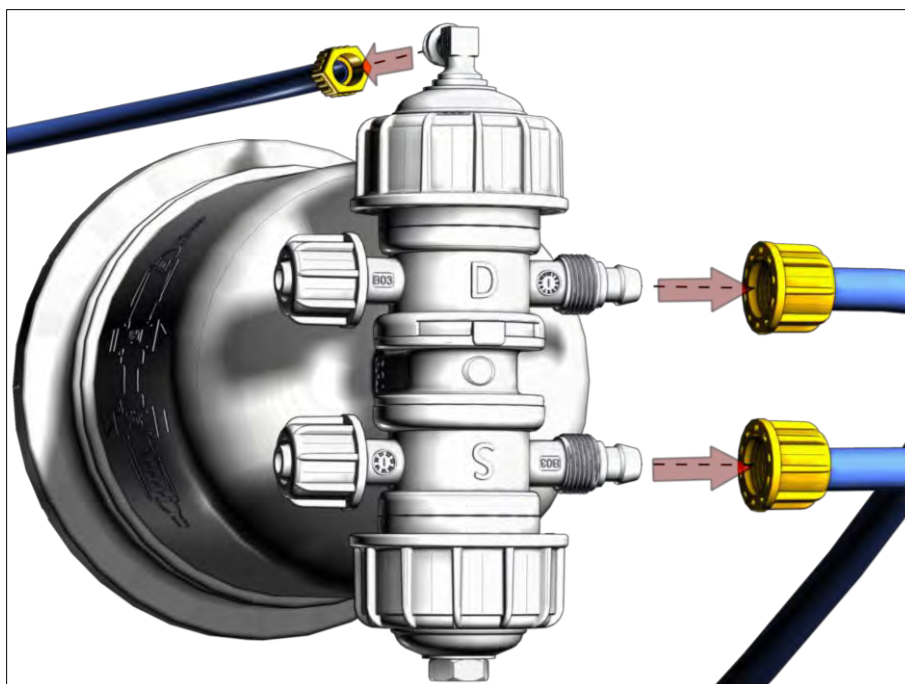


2. Disconnect the tubes of the water supply (S), water drainage (D) & command tube (C) from the booster cylinder.

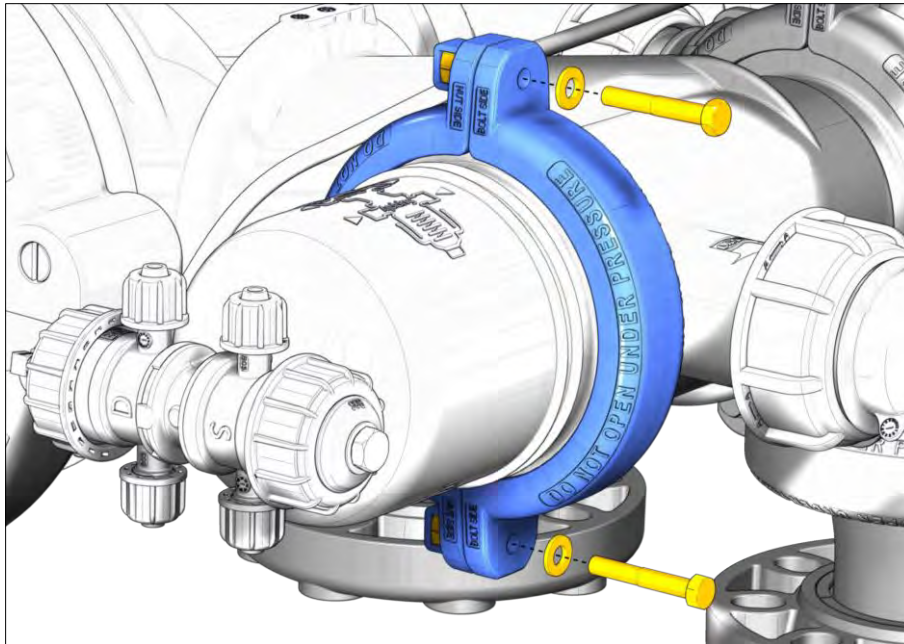
In-line



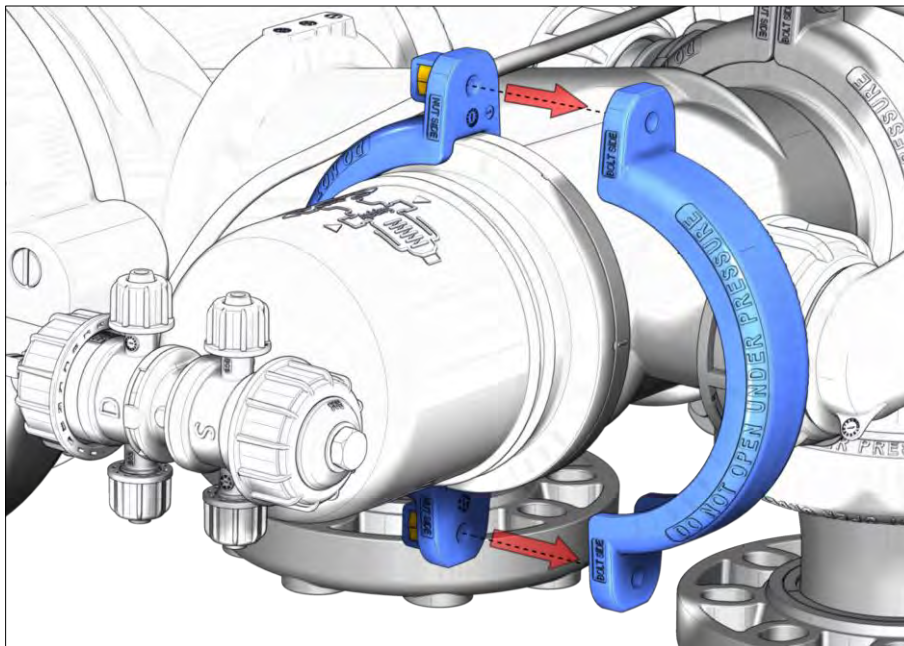
On-line



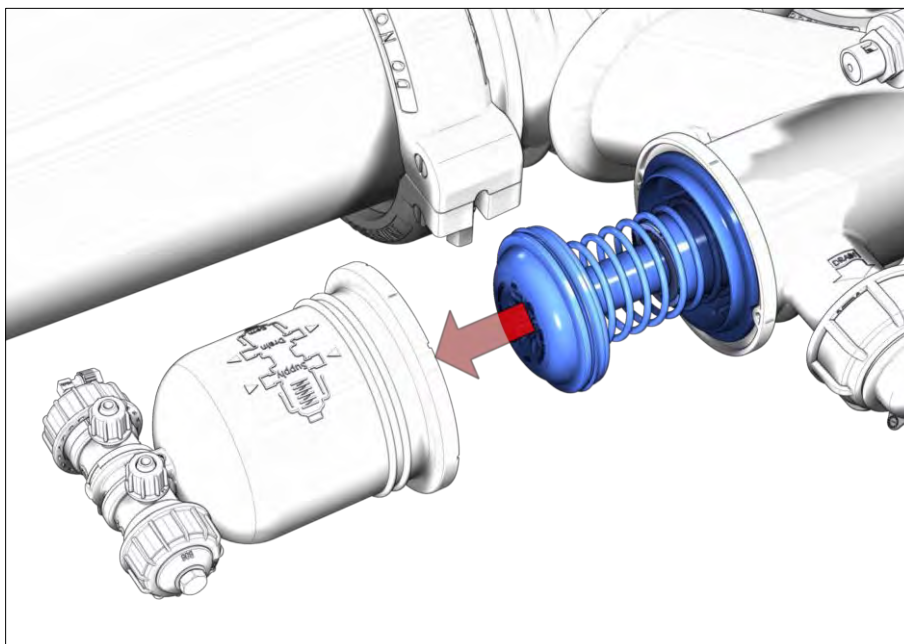
3. Unscrew the two bolts that join the system clamps and remove them.



4. Remove the clamps (you may need to use a flat screwdriver to separate them).

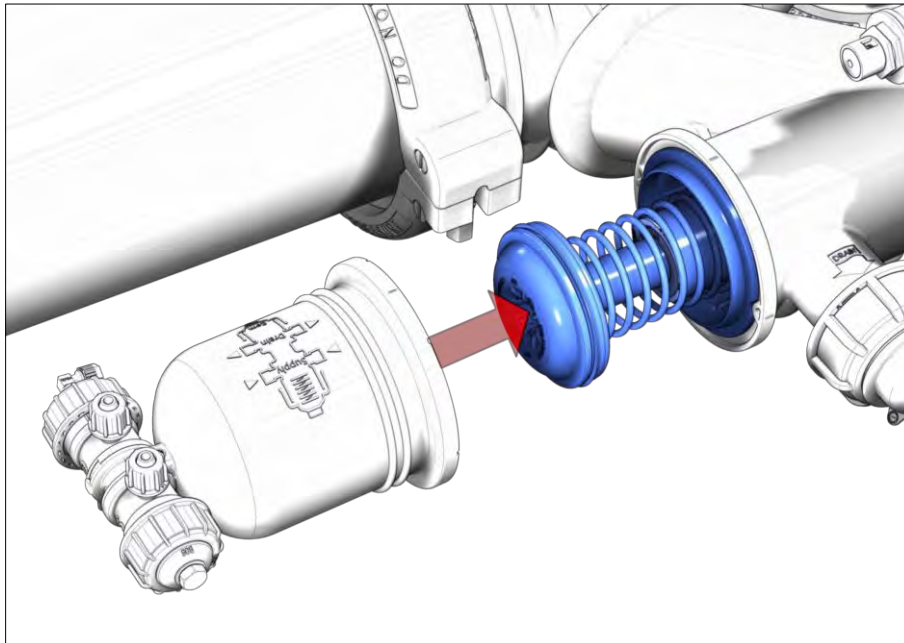


5. Remove the booster cylinder by pulling it backwards. Drain the booster cylinder from water residue.
6. Ensure the filter is empty.

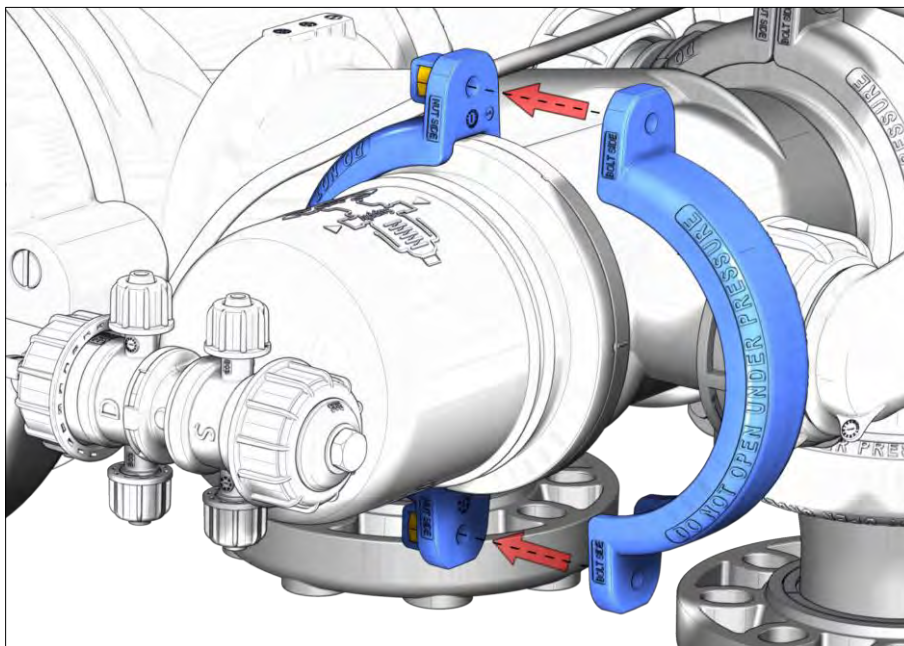


11.2. Assembly After Water Draining

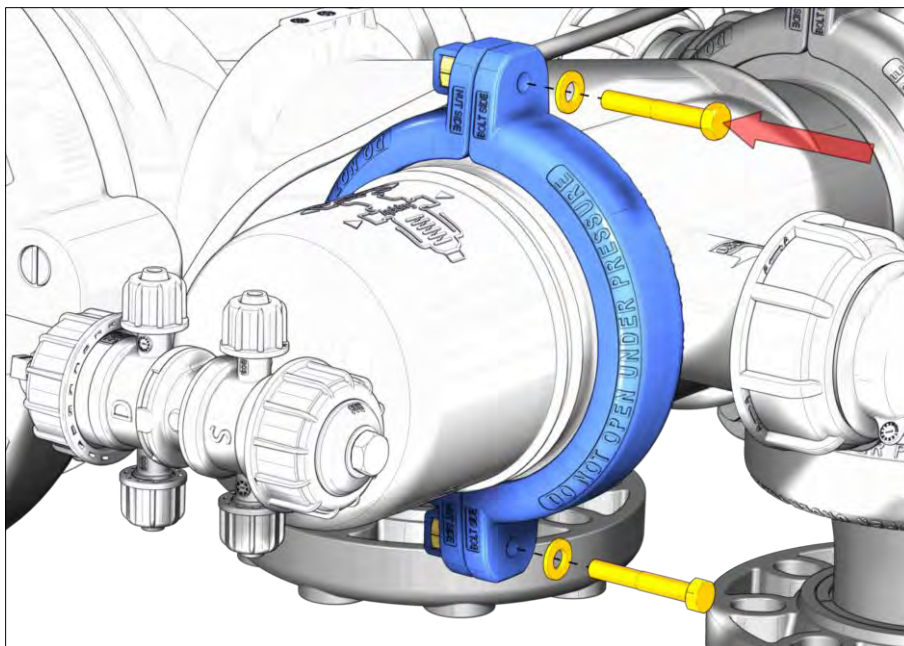
1. Reassemble the booster cylinder on the flush valve.



