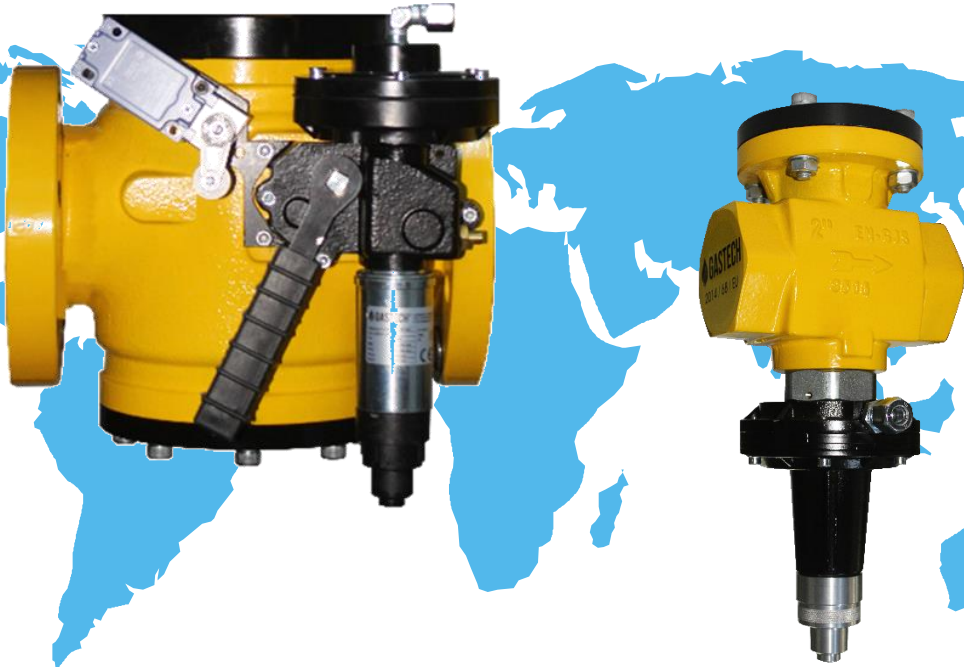


SLUM SHUT VALVES



Type SL



The slum shut valves according to 2014/68/EU directive and EN 14382:2019 standard. Slam-shut valve with self operated actuation and manual resetting, it is an ideal product for distribution networks or gas used systems. SL is suitable for natural gas and all non-corrosive gases.

PRODUCT DESCRIPTION

The "SL" series slum shut valves are suitable for low, medium and high outlet pressure. The "SL" series slum shut valves are supplied with external sensing lines and are preset for an optional connection to an internal sensing line by the customer.

The function of the SL series shutoff valve is to shut off gas flow upstream or downstream in setting pressure to make the inlet system safe.

The valve is closed automatically when the adjustment pressure accidentally exceeds the block set pressure. The valve can only be opened manually and this must only be after the problem that caused the closure is found and eliminated.

Slam-shut valve with self operated actuation and manual resetting, it is an ideal product for distribution networks or gas used systems. SL is suitable for natural gas and all non-corrosive gases.

Suitable for stations in gas transmission, LPG, LNG and CNG facilities.



Suitable for gas pressure regulator all small and medium capacity boiler plant (Hot water boiler, steam boiler, hot oil heaters, etc...)



Suitable for process combustion system and all pre-burner gas trains



Technical Features

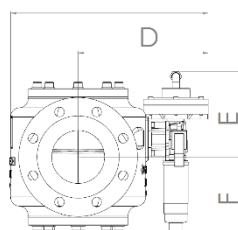
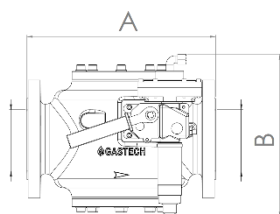
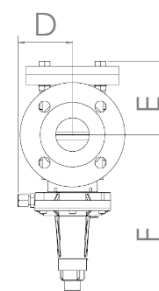
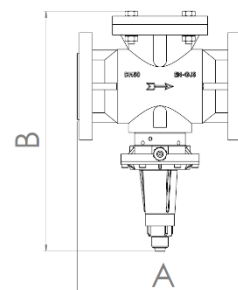
Body, Actuator, Slum Shut Cover, Associated (PSD)	SL serie 25 bar, SLH Serie 100 bar
Type of Fluid	Groups 1 and 2
Diameter	Threaded 1" – 1 1/2" – 2" ISO 7/1 on request NPT Flanged DN 25-40-50-65-80-100 PN 16/40 DIN 2263, ISO 7005 Class 150-300-600 RF , according to ANSI B16.5
Inlet Pressure bPu	Threaded Versions 16bar, Threaded AP Version 25bar, Flanged Versions 25 bar, 50 bar, 100 bar
Material	Body: SL Serie EN-GJS 500, SLH Serie Cast steel ASTM A 352 LCC Sealing Parts: NBR, Nitril Rubberized canvas with hot pressing Orifice : Stainless Steel
Operation Class	A
Response Time	< 2 s
Max. Pressure Set Range	1 – 49 bar, with different versions
Min. Pressure Set Range	0.6 – 49 bar, with different versions
Atm. Relief Connection	1/4" tapped
External Impuls Line	Ø10mm pipe interior
Operating Temperature	-20°C / +60°C on request -40°C
Internal Manual By-pass	Cg 2
Certification	Directive 2014/68/EU, Standard EN14382:2019

