

VAPOR ACTUATED DIAL THERMOMETERS

Offered in 3 1/2" and 4 1/2" dial sizes, these thermometers are furnished in four stainless steel case configurations for direct, surface or panel mounting. The following coding chart illustrates a wide variety of bulb styles, capillaries and process connection fittings. The versatility of configurations makes these thermometers well suited to a wide range of applications including hot and chilled water pipeline systems, tanks and air ducts.

CODE	CATALOG NO.	DESCRIPTION
I	35	CASE SIZE 3 1/2" Case
	45	4 1/2" Case
II	V	CASE TYPE Vari-angle,® Direct Mount
	B	Back Flange, Surface Mount
	R	Semi-flush, Panel Mount
	Z	Adjustable Bracket, Remote Mount
III	A	CASE CONNECTION Adjustable
	B	Back Connection
	L	Lower Connection
IV	3	CASE WINDOW Snap in Lexan with "O" Ring
V		THERMAL SYSTEM
		Bulb Type Bulb Material Capillary Material Capillary Protection
	0	Union Copper (Vari-angle only)
	2	Plain Copper Copper Cu. Braid
	3	Plain 316 S.S. 316 S.S. None
	5	Union Copper Copper Cu. Braid
	7	Union 316 S.S. Copper Cu. Braid
	8	Union 316 S.S. 316 S.S. Intlock Armor*
	9	Union 316 S.S. 316 S.S. None
		* At bulb end 31/2" long. All systems have S.S. Spring capillary protection at indicating head. No. 5-7 system include S.S. spring at bulb end - S.S. jam nut standard on No. 8-9 system.
VI		BULB SELECTION
		Thermal System No. 5 Thru 9 (Union) Thermal System No. 2 & 3 (Plain) Max. System Len.
		Dia. Length Dia. Length
	1	7/16 2.5" N.A. N.A. 10Ft.
	2*	7/16 3.4" 3/8 3.4 25Ft.
	3*	7/16 5.4" 3/8 5.9 50Ft.
	4	7/16 7.4" 3/8 7.9 99Ft.
	5	7/16 9.4" 3/8 9.4 99Ft.
	X	1/8" x 180" Averaging Bulb 10Ft.
	6	N.A. N.A. 3/8 2.5 05Ft.
		* Only No. 2&3 bulbs are options for Vari-angle.



VII		PROCESS CONNECTION FITTING
	1	Union Connection 1/2" NPT
	2	Union Connection 3/4" NPT
	3	Separable Socket 1/2" NPT
	4	Separable Socket 3/4" NPT
	5	Separable Socket 1/2" NPT with 2" Lag Extension (No.3 Bulb only)
	6	Separable Socket 3/4" NPT with 2" Lag Extension (No.3 Bulb only)
VIII	7	Air Duct Flange, Union Conn., Aluminum only
	9	Plain bulb, no fitting
		PROCESS CONNECTION MATERIAL
	1	Brass
	2	304 Stainless Steel
	3	316 Stainless Steel
	5	Aluminum (Air Duct Flange only)
	0	None - Plain Bulb
IX A-B	See Example Below	SYSTEM LENGTH SPECIFYING
		9A - Use 2 digits: EX. 05, 10, 99 for length required. 9B - Use FT for feet, use IN for inches

EXAMPLE FOR OBTAINING COMPLETE CATALOG NUMBER FROM CODES - SERIES VTR

CODE I-IV (HEAD ASSY)	CODE V-VIII (THERMAL SYSTEM)	CODE IX A - B (CAPILLARY LENGTH)
4 5 B L 3	5 2 3 1	0 5 F T
—		
RANGE 40-240 F		

EXAMPLE FOR OBTAINING COMPLETE CATALOG NUMBER FROM CODES - SERIES VTVA

CODE I-IV (HEAD ASSY)	CODE V-VIII (THERMAL SYSTEM)
4 5 V A 3	0 2 3 1
—	
RANGE 40-0-60 F&C	

STANDARD RANGES*

-40-0-60F	0-150F	30-300F
-20-0-100F	0-180F	100-350F
-40-0-110F	40-240F	60-260F

*All Ranges available in Dual Scale, F&C.

NSF REMOTE READING DIAL THERMOMETERS



The Weiss Line of Remote Reading Dial Thermometers offers a wide variety of dial sizes and case configurations to match any installation. All items are furnished in attractive stainless steel cases and all models are NSF listed. Additional features include smart color zoned dual scales and tin plated thermal systems.

