

# ITM Instruments Inc.



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35VA - Vari-angle® Direct Mount

CODE	CATALOG		nF2	CRIPT	IUN				
OODL	NO.			OIIII 1	1014				
I	35 45	31/2" Case 41/2" Case							
II	V B R Z	Vari-angle® Back Flang Semi-flush, Adjustable	Direct Mo e, Surface Panel Mo	Mount ount	<i>f</i> lount				
III	A B L	Adjustable Back Conn	CASE CONNECTION  Adjustable Back Connection Lower Connection						
IV	3		CASE WINDOW Snap in Lexan with "O" Ring						
		THERMAL Bulb Type	. <b>SYSTEI</b> Bulb Materia	Cap	illary erial	Capillary Protection			
V	0 2 3 5 7 8	Union Plain Plain Union Union Union Union Union Union	Copper 316 S.S Copper 316 S.S 316 S.S 316 S.S	Co S. 310 Co S. Co S. 31	pper 5 S.S. pper pper 6 S.S. 6 S.S.	Cu. Braid None Cu. Braid Cu. Braid Intlock Armor* None			
		*At bulb end 3 at indicating h S.S. jam nut st	1/2" long. All nead. No. 5- tandard on N	systems ha 7 system i o. 8–9 syst	ave S.S. Spring nclude S.S. s em.	g capillary protection pring at bulb end –			
VI	1 2 3 4 5 X 6	7/16 7/16 7/16 7/16 7/16	ystem	<b>Therma No. 2 &amp; Dia.</b> N.A. 3/8 3/8 3/8 3/8 3/8	I System 3 (Plain) Length N.A. 3.4 4.9 7.9 9.4	Max. System Len. 10Ft. 25Ft. 50Ft. 99Ft. 99Ft. 10Ft. 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.

	1 2	PROCESS CONNECTION FITTING Union Connection 1/2" NPT Union Connection 3/4" NPT							
VII	2 3 4 5	Separable Socket 1/2" NPT Separable Socket 3/4" NPT Separable Socket 1/2" NPT with 2" Lag Extention							
	6 7	No.3 Bulb only) Separable Socket 3/4" NPT with 2" Lag Extention No.3 Bulb only) Air Duct Flange, Union Conn., Aluminum only							
	9	Plain bulb, no fitting							
VIII	1 2 3 5 0	PROCESS CONNECTION MATERIAL Brass 304 Stainless Steel 316 Stainless Steel Aluminum (Air Duct Flange only) None – Plain Bulb							
<b>IX</b> A-B	See Example Below	<b>SYSTEM LENGTH SPECIFYING</b> 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		CODE V-VIII	CODE IX A – B
(HEAD ASSY)		(THERMAL SYSTEM)	(CAPILLARY LENGTH)
4 5 B L 3	_	5 2 3 1	— 05FT
		RANGE	

# Series Panel Mounting





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

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 <a href="https://www.nsf.org">www.nsf.org</a>.

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

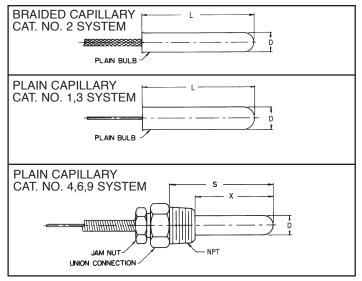
CODE I-IV (HEAD ASSY) 20FB3 - CODE V-VIII (THERMAL SYSTEM) CODE IX A - B (CAPILLARY LENGTH) - 05FT

