

ALL STAINLESS STEEL PRESSURE GAUGE

The label *Trafag Industrial Components* extends the Trafag brand name to instruments manufactured by qualified partner companies.

Trafag Industrial Components complement the genuine Trafag product range to offer customers a complete portfolio from one single source.

The TMP103 All Stainless Steel Pressure Gauge with bourdon tube sensing element offers a robust design in housing size $\leq$ DN100.



Applications

- Food & Beverages
- Chemical & Petrochemical
- Corrosive environments
- Liquid & gaseous mediums

Features

- All SS measuring system
- Socket-case, direct welded
- Dry / liquid filled

Reference

- EN 837-1
- ATEX 2014/34/UE

07/2020

Data sheet H20003b

Standard parameters	
Accuracy	CL 1.6 (DN63 / DN80 / DN100) & CL 2.5 (DN50)
Ambient temperature	-40 ... + 65°C (without dampening liquid) -20 ... + 65°C (with dampening liquid)
Service temperature	300°C max
Pressure limits	Steady pressure up to FS value Fluctuating pressure up to 90% of FS value Short time 1.3 x FS value for range up to 100 bar Short time 1.15 x FS value for range above 100 bar
Measuring range	-1 ... 0 bar, -600 ... 0 mbar to 0 ... 1000 bar
Weld joints	TIG argon arc welding

Ordering code

				TMP103 - XX - XXX - XX - XXX - XX - XX - XX							
1. Dial size	50 mm / 2"			02	XXX	XX	XXX	XX	XX	XX	
	63 mm / 2½"			25							
	80 mm / 3"			03							
	100 mm / 4"			04							
2. Range	Refer "Range Table"				XXX						
3. Mounting pattern	Direct, Bottom connection				B0						
	Wall/Surface/Projection mounting, Bottom connection				B1						
	Centre, Back connection²				R0						
	Panel/Front flange mounting, Centre Back connection				R2						
	Panel/bracket mounting, Centre Back connection				R3						
	Lower, Back connection				L0						
	Panel/Front flange mounting, Lower Back connection				L1						
	Panel/bracket mounting, Lower Back connection				L2						
4. Process connection¹	1/8" NPT (M)				11N						
	¼" NPT (M)				12N						
	½" NPT (M)				14N						
	1/8" GAS (M)				11B						
	¼" BSP (M)				12B						
	3/8" BSP (M)				13B						
	½" BSP (M)				14B						
	M20 X 1.5 mm (M)				14M						
5. Ingress protection	IP 65				ER						
	IP 66				ES						
	IP 67				ET						
6. Execution	Dry²				EA						
	Dry but fillable				EB						
	Dampening liquid filled, glycerine				EG						
	Dampening liquid filled, silicon oil				EH						
7. Other options	Case & Ring in AISI 316 SS (B0)	BA	Toughened glass	GD	Performance test				TP		
	Case & Ring in AISI 316 SS (B1)	BB	Maximum Reading pointer³	GW	SS tag plate, AISI 304 SS				XF		
	Case & Ring in AISI 316 SS (R0)	BG	Dial with Freon temperature scales	G9	SS tag plate, AISI 316 SS				XG		
	Case & Ring in AISI 316 SS (R2)	BI	Dial with Ammonia temperature scale	N9	Rolling type case & ring				XO		
	Case & Ring in AISI 316 SS (R3)	BJ	Rubber parts, Viton	RA	Custom designed dial				XR		
	Case & Ring in AISI 316 SS (L0)	BK	Vent plug, ON-OFF type	RW	Dial tag marking				XT		
	Case & Ring in AISI 316 SS (L1)	BL	5 - point calibration certificate	TA	Two-piece construction				E7		
	Case & Ring in AISI 316 SS (L2)	BM	Helium leak testing	TL	ATEX Version⁴				AX		
	Dampening screw, AISI 316 SS	EN	Material test certificate 2.2	TM							
	Shatterproof safety glass	GC	Certification for Oxygen service	TO							

¹⁾ For other connections, please contact factory.

²⁾ Available with Ingress Protection IP 54 (Dust Proof) only.

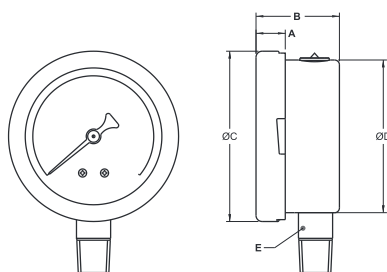
³⁾ Available in dry version with accuracy CL 1.0 or above.

