MS Evo

Translation of the original instructions

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Description MS Evo

A main station has a built-in pump and an injector system for mixing water and detergent.
Depending on the model, up to three different detergents can be applied.

The integrated manual satellite allows you to manually rinse and apply detergent.

The selected outlet pressure is kept constant regardless of consumption provided the consumption remains below the maximum volume the system can deliver.

The pump is protected against dry-running in case of insufficient water supply.

The pump is protected against excessive water temperatures.

All components in contact with concentrated detergent may consist of AISI 316, Viton, PVC or a combination of these materials.

It is the user's responsibility to ensure that the detergent is compatible with these materials.

General information

For safety during installation and subsequent use, it is extremely important that the manual is followed carefully.
Please keep this user manual in a place where it is available at all times and hand it over to the person responsible for this product. If the user manual is lost, you are welcome to request a new one from your dealer.
If there is any doubt about the content of the instructions, contact the dealer for clarification.

Intended use

The System Cleaners system is designed for use with water and detergents only.

- Rinse with water.
- Application of foam.
- Application of disinfectant.

Any other use besides this is considered inappropriate and a deviation from the provisions, and may lead to dangerous situations.

System Cleaners A/S is not liable for consequential damages caused in this respect.

Intended use means:

- The instructions, regulations and recommendations given in the user manual for the unit.
- Compliance with the prescribed inspection and maintenance intervals.
- Correct maintenance of the unit to keep it in good working order.
- Compliance with the prescribed environmental and operating conditions.
- Use of a detergent compatible with the materials in the unit.

Intended use also includes compliance with all the information provided in this user manual. This applies in particular to the specified safety instructions.

Liability provisions

It is the responsibility of the individual user to handle and use the unit in a safe manner. It is therefore extremely important that this user manual is available to the sanitation worker.

Safety precautions

The unit is designed in accordance with the generally accepted technical rules and regulations as well as working environment and accident prevention regulations. Nevertheless, risks may arise during use that could cause physical harm to the user or third parties or affect the machinery or other equipment. The unit must therefore be in optimal technical condition before use and may only be used in accordance with its intended use and in compliance with the safety regulations and operating instructions. In particular, faults that may affect safety must be rectified immediately.

Warranty provisions

Please refer to the current sales and delivery conditions.

Labelling

The unit is supplied with a type plate with technical data. The type plate is located on a fixed part of the unit.

Disposal

This product and its parts must be disposed of in an environmentally sound manner in accordance with local legislation.
Use the public or private recycling stations.
If the aforementioned is not possible, please contact your nearest System Cleaners representative.

Transport and handling

Care must be taken when lifting the unit due to its relatively high weight.
Use of the dedicated lifting brackets is recommended.

Storage

When storing the unit, the ambient temperature must be kept above freezing point.
After long-term storage, the unit must be rinsed before it is used in production.

Safety information

Safety symbols

	General warning. Read the documentation before using the system. Read the documentation before servicing the system.
	There may be hot surfaces. Take special care when servicing the system.
	Goggles must be worn when operating the system. Goggles must be worn when servicing the system.
	Gloves must be worn when operating the system. Gloves must be worn when servicing the system. Wear cut-resistant gloves when servicing.

General

This unit may only be operated by trained professionals or persons who have been properly instructed in how to operate it.
Service may only be carried out by trained professionals or maintenance personnel who have been properly instructed in how to service it.

Never point the outlet nozzle at other people or electrical installations.

Risks on the equipment (residual risk)

Operation

- Always wear safety goggles, gloves and appropriate work clothing when using the unit (PPE).
- Risk of getting chemicals in the eyes (HIGH RISK).
- Risk of getting high-pressure water in the eyes (HIGH RISK).
- Risk of getting chemicals on the skin (HIGH RISK).
- Risk of scalding (HIGH RISK).
    - It is the user's/fitter's responsibility to ensure that water is not used at temperatures above 70 °C.

The door must always be closed.
Risk of high-pressure water/chemicals in the event of failure (MEDIUM RISK).

Service/maintenance:

- Always wear safety goggles, cut-resistant gloves and appropriate work clothing when servicing the system (PPE).
- Risk of getting chemicals in the eyes (HIGH RISK).
- Risk of getting high-pressure water in the eyes (HIGH RISK).
- Risk of getting chemicals on the skin (HIGH RISK).
- Risk of cutting/striking yourself (HIGH RISK).

Before accessing the unit/open door, close all inlet ball valves (water, chemicals, air).
After this, the first thing to be done once the door is open is to depressurise the entire system.
Risk of high-pressure water/chemicals if service is performed without relieving the pressure from the system (HIGH RISK)

Safety signs:
The following pictograms are placed on the equipment (size is 65x65 mm).
Scale displayed (1:1).

Declaration of conformity

Manufacturer:
System Cleaners A/S
Halkjærvej 17
DK-9200 Aalborg SV
Denmark

Product series: MS5-20/MS10-20 Evo.

We, System Cleaners A/S, declare that this product complies with the following directives and standards.

Machinery Directive 2006/42/EC.

Standards:
EN ISO 12100:2010 – Risk assessment and risk reduction.
EN 60204-1:2018 – Part 1: General requirements (IEC 60204-1:2016).
EN ISO 13849-2:2012 – Part 2: General requirements.
EN ISO 13732-1:2008 – Part 1: Hot surfaces.
EN ISO 13732-3:2008 – Part 3 Cold surfaces.
EN ISO 14118:2018 – Prevention of unexpected start-up.
EN ISO 13849-1:2023 – Part 1: General principles for design.
EN ISO 4414:2010 – General rules and safety requirements.

Responsible for the technical file:
Jørn Hansen
Development Manager
Aalborg, 17/10/2024

Installation

Mounting the unit

- The wall material should be of a stable quality that can support the weight of the unit.
- Mounting must be performed with the bolts and plugs supplied.
- Drill holes for the unit's wall brackets according to the dimensional drawing.
- Mount and tighten the wall brackets. Then, mount the unit and screw the safety screw at the bottom of the unit into the wall.
- For servicing, we recommend that you allow 1m free space around the system.

Mounting the pipe connections

In general, pipe connections must be made in accordance with local regulations.
It is the fitter's responsibility to ensure compliance with applicable legislation.

- All pipes must be rinsed through before they are connected to the unit.
- Lockable shut-off valves must be fitted to all pipe connections and the air connection.
- The fitter must comply with any local requirements regarding pipe interrupters, if any exist.
- We recommend that you select pipe sizes that keep the flow velocity below 3 m/s. This normally provides an acceptable pressure loss and low flow noise.
- It must be ensured that the water temperature does not exceed 70 °C.

Electrical connection

- Connection to the electricity supply must be performed according to local regulations.
- It is the fitter's responsibility to ensure compliance with applicable legislation.
- A lockable service valve that can be operated from the floor without the use of a ladder or similar must always be fitted.
- For more information, see the manual supplied with the pump.

Start-up of operations

The unit must be bled before it is taken into use or after servicing.

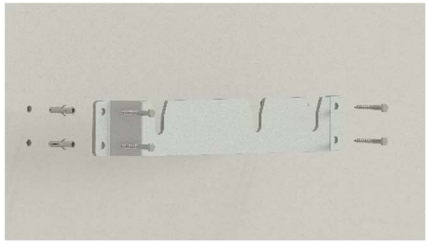
Installation kits

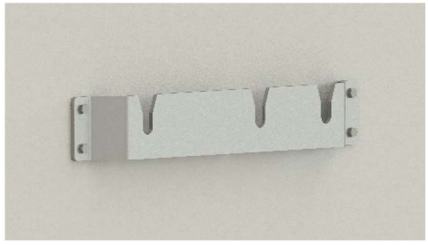
Item number	Installation kit
96-010061	1–3 concentrated products
96-010062	0–2 concentrated products and 1 premixed product
96-010063	0–1 concentrated product and 2 premixed products
96-010064	3 premixed products

Mounting instructions

For safety reasons, your new System Cleaners cleaning system is equipped with an integrated lifting bracket to prevent work-related accidents during mounting when used correctly. Follow the instructions below carefully.

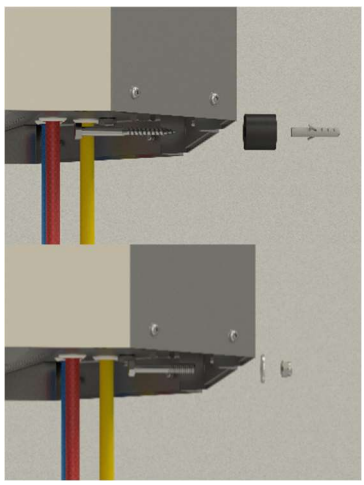
1. Start by drilling holes and mounting the wall bracket (brackets, screws and wall plugs are included). IMPORTANT: Fit the safety screw in the base of the cabinet in the wall (1) or floor stand (2).





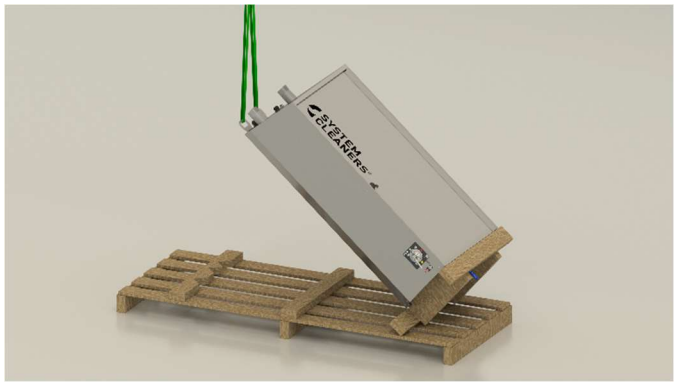
1

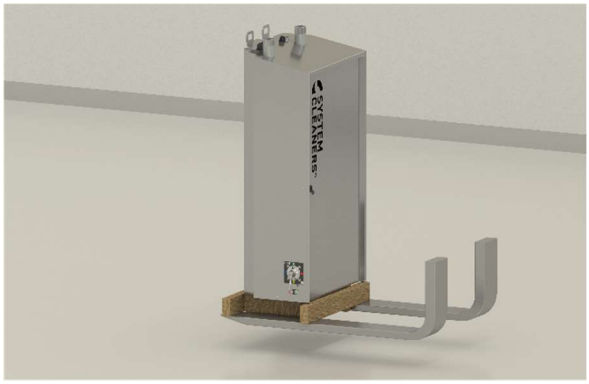
2



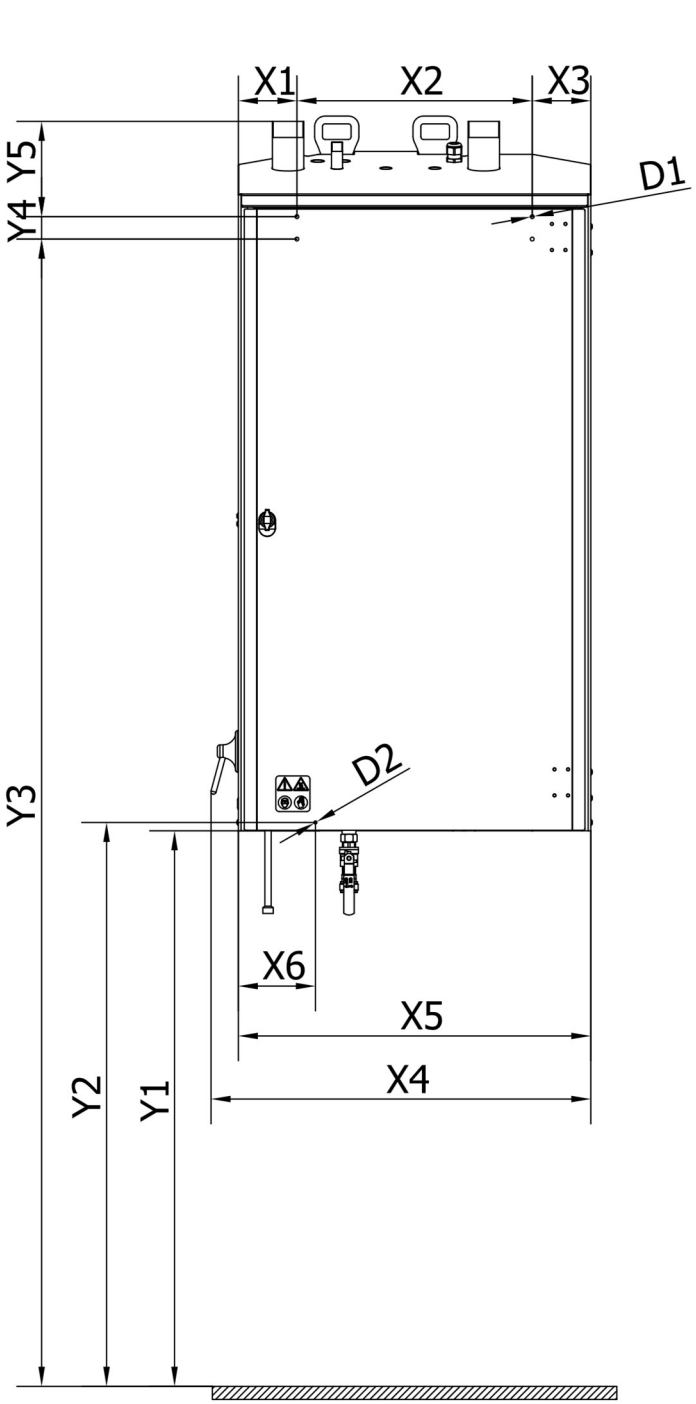
2. Your new System Cleaners unit is delivered lying on a pallet. To mount it on the wall bracket or on a floor stand, use the integrated lifting bracket.

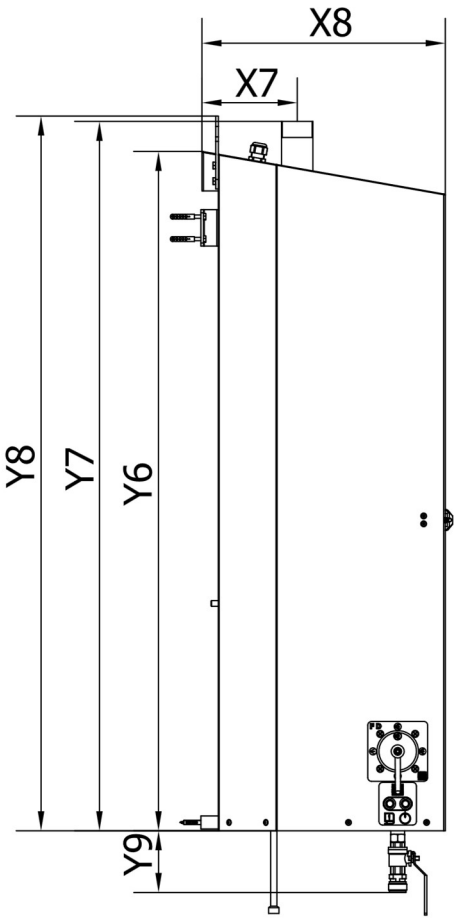
3. Attach an approved lifting sling to the bracket. Once the unit is hoisted into a vertical position, a forklift can be used for the rest of the installation.

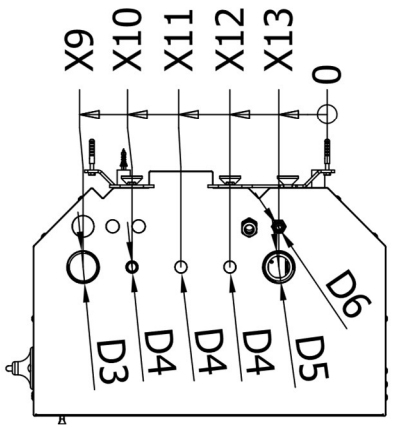




Mounting dimensions

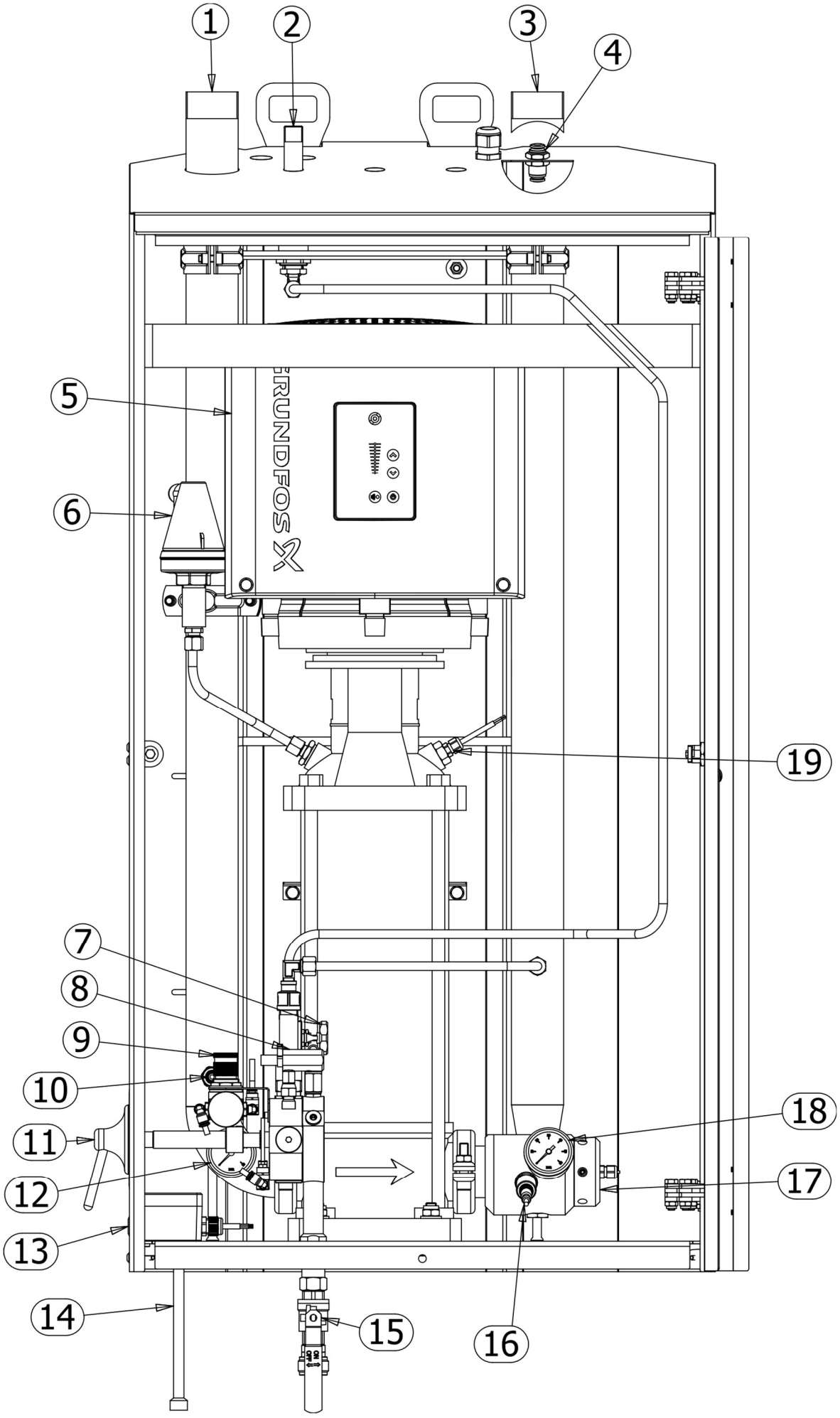






Item	Millimetres	Inches
X1	112.5	$4\ ^{27}/_{64}$
X2	452	$17\ ^{51}/_{64}$
X3	112.5	$4\ ^{27}/_{64}$
X4	729.5	$28\ ^{23}/_{32}$
X5	677	$26\ ^{21}/_{32}$
X6	173.5	$6\ ^{53}/_{64}$
X7	185	$7\ ^{9}/_{32}$
X8	469.4	$18\ ^{31}/_{64}$
X9	469	$18\ ^{15}/_{32}$
X10	375	$14\ ^{49}/_{64}$
X11	281	$11\ ^{1}/_{16}$
X12	187	$7\ ^{23}/_{64}$
X13	93	$3\ ^{21}/_{32}$
Y1	1070	$42\ ^{1}/_{8}$
Y2	1086	$42\ ^{3}/_{4}$
Y3	2208.5	$86\ ^{61}/_{64}$
Y4	43	$1\ ^{11}/_{16}$
Y5	183	$7\ ^{13}/_{64}$
Y6	1374.7	$54\ ^{1}/_{8}$
Y7	1364.5	$53\ ^{23}/_{32}$
Y8	1306.8	$51\ ^{29}/_{64}$
Y9	118.6	$4\ ^{43}/_{64}$
D1	Ø10	$^{25}/_{64}$
D2	Ø8	$^{5}/_{16}$
D3	2″	2″
D4	½″	½″
D5	2″	2″
D6	Ø10	$^{25}/_{64}$

