

Schaffer's Diaphragm Pressure Gauge

SD

The sensing element is an elastic diaphragm, with concentric corrugations that drives the amplifying movement through a ball-joint. The annual clamped diaphragm is extensively insensitive to jamming or vibration. They are designed to measure pressure or vacuum of viscous, sedimentous, crystallisable or corrosive fluids. Compared to the bourdon tube system they are more robust and are better able to withstand overpressure or aggressive fluids.

Applications :

Schaffer's Gauges are suitable for Chemical, Petrochemicals, Food & Beverages, Pharmaceuticals, oil & Gas, Refinery, Paper & Pulp, Sugar, Cement Industries etc.



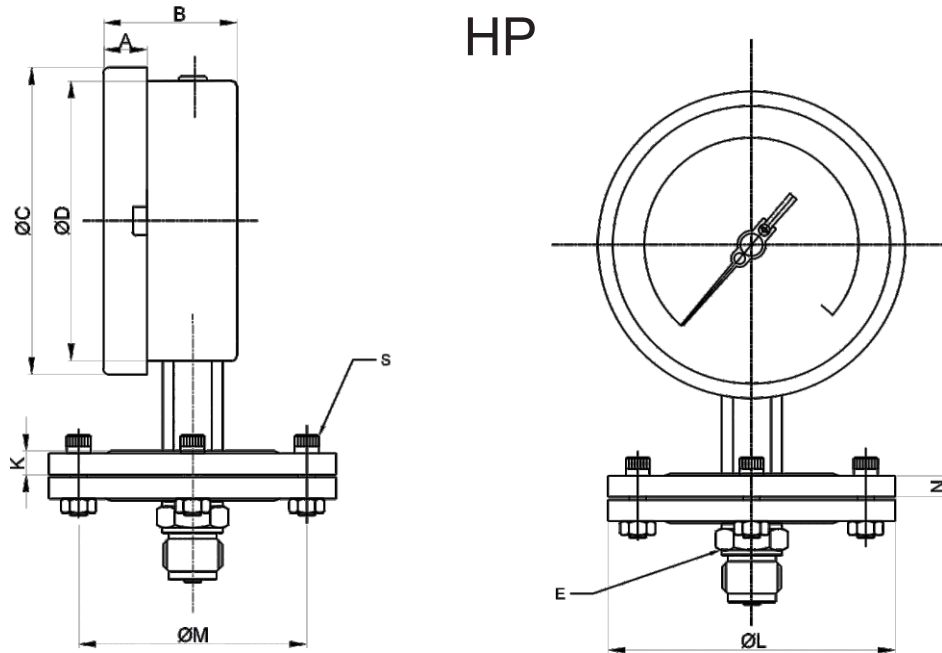
Special Features :

- ★ Design: standard followed in general EN 837-3.
- ★ Flanged or screwed connection
- ★ Stainless steel case & measuring systems

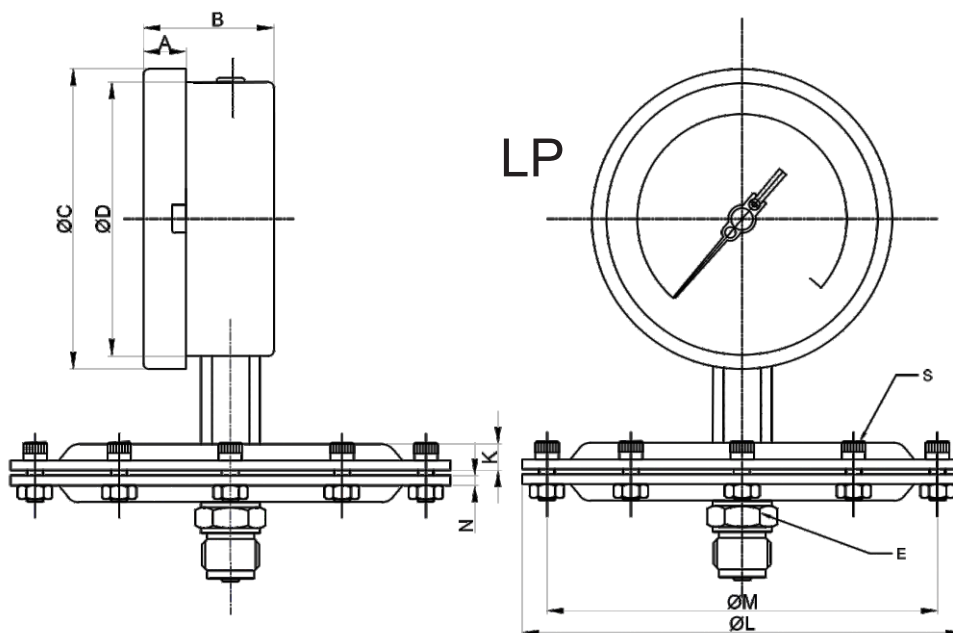
Specifications

Ranges:	HP : - 1 to) bar & 0-21 bar LP : -6000 -0mmWc &)-6000mmWc
Accuracy class	1,6 as per EN 837-3.
Ambient temperature	--25...+65 °C). Process
temperature:	max. +100 °C. Working pressure: max 75% of the full scale value.
Overpressure limit	25% of the full scale value.
Protection	IP 65
Process connection	AISI 316 SS
Case & Bezel	AISI304 SS
Movement	AISI304SS
Dial	aluminium, white with black markings.
Window	Toughend / Shatterproof glass.
Blow off Disc	Neoprine
Gasket	Neoprine
Top chamber	AISI304SS
Bottom chamber	AISI 316SS
Diaphragm	AISI 316SS
Diaphragm gasket	PTFE
Pointer	aluminium, micrometric adjustable.