⁴⁾  II 2 G Ex h IIC T6...T3 Gb X
II 2 D Ex h IIC T85°C...T200°C Db X

Specifications		
Material of construction	Sensing element	Bourdon Tube (≤ 100 bar : C - type , > 100 bar : Helical)
	Case & Ring material	AISI 304 SS (Bayonet type)
	Bourdon tube & Shank	AISI 316L SS (Shank welded directly to case)
	Movement mechanism	AISI 304 SS
	Dial	Aluminum, black graduation on white background
	Pointer	Fixed, aluminum, black powder coated
	Gaskets, Blow off disc & filling plug	Neoprene / NBR
	Window	Plexi glass
	Dial size	DN50 / DN63 / DN80 / DN100
	Range	-1 ... 0 to 0 ... 400 bar (DN50) -1 ... 0 to 0 ... 1000 bar (DN 63 / DN80 / DN100)
Standard specifications	Mounting pattern	Direct, Bottom connection
	Process connection	1/4" NPT (M) / 1/4" BSP (M)
	Ingress protection	IP 54 / IP 65
	Execution	Dry / Dry but fillable
	Window	Plexi glass
Standard specifications: dampening liquid filled, glycerin	Dampening liquid	Glycerin 99.7% [Service temperature up to 65°C]
Temperature effect		When temperature of the measuring system deviates from reference temperature (+20°C) max error $\pm 0.4\%$ / 10K of true scale value.

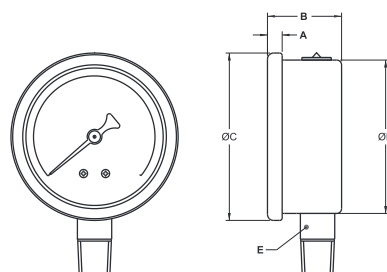
Dimensions - All dimensions are in mm

Type B0 (Bayonet ring)



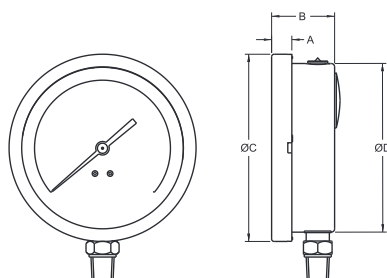
DN	A	B	ØC	ØD	E	Weight (grams)
50	9	34	58,5	52	SQ.14	120
63	12	33	69,7	62,5	SQ.14	209

Type B0 (Rolling ring)



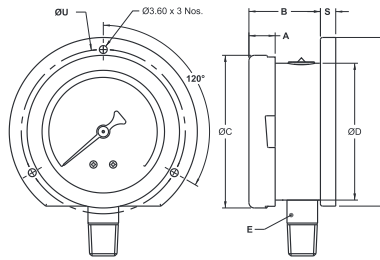
DN	A	B	ØC	ØD	E	Weight (grams)
50	5	32,5	57,5	51,5	SQ.14	110
63	5	31,5	68	62,5	SQ.14	189

Type B0 (Bayonet ring)



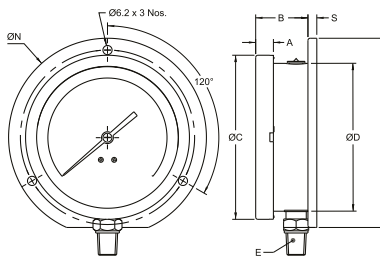
DN	A	B	ØC	ØD	E	Weight (grams)
80	9,5	33,5	89,5	80	A/F14	450
100	12	38	111	100	A/F14	500

Type B1 (Bayonet ring)



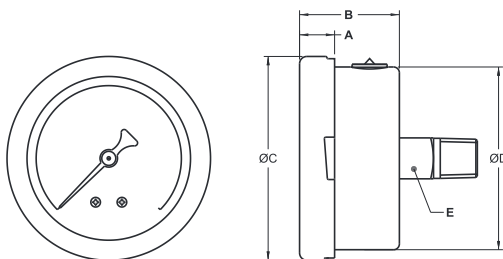
DN	A	B	ØC	ØD	E	ØN	ØU	M	S	Weight (grams)
63	12	33	69,7	62,5	SQ.14	86	75	77	7	254

Type B1 (Bayonet ring)



