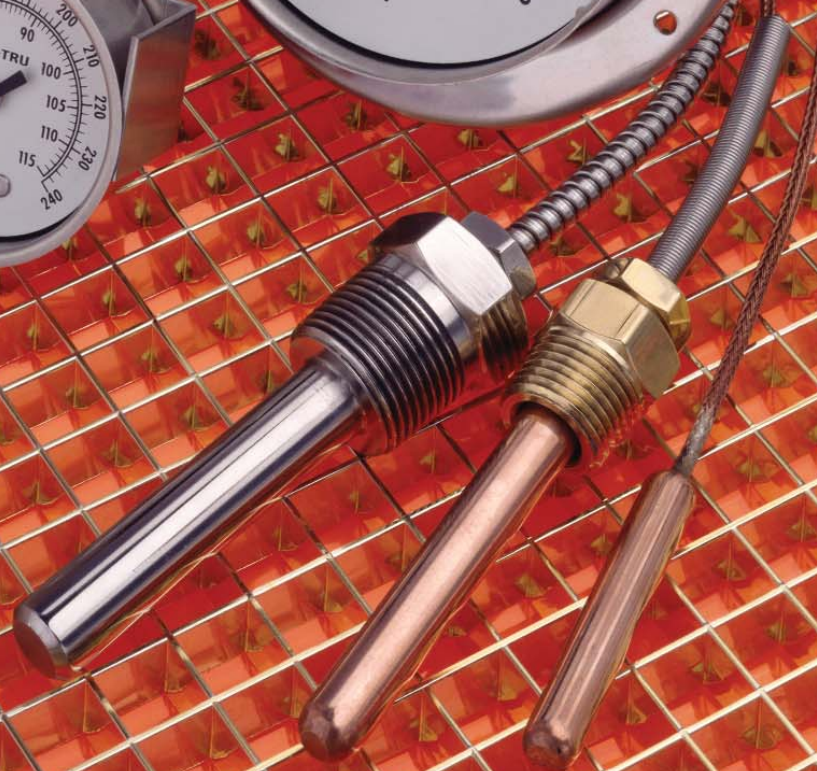
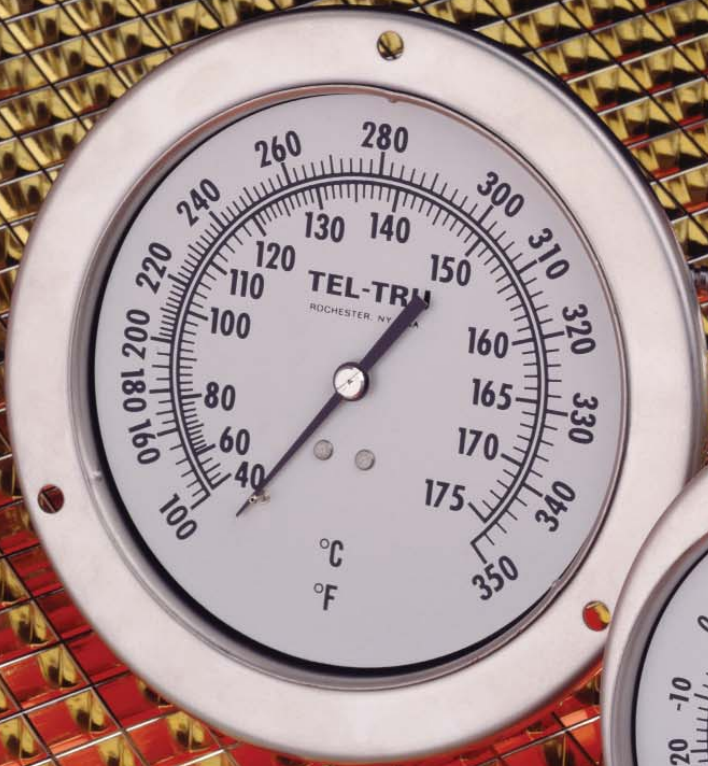


# TEL-TRU Vapor Tension Thermometers



**World Class  
Thermometers**

# Vapor Tension Thermometers



TEL-TRU Manufacturing Company, for many years recognized as a leader in the manufacturing of Bimetal Dial Thermometers for industrial, OEM and laboratory purposes, now offers a complete line of Vapor Tension Thermometers.