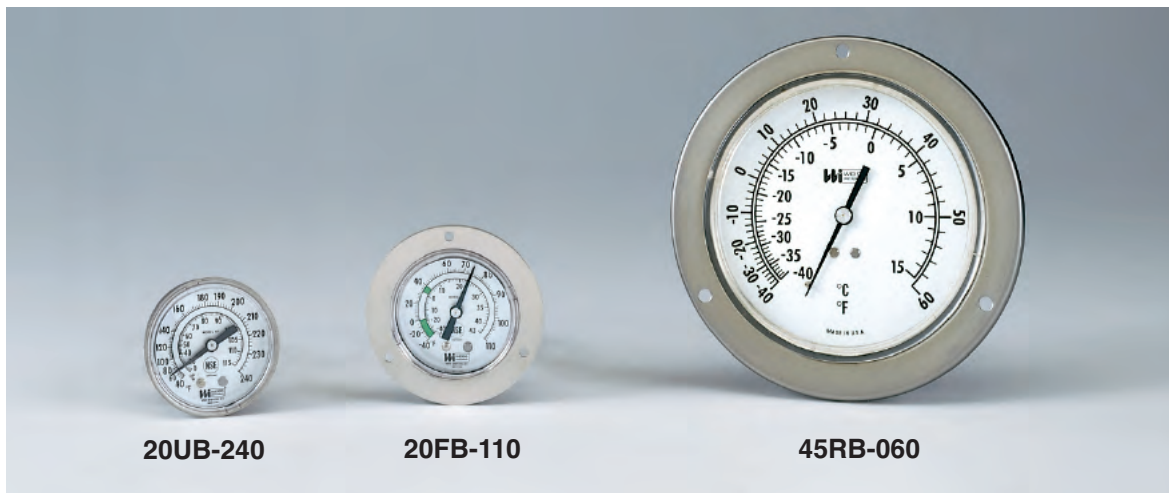
2" DIAL SIZE

SERIES FB - FRONT FLANGE BACK CONNECT					SERIES HL - HANGING BRACKET LOWER CONNECT				
NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
RF	21FB-060	40-0-60 F&C	48"	40110	RH	21HL-060	40-0-60 F&C	48"	40170
RF	21FB-960	40-0-60 F&C	9"	40115	HF	21HL-240	40-240 F&C	48"	40180
RF	21FB-260	40-0-60 F&C	20 FT	40120					
RF	20FB-110	40-0-110 F&C	48"	40130	SERIES FL - FRONT FLANGE LOWER CONNECT				
HF	20FB-240	40-240 F&C	48"	40140	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
					HF	20FL-240	40-240 F&C	48"	40160
SERIES BB - BACK FLANGE BACK CONNECT									
NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN	SERIES UB - U CLAMP BACK CONNECT				
RF	20BB-060	40-0-60 F&C	48"	40220	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
RF	20BB-110	40-0-110 F&C	48"	40230	RU	21UB-060	40-0-60 F&C	48"	40190
HF	20BB-240	40-240 F&C	48"	40240	W	20UB-220	100-220 F&C	48"	40210
					HU	20UB-240	40-240 F&C	48"	40200

2 1/2" DIAL SIZE

SERIES FB - FRONT FLANGE BACK CONNECT					SERIES HL - HANGING BRACKET LOWER CONNECT				
NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
RF	25FB-060	40-0-60 F&C	48"	40250	RF	25FB-110	40-0-110 F&C	48"	40260
RF	25FB-110	40-0-110 F&C	48"	40260	HF	25FB-240	40-240 F&C	48"	40270
HF	25FB-240	40-240 F&C	48"	40270					
SERIES BB - BACK FLANGE BACK CONNECT					SERIES PB - PLAIN W/LOCK NUT BACK CONNECT				
NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
RF	25BB-110	40-0-110 F&C	48"	40295	RU	25PB-060	40-0-60 F&C	48"	40290

NSF REMOTE READING DIAL THERMOMETERS



20UB-240

20FB-110

45RB-060

4 1/2" DIAL SIZE

SERIES RB - FRONT FLANGE BACK CONNECT					SERIES BB - BACK FLANGE BACK CONNECT				
NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN	NSF MOD.	CAT. NO.	RANGE	CAPILLARY	IDN
RF	45RB-060	40-0-60 F&C	48"	40310	RF	45BB-060	40-0-60 F&C	48"	40350
RF	45RB-260	40-0-60 F&C	20 FT	40320	RF	45BB-260	40-0-60 F&C	20 FT	40360
RF	45RB-110	40-0-110 F&C	48"	40330	RF	45BB-110	40-0-110 F&C	48"	40370
HF	45RB-240	40-240 F&C	48"	40340	HF	45BB-240	40-240 F&C	48"	40380

UNION CONNECTED DIAL THERMOMETERS



45BL-100

Offered in 3 1/2" and 4 1/2" dial sizes the Series BL is furnished with braided copper capillary and a 1/2" NPT brass union connection. Sensor bulb insertion is 2 5/8" below the mounting thread.

