

#### **TABLE OF CONTENTS**

General Information	
Sales Policy	
Product Engineering Specifications - Drilled Barstock	
Overall Lengths: <31.25"	4
Overall Lengths: >31.25" through 61.25"	5
Overall Lengths: >61.25"	6
Post-Fabricated Flange Dimensional Tolerances	
Protection Tube Engineering Specifications	
Manufacturer's Standard Packaging Procedures	
Threaded Thermowells	
Reduced	10 - 11
Straight	
Tapered	
Limited Space	
Flanged Thermowells	
Reduced	21
Straight	22 - 23
Tapered	
Socket-Weld Thermowells	
Reduced	26 - 27
Straight	28 - 31
Tapered	32 - 35
Vanstone Thermowells	
Assembly	36
Reduced	37
Straight	38 - 39
Tapered	40 - 41
Weld-in Thermowells	
Tapered	42 - 45
Sanitary Thermowells	
Ground Joint Thermowells	47
Plug & Chain Attachments	48

The thermowells shown in this catalog are standard lengths for bimetallic thermometers. We also manufacture wells for thermocouples and RTDs. Texas Thermowell, Inc. will be glad to quote your custom requirements and additionally provide our high standard of quality to the following specifications.

Bore Diameters
Calculations
Coatings

**Exotic Materials** 

**Heat Treating** 

Oxygen Cleaning
Pipe Protection Tubes
Sanitary Wells

#### Sheaths

Testing Procedures:

- Internal Hydrostatic Test
- Liquid Dye Penetrant Test
- PMI, X-ray, Radiograph, etc.

Welding (Standard & Full penetration)

Extensive range of sizes ASME PTC 19.3

Alumina Oxide, Colmonoy (1), Kynar (2), Stellite (3), Halar (4), Tantalum, PTFE, PFA (Fluoropolymers) and others
The largest inventory of Nickel Alloys, flanges and bar, in the industry
NACE MR-01-75 certification, Stress
Relief, annealing and custom
In compliance with ASTM G93-88
Extensive inventory of pipe sizes & materials
Texas Thermowell is certified under the 3A
Dairy Standard, Authorization #690

In compliance with ASTM E1003-84(1990)
In compliance with ASTM E1220-92
Additional information available
Welding performed by welders certified
under ASME Sec. IX, Boiler & Pressure
Vessel Code

Tantalum, Titanium, Hastelloy Alloys, etc.

Our standard delivery policy is 2 weeks shipping after receipt of order. However, if you require a "rush" delivery, we will provide whatever service you may need. Because of our large and advanced equipment package and the largest inventory of bar and flanges in the industry, we are able to respond in a manner which cannot be matched by anyone in our industry.

Texas Thermowell, Inc. has a formal Total Quality Management system which is in compliance with the standards set forth in ANSI/ASQC 92 (which is the technical equivalent of International Standards ISO 9002). The Company is a sustaining member of the American Society for Quality Control as well.

- (1) Trademark Wall Colmonoy
- (2) Trademark Pennwalt Corp.
- (3) Trademark Deloro Stellite
- (4) Trademark Ausimont USA, Inc.

#### **SALES POLICY**

MANUFACTURER'S STANDARDS TTI Standard Product Specifications and tolerances are offered

when Customer specific requirements are not provided. TTI will be pleased to review Customer provided product specifications and

tolerances for manufacturability.

**PRE-CONTRACT REVIEW** Purchaser is responsible for confirming the TTI defined interpretation

of contract requirements. Approval drawings, notations and TTI requests for clarification shall be mutually agreed upon prior to

accepting an order.

**PAYMENT TERMS**Net 30 Days with established account.

MINIMUM BILLING CHARGE \$25.00 Net Per Order (high volume accounts are exempted)

PRICES All Prices are Quoted "Net Each" in U.S. Currency. Standard 30 day

validity may be subject to material availability or prior sale when

applicable.

**SCHEDULING** As a standard, orders are scheduled to ship 10 working days after

receipt. The TTI Sales Department will be pleased to provide pricing

and verify availability for rush scheduling.

SHIPPING CHARGES Freight on Board Beaumont, TX. Freight charges are prepay and add

(upon credit approval).

SHIPMENT DAMAGES Damage to shipments beyond the F.O.B. point is the responsibility of

the carrier. Shipments should be opened and inspected promptly upon receipt. Replacement shipments are made on a chargeable

basis.

SHIPMENT SHORTAGES All claims for shortages must be reported within 7 days of receipt of

shipment. The purchaser's receiving department is responsible for furnishing the TTI bundle identification markings and for storing damaged containers that may require inspection by the freight

carrier, if applicable.

