

## TEMPERATURE GAUGES



**ELITE INSTRUMENTS**

ISO 9001 COMPANY

PRESSURE GAUGE | THERMOMETER | DIAPHRAGM SEAL | ACCESSORIES

[www.elite-instrument.com](http://www.elite-instrument.com)  
[www.elite-instruments.com](http://www.elite-instruments.com)



the pressure equipment safety authority

NS : 40 / 50 / 63 / 80 /  
100 / 125 / 160 /  
200 / 250mm

Ranges  
available up  
to 60,000 psi

**WETTED PARTS -AVAILABLE  
SS 316L , HASTELLOY-C276 ,  
INCONEL 625 , MONEL 400**

- Bourdon Tube - AS PER NACE MR 0175
- Socket - AS PER NACE MR 0175
- Bourdon Tube - Seamless Tube
- Tig Welding - Approved by TUV
- Leak Testing - Helium Leak Tested
- Movement - Silicone Jelly Movement
- Dial - White Aluminum
- Window - Safety Glass
- Gasket - NBR
- Blow out Disc - Temperature Compensated
- IP Protection - IP 68

\*PLEASE REFER PRESSURE GAUGE CATALOGUE FOR DETAILS

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## SPECIAL FEATURES

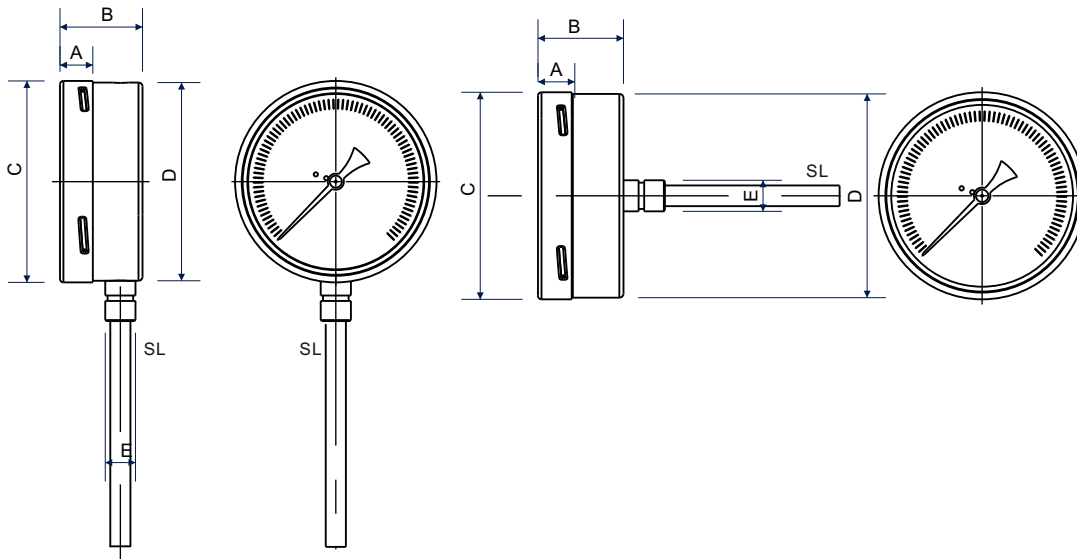
Inert Gas Filled Expansion System.  
 Stainless Steel Case & Stem  
 With or Without Thermowell  
 Standard Followed EN 13190.

## SPECIFICATIONS

Accuracy : Class 1 as per EN 13190  
 Ambient Temperature: -13°F (-25°C) to 149°F (65°C)  
 Operating Pressure : 25bar (Without Thermowell)  
 Stem Diameter: 10mm  
 Case & Bezel: AISI 304 SS (Bayonet Type)  
 Stem Connection: AISI 316 SS  
 Joint: Tig Argon Arc Welding  
 Protection: IP 65  
 Dial: Aluminium  
 Pointer: Aluminium  
 Window: Safety Glass  
 Gasket: NBR

## APPLICATIONS

All Stainless Steel Inert Gas Filled Thermometers  
 Areas suitable for Corrosive Media / Environments  
 In Process Industry Like Chemical , Food , Pharmaceutical,  
 Pulp & Paper Refinery, Cement & Many More.



