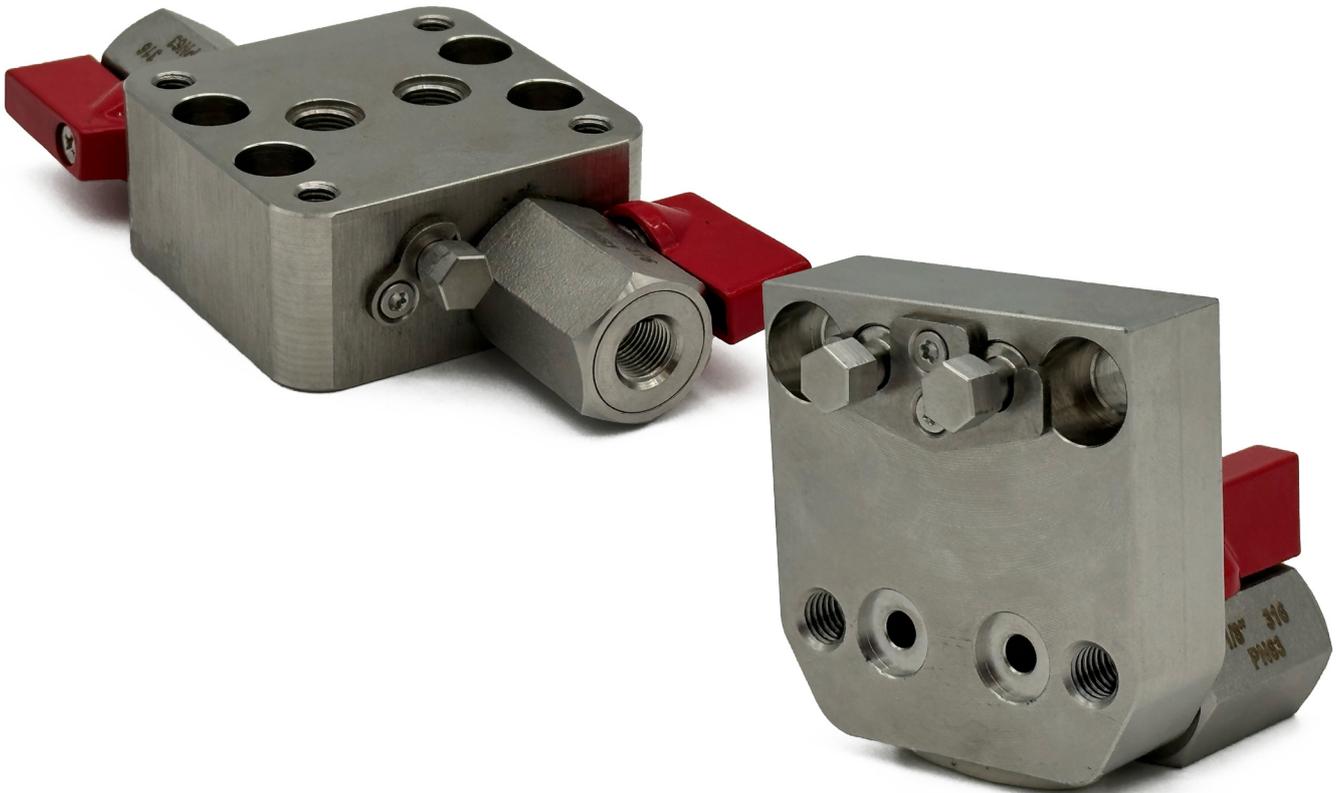


# ROBUST HIGH QUALITY FLOW MONITORS

MANUAL MULTIBLOCK



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### About this Manual

- This manual relates to Multiblock for FSS/GSS pipes and Multiblock for GL/FA/M pipes.
- Note that the latest version of this manual is always available as a PDF file on web site [www.eletta.com](http://www.eletta.com)
- On the web site there is other interesting information, such as the product configurator where you can build your own Monitor. Also, 3D-models, leaflets, certificates etc.

### Proprietary Rights

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### Distributors

Eletta has appointed several distributors all over the world. More information about the closest distributor is found at our web site [www.eletta.com](http://www.eletta.com) or by contacting our Customer Service Centre.