TEL-TRU Vapor Tension Thermometers provide an accurate indication of critical temperatures within recommended working zones. Dial graduations are non-linear with the distance between graduations increasing as the temperature range increases.

TEL-TRU Vapor Tension Thermometers offer dependability, durability, high accuracy, low ambient error and are available in various case sizes and styles.

## Features

Case Sizes: 2", 2-1/2", 3-1/2", 4-1/2"

Case Type:

- Front flange
- U clamp
- Back flange
- Front flange, semi flush
- Adjustable bracket

Case Material: Stainless Steel

Dial: White coated aluminum with large black numbers and graduations. Easy to read from any angle.

Bulb: Copper or Stainless Steel

Capillary: Copper – plain or with braided armor  
Stainless Steel – plain or with interlocking armor

Window: Glass or polycarbonate

Pointer: Slotted type for field zero adjustment

Accuracy: Within one scale division in recommended working zone

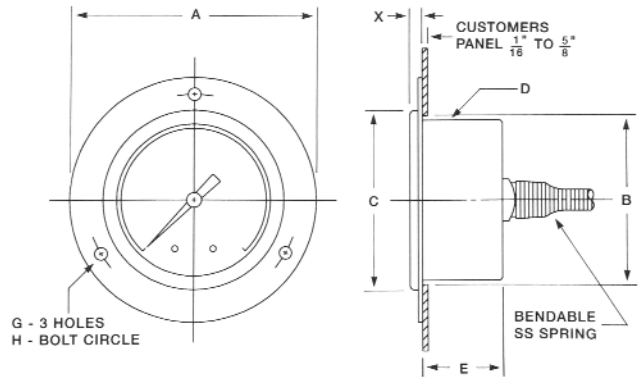
Ranges: From -40°F (-40°C) to 350°F (175°C)



# 2" Thermometers

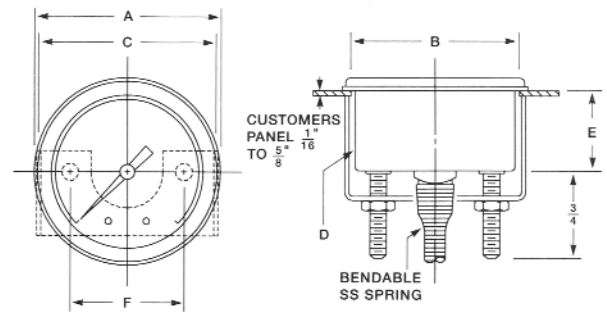
## Front Flange Case

Code	Case Size	Conn.	A	Panel Hole B	C	D	E	F	G	H
V20 FB	2"	Back	2 15/16"	2 1/16"	2 11/64"	2 1/32"	31/32"	-	9/64"	2 9/16"



## U-Clamp Case

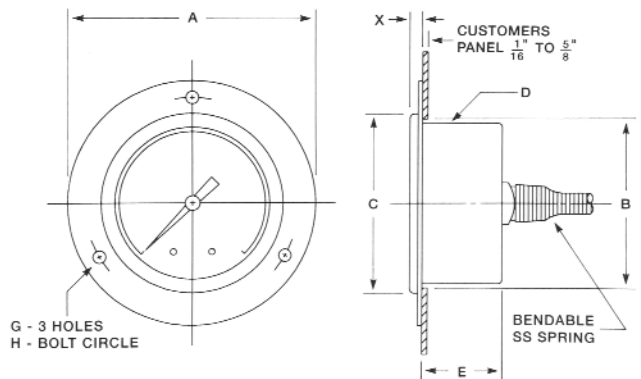
Code	Case Size	Conn.	A	Panel Hole B	C	D	E	F
V20 UB	2"	Back	2 7/32"	2 1/16"	-	2 1/32"	31/32"	1 3/8"



