

# Motorized valves for gas VK

Technical Information · GB

3 Edition 01.15

- Safety valves for gas
- Flow rate can be restricted
- Robust design for a long service life
- Energy-saving thanks to automatic motor shut-off
- Explosion-proof version available
- One- or two-stage, available with position indicator
- EC type-tested and certified
- AGA approved



**krom**  
**schröder**

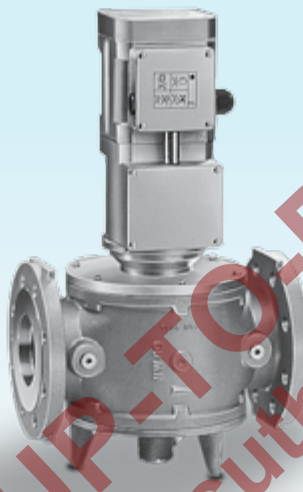
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## 1 Application



VK..R



VK..F



VK..X

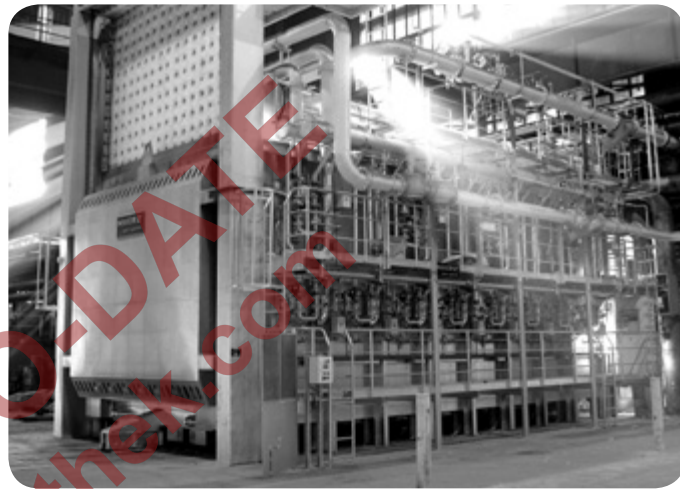
Robust motorized valves for gas VK for safeguarding and controlling the air and gas supply to gas burners and gas appliances. For heavy-duty use in gas control and safety systems in industrial heat generation. When a position indicator is fitted, two-stage operation is possible.

Special device versions are suitable for Zone 1 and 2 hazardous areas or comply with the requirements pursuant to TRD 412, Para. 4.2 "Use in open-air installations" and 5.1 "Shut-off valves outside the boiler room".

## 1.1 Examples of application



*Metallurgical industry: forging furnace*



*Ceramics industry: intermittent shuttle kiln*



*Aluminium industry: smelting furnace*

## 2 Certification

EU certified pursuant to



- Gas Appliances Directive (2009/142/EC) in conjunction with EN 13611 and EN 161

Meets the requirements of the

- Low Voltage Directive (2006/95/EC)
- EMC Directive (2004/108/EC)

VK 40-200..X, VK 50-250..HX

pursuant to

- Directive 94/9/EC "Equipment and protective systems intended for use in potentially explosive atmospheres" in conjunction with EN 60079

AGA approved



Australian Gas Association, Approval No.: 3968

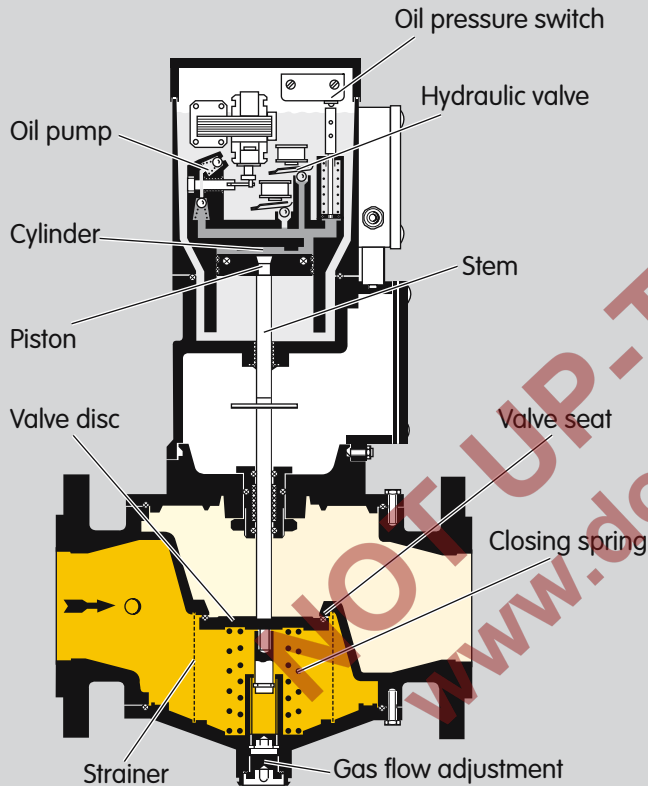
[www.agasn.au/product\\_directory](http://www.agasn.au/product_directory)

Approval for Russia



The product VK meets the technical specifications of the Eurasian Customs Union (the Russian Federation, Belarus, Kazakhstan).

### 3 Function



VK

#### 3.1 Motorized valve for gas VK

Motorized valve for gas VK is a hydraulically actuated safety valve that is closed when de-energized.