2. Reassemble the system clamps.

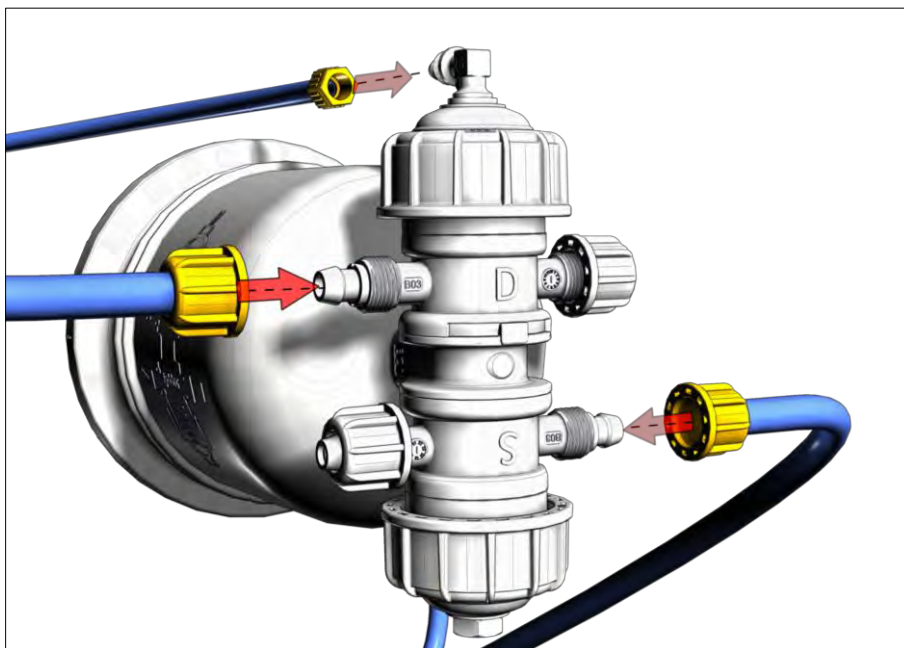


3. Tighten the system clamps by using the 2 bolts, with a 13mm (½") spanner.

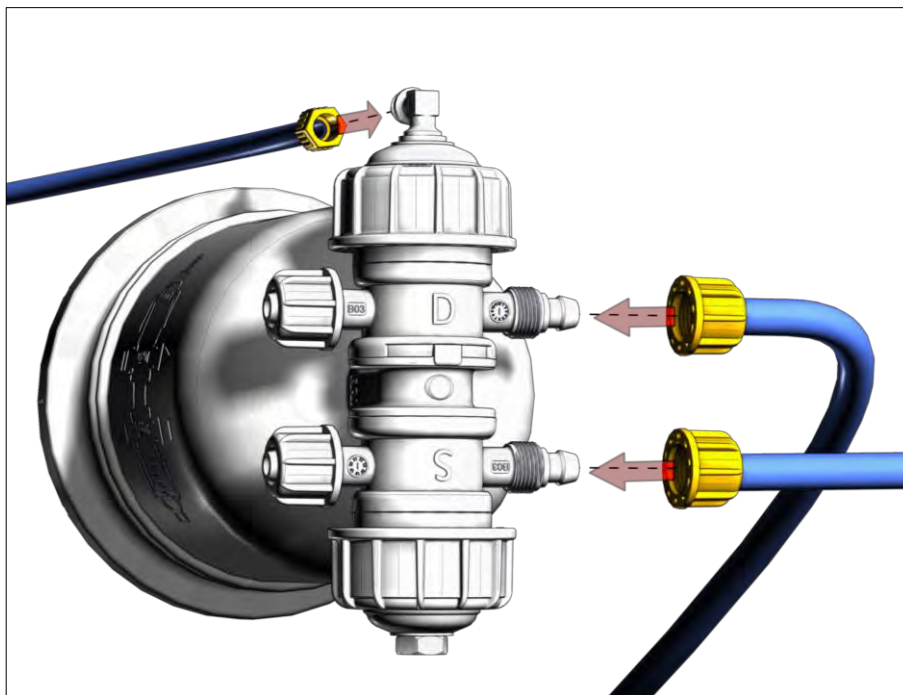


4. Connect the tubes of the water supply (S), water drainage (D) & command tube (C) to the booster cylinder.

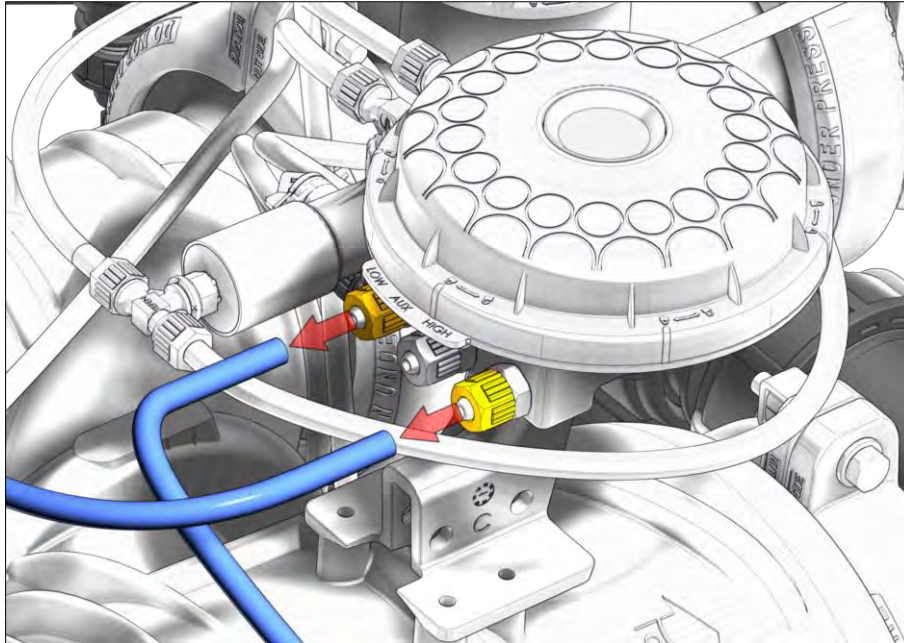
In-line



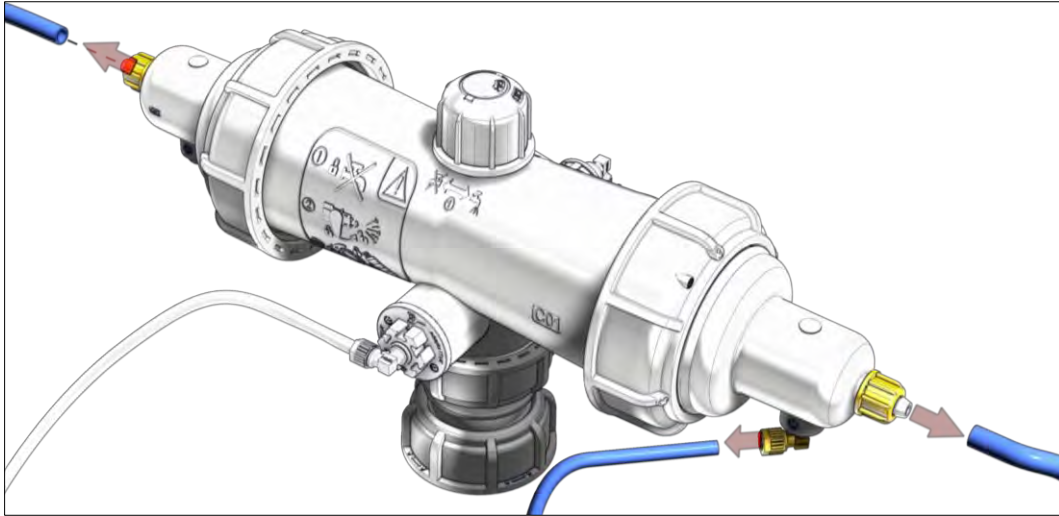
On-line



5. Disconnect the low & high sensor pressure 8mm connection from the ADI-P as shown, and leave unassembled until next season.



6. Disconnect the tubes that supply water to the solenoid, and leave unassembled until next season.



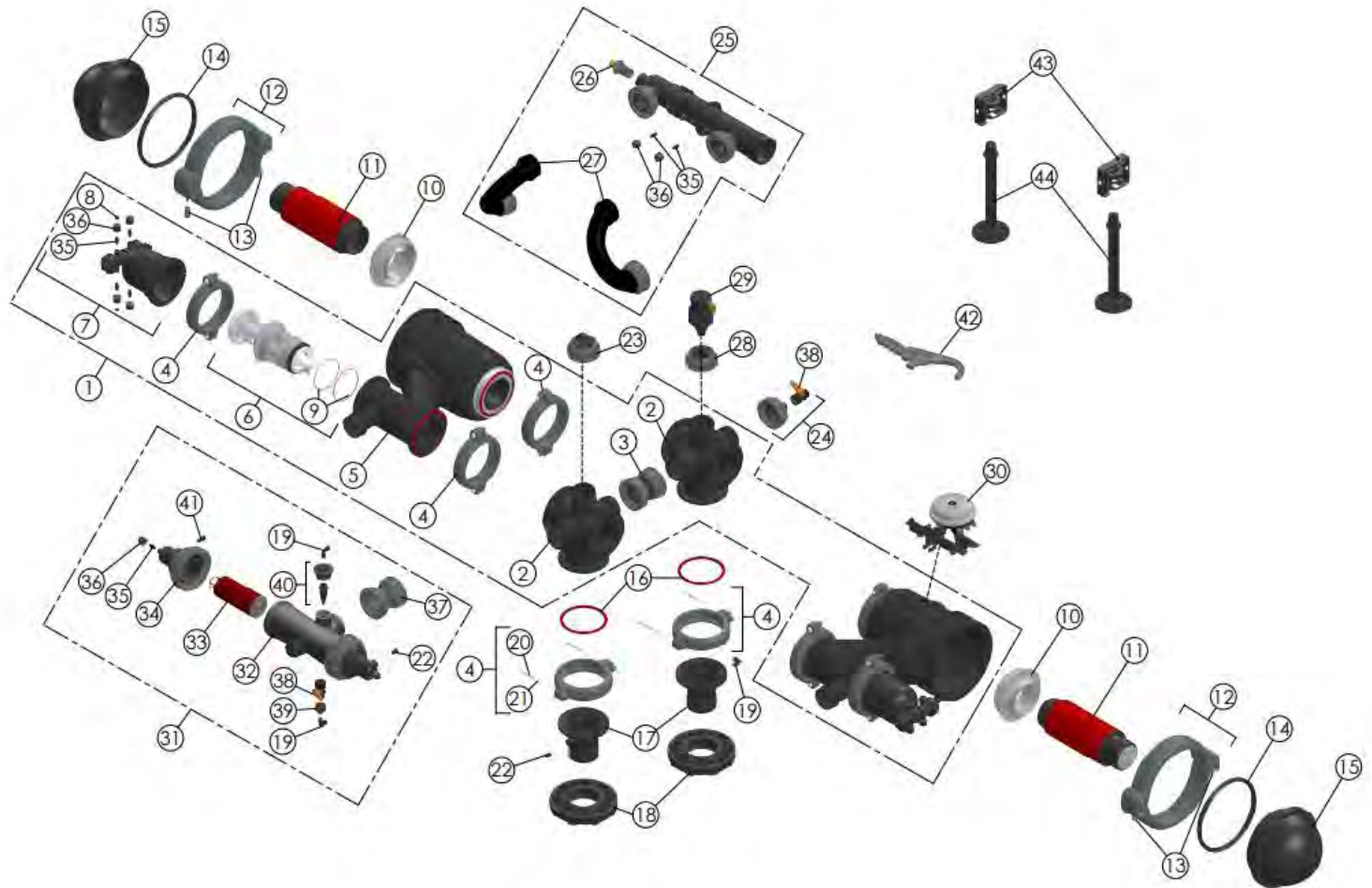
New Irrigation Season

Prior to a new irrigation season, perform the following steps:

1. Connect the tubes that supply water to the solenoid and the booster.
2. Connect the low & high 8mm control tubes to the ADI-P controller sensor ports.
3. Close the command filter drain valve.
4. Close the 3/4 drain valve located at the bottom of the filter.
5. Open the isolation valves (inlet & outlet).
6. Initiate 1 flushing cycle by manually operating the controller.