### Contact/Customer Service



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## 1.1 Introduction

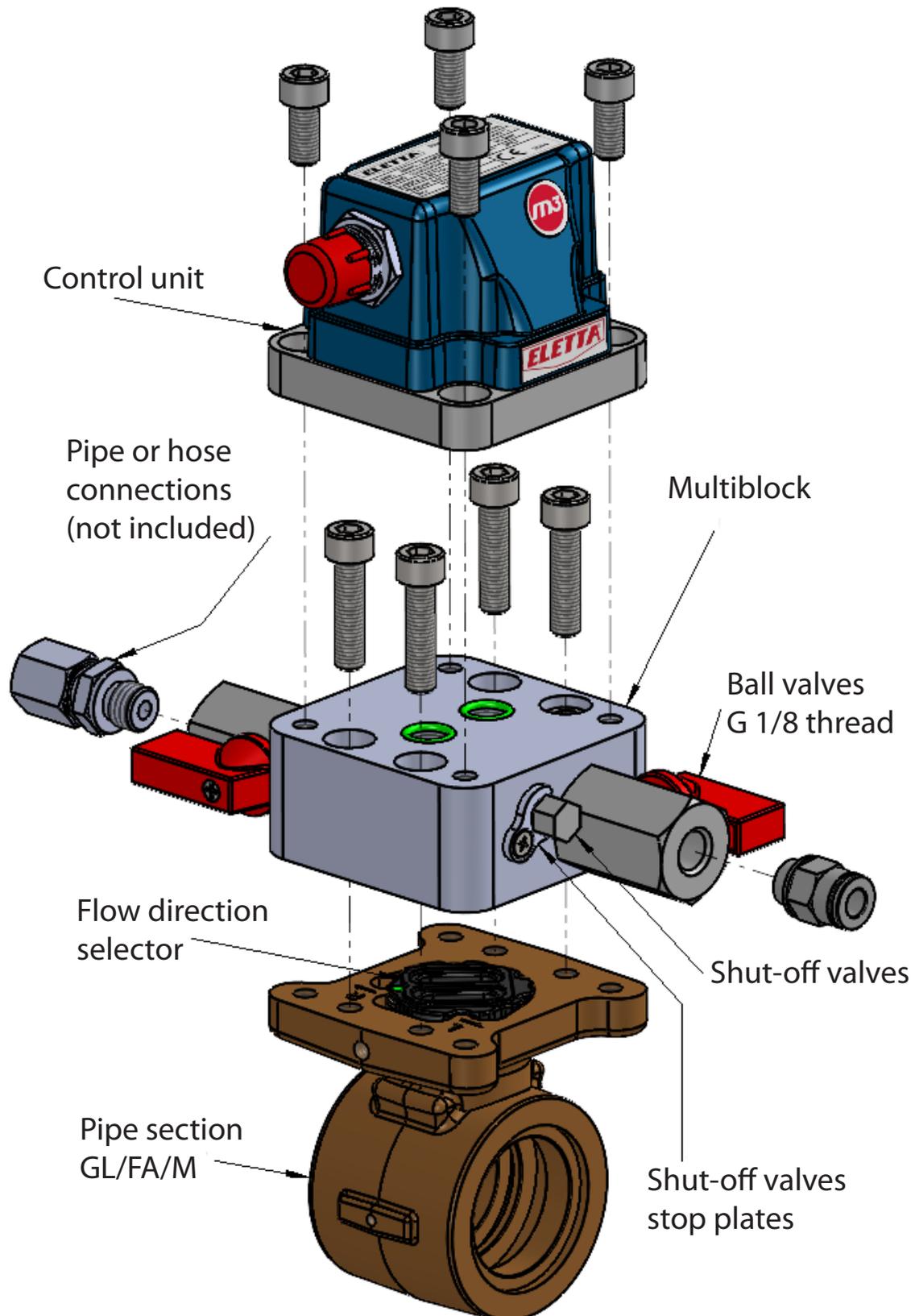
The Multiblocks can be used with all Elettas flow monitors and meters on pipe sections GL, FA, M, FSS and GSS. They include functions providing:

- **Deariation** at upstart to remove air which can cause faulty readings.
- **Shut-off** making it possible to change or maintain the Control unit during full operation.
- **Cleaning** of the channels between pipe section and Control unit. This is useful when the media contains particles or humus which can clog the channels, causing faulty readings. Can be performed during system operation or standing/empty system
- Connecting **reference DP-flow/pressure measuring** equipment.
- Connecting **temperature measuring** devices.
- Withdrawing **samples** of the media for control and analysis.