### RANGE TABLE

Nominal Range, Measuring Range & Limits of Error as per En13190		
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

NS	A	B	ΦC	ΦD	ΦE
63	12	39	63.5	62	15
100	16.3	41	100	98.4	15

NS	A	B	ΦC	ΦD	ΦE
63	12	39	63.5	62	15
100	16.3	41	100	98.4	15



## HOW TO ORDER

Example

T-01

NOMINAL SIZE	D	F	G	H
	2.5 "(63mm)	4"(100mm)	5"(125mm)	6"(160mm)

X

## TYPE OF MOUNTING

1 WALL /SURFACE /PROJECTION MOUNTING WITH BOTTOM ENTRY	7 CENTER BACK ENTRY WITH FRONT FLANGE
2 DIRECT BOTTOM ENTRY	9 EVERY ANGLE CENTER BACK ENTRY
4 DIRECT CENTER BACK ENTRY	8 CENTER BACK ENTRY WITH MOUNTING BRACKET

X

## PROCESS CONNECTION

<b>4BM</b> 1/2"BSP(M) (Standard)	<b>6BM</b> 3/4"BSP(M)
<b>4NM</b> 1/2"NPT(M)	<b>4MM</b> M20X1.5(M)
<b>4TM</b> 1/2"BSPT(M)	

XXX

## PROCESS CONNECTION TYPE

<b>ZI</b> Adjustable	<b>ZJ</b> Fixed	<b>KJ</b> Revolving/Swivel
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XX

## STEM DIAMETER

<b>1U</b> 6mm	<b>2M</b> 1/4"(6.35mm)	<b>2C</b> 8mm	<b>2I</b> 9.5mm	<b>2J</b> 10mm	<b>2K</b> 12mm
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XX

## STEM LENGTH (BELOW THREAD)

Minimum Stem Length : 120 mm
Maximum Stem Length : 600 mm
Stem Diameter : 10 mm

120mm

## RANGE

Refer Range Table

0/100°C

## TYPE

<b>A1</b> With Rigid Stem	<b>A2</b> With Capillary
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XX

## CAPILLARY LENGTH (Max up to 25Mtrs.)

In Meters (Eg.1.5=1.5 Meters , 2.0=2 Meters)

3Mtrs

## CAPILLARY COVERED WITH ARMOUR

<b>PF</b> AISI 304 SS	<b>PH</b> AISI 316 SS
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XX

## OPTIONAL EXTRAS

<b>PS</b> AISI 316SS CASE & BEZEL**	<b>RH</b> CUSTOM DESIGN DIAL
<b>PW</b> FIVE POINT CALIBRATION CERTIFICATE	<b>RX</b> SHATTERPROOF /SAFETY GLASS
<b>QA</b> DAMPENING LIQUID SILICON OIL (-45/200 C)	<b>RZ</b> TOUGHENED GLASS
<b>PY</b> DAMPENING LIQUID GLYCERINE (UP TO 100 C) EXCEPT ELECTRICAL CONTACT	<b>SW</b> DIAL TAG MARKING
<b>SJ</b> MAXIMUM READING POINTER WITH PLEXI GLASS ( FOR DRY VERSION OF 100mm to 150mm)	<b>SX</b> SS TAG PLATE
<b>GH</b> MATERIAL TEST CERTIFICATE	*Gasket & Filling plug of NBR. Consult factory for Viton.
	**Available for NS 100mm to 150mm.Consult with Factory for Minimum order quantity and delivery.
	*Material Certificate according to EN 10204 3.1 B

XX

## ELECTRIC CONTACTS ( FOR NS 100 & 150 mm Only) (CE APPROVED)

( WITH IP PROTECTION UP TO Ip55 & WINDOW POLYCARBONATE DOME TYPE)

XX

**A) SINGLE INSULATED MAGNETIC SNAP ACTION TYPE\* (230 V AC, 1 Amp.) (48 V DC, 0.5 Amp.)**

**B) INDUCTIVE TYPE (220 V AC, 0.4 Amp.)**

<b>RJ</b> SINGLE; NORMALLY CLOSED (1 NC)	<b>YW</b> SINGLE; NORMALLY OPEN ( 1 NO)
<b>RK</b> DOUBLE; NORMALLY CLOSED+ NORMALLY OPEN (1NC + 1NO)	<b>YV</b> SINGLE; NORMALLY CLOSED ( 1 NC)
<b>RL</b> SINGLE; NORMALLY OPEN (1 NO)	<b>YX</b> DOUBLE; NORMALLY CLOSED + NORMALLY OPEN (1NC +1 NO)
<b>RM</b> DOUBLE; NORMALLY OPEN + NORMALLY CLOSED (1 NO + 1 NC)	<b>YY</b> DOUBLE; NORMALLY OPEN (BOTH NO)
<b>RN</b> DOUBLE; NORMALLY CLOSED (BOTH NC)	<b>YZ</b> DOUBLE; NORMALLY CLOSED (BOTH NC)
<b>RO</b> DOUBLE; NORMALLY OPEN ( BOTH NO)	<b>ZA</b> DOUBLE; NORMALLY OPEN + NORMALLY CLOSED (1 NO + 1 NC)
<b>RU</b> BOOSTER WITH RELAY FOR CURRENT UPTO 5 Amp.	

