

RANGE

The maximum operating pressure should not exceed 75% of the full-scale range. The normal operating range should be in the middle half of the range (between 25% and 75% of the full-scale range); whenever possible.

DIAL SIZE

Select a dial size that allows you to comfortably read the dial from the normal distance when installed.

ACCURACY

All Weksler gas actuated dial thermometers have an accuracy of $\pm 1\%$ of the full-scale range. For accurate readings the entire sensitive portion of the bulb must be fully immersed into the medium being measured.

CASE

A wide variety of case styles and materials are offered. Determine how the thermometer is to be mounted: direct, surface (wall) or flush (in panel). Determine the desired case material: polypropylene, aluminum (black enameled) or stainless steel (300 series).

FACE

A gasketed glass window is standard. Where breakage is a concern, a plastic or shatterproof glass window is optional at extra cost. Plastic windows are not suitable where head temperature exceeds 150°F (65°C).

POINTER

All Weksler gas actuated thermometers have adjustable pointers. This permits pointer repositioning during calibration check or allows maximum precision at a selected point within the scale range.

MOUNTING

Weksler gas actuated thermometers are available in remote mounted types (with capillary tubing between case and sensing bulb) and direct mounted types (sensing bulb is attached directly to case). Remote mounted types allow the temperature to be read at a location remote from the actual temperature source. Remote mounting is also desirable to isolate the head (case, scale, pointer and internal parts) from the damaging effects of shock, vibration or excessive heat that may be present at the temperature source. Direct mounted thermometers are available in "adjust angle" types which allow the head of the thermometer to be positioned for the most desirable viewing angle or rigid (non-adjustable types with fixed bottom or rear connections. Direct mounted units are installed directly on pipes, tanks or other vessels.

BULB TYPES

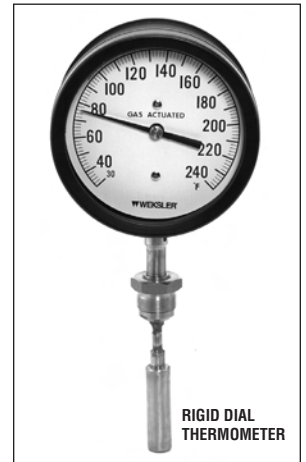
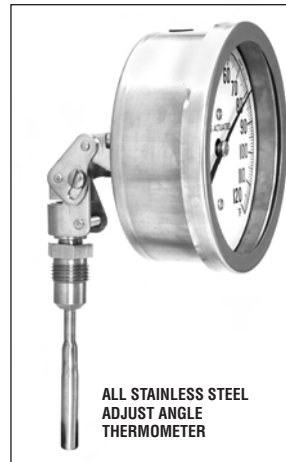
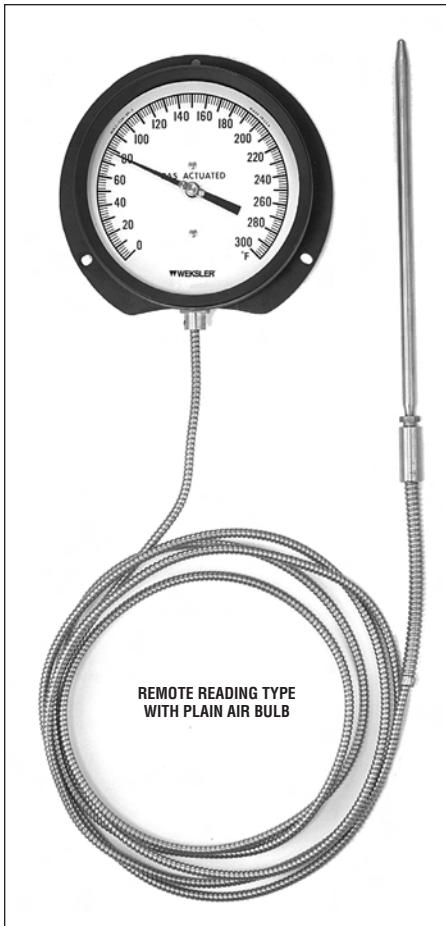
Weksler gas actuated thermometers are available with various styles of plain bulbs or union connection bulbs. The bulb is the sensing element at the tip of the thermometer that reacts to temperature changes. The entire thermometer including the bulb, head assembly and capillary tubing (on remote types) is filled with an inert nitrogen gas offering fast response and linear dial graduations. Plain bulbs are those without threaded fittings for sensing air temperature or liquid temperatures in open tanks, vats, sinks, etc. Union connected bulbs have threaded swivel nuts that hold the bulb into a bulb fitting such as a thermowell, bushing or flange.

HIGH PRESSURE OR CORROSIVE APPLICATIONS

In these applications, use of a separable thermowell is recommended. In addition to protecting the thermometer, thermowells facilitate removal of the thermometer without having to shut down the system.

STANDARD FEATURES

- Uniformly graduated scales
- Accurate to $\pm 1\%$ of range span
- 3½", 4½", 6" and 8½" dial sizes
- Adjustable pointer
- Fast response
- Inert gas fill – ideal for applications where Mercury is prohibited
- Stainless steel bulb
- Stainless steel (302) interlocked spiral armor over stainless steel (347) capillary tubing (lengths up to 100 ft.)
- Bronze bushed rotary type brass movement – stainless steel movement optional at extra cost
- Rigid or adjustable angle forms


TABLE 1

REMOTE AND DIRECT MOUNTED TYPES		
BASE CATALOG NO.	DIAL SIZE	TYPE
313B	3½"	REMOTE MOUNTED
413B	4½"	
613B	6"	
813B	8½"	
453B	4½"	ALL STAINLESS STEEL ADJUSTABLE ANGLE
333B	3½"	ADJUSTABLE ANGLE
433B	4½"	
633B	6"	
833B	8½"	RIGID (NOT ADJUSTABLE)
323B	3½"	
423B	4½"	
623B	6"	
823B	8½"	

STANDARD TYPE "E" CAPILLARY TUBING


0.280" O.D. Stainless Steel Interlocked Spiral (302) Armor Over Stainless Steel Capillary (347)

