



RoHS applies only to 304 SS and  
316 SS thermowells

### Description & Features:

- Available in a wide range of materials for use on most applications
- Standard “stepped construction” offering is complemented by an array of custom thermowells including: straight, tapered, sanitary and flanged configurations
- CRN registered
- 5 year warranty

### Applications:

- Allows for the creation of a “sealed system”, whereby the thermometer can be removed from the application without the need for shutting down or draining the system
- To protect the thermometer from possible exposure to the process media

### Specifications

|                                         |                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Thermometer Connection</b>           | 1/2" NPTF connection standard<br>Other thread sizes are available upon request                                                                                                                                                                                                                                                                                       |
| <b>Process Connection</b>               | 3/4", 1/2" or 1" NPT connection standard<br>Other thread sizes are available upon request                                                                                                                                                                                                                                                                            |
| <b>Bore</b>                             | 0.260" (6.5mm) bore standard                                                                                                                                                                                                                                                                                                                                         |
| <b>Construction</b>                     | Stepped construction standard<br>Tapered construction available upon request                                                                                                                                                                                                                                                                                         |
| <b>Material</b>                         | Brass, 304 SS, 316 SS standard<br>Other materials available upon request                                                                                                                                                                                                                                                                                             |
| <b>Warning (brass thermowells only)</b> |  <b>WARNING:</b> This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> . |

| Material | Pressure - Temperature Rating (PSI) |              |               |               |               |                 |                 |
|----------|-------------------------------------|--------------|---------------|---------------|---------------|-----------------|-----------------|
|          | 70°F (21°C)                         | 200°F (93°C) | 400°F (204°C) | 600°F (316°C) | 800°F (427°C) | 1,000°F (538°C) | 1,200°F (649°C) |
| Brass    | 5,000                               | 4,200        | 1,000         | -             | -             | -               | -               |
| 304 SS   | 7,000                               | 6,200        | 5,600         | 5,400         | 5,200         | 4,500           | 1,650           |
| 316 SS   | 7,000                               | 7,000        | 6,400         | 6,200         | 6,100         | 5,100           | 2,500           |

Note: For process media velocities above 10m/s (30 feet/s) contact Winters

Order Codes (Thermowells without lag. Products in bold are normally stock in North America)

| Stem Length<br>A   | NPT Connection<br>P | Material | Code             | Standard Insertion Length<br>U | Shank Diameter |
|--------------------|---------------------|----------|------------------|--------------------------------|----------------|
| <b>2.5" (63mm)</b> | 1/2"                | Brass    | <b>TBR2550</b>   | 1-3/8" (35mm)                  | 1/2" (12.5mm)  |
|                    |                     | 304 SS   | <b>TBR2550-1</b> |                                |                |
|                    |                     | 316 SS   | TBR2550-2        |                                |                |
|                    | 3/4"                | Brass    | <b>TBR25</b>     |                                |                |
|                    |                     | 304 SS   | <b>TBR25-1</b>   |                                |                |
|                    |                     | 316 SS   | <b>TBR25-2</b>   |                                |                |
| <b>4" (100mm)</b>  | 1/2"                | Brass    | <b>TBR3550</b>   | 2.5" (63mm)                    | 1/2" (12.5mm)  |
|                    |                     | 304 SS   | <b>TBR3550-1</b> |                                |                |
|                    |                     | 316 SS   | TBR3550-2        |                                |                |
|                    | 3/4"                | Brass    | <b>TBR35</b>     |                                |                |
|                    |                     | 304 SS   | <b>TBR35-1</b>   |                                |                |
|                    |                     | 316 SS   | <b>TBR35-2</b>   |                                |                |
|                    | 1"                  | Brass    | TBR35100         |                                |                |
|                    |                     | 304 SS   | TBR35100-1       |                                |                |
|                    |                     | 316 SS   | TBR35100-2       |                                |                |
| <b>6" (150mm)</b>  | 1/2"                | Brass    | <b>TBR650</b>    | 4.5" (115mm)                   | 5/8" (16mm)    |
|                    |                     | 304 SS   | <b>TBR650-1</b>  |                                | 3/4" (19mm)    |
|                    |                     | 316 SS   | TBR650-2         |                                |                |
|                    | 3/4"                | Brass    | <b>TBR6</b>      |                                |                |
|                    |                     | 304 SS   | <b>TBR6-1</b>    |                                |                |
|                    |                     | 316 SS   | <b>TBR6-2</b>    |                                |                |
|                    | 1"                  | Brass    | TBR6100          |                                | 7/8" (22mm)    |
|                    |                     | 304 SS   | TBR6100-1        |                                |                |
|                    |                     | 316 SS   | TBR6100-2        |                                |                |
| <b>9" (229mm)</b>  | 1/2"                | Brass    | TBR950           | 7.5" (190mm)                   | 5/8" (16mm)    |
|                    |                     | 304 SS   | TBR950-1         |                                | 3/4" (19mm)    |
|                    |                     | 316 SS   | TBR950-2         |                                |                |
|                    | 3/4"                | Brass    | <b>TBR9</b>      |                                |                |
|                    |                     | 304 SS   | <b>TBR9-1</b>    |                                | 7/8" (22mm)    |
|                    |                     | 316 SS   | TBR9-2           |                                |                |
|                    | 1"                  | Brass    | TBR9100          |                                |                |
|                    |                     | 304 SS   | TBR9100-1        |                                |                |
|                    |                     | 316 SS   | TBR9100-2        |                                |                |
| <b>12" (305mm)</b> | 1/2"                | Brass    | TBR1250          | 10.5" (266mm)                  | 5/8" (16mm)    |
|                    |                     | 304 SS   | TBR1250-1        |                                | 3/4" (19mm)    |
|                    |                     | 316 SS   | TBR1250-2        |                                |                |
|                    | 3/4"                | Brass    | <b>TBR12</b>     |                                |                |
|                    |                     | 304 SS   | TBR12-1          |                                | 7/8" (22mm)    |
|                    |                     | 316 SS   | TBR12-2          |                                |                |
|                    | 1"                  | Brass    | TBR12100         |                                |                |
|                    |                     | 304 SS   | TBR12100-1       |                                |                |
|                    |                     | 316 SS   | TBR12100-2       |                                |                |
| <b>15" (370mm)</b> | 3/4"                | Brass    | <b>TBR15</b>     | 13" (330mm)                    | 3/4" (19mm)    |
|                    |                     | 304 SS   | TBR15-1          |                                |                |
|                    |                     | 316 SS   | TBR15-2          |                                |                |

