



HBC 975

Slam Shut Valves

Classification and area of application

HBC 975 is a safety device, also called slam-shut valve, suitable to quickly interrupt the flow of a gas when the pressure existing in the control point reaches the set calibration value. It is a valve featuring an extremely fast response time, adjustable within the range of 0.5 and 2 seconds.

The tripping of the slam-shut device, besides occurring automatically when the predetermined set-point is exceeded, can also be enabled locally, by pressing the suitable button available on the pressure switch, or remotely, as a result of the monitoring of the system or network on which the slam-shut device is installed.

As a result of the tripping of the slam-shut valve, the subsequent restoration of the normal operating condition, also called **RESET** operation, is carried out in a purely manual manner, after having verified and solved the causes that led to such tripping.

HBC 975 is a slam-shut valve that can be used:

- In natural gas transport and/or distribution networks
- In networks for gaseous fluids in general, provided that they are not corrosive and are previously purified.
- In applications on industrial and/or process plants where it is necessary to assure that given pressure thresholds are not exceeded, for safety reasons.

It is Truly a **TOP ENTRY** design, which confers to the regulator management advantages, for example the ability to perform full maintenance without uninstalling it from the connection pipe.

The modularity concept adopted in the design of these valves allows the coupling of the same with various other equipment of our production such as pressure regulators and/or throttling devices.

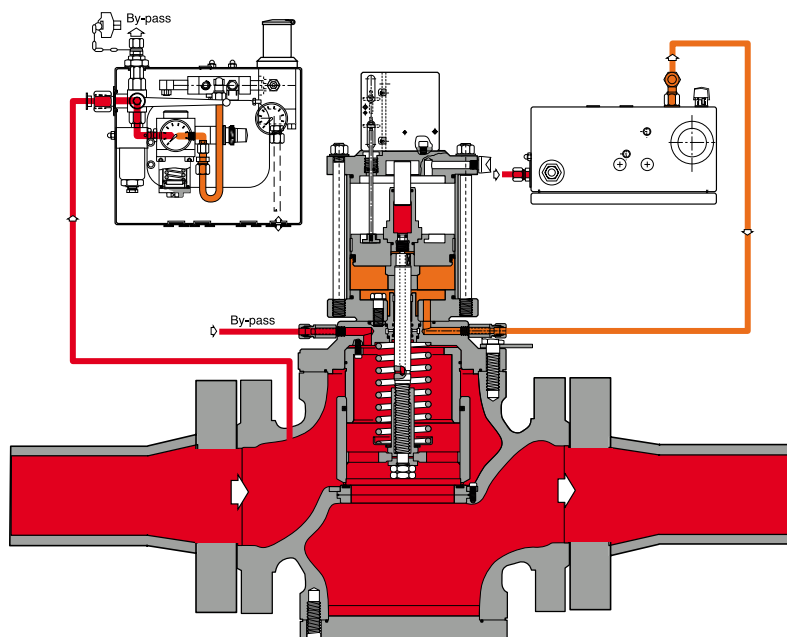


Fig.1

HBC 975 - Slam-shut valve

Features

Functional features:*

■ Maximum inlet pressure:	Up to 102 bar
■ Minimum ambient temperature:	Execution up to -40°C (to specify in the request).
■ Maximum ambient temperature:	+60°C
■ Inlet gas temperature:	Up to -20°C + 60°C
■ Accuracy class AG:	Up to 1
■ Range of intervention for overpressure:	OPSO 1,3/85 bar
■ Range of intervention for underpressure:	UPSO 0,4/75 bar
■ Plug:	Balanced

Design features:

■ Nominal dimensions DN:	100 (4"); 150 (6"); 200 (8"); 250 (10"); 300 (12")
■ Flanged connections:	Class 150-300-600 RF or RTJ, according to ANSI B16.5 and PN 16 according to UNI EN 1092 or ISO 7005.