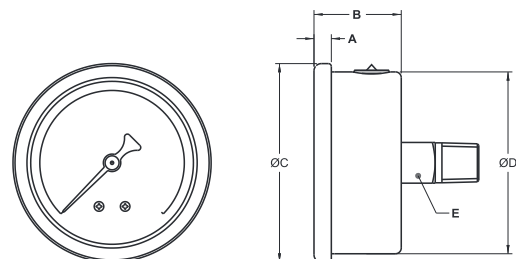
DN	A	B	ØC	ØD	E	ØN	ØU	M	S	Weight (grams)
100	12	38	111	100	A/F14	134	118	128	6	607

Type R0 (Bayonet ring)



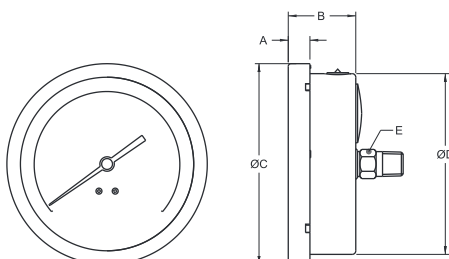
DN	A	B	ØC	ØD	E	Weight (grams)
50	9	34	58,5	52	SQ.14	120
63	12	33	69,7	62,5	SQ.14	209

Type R0 (Rolling ring)



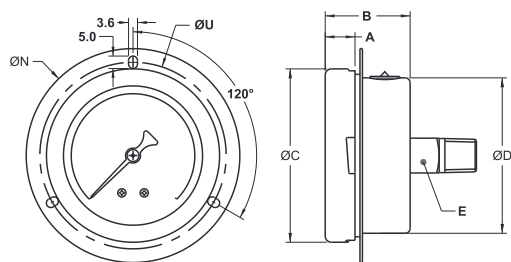
DN	A	B	ØC	ØD	E	Weight (grams)
50	5	32,5	57,5	51,5	SQ.14	110
63	5	31,5	68	62,5	SQ.14	189

Type R0 (Bayonet ring)



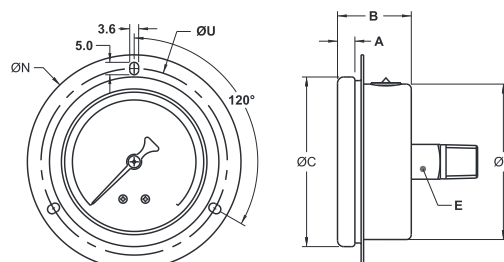
DN	A	B	ØC	ØD	E	Weight (grams)
80	9,5	33,5	89,5	80	A/F14	450
100	12	38	111	100	A/F14	500

Type R2 (Bayonet ring)



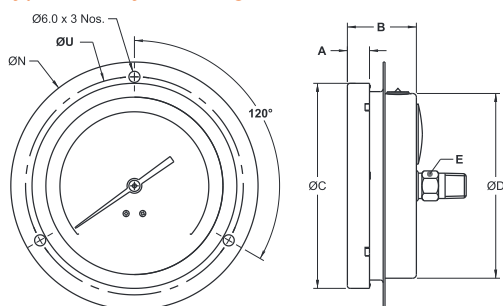
DN	A	B	ØC	ØD	E	ØN	ØU	Weight (grams)
63	12	33	69,5	62,5	SQ.14	86	75	240

Type R2 (Rolling ring)



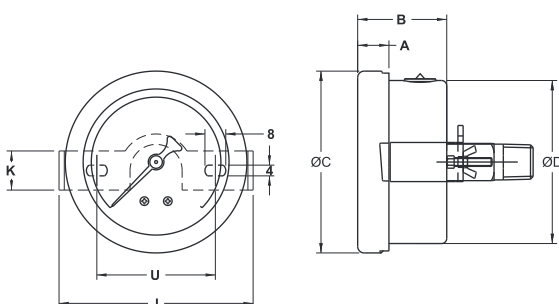
DN	A	B	ØC	ØD	E	ØN	ØU	Weight (grams)
63	5	31,5	68	62,5	SQ.14	86	75	189

Type R2 (Bayonet ring)



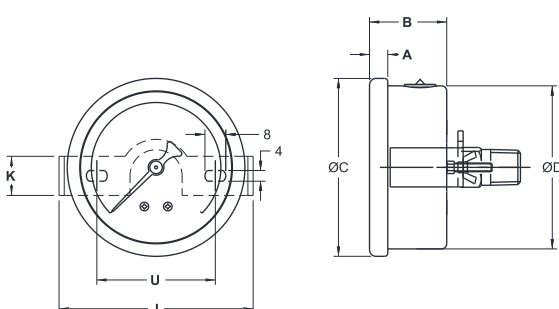
DN	A	B	ØC	ØD	E	ØN	ØU	Weight (grams)
100	12	38	111	100	A/F14	134	118	574