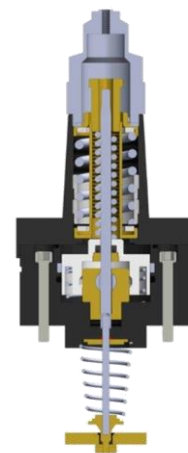


All dimensions in mm

DIMENSIONS AND WEIGHTS

Code	Connec.	A	B	D	E	F
SL25R	Rp. 1" x1"	105	315	90	60	255
SL40R	Rp. 1 1/2" x1 1/2"	132	315	90	60	255
SL50R	Rp. 2" x2"	156	350	90	100	250
SL25F	DN25 -1"	222	344	90	100	244
SL40F	DN40 – 1 1/2"	222	344	90	100	244
SL50F	DN50 – 2"	254	385	90	130	255
SL65F	DN65 – 2 1/2"	298	290	200	145	145
SL80F	DN80 – 3"	298	290	200	145	145
SL100F	DN100 – 4"	352	272	224	136	136





SAFETY SLUM SHUT VALVE

The F series of regulators can be fitted with safety shut-off valve for overpressure (OPSO) or combined under-and-over pressure (UPS/O) protection. Shut-off gas flow when the outlet pressure of the regulator increases or/and decreases. The Slum shut valve trip pressure can easily be adjusted independently of the regulator set point. Built internal bypass, for balancing pressure before relatching the safety shut-off valve, is operated by pulling the valve stem. Possibility of application of devices for remote signal and remote control.

Slum Shut Valve Technical Futures			LP Series
Type	IS		
Operation Class	A		
Response Time	< 2 s		
Maximum Pressure Set Range Wdo	35 – 5500 mbar	3.5 – 550 kPa	0.5 – 79.7 PSIG
Minimum Pressure Set Range Wdu	10 – 3200 mbar	1 – 320 kPa	0.14 – 46.6 PSIG
Accuracy (AG)	BP Model AG10 – MP Model AG5 – AP Model AG5		
Options	Remote Control (Pneumatic or electromagnetic) Remote Signal (contact or inductive microswitches).		

Slum Shut Valve Technical Futures			HP Series
Type	IS		
Operation Class	A		
Response Time	< 2 s		
Maximum Pressure Set Range Wdo	4 – 49 bar	400 – 4900 kPa	58 – 710 PSIG
Minimum Pressure Set Range Wdu	3.5 – 49 bar	350 – 4900 kPa	50 – 710 PSIG
Accuracy (AG)	AG 5		
Options	Remote Control (Pneumatic or electromagnetic) Remote Signal (contact or inductive microswitches).		



REMOTE SIGNAL and CONTROL



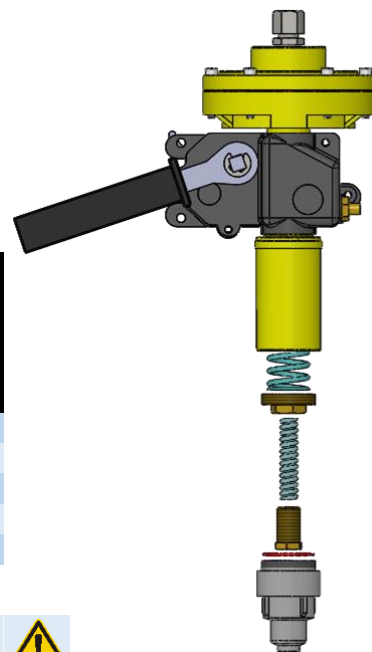


SSV Maksimum Set Range, Springs Code [Wds0]							DN25 – DN50	
Spring Code	Spring Colour	D	Lo	De	AP Bar (PSIG)		HP Bar (PSIG)	
GT1158	Pink	4.0	60	30.0	1.0 – 1.7	(14.5 – 24.6)	4 – 8	(58 – 116)
GT1159	White	4.5	60	30.0	1.5 – 2.5	(21.7 – 36.2)	6 – 12	(87 – 174)
GT1160	Orange	5.0	60	30.0	2.0 – 5.0	(29 – 72.5)	10 – 16	(145 – 232)
GT1361	Yellow	5.5	60	30.0			15 – 32	(218 – 465)
GT1362	Red	6	60	30.0			32 – 49	(465 – 710)

