SAFETY SHUT-OFF VALVES
Series VSB and VSA

Gas safety solenoid shut-off valve series VSB and VSA, 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 first, second and third family. On request there are versions for biogas and 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	: brass OT-58 and die-cast aluminium	Standard supply voltage	: 230 Vac, 110 Vac, 24 and 12 Vac and Vdc
Pipe connections for valves with brass body	: Rp ⅜, Rp ½, Rp ¾ according to EN10226	Frequency	: 50 ÷ 60 Hz 50 Hz for 12 and 24 Vac
Pipe connections for valves with aluminium body	: Rp ½…Rp 2 acc. to EN10226 and DN65 - DN150 flanged PN16 acc. to ISO 7005	Enclosure	: IP 65 – IEC 529
		Supply voltage tolerance	: -15% - +10%
Inlet pressure	: 200 and 360 mbar	Duty cycle	: continuous
Opening*/closing time * on quick version	: < 1 second	Ambient temperature	: -20 / +60 °C

FEATURES

- Class A, 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 and metallic frame for flanged bodies
- Pressure test points at inlet by both sides
- Accessories on request:: by-pass, limit switch, max flow adjustment

WIRING INSTRUCTIONS

WARNING

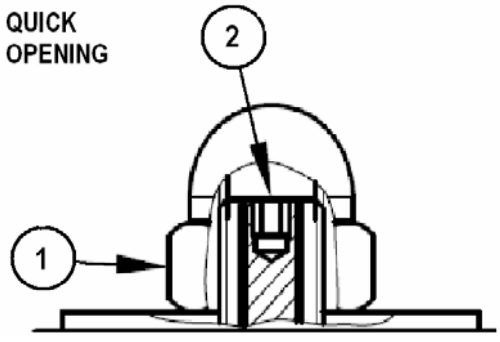
Installation, adjustment and maintenance of the valve must be carried out exclusively by skilled and authorized service technicians

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 ⏚
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. When installing the safety shut-off valve in pipework do not use the coil as a lever, but use the correct wrench.
5. 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.

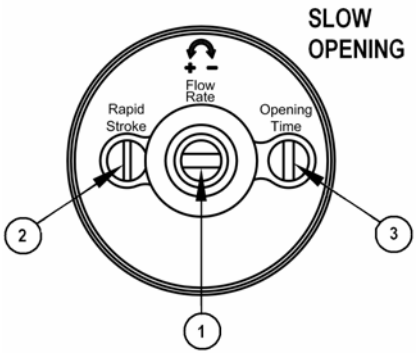
ADJUSTMENT OF FLOW RATE - OPENING TIME AND RAPID STROKE



1. Coil fastening nut

2. Flow rate adjustment

Unscrew the nut and spin the internal screw clockwise ↻ to reduce and counter clockwise ↺ to increase the flow rate.



1. Flow rate adjustment

2. Rapid stroke adjustment

3. Opening time adjustment

Spin the screws clockwise ↻ to reduce each worth and counter clockwise ↺ to increase each worth.

