

# SAFETY SHUT-OFF VALVES

## Series VSA at 1, 3 and 6 bar



Gas safety solenoid shut-off valves series VSA High pressure, approved according to the Norm EN 161 with **CE** product identification and manufactured according to Atex rule 94/9/CE - Zone 2 and 22 (II 3G – II 3D), are suitable for the automatic control of gases belonging to the I°, II° and III° family. On request there are versions for air. These valves, normally closed for continuous and cyclic operation, open by powering the coil and close quickly when there is no tension.

### TECHNICAL FEATURES

Valve body	: die-cast aluminium	Supply voltage	: 230 Vac, 110 Vac
Threaded connections	: Rp ½ ÷ Rp 2 acc. to EN10226	On request	: 12 Vac/Vdc for Rp ½ ÷ Rp 1 : 24 Vdc, but DN200 [only 24 Vac]
Flanged connections	: DN25 ÷ DN200 PN16 acc. to ISO 7005	Frequency	: 50 ÷ 60 Hz : 50 Hz for 24 Vac
Inlet pressure	: 1, 3 and 6 bar	Enclosure	: IP 65
Opening*/closing time * on quick version	: < 1 second	Supply voltage tolerance	: -15% - +10%
Ambient temperature	: -20 ÷ +60 °C	Duty cycle	: continuous

### FEATURES

- Class A for Rp 1/2 ÷ Rp 2 and DN25 ÷ DN 150; Class B for DN 200, Group 2 according to EN161
- Electromagnetic Compatibility – Directive 2004/108/CE
- Low voltage – Directive 2006/95/CE
- ATEX zones 2 and 22 (II 3G – II 3D) – Directive 94/9/CE
- Normally closed
- Quick and slow Opening and quick Closing
- Quiet operation
- PA resin encapsulated coils
- Pressure test points at inlet by both sides
- Accessories on request: limit switch, max flow adjustment, rapid stroke

# WIRING INSTRUCTIONS



## WARNING

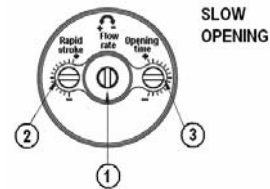
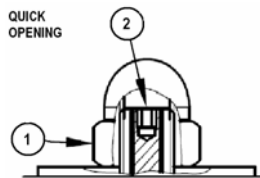
Installation, adjustment and maintenance of the valve must be carried out exclusively by skilled and authorized service technicians

1. Before electric wiring, check that the main voltage matches with the power supply voltage stated on the product label.
2. Disconnect power before wiring.
3. By wiring connector, use terminals and cables as reported in the Instruction leaflet in the package.
4. Connect the power supply to terminals 1 and 2 and the ground wire to terminal 3
5. Using energy saving Green connector with 12 and 24 Vdc comply with polarity.

## INSTALLATION AND OPERATING INSTRUCTIONS

1. Make sure that all operating data indicated on the safety shut-off valve label correspond to those of the system.
2. Before installing the safety shut-off valve, quit the gas supply and make sure that the pipeline is free from impurities. The pipeline must be vibration-free.
3. The flow direction indicated by the arrow on the valve body must be respected, facing towards the user appliance. The safety valve can be installed either horizontally or vertically, provided that the coil is not turned downwards.
4. By installing on threaded device, check the pipeline length: overlong threads may damage the body of the device when joined.
5. When installing the safety shut-off valve in pipework do not use the coil as a lever, but the correct wrench.
6. The sealing material must be applied to the external thread of the pipeline only and not to the internal thread of the safety shut-off valve.