Case configuration is stainless steel back flange type for wall or surface mounting, capillary outlet at case bottom.*

The Series BL construction is well suited to applications such as hot and chilled pipeline systems, tanks, coolers and air ducts.

DIAL SIZE	CAT. NO.	RANGE	CAPILLARY	IDN
3 1/2"	35BL-060	40-0-60 F&C	5 FT	42070
3 1/2"	35BL-110	40-0-110 F&C	5 FT	42080
3 1/2"	35BL-100	20-0-100 F&C	5 FT	42090
3 1/2"	35BL-180	0-180 F&C	5 FT	42100
3 1/2"	35BL-240	40-240 F&C	5 FT	42110
4 1/2"	45BL-060	40-0-60 F&C	5 FT	42010
4 1/2"	45BL-110	40-0-110 F&C	5 FT	42020
4 1/2"	45BL-100	20-0-100 F&C	5 FT	42030
4 1/2"	45BL-180	0-180 F&C	5 FT	42040
4 1/2"	45BL-240	40-240 F&C	5 FT	42050

* Also available with back outlet, specify 35BB or 45BB.

Series VTVA & VTR

Direct Mount & Remote Reading

35BL - Back Flange, Lower Mount



35BB - Back Flange, Back Mount



35RB - Semi-flush, Panel Mount



35ZL - Adjustable Bracket Mount



35VA - Vari-angle® Direct Mount



CODE	CATALOG NO.	DESCRIPTION				
I	35 45	CASE SIZE 31/2" Case 41/2" Case				
II	V B R Z	CASE TYPE Vari-angle® Direct Mount Back Flange, Surface Mount Semi-flush, Panel Mount Adjustable Bracket, Remote Mount				
III	A B L	CASE CONNECTION Adjustable Back Connection Lower Connection				
IV	3	CASE WINDOW Snap in Lexan with "O" Ring				
V		THERMAL SYSTEM				
	0	Bulb Type Union	Bulb Material Copper (Vari-angle only)	Capillary Material	Capillary Protection	
	2	Plain	Copper	Copper	Cu. Braid	
	3	Plain	316 S.S.	316 S.S.	None	
	5	Union	Copper	Copper	Cu. Braid	
	7	Union	316 S.S.	Copper	Cu. Braid	
	8	Union	316 S.S.	316 S.S.	Intlock Armor*	
	9	Union	316 S.S.	316 S.S.	None	
	*At bulb end 31/2" long. All systems have S.S. Spring capillary protection at indicating head. No. 5-7 system include S.S. spring at bulb end - S.S. jam nut standard on No. 8-9 system.					
VI		BULB SELECTION				
		Thermal System No. 5 Thru 9 (Union)		Thermal System No. 2 & 3 (Plain)		Max. System Len.
		Dia.	Length	Dia.	Length	
	1	7/16	2.5"	N.A.	N.A.	10Ft.
	2	7/16	3.4"	3/8	3.4	25Ft.
	3	7/16	5.4"	3/8	4.9	50Ft.
	4	7/16	7.4"	3/8	7.9	99Ft.
	5	7/16	9.4"	3/8	9.4	99Ft.
	X	1/8" x 180" Averaging Bulb				10Ft.
6	N.A.	N.A.	3/8	2.5	05Ft.	
® Vari-angle is a registered trademark of Weiss Instruments, Inc.						

SPECIFICATIONS

CASE & RING - drawn stainless steel case with snap-in "O" ring gasketed clear lexan window.

CASE STYLES - five case styles are available (as shown) to accommodate direct mount, surface or panel mounting.

DIAL - white coated aluminum with black markings.

POINTER - slotted adjustable type.

BOURDON TUBE - phosphor bronze.

THERMAL BULB & LINE ASSEMBLY - copper or 316 stainless steel.

PROCESS CONN. FITTING - separable socket, union or air duct flange connections.

ACCURACY - one scale division throughout range.

