

## Low and high pressure Diaphragm Gauge (Schaffer)



### Features:

- All SS case & measuring system
- Selectable ranges from -6000 to 0 & 0 to 6000 mmWC, -1 to 0 and 0 to 10 kg/cm<sup>2</sup>
- Flanged or screwed connection

### Applications:

- Suitable for clean air
- Corrosive environments & gaseous or non-crystallised liquid media that will not obstruct the pressure system

### Standard:

- EN 837-3

### Standard Parameters

Diaphragm type	: HP: - -1 to 0 and 0 to 10 kg/cm <sup>2</sup> : LP: - -6000 to 0 & 0 to 6000 mmWC
Accuracy	: ±1.6% F.S.
Ambient temperature	: -25° C to 65° C
Process temperature	: Max. 100° C
Operating pressure range	: 75% of Scale Value
Over pressure limit	: 125% of Scale value

### Materials of Construction

Case & bezel	: AISI 304 SS (Bayonet type)
Top chamber	: AISI 304 SS
Bottom chamber	: AISI 316 SS
Movement	: AISI 304 SS
Diaphragm	: AISI 316L SS
Gauge Connection	: 1/2" BSP[M]
Protection	: IP 65
Dial background	: Aluminium, black graduation on white
Pointer adjustable	: Aluminium, black coloured, slotted zero
Window	: Sheet glass
Blow of disk	: Neoprene
Gasket	: Neoprene

### Temperature Effect

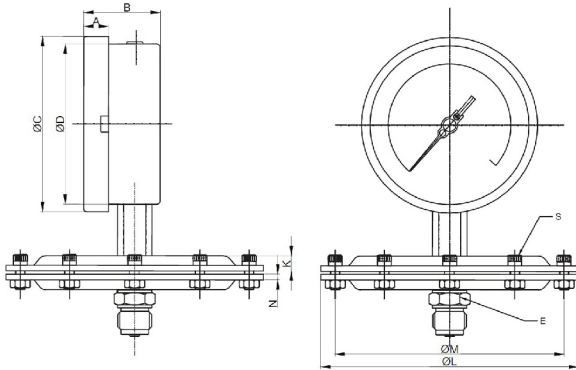
The variation of indication caused by effects of temperature is to be calculated by below formula which is to be added in the specific accuracy while measurement:

Formula  $\pm 0.08 \times (t_2 - t_1) \% \text{ of F.S.}$

where t1: reference temperature (+20°C) and t2: ambient temperature in °C.

### Dimensional drawing

#### TYPE 1- LP



NS	A	B	øC	øD	E	K	øL	N	S
100	15.5	47	109	98.5	22	9.5	160	3.5	1/4
150	15.5	49	160	149	22	9.5	160	3.5	1/4

Note: ● Drawings are not to scale ● All dimensions are in mm

#### Range table

Note: We offer Pressure, Vacuum and Compound ranges in Scales like kPa, MPa, bar, psi, kg/cm<sup>2</sup> & dual Scale like kPa with psi, kPa with bar, bar with psi or scales as per the requirement can be provided on request. Following are the example tables for kg/cm<sup>2</sup> & psi scales

#### Pressure, Vacuum & Compound Ranges (HP)

Single Scale (kg/cm <sup>2</sup> )				Dual Scale psi with kg/cm <sup>2</sup>			
0/0.6	0/1.6	0/4	0/10	psi	Kg/cm <sup>2</sup>	psi	Kg/cm <sup>2</sup>
0/1	0/2.5	0/6		0/15	0/1	0/100	0/7
				0/30	0/2	0/150	0/10
				0/60	0/4		

#### Vacuum & Compound range

Single Scale (kg/cm <sup>2</sup> )			Dual Scale PSI with kg/cm <sup>2</sup>			
-1/0.6	-1/3	-1/9	inHg with psi	mmHg with kg/cm <sup>2</sup>	inHg with psi	mmHg with kg/cm <sup>2</sup>
-1/1.5	-1/5		-30/0	-760/0	-30/60	-760/4
			-30/15	-760/1	-30/100	-760/7
			-30/30	-760/2	-30/150	-760/9