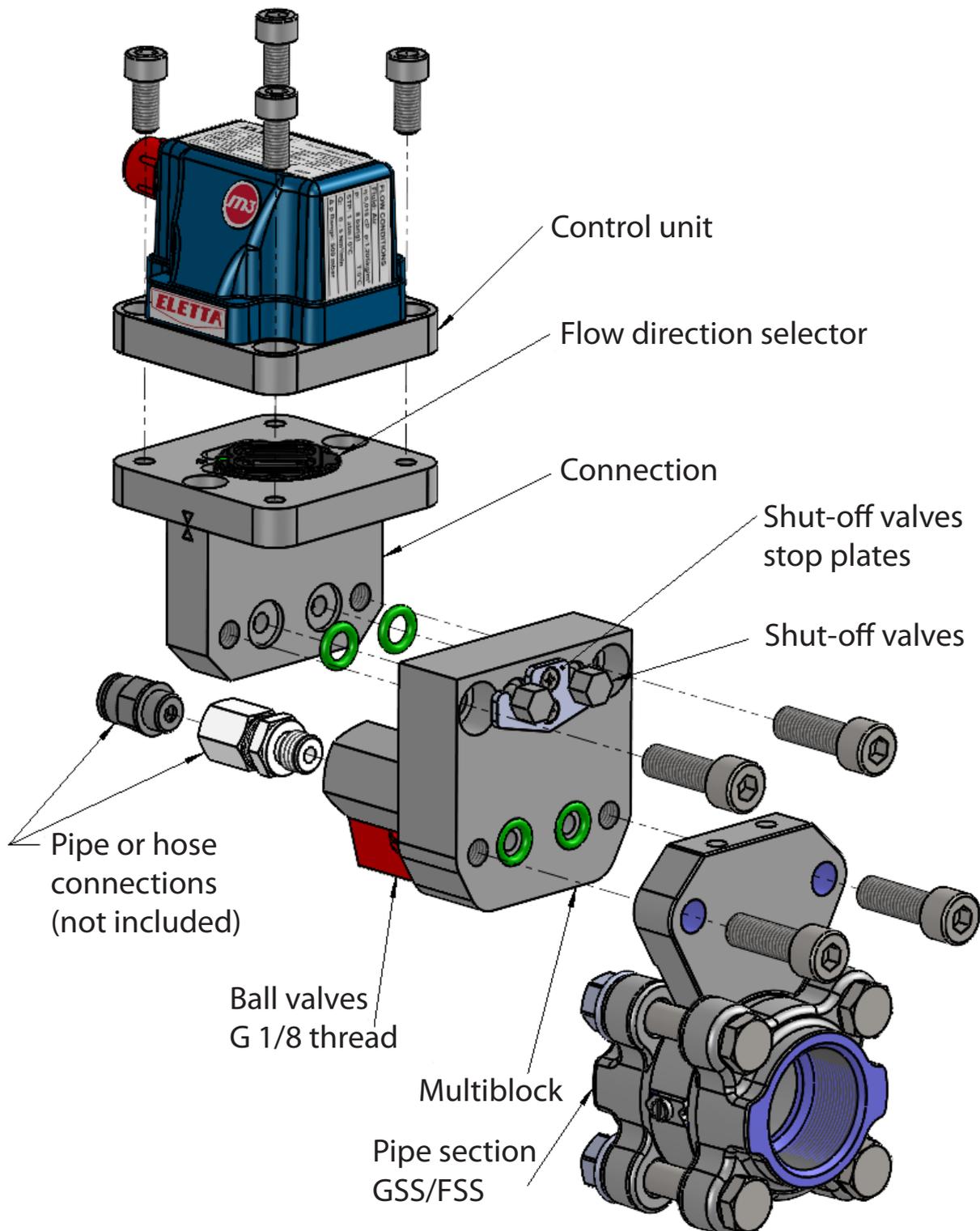
## 1.2 Specifications

<b>Connections</b>	Ball valves Remote mounting fittings	G1/8 G1/8 6mm pipe
<b>Material</b>	Multiblock Ball valve O-ring Flow direction selector	Stainless steel Stainless steel, plastic handle cover FPM polymer (Options HNBR or EPDM) FPM polymer (Options HNBR or EPDM), stainless steel plate
<p>Pipe and hose connections are not included in the delivery. G1/8 pipe couplings for diameter 6mm pipes and G1/8 push-in couplings for diameter 6mm hoses can be ordered from Eletta.</p> <p><b>N.B. Never remove Shut-off valves stop plates unless the o-rings are being changed. See chapter “Changing or maintaining the Control unit and o-rings”.</b></p>		

## Multiblock for GL, FA or M



## Multiblock for FSS or GSS

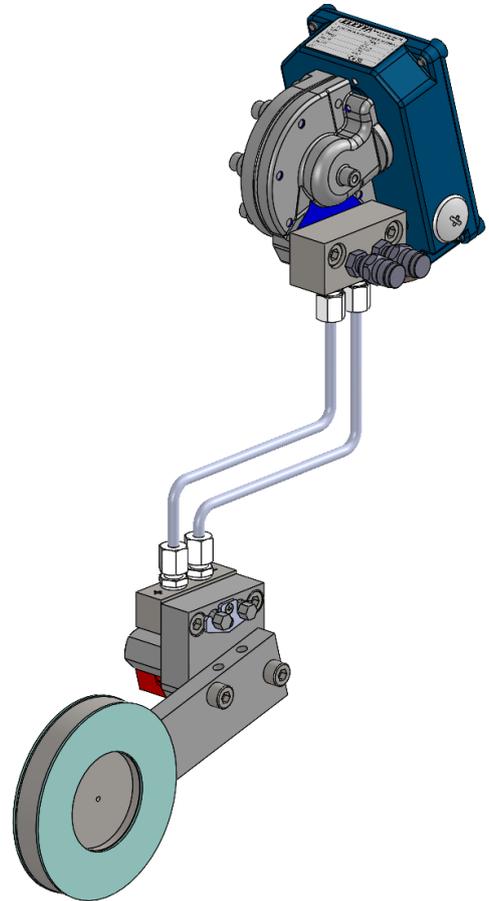
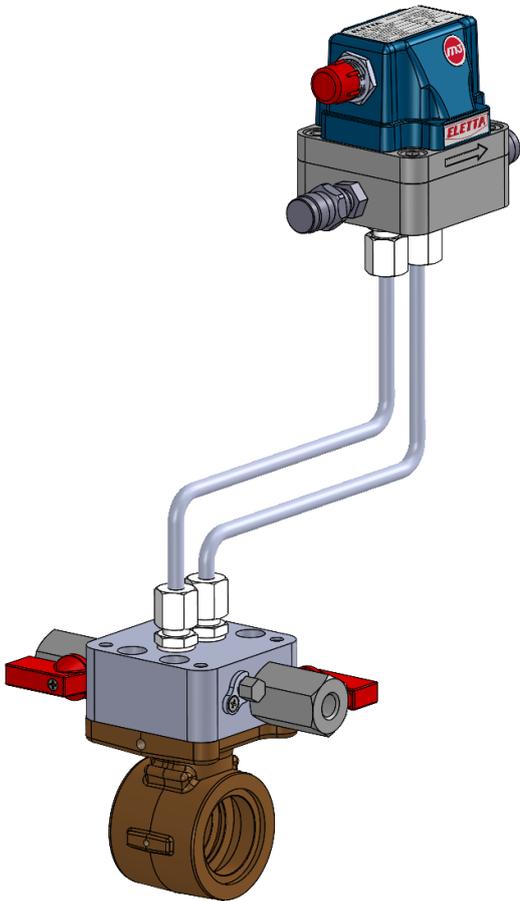