TABLE 2 – BULB TYPE AND SIZE








FOR ALL MOUNTED TYPES		CODE															
<p>PLAIN BULB FOR AIR TEMPERATURE</p>  <p>Optional Fittings: A16 Bulb Mounting Bracket</p> <p>12" Long .375 Diameter</p>		A															
<p>PLAIN BULB FOR LIQUIDS IN OPENTANKS, VATS, SINKS, ETC.</p>  <p>Optional Fittings: A1 1/2 NPT Compression Fitting A12-2 Set Screw Flange</p> <p>6" Long .50" Diameter</p>		C															
<p>PLAIN BULB WITH 12" BENDABLE EXTENSION</p>  <p>3" x .375" Diameter Bulb</p> <p>3" x .625" Diameter Bulb</p>		1 E															
<p>SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION</p>  <p>3" x .375" Diameter Bulb, 1/2 NPT Swivel Nut</p> <p>Optional Fittings: All "K" Series Thermowells 2F2 Flange</p>		3															
<p>SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION</p>  <p>3" x .625" Diameter Bulb, 1"-20 NEF-2B Swivel Nut</p> <p>Optional Fittings: All "5F" Series Thermowells All "5F" Series Bushings</p>		N															
<p>3/8" O.D. – 1/2"-14 NPSM Swivel Nut</p> <p>Union Connection (fixed length) Wells, busings or flanges required for installation</p> 	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>4"</td> <td>4 1/4" O.A.</td> </tr> <tr> <td>6</td> <td>6"</td> <td>6 1/2" O.A.</td> </tr> <tr> <td>9</td> <td>9"</td> <td>9 1/4" O.A.</td> </tr> <tr> <td>2</td> <td>12"</td> <td>12 1/4" O.A.</td> </tr> </tbody> </table> <p>*Uses "K" Series Thermowells (See page)</p>	CODE	STEM LENGTH	FITS WELL*	4	4"	4 1/4" O.A.	6	6"	6 1/2" O.A.	9	9"	9 1/4" O.A.	2	12"	12 1/4" O.A.	
CODE	STEM LENGTH	FITS WELL*															
4	4"	4 1/4" O.A.															
6	6"	6 1/2" O.A.															
9	9"	9 1/4" O.A.															
2	12"	12 1/4" O.A.															
<p>5/8" O.D. – 1"-20 NEF-2B Swivel Nut**</p> 	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>J</td> <td>3 1/2"</td> <td>4 1/4" O.A.</td> </tr> <tr> <td>K</td> <td>6"</td> <td>6 3/4" O.A.</td> </tr> <tr> <td>L</td> <td>9"</td> <td>9 3/4" O.A.</td> </tr> <tr> <td>M</td> <td>12"</td> <td>12 3/4" O.A.</td> </tr> </tbody> </table> <p>**Uses "5F" Series Thermowells "5F" Series Bushings (See page)</p>	CODE	STEM LENGTH	FITS WELL*	J	3 1/2"	4 1/4" O.A.	K	6"	6 3/4" O.A.	L	9"	9 3/4" O.A.	M	12"	12 3/4" O.A.	
CODE	STEM LENGTH	FITS WELL*															
J	3 1/2"	4 1/4" O.A.															
K	6"	6 3/4" O.A.															
L	9"	9 3/4" O.A.															
M	12"	12 3/4" O.A.															

TABLE 3 – CASE STYLES

WALL MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard – 4 1/2" dial size only.
A	Aluminum, Rear Flange Black Aluminum Bayonet Ring Standard – 3 1/2", 6" dial sizes. Extra cost option – 4 1/2" dial size.
G	Aluminum, Rear Flange Chrome Like Bayonet Ring Standard – 8 1/2" dial size only.
X	Stainless Steel, Rear Flange Stainless Steel Bayonet Ring Extra cost option – 4 1/2" and 8 1/2" dial sizes only.
FLUSH PANEL MOUNTED STYLES	
E	Aluminum Case Black Threaded Front Flange Ring Extra cost option – all dial sizes.
B	Aluminum Case, Semi-Flush Mounting Black Aluminum Bayonet Ring Extra cost option – 3 1/2", 4 1/2", 6" dial sizes.
H	Aluminum Case, Semi-Flush Mounting Chrome like Bayonet Ring Extra cost option – 8 1/2" dial size only.
V	Stainless Steel Case and Bayonet Ring Front Flange – Semi-Flush Mounting Extra cost option – 4 1/2" dial sizes only.
W	Aluminum Case Hinged Front Plastic Bezel Extra cost option – 4 1/2", 6" dial sizes only. (back conn. only)
DIRECT MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard on 4 1/2" dial size only.
C	Aluminum, Flangeless Black Aluminum Bayonet Ring. Standard on 3 1/2", 4 1/2" and 6" dial sizes.
Y	Stainless Steel, Flangeless Stainless Steel Bayonet Ring Standard on base catalog No. 453B Extra cost option for all other 4 1/2" dial sizes only.

For complete case description and dimensions refer to pages 108-111

TABLE 4

CONNECTION LOCATION CODE	AVAILABILITY			
	ALL SS ADJ. ANGLE	ADJUST ANGLE	RIGID TYPE	REMOTE MOUNT
C = Center Back	•	•		
L = Lower		•	•	•
R = Rear			•	•

TABLE 5

CODE	CASE FEATURE
0	None
2	Flush mounting ring and contact
F	Flush mounting ring only
C	Contact

TABLE 6

CODE	CAPILLARY TYPE
E	Stainless steel armored
Q	PVC coated
X	None required

TABLE 7 – BULB DIMENSIONS

CODE	LENGTH	DIAMETER
NE	12"	3/8 (.375)
GG	6"	1/2 (.50)
CE	3"	3/8 (.375)
CJ	3"	5/8 (.625)
EE	4"	3/8 (.375)
GE	6"	3/8 (.375)
KE	9"	3/8 (.375)
DJ	3 1/2"	5/8 (.625)
GJ	6"	5/8 (.625)
KJ	9"	5/8 (.625)
NJ	12"	5/8 (.625)

TABLE 8

CODE	OPTIONS
0	NONE
D	25" bendable extension
E	30" bendable extension

TABLE 9 – STANDARD RANGES

CODE	FAHRENHEIT	CODE	DUAL (F&C)	CODE	CELCIUS
FA	-100/100	DA	-40/104F & -40/40C	CA	-100/100
FB	-40/110	DB	-40/180F & -40/82C	CB	-40/180
FC	-40/180	DD	-20/120F & -30/50C	CC	-40/110
FD	-20/120	DD	0/120F & -20/50C	CD	0/100
FE	0/100	DE	0/150F & -18/66C	CE	0/120
FF	0/120	DF	0/300F & -20/120C	CF	0/150
FG	0/150	DG	0/500F & -18/260C	CG	0/200
FH	0/200	DH	30/240F & 0/115C	CH	0/300
FI	0/300	DI	50/550F & 10/290C	CI	0/400
FJ	0/400	DJ	200/1000F & 95/540C	CJ	0/500
FK	0/500	DK	400/1200F & 200/650C	CK	200/650
FL	20/240	DL	0/1000F & 18/38C	CM	30/50
FM	30/240	DO	50/750F & 10/399C	CR	30/150
FN	50/550				
FO	50/750				
FP	200/1000				
FQ	400/1200				

TABLE 10

CODE	LENGTH OF CAPILLARY TUBING LENGTHS UP TO 100'
00	None
02	2'
12	12'
1C	100'