VII		PROCESS CONNECTION FITTING
	1	Union Connection 1/2" NPT
	2	Union Connection 3/4" NPT
	3	Separable Socket 1/2" NPT
	4	Separable Socket 3/4" NPT
	5	Separable Socket 1/2" NPT with 2" Lag Extension (No.3 Bulb only)
	6	Separable Socket 3/4" NPT with 2" Lag Extension (No.3 Bulb only)
	7	Air Duct Flange, Union Conn., Aluminum only
	9	Plain bulb, no fitting
VIII		PROCESS CONNECTION MATERIAL
	1	Brass
	2	304 Stainless Steel
	3	316 Stainless Steel
	5	Aluminum (Air Duct Flange only)
	0	None - Plain Bulb
IX A-B	See Example Below	SYSTEM LENGTH SPECIFYING
		9A - Use 2 digits: EX. 05, 10, 99 for length required. 9B - Use FT for feet, use IN for inches

EXAMPLE FOR OBTAINING COMPLETE CATALOG NUMBER FROM CODES - SERIES VTVA & VTR

CODE I-IV (HEAD ASSY)	CODE V-VIII (THERMAL SYSTEM)	CODE IX A - B (CAPILLARY LENGTH)
4 5 B L 3	5 2 3 1	0 5 F T
RANGE		
40-240 F		

Series 716 Panel Mounting

20FB - Front Flange, Flush Mount



20UB - U-Clamp, Panel Mount



25BB - Back Flange, Wall Mount



35QB - U-Clamp Panel Mount



CODE	CATALOG NO.	DESCRIPTION
I	15	CASE SIZE
	20	1-1/2" Case
	25	2" Case
	35	2-1/2" Case
	35	3-1/2" Case
II	F	CASE TYPE
	U	Front Flange Flush Mount, 2, 2-1/2"
	B	U-Clamp Flush Mount, 1-1/2, 2, 2-1/2"
	S	Back Flange Surface Mount, 2, 2-1/2"
	J	Front Flange Semi-Flush Mount, 3-1/2"
	Q	U-Clamp Semi-Flush Mount, 3-1/2"
III	B	CASE CONNECTION
	L	Back Connection - Standard Lower Connection
IV	3	CASE FRONT AND WINDOW
	4	Molded one-piece Lexan
	5	Stainless Steel Ring & Glass
	8	Chrome Plated Brass, Glass
	9	Crimped Ring, S.S., Plastic or Glass - Waterproof Threaded one-piece Lexan
V	1	THERMAL SYSTEM
	2	Bulb Type
	3	Bulb Material
	4	Capillary Material
	5	Capillary Protection
	6	Plain Copper Copper None
	7	Plain Copper Copper Cu. Braid
	8	Union 316 S.S. 316 S.S. None
	9	Union Copper Copper None*
	9	Union Copper Copper Cu. Braid
VI	0	BULB SELECTION
	1	Thermal System No. 4 Thru 9 (Union) Dia. Length
	2	Thermal System No. 1 - 3 (Plain) Dia. Length
	3	Max. System Len.
	4	7/16 1.87" N.A. N.A. 10Ft.
	5	7/16 2.5" N.A. N.A. 10Ft.
	6	7/16 3.4" 3/8 3.4 25Ft.
	7	7/16 5.4" 3/8 4.9 50Ft.
	8	7/16 7.4" 3/8 7.9 99Ft.
	9	N.A. N.A. 3/8 2.5 05Ft.

*At bulb end 31/2" long. All systems have S.S. Spring capillary protection at indicating head. No. 5-7 system include S.S. spring at bulb end - S.S. jam nut standard on No. 8-9 system.

*Bulb lengths are standard for system lengths shown. Longer standard bulbs can be applied to any shorter system length. The bulb length shown is for comparative purposes, relating system length to bulb length. See Bulb Chart on Page 4 for Dim.

SPECIFICATIONS

CASE & RING - drawn stainless steel case with snap-in "O" ring gasketed clear lexan or glass window.

DIAL - white coated aluminum with black markings.

POINTER - slotted adjustable type which permits "zero set" calibration.

BOURDON TUBE - precision geared brass movement and phosphor bronze tube.

THERMAL SYSTEMS - available in nine standard types, with system lengths from 6 inches thru 100 feet. Materials for the case and ring assembly are as shown in the Coding Charts.

PROCESS CONN. FITTING - separable socket, union or air duct flange connections.

ACCURACY - one scale division throughout range. Built with NSF accuracy and compliance, see our complete listing at www.nsf.org.

