

**HARCO**

**ENTERPRISES LTD.**

*Since 1964*

BI-METAL  
THERMOMETERS  
CATALOG





# Supply House to the Processing Industries Since 1964

**Trusted supply house of sanitary processing equipment, parts and supplies for the dairy and food, brewery, beverage and pharmaceutical industries.**

Harco Enterprises offers a diverse line of sanitary and hygienic processing equipment, parts and supplies including pumps, sanitary valves, separators, homogenizers, gaskets and fittings, sanitary hoses, and instrumentation as well as a variety of other products from world leading manufacturers such as Alfa Laval, Ampco, Tetra Pak, Burkert, Tri-Clover, Remco, Vikan, Carlisle, Haynes, Strahman, and more.

These products are distributed to dairy, food, beverage processing facilities as well as the pharmaceutical, brewing, and fisheries industries throughout North America.

Many of our products are customized in design due to strict sanitary and hygienic standards, and all are built to stand up to the demands of high production environments. Resourcefulness and quick delivery are important to you, and Harco always provides both.

Check out our large collection of equipment, parts and supplies, including our line of color-coded products available.

**Visit our website today at [www.harcosupply.com](http://www.harcosupply.com)**

## Bi-Metal Thermometers

The Bi-Metal Thermometer is built to function for many years with little or no maintenance. Our dedication to quality is not only evident in our products, but also in our customer service. We offer immediate availability on all products and respond quickly with quality service at reasonable prices. We feel so strongly about the quality of our products and service that we guarantee complete satisfaction.

### FEATURES

**Standard 304 Stainless Steel Case and Bezel** on all external parts increases corrosion resistance.

**Super Sensitive Bimetallic Helix Coil** is fabricated to tight tolerances. Heat treated for stress relief and silicone coated to minimize pointer vibration and maximize heat transfer and response time.

**Bi-Metal Bushing** is pressed into groove on stem to center the coil in stem. 302 stainless steel stem wire through center of bushing connects bimetal element to pointer to minimize coil interference with tube wall.

**C.I.P.** - can be cleaned in place for convenience and eliminates the possibility of damage from mishandling.

**Temperature Ranges** from -100°F (-75°C) to 1000°F (550°C).

**Hermetic Seal** on Case/Bezel assembly is a precision interference fit. Silicone gasket provides dustproof and leakproof seal.

**External Reset Calibration** adjusts using an Allen wrench to discourage tampering.

**Silicone Fill** is available on all gauges for additional dampening of extreme vibration, or to assure consistent performance in low process temperature/high environmental humidity.

**140°F (60°C) Maximum process temperature** Please consult factory when ordering for higher temperature applications.

**Immediate Availability** from stock for all pressure gauges.

**Experienced Engineers** are available to answer questions and solve difficult application problems.

**Unparalleled Customer Service** where the customer is always right and we are not happy until the customer is satisfied.

### SPECIFICATIONS

Accuracy	±2°F (1°C)
Over Range Capability	30%
Wetted Surfaces	316L Stainless Steel
Case Material	304 Stainless Steel
Dial Size	3", 4", 5" (76, 102, 127mm) Dia.
Standard Lens	Glass
Optional Lens	Various Shatter-Resistant Materials
Temp. Limits	-100°F/1000°F (-75°C/550°C)
Optional Fill	Silicone
Recalibration Feature	Standard
Dry Shipping Wt. 3", 4", 5"	11 oz, 16 oz, 20 oz
Filled Shipping Wt. 3", 4", 5"	14 oz, 22 oz, 30 oz

### AVAILABLE RANGES

20 different temperature ranges are available in both Fahrenheit and Celsius. Refer to back page for specific information.

### AVAILABLE FITTINGS

½-18 NPT.  
¾" Tri-Clamp®, 1½" Tri-Clamp®, 2" Tri-Clamp®,  
2½" Tri-Clamp®, 3" Tri-Clamp®, 4" Tri-Clamp®.

### AVAILABLE MOUNTINGS

Bottom, Back and Adjustable mount.