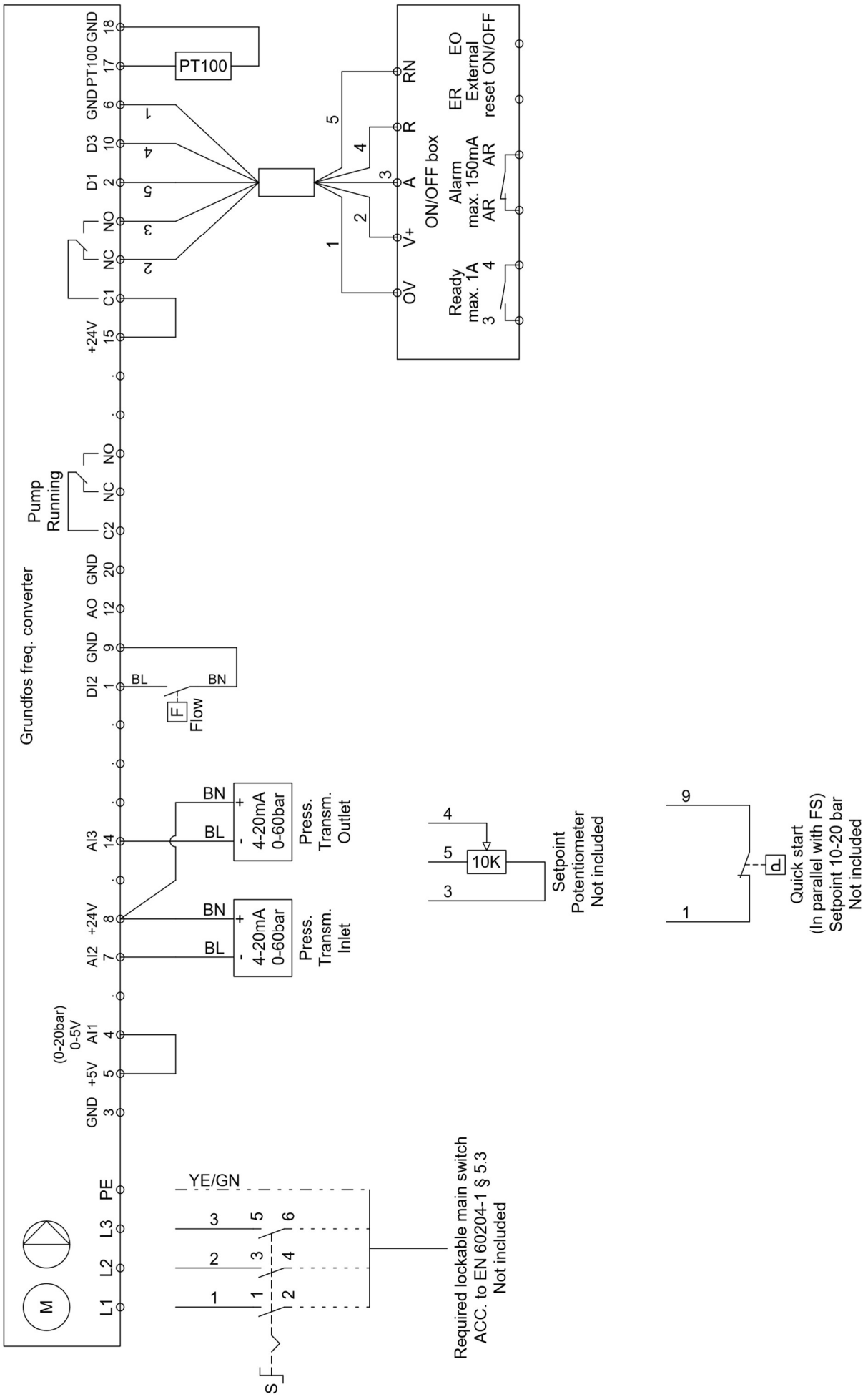
Main elements



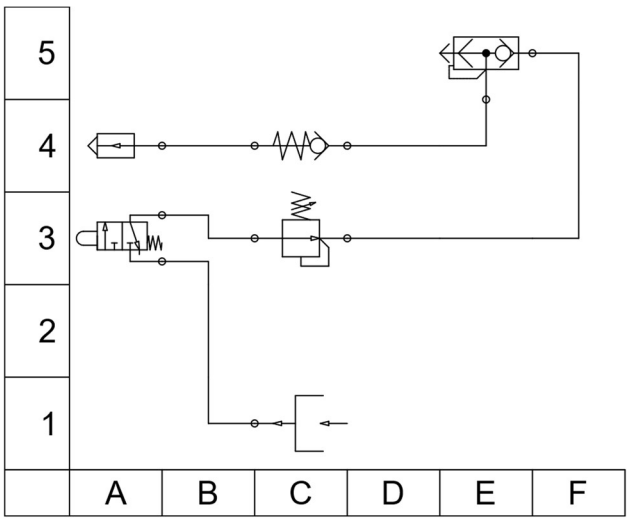
Main elements list

Item	Description
1	Water inlet
2	Inlet, premixed chemicals
3	Outlet
4	Air inlet
5	Pump
6	Pump exhaust system
7	Premixed dosing
8	Concentrated dosing
9	Air pressure regulator
10	Pressure transmitter inlet
11	Function selector
12	Manometer inlet
13	On/Off/Reset buttons with indicator
14	Suction hose manual function
15	Manual outlet
16	Pressure transmitter outlet
17	Check valve/flow switch
18	Manometer outlet
19	Temperature sensor

Wiring diagram



Pneumatic diagram, manual function



Row	Column	Description
1	C	Air connection
3	A	Control valve
3	C	Air pressure regulator
4	A	Air nozzle
4	C	Check valve
5	E	Backflow preventer valve

Technical specifications

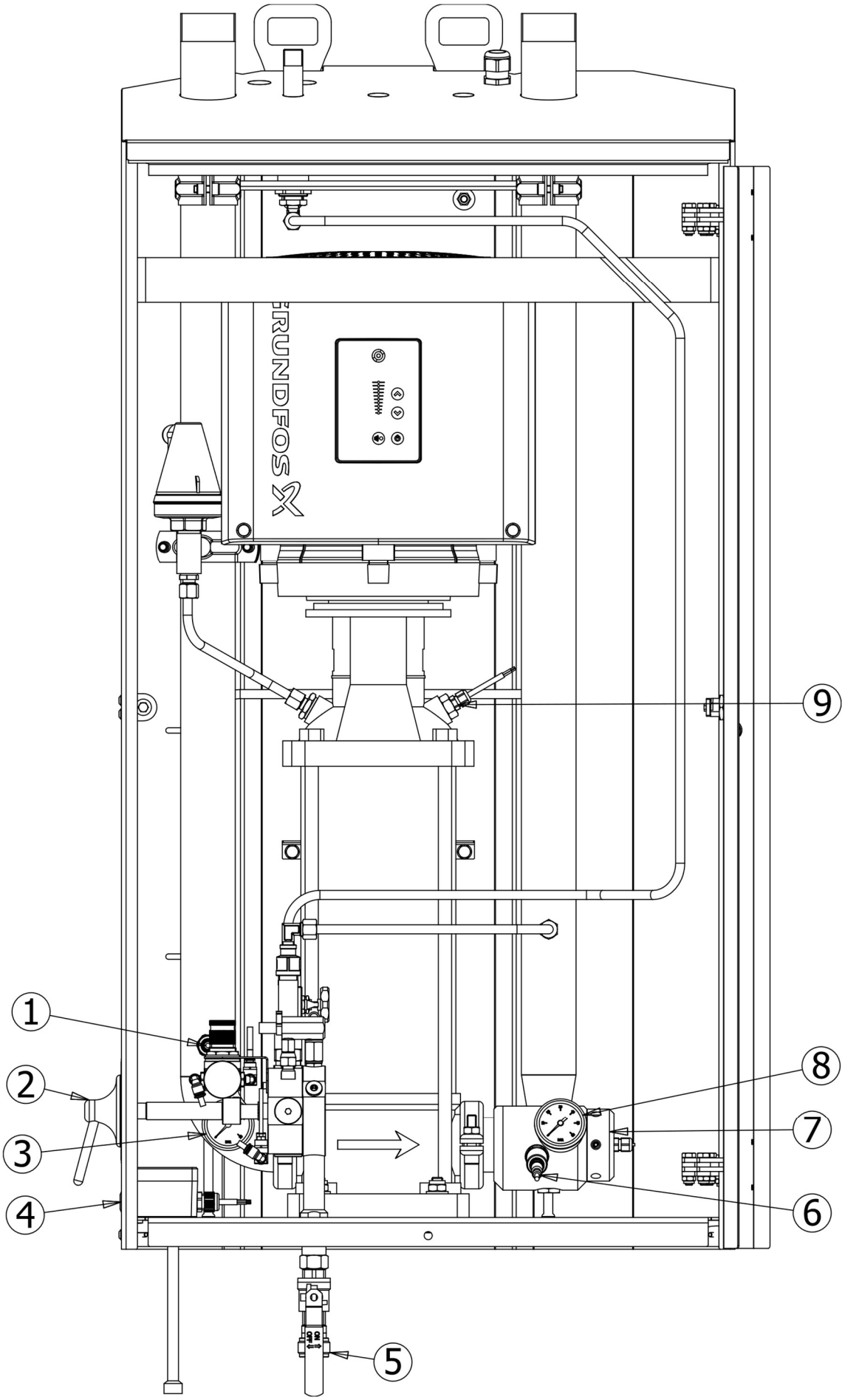
	MS5-20 Evo
Installation	
Ambient temperature	3-40 °C // 37-104 °F
Pump	
Pump type	CRNE 5-14
Energy class	IE5
Motor power	6 kW // 8 HP
Frequency converter	Integrated in pump motor
Water supply	
Connection	2” BSPT // 2” NPT
Inlet pressure	1,5-10 bar // 22-145 psi
Filtration rating	≤800 µ
Automatic pump stop at inlet pressure less than	1,5 bar // 22 psi
Temperature	3-70 °C // 37-160 °F
Automatic pump stop at liquid temperature higher than	85 °C // 185 °F
Recommended minimum inlet flow	12 m³/h // 53 US gal/min
Water outlet	
Connection	2” BSPT // 2” NPT
Set point range (0-5V external signal)	0-20 bar (STD. 20 bar)
Maximum flow at 20 bar/290 psi, incl. a 4 bar/58 psi inlet pressure	150 litres/min // 40 US gal/min
Air supply	
Connection	ø10 // ¼” NPT
Pressure range	5-10 bar // 73-145 psi
Compressed air quality	DIN ISO 8573-1, class 4
Minimum flow	150 litres/min // 5.3 cfm
Electrical connection	
Voltage	3x380-500 V +/- 10%
Frequency	50-60 Hz
Current	11,5-9 A
Manual outlet	
Connection	SC coupling
Minimum rinse capacity	30 litres/min // 8 US gal/min
Water consumption, injector	7 litres/min // 1.85 US gal/min
Concentration*	0,2-6%
Liquid consumption, prediluted product	7 litres/min // 1.85 US gal/min
General	
Number of users/workstations	5
Width x height x depth	677 x 1432 x470 mm // 27 x 57 x 19 inches
Maximum weight	170 kg // 375 lbs
IP class	54
Noise level	<70 dB

*Depending on product viscosity, back pressure etc. test performed with water

	MS10-20 Evo
Installation	
Ambient temperature	3-40 °C // 37-104 °F
Pump	
Pump type	CRNE 10-12
Energy class	IE5
Motor power	11 kW // 15 HP
Frequency converter	Integrated in pump motor
Water supply	
Connection	2” BSPT // 2” NPT
Inlet pressure	1,5-10 bar // 22-145 psi
Filtration rating	≤800 µ
Automatic pump stop at inlet pressure less than	1,5 bar // 22 psi
Temperature	3-70 °C // 37-160 °F
Automatic pump stop at liquid temperature higher than	85 °C // 185 °F
Recommended minimum inlet flow	24 m³/h // 106 US gal/min
Water outlet	
Connection	2” BSPT // 2” NPT
Set point range (0-5V external signal)	0-20 bar (STD. 20 bar)
Maximum flow at 20 bar/290 psi, incl. a 4 bar/58 psi inlet pressure	300 litres/min // 79 US gal/min
Air supply	
Connection	ø10 // ¼” NPT
Pressure range	5-10 bar // 73-145 psi
Compressed air quality	DIN ISO 8573-1, class 4
Minimum flow	300 litres/min // 5.3 cfm
Electrical connection	
Voltage	3x380-500 V +/- 10%
Frequency	50-60 Hz
Current	20,6-16 A
Manual outlet	
Connection	SC coupling
Minimum rinse capacity	30 litres/min // 8 US gal/min
Water consumption, injector	7 litres/min // 1.85 US gal/min
Concentration*	0,2-6%
Liquid consumption, prediluted product	7 litres/min // 1.85 US gal/min
General	
Number of users/workstations	10
Width x height x depth	677 x 1432 x470 mm // 27 x 57 x 19 inches
Maximum weight	210 kg // 463 lbs
IP class	54
Noise level	<70 dB

*Depending on product viscosity, back pressure etc. test performed with water

Description of functions
Operating elements



Item	Description
1	Inlet pressure transmitter
2	Function selector
3	Manometer, inlet pressure
4	On/Off/Reset buttons with indicator
5	Outlet coupling with ball valve
6	Outlet pressure transmitter
7	Flow switch
8	Manometer, outlet pressure
9	Temperature sensor

Item 1 – Inlet pressure transmitter
The function of the pressure transmitter is to ensure that there is sufficient inlet pressure to the system.

If the inlet pressure falls below 1.5 bar, a countdown of 5 seconds starts.
If the inlet pressure remains below 1.5 bar after the countdown, the pump will begin sounding an alarm and stop.

The alarm is reset by pressing the blue button.

Item 2 – Function selector
The function selector is used to select between the different modes the manual satellite is configured with.

Item 3 – Manometer, inlet pressure
Shows the inlet pressure.

Item 4 – ON/OFF button
The function of the white button is to switch between "standby" and "ready to run".
A flashing white light means that the pump is on but has not been granted permission to run.
A steady white light means that the pump is on and is permitted to run.

The function of the blue button is to reset the pump if there has been an error/alarm.
The blue button lights up if there has been an error/warning in the pump.

Item 5 – Outlet coupling with ball valve
Hose connection point.

Item 6 – Outlet pressure transmitter
The function of the pressure transmitter is to maintain a constant outlet pressure.
The pump regulates its speed based on the pressure transmitter's reading.

Item 7 – Flow switch
The function of the flow switch is to start the pump when there is flow.
This function is dependent on the white button having a constant white light.

Item 8 – Manometer outlet pressure
Shows the outlet pressure.

Item 9 – Temperature sensor
The function of the temperature sensor is to protect the system against excessive water temperatures.

If the water temperature is >70 °C, a countdown of 5 seconds starts.
If the temperature remains above 70 °C after the countdown, the pump will go into alarm mode and stop.

The pump temperature must be below 65 °C before the alarm can be reset by pressing the blue button.

Maintenance

Check valves
Both water, chemical and air check valves should be checked weekly.

The water check valve protects the fresh water supply against the backflow of chemicals from the system.

There are one air check valves in the air system. Between the check valves is a backflow preventer valve. The purpose is to protect the air supply.

There is a check valve on each chemical inlet. The purpose is to prevent water from entering the chemical container.

It is recommended that you service/replace all check valves once a year.

Suction hose and suction filter
Both filter and hose should be inspected weekly.
We recommend that you change both filter and hose every year.

Hose
The hose must be inspected every week as it is subjected to heavy mechanical wear.
We recommend that you replace the hose at least once a year.

Low pressure valve/gun
The low pressure valve/gun should be checked weekly.
The nut on the low-pressure valve must be tightened regularly.
If there is any damage to the low pressure valve/gun, it must be replaced for safety reasons.

Injector
The water nozzle may become clogged from lime buildup. It should be checked once a month.
Descale the water nozzle if it is clogged.

Pump
The shaft seal on the pump should be checked for leaks once weekly.
Repeated dry-running can reduce the life of the shaft seal.
We recommend that you replace the shaft seal every two years.