12. Bill of Materials

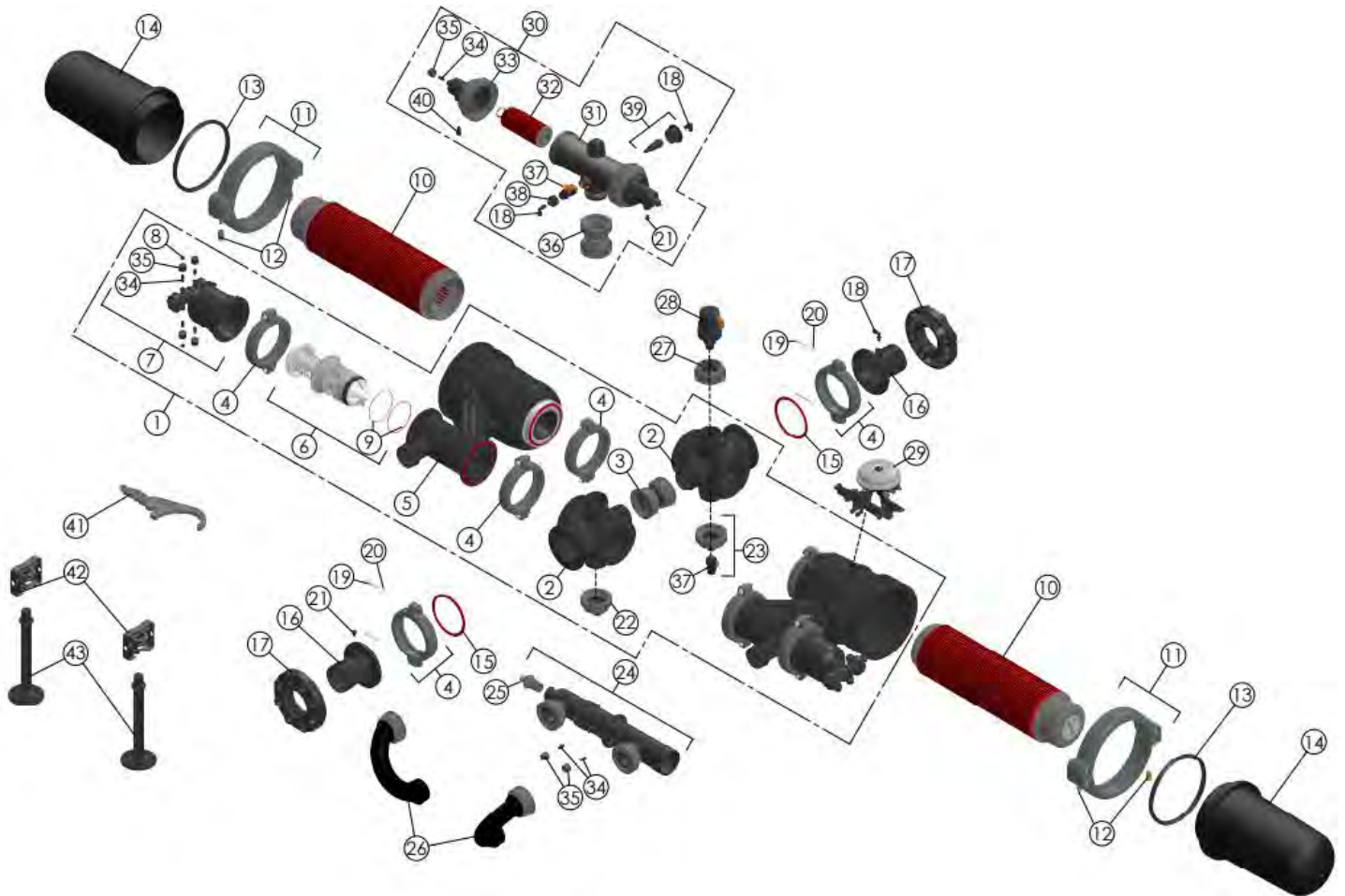
12.1. 3" Spin Klin™ Nova Single – Parts Schedule



12.2. 3" Spin Klin™ Nova Single – Parts List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	700190-006164	NOVA SINGLE ON-LINE FILTER ASSEMBLY	1
	700190-005750	NOVA SINGLE IN-LINE FILTER ASSEMBLY	1
	700190-006186	NOVA SINGLE ANGLE FILTER ASSEMBLY	1
	700190-006187	NOVA SINGLE REVERSE ANGLE FILTER ASSEMBLY	1
2	710101-001492	NOVA DIVERTER RPA BLACK	2
3	700190-005740	NOVA DIVERTER CONNECTOR ASSEMBLY	1
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	8
5	700190-006048	NOVA SINGLE BODY ASSEMBLY	2
6	700190-005739	NOVA VALVE ASSEMBLY	2
7	700190-005738	NOVA FLUSHING VALVE COVER ASSEMBLY	2
8	710101-001546	NOVA PLUG 12MM PP BLACK	2
9	770101-000210	MM O-RING SEAL ID90MM TH4MM EPDM 70 SHORE RED PAN7427 C	2
10	710101-001480	NOVA 2" SK SPINE SEAT RPP GREY	2
11	700101-002424	DISC ELEMENT PP 130MIC NOVA RPA 2"	2
12	700190-005765	NOVA MAIN CLAMP ASSEMBLY	2
13	760102-000041	HEX CONNECTION NUTS M10 BRASS SPECIAL	2
14	770104-000394	BODY_COVER HYD.SEAL EPDM RED PAN7427 C 70 SHORE NOVA	2
15	710101-001483	NOVA MAIN COVER RPA BLACK	2
16	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	2
17	710101-001494	NOVA 3" GROOVED ADAPTOR RPA BLACK	2
18	700190-000223	3" AKF UNIVERSAL ASSY	2
19	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	3
20	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	2
21	760103-000096	FLAT WASHER M8 DIN125 S/ST316	2
22	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFEN	2
23	700190-005752	NOVA PLUG ASSEMBLY	1
24	700190-005751	NOVA PLUG AND 3/4" BALL VALVE ASSEMBLY	1
25	700190-005742	NOVA DRAIN MANIFOLD SINGLE ASSEMBLY	1
26	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	1
27	700190-005744	NOVA DRAIN SINGLE ASSEMBLY	2
28	700190-005753	NOVA PLUG INTERNAL 3/4" BSPT ASSEMBLY	1
29	730108-000011	AIR RELEASE VALVE A.R.I BARAK 3/4" BSPT NYLON3 GREY 10BAR	1
30	700103-001764	ADI-P DC KIT PACKAGE TWO SOLENOIDS NC	1
31	700190-005746	NOVA COMMAND FILTER SHORT ASSEMBLY	1
32	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
33	700101-001198	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SHORT	2
34	700190-006050	NOVA COMMAND FILTER COVER ASSEMBLY	2
35	710101-001573	NOVA NIPPLE 3/8"x12MM PBT BLACK	8
36	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	8
37	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
38	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2" T	2
39	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"x1/4"	1
40	700190-006175	1"x 1/4" FINGER FILTER+SEAL ASSY	1
41	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	1
42	700190-005963	NOVA/MINI SIGMA MULTITOOLOO ASSEMBLY	1
43	710101-001676	NOVA BATTERY SPACER RPA BLACK	2
44	710101-000278	2" SK LEG 300MM RPA BLACK	2

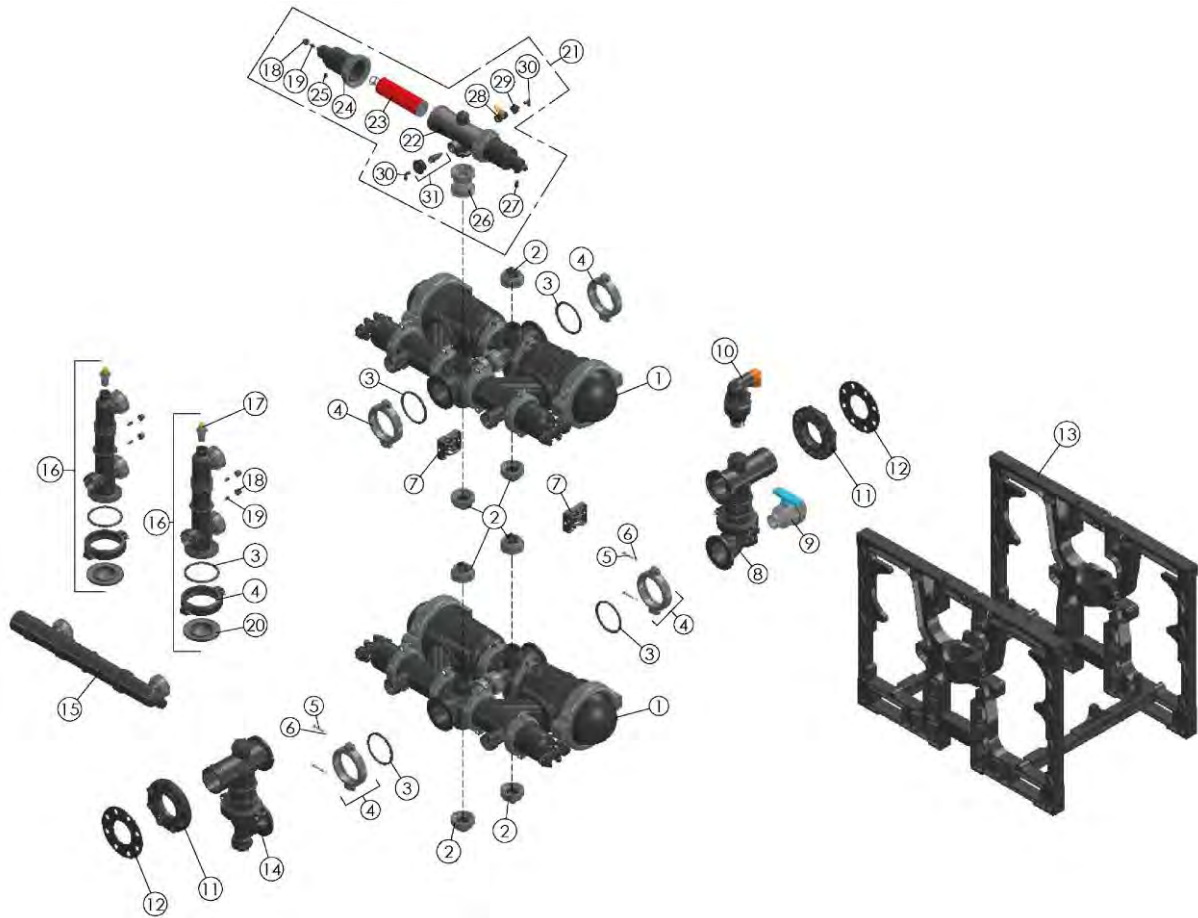
12.3. 3" / 4" Spin Klin™ Nova Plus Single – Parts Schedule



