

## Thermowells

| Example<br>Model<br>Number | Style      | Bore<br>Diameter | Immersion<br>Length | Root<br>Diameter | Tip<br>Diameter | Instrument<br>Connection | Material | Lag<br>Length | Options    |
|----------------------------|------------|------------------|---------------------|------------------|-----------------|--------------------------|----------|---------------|------------|
|                            |            |                  | "U" Dim.            | "Q" Dim.         | "D" Dim.        |                          |          | "T" Dim.      |            |
|                            | <b>TR2</b> | <b>A</b>         | <b>045</b>          | <b>H</b>         | <b>C</b>        | <b>2</b>                 | <b>B</b> |               | <b>-AT</b> |

Written as: TR2A045HC2B-AT

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| Style          |          |             |          |                                |           |
|----------------|----------|-------------|----------|--------------------------------|-----------|
| Mounting Style | Code     | Shank Style | Code     | Process Connection             | Code      |
| Threaded       | <i>T</i> | Stepped     | <i>R</i> | <b>Threaded</b>                |           |
| Flanged-RF     | <i>F</i> | Straight    | <i>S</i> | 1/2" NPT                       | <i>1</i>  |
| Flanged-RTJ    | <i>J</i> | Tapered     | <i>H</i> | 3/4" NPT                       | <i>2</i>  |
| Flanged-FF     | <i>N</i> |             |          | 1" NPT                         | <i>3</i>  |
| Socket Weld    | <i>S</i> |             |          | 1-1/4" NPT                     | <i>4</i>  |
| Weld-In        | <i>W</i> |             |          | 1-1/2" NPT                     | <i>5</i>  |
| Van Stone      | <i>V</i> |             |          | <b>Flanged</b>                 |           |
| Sanitary       | <i>C</i> |             |          | 1" Class 150                   | <i>3A</i> |
|                |          |             |          | 1-1/2" Class 150               | <i>5A</i> |
|                |          |             |          | 2" Class 150                   | <i>6A</i> |
|                |          |             |          | 1" Class 300                   | <i>3B</i> |
|                |          |             |          | 1-1/2" Class 300               | <i>5B</i> |
|                |          |             |          | 2" Class 300                   | <i>6B</i> |
|                |          |             |          | 1" Class 600                   | <i>3C</i> |
|                |          |             |          | 1-1/2" Class 600               | <i>5C</i> |
|                |          |             |          | 2" Class 600                   | <i>6C</i> |
|                |          |             |          | 1" Class 900/1500              | <i>3D</i> |
|                |          |             |          | 1-1/2" Class 900/1500          | <i>5D</i> |
|                |          |             |          | 2" Class 900/1500              | <i>6D</i> |
|                |          |             |          | 1" Class 2500                  | <i>3E</i> |
|                |          |             |          | 1-1/2" Class 2500              | <i>5E</i> |
|                |          |             |          | 2" Class 2500                  | <i>6E</i> |
|                |          |             |          | <b>Socket Weld and Weld-In</b> |           |
|                |          |             |          | 3/4" Pipe (1.050 OD)           | <i>2</i>  |
|                |          |             |          | 1" Pipe (1.315 OD)             | <i>3</i>  |
|                |          |             |          | 1-1/4" Pipe (1.660 OD)         | <i>4</i>  |
|                |          |             |          | 1-1/2" Pipe (1.900 OD)         | <i>9</i>  |
|                |          |             |          | 1-1/2" Actual (1.500 OD)       | <i>5</i>  |
|                |          |             |          | <b>Van Stone</b>               |           |
|                |          |             |          | 1"                             | <i>3</i>  |
|                |          |             |          | 1-1/2"                         | <i>5</i>  |
|                |          |             |          | 2"                             | <i>6</i>  |
|                |          |             |          | <b>Sanitary</b>                |           |
|                |          |             |          | 1-1/2" Tri-Clamp               | <i>5</i>  |
|                |          |             |          | 2" Tri-Clamp                   | <i>6</i>  |
|                |          |             |          | 2-1/2" Tri-Clamp               | <i>7</i>  |
|                |          |             |          | 3" Tri-Clamp                   | <i>8</i>  |
|                |          |             |          | <b>Other</b>                   |           |
|                |          |             |          | (Please Specify)               | <i>X</i>  |