\*For Double Insulated Electrical Contacts , Consult Factory for Price & Delivery .

**Ordering Example: T-01-X-X-XXX-XX-XX-120mm-0/100°C-XX-3Mtr-XX-XX-XX**

## SPECIAL FEATURES

- Stainless Steel Case & Stem
- Bottom/Back/Every Angle Entry
- Silicon Oil Filled ( Optional)
- With or Without Thermowell
- External Zero Adjustable (Optional)
- Standard Followed En13190.

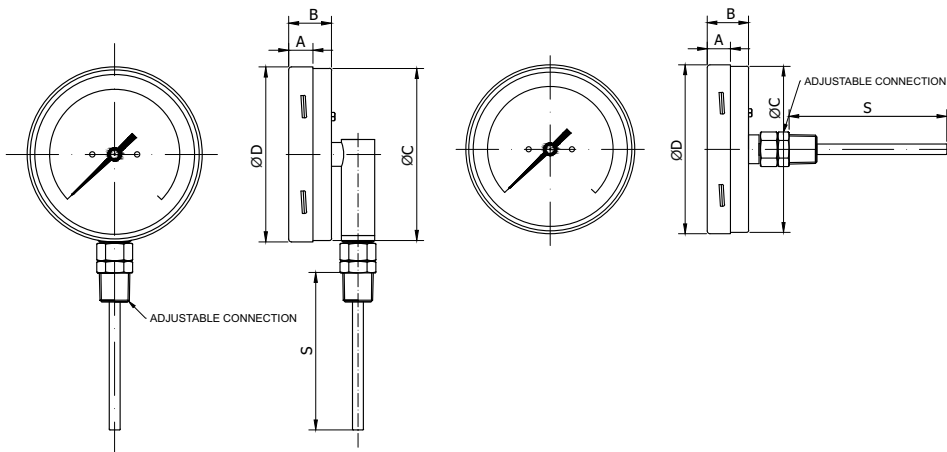
## SPECIFICATIONS

- Accuracy : 1 as per EN 13190
- Ambient Temperature: -13°F (-25°C) to 108°F (60°C)
- Operating Pressure : 25bar (Without Thermowell)
- Stem Diameter: 8mm
- Case & Bezel: AISI 304 SS (Bayonet Type)
- Stem Connection: AISI 316 SS
- Joint: Tig Argon Arc Welding
- Sensing Element:Coiled Bimetal
- Protection: IP 65(EN 60529/IEC529)
- Dial: Aluminium
- Pointer: Aluminium
- Window: Safety Glass
- Gasket: NBR



## APPLICATIONS

- Chemical / Refinery / Fertilizer / Petrochemicals /
- Pharmaceutical / Power /Cement / Sugar /
- Food & Beverages / Pulp & Paper & Allied
- Process Industries which are having Corrosive Media / Environment.

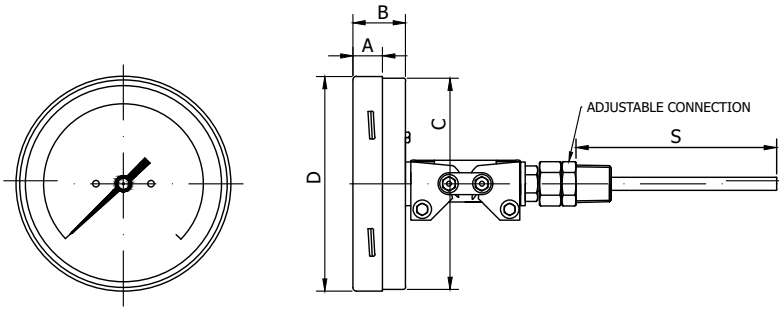


### RANGE TABLE

Nominal Range, Measuring Range & Limits of Error as per En13190		
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

NS	A	B	ØC	ØD
63	13	23.5	62	63.5
80	13.5	26	78	80
100	13.5	26	99	100
125	18	29	126	128
160	18	29	157	160

NS	A	B	ØC	ØD
50	5.5	12.5	52	57
63	13	23.5	62	63.5
80	13.5	26	78	80
100	13.5	26	99	100
125	18	29	126	128
160	18	29	157	160



NS	A	B	ΦC	ΦD
63	13	23.5	62	63.5
80	13.5	26	78	80
100	13.5	26	99	100
125	18	29	126	128
160	18	29	157	160

## HOW TO ORDER

NOMINAL SIZE	D	E	F	G	H
	2.5 "(63mm)	3"(80mm)	4"(100mm)	5"(125mm)	6"(160mm)

