

## **SBC 782**

Slam Shut Valves

## Classification and area of application

**SBC 782** 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, guaranteeing the closing tripping within the time limit of 1 second.

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.

**SBC 782** 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.

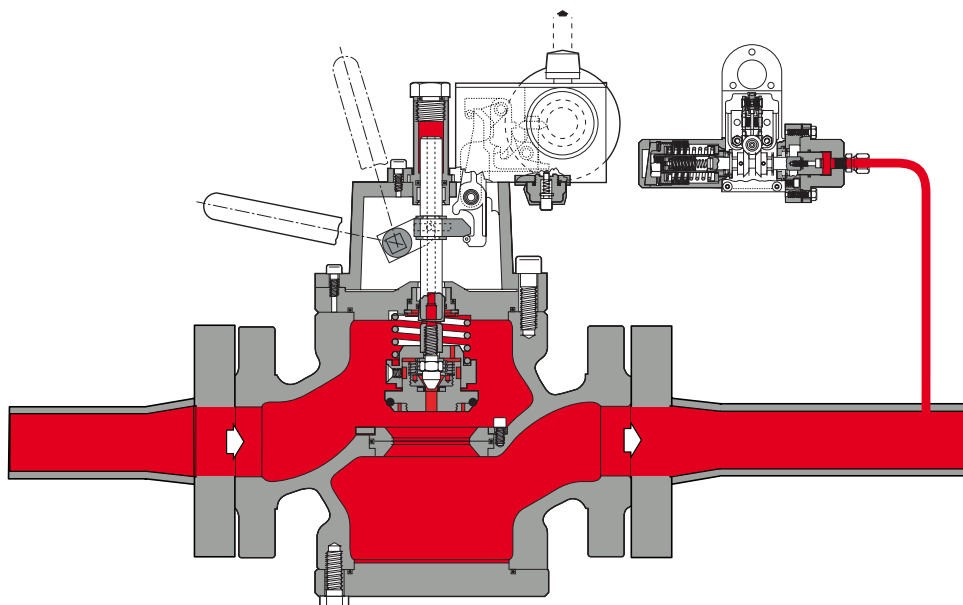


Fig.1

**SBC 782** - Slam shut valve

## Features

### Functional features:\*

■ <b>Maximum inlet pressure:</b>	Up to 102 bar
■ <b>Minimum ambient temperature:</b>	Execution up to -40°C (to specify in the request).
■ <b>Maximum ambient temperature:</b>	+60°C
■ <b>Inlet gas temperature:</b>	Up to -20°C + 60°C
■ <b>Accuracy class AG:</b>	Up to 2,5
■ <b>Range of intervention for overpressure:</b>	OPSO 0,03/90 bar
■ <b>Range of intervention for underpressure:</b>	UPSO 0,01/90 bar
■ <b>Plug:</b>	Balanced

### Design features:

■ <b>Nominal dimensions ANSI 150 / PN 16:</b>	25 (1"); 50 (2"); 65 (2" ½); 80 (3"); 100 (4"); 150 (6"); 200 (8"); 250 (10").
■ <b>Nominal dimensions ANSI 300/600:</b>	25 (1"); 50 (2"); 80 (3"); 100 (4"); 150 (6"); 200 (8"); 250 (10").
■ <b>Flanged connections:</b>	Class 150-300-600 RF o RTJ, according to ANSI B16.5 e PN 16 according to EN 1092, ISO 7005.

### Materials: \*\*

■ <b>Body:</b>	Cast steel ASTM A 352 LCC for class ANSI 600 and 300; Cast steel ASTM A 216 WCB for class Ansi 150 and PN 16.
■ <b>Stem:</b>	AISI 416 stainless steel
■ <b>Plug:</b>	Stainless steel
■ <b>Valve seat:</b>	Stainless steel
■ <b>Sealing ring:</b>	Nitril rubber
■ <b>Connection fittings:</b>	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	25	50	65	80	100	150	200	250
Inches	1"	2"	2"1/2	3"	4"	6"	8"	10"
<b>KG flow coefficient</b>	510	1970	3550	4390	7120	14780	23080	32506
								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 the 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 (UPS0)**.

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 (UPS0)
<b>101M</b>	from 0,03 to 1	from 0,01 to 0,26
<b>102M</b>	from 0,2 to 5,5	from 0,2 to 2,8
<b>103M</b>	from 2 to 22	from 0,2 to 8
<b>104M</b>	from 15 to 45	from 1,6 to 18
<b>105M</b>	from 30 to 90	from 3 to 44
<b>102MH</b>	from 0,2 to 5,5	from 2,8 to 5,5
<b>103MH</b>	from 2 to 22	from 8 to 19
<b>104MH</b>	from 15 to 45	from 18 to 41
<b>105MH</b>	from 30 to 90	from 44 to 90
		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 correct sizing of slam-shut valves <b>please contact our commercial department.</b>	
Tab.3	

## Typical connection diagrams

The following examples are provided as a recommendation to get the best performance from the slam shut valves **SBC 782**.