Dimension :



Snap Action Bottom Direct									
NS	A	B	ØC	ØD	E	K	ØL	N	S
100	15.5	47	109	98.5	22 HEX	8.8	102	7.7	1/4
150	15.5	49	160	149	22 HEX	8.8	102	7.7	1/4



Snap Action Bottom Direct									
NS	A	B	ØC	ØD	E	K	ØL	N	S
100	15.5	47	109	98.5	22 HEX	9.5	160	3.5	1/4
150	15.5	49	160	149	22 HEX	9.5	160	3.5	1/4

All Dimensions are in mm, Drawings are not to scale

FLANGE TABLE WITH ORDERING CODES

e.g. FOR FLANGE SIZE OF 1 " AS PER BS-10 TABLE E WITH RAISED FACE : B97 - A2

A2 RAISED FACE

A3 FLAT FACE

AS PER DIN 2527

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
15A	5K	B60
	10K	B61
	40K	B62
20A	5K	B63
	10K	B64
	40K	B65

NOMINAL SIZE	RATING /CLASS	CODE
25A	5K	B66
	10K	B67
	40K	B68
32A	5K	B69
	10K	B70
	40K	B71
40A	5K	B72
	10K	B73
	40K	B74

NOMINAL SIZE	RATING /CLASS	CODE
50A	5K	B75
	10K	B76
	40K	B77
65A	5K	B78
	10K	B79
	40K	B80
80A	5K	B81
	10K	B82
	40K	B83

AS PER DIN 2642

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	16	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	40	A99
15		B01
20		B02
25		B03
32		B04
40		B05
50		B06
65		B07
80		B08

AS PER ANSI B 16.5

NOMINAL SIZE	RATING /CLASS	CODE
½"	150	B09
	300	B10
	600	B11
	900	B12
	1500	B13
	2500	B14
¾"	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
	2500	B26
1 ¼"	150	B27
	300	B28
	600	B29
	900	B30
	1500	B31
	2500	B32

NOMINAL SIZE	RATING /CLASS	CODE
1 ½"	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 ½"	150	B45
	300	B46
	600	B47
	900	B48
	1500	B49
	2500	B50
3"	150	B51
	300	B52
	600	B53
	900	B54
	1500	B55
	2500	B56

AS PER BS - 10

NOMINAL SIZE	TABLE	CODE
½"	D	B84
	E	B85
	F	B86
	H	B87
	J	B88
	K	B89
¾"	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
	K	C02
1 ¼"	D	C03
	E	C04
	F	C05
	H	C06
	J	C07
	K	C08

NOMINAL SIZE	TABLE	CODE
1 ½"	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 ½"	D	C21
	E	C22
	F	C23
	H	C24
	J	C25
	K	C26
3"	D	C27
	E	C28
	F	C29
	H	C30
	J	C31
	K	C32

Note : 1 Flanged Connections as per BS / ANSI / DIN etc standards with or without Teflonprotection can be provided on request.

2 Flange Finish shall be 125 - 250 AARH as a standard. For other finish, please consult factory.

(If the contract is of the magnetically assisted type, this value can't be added within +/- 5% of setting point)

RANGE TABLE

Note : Delta offers National / International Scales like kPa, MPa, bar, psi, kg/cm² & Dual Scale like kPa with psi, kPa with bar, bar with psi or Equivalent scales as per the requirement can be provided on request. Following are the example tables for kg/cm² & psi scales

PRESSURE , VACUUM & COMPOUND RANGES (HP)

PRESSURE RANGE

SINGLE SCALE - kg/cm²

0/0.6 0/1	0/1.6 0/2.5	0/4 0/6	0/10 0/16	0/21
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DUAL SCALE - kg/cm²with psi

psi 0/15 0/30 0/60	kg/cm ² 0/1 0/2 0/4	psi 0/100 0/150 0/220	kg/cm ² 0/7 0/10 0/16	psi 0/300	kg/cm ² 0/21
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VACUUM & COMPOUND RANGE

SINGLE SCALE - kg/cm²

-1/0.6 -1/1.5	-1/3 -1/5	-1/9 -1/15	-1/20
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DUAL SCALE - kg/cm² with psi

inHg with psi -30/0 -30/15 -30/30	mmHg with kg/cm ² -760/0 -760/1 -760/2	inHg with psi -30/60 -30/100 -30/150	mmHg with kg/cm ² -760/4 -760/7 -760/10	inHg with psi -30/200 -30/300	mmHg with kg/cm ² -760/14 -760/20
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PRESSURE, VACUUM & COMPOUND RANGES (LP)

