

Optional accessories for Air Operated Pinch Valves

Accessories for Air Operated Pinch Valves

VF Series | VM Series | VMC Series | VMCE Series | VMP Series | VT Series | RVA Series



Including all Ex-protected series versions (e.g. VFX)



Technical details subject to change without notice.



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Optional accessories for Air Operated Pinch Valves

Example illustrations

Pressure switch

Compressed air monitoring & feedback of the switching state of the pinch valve

► [Page 9](#) ➤

Safety arrangement (protection circuit)

Keeps the pinch valve closed in the event of a loss of the compressed air supply / power cut

► [Page 12](#) ➤

Solenoid valve

Control valve for closing and opening the pinch valve

► [Page 7](#) ➤

Quick exhaust valve

Quick removal of the compressed air
→ quick opening of the pinch valve

► [Page 10](#) ➤

Proportional pressure regulator valve

Enables control of intermediate positions and central control with varying settings.

► [Page 17](#) ➤

Pressure & filter regulator

Individually set the pressure & remove condensate

► [Page 6](#) ➤

Visual pressure indicator

Visual feedback of the current switching state of the pinch valve

► [Page 8](#) ➤

AKOVAC - Vacuum-Units

Basic

Module for vacuum compensation

► [Page 14](#) ➤

Perfect

Module for vacuum compensation incl. pressure settings

► [Page 14](#) ➤

Central

Centralized module for vacuum compensation

► [Page 15](#) ➤

Back-flow preventer

Prevents back flow of the medium into the control line and control units. e.g. in the event of a faulty sleeve

► [Page 11](#) ➤

Pressure relief unit

Protects against excessive operating pressures or excessive pressure in pumps and systems

► [Page 16](#) ➤

Mounting bracket

Compact and stable accessory for installing items on the pinch valve

► [Page 18](#) ➤

Compressed air supply tank

Enables the closing of the pinch valve in the event of a loss of the compressed air supply

► [Page 13](#) ➤



Optional accessories for Air Operated Pinch Valves

Pinch valve accessories from specialists

AKO Armaturen offers you a series of accessories for all air operated pinch valve series.

These accessories can be used to expand the functionality of the AKO pinch valves 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 prepared for use on-site by our experienced installers.

There are generally two possibilities for installing the required accessory on the pinch valve:

- ▶ Directly on the compressed air connection
- ▶ Attached to the pinch valve housing using the mounting bracket
 - ↳ Or you can install them away from the pinch valve

i In order to avoid damage during transport, accessories intended for installation to the compressed air connection are usually not sent fitted to the valve. However, installation to the compressed air inlet on the pinch valve can be completed quickly on-site – no settings are required! This task has already been completed by AKO.

i **Note:** If the sleeve breaks, the transported medium can be pushed into the control pressure line or control components and cause damage. Therefore, we recommend where possible fitting a back-flow preventer ↗.

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 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 can also be supplied in ⚡-protected versions according to **2014/34/EU (ATEX)**.

🔴 Please speak to your product consultant in this case.

Note: 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).



Optional accessories for Air Operated Pinch Valves

Installation sequence for the pinch valve accessories

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

i Examples of possible combinations of accessories

► Example 1:

Pressure / filter regulator → Solenoid valve → Quick exhaust valve

► Example 2:

Pressure / filter regulator → AKOVAC Perfect

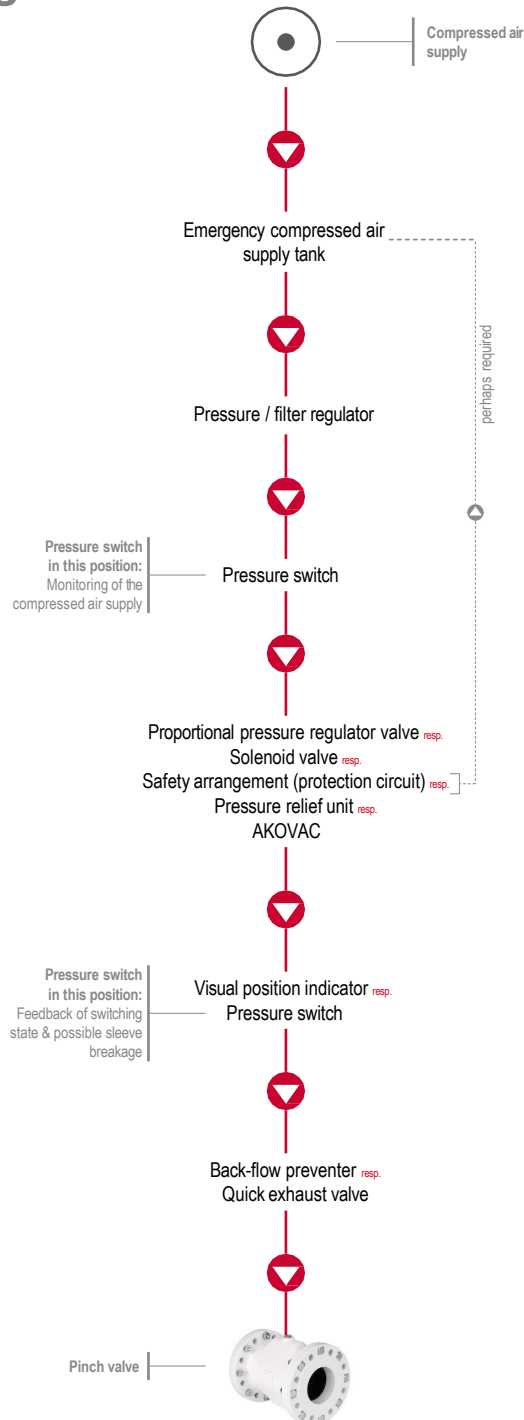
► Example 3:

Pressure / filter regulator → Pressure switch → Compressed air supply tank → Safety arrangement (protection circuit) → Pressure switch



Figure:

Pinch valve with a pressure switch → AKOVAC Basic →
Safety arrangement (protection circuit) → Pressure switch



Optional accessories for Air Operated Pinch Valves

What accessories do I need?

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

In general, our accessories can be used in combination on the 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 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 receive electrical feedback on the switching state (open or closed) of your pinch valve?

You require: *Pressure switch*
▶ [Page 9](#) ↗

▶ Do you want to receive feedback when not enough pressure can be supplied, or the compressed air supply has been lost?

You require: *Pressure switch*
▶ [Page 9](#) ↗

▶ Do you want to receive feedback about a possible sleeve breakage?

You require: *Pressure switch*
▶ [Page 9](#) ↗

▶ Do you want the pinch valve to close in the event of a loss of the compressed air supply?

You require: *Compressed air supply tank*
▶ [Page 13](#) ↗

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

You require: *3/2 | 5/2-way solenoid valve*
▶ [Page 7](#) ↗

▶ Do you want to keep a closed valve in a closed state in the event of a loss of the compressed air supply?

You require: *Safety arrangement (protection circuit)*
▶ [Page 12](#) ↗

▶ Do you want to use the pinch valve at operating pressures > 0.1 bar negative pressure?

You require: *AKOVAC - Vacuum-Units*
▶ [Page 14](#) ↗

▶ Do you want the pinch valve to open at a particular pressure in the pipeline?

You require: *Pressure relief unit*
▶ [Page 16](#) ↗

▶ Do you require other setting positions (e.g. 50 % open) in addition to the normal valve settings of "open" or "closed"?

You require: *Proportional pressure regulator valve*
▶ [Page 17](#) ↗

▶ Do you want to be able to visually check the switching state (open or closed) of your pinch valve?

You require: *Visual pressure indicator*
▶ [Page 8](#) ↗

▶ Do you want to prevent the medium being forced into the compressed air line or other attachments in the event of a faulty sleeve?

You require: *Back-flow preventer*
▶ [Page 11](#) ↗

▶ Do you want the pinch valve to open quicker?

You require: *Quick exhaust valve*
▶ [Page 10](#) ↗

▶ Do you want to safely install the accessory away from the pinch valve?

You require: *Mounting bracket*
▶ [Page 18](#) ↗



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Pressure regulator | Pressure / filter regulator



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 pinch valve. The optimum control pressure for the sleeve 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 valve. The condensate and impurities collected in the container can be removed using the drain plug. The filtering function also protects all downstream components – such as the solenoid valve – against wear.