Opening: the hydraulic valve closes once mains voltage has been applied. The oil pump fills the cylinder with oil and the piston is moved down against the force of the closing spring. The valve opens. If piston, stem and valve disc are at the limit, the pressure will increase in the cylinder and the pressure switch will switch the motor off.

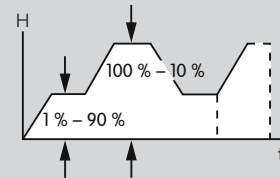
Closing: when the voltage is disconnected, the hydraulic valve opens and the piston is pushed up again by the force of the closing spring. The motorized valve closes within 1 second and the gas supply is stopped.

The gas volume can be set by limiting the valve stroke.

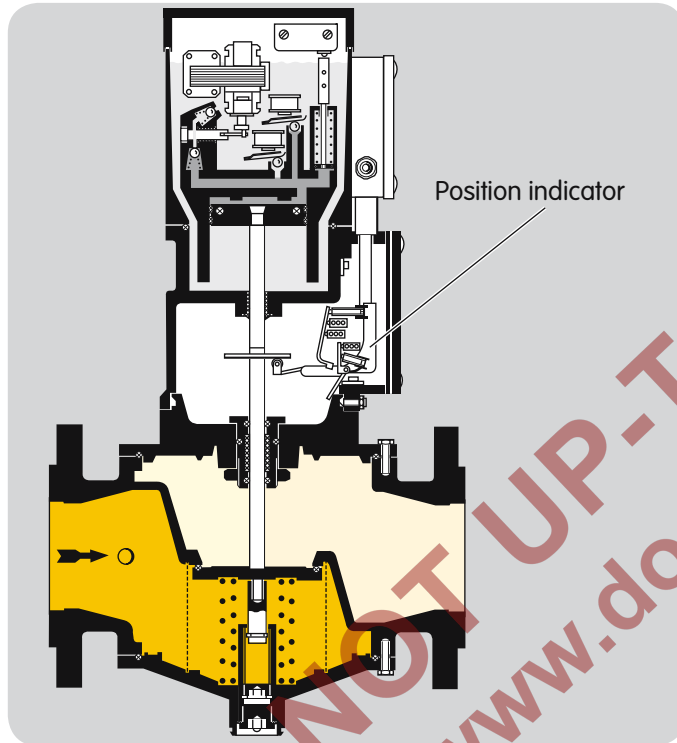
The strainer in the inlet of the motorized valve for gas prevents deposits of dirt particles on the valve seat.

#### 3.2 Motorized valve for gas VK..Z

The motorized valve for gas VK..Z features a two-stage actuator. The first stage can be set between 1% and 90% using a switch. A second stage can be set between 10% and 100% using an additional flow rate restrictor.



### 3.3 VK with position indicator



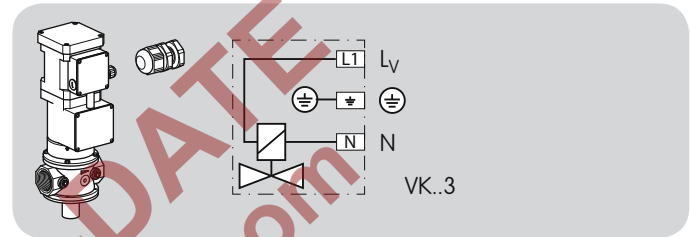
Opening: when the motorized valve for gas is opened, the position indicator switches and returns the "open" signal.

Closing: the motorized valve for gas VK is disconnected from the voltage supply and the closing spring presses the valve disc on to the valve seat. In the process, the position indicator switches and returns the "closed" signal.

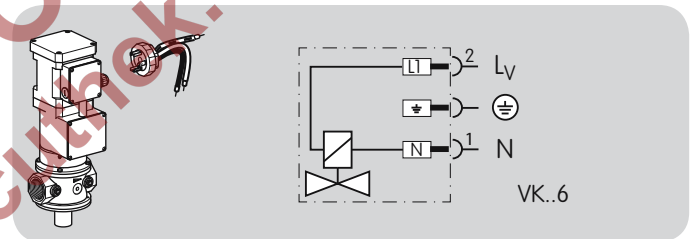
Connection rating: 30–250 V, 50/60 Hz, max. 10 A (resistive load).

