

# Manual

## Industrial nylon valves 100 & 200 Series

### General:

Bermad industrial glass-filled nylon valves are designed and manufactured to meet the highest standards in quality and workmanship. The valves are available with a wide variety of functions.

The maximum pressure is 10 bar - take measures if the pressure is not fully under control. The valves can be installed in the horizontal or vertical position for reliable operation.

For clean water use a 2-way valve model and a 3-way model for less clean water.

### Installation:

Ensure adequate space and accessibility for maintenance and future alterations.

Flush the pipes thoroughly to remove dirt and scale before installing or commissioning the valve.

Check whether the specifications of the solenoid correspond to the power supply. Place the valve with the arrow on the valve in the direction of flow.

Ensure stress-free installation of the valve in the pipe system, which must be sufficiently supported and protected against mechanical forces. Furnish the fitting connections with sufficient packing material and tighten with the correct force. Bermad PVC adapters for the 100 Series valve are fitted with an O-ring seal. Secure the electric connections (low voltage current) with cable connectors, and conceal the cables safely, while ensuring they are kept dry. Following installation, check that the valve, as well as the accessories, have not been damaged.

### Commissioning:

Check that the manual switch is set to 'AUTO'. Slowly increase the pressure in the system. If the valve does not work properly, allow air to escape by manually opening the valve.

### Operation:

The valves can be closed and/or opened manually, electrically, or by a pilot. Valves equipped with a flow stem (the knob on top of the cover) are able to restrict the flow or pressure to a lower maximum.

Use the white lever under the solenoid for manual operation (old model).

The Trio manual override (new) has a "Closed", "Auto" and "Open" position.



**For Latching Models:** In order to shift back from manually 'open' to 'auto' you must first turn the selector to the 'close' position, and then back to 'auto'.

### Maintenance:

Before dismantling the valve or parts thereof, check that there is no pressure in the system.

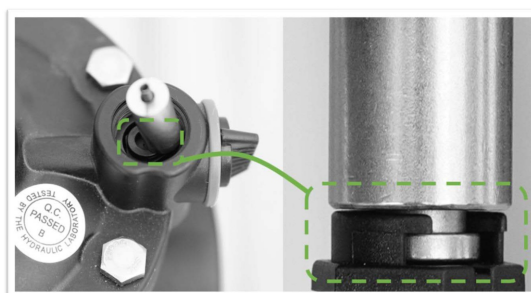
The cover of the valve can be removed by unscrewing the bolts/screws/ring clamp.

When replacing the diaphragm, pay close attention to the small hole in the edge ( $\frac{3}{4}$ " and 1" 200 series)

The 'new' Trio manual override has the plunger of the solenoid attached to the cover/manual override.



When replacing the solenoid, the plunger needs to be replaced as well. Turn the manual override to 'auto' and detach the plunger sideways (click). Then replace the plunger by clicking it back in sideways.



### Note:

In view of on-going improvements, we reserve the right to change specifications at any time without prior notice.



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### Troubleshooting nylon valves:

Symptom	Cause	Remedy
Valve failt to open	No electric current	Check the power suply
	Insufficient inlet pressure	Check water-pressure facilities
	Solenoid: <ul style="list-style-type: none"> <li>• Core is stuck</li> <li>• Clogged connections</li> <li>• No response - 'no click'</li> </ul>	<ul style="list-style-type: none"> <li>• Check and clean core</li> <li>• Check and clean connections</li> <li>• Test the solenoid, replace if necessary, check whether the power supply corresponds to the current as specified on the solenoid</li> </ul>
	Diaphragm is leaking	Replace diaphragm
	Manual override set to 'close'	Set manual override to 'auto'
Valve fails to close	Dirt in the diaphragm hole (2w)	Remove, clean and use a filter
	In-line filter is closed (3w)	Remove and clean in-line filter
	In-line filter is not installed correctly	Stagnation filter must be installed in the flow direction
	Solenoid <ul style="list-style-type: none"> <li>• Continues to be energised</li> <li>• Clogged connections</li> </ul>	<ul style="list-style-type: none"> <li>• De-energise solenoid</li> <li>• Reduce current leakage</li> <li>• Check and clean connections</li> </ul>
	Dirt stuck under diaphragm	Open the valve and remove dirt check diaphragm for damage
	Manual override set to 'open'	Set manual override to 'auto'