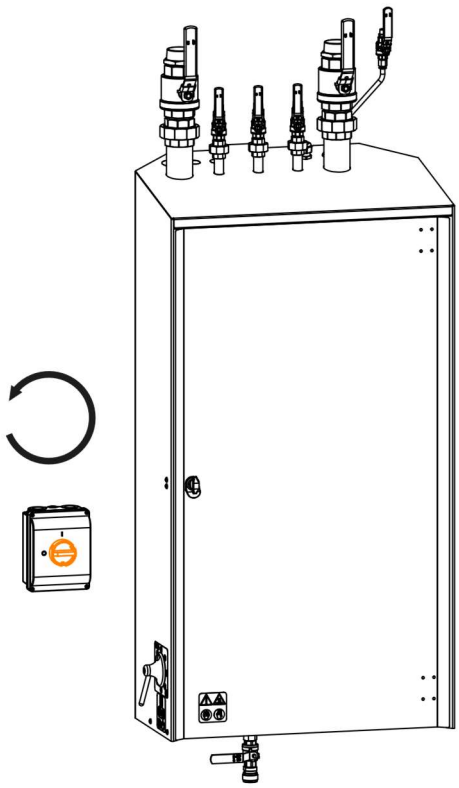
Service kits
Annual service kit, Machine – 96-010480
MS5-20 Evo shaft seal EPDM (standard) – 32-300010
MS5-20 Evo shaft seal Viton – 32-300011
MS10-20 Evo shaft seal EPDM (standard) – 32-100020
MS10-20 Evo shaft seal Viton – 32-100021
Annual service kit, Manual function main unit – 96-010463
Annual service kit, Concentrated product, White suction hose – 96-010464
Annual service kit, Concentrated product, Blue suction hose – 96-010465
Annual service kit, Concentrated product, Red suction hose – 96-010466
Annual service kit, Concentrated product, Yellow suction hose – 96-010467
Annual service kit, 1 x premixed product – 96-010468
Annual service kit, 2 x premixed products – 96-010469
Annual service kit, 3 x premixed products – 96-010470

Service quick guides

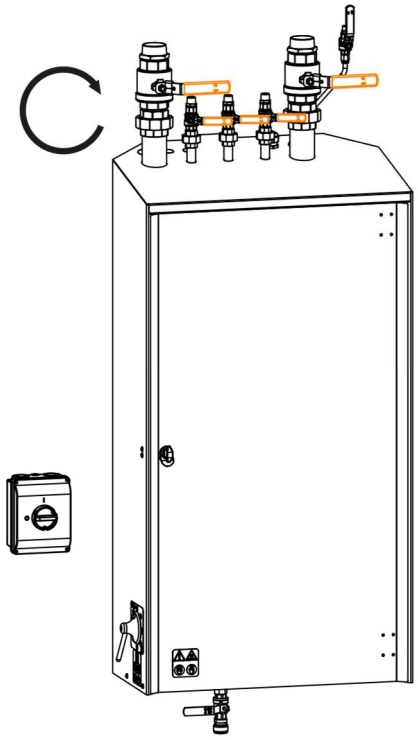
Depressurise the system before servicing.

For safety reasons, this must be done before disassembling internal components.

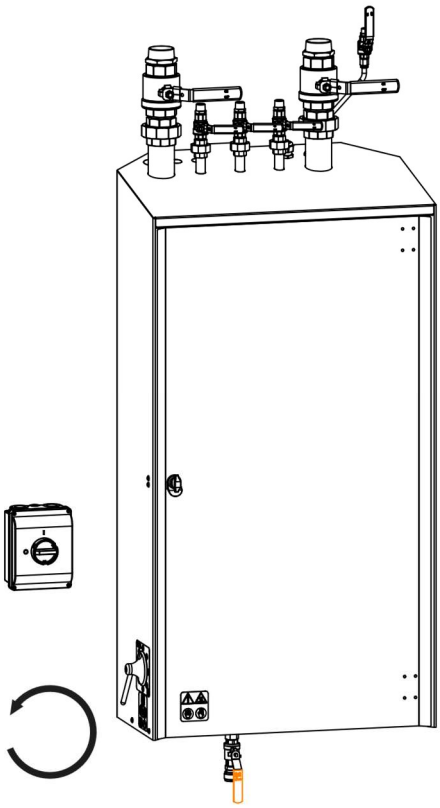
1. Turn off the service switch.



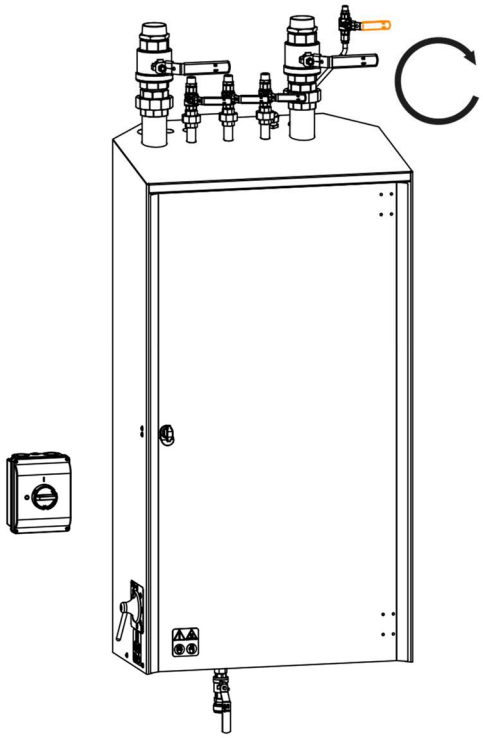
2. Shut off the fluid supply.



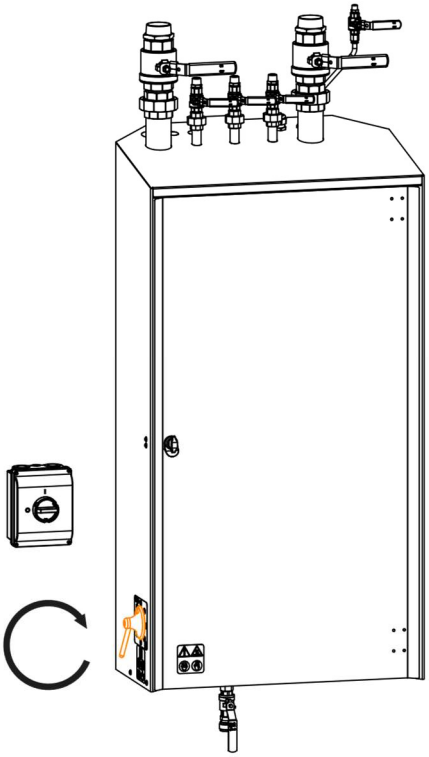
3. Open the manual outlet.



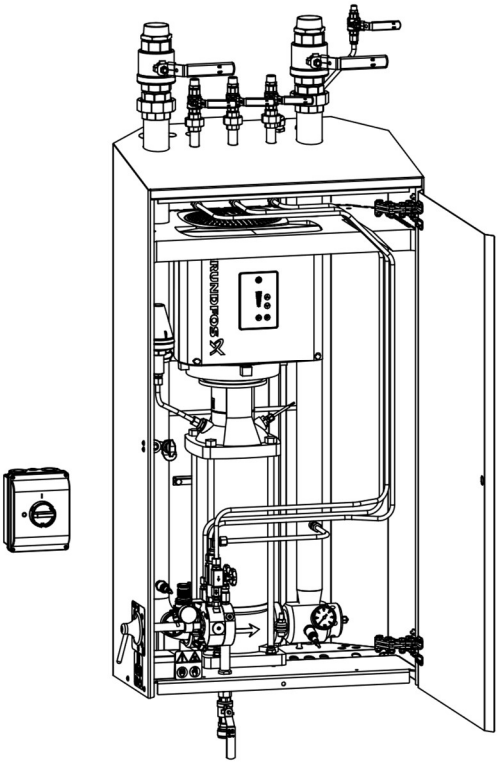
4. Shut off air supply.



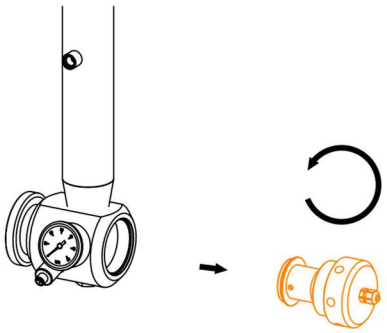
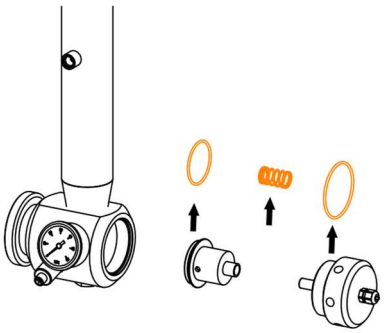
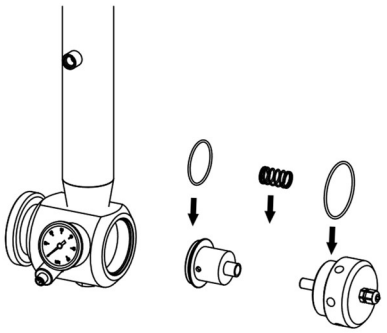
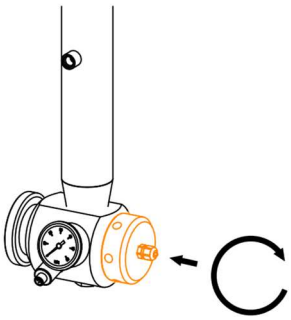
5. Select all manual modes, end with close.



6. Open the unit door.



Check valve/flow switch

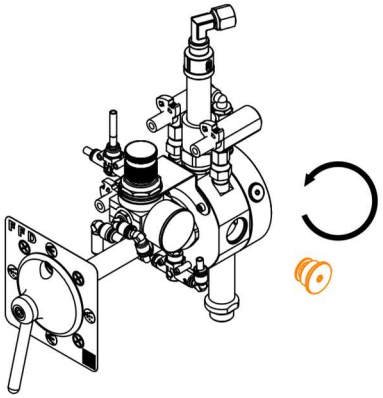
1. Remove the check valve/flow switch 	2. Remove the O-rings and spring 
3. Fit new O-rings and spring 	4. Fit the check valve/flow switch 

Service quick guides, manual function

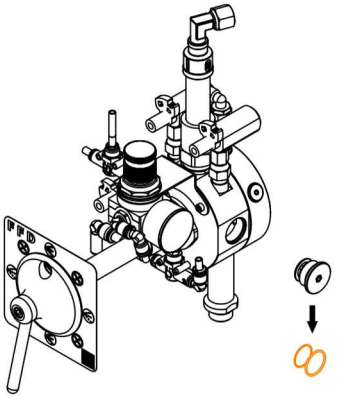
The system must be depressurised before servicing. See the section on depressurisation.

Descaling the water nozzle

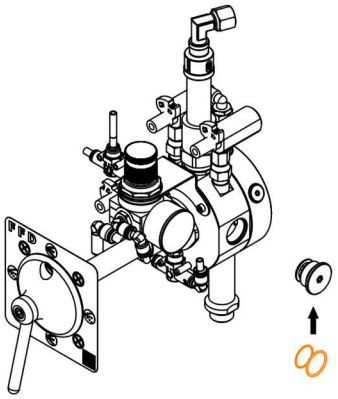
1. Remove the water nozzle.



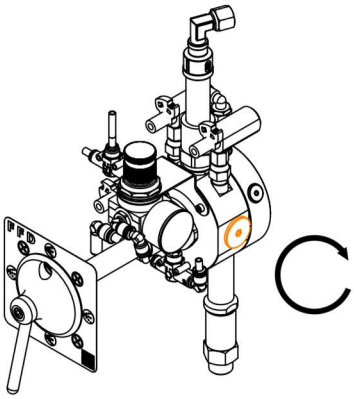
2. Remove the O-rings and descale the water nozzle.



3. Fit the O-rings.

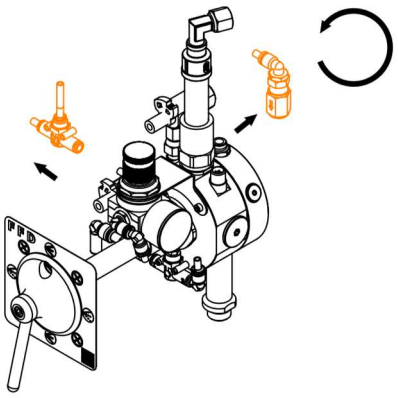


4. Fit the water nozzle.

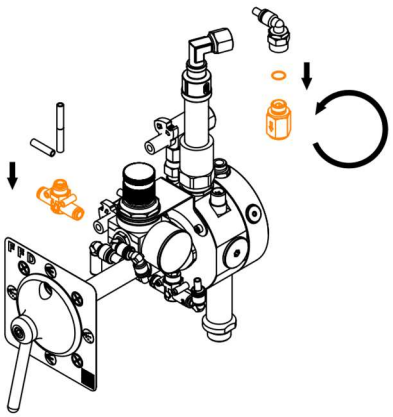


Air check valve

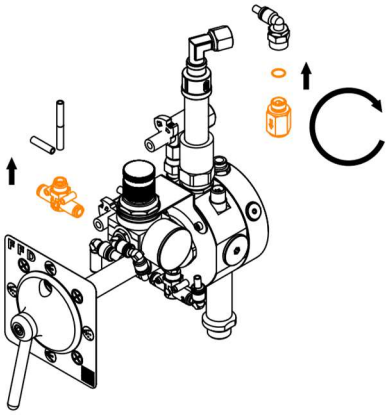
1. Remove the check valve connectors.



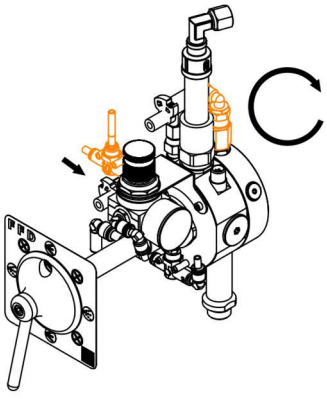
2. Remove the check valve, O-ring and backflow preventer valve.



3. Fit a new check valve, O-ring and backflow preventer valve.

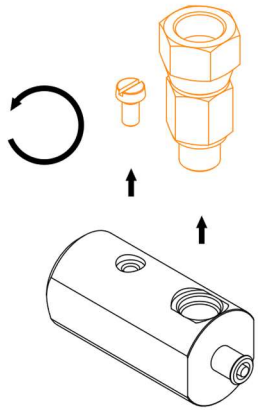


4. Mount the check valve connectors.

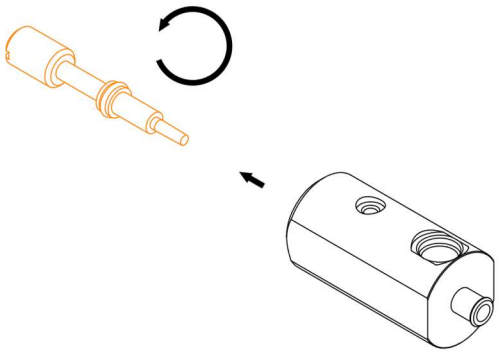


Check valve, concentrated chemicals

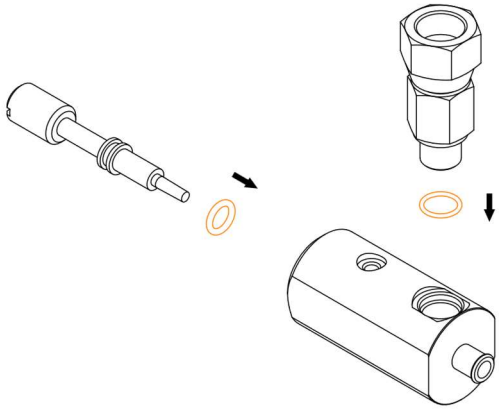
1. Remove the safety screw and check valve.



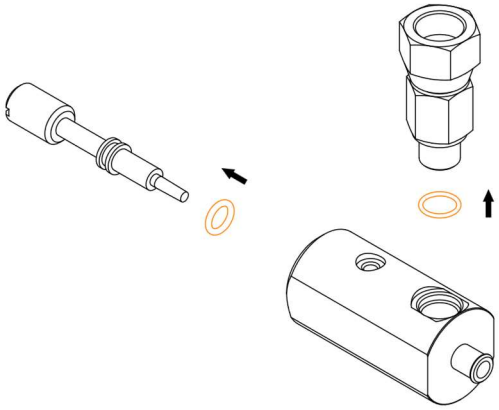
2. Remove the adjustment screw.



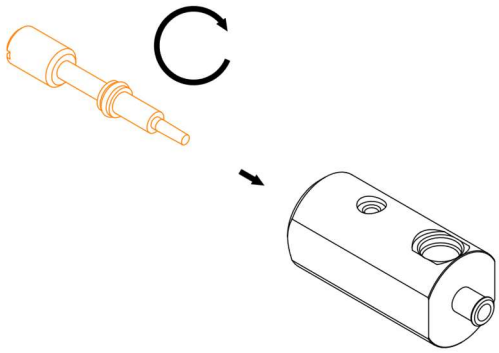
3. Remove the O-rings.



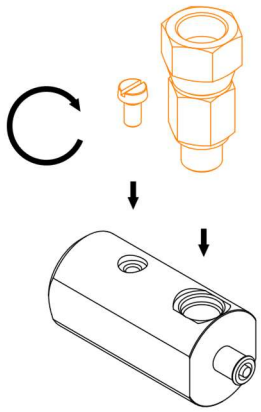
4. Fit new O-rings.