### 3.4 Connection diagram

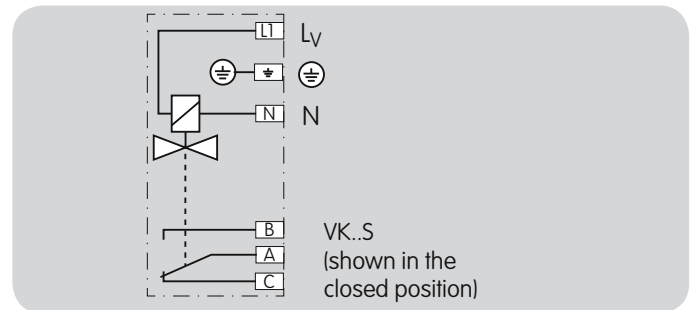
#### 3.4.1 VK with M20 cable gland



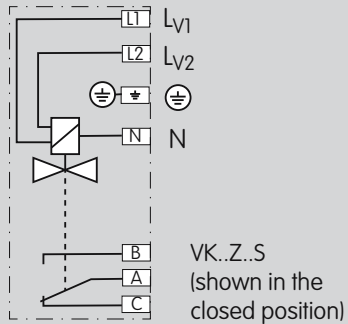
#### 3.4.2 VK with plug



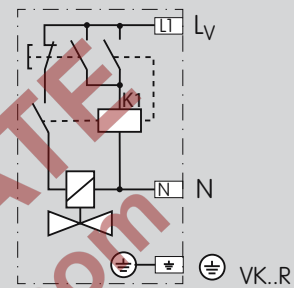
#### 3.4.3 VK with position indicator



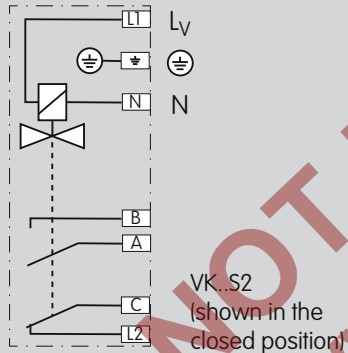
### 3.4.4 VK, two-stage, with position indicator



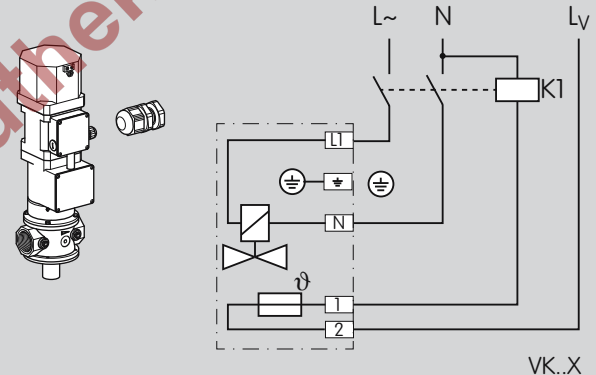
### 3.4.7 VK with holding relay



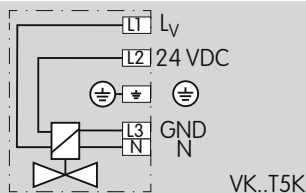
### 3.4.5 VK with two position indicators



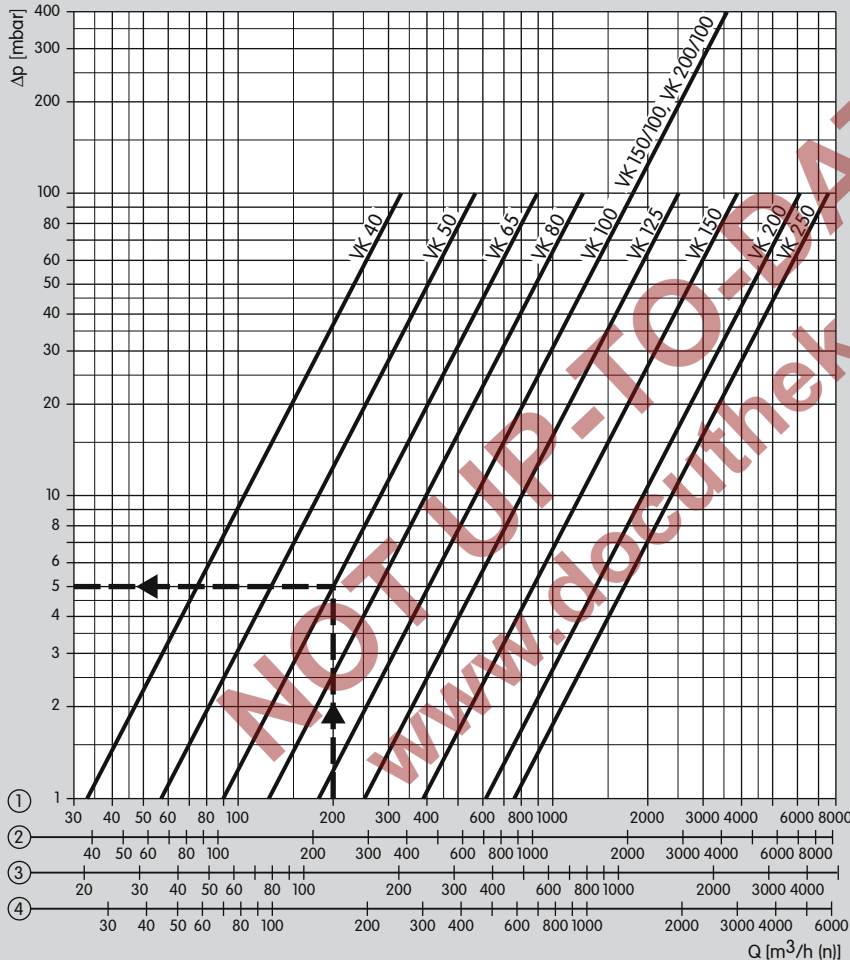
### 3.4.8 VK, explosion-proof version, with M20 cable gland



### 3.4.6 VK with 24 V holding voltage



## 4 Flow rate



- ① = natural gas ( $\rho = 0.80$  kg/m³)      ③ = LPG ( $\rho = 2.01$  kg/m³)  
 ② = town gas ( $\rho = 0.64$  kg/m³)      ④ = air ( $\rho = 1.29$  kg/m³)

Reading instructions: when determining the pressure loss, operating cubic metres must be entered. Then the pressure loss  $\Delta p$  read must be multiplied by the absolute pressure in bar (positive pressure + 1) to account for the change in the medium's density.