► 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 ¼"	G ½"
► Connection:	G ¼"	G ½"
► 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 Air Operated Pinch Valves

Available for all series of air operated pinch valves

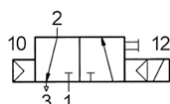
3/2 or 5/2-way solenoid valve



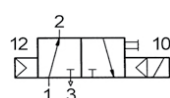
Example illustration

3/2-way

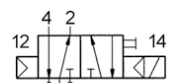
closed with zero current



open with zero current



5/2-way



Example illustrations

These control valves are required for pinch valves without centralised (or external) compressed air management. The solenoid valve controls the supply of the required compressed air directly on the pinch valve to close and open it.

AKO 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 also stand out due to a high air flow (flow capacity) for quicker opening (4 mm (1/8") with 360 NI/min, 9 mm (3/8") with 1,580 NI/min or 14 mm (1/2") with 3,300 NI/min) and are fitted with magnetic coils with improved protection against moisture.

► **Ideal installation position:** To achieve the most efficient / economical operation, the solenoid valve should be installed as near as possible to the pinch valve – ideally directly on the pinch valve. This will ensure that the quickest opening/closing time and the most economical air consumption are achieved.

Versions available:

Connection options:

- 1/8" (recommended for: DN 10 – 25)
- 1/4" (recommended for: DN 32 – 200) (Standard)
- 1/2" (recommended for: DN 250 – 300)

Voltage options:

- 24 VDC
- 230 VAC

Setting options:

- **Solenoid valve open with zero current** (normally open)
 - ↳ Pinch valve closed
- **Solenoid valve closed with zero current** (normally closed)
 - ↳ Pinch valve open

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
- Vacuum variants (+ auxiliary control pressure)
- Low temperature versions down to -30 °C

Control valve (manually and air operated)

- Piston valve with spring-return mechanism.
- All connections can be freely used.
- Also available as an Ex-protected version.

i 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!*

Ex **Control valves** are also available in ATEX-compliant versions

► *Speak to your product consultant!*

i Versions for use in a **vacuum** are available. You can find more information in the data sheet on the subject of solenoid valves.

► *Speak to your product consultant!*

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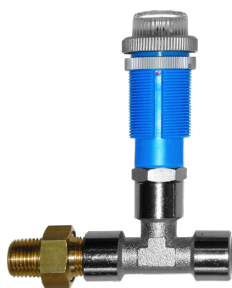
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Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Visual pressure indicator



Example illustration

The visual pressure indicator can be used for the visual control or display of the current switching state (open / closed) of a pinch valve.

The visual pressure indicator is installed before the pinch valve and provides visual feedback as soon as the compressed air supplied to the valve exceeds a value of 1.5 bar. If the control pressure exceeds 1.5 bar, a red plastic cover is easily visible in the inspection glass.

Pinch valve, no pressure (open)
Control pressure < 1.5 bar



Pinch, valve, pressurised (closed)
Control pressure > 1.5 bar



Specifications

▶ Connection for pinch valve:	G 1/4" (external)
▶ Connection for control air :	G 1/4" (internal)
▶ Temperature:	+2 °C - +45 °C
▶ Medium:	Compressed air, filtered
▶ Pressure range:	1.5 - 8 bar
▶ Indicator colour:	red

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

▶ *Speak to your product consultant!*

▶ *Download from the AKO website*



Further information available on our website under:

Products ▶ Accessories



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Pressure switch



Example illustration

NOTE

Alternatively, a digital pressure switch for vacuum operation (-1 to +10 bar) is also available.



The pressure switch monitors the pressure in the compressed air system to check the compressed air applied to the pinch valve. In addition, it displays the switching state (open/closed) of the pinch valve. It converts a pressure signal into an electrical signal.

The pressure switch can also be used to monitor sleeve breakage. In the event of this type of problem with the sleeve, it is generally no longer possible to generate the required closing pressure in the pressure chamber between the valve housing and the sleeve. The compressed air will then usually be blown through the break in the sleeve and into the feed line.

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

Possible installation positions:

- ▶ **Installation in front of the solenoid valve**
 - ↳ Monitoring of the compressed air supply (loss of supply or it falls below the required level)
 - ↳ Also possible when the pinch valve is open.
 - ↳ Can also monitor the compressed air supply to a plurality of pinch valves in this position.
- ▶ **Installation between the solenoid valve and the pinch valve**
 - ↳ Monitoring the control air pressure applied to the pinch valve → Feedback on the switching state (closed / open).
 - ↳ Monitoring possible sleeve breakage → A loss of control air pressure can indicate damage to the sleeve.
(Please note: The performance of the compressed air supply and the size of the break in the sleeve must be proportional to detect a loss in compressed air)



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

▶ Speak to your product consultant!