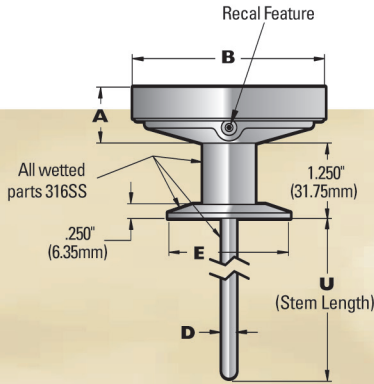
*Tri-Clamp® is a registered trademark of Tri-Clover, Inc.*





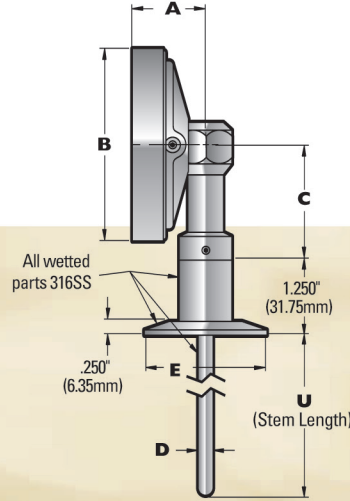
# Bi-Metal Thermometers

## SANITARY FITTING DIMENSIONS



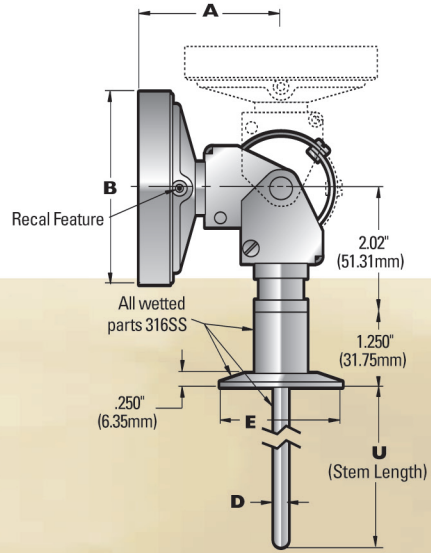
**BACK MOUNT**  
(shown with Tri-Clamp®)

SIZE	A	B
3"	.89" (23mm)	3.19" (81mm)
4"	.89" (23mm)	4.12" (104mm)
5"	.33" (34mm)	5.04" (128mm)



**BOTTOM MOUNT**  
(shown with Tri-Clamp®)

SIZE	A	B	C
3"	1.19" (30mm)	3.19" (81mm)	1.88" (48mm)
4"	1.19" (30mm)	4.12" (104mm)	2.62" (67mm)
5"	1.62" (41mm)	5.04" (128mm)	2.62" (67mm)

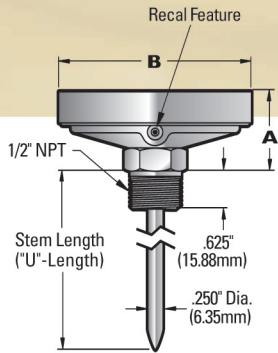


**ADJUSTABLE MOUNT**  
(shown with Tri-Clamp®)

SIZE	A	B
3"	2.43" (62mm)	3.19" (81mm)
4"	2.43" (62mm)	4.12" (104mm)
5"	2.66" (68mm)	5.04" (128mm)

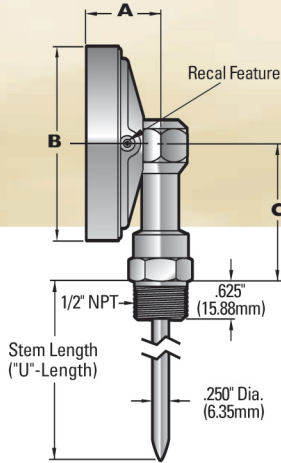
Available Tri-Clamp® Fittings (E): 3/4" Tri-Clamp = .98" (25mm), 1-1/2" Tri-Clamp = 1.98" (50mm), 2" Tri-Clamp = 2.52" (64mm), 2-1/2" Tri-Clamp = 3.05" (77mm), 3" Tri-Clamp = 3.56" (91mm), 4" Tri-Clamp = 4.68" (119mm)  
 Available Stem Lengths (U): 1.62" (41mm), 2.50" (64mm), 4.50" (114mm), 7.50" (190mm), 10.50" (267mm), 13.50" (343mm), 16.50" (419mm), 22.50" (572mm)

## INDUSTRIAL FITTING DIMENSIONS



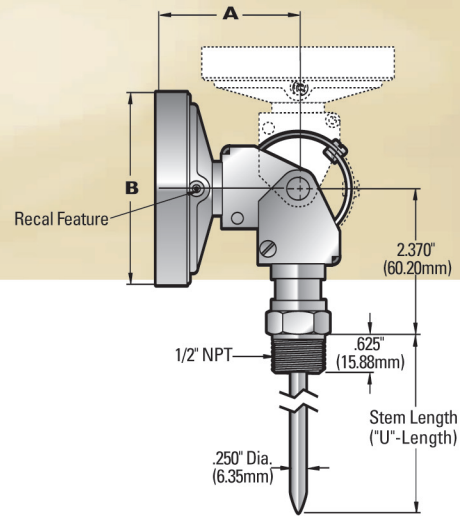
**BACK MOUNT**  
(shown with 1/2" NPT)