12.4. 3" / 4" Spin Klin™ Nova Plus Single – Part List

ITEM NO.	PARTNUMBER	DESCRIPTION	QTY.
1	700190-006164	NOVA SINGLE ON-LINE FILTER ASSEMBLY	1
	700190-005750	NOVA SINGLE IN-LINE FILTER ASSEMBLY	1
	700190-006186	NOVA SINGLE ANGLE FILTER ASSEMBLY	1
	700190-006187	NOVA SINGLE REVERSE ANGLE FILTER ASSEMBLY	1
2	710101-001492	NOVA DIVERTER RPA BLACK	2
3	700190-005740	NOVA DIVERTER CONNECTOR ASSEMBLY	1
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	8
5	700190-006048	NOVA SINGLE BODY ASSEMBLY	2
6	700190-005739	NOVA VALVE ASSEMBLY	2
7	700190-005738	NOVA FLUSHING VALVE COVER ASSEMBLY	2
8	710101-001546	NOVA PLUG 12MM PP BLACK	2
9	770101-000210	MM O-RING SEAL ID90MM TH4MM EPDM 70 SHORE RED PAN7427 C	2
10	700101-002395	DISC ELEMENT PP 130MIC 3-4"SK	2
11	700190-005765	NOVA MAIN CLAMP ASSEMBLY	2
12	760102-000041	HEX CONNECTION NUTS M10 BRASS SPECIAL	2
13	770104-000394	BODY_COVER HYD.SEAL EPDM RED PAN7427 C 70 SHORE NOVA	2
14	710101-001482	NOVA PLUS MAIN COVER RPA BLACK	2
15	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	2
16	710101-001494	NOVA 3" GROOVED ADAPTOR RPA BLACK	2
	710101-001493	NOVA 4" GROOVED ADAPTOR RPA BLACK	2
17	700190-000223	3" AKF UNIVERSAL ASSY	2
	700190-000227	4" AKF UNIVERSAL ASSEMBLY	2
18	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	3
19	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	2
20	760103-000096	FLAT WASHER M8 DIN125 S/ST316	2
21	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFEN	2
22	700190-005752	NOVA PLUG ASSEMBLY	1
23	700190-005751	NOVA PLUG AND 3/4" BALL VALVE ASSEMBLY	1
24	700190-005742	NOVA DRAIN MANIFOLD SINGLE ASSEMBLY	1
25	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	1
26	700190-005744	NOVA DRAIN SINGLE ASSEMBLY	2
27	700190-005753	NOVA plug internal 3/4" BSPT ASSEMBLY	1
28	730108-000011	AIR RELEASE VALVE A.R.I BARAK 3/4" BSPT NYLON3 GREY 10BAR	1
29	700103-001764	ADI-P DC KIT PACKAGE TWO SOLENOIDS NC	1
30	700190-005746	NOVA COMMAND FILTER SHORT ASSEMBLY	1
31	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
32	700101-001198	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SHORT	2
33	700190-006050	NOVA COMMAND FILTER COVER ASSEMBLY	2
34	710101-001573	NOVA NIPPLE 3/8"X12MM PBT BLACK	8
35	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	8
36	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
37	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2" T	2
38	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"X1/4"	1
39	700190-006175	1"x 1/4" FINGER FILTER+SEAL ASSY	1
40	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	1
41	700190-005963	NOVA/MINI SIGMA MULTITOOL ASSEMBLY	1
42	710101-001676	NOVA BATTERY SPACER RPA BLACK	2
43	710101-000278	2" SK LEG 300MM RPA BLACK	2

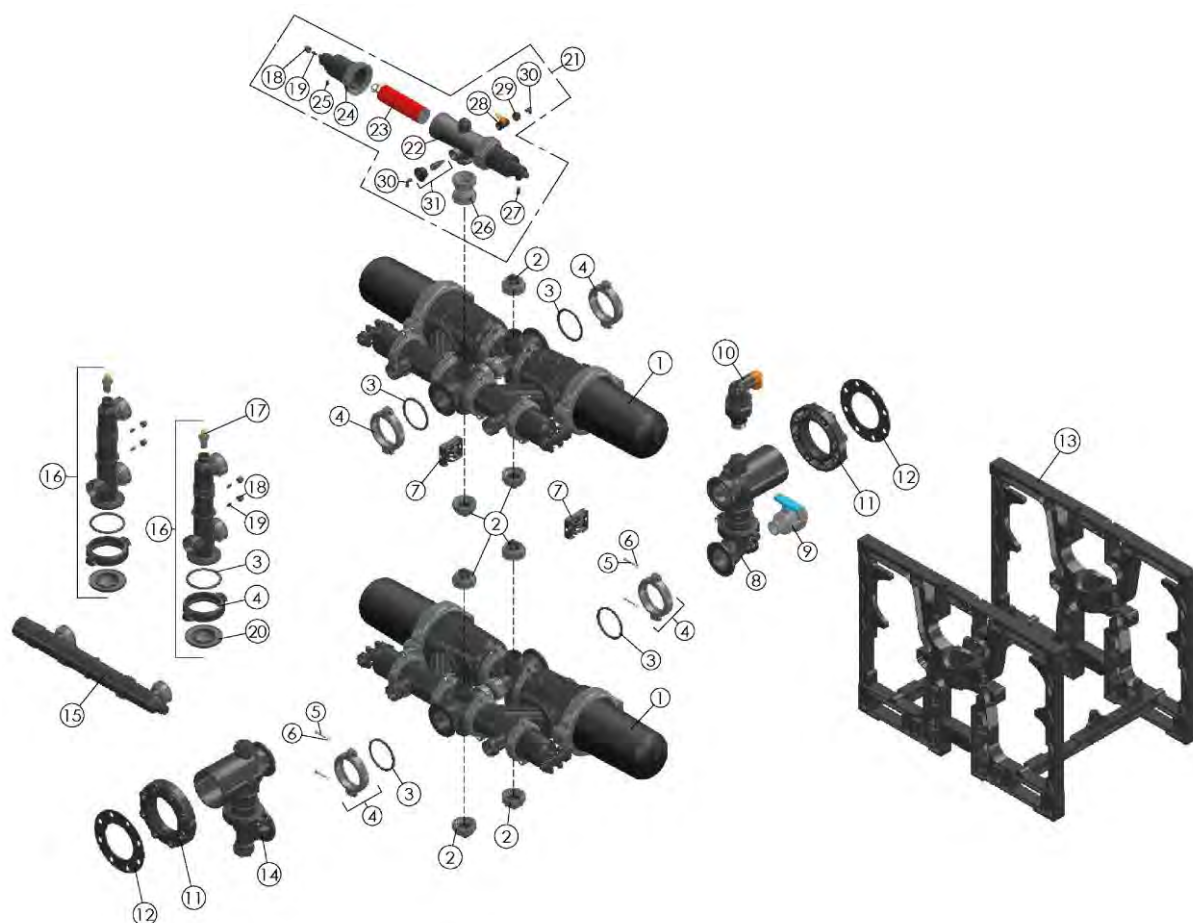
12.5. 4" Spin Klin™ Nova Dual – Part Schedule



12.6. 4" Spin Klin™ Nova Dual – Part List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	700104-001303	NOVA SINGLE IN-LINE RPA BLACK 130MIC 8MM TEFFEN	2
2	700190-005752	NOVA PLUG ASSEMBLY	7
3	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	6
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	6
5	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	12
6	760103-000096	FLAT WASHER M8 DIN125 S/ST316	12
7	710101-001676	NOVA BATTERY SPACER RPA BLACK	2
8	700190-006199	NOVA MANIFOLD DUAL 4" OUT ASSEMBLY	1
9	730104-000034	2-WAY BALL VALVE 2" M/F PVC GREY MANUAL PLASSON	1
10	730108-000040	AIR RELEASE VALVE A.R.I BARAK 2" BSPT NYLON3 10BAR	1
11	700190-000227	4" AKF UNIVERSAL ASSEMBLY	2
12	710101-000841	4" FLANGE SEPARATION RING PP BLACK	2
13	700190-006226	NOVA SUPPORT LEG DUAL ASSEMBLY	1
14	700190-006195	NOVA MANIFOLD DUAL 4" IN ASSEMBLY	1
15	700190-006128	NOVA DRAIN MANIFOLD COLLECTOR ASSEMBLY	1
16	700190-006193	NOVA DRAIN MANIFOLD DUAL ASSEMBLY	2
17	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	2
18	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	6
19	710101-001573	NOVA NIPPLE 3/8"X12MM PBT BLACK	6
20	710101-001600	NOVA DIVERTER AND DRAIN COVER RPA BLACK	2
21	700190-006129	NOVA COMMAND FILTER LONG ASSEMBLY	1
22	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
23	700101-001199	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SUPER	2
24	700190-006130	NOVA COMMAND FILTER LONG COVER ASSEMBLY	2
25	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFFEN	1
26	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
27	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	1
28	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2" T	1
29	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"X1/4"	1
30	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	2
31	700190-006175	1"x 3/4" FINGER FILTER+SEAL ASSY	1

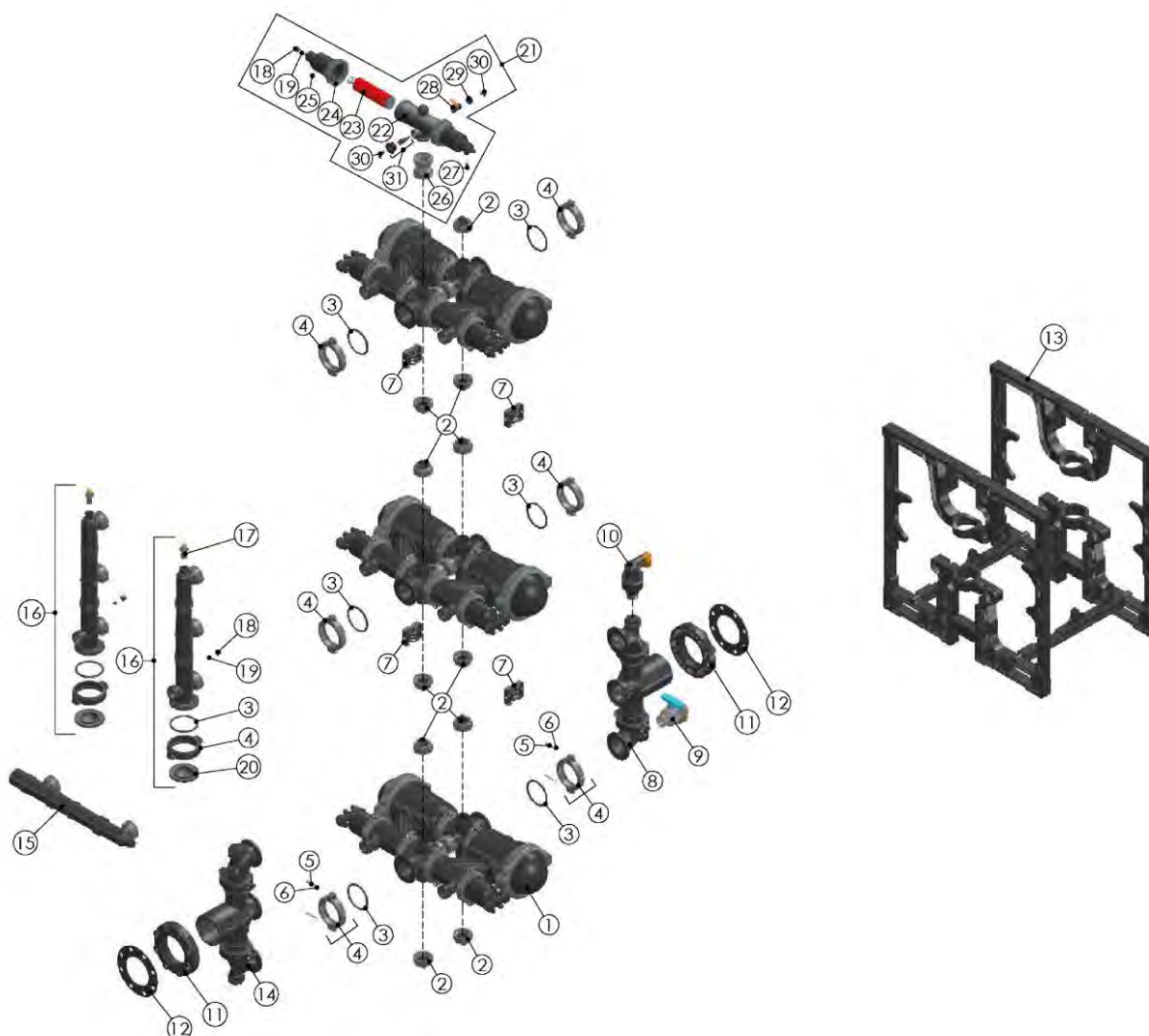
12.7. 6" Spin Klin™ Nova Plus Dual – Part Schedule