Example:

inlet pressure  $p_u$  (positive pressure) = 1 bar,  
 gas type: natural gas,  
 operating flow rate  $Q_b = 200$  m³/h,  
 $\Delta p$  from diagram = 5 mbar,  
 $\Delta p = 5 \text{ mbar} \times (1 + 1) = 10 \text{ mbar}$  on the motorized valve VK 65.

### 4.1 Calculating the nominal size

Enter density  
 Flow rate  $Q$  (standard)  
 Inlet pressure  $p_u$   
 $\Delta p_{\text{max.}}$   
 Medium temperature  
 Flow rate  $Q$  (operation)  
 Product       $\Delta p$        $v$

## 4.2 $k_v$ value

The nominal size is determined using the flow rate diagram or by calculation using the  $k_v$  value.

$Q_{(n)}$  = flow rate (standard state) [m<sup>3</sup>/h]

$k_v$  = valve coefficient

$\Delta p$  = pressure loss [bar]

$p_d$  = outlet pressure (absolute) [bar]

$\rho_n$  = density [kg/m<sup>3</sup>]

(air 1.29/natural gas 0.80/propane 2.01/butane 2.71)

$T$  = medium temperature (absolute) [K]

$$k_v = \frac{Q_{(n)}}{514} \cdot \sqrt{\frac{\rho_n \cdot T}{\Delta p \cdot p_d}} \quad Q_{(n)} = 514 \cdot k_v \cdot \sqrt{\frac{\Delta p \cdot p_d}{\rho_n \cdot T}}$$

$$\Delta p = \left( \frac{Q_{(n)}}{514 \cdot k_v} \right)^2 \cdot \frac{\rho_n \cdot T}{p_d}$$

| VK     | $k_v$ m <sup>3</sup> /h |
|--------|-------------------------|
| VK 40  | 30.8                    |
| VK 50  | 52.6                    |
| VK 65  | 83.1                    |
| VK 80  | 117.1                   |
| VK 100 | 168.2                   |
| VK 125 | 235.1                   |
| VK 150 | 363.1                   |
| VK 200 | 557.7                   |
| VK 250 | 701.0                   |

## Example

We want to find the nominal size for a motorized valve for gas VK.

We have the maximum flow rate  $Q_{(n) \max.}$ , the inlet pressure  $p_u$  and the temperature  $T$  for the medium of natural gas.

$$Q_{(n) \max.} = 400 \text{ m}^3/\text{h}$$

$$p_u = 500 \text{ mbar} = 0.5 \text{ bar} \rightarrow$$

$$p_{u \text{ absolute}} = 0.5 \text{ bar} + 1 \text{ bar} = 1.5 \text{ bar}$$

$$\Delta p_{\max.} = 0.01 \text{ bar (desired)}$$

$$p_{d \text{ absolute}} = p_{u \text{ absolute}} - \Delta p_{\max.}$$

$$p_{d \text{ absolute}} = 1.5 \text{ bar} - 0.01 \text{ bar} = 1.49 \text{ bar}$$

$$T = 27^\circ\text{C} \rightarrow$$

$$T_{\text{absolute}} = 27 + 273 \text{ K} = 300 \text{ K}$$

$$k_v = \frac{60}{514} \cdot \sqrt{\frac{0.83 \cdot 300}{0.01 \cdot 1.06}} = 17.9$$

The motorized valve for gas with the next higher  $k_v$  value is to be selected (see table): VK 80.

## 5 Selection

### 5.1 VK, VK..Z

| Type   | R | F | 02 | 04 | 06 | 10 | 24 | 31 | 40 | Z <sup>1)</sup> | T5 | W5 | W6 | Y | Q6 | M | P | T5/K | A | G <sup>2)</sup> | 9 | 6 | 3 | D | S <sup>1)</sup> | S2 | R <sup>1)</sup> | V | F |   |
|--------|---|---|----|----|----|----|----|----|----|-----------------|----|----|----|---|----|---|---|------|---|-----------------|---|---|---|---|-----------------|----|-----------------|---|---|---|
| VK 40  | ● | ● |    |    |    | ●  |    |    | ○  | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ● | ○ | ● | ●               | ○  | ○               | ○ | ○ | ○ |
| VK 50  | ● | ● |    |    |    | ●  |    |    | ○  | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ● | ○ | ● | ●               | ○  | ○               | ○ | ○ | ○ |
| VK 65  | ● | ● |    |    |    | ●  |    |    | ○  | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ● | ○ | ● | ●               | ○  | ○               | ○ | ○ | ○ |
| VK 80  |   | ● |    |    |    | ●  | ○  |    |    | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ● | ○ | ● | ●               | ○  | ○               | ○ | ○ | ○ |
| VK 100 |   | ● |    |    |    | ●  |    |    |    | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ● | ○ | ● | ●               | ○  | ○               | ○ | ○ | ○ |
| VK 125 |   | ● |    |    | ●  |    |    |    |    | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ○ | ○ | ● |                 | ○  | ○               | ○ | ○ | ○ |
| VK 150 |   | ● |    | ●  |    |    |    |    |    | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ○ | ○ | ● |                 | ○  | ○               | ○ | ○ | ○ |
| VK 200 |   | ● | ●  |    |    |    |    |    |    | ○               | ●  | ○  | ○  | ○ | ○  | ○ | ○ | ○    | ○ | ●               | ○ | ○ | ○ | ● |                 | ○  | ○               | ○ |   | ○ |