PRESSURE RANGE

SINGLE SCALE - mmWC (LP)

0/250 0/400 0/600	0/1000 0/1600 0/2000	0/2500 0/4000 0/6000
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VACUUM & COMPOUND RANGE

SINGLE SCALE - mmWC (VACUUM)

- 250/0 - 400/0 - 600/0	- 1000/0 - 1600/0 - 2000/0	- 2500/0 - 4000/0 - 6000/0
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SINGLE SCALE - mmWC (COMPOUND)

- 100/150 - 150/250 - 200/400	- 400/600 - 600/1000 - 800/1200	- 1000/1500 - 1500/2500 - 2000/4000
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ACCESSORIES (Refer Datasheet for complete specifications)

GC GAUGE COCK	SN SNUBBER	CT COOLING TOWER
NV NEEDLE VALVE	SY SIPHON	GS OVERLOAD PROTECTOR (GAUGE SAVER)**

* Refer catalogue for valves and manifolds

** For Pressure Ranges 2500 mmWC & above

HOW TO ORDER

Example

BASIC MODEL

CODE

SD

NOMINAL SIZE

C

D

100 mm

150 mm

C

TYPE OF MOUNTING

2 DIRECT BOTTOM ENTRY

6 2" PIPE / YOKE MOUNTING WITH BOTTOM ENTRY*

2

* MOC OF BRACKET AND 'U' CLAMP WILL BE STEEL. ASK FACTORY FOR DRAWINGS, IF REQUIRED.

TOP CHAMBER

S4 AISI 304 SS (Standard)

S6 AISI 316 SS

S4

DIAPHRAGM

HC HASTELLOY 'C'

ML MONEL

S6L AISI 316L SS (Standard)

S6L

BOTTOM CHAMBER (*Refer Pressure v/s Temperature table below.)

S4 AISI 304 SS

TZ PVC*

S6L AISI 316L SS

ML MONEL

S6

TT TITANIUM

S6 AISI 316 SS (Standard)

HC HASTELLOY C

PROCESS CONNECTION

15N 1/2" NPT (M) (Standard)

15T 1/2" BSPT (M)

10B 3/8" BSP (M) (Except Option QS)

15N

15B 1/2" BSP (M) (Standard)

M20 M20 x 1.5 (M)

Flanged* Refer Flange Table with ordering code on previous page

Note : Connections like Metric/ PT/ PF/ Flaired/ UNF/ G/ R etc. can be provided on request. *ASK FACTORY FOR DRAWINGS, IF REQUIRED.

RANGE

REFER RANGE TABLE

**0/250
mmWC**

OPTIONAL EXTRAS

PW FIVE POINT CALIBRATION CERTIFICATE

RH CUSTOM DESIGNED DIAL

RX SHATTERPROOF / SAFETY GLASS

RZ TOUGHENED GLASS

SW DIAL TAG MARKING

SX SS TAG PLATE

YF TOP CHAMBER IN AISI 316 SS

SG OXYGEN SERVICE

QS PTFE LINING ON FLANGE OR SCREWED CONNECTION

ZT SILVER PROTECTION ON DIAPHRAGM

QU PTFE PROTECTION ON DIAPHRAGM

VZ PTFE COATING ON DIAPHRAGM

VI PTFE GASKET UPTO 200°C

SD AISI 316 SS MOVEMENT

PS AISI 316 SS CASE & BEZEL

GH MATERIAL TEST CERTIFICATES#

SX

* For screwed connection, bore diameter will be minimum 10 mm.

** Suitable for Pressure Ranges only.

*** BOD, Gasket & Filling plug of NBR. Refer Price List for Viton.

MATERIAL TEST CERTIFICATES WILL BE PROVIDED FOR WETTED PARTS ONLY WITH CHEMICAL COMPOSITION TESTING. FOR OTHERS, PLEASE CONSULT FACTORY.

ELECTRIC CONTACTS

(WITH INGRESS PROTECTION UPTO IP 55 & FOR PRESSURE RANGES FROM 6000 mmWC TO 21 kg/cm²)

Magnetic TYPE (220 V AC, 0.4 Amp.)

RJ : SINGLE NORMALLY CLOSED (1NC)

YW Single NORMALLY OPEN (1 NO)

RJ

RK Double NORMALLY CLOSED & OPEN

Note: THE SCALE AMPLITUDE WILL BE IN BETWEEN 180° TO 270° & WINDOW SHALL BE POLYCARBONATE DOME.

Ordering Example: SD - C - 2 - S4 - S6L - S6 - 15N - 0/250 mmWC - SX - RJ

FOR NON STANDARD PRODUCTS/OPTIONAL ITEMS, PLEASE CONTACT FACTORY FOR DELIVERY AND MINIMUM QUANTITY OF ORDER.

Refer Datasheet EE for selection of Flushing Rings.

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.