5. Fit the adjustment screw.

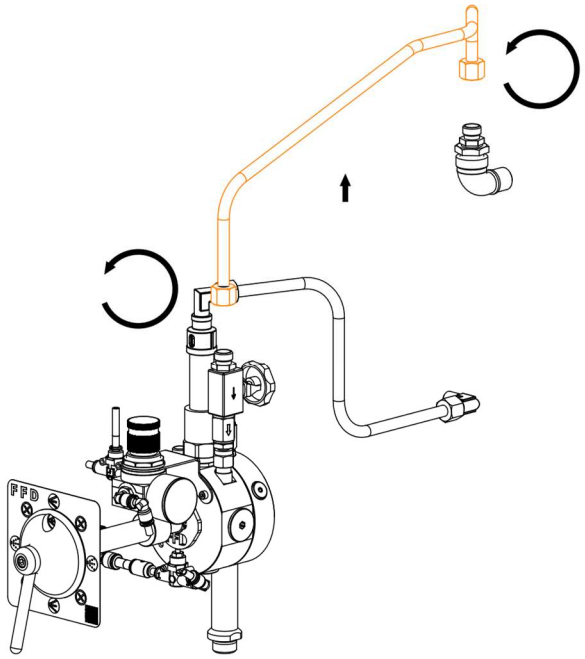


6. Fit the safety screw and new check valve.

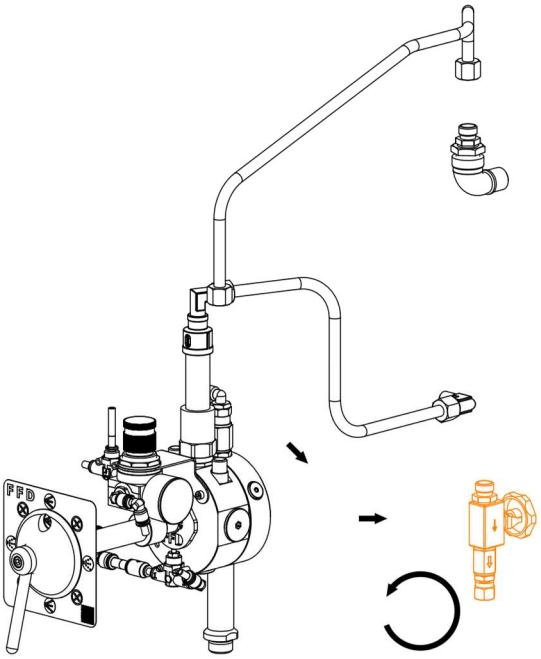


Check valve, premixed chemicals

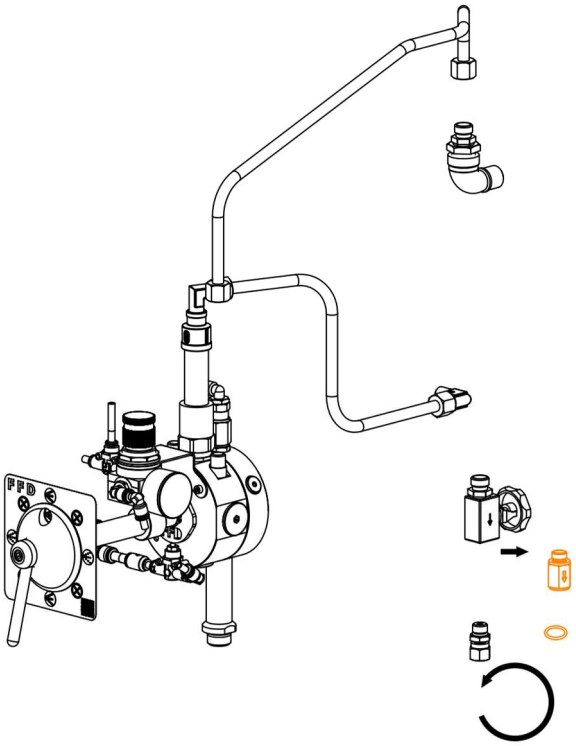
1. Remove the chemicals supply pipe



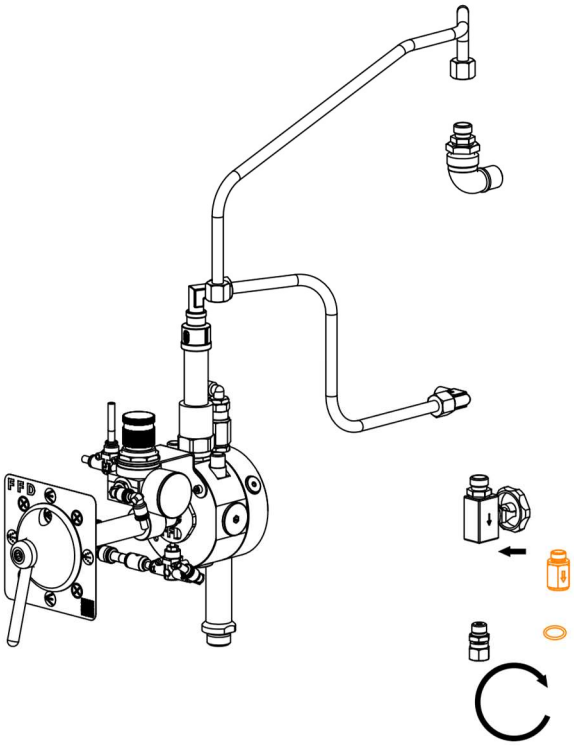
2. Remove the dosing valve/check valve



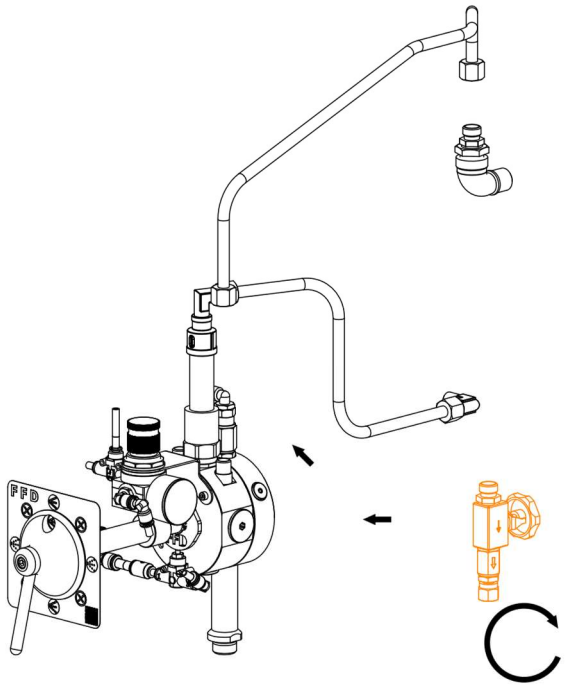
3. Remove the check valve and O-ring



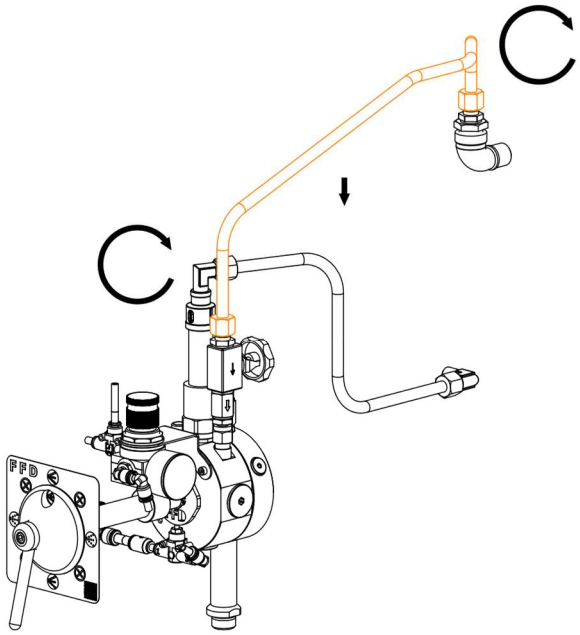
4. Fit new check valve and O-ring



5. Fit the dosing valve/check valve

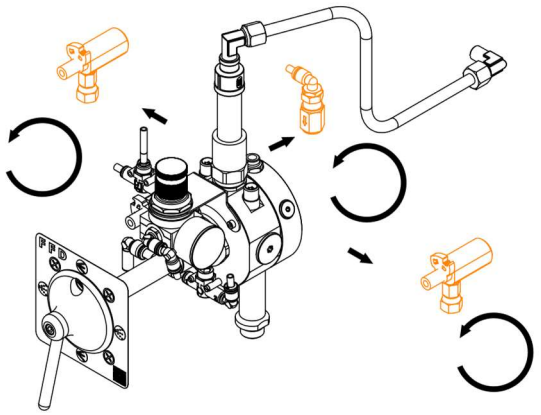


6. Fit the chemicals supply pipe

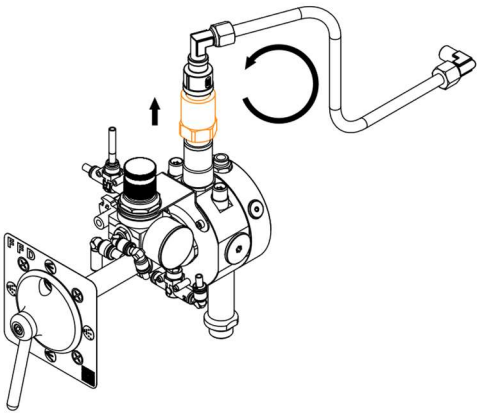


Check valve, water

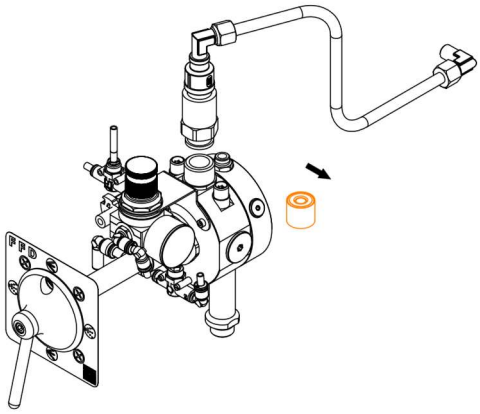
1. Remove the dosing valves and air check valve.



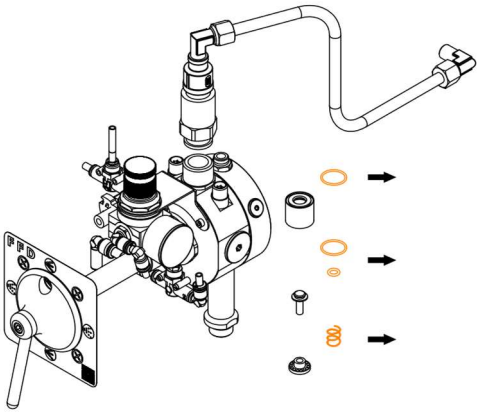
2. Remove the nut for the check valve.



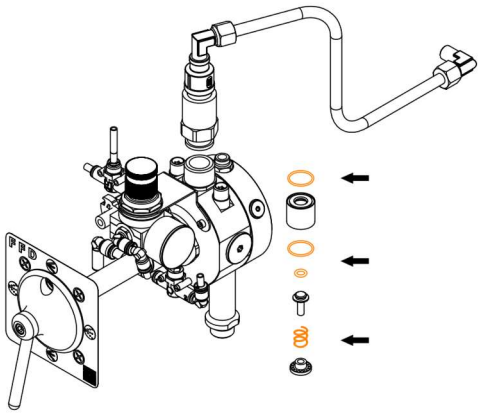
3. Remove the check valve.



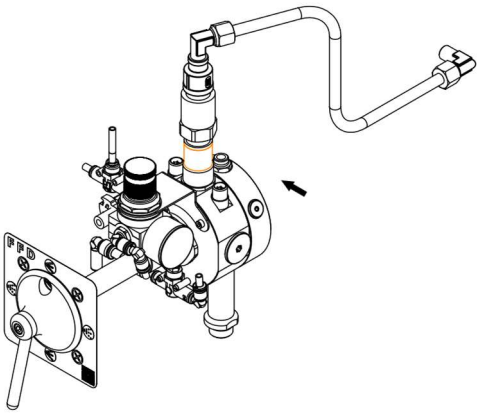
4. Remove the O-rings and spring.



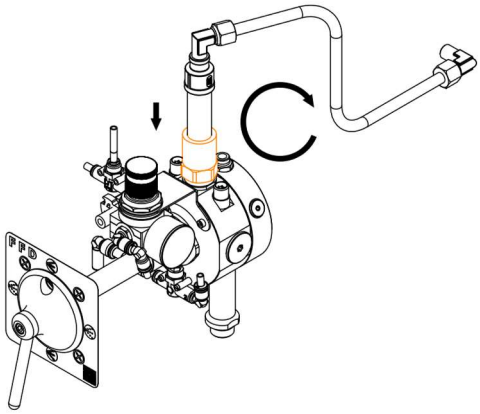
5. Fit new O-rings and a new spring.



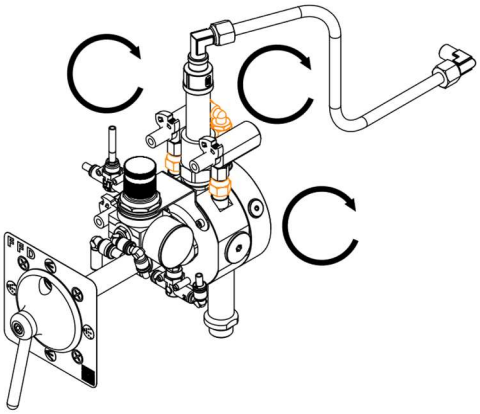
6. Fit the check valve.



7. Fit the nut for the check valve.

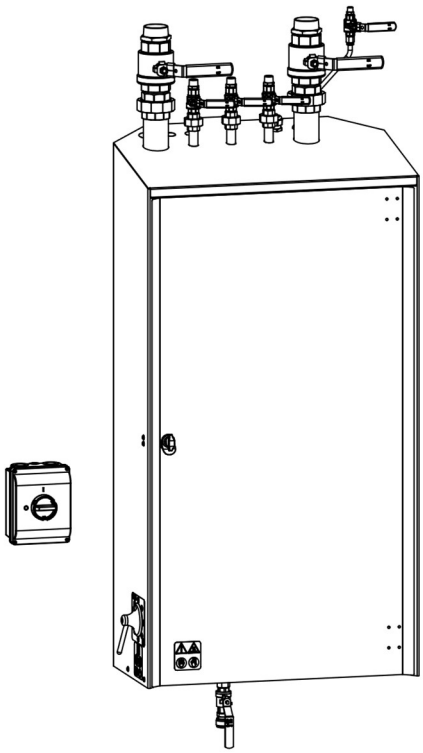


8. Fit the dosing valves and air check valve.



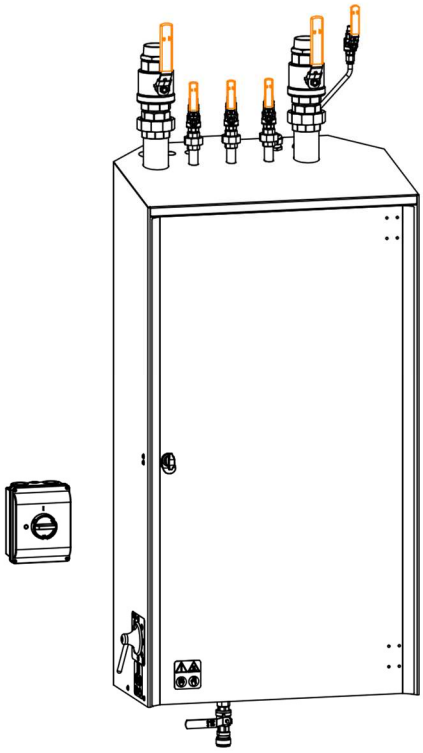
Restart after service.

1. Close the door.



2. Close the manual outlet.

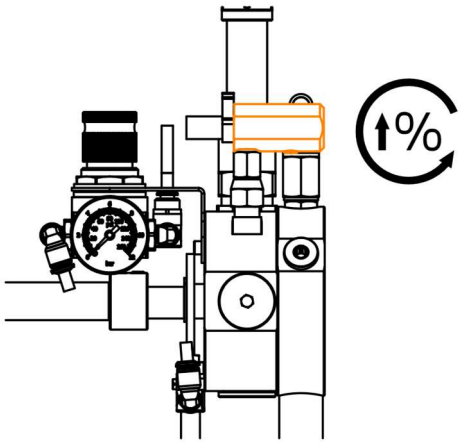
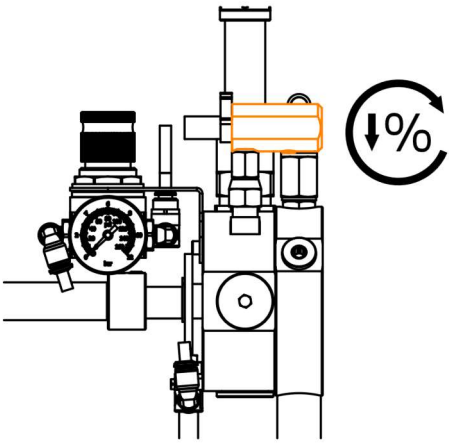
3. Open air and fluid supply.