Materials: **

■ Body:	Cast steel ASTM A 352 LCC for classes ANSI 300 and 600; Cast steel ASTM A 216 WCB for classes Ansi 150 and PN 16
■ Stem:	AISI 416 stainless steel
■ Valve seat:	Carbon steel + vulcanized rubber
■ Plug:	ASTM A 350 LF2 Nikel coated
■ Sealing ring:	Nitril rubber
■ Connection fittings:	In zinc-plated carbon steel according to DIN 2353; Stainless steel on request

REMARK: * Different functional features available on request.

** The materials indicated above refer to the standard models.
Different materials can be provided according to specific needs.

Characteristic coefficients

Nominal diameter					
Millimeters	100	150	200	250	300
Inches	4"	6"	8"	10"	12"
KG flow coefficient	8416	17471	27282	38425	57860
					Tab.1

The calibration can be varied in, according to the operating needs, in the fields referred to in the table N.2, according to the model of pressure switch forecast.

The slam shuth device is equipped with a button for local manual control of slam shut operation.

The reset of the block device, for safety reasons, is exclusively manual and, inside the slam shut, a bypass device is provided, in order to make the reset operation easier.

The slam-shut device can be equipped with accessories of pneumatic or electromagnetic type allowing control, as well as with sensors (micro-switches) for the remote signaling of its tripping.

The slam shut valve can be calibrated for pressure increase, **over pressure shut off (OPSO)** and/or for pressure drop, **under pressure shut off (UPSO)**..

The two intervention modes can be tuned independently, using the dedicated calibration springs: a spring for the intervention of maximum pressure and a second spring for the intervention of minimum pressure.

Pressure switch

MOD.	Set point range for Overpressur (OPSO)	Set point range for Underpressure (UPSO)
SH 1190-103	from 1,3 to 11	from 0,4 to 6,8
SH 1190-104	from 10 to 31,5	from 1 to 20,6
SH 1190-105	from 25 to 76	from 2,5 to 50
SH 1190-105/92	from 58 to 85	from 45 to 75
		Tab.2

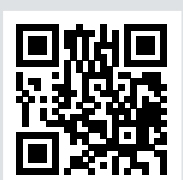
Values in bar(g)

Optionals

- Option for pneumatic or electromagnetic remote control
- Micro-switches for signaling that the valve is open and/or closed
- Stainless steel fittings, with single or dual sealing ring

Sizing of the slam-shut valve

In general, the sizing of the slam-shut valve involves determining the pressure drop under given operating conditions through the valve itself, verifying that such pressure drop is compatible with the plant parameters specified in the request.

Sizing	
	
For the sizing of the involved valves, kindly refer to our website: www.fiorentini.com/sizing	
Tab.3	

Typical connection diagrams

The following examples are provided as a recommendation to get the best performance from the slam shut valves **HBC 975**.