# 2-1/2" Thermometers

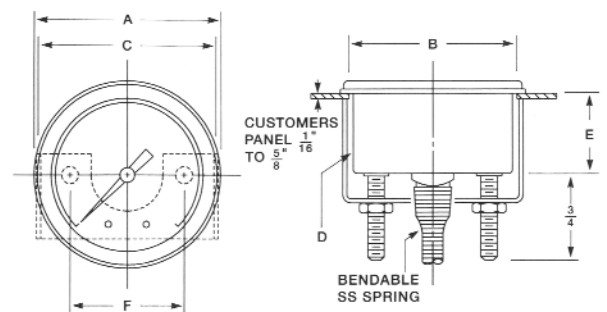
## Front Flange Case

Code	Case Size	Conn.	A	Panel Hole B	C	D	E	F	G	H
V25 FB	2 1/2"	Back	3 11/16"	2 39/64"	2 7/8"	2 9/16"	1"	-	11/64"	3 5/16"



## U-Clamp Case

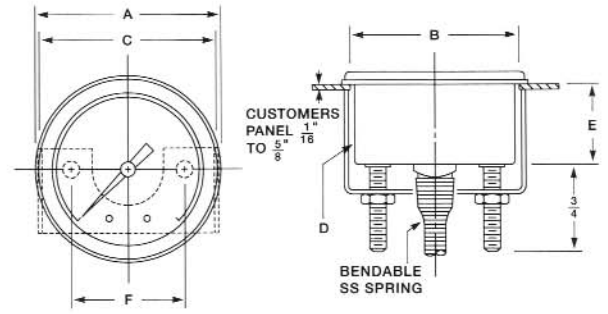
Code	Case Size	Conn.	A	Panel Hole B	C	D	E	F
V25 UB	2 1/2"	Back	2 13/16"	2 39/64"	-	2 9/16"	1"	2"



# 3-1/2" Thermometers

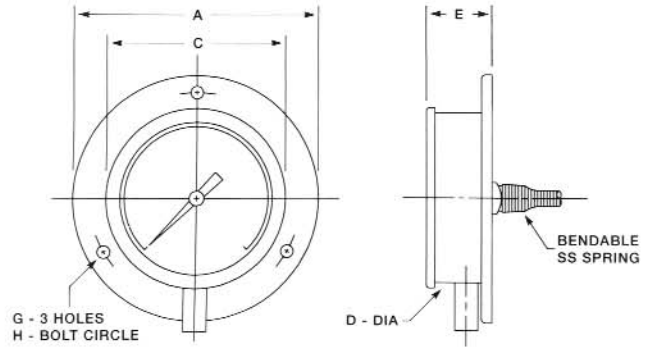
## U-Clamp Case

Code	Case Size	Conn.	A	Panel Hole B	C	D	E	F
V-35 QB	3 1/2"	Back	3 7/8"	3 5/8"	-	3 19/32"	1"	3 1/16"



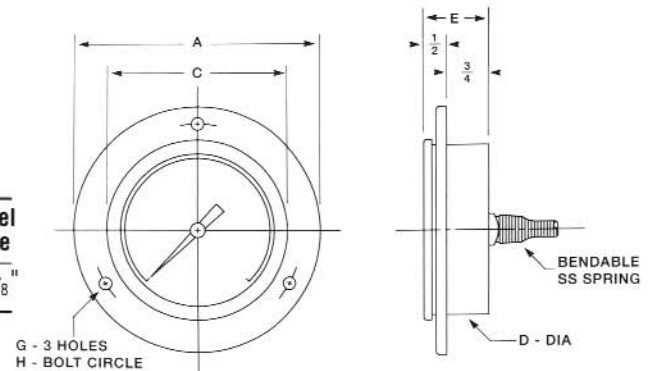
## Back Flange Case

Code	Case Size	Conn.	A	C	D	E	G	H
V35 BB	3 1/2"	Back	4 3/4"	3 11/16"	3 19/32"	1 1/4"	5/32"	4 5/16"
V35 BL	3 1/2"	Bottom	4 3/4"	3 11/16"	3 19/32"	1 1/4"	5/32"	4 5/16"



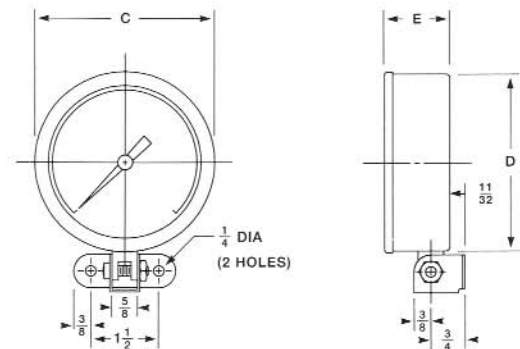
## Semi-Flush Case

Code	Case Size	Conn.	A	C	D	E	G	H	Panel Hole
V35 RB	3 1/2"	Back	4 3/4"	3 11/16"	3 19/32"	1 1/4"	5/32"	4 5/16"	3 5/8"