### 2-way solenoid controlled valve

Typical parts

100 Series KY-valves

- 2S10020Y05 Diaphragm assy. 2"
- 2S10025Y05 Diaphragm assy. 2½" - 3"R

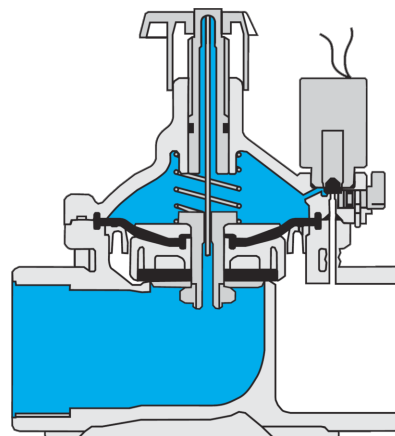
200 Series valves

- 2S21007G05 Diaphragm ¾" - 1"
- 2S21015G05 Diaphragm 1½" - 2"

Solenoid 2w

- 2U202390 Solenoid 24 VDC
- 2U203390 Solenoid 24 VAC

- 2U202390T Trio Solenoid 24 VDC
- 2U203390T Trio Solenoid 24 VAC
- 2U208392T Trio Latching Solenoid 6-20 VDC (2 wires)



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## Industrial nylon valves 100 & 200 Series

### 3-way solenoid controlled valve

Typical parts

#### 100 Series KY-valves

- 2S11020Y05 Diaphragm assy. 2"
- 2S11025Y05 Diaphragm assy. 2½" - 3"R
- 2S10930105 Diaphragm assy. 3" - 4"
- 2S10940105 Diaphragm assy. 4"L - 6"R

#### 200 Series valves

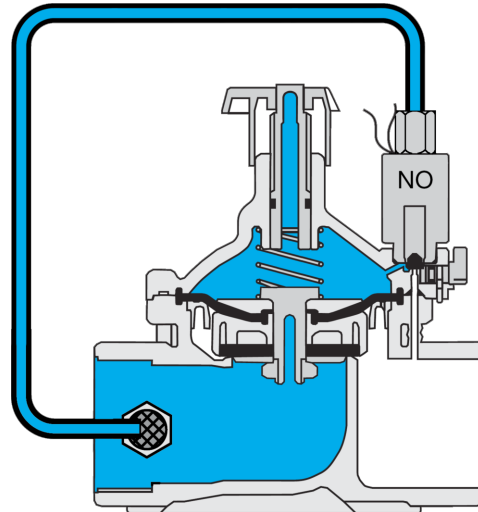
- 2S21107G05 Diaphragm ¾" - 1"
- 2S21115G02 Diaphragm 1½" - 2"

#### Solenoid 3w

- 2U204390 Solenoid 24 VDC
- 2U205391 Solenoid 24 VAC-R

- 2U204390T Trio Solenoid 24 VDC
- 2U205390T Trio Solenoid 24 VAC

- 2U209392T Trio Latching Solenoid 9 - 20 VDC  
(2 wires)



### 3-way solenoid controlled valve NO

Typical parts

#### 100 Series KY-valves

- 2S11020Y05 Diaphragm assy. 2"
- 2S11025Y05 Diaphragm assy. 2½" - 3"R
- 2S10930105 Diaphragm assy. 3" - 4"
- 2S10940105 Diaphragm assy. 4"L - 6"R

#### 200 Series valves

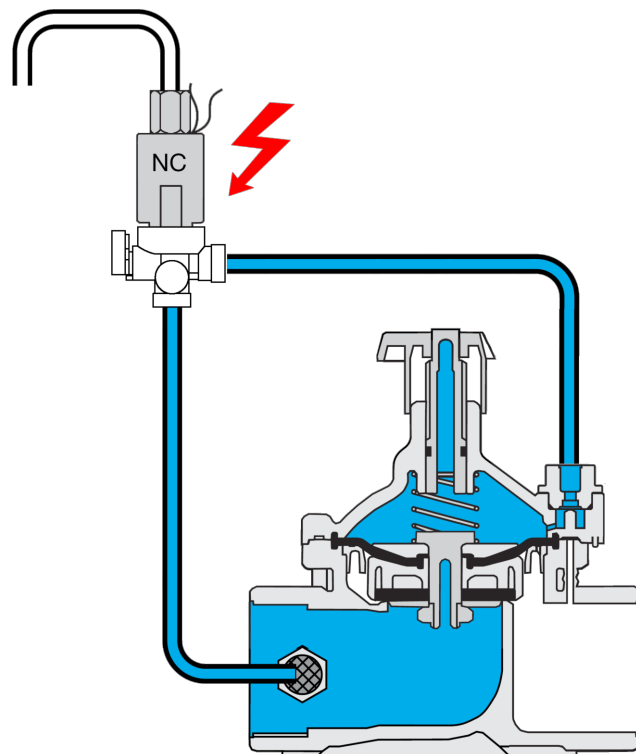
- 2S21107G05 Diaphragm ¾" - 1"
- 2S21115G02 Diaphragm 1½" - 2"