SHUT-OFF VALVES SERIES VSB …. QUICK OPENING

VSB = **Safety shut-off valve in brass**

Operation
- **R** = Quick
- **RP** = Quick with max. flow adjustment

Max. pressure
- **2** = 200 mbar

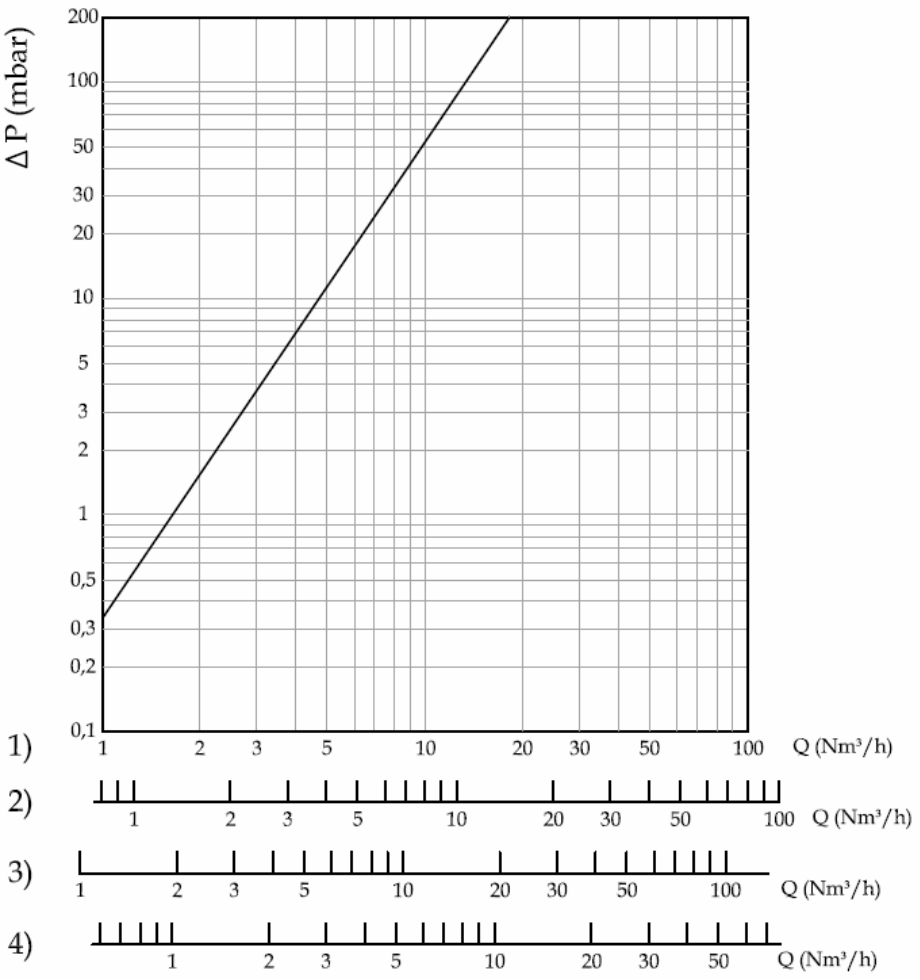
Nominal diameter
- **10** = Rp ⅜
- **15** = Rp ½
- **20** = Rp ¾

Supply voltage
- **A** = 24 Vac / 50 Hz
- **B** = 110 Vac / 50-60Hz
- **C** = 230 Vac / 50-60Hz
- **E** = 24 Vdc
- **F** = 12Vdc
- **G** = 12Vac / 50 Hz

Other accessories
- **I** = signal lamp by valve feeding [in the connector]
- **GR** = Green - with low energy consumption connector
- **NPT** = with NPT thread

VSB RP 2 15 C I

FLOW DIAGRAM



1) Methane **2) Air** **3) Town gas** **4) L.P.G.**

SHUT-OFF VALVES SERIES VSA ….
Rp 1/2 - 3/4 - 1

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
- **2** = 200 mbar
- **3** = 360 mbar