## Adjustable Bracket Case

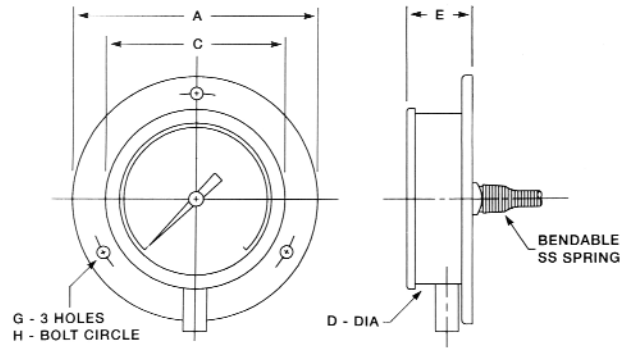
Code	Case Size	Conn.	A	C	D	E
V35 ZL	3 1/2"	Bottom	-	3 11/16"	3 19/32"	1 1/4"



# 4-1/2" Thermometers

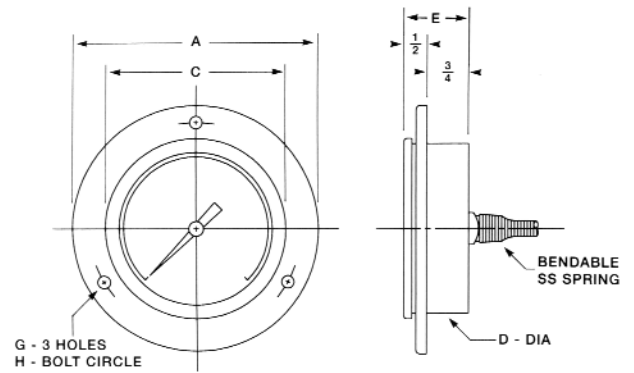
## Back Flange Case

Code	Case Size	Conn.	A	C	D	E	G	H
V45 BB	4 1/2"	Back	5 7/8"	4 11/16"	4 19/32"	1 1/4"	7/32"	5 3/8"
V45 BL	4 1/2"	Bottom	5 7/8"	4 11/16"	4 19/32"	1 1/4"	7/32"	5 3/8"



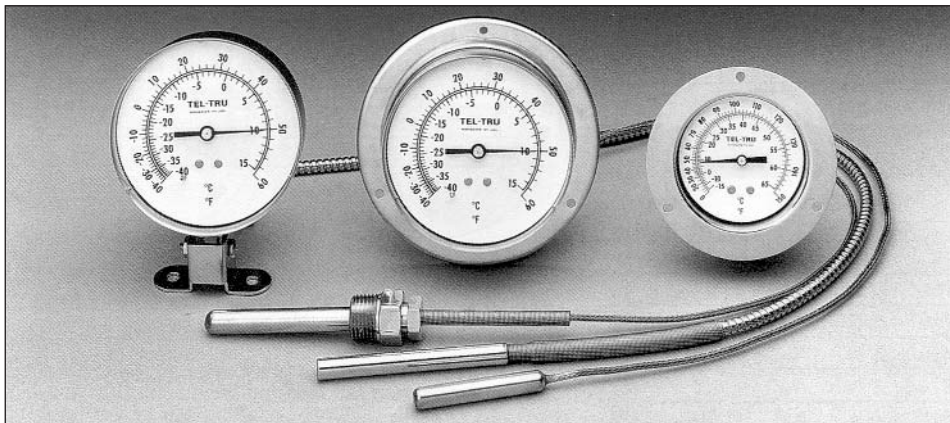
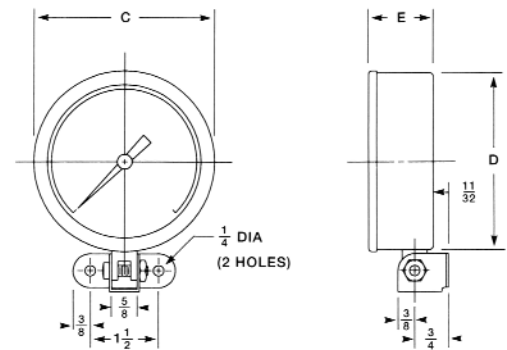
## Semi-Flush Case