#### Pressure Vacuum and Compound Range LP

Pressure Range – single scale -mmWC			Vacuum range -Single scale mmWC		
0/250	0/1000	0/2500	-250/0	-1000/0	-2500/0
0/400	0/1600	0/4000	-400/0	-1600/0	-4000/0
0/600	0/2000	0/6000	-600/0	-2000/0	-6000/0

Compound Range – single scale -mmWC			Accessories	
-100/150	-400/600	-1000/1500	Gauge cock	Syphon
-150/250	-600/1000	-1500/2500	Needle Valve	Cooling tower
-200/400	-800/1200	-2000/4000	Snubber	Overload protector

## Range Table

DN	PN	CODE	
10	6	A01	
	10	A02	
	16	A03	
	25	A04	
	40	A05	
	64	A06	
	100	A07	
	160	A08	
	250	A09	
	400	A10	
15	6	A11	
	10	A12	
	16	A13	
	25	A14	
	40	A15	
	64	A16	
	100	A17	
	160	A18	
	250	A19	
	400	A20	
20	6	A21	
	10	A22	
	16	A23	
	25	A24	
	40	A25	
25	6	A26	
	10	A27	
	16	A28	
	25	A29	
	40	A30	
	64	A31	
	100	A32	
	160	A33	
	250	A34	
	400	A35	
32	6	A36	
	10	A37	
	16	A38	
	25	A39	
	40	A40	
	40	6	A41
		10	A42
		16	A43
		25	A44
		40	A45
64		A46	
100		A47	
160		A48	
250		A49	
400		A50	
50	6	A51	
	10	A52	
	16	A53	
	25	A54	
	40	A55	
	64	A56	
	100	A57	
	160	A58	
	250	A59	
	400	A60	

DN	PN	CODE
65	6	A61
	10	A62
	16	A63
	25	A64
	40	A65
	64	A66
	100	A67
	160	A68
	250	A69
	400	A70
80	6	A71
	10	A72
	16	A73
	25	A74
	40	A75
	64	A76
	100	A77
	160	A78
	250	A79
	400	A80

**As per JIS - B 2210**

NOMINAL SIZE	RATING /CLASS	CODE
10A	5K	B57
	10K	B58
	40K	B59
	5K	B60
15A	10K	B61
	40K	B62
	5K	B63
20A	10K	B64
	40K	B65
	5K	B66
25A	10K	B67
	40K	B68
	5K	B69
32A	10K	B70
	40K	B71
	5K	B72
40A	10K	B73
	40K	B74

DN	PN	CODE
10	10	A90
	15	A91
	20	A92
	25	A93
	32	A94
	40	A95
	50	A96
	65	A97
	80	A98

**As per DIN 2633**

DN	PN	CODE
10	10	A81
	15	A82
	20	A83
	25	A84
	32	A85
	40	A86
	50	A87
	65	A88
	80	A89

**As per DIN 2635**

DN	PN	CODE
10	10	A99
	15	B01
	20	B02
	25	B03
	32	B04
	40	B05
	50	B06
	65	B07
	80	B08

NOMINAL SIZE	RATING /CLASS	CODE
1/2"	150	B09
	300	B10
	600	B11
	900	B12
	1500	B13
	2500	B14
3/4"	150	B15
	300	B16
	600	B17
	900	B18
	1500	B19
	2500	B20

NOMINAL SIZE	RATING /CLASS	CODE
1"	150	B21
	300	B22
	600	B23
	900	B24
	1500	B25
1 1/4"	2500	B26
	150	B27
	300	B28
	600	B29
	900	B30
1 1/2"	1500	B31
	2500	B32

NOMINAL SIZE	RATING /CLASS	CODE
1 1/2"	150	B33
	300	B34
	600	B35
	900	B36
	1500	B37
	2500	B38
2"	150	B39
	300	B40
	600	B41
	900	B42
	1500	B43
	2500	B44

