

Solenoid valves for gas VGP

TECHNICAL INFORMATION

- Safety valves for gas
- Compact design saves space
- Low power consumption
- Simplified equipment saves costs
- Suitable for hydrogen



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1 Application



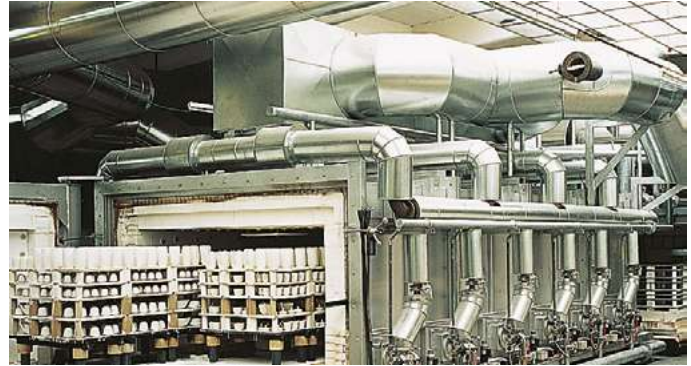
VGP 10–15..6

Gas solenoid valves VGP for safeguarding and controlling the air and gas supply to gas burners and gas appliances. For use in gas control and safety systems in industrial and commercial heat generation, such as the foodstuffs and ceramics industries.

1.1 Application examples



Ceramics industry: roller hearth kiln



Ceramics industry: intermittent shuttle kiln



Ceramics industry: intermittent shuttle kiln

2 Certification

2.1 Certificate download

Certificates – see www.docuthek.com

2.2 EU certified



- 2014/35/EU (LVD), Low Voltage Directive
- 2014/30/EU (EMC), Electromagnetic Compatibility Directive
- 2011/65/EU, RoHS II
- 2015/863/EU, RoHS III
- (EU) 2016/426 (GAR), Gas Appliances Regulation
- EN 161:2011+A3:2013

AGA approved



Australian Gas Association, Approval No.: 5567.www.agasn.au

2.3 UKCA certified



Gas Appliances (Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019)

BS EN 161:2011+A3:2013

2.4 AGA approved



Australian Gas Association, Approval No.: 5567.

2.5 Eurasian Customs Union



The products VGP meet the technical specifications of the Eurasian Customs Union.

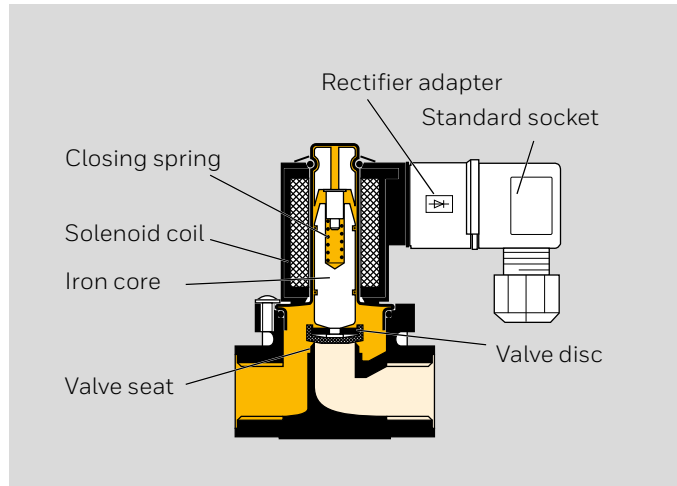
2.6 REACH Regulation

The device contains substances of very high concern which are listed in the Candidate List of the European REACH Regulation No. 1907/2006. See Reach list HTS at www.docuthek.com.

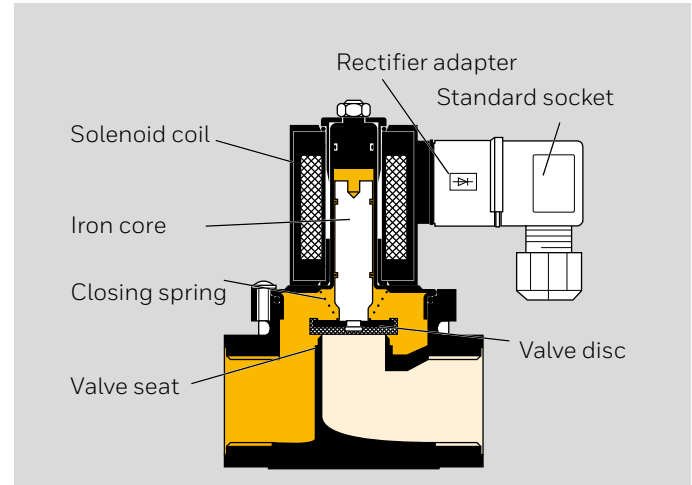
2.7 China RoHS

Directive on the restriction of the use of hazardous substances (RoHS) in China. Scan of the Disclosure Table China RoHS2, see certificates at www.docuthek.com.

