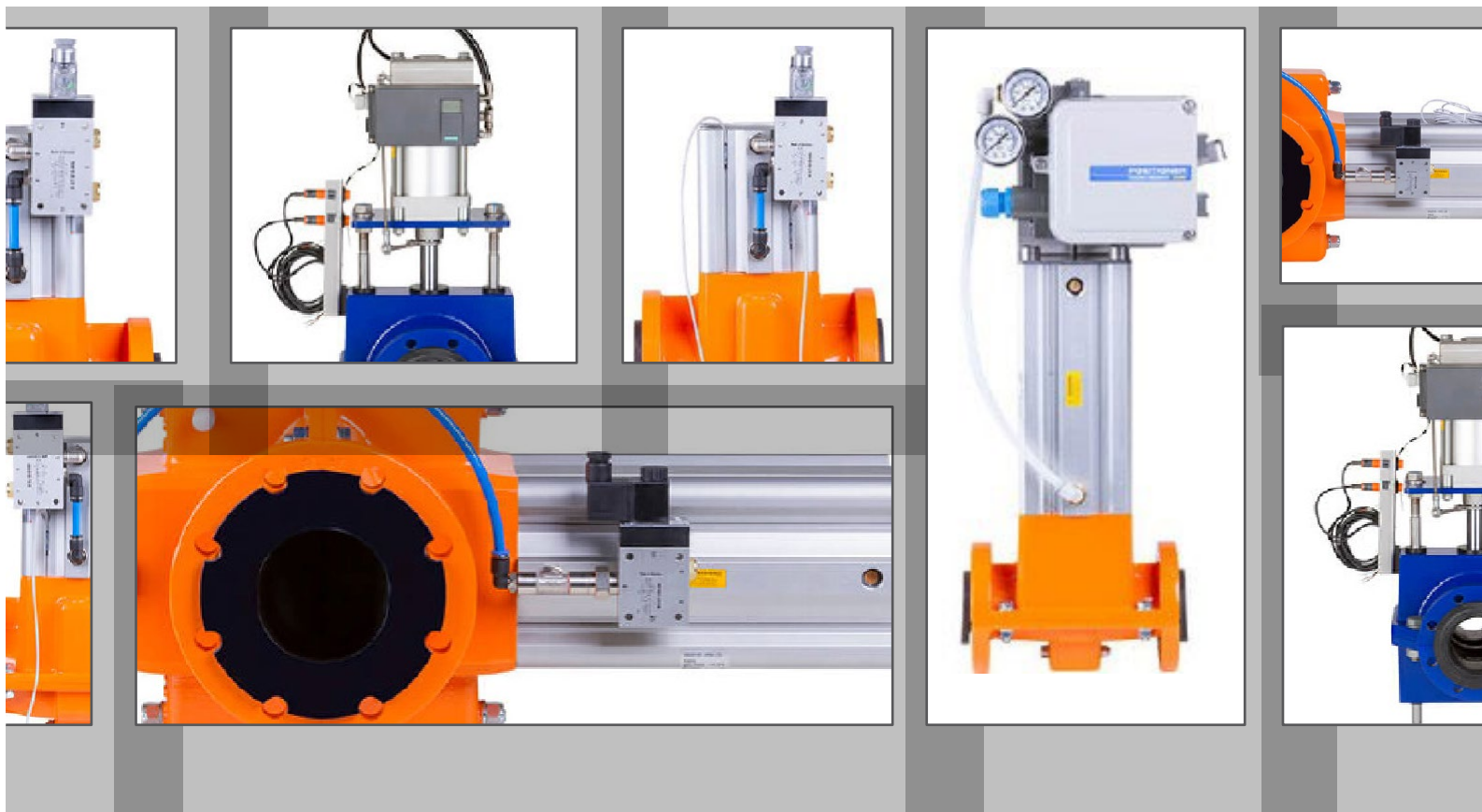


## Accessories for Mechanical Pinch Valves

RV Series | OV Series | VZ Series



Technical details subject to change without notice.



