

Installation Instructions

Liquiline Control CDC90

Maintenance kit



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1 Overview

1.1 Spare parts kits

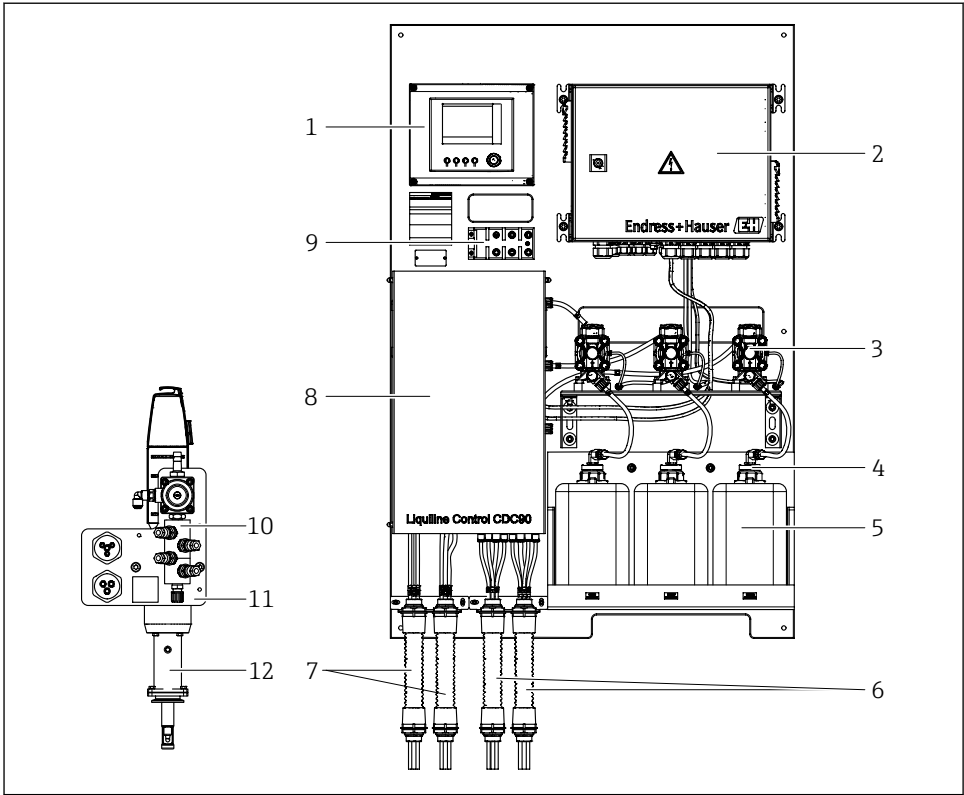
These installation instructions apply to the following spare parts kits:

Order code	Designation	Page
71361240	CDC90 Membrane pump	→  6
71677034	CDC90 Media valve A2	→  7
71676610	CDC90 Multihose media 5 m 1C A2	→  7
71676912	CDC90 Multihose media 5 m 2C A2	→  8
71676922	CDC90 Multihose media 10 m 1C A2	→  8
71677026	CDC90 Multihose media 10 m 2C A2	→  8
71677028	CDC90 Multihose air 5 m 1C A2	→  8
71677030	CDC90 Multihose air 5 m 2C A2	→  8
71677031	CDC90 Multihose air 10 m 1C A2	→  9
71677032	CDC90 Multihose air 10 m 2C A2	→  9
71677033	CDC90 Valve manifold 2x8 pilot valves	→  9
71677035	CDC90 IPC A2	→  9

1.2 Overview of Liquiline Control CDC90

The complete Liquiline Control CDC90 consists of the following components:

- CDC90 control unit
- Ethernet switch
- Pneumatic control unit
- Pumps
- Canisters for buffer solutions and cleaner
- Multihoses for media control
- Rinsing block



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1 Total view of CDC90

- | | | | |
|---|--|----|-------------------------------------|
| 1 | CDC90 control unit | 7 | M1/M2 multihoses |
| 2 | Pneumatic control unit | 8 | Cover |
| 3 | Pumps | 9 | Ethernet switch |
| 4 | Float switch | 10 | Rinsing block |
| 5 | Canisters for buffer solutions and cleaner | 11 | Rinsing block bracket |
| 6 | M3/M4 multihoses | 12 | Assembly (not included in delivery) |

2 Intended use

- The parts of the kits must only be used as maintenance parts for CDC90 cleaning and calibration systems. Any other use is not permitted!
- Only use original parts from Endress+Hauser.
- In the Device Viewer, check if the spare part is suitable for the device in question.

