

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 with external zero adjustment.



Applications

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages
- Nuclear power plants

Features

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

Reference

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

06/2017

Data sheet H20002a

Standard parameters	
Accuracy	CL 1.0
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

		TMP102	- XX	- XXX	- XX	- XXX	- XX	- XX	- XX
1. Dial size	100 mm / 4"		04						
	125 mm / 4½"		05						
	150 mm / 6"		06						
	250 mm / 10"		10						
2. Range	Refer "Range Table"			XXX					
3. Mounting pattern	Direct, Bottom connection								B0
	Wall/Surface/Projection mounting, Bottom connection								B1
	2" Pipe/Yoke mounting, Bottom connection								B2
	Centre, Back connection ²								R0
	Lower, Back connection								L0
4. Process connection¹	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 ⁵								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	Dampened movement	GM	Helium leak testing	TL			
	Case & Ring in AISI 316 SS (B1)	BB	Maximum Reading pointer ³	GW	Material test certificate 2.2	TM			
	Case & Ring in AISI 316 SS (B2)	BC	Knife edge pointer	GX	Tested to NACE standards	TN			
	Case & Ring in AISI 316 SS (R0)	BG	Monel wetted parts	MN	Certification for Oxygen service	TO			
	Case & Ring in AISI 316 SS (L0)	BK	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	High overpressure protection ⁷	OS	Accuracy CL 0.5 / CL 0.6 of FS	XA			
	Internal overload stop	EX	Epoxy coating (Case & Ring)	P8	SS tag plate, AISI 304 SS	XF			
	Internal vacuum stop	EY	Receiver gauge ⁴	R9	SS tag plate, AISI 316 SS	XG			
	Pointer stop on dial	EZ	Rubber parts, Viton	RA	Electro polished (Case & Ring)	XK			
	Dial with Freon temperature scales	G9	Vent plug, ON-OFF type	RW	Anti-parallax mirror band	XN			
	Plexi glass	GB	5 - point calibration certificate	TA	Custom designed dial	XR			
	Shatterproof safety glass	GC	Material test certificate 3.1	TC	Dial tag marking	XT			
	Toughened glass	GD	CE certificate	TE					
	AISI 316 SS movement	GL	IBR certification	TI					

¹⁾ For other connections, please contact factory.

²⁾ Available in DN100 only.

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

⁴⁾ Please specify the second scale required.

⁵⁾ Available with Ingress Protection IP 54 (dust proof) only.

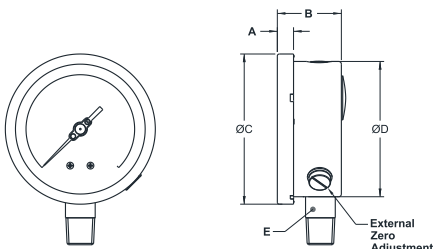
⁶⁾ C.C. = Calibration Certificate

⁷⁾ Refer Range V/s Overpressure table.

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	Micro-zero adjustable, aluminum, black powder coated	
	Gaskets, Blow off disc & filling plug	Neoprene / NBR	
	Window	Sheet glass / Shatterproof safety glass	
	Standard specifications	Dial size	DN100 / DN125 / DN150 / DN250
		Range	-1 ... 0 to 0 ... 1600 bar
		Mounting pattern	Direct, Bottom connection
		Process connection	½" NPT (M) / ½" BSP (M)
		Ingress protection	IP 54 / IP 65
		Execution	Dry / Dry but fillable
Zero adjustment		External screw with locking mechanism	
Standard specifications : dampening liquid filled, glycerin	Window	Safety glass	
	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 ±0.4% / 10K of true scale value.		

