

03251389

**krom  
schroder**

D GB F NL I E DK S N P GR  
TR CZ PL AUS H → www.docuthek.com

## Operating instructions

### Solenoid valve for gas

### VG 6 – VG 15/10



## Contents

<b>Solenoid valve for gas</b>	
<b>VG 6 – VG 15/10</b>	<b>1</b>
<b>Contents</b>	<b>1</b>
<b>Safety</b>	<b>1</b>
<b>Checking the usage</b>	<b>2</b>
Intended use	2
Type code	2
Part designations	2
Type label	2
<b>Installation</b>	<b>2</b>
<b>Wiring</b>	<b>2</b>
<b>Tightness test</b>	<b>3</b>
<b>Replacing the solenoid actuator</b>	<b>4</b>
<b>Maintenance</b>	<b>4</b>
<b>Assistance in the event of malfunction</b>	<b>5</b>
<b>Technical data</b>	<b>5</b>
<b>Logistics</b>	<b>6</b>
<b>Certification</b>	<b>6</b>
Declaration of conformity	6
Approval for Australia	6
Eurasian Customs Union	6
<b>Contact</b>	<b>6</b>

## Safety

### Please read and keep in a safe place



Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator. This unit must be installed and commissioned in accordance with the regulations and standards in force. These instructions can also be found at [www.docuthek.com](http://www.docuthek.com).

### Explanation of symbols

■, **1**, **2**, **3**... = Action  
▷ = Instruction

### Liability

We will not be held liable for damage resulting from non-observance of the instructions and non-compliant use.

### Safety instructions

Information that is relevant for safety is indicated in the instructions as follows:

#### **DANGER**

Indicates potentially fatal situations.

#### **WARNING**

Indicates possible danger to life and limb.

#### **! CAUTION**

Indicates possible material damage.

All interventions may only be carried out by qualified gas technicians. Electrical interventions may only be carried out by qualified electricians.

### Conversion, spare parts

All technical changes are prohibited. Only use OEM spare parts.

## Changes to edition 07.15

The following chapters have been changed:

- Installation
- Certification

## Checking the usage

### Intended use

Gas solenoid valve for safeguarding gas or air on various appliances.

This function is only guaranteed when used within the specified limits – see page 5 (Technical data).

Any other use is considered as non-compliant.

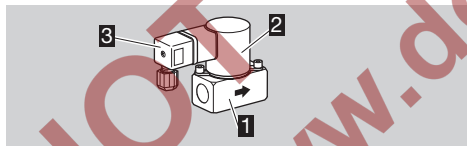
### ⚠ ATTENTION

Cleaning work on the solenoid actuator may not be performed using high pressure and/or chemical cleaning agents. This can cause moisture to get into the solenoid actuator and may lead to a dangerous failure.

### Type code

Code	Description
<b>VG</b>	Gas solenoid valve
<b>6–15/10</b>	Nominal size
<b>K</b>	Double-cone olive for 8 mm tube loosely enclosed
<b>R</b>	Rp internal thread
<b>01</b>	$p_{U \text{ max.}}$ 100 mbar
<b>03</b>	$p_{U \text{ max.}}$ 360 mbar
<b>05</b>	$p_{U \text{ max.}}$ 500 mbar
<b>18</b>	$p_{U \text{ max.}}$ 1.8 bar
<b>T</b>	Mains voltage: 220/240 V AC, 50/60 Hz
<b>Q</b>	Mains voltage: 120 V AC, 50/60 Hz
<b>K</b>	Mains voltage: 24 V DC
<b>6</b>	Connection via 3-pin standard plug and socket
<b>G</b>	Low-noise

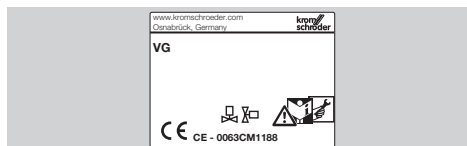
### Part designations



- 1 Housing
- 2 Solenoid actuator
- 3 Socket

### Type label

Rated voltage, electrical power consumption, installation position, max. inlet pressure  $p_{U \text{ max.}}$ , ambient temperature, enclosure and medium: see type label.