12.8. 6" Spin Klin™ Nova Plus Dual – Part List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	700104-001304	NOVA PLUS SINGLE IN-LINE RPA BLACK 130MIC 8MM TEFFEN	2
2	700190-005752	NOVA PLUG ASSEMBLY	7
3	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	6
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	6
5	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	12
6	760103-000096	FLAT WASHER M8 DIN125 S/ST316	12
7	710101-001676	NOVA BATTERY SPACER RPA BLACK	2
8	700190-006198	NOVA MANIFOLD DUAL 6" OUT ASSEMBLY	1
9	730104-000034	2-WAY BALL VALVE 2" M/F PVC GREY MANUAL PLASSON	1
10	730108-000040	AIR RELEASE VALVE A.R.I BARAK 2" BSPT NYLON3 10BAR	1
11	700190-000238	6" AKF UNIVERSAL ASSY	2
12	710101-000838	6" FLANGE SEPARATION RING PP BLACK	2
13	700190-006226	NOVA SUPPORT LEG DUAL ASSEMBLY	1
14	700190-006196	NOVA MANIFOLD DUAL 6" IN ASSEMBLY	1
15	700190-006128	NOVA DRAIN MANIFOLD COLLECTOR ASSEMBLY	1
16	700190-006193	NOVA DRAIN MANIFOLD DUAL ASSEMBLY	2
17	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	2
18	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	6
19	710101-001573	NOVA NIPPLE 3/8"X12MM PBT BLACK	6
20	710101-001600	NOVA DIVERTER AND DRAIN COVER RPA BLACK	2
21	700190-006129	NOVA COMMAND FILTER LONG ASSEMBLY	1
22	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
23	700101-001199	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SUPER	2
24	700190-006130	NOVA COMMAND FILTER LONG COVER ASSEMBLY	2
25	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFEN	1
26	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
27	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	1
28	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2"T	1
29	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"X1/4"	1
30	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFEN	2
31	700190-006175	1"x ¾" FINGER FILTER+SEAL ASSY	1

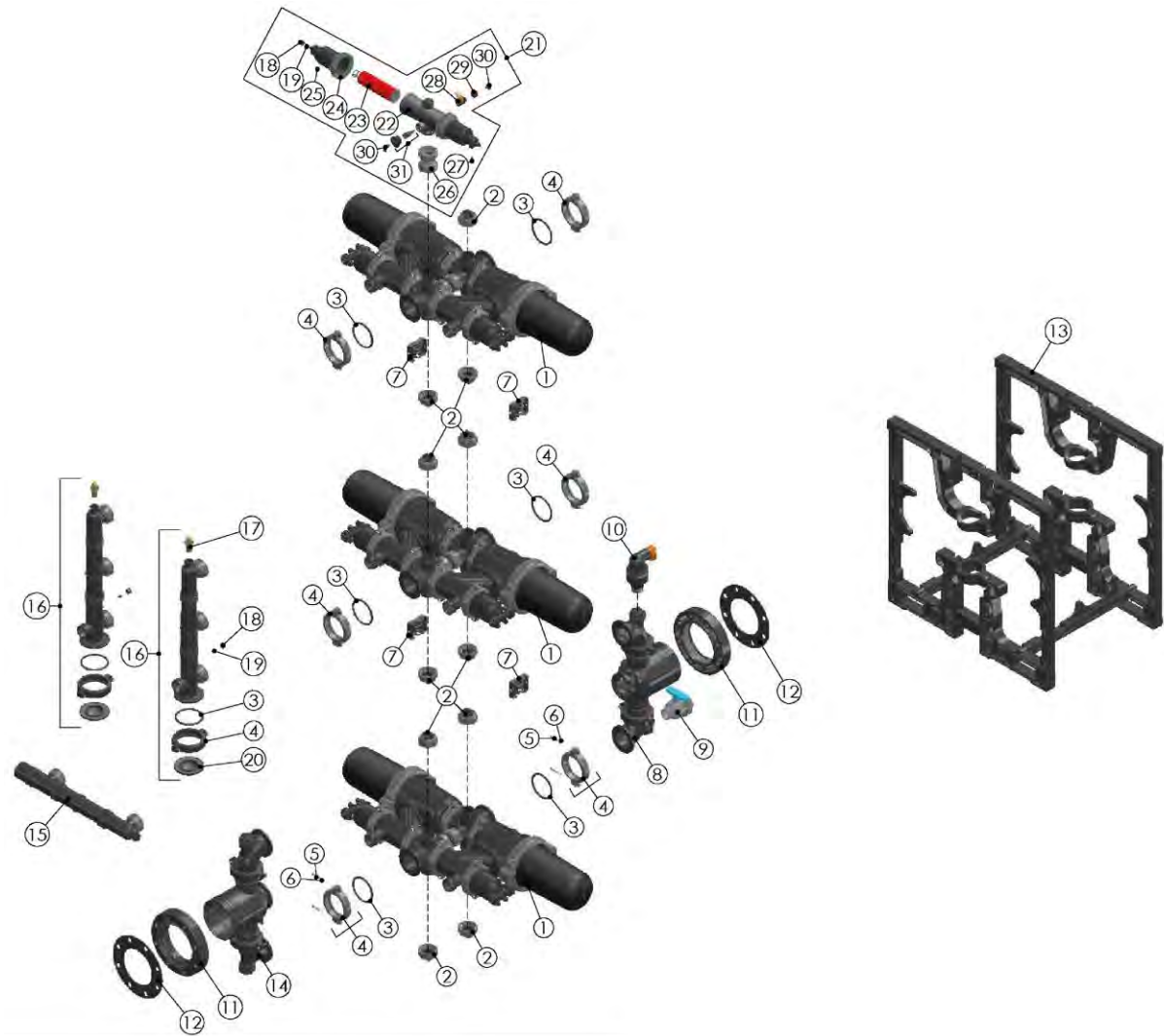
12.9. 6" Spin Klin™ Nova Trio – Part Schedule



12.10. 6" Spin Klin™ Nova Trio – Part List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	700104-001303	NOVA SINGLE IN-LINE RPA BLACK 130MIC 8MM TEFFEN	3
2	700190-005752	NOVA PLUG ASSEMBLY	11
3	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	8
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	8
5	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	16
6	760103-000096	FLAT WASHER M8 DIN125 S/ST316	16
7	710101-001676	NOVA BATTERY SPACER RPA BLACK	4
8	700190-006197	NOVA MANIFOLD TRIO 6" OUT ASSEMBLY	1
9	730104-000034	2-WAY BALL VALVE 2" M/F PVC GREY MANUAL PLASSON	1
10	730108-000040	AIR RELEASE VALVE A.R.I BARAK 2" BSPT NYLON3 10BAR	1
11	700190-000238	6" AKF UNIVERSAL ASSY	2
12	710101-000838	6" FLANGE SEPARATION RING PP BLACK	2
13	700190-006228	NOVA SUPPORT LEG TRIO ASSEMBLY	1
14	700190-006194	NOVA MANIFOLD TRIO 6" IN ASSEMBLY	1
15	700190-006128	NOVA DRAIN MANIFOLD COLLECTOR ASSEMBLY	1
16	700190-006127	NOVA DRAIN MANIFOLD TRIO ASSEMBLY	2
17	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	2
18	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	4
19	710101-001573	NOVA NIPPLE 3/8"X12MM PBT BLACK	4
20	710101-001600	NOVA DIVERTER AND DRAIN COVER RPA BLACK	2
21	700190-006129	NOVA COMMAND FILTER LONG ASSEMBLY	1
22	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
23	700101-001199	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SUPER	2
24	700190-006130	NOVA COMMAND FILTER LONG COVER ASSEMBLY	2
25	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFFEN	1
26	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
27	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	1
28	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2"T	1
29	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"X1/4"	1
30	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	2
31	700190-006175	1"x 3/4" FINGER FILTER+SEAL ASSY	1

12.11. 8" Spin Klin™ Nova Plus Trio – Part Schedule



12.12. 8" Spin Klin™ Nova Plus Trio – Part List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	700104-001304	NOVA PLUS SINGLE IN-LINE RPA BLACK 130MIC 8MM TEFFEN	3
2	700190-005752	NOVA PLUG ASSEMBLY	11
3	700190-006330	HYDRAULIC SEAL+O-RING F/NOVA ASSY	8
4	700190-005749	NOVA SYSTEM CLAMP ASSEMBLY	8
5	760101-001441	HEX BOLT FULL THRD M8 50MM S/ST304 DIN933	16
6	760103-000096	FLAT WASHER M8 DIN125 S/ST316	16
7	710101-001676	NOVA BATTERY SPACER RPA BLACK	4
8	700190-006132	NOVA MANIFOLD TRIO 8" OUT ASSEMBLY	1
9	730104-000034	2-WAY BALL VALVE 2" M/F PVC GREY MANUAL PLASSON	1
10	730108-000040	AIR RELEASE VALVE A.R.I BARAK 2" BSPT NYLON3 10BAR	1
11	700190-006133	NOVA 8" AK FLANGE UNIVERSAL ASSEMBLY	2
12	710101-001636	8" AK SEPARATION RING PP BLACK	2
13	700190-006228	NOVA SUPPORT LEG TRIO ASSEMBLY	1
14	700190-006131	NOVA MANIFOLD TRIO 8" IN ASSEMBLY	1
15	700190-006128	NOVA DRAIN MANIFOLD COLLECTOR ASSEMBLY	1
16	700190-006127	NOVA DRAIN MANIFOLD TRIO ASSEMBLY	2
17	700190-006173	VACUUM BREAKER ASSEMBLY F/NOVA	2
18	710101-001541	NOVA TUBE NUT 12MM RPA BLACK	4
19	710101-001573	NOVA NIPPLE 3/8"X12MM PBT BLACK	4
20	710101-001600	NOVA DIVERTER AND DRAIN COVER RPA BLACK	2
21	700190-006129	NOVA COMMAND FILTER LONG ASSEMBLY	1
22	700190-006049	NOVA COMMAND FILTER BODY ASSEMBLY	1
23	700101-001199	DISC ELEMENT PP 130MIC ARKAL 1 1/2" SUPER	2
24	700190-006130	NOVA COMMAND FILTER LONG COVER ASSEMBLY	2
25	720501-000221	PLUG 1/4"M BSPT PA66 BLACK TEFFEN	1
26	700190-005741	NOVA COMMAND FILTER CONNECTOR ASSEMBLY	1
27	720501-000132	STRAIGHT CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	1
28	300005-000006	BALL VALVE AC 3/4" 10 BAR BLACK FOR 2"T	1
29	700190-001971	RACCORD CONNECTOR ASSEMBLY 3/4"X1/4"	1
30	720501-000139	L-CONNECTOR 1/4"M X8MM BSPT ACETAL BLACK TEFFEN	2
31	700190-006175	1"x ¾" FINGER FILTER+SEAL ASSY	1

13. Troubleshooting

No Backwash

Symptom	Possible causes	Required actions
No hydraulic command transfer	Exceeded high flow rate drop down the inlet pressure.	Check the irrigation system flow rate. Check the irrigation controller.
	Command filter is blocked.	Manually clean the command filter.
No commands transfer	No electricity. Batteries voltage is low, or batteries are empty.	Check the electrical source and connections. Replace batteries if needed.
Some commands do not activate	One or more of the solenoids do not function.	Check solenoids' connections. Repair or replace solenoids.
	One or more controller outputs do not respond.	Check the controller. Replace if needed.
The backwash valves fail to reverse flow	Hydraulic resistance in the drainpipe.	Disconnect the drainpipe. Check the length, diameter, and the pipe incline.
	Mechanical restriction of the internal valve's actuator.	Remove the cylinder booster cover. Pull out the internal actuator. Repair or replace.
<i>In case all the above do not apply, consult your local distributor.</i>		

Continuous Flow to Drain

Symptom	Possible causes	Required actions
Strong leakage through the drainpipe	One or more of the solenoids do not release the command.	Disconnect the 8mm command tubes from the cylinder booster. Identify the failure solenoid. Repair or replace as needed.
	The backwash valves fail to return from flushing to filtration mode	Disconnect the 12mm drain tubes of the booster cylinder, check for hydraulic backpressure from the drain manifold
		Check backwash valves performances, look and remove any obstacles, repair, or replace valve's actuator
In case all the above do not apply, consult your local distributor.		