Type R3 (Bayonet ring)



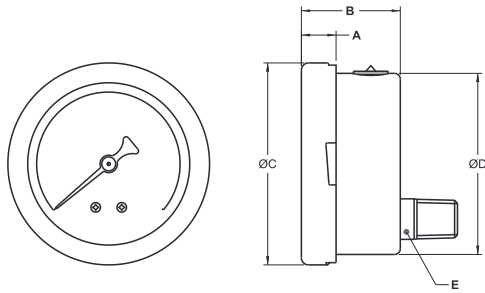
DN	A	B	ØC	ØD	E	U	J	K	Weight (grams)
50	9	34	58,5	51	SQ.14	70,5	91	38	163
63	12	33	69,7	62,5	SQ.14	70,5	91	38	254

Type R3 (Rolling ring)



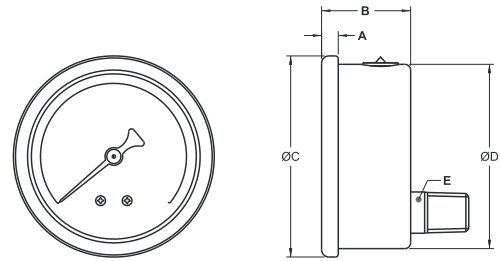
DN	A	B	ØC	ØD	E	U	J	K	Weight (grams)
50	9	34	58,5	51	SQ.14	70,5	91	38	163
63	12	33	69,7	62,5	SQ.14	70,5	91	38	254

Type L0 (Bayonet ring)



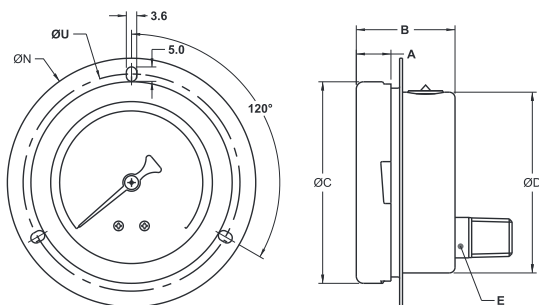
DN	A	B	ØC	ØD	E	Weight (grams)
63	12	33	69,7	62,5	SQ.14	209

Type L0 (Rolling ring)



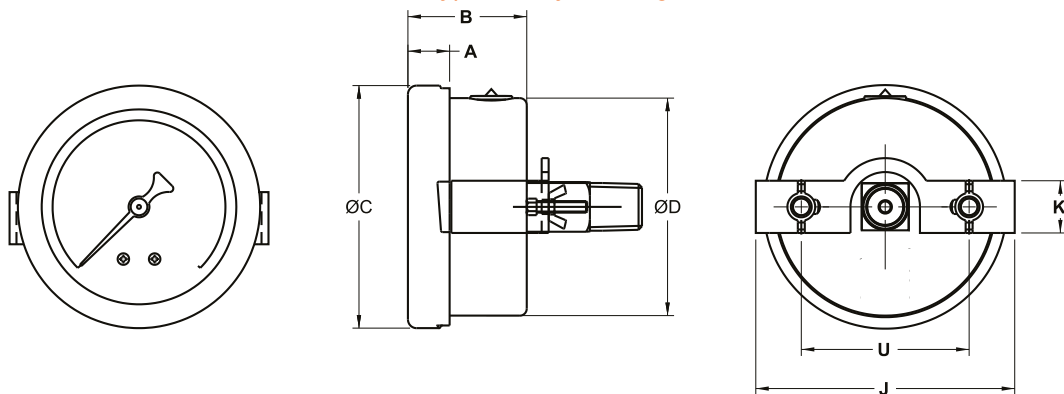
DN	A	B	ØC	ØD	E	Weight (grams)
63	5	31,5	68	62,5	SQ.14	189

Type L1 (Bayonet ring)



DN	A	B	ØC	ØD	E	ØN	ØU	Weight (grams)
63	12	33	69,7	62,5	SQ.14	86	75	240

Type L2 (Bayonet ring)



DN	A	B	ØC	ØD	E	U	J	K	Weight (grams)
50	9	34	58,5	51	SQ.14	45,5	74,5	15	163
63	12	33	69,7	62,5	SQ.14	45,5	74,5	15	254

