

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 TMP102 All Stainless Steel Pressure Gauge with bourdon tube sensing element offers a robust design in DIN style case and ring.



Applications

- Oil & Gas applications
- Corrosive environments
- Liquid & gaseous mediums
- Nuclear power plants

Features

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

Reference

- EN 837-1
- PED 97/23/EC

06/2017

Data sheet H20004a

Standard parameters	
Accuracy	CL 1.0 (DN100 / DN150) & CL 1.6 (DN63)
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 ... 1600 bar
Weld joints	TIG argon arc welding

Ordering code

		TMP104 - XX - XXX - XX - XXX - XX - XX - XX						
1. Dial size	63 mm / 2,5" ⁵	25	XXX	XX	XXX	XX	XX	XX
	100 mm / 4"	04						
	150 mm / 6"	06						
2. Range	Refer "Range Table"		XXX					
3. Mounting pattern	Direct, Bottom connection			B0				
	Wall/Surface/Projection mounting, Bottom connection			B1				
	Centre, Back connection ²			R0				
	Lower, Back connection			L0				
	Panel/Front flange mounting, Lower Back connection			L1				
	Panel/bracket mounting, Lower Back connection			L2				
4. Process connection ¹	¼" BSP (M)			12B				
	¼" NPT (M)			12N				
	3/8" BSP (M)			13B				
	½" BSP (M)			14B				
	M20 X 1.5 mm (M)			14M				
	½" NPT (M)			14N				
5. Ingress protection	IP 65					ER		
	IP 66					ES		
	IP 67					ET		
6. Execution	Dry ⁷					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	AISI 316 SS movement	GL	IBR certification	TI		
	Case & Ring in AISI 316 SS (B1)	BB	Dampened movement	GM	Helium leak testing	TL		
	Case & Ring in AISI 316 SS (R0)	BG	Maximum Reading pointer ³	GW	Material test certificate 2.2	TM		
	Case & Ring in AISI 316 SS (L0)	BK	Knife edge pointer	GX	Tested to NACE standards	TN		
	Case & Ring in AISI 316 SS (L1)	BL	Monel wetted parts	MN	Certification for Oxygen service	TO		
	Case & Ring in AISI 316 SS (L2)	BM	Dial with Ammonia temperature scale	N9	Performance test	TP		
	Dampening screw, Monel	EM	Overrange protection 1.5xFS	OP	C.C. with NABL traceability ⁶	TT		
	Dampening screw, AISI 316 SS	EN	Epoxy coating (Case & Ring)	P8	Accuracy CL 0.5 / CL 0.6 of FS	XA		
	Internal overload stop	EX	Receiver gauge ⁴	R9	SS tag plate, AISI 304 SS	XF		
	Internal vacuum stop	EY	Rubber parts, Viton	RA	SS tag plate, AISI 316 SS	XG		
	Pointer stop on dial	EZ	Vent plug, ON-OFF type	RW	Electro polished (Case & Ring)	XK		
	Dial with Freon temperature scales	G9	5 - point calibration certificate	TA	Anti-parallax mirror band	XN		
	Plexi glass	GB	Material test certificate 3.1	TC	Custom designed dial	XR		
	Toughened glass	GD	CE certificate	TE	Dial tag marking	XT		

¹⁾ For other connections, please contact factory.

²⁾ Available in DN100 & DN150 only.

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

⁴⁾ Please specify the second scale required.

⁵⁾ For options applicable to dial size code 25, please refer model P103.

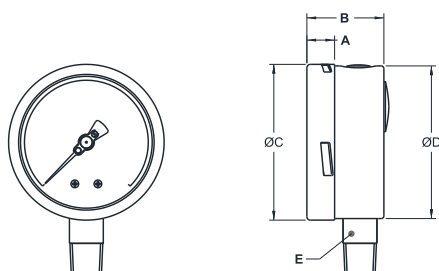
⁶⁾ C.C. = Calibration Certificate

⁷⁾ Available with Ingress Protection IP 54 (Dust Proof) only.