Non-Stop Backwash

Symptom	Possible causes	Required actions
High DP remains after a backwash cycle	High flow rate exceeds planned irrigation	Check the irrigation flow rate.
	The flushing pressure is below the required minimum.	Check the inlet / outlet and DP pressure during filtration mode. Check the downstream pressure during backwash mode. Install P.S.V. if needed.
	Insufficient cleaning of the discs.	Close the inlet valve. Remove the discs element, and manually clean the discs by using pressurized water jets.
DP is normal but the filter is still backwashing nonstop	Incorrect flushing program.	Check and set the recommended flushing program.
	The backwash valves failed to complete a reverse flow, from filtering to flushing mode.	Check the backwash valves performance. Repair or replace the valve's actuator.
	The high / low pressure sensor failed to read the actual pressure.	Check the pressure sensors and the controller. Replace if needed.
<i>In case all the above do not apply, consult your local distributor.</i>		

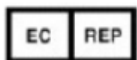
14. Amiad Limited Warranty

1. This certificate applies to Amiad Water Systems Ltd. ("Amiad") products purchased by you (the "Buyer") from Amiad unless specifically agreed otherwise in writing by Amiad. This Warranty extends only to the original purchaser, and is not transferable to anyone who subsequently purchases, leases, or otherwise obtains the product from the original purchaser.
2. Amiad hereby warrants that the products are and will be free from defects in material and workmanship under normal use and service. Amiad warrants that it will correct manufacturing defects in the products, in accordance with the conditions set out in this Warranty.
3. This Warranty is enforceable for a period of 12 months after the date upon which the products were delivered (the "**Warranty Period**").
4. In the event that during the Warranty Period the Buyer discovers a defect in material and/or workmanship in any product or part (the "**Defective Product**"), it shall submit a written complaint to Amiad using Amiad's standard Buyer Complaint Form. For the receipt of the Buyer Complaint Form, the submission of the complaint or any questions please contact your service representative.
5. Upon written demand by Amiad the Buyer shall return the Defective Product - or a sample thereof - to Amiad, at Amiad's cost. If the Buyer ships any such Defective Product, Amiad suggests the Buyer package it securely and insure it for value, as Amiad assumes no liability for any loss or damage occurring during shipment. Provided however that in the event Amiad determines that this Warranty does not apply to such product, Buyer shall promptly reimburse Amiad for such cost (including freight and customs). Any returned product or part must be accompanied by the Warranty certificate and the purchase invoice. It is clarified that the Buyer may not return the Defective Product unless such return was coordinated and approved by Amiad in advance.
6. Amiad's obligation under this Warranty shall be limited to, at Amiad's option, the repair or exchange, free of charge, of the product or any part which may prove defective under normal use and service during the Warranty Period. The provision of a repair or replacement of a product during the Warranty Period will result in an extension of the Warranty Period by an additional period of 12 months, provided that the total accumulated Warranty Period shall in any event be no more than 18 months from the date upon which the products were delivered.
7. This Warranty is valid on the condition that the products are installed according to Amiad's instructions as expressed in Amiad's instruction manuals and according to the technical limitations as stipulated in Amiad's literature or as stated by a representative of Amiad.
8. This Warranty will not apply to damaged or defective products resulting from or related to:
 - (i) Fire, flood, power surges or failures or any other catastrophe and/or unforeseen occurrence, such as but not limited to those for which the Buyer is customarily insured for, or any force majeure events;
 - (ii) Fault, abuse or negligence of the Buyer;
 - (iii) Intake water not meeting the agreed standards, as set forth in a written document, approved by Amiad, or improper storage;
 - (iv) Improper or unauthorized use of the product or related parts by the Buyer, including Buyer's failure to operate the product in conformity with the recommendations and instructions of Amiad, as set forth in Amiad's manuals and other written materials, the operation of the product other than by a trained and qualified operator, or improper installation of the product by a third party not authorized by Amiad;
 - (v) Performance by the Buyer of maintenance or operation other than in conformity with the recommendations and instructions of Amiad, or other than in accordance with procedures defined in the literature supplied for products (including the timely replacement of requisite parts), and for services provided other than by a trained and qualified advanced operator; or
 - (vi) Any alteration, modification, foreign attachment to or repair of the products, other than by Amiad or its authorized technical representatives.
9. In no event shall Amiad be liable to the Buyer or any third party for any damages to property, or for any intangible or economic loss, including loss of profits, loss of customers or damage to reputation, for any damages, including indirect, special, consequential damages, or punitive damage arising out of or in connection with this Warranty, or arising out of or in connection with the product's performance or failure to perform, even if it has been advised of the possibility of such damages.
10. Amiad will be excused for failure to perform or for delay in performance hereunder if such failure or delay is due to causes beyond its reasonable control or force majeure preventing or hindering performance.
11. This Warranty set forth herein is the only contractual warranty given by Amiad and is provided in lieu of any other warranties created by any documentation, packaging or otherwise.
12. Amiad makes no warranty whatsoever in respect to accessories or parts not supplied by Amiad. In the event that Amiad is required to correct a Defective Product or product not covered by this Warranty, it will do so solely in consideration for additional fees.
13. The parties will actively endeavor to amicably settle any dispute arising between them. In the event that the parties are unable to reach an equitable settlement of such dispute, any claim or lawsuit related to the Warranty, its validity execution, its performance be brought before only the courts of Tel-Aviv, Israel. Israeli law will govern the Warranty, to the exclusion of any conflict of law rules.

**Manufacturer**

Amiad Water Systems Ltd. D.N. Galil Elyon 1, 1233500, Israel.

Tel: +972 4690 9500 | Fax: +972 48141159 | Email: info@amiad.com

**European Authorised Representative for CE**

Obelis s.a. Bd Général Wahis 53, 1030 Brussels, Belgium.

Tel: +(32) 2732 5954 | Fax: +(32) 27326003 | Email: mail@obelis.net

EU Declaration of Conformity <https://www.amiad.com/certificatesDownload.asp>

Quick Guide

ADI-P: Smartphone Operated Controller for Filtration Systems

Introduction:

Thank you for purchasing the ADI-P Controller - a smartphone operated controller for filtration systems. The system consists of two major components, the **ADI-P Controller** and the **ADI-BLE Mobile Application**.

For a complete guide for using your ADI-P controller please refer to the [ADI-P IOM](#), available for download on our website or scan the QR code.

This Quick Guide provides the “getting started” instructions for a new filtration system which is equipped with the integral ADI-P controller.



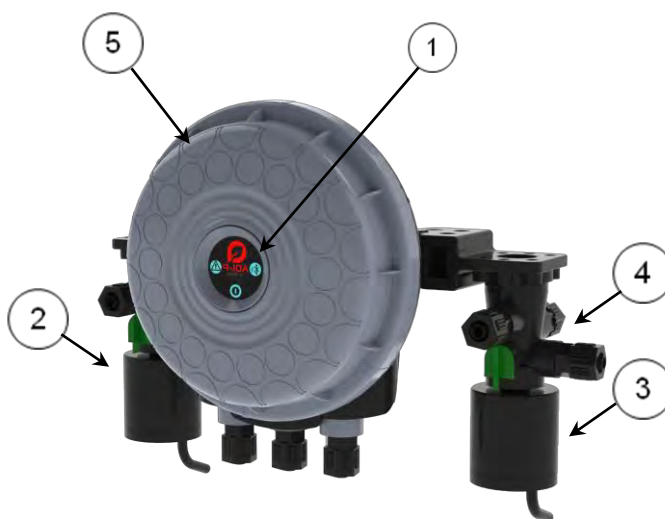
Important: If your ADI-P controller was supplied as a **standalone device** to control existing filtration systems, please first refer to the **Installing the ADI-P Controller on an Existing Filter** chapter in the [ADI-P IOM](#) and make sure to install the controller properly before attempting to operate the system.

Safety First: Before starting, read the **Safety Instructions** chapter in the **ADI-P IOM**. Make sure that you understand and comply with all the relevant safety instructions.

Getting to know the ADI-P Controller:



Single solenoid controller



Dual solenoid controller

1. ADI-P panel for manual flushing button and indication LEDs
2. 3-Way 12VDC solenoid #1 – latch
3. 3-Way 12VDC solenoid #2 – latch
4. Solenoids' manual operation handles (Green)
5. ADI-P cover

ADI-PLT Model

ADI-PLT model equipped with external water pressure sensors for frozen areas.



1. Two external pressure sensors
2. Protection plug on the central sensor input

Initial operation of the ADI-P Controller:

Open the cover of the ADI-P Controller by turning it counterclockwise [1] and insert four alkaline 1.5V AA batteries, or remove battery slip [2]. The ADI-P Controller starts operating according to its pre-defined default flushing program; flushing at 0.5 bar DP signal or 4-hour time intervals.



Downloading the Mobile Application:



The free **ADI-BLE** application by Amiad Water Systems is available for download on Google Play or the App Store.

Scan QR code to download the mobile app:

Google Play:

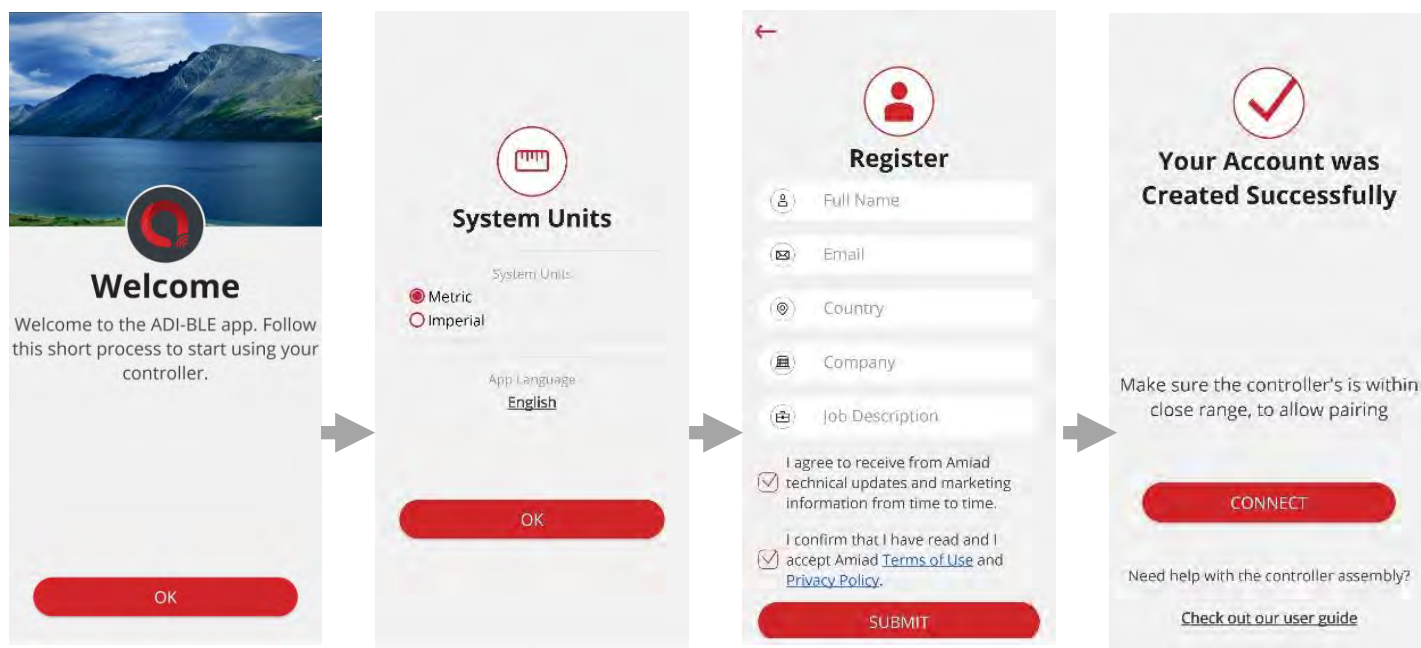


Apple Store:

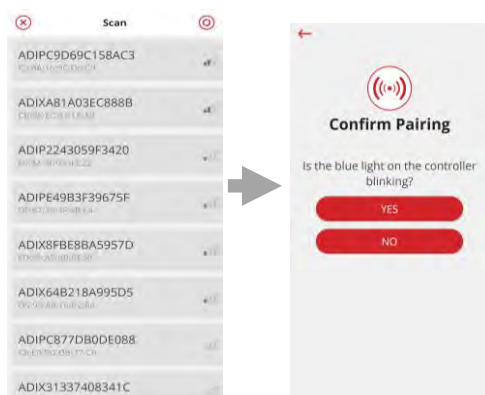


Setup of the ADI-BLE mobile app:

1. Activate your phone's Bluetooth® discovery mode and start the ADI-BLE application.
2. Select the applicable SYSTEM UNITS.
3. REGISTER your filter to create an account.