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# Optional accessories for Mechanical Pinch Valves

## Example illustrations

### Solenoid valve

Control the compressed air directly on the mechanical pinch valve.

► [Page 8](#) ➤

RV OV



### Transducer

Enables you to query the current position of the mechanical pinch valve.

► [Page 12](#) ➤

RV OV VZ 



### Sleeve wear monitoring

Receive an early warning of wear using a monitoring wire

► [Page 10](#) ➤

RV

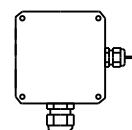


### Terminal box

Distributor box for the monitoring board

► [Page 11](#) ➤

RV

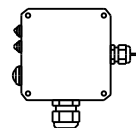


### Wear indicator with feedback

Feedback about a faulty sleeve (sleeve monitoring)

► [Page 11](#) ➤

RV



### Positioner, electro-pneumatic

Enables the control of any intermediate positions

► [Page 9](#) ➤

RV OV 



### Pressure / filter regulator

Carry out individual pressure settings

► [Page 6](#) ➤

RV

### Pressure switch

Monitor the compressed air supply

► [Page 7](#) ➤

RV OV



# Optional accessories for Mechanical Pinch Valves

## Accessories for mechanical pinch valve from specialists

AKO Armaturen offers you a series of accessories for the OV, RV and VZ mechanical pinch valve series.

These accessories can be used to expand the functionality of the AKO mechanical pinch valve without impacting the accustomed reliable operation and long service life of the individual components. In addition: The installed accessories can exclude possible malfunctions and increase the service life of the components even further!

You can order the accessories separately or have them delivered fitted to the mechanical pinch valve and prepared for use on-site by our experienced installers.

Available for series:

OV RV VZ


The information to the right of the heading for each accessory indicates which accessories are available for which mechanical pinch valves.

## Your benefits with AKO accessories

Directly ordering accessories from AKO Armaturen brings you a whole range of benefits:

- ▶ **One combined process.**  
One order, one invoice, one contact person, one delivery, etc.
- ▶ **The accessories have been comprehensively tested** for their compatibility with **AKO mechanical pinch valves**.
- ▶ **Presetting / calibration of the accessories** can be carried out by AKO pinch valve **specialists**.
- ▶ If desired, direct **fitting of the accessories**.
- ▶ **High-quality products.**
- ▶ **Receive advice about the accessories** in advance from our pinch valve experts.



Many accessories for the RV series can also be supplied in -protected versions according to **2014/34/EU (ATEX)**.

▶ Please speak to your product consultant in this case.

**Note:** Mechanical pinch valves and accessories must be considered individually for their respective use in areas at risk of explosion (Ex) and be suitable for use. Therefore, they cannot be supplied by AKO as an assembled unit.

The operator / customer must determine the suitability of accessories (not put together as an assembly as defined by §44 ATEX Directive) supplied for use in areas at risk of explosion (Ex zones).