VII	1	PROCESS CONNECTION FITTING
	2	Union Connection 1/2" NPT
	3	Union Connection 3/4" NPT
	4	Separable Socket 1/2" NPT
	5	Separable Socket 3/4" NPT
VIII	6	PROCESS CONNECTION MATERIAL
	7	Brass
	8	304 Stainless Steel
	9	316 Stainless Steel
IX A-B	0	Aluminum (Air Duct Flange only)
	1	None - Plain Bulb
	2	SYSTEM LENGTH SPECIFYING
IX C	3	9A - Use 2 digits: EX. 05, 10, 99 for length required.
	4	9B - Use FT for feet, use IN for inches
IX C	5	SYSTEM TIN PLATING (IF REQUIRED)
	6	9C - Use TIN (No. 1, 4 & 5 Thermal System*)

NOTE: All other system plating consult factory.

*Should be specified for Foodservice Equipment Thermometers

EXAMPLE FOR OBTAINING COMPLETE CATALOG NUMBER FROM CODES - SERIES 716

CODE I-IV (HEAD ASSY) CODE V-VIII (THERMAL SYSTEM) CODE IX A - B (CAPILLARY LENGTH)

20FB3 1690 05FT

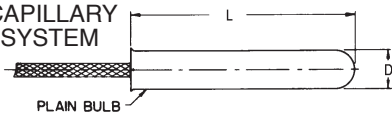
CODE IX C RANGE

— — — 40-0-60 F&C

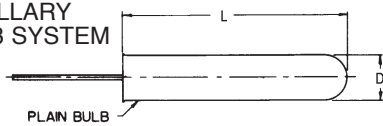
Thermal Systems

Code V

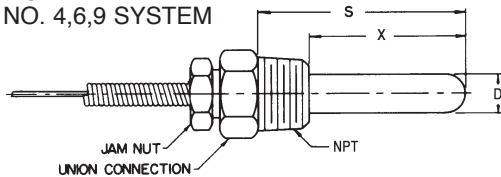
BRAIDED CAPILLARY
CAT. NO. 2 SYSTEM



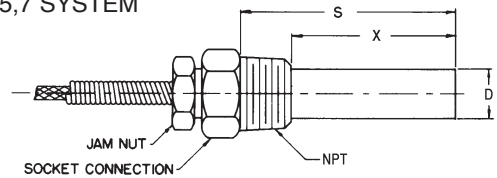
PLAIN CAPILLARY
CAT. NO. 1,3 SYSTEM



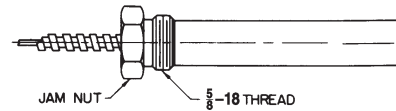
PLAIN CAPILLARY
CAT. NO. 4,6,9 SYSTEM



BRAIDED CAPILLARY
CAT. NO. 5,7 SYSTEM

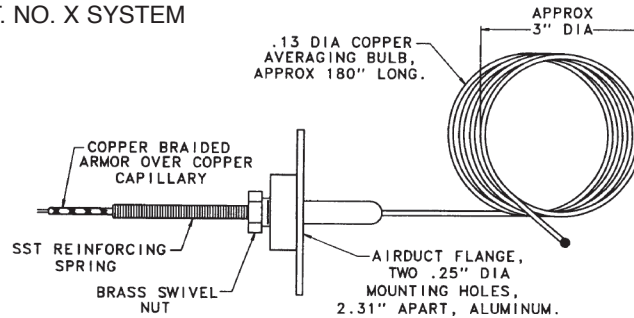


ARMORED CAPILLARY
CAT. NO. 8 SYSTEM



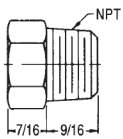
Code VI

AVERAGING BULB
CAT. NO. X SYSTEM

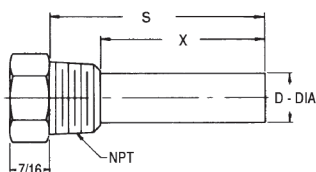


Process Connection Fittings - Code VII

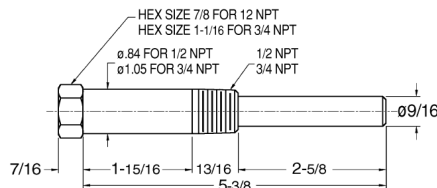
UNION CONNECTION
CAT. NO. 1,2



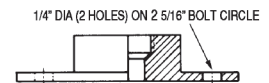
SOCKET CONNECTION
CAT. NO. 3,4



SOCKET W/ LAG EXTENSION
CAT. NO. 5,6 (No. 3 Bulb only)