## TYPE OF MOUNTING

- 2 BOTTOM ENTRY THROUGH ELBOW
- 4 DIRECT CENTER BACK ENTRY
- 8 EVERY ANGLE CENTER BACK ENTRY

## PROCESS CONNECTION

<b>3BM</b> 3/8"BSP(M) ( Stem Dia.Max. 9.5 & 10mm)	<b>4MM</b> M20X1.5 (M) ( Stem Dia.Max.12mm)	<b>6NM</b> 3/4" NPT (M)
<b>4BM</b> 1/2"BSP(M) ( Stem Dia.Max. 12mm)	<b>4YN</b> 1 1/2"TRICLOVER ** ( Stem Dia.Max. 12mm)	<b>8BM</b> 1" BSP(M)
<b>4NM</b> 1/2"NPT(M) ( Stem Dia.Max. 12mm)	<b>6BM</b> 3/4"BSP(M)	<b>8NM</b> 1"NPT(M)

## PROCESS CONNECTION TYPE

<b>ZI</b> Adjustable	<b>ZJ</b> Fixed	<b>KJ</b> Revolving/Swivel
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## STEM DIAMETER

<b>1U</b> 6mm	<b>2M</b> 1/4"(6.35mm)	<b>2C</b> 8mm	<b>2I</b> 9.5mm	<b>2J</b> 10mm	<b>2K</b> 12mm
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## STEM LENGTH (BELOW THREAD)

Minimum Stem Length : 60 mm  
 Maximum Stem Length : 1000 mm

## RANGE

Refer Range Table

## OPTIONAL EXTRAS

<b>PS</b> AISI 316SS CASE & BEZEL**	<b>RS</b> EXTERNAL ZERO ADJUSTMENT
<b>PW</b> FIVE POINT CALIBRATION CERTIFICATE	<b>RX</b> SAFETY GLASS
<b>QA</b> DAMPENING LIQUID SILICON OIL (-45/200 C)	<b>RZ</b> TOUGHENED GLASS
<b>PY</b> DAMPENING LIQUID GLYCERINE (UP TO 100° C) EXCEPT ELECTRICAL CONTACT	<b>SX</b> SS 304 TAG PLATE
<b>RH</b> CUSTOM DESIGN DIAL	<b>GH</b> MATERIAL TEST CERTIFICATE AS PER En10204 3.1#
<b>SW</b> DIAL TAG MARKING	<b>SY</b> SS 316 TAG PLATE

Ordering Example: T-02-X-X-XXX-XX-XX-100mm-0/100°C-XX

Example

T-02

X

X

XXX

XX

XX

100mm

0/100°C

XX

## SPECIAL FEATURES

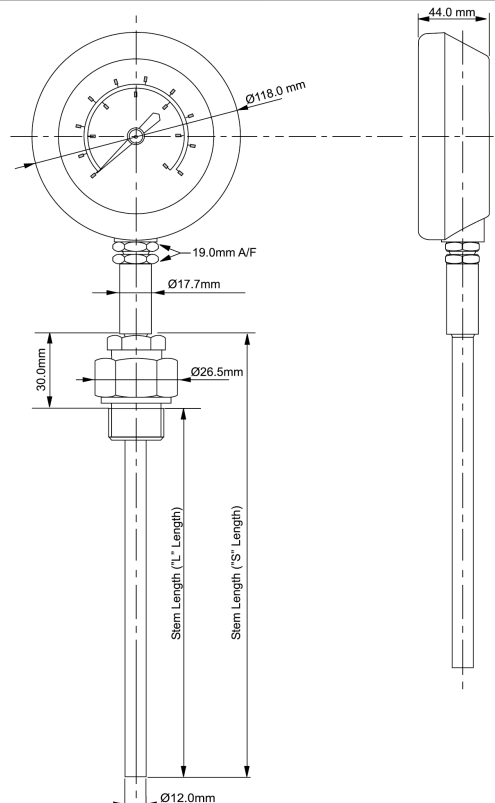
- Resist to High Temperature & Excessive Vibration System
- Robust Construction
- Corrosion Wear & Tear Proof
- Silicon Oil Filled
- Accurate & Reliable

## SPECIFICATIONS

- Accuracy : 1 as per EN 13190
- Ambient Temperature: -72°F (-40°C) to 180°F (100°C)
- Process Temperature: Max 117°F(65°C)
- Stem Diameter: 12mm
- Case & Bezel: Die Cast Aluminium
- Stem Connection: AISI 316 SS
- Joint: Tig Argon Arc Welding
- Protection: IP 65
- Dampening Liquid: Silicon Oil
- Dial: Aluminium
- Pointer: Aluminium
- Window: Tempered Glass
- Gasket & Filling Plug: VITON

## APPLICATIONS

This Nitrogen Filled Thermometer is the most widely specified Instrument for measuring Exhaust gas temperature in Diesel Engines. The Nitrogen Filled System is both reliable & accurate as well as environment friendly. The Instrument are protected against vibration using Silicon to ensure maximum life under the most severe conditions. The Instrument field applications are Refinery , Diesel, Power Generation, Sets ,Power, Pulp & Paper , Shipping , Offshore, DG Sets , Oil Engines & Allied Process Industries.