**Fig. 1**

Accessory on a mechanical pinch valve from the OV series



**Fig. 1**

Accessory on a mechanical pinch valve from the RV series

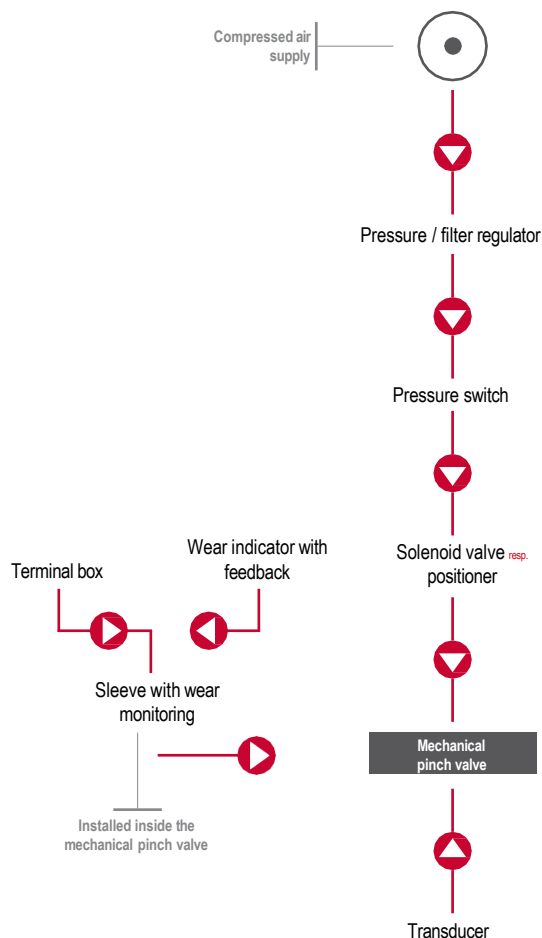


# Optional accessories for Mechanical Pinch Valves

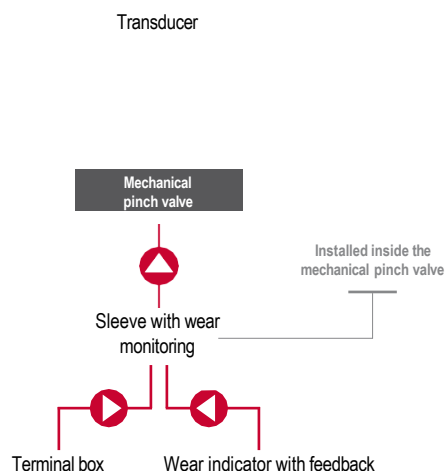
## Installation sequence for the mechanical pinch valve accessories

The individual accessories can also be used in combination on the mechanical pinch valve. However, it is important to observe the following sequence in this case.

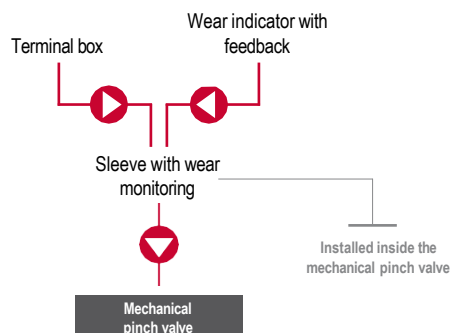
### Mechanical pinch valve with pneumatic drive



### Mechanical pinch valve with manual drive



### Mechanical pinch valve with electrical control



# Optional accessories for Mechanical Pinch Valves

## What accessories do I need?

Using the following questions on the future functional scope of your mechanical pinch valves, you can gain a general initial overview of the accessories that you require.

In general, our accessories can be used in combination on the mechanical pinch valve.

► Please speak to our Sales & Support Team to clarify your specific requirements.

► Do you want to reduce the compressed air supply to the optimal operating pressure for the mechanical pinch valve, constantly maintain it and remove any compressed air condensate that may occur?

You require: *Pressure / filter regulator*  
► [Page 6](#) ↗

► Do you want to monitor the compressed air supply for your mechanical pinch valve?

You require: *Pressure switch*  
► [Page 7](#) ↗

► Do you have a compressed air supply and want to directly control the mechanical pinch valve?

You require: *3/2 | 5/2-way solenoid valve*  
► [Page 8](#) ↗

► Do you want to be able to set freely definable intermediate settings in addition to "open" and "closed"?

You require: *Positioner, electro-pneumatic*  
► [Page 9](#) ↗

► Do you want to be warned about wear to the sleeve at an early stage?

You require: *Sleeve wear monitoring*  
► [Page 10](#) ↗

► Do you want to connect up the wire monitoring electrically and protect it against external influences?

You require: *Terminal box*  
► [Page 11](#) ↗

► Do you require a visual wear indicator with electrical feedback?

You require: *Wear indicator with feedback*  
► [Page 11](#) ↗

► Do you want to be able to query and receive feedback on the current position (closed or open) of the mechanical pinch valve?

You require: *Transducer*  
► [Page 12](#) ↗



# Optional accessories for Mechanical Pinch Valves

Available for series:

## Pressure / filter regulator

RV

OV

VZ



Pressure regulator

Example illustration

The pressure regulator can be used to set the optimal control pressure.