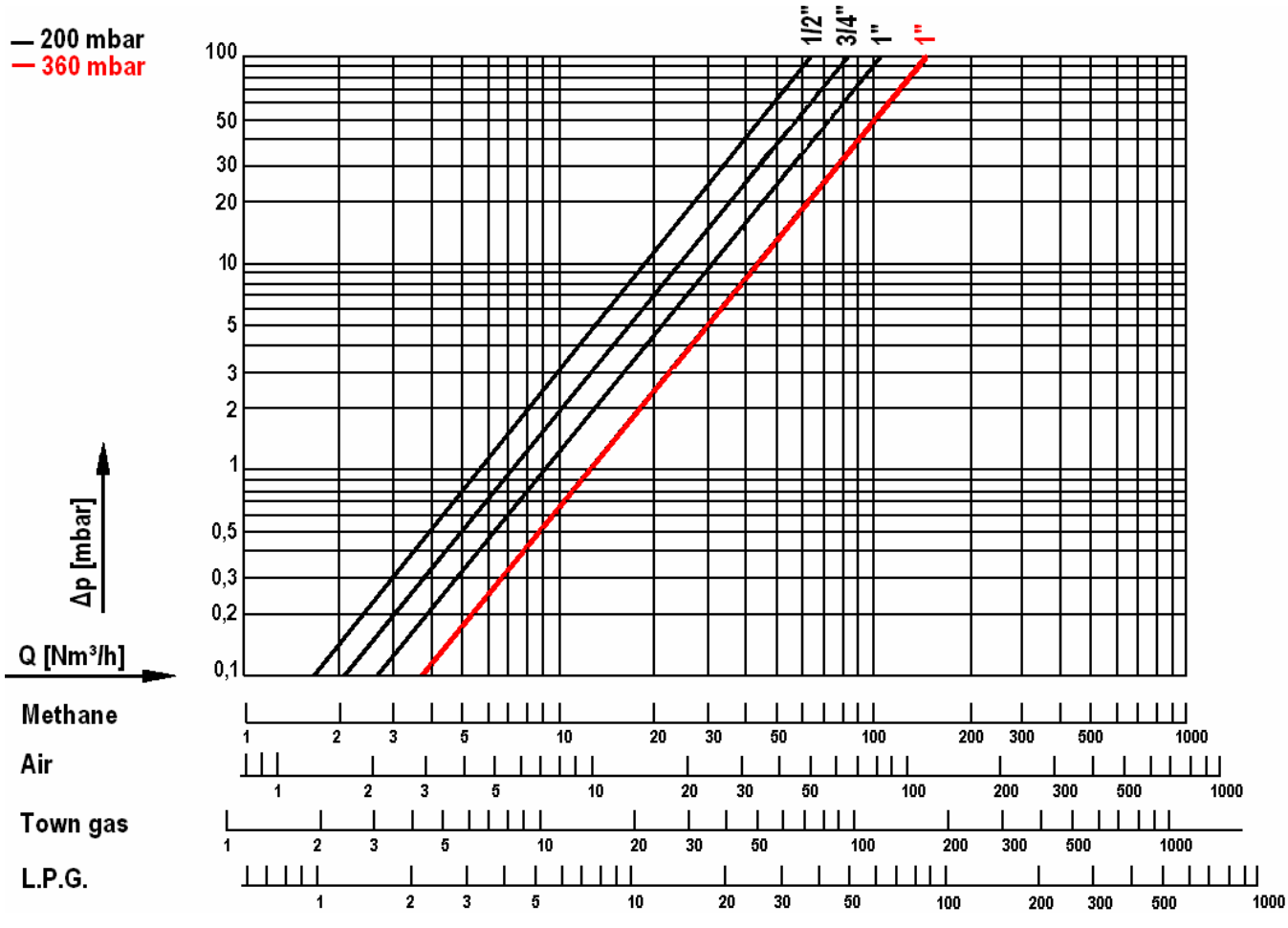
Nominal diameter
- **15** = Rp ½
- **20** = Rp ¾
- **25** = Rp 1

Supply voltage
- **A** = 24 Vac / 50 Hz
- **B** = 110 Vac / 50-60Hz
- **C** = 230 Vac / 50-60Hz
- **E** = 24 Vdc
- **F** = 12Vdc
- **G** = 12Vac / 50 Hz

Other accessories
- **BP** = by-pass
- **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	2	25	C	BP