HOW TO ORDER

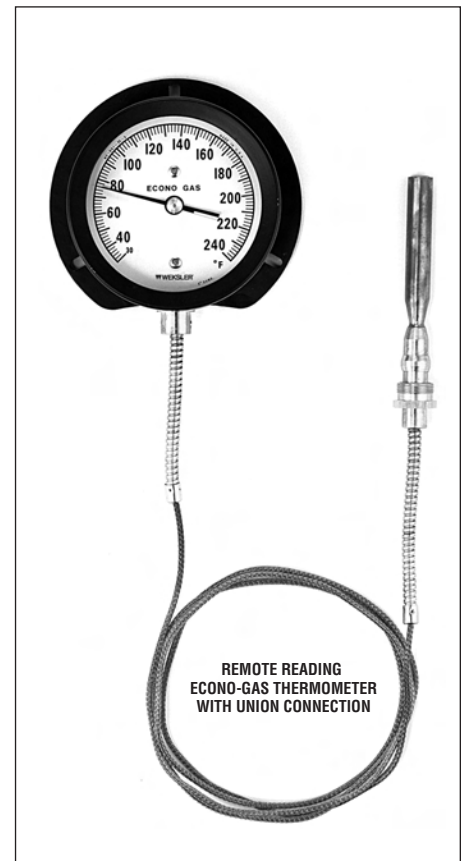
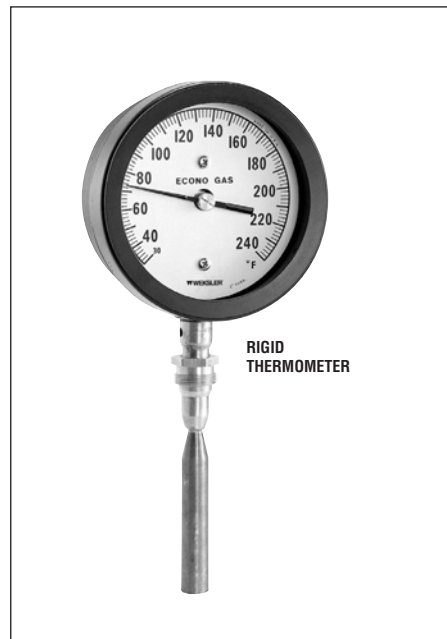
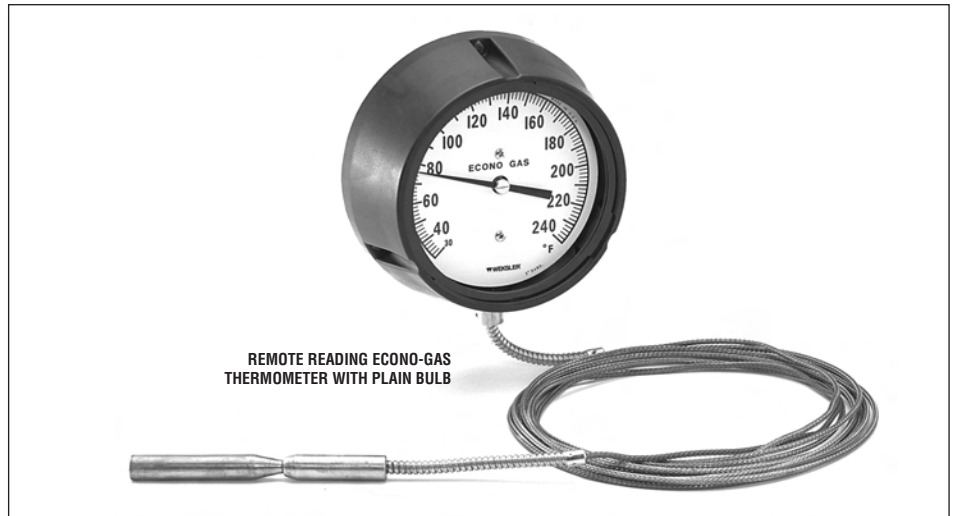
4 5 3 B 4 Y C 0 X EE 0 FA 00 ()

- Specify 4-digit Base Catalog No. from Table 1 _____
- Add Bulb Digit from Table 2 _____
- Add Case Style Digit from Table 3 _____
- Add Connection Location Digit from Table 4 _____
- Add Case Feature Digit from Table 5 (enter "0" if none) _____
- Add Capillary Type Digit from Table 6 (enter "X" if none required) _____
- Add Bulb Dimension Digits from Table 7 _____
- Add Bendable extension Length Digit Options from Table 8 (enter "0" if none required) _____
- Add Range Code Digits from Table 9 _____
- Add Length of Capillary Digit(s) from Table 10 (enter "00" if none required) _____
- Add Optional Feature Code from Page 86 if needed _____

Direct or Remote Mounted Econo Gas-Actuated Thermometers

STANDARD FEATURES

- Uniformly graduated scales
- Accurate to $\pm 1\%$ of range span
- 3 $\frac{1}{2}$ " and 4 $\frac{1}{2}$ " dial sizes
- Adjustable pointer
- Fast response
- Inert gas fill – ideal for applications where Mercury is prohibited
- Copper Bulb, $\frac{1}{2}$ " diameter with brass fittings
- Bronze bushed rotary type brass movement



STANDARD TYPE "P" CAPILLARY TUBING



0.125" O.D. Copper Braided Protective Covering Over Copper Capillary
AVAILABLE LENGTHS: 5, 10, 15, 20, 25 or 30 feet.





TABLE 1

REMOTE AND DIRECT MOUNTED TYPES		
BASE CATALOG NO.	DIAL SIZE	TYPE
313E 413E 613E	3½" 4½" 6"	REMOTE MOUNTED
333E 433E	3½" 4½"	ADJUSTABLE ANGLE
323E 423E	3½" 4½"	RIGID (NOT ADJUSTABLE)

TABLE 3 – CASE STYLES

WALL MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard – 4½" dial size only.
A	Aluminum, Rear Flange Black Aluminum Bayonet Ring Standard – 3½" dial size. Extra cost option – 4½" dial size.
X	Stainless Steel, Rear Flange Stainless Steel Bayonet Ring Extra cost option – 4½" dial size.
FLUSH PANEL MOUNTED STYLES	
E	Aluminum Case Black Threaded Front Flange Ring Extra cost option – all dial sizes.
B	Aluminum Case, Semi-Flush Mounting Black Aluminum Bayonet Ring Extra cost option
V	Stainless Steel Case and Bayonet Ring Front Flange – Semi-Flush Mounting Extra cost option – 4½" dial sizes only.
W	Aluminum Case Hinged Front Plastic Bezel Extra cost option – 4½" dial size.
DIRECT MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard on 4½" dial size. (Not available in other dial sizes.)
C	Aluminum, Flangeless Black Aluminum Bayonet Ring. Standard on 3½" dial size. Extra cost option for 4½" dial size.
Y	Stainless Steel, Flangeless Stainless Steel Bayonet Ring Extra cost option for 3½" or 4½" dial sizes

TABLE 2 – BULB TYPE AND SIZE
FOR ALL MOUNTED TYPES

PLAIN BULB FOR LIQUIDS IN OPEN TANKS, VATS, SINKS, ETC.		CODE									
	6" Long X .50" Diameter	3.5" C									
Optional Fittings: A1 ½ NPT Compression Fitting A12-2 Set Screw Flange		6" D									
PLAIN BULB WITH 12" BENDABLE EXTENSION											
	3" x .50" Diameter Bulb	E									
SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION											
	3.5" x .625" Diameter Bulb, 1"-20 NEF-2B Swivel Nut	N									
Optional Fittings: All "5F" Series Thermowells All "5F" Series Bushings											
DIRECT MOUNTED TYPES											
½" O.D. Bulb – ¾"-24 NS-2 Swivel Nut with Compression Fitting											
Union Connection (fixed length) Wells, bushings or flanges required for installation	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>J</td> <td>3½"</td> <td>4½" O.A.</td> </tr> <tr> <td>K</td> <td>6"</td> <td>6½" O.A.</td> </tr> </tbody> </table>	CODE	STEM LENGTH	FITS WELL*	J	3½"	4½" O.A.	K	6"	6½" O.A.	
CODE	STEM LENGTH	FITS WELL*									
J	3½"	4½" O.A.									
K	6"	6½" O.A.									
	Optional Fittings: "4B Series" Thermowells "4B Series" Bushings All-2 Flange										

For complete case description and dimensions refer to pages 108-111

TABLE 4

CONNECTION LOCATION	AVAILABILITY	
	ADJUST ANGLE	RIGID TYPE
CODE		
L = Lower	•	•
R = Rear		•

TABLE 5

CODE	CASE FEATURE
0	None
2	Flush mounting ring and contact
F	Flush mounting ring only
C	Contact

TABLE 6

CODE	CAPILLARY TYPE
X	None required
P	Copper with braided copper covering

TABLE 7 – BULB DIMENSIONS

CODE	LENGTH	DIAMETER
DG	3 1/2"	1/2 (.50)
GG	6"	1/2 (.50)
CG	3"	1/2 (.50)