SIZE	A	B
3"	1.38" (35mm)	3.19" (81mm)
4"	1.38" (35mm)	4.12" (104mm)
5"	4.72" (44mm)	5.04" (128mm)



**BOTTOM MOUNT**  
(shown with 1/2" NPT)

SIZE	A	B	C
3"	1.19" (30mm)	3.19" (81mm)	2.30" (58mm)
4"	1.19" (30mm)	4.12" (104mm)	3.00" (76mm)
5"	1.62" (41mm)	5.04" (128mm)	3.00" (76mm)



**ADJUSTABLE MOUNT**  
(shown with 1/2" NPT)

SIZE	A	B
3"	2.43" (62mm)	3.19" (81mm)
4"	2.43" (62mm)	4.12" (104mm)
5"	2.66" (68mm)	5.04" (128mm)

Available Stem Lengths (U): 2.50" (64mm), 4.00" (102mm), 6.00" (152mm), 9.00" (229mm), 12.00" (305mm), 15.00" (381mm), 18.00" (457mm), 24.00" (610mm)

# Bi-Metal Thermometers

## ORDERING INFORMATION

Below are typical examples of models with their descriptions.

**EXAMPLE 1:**

**3B - T67 - 2U - BK -**

**L4.5 - 3/8 - A**

Describes a 3" (76mm) Bi-metal Thermometer, 0 to 250°F, 2" Tri-Clamp fitting, back mounted, 4½" probe length with a .375" probe diameter, standard glass lens.

**EXAMPLE 2:**

**4B - T87 - 3U - BT -**

**L22.5 - 3/8 - C**

Describes a 4" (102mm) Bi-metal Thermometer, -75 to 175°C, 3" Tri-Clamp fitting, bottom mounted, 22½" probe length with a .375" probe diameter, safety glass lens.

**EXAMPLE 3:**

**5B - T6 1 - 1/2NPT - AA -**

**L7.5 - 3/8 - E**

Describes a 5" (127mm) Bi-metal Thermometer, 50 to 250°F, ½" NPT fitting, adjustable angle, 7½" probe length with a .375" probe diameter, polycarbonate lens.

**MODEL NUMBER CONSISTS OF:**

SERIES	TEMP. RANGE	FITTING	MOUNT	PROBE LENGTH	PROBE DIA.	LENS
3B	T67	2U	BK	L4.5	3/8	A

Please make a selection from each category below:

**SERIES**

- 3B 3" Dial
- 4B 4" Dial
- 5B 5" Dial

**TEMPERATURE RANGE**

- |                 |                |
|-----------------|----------------|
| T5 1 -100/100°F | T87 -75/175°C  |
| T52 -50/120°F   | TEA -70/70°C   |
| T53 -40/160°F   | T7 1 -50/100°C |
| T54 0/140°F     | T72 -50/25°C   |
| T55 0/180°F     | T73 -50/50°C   |
| T50 0/200°F     | T84 -40/70°C   |
| T56 0/220°F     | T86 -20/120°C  |
| T67 0/250°F     | T74 -10/110°C  |
| T67 0/300°F     | T75 0/50°C     |
| T58 0/500°F     | T95 0/60°C     |
| T59 20/240°F    | TEI 0/80°C     |
| T60 25/125°F    | T76 0/100°C    |
| T6 1 50/250°F   | T77 0/150°C    |
| T62 50/300°F    | T78 0/200°C    |
| T63 50/400°F    | T79 0/250°C    |
| T64 50/500°F    | T80 0/300°C    |
| T68 50/550°F    | T8 1 0/400°C   |
| T44 100/800°F   | T90 0/450°C    |
| T65 150/750°F   | T82 100/400°C  |
| T66 *200/1000°F | T83 *100/550°C |

\*Not for continued use above 800°F (425°C) (for intermittent use only).

Ranges vary by dial size and fitting.

**FITTINGS**

- ¾U 3/4" Tri-Clamp (3 16SS)\*
- 1½U 1½" Tri-Clamp (316SS)\*\*
- 2U 2" Tri-Clamp (3 16SS)
- 2½U 2½" Tri-Clamp (3 16SS)
- 3U 3" Tri-Clamp (3 16SS)
- 4U 4" Tri-Clamp (3 16SS)
- ½NPT ½" NPT (316SS)

\* Used on both ½" and ¾" lines.

\*\* Used on both 1" and 1½" lines.