### 2.1 Installation

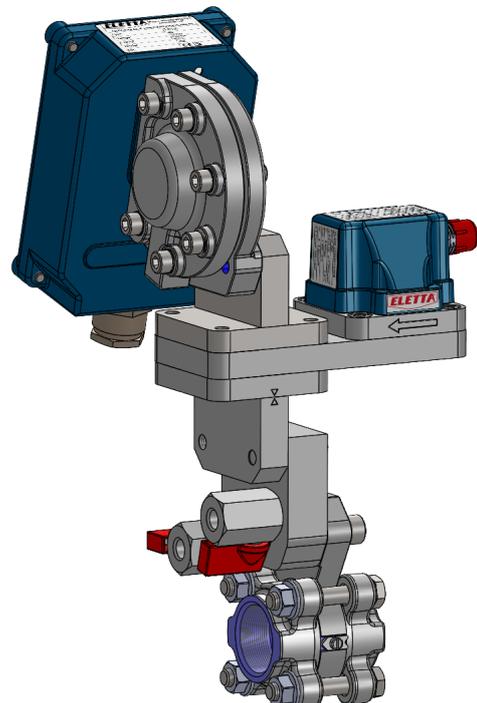
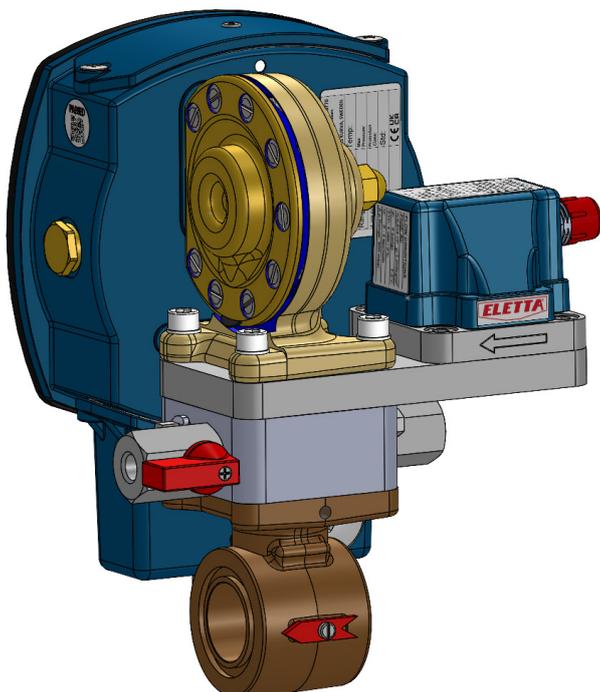
1. Empty the system and make sure it is cool. Disconnect all electrical devices.
2. Remove the Control unit.
3. If applicable: Assemble suitable couplings for purging to the ball valves with G1/8 threads. Pipe couplings for diameter 6mm pipes and push-in couplings for diameter 6mm hoses can be ordered from Eletta.
4. Fasten the Multiblock with the screws included in the delivery.
5. Place the two green o-rings included in the delivery in the holes.
6. Fasten the Control unit. Check that the flow direction (Marked on the pipe section and/or Control unit) has the same direction as the system flow.
7. For small pipe dimensions it might be necessary to fasten the control unit with a bracket to something stable to avoid turning the pipe section.
8. At upstart, the ball valves can be used for deairation. Make sure that the shut-off valves are open. They only need to be screwed a few turns with a no. 8 key, which can be ordered from Eletta. Make sure the ball valves are closed.

## 2.2 Parallel and separate mounting

Multiblocks are always mounted on the pipe section.