Standard Ranges				Standard Ranges		Standard Ranges		Standard Ranges		Standard Ranges	
RANGE	bar	Kg/cm ²	bar/psi	RANGE	psi	RANGE	kPa	RANGE	MPa	RANGE	mbar
0 ... 0.6	B01	K01	N01	0 ... 10	S01	0 ... 60	E01	-	-	-600 ... 0	B00
0 ... 1	B02	K02	N02	0 ... 15	S02	0 ... 100	E02	0 ... 0.1	M02	-	-
0 ... 1.6	B03	K03	N03	0 ... 25	S03	0 ... 160	E03	0 ... 0.16	M03	-	-
0 ... 2.5	B05	K05	N05	0 ... 35	S05	0 ... 250	E05	0 ... 0.25	M05	-	-
0 ... 4	B06	K06	N06	0 ... 60	S06	0 ... 600	E06	0 ... 0.4	M06	-	-
0 ... 6	B07	K07	N07	0 ... 90	S07	0 ... 600	E07	0 ... 0.6	M07	-	-
0 ... 7	B08	K08	N08	0 ... 100	S08	0 ... 700	E08	0 ... 0.7	M08	-	-
0 ... 10	B09	K09	N09	0 ... 150	S09	0 ... 1000	E09	0 ... 1	M09	-	-
0 ... 16	B11	K11	N11	0 ... 235	S11	0 ... 1600	E11	0 ... 1.6	M11	-	-
0 ... 25	B13	K13	N13	0 ... 365	S13	0 ... 2500	E13	0 ... 2.5	M13	-	-
0 ... 40	B16	K16	N16	0 ... 600	S16	0 ... 4000	E16	0 ... 4	M16	-	-
0 ... 60	B17	K17	N17	0 ... 870	S17	0 ... 6000	E17	0 ... 6	M17	-	-
0 ... 70	B18	K18	N18	0 ... 1000	S18	0 ... 7000	E18	0 ... 7	M18	-	-
0 ... 100	B19	K19	N19	0 ... 1500	S19	0 ... 10000	E19	0 ... 10	M19	-	-
0 ... 160	B21	K21	N21	0 ... 2300	S21	0 ... 16000	E21	0 ... 16	M21	-	-
0 ... 250	B24	K24	N24	0 ... 3600	S24	0 ... 25000	E24	0 ... 25	M24	-	-
0 ... 400	B27	K27	N27	0 ... 6000	S27	0 ... 40000	E27	0 ... 40	M27	-	-
0 ... 600	B29	K29	N29	0 ... 8700	S29	0 ... 60000	E29	0 ... 60	M29	-	-
0 ... 700	B30	K30	N30	0 ... 10000	S30	0 ... 70000	E30	0 ... 70	M30	-	-
0 ... 1000	B31	K31	N31	0 ... 15000	S31	-	-	0 ... 100	M31	-	-
-1 ... 0	B37	K37	N37	-30 ... 0 ¹	S37	-100 ... 0	E37	-0.1 ... 0	M37	-	-
-1 ... 0.6	B38	K38	N38	-30 ... 10 ¹	S38	-100 ... 60	E38	-0.1 ... 0.06	M38	-	-
-1 ... 1.5	B39	K39	N39	-30 ... 20 ¹	S39	-100 ... 150	E39	-0.1 ... 0.15	M39	-	-
-1 ... 3	B42	K42	N42	-30 ... 45 ¹	S42	-100 ... 300	E42	-0.1 ... 0.3	M42	-	-
-1 ... 5	B43	K43	N43	-30 ... 75 ¹	S42	-100 ... 500	E43	-0.1 ... 0.5	M43	-	-
-1 ... 9	B45	K45	N45	-30 ... 130 ¹	S45	-100 ... 900	E45	-0.1 ... 0.9	M45	-	-
-1 ... 15	B47	K47	N47	-30 ... 220 ¹	S47	-100 ... 1500	E47	-0.1 ... 1.5	M47	-	-
-1 ... 24	B49	K49	N49	-30 ... 350 ¹	S49	-100 ... 2400	E49	-0.1 ... 2.4	M49	-	-

General notes

- Other scales & measurement units are available.
- Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.
- Primary scales shall be in "BLACK" and secondary scales shall be "RED".
- Special scales, custom dial designs, OEM/private logo printing is available, details contact our marketing team.
- Any other range codes which are not available in the list shall be confirmed by factory.

Technical note

- In compound ranges, negative pressures are marked in In Hg, hence for example for -1 to 1 bar the corresponding scale shall be -30"Hg to 15 psi.

Additional information

Documents	Data sheet	H20003	www.trafag.com/H20003
	Instructions	H21001	www.trafag.com/H21001