| Bore Diameter          |          |
|------------------------|----------|
| (inches)               | Code     |
| 0.260                  | <i>A</i> |
| 0.385                  | <i>B</i> |
|                        |          |
| 0.187                  | <i>C</i> |
| 0.190                  | <i>D</i> |
| 0.203                  | <i>E</i> |
| 0.250                  | <i>F</i> |
| 0.281                  | <i>G</i> |
| 0.290                  | <i>H</i> |
| 0.343                  | <i>J</i> |
| 0.375                  | <i>K</i> |
| 0.406                  | <i>L</i> |
| 0.437                  | <i>M</i> |
| 0.515                  | <i>N</i> |
| 0.640                  | <i>P</i> |
| 0.656                  | <i>R</i> |
| 0.702                  | <i>S</i> |
| 0.718                  | <i>T</i> |
| Other (Please specify) | <i>X</i> |

| Immersion Length |            |
|------------------|------------|
| (inches)         | Code       |
| 1.625            | <i>016</i> |
| 2.0              | <i>020</i> |
| 2.5              | <i>025</i> |
| etc...           |            |
| 10.0             | <i>100</i> |
| 10.5             | <i>105</i> |
| 11.0             | <i>110</i> |
| 11.5             | <i>115</i> |
| etc...           |            |
| 98.0             | <i>980</i> |
| 98.5             | <i>985</i> |
| 99.0             | <i>990</i> |
| 99.5             | <i>995</i> |
| Other            | <i>XXX</i> |

Thermowell drawings on pages 10 thru 14.

(continued from previous page)

| Root Diameter          |      | Tip Diameter           |      | Instrument Connection  |      | Material               |      | Lag Length |      |
|------------------------|------|------------------------|------|------------------------|------|------------------------|------|------------|------|
| (inches)               | Code | (inches)               | Code | Type                   | Code | Type                   | Code | (inches)   | Code |
| 0.375                  | A    | 0.375                  | A    | 1/2" NPT               | 1    | 304 SST                | A    | 0.0        |      |
| 0.400                  | B    | 0.400                  | B    | 1/2" NPSM              | 2    | 316 SST                | B    | 0.5        | 05   |
| 0.500                  | C    | 0.500                  | C    |                        |      |                        |      | 1.0        | 10   |
| 0.562                  | D    | 0.562                  | D    | 1/4" NPT               | 3    | Brass                  | C    | 1.5        | 15   |
| 0.625                  | E    | 0.625                  | E    | 1/4" NPSM              | 4    | 310 SST                | D    | 2.0        | 20   |
| 0.680                  | F    | 0.680                  | F    |                        |      | 321 SST                | E    | 2.5        | 25   |
| 0.735                  | G    | 0.735                  | G    | 3/4" NPT               | 5    | 347 SST                | F    | 3.0        | 30   |
| 0.750                  | H    | 0.750                  | H    | 3/4" NPSM              | 6    | 446 SST                | G    | 3.5        | 35   |
| 0.766                  | J    | 0.766                  | J    |                        |      | Duplex 2205            | H    | 4.0        | 40   |
| 0.781                  | K    | 0.781                  | K    | 1" NPT                 | 7    | CS-1018                | J    | 4.5        | 45   |
| 0.860                  | L    | 0.860                  | L    | 1" NPSM                | 8    | CS-A105                | K    | 5.0        | 50   |
| 0.875                  | M    | 0.875                  | M    | Other (Please specify) | X    | Hastelloy B            | L    | 5.5        | 55   |
| 0.900                  | N    | 0.900                  | N    |                        |      | Hastelloy C276         | M    | 6.0        | 60   |
| 1.000                  | P    | 1.000                  | P    |                        |      | Alloy 20               | N    | 6.5        | 65   |
| 1.050                  | Q    | 1.050                  | Q    |                        |      | Nickel 200             | P    | 7.0        | 70   |
| 1.063                  | R    | 1.063                  | R    |                        |      | Monel 400              | Q    | 7.5        | 75   |
| 1.125                  | S    | 1.125                  | S    |                        |      | Inconel 600            | R    | 8.0        | 80   |
| 1.250                  | T    | 1.250                  | T    |                        |      | Incoloy 800            | S    | 8.5        | 85   |
| 1.315                  | U    | 1.315                  | U    |                        |      | F5                     | T    | 9.0        | 90   |
| 1.375                  | V    | 1.375                  | V    |                        |      | F9                     | U    | 9.5        | 95   |
| 1.500                  | W    | 1.500                  | W    |                        |      | F11                    | V    | Other      | XX   |
| 1.625                  | Y    | 1.625                  | Y    |                        |      | F22                    | W    |            |      |
| 1.900                  | Z    | 1.900                  | Z    |                        |      | F91                    | Y    |            |      |
| Other (Please specify) | X    | Other (Please specify) | X    |                        |      | Titanium               | Z    |            |      |
|                        |      |                        |      |                        |      | Other (Please Specify) | X    |            |      |

