

CE

### Special Features

- Stainless steel case & stem
- Stem length available from 50 mm
- Bottom / back / every angle entry
- Silicon oil filled (optional)
- With or without thermowell
- External zero adjustment (optional)
- Standard followed EN 13190.

### Application

- Chemicals
- Refinery
- Fertilizer
- Petrochemicals
- Pharmaceutical
- Power
- Cement
- Sugar
- Food
- Beverages
- Pulp
- Paper
- Allied process industries  
Which are having corrosive media / environment

### Specifications

**Standard Version :** 40 mm & 50 mm = Range up to 300 °C Max.,  
63 mm = Range up to 300 °C Max.,  
80 mm, 100 mm, 125 mm & 150 mm = Range up to 500 °C Max.  
(For compound ranges, refer range table)

**Nominal range, measuring ranges & limits of error as per EN 13190**

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: -25°C to 65 °C
Operating pressure	: 15 kg/cm <sup>2</sup> (without thermowell)
Over range limit	: 110% of full scale
Stem diameter	: 10 mm (Standard) Optional 6 mm, 8 mm, 12 mm
Process connection	: ½" BSP (M) fixed

Nominal Range (°C)	Measuring Range (°C)	Limits of Error (± °C)
-20 to +40	-10 to +30	1
-20 to +60	-10 to +50	1
-20 to +120	-10 to +110	2
-30 to +30	-20 to +20	1
-30 to +50	-20 to +40	1
-30 to +70	-20 to +60	1
-40 to +40	-30 to +30	1
-40 to +60	-30 to +50	1
-100 to +60	-80 to +40	2
0 to 60	10 to 50	1
0 to 80	10 to 70	1
0 to 100	10 to 90	1
0 to 120	10 to 110	2
0 to 160	20 to 140	2
0 to 200	20 to 180	2
0 to 250	30 to 220	2.5
0 to 300	30 to 270	5
0 to 400	50 to 350	5
0 to 500	50 to 450	5
0 to 600	100 to 500	10

Case, Bezel & Clamp	: AISI 304 SS
Stem & Connection	: AISI 316 SS
Joints	: TIG argon arc welding
Sensing Element	: Bi - metal strip coiled

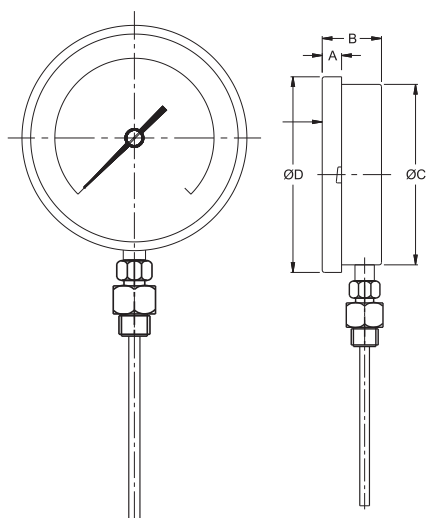
Protection	: IP 68
Dial	: Aluminum, black graduation on white background
Pointer	: Aluminum, black coloured, Slotted zero adjustable & Fixed for NS 40 mm, 50 mm & 63 mm
Zero adjustment	: Externally for mounting type 8 & 14, (Except NS 40 mm, 50 mm & 63 mm)
Window	: Toughened Glass
Gasket	: Neoprene

### Standard version : Silicon oil filled

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: Maximum 65°C
Window	: Toughened Glass ( Plexi Glass Optional )
Dampening liquids	: Silicon Oil
Gasket & filling Plug*	: Viton
Other features	: Refer Specification of Standard Version

\*Gasket & Filling plug of Viton.

## Dimensions - Standard Version

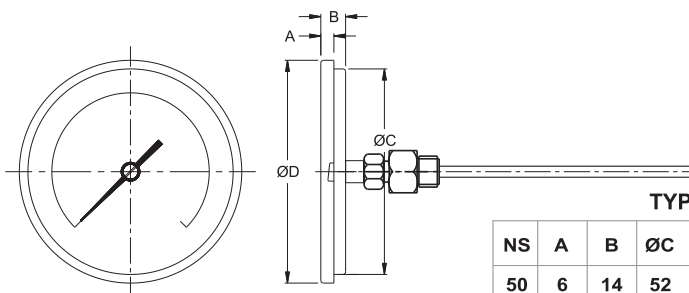


**TYPE 2**

NS	A	B	ØC	ØD	Approx. Wt.#
63	12	46	63	70	200.0
80	12	46	80	90	250.0
100	12	46	100	111	500.0
125	15	46	119	131	750.0
150	15	46	149	161	1000.0