FLOW DIAGRAM



SHUT-OFF VALVES SERIES VSA ....
Rp 1.1/4 -1.1/2 - 2

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

- **2** = 200 mbar
- **3** = 360 mbar

Nominal diameter

- **32** = Rp 1.1/4
- **40** = Rp 1.1/2
- **50** = Rp 2

Supply voltage

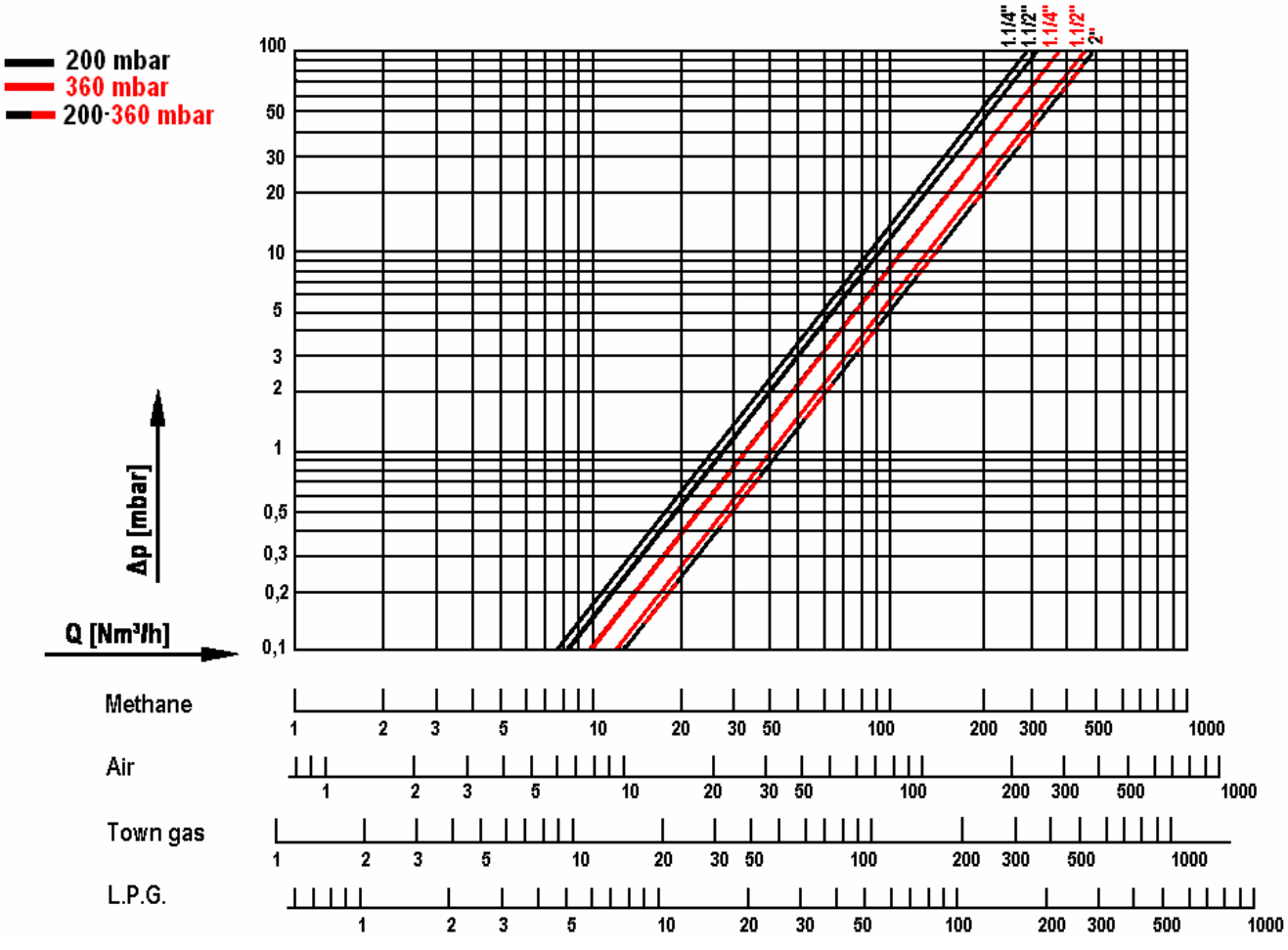
- **A** = 24 Vac / 50 Hz
- **B** = 110 Vac/ 50-60Hz
- **C** = 230 Vac/ 50-60Hz
- **E** = 24 Vdc

Other accessories

- **BP** = by-pass
- **I** = signal lamp by valve feeding [in the connector]
- **M** = limit micro-switch
- **F** = flanged
- **B** = biogas version
- **AX** = ATEX version
- **NPT** = with NPT thread