Pressure switches are also available in AT-EX-compliant versions

▶ Speak to your product consultant!

Further information available on our website under:

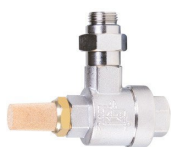
Products ▶ Accessories



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Quick exhaust valve



Example illustration

If you want to significantly speed up the opening process for closed (those pressurised using compressed air) pinch valves, a quick exhaust valve can be installed.

The quick exhaust valve allows the compressed air within the valve to escape quickly, and the sleeve opens faster as a result. The sleeve can thus open significantly quicker, especially in the case of valves with larger nominal sizes.

Other advantages:

► Due to the quicker opening of the sleeve and the fact that the complete diameter of the pipeline is opened up more quickly, the quick exhaust valve also means that the valve experiences less wear and thus has a longer service life because the demands placed on the sleeve are reduced (less wear on the inside of the sleeve caused by the medium).

► The frequency of the possible switching cycles (open / closed) for the pinch valve can be increased as a result.

Specifications:

► Connecting thread:	G ¼" and G ½"
► Temperature:	-10 °C – +70 °C

Optional equipment:

- **Silencer**
 - ↳ Reduced noise when blowing out.

Incompatibility:

- **With the safety arrangement (protection circuit)**
 - ↳ As the quick exhaust valve creates an additional leakage point, it will reduce the closing time for the pinch valve in the event of a loss of the compressed air supply.
- **With AKOVAC Basic & AKOVAC Comfort**
 - ↳ However, a special quick exhaust valve is available for the AKOVAC Basic.

i Further information on this accessory can be found in the **data sheet on the subject of quick exhaust valves**.

► *Speak to your product consultant!*

Further information available on our website under:
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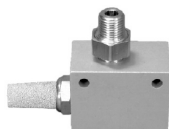
NOTE
Recommended installation: <ul style="list-style-type: none"> • When using solenoid valves with low air throughput. • When using solenoid valves which are not directly mounted to the pinch valve. • If the opening time of the pinch valve is greater than one second (starting approximately from DN 50) and a faster opening time is needed.



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Back-flow preventer



Example illustration

By adding a back-flow preventer to the pinch valve, it prevents the medium from flowing back into the control line and control units in the event of a sleeve breakage.

Any contamination of the control-related fittings and the compressed air line is prevented as a result. In the event of a faulty sleeve, the medium is drained by the back-flow preventer. Therefore, it is only the back-flow preventer itself that is contaminated or damaged.



Please note that if using **hazardous media**, a back-flow preventer can **ONLY be used if the drainage process is controlled**. It must be ensured that the medium cannot escape into the atmosphere or environment and thus pose a hazard.

Specifications

► Connections:	G 1/8", G 1/4" and G 1/2"
► Temperature range:	-10 °C – +70 °C

Components:

- Back-flow preventer
- Silencer
- Screw connections



Further information on this accessory can be found in the **data sheet on the subject of back-flow preventers**.

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

Further information available on our website under:

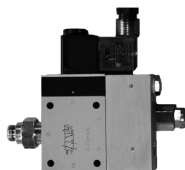
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Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Safety arrangement (protection circuit)



Example illustration

Pinch valves from AKO are directly supplied with compressed air. In the event of a loss of the compressed air supply, the required closing pressure cannot be maintained within the pinch valve, and the sleeve will start to open. However, a safety arrangement (protection circuit) can maintain the control pressure in the pinch valve and keep the sleeve closed.

The solenoid valve installed in the safety arrangement (protection circuit) remains closed in the event of a loss of the compressed air supply and prevents the compressed air in the valve from escaping. If the compressed air supply is interrupted, the solenoid valve cannot independently open for safety reasons. Once the compressed air supply has been restored, the safety arrangement (protection circuit) can be reset.

NOTE

In the event of a loss of the compressed air supply, do you want an opened pinch valve to close automatically and remain closed? In addition to the safety arrangement (protection circuit), you will also require a

◉ compressed air supply tank. ➔

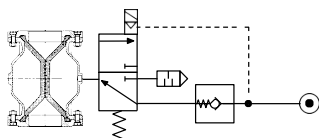
NOTE

If the safety arrangement (protection circuit) is ordered in combination with a pinch valve, the entire unit will be inspected for tightness.