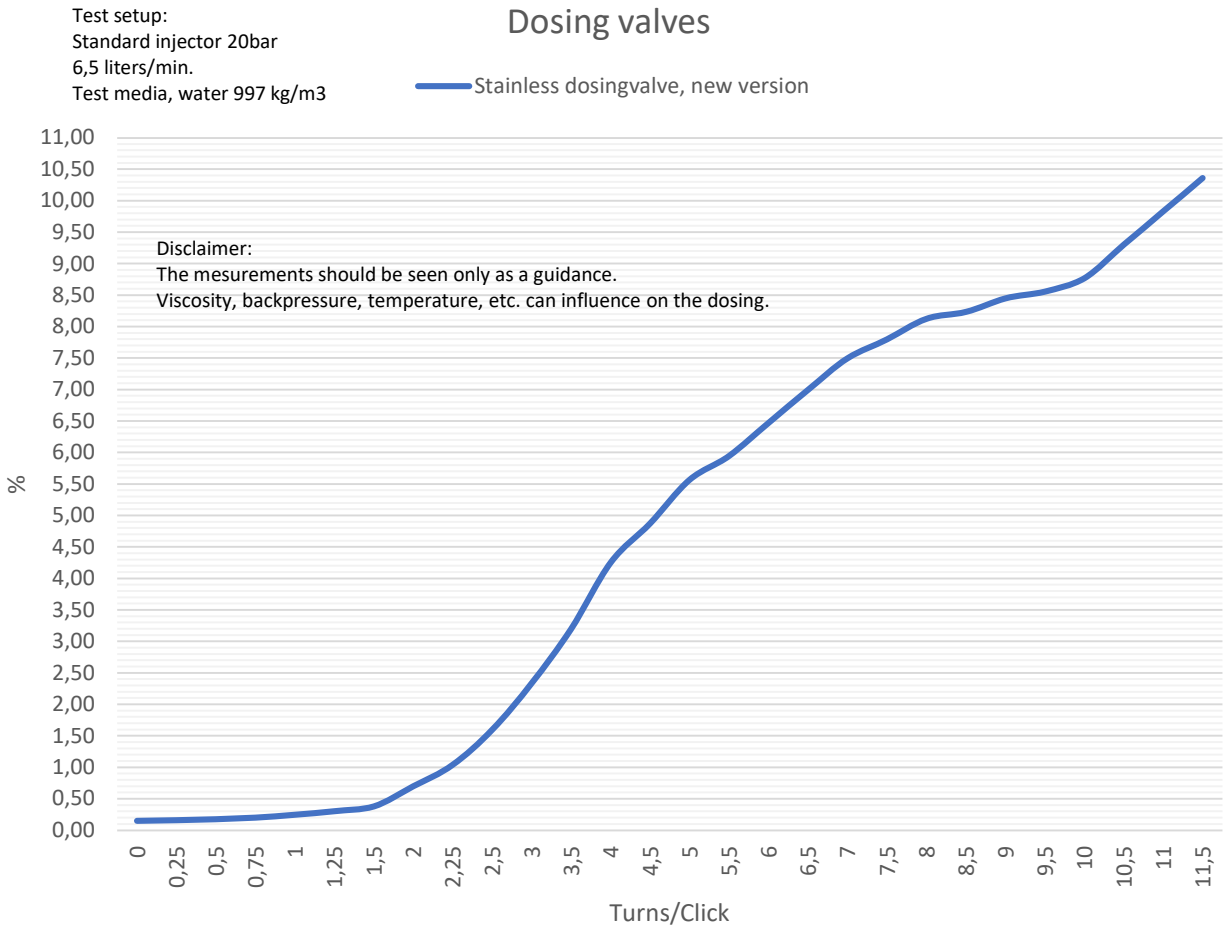


4. Turn on the service switch.

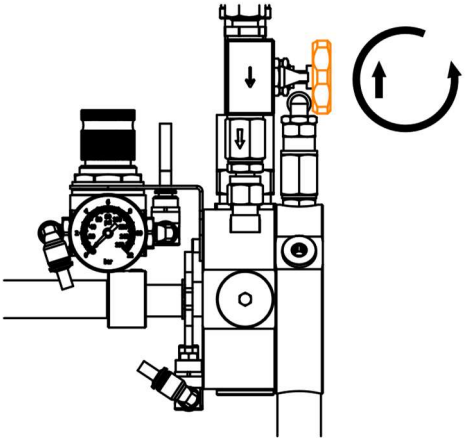
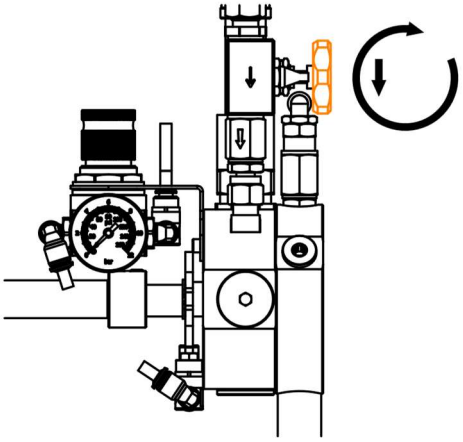
Quick guide

Adjusting the concentration for concentrated chemicals

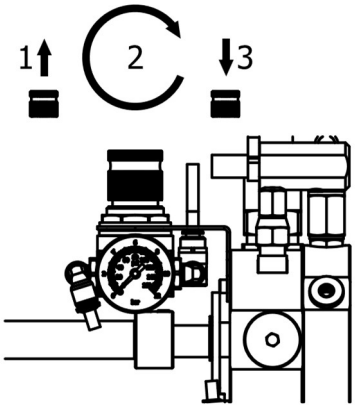
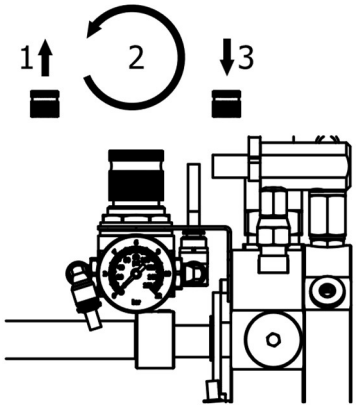
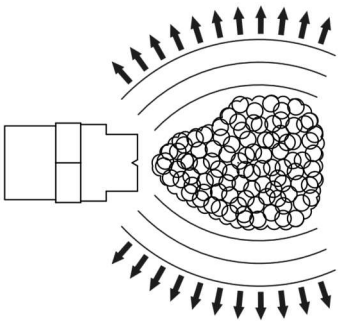
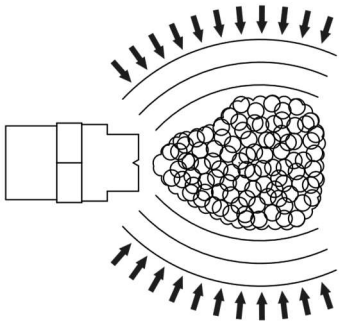
Increase the concentration.	Reduce the concentration.
	



Premixed chemicals, adjust the amount

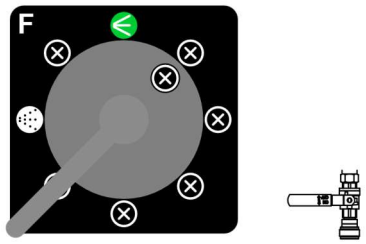
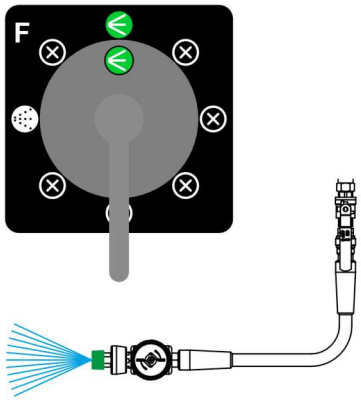
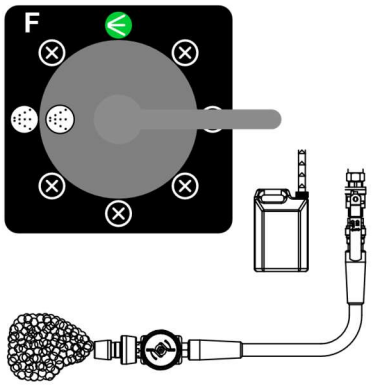
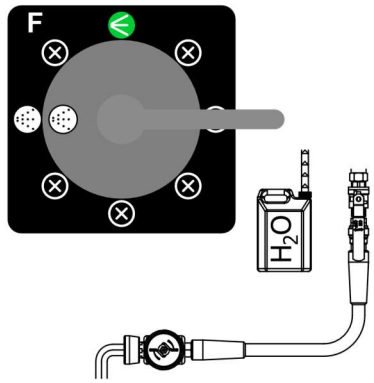
Increase the amount.	Reduce the amount.
	

Adjustment of airflow/foam volume

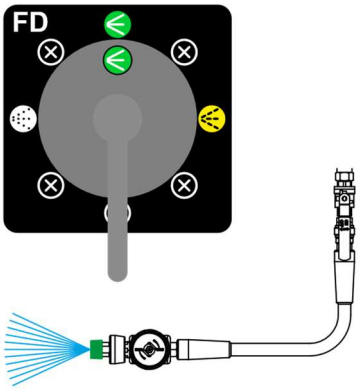
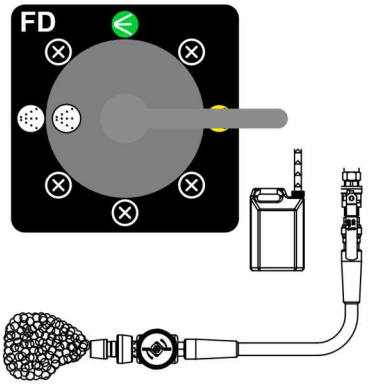
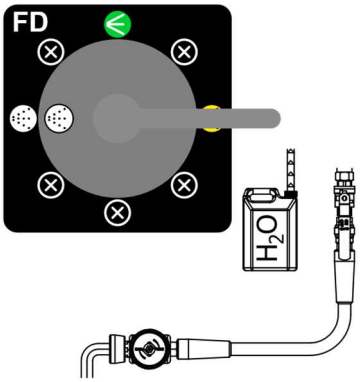
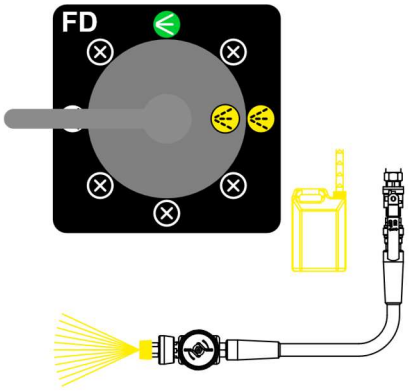
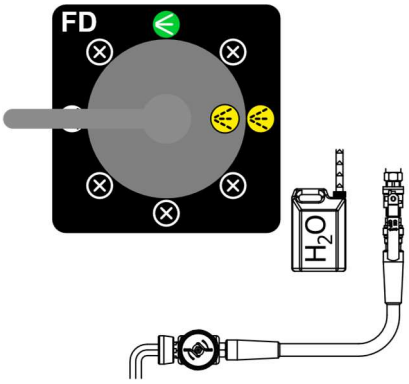
Increase airflow.	Decrease airflow.
	
	

Quick guide, modes, manual function

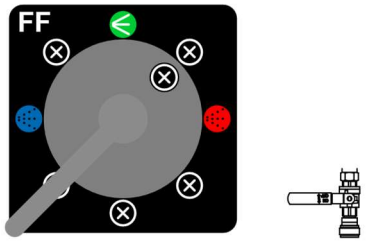
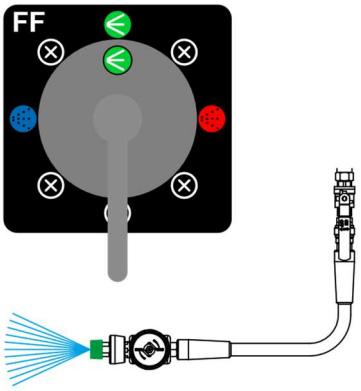
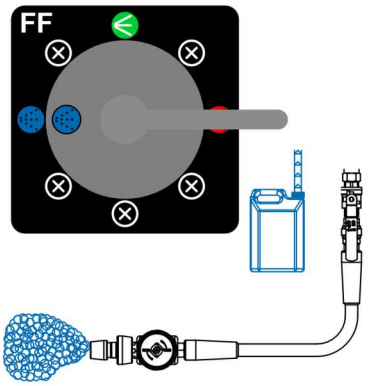
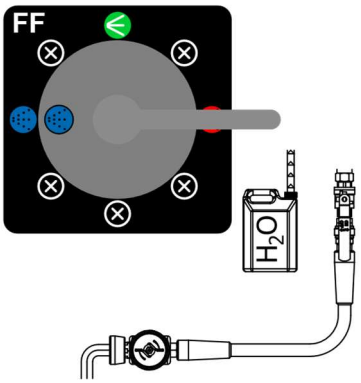
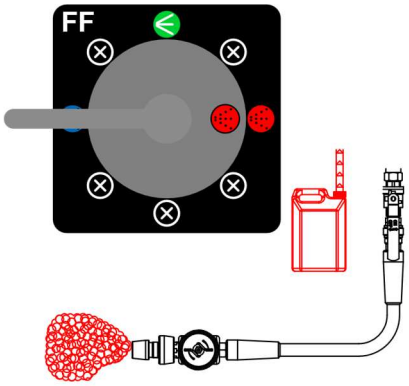
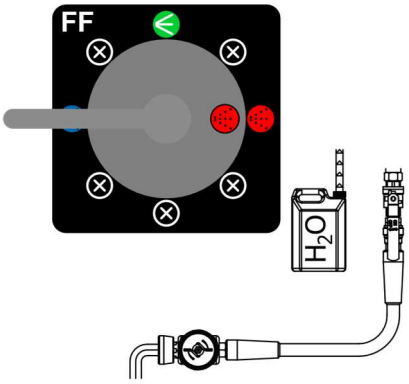
Mode F

Closed. 	Rinse. 
Foam. 	Flush. 

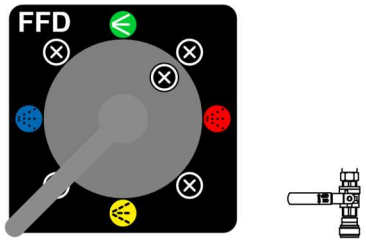
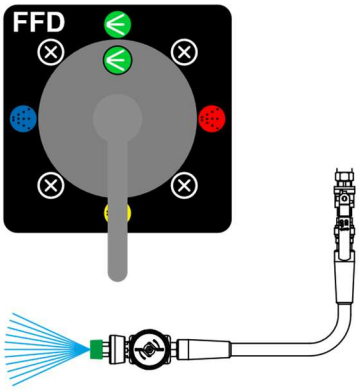
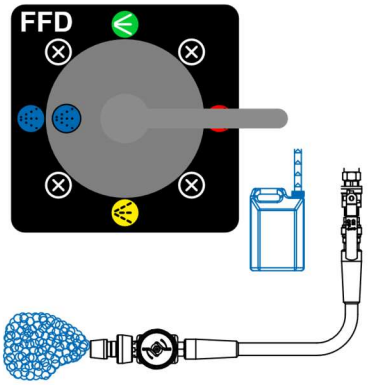
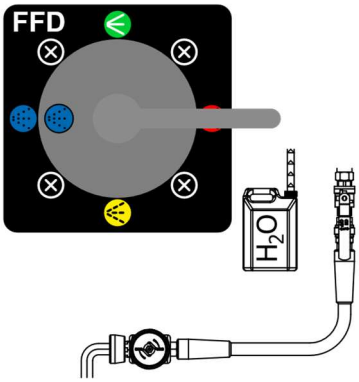
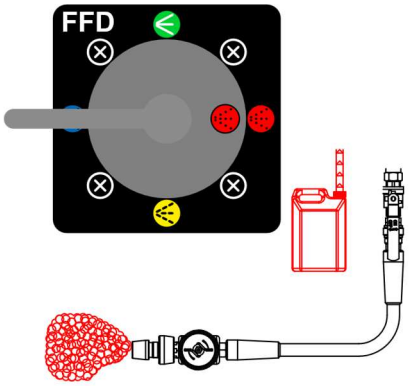
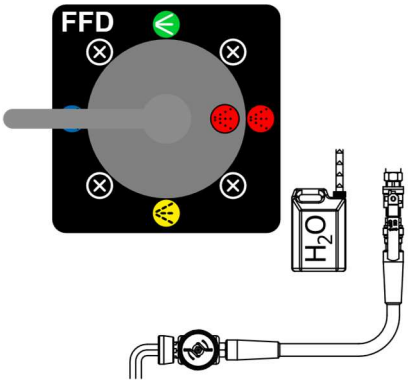
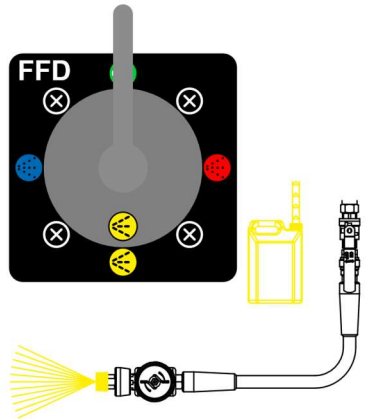
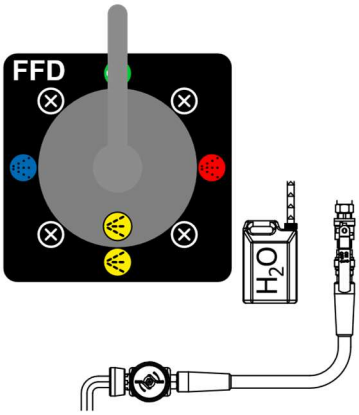
Mode F D

Closed. 	Rinse. 
Foam. 	Flush. 
Disinfection. 	Flush. 

Mode F F

Closed. 	Rinse. 
Foam. 	Flush. 
Foam. 	Flush. 

Mode F F D

Closed. 	Rinse. 
Foam. 	Flush. 
Foam. 	Flush. 
Disinfection. 	Flush. 

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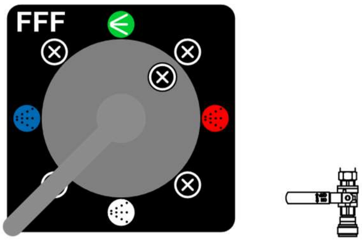

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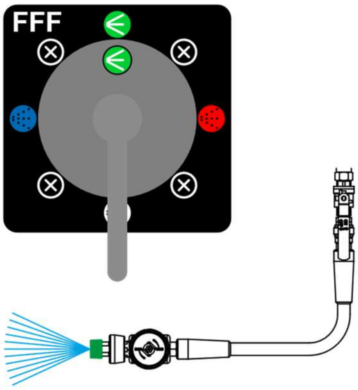

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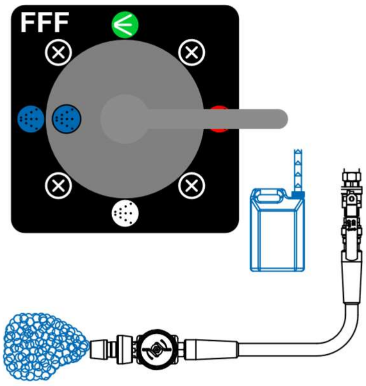

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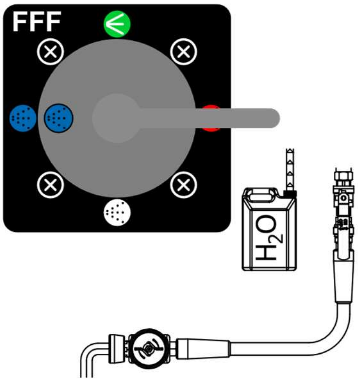

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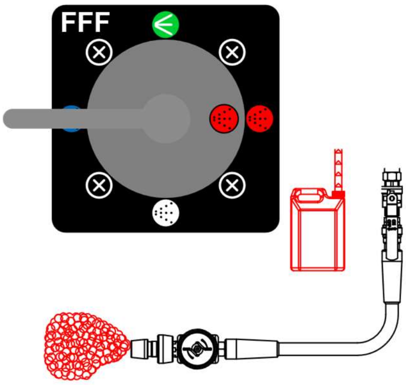

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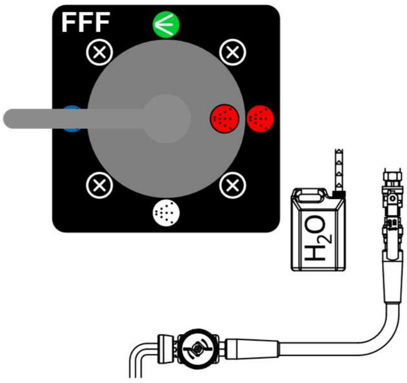

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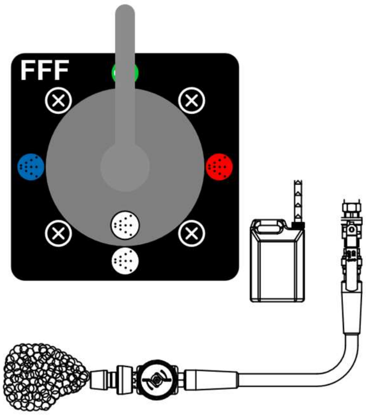

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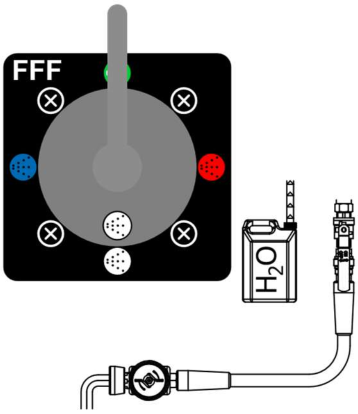

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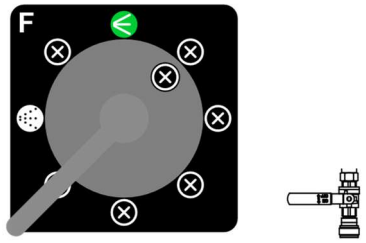
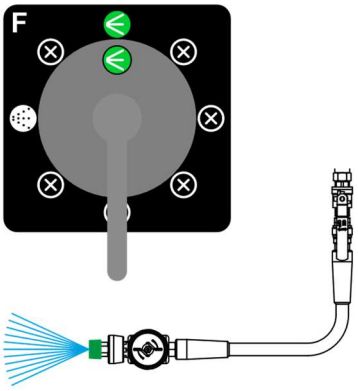
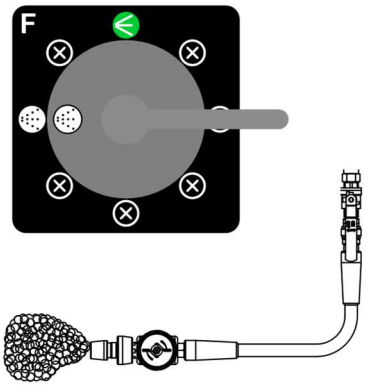
Closed. 	Rinse. 
Foam. 	