FLANGE CONNECTION
CAT. NO. 7



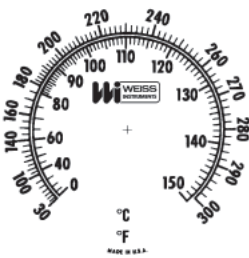
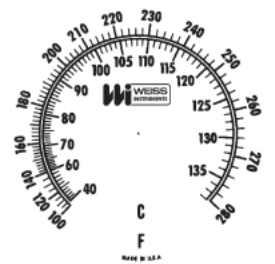
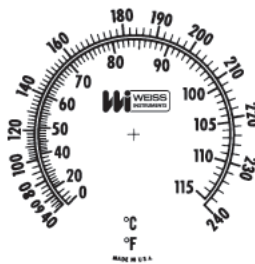
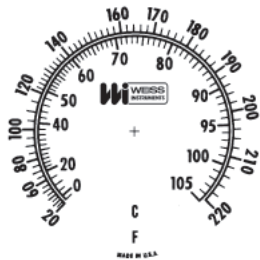
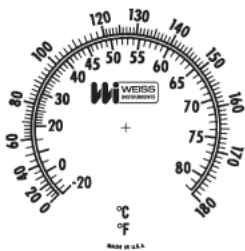
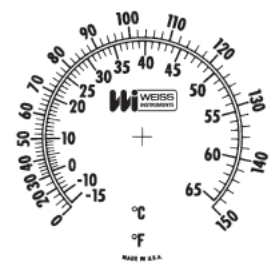
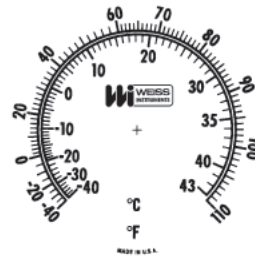
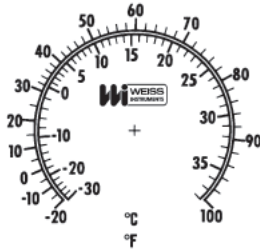
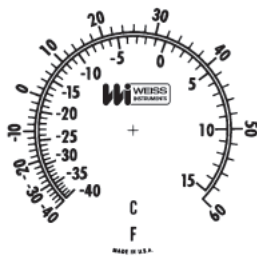
Bulb Dimensions

BULB NO. (CODE VI)	PLAIN CONNECTION		UNION CONNECTION			SOCKET CONNECTION			FLANGE CONNECTION	
	L	D	X	S	D	X	S	D	X	D
0	N/A	N/A	1	1 7/8	7/16	N/A	N/A	N/A	N/A	N/A
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
5	9 7/16	3/8	8 5/8	9 3/8	7/16	8 5/8	9 3/8	9/16	9	7/16
6	2 1/2	3/8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	3	5/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE: "X" for Flange Conn. is the Insertion Length from Tip of Bulb to Face of Flange.

Standard Ranges

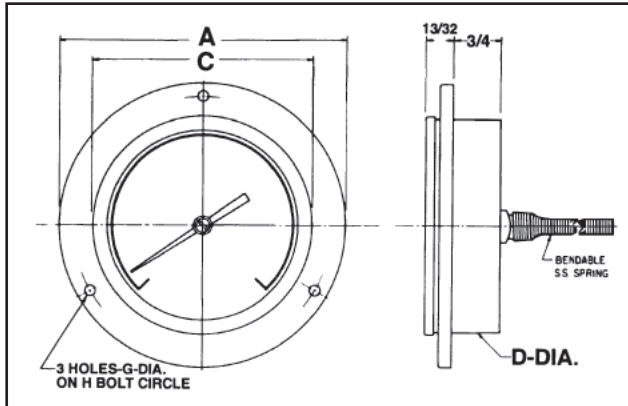
VTVA•VTR•716



NOTE: Careful consideration should be used when selecting a range, since Vapor Thermometers have progressive graduations and are best read within the upper two thirds of range. Other ranges are available, consult the factory.

