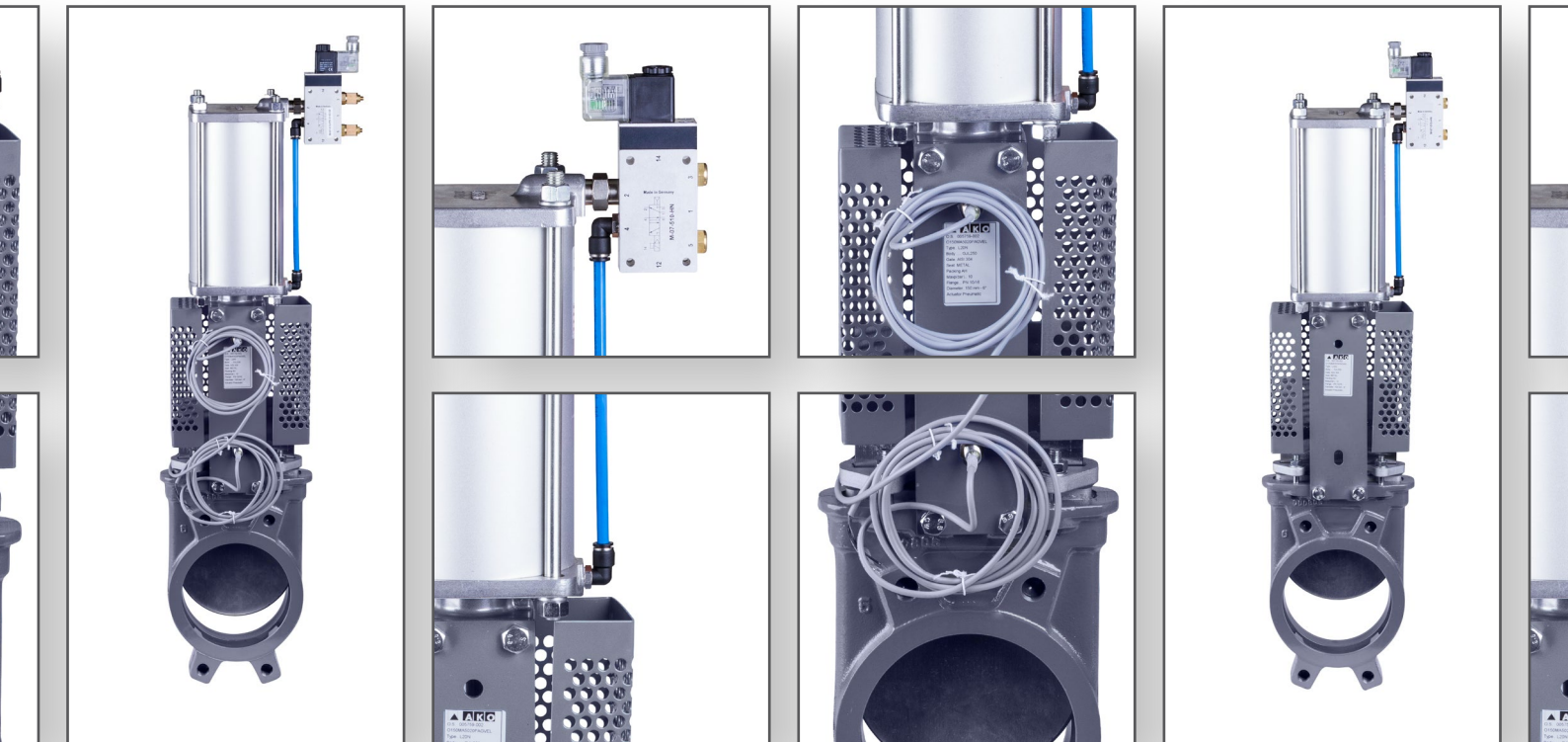


## Accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C





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## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Example illustrations

### Solenoid valve

Compressed air control unit directly on the knife gate valve

» [Page 6](#) »

**A** **B** **C**



### Flow control silencer

Enables you to control the opening & closing speed of the knife gate valve.