Code	Case Size	Conn.	A	C	D	E	G	H	Panel Hole
V45 RB	4 1/2"	Back	5 7/8"	4 11/16"	4 19/32"	1 1/4"	7/32"	5 3/8"	4 5/8"



## Adjustable Bracket Case

Code	Case Size	Conn.	A	C	D	E
V45 ZL	4 1/2"	Bottom	-	4 11/16"	4 19/32"	1 1/4"

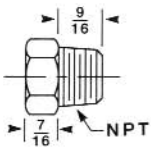


# Process Connection

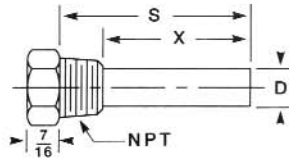
# Vapor Thermometer Dials

**Table 5:**

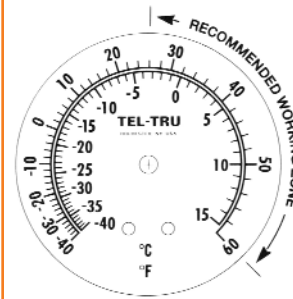
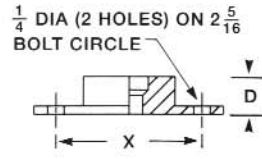
**Code 1, 2**  
Union  
Connection



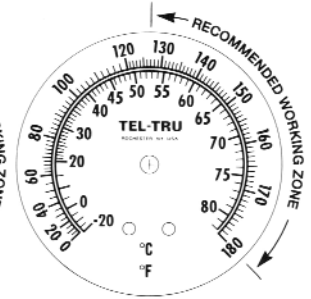
**Code 3, 4**  
Thermowell  
Connection



**Code 7**  
Flange  
Connection



**Code DA** -40/60°F  
-40/15°C

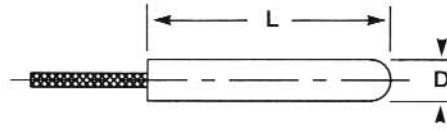


**Code DF** 0/180°F  
-20/82°C

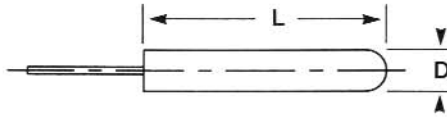
# Thermal System Selection

**Table 7:**

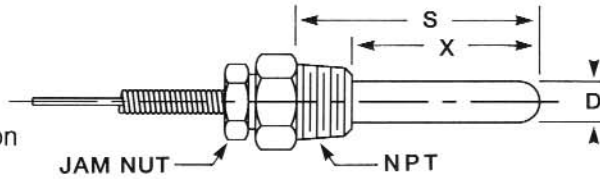
**Code 2**  
Plain Bulb  
Braided Capillary



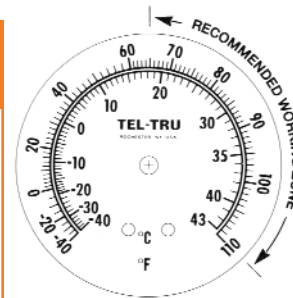
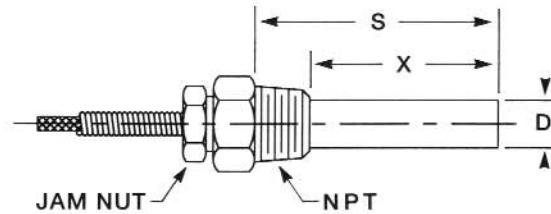
**Code 3**  
Plain Bulb  
Plain Capillary



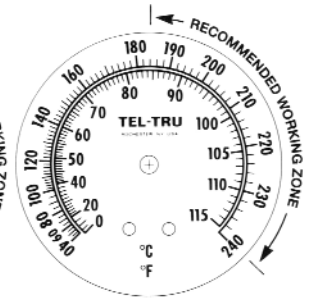
**Code 5, 8, 9**  
Capillary with  
Union Connection