The pressure & filter regulator additionally removes any condensate and impurities from the compressed air.

### Pressure regulator:

The pressure control components ensure the ideal supply of compressed air to the mechanical pinch valve with pneumatic control. The optimum control pressure for the pneumatic cylinder can be adjusted using the handwheel to avoid any unnecessary consumption of compressed air and wear. In the event of any temporary spikes in the compressed air supply, the pressure control components maintain the air pressure at a constant level.

Filter regulator



Example illustration

### Filter regulator:

Provides the same functions as the pressure regulator and also removes any condensate and impurities into a collection container. As a result, the condensate and impurities are not able to settle within the pneumatic cylinder. The condensate and impurities collected in the container can be removed using the drain plug.

### ► Another benefit:

By optimally adjusting the pressure to the operating conditions, it reduces the demands placed on the sleeve. This means that the valve has a longer service life with the same level of functionality.

### Specifications:

	G 1/4"	G 1/2"
► Connection:	G 1/4"	G 1/2"
► Inlet pressure: 16 bar	max.	max. 16 bar
► Outlet pressure: bar	0.5 - 10	0.5 - 10 bar
► Nominal flow rate: Nl/min	1130	3500 Nl/min



Further information on this accessory can be found in the **data sheet on the subject of pressure/filter regulators**.

► *Speak to your product consultant!*

Further information available on our website under:

**Products ► Accessories**



# Optional accessories for Mechanical Pinch Valves

Available for series:

## Pressure Switch

RV

OV

VZ



Example illustration

The pressure switch monitors the pressure in the compressed air system (compressed air supply). It converts a pressure signal into an electrical signal.

If the compressed air supply – required for the pneumatic drive of the mechanical pinch valve – is completely lost or falls below the minimum control pressure required, feedback can be sent in the form of an electrical signal with the help of the pressure switch.

It is thus not possible for a mechanical pinch valve to break down unnoticed due to a lack of compressed air.

### Specifications:

▶ Pressure range:	0.5 - 8 bar
▶ Connecting thread:	G 1/4"
▶ Ambient temperature:	- 10 °C – + 80 °C
▶ Switching voltage:	250V AC / 24V DC
▶ Protection class:	IP 65

**i** Further information on this accessory can be found in the **data sheet on the subject of pressure switches**.

▶ *Speak to your product consultant!*

**Ex** Pressure switches are also available in AT-EX-compliant versions for the RV series

▶ *Speak to your product consultant!*

Further information available on our website under:

**Products ▶ Accessories**





# Optional accessories for Mechanical Pinch Valves

Available for series:

## 3/2 or 5/2-way solenoid valve

RV

OV

VZ

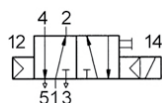


Example illustration

### Standard version

In combination with a double-acting cylinder

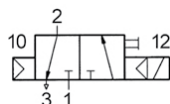
### 5/2-way



In combination with a single-acting cylinder (mech. spring / pneumatic spring)

### 3/2-way

closed with zero current



Example illustration

These control valves are required for mechanical pinch valves with a pneumatic drive and without centralised (or external) compressed air management. The solenoid valve controls the supply of the required compressed air directly on the mechanical pinch valves to close and open it. Ideally, the solenoid valve is installed directly on the pneumatic drive.

AKO Armaturen uses solenoid valves with electrically actuated piston valves that control the valve after switching on the voltage. In addition, the solenoid valves are fitted with a latching manual override. They stand out due to a very high air flow (flow capacity) for quicker opening (4 mm (1/8") | 360 NI/min, 9 mm (3/8") | 1,580 NI/min or 14 mm (1/2") | 3,300 NI/min) and are fitted with magnetic coils with improved protection against moisture.

