PBB - Stainless Steel Case and Bezel

Welded Construction with Back Blow Out Disc

This gauge is ideally suited to most industrial applications where high accuracy and durability is required.

Gauges are available with either brass / bronze internals, all stainless steel internals, or Monel Bourdon tube and socket with stainless steel movement.

All gauges are retro-fillable and totally repairable. A number of optional accessories are available either as factory fitted or retro-fitted. A Rhomberg manocont movement can be fitted where filling material is not allowed or excessive vibration is present.

(Conforming to military specification) the high impact movement protects against entanglement of the hairspring in the pinion and segment - the most common cause of gauge failure.

Case
Brush finish 304 stainless steel

Bezel
Brush finish 304 stainless steel

Blow-Out Disc
Back blow out

Configuration
A B D E F U V

Mountings
Direct, surface or panel mounting

Nominal Sizes

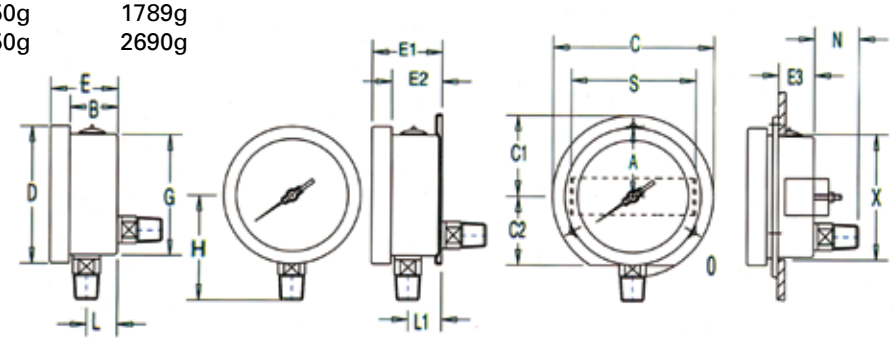
mm	63	100	150	250
Imp	$2^1/_2$"	4"	6"	10"

Nett Mass

	63mm	100mm	150mm	250mm
Dry	155g	556g	850g	1789g
Filled	230g	816g	1 750g	2690g

SABS 1062 - 1985

SABS ISO 9001



Conf. A + D | A + D | B + E | B + F | F + U

Nominal size

Dimensions (X is panel cut-out diameter)

Metric Imperial	B	C	C1	C2	D	E	E1	E2	E3	G	H	S	L	L1	N	O	X
63mm $2^1/_2$"	22,70 0,89	85,00 3,35	42,50 1,67	36,00 1,42	69,60 2,74	32,50 1,28	35,70 1,41	27,20 1,07	22,00 0,87	62,00 2,44	60,00 2,36	66,50 2,62	9,00 0,35	13,00 0,51	27,00 1,06	3,50 0,14	63,50 2,50
100mm 4"	36,85 1,54	133,00 5,24	66,50 2,62	56,50 2,22	108,00 4,43	47,65 2,17	57,50 2,26	38,55 1,64	29,70 1,17	99,00 3,90	92,60 3,39	106,00 4,17	16,50 0,74	21,90 0,86	38,00 1,49	4,80 0,19	101,00 3,98
150mm 6"	29,00 1,14	196,00 7,72	98,00 3,85	86,00 3,38	155,00 6,10	56,00 2,20	59,00 2,32	32,00 1,26	28,00 1,10	140,00 5,51	108,00 4,25	146,00 5,75	17,00 0,67	18,00 0,71	38,00 1,49	5,80 0,23	142,00 5,60
250 mm 9.8"	34 1.3	285 11.2	N/A N/A	N/A N/A	250 9.8	56 2.2	58 2.3	36 1.4	51 2.0	248 9.8	156 6.1	N/A N/A	19 0.7	22 0.9	41 1.6	N/A N/A	253 10.0

Gauges Ordering Code

Example of how to make up the ordering product code:

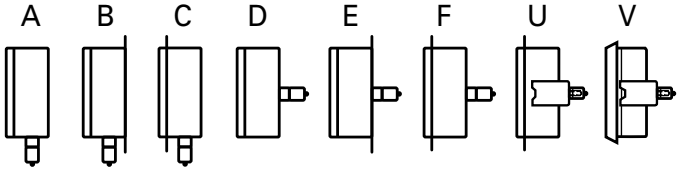
PBB	A	63	SS	1	2	Q	C3B	CO1	G	Q
Case design										
Configuration										
Nominal size										
System material										
Thread type										
Thread size										
Case material & Colour										
Range										
Customer reference										
Option 1										
Option 2										

For the complete part number for Diaphragm and Differential Pressure Gauges, please consult with your sales representative when placing an order.