## Installation

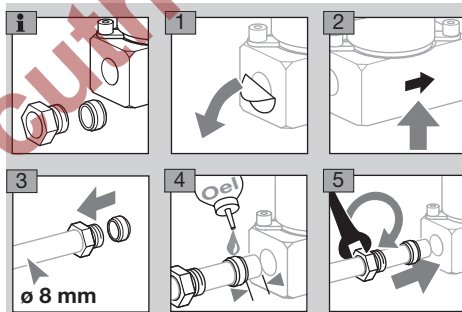
### ! CAUTION

Please observe the following to ensure that the VG is not damaged during installation and operation:

- Continuous operation at high temperatures accelerates the ageing of elastomer materials.
- Do not install or store the unit in the open air.
- Dropping the device can cause permanent damage. In this event, replace the entire device and associated modules before use.
- Check max. ambient temperature – see type label.
- Check max. inlet pressure – see type label.
- ▷ Installation position: black solenoid actuator in the vertical upright position or tilted up to the horizontal, not upside down.
- ▷ Sealing material and dirt, e.g. thread cuttings, must not be allowed to get into the valve housing.
- ▷ Install a filter upstream of every system.
- ▷ Use approved sealing material only.
- ▷ Ensure that there is sufficient space for installation and adjustment.

### VG 6K for compression fittings

- ▷ The double-cone olive and cap screw are enclosed.



## Wiring

### ⚠ WARNING

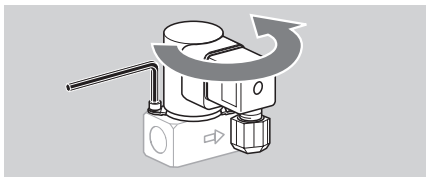
Attention! Please observe the following to ensure that no damage occurs:

- Electric shocks can be fatal! Before working on possible live components, ensure the unit is disconnected from the power supply.
- The solenoid actuator heats up during operation. Surface temperature approx. 85°C (approx. 185°F) pursuant to EN 60730-1.



- ▷ Use temperature-resistant cable (> 80°C/176°F).
- ▷ Wiring to EN 60204-1.

- 1 Disconnect the system from the electrical power supply.
  - 2 Shut off the gas supply.
- ▷ The solenoid actuator can be rotated to allow the socket for the electrical connection to be repositioned. To do so, loosen both screws, but do not unscrew completely.



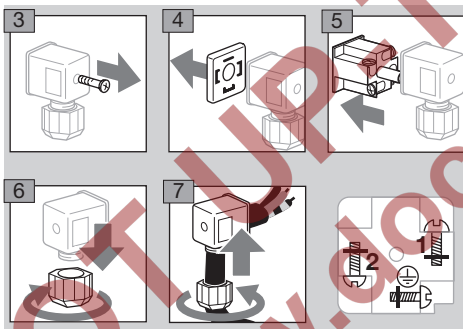
- ▷ Once the solenoid actuator is in the desired position, re-tighten the screws.

### ⚠ ATTENTION

Attention! Gas-filled space has been opened. Please observe the following to ensure that no damage occurs:

- Check for tightness, see page 3 (Tightness test)

1 = N (-), 2 = LV1<sub>V1</sub> (+)



- 8 Follow the reverse procedure when reassembling.

### Tightness test

#### ! CAUTION

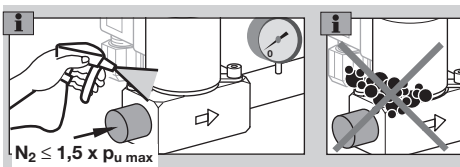
Please observe the following to ensure that the VG is not damaged during the tightness test:

- Check max. inlet pressure – see type label.
- Test pressure  $\leq 1.5 \times$  max. inlet pressure.

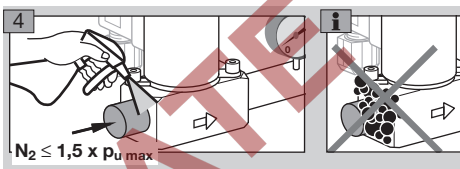
- 1 Close the solenoid valve.
- 2 Shut off the gas supply.
- 3 To be able to check the tightness, shut off the downstream pipeline as close as possible to the valve.

### ⚠ ATTENTION

If the actuator of the VG is rotated, the tightness can no longer be guaranteed. To ensure that there are no leaks, check the actuator of the VG for tightness.



### Checking for external tightness



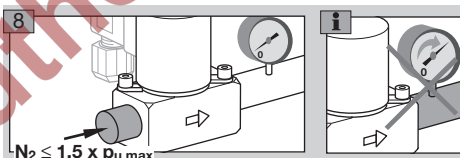
- 5 Open the solenoid valve.



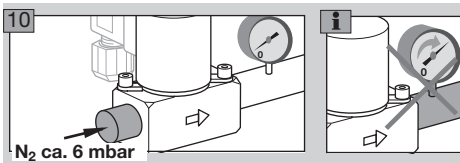
- ▷ Pipeline leaking: check the seal.

### Checking for internal tightness

- 7 Close the solenoid valve.



