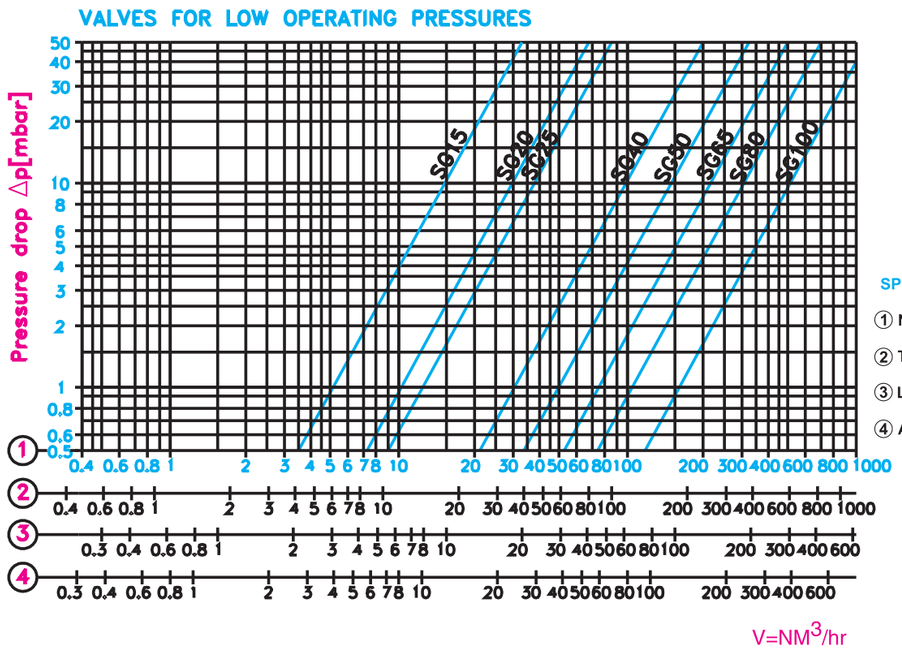
VOLUMETRIC FLOW DIAGRAM
VALVES WITH LOW INLET PRESSURE



SPECIFIC GRAVITY :

① Natural Gas = 0. 62

② Town Gas = 0. 45

③ LP Gas = 1. 56

④ Air = 1. 00

Note :
When reading operating cubic meters in the diagram, without converting to m^3/ hr (n), the pressure loss as read, is to be multiplied with the absolute pressure in bar (positive pressure in bar).

Note:
Technical specifications and dimensions are subject to change without prior notice.
Dimensions in the table are approximate subject to final confirmation by AVCON.

WESTERN

Mumbai
Plot No. 65, Road No. 13, MIDC Marol, Andheri (East), Mumbai - 400 093
Tel.No.: 022-6915 6100 / 83909 17431
E-mail : acplmumbai.sales@avconcontrols.com

Pune
Plot No. T - 108, MIDC Bhosari, Pune - 411 026. Maharashtra (INDIA).
Tel.No.: 020-2712 0776 / 2712 0540
E-mail : acplmumbai.sales@avconcontrols.com

Baroda
307, Mangaldeep Complex, Sampatrao Colony, Productivity Road, Baroda - 390 005.
Tel.No.: 022-6915 6100 / 83909 17431
E-mail : acplmumbai.sales@avconcontrols.com

EASTERN

Kolkata
720, 7th Floor, 33/1, N.S. Road, Marshal House, Kolkata- 700 001.
Tel.No.: 033-4068 1180 / 77109 00889
E-mail : acplmumbai.sales@avconcontrols.com

SOUTHERN

Chennai
249, First Floor, Tiny Sector Ambattur Industrial Estate, Chennai - 600 058
Tel.No.: 044-4807 4107 / 089393 12809
E-mail : acplmumbai.sales@avconcontrols.com

Hyderabad
SSR ENCLAVE, Plot No. 81, Road No.4, Vasanth Nagar, Nizampet X Roads (Near JNTU College Metro Station,) Hyderabad - 500085.
Tel.No.: 7995086416
E-mail : acplmumbai.sales@avconcontrols.com

Bangalore
Tel.No.: 084312 56574
E-mail : acplmumbai.sales@avconcontrols.com

NORTHERN

New Delhi
Unit No. 708, 7th Floor, 94 Meghdoot, Nehru Place, New Delhi - 110019
Tel.No.: 011-42639736 / 88282 69844
E-mail : acplmumbai.sales@avconcontrols.com

Manufactured by:
AVCON CONTROLS PVT. LTD.
Plot No. 65, Road No.13, MIDC Marol,
Andheri (East), Mumbai - 400 093 (INDIA).
Phone : +91-22-6915 6100.
E-mail : avcon@avconcontrols.com
acplmumbai.sales@avconcontrols.com
Website : www.avconcontrols.com

DATA SHEET
SG

2/2 Way Direct Acting, Solenoid Valves, Normally Closed, Energised to Open for Gas and Air Application.