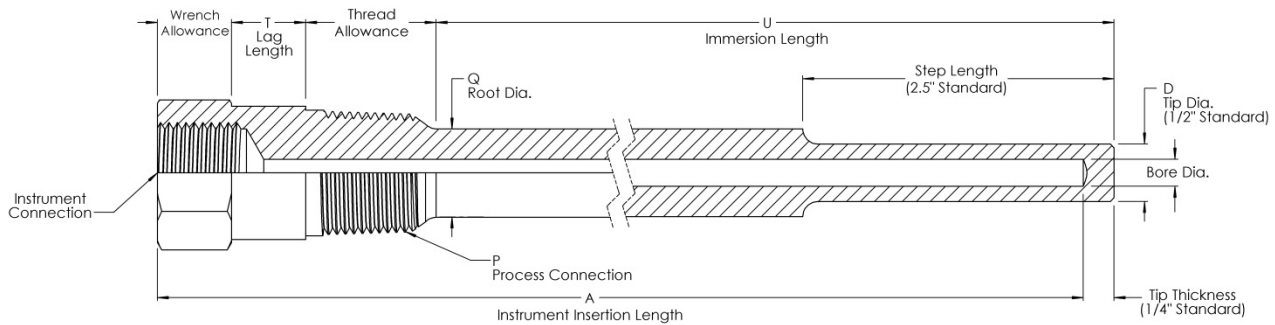
| Options                            |      |                                      |      |
|------------------------------------|------|--------------------------------------|------|
| Option                             | Code | Option                               | Code |
| Stainless Plug and Chain           | A    | Electropolishing                     | G    |
| Brass Plug and Chain               | B    | Teflon Coating                       | N    |
| Special Markings / Tagging         | T    | Stellite Coating                     | K    |
| Wake Frequency Calculation         | C    | Tantalum Sheath                      | S    |
| Full Penetration Flange Weldment   | F    | Velocity Collar                      | V    |
| Dye Penetrant Testing              | D    | Include Lap-Joint Flange (Van Stone) | L    |
| Internal Hydro-testing             | I    | Special Cleaning for Oxygen Service  | Y    |
| External Hydro-testing             | E    | Tantalum Coating                     | J    |
| Positive Material ID (PMI) Testing | P    | Titanium Sheath                      | Z    |
| X-ray of Weldment                  | R    | Other (Please Specify)               | X    |

Documents available on request:

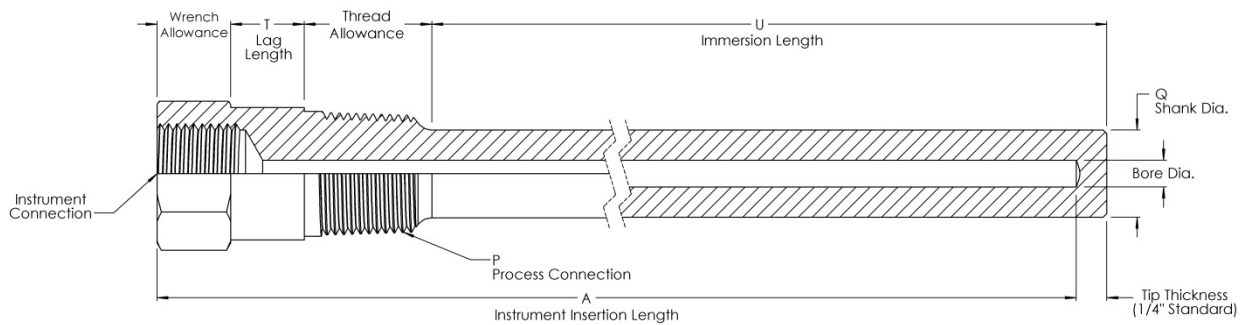
- MTR (Material Test Report)
- COC (Certificate of Compliance)
- COC-NACE (Certificate of NACE Compliance)
- COO (Certificate of Origin)