Case Type and Size

Case	*Case & Bezel Material (Std)*	*Size Code*	*Nom. size mm (inch)*	*Available Configuration*
PBB	polished 304 stainless steel	63 10 15	63 (2 1/2) 100 (4) 150 (6)	A B C* D E F U V *100mm only
PBZ	colour coded *(grey)* PBT polybutylene-terephthalate	10 15	100 (4) 150 (6)	A B D* *centre-back connection available only brass 100mm
PBX	colour coded *(black)* PBT polybutylene-terephthalate	10	100 (4)	A
PCB	polished 304 stainless steel	10 15	100 (4) 150 (6)	A B C* D F U V *100mm only
PCZ	colour coded *(grey)* PBT polybutylene-terephthalate	10 15	100 (4) 150 (6)	A B
PCK	*(black)* mild steel	68	68 (2 1/2)	A D V
PDB	polished 304 stainless steel	10 15	100 (4) 150 (6)	H
PDZ	colour coded *(grey)* PBT polybutylene-terephthalate	10 15	100 (4) 150 (6)	H
DBB	304 stainless steel	15	150 (6)	A B D F
DCB	polished 304 stainless steel	15	150 (6)	A B D F
PBG	304 stainless steel	63 10	63 (2 1/2) 100 (4)	A B D E F U V
PBJ	*(black)* injection moulded, 304 stainless steel bezel	63 80	63 (2 1/2) 80 (3)	A
PBN	*(black)* injection moulded case polycarbonate clip-in lens	42 54 68	42 (1 1/2) 54 (2) 68 (2 1/2)	A D
PBM	*(black)* mild steel polycarbonate clip-in lens	42 54 68	42 (1 1/2) 54 (2) 68 (2 1/2)	A D V
PBK	*(black)* mild steel threaded polycarbonate window	42 54 68 96	42 (1 1/2) 54 (2) 68 (2 1/2) 96 (4)	A* D V* * only option for safety pattern ** 54 mm & 68 mm only
PBU	*(black)* mild steel flat acrylic window	42 54 63 10 12	42 (1 1/2) 54 (2) 63 (2 1/2) 100 (4) 125 (5)	A B** D E** F *U * * 54 mm & 68 mm only ** on application 100 mm, 125 mm
PBV	*(black)* mild steel with nickel plated bezel, flat acrylic window	52	52 (2)	V

Configurations



A bottom connection, stem mounting
B bottom connection, back flange, surface mounting
C bottom connection, front flange, surface mounting
D back connection, stem mounting
E back connection, back flange, surface mounting
F back connection, wide front flange, (drilled) panel mounting
U back connection, wide front flange, (undrilled) panel mounting (yoke)
V back connection, narrow front-ring, panel mounting (yoke)

Bourdon Tube Selection

System code	Socket material	Bourdon tube material	Tube type	Range selection (kPa)
BB	brass brass tip stainless steel tube and tip	bronze tube	C-tube spiral / 100 000	60 / 6 000 10 000
SS	316 L 316 Ti	316 Ti spiral	C-tube 10 000 / 100 000	60 / 6 000
MM	Monel 400 K-Monel	K-Monel spiral	C-tube 10 000 / 60 000	60 / 6 000

Utility gauges-ranges above 20 MPa on request
Process gauges-ranges above 100 MPa on request

Capsule Systems Materials Selection

System code	Socket material	Capsule material	Tube type	Range selection (kPa)
SS	316 L	stainless	capsule -10 to -25 kPA (Vac)	2,5 to 100 kPa
BB	brass	copper	capsule -6 to -25 kPA (Vac)	2,5 to 100 kPa

Thread Type and Size

Thread type	*Thread size (size code = number $^1/_8$" 's)*
	1 = $^1/_8$"
O = NPT	2 = $^1/_4$"
1 = BSP	3 = $^3/_8$"
2 = BSPT	4 = $^1/_2$"