## Order Codes (Thermowells with lag.)

| Stem Length<br>A | NPT Connection<br>P | Material | Code       | Standard Insertion Length<br>U | Lag Length<br>T | Shank<br>Diameter |
|------------------|---------------------|----------|------------|--------------------------------|-----------------|-------------------|
| 6" (150mm)       | 1/2"                | Brass    | TBRN650    | 2.5" (63mm)                    | 2" (50mm)       | 1/2" (12.5mm)     |
|                  |                     | 304 SS   | TBRN650-1  |                                |                 |                   |
|                  |                     | 316 SS   | TBRN650-2  |                                |                 |                   |
|                  | 3/4"                | Brass    | TBRN6      |                                |                 |                   |
|                  |                     | 304 SS   | TBRN6-1    |                                |                 |                   |
|                  |                     | 316 SS   | TBRN6-2    |                                |                 |                   |
|                  | 1"                  | Brass    | TBRN6100   |                                |                 |                   |
|                  |                     | 304 SS   | TBRN6100-1 |                                |                 |                   |
|                  |                     | 316 SS   | TBRN6100-2 |                                |                 |                   |
| 9" (229mm)       | 1/2"                | Brass    | TBRN950    | 4.5" (115mm)                   | 3" (75mm)       | 5/8" (16mm)       |
|                  |                     | 304 SS   | TBRN950-1  |                                |                 |                   |
|                  |                     | 316 SS   | TBRN950-2  |                                |                 |                   |
|                  | 3/4"                | Brass    | TBRN9      |                                |                 | 3/4" (19mm)       |
|                  |                     | 304 SS   | TBRN9-1    |                                |                 |                   |
|                  |                     | 316 SS   | TBRN9-2    |                                |                 |                   |
|                  | 1"                  | Brass    | TBRN9100   |                                |                 | 7/8" (22mm)       |
|                  |                     | 304 SS   | TBRN9100-1 |                                |                 |                   |
|                  |                     | 316 SS   | TBRN9100-2 |                                |                 |                   |
| 12" (305mm)      | 1/2"                | Brass    | TBRN1250   | 7.5" (190mm)                   | 3" (75mm)       | 5/8" (16mm)       |
|                  |                     | 304 SS   | TBRN1250-1 |                                |                 |                   |
|                  |                     | 316 SS   | TBRN1250-2 |                                |                 |                   |
|                  | 3/4"                | Brass    | TBRN12     |                                |                 | 3/4" (19mm)       |
|                  |                     | 304 SS   | TBRN12-1   |                                |                 |                   |
|                  |                     | 316 SS   | TBRN12-2   |                                |                 |                   |
|                  | 1"                  | Brass    | TBRN1210   |                                |                 | 7/8" (22mm)       |
|                  |                     | 304 SS   | TBRN1210-1 |                                |                 |                   |
|                  |                     | 316 SS   | TBRN1210-2 |                                |                 |                   |

Other configurations available. 1/4" NPT thermometer connection available. BSP threads available upon request. Tapered construction available upon request. Other lengths available up to 48" (welded construction only). Other materials such as Monel®, Inconel®, Hastelloy® C and Titanium are available upon request.