- 9 After 60 seconds, increase the test pressure to  $\leq 1.5 \times p_{u \max}$ .

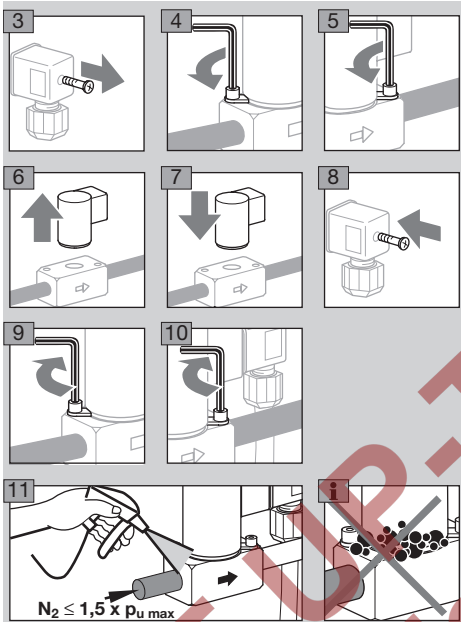


- ▷ Tightness OK: open the pipeline.  
 ▷ Unit leaking: remove the VG and return it to the manufacturer.

## Replacing the solenoid actuator

- ▷ We recommend replacing the entire actuator set when replacing the solenoid actuator.
- ▷ The actuator set is available separately as a spare part.

- 1** Disconnect the system from the electrical power supply.
- 2** Shut off the gas supply.



- 12** When the solenoid actuator is removed, the gas-filled space in the VG is opened. Therefore, check for internal tightness once the new actuator has been installed; see page 3 (Tightness test).
- 13** Tightness OK: release the gas supply.

## Maintenance

### ! CAUTION

In order to ensure smooth operation: check the tightness and function of the VG every year, or every six months if operated with biogas.

- 1** Disconnect the system from the electrical power supply.
- 2** Shut off the gas supply.

### Cleaning the strainer

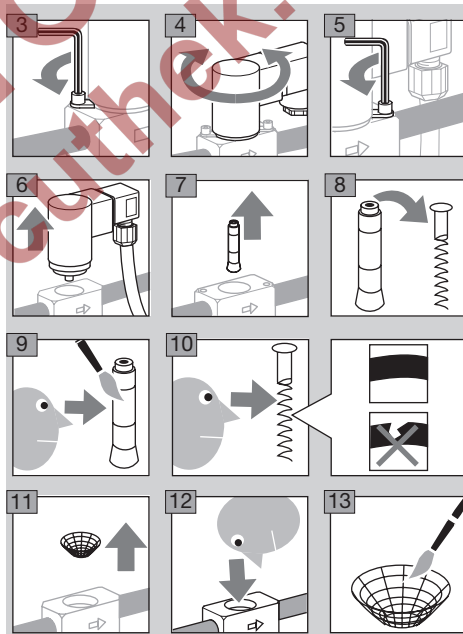
- ▷ If the flow rate is correct, see page 3 (Tightness test).
- ▷ If the flow rate has dropped, clean the strainer.

## VG 6-8



- 11** Follow the reverse procedure when reassembling.

## VG 10-15/10



- 14** Follow the reverse procedure when reassembling.

### Checking tightness and function

- ▷ When the solenoid actuator is removed, the gas-filled space in the VG is opened. Therefore, check for tightness once the actuator has been reinstalled.
- ▷ In order to determine whether the VG is tight and closes securely, check the internal and external tightness, see page 3 (Tightness test).
- ▷ Check electrical installations in line with local regulations; pay particular attention to the PE wire.

## Assistance in the event of malfunction

### WARNING

Electric shocks can be fatal! Before working on possible live components, ensure the unit is disconnected from the power supply. Fault-clearance must only be undertaken by authorized trained personnel. Unauthorized repairs or incorrect electrical connections can cause the solenoid valve to become defective. In this case, our warranty will be rendered void.

- ? Fault**
- ! Cause**
- Remedy**

#### **? The solenoid valve does not open, there is no flow downstream of the solenoid valve.**

- ! There is no power supply.**
- Have wiring checked by authorized trained personnel.
- Remove the unit and return it to the manufacturer.

#### **? The solenoid valve does not close securely, the flow downstream of the solenoid valve does not stop.**

- ! Valve seat is dirty.**
- Clean the valve seat, see page 4 (Maintenance).
- Install a filter upstream of the solenoid valve.
- ! Valve seat is damaged.**
- Remove the unit and return it to the manufacturer.
- ! Valve seal is damaged or hardened.**
- Remove the unit and return it to the manufacturer.