## Threaded

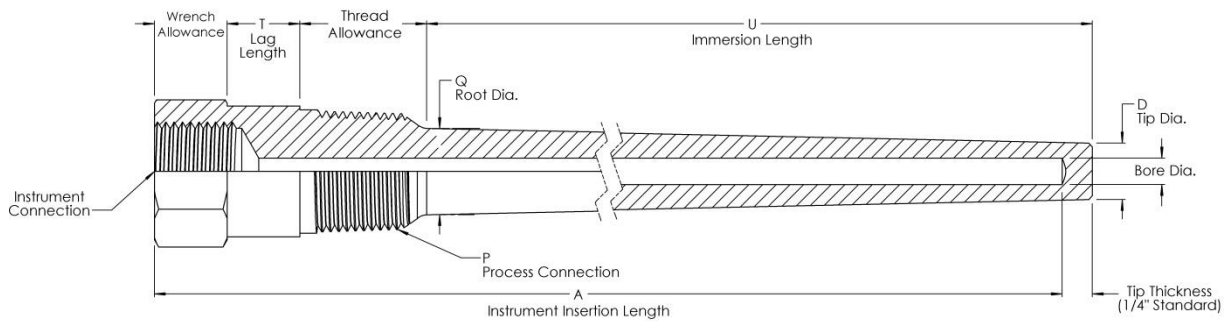
### Stepped



### Straight

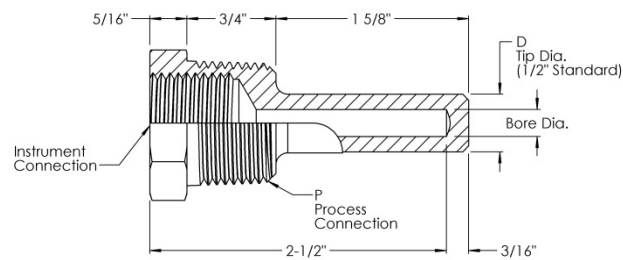


### Tapered

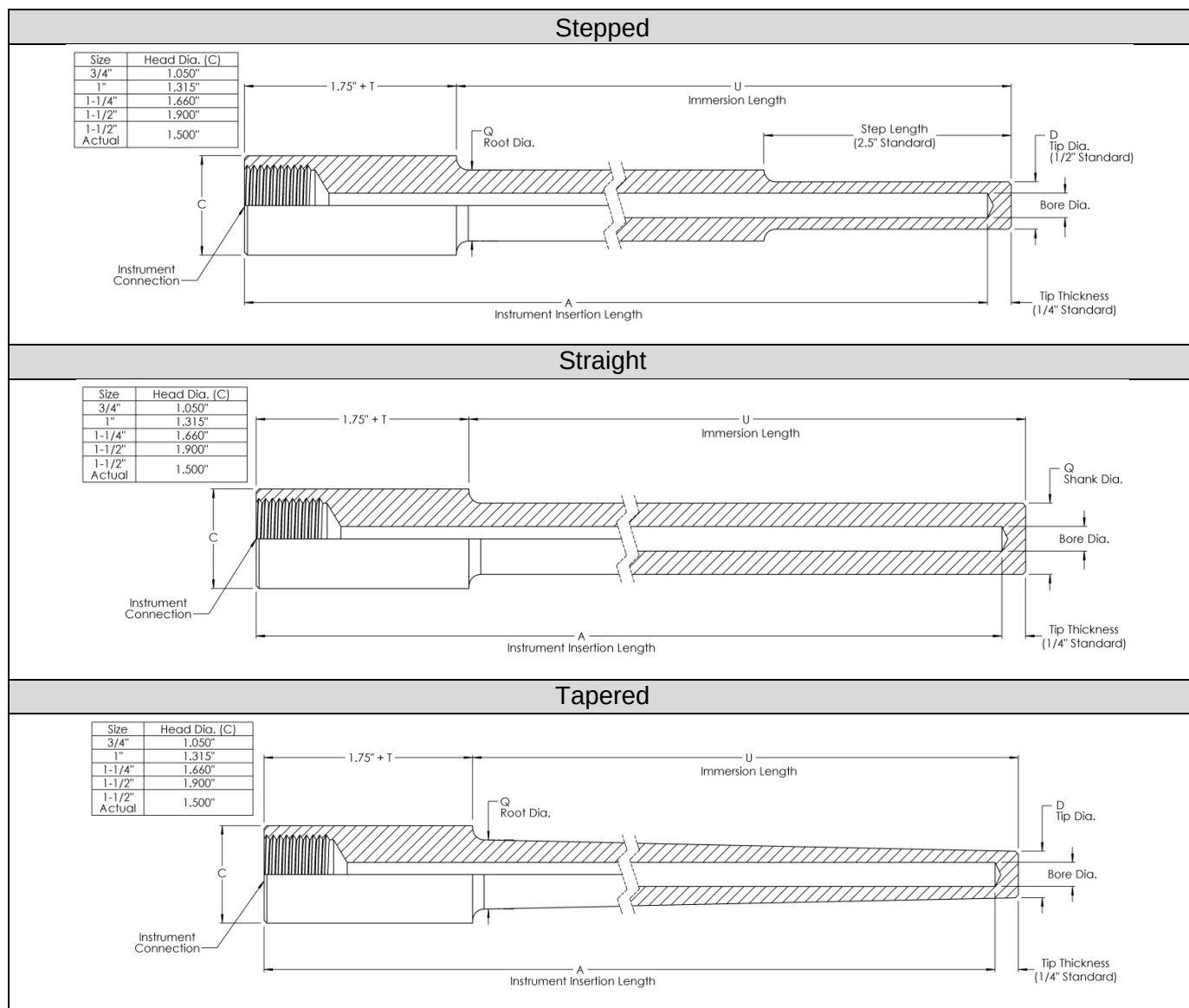


\* Standard head length (Wrench Allowance + Thread Allowance) = 1.75"

