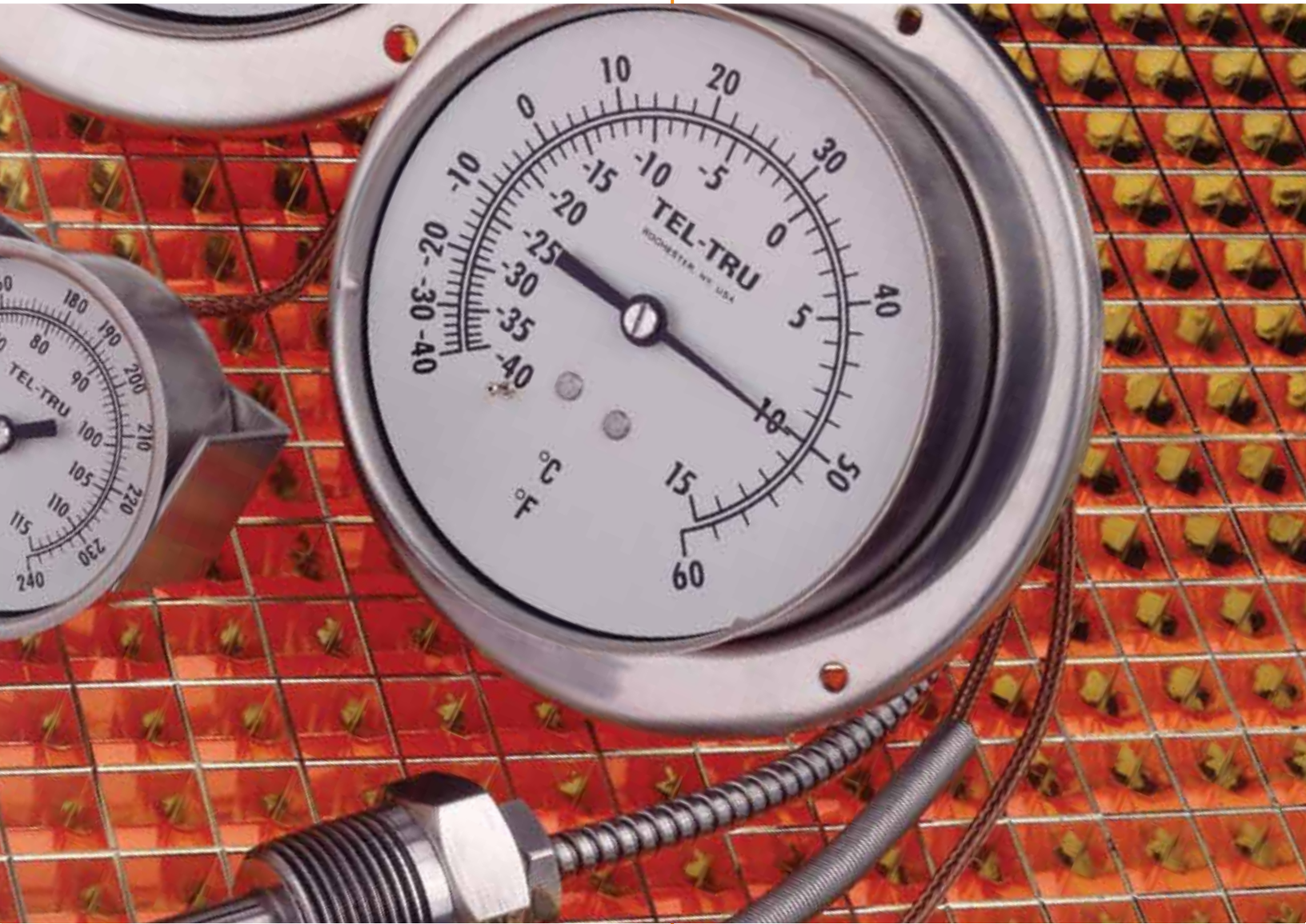




TEL-TRU Manufacturing Co.

VAPOR TENSION THERMOMETERS



www.teltru.com

Temperature + Pressure

*Since
1916*

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 temperatures within the recommended working zones. Dial graduations are non-linear with the distance between graduations increasing as the temperature range increases.