## HOW TO ORDER

### NOMINAL SIZE

F

4"(100mm)

### TYPE OF MOUNTING

2 DIRECT BOTTOM ENTRY

### PROCESS CONNECTION

**4BM** 1/2"BSP(M)

**6BM** 3/4"BSP(M) STANDARD

**4NM** 1/2" NPT (M)

### PROCESS CONNECTION TYPE

**ZI** ADJUSTABLE ( STANDARD)

### STEM LENGTH

200mm

250mm

300mm

400mm

600mm

### RANGE (STANDARD)

+50 TO 650°C WITH °F SCALE ( Limits of Error +-10°C as per EN 13190)

### OPTIONAL EXTRAS

**PW** FIVE POINT CALIBRATION CERTIFICATE

**SX** SS TAG PLATE

**RH** CUSTOM DESIGN DIAL

**SW** DIAL TAG MARKING

**GH** MATERIAL TEST CERTIFICATE\*

**Ordering Example: T-03-X-X-XXX-XX-200mm-50 TO 650°C-XX**

Example

T-03

X

X

XXX

XX

200mm

50 TO  
650°C

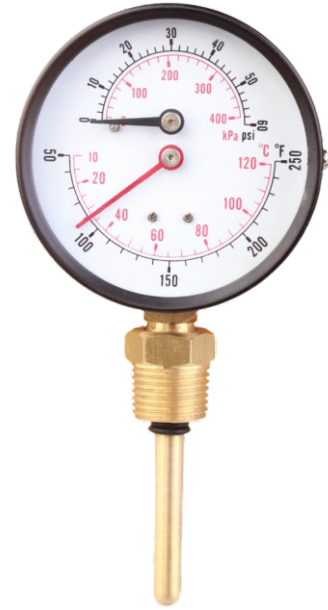
XX

## SPECIAL FEATURES

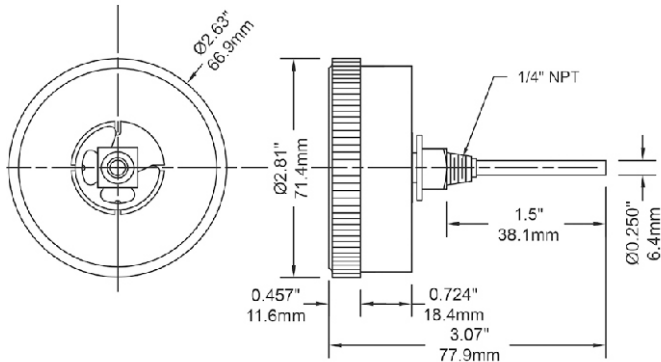
- Single Port Installation for Pressure and Temperature Measurement
- Cost Effective
- Excellent For HVAC Industry
- Rustproof Design

## SPECIFICATIONS

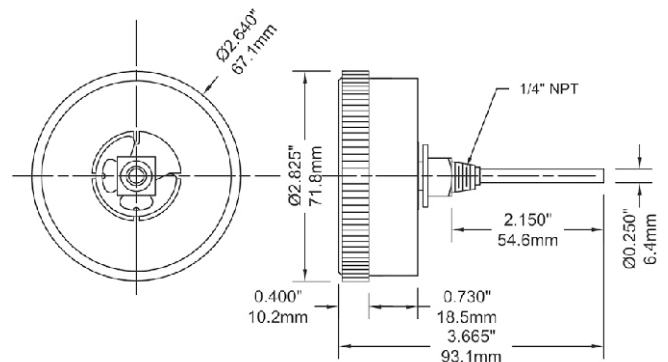
- Accuracy : 2 %
- Case & Bezel: Black Steel/ ABS Plastic
- Pressure Element : Bourdon(Copper Alloy)
- Temperature Element: Bi-Metal Strip Coiled
- Stem Diameter: 6mm (Standard)
- Stem Material: AISI SS316
- Dial: Aluminium
- Pointer: Aluminium
- Movement: Copper Alloy
- Window: Sheet Glass