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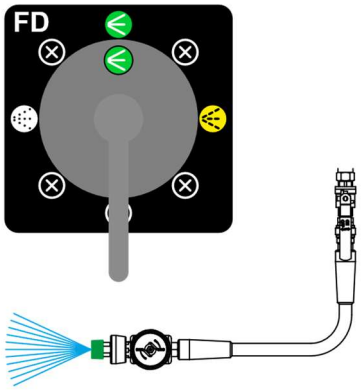
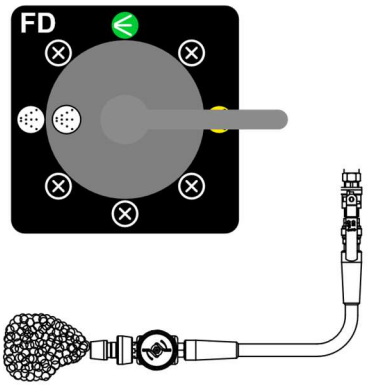
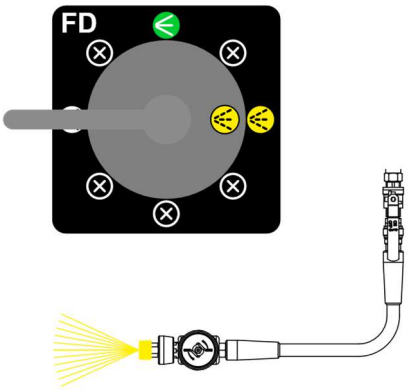
Closed. 	Rinse. 
Foam. 	Disinfection. 

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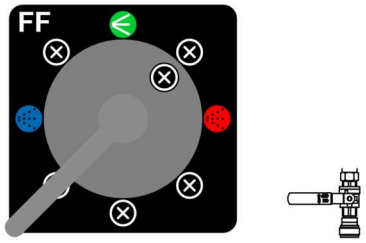
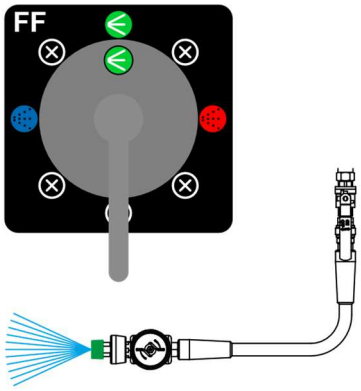
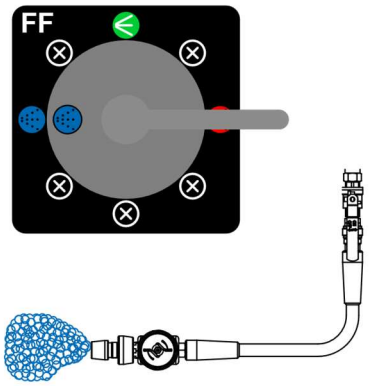
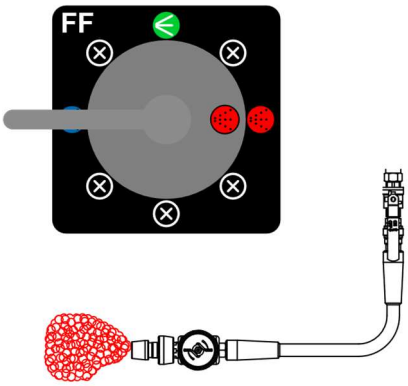
Closed. 	Rinse. 
Foam. 	Foam. 

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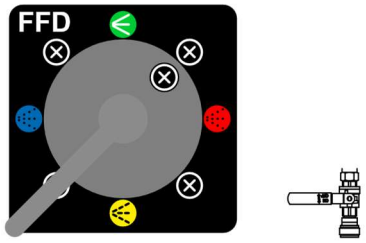
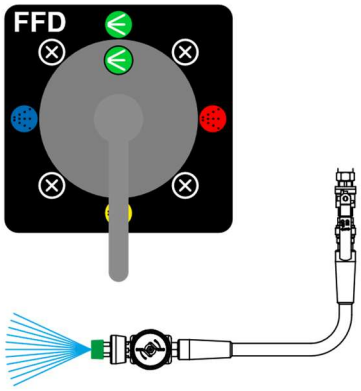
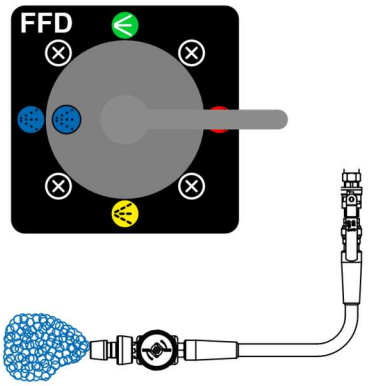
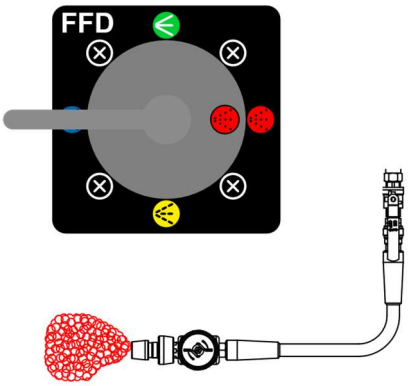
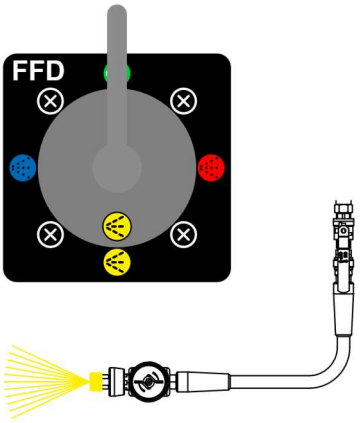
Closed. 	Rinse. 
Foam. 	Foam. 
Disinfection. 	

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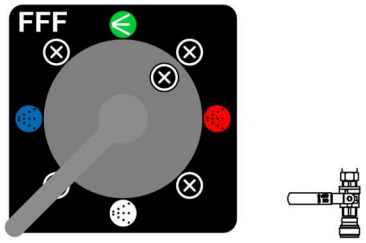
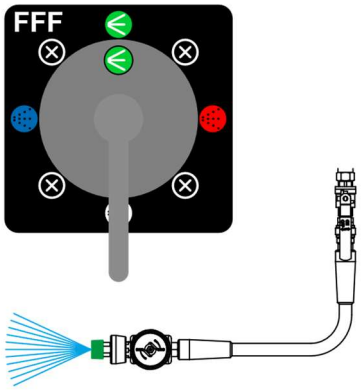
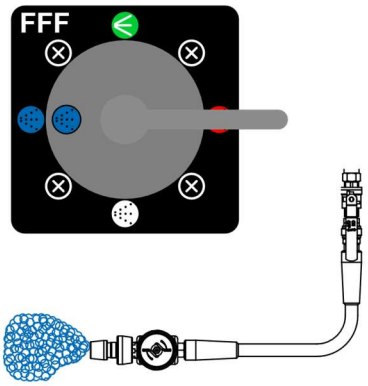
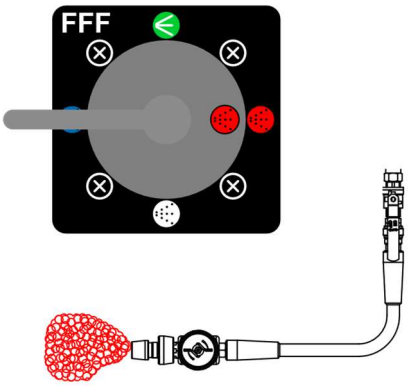
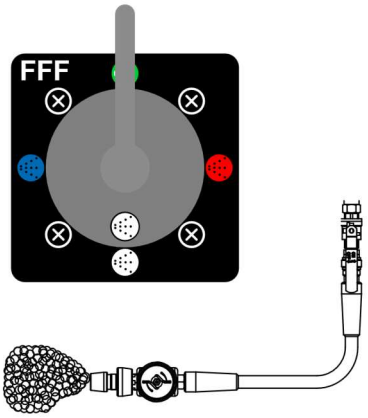
Closed. 	Rinse. 
Foam. 	Foam. 
Foam. 	

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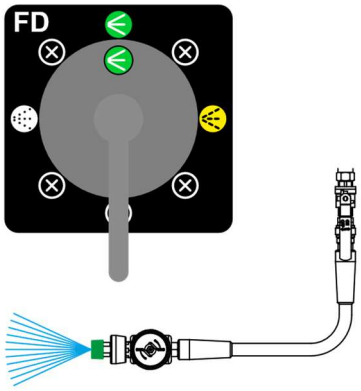
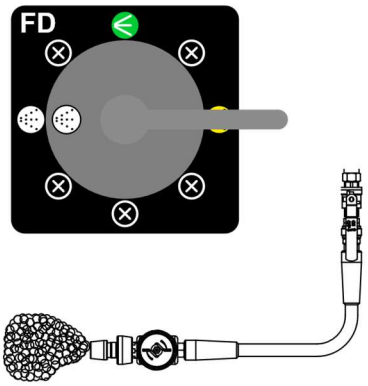
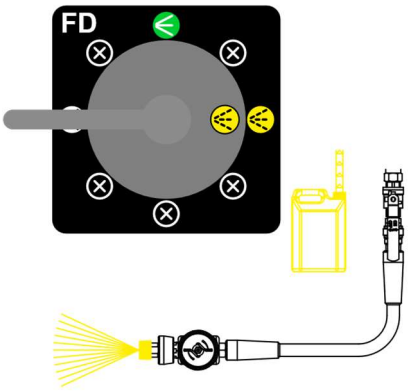
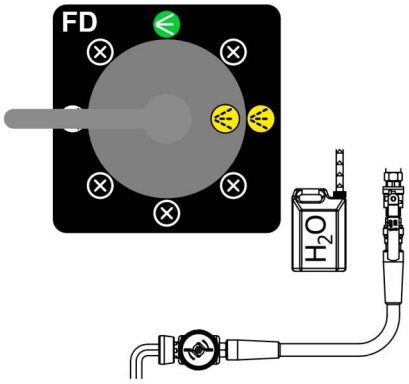
Closed. 	Rinse. 
Foam. 	Disinfection. 
Flush. 	

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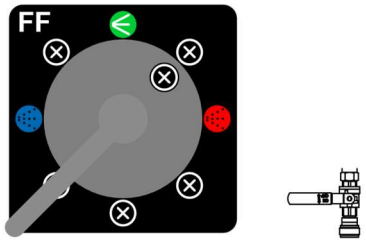
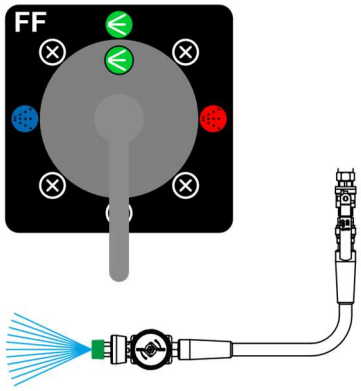
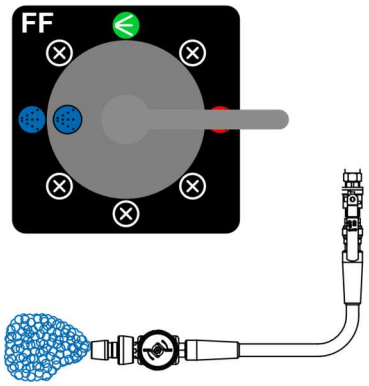
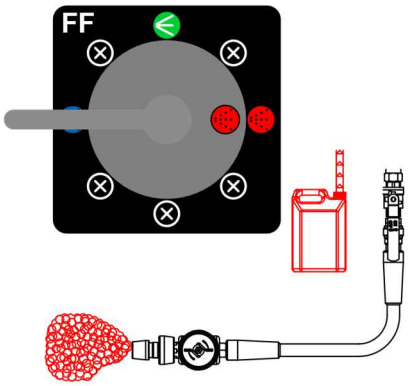
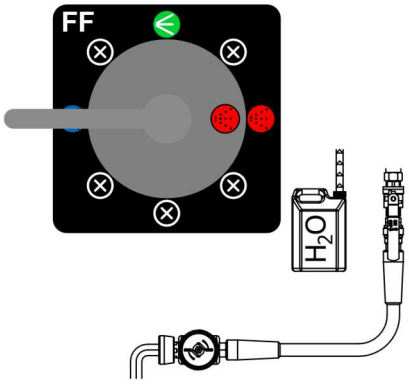
Closed. 	Rinse. 
Foam. 	Foam. 
Flush. 	

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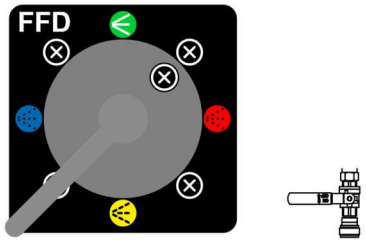
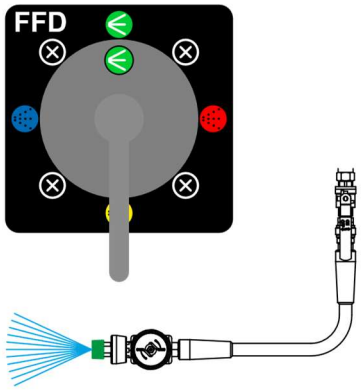
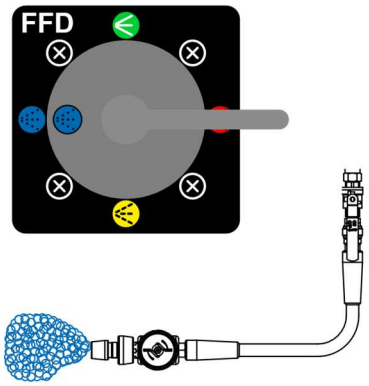
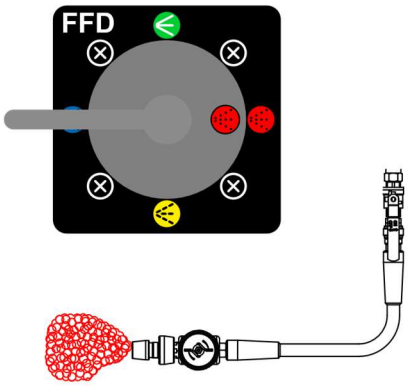
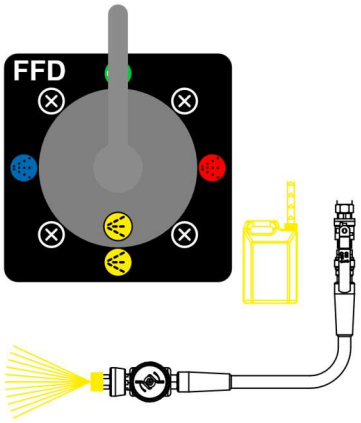
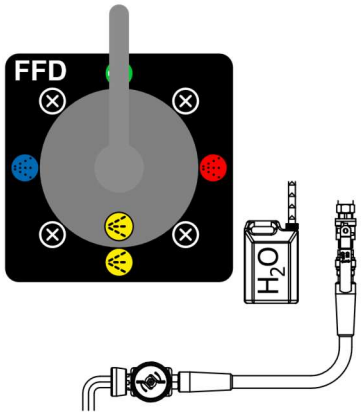
Closed. 	Rinse. 
Foam. 	Foam. 
Disinfection. 	Flush. 