3 Authorized installation personnel

- Installation, commissioning, operation and maintenance of the measuring system may be carried out only by specially trained technical personnel.
- The technical personnel must be authorized by the plant operator to perform the stated tasks.
- The electrical connection may only be established by an electrical technician.
- The technical personnel must have read and understood these Installation Instructions and must follow the instructions they contain.
- Measuring point faults may be repaired only by authorized and specially trained personnel.
- In the case of Ex-certified devices, the technical staff must also be trained in explosion protection.

 Repairs not described in the Operating Instructions provided must only be carried out directly at the manufacturer's site or by the service organization.

4 Safety instructions

CAUTION

Risk to health due to contact with reagents (chemicals) or process solutions!

- ▶ Wear chemical-resistant protective gloves, protective goggles and protective clothing,
- ▶ Immediately rinse splashes with plenty of water and a 1% sodium bicarbonate solution (NaHCO_3 , baking soda).
- ▶ In case of eye contact, rinse the affected area with plenty of water and then seek medical advice. Show the relevant safety data sheet to the physician.
- ▶ Note the nationally applicable workplace safety regulations for the work area when handling toxic or corrosive chemicals.

Potential impact on the process

Before decommissioning an active device, the potential impact on the overall process must be taken into account! This applies in particular when using the switching contacts, the analog signal outputs or the communication interface of the associated measuring instrument to control process variables. Coordinate service tasks with the operator!

Electrical safety

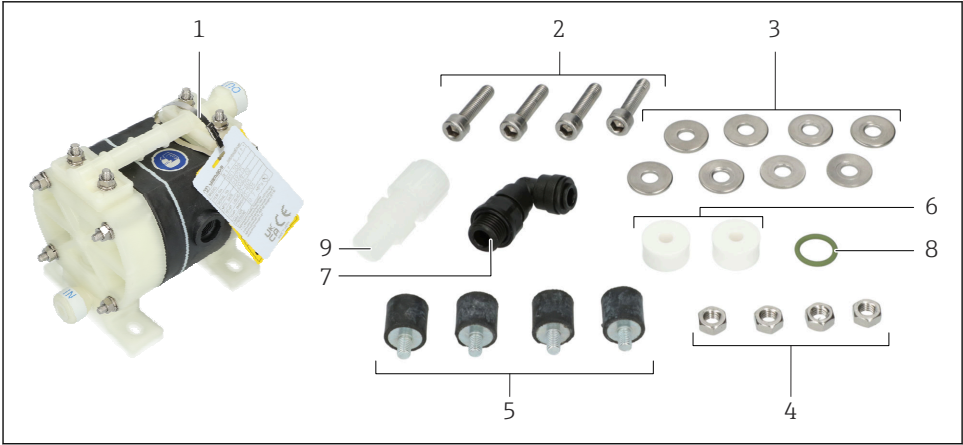
The sensor operates exclusively with protective extra-low voltage. Therefore there is no electrical hazard.