VSA	LP	3	50	B	M

FLOW DIAGRAM



SHUT-OFF VALVES SERIES VSA .... FLANGED
DN65 - DN80 - DN100 - DN125 - DN150

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

3 = 360 mbar

Nominal diameter

65	=	DN 65
80	=	DN 80
100	=	DN 100
125	=	DN 125
150	=	DN 150

Supply voltage

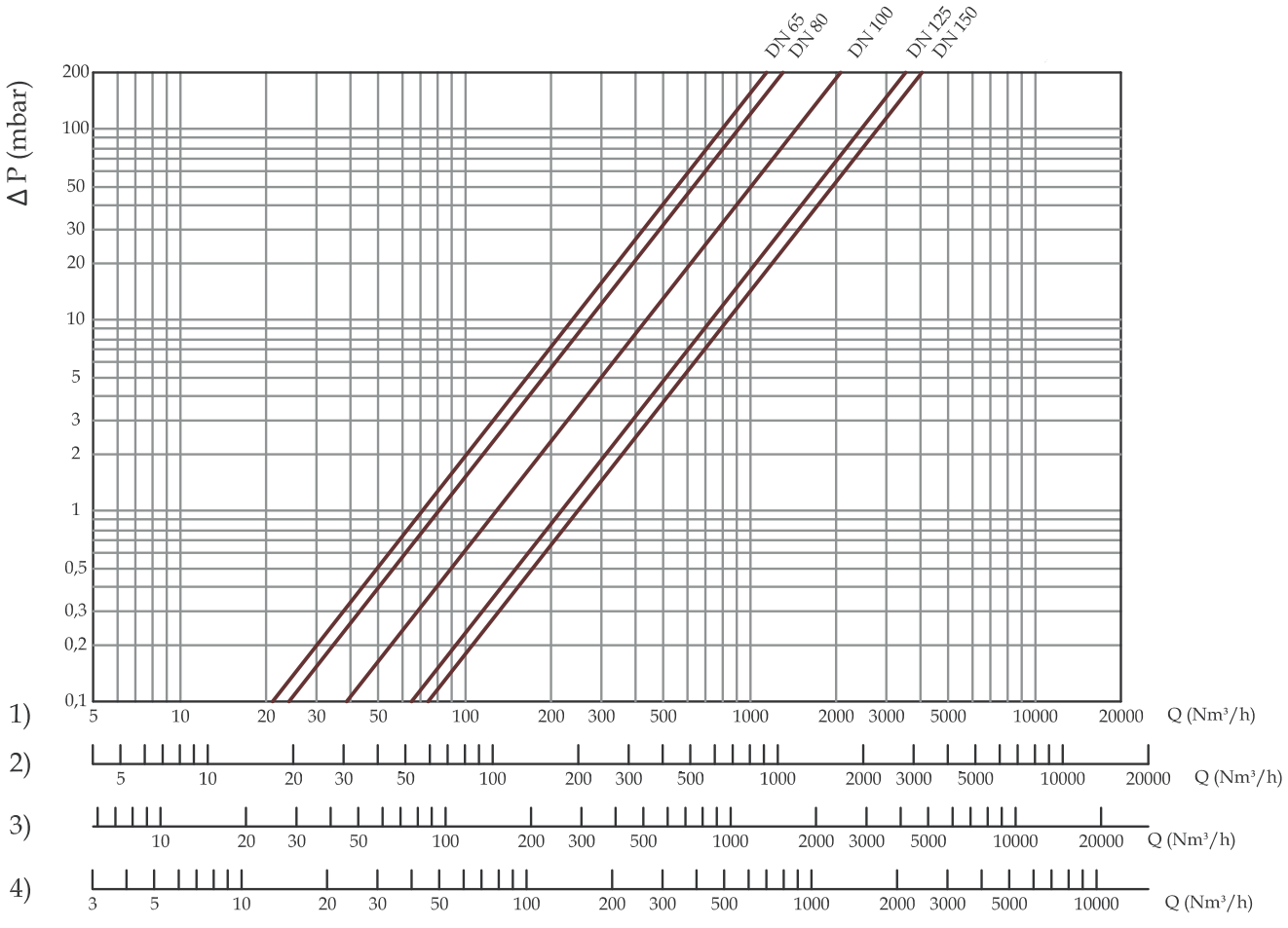
A = 24 Vac / 50 Hz
B = 110 Vac/ 50-60Hz
C = 230 Vac/ 50-60Hz
E = 24 Vdc