3 Function



VGP 10-15..6



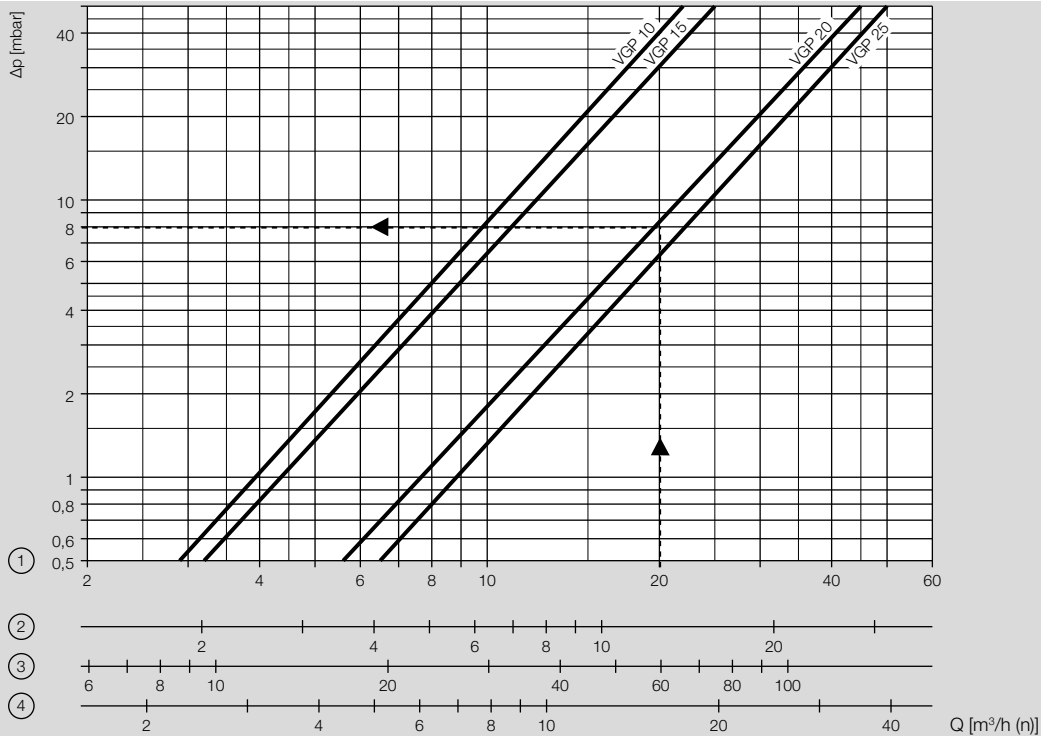
VGP 20-25..6

The gas solenoid valve VGP is closed when de-energized.

Opening: the applied AC voltage is rectified (the rectifier adapter must be installed for this) and generates a powerful magnetic field in the solenoid coil. The magnetic field attracts the iron core and lifts the valve plate from the valve seat, acting against the effective inlet pressure and the closing spring force. The gas solenoid valve VGP opens and the gas supply is released.

Closing: when the voltage is disconnected, the magnetic field collapses and within 1 s, the closing spring pushes the iron core with valve plate back onto the valve seat, assisted by the inlet pressure. The gas solenoid valve VGP closes and the gas supply is stopped.

4 Flow rate



- 1 = natural gas ($\rho = 0.80 \text{ kg/m}^3$)
- 2 = propane ($\rho = 2.01 \text{ kg/m}^3$)
- 3 = hydrogen ($\rho = 0.09 \text{ kg/m}^3$)
- 4 = air ($\rho = 1.29 \text{ kg/m}^3$)

Δp from diagram = 8 mbar,
solenoid valve VGP 20

4.1 Calculating the nominal size

A web app for calculating the nominal size is available at www.adlatus.org.

Example

gas type: natural gas,
flow rate $Q = 20 \text{ m}^3/\text{h}$,

5 Selection

5.1 Selection table

Option	VGP 10	VGP 15	VGP 20	VGP 25
DN	10	15	20	25
Pipe connection	R	R	R	R
Inlet pressure	02	02	01	01
Mains voltage	W, Q	W, Q	W, Q	W, Q
Connection	5, 6	5, 6	5, 6	5, 6

Order example

VGP 20R01W6

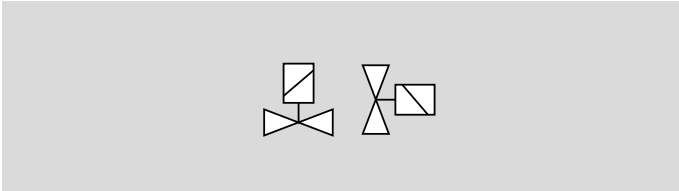
5.2 Type code

VGP	Solenoid valve for gas
10-25	Nominal size
R	Rp internal thread
01	p _u max. 150 mbar
02	p _u max. 200 mbar
W	Mains voltage 230 V AC, 50/60 Hz
Q	Mains voltage 120 V AC, 50/60 Hz
5	Connection via rectifier adapter without socket
6	Connection via rectifier adapter and standard socket