» [Page 7](#) »

**A** **B** **C**

### Transducer

Enables you to query the position of the knife gate valve.

» [Page 9](#) »

**A** **B** **C**

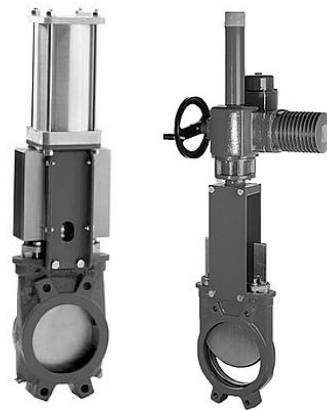


### Pressure / filter regulator

Carry out individual pressure settings

» [Page 5](#) »

**A** **B** **C**



### Positioner, electro-pneumatic

Enables you to set any intermediate settings

» [Page 8](#) »

**A** **B** **C**

- Suitable for knife gate valves with a **pneumatic** drive (pneumatic cylinder)
- Suitable for knife gate valves with a **manual** drive (e.g. handwheel)
- Suitable for knife gate valves with an **electric** drive (electric motor)

- A** Suitable for **knife gate valves type A**
- B** Suitable for **knife gate valves type B**
- C** Suitable for **knife gate valves type C**

## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

### Accessories for knife gate valves from specialists

AKO Armaturen offers you a range of accessories for the AKO knife gate valves of type A, B and C.

These accessories can be used to expand the functionality of the various types of knife gate valve without impacting the accustomed reliable operation and long service life of the individual components. In addition, the process using the installed accessory can reduce individual malfunctions and increase the service life of the components even further!


You can order the accessories separately or have them delivered pre-installed for use on-site by our experienced installers. The accessory is always fitted to the setting mechanism of the knife gate valve.

### 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 knife gate valves.
- » **Presetting / calibration of the accessories** can be carried out by AKO.
- » If desired, direct **fitting of the accessories**.
- » **High-quality products.**
- » **Receive advice about the accessories** in advance from our 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:** Knife gate 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

Example: A transducer fitted to a Knife Gate Valve

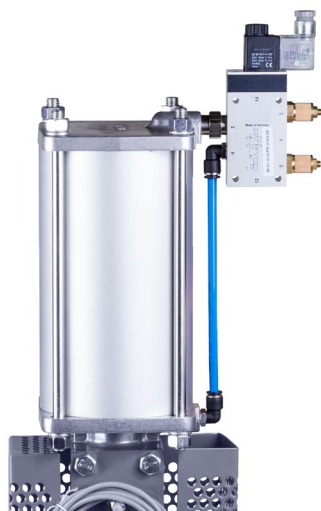


Fig. 2

Example: A solenoid valve with a flow control silencer fitted to the Knife Gate Valve



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## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

### What accessories do I need?

Using the following questions about the future functional scope of your knife gate 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 knife gate 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 knife gate valve, constantly maintain it and remove any compressed air condensate that may occur?

You require: Pressure / filter regulator

▶ [Page 5](#) ↗

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

You require: 5/2-way solenoid valve

▶ [Page 6](#) ↗

▶ Do you want to control the speed at which the slide plate closes and opens?