Specifications:

- ▶ **Special solenoid valve with very high impermeability ($\frac{1}{4}$ ")**
- ▶ **Solenoid valves are individually checked for their tightness**
- ▶ **Reliable closing time over a long period of time**
 - ➔ A reliable closing time is dependent on the air volume and the tightness of the pinch valve

Switching model:



i Further information on this accessory can be found in the **data sheet on the subject of safety arrangements (protection circuits).**

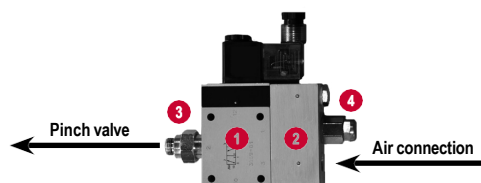
▶ *Speak to your product consultant!*

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Components:



- 1 Solenoid valve with light connector and protective circuit
- 2 Control block
- 3 Screw connection (G $\frac{1}{4}$ " + O-ring)
- 4 Noise absorbers



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Compressed air supply tank



Example illustration

In combination with a safety arrangement (protection circuit) ➤, the compressed air supply tank can be used to keep the pinch valve closed even in the event of a loss of the central compressed air supply.

In the event of a loss of the compressed air supply, the pinch valve is supplied with compressed air from the supply tank and either closed or kept closed.

Depending on the storage capacity of the tank and the compressed air consumption of the pinch valve, the compressed air stored in the supply tank can also be used to carry out further switching cycles.

► **Please note:** Once the compressed air in the supply tank has been used up, it will no longer be possible to keep the pinch valve closed in the event of a loss of the central compressed air supply.

NOTE

The following parameters are required for deciding on the correct size for the tank:

From the operator:

1. Min. supply pressure that is available.
2. Operating pressure
3. Number of switching processes required using the compressed air supply tank
4. Number of pinch valves to be supplied
5. Article number of the pinch valves

Based on this information, AKO will calculate which size of required tank taking into account the optimal operating pressure.

Optional equipment (recommended):

► Non-return valve (mandatory)

- ↳ Ensures that the compressed air cannot escape from the supply tank in the event of a loss of the compressed air supply.

► Pressure & filter regulator (mandatory)

- ↳ Used to reduce the output pressure from the compressed air supply tank to the optimal operating pressure required.

► Pressure switch

- ↳ Provides electrical feedback in the event of a possible loss of the compressed air supply.

► Safety valve

- ↳ Releases compressed air from the supply tank if the maximum permitted pressure is exceeded.

► Pressure gauge

- ↳ Use to read the pressure that is still available.

► Drainage valve

- ↳ Used to remove any possible condensate that may occur.

You can receive further information on this accessory from our pinch valve experts.

► *Speak to your product consultant!*



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Vacuum unit - AKOVAC Basic & AKOVAC Perfect



Example illustration

▲
AKOVAC Basic
▼
AKOVAC Perfect



Example illustration

NOTE

AKOVAC Basic: The closing pressure & vacuum level cannot be set separately.

High vacuum & high closing pressure → higher wear on the sleeve.

AKOVAC Perfect enables the separate setting of the closing pressure & vacuum level.

The sleeve is placed under less strain → longer service life.

Pinch valves can also be used for processes in which the pipeline is operated in a vacuum – e.g. in vacuum conveyance.

As the sleeve will begin to contract at a negative pressure of > 0.1 bar, this should be counteracted using a vacuum unit.

The AKOVAC vacuum units perform precisely this task. They generate a counteracting vacuum (vacuum compensation) within the valve housing that prevents the sleeve from contracting. The constriction-free passage through the pinch valve is thus fully maintained. This reduces the wear on the sleeve to a minimum and significantly increases its service life.