TABLE 8

CODE	OPTIONS
0	None
D	25" bendable extension
E	30" bendable extension

TABLE 9 – STANDARD RANGES

CODE	FAHRENHEIT	DIVISIONS
FD	-20 to 120°F	1°
FE	0 to 100°F	1°
FR	30 to 150°F	1°
FM	30 to 240°F	2°
FI	0 to 300°F	2°
CODE	CELSIUS	DIVISIONS
CM	-30 to 50°C	1°
CD	0 to 100°C	1°
CR	30 to 150°C	1°
CODE	DUAL	DIVISIONS
DL	0 to 100°F -18 to 38°C	1°
DH	30 to 240°F 0 to 115°C	2°
		1°

TABLE 10

CODE	LENGTH OF CAPILLARY TUBING
00	None
2	2'
12	12'
30*	30'

*Maximum capillary length

HOW TO ORDER

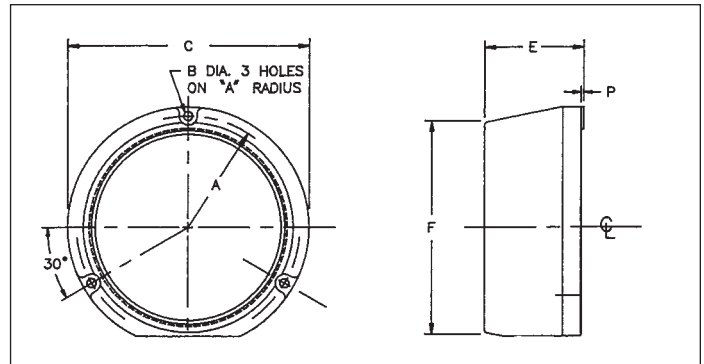
4 3 3 E J V L 0 X DG 0 FD 00 ()

1. Specify 4-digit Base Catalog No. from Table 1 _____
2. Add Bulb Digit from Table 2 _____
3. Add Case Style Digit from Table 3 _____
4. Add Connection Location Digit from Table 4 _____
5. Add Case Feature Digit from Table 5 (enter "0" if none) _____
6. Add Capillary Type Digit from Table 6 (enter "X" if none required) _____
7. Add Bulb Dimension Digits from Table 7 _____
8. Add Bendable extension Length Digit Options from Table 8 (enter "0" if none required) _____
9. Add Range Code Digits from Table 9 _____
10. Add Length of Capillary Digit(s) from Table 10 (enter "00" if none required) _____
11. Add Optional Feature Code from Page 112 if needed _____

SURFACE (WALL) OR DIRECT MOUNT TYPES


Snap-in glass retaining ring.

Standard for 4½" remote or direct mount types (except all stainless steel adjust angle).



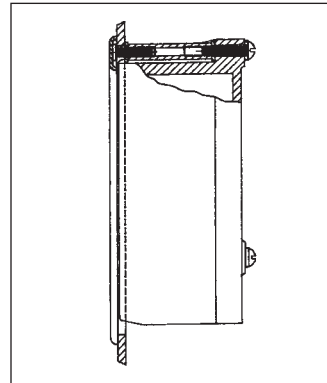
STYLE	DIAL SIZE(S)	MATERIAL
P	4½" Only	Polypropylene

GAUGE SIZE	A	B	C	E	F	P
4½	INCH 2 ¹¹ / ₁₆	¼	5 ¹³ / ₁₆	2 ⁷ / ₁₆	5 ¹ / ₁₆	¼
	MM 68	6	148	62	129	2

FLUSH MOUNTING RING KIT FOR STYLE "P" CASE

CATALOG NUMBER	FOR USE WITH	PANEL CUT-OUT DIAMETER
TR45	4½" "P" Case	5.675"

Kit consists of flush mounting ring plus necessary hardware for mounting (screws, washers, spacer posts).


SURFACE (WALL) MOUNT TYPES

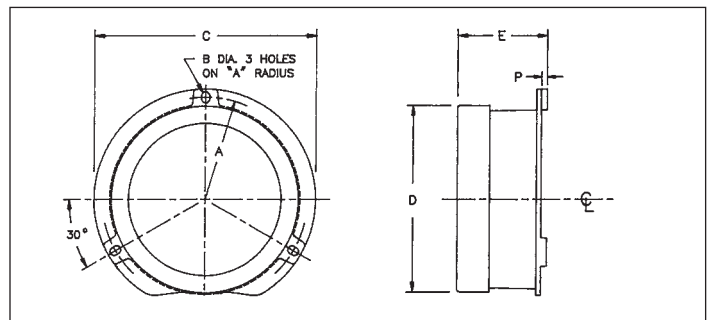

Style "A" has bayonet type glass retaining ring.

Style "G" has chrome like slip on glass retaining ring.

Style "A" is standard on 3½" and 6" dial size remote mount thermometers and is optional for 4½" dial size.

Style "G" is standard on 8½" dial size remote mount thermometers.

STYLE	DIAL SIZE(S)	MATERIAL
A	3½" - 4½" - 6"	Aluminum Black Textured Enamel Finish
G	8½" Only	



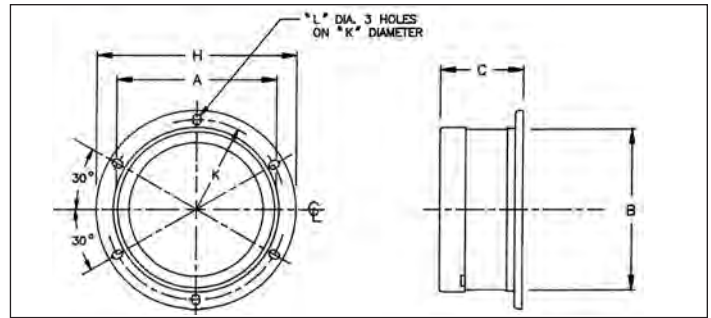
GAUGE SIZE	A	B	C	E	F	P
3½	INCH 2 ¹ / ₈	¾	5	4	2 ¹ / ₁₆	¼
	MM 64	5	127	102	52	3
4½	INCH 2 ¹¹ / ₁₆	¾	5 ¹ / ₈	4 ¹ / ₁₆	2 ⁷ / ₁₆	¼
	MM 68	5	149	125	62	3
6	INCH 3 ⁹ / ₁₆	¼	7 ⁷ / ₈	6 ⁷ / ₁₆	2 ¹ / ₂	¼
	MM 90	6	194	164	64	3
8½	INCH 4 ¹³ / ₁₆	¼	10 ¹ / ₄	8 ¹³ / ₁₆	2 ⁹ / ₁₆	¼
	MM 122	6	260	227	59	2

NOTE: ALL DIMENSIONS ARE APPROXIMATE.

SURFACE (WALL) MOUNT TYPES (Cont.)



BAYONET TYPE GLASS RETAINING RING
4 1/2" dial size remote mount thermometers.