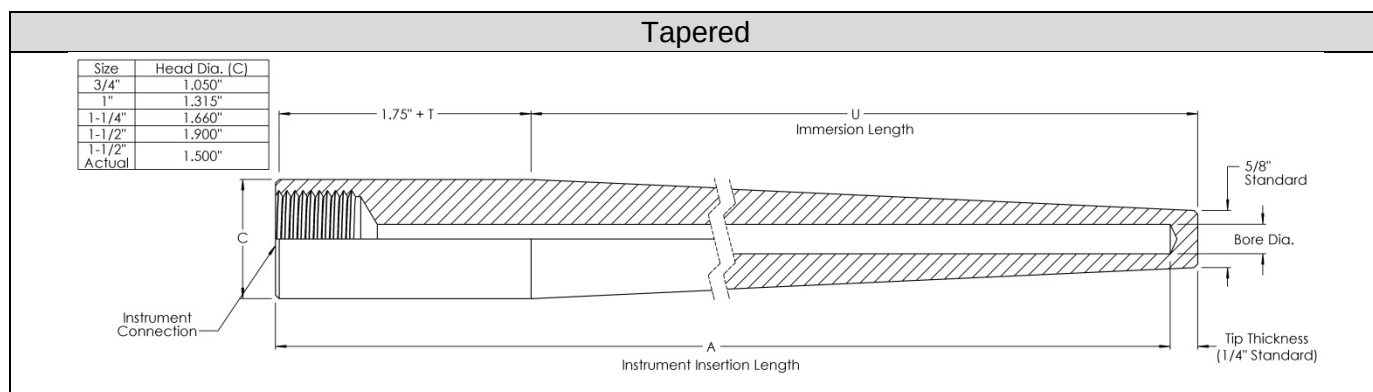
### Limited Space



## Socket Weld

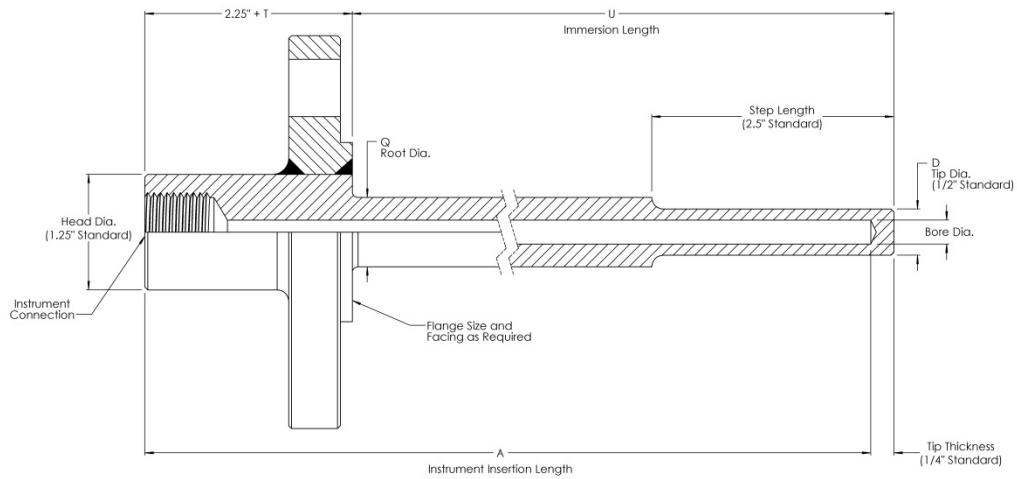


## Weld-In