► Another application:

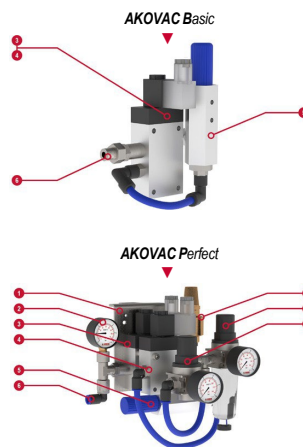
The AKOVAC vacuum units cannot only be used for vacuum processes: If you use pinch valves that are normally in a closed state and are only opened for a short period of time, it is possible that the diameter of the pipeline will be initially restricted in the area of the pinch valve when it has been opened. This is because it may take a while for the sleeve to open to its full diameter following long periods held in a closed state.

This temporary deformation can be counteracted with the help of the AKOVAC vacuum unit. The vacuum generated in the valve housing pulls the sleeve apart and thus restores the full constriction-free diameter of the sleeve. This also minimises wear and significantly extends the service life of the sleeve.

► **Info:** For quicker opening times, the **AKOVAC Basic** is optionally available with a special quick exhaust valve.

Components:

Mounting bracket	1
Pressure display (pinch valve)	2
Solenoid valve for control/closing pressure	3
Solenoid valve for vacuum level	4
Vacuum pump	5
Compressed air connection to pinch valve	6
Quick exhaust valve	7
Filter / pressure regulator (compressed air supply)	8
Pressure regulator (control/closing pressure)	9



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

► *Speak to your product consultant!*

► *Download from the AKO website*



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Vacuum unit - AKOVAC Central & AKOVAC CentralUnit



AKOVAC Central

AKOVAC CentralUnit



Example illustration

AKOVAC-Central acts (in contrast to Basic and Perfect) as a central controlled vacuum-unit. It is able to supply several decentralised control units (CentralUnit) at various pinch valve with vacuum.

With AKOVAC-Central and the AKOVAC-CentralUnits, you are able to supply several pinch valves with vacuum using just one vacuum pump. This saves air, energy and costs.

The centralised supply via a vacuum pump makes sense wherever several pinch valves have approximately the same operating parameters and a vacuum supply is necessary or advantageous for operation.

If the pinch valves used have different requirements or operating parameters, AKOVAC-Basic or AKOVAC-Perfect are recommended.

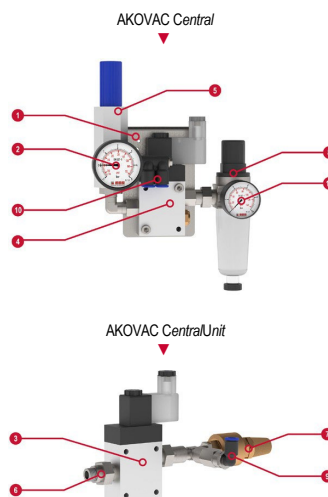
i Further information on this accessory can be found in the **data sheet on the subject of AKOVAC.**

► Speak to your product consultant!

► Download from the AKO website

Components:

Mounting bracket	1
Vacuum indicator (pinch valve)	2
Solenoid valve for control closing pressure	3
Solenoid valve for vacuum level	4
Vacuum-pump	5
Compressed air connection to the pinch valve	6
Quick exhaust	7
Filter-/Pressure regulator (compressed air supply)	8
Vacuum connection from AKOVAC-Central	9
Vacuum connection from AKOVAC-CentralUnit	10
Pressure indicator (vacuum pump)	11



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Pressure relief unit



Example illustration

LV version

For use with an available compressed air supply.

LNV version

For use without an available compressed air supply.



Example illustration

NOTE

The following generally need to be adapted to the process in order to avoid the pulsating opening and closing of the pinch valve:

- Flow / feed rate
- Operating pressure
- Nominal size of the pinch valve

The pressure relief valves helps you to protect your pumps and systems against excess pressure and any associated overloading and faults.

The pressure relief unit is directly installed on the pinch valve. The optimal control pressure is applied and the valve remains closed in its normal position.

If the line pressure exceeds the previously defined operating pressure in normal operation (e.g. due to a blockage or undesired narrowing of the pipeline), the pinch valve will slowly start to open and the excess pressure can escape. An installed pressure switch will then also provide feedback on the opening of the sleeve.

In addition, the pressure relief valve can be used as a pulsation damper. However, it must be adjusted to the specific process.

Versions:

► Versions for use with an available compressed air supply (LV version)

► Versions for use without an available compressed air supply (LNV version)

- ↳ Both versions are available incl. the pinch valve or as a retrofitting kit without the pinch valve.
- ↳ If an LNV version is ordered with the pinch valve, the entire unit will be inspected for tightness.