Other accessories

I	=	signal lamp by valve feeding [in the connector]
M	=	limit micro-switch
B	=	biogas version
AX	=	ATEX version
K	=	with cataphoresis treatment

VSA	LSP	3	150	A	BK

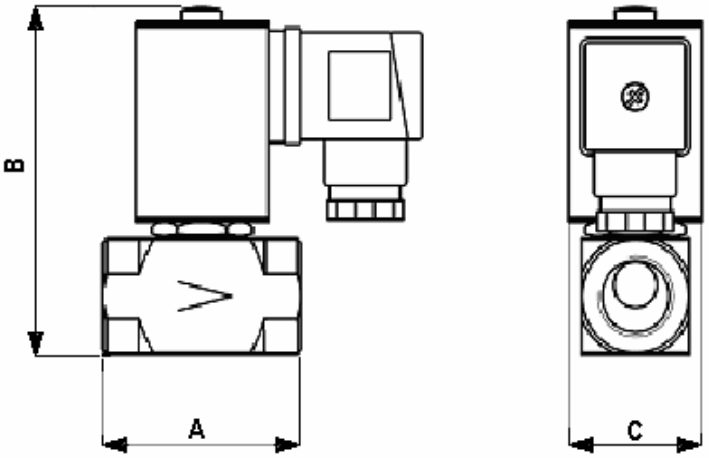
FLOW DIAGRAM



1) Methane **2) Air** **3) Town gas** **4) L.P.G.**

MODELS AND RATING

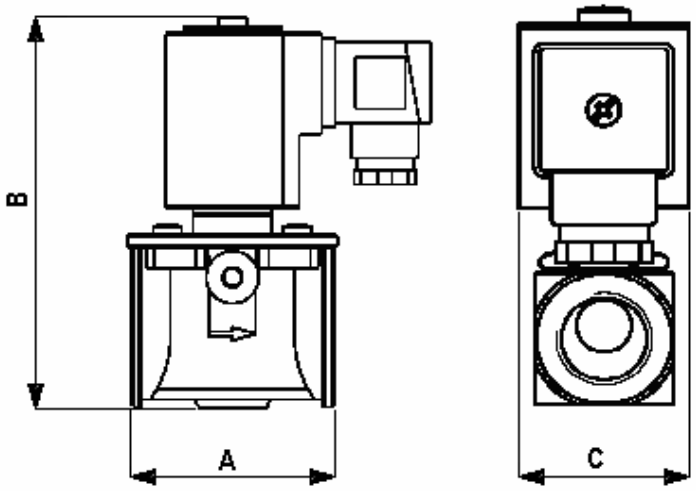
SERIES VSB….. QUICK OPENING



An energy saving connector Green for valuable reduction of energy consumption is also available [3 VA].

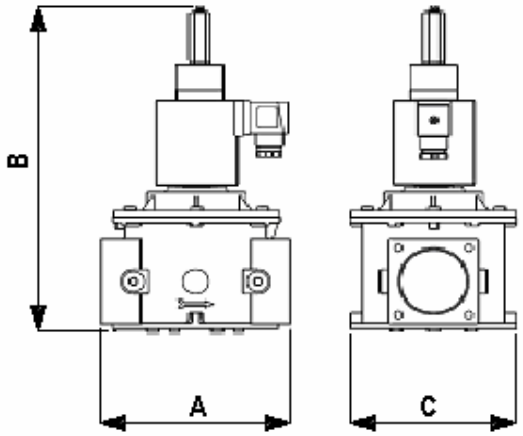
Pipe [Rp]	Max. pressure [mbar]	Rating at 230V [VA]	Rating at 230V with Green conn. [VA]	Dimension [mm]			Weight [kg]	Model
				A	B	C		
3/8	200	9	3	55	90,5	37	0,6	VSBRP210C..
1/2	200	9	3	55	90,5	37	0,6	VSBRP215C..
3/4	200	9	3	55	90,5	37	0,6	VSBRP220C..