SSV Minimum Set Range, Springs Code [Wdsu]							DN25 – DN50	
Spring Code	Spring Colour	D	Lo	De	AP Bar (PSIG)		HP Bar (PSIG)	
GT1150	Silver	2.8	60	15.0	0.6 – 0.9	(8.7 – 13)	4.5 – 8	(65.2 – 116)
GT1151	Pink	3.0	60	15.0	0.7 – 3.2	(10.1 – 46.4)	7 – 14	(101.5 – 203)
GT1161	Red	3.5	60	15.0			9 – 16	(130.5 – 232)
GT1368	White	4.0	60	15.0			15 – 32	(218 – 465)
GT1369	Green	4.5	60	15.0			32 – 49	(465 – 710)

SSV Maksimum Set Range, Springs Code [Wds0]							DN80 – DN100	
Spring Code	Spring Colour	D	Lo	De	AP Bar (PSIG)		HP Bar (PSIG)	
GT1158	Pink	4.0	60	30.0	1.0 – 1.7	(14.5 – 24.6)	4 – 8	(58 – 116)
GT1159	White	4.5	60	30.0	1.5 – 2.5	(21.7 – 36.2)	6 – 12	(87 – 174)
GT1160	Orange	5.0	60	30.0	2.0 – 5.0	(29 – 72.5)	10 – 16	(145 – 232)
GT1461	Yellow	6.0	60	30.0			15 – 32	(218 – 465)
GT1462	Red	7.0	60	30.0			32 – 49	(465 – 710)

SSV Minimum Set Range, Springs Code [Wdsu]							DN80 – DN100	
Spring Code	Spring Colour	D	Lo	De	AP Bar (PSIG)		HP Bar (PSIG)	
GT1150	Silver	2.8	60	15.0	0.6 – 0.9	(8.7 – 13)	4.5 – 8	(65.2 – 116)
GT1151	Pink	3.0	60	15.0	0.7 – 3.2	(10.1 – 46.4)	7 – 14	(101.5 – 203)
GT1161	Red	3.5	60	15.0			9 – 16	(130.5 – 232)
GT1463	White	4.0	60	15.0			15 – 32	(218 – 465)
GT1464	Orange	4.5	60	15.0			32 – 49	(465 – 710)



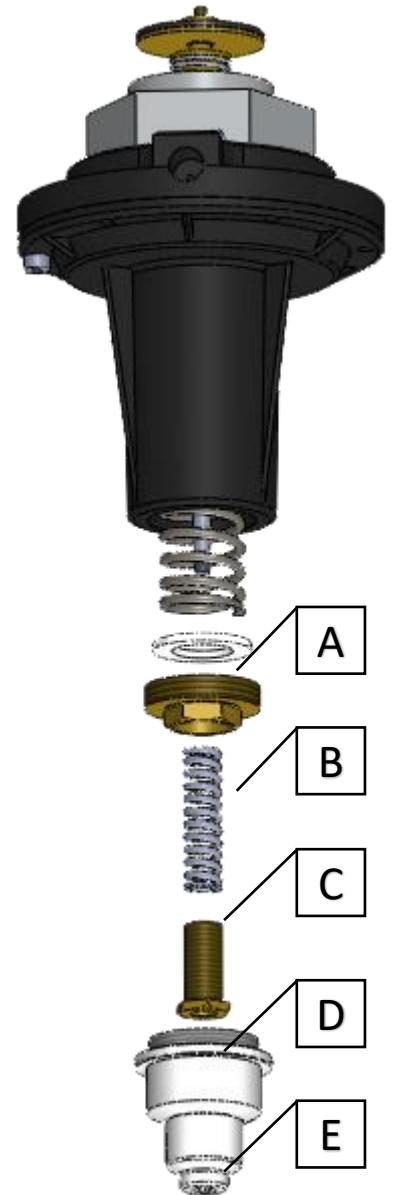
SSV SETTING

Shut-off setting in case of overpressure;

1. 'E' Turn the cap and remove.
2. 'B' Turn the external adjusting screw, using a tube spanner 22mm.
3. 'B' Turning clockwise: increase in the upper shut down pressure.
4. Turning counter-clockwise: reduction in the upper shut down pressure.

Shut-off setting in case of overpressure;

1. 'E' Turn the cap and remove.
2. Turn the internal adjusting screw 'D' using a tube spanner 17mm.
3. Turning clockwise: increase in the lower shut down pressure.
4. Turning counter-clockwise: reduction in the lower shut down pressure.
5. Screw on the cap 'E' again.