FEATURES

- Gas safety valve group 'A' in accordance with DN 3391/ 3
- Operating pressures 0 to 200 mbar, 0 to 360 mbar
- Long life design
- Internationally approved designs
- Robust, maintenance free, leakage free construction
- Fast opening or slow opening or adjustable initial opening
- Fast closing
- Large flow rate
- Fitted with flow adjustment device
- Low pressure loss through valve
- Available with opening speed adjustment damper
- Few models with single limit switch for position indication or proof of closure/opening

APPLICATION

For protection, regulation and control of air and gas supply to gas burner/gas devices.

TECHNICAL SPECIFICATIONS

- Valve Body : AISI Alloy cast, Pressure die-cast or gravity die cast
- Valve Seat : Buna Nitrile, on special request 'Viton'.
- Magnetic construction : 430F.
- Operating Pressure : Refer to the specification table
- Operating Temperature : (-)20^0 to (+)60^{0}C
- Opening time : SG..N without damping unit, fast opening~ 0.5 Sec. SG..L with damping unit, slow opening approx.10 Sec.
- Closing time : Less than 1 second
- Switching frequency : Arbitrary
- Coil protection : IP-54 according to IS-2147.
- Power factor : 1.
- Coil insulation : Class “F”
- Standard Voltages : 110/ 220/ 240V +10%/ -5%, 50Hz; 24V +10% /-15% DC. Coils on AC voltage (24 VAC excluded) are fed through protective circuit and rectifier. For 24V AC external protective circuit with rectifier must be provided. For 24V DC external protective circuit must be provided.
- Power Consumption : Will be in accordance with specification table. Power consumption does not change during pick-up and holding operation.
- Duty Cycle : 100%
- Fuse : Max. 6.3 Amperes with anti surge protection.
- Cable Entry : Valves provided with coupler plug as per DIN 43650.
- Cable Gland : Pg 11 for size 15 to 25NB, Pg 13.5 for size 40 to100NB
- Fluids : All gases in accordance with DVGW Code of practice G260/1 Natural gas, LPG, Methane, Bio-gas (special construction required), air or any other inert gas.

Ed.SG-Dec-2025

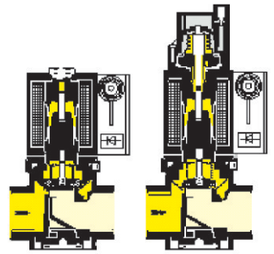
INSTALLATION INSTRUCTIONS

- While installing the valve in the pipe work do not use Solenoid portion as a lever. Use suitable holding device for the valve.
- Remove pipeline strain by installing suitable flexible joints.
- Read pressure loss and flow rate for the valve from the flow diagram. However valves can be also chosen by determining Kv value.

$$Kv = V \times \sqrt{\frac{\rho}{\Delta p}} \quad [\ m^3/\ hr\ ]$$

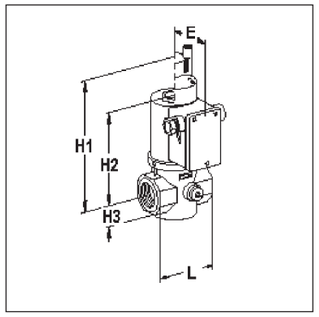
p [kg/ m^3]; Δp [millibar]; Ψ [m^3/ hr]
(Conversion of SI Units) 1 millibar = 100 Pa

- Fix all valves in horizontal pipeline, keeping Solenoid vertical and upright.
- Housing must not touch its surrounding walls. Keep minimum 20mm distance.

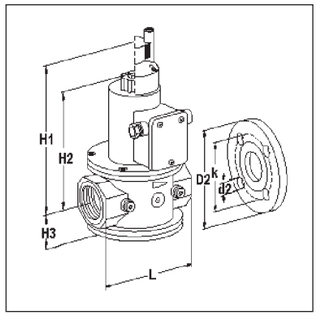


SELECTION TABLE

SG	Type	
40	Size	15,20,25 40,50,65,80,100
R/F/A	Connection	R=Rp-thread F = PN16 or 'A' = ANSI B16.5 Cl.150 flange
02	Maximum inlet pressure	02 = 200 mbar 03 = 360 mbar
L	Damping Unit	L = With damping device Slow opening* N = Without damping device
T	Voltage 15,20,25 40	T= 230V AC 50Hz M=110V AC 50Hz K= 24V DC
3	Terminal box	3 = With terminals IP 54 6 = With standard plug IP54
1	Test Plug	1 = Screw at the inlet 3 = Screw plug at the inlet and outlet
***D**		D = With Flow Adjustment Device
***S**	Closed Position Indicator	S = With position indicator
***M**	Suitable for Bio Produced methane	
***V**	Seat Material	M = free of non-ferrous metal V = Viton
(*)	**IF NOT APPLICABLETHIS LETTERIS OMITTED, i. e. THE NEXT LETTERMOVES ONE UP**	