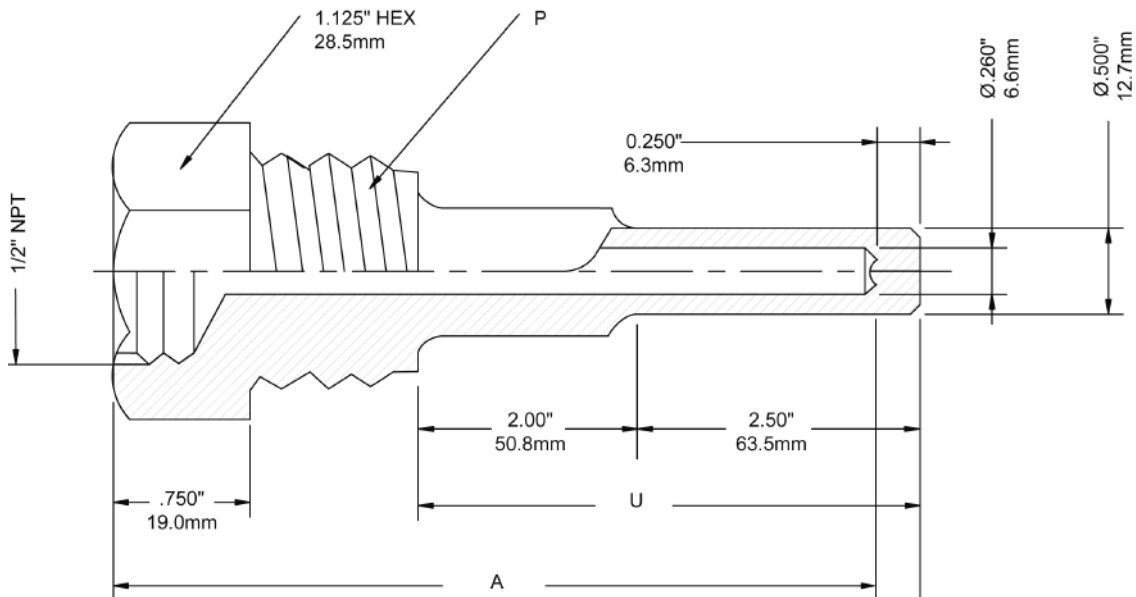
Note: Standard well is stepped as shown to 0.5" OD except U=2.5". Straight shank supplied as an option. Specify additional lagging extensions as needed

Hastelloy® is a registered trademark of Haynes International, Inc.

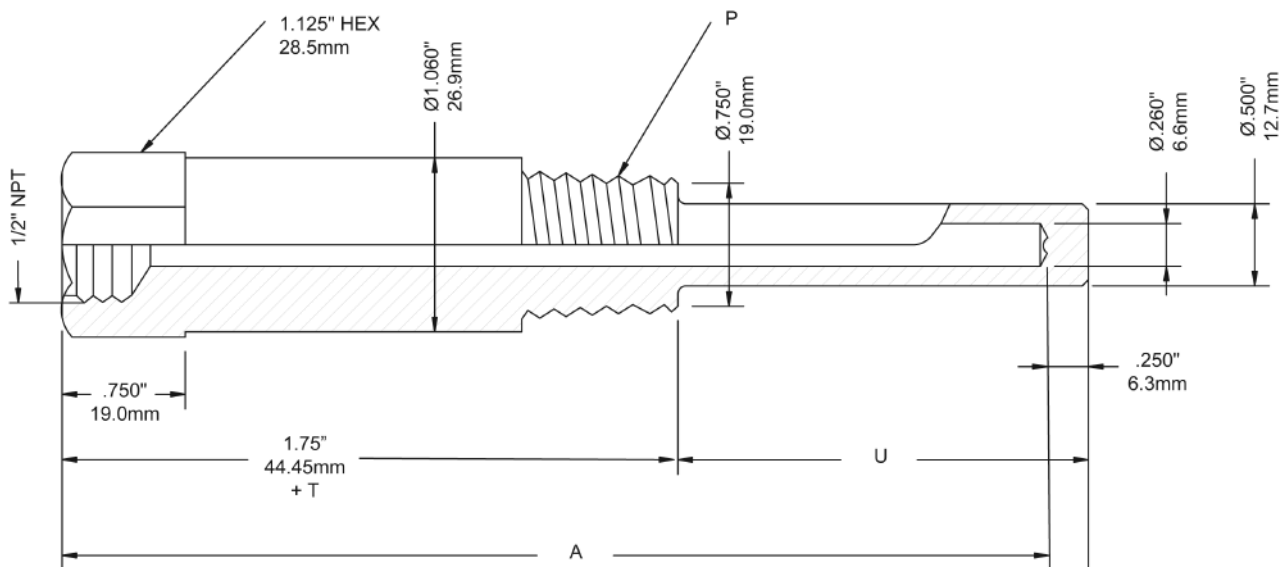
Inconel® is a registered trademark of Special Metals Corporation