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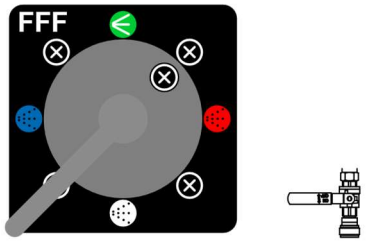
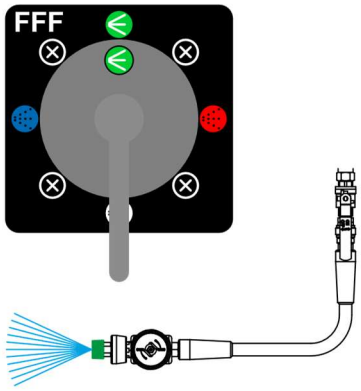
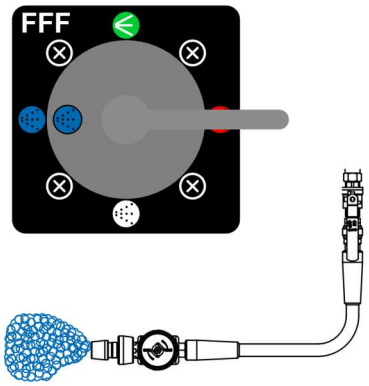
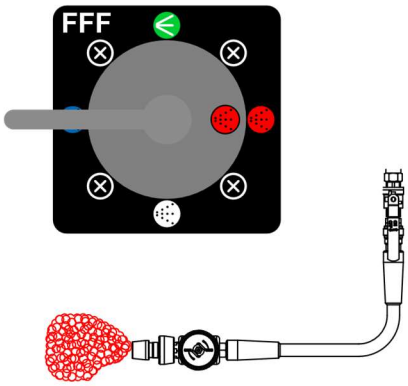
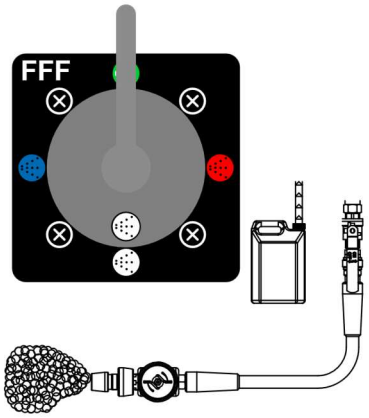
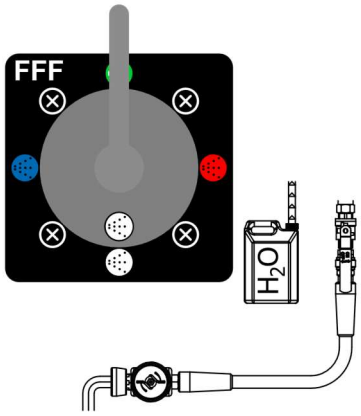
Closed. 	Rinse. 
Foam. 	Foam. 
Foam. 	Flush. 

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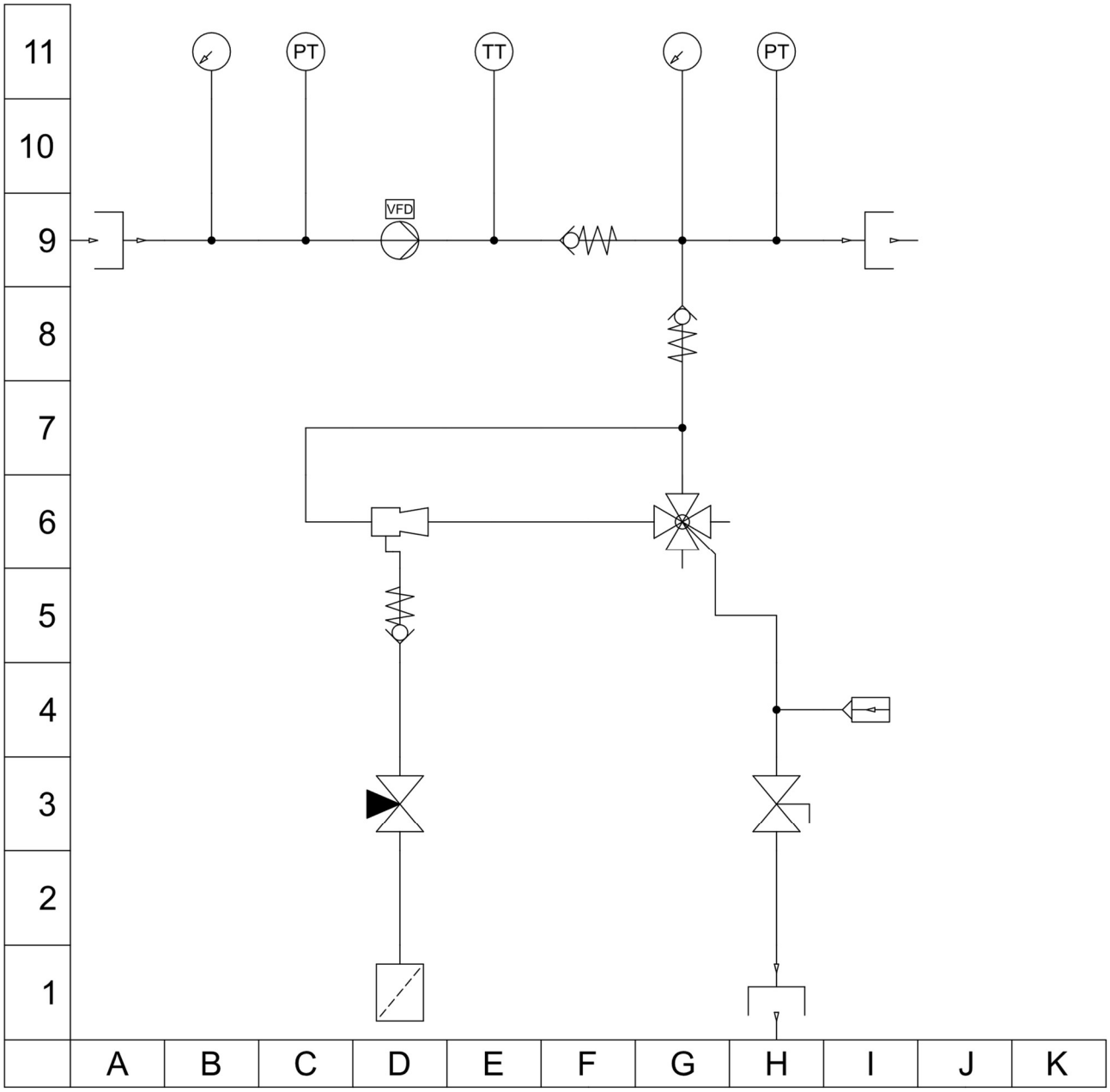
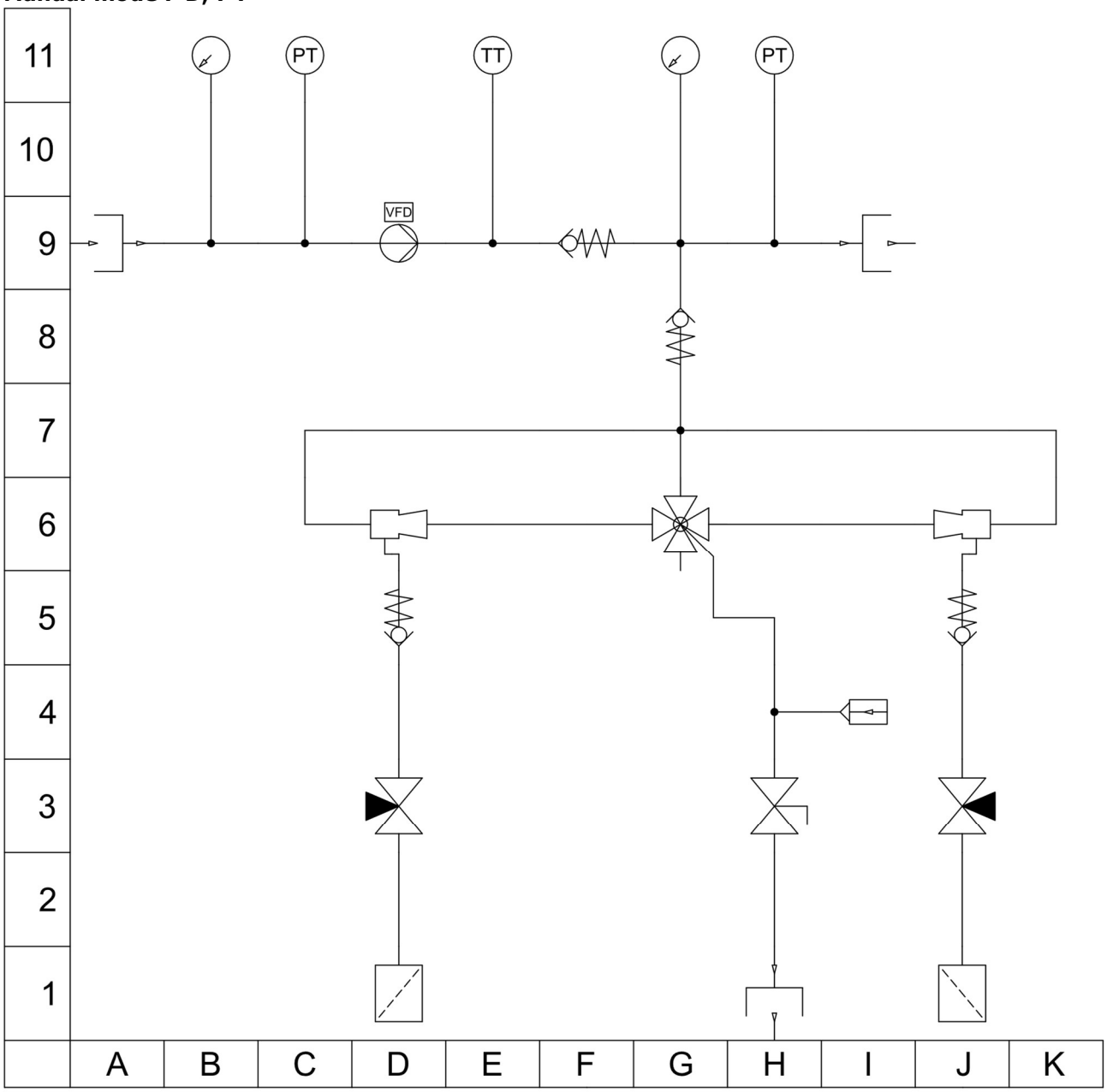
Manual mode F



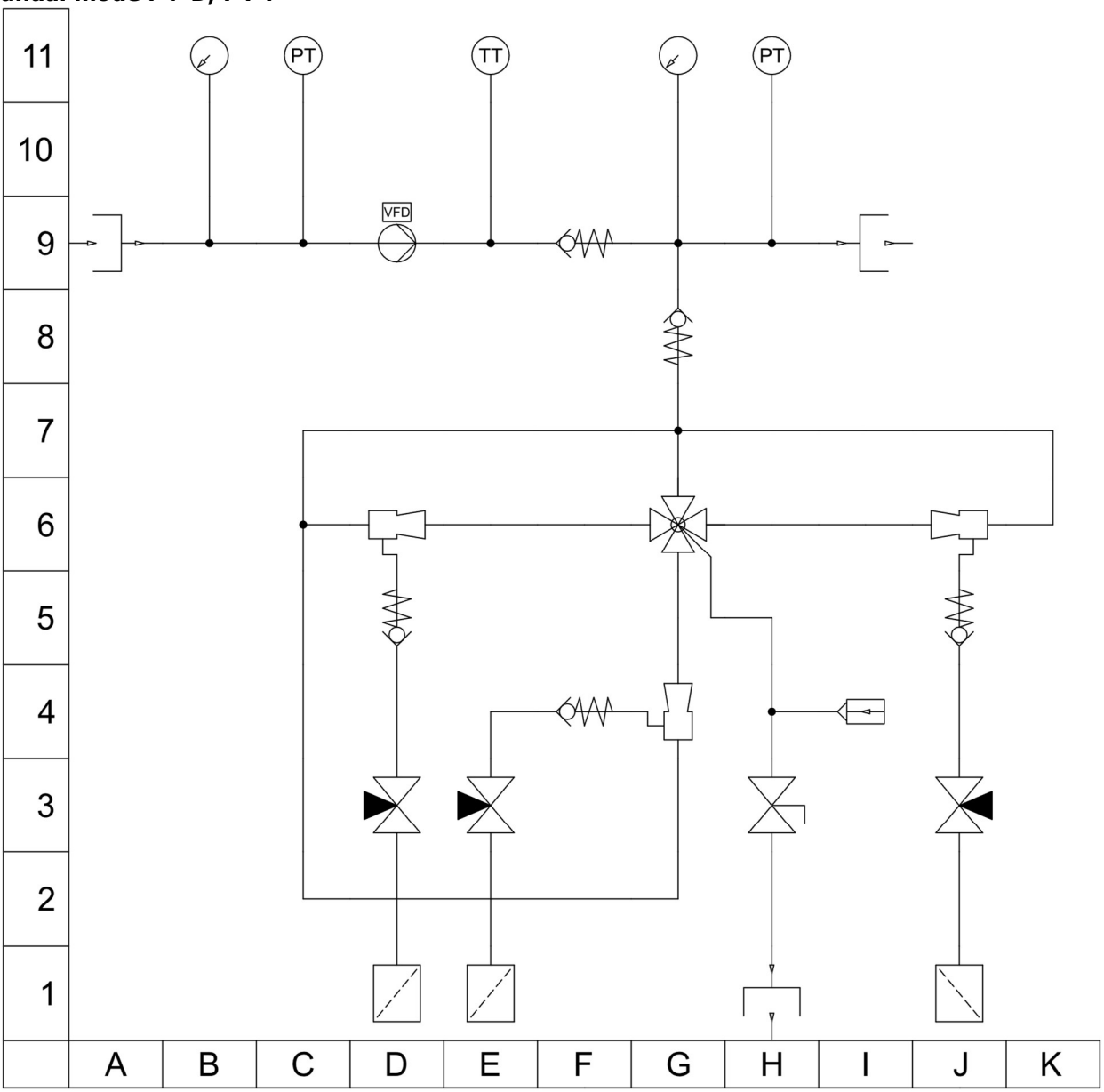
Row	Column	Description
1	D	Suction filter, chemicals
1	H	Manual satellite outlet
3	D	Dosing valve, chemicals
3	H	Ball valve, outlet
4	I	Air nozzle
5	D	Check valve, chemicals
6	D	Injector
6	G	Function selector, valve
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode F D, F F



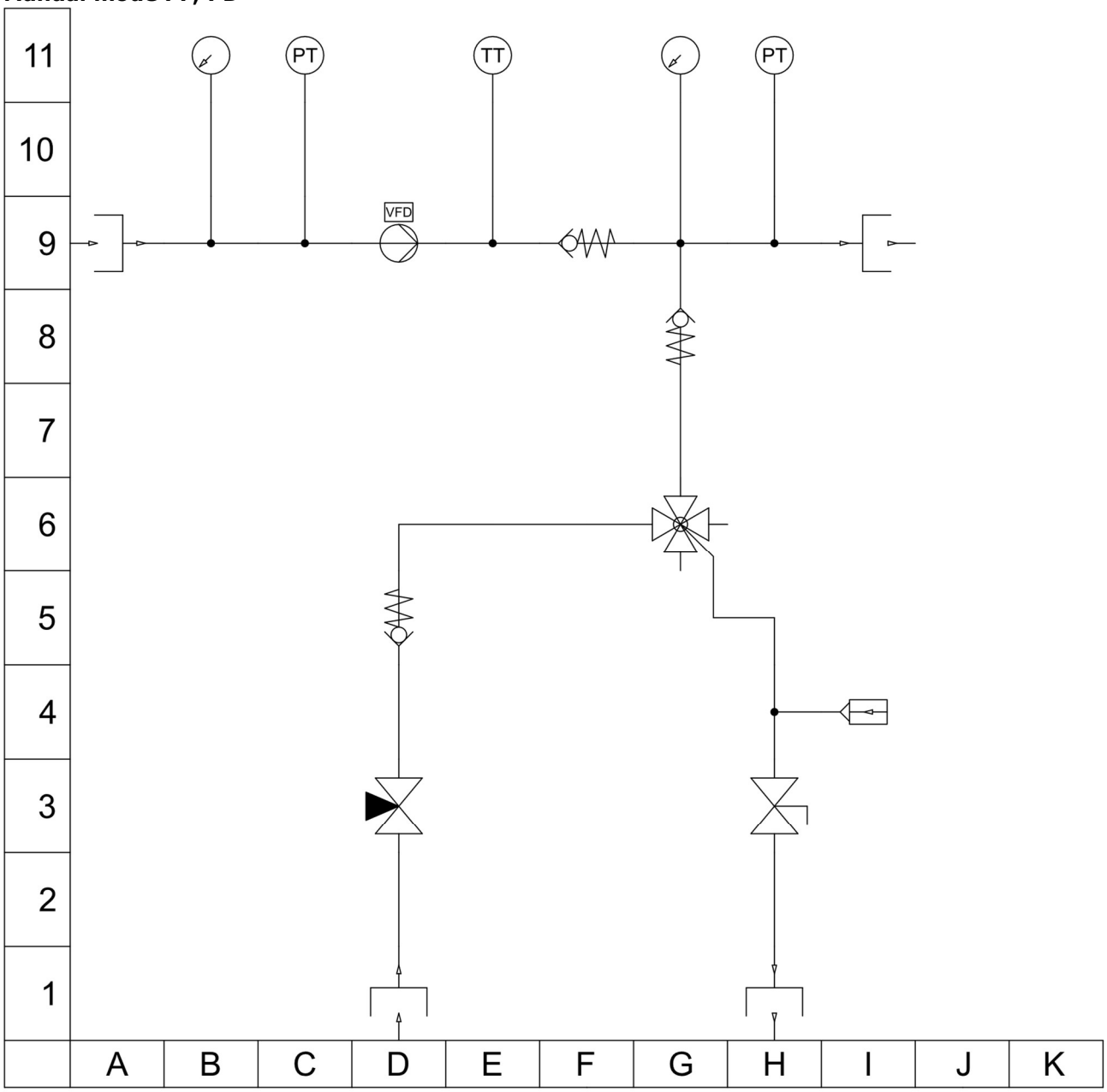
Row	Column	Description
1	D	Suction filter, chemicals
1	H	Manual satellite outlet
1	J	Suction filter, chemicals
3	D	Dosing valve, chemicals
3	G	Ball valve, outlet
3	J	Dosing valve, chemicals
4	I	Air nozzle
5	D	Check valve, chemicals
5	J	Check valve, chemicals
6	D	Injector 1
6	G	Function selector, valve
6	J	Injector 2
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode F F D, F F F