Series VTVA & VTR Dimensions

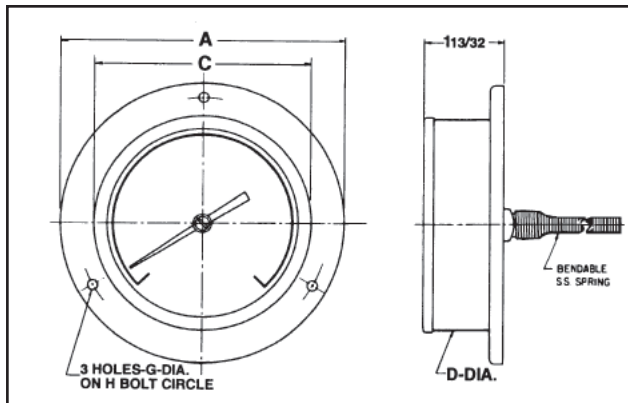
RB Case - Semi Flush Panel Mount



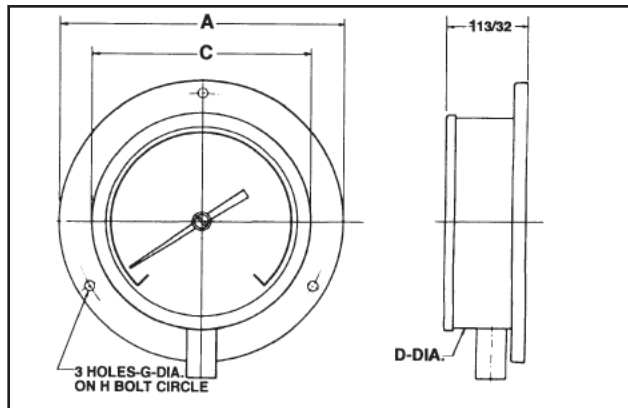
Series VTR Dimensions

DIAL SIZE	A	C	D	E	G	H	*PANEL HOLE
3 1/2"	4 3/4	3 11/16	3 19/32	1 1/4	5/32	4 5/16	3 5/8
4 1/2"	5 7/8	4 11/16	4 19/32	1 1/4	7/32	5 3/8	4 5/8

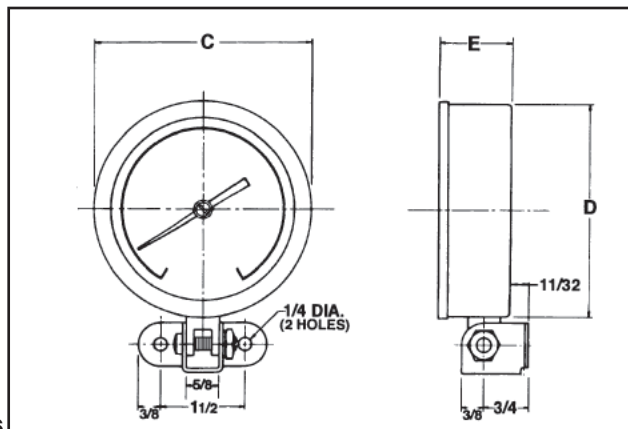
BB Case - Surface Mounted Back Connected



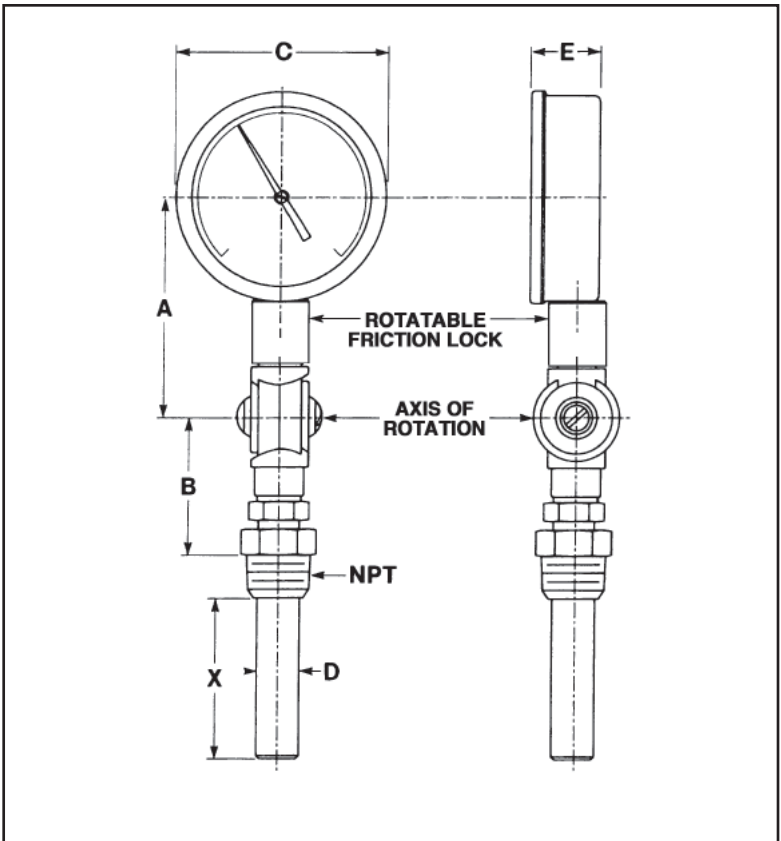
BL Case - Surface Mounted Bottom Connected