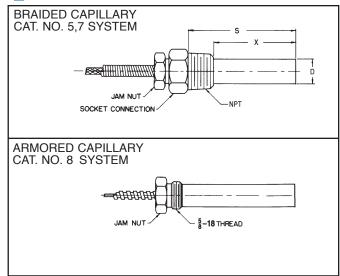
CODE IX C

RANGE 40-0-60 F&C

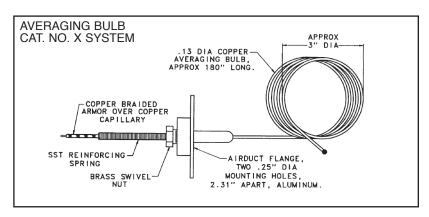
# Code V



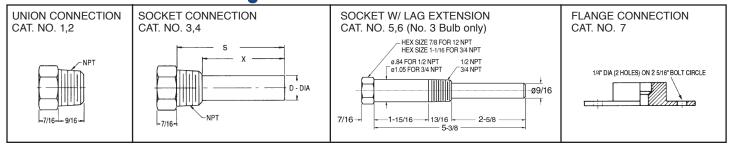




#### Code VI



# **Process Connection Fittings - Code VII**

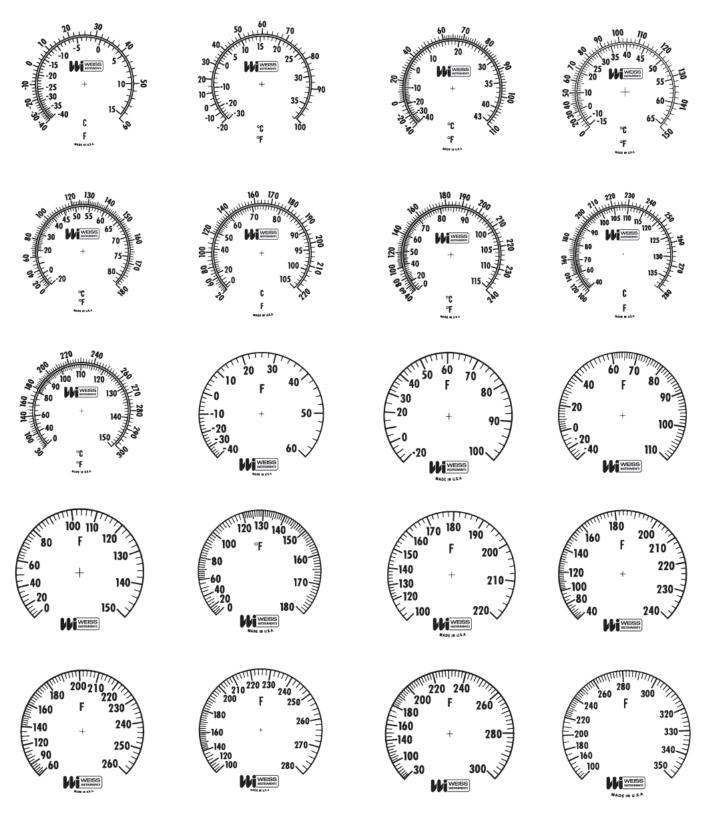


#### **Bulb Dimensions**

BULB NO.	PLAIN CONNECTION		UNION CONNECTION			(	FLANGE CONNECTION			
(CODE VI)	٦	D	Х	S	D	Х	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	113/16	2 3/8	7/16	115/16	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.

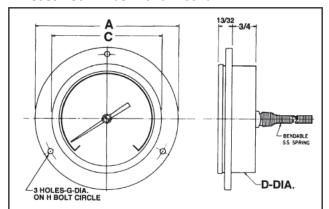
# Standard Ranges VTVA-VTR-716



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

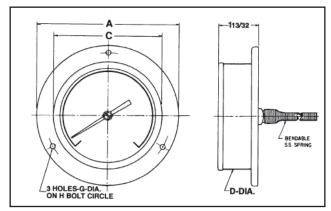
#### **RB Case - Semi Flush Panel Mount**



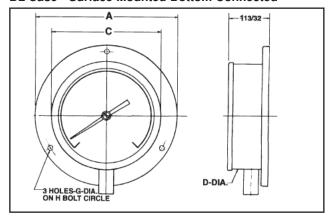
#### Series VTR Dimensions

DIAL SIZE	A	С	D	E	G	Н	*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

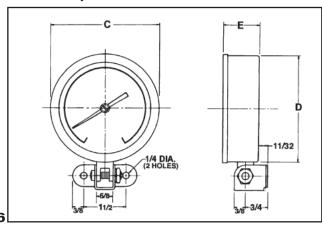
**BB Case - Surface Mounted Back Connected** 



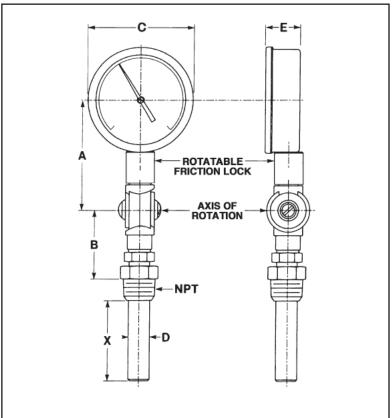
**BL Case - Surface Mounted Bottom Connected** 



**ZL Case - Adjustable Bracket Mount** 



#### **Series VTVA - Direct Mount**



DIAL SIZE	Α	В	С	Е	*D	**X LENGTH FOR BULB NO. (CODE VI)					
SIZE			)			2	3	4	5		
3 1/2"	3 7/8	2 9/16	3 11/16	1 1/4	9/16	2 5/8	A 510	6 5/8	8 5/8		
4 1/2"	4 3/8	2 9/16	4 11/16	1 1/4	9/16		4 5/6				

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

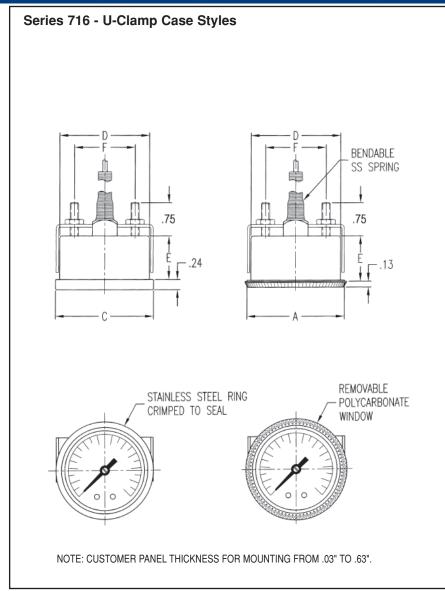
\*\* Same for Union Conn. and Air Duct Union Flange Connection.

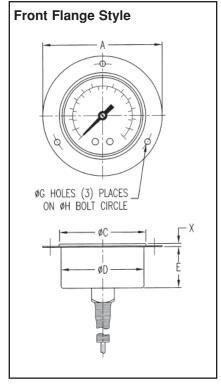


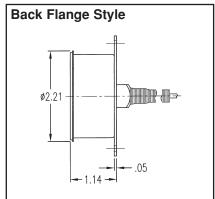
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### **Case Dimensions**

CASE	CASE	CODE	FLGE DIA.	RING O.D.	PANEL HOLE	DIA.	E	F	G	н	CASE FRONT C		CODE IV
SIZE	TYPE	ı	Α	С	В	D					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	ı	-
3-1/2"	U-CLAMP	35Q	3-7/8	3-29/32	3-5/8	3-19/32	1	3-1/16	-	-	-	-	1/8