### Versions available:

#### Connection options:

▶ 1/8" (360 NI/min)

▶ 1/4" (1,580 NI/min) (Standard)

▶ 1/2" (3,300 NI/min)

#### Voltage options:

▶ 24 VDC

▶ 230 VAC

**i** The required air flow – according to the connection option – is based on the required closing / opening time.

#### Setting options:

▶ 5/2-way solenoid valve, open or closed with zero current

↳ Mechanical pinch valve open (standard) or closed

▶ 3/2-way solenoid valve, closed with zero current (normally closed)

↳ Mechanical pinch valve closed

#### Optional equipment:

▶ Light connector with protective circuit (visual switching indicator)

**i** (already included in the 1/8" versions)

▶ Various different connection sockets

▶ Special coils with less power consumption

▶ Low temperature versions down to -30 °C



Further information on the available solenoid valves can be found in the **data sheet on the subject of solenoid valves**.

▶ Speak to your product consultant!



Control valves are also available in ATEX-compliant versions for the RV series

▶ Speak to your product consultant!

Further information available on our website under:

Products ▶ Accessories

### Control valve (manually and air operated)

▶ Piston valve with spring-return mechanism.

▶ All connections can be freely used.

▶ Also available in Ex-protected version.





# Optional accessories for Mechanical Pinch Valves

Available for series:

**Positioner, electro-pneumatic**

**RV**

**OV**

**VZ**



Example illustration

The electro-pneumatic positioner enhances your mechanical pinch valve so that the opening / closing level of the sleeve can be infinitely adjusted.

As a result, the pneumatically controlled positioner enables you to dose the flow of the medium. The positioner is suitable for both single and double-acting pneumatic drives on the mechanical pinch valves.

To adjust the closing level of the mechanical pinch valve with the help of the electro-pneumatic positioner, the positioner converts the electrical input signal (4 ~ 20 mA) into a pneumatic signal.

The electro-pneumatic positioner is so to speak an intermediate solution to an electric drive. Precise reproducibility or repeat accuracy of the positioning with the electro-pneumatic positioner cannot be compared to control the valve with an electric motor due to external influences such as friction. In addition, the previously defined setting point can vary depending on the direction of travel (from a closed position to the desired setting position or from an open position to the desired setting position).

► If you require a precisely reproducible setting position from every direction, you should set the mechanical pinch valve using an electric drive (electric motor) and a control unit.



You can receive further information on this accessory from your product consultant.

► Speak to your product consultant!

Further information available on our website under:

**Products ► Accessories**



# Optional accessories for Mechanical Pinch Valves



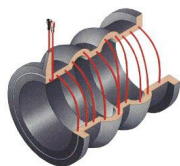
## Sleeve wear monitoring

Available for series:

RV

OV

VZ



Example illustration

Sleeves with special wear monitoring are available on request for mechanical pinch valves in the RV series. You can thus detect any fault or wear to the sleeve without having to remove the valve from the pipeline and dismantle it.

Do you want to detect a worn or faulty sleeve in order to prevent any unnoticed contamination of the control room for the mechanical pinch valve or the system?

To meet this requirement, AKO Armaturen offers optionally available sleeve designs that provide you with feedback in the event of a faulty sleeve or wear.

The system uses a monitoring wire that is permanently installed in the sleeve. If the electrical resistance running through the wire changes then the monitoring wire is either broken (faulty sleeve) or frayed (wear).

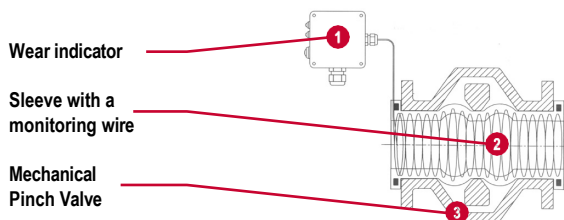
This allows you to respond quickly in the event of a fault and avoid any negative implications of the failure of the valve. In the event of a warning about wear to the sleeve, the replacement of the sleeve can be planned without any undesired downtimes.

### Required components:

- ▶ If you select a sleeve with wear monitoring, you require an additional wear indicator that provides you with feedback about any drop in voltage.

➔ See the accessory [wear indicator with feedback](#) ↗.

