



TEMPERATURE GAUGES

Bimetal Dial Thermometer

General

The Bimetal thermometer employs a bimetal strip in the form of helix (it works on the principle of thermal expansion - two metals having different coefficient of expansions are joined to form a bimetal. The resultant expansion of bimetal is proportional to temperature). Bimetal dial thermometers are simple in construction, yet rugged. They are used for measurement of temperature in most of the industrial applications. They are offered in the range of (-) 50°C to 600°C. With rigid stem having bottom or back entry. It can also be offered in every angle rotatable construction.

Features

- Rugged construction
- Bottom/Back entry, every angle construction
- Fast response
- Protection class IP-68
- Accuracy $\pm 1\%$ FSD
- High repeatability, low hysteresis
- Hermetically sealed case

Specifications

Ref. Standard	ASME B 40.200, EN 13190
Dial	100mm / 150mm / 250mm in aluminium white background, black markings
Case	SS304 with bayonet bezel / SS316 optional
Protection	Weatherproof to IP - 68 (IS/IEC : 60947 / IEC : 60529)
Window	Shatterproof glass
Pointer	Aluminium, black, micrometer adjustable
Stem	SS304 or SS316 in 6 mm, 8 mm, 10 mm, 12 mm dia and length from 100 mm to 1000 mm as standard
Connection	1/2" NPT (M) as standard in SS304 or SS316 adjustable three piece compression fitting
Range	(-) 50°C to 600°C with a minimum span of 60°C
Accuracy	$\pm 1\%$ FSD
Over range	125% FSD (upto max temp range of 500°C)
Reset	Micrometer Pointer (standard) External (optional)
Optional	1) Silicon Oil Filled Case (Suitable upto 339°C Max) 2) Contacts: Single SPST, normally open to close on rise / fall in temperature (specify action required) adjustable over the entire range, rating 30 VA @ 230 V AC (100 mm dial, back entry only)
Note	1) For minimum insertion length essential for proper sensing, contact our design department. 2) Three point calibration certificate accompanies each thermometer.



Ordering Information

MODEL : BDT



MOUNTING

- V** Bottom Entry, Local Mounting
- C** Back Entry, Local Mounting
- E** Every Angle, Local Mounting

DIAL

- 100** - 100 mm
- 150** - 150 mm
- 250** - 250 mm

CASE

- S4S** SS304
- S6S** SS316

STEM-OD

- S06** 6 mm **S10** 10 mm
- S08** 8 mm **S12** 12 mm

STEM LENGTH

Specify in mm

STEM MATERIAL

- S4S** - SS304
- S6S** - SS316
- 310** - SS310*

OPTION

- TW** Thermowell
- CLB** Colour Band
- DUS** Dual Scale
- 1ST** 1 SPST Electrical contact
- DC2** Silicon Oil Filled Case *
- L** Nil

UNIT

- DGC** Deg C **DGF** Deg F

RANGE **

- | | |
|------------------|----------|
| (-) 50 to (+) 30 | 0 to 200 |
| (-) 30 to (+) 50 | 0 to 250 |
| (-) 20 to (+) 60 | 0 to 300 |
| 0 to 60 | 0 to 350 |
| 0 to 80 | 0 to 400 |
| 0 to 100 | 0 to 500 |
| 0 to 120 | 0 to 600 |
| 0 to 160 | |

* Silicon Oil Filled Case shall be suitable up to maximum temperature of 339°C only.

** Ranges mentioned are in °C. Equivalent unit in °F can be provided on request.

CONNECTION

Conn	Code	Size	Code	Type	Code	Male/ Female	Code
Thread	T	1/4"	06	NPS	NS	Male	M
		3/8"	10	NPT	NT		
		1/2"	15	BSP	BP		
		3/4"	20	BSPT	BT		
		1"	25	JIS-PF	PF		
		M20	M20	JIS-PT	PT		
				Gas	GS		
				R	RR		
				Rp	RP		
				Pitch 1.5	C		