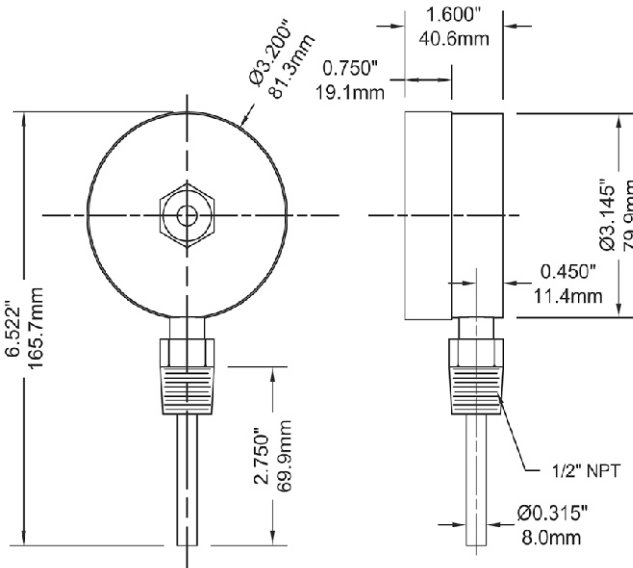
**2.5" BACK CONNECTION, 1" STEM**



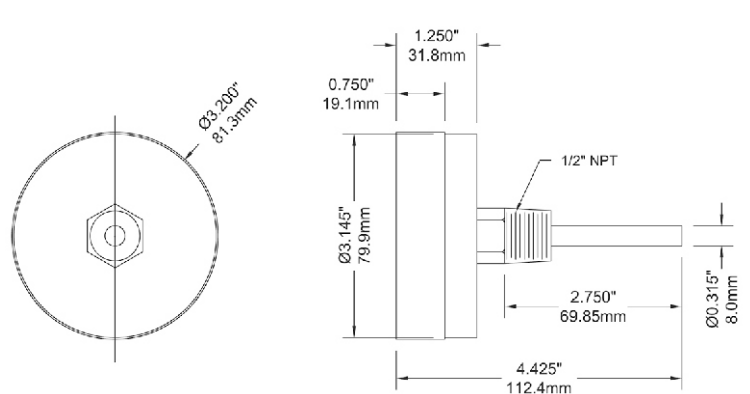
**2.5" BACK CONNECTION**



**3" BOTTOM CONNECTION**



**3" BACK CONNECTION**





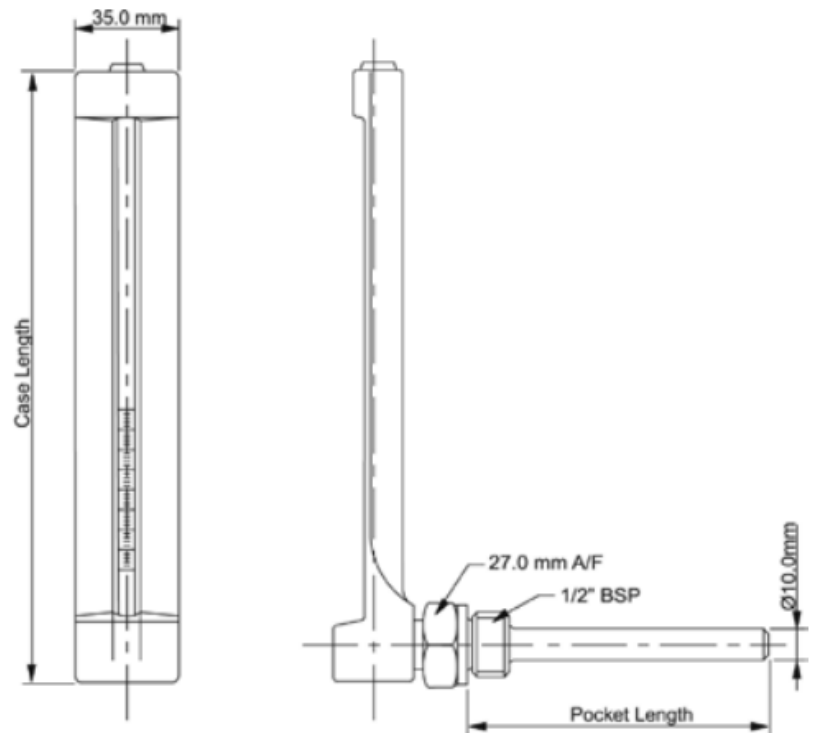
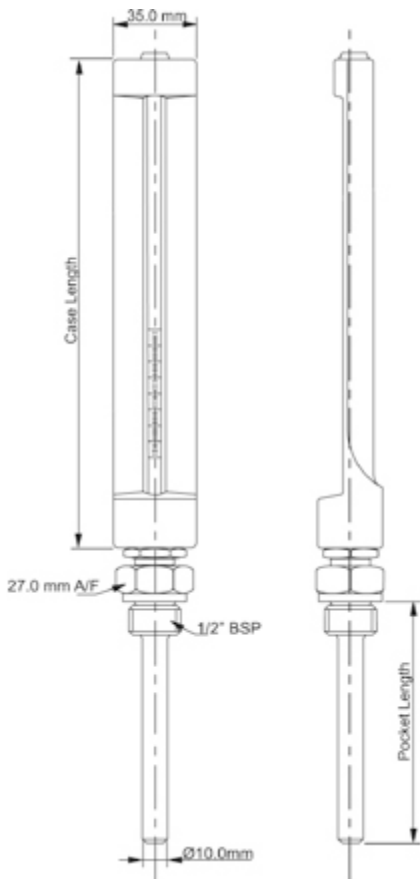
## SPECIFICATIONS