5 Scope of delivery

5.1 71361240 CDC90 Membrane pump

The kit contains the following parts →  2,  6:

- | | | | | | |
|---|-----|-------------------------|-----|-----|--------------------------------------|
| 1 | 1 x | Pneumatic membrane pump | 6 | 2 x | Spacer |
| 2 | 4 x | M5x25 cylinder screw | 7 | 1 x | Swivel elbow fitting, ANS LDS-146MSV |
| 3 | 8 x | M5 washer | 8 | 1 x | O-Ring ID 12.00 W 2.00 mm for G ¼" |
| 4 | 4 x | Nut M5 | 9 | 1 x | Threaded fitting, OD 6 mm/G ¼" |
| 5 | 4 x | Rubber-metal buffer | 1 x | | Kit instructions |



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 2 CDC90 membrane pump

5.2 71677034 CDC90 Media valve A2

The kit contains the following parts →  3,  7:

- | | | | |
|-----|---|-----|------------------|
| 1 x | Media valve incl. couplings and compressed air connection | 1 x | Kit instructions |
|-----|---|-----|------------------|



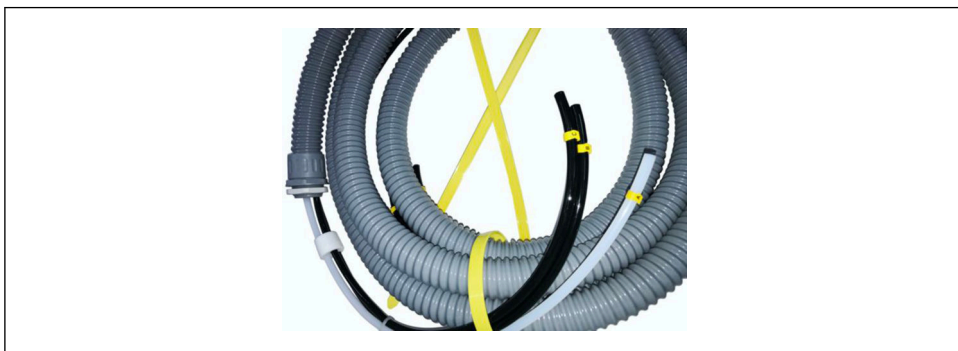
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 3 CDC90 media valve A2

5.3 7166610 CDC90 Multihose media 5 m 1C A2

The kit contains the following parts →  4,  7:

- | | | | |
|-----|--------------------------------------|-----|------------------|
| 1 x | 1-channel 5 m multihose (M1/M2 hose) | 1 x | Kit instructions |
|-----|--------------------------------------|-----|------------------|



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 4 CDC90 multihose media

5.4 71676912 CDC90 Multihose media 5 m 2C A2

The kit contains the following parts →  4,  7:

- 1 x 1-channel 5 m multihose (M1/M2 hose)
- 1 x Kit instructions

5.5 71676922 CDC90 Multihose media 10 m 1C A2

The kit contains the following parts →  4,  7:

- 1 x 1-channel 10 m multihose (M1/M2 hose)
- 1 x Kit instructions

5.6 71677026 CDC90 Multihose media 10 m 2C A2

The kit contains the following parts →  4,  7:

- 1 x 1-channel 10 m multihose (M1/M2 hose)
- 1 x Kit instructions

5.7 71677028 CDC90 Multihose air 5 m 1C A2

The kit contains the following parts →  5,  8:

- 1 x 1-channel 5 m multihose (M3/M4 hose)
- 1 x Kit instructions



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 5 CDC90 multihose, air

5.8 71677030 CDC90 Multihose air 5 m 2C A2

The kit contains the following parts →  5,  8:

- 1 x 1-channel 5 m multihose (M3/M4 hose)
- 1 x Kit instructions

5.9 71677031 CDC90 Multihose air 10 m 1C A2

The kit contains the following parts →  5,  8:

1 x 1-channel 10 m multihose (M3/M4 hose) 1 x Kit instructions

5.10 71677032 CDC90 Multihose air 10 m 2C A2

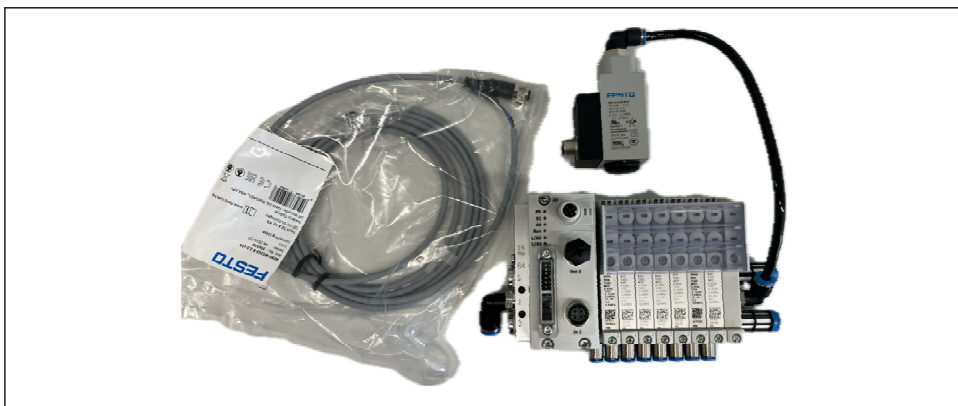
The kit contains the following parts →  5,  8:

1 x 1-channel 10 m multihose (M3/M4 hose) 1 x Kit instructions

5.11 71677033 CDC90 Valve manifold 2x8 pilot valve

The kit contains the following parts →  6,  9:

1 x 8-way solenoid valve manifold, 24 VDC, with pressure switch and mounting accessories 1 x Kit instructions



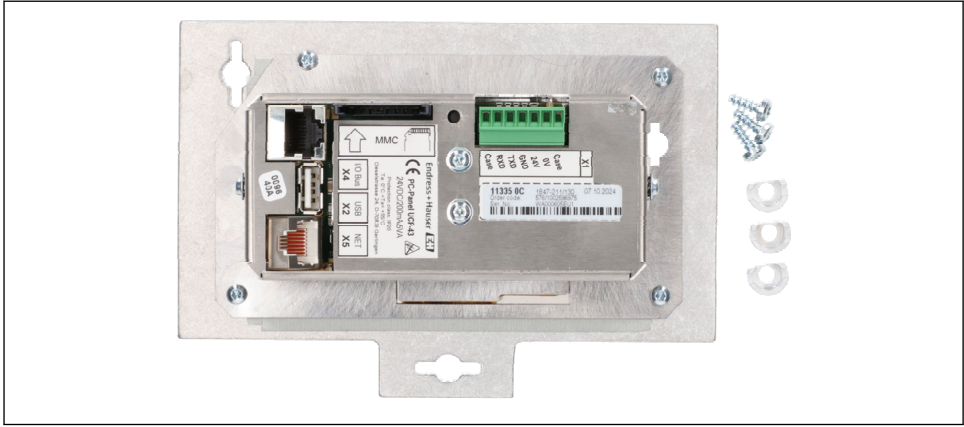
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 6 CDC90 valve manifold 2x8 pilot valve

5.12 71677035 CDC90 IPC A2

The kit contains the following parts →  7,  10:

1 x IPC 3 x Torx screw K40x10
3 x Spacer sleeve 1 x Kit instructions



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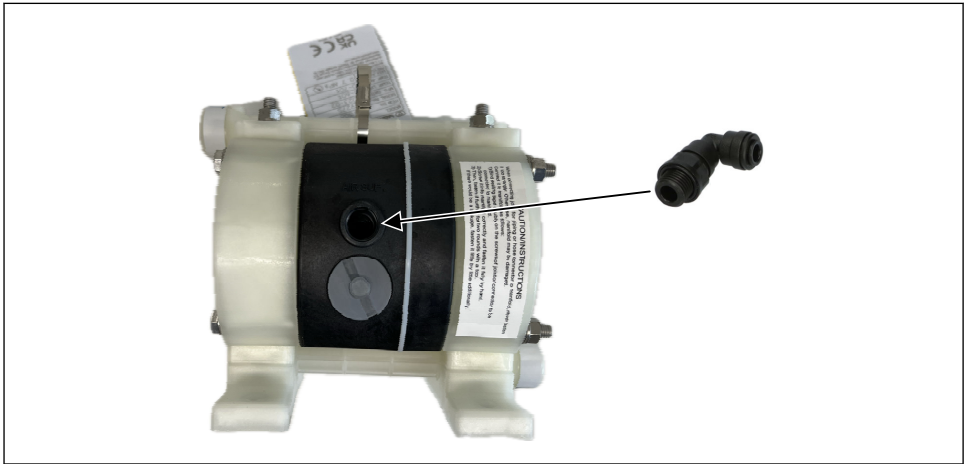
7 CDC90 IPC A2