Monel® is a registered trademark of Inco Alloys International

## Standard Thermowell without lag



## Standard Thermowell with lag



## Engineering Codes

## TBR SERIES

## Thermowell Type

STEPPED  
STRAIGHT  
TAPERED  
HELICAL / VORTEX

S T  
S R  
T P  
H V

## Instrument Connection

1/4" NPT FEMALE  
3/8" NPT FEMALE  
1/2" NPT FEMALE  
G 1/4" FEMALE  
G 3/8" FEMALE  
G 1/2" FEMALE

F 4  
F 3  
F 2  
C 4  
C 3  
C 2

## Process Connection

1/4" NPT MALE  
3/8" NPT MALE  
1/2" NPT MALE  
3/4" NPT MALE  
1" NPT MALE  
G 1/4" MALE  
G 3/8" MALE  
G 1/2" MALE  
G 3/4" MALE  
G 1" MALE  
M14\*1.5  
M20\*1.5

N 4  
N 3  
N 2  
N 5  
N 1  
G 4  
G 3  
G 2  
G 5  
G 1  
M 4  
M 2

Process Insertion Length  
(U dimension)

2"  
2.5"  
4"  
6"  
7"  
9"  
10"  
12"  
13"  
15"  
16"  
19"  
21"  
22"

2  
2 5  
4  
6  
7  
9  
1 0  
1 2  
1 3  
1 5  
1 6  
1 9  
2 1  
2 2

## Lagging (T Dimension)

NO LAG  
1" (25mm)  
2" (50mm)  
3" (76mm)  
4" (100mm)  
5" (125mm)  
6" (150mm)

0  
1  
2  
3  
4  
5  
6

## Root Diameter

0.50" (12.7mm)  
0.63" (16mm)  
0.75" (19mm)  
0.866" (22 mm)  
1.063" (27 mm)

R 1  
R 2  
R 3  
R 4  
R 5

## Tip Diameter

0.512" (13 mm)  
0.63" (16mm)  
0.75" (19mm)

T 1  
T 2  
T 3

## Bore (Inner) Diameter

(Not applicable for Straight)

0.260" (6.6mm), STANDARD  
0.276" (7 mm)  
0.355" (8.5 mm)  
0.385" (9.8mm)  
0.417" (10.6 mm)  
0.50" (13mm)

B 1  
B 2  
B 3  
B 4  
B 5  
B 6

## Tip Thickness

0.20" (5 mm)  
0.25" (6.35 mm)  
0.28" (7 mm)

1  
2  
3

| TBR SERIES                  |                            | T B R - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> - <div></div> |  |  |  |  |  |  |  |  |  |  |         |
|-----------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|---------|
| Material                    | BRASS/BRONZE               |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | B R     |
|                             | CARBON STEEL               |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | C S     |
|                             | 304SS                      |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | S       |
|                             | 316SS                      |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | S S     |
|                             | 316L                       |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | S L     |
|                             | 316/316L SS DUAL CERTIFIED |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | D C     |
|                             | DUPLEX                     |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | D       |
|                             | SUPER DUPLEX               |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | S D     |
|                             | MONEL 400                  |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | M       |
|                             | HASTELLOY C-276            |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | H C     |
|                             | TITANIUM                   |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | T I     |
|                             | TANTALUM                   |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | T A     |
|                             | INCONEL 825                |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | I 8     |
|                             | INCONEL 625                |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | I 7     |
|                             | INCONEL 600                |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | I 6     |
| Option Codes                | BRASS CAP AND CHAIN 1/2"   |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | W 6 0   |
| List In Alpha-Numeric Order | 304SS CAP AND CHAIN 1/2"   |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | W 6 0 1 |
|                             | 316SS CAP AND CHAIN 1/2"   |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | W 6 0 2 |
|                             | 316LSS CAP AND CHAIN 1/2"  |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | W 6 0 3 |
|                             | MARKINGS ON THERMOWELL     |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | P M     |
|                             | HEAT TRANSFER COMPOUND     |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | H T     |
|                             | CRN REGISTERED             |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | C       |
|                             | ROSH COMPLIANT             |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | R       |
|                             | NACE COMPLIANT             |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | N       |
|                             | SPECIAL                    |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  | Z # # # |
|                             |                            |                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |         |