**Code 5, 8, 9**  
Capillary with  
Thermowell



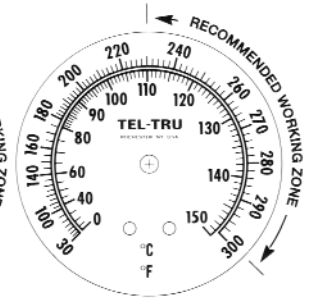
**Code DB** -40/110°F  
-40/43°C



**Code DG** 40/240°F  
0/115°C



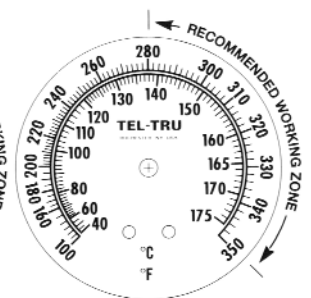
**Code DC** -20/100°F  
-30/38°C



**Code DH** 30/300°F  
0/150°C



**Code DE** 0/150°F  
-15/65°C



**Code DJ** 100/350°F  
40/175°C

*Note: Accuracy is ± one graduation in the recommended working zone*

# Bulb Dimensions

Code	Plain Bulb		Union Connection			Thermowell Connection			Flange Connection	
	L	D	X	S	D	X	S	D	X	D
1	N/A	N/A	1 13/16"	2 3/8"	7/16"	1 15/16"	2 1/2"	9/16"	2 3/16"	7/16"
2	3 7/16"	3/8"	2 5/8"	3 3/8"	7/16"	2 5/8"	3 3/8"	9/16"	3"	7/16"
3	4 7/8"	3/8"	4 5/8"	5 3/8"	7/16"	4 5/8"	5 3/8"	9/16"	5"	7/16"
4	7 7/8"	3/8"	6 5/8"	7 3/8"	7/16"	6 5/8"	7 3/8"	9/16"	7"	7/16"
6	2 1/2"	3/8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Note: "X" for flange connection is the insertion length from tip of bulb to face of flange (not pictured)*



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Manufacturer of Precision Products since 1916

# How to Order:

Select proper code from tables, in order, and combine to provide complete thermometer description.

## Example

	V25	U	B	4	1	2	3	1	05	DE	0
<b>Table 1 Case Size:</b>	2-1/2"										
<b>Table 2 Case Type:</b>		SS U Clamp									
<b>Table 3 Connection:</b>			Back								
<b>Table 4 Case Front/Window:</b>				Glass w/SS ring							
<b>Table 5 Process Connection:</b>					1/2" N PT Union						
<b>Table 6 Process Conn. Material:</b>						304 SS					
<b>Table 7 Thermal System:</b>							Plain Bulb - Capillary SS				
<b>Table 8 Bulb Selection:</b>								7/16" x 2.5"			
<b>Table 9 Capillary Length:</b>									05'		
<b>Table 10 Temperature Range:</b>										0/150°F & -15/65°C	
<b>Table 11 Options:</b>											None

**Table 1:**

Code	Case Size
V 20	2"
V 25	2 1/2"
V 35	3 1/2"
V 45	4 1/2"

**Table 2:**

Code	Case Type & Material
F	SS Front Flange 2" & 2 1/2"
U	SS U-Clamp 2" & 2 1/2"
Q	SS U-Clamp 3 1/2"
B	SS Back Flange 3 1/2" & 4 1/2"
R	SS Front Flange, semi flush 3 1/2" & 4 1/2"
Z	SS Adjustable bracket 3 1/2" & 4 1/2"

**Table 3:**

Code	Connection
B	Back Connection (N/A Type Z Case)
L	Lower (N/A Type F, U, Q, R Cases)

**Table 4:**

Code	Case Front and Window
3	Lexan snap in lens
4	Glass lens with SS ring 2" & 2 1/2"
5	Glass lens w/Chrome/brass ring 'Q' 3 1/2"
7	Glass lens w/rubber ring 3 1/2" & 4 1/2"
8	Glass lens w/crimped SS ring water resist. 2" & 2 1/2"
9	Lexan Threaded lens 2", 2 1/2", 3 1/2"