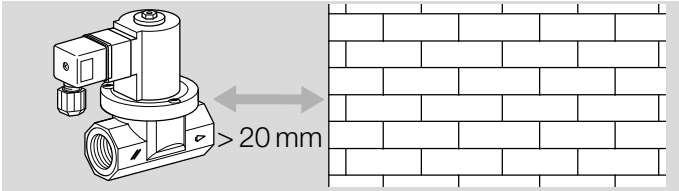
6 Project planning information

6.1 Installation

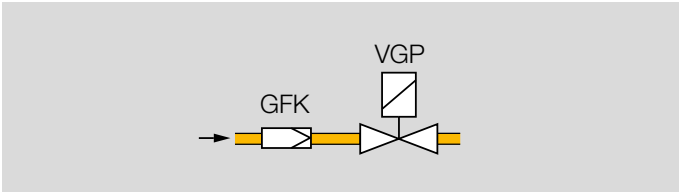
Installation position: black solenoid actuator in the vertical upright position or tilted up to the horizontal, not upside down.



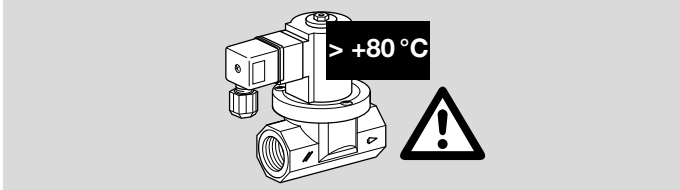
The gas solenoid valve VGP must not be in contact with masonry. Minimum clearance 20 mm.



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.



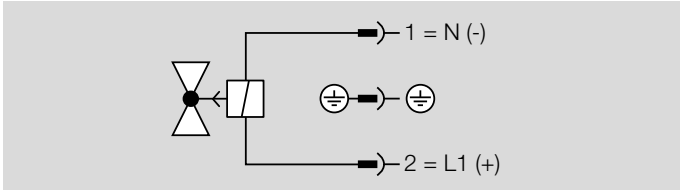
The solenoid body heats up during operation depending on ambient temperature and voltage.



6.2 Wiring

Wiring to EN 60204-1.

It is absolutely necessary to install a rectifier adapter (included in the delivery).



6.3 Hydrogen



Other hydrogen-compatible products can be found here:
[Technical Information, Products for hydrogen.](#)

7 Technical data

Gas types: natural gas, town gas, LPG (gaseous), biogas (max. 0.1 %-by-vol. H₂S), hydrogen or clean air; other gases on request. The gas must be clean and dry in all temperature conditions and must not contain condensate.

Opening time: 0.5 s.

Closing time: < 1 s.

Ambient temperature: -20 to +60°C.

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.

Safety valve:

Class A, Group 2 pursuant to EN 161.

Mains voltage:

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

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

Electrical connection:

Plug with socket to EN 175301-803.

Power consumption:

Type	120/230 V AC
VGP 10	26 W
VGP 15	26 W
VGP 20	35 W
VGP 25	35 W

Enclosure: IP 54.

Duty cycle: 100%.

Power factor of the solenoid coil: cos φ = 1.

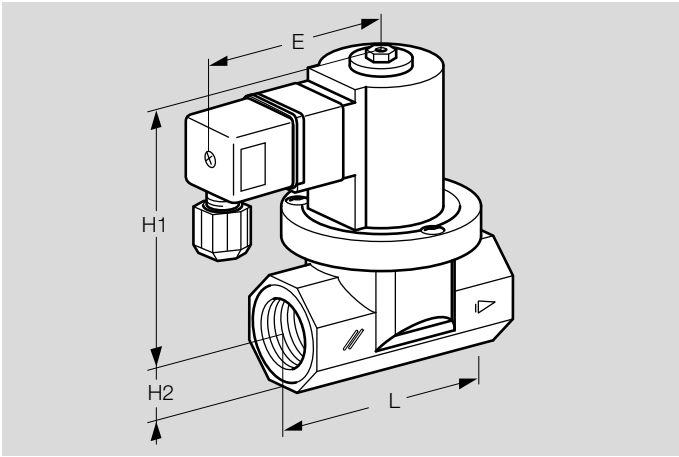
Solenoid coil insulation: class F insulating material.

Switching frequency: any.

Valve housing: aluminium,
valve plate: Perbunan.

Internal thread: Rp to ISO 7-1.

8 Dimensions



Type	Connection		Dimensions [mm]				P _u max. [mbar]	Weight [g]
	Rp	DN	L	H1	H2	E		
VGP 10	3/8	10	71	89	16	77	200	500
VGP 15	1/2	15	71	89	16	77	200	480
VGP 20	3/4	20	91	105	23	78	150	800
VGP 25	1	25	91	105	23	78	150	780

9 Maintenance cycles

At least once a year, at least twice a year in the case of biologically produced methane.

For more information

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Eclipse, Exothermics, Hauck, Kromschroder and Maxon. To learn more about our products, visit ThermalSolutions.honeywell.com or contact your Honeywell Sales Engineer.

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