You require: Flow control silencer

▶ [Page 7](#) ↗

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

You require: Positioner, electro-pneumatic

▶ [Page 8](#) ↗

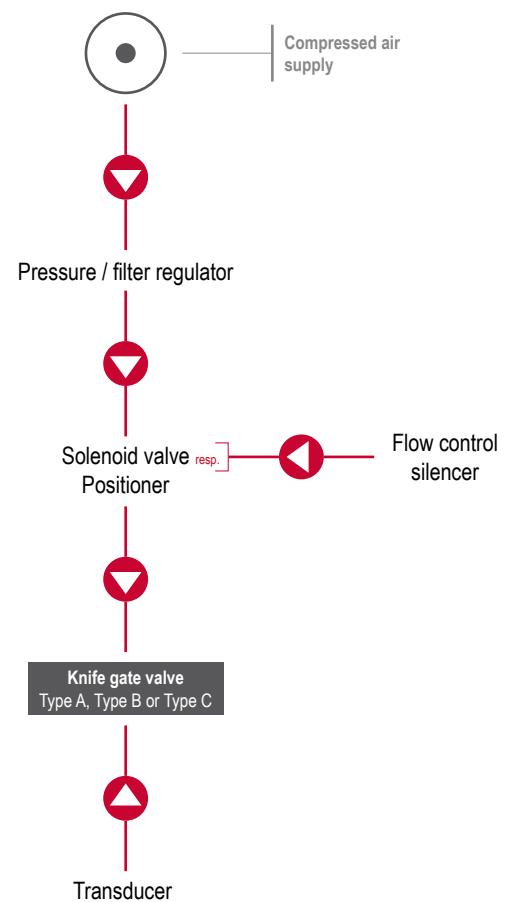
▶ Do you want to be able to query and receive feedback on the current position (closed or open) of the knife gate valve?

You require: Transducer

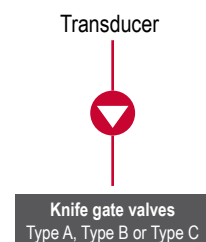
▶ [Page 9](#) ↗

### Installation sequence for Knife Gate Valve accessories

Knife gate valve (Type A, B and C) with pneumatic control



Knife gate valve (Type A, B and C) with manual control



## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Available for type:



### Pressure / filter regulator

A

B

C



Pressure regulator

Filter regulator



Example illustration

Example illustration

The filter & pressure regulator can be used to set the ideal control pressure. In addition, the installed compressed air filter removes any condensate that may occur.

#### Pressure control components:

The pressure control components ensure the ideal supply of compressed air to the knife gate valve. The desired control pressure for the pneumatic cylinder can be adjusted using the handwheel to avoid any unnecessary consumption of compressed air.

In the event of any temporary spikes in the compressed air supply, the pressure control components maintain the air pressure at a constant level.

#### Another benefit:

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

#### Compressed air filter components:

The installed compressed air filter removes any condensate into a collection container. As a result, the condensate cannot settle within the control mechanism. The condensate that collects in the container can be easily removed using the drain plug.

#### Specifications:

	G ¼"	G ½"
› Connection:	G ¼"	G ½"
› Inlet pressure:	max. 16 bar	max. 16 bar
› Outlet pressure:	0.5 - 10 bar	0.5 - 10 bar
› Nominal flow rate:	1130 NI/min	3500 NI/min
› Installation position:	vertical, drain plug at bottom	



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**



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## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Available for type:



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

A

B

C

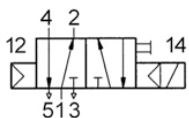


Example illustration

#### Standard version

In combination with a double-acting cylinder

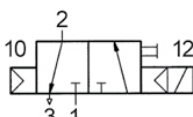
#### 5/2-way



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

#### 3/2-way

closed with zero current



Example illustration

Solenoid valves are required on knife gate valves without centralised (or external) compressed air management for controlling the compressed air supply to the pneumatic cylinder(s) that help close / open the knife gate valves. The solenoid valve also controls the removal of the compressed air to open the knife gate valve again.

AKO uses solenoid valves with electrically actuated piston valves that control the knife gate valve after switching on the voltage. In addition, the solenoid valves are fitted with a latching manual override.