Separate mounting. Pipes or hoses up to 10m.



### 3.1 During system operation

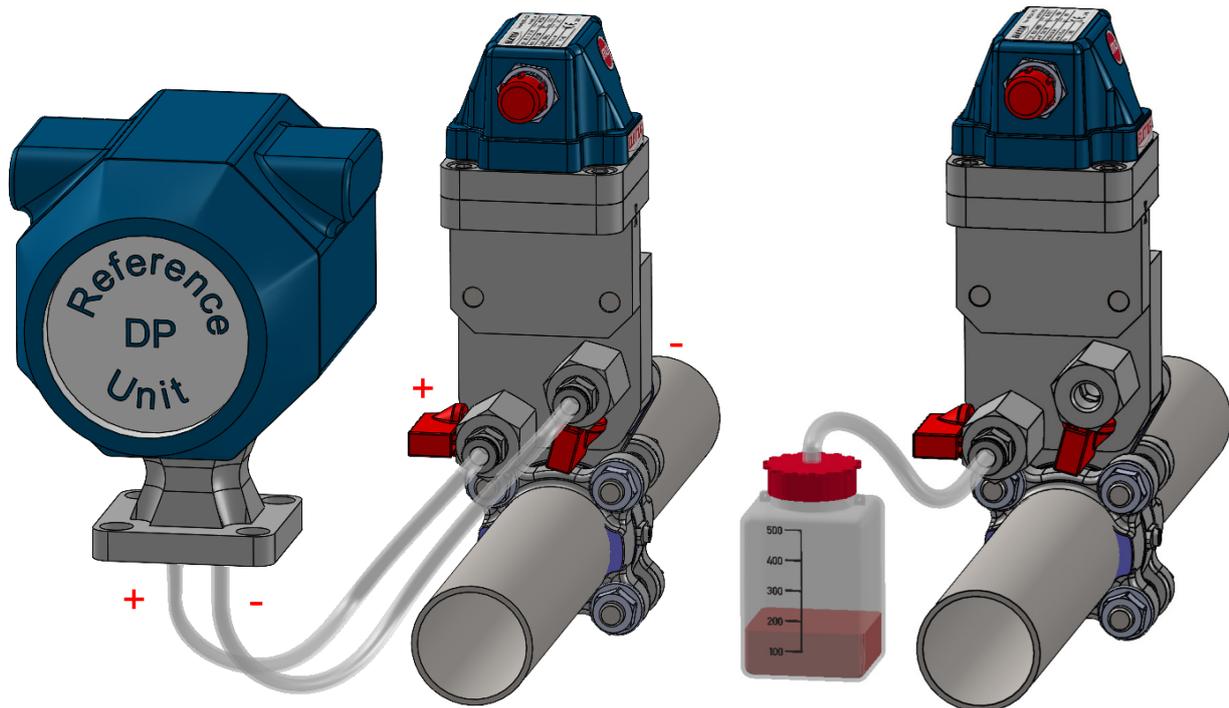
1. Attach connections or fittings for pipes or hoses to the closed ball valves.
2. Connect the pipes/hoses to media return system or suitable container considering media properties and temperature.
3. Close the shut-off valves.
4. Open the ball valves slowly.
5. If possible: observe when the media comes out clean, then close the ball valves. Or observe when the pressure stops decreasing. Otherwise, close the ball valves when flow in channels increases and check if the Control unit is working properly.
6. Remove the flushing equipment.
7. Start up the process.

### 3.2 During empty, or standing system

1. Attach connections or fittings for pipes or hoses to the closed ball valves.
2. Connect air-compressor or water pump to the pipes/hoses.
  - a. Make sure the flushing media is compatible with the media in the process system or that the tainted process media is discarded.
  - b. Make sure the pressure of the purging media exceeds the pressure of the standing media in the system.
3. Close the shut-off valves.
4. Activate air-compressor or pump and open the ball valves.
5. Flush the channels until the pressure of the flushing media stops decreasing.
6. Close the ball valves, remove the flushing equipment.
7. Start up the process.

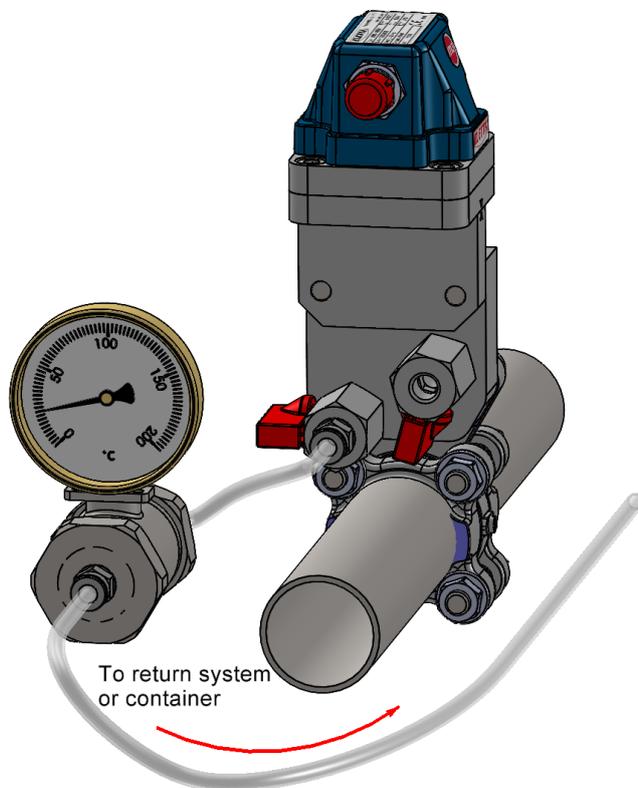
### 3.3 Reference measuring of flow or temperature and withdrawing samples