SERIES VSA….. QUICK / SLOW OPENING THREADED Rp 1/2, 3/4, 1



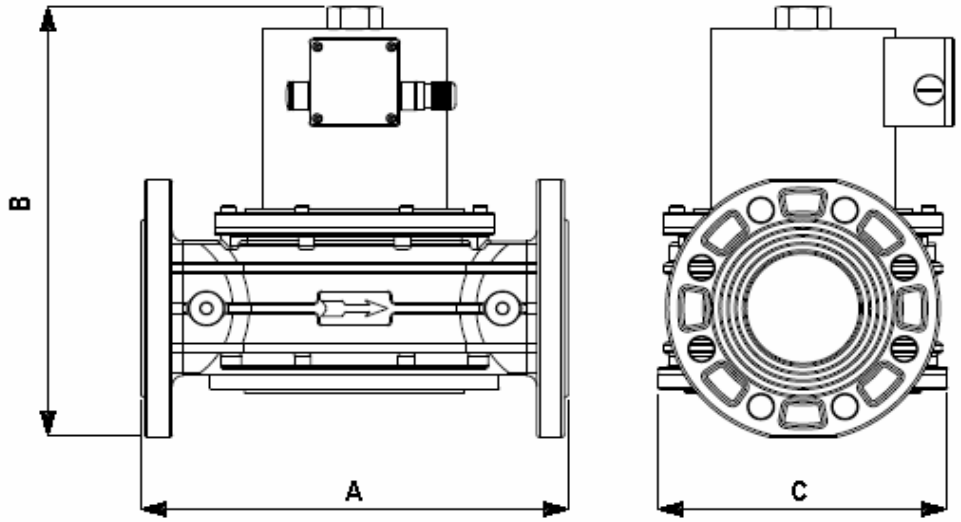
Pipe [Rp]	Max. pressure [mbar]	Rating at 230V [VA]	Dimension [mm]						Weight [kg]	Model
			A	B				C		
				R	RP	L	LP/ LSP			
1/2”	200	18	70	137	150	185	205	74	0,85	VSA..215C..
	360	30 / 9								VSA..315C..
3/4”	200	18	70	137	150	185	205	74	0,85	VSA..220C..
	360	30 / 9								VSA..320C..
1”	200	30 / 9	142	170	195	230	250	74	0,80	VSA..225C..
	360	54 / 18								VSA..325C..

SERIES VSA… QUICK / SLOW OPENING THREADED Rp 1.1/4, 1.1/2, 2



Pipe [Rp]	Max. pressure [mbar]	Rating at a 230V [VA]	Dimension [mm]						Weight [kg]	Model
			A	B				C		
				R	RP	L	LP/ LSP			
1.1/4	200	89 / 25	160	185	200	240	262	140	3,4	VSA..232C..
	360			210	210	253	275		3,6	VSA..332C..
1.1/2	200	89 / 25	160	185	200	240	262	140	3,4	VSA..240C..
	360			210	210	253	275		3,6	VSA..340C..
2	200	89 / 25	160	210	225	267	290	140	3,6	VSA..250C..
	360			235	235	278	300			VSA..350C..

SERIES VSA… QUICK / SLOW OPENING FLANGED



Pipe [DN]	Max. pressure [mbar]	Rating at 230V [VA]	Dimension [mm]						Weight [kg]	Model
			A	B				C		
				R	RP	L	LP/ LSP			
65	360	105 / 29	290	321	321	432	480	211	17	VSA..365C..
80			310	328	328	439	486	211	17,60	VSA..380C..
100		124 / 36	350	389	389	500	547	254	29,60	VSA..3100C..
125			480	570	570	681	728	322	34,00	VSA..3125C..
150			480	570	570	681	728	322	45,00	VSA..3150C..

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

Form 120911