6 Replacing the components

6.1 Installation of the membrane pump

Installing the membrane pump

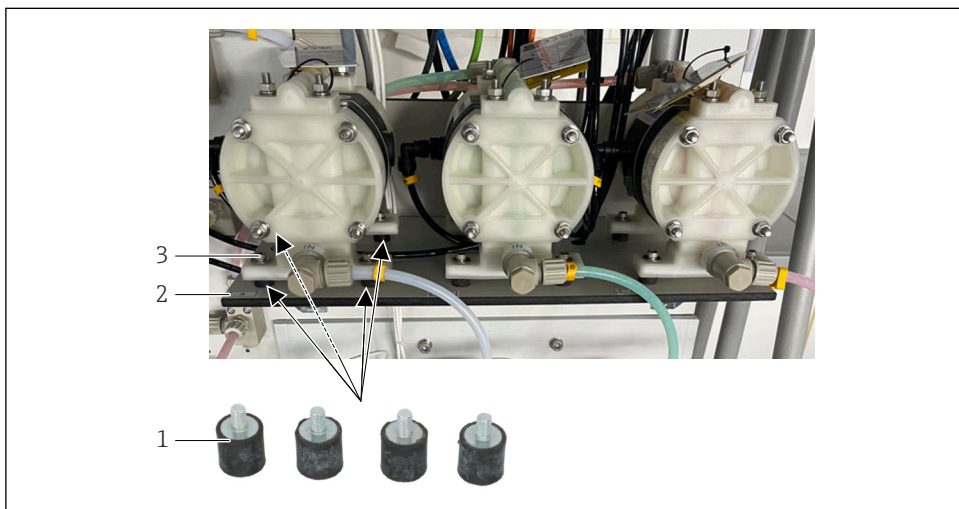
1. Screw the hose connection for the compressed air supply to the membrane pump into the G ¼ port on the left side.



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8 Screwing in the hose connection

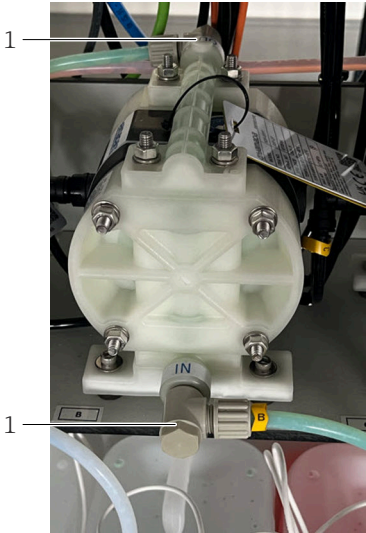
2. Fit the rubber buffers (1) on the mounting plate (2).
3. Then place the membrane pump on the rubber buffers (1) and secure using the M5 × 12 mm screws provided on the device.



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9 *Securing the membrane pump*

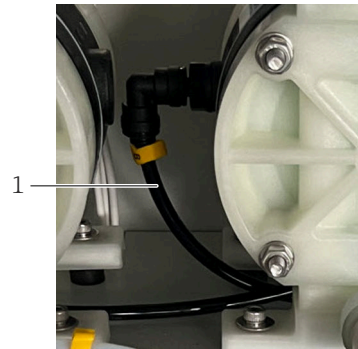
4. Install the two hose connections (1) on the front and rear of the membrane pump.