- 1) The VK..Z is always available with a position indicator but not with a holding relay.  
 2) The higher inlet pressure is applicable for VK..G. It is only available with a flanged connection.  
 ● = standard, ○ = optional

**Order example:**

VK 65R10T5A93D

5.2 VK..H, VK..HX

| Type          | F | 05 | 10 | 15 | 20 | 40 | 60 | 80 | T5 | W5 <sup>1)</sup> | W6 <sup>1)</sup> | Y | Q6 | M | P | T5/K | H | X <sup>1)</sup> | A               | G | 9 | 6 | 3 | D | S <sup>2)</sup> | S2 <sup>2)</sup> | R | V | F |
|---------------|---|----|----|----|----|----|----|----|----|------------------|------------------|---|----|---|---|------|---|-----------------|-----------------|---|---|---|---|---|-----------------|------------------|---|---|---|
| VK 50..H      | ● |    |    |    |    |    |    | ●  | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ●               | ● | ○ | ● | ● | ○ | ○               | ○                | ○ | ○ | ○ |
| VK 65..H      | ● |    |    |    |    |    |    | ●  | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ●               | ● | ○ | ● | ● | ○ | ○               | ○                | ○ | ○ | ○ |
| VK 80..H      | ● |    |    |    |    |    | ●  |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ●               | ● | ○ | ● | ● | ○ | ○               | ○                | ○ | ○ | ○ |
| VK 100..H     | ● |    |    |    |    | ●  |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ●               | ● | ○ | ● | ● | ○ | ○               | ○                | ○ | ○ | ○ |
| VK 125..H     | ● |    | ●  |    | ●  |    |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ○ <sup>3)</sup> | ● | ● | ○ | ● |   | ○               | ○                | ○ | ○ | ○ |
| VK 150..H     | ● |    | ●  | ●  |    |    |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ○ <sup>3)</sup> | ● | ● | ○ | ● |   | ○               | ○                | ○ | ○ | ○ |
| VK 150/100..H | ● |    |    |    |    | ●  |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ○ <sup>3)</sup> | ● | ● | ○ | ● |   | ○               | ○                | ○ | ○ | ○ |
| VK 200..H     | ● |    | ●  |    |    |    |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ○ <sup>3)</sup> | ● | ● | ○ | ● |   | ○               | ○                | ○ |   | ○ |
| VK 20/100..H  | ● |    |    |    |    | ●  |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               |                 | ● | ● | ○ | ● |   | ○               | ○                | ○ |   | ○ |
| VK 250..H     | ● | ●  |    |    |    |    |    |    | ●  | ○                | ○                | ○ | ○  | ○ | ○ | ○    | ● | ○               | ●               | ● | ○ | ● |   | ○ | ○               | ○                |   | ○ | ○ |

1) The explosion-proof version only allows mains voltages W5, W6 and M.

2) The VK..HX is not available with position indicator S or S2.

3) For 1 bar: AISi = standard

● = standard, ○ = optional

Order example:

VK 100F40T5HG93D

5.3 VK..X

| Type      | R | F | 02 | 04 | 06 | 10 | 24 | 31 | 40 | W5 | W6 | M | X | A | G <sup>1)</sup> | 4 | 3 | D | V | F |
|-----------|---|---|----|----|----|----|----|----|----|----|----|---|---|---|-----------------|---|---|---|---|---|
| VK 40..X  | ● | ● |    |    |    | ●  |    |    | ○  | ●  | ○  | ○ | ● | ● |                 | ● | ○ | ● | ○ | ○ |
| VK 50..X  | ● | ● |    |    |    | ●  |    |    | ○  | ●  | ○  | ○ | ● | ● | ○               | ● | ○ | ● | ○ | ○ |
| VK 65..X  | ● | ● |    |    |    | ●  |    | ○  |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ | ● | ○ | ○ |
| VK 80..X  |   | ● |    |    |    | ●  | ○  |    |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ | ● | ○ | ○ |
| VK 100..X |   | ● |    |    |    | ●  |    |    |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ | ● | ○ | ○ |
| VK 125..X |   | ● |    |    | ●  |    |    |    |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ |   | ○ | ○ |
| VK 150..X |   | ● |    | ●  |    |    |    |    |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ |   | ○ | ○ |
| VK 200..X |   | ● | ●  |    |    |    |    |    |    | ●  | ○  | ○ | ● | ● | ○               | ● | ○ |   |   | ○ |

1) The higher inlet pressure is applicable for VK..G. It is only available with a flanged connection.