GAUGE SIZE		A	B	C	H	K	L
4 1/2	INCH	4 7/8	4 9/16	2 5/16	6	5 1/16	7/32
	MM	124	116	59	152	144	6

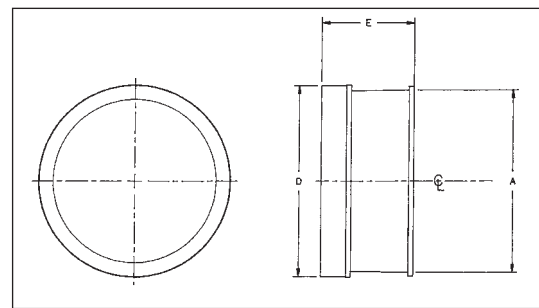
STYLE	DIAL SIZE(S)	MATERIAL
X	4 1/2"	Stainless Steel (300 Series)

DIRECT MOUNT TYPES (Flangless Case)



Style "C" is standard on 3 1/2" and 6" dial size direct mount thermometers and is extra cost option for 4 1/2" dial size.

Glass retaining ring is Bayonet type on style "C" and slip-on type on style "I".

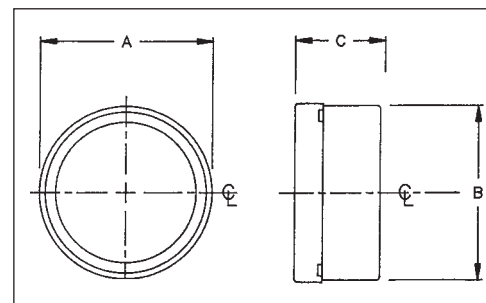


GAUGE SIZE		A	BEZEL-D		E
			BAY'NT	SLIP	
3 1/2	INCH	3 3/8	4 1/8	-	2
	MM	98	105	-	51
4 1/2	INCH	4 15/16	5	-	2 5/8
	MM	125	127	-	60
6	INCH	6 7/16	6 1/2	-	2 7/16
	MM	164	165	-	62

STYLE	DIAL SIZE(S)	MATERIAL
C	3 1/2" - 4 1/2" - 6"	Aluminum Black Textured Enamel Finish



BAYONET TYPE GLASS RETAINING RING
Standard on all stainless steel adjust angle, extra cost on all other 3 1/2" or 4 1/2" dial size direct mount thermometers.



GAUGE SIZE		A	B	C
4 1/2	INCH	4 7/8	4 1/16	2 3/16
	MM	124	116	56

STYLE	DIAL SIZE(S)	MATERIAL
Y	4 1/2"	Stainless Steel (300 Series)

NOTE: ALL DIMENSIONS ARE APPROXIMATE.

FLUSH PANEL MOUNT TYPES

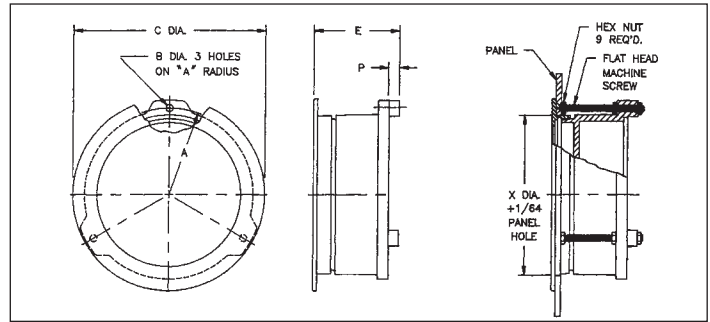


Flanged threaded glass retaining ring for full flush mounting.

Extra cost option on all dial size remote mount thermometers.

NOTE: Rear (back) connections are recommended for flush mounting. Bottom connection is also available.
NOTE: Style "E" formerly was style "AF".

STYLE	DIAL SIZE(S)	MATERIAL
E	3½", 4½", 6" and 8½"	Aluminum Black Textured Enamel Finish



GAUGE SIZE		A	B	C	D	E	P	X	SCREW SIZE
3½	INCH	2 ³ / ₁₆	⁷ / ₃₂	5	4 ¹⁵ / ₁₆	2	¹ / ₈	4	10-32 x 2½
	MM	56	6	127	125	51	3	102	
4½	INCH	2 ¹¹ / ₁₆	⁷ / ₃₂	5 ⁷ / ₈	6	2 ⁷ / ₁₆	³ / ₁₆	5	10-32 x 2½
	MM	68	6	149	152	62	5	127	
6	INCH	3½	⁹ / ₃₂	7 ⁵ / ₈	7 ³ / ₄	2 ¹ / ₁₆	³ / ₁₆	6½	¼-20 x 2½
	MM	89	7	194	197	62	5	165	
8½	INCH	4 ¹³ / ₁₆	⁹ / ₃₂	10 ¹ / ₈	10 ³ / ₈	2 ⁵ / ₁₆	¹ / ₁₆	9	¼-20 x 2½
	MM	122	7	257	264	59	2	229	

HINGED FRONT TYPE FOR FLUSH MOUNTING

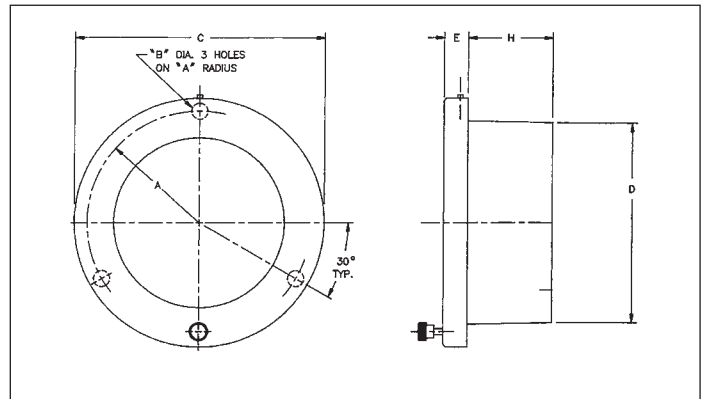


Molded plastic hinged front ring allows easy access to dial and pointer.

Extra cost option on 4½" and 6" dial size remote mount thermometers.

NOTE: Only available with rear (back) connection.

STYLE	DIAL SIZE(S)	MATERIAL
W	4½" and 6"	Aluminum Black Textured Enamel Finish



GAUGE SIZE		A	B	C	D	E	H	X
4½	INCH	2 ¹¹ / ₁₆	³ / ₁₆	6 ³ / ₁₆	4 ⁷ / ₈	⁵ / ₈	2	4 ¹⁵ / ₁₆
	MM	68	5	157	124	16	51	125
6	INCH	3½	³ / ₁₆	7 ¹³ / ₁₆	6 ⁵ / ₈	⁵ / ₈	1¾	6 ⁷ / ₁₆
	MM	89	5	198	168	16	44	164

X-PANEL HOLE CUT-OUT DIAMETER

FLUSH PANEL MOUNT TYPES



Front flanged case for semi-flush mounting.

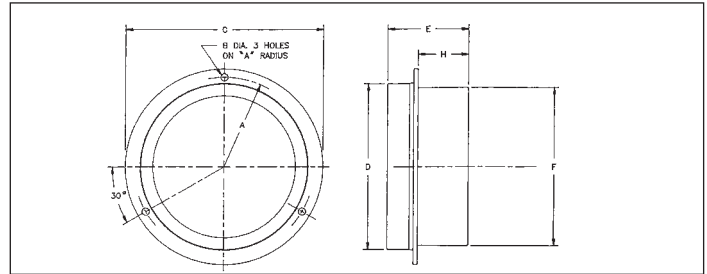
Style "B" has Bayonet type glass retaining ring.

Style "H" has chrome like slip on glass retaining ring.

Extra cost option on all remote mount thermometers.

NOTE: Only available with rear (back) connection.

