

Solenoid butterfly valve series BFVS

The magnetic butterfly valves of the series BFVS are suitable to be used for control of gases belonging to the first, second and third family [not aggressive] as well as of air. On request versions for biogas are also available.

These valves, normally closed for continuous and cyclic operation, open by powering the coil and close quickly when there is no tension.

Magnetic butterfly valve are manufactured in conformity to EN 161 and to ATEX rule 94/9/CE - Zone 2 and 22 (II 3G - II 3D).



TECHNICAL FEATURES

Valve body	Aluminium 11S
Stem and disc	Stainless steel 303
Pipe connection	Flanged wafer type from DN 50 up to DN 200 according to norms EN 1092
Max Inlet pressure max	200 mbar
Opening/closing time (quick version)	< 1 second / < 1 second
Opening/closing time (slow version)	Up to 20 s / < 1 s
Supply voltage	230V ac 50-60 Hz
On request	110V ac 50-60 Hz - 24V ac and dc. 50 Hz
Enclosure	IP65 - IEC 529
Duty cycle	100% continuous
Ambient temperature	-40 ÷ +60°C

FEATURES

- Sturdy, compact construction suitable for industrial application
- Low leakage rate and pressure loss
- On request by-pass for minimum flow adjustment
- Maximum flow adjustment
- Robust mechanical transmission which guarantees high no of cycles
- Adjustable opening time in the slow version
- Suitable for installation on vertical pipe

MODELS

BFVS = Solenoid Butterfly Valve

Nominal diameter

- 50** = DN 50
- 65** = DN 65
- 80** = DN 80
- 100** = DN 100
- 125** = DN 125
- 150** = DN 150
- 200** = DN 200

Supply Voltage

- A** = 24V ac 50 Hz
- B** = 110V ac 50 - 60 Hz
- C** = 230V ac 50 - 60 Hz
- E** = 24V dc.

Operation

- R** = quick opening
- RP** = quick opening with max flow adjustment
- L** = slow opening
- LP** = slow opening with max flow adjustment