- Case Length : 100mm, 150mm, 200mm
- Case Material: Aluminium with Golden Plated
- Color : Blue
- Type: Straight & Angle
- Stem Material : Brass or Steel
- Stem Diameter : 10mm
- Stem Length : 30mm, 40mm, 50mm, 100mm, 150mm
- Union : G1/2", M22X1.5, M27X2
- Scale : Single Scale °C
- Accuracy: +-2.0%
- Range : -30+50°C, 0+50°C, 0+100°C, 0+120°C,  
0+160°C, 0+200°C, 0+600°C



**BOTTOM ENTRY**

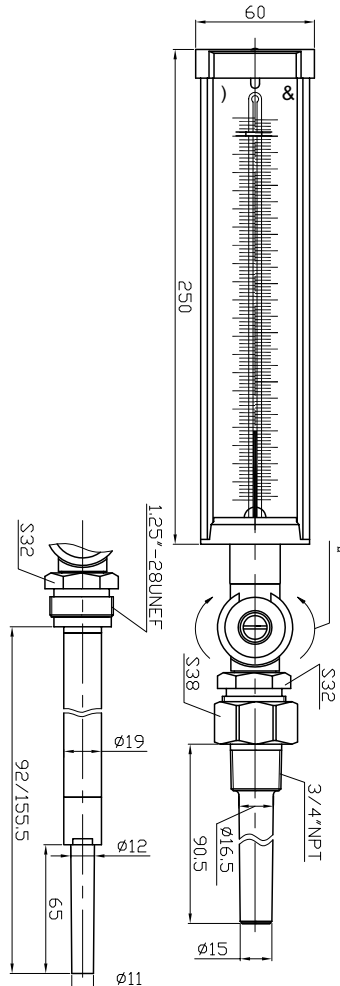
**BACK ENTRY**





## SPECIFICATIONS

- Case Material: 7" & 9" Plastic or Aluminium
- Window : Glass
- Dial : V-Shaped Aluminium
- Tube : Blue or Red Liquid Filled
- Type : Adjustable angle connection/Straight Connection
- Stem : Aluminium 0.433"(11mm),3.5"(89mm)
- Standard Union : 1-1/4" UNF BRASS
- Scale : Single or Double Scale
- Accuracy: +-2.0%
- Range : -40-110F / -40-40°C
- 0-120F / -15-45°C
- 0-160F / -10-70°C
- 30-180F / 0-80°C
- 30-240F / 0-110°C
- 30-300F / 0-150°C
- 50-400F / 20-200°C
- 50-550F / 25-275°C
- or Customize
- Thermowell : Brass





## ABOUT US:

Elite Instruments is a world class manufacturer of measuring instruments and accessories, including pressure gauges, thermometers, level gauges, pressure switches, RTD's, thermocouples and thermowells. We specialize in working together with our customers to develop comprehensive solutions in measurement technology and integrating those solutions into their processes.

Established in 2010, Elite Instruments delivers over 2 million quality products to over 50 countries every year. Worldwide, over 6 million ELITE measuring instruments are currently in use.

Headquartered in China, Kunshan Elite Instruments Company Ltd. also has locations in Singapore and India to better serve our customers,

Elite serves a wide variety of industries worldwide, including:

1. Oil and Gas
2. Chemical and Petrochemical
3. Food and Pharmaceutical
4. Water and Wastewater
5. Engineering and Process

Elite also specializes in developing custom built OEM products as per customer requirements. Our proficient team of engineers will work to bring your custom design to life, or work with you to create new products designed meet your exact needs.

Our customers have testified that the Quality, workmanship, appearance and packaging of Elite products are second to none.

Elite Instruments is ISO 9001 :2008 certified with many products holding ATEX approval, per 2014/34/EU Our state of the art production, testing and warehouse facilities ensure Elite exceeds customer expectations for quality and delivery.

Elite's commitment to quality is demonstrated by our investment in world class production and testing equipment.

Our commitment to quality is also demonstrated in our procedures. All Elite products undergo rigorous quality inspection before, during and post-production to ensure 100% of products meet customer demands and specifications.

Elite Instruments' customer service is fast and flexible. We always put our CUSTOMER FIRST. Let us prove that we are the best choice for your supplier of measuring instruments.