STYLE	DIAL SIZE(S)	MATERIAL
B	3½" - 4½" - 6"	Aluminum
H	8½" Only	Black Textured Enamel Finish



GAUGE SIZE		A	B	C	D	E	F	H	X
3½	INCH	2¼	¼	4 ¹⁵ / ₁₆	4 ¹ / ₈	2	3 ¹³ / ₁₆	1 ¹ / ₃₂	3 ¹⁵ / ₁₆
	MM	57	6	125	105	51	97	26	100
4½	INCH	2 ¹ / ₁₆	¼	5 ⁵ / ₈	5	2¼	4¾	1½	4 ⁷ / ₈
	MM	68	6	149	127	57	121	38	124
6	INCH	3½	¾	7 ⁹ / ₁₆	6½	2 ⁷ / ₁₆	6 ⁵ / ₁₆	1 ⁷ / ₁₆	6 ⁵ / ₁₆
	MM	89	7	192	165	62	157	37	160

X-PANEL HOLE CUT-OUT DIAMETER



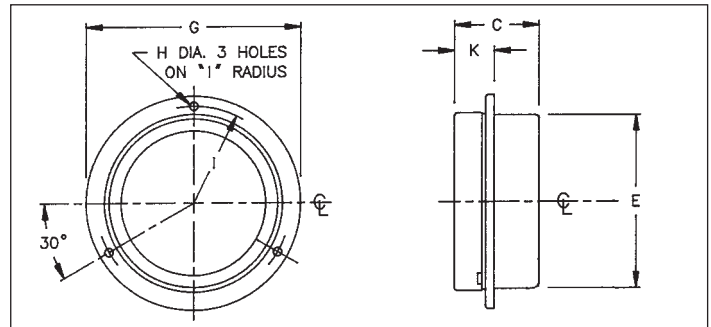
Front flanged case for semi-flush mounting.

Bayonet type glass retaining ring.

Extra cost option 4½" dial size remote mount thermometers.

NOTE: Only available with rear (back) connection.

STYLE	DIAL SIZE(S)	MATERIAL
V	4½"	Stainless Steel (300 Series)



GAUGE SIZE		A	B	C	H	K	L
4½	INCH	2 ¹ / ₈	4 ⁹ / ₁₆	5 ¹⁵ / ₁₆	7 ⁷ / ₃₂	2 ¹ / ₁₆	1 ³ / ₁₆
	MM	54	116	151	6	68	21

NOTE: ALL DIMENSIONS ARE APPROXIMATE.

FEATURES	OPTION CODE
Plastic Lens	PD
Shatterproof Glass	SG
Movable Red Set Hand	SH
Dual Red Set Hands	ST
Markings on Dial	DM
Maximum Indicating Hand	EP
Minimum Indicating Hand	EQ
Paper Tag Attached to Instrument	NN
Stainless Steel Tag Attached by Wire	NH
Special Dials (Minimum Quantity Required)	SS

ELECTRIC CONTACTS – 4½" DIAL SIZE ONLY

The electric contact feature is a switching mechanism actuated by the indicating pointer. Switch points are adjustable and can be set throughout the 270° arc. Contacts are used to activate alarms and relays.

(Not recommended for continuous switching).



STANDARD FEATURES

- High impact polycarbonate enclosure for ambient temperature up to 150°F
- Full scale contact adjustment from front of enclosure
- Magnetically assisted, silver alloy contact
- Accuracy ±2% of scale arc (add to instrument accuracy)
- Rated for ¼ amp, 110 volt AC non-inductive load
- Available in type P, E, W, Y cases

MODEL	GSHA (Code E1)	GHLDA (Code E2)
DESCRIPTION	Single adjustable contact designed to "make" on the rise.	Double adjustable contact designed to "make" on the rise at the high setpoint and "make" on the drop at the low setpoint "off-in-between"
CONNECTION	2' lead wires exit side of case thru a conduit fitting.	2' lead wires exit thru fitting in lower portion of enclosure.
WIRING DIAGRAM		

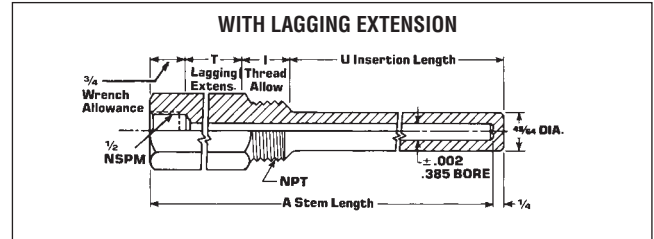
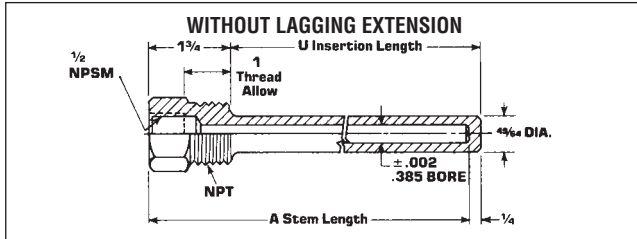
CONNECTING TUBING

TUBING TYPES	ARMOR MATERIAL	CAPILLARY MATERIAL	TUBING TYPE NO.
	PVC Over 0.280" O.D. Zinc Plated Steel Interlocked Spiral	Stainless Steel (347)	Q
	0.1875" O.D. Stainless steel (316), Smooth Bendable	Stainless Steel (347)	G
	0.125" O.D. Stainless Steel Braid (321)	Stainless Steel (347)	O

NOTE: Optional tubing types not available on "Econo Gas" type.

“K” SERIES THERMOWELLS

(Fits 3/8" O.D. Bulb with 1/2" NPSM Swivel Nut)



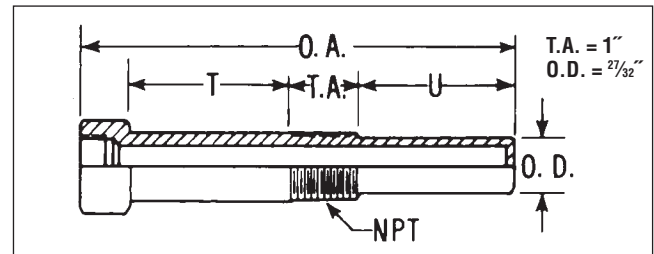
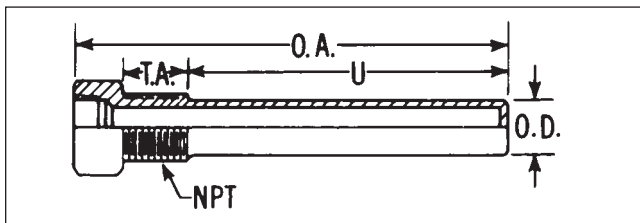
PART NUMBERS - 3/4 NPT					
A	U	BRASS	STEEL	304 SS	316 SS
4	2 1/2	S3B4K	S3S4K	S3G4K	S3J4K
6	4 1/2	S3B6K	S3S6K	S3G6K	S3J6K
9	7 1/2	S3B9K	S3S9K	S3G9K	S3J9K
12	10 1/2	S3B2K	S3S2K	S3G2K	S3J2K

PART NUMBERS - 3/4 NPT*						
A	U	T	BRASS	STEEL	304 SS	316 SS
6	2 1/2	2 1/2	L3B6K	L3S6K	L3G6K	L3J6K
9	4 1/2	3 1/2	L3B9K	L3S9K	L3G9K	L3J9K
12	7 1/2	3 1/2	L3B2K	L3S2K	L3G2K	L3J2K

*1 NPT AVAILABLE AT EXTRA COST, CHANGE 2ND DIGIT FROM 3 TO 4.