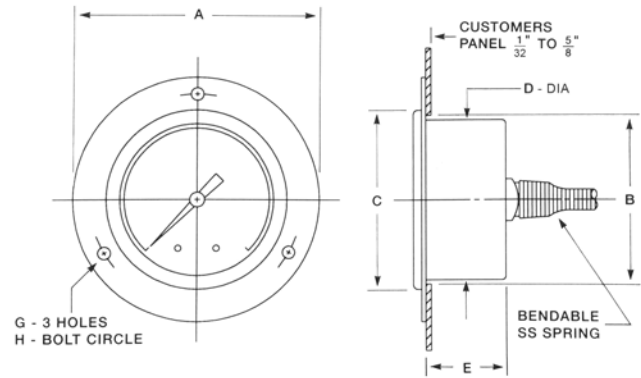
Tel-Tru Vapor Tension Thermometers offer dependability, durability, high accuracy, low ambient error and are available in various case sizes and styles.

Features

Case Size:	2", 2-1/2", 3-1/2", 4-1/2"
Case Type:	<ul style="list-style-type: none">• Front flange• U clamp• Back flange• Front flange, semi flush• Adjustable bracket
Case Material:	304 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 316 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)
Vibration Dampening:	Standard on all units

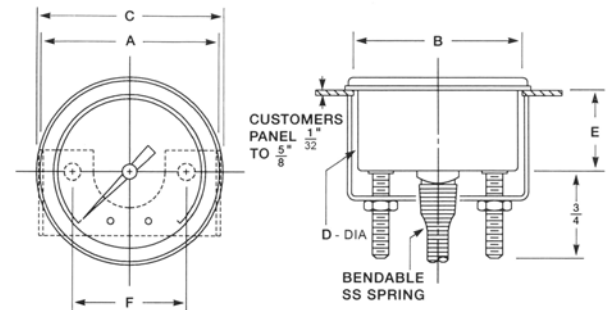
Front Flange Case

Code	Case Size	Conn.	Panel Hole			D	E	G	H
			A	B	C				
V20 FB	2"	Back	2 ¹⁵ / ₁₆ "	2 ¹ / ₁₆ "	2 ¹¹ / ₆₄ "	2 ¹ / ₃₂ "	3 ¹ / ₃₂ "	9 ⁹ / ₆₄ "	2 ⁹ / ₁₆ "
V25 FB	2 1/2"	Back	3 ¹¹ / ₁₆ "	2 ³⁹ / ₆₄ "	2 ⁷ / ₈ "	2 ⁹ / ₁₆ "	1"	1 ¹ / ₆₄ "	3 ⁵ / ₁₆ "



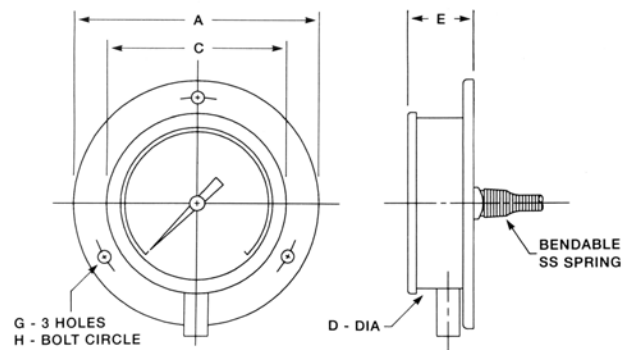
U-Clamp Case

Code	Case Size	Conn.	Panel Hole			D	E	F
			A	B	C			
V20 UB	2"	Back	2 ⁷ / ₃₂ "	2 ¹ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ¹ / ₃₂ "	3 ¹ / ₃₂ "	1 ³ / ₈ "
V25 UB	2 1/2"	Back	2 ¹³ / ₁₆ "	2 ³⁹ / ₆₄ "	2 ⁷ / ₈ "	2 ⁹ / ₁₆ "	1"	2"
V35 QB	3 1/2"	Back	3 ⁷ / ₈ "	3 ⁵ / ₈ "	3 ²⁹ / ₃₂ "	3 ¹⁹ / ₃₂ "	1"	3 ¹ / ₁₆ "