1. Make sure the ball valves are closed.
2. Attach suitable connections/fittings to the ball valves.
3. Connect the pipes/hoses
  - a. For temperature measuring, which needs flow to heat the equipment before the sensor up to the temperature of the media: Connect pipes/hoses to a media return system or suitable container, considering media properties and temperature. N.B. Temperature reading of the media will not be reliable until the temperature value stops inclining/declining.
  - b. For flow reference DP-unit: check that it is connected to the correct pressure channels "+ to +" and "-to-".
4. Open the ball valves.
5. If applicable: Collect a sample of the media in suitable container.
6. Evaluate the reference results.
7. If the reference measuring is not supposed to stay permanently; Close ball valves and remove equipment.



Reference measuring, calibration

Sample collection



Temperature measuring

### 4.1 Maintaining Control unit

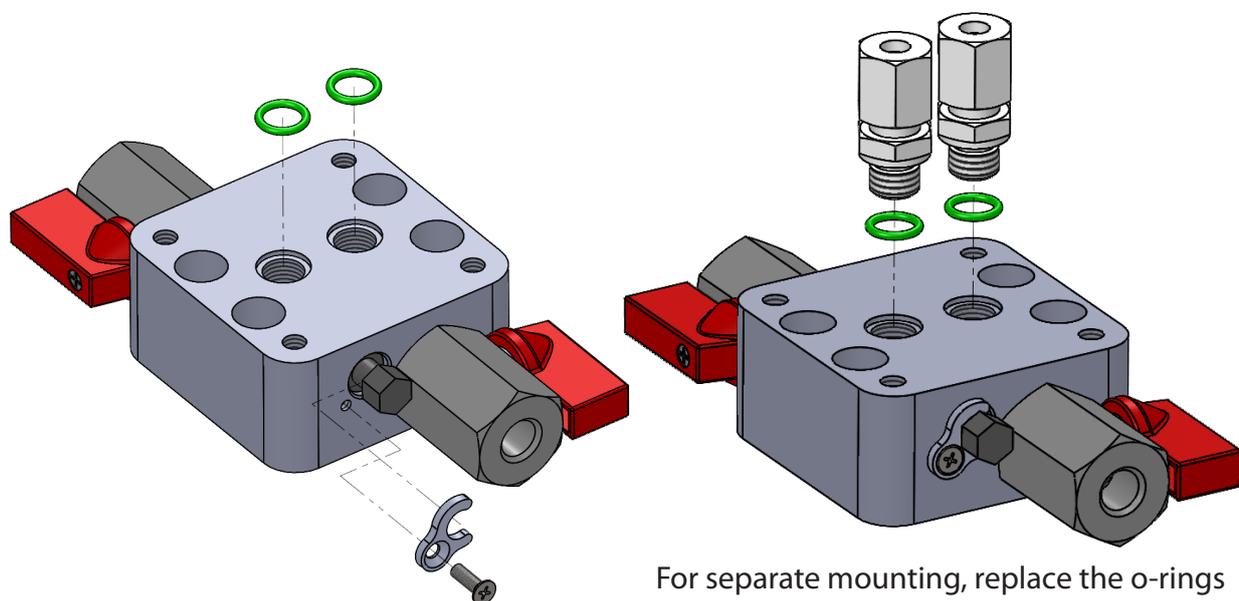
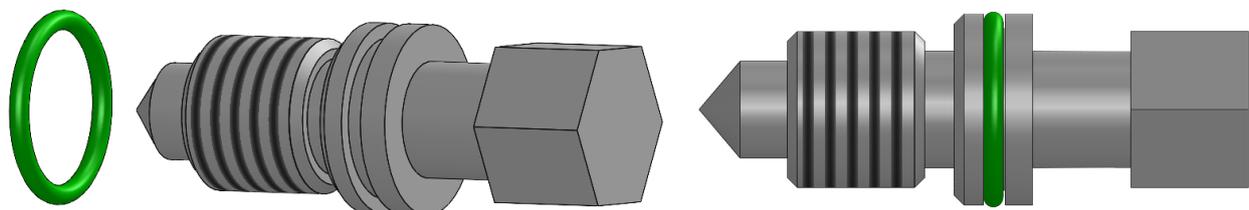
This can be performed during system operation

1. Close the shut off valves
2. Remove the Control unit
3. Maintain the Control unit and/or change the o-rings and flow direction selector.  
These parts can be ordered from Eletta.
4. Reassemble the Control unit.