#### Solenoid 3w

- 2U206390 Solenoid 24 VDC/NC
- 2U207390 Solenoid 24 VAC/NC

- 2U206390T Trio Solenoid 24 VDC/NC
- 2U207390T Trio Solenoid 24 VAC/NC

- 2U209392T Trio Latching Solenoid 9 - 20 VDC  
(2 wires)



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### 3-way pressure relief valve

Typical parts

#### 100 Series KY-valves

- 2S11020Y05 Diaphragm assy. 2"
- 2S11025Y05 Diaphragm assy. 2½" - 3"R
- 2S10930105 Diaphragm assy. 3" - 4"
- 2S10940105 Diaphragm assy. 4"L - 6"R

#### 200 Series valves

- 2S21107G05 Diaphragm ¾" - 1"
- 2S21115G05 Diaphragm 1½" - 2"

#### Pilot

- 2U2PC10 Pilot

### 3-way float valve

Typical parts

#### 100 Series KY-valves

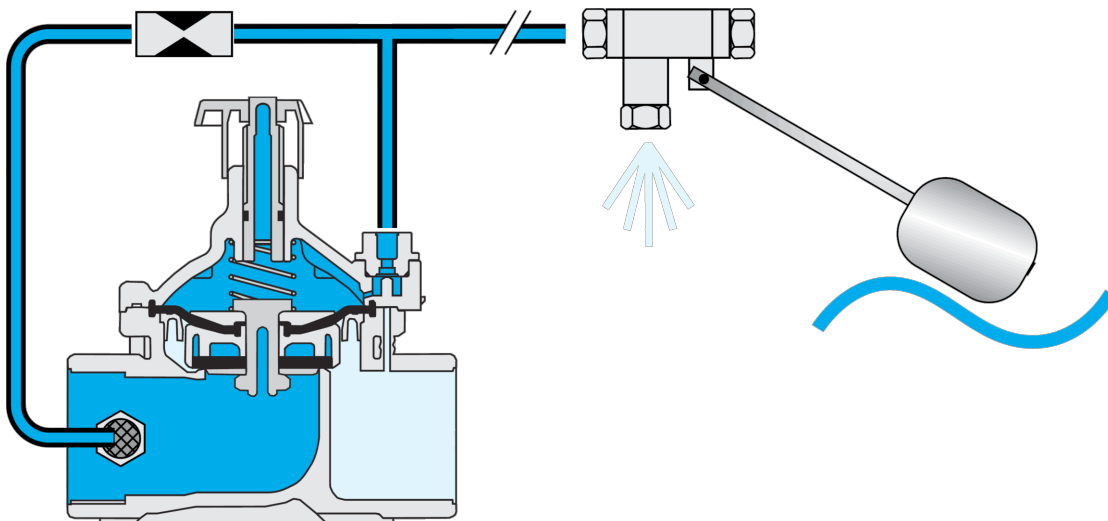
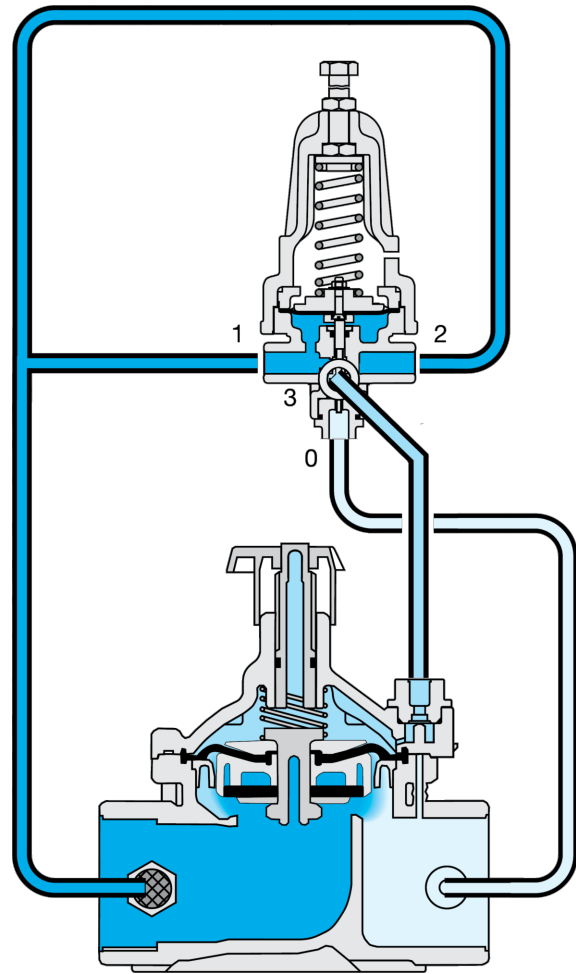
- 2S11020Y05 Diaphragm assy. 2"
- 2S11025Y05 Diaphragm assy. 2½" - 3"R
- 2S10930105 Diaphragm assy. 3" - 4"
- 2S10940105 Diaphragm assy. 4"L - 6"R