## ADJUSTMENT OF FLOW RATE - OPENING TIME AND RAPID STROKE



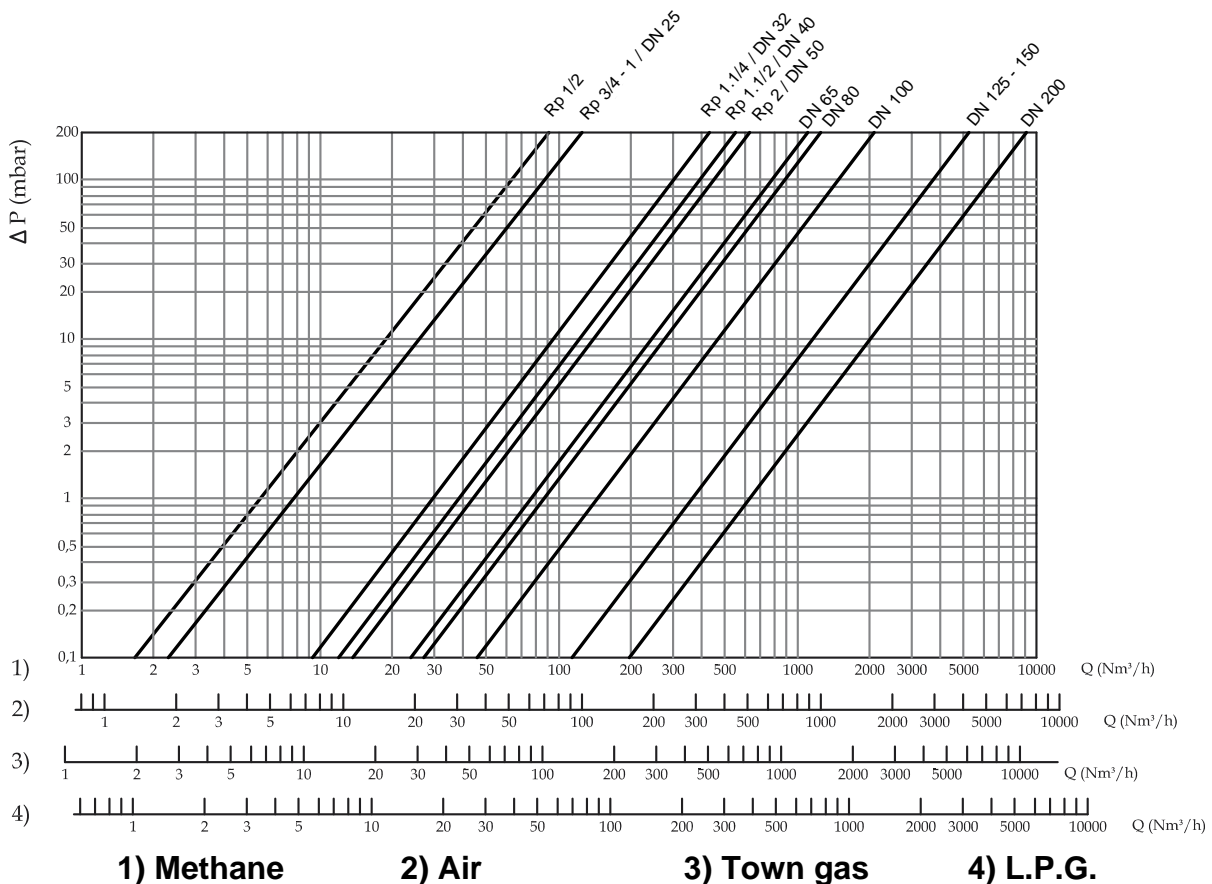
1. Coil fastening nut
2. Flow rate adjustment

Unscrew the nut and spin the internal screw clockwise  $\curvearrowright$  to reduce and counter clockwise  $\curvearrowleft$  to increase the flow rate. For sizes  $\geq$  DN65 disconnect power, in order to avoid any mechanical stress on the screw.

1. Flow rate adjustment
2. Rapid stroke adjustment
3. Opening time adjustment

Spin the screws clockwise  $\curvearrowright$  to reduce each worth and counter clockwise  $\curvearrowleft$  to increase each worth.

## FLOW DIAGRAM



# SHUT-OFF VALVES SERIES VSA .... THREADED

**VSA = Safety shut-off valve in alluminio**

**Operation**

- R = Quick
- RP = Quick with max. flow adjustment
- L = Slow
- LP = Slow with max flow adjustment
- LSP = Slow with max flow adjustment + rapid stroke

**Max. pressure**

- 10 = 1 bar
- 30 = 3 bar
- 60 = 6 bar

**Nominal diameter**

- |             |               |
|-------------|---------------|
| 15 = Rp 1/2 | 32 = Rp 1.1/4 |
| 20 = Rp 3/4 | 40 = Rp 1.1/2 |
| 25 = Rp 1   | 50 = Rp 2     |

**Supply voltage**

- |                       |  |
|-----------------------|--|
| A = 24 Vac / 50 Hz    | E = 24 Vdc                                 |
| B = 110 Vac / 50-60Hz | F = 12Vdc [only for Rp 1/2 ÷ Rp 1]         |
| C = 230 Vac / 50-60Hz | G = 12Vac / 50 Hz [only for Rp 1/2 ÷ Rp 1] |