“5F” SERIES THERMOWELL

(Fits 5/8" O.D. Bulb with 1-20 NEF-2B Swivel Nut)



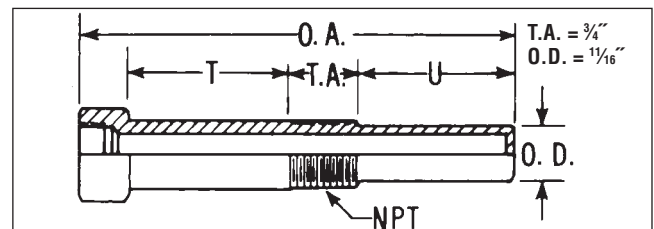
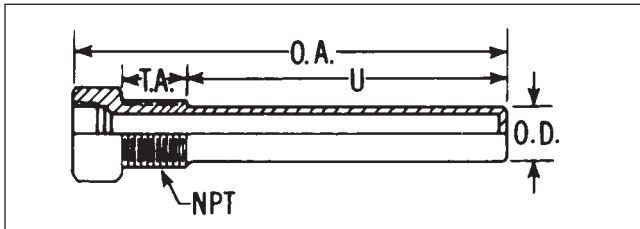
PART NUMBERS - 3/4 NPT**					
O.A. LENGTH	U DIM.	BRASS	STEEL	304 SS	316 SS
4 1/4	2 1/2	D1E5F2	D3E5F2	D6E5F2	D4E5F2
6 1/4	5	D1M5F2	D3M5F2	D6M5F2	D4M5F2
9 1/4	8	D1S5F2	D3S5F2	D6S5F2	D4S5F2
12 1/4	11	D1T5F2	D3T5F2	D6T5F2	D4T5F2

PART NUMBERS - 3/4 NPT**						
O.A. LENGTH	U DIM.	T DIM.	BRASS	STEEL	304 SS	316 SS
6 1/4	2 1/2	2 1/2	D1M5F2E	D3M5F2E	D6M5F2E	D4M5F2E
9 1/4	5 1/2	2 1/2	D1S5F2E	D3S5F2E	D6S5F2E	D4S5F2E
12 1/4	8 1/2	2 1/2	D1T5F2E	D3T5F2E	D6T5F2E	D4T5F2E

**1 NPT AVAILABLE AT EXTRA COST, CHANGE 6TH DIGIT FROM 2 TO 3.

“4B” SERIES THERMOWELLS - for econo thermometers

(Fits 1/2" O.D. Bulb with 3/4-24 NS-2 Swivel Nut)



PART NUMBERS - 1/2 NPT***					
O.A. LENGTH	U DIM.	BRASS	STEEL	304 SS	316 SS
4	2 3/4	D1D4B1	D3D4B1	D6D4B1	D4D4B1
6 1/2	5 1/4	D1V4B1	D3V4B1	D6V4B1	D4V4B1
9 1/2	8 1/4	D1Z4B1	D3Z4B1	D6Z4B1	D4Z4B1
12 1/2	11 1/4	D1T4B1	D3T4B1	D6T4B1	D4T4B1

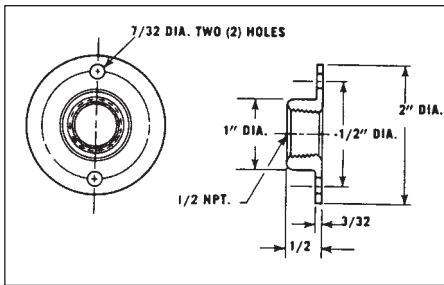
PART NUMBERS - 1/2 NPT***						
O.A. LENGTH	U DIM.	T DIM.	BRASS	STEEL	304 SS	316 SS
6 1/2	2 3/4	2 1/2	D1V4B1E	D3V4B1E	D6V4B1E	D4V4B1E
9 1/2	5 1/4	2 1/2	D1Z4B1E	D3Z4B1E	D6Z4B1E	D4Z4B1E
12 1/2	8 1/4	2 1/2	D1T4B1E	D3T4B1E	D6T4B1E	D4T4B1E

***3/4 NPT AVAILABLE AT EXTRA COST, CHANGE 6TH DIGIT FROM 1 TO 2.

FLANGES (2" O.D.) For use in air ducts, dryers, ovens, etc.

1/2 NPT FLANGE

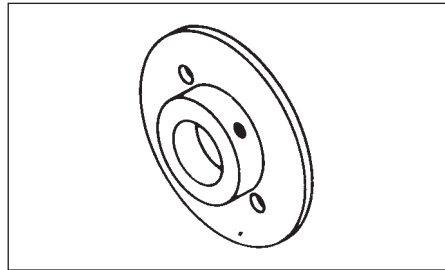
Satin finish chrome plated brass.
For use with bulb style "3" only.



PART NUMBER 2F2

SET SCREW FLANGE

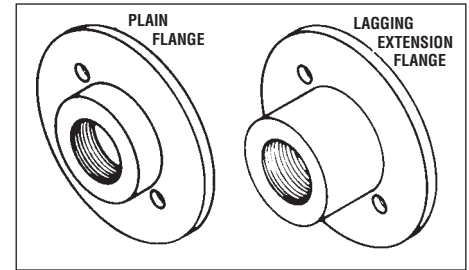
Brass.
For use on plain bulb.
(Style "C" only).



PART NUMBER A12-2

3/4"-24 NS-2 FLANGES

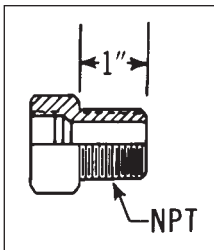
Brass.
For use with Econo-gas.
Bulb styles J, K and N only.



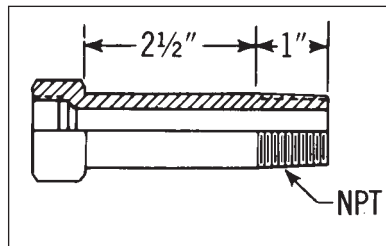
PART NUMBER A11-2 PART NUMBER A13-2

THREADED BUSHINGS

SERIES	INTERNAL THREAD	MALE THREAD	TYPE	BRASS	PART NUMBER	
					304 SS	316 SS
"4B"	3/4"-24 NS-2	1/2 NPT	Standard	D124B1	D624B1	D424B1
			Lagging	D124B1E	D624B1E	D424B1E
"5F"	1"-20 NEF-2B	3/4 NPT	Standard	D145F2	D645F2	D445F2
			Lagging	D145F2E	D645F2E	D445F2E



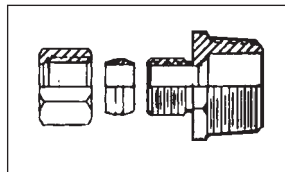
STANDARD BUSHING



LAGGING EXTENSION BUSHING

1/2 NPT COMPRESSION UNION

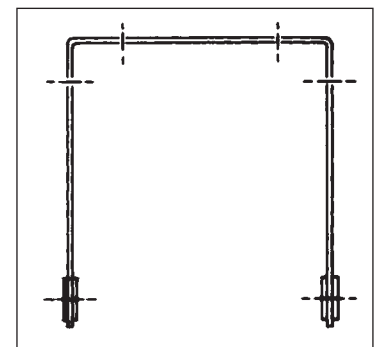
For use on 1/2" O.D. rigid extension plain bulbs.
(Bulb Style "C").