### Circuit diagram:



**i** You can receive further information on **sleeves with monitoring wires** from your product consultant.

▶ *Speak to your product consultant!*

Further information available on our website under:  
**Products ▶ Accessories**



# Optional accessories for Mechanical Pinch Valves

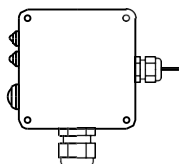
Available for series:

## Wear indicator with feedback

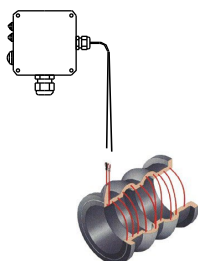
RV

OV

VZ



Example illustration



The wear indicator provides visual feedback – or a feedback signal to the process control system – about an existing fault or wear to a sleeve with wear monitoring.

If there is a change in the electrical resistance due to a breakage or wear to the monitoring wire, this is indicated by the red Alarm LED.

If the electrical voltage is flowing normally through the monitoring wire, only the green Power LED will light up.

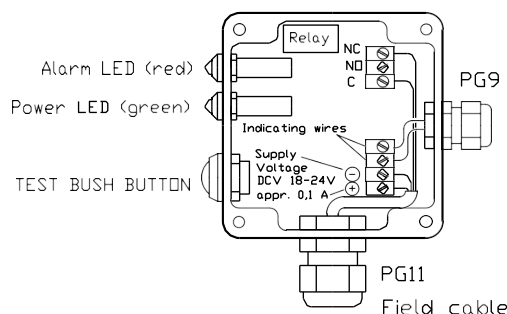
### Specifications:

► Protection class:	IP65
► Dimensions:	80 mm x 82 mm x 55 mm
► Setting range:	0.5 – 3.5 MΩ
► Operating voltage:	18 – 24 V DC (approx. 0.1 A)
► Switching power:	48 V DC / max. 0.3 A 24 V DC / max. 0.5 A 120 V AC / max. 1.0 A

You can receive further information on the **wear indicator** from your product consultant.

► *Speak to your product consultant!*

### Wiring diagram:



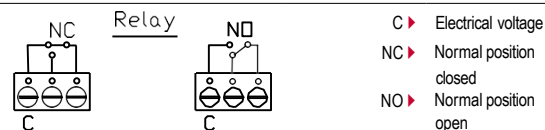
Further information available on our website under:

Products ► Accessories

A **terminal box** is also available separately without a wear indicator and without a relay output.

► *Speak to your consultant!*

### Assignment of the relay contacts:



# Optional accessories for Mechanical Pinch Valves

Available for series:

## Transducer / proximity switch

RV

OV

VZ

Mechanical limit switch



Example illustration

A transducer fitted to the mechanical pinch valve can be used to process and display the current operating position (open / closed) of your mechanical pinch valve as an electrical signal. The transducers work inductively, mechanically or magnetically.

Proximity switch (inductive) / limit switch (mechanical):

RV VZ

After reaching the *open* or *closed* position, an inductive or mechanical contact in the proximity switch / limit switch is closed.

This signal can provide feedback on the "open" and "closed" state for further processing in a process control system.

Transducer (magnetic):

OV

After reaching the open or closed position, a magnetic contact (reed contact) in the transducer is closed. The transducer is switched by a magnetic field generated by a magnetic strip on the piston of the pneumatic cylinder.

This signal can provide feedback on the "open" and "closed" state for further processing in a process control system.

Inductive proximity switch



Example illustration

### Possible enhancement:

OV RV

#### ► Moving to intermediate positions

- ↳ Using additionally installed transducers / proximity switches or by varying the position of the transducer / proximity switch and using an additional pneumatic control, the mechanical pinch valve can also be moved to corresponding intermediate positions and also individual end positions.

Magnetic transducer



Example illustration



Further information on this accessory can be found in the **data sheet on the subject of transducers / proximity switches / limit switches**.

- Speak to your product consultant!
- Download from the AKO website

Further information available on our website under:

Products ► Accessories