● = standard, ○ = optional

Order example:

VK 50R10W5XA4D

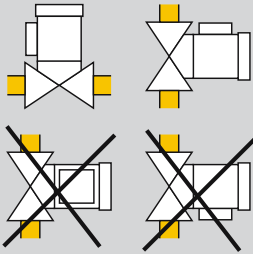
## 5.4 Type code

| Code   | Description                                                          |
|--------|----------------------------------------------------------------------|
| VK     | Motorized valve for gas                                              |
| 40-250 | Nominal Size                                                         |
| R      | Rp internal thread                                                   |
| F      | Flange to ISO 7005                                                   |
| 02     | p <sub>u</sub> max. 230 mbar                                         |
| 04     | p <sub>u</sub> max. 400 mbar                                         |
| 05     | p <sub>u</sub> max. 500 mbar                                         |
| 06     | p <sub>u</sub> max. 600 mbar                                         |
| 10     | p <sub>u</sub> max. 1 bar                                            |
| 15     | p <sub>u</sub> max. 1.5 bar                                          |
| 20     | p <sub>u</sub> max. 2 bar                                            |
| 24     | p <sub>u</sub> max. 2.4 bar                                          |
| 31     | p <sub>u</sub> max. 3.1 bar                                          |
| 40     | p <sub>u</sub> max. 4 bar                                            |
| 60     | p <sub>u</sub> max. 6 bar                                            |
| 80     | p <sub>u</sub> max. 8 bar                                            |
| Z      | 2-stage                                                              |
| T5     | Mains voltage: 220/240 V AC; 50 Hz                                   |
| T5/K   | Mains voltage: 220 V AC; 50 Hz / 24 V DC                             |
| W5     | Mains voltage: 230 V AC; 50 Hz                                       |
| Q6     | Mains voltage: 120 V AC; 60 Hz                                       |
| W6     | Mains voltage: 230 V AC; 60 Hz                                       |
| M      | Mains voltage: 110 V AC; 50/60 Hz                                    |
| X      | Explosion-proof version, IP 65                                       |
| H      | For higher inlet pressures                                           |
| A      | Valve housing made of AlSi                                           |
| G      | Valve housing made of GGG 50 complying with TRD 412 and GUV          |
| 4      | Terminal connection box, IP 65                                       |
| 6      | Terminal connection box with 4-pin standard socket, IP 54            |
| 6L     | Terminal connection box with 4-pin standard socket, with lamp, IP 54 |
| 9      | Metal terminal connection box, IP 54                                 |
| 3      | Screw plugs at the inlet and outlet                                  |
| D      | With flow adjustment                                                 |
| S      | With position indicator                                              |
| S2     | With 2 position indicators                                           |
| R      | With holding relay                                                   |
| V      | With Viton valve disc seal                                           |
| F      | With viewing window                                                  |

## 6 Project planning information

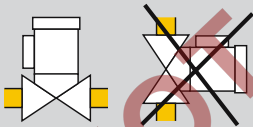
### 6.1 Installation

VK, VK..H

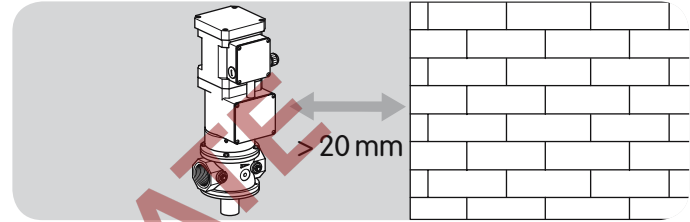


Installation position: actuator in the vertical upright position or tilted up to the horizontal, not upside down. The connection box must point upwards.

VK..X, VK..HX

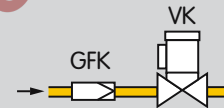


Installation position: actuator in the vertical upright position only.



The motorized valve for gas VK must not be in contact with masonry. Minimum clearance 20 mm.

Do not store or install the unit in the open air.



Sealing material and dirt, e.g. thread cuttings, must not be allowed to get into the valve housing.

Install a filter (GFK) upstream of every system.

## 6.2 Explosion protection

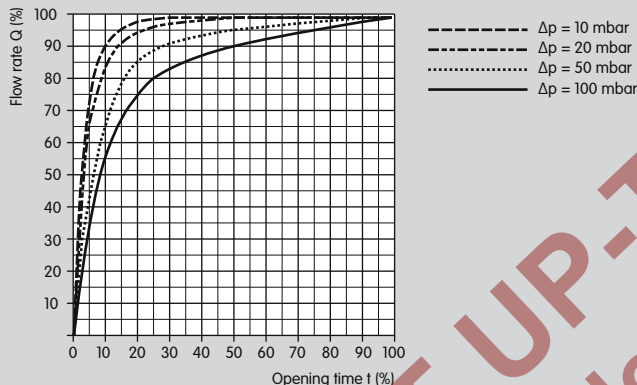
Motorized valves for gas VK..X and VK..HX can be installed in Zone 1 and 2 hazardous areas. Only design-approved electrical operating equipment may be used for this.

|  II 2G Ex e o IIC T5 Gb |                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | Specific marking of explosion protection                                                                                                                                                                                           |
| II                                                                                                       | Equipment group for general industries, all flammable gases and vapours (as defined by Directive 94/9/EC)                                                                                                                          |
| 2G                                                                                                       | Equipment category for explosive gases, vapours and hazes                                                                                                                                                                          |
| Ex                                                                                                       | Symbol for electrical equipment built according to European standards                                                                                                                                                              |
| e                                                                                                        | Type of ignition protection: increased safety                                                                                                                                                                                      |
| o                                                                                                        | Type of ignition protection: oil immersion                                                                                                                                                                                         |
| IIC                                                                                                      | Suitable for gases of explosion group IIC; field of application: electrical equipment for all hazardous areas except for mines susceptible to firedamp                                                                             |
| T5                                                                                                       | Maximum surface temperature of the device determined: 100°C                                                                                                                                                                        |
| Gb                                                                                                       | Equipment protection level (EPL); device with high level of protection for use in potentially explosive atmospheres, in which there is no danger of ignition in normal operation or in the case of foreseeable faults/malfunctions |

## 7 Technical data

Gas types: natural gas, town gas, LPG (gaseous), boigas, landfill gas or clean air; other gases on request. The gas must be dry in all temperature conditions and must not contain condensate.