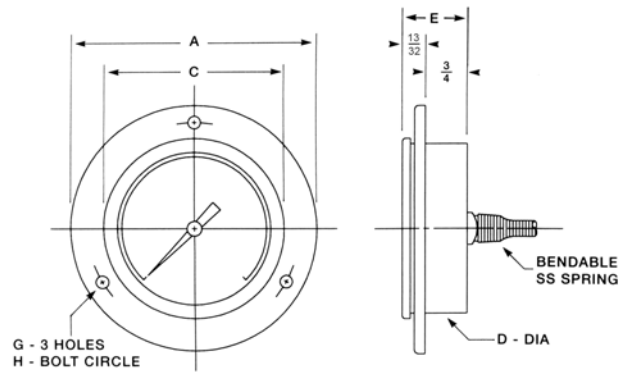
Back Flange Case

Code	Case Size	Conn.	Panel Hole			E	G	H
			A	C	D			
V35 BB	3 1/2"	Back	4 ³ / ₄ "	3 ¹¹ / ₁₆ "	3 ¹⁹ / ₃₂ "	1 ¹³ / ₃₂ "	5 ⁵ / ₃₂ "	4 ⁵ / ₁₆ "
V35 BL	3 1/2"	Bottom	4 ³ / ₄ "	3 ¹¹ / ₁₆ "	3 ¹⁹ / ₃₂ "	1 ¹³ / ₃₂ "	5 ⁵ / ₃₂ "	4 ⁵ / ₁₆ "
V45 BB	4 1/2"	Back	5 ⁷ / ₈ "	4 ¹¹ / ₁₆ "	4 ¹⁹ / ₃₂ "	1 ¹³ / ₃₂ "	7 ⁷ / ₃₂ "	5 ³ / ₈ "
V45 BL	4 1/2"	Bottom	5 ⁷ / ₈ "	4 ¹¹ / ₁₆ "	4 ¹⁹ / ₃₂ "	1 ¹³ / ₃₂ "	7 ⁷ / ₃₂ "	5 ³ / ₈ "



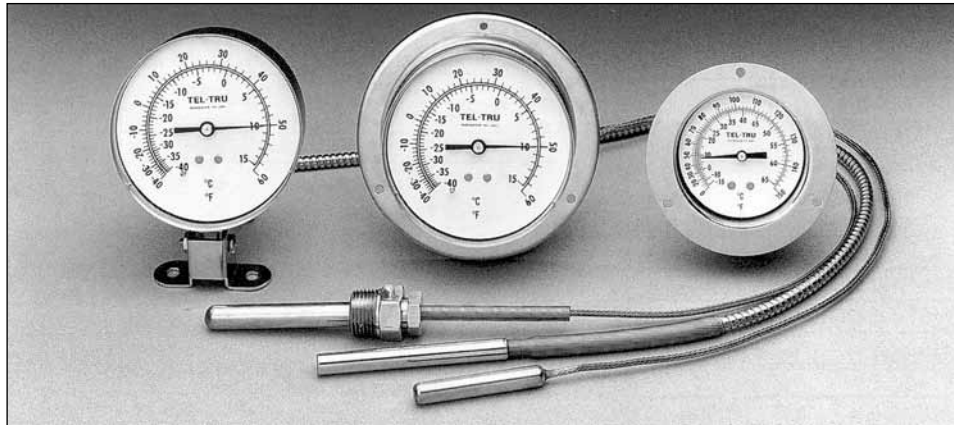
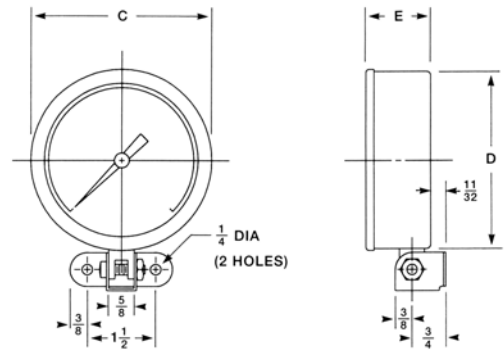
Semi-Flush Case

Code	Case Size	Conn.	A	C	D	E	G	H	Panel Hole
V35 RB	3 1/2"	Back	4 3/4"	3 1/16"	3 19/32"	1 5/32"	5/32"	4 5/16"	3 5/8"
V45 RB	4 1/2"	Back	5 7/8"	4 1/16"	4 19/32"	1 5/32"	7/32"	5 3/8"	4 5/8"