**Other accessories**

- I = signal lamp by valve feeding [in the connector]
- M = limit micro-switch
- F = flanged [only for Rp 1]
- B = biogas version
- AX = ATEX version
- NPT = with NPT thread

VSA LP 60 25 C M

# SHUT-OFF VALVES SERIES VSA .... FLANGED

**VSA = Safety shut-off valve in aluminium**

**Operation**

- R = Quick
- RP = Quick with max. flow adjustment
- L = Slow
- LP = Slow with max. flow adjustment
- LSP = Slow with max. flow adjustment and rapid stroke

**Max. pressure**

- 10 = 1 bar
- 30 = 3 bar
- 60 = 6 bar

**Nominal diameter**

- |            |            |              |              |
|------------|------------|--------------|--------------|
| 25 = DN 25 | 50 = DN 50 | 100 = DN 100 | 200 = DN 200 |
| 32 = DN 32 | 65 = DN 65 | 125 = DN 125 |              |
| 40 = DN 40 | 80 = DN 80 | 150 = DN 150 |              |

**Supply voltage**

- |                      |                                |
|----------------------|--------------------------------|
| A = 24 Vac / 50 Hz   | C = 230 Vac/ 50-60Hz           |
| B = 110 Vac/ 50-60Hz | E = 24 Vdc [except for DN 200] |

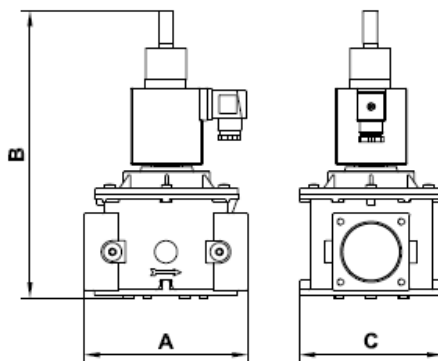
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VSA R 10 40 A AX

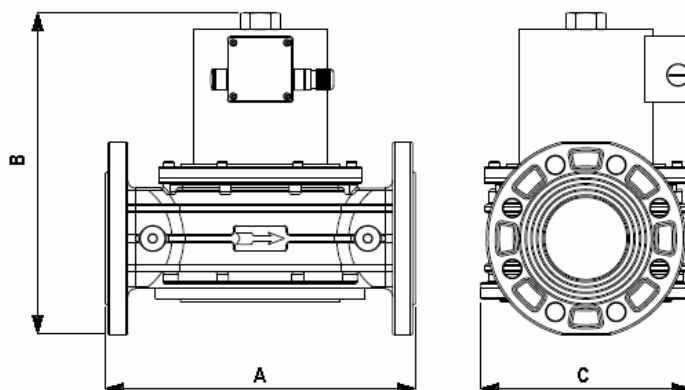
# MODELS AND RATING

## SERIES VSA..... QUICK / SLOW OPENING THREADED



Pipe [Rp]	Max. pressure [bar]	Rating at 230V [VA]	Dimension [mm] Model R			Weight [kg]
			A	B	C	
1/2" - 3/4"	1	18	70	137	74	0,85
	3 - 6	30 / 9				
1"	1	18	70	137	74	0,80
	3 - 6	30 / 9				
1.1/4"	1	89 / 25	160	210	140	3,6
	3 - 6			258		
1.1/2"	1	89 / 25	160	210	140	3,6
	3 - 6			258		
2"	1	89 / 25	160	210	140	3,6
	3 - 6			258		

## SERIES VSA... QUICK / SLOW OPENING FLANGED



Pipe [DN]	Max. pressure [bar]	Rating at 230V [VA]	Dimension [mm] Model R			Weight [kg]
			A	B	C	
25	1	18	142	170	74	0,85
	3 - 6	30 / 9				
32 - 40 - 50	1	89 / 25	230	237	140	3,6
	3 - 6	55 / 15		261		
65	1 - 3 - 6	105 / 29	290	318	211	17
80			310	325		17,60
100		350	392	254	29,60	
125		480	570	322	34,00	
150	480	570	322	45,00		
200	----	----	600	680	---	---

All the reported data are subject to be changed without notice.

Form 120912