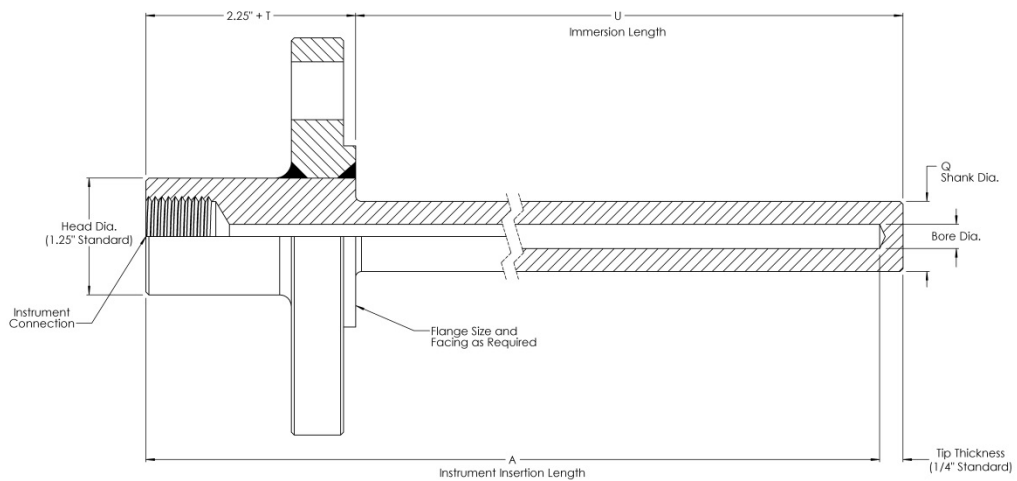


## Flanged

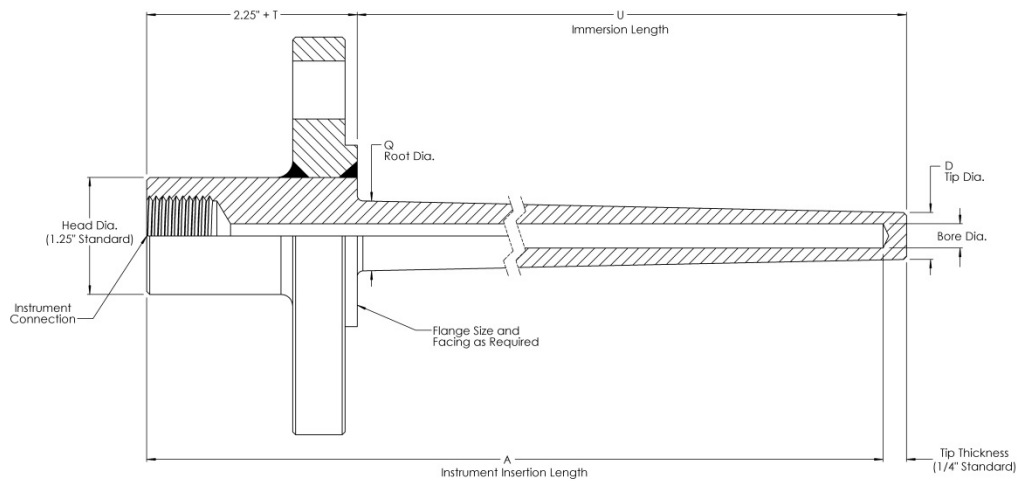
### Stepped



### Straight

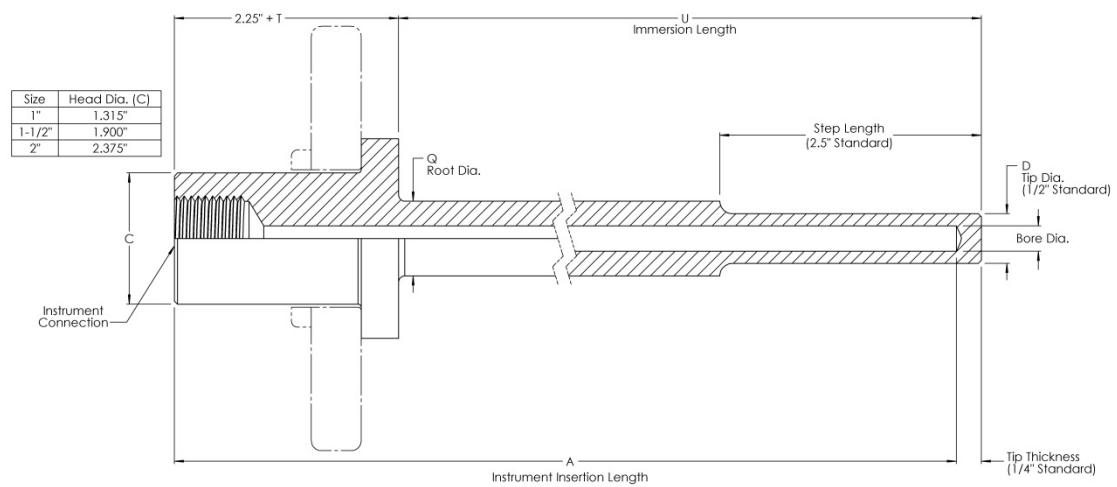