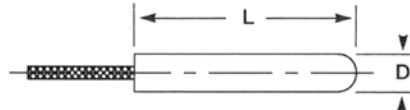
Adjustable Bracket Case

Code	Case Size	Conn.	C	D	E
V35 ZL	3 1/2"	Bottom	3 1/16"	3 19/32"	1 1/4"
V45 ZL	4 1/2"	Bottom	4 1/16"	4 19/32"	1 1/4"

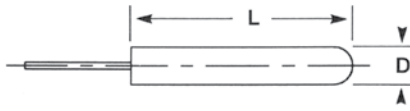


Process Connection & Capillary

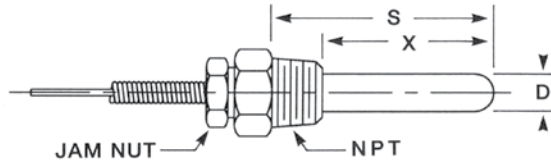
Braided Capillary with Plain Bulb



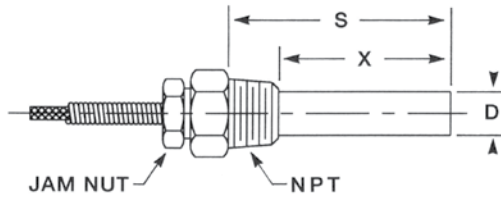
Plain Capillary with Plain Bulb



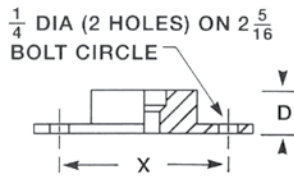
Armored Capillary with Union Connection



Armored Capillary with Thermowell



Flange Connection



Bulb Dimensions

WITH FITTING - UNION OR THERMOWELL

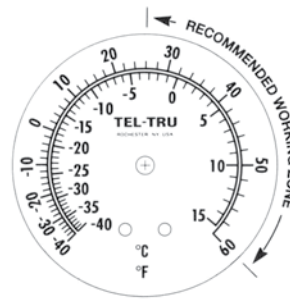
Table 4 Code	Union Connection			Thermowell Connection			Flange Connection	
	X	S	D	X	S	D	X	D
1	1 13/16"	2 3/8"	7/16"	1 15/16"	2 1/2"	9/16"	2 3/16"	7/16"
2	2 5/8"	3 3/8"	7/16"	2 5/8"	3 3/8"	9/16"	3"	7/16"
3	4 5/8"	5 3/8"	7/16"	4 5/8"	5 3/8"	9/16"	5"	7/16"
4	6 7/8"	7 3/8"	7/16"	6 5/8"	7 3/8"	9/16"	7"	7/16"

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

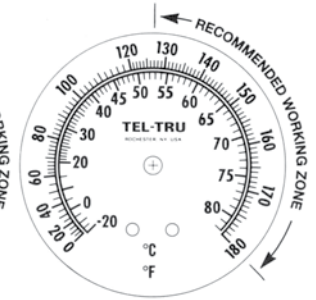
NO FITTING - PLAIN BULB

Table 4 Code	Plain Bulb	
	L	D
6	2 1/2"	3/8"
2	3 7/16"	3/8"
3	4 7/8"	3/8"
4	7 7/8"	3/8"