Specifications		
Material of construction	Sensing element	Bourdon Tube (≤ 100 bar: C - type , > 100 bar: Helical)
	Case & Ring material	AISI 304 SS (Bayonet type), DIN style
	Bourdon tube & Shank	AISI 316L SS (Shank welded directly to case)
	Movement mechanism	AISI 304 SS
	Dial	Aluminum, black graduation on white background
	Pointer	Micro-zero adjustable, aluminum, black powder coated Fixed, aluminum, black powder coated (DN63)
	Gaskets, Blow off disc & filling plug	Neoprene / NBR
	Window	Shatterproof safety glass
	Dial size	DN63 / DN100 / DN150
	Range	-1 ... 0 to 0 ... 1600 bar (DN100 / DN150) -1 ... 0 to 0 ... 1000 bar (DN63)
	Mounting pattern	Direct, Bottom connection
	Process connection	$\frac{1}{2}$ " NPT (M) / $\frac{1}{2}$ " BSP (M) [DN100 / DN150] $\frac{1}{4}$ " NPT (M) / $\frac{1}{4}$ " BSP (M) [DN63]
	Ingress protection	IP 65
	Execution	Dry but fillable
Standard specifications	Window	Safety glass
	Dampening liquid	Glycerin 99.7% [Service temperature up to 65°C]
	Standard specifications : dampening liquid filled, glycerin	
Temperature effect	When temperature of the measuring system deviates from reference temperature (+20°C) max error $\pm 0.4\%$ / 10K of true scale value.	

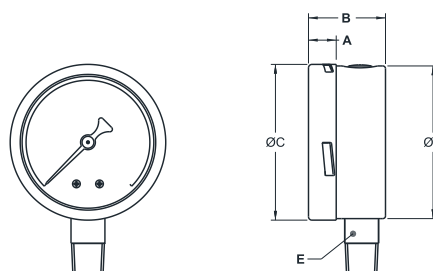
Dimensions - All dimensions are in mm

Type B0



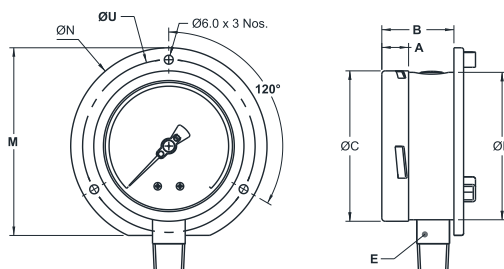
DN	A	B	ØC	ØD	E	Weight (grams)
63	12	32	64	61,7	SQ.14	190

Type B0



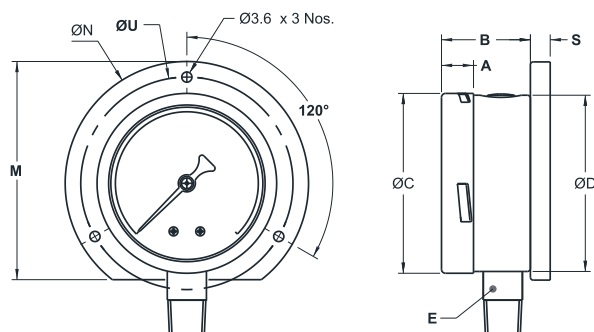
DN	A	B	ØC	ØD	E	Weight (grams)
100	16,5	50	101	99	SQ.22	491
150	17	51	162	159	SQ.22	890

Type B1



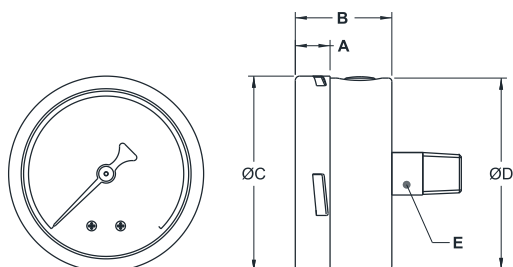
DN	A	B	ØC	ØD	E	ØN	ØU	M	S	Weight (grams)
63	12	32	64	61,7	SQ.14	80	86	7	75	240

Type B1



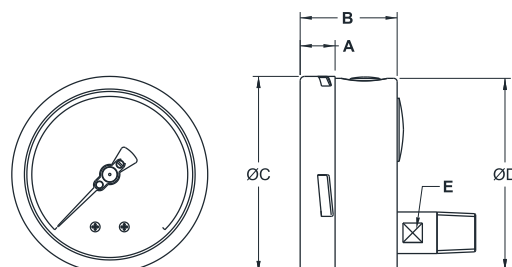
DN	A	B	ØC	ØD	E	ØN	ØU	M	Weight (grams)
100	16,5	54	101	99	SQ.22	132	116	126	598
150	17	55	162	159	SQ.22	196	178	188	1070

Type R0



DN	A	B	ØC	ØD	E	Weight (grams)
63	12	32	64	61,7	SQ.14	190

Type L0



DN	A	B	ØC	ØD	E	Weight (grams)
100	16,5	50	101	99	A/F-18	491
150	17	51	162	159	A/F-18	890

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	-	-
0 ... 1600	B34	K34	N34	0 ... 23200	S34	-	-	0 ... 160	M34	-	-
-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	H20004	www.trafag.com/H20004
	Instructions	H21001	www.trafag.com/H21001