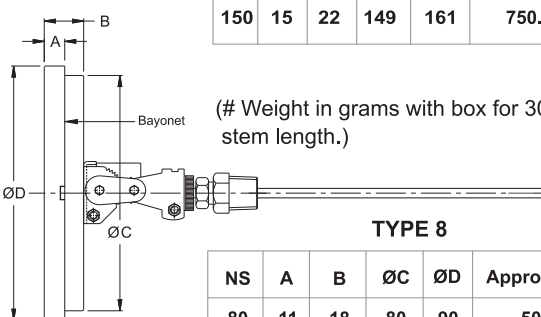
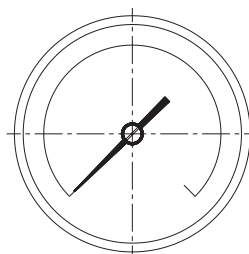
(# Weight in grams with box for 300 mm stem length.)

Notes : • Drawings are not to scale. • All Dimensions are in mm. • NS = Nominal Size.



**TYPE 4**

NS	A	B	ØC	ØD	Approx. Wt.#
50	6	14	52	58	115.0
63	12	18	63	70	150.0
80	12	22	80	90	250.0
100	12	22	100	111	350.0
125	15	22	119	132	500.0
150	15	22	149	161	750.0



(# Weight in grams with box for 300 mm stem length.)

**TYPE 8**

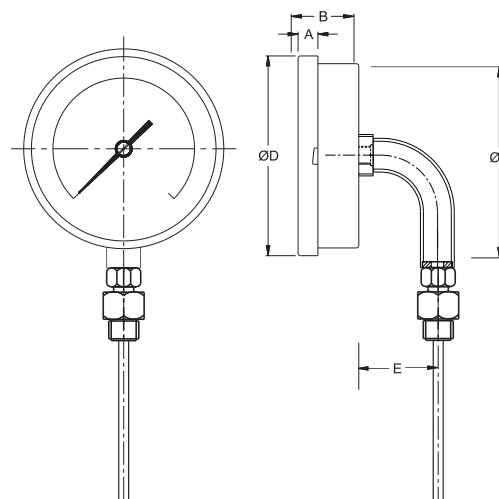
NS	A	B	ØC	ØD	Approx. Wt.#
80	11	18	80	90	500.0
100	12	22	100	111	750.0
125	15	22	119	132	900.0
150	15	22	149	161	1000.0

## Range Table

### Range, stem OD & stem length selection table

The following table indicates the minimum and maximum stem lengths in mm, per stem diameter per range. The lower values indicated are the minimum immersion length (below thread) for all type of threads. During stem length selection, please select between the limits mentioned below.

(Range) °C	Ø 6 mm/ 6.34 mm. Stem Length Min. / Max.	Ø 8, 9.5 & 10 mm. Stem Length Min. / Max.	Ø 12 mm. Stem Length Min. / Max.
-20 / 40	115 / 500	95 / 600	95 / 600
-20 / 60	95 / 500	75 / 600	75 / 600
-20 / 120	65 / 500	55 / 600	55 / 600
-30 / 30	115 / 500	95 / 600	95 / 600
-30 / 50	95 / 500	75 / 600	75 / 600
-30 / 70	85 / 500	55 / 600	75 / 600
-40 / 40	95 / 500	75 / 600	75 / 600
-40 / 60	85 / 500	75 / 600	75 / 600
-80 / 80	65 / 500	55 / 600	55 / 600
0 / 60	115 / 500	95 / 600	95 / 600
0 / 80	95 / 500	75 / 600	75 / 600
0 / 100	65 / 500	50 / 600	75 / 600
0 / 120	50 / 500	40 / 600	55 / 600
0 / 160	45 / 500	35 / 600	55 / 600
0 / 200	40 / 500	30 / 600	45 / 600
0 / 250	45 / 500	45 / 600	45 / 600
0 / 300	65 / 500	55 / 600	55 / 600
0 / 400	55 / 500	45 / 600	45 / 600
0 / 500	55 / 500	45 / 600	45 / 600



**TYPE 14**

NS	A	B	ØC	ØD	E	Approx. Wt.#
63	12	18	66	70	35	150.0
80	11	22	80	90	35	200.0
100	15	22	100	111	35	250.0
125	15	22	119	132	35	350.0
150	15	22	149	161	35	500.0

(# Weight in grams with box for 300 mm stem length.)