PART NUMBER	THREAD	MATERIAL
1A	1/2 NPT	Brass
1A-SS	1/2 NPT	304 SS

MOUNTING BRACKET

Used to support Type "A" air temperature bulb; 5" wall clearance provides good air circulation and minimum radiation effect. Nickel plated brass standard. For bulb style "A" only.



PART NUMBER A16



Temperature Conversion Table

NOTE: The numbers in the center of each column refer to the temperature either in degrees Celsius or Fahrenheit which it is desired to convert into the

other scale. If converting from Fahrenheit degrees to Celsius degrees the equivalent temperature will be found in the left column, while if converting from

degrees Celsius to degrees Fahrenheit the answer will be found in the column on the right.

-459.4 to -10			-9 to +50			51 to 110			120 to 700			710 to 1300		
C		F	C	F		C	F		C	F		C	F	
-273	-459.4		-22.8	-9	15.8	10.6	51	123.8	48.9	120	248	377	710	1310
-268	-450		-22.2	-8	17.6	11.1	52	125.6	54.4	130	266	382	720	1328
-262	-440		-21.7	-7	19.4	11.7	53	127.4	60.0	140	284	388	730	1346
-257	-430		-21.1	-6	21.2	12.2	54	129.2	65.6	150	302	393	740	1364
-251	-420		-20.6	-5	23.0	12.8	55	131.0	71.1	160	320	399	750	1382
-246	-410		-20.0	-4	24.8	13.3	56	132.8	76.7	170	338	404	760	1400
-240	-400		-19.4	-3	26.6	13.9	57	134.6	82.2	180	356	410	770	1418
-234	-390		-18.9	-2	28.4	14.4	58	136.4	87.8	190	374	416	780	1436
-229	-380		-18.3	-1	30.2	15.0	59	138.2	93.3	200	392	421	790	1454
-223	-370		-17.8	0	32.0	15.6	60	140.0	98.9	210	410	427	800	1472
-218	-360		-17.2	1	33.8	16.1	61	141.8	100	212	413.6	432	810	1490
-212	-350		-16.7	2	35.6	16.7	62	143.6	104	220	428	438	820	1508
-207	-340		-16.1	3	37.4	17.2	63	145.4	110	230	446	443	830	1526
-201	-330		-15.6	4	39.2	17.8	64	147.2	116	240	464	449	840	1544
-196	-320		-15.0	5	41.0	18.3	65	149.0	121	250	482	454	850	1562
-190	-310		-14.4	6	42.8	18.9	66	150.8	127	260	500	460	860	1580
-184	-300		-13.9	7	44.6	19.4	67	152.6	132	270	518	466	870	1598
-179	-290		-13.3	8	46.4	20.0	68	154.4	138	280	536	471	880	1616
-173	-280		-12.8	9	48.2	20.6	69	156.2	143	290	554	477	890	1634
-169	-273	-459.4	-12.2	10	50.0	21.1	70	158.0	149	300	572	482	900	1652
-168	-270	-454	-11.7	11	51.8	21.7	71	159.8	154	310	590	488	910	1670
-162	-260	-436	-11.1	12	53.6	22.2	72	161.6	160	320	608	493	920	1688
-157	-250	-418	-10.6	13	55.4	22.8	73	163.4	166	330	626	499	930	1706
-151	-240	-400	-10.0	14	57.2	23.3	74	165.2	171	340	644	504	940	1724
-146	-230	-382	-9.44	15	59.0	23.9	75	167.0	177	350	662	510	950	1742
-140	-220	-364	-8.89	16	60.8	24.4	76	168.8	182	360	680	516	960	1760
-134	-210	-346	-8.33	17	62.6	25.0	77	170.6	188	370	698	521	970	1778
-129	-200	-328	-7.78	18	64.4	25.6	78	172.4	193	380	716	527	980	1796
-123	-190	-310	-7.22	19	66.2	26.1	79	174.2	199	390	734	532	990	1814
-118	-180	-292	-6.67	20	68.0	26.7	80	176.0	204	400	752	538	1000	1832
-112	-170	-274	-6.11	21	69.8	27.2	81	177.8	210	410	770	543	1010	1850
-107	-160	-256	-5.56	22	71.6	27.8	82	179.6	216	420	788	549	1020	1868
-101	-150	-238	-5.00	23	73.4	28.3	83	181.4	221	430	806	554	1030	1886
-95.6	-140	-220	-4.44	24	75.2	28.9	84	183.2	227	440	824	560	1040	1904
-90.0	-130	-202	-3.89	25	77.0	29.4	85	185.0	232	450	842	566	1050	1922
-84.4	-120	-184	-3.33	26	78.8	30.0	86	186.8	238	460	860	571	1060	1940
-78.9	-110	-166	-2.78	27	80.6	30.6	87	188.6	243	470	878	577	1070	1958
-73.3	-100	-148	-2.22	28	82.4	31.1	88	190.4	249	480	896	582	1080	1976
-67.8	-90	-130	-1.67	29	84.2	31.7	89	192.2	254	490	914	588	1090	1994
-62.2	-80	-112	-1.11	30	86.0	32.2	90	194.0	260	500	932	593	1100	2012
-56.7	-70	-94.0	-0.56	31	87.8	32.8	91	195.8	266	510	950	599	1110	2030
-51.1	-60	-76.0	0	32	89.6	33.3	92	197.6	271	520	968	604	1120	2048
-45.6	-50	-58.0	0.56	33	91.4	33.9	93	199.4	277	530	986	610	1130	2066
-40.0	-40	-40.0	1.11	34	93.2	34.4	94	201.2	282	540	1004	616	1140	2084
-38.9	-38	-36.4	1.67	35	95.0	35.0	95	203.0	288	550	1022	621	1150	2102
-37.8	-36	-32.8	2.22	36	96.8	35.6	96	204.8	293	560	1040	627	1160	2120
-36.7	-34	-29.2	2.78	37	98.6	36.1	97	206.6	299	570	1058	632	1170	2138
-35.6	-32	-25.6	3.33	38	100.4	36.7	98	208.4	304	580	1076	638	1180	2156
-34.4	-30	-22.0	3.89	39	102.2	37.2	99	210.2	310	590	1094	643	1190	2174
-33.3	-28	-18.4	4.44	40	104.0	37.8	100	212.0	316	600	1112	649	1200	2192
-32.2	-26	-14.8	5.00	41	105.8	38.3	101	213.8	321	610	1130	654	1210	2210
-31.1	-24	-11.2	5.56	42	107.6	38.9	102	215.6	327	620	1148	660	1220	2228
-30.0	-22	-7.6	6.11	43	109.4	39.4	103	217.4	332	630	1166	666	1230	2246
-28.9	-20	-4.0	6.67	44	111.2	40.0	104	219.2	338	640	1184	671	1240	2264
-27.8	-18	-0.4	7.22	45	113.0	40.6	105	221.0	343	650	1202	677	1250	2282
-26.7	-16	3.2	7.78	46	114.8	41.1	106	222.8	349	660	1220	682	1260	2300
-25.6	-14	6.8	8.33	47	116.6	41.7	107	224.6	354	670	1238	688	1270	2318
-24.4	-12	10.4	8.89	48	118.4	42.2	108	226.4	360	680	1256	693	1280	2336
-23.3	-10	14.0	9.44	49	120.2	42.8	109	228.2	366	690	1274	699	1290	2354
			10.0	50	122.0	43.3	110	230.0	371	700	1292	704	1300	2372

INTERPOLATION FACTORS

C	F	C	F
0.56	1	3.89	7
1.11	2	4.44	8
1.67	3	5.00	9
2.22	4	5.56	10
2.78	5		
3.33	6		