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 10 *Installing hose connections*

5. Connect compressed air hoses A, B and C (1) (depending on version) to the membrane pump.



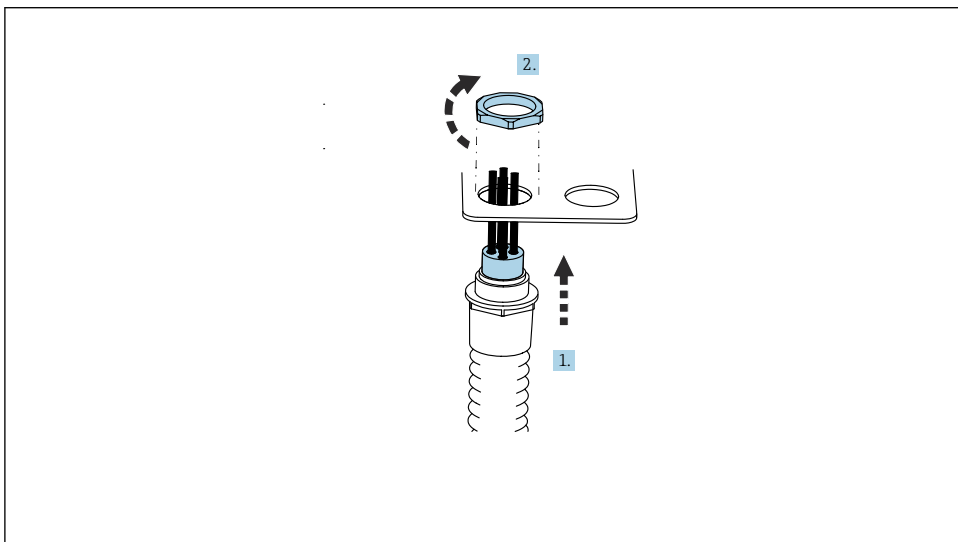
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 11 *Connecting compressed air hoses*

Install the multihoses on the panel

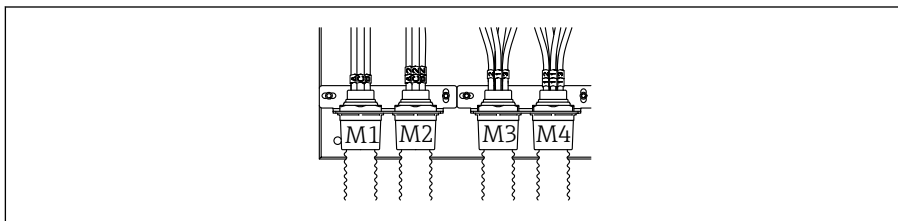
Depending on the configuration, a distinction is made between one and two-channel devices and is indicated with a "/".

The multihoses combine the individual pressure and liquid hoses.



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1. Guide the hoses through the opening of the multihose bracket on the panel.
2. Use the counterpart to secure the cable gland.
- 3.



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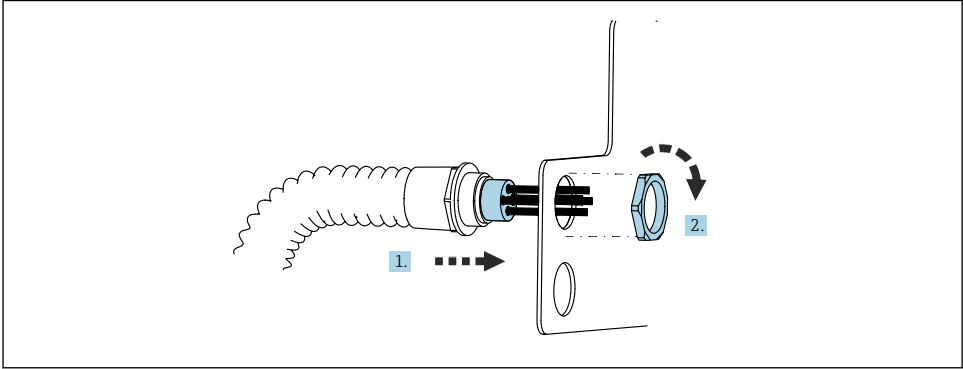
Install the multihoses depending on the configuration: from left to right: location 1 = M1, location 2 = M2, location 3 = M3, location 4 = M4