ZL Case - Adjustable Bracket Mount



Series VTVA - Direct Mount



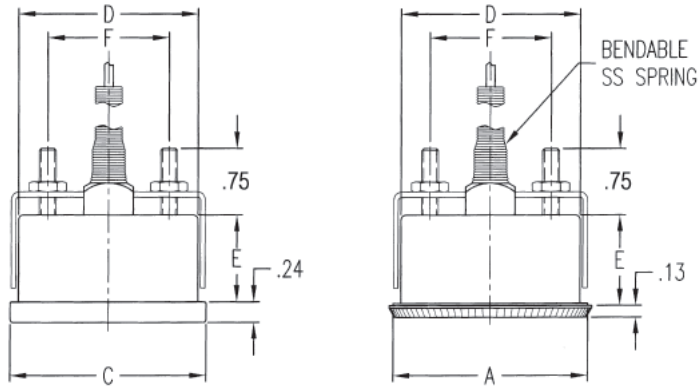
DIAL SIZE	A	B	C	E	*D	**X LENGTH FOR BULB NO. (CODE VI)			
						2	3	4	5
3 1/2"	3 7/8	2 9/16	3 11/16	1 1/4	9/16	2 5/8	4 5/8	6 5/8	8 5/8
4 1/2"	4 3/8	2 9/16	4 11/16	1 1/4	9/16				

*D Dimension for Union Connection and Air Duct Union Flange Conn. is 7/16"

** Same for Union Conn. and Air Duct Union Flange Connection.

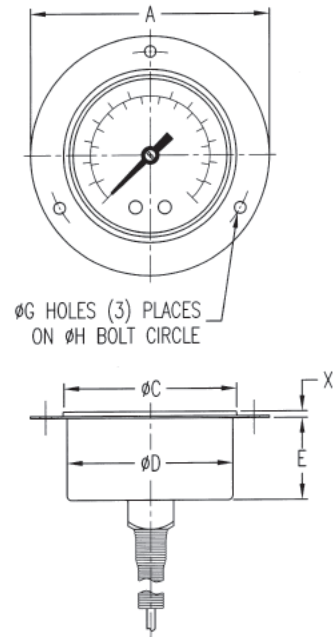
Series 716 Dimensions

Series 716 - U-Clamp Case Styles

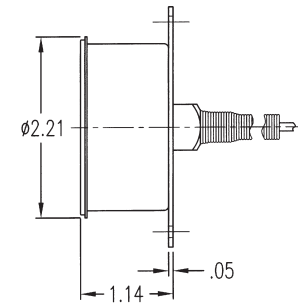


NOTE: CUSTOMER PANEL THICKNESS FOR MOUNTING FROM .03" TO .63".

Front Flange Style



Back Flange Style



Case Dimensions

CASE SIZE	CASE TYPE	CODE I	FLGE DIA. A	RING O.D. C	PANEL HOLE B	DIA. D	E	F	G	H	X CASE FRONT CODE IV		
											4	3	5
1-1/2"	U-CLAMP	15U	1-13/16	—	1-5/8	1-19/32	7/8	1-1/16	—	—	—	—	—
2"	U-CLAMP	20U	2-7/32	2-11/16	2-1/16	2-1/32	31/32	1-3/8	—	—	3/16	3/32	—
2"	FRONT FLGE	20F	2-15/16	2-11/64	2-1/16	2-1/32	31/32	—	9/64	2-9/16	3/16	3/32	—
2-1/2"	U-CLAMP	25U	2-13/16	2-7/8	2-39/64	2-9/16	1	2	—	—	3/16	1/4	—
2-1/2"	FRONT FLGE	25F	3-11/16	2-7/8	2-39/64	2-9/16	1	—	11/64	3-5/16	3/16	1/4	—
2-1/2"	FRONT FLGE	25S	3-11/16	2-7/8	2-21/32	2-41/64	3/4	—	7/32	3-5/16	3/8	—	—
3-1/2"	FRONT FLGE	35S	4-3/4	3-31/32	3-5/8	3-19/32	3/4	—	5/32	4-5/16	7/16	—	—
3-1/2"	U-CLAMP	35J	3-31/32	3-31/32	3-5/8	3-19/32	3/4	3-1/16	—	—	7/16	—	—
3-1/2"	U-CLAMP	35Q	3-7/8	3-29/32	3-5/8	3-19/32	1	3-1/16	—	—	—	—	1/8