4. Click CONNECT. The application scans for controllers within Bluetooth® range.
5. Select your controller from the list of controllers in range. Verify that the blue LED on your controller is blinking before clicking YES to initiate the pairing process.
6. Confirm the pairing process.

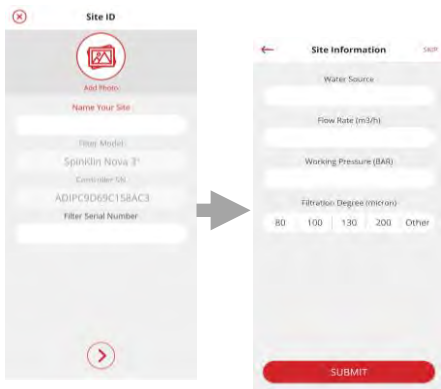


7. Complete the SITE ID form.
 - a. Controller supplied with filter:** Name your site. The application reads the filter model and controller's serial number automatically.
 - b. Controller purchased separately:** Name your site, select the filter model and enter your controller's serial number.

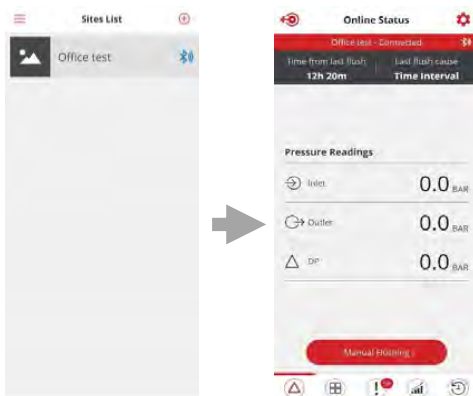
You may add a site photo by clicking on



8. Enter the SITE INFO details (optional).
9. Once done, click SUBMIT to add your new filter to the SITE LIST.



10. In order to view data from your controller, select the active controller from the SITE LIST, marked by the active Bluetooth® icon.

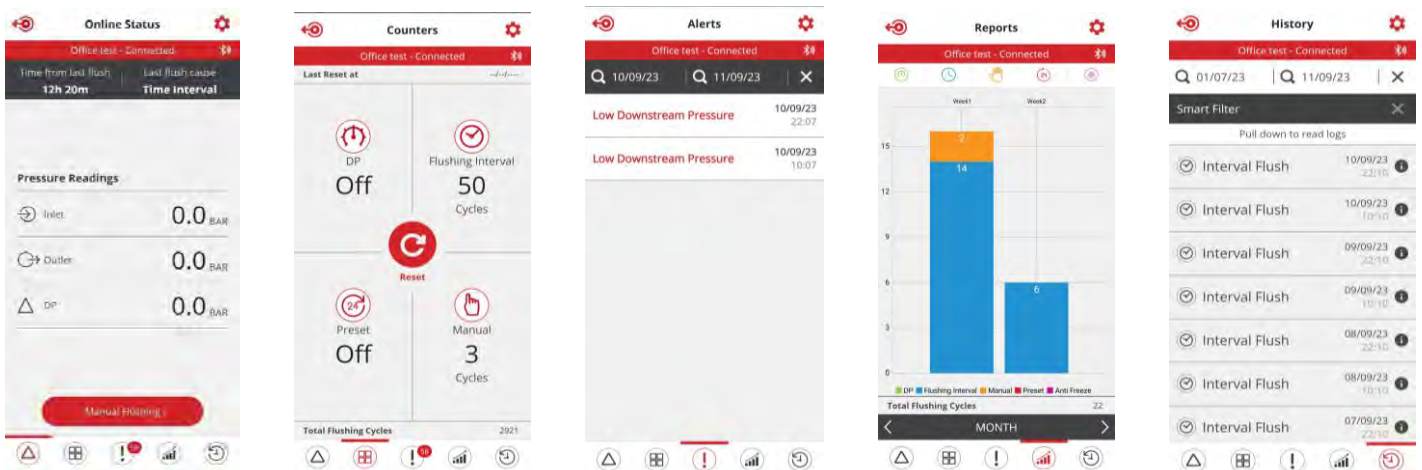


11. The ONLINE STATUS screen appears and relevant data regarding your filter's performance can be viewed.

Getting to know the ADI-BLE Application:

Take a few moments to familiarize yourself with the ADI-BLE mobile application interface:

Once running and controlling the filter, the application has 5 main screens. Scroll through these screens by sliding to the right or to the left.



Manufacturer

Amiad Water Systems Ltd. D.N. Galil Elyon 1, 1233500, Israel
Tel: +972 4690 9500 | Fax: +972 48141159 | Email: info@amiad.com



EU Declaration

<https://www.amiad.com/certificatesDownload.asp>

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Amiad Water Systems is under license. Other trademarks and trade names are those of their respective owners.

ADI-X: Cloud-based Filtration Controller

Quick Guide Start

Introduction

About the Quick Guide



This Quick Guide provides basic installation and operation instructions for your ADI-X controller, with focus on the ADI-X mobile applications.

For a complete guide for using your ADI-X controller please refer to the [ADI-X Manual](#) or scan the QR code.

Safety First: Before starting, read the Safety Instructions chapter in the ADI-X IOM. Make sure that you understand and comply with all the relevant safety instructions.

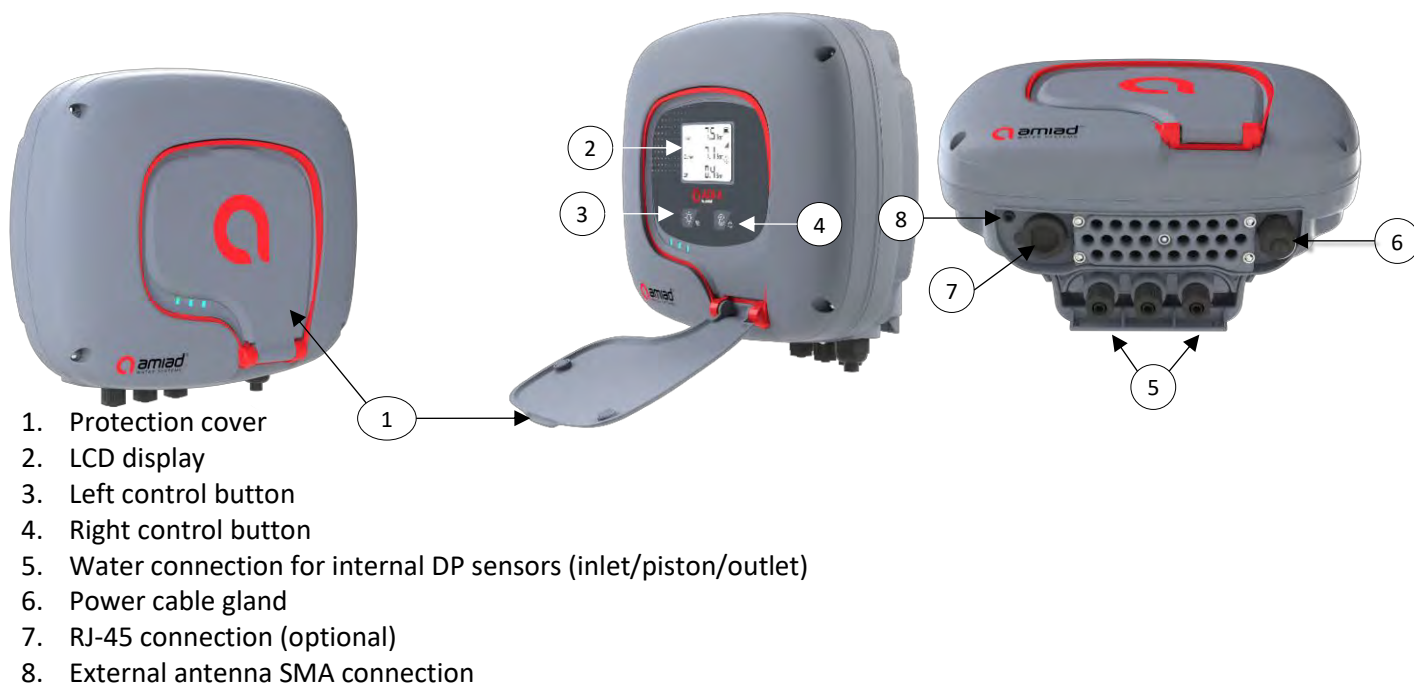
About the ADI-X Controller

ADI-X by Amiad, is our most advanced smart controller for a wide range of filtration solutions.

By using the ADI-X, you will be able to receive real time data regarding your filter performance, relevant alerts, technical and marketing updates. ADI-X allows you to modify various parameters for your filtration system remotely. Supporting both Cloud and Bluetooth® wireless technology, ADI-X allows you to connect to your filter from any mobile device or desktop, regardless of your location (while on the Cloud).

The ADI-X Controller Components

Take a few moments to familiarize yourself with the ADI-X Controller components:



NOTE: This document contains Amiad confidential information. Copying and distributing this document are strictly prohibited.

ADI-X Controller Buttons

There are two main buttons on the ADI-X controller control panel.
Following is the functionality description of the buttons:

	Left button	Right button
Short push	Turn on display backlight	Start manual flush
Long push	Enter communication mode	Force full cloud synchronization

Batteries Installation/Replacement

The ADI-X controller is supplied with 4 x 1.5V Type D batteries supplied loose.

The estimated batteries' lifetime is one year or about 80K flushes (whichever comes first).

To install/replace the batteries:

1. Remove the top cover by loosening the four screws.
2. Remove the two screws that secure the battery cover. This will allow access to the battery assembly.
3. Remove the battery assembly from the device and replace 4 x 1.5V Type D batteries.
4. Reinstall the battery assembly.
5. Close battery cover and tighten the screws.
6. Reassemble the top cover and tighten the screws.



ADI-X Desktop, ADI-X Mobile, and ADI-BLE Mobile Applications

The ADI-X controller can be controlled by three applications as follows:

1. **ADI-X Desktop application** connects to the controller via the cloud. It allows you to operate your controller by remote access.
To access the **ADI-X Desktop application** go to the adix.amiad.com website.
2. **ADI-X Mobile application** connects to the controller via the cloud. It allows you to operate your controller by remote access.
3. **ADI-BLE Mobile application** connects to the controller via Bluetooth® wireless technology.
The mobile device should be within a range of 10-15 meters from the controller. This application does not require or support cloud services.

The free **ADI-X** and **ADI-BLE** mobile applications by Amiad Water Systems are available for download on Google Play or the Apple Store.