Connect the individual hoses

- Depending on the configuration (one/two channel), connect the individual hoses as follows:

Multihose	Function	Hose name Single-channel/two-channel	Panel terminal name Single-channel/two-channel
M3/M4 (compressed air hose)	Compressed air control for assembly, measure position	1/11	1/11
	Compressed air control for assembly, service position	2/12	2/12
	Compressed air control for water valve on rinsing block	3/13	3/13
	Compressed air control for purge air on rinsing block (check valve)	4/14	4/14
M1/M2 (liquid hose)	Pump A/canister A (left)	A/A2	A/A2
	Pump B/canister B (middle)	B/B2	B/B2
	Pump C/canister C (right)	C/C2	C/C2

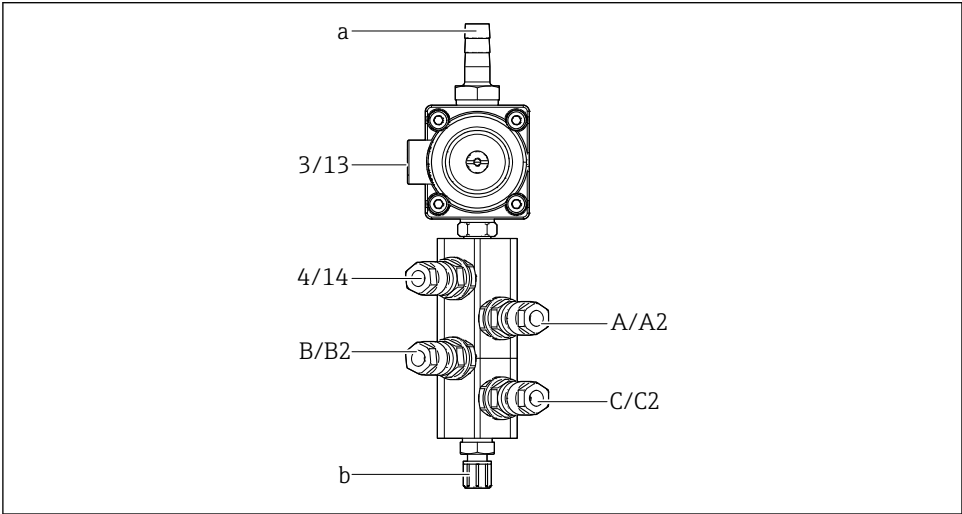
Secure the M1/M3 and M2/M4 multihose to the rinsing block bracket



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1. Guide the hoses through the opening on the rinsing block plate.
2. Use the counterpart to secure the cable gland.

Assign individual hoses from the M1/M3 and M2/M4 multihose to the rinsing block



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 12 Rinsing block, labeling depending on system configuration

a Water connection

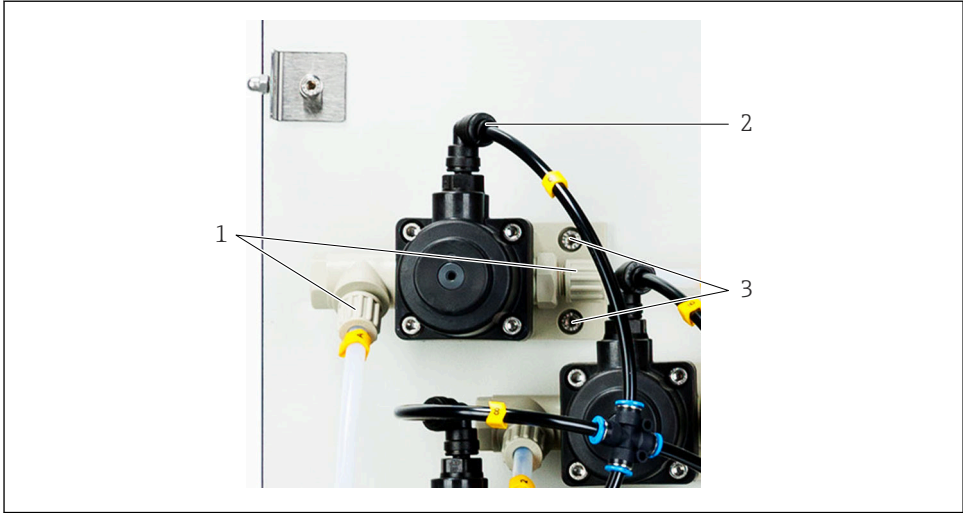
b Rinse connection outlet to assembly

► Connect the individual hoses on the system as follows:

Multihose	Function	Hose name Single-channel/two-channel	Rinsing block position Single-channel/two-channel
M3/M4 (compressed air hose)	Compressed air control for water valve on rinsing block	3/13	3/13
	Purge air on rinsing block	4/14	4/14
M1/M2 (liquid hose)	Pump A/canister A (left)	A/A2	A/A2
	Pump B/canister B (middle)	B/B2	B/B2
	Pump C/canister C (right)	C/C2	C/C2

6.2 Replacing a media valve

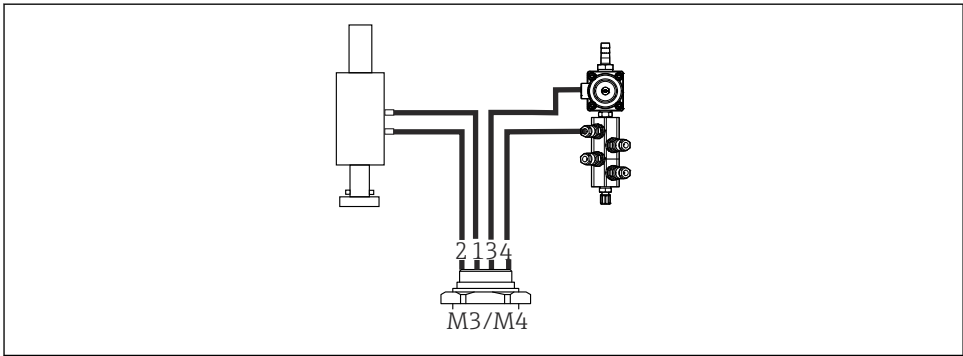
1. Lift off the cover over the media valves.
2. Release the media hoses (1) and the compressed air hose (2) at the hose connectors and release the two Allen screws (3).



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3. Install the new media valve in reverse order.

Connect the individual hoses from the M3/M4 multihose to the assembly



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13 M3/M4 connections on assembly and rinsing block, example with single-channel device

4. Connect hose **1/11** to the connection for moving the assembly in the measure position.
5. Connect hose **2/12** to the connection for moving the assembly in the service position.
6. Connect hose **3/13** to the compressed air control unit for the water valve of the rinsing block.
7. Connect hose **4/14** to the connection for the purge air on the rinsing block.

6.3 Replacing the IPCs

1. Disconnect the device from the power supply.
2. Open the cover of the control unit.
3. Release the communication cable **X5** (1) and remove the plug-in connector.
4. Pull off the connector strip **X1** (2).
5. Release the three screws (3) and remove the IPC from the cover.
6. Attach the new IPC to the cover.



Tighten the screws to a maximum torque of **0.5 Nm** as proper operation of the IPC is otherwise restricted.

1. Plug the communication cable into the **X5** socket (1) and insert the connector strip into the **X1** socket (2).
2. Close the cover and check that the IPC is functioning properly.



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7 Additional documentation

Detailed information on the devices shown here can be found in the Operating Instructions for each device and in the other documentation, available at:

- Product page: <https://www.endress.com/>
- Spare parts finder: <https://sft-p.cdn.endress.com/>
- Device Viewer: www.endress.com/device-viewer
- Smartphone/tablet: Endress+Hauser Operations app

8 Disposal

 If required by the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), the product is marked with the depicted symbol in order to minimize the disposal of WEEE as unsorted municipal waste. Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.



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www.addresses.endress.com