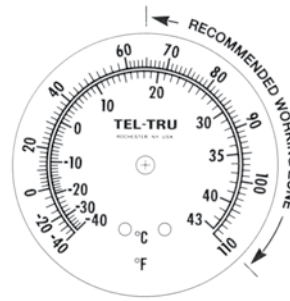
Vapor Thermometer Dials



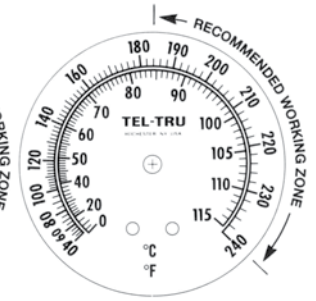
Code DA -40/60°F
-40/15°C



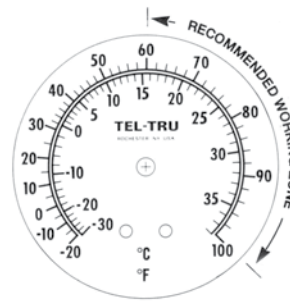
Code DF 0/180°F
-20/82°C



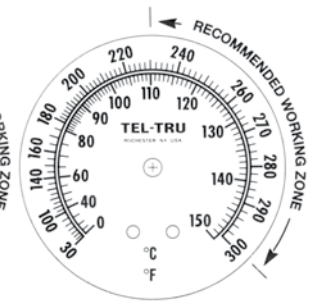
Code DB -40/110°F
-40/43°C



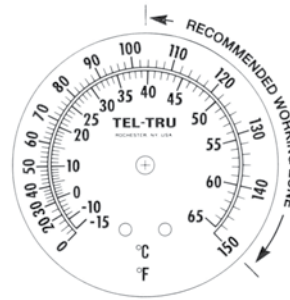
Code DG 40/240°F
0/115°C



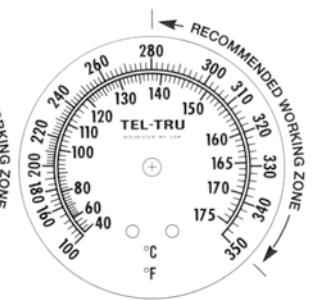
Code DC -20/100°F
-30/38°C



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

How to Order: WITH FITTING - UNION OR THERMOWELL

HOW TO ORDER WITH FITTING - UNION OR THERMOWELL:

From each table select the dial size, case material/type, case front and window, process conn. and material, bulb & capillary, bulb dimension, capillary length, dual temperature range and options. Combine to complete your Vapor Tension Thermometer.

EXAMPLE:

2½" SS U-clamp back connection, glass lens w/SS ring, union conn. ½" NPT 316SS, 316SS bulb & SS plain capillary, ⅞" x 2½", 5', 0/150°F and -15/65°C, additional vibration dampening

TABLE 1A and 1B Dial Size, Case Material/ Type Code		TABLE 2 Case Front & Window Code	TABLE 3 Process Conn. & Material Code	TABLE 4 Bulb & Capillary Code	TABLE 5 Bulb Dimension Code	TABLE 6 Capillary Length Code	TABLE 7 Temperature Range Code	TABLE 8 Options Code
V25UB		4	13	9	1	05	DE	1

WITH FITTING - UNION OR THERMOWELL

Dial Size		TABLE 1A & 1B - DIAL SIZE, CASE MATERIAL/TYPE & CASE FRONT AND WINDOW						
Code	Code				Code			
2"	V20FB	SS Front flange, back conn.			3	Lexan snap in lens		
	V20UB	SS U-clamp, back conn.			4	Glass lens w/SS ring		
					8	Glass lens w/crimped SS ring, IP66 (U-clamp only)		
					9	Lexan threaded lens		
2½"	V25FB	SS Front flange, back conn.			3	Lexan snap in lens		
	V25UB	SS U-clamp, back conn.			4	Glass lens w/SS ring		
					8	Glass lens w/crimped SS ring, IP66 (U-clamp only)		
					9	Lexan threaded lens		
3½"	V35QB	SS U-clamp, back conn.			3	Lexan snap in lens		
	V35BB	SS Back flange, back conn.			5	Glass lens w/chrome/brass ring (U-clamp only)		
	V35BL	SS Back flange, lower conn.			9	Lexan threaded (U-clamp only)		
	V35RB	SS Front flange, semi-flush						
	V35ZL	SS Adjustable bracket, lower conn.						
4½"	V45BB	SS Back flange, back conn.			3	Lexan snap in lens		
	V45BL	SS Back flange, lower conn.						
	V45RB	SS Front flange, semi-flush, back conn.						
	V45ZL	SS Adjustable bracket, lower conn.						
TABLE 2 PROCESS CONN. & MATERIAL			TABLE 3 BULB & CAPILLARY			TABLE 4 BULB DIMENSION		
Code			Code			Code		
11	Union conn. ½" NPT, Brass		5	Copper bulb & copper braided capillary		1	⅞" x 2.5" (10' max. cap. length)	
12	Union conn. ½" NPT, 304SS		8	316SS bulb & SS armored capillary		2	⅞" x 3.4" (25' max. cap. length)	
13	Union conn. ½" NPT, 316SS		9	316SS bulb & SS plain capillary		3	⅞" x 5.4" (50' max. cap. length)	
21	Union conn. ¾" NPT, Brass					4	⅞" x 7.43" (99' max. cap. length)	
22	Union conn. ¾" NPT, 304SS							
23	Union conn. ¾" NPT, 316SS							
31	Thermowell ½" NPT, Brass							
32	Thermowell ½" NPT, 304SS							
33	Thermowell ½" NPT, 316SS							
41	Thermowell ¾" NPT, Brass							
42	Thermowell ¾" NPT, 304SS							
43	Thermowell ¾" NPT, 316SS							
75	Air duct flange union, alum.							
TABLE 5 CAPILLARY LENGTH IN FEET			TABLE 6 DUAL TEMPERATURE			TABLE 7 OPTIONS		
Code			Code	Fahrenheit °F	Celsius °C	Code		
XX	Use 2 digits - ex. 5 feet equals code 05		DA	-40/60	-40/15	0	NONE	
			DB	-40/110	-40/43	1	Additional vibration dampening	
			DC	-20/100	-30/38			
			DD	-20/120	-30/49			
			DE	0/150	-15/65			
			DF	0/180	-20/82			
			DG	40/240	0/115			
			DH	30/300	0/150			
			DJ	100/350	40/175			