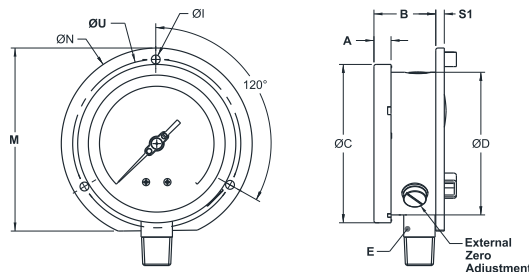
Dimensions - All dimensions are in mm

Type B0



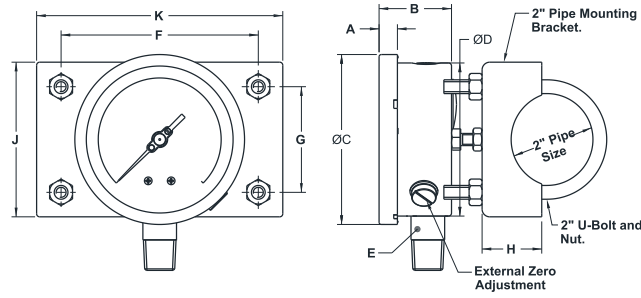
DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	SQ.22	506
125	15	48	129	118.5	SQ.22	694
150	15	48	161	149	SQ.22	900
250	18.5	50	263	250	SQ.22	2100

Type B1



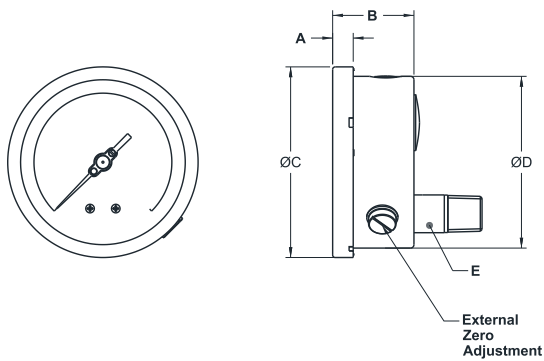
DN	A	B	ØC	ØD	E	ØI	M	ØN	S1	ØU	Weight (grams)
100	12	52	111	100	SQ.22	6	128	134	6	118	613
125	15	50	129	118.5	SQ.22	6	143.5	150	4	137	796
150	15	52	161	149	SQ.22	6	172.4	186	6	168	1080
250	18.5	51.5	263	250	SQ.22	7	286.5	290	1.5	276	2448

Type B2

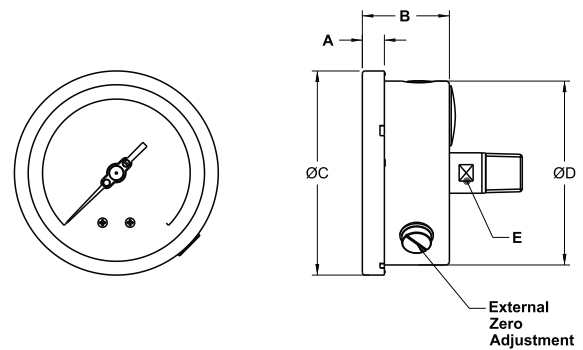


DN	A	B	ØC	ØD	E	ØI	M	ØN	S1	ØU	Weight (grams)
100	12	48	111	100	SQ.22	129	69	39	101	161	1580
150	15	48	161	149	SQ.22	129	69	39	101	161	1974

Type L0



Type R0



DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	SQ.22	506
150	15	48	161	149	SQ.22	2100

DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	A/F 17	506
150	15	48	161	149	A/F 17	2100

Range v/s over range in bar

RANGE	OVER RANGE
0 ... 1	4
0 ... 1.6	6
0 ... 2.5	10
0 ... 4	16
0 ... 6	25
0 ... 10	40
0 ... 16	48
0 ... 25	75
0 ... 40	80
0 ... 60	120
0 ... 100	200
0 ... 160	320
0 ... 250	500
0 ... 400	800
0 ... 600	1200

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	H20002	www.trafag.com/H20002
	Instructions	H21001	www.trafag.com/H21001