### Tapered

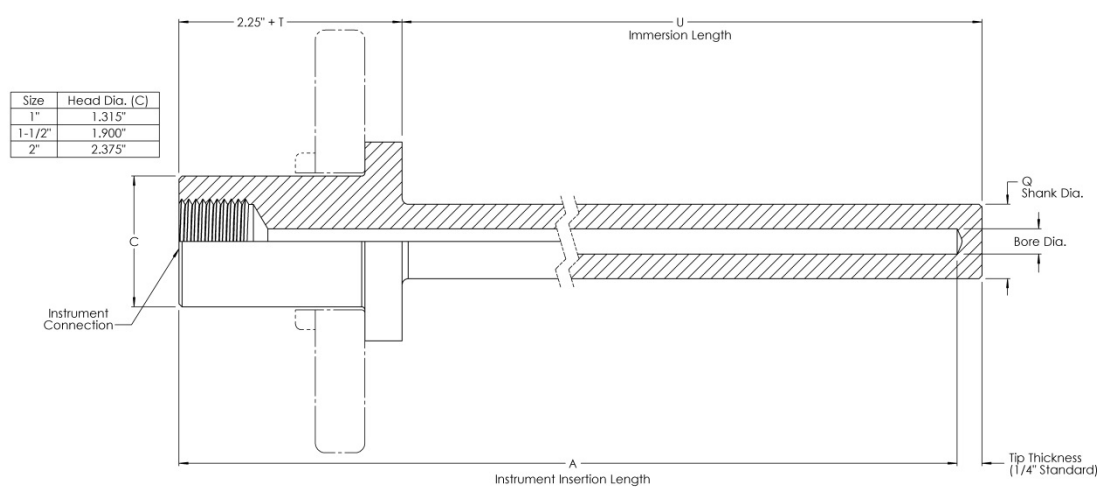


# Van Stone

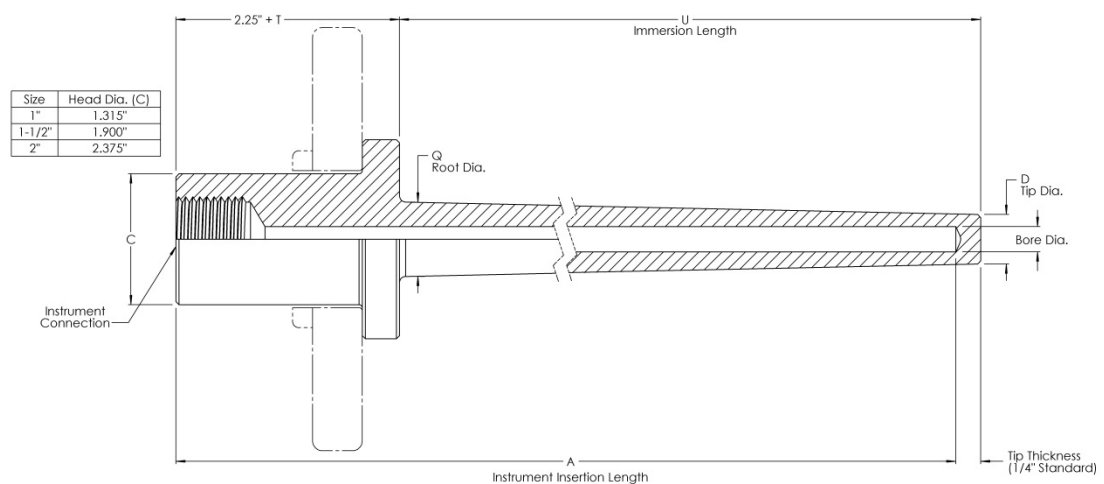
## Stepped



## Straight