Opening time:



| Nominal size | Opening time t VK | Opening time t VK..H |
|--------------|-------------------|----------------------|
| DN 40        | 5 s               | -                    |
| DN 50 – 65   | 8 s               | 12 s                 |
| DN 80 – 100  | 10 s              | 18 s                 |
| DN 125 – 200 | 13 s              | 24 s                 |
| DN 250       | -                 | 24 s                 |

Closing time: < 1 s.

Ambient temperature:

VK.., VK..H, VK..Z: -15°C to +60°C,

VK..X, VK..HX: -15°C to +40°C.

Storage and transport temperature: -20°C to +40 °C.

Safety valve: Class A Group 2 pursuant to EN 161.

Mains voltage:

220/240 V AC, +10/-15%, 50 Hz (standard),

230 V AC, +10/-15%, 50 Hz,

230 V AC, +10/-15%, 60 Hz,

220 V AC, +10/-15%, 50 Hz, 24 V DC,

200 V AC, +10/-10%, 50/60 Hz,

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

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

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

Power consumption:

when opening: 90 VA, 50 W,

open: 9 VA, 9 W.

Electrical connection:

– M20 x 1.5,

– plug with socket to EN 175301-803,

– cable gland: M 20,

– connection terminal: 2.5 mm<sup>2</sup>.

Enclosure: IP 54.

Duty cycle: 100%.

Safety class 1.

Valve housing:

aluminium, GGG 40 (coated inside and outside with epoxy powder coating).

Valve disc: Perbunan, Viton.

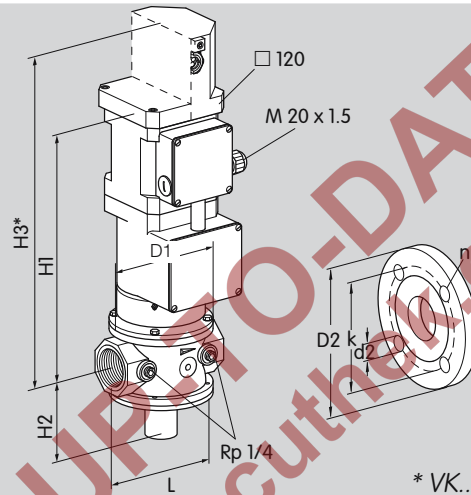
Actuator/drive: AISi.

Internal thread: Rp to ISO 7-1.

Flange: ISO 7005, PN 16.