IN-LINE INSTALLATION

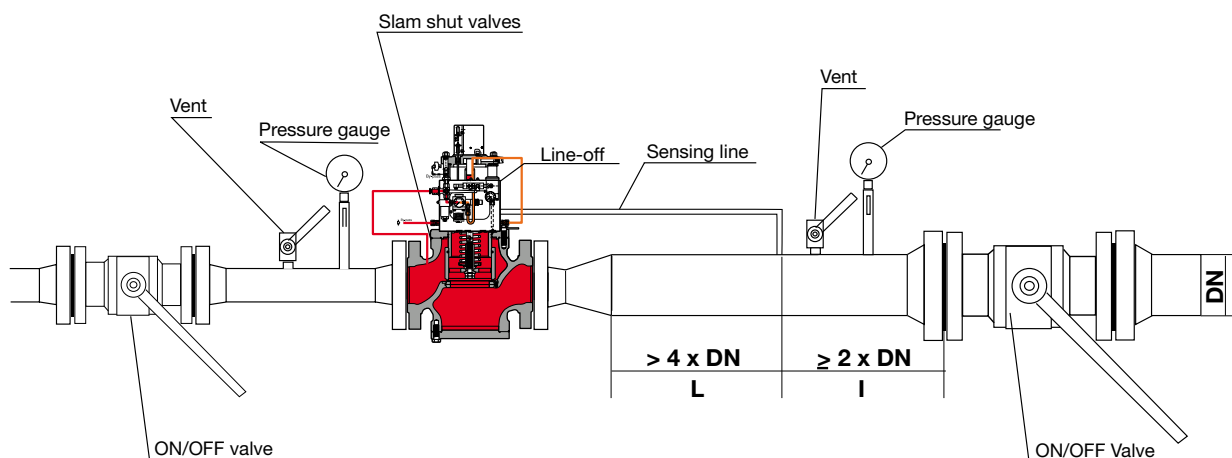


Fig.2

Recommended installations

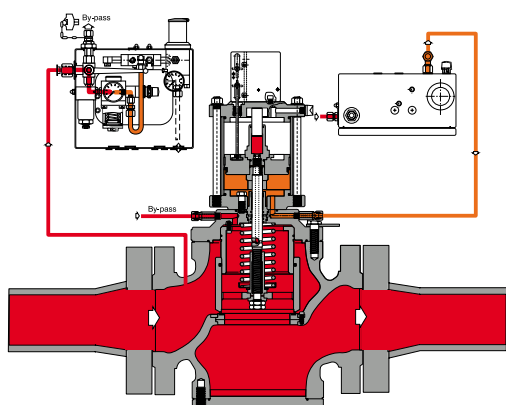


Fig.3

HBC 975 - Standard position

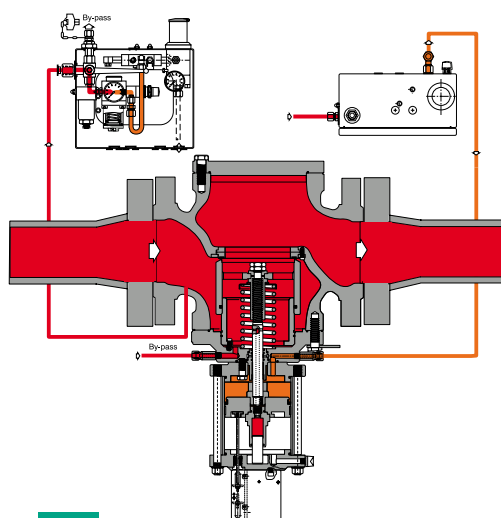


Fig.4

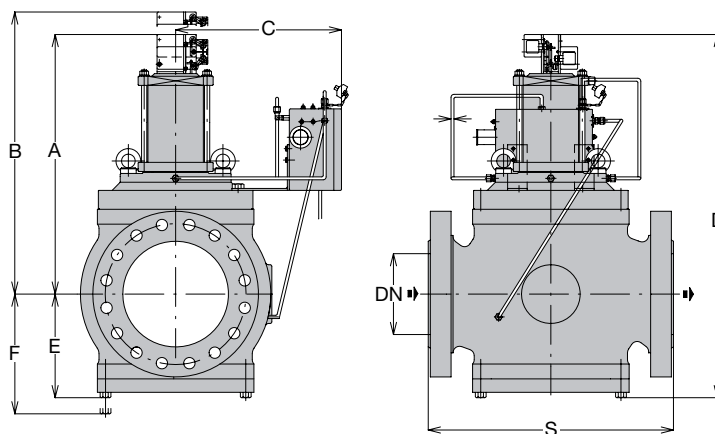
HBC 975 - Upside down position

■ Inlet pressure

■ Motorization

■ Outlet pressure

Dimensions



Overall dimensions DN

Millimeters	100	150	200	250	300
Inches	4"	6"	8"	10"	12"
S - Ansi 150/Pn16	352	451	543	673	737
S - Ansi 300	368	473	568	708	775
S - Ansi 600	394	508	609	752	819
A	518	645	687	796	940
B	650	835	900	1060	1220
C	358	410	445	510	530
D	700	870	952	1136	1312
E	180	225	265	340	372
F	205	275	320	440	480

Tab.4

Dimensions S according to EN 334 and IEC 534-3.

Weight in Kgf

S - Ansi 150/Pn16	104	233	305	600	1125
S - Ansi 300	120	239	349	650	1200
S - Ansi 600	131	256	375	700	1300

Tab.5

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The data are not binding. We reserve
the right to make changes without
prior notice.