#### 200 Series valves

- 2S21107G05 Diaphragm ¾" - 1"
- 2S21115G05 Diaphragm 1½" - 2"

#### Float

- 1U08000301 Float (optional)



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### 3-way pressure sustaining float valve

Typical parts

#### 100 Series KY-valves

- 2S11020Y05 Diaphragm assy. 2"
- 2S11025Y05 Diaphragm assy. 2½" - 3"R
- 2S10930105 Diaphragm assy. 3" - 4"
- 2S10940105 Diaphragm assy. 4"L - 6"R

#### 200 Series valves

- 2S21107G05 Diaphragm ¾" - 1"
- 2S21115G05 Diaphragm 1½" - 2"

#### Float

- 1U08000301 Float (optional)

#### Pilot

- 2U2PC30 Pilot

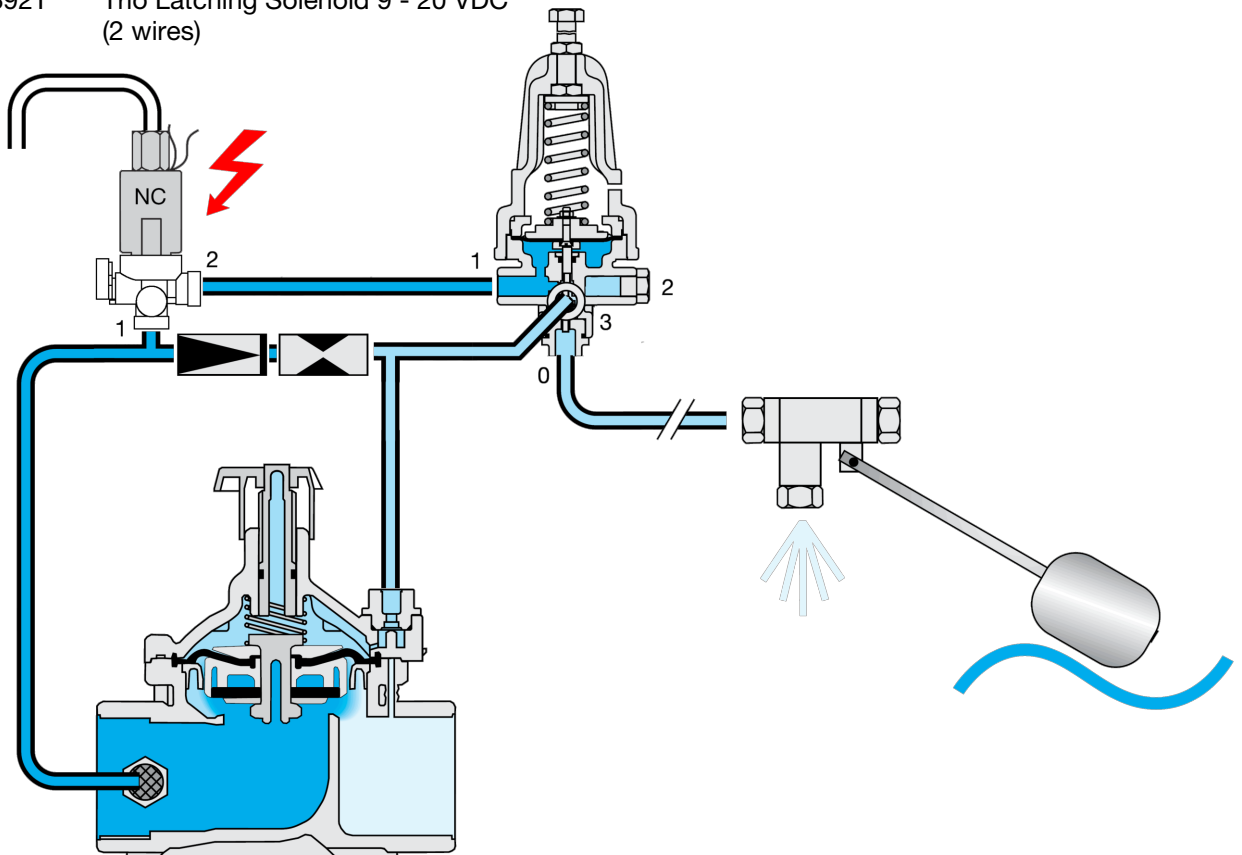
#### Solenoid 3w

- 2U206390 Solenoid 24 VDC/NC
- 2U207390 Solenoid 24 VAC/NC

#### 2U206390T Trio Solenoid 24 VDC/NC

- 2U207390T Trio Solenoid 24 VAC/NC

#### 2U209392T Trio Latching Solenoid 9 - 20 VDC (2 wires)



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