### IN-LINE INSTALLATION

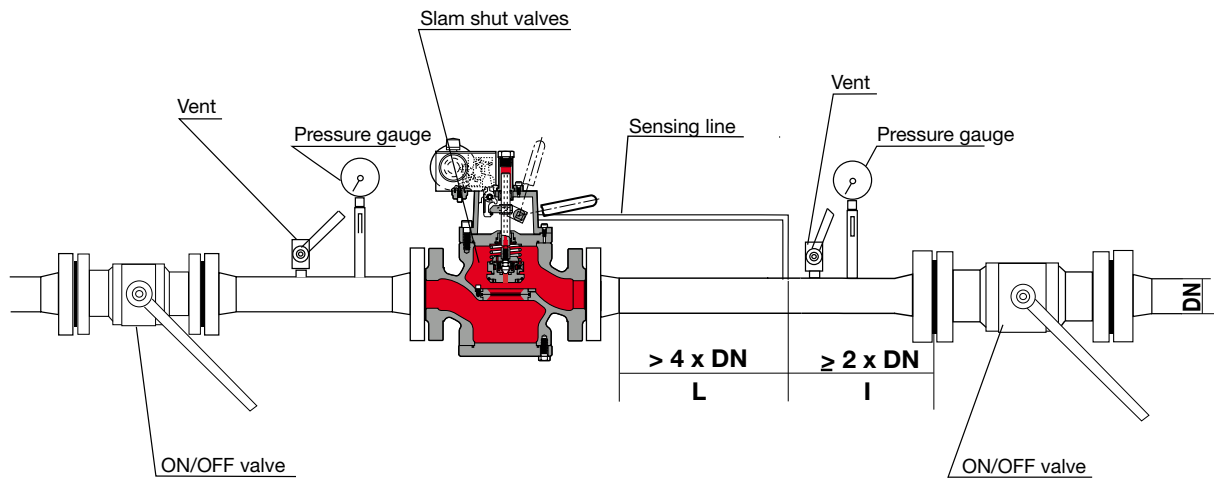


Fig.2

## Recommended installations

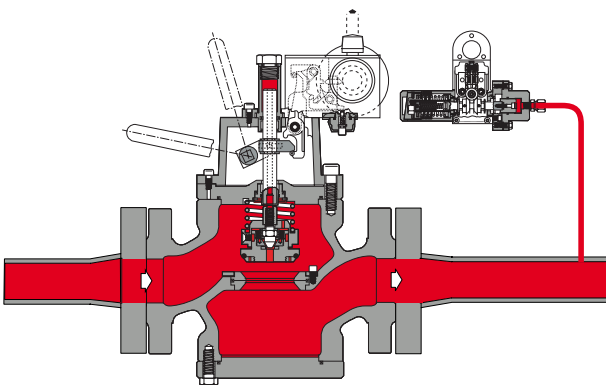


Fig.3 **SBC 782** - Standard position

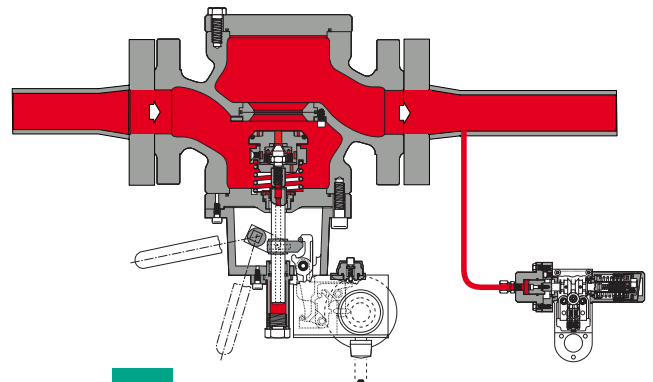


Fig.4 **SBC 782** - Upside down position

■ Inlet pressure      ■ Outlet pressure

## Dimensions

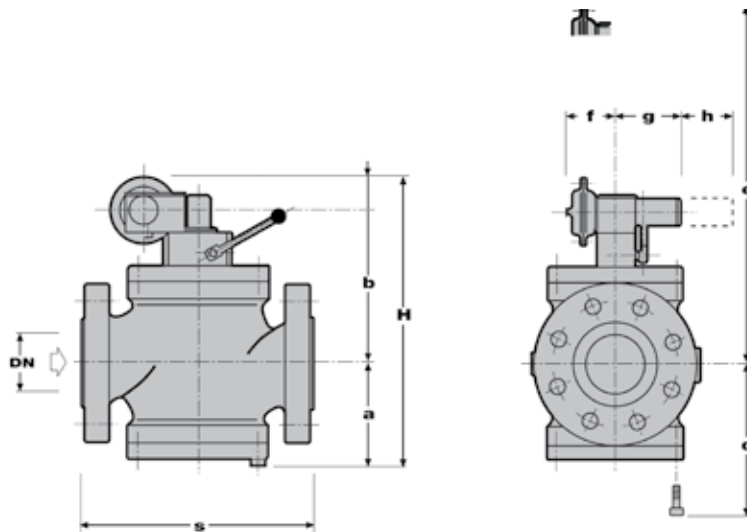


Fig.5

Overall dimensions DN								
Millimeters	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
<b>S - Ansi 150/Pn16</b>	183	254	277	298	352	451	543	673
<b>S - Ansi 300</b>	197	267	-	317	368	473	568	708
<b>S - Ansi 600</b>	210	286	-	336	394	508	609	752
<b>a</b>	100	130	140	150	190	225	265	340
<b>b</b>	215	240	270	315	300	375	450	530
<b>d</b>	130	160	180	200	250	275	320	440
<b>e</b>	280	330	380	425	440	560	625	730
<b>f</b>	75,5	75,5	75,5	75,5	75,5	75,5	75,5	75,5
<b>g</b>	118	118	118	118	118	118	118	118
<b>h</b>	80	80	80	80	80	80	80	80
<b>H</b>	315	370	420	45	490	600	715	870
								Tab.4

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

Weight in Kg								
<b>S - Ansi 150/Pn16</b>	21	37	45	51	79	154	255	430
<b>S - Ansi 300</b>	22	40	48	54	95	190	290	577
<b>S - Ansi 600</b>	23	42	51	57	100	210	335	577
								Tab.5

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