**Dimensions - Standard Version**

Note : We offer National / International Scales like °C, °F & Dual Scale in °C & °F & Scales as per the requirement can be provided on request. Following are the example tables for ranges in °C.

**Standard Ranges**

Positive range single scale in °C									
0/60	0/80	0/100	0/120	0/160	0/200	0/250	0/300	0/400	0/500
Compound range single scale in °C									
- 20 / 40	- 20 / 60	- 20 / 120	- 30 / 30	- 30 / 50	- 30 / 70	- 40 / 40	- 40 / 60	- 80 / 80	

**ACCESSORIES** (\* Refer datasheet for Thermowells)

Note : Other Scales are available on request.

\* Thermowell

**How To Order**

**Example**

**Basic Model**

Code		20	25	30	40	45	60	
<b>Nominal Size (mm)</b>		50 mm	63 mm	80 mm	100 mm	125 mm	150 mm	BT X
<b>Type of Mounting</b>								
<b>2</b>	Direct bottom entry	X	✓	✓	✓	✓	✓	
<b>4</b>	Direct center back entry	✓	✓	✓*	✓*	✓*	✓*	X OR XX
<b>8</b>	Every angle back entry	X	X	✓*	✓*	✓*	✓*	
<b>14</b>	Bottom entry through elbow	X	✓	✓*	✓*	✓*	✓*	

\* Available with external zero adjustment, Refer option EXZ.

<b>Pressure Connection</b>								
<b>1BM</b>	1/8" BSP (M) (Stem Dia. Max. 6.35 mm)	✓	✓	X	X	X	X	
<b>1NM</b>	1/8" NPT (M)* (Stem Dia. Max. 6.35 mm)	✓	✓	X	X	X	X	
<b>2BM</b>	1/4" BSP (M) (Stem Dia. Max. 6.35 mm)	✓	✓	X	X	X	X	
<b>2NM</b>	1/4" NPT (M)* (Stem Dia. Max. 6.35 mm)	✓	✓	X	X	X	X	
<b>3BM</b>	3/8" BSP (M) (Stem Dia. Max. 10 mm)	X	✓	✓	✓	✓	✓	XXX
<b>4BM</b>	1/2" BSP (M) (Standard) (Stem Dia. Max. 12 mm)	X	✓	✓	✓	✓	✓	
<b>4NM</b>	1/2" NPT (M)* (Stem Dia. Max. 12 mm)	X	✓	✓	✓	✓	✓	
<b>4MM</b>	M20 x 1.5 (M) (Stem Dia. Max. 12 mm)	X	✓	✓	✓	✓	✓	
<b>2TC</b>	1-1/2" TRICLOVER** (Stem Dia. Max. 12 mm)	X	✓	✓	✓	✓	✓	

\* Not recommended for Revolving/ Swivel connections. \*\* Without clamp, gasket & bottom mating part.

**Process Connection Type** (\* Welded with stem / case & not suitable for taper threaded connections)

<b>AD</b> Adjustable	<b>FX</b> Fixed (Standard)*	<b>SL</b> Revolving / Swivel	XX
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**Stem Diameter**

<b>SD06</b> 6 mm	<b>SD08</b> 8 mm	<b>SD10</b> 10 mm (Standard)	<b>SD12</b> 12 mm	XX
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**Stem Length ( Max. 600 mm )** Please specify in mm (Please Refer Page No. 2 for minimum & maximum stem lengths)

**Range**

Refer range table	300 mm
	0/100 °C

**Optional extras** (\* Applicable for NS 100 mm & above)

<b>CBS</b> AISI 316 SS case & bezel (For NS 100 mm & above) * #	<b>STG</b> Shatter Proof Glass *	XXX
<b>LSI</b> Dampening liquid silicon oil (up to 300°C)**	<b>CDD</b> Custom designed dial	
<b>EXZ</b> External zero adjustment	<b>TND</b> Tag No. Marking on Dial *	
<b>[except NS 40 mm, 50 mm &amp; 63 mm &amp; mounting type 2]</b>	<b>MTC</b> Material test certificates # #	
<b>STP</b> SS tag plate	<b>SCP</b> SS Case & Polycarbonet Window	

\*\*Gasket & Filling plug of Viton. (# Consult factory for minimum order quantity & delivery.) # # Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please Consult factory.

**Ordering Example: BT - XX - X OR XX - XXX - XX - XXXX - 300 mm - 0/100°C - XXX**

For other optional items, please contact factory for delivery and minimum quantity of order.

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.