Applications Preparation

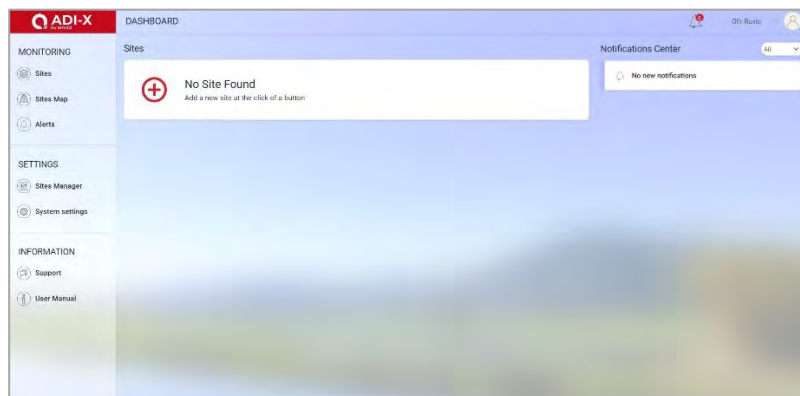
ADI-X Desktop Application Sign Up

To create a new ADI-X user account:

1. Click "SIGN UP".
2. Enter your Email address and click "SEND".
3. A verification code will be sent to your email. Log into your email account, open the mail and copy your verification code. Paste the verification code and click "Verify code".
4. Create your new password in the "New Password" field and reenter the new password in the "Confirm New Password" field. Remember your password! Click "Create".
5. Enter your Full Name, Country, Company and Job Description. Click "Next".
6. Select your application language and units (METRIC or IMPERIAL). Click "SUBMIT".



7. Your ADI-X user account was created!

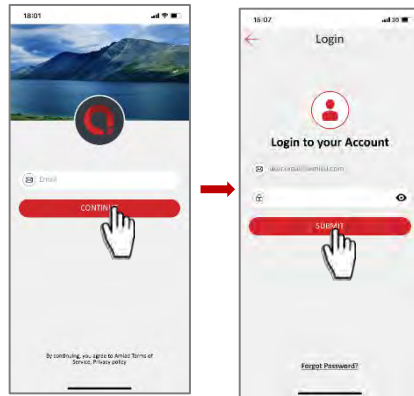


ADI-X Mobile Application Log In

Download and install the **ADI-X Mobile application** on your mobile device.

Log in using Email and password created earlier.

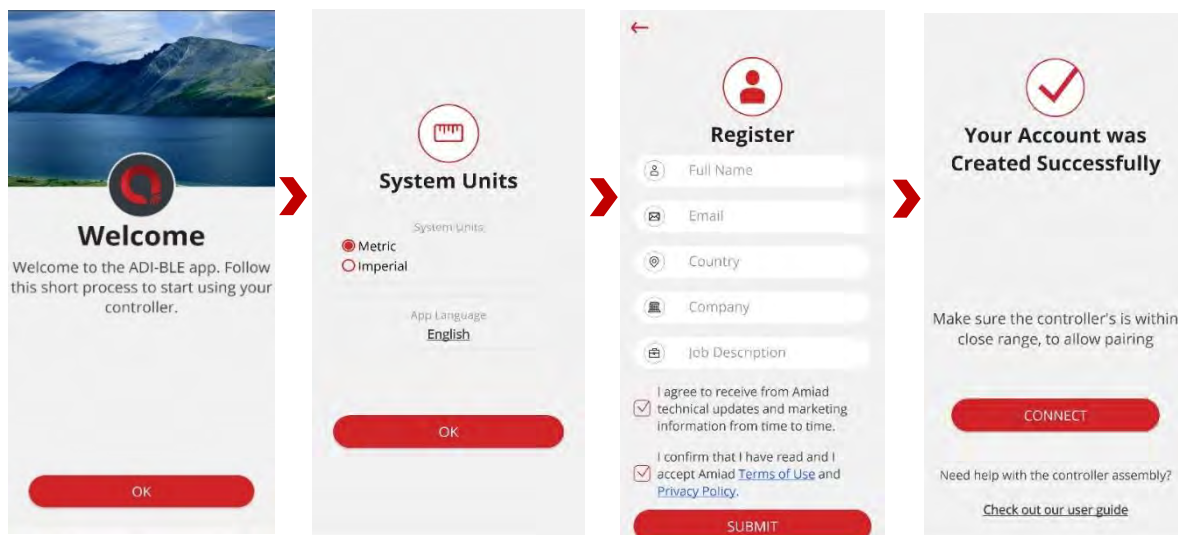
1. Enter your Email (used for signing up in ADI-X Desktop application). Click "CONTINUE".
2. Enter your password (created during sign up in ADI-X Desktop application). Click "SUBMIT".



ADI-BLE Mobile Application Registration

Download and install the **ADI-BLE Mobile application** on your mobile device. To register your account in the **ADI-BLE** application:

1. Activate your mobile device's Bluetooth® discovery mode and start the ADI-BLE application.
2. Click "OK" to start setting up your account.
3. Select your preferred system units (Metric or Imperial and click "OK".
4. Enter your Full Name, Email, Country, Company, and Job Description. Click "SUBMIT".
To skip this step, click "SKIP" in the upper right corner (completing these steps is recommended for better support).
5. At this stage, your account was successfully created and is ready use.

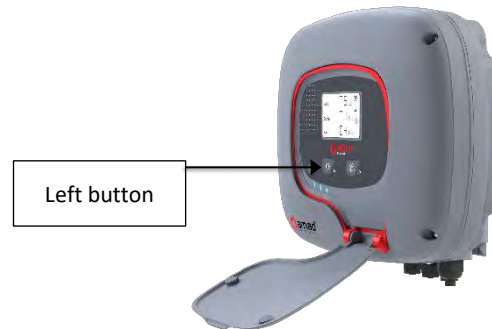


Adding ADI-X Controller to a User Account

Adding an ADI-X controller to your user account can be done using the **ADI-X Desktop application** or the **ADI-X Mobile application**. When the controller is added to your account it will be reflected on both applications. The ADI-X controller can be added only to a single account – the owner account. The owner can share the ADI-X controller with other users (see **Error! Reference source not found.** ADI-X Controller Sharing).

To add your ADI-X controller to your account, you need to set the ADI-X controller in communication mode and get the specific PIN code displayed, by following these instructions:

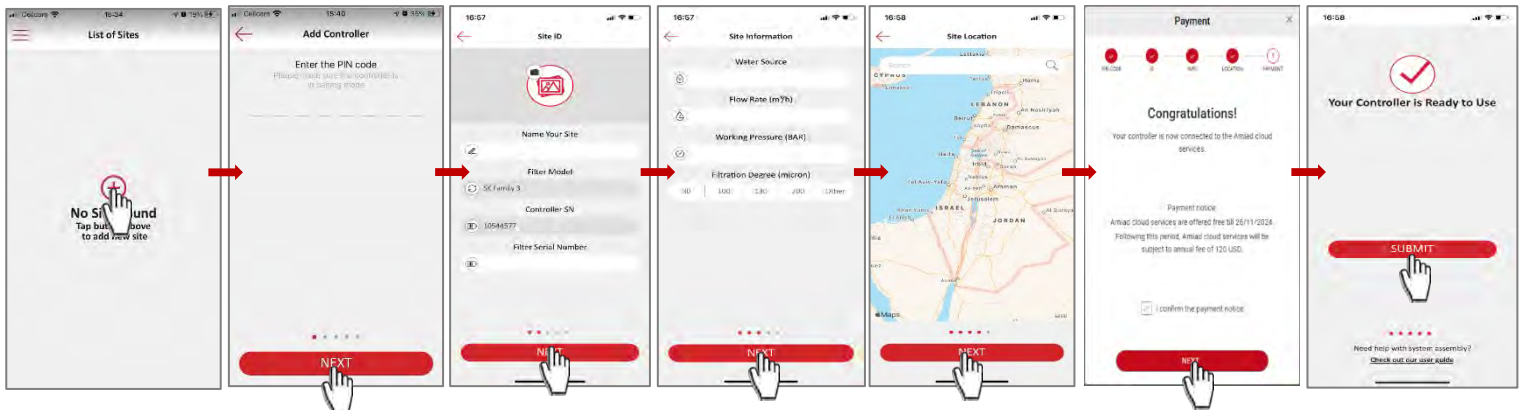
1. Open the **ADI-X** controller display protection cover.
2. If needed, Press the Left Button to enable LED backlight.
3. Press and hold the Left Button on the **ADI-X** controller until the 8-digit PIN code appears on the screen.



Adding ADI-X Controller using the ADI-X Mobile Application

To add ADI-X controller to a user account using **ADI-X Mobile Application**:

1. Open the **ADI-X Mobile Application**. Sign in with your email and password.
2. Click the "+" in the "List of Sites" window.
3. Make sure the controller is turned on and in communication mode. Enter the 8-digit PIN code obtained from the controller. Click "NEXT".
4. In "Site ID" screen enter your site name in the "Name Your Site" field, select filter model from the list, enter filter serial number in "Filter Serial Number" field, add site picture by clicking the Site image icon. Click "NEXT".
5. In "Site Information" screen select water source from the list, enter flow rate in "Flow Rate (m³/h)" field, enter working pressure in "Working Pressure (BAR)" field, select filtration degree from the list. Click "NEXT".
6. In "Site Location" screen set the location of the site on the map. Click "NEXT".
7. In "Payment" window you should confirm the payment notice. At this stage, your controller is connected to your account and ready for use! Click "Next".
8. At this stage your controller was connected to your user account and ready for use! Click "SUBMIT".

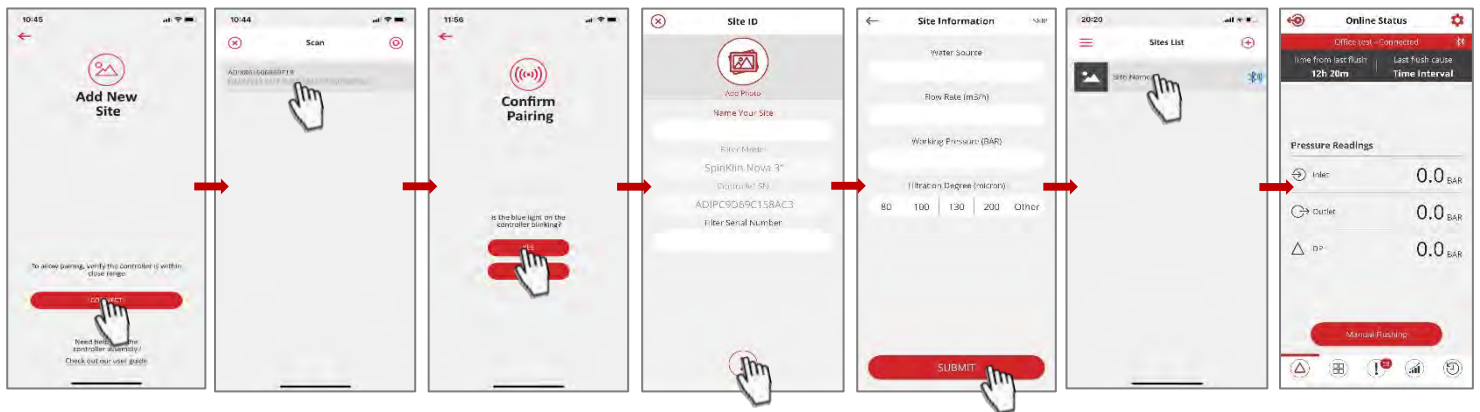


Pairing ADI-X Controller using the ADI-BLE Mobile Application

Notice: Pairing the ADI-X controller with the Bluetooth® application will utilize part of the full list of features available in the cloud applications. Amiad recommends pairing the ADI-X controller with the dedicated ADI-X applications (Mobile and Desktop).

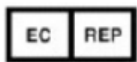
To pair the controller with the **ADI-BLE Mobile Application**:

1. Verify your mobile device's Bluetooth® discovery mode is activated. To start pairing with the ADI-X controller, click "+" in the window. The application scans for controllers within the Bluetooth® range (10-15 meters).
2. Select your controller from the controllers list in range. The application will start pairing.
3. Verify that the blue/green LED on your controller is blinking. Click "YES" to confirm.
4. At the end of the pairing process, complete the Site ID form: name your site, enter filter model and controller serial number if needed. You may add a site photo by clicking on "Add Photo". Click "→".
5. Enter the Site Information details (optional), Click "SUBMIT" to add your new filter to the Sites List.
6. To view data from your controller, select the active controller from the "Sites List", marked by the active Bluetooth® icon.



Amiad Water Systems Ltd. D.N. Galil Elyon 1, 1233500, Israel.

Tel: +972 4690 9500 | Fax: +972 48141159 | Email: info@amiad.com



Obelis s.a. Bd Général Wahis 53, 1030 Brussels, Belgium.

Tel: +(32) 2732 5954 | Fax: +(32) 27326003 | Email: mail@obelis.net

EC Declaration <https://amiad.com/list-certificates/>

The *Bluetooth®* word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Amiad Water Systems is under license. Other trademarks and trade names are those of their respective owners.