**MOUNT**

- BT Bottom Mount
- BK Back Mount
- AA Adjustable Angle

**PROBE LENGTH (U)**


- L2.5 2½" (½" NPT)
- L4 4" (½" NPT)
- L6 6" (½" NPT)
- L9 9" (½" NPT)
- L12 12" (½" NPT)
- L15 15" (½" NPT)
- L18 18" (½" NPT)
- L24 24" (½" NPT)
- L30 30" (½" NPT)
- L36 36" (½" NPT)
- L42 42" (½" NPT)
- L1.625 1.625" (Tri-Clamp)
- L2.5 2.5" (Tri-Clamp)
- L4.5 4.5" (Tri-Clamp)
- L7.5 7.5" (Tri-Clamp)
- L10.5 10.5" (Tri-Clamp)
- L13.5 13.5" (Tri-Clamp)
- L16.5 16.5" (Tri-Clamp)
- L22.5 22.5" (Tri-Clamp)

**PROBE DIAMETER (D)**


- 15/64 .236"
- 1/4 .250" Standard on NPT
- 5/16 .315"
- 3/8 .375" Standard on Tri-Clamp

**LENS**

- A Glass (Standard)
- B Tempered Glass
- C Safety Glass
- D Plastic, Acrylic
- E Plastic, Polycarbonate



- Plate Heat Exchangers
- Valves
- Separators
- Gaskets
- Pumps



### Brushes

- Sparta Brushes
- Stainless Steel Sponges
- Nylon Scouring Pads
- Squeegees
- Janitorial Supplies



REMCO  
Vikan  
CARLISLE  
SANITARY MAINTENANCE PRODUCTS



FLUID CONTROL SYSTEMS

- Sanitary & Utility Valves
- The Universal Control Top For Hygienic Process Valves



### Gaskets & Fittings

- Sanitary (Bevel Seat)
- Alloy Products
- Cherry Burrell
- G&H-Clamp and Flat Seat
- John R. Perry Sanitary
- Tri-Clover (Clamp)
- DeLaval
- Clamp Fittings
- Weld Fittings
- NPT Fittings
- S S Tubing




PROTECTS WHAT'S GOOD™



- Homogenizers & Parts
- Plate Heat Exchangers
- Separators

### Hose & Tubing

- Steam Hose
- Instrumentation Tubing
- Sanitary Hose for Food and Beverage Applications
- Food Master Sanitary Hose



Gates  
NOVAFLEX

### Lubricants

- Haynes Sprays
- Lubri film
- Petro Gel
- CIP Lube
- Harco HL-7
- Moovit Sprays



HAYNES LUBRICANTS

### Blending and Mixing Systems

- Powder Mixers
- Dry & Liquid Blenders
- Shear Blenders
- Dry Hopping Units
- Twin Screw Pumps



AMPCO APPLIED PRODUCTS

### Pails & Utensils

- Stainless Steel Containers
- Stainless Steel Sanitary Pails
- Scoops & Dippers
- H-Duty Sanitary Shovels
- Pitch and Cheese forks and more...



### Pumps & Parts

- AlfaLaval
- Ampco
- APV
- DeLaval
- Fristam
- G&H Centrifugal Pumps and Parts
- Jabsco
- Tetra Pak
- Tri-Clover
- Waukesha

*Repair Service For All Makes.*



### Washdown Equipment

- Mixing Units
- Hose Stations
- Hose Assemblies
- Water Saver Nozzles
- Hose Racks
- Hose Accessories



Strahman ARCHON

### Ampco Pumps



- ZP1, ZP2 & ZP3 SERIES Pumps - All Stainless Steel Gear Case!
- LC/LD/LF Series Pumps
- AC + Series Pumps
- Master Distributor for Ampco

Ampco Pump Company



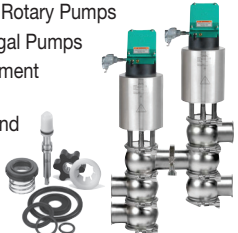
### Thermometers and Gauges

- Thermometers
- Sanitary Instrumentation
- Homogenizer Gauges
- Sani-Flow Gauges
- Digital Thermometers

### Tri-Clover Inc.

- Positive Rotary Pumps
- Centrifugal Pumps
- Replacement Parts
- Valves and Fittings



### Miscellaneous

- Cleaners
- Pads and Sponges
- Kettles
- Aprons
- Disinfectant Mats
- Plastic Shovels
- Tools & Accessories
- Recorder Charts
- Pens



### Spare Parts for All Makes

- Homogenizers & Parts
- Heat Exchangers
- Pumps
- Valves
- Blenders
- Tuchenhagen



*Specialty Parts & Supply*