How to Order: NO FITTING - PLAIN BULB

HOW TO ORDER PLAIN BULB - NO FITTING:

From each table select the dial size, case material/type, case front and window, process conn. and material, bulb and capillary, bulb dimension, capillary length, dual temperature range and options. Combine to complete your Vapor Tension Thermometer description.

EXAMPLE:

2½" SS U-clamp back connection, glass lens w/SS ring, plain bulb, no fitting, copper bulb & copper braided capillary, ¾" x 3.4", 5', 0/150°F & -15/65°C, None (options)

TABLE 1A & 1B Dial Size, Case Material/Type Code		Case Front & Window Code	TABLE 2 Process Conn. & Material Code	TABLE 3 Bulb & Capillary Code	TABLE 4 Bulb Dimension Code	TABLE 5 Capillary Length Code	TABLE 6 Temperature Range Code	TABLE 7 Options Code
V25UB		4	90	2	2	05	DE	0

PLAIN BULB - NO FITTING

Dial Size Code		DIAL SIZE, CASE MATERIAL/TYPE & CASE FRONT AND WINDOW Code			
2"	V20FB	SS Front flange, back conn.		3	Lexan snap in lens
	V20UB	SS U-clamp, back conn.		4	Glass lens w/SS ring
				8	Glass lens w/crimped SS ring, IP66 (U-clamp only)
				9	Lexan threaded lens
2½"	V25FB	SS Front flange, back conn.		3	Lexan snap in lens
	V25UB	SS U-clamp, back conn.		4	Glass lens w/SS ring
				8	Glass lens w/crimped SS ring, IP66 (U-clamp only)
				9	Lexan threaded lens
3½"	V35QB	SS U-clamp, back conn.		3	Lexan snap in lens
	V35BB	SS Back flange, back conn.		5	Glass lens w/chrome/brass ring (U-clamp only)
	V35BL	SS Back flange, lower conn.		9	Lexan threaded (U-clamp only)
	V35RB	SS Front flange, semi-flush			
	V35ZL	SS Adjustable bracket, lower conn.			
4½"	V45BB	SS Back flange, back conn.		3	Lexan snap in lens
	V45BL	SS Back flange, lower conn.			
	V45RB	SS Front flange, semi-flush, back conn.			
	V45ZL	SS Adjustable bracket, lower conn.			

TABLE 2 PROCESS CONN. & MATERIAL Code		TABLE 3 BULB & CAPILLARY Code		TABLE 4 BULB DIMENSION Code	
90	Plain bulb, no fitting	2	Copper bulb & copper braided capillary	6	¾" x 2.5" (5' max. cap. length)
		3	316SS bulb & SS plain capillary	2	¾" x 3.4" (25' max. cap. length)
				3	¾" x 4.9" (50' max. cap. length)
				4	¾" x 7.9" (99' max. cap. length)

TABLE 5 CAPILLARY LENGTH IN FEET Code		TABLE 6 DUAL TEMPERATURE Code		TABLE 7 OPTIONS Code		
		Fahrenheit °F	Celsius °C			
XX	Use 2 digits - ex. 5 feet equals code 05	DA	-40/60	-40/15	0	NONE
		DB	-40/110	-40/43	1	Additional vibration dampening
		DC	-20/100	-30/38		
		DE	0/150	-15/65		
		DF	0/180	-20/82		
		DG	40/240	0/115		
		DH	30/300	0/150		
		DJ	100/350	40/175		



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