Customer Reference

Codes allocated to customers describing their specific requirements
Standard CI gauge code is C01
Where applicable consult with our sales representative for your specific code

Case Material and Case Colour

Q = standard (see Case type & size)
C = nickel plated
P = brass plated
S = stainless steel case (where not standard)

H = white	*R = red*
E = yellow	*2 = gold*
I = pink	*3 = brown*
Z = violet	*4 = olive green*
L = blue	*A = purple*
N = green	*5 = charcoal*
O = orange	*6 = dark brown*
D = dark blue	*B = black*

X = non standard (describe under special instructions)

Standard Metric Ranges (kPa)

Range		*Dial graduation*	
kPa (kilopascal)	*range code*	*figure interval*	*minor graduation*
0/10 Pa	C1A	1	0,1
0/16 Pa	C1B	1	0,2
0/25 Pa	C1C	5	0,2
0/40 Pa	C1D	5	0,5
0/60 Pa	C1E	10	0,5
0/100 Pa	C1F	10	1
0/160 Pa	C1G	10	2
0/250 Pa	C1H	50	5
0/400 Pa	C1J	50	5
0/600 Pa	C1K	100	10
0/1 000 Pa	C1L	100	10
0/1 600 Pa	C1M	100	20
0/2 500 Pa	C2A	500	50
0/4 000 Pa	C2B	500	50
0/6 000 Pa	C2C	1 000	100
0/1	C2D	0,1	0,01
0/1,6	C2E	0,1	0,02
0/2,5	C2F	0,5	0,5
0/4	C2G	0,5	0,5
0/6	C2H	1	0,1
0/10	C2J	1	0,1
0/16	C2K	1	0,2
0/25	C2L	5	0,2
0/40	C2M	5	0,5
0/60	C3A	10	0,5
0/100	C3B	10	1
0/160	C3C	10	2
0/250	C3D	50	5
0/400	C3E	50	5
0/600	C3F	100	10
0/1 000	C3G	100	10
0/1 600	C3H	100	20
0/2 500	C3J	500	50
0/4 000	C3K	500	50
0/6 000	C3L	1 000	100
0/1 MPa	C3M	0,1	0,01
0/1,6 MPa	C4A	0,1	0,02
0/2,5 MPa	C4B	0,5	0,5
0/4 MPa	C4C	0,5	0,5
0/6 MPa	C4D	1	0,1
0/10 MPa	C4E	1	0,1
0/16 MPa	C4F	1	0,2
0/25 MPa	C4G	5	0,2
0/40 MPa	C4H	5	0,5
0/60 MPa	C4J	10	0,5
0/100 MPa	C4K	10	1
0/160 MPa	C4L	10	2
0/250 MPa	C4M	50	5
vacuum			
-100/0	A5B	10	1
compound			
-100/0/150	B5A	50	5
-100/0/300	B5B	50	5
-100/0/500	B5C	100	10
-100/0/900	B5D	100	10
-100/01 500	B5E	100	20
-100/0/2 400	B5F	500	50

Gauges may be ordered with non-standard metric dials (kPa, bar or kg/cm^2). Range in accordance with SABS 1062.
Dual scale dials will be supplied with a standard metric inner scale and equivalent psi outer scale.
psi dominant dual scales are also available.
Please be specific when ordering.

Other Standard Metric Ranges (kg/cm² & Bar)

Range		Dial graduation	
kg/cm²(kilograms per sq.cm²)	*bar*	*figure interval*	*minor graduation*
pressure			
0/1	0/1	0,1	0,01
0/1,6	0/1,6	0,2	0,02
0/2,5	0/2,5	0,5	0,05
0/4	0/4	0,5	0,05
0/6	0/6	0,5	0,1
0/10	0/10	1	0,1
0/16	0/16	1	0,2
0/25	0/25	5	0,5
0/40	0/40	5	0,5
0/60	0/60	5	0,5
0/100	0/100	10	1
0/160	0/160	10	2
0/250	0/250	50	5
0/400	0/400	50	5
0/600	0/600	50	10
0/1 000	0/1 000	100	10
vacuum			
-10/0	-1/0	0,1	0,01
compound			
-10/0/1,5	-1/0/1,5	0,5	0,05
-1/0/3	-1/0/3	0,5	0,05
-1/0/5	-1/0/5	1	0,1
-1/0/9	-1/0/9	1	0,1
-1/0/15	-1/015	2	0,2
-1/0/24	-1/0/24	5	0,5