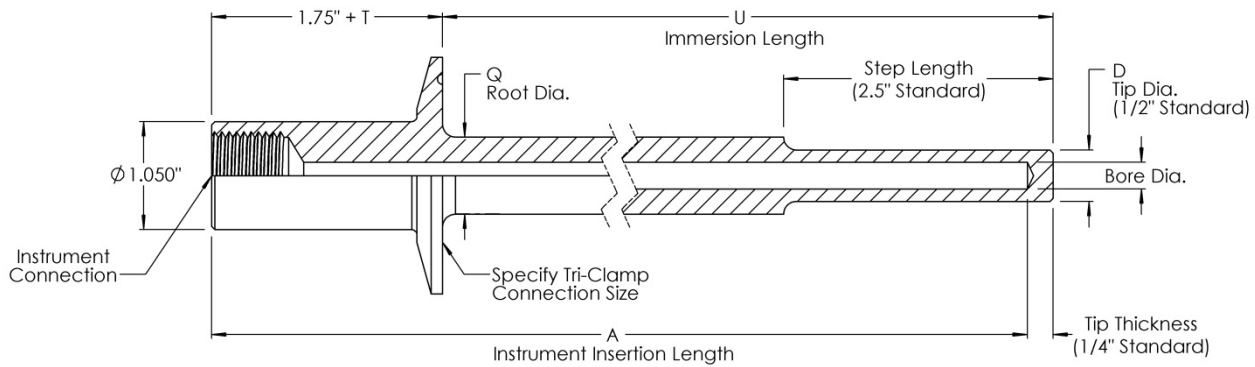


## Tapered

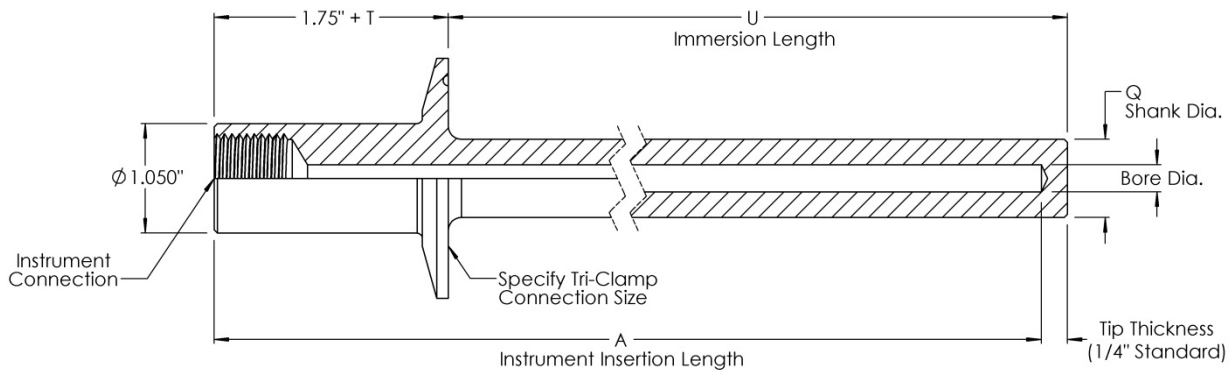


## Sanitary

### Stepped



### Straight



### Tapered