**Table 5:**

Code	Process Connection
1	Union 1/2" npt
2	Union 3/4" npt
3	Thermowell 1/2" npt
4	Thermowell 3/4" npt
7	Air duct Flange union
9	Plain bulb no fitting

**Table 6:**

Code	Process Connection material
1	Brass
2	304 Stainless Steel
3	316 Stainless Steel
5	Aluminum - air duct only
0	none - plain bulb

**Table 7:**

Code	Thermal System			
	Bulb Type	Bulb Material	Capillary Material	Protection
2	Plain	Copper	Copper	Braided
3	Plain	SS	SS	none
5	Union	Copper	Copper	Braided
8	Union	SS	SS	Armored
9	Union	SS	SS	None

**Table 8:**

Code	Max. Cap. Length	Bulb Selection	
		Union Dim.	Plain Dim.
1	10 ft.	7/16" x 2.5"	N/A
2	25 ft.	7/16" x 3.4"	3/8" x 3.4"
3	50 ft.	7/16" x 5.4"	3/8" x 5.4"
4	99 ft.	7/16" x 7.4"	3/8" x 7.4"
6	5 ft.	N/A	3/8" x 2.5"

**Table 9:**

Code	Capillary Length - Ft.
XX	Use 2 digits; ex. 05', 10'

**Table 10:**

Code	Dual Temperature Ranges			
	°F	°C	Code	°F
DA	-40/60	-40/15	DF	0/180
DB	-40/110	-40/43	DG	40/240
DC	-20/100	-30/38	DH	30/300
DE	0/150	-15/65	DJ	100/350

See page 6 for recommended working zone. Other ranges available.

**Table 11:**

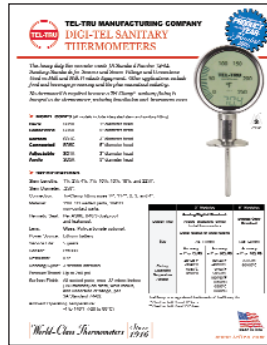
Code	Options
0	None
1	Vibration Dampening



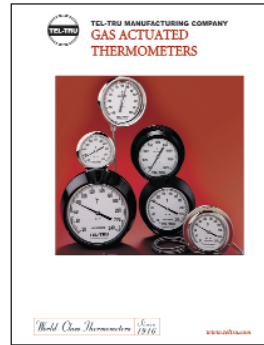
# ADDITIONAL PRODUCTS AVAILABLE FROM TEL-TRU



**Bimetal Thermometers**  
Catalog number BT1100



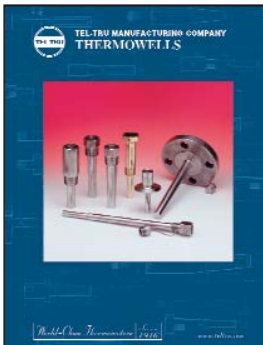
**Sanitary Bimetal and Digi-Tel Sanitary Thermometers**  
Catalog numbers SBTSH804 and DTSSHT805



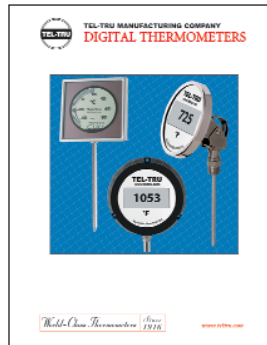
**Gas Actuated Thermometers**  
Catalog number GA0203



**Glass Industrial Thermometers**



**Thermowells**  
Catalog number TW1003



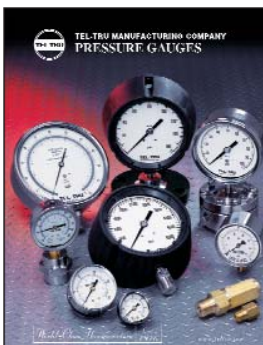
**Digi-Tel Thermometers**  
Catalog number DT0903



**Digi-Tel Temperature Transmitter**  
Catalog number DTTT904



**Electronic Calibration Instruments**  
Catalog numbers C5101104, C5121104, and C5301104



**Pressure Gauges**  
Catalog number PG706



**Sanitary Pressure Gauges**  
Catalog number SPG306



**Pressure Transmitters**  
Catalog number PT404



**Check-Temp Calibrators**  
Catalog number CTC401



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