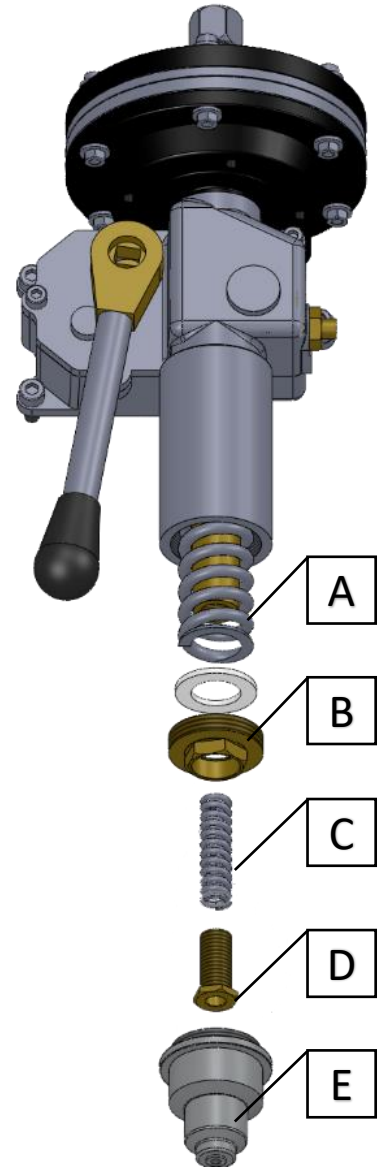
SSV SETTING (SL65-80)

Shut-off setting in case of overpressure;

1. 'E' Turn the cap and remove.
2. 'B' Turn the external adjusting screw, using a tube spanner 22mm.
3. 'B' Turning clockwise: increase in the upper shut down pressure.
4. Turning counter-clockwise: reduction in the upper shut down pressure.

Shut-off setting in case of overpressure;

1. 'E' Turn the cap and remove.
2. Turn the internal adjusting screw 'D' using a tube spanner 17mm.
3. Turning clockwise: increase in the lower shut down pressure.
4. Turning counter-clockwise: reduction in the lower shut down pressure.
5. Screw on the cap 'E' again.



CALCULATION of the PRESSURE DROP

Calculation of the pressure drop

The following formula can be used to calculate pressure losses of the slam shut valve with the obturator at full open position:

Δp = pressure loss in bar

P_u = absolute inlet pressure in bar

Q = flow rate inlet Stm^3/h

KG = flow coefficient

$$\Delta p = \frac{KG \times P_u - \sqrt{(KG^2 \times P_u^2) - 4Q^2}}{2 \times KG}$$

Flow with Other Gases

In the tables above, the flow is in (n)m³/h natural gas with a density 0.61 and temperature 15°C. To convert to other gas flow, using the following formula:

$$Q \text{ (Scm/h Naturalgas)} \times F_c = Q \text{ (Scm/h Xgas)}$$

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

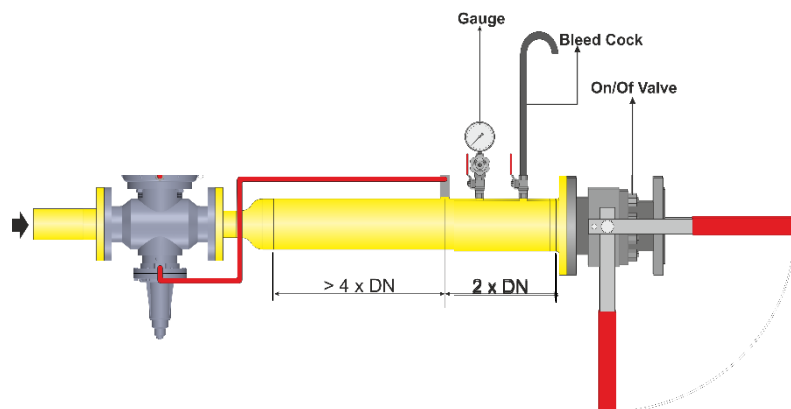
$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

Correction Factor F_c at 15°C

Correction Factor F_c at 15°C	
Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

Nominal Diameter (mm)	THREADED			FLANGED					
	1"	1 1/2"	2"	DN25	DN40	DN50	DN65	DN80	DN100
Size	1"	1 1/2"	2"	DN25	DN40	DN50	DN65	DN80	DN100
KG Flow Coefficient	288	345	1540	538	1080	1765	2580	4077	6055

CONNECTING THE EQUIPMENT



Where forecast, the connections between the equipment and the piping have to be carried out using a stainless steel or copper pipe, having a minimum internal diameter of 8 mm.
 SSV sensing line: 1/4" with compression fitting for 10 mm pipe
 SSV vent line: Rp 1/4"