Optional equipment:

► Pressure switch (digital)

- ↳ Featuring two switching points (control pressure too high or too low) and a digital pressure display. → More precise feedback.

Switching point 1: Feedback about the control pressure / closing pressure being too high. The sleeve opens due to the high operating pressure.

Switching point 2: Feedback about the control pressure / closing pressure being too low. The sleeve opens due to the low control pressure / closing pressure.

► Air pump (only for type LNV)

- ↳ If a compressed air supply is not available or manual actuation is desired, the pressure within the pressure relief valve can be generated using an air pump.

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

► *Speak to your product consultant!*

► *Download from the AKO website*

Further information available on our website under:

Products ►
Pressure relief valve

Intended purpose:

- Pressure relief valve
- Pressure monitoring valve
- Relief valve

Specifications

- **Max. operating temperature:** -10 °C – +60 °C



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Proportional pressure regulator valve



Example illustration

Optional equipment

Electrical connection cable
(recommended)
Wiring box M12, angled with
5m cable

NOTE

The proportional pressure regulator valve is adjusted based on the nominal size of the respective pinch valve.

NOTE

The ratio between the input power signal (4 - 20 mA) and the pressure control range can be individually adjusted.

NOTE

Breakdown function:
In the event of a loss of the electricity or compressed air supply, the proportional valve will move to the "venting" setting (fail open).

Alongside the two standard valve settings (open / closed), the valve can also be moved to intermediate settings – such as 50% open – with the help of a proportional pressure regulator valve. A proportional pressure regulator valve is basically an electrically controlled pressure regulator.

The valve is moved into the intermediate settings by proportionally converting an electrical signal into pneumatic pressure.

The pinch valve can be controlled centrally and provided with varying settings (e.g. for optimising filling processes) with the help of a proportional pressure regulator valve.

A setpoint generator (e.g. PLC control 4-20mA) can be used to move the valve manually to a certain position.

Specifications

► Connection:	G ¼" (internal)
► Operating medium:	filtered (5 µm) and dry compressed air
► Flow rate:	1100 Nl/min
► Input / output signal:	4 - 20 mA (0 - 10 V, 0 - 20 mA)
► Pressure control range:	0 - 9 bar
► Input pressure (min.):	max. required optimal control pressure for the pinch valve + 1 bar
► Input pressure (max.):	10 bar
► Voltage supply:	24 VDC
► connection, electrical:	M12 connector
► Temperature:	±0 °C - +50 °C
► Protection class:	IP65

► **Note:** Using a proportional pressure regulator valve enables the air operated pinch valve to be roughly controlled. However, the repeat accuracy is not very precise (due to the compressible control air) – although it is sufficient in many cases.

If you need to precisely control / move the pinch valve into the intermediate positions, you should use a mechanical pinch valve with pneumatic drive and positioner or an electric drive with a control unit.

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

► *Speak to your product consultant!*

► *Download from the AKO website*

Further information available on our website under:

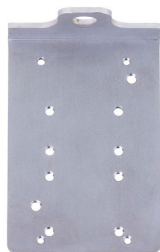
Products ► Accessories



Optional accessories for Air Operated Pinch Valves

Available for all series of air operated pinch valves

Mounting bracket



Example illustration

The mounting bracket can be used to safely and securely install larger attachments on the pinch valves.

In addition, the mounting bracket also enables you to install the accessories in a compact, safe and secure manner away from the pinch valves.

Comparison of the attachments:

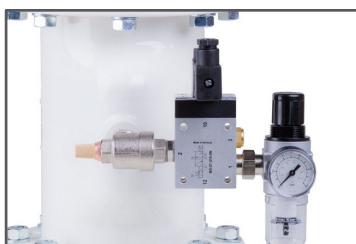


Fig. 1

Accessory directly installed on the compressed air connection

i In order to avoid damage during transport, accessories intended for installation to the compressed air connection are usually not sent fitted to the valve. However, installation to the compressed air inlet on the pinch valve can be completed really quickly on-site – no settings are required! This task has already been completed by AKO.



Fig. 2

Accessory installed on the pinch valve housing using the mounting bracket

i Attachment at a mounting bracket is only possible for the following series:

- ▶ VF series
- ▶ VMC series (DN 65 – DN 150)