## Technical data

Gas types: natural gas, town gas, LPG (gaseous), biogas (max. 0.1 % by-vol. H<sub>2</sub>S) or clean air; other gases on request.

The gas must be dry in all temperature conditions and must not contain condensate.

Max. inlet pressure  $p_U$ : see type label.

Opening time:  $\leq 1$  s.

Closing time:  $\leq 1$  s.

Ambient temperature: -15 to +60°C (5 to 140°F).

No condensation permitted.

Long-term use in the upper ambient temperature range accelerates the ageing of the elastomer materials and reduces the service life (please contact manufacturer).

Storage temperature: -20 to +40°C (68 to 104°F).

Safety valve:

Class A, Group 2 pursuant to EN 161.

Mains voltage:

220/240 V AC, +10/-15%, 50/60 Hz,

120 V AC, +10/-15%, 50/60 Hz,

24 V DC, +10/-15%.

Electrical connection:

plug with socket to EN 175301-803.

Enclosure: IP 54.

Duty cycle: 100%.

Power factor of the solenoid coil:  $\cos \phi = 1$ .

Power consumption:

Type	Voltage	Power
VG 6–15/10	24 V DC	8 W DC
	120 V AC	8 W DC
	230 V AC	9.5 W DC

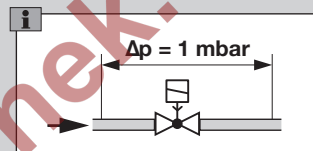
Switching frequency: max. 30/min.

Valve housing: aluminium.

Valve disc: NBR.

Internal thread: Rp to ISO 7-1.

Air flow rate Q for pressure loss  $\Delta p = 1$  mbar.



	Q [m³/h]
VG 6	0.45
VG 8R03G	0.60
VG 8R05	0.60
VG 8R18	0.25
VG 10R01	1.25
VG 15/10R01	1.35

## Designed lifetime

This information on the designed lifetime is based on using the product in accordance with these operating instructions. Once the designed lifetime has been reached, safety-relevant products must be replaced. Designed lifetime (based on date of manufacture) in accordance with EN 161 for VG:

Type	Designed lifetime	
	Switching cycles	Time [years]
VG 6 – VG 15/10	200,000	10

You can find further explanations in the applicable rules and regulations and on the afecor website ([www.afecor.org](http://www.afecor.org)).

This procedure applies to heating systems. For thermoprocessing equipment, observe local regulations.

## Logistics

### Transport

Protect the unit from external forces (blows, shocks, vibration). On receipt of the product, check that the delivery is complete, see page 2 (Part designations). Report any transport damage immediately.

### Storage

Store the product in a dry and clean place.  
Storage temperature: see page 5 (Technical data).  
Storage time: 6 months in the original packaging before using for the first time. If stored for longer than this, the overall service life will be reduced by the corresponding amount of extra storage time.

### Packaging

The packaging material is to be disposed of in accordance with local regulations.

### Disposal

Components are to be disposed of separately in accordance with local regulations.

## Certification

### Declaration of conformity



We, the manufacturer, hereby declare that the product VG, marked with product ID No. CE-0063BL1553, complies with the requirements of the listed Directives and Standards.

Directives:

- 2009/142/EC – GAD (valid until 20 April 2018)
- 2014/30/EU
- 2014/35/EU

Regulation:

- (EU) 2016/426 – GAR (valid from 21 April 2018)

The relevant product corresponds to the tested type sample.

The production is subject to the surveillance procedure pursuant to Directive 2009/142/EC Annex II paragraph 3 (valid until 20 April 2018) and to Regulation (EU) 2016/426 Annex III paragraph 3 (valid from 21 April 2018).

Elster GmbH

Scan of the Declaration of conformity (D, GB) – see [www.docuthek.com](http://www.docuthek.com)

### Approval for Australia



Australian Gas Association, Approval No.: 3968  
[www.agasn.au/product\\_directory](http://www.agasn.au/product_directory)

### Eurasian Customs Union



The product VG meets the technical specifications of the Eurasian Customs Union.

## Contact

If you have any technical questions, please contact your local branch office/agent. The addresses are available on the Internet or from Elster GmbH.

We reserve the right to make technical modifications in the interests of progress.

# Honeywell

**krom/  
schroder**

Elster GmbH  
Strotheweg 1, D-49504 Lotte (Büren)

Tel. +49 541 1214-0

Fax +49 541 1214-370

[hts.lotte@honeywell.com](mailto:hts.lotte@honeywell.com), [www.kromschroeder.com](http://www.kromschroeder.com)