Accessories

- BP** = by-pass
- BG** = biogas

BFVS

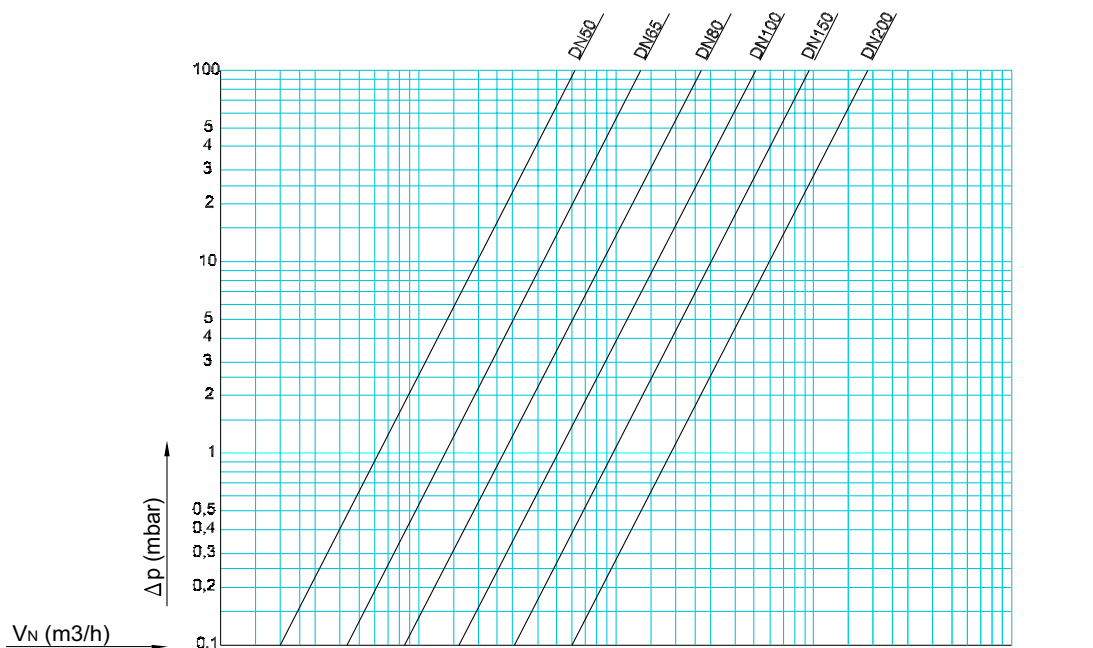
50

B

RP

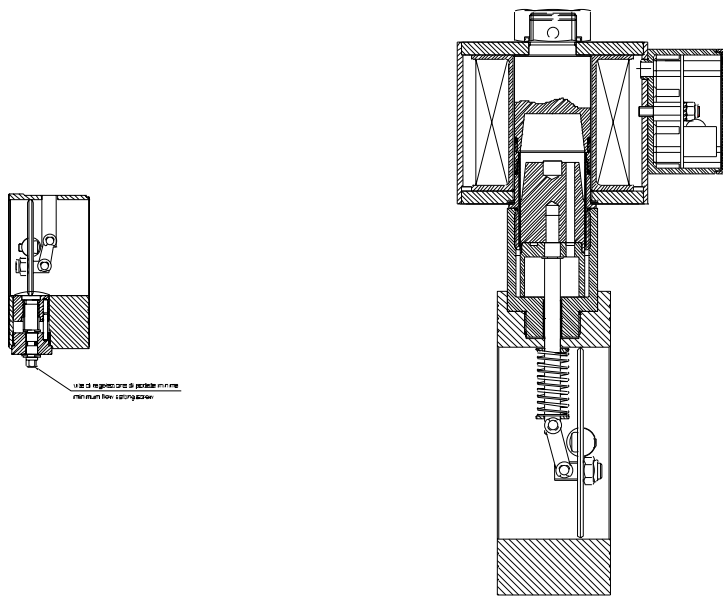
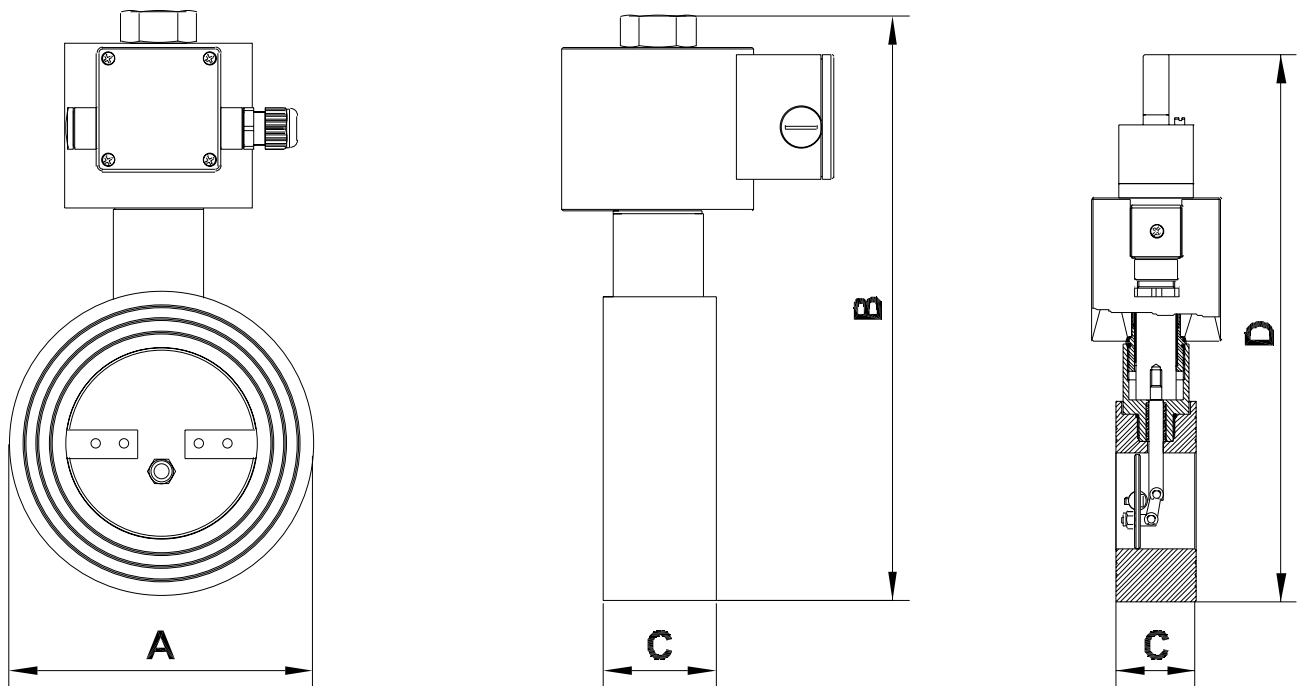
BP