NOMINAL SIZE	RATING /CLASS	CODE
2 1/2"	150	B45
	300	B46
	600	B47
	900	B48
	1500	B49
3"	2500	B50
	150	B51
	300	B52
	600	B53
	900	B54
3 1/2"	1500	B55
	2500	B56

NOMINAL SIZE	TABLE	CODE
1/2"	D	B84
	E	B85
	F	B86
	H	B87
	J	B88
	K	B89
3/4"	D	B90
	E	B91
	F	B92
	H	B93
	J	B94
	K	B95

NOMINAL SIZE	TABLE	CODE
1"	D	B96
	E	B97
	F	B98
	H	B99
	J	C01
1 1/4"	K	C02
	D	C03
	E	C04
	F	C05
	H	C06
1 1/2"	J	C07
	K	C08

NOMINAL SIZE	TABLE	CODE
1 1/2"	D	C09
	E	C10
	F	C11
	H	C12
	J	C13
	K	C14
2"	D	C15
	E	C16
	F	C17
	H	C18
	J	C19
	K	C20

NOMINAL SIZE	TABLE	CODE
2 1/2"	D	C21
	E	C22
	F	C23
	H	C24
	J	C25
3"	K	C26
	D	C27
	E	C28
	F	C29
	H	C30
3 1/2"	J	C31
	K	C32

Note : 1 Flanged Connections as per BS / ANSI / DIN etc standards with or without Teflon protection can be provided on request.  
 2 Flange Finish shall be 125 - 250 AARH as a standard. For other finish, please consult factory.

## Ordering codes

<b>1. Dial Size</b>	<b>E</b>	<b>5. Range</b>	<b>0/1000 mmWC</b>
<b>Code</b> <b>Nominal size</b>		Refer Range table	
<b>E</b> 100mm			
<b>G</b> 150mm			
<b>2. Mounting</b>	<b>1</b>	<b>7. Options</b>	<b>5C</b>
<b>1</b> Direct bottom		<b>S6</b> AISI 316 SS case & bezel	
<b>7</b> 2" pipe/yoke mounting*		<b>SD</b> AISI 316 SS movement	
*Ask factory if drawing required		<b>5C</b> Five-point calibration certificate	
<b>3. Top Chamber</b>	<b>S4</b>	<b>OS</b> Oxygen service (for dry version)	
<b>S4</b> AISI 304 SS (Standard)		<b>ST</b> SS tag plate	
<b>S6</b> AISI 316 SS		<b>DT</b> Dial tag marking	
<b>4. Diaphragm</b>	<b>S6L</b>	<b>CD</b> Custom designed dial	
<b>HC</b> Hastelloy C		<b>MT</b> Material test certificate**	
<b>MO</b> Monel		<b>NT</b> Calibration certificate with NABL traceability	
<b>S6L</b> AISI 316L (Standard)		<b>SG</b> Shatter Proof glass	
<b>5. Bottom Chamber</b>	<b>S6</b>	<b>TG</b> Toughened glass	
<b>S4</b> AISI 304 SS		<b>PL</b> PTFE lining on flange or screwed connection	
<b>S6L</b> AISI 316L SS		<b>SP</b> Silver protection on diaphragm	
<b>TI</b> Titanium		<b>PP</b> PTFE protection on diaphragm	
<b>HC</b> Hastelloy C		<b>PC</b> PTFE coating on diaphragm	
<b>MO</b> Monel		<b>PG</b> PTFE gasket up to 200° C	
<b>S6</b> AISI 316 SS (Standard)			
<b>6. Process Connection</b>	<b>15B</b>		
<b>15N</b> 1/2" NPT[M] (Standard)			
<b>15B</b> 1/2" BSP[M] (Standard)			
<b>15BT</b> 1/2" BSPT[M]			
<b>M20</b> M20 x 1.5[M]			
<b>10B</b> 3/8" BSP[M]			

**Ordering Example: SF-E-1-S4-S6L-S6-15B-0/1000mmWC-5C**

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.