SCREWED END VALVE DIMENSIONS



FLANGED END VALVES DIMENSIONS

TABLE 1: FOR SCREWED END CONNECTION VALVES 200mbar

TYPE	DN	Dimensions						Max Press Gr. A Cl. 1	Δ P = 1mbar of Air	Kv ****	P		P		Weight	Weight (1)
		L	H1	H2	H3	E	(1)				220 V 110 V 24 V AC	(1)	240 V AC	(1)		
	mm	mm	mm	mm	mm	mm	mm	mbar	m^3/hr	m^3/hr	VA/ W	VA/ W	VA/ W	VA/ W	kg***	kg***
SG 15 R 02	15	71	161	112	24	56	185	200	3.8	4.3	32	38	38	38	1.26	1.46
SG 20 R 02	20	91	175	126	33	61	208	200	8	9.1	31	42	37	42	1.91	2.11
SG 25 R 02	25	91	175	126	33	61	208	200	10	11.4	31	42	37	42	2.10	2.30

TABLE FOR SCREWED END CONNECTION VALVES 360 mbar

SG 15 R 03	15	71	161	112	24	56	185	360	3.8	4.3	32	31	38	37	1.26	1.46
SG 20 R 03	20	91	175	126	33	66	208	360	8	9.1	36	42	42	42	2.25	2.45
SG 25 R 03	25	91	175	126	33	66	208	360	10	11.4	36	42	42	42	2.25	2.45

Note:: (1) Model with Damper
*** Model with Position Indicator + 0.2 kg..
**** Refer to formulae to obtain kv

TABLE 2: FOR FLANGED END CONNECTION VALVES

MODEL - SGXXA WITH ANSI FLANGES, MODEL - SGXXF WITH DIN FLANGES,

Type	DN	L	Dimensions				Flange			No of holes	Max Press Gr.A Cl.1	Δ P = 1mbar of Air	Kv***	P 220 V 110 V 24 V	P 240 V	Weight
			OD	H1	H2	H3	D2	K	d2							
	mm	mm	mm	mm	mm	mm	mm	mm	mm		mbar	m^3/hr	m^3/hr	VA/ W	VA/ W	kgs*
ANSI TYPE FLANGE DIMENSIONS FOR 200 mbar																
SG 40 A 02	40	200	128.5	279.5	204.5	50.5	127	98	16	4	130	24	27.3	67	75	7.5
SG 50 A 02	50	230	156.5	291	216	62	152	121	19	4	130	37	42.1	73	86	9.6
SG 65 A 02	65	290	183.5	303	228	74	178	140	19	4	130	57	64.8	85	99	15.8
SG 80 A02	80	310	210	404	329	103	191	152	19	4	130	90	102.3	105	125	25
SG 100 A 02	100	350	210	428	353	110	229	191	19	8	130	142	161.5	158	187	41
ANSI TYPE FLANGE DIMENSIONS FOR 360 mbar																
SG 40 A 03	40	200	128.5	279.5	204.5	50.5	127	98	16	4	360	24	27.3	73	86	8.8
SG 50 A 03	50	230	156.5	291	216	62	152	121	19	4	360	37	42.1	85	99	14.3
SG 65 A 03	65	290	183.5	393	318	74	178	140	19	4	360	57	64.8	105	125	21.6
SG 80 A 03	80	310	210	404	329	103	191	152	19	4	360	90	102.3	158	187	36
SG 100 A 03	100	350	210	428	353	110	229	191	19	8	360	142	161.5	158	187	50
DIN TYPE FLANGE DIMENSIONS FOR 200 mbar																
SG 40 F 02	40	200	128.5	279.5	204.5	50.5	150	110	18	4	130	24	27.3	67	75	7.5
SG 50 F 02	50	230	156.5	291	216	62	165	125	18	4	130	37	42.1	73	86	9.6
SG 65 F 02	65	290	183.5	303	228	74	185	145	18	4	130	57	64.8	85	99	15.8
SG 80 F 02	80	310	210	404	329	103	200	160	18	8	130	90	102.3	105	125	25
SG 100 F 02	100.	350	210	428	353	110	220	180	18	8	130	142	161.5	158	187	41
DIN TYPE FLANGE DIMENSIONS FOR 360 mbar																
SG 40 F 03	40	200	128.5	279.5	204.5	50.5	150	110	18	4	360	24	27.3	73	86	8.8
SG 50 F 03	50	230	156.5	291	216	62	165	125	18	4	360	37	42.1	85	99	14.3
SG 65 F 03	65	290	183.5	393	318	74	185	145	18	4	360	57	64.8	105	125	21.6
SG 80 F 03	80	310	210	404	329	103	200	160	18	8	360	90	102.3	158	187	36
SG 100 F 03	100	350	210	428	353	110	220	180	18	8	360	142	161.5	158	187	50

Note: * With Slow Opening Valve + 0.5 kg. for the damping unit,
version with position indicator + 0. 2 kg.
*** Without damping unit, without position indicator, without flow rate restrictor.