FLOW CHART



Fluid	dv	Scale 1 (m ³ /h)	Scale 2 (m ³ /h)	Scale 3 (m ³ /h)	Scale 4 (m ³ /h)
Aria	1	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Air	1	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Metano	0,64	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Methane	0,64	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Gas di città	0,45	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Town gas	0,45	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Propano	1,56	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Propane	1,56	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Butano	2,09	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
Butane	2,09	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
G.P.L.	1,70	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000
L.G.P.	1,70	10 20 30 40 50 60 80 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000	2 3 4 5 6 8 100000

DIMENSIONS



Dimensions in mm

DN	50	65	80	100	125	150	200
A	108	124	138	160	185	210	270
B	220	240	250	312	360	370	470
D (slow version)	300	320	330	392	440	450	550
C	43	44	44	60	64	64	74
Weight in Kgs (quick version)	3,0	3,5	3,5	6,0	8,0	12,0	18,0
Weight in Kgs (slow version)	4,0	4,5	4,5	7,0	9,0	13,0	19,0




Warning

Installation, adjustment, and maintenance of the valve must be carried out exclusively by skilled and authorized service technicians. Non-proper installation, changes, use and maintenance may cause damages to the personnel or to the equipment. Consequently, it is necessary to respect strictly the following instructions and local prescriptions for gas systems.

INSTALLATION

- The gas supply must be shut off before installation.
- Check that the line pressure **DOES NOT EXCEED** the maximum pressure stated on the product label.
- The throttle valve must be installed between two flanges according to EN-1092. We suggest to mount it taking into consideration a straight pipe length before and after the valve of 2 x DN at least.
- The valve can be mounted even on a vertical pipe, in this case we suggest to check periodically the absence of dirtiness got on the obturator disc which could change the correct function of the valve.
- If pipe fittings are installed in the pipe, the additional pressure loss must be taken into account.
- During installation take care not to allow debris or scraps of metal to enter the device.
- Check that the inlet and outlet counterflanges are perfectly parallel to avoid unnecessary mechanical stresses on the body of the device. Also calculate the space needed to fit the seal. If the gap left after the seal is fitted is too wide, do not try to close it by overtightening the device's bolts.
- Always check that the system is gas-tight after installation.

ELECTRICAL CONNECTIONS

- Before making electrical connections, check that the mains voltage is the same as the power supply voltage stated on the product label.
- Disconnect the power supply before wiring.
- Wire the connector with cable type:
DN 50 - DN 65 - DN 80: H05RN-F 3X0.75mm² Ø outside from 6,2 to 8,1 mm
DN 100 - DN 125 - DN 150 - DN 200: H05RN-F 3X1mm² Ø outside from 8,3 to 9,5 mm
taking care to ensure that the device has IP65 protection.
- Connect the power supply to terminals 1 and 2 and the ground wire to terminal .

IMPORTANT

With tension 24 Vdc with energy saving connector observe the polarity.

The coil is also suitable for permanent power supply. In case of continuous duty, it is absolutely normal for the coil to heat up. The coil should not be touched with bare hands after it has been continuously powered for more than 20 minutes. Before maintenance work, wait for the coil to cool or use suitable protective equipment.

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

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