### 4.2 GL/FA/M Maintaining Multiblock

**This can NOT be performed during system operation**

- a. Remove the Control unit
- b. Remove the shut off valves and replace the o-rings
- c. Put back the shut off valves.
- d. Put back the shut off valve-stop plates from the side and fasten them with the screws.
- e. Reassemble the Control unit.

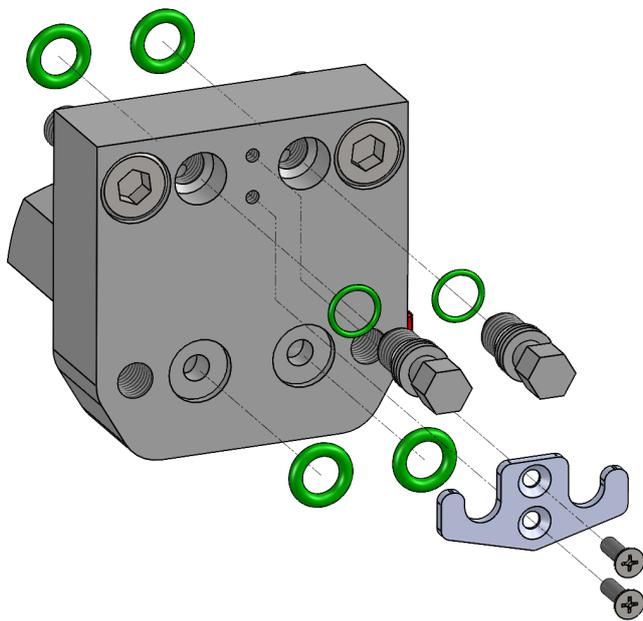


For separate mounting, replace the o-rings under the pipe fittings.

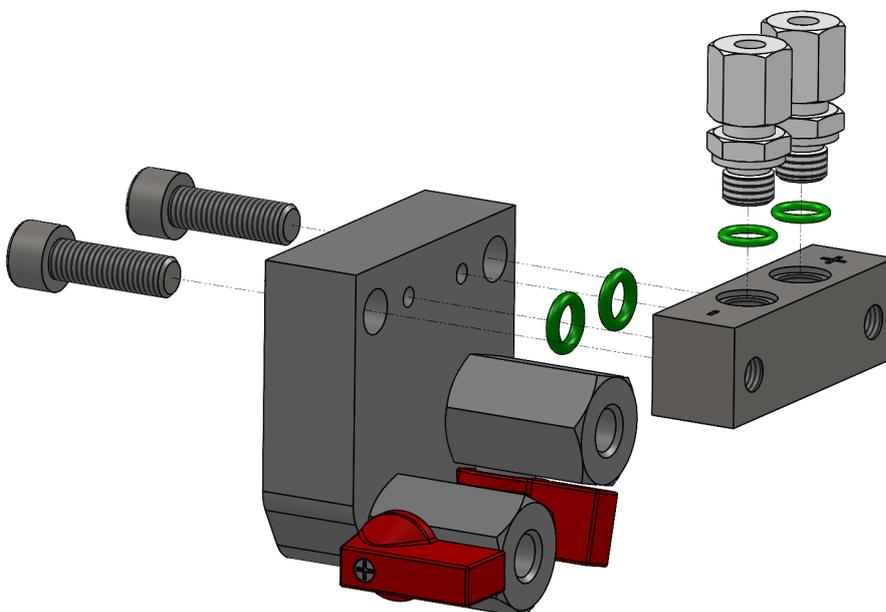
### 4.3 FSS/GSS Maintaining Multiblock

**This can NOT be performed during system operation**

- a. Remove the Control unit
- b. Remove the shut off valves and replace the o-rings
- c. Put back the shut off valves.
- d. Insert the screws for the Control unit.
- e. Put back the shut off valve-stop plate from under and fasten them with the screws.
- f. Reassemble the Control unit.