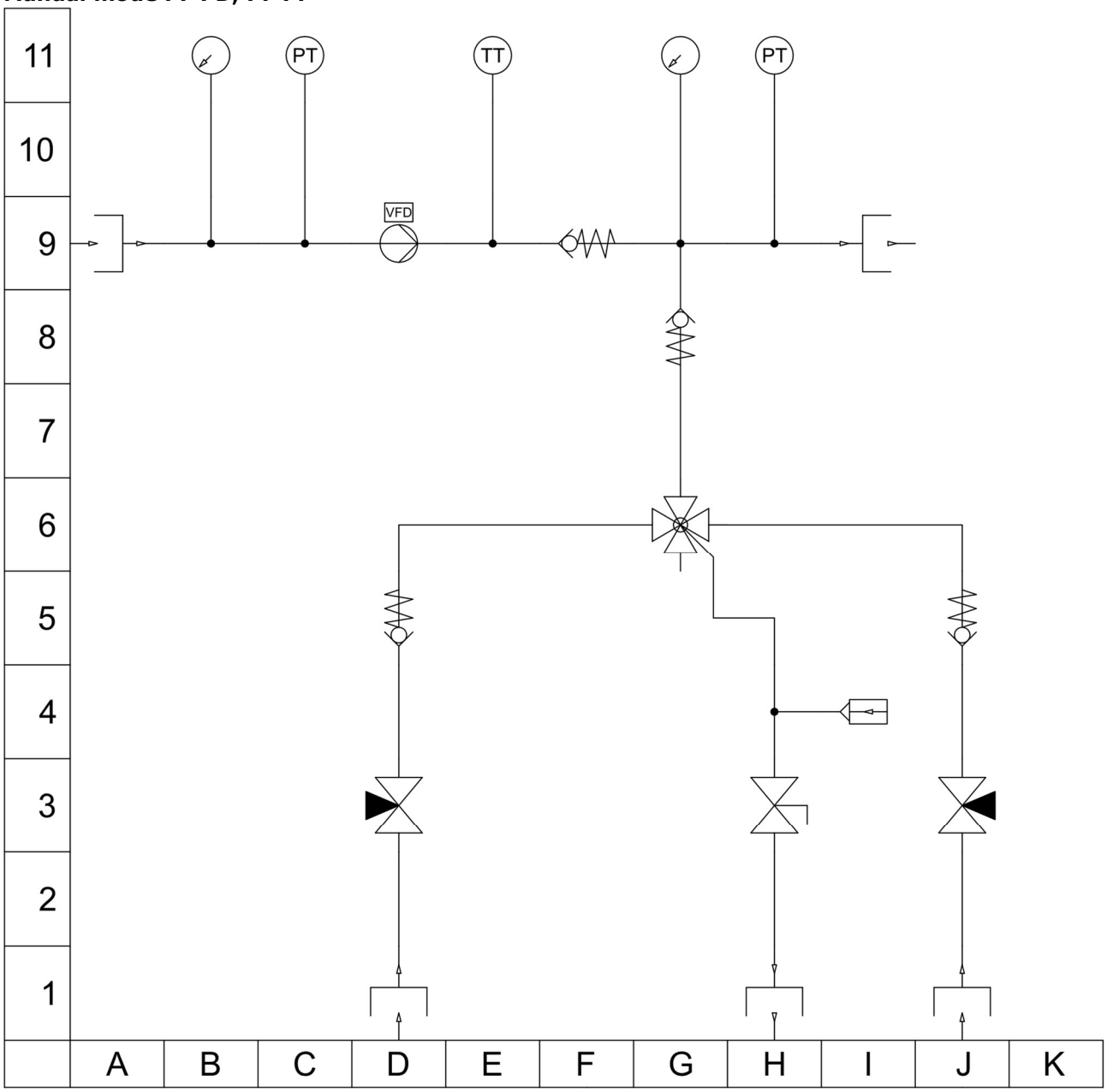
Row	Column	Description
1	D	Suction filter, chemicals
1	E	Suction filter, chemicals
1	H	Manual satellite, outlet
1	J	Suction filter, chemicals
3	D	Dosing valve, chemicals
3	E	Dosing valve, chemicals
3	H	Ball valve, outlet
3	J	Dosing valve, chemicals
4	F	Check valve, chemicals
4	G	Injector 3
4	I	Air nozzle
5	D	Check valve, chemicals
5	J	Check valve, chemicals
6	D	Injector 1
6	G	Function selector, chemicals
6	J	Injector 2
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode PF, PD



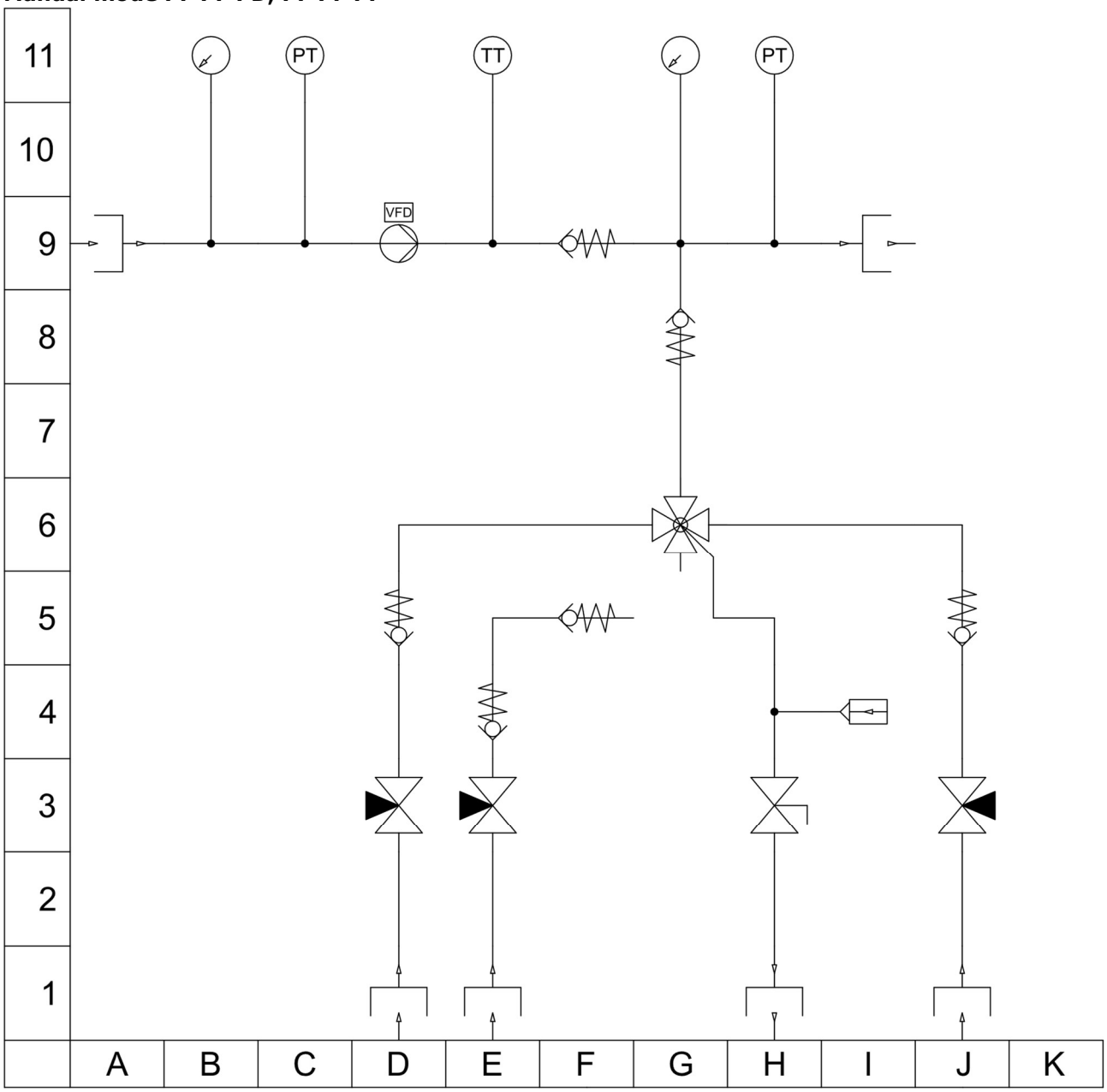
Row	Column	Description
1	D	Chemicals inlet, premixed chemicals
1	H	Manual satellite, outlet
3	D	Flow control valve, premixed chemicals
3	H	Ball valve, outlet
4	I	Air nozzle
5	D	Check valve, premixed chemicals
6	G	Function selector, valve
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode PF PD, PF PF



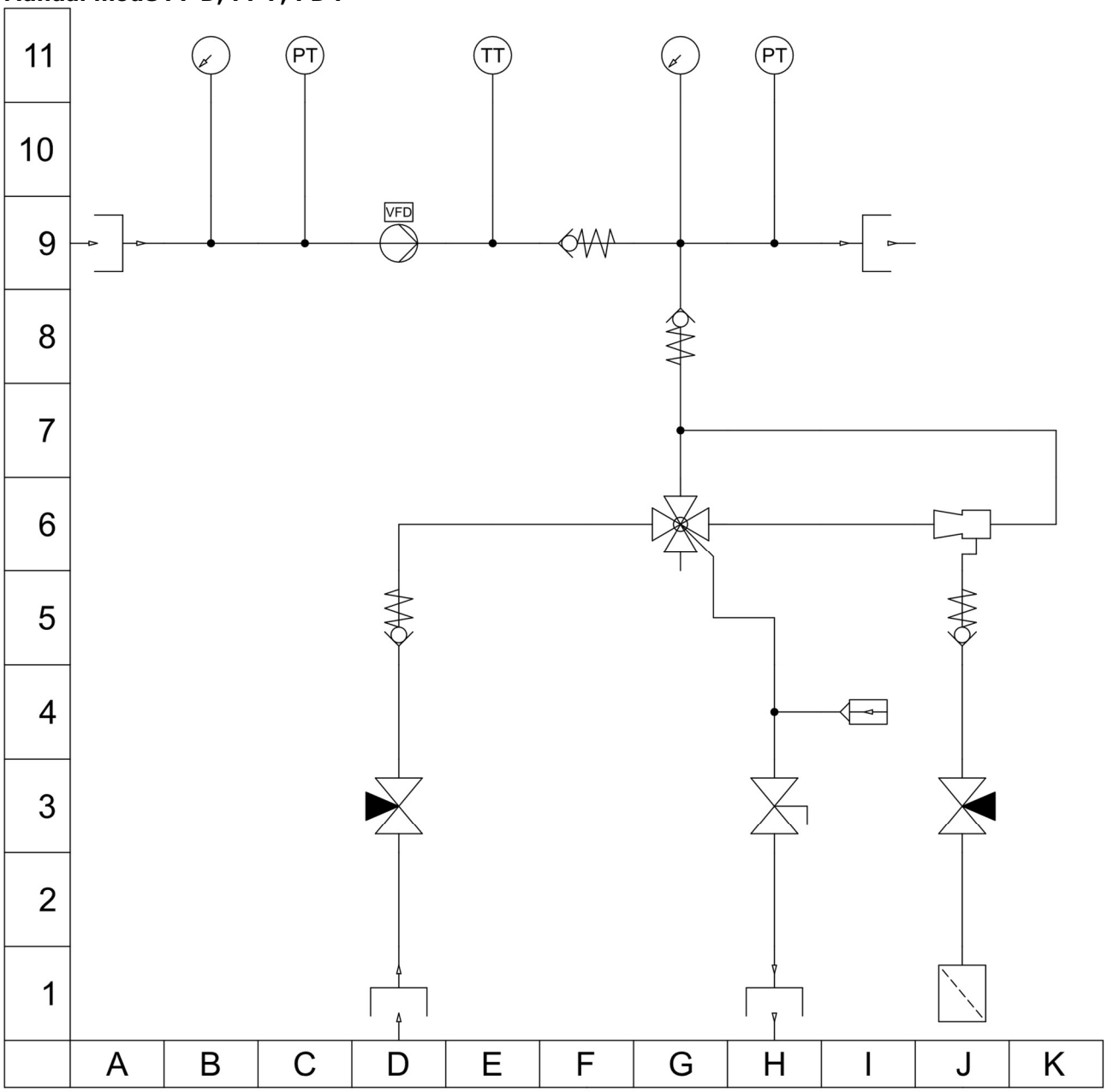
Row	Column	Description
1	D	Chemicals inlet, premixed chemicals
1	H	Manual satellite, outlet
1	J	Chemicals inlet, premixed chemicals
3	D	Flow control valve, premixed chemicals 1
3	H	Ball valve, outlet
3	J	Flow control valve, premixed chemicals 2
4	I	Air nozzle
5	D	Check valve, premixed chemicals
5	J	Check valve, premixed chemicals
6	G	Function selector, valve
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode PF PF PD, PF PF PF



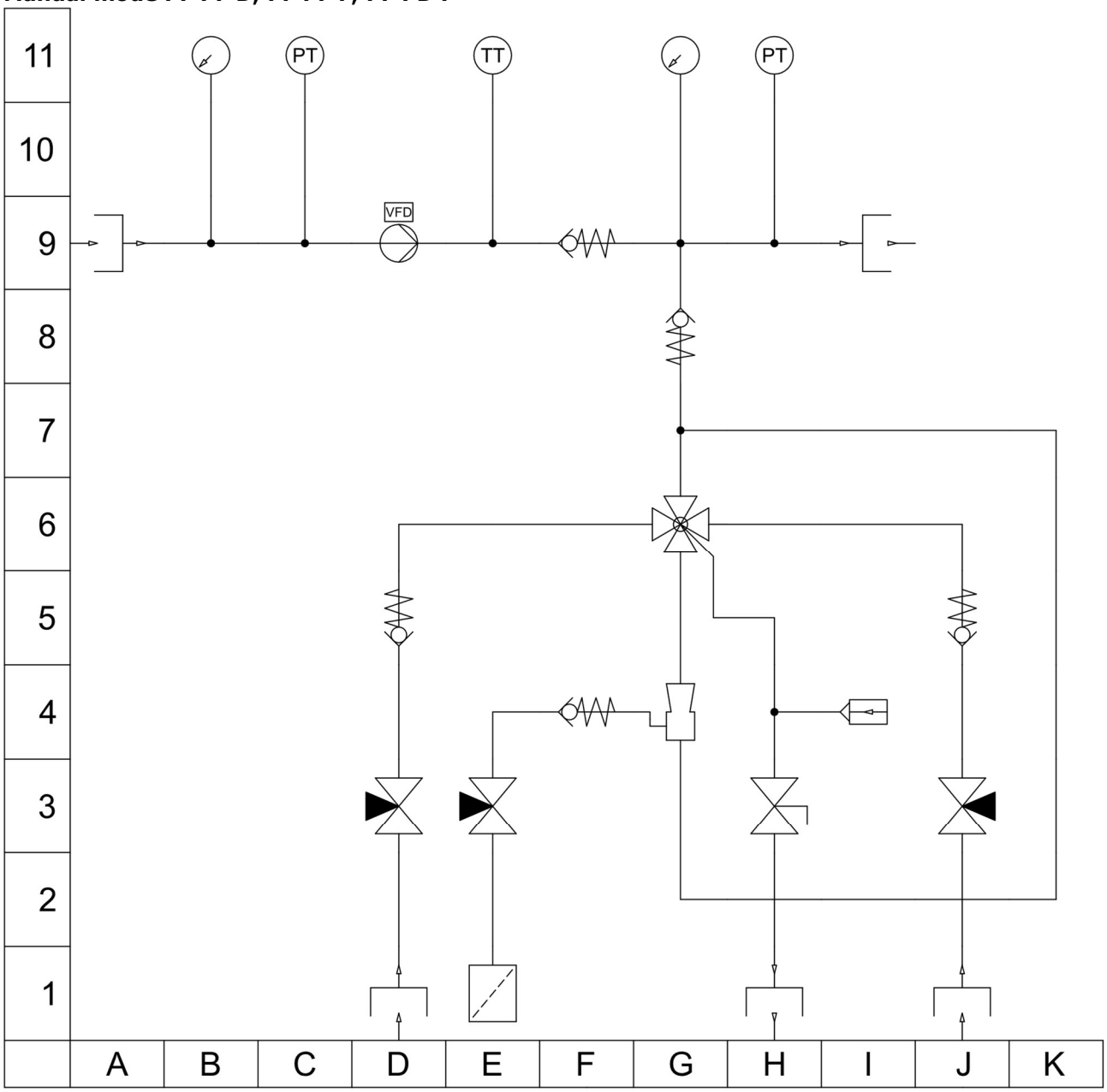
Row	Column	Description
1	D	Chemicals inlet, premixed chemicals 1
1	E	Chemicals inlet, premixed chemicals 3
1	H	Manual satellite outlet
1	J	Chemicals inlet, premixed chemicals 2
3	D	Dosing valve, chemicals
3	E	Flow control valve, premixed chemicals 1
3	H	Flow control valve, premixed chemicals 3
3	J	Flow control valve, premixed chemicals 2
4	I	Air nozzle
5	D	Check valve, chemicals
5	F	Check valve, chemicals
5	J	Check valve, chemicals
6	G	Function selector, valve
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode PF D, PF F, PD F



Row	Column	Description
1	D	Chemicals inlet, premixed chemicals 1
1	H	Manual satellite outlet
1	J	Suction filter, chemicals
3	D	Flow control valve, premixed chemicals 1
3	H	Ball valve, outlet
3	J	Dosing valve, chemicals 2
4	I	Air nozzle
5	D	Check valve, chemicals
5	J	Check valve, chemicals
6	G	Function selector, valve
6	J	Injector, chemicals 2
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Manual mode PF PF D, PF PF F, PF PD F



Row	Column	Description
1	D	Chemicals inlet, premixed chemicals 1
1	E	Suction filter, chemicals
1	H	Manual satellite, outlet
1	J	Chemicals inlet, premixed chemicals 2
3	D	Flow control valve, premixed chemicals 1
3	E	Dosing valve, chemicals
3	H	Ball valve, outlet
3	J	Flow control valve, premixed chemicals 2
4	F	Check valve, chemicals
4	G	Injector, chemicals 3
4	I	Air nozzle
5	D	Check valve, chemicals
5	J	Check valve, chemicals
6	G	Function selector, valve
8	G	Check valve, water inlet
9	A	Water inlet connection
9	D	Pump
9	F	Check valve/flow switch
9	I	Outlet
11	B	Manometer, inlet pressure
11	C	Pressure transmitter, inlet pressure
11	E	Water temperature sensor
11	G	Manometer, outlet pressure
11	H	Pressure transmitter, outlet pressure

Troubleshooting, manual function

Error	Cause	Solution
No rinse pressure.	No water pressure.	Start the pump station.
	Ball valve is closed on the outlet coupling.	Open the valve.
	The wrong nozzle is fitted.	Fit the original System Cleaners rinse nozzle.
	Incorrect mode selected.	Select rinse on the function selector.
Poor foam quality.	Incorrect dosage.	Adjust the dosage in accordance with the chemical supplier's specifications.
	Suction filter or chemical restrictor blocked by chemical residues.	Clean the suction filter and chemical restrictor.
	Water pressure is too low.	Check that the pump station is switched on.
	Air pressure is too low.	Increase the air supply.
The system is not pulling up detergent.	Suction filter or chemical restrictor blocked by chemical residues.	Clean the suction filter or chemical restrictor.
	Water pressure is too low.	Check that the pump station is switched on.
	Suction filter above liquid level in chemical container.	Bring the suction filter below liquid level.

Manual revision

Rev.	Description	Date	Ini.
A	Manual created	12/09/2024	Mpr
B	Technical data sheet changed and corrected, Wiring diagram corrected	13/05/2025	Mpr

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Please note that:
We reserve the right to make changes to the technical specifications without notice.