## 7.1 Dimensions

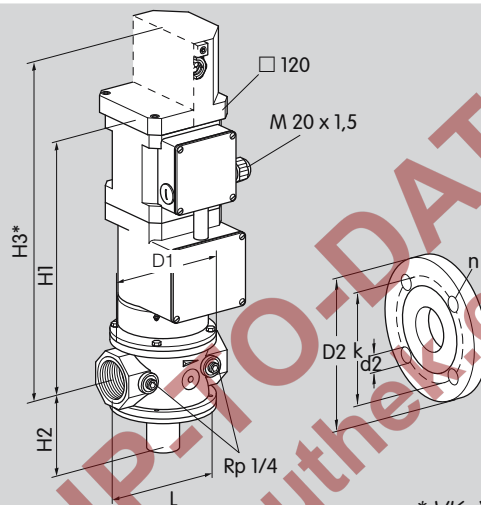
### 7.1.1 VK



\* VK..X: + 1.5 kg

| Type     | Dimensions |       |     |     |     |     |     |     |     | Drilling |    | p <sub>U</sub> max. |             | Q                       | Weight   |           |
|----------|------------|-------|-----|-----|-----|-----|-----|-----|-----|----------|----|---------------------|-------------|-------------------------|----------|-----------|
|          | Connection |       | L   | H1  | H2  | H3  | D1  | D2  | k   | d2       | n  | AlSi<br>mbar        | GGG<br>mbar | Δp = 1 mbar<br>m³/h air | Al<br>kg | GGG<br>kg |
|          | DN         | Rp    | mm  | mm  | mm  | mm  | mm  | mm  | mm  | mm       |    |                     |             |                         |          |           |
| VK 40..  | -          | Rp 1½ | 150 | 345 | 100 | 430 | 127 | -   | -   | -        | -  | 1000/4000           | -           | 27.5                    | 8        | -         |
| VK 40..  | 40         | -     | 200 | 345 | 100 | 430 | 127 | 150 | 110 | 18       | 4  | 1000/4000           | -           | 27.5                    | 9        | -         |
| VK 50..  | -          | Rp 2  | 180 | 350 | 117 | 435 | 155 | -   | -   | -        | -  | 1000/4000           | -           | 45.0                    | 9        | -         |
| VK 50..  | 50         | -     | 230 | 350 | 117 | 435 | 155 | 165 | 125 | 18       | 4  | 1000/4000           | 4000        | 45.0                    | 11       | 20.5      |
| VK 65..  | -          | Rp 2½ | 218 | 370 | 135 | 455 | 182 | -   | -   | -        | -  | 1000/3100           | -           | 70.0                    | 11       |           |
| VK 65..  | 65         | -     | 290 | 370 | 135 | 455 | 182 | 185 | 145 | 18       | 4  | 1000/3100           | 3100        | 70.0                    | 13       | 26        |
| VK 80..  | 80         | -     | 310 | 378 | 137 | 463 | 210 | 200 | 160 | 18       | 8  | 1000/2400           | 2400        | 103.0                   | 15       | 32        |
| VK 100.. | 100        | -     | 350 | 400 | 163 | 485 | 248 | 229 | 180 | 18       | 8  | 1000                | 1000        | 148.0                   | 19       | 41.5      |
| VK 125.. | 125        | -     | 400 | 450 | 158 | 535 | 314 | 250 | 210 | 18       | 8  | 600                 | 600         | 206.0                   | 24       | 60        |
| VK 150.. | 150        | -     | 480 | 445 | 173 | 530 | 344 | 285 | 240 | 23       | 8  | 400                 | 400         | 310.0                   | 32       | 80        |
| VK 200.. | 200        | -     | 600 | 475 | 218 | 560 | 420 | 340 | 295 | 23       | 12 | 230                 | 230         | 490.0                   | 52       | 141       |

# 7.1.2 VK..H

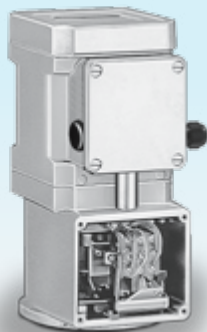


\* VK..X: + 1.5 kg

| Type          | Dimensions |     |     |     |     |     |     |     | Drilling |    | p <sub>U</sub> max.<br>Class A |             | Q                           | Weight   |           |
|---------------|------------|-----|-----|-----|-----|-----|-----|-----|----------|----|--------------------------------|-------------|-----------------------------|----------|-----------|
|               | Connection | L   | H1  | H2  | H3  | D1  | D2  | k   | d2       | n  | AlSi<br>mbar                   | GGG<br>mbar | Δp = 1 mbar<br><br>m³/h air | Al<br>kg | GGG<br>kg |
|               |            |     |     |     |     |     |     |     |          |    |                                |             |                             |          |           |
| VK 50..H      | 50         | 230 | 414 | 117 | 499 | 155 | 165 | 125 | 18       | 4  | -                              | 8000        | 45.0                        | -        | 21        |
| VK 65..H      | 65         | 290 | 434 | 135 | 519 | 182 | 185 | 145 | 18       | 4  | -                              | 8000        | 70.0                        | -        | 27        |
| VK 80..H      | 80         | 310 | 442 | 137 | 527 | 210 | 200 | 160 | 18       | 8  | -                              | 6000        | 103.0                       | -        | 33        |
| VK 100..H     | 100        | 350 | 464 | 163 | 549 | 248 | 220 | 180 | 18       | 8  | -                              | 4000        | 148.0                       | -        | 43        |
| VK 125..H     | 125        | 400 | 514 | 158 | 599 | 314 | 250 | 210 | 18       | 8  | 1000                           | 2000        | 206.0                       | 25       | 61        |
| VK 150..H     | 150        | 480 | 509 | 173 | 594 | 344 | 285 | 240 | 23       | 8  | 1000                           | 1500        | 310.0                       | 33       | 81        |
| VK 150/100..H | 150        | 480 | 509 | 173 | -   | 344 | 285 | 240 | 23       | 8  | -                              | 4000        | 148.0                       | -        | 81        |
| VK 200..H     | 200        | 600 | 539 | 218 | 624 | 420 | 340 | 295 | 23       | 12 | 1000                           | 1000        | 490.0                       | 53       | 142       |
| VK 200/100..H | 200        | 600 | 539 | 218 | -   | 420 | 340 | 295 | 23       | 12 | -                              | 4000        | 148.0                       | -        | 142       |
| VK 250..H     | 250        | 730 | 573 | 270 | 658 | 496 | 405 | 355 | 27       | 12 | 500                            | -           | 590.0                       | 80       | -         |

## 8 Accessories

### 8.1 Position indicator

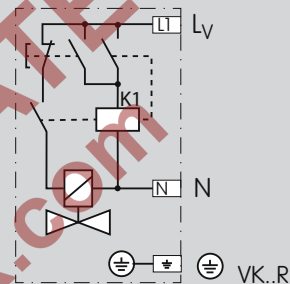


For the "closed" or "not closed" signal.

| Type     | Order No. |
|----------|-----------|
| VK...S   | 74911637  |
| VK...S2  | 74960023  |
| VK...HS  | 74918705  |
| VK...HS2 | 74919317  |

### 8.2 Holding relay

For "manual restart". The holding relay prevents the gas from being automatically released in the case of a power failure.



## 9 Maintenance cycles

At least once a year, at least twice a year in the case of boigas.

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