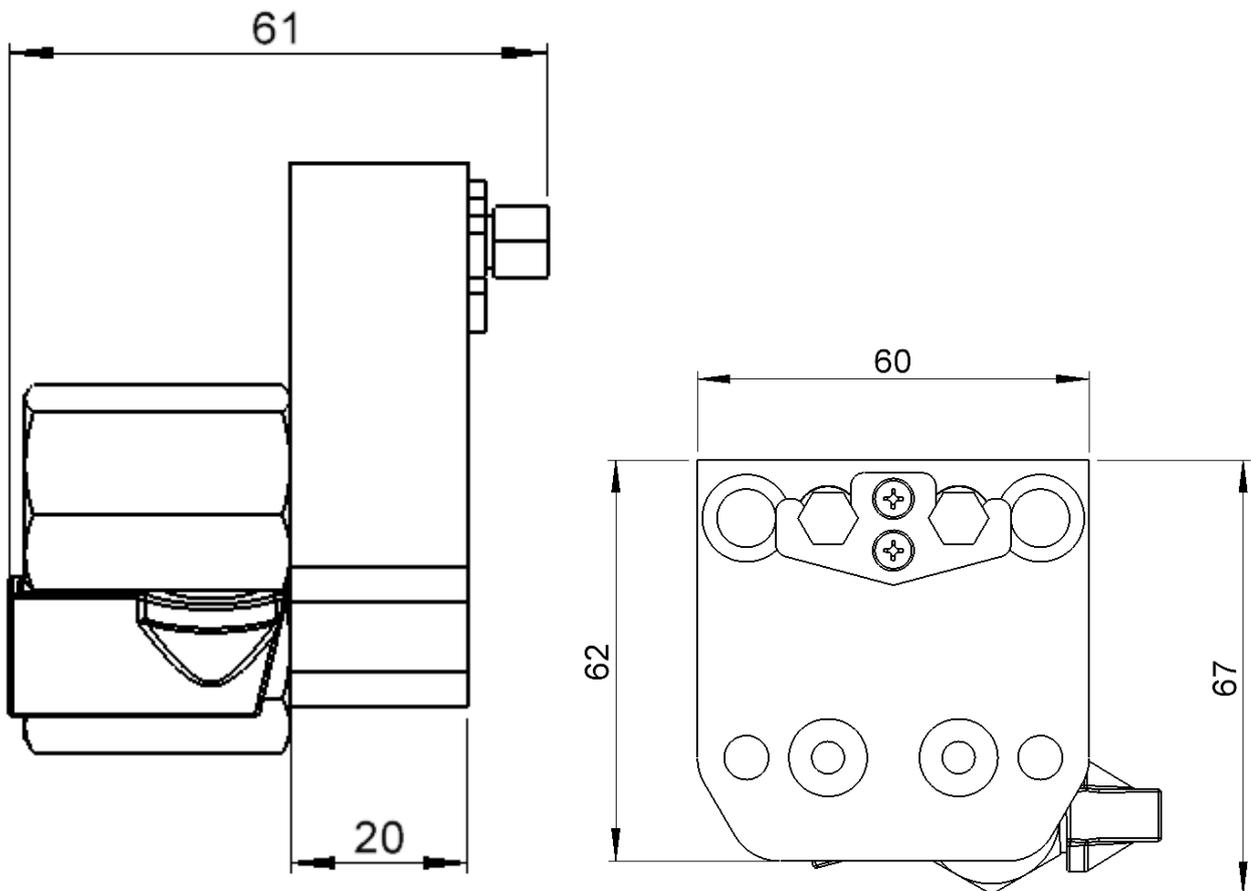
For remote mounting, also replace the o-rings under the pipe fittings and between the Multiblock and remote mounting block.



## GL/FA/M



## FSS/GSS

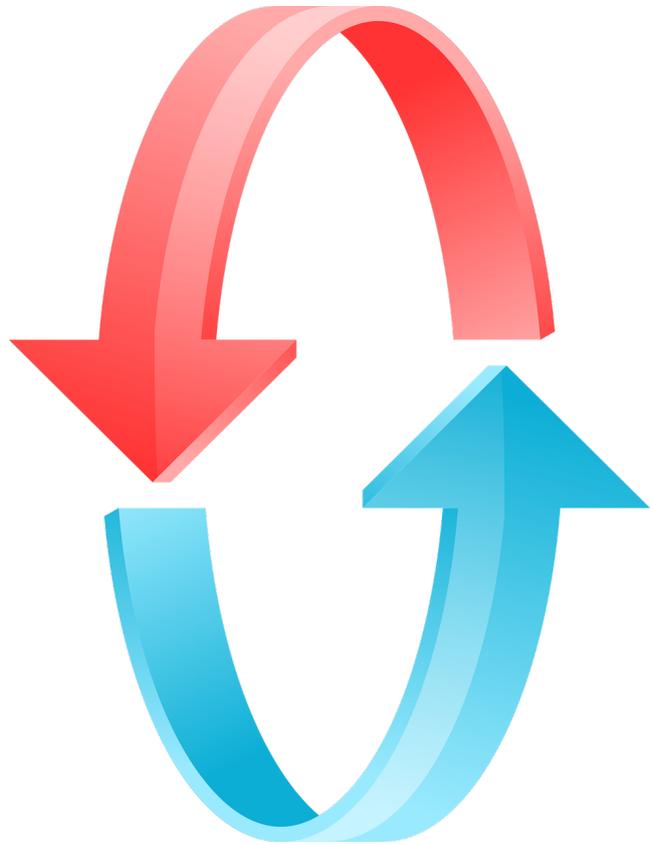


### Recycle your product and packaging at disposal

These products and packaging should not be mixed with general household waste. For proper recycling, take these products to a designated collection point.

Contact local authority or household waste disposal service for further details of the nearest designated collection point.

Correct product disposal saves resources and prevents negative effects on human health and the environment.



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