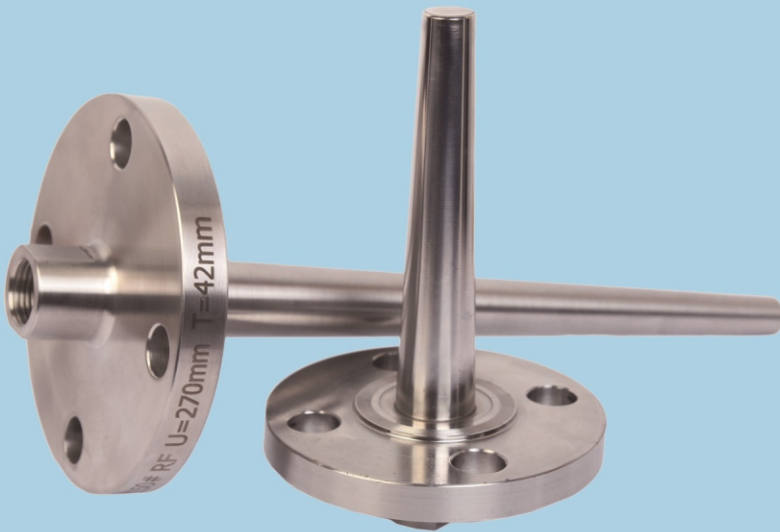
Please visit our website [www.elite-instrument.com](http://www.elite-instrument.com) or send your enquires to [sales@elite-instrument.com](mailto:sales@elite-instrument.com)

Please visit youtube page :

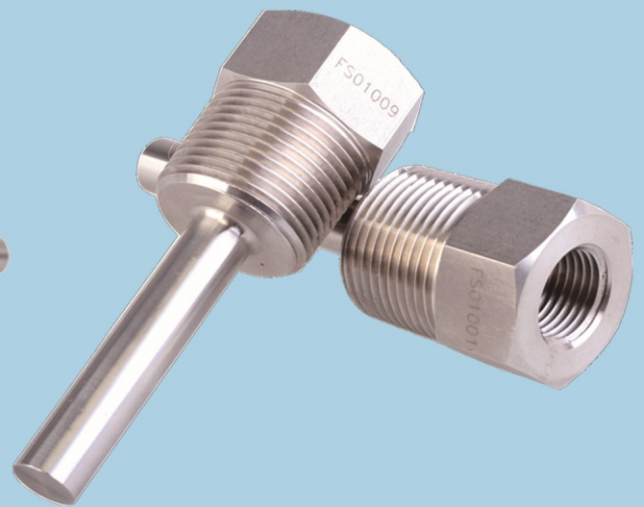
<https://youtu.be/72MgbJNO5fw>

# THERMOWELLS

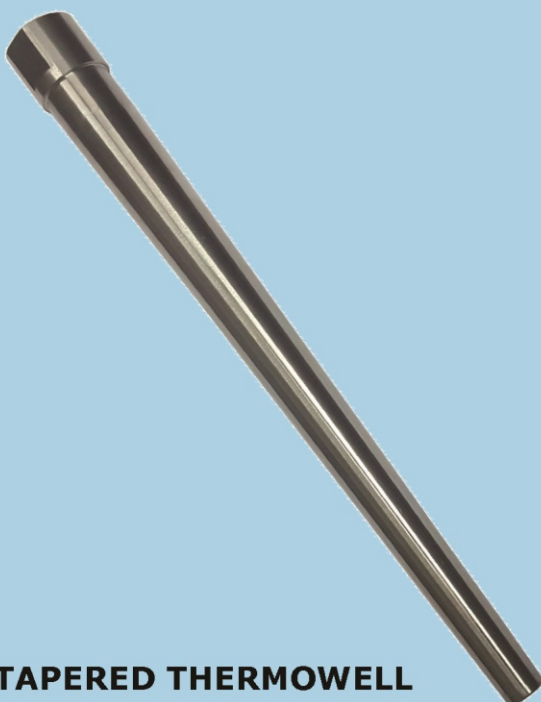
- Manufacture from BAR STOCK
- Design Standard : PTC 19.3
- Available material: SS316L ,HASTELLOY C,MONEL,TITANIUM,TANTALUM, INCONEL 600
- Protection Coating: Available with PTFE for acid applications.
- Leak Testing : Helium gas and Hydro static pressure internal and external



**FLANGE THERMOWELL**



**STRAIGHT THERMOWELL**



**TAPERED THERMOWELL**



**STEPPED THERMOWELL**



## **Manufacturing Units**

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Email : sales@elite-instrument.com / snreddy@elite-instruments.com

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Email : sales@elite-instrument.com / snreddy@elite-instruments.com

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