e.g. For 1/2"NPT(M), Code: **T15NTM**
For M20x1.5 (F), Code: **TM20CF**

*Note: Stem material of SS310 is recommended for Temperature 600 Deg. C

Sample Model Code: BDT-E-150-S4S-S10-400-S6S-T15NTM-(0-250)-DGC-L

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Gas Filled Dial Thermometer

General

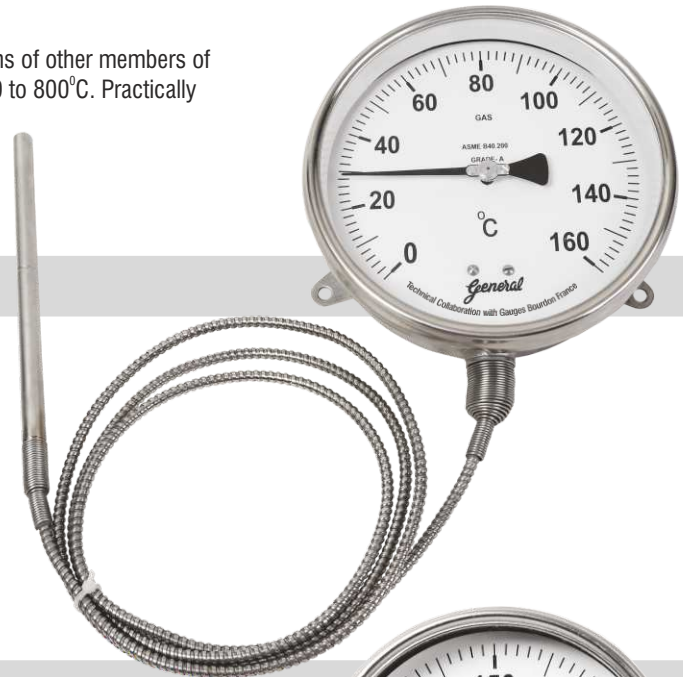
Gas filled Temperature Gauge overcomes most of the limitations of other members of family. It is offered in a very wide temperature range i.e. (-)200 to 800°C. Practically any stem length can be offered and capillary length as long as 30 mtr, without any loss of accuracy. Inert, non hazardous, non toxic nature of the filled system makes it virtually ideal choice of cross section of industries.

Features

- Use of inert gas - N₂
- Suitable for sanitary application
- All SS construction
- Rigid stem or capillary type
- Fast response
- Non-polluting, environment friendly
- Non-hazardous for the service
- High reliability
- IP-68 protection
- Accuracy $\pm 1\%$ FSD

Specifications

Ref. Standard	ASME B 40.200, EN 13190
System	Gas (N ₂) filled, case compensated in accordance with SAMA CI. III B
Dial	100 mm / 150mm / 250mm in aluminium, white background, black marking
Case	SS304 / SS316 with bayonet bezel
Protection	Weatherproof to IP-68 (IS/IEC : 60947 / IEC : 60529)
Window	Shatterproof glass
Pointer	Aluminium, black with micrometer adjustment
Stem	SS316 in 6 mm, 8 mm, 10 mm, 12 mm dia as standard
Capillary	SS316 with SS304 / SS316 armouring or SS316 with SS304 / SS316 armouring, with PVC covering
Connection	1/2"NPT (M) adjustable three piece compression fitting in SS304 or SS316
Range	(-) 200°C to 800°C with minimum span of 80°C
Accuracy	$\pm 1\%$ FSD
Overrange	125% FSD
Reset	Micrometer Pointer
Optional	Silicon Oil Filled Case
Note	1) For minimum insertion length essential for proper sensing, contact our design department. 2) Three point calibration certificate accompanies each thermometer. 3) For operating temp > 600°C; stem of SS310 / Inconel 600 shall be recommended.



Ordering Information

GDT-R - Rigid Stem
GDT-C - Capillary Type

MODEL : GDT-R / GDT-C



MOUNTING
V Bottom Entry, Local Mounting
C Back Entry, Local Mounting
E Every Angle, Local Mounting
S Bottom Entry, Surface Mounting
P Back Entry, Panel Mounting
Y Bottom Entry, 2" Pipe Mounting

DIAL
100 100 mm
150 150 mm
250 250 mm

CASE
S4S SS304
S6S SS316

STEM-OD
S06 6 mm **S10** 10 mm
S08 8 mm **S12** 12 mm

STEM LENGTH
 Specify in mm

STEM MATERIAL
S6S SS316 **S4S** SS304
310 SS310** **600** Inconel 600**

CAPILLARY
4AR(*) SS 316 Capillary, SS 304 Armoured
4PV(*) SS 316 Capillary, SS 304 Armoured+PVC Covered
6AR(*) SS 316 Capillary, SS 316 Armoured
6PV(*) SS 316 Capillary, SS 316 Armoured+PVC Covered
NIL Not Applicable for GDT-R type.

OPTION
TW Thermowell
CLB Colour Band
DUS Dual Scale
L Nil
DC2 Silicone Oil Filled Case

UNIT
DGC Deg C **DGF** Deg F

RANGE #

0 to 80	0 to 600
0 to 100	0 to 800
0 to 120	(-) 30 to (+) 50
0 to 160	(-) 20 to (+) 80
0 to 200	(-) 50 to (+) 30
0 to 250	(-) 50 to (+) 50
0 to 250	(-) 80 to (+) 120
0 to 350	(-) 100 to (+) 150
0 to 400	(-) 200 to (+) 50
0 to 500	(-) 200 to (+) 100

CONNECTION							
Conn	Code	Size	Code	Type	Code	Male/ Female	Code
Thread	T	1/4"	06	NPS	NS	Male	M
		3/8"	10	NPT	NT		
		1/2"	15	BSP	BP		
		3/4"	20	BSPT	BT		
		1"	25	JIS-PF	PF		
		M20	M20	JIS-PT	PT		
				Gas	GS		
				R	RR		
				Rp	RP		
				Pitch 1.5	C		

e.g. For 1/2"NPT(M), Code: **T15NTM**
 For M20x1.5 (F), Code: **TM20CF**

* Specify the length of Capillary in Meters.

**Note: Stem material of SS310 is recommended for Temperature 600 Deg. C and Inconel 600 for temperature above 600 Deg.C

#Ranges mentioned are in °C. Equivalent unit in °F can be provided on request.

Sample Model Code: GDT-C-P-150-S4S-S10-400-S6S-4AR(5)-T15NTM-(0-250)-DGC-TW

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