#### Versions available:

##### Connection options:

- › 1/4" NW 9 (1,580 NI/min) (Standard)
- › 1/2" NW 14 (3,300 NI/min)

##### Voltage options:

- › 24 DVC
- › 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
  - ↳ Knife gate valve closed (standard) or open
- › 3/2-way solenoid valve closed with zero current (normally closed)
  - ↳ Knife gate valve closed

##### Optional equipment:

- › Light connector with protective circuit (visual switching indicator)
- › Various different connection sockets
- › Special coils with less power consumption
- › 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!

Further information available on our website under:

Products → Accessories



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## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Available for type:



### Flow control silencer

A

B

C

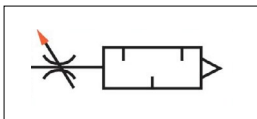


Example illustration

A flow control silencer fitted to the solenoid valve  is used to regulate the opening and closing speed of the slide plate.

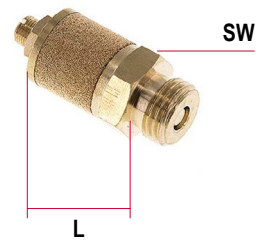
Both the closing and opening speed can be set on the flow control silencer (cone-type throttle with silencer) by regulating the desired flow rate of the exhaust air from the pneumatic cylinder on the knife gate valve. A separate flow control silencer is required for every direction of movement of the slide plate (open / close).

#### Switching symbol

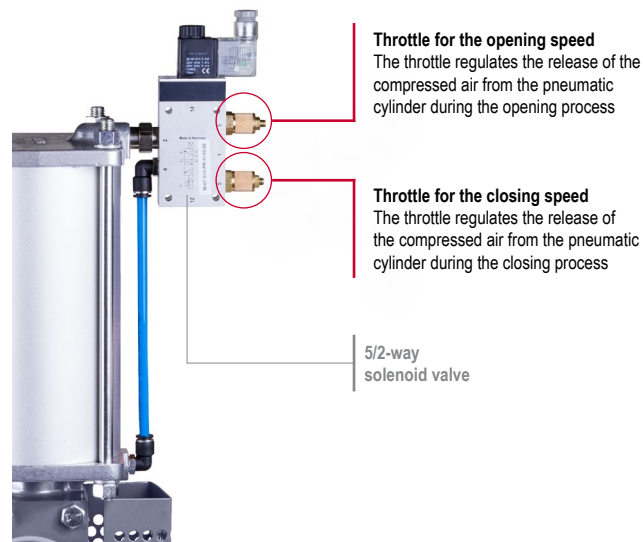


#### Specifications:

› Thread:	G 1/4"
› SW:	16 mm
› L:	24 mm



#### Flow control (throttle) function:





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## Optional accessories for Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Available for type:



### Positioner, electro-pneumatic

A

B

C



Example illustration

The electro-pneumatic positioner enhances your knife gate valve with a pneumatic drive so that the opening / closing level of the knife gate valve can be infinitely adjusted.

As a result, the pneumatically controlled positioner enables you to dose the flow of the medium. To adjust the closing level of the knife gate valve with a pneumatic drive with the help of the electro-pneumatic positioner, the positioner converts an 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 knife gate valve using an electric drive (electric motor) and a control unit.

**i** 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 Knife Gate Valves

Knife Gate Valves Type A | Knife Gate Valves Type B | Knife Gate Valves Type C

Available for type:



### Proximity switch / Limit switch

A

B

C

Mechanical limit switch



Example illustration

A proximity switch / limit switch on the knife gate valve can be used to process and display the current operating position (open / closed) of your knife gate valve as an electrical signal. The transducers work inductively (proximity switch) or mechanically (limit switch).

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.

#### Possible enhancement:

##### › Moving to intermediate positions

- ↳ Using additionally installed proximity switches / limit switches or by varying the position of the proximity / limit switch and using an additional pneumatic control, the Knife Gate Valve can also be moved to corresponding intermediate positions and also individual end positions.

Inductive proximity switch



Example illustration

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

▶ *Speak to your product consultant!*

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