Note: *Where required range has no code indicated, that range should be clearly specified on ordering.*

Standard Imperial Ranges (psi)

Range		Dial graduation			
psi	*range code*	*figure interval*		*minor graduation*	
0/15	G2D	1		0,2	
0/30	G2F	5		0,5	
0/60	G2G	10		1	
0/100	G3A	10		1	
0/160	G3E	10		2	
0/200	G3C	50		2	
0/300	G3D	50		5	
0/400	G3E	50		5	
0/600	G3G	100		10	
0/800	G3H	100		10	
0/1 000	G3J	100		10	
0/1 500	G3K	500		20	
0/2 000	G3L	500		20	
0/3 000	G4A	500		50	
0/4 000	G4B	500		50	
0/5 000	G4C	1 000		100	
0/6 000	G4D	1 000		100	
0/10 000	G4E	1 000		100	
0/15 000	G4F	5 000		500	
vacuum 30-0 inches mercury	E1A	5 inches		0,5	
compound		*'Hg*	*psi*	*'Hg*	*psi*
30"Hg Vac/0/15psi	F1A	5	3	1	0,5
30"Hg Vac/0/30psi	F1B	10	5	1	1
30"Hg Vac/0/60psi	F1C	10	10	2	1
30"Hg Vac/0/100psi	F1D	10	10	2	1
30"Hg Vac/0/150psi	F1E	10	25	5	5
30"Hg Vac/0/300psi	F2B	30	25	5	5

Options

Both option digits to be filled in:
No options = QQ; One option = selected digit then Q;
Two options = list from below alpha-numerically

Q = no options
X = special instruction
A = drag pointer
B = blow-out back with baffle (safety)
C = red set pointer
D = micro switch movement single
E = micro switch movement double
F = manocont movement
G = safety glass
H = bar secondary scale
I = kPa secondary scale
J = zero adjuster
K = oil free, oxygen clean logo; gauge bagged in plastic
L = psi secondary scale
M = refrigeration scale
N = retarded scale
P = overload stop internal
R = studs and bracket
S = nickel plated block
T = snubbers
U = adaptor fitted
V = silicon oil filled
W = block welded to case
Y = glycerine filled
Z = opanol oil filled
2 = other filling medium (Siltherm 800, Flurolube, Krytox GPL 100, etc.)
3 = female thread
4 = stainless steel movement in brass system
5 = no aluminium parts
9 = centre back option

Pressure Cross Reference Chart

psi	*atms.*	*Ft.Hd. H_20 at 20°C*	*in H_20*	*kg/cm²*	*meters H_20*	*in.Hg. at 20°C*	*mm.Hg.*	*cm.Hg.*	*bar*	*Milibar (mbar)*	*kPa*
1	0,0680	2,310	27,720	0,0700	0,704	2,043	51,884	5,188	0,0690	68,947	6,895
14,696	1	33,659	407,513	1,0330	10,351	30,019	762,480	76,248	1,0130	1013,0	101,325
0,433	0,0290	1	12,000	0,0300	0,305	0,884	22,452	2,245	0,0300	29,837	2,984
0,036	0,0025	0,833	1	0,0025	0,025	0,074	1,871	0,187	0,0025	2,486	0,249
14,233	0,9680	32,867	394,408	1	10,018	29,054	737,959	73,796	0,9810	980,662	98,066
1,422	00,0970	3,287	39,370	0,0990	1	2,905	73,796	7,379	0,0980	98,066	9,807
0,489	0,0330	1,131	13,575	0,0340	0,345	1	25,400	2,540	0,0340	33,753	3,375
0,019	0,0013	0,045	0,534	0,0014	0,0136	0,039	1	0,100	0,0010	1,329	0,133
0,193	0,0131	0,445	5,340	0,0140	0,1360	0,393	10,000	1	0,0133	13,290	1,328
14,503	0,9870	33,514	402,164	1,0200	10,2110	29,625	752,470	75,247	1	1000,0	100,00
0,014	0,0009	0,033	0,402	0,0010	0,0102	0,029	0,752	0,075	0,001	1	0,100
0,145	0,0098	0,335	4,021	0,0100	0,1020	0,296	7,525	0,752	0,010	10,000	1