MATERIAL RETURNS Contact the TTI Sales Department for information. A Return Authori-

zation number is required to assure shipment acceptance at the TTI

Receiving Department.

**RESTOCKING CHARGES**Contact the TTI Sales Department for information. If material is

approved for restock, the incoming freight must be accompanied with

an authorization number.

SAMPLE MATERIALS Sample materials for evaluation and quotation will require an authori-

zation number for internal routing and processing. Contact the TTI

Sales Department.

#### PRODUCT ENGINEERING SPECIFICATIONS

DRILLED BARSTOCK **OVERALL LENGTHS: THROUGH 31.25" ONLY** 

**Barstock Outside Diameter** Mill Standard +.000"/-1/32"

(Hex: Flat to flat measurement; Round: Outside diameter)

"W" (Nominal) Bore "Bottom" Shape

.0015" drift per inch, .035" Max. T.I.R. **Bore Concentricity** 

Bore Depth +.030"/-.000"

Bore Diameter +.005"/-.003" Stem Only (Not Welded)

+.007"/-.003" Welded Products

Chamfer Nominal Insertion Length ±.063"

1/2"-14 NPT. Entrance bevel: 60° (±1/2°); Drill .718"(±.005") I.D. x Instrument Connection

1.00" (±.015") depth; 59° (Nom.) drill bottom. Tap (thread) .500" x .875" depth. Yield: 3 full turns (Min.) x 4 full turns (Max.) on plug

gauge. In compliance with ANSI B1.20.1-92.

\*NOTE: Variances in standard dimensions occur in the TTI Series: 1/2"LS (Limited Space) threaded thermowell, request dimensions.

Material In compliance with ASTM specifications (or other applicable

National Standard such as ASME, AWS, etc.)

Overall Length Nominal

**Process Connection Flange** Reference Doc. No. TX-PFT

**Process Connection Thread** In compliance with ANSI B1.20.1-92. Specifications vary

depending upon the required process connection size, request dimensions.

Radius Nominal

3/32" minimum height characters indicating material Stamping

grade & Manufacturer's internal traceability code(s).

Stem Finish 16-32 RMS over 85% of "U" dimension (Exception: \*high

carbon/low alloy content materials).

Stem Outside Diameter(s) +/- .010"

Tapered Allowance Maximum "U" length for a full length taper is 16.00".

> "U" dimensions greater than 16.00" in length are manufactured with a straight o.d. (Utilizing the Major "taper" diameter) beginning below the process connection radius & following through with only the last 16.00"

(+.000"/-.500") of the "U" dimension tapered to the Minor o.d.

Tip Thickness .250" ±.063"

Weld Reference TTI Doc. No TX-PFT for flanged wells.

(Multiple-piece construction weld joints: Reference TTI Dwg. No. TX-B)

Wrench Allowance Nominal. Wrench allowance specifications vary with the process

connection size ordered. Request dimensions.

\*A listing of applicable material grades is provided on the TTI Doc. No. TX-CSL which is available upon request.

Notice: Customer supplied specifications will be accepted as an alternative. Manufacturability of such specifications will be determined by Texas Thermowell, Inc.

Rev. 1; Date: 09-17-96 ile Loc. # g:\dept\product\pr0150.wpo

#### PRODUCT ENGINEERING SPECIFICATIONS

DRILLED BARSTOCK

OVERALL LENGTHS: >31.25" THROUGH 61.25" ONLY

**Barstock Outside Diameter** Mill Standard +.000"/-1/32"

(Hex: Flat to flat measurement; Round: Outside diameter)

Bore "Bottom" Shape "W" (Nominal)

**Bore Concentricity** .002" drift per inch, .035" Max. T.I.R.

±.125"

Bore Depth +.063"/-.000" **Bore Diameter** +.007"/-.003" Chamfer Nominal Insertion Length

Instrument Connection 1/2"-14 NPT. Entrance bevel: 60° (±1/2°); Drill 718"(±.005") I.D. x

> 1.00" (±.015") depth; 59° (Nom.) drill bottom. Tap (thread) .500" x .875" depth. Yield: 3 full turns (Min.) x 4 full turns (Max.) on plug

gauge. In compliance with ANSI B1.20.1-92.

Material In compliance with ASTM specifications (or other applicable

National Standard such as ASME, AWS, etc.)

Overall Length Nominal

**Process Connection Flange** Reference Doc. No. TX-PFT

**Process Connection Thread** In compliance with ANSI B1.20.1-92. Specifications vary

depending upon the required process connection size, request dimensions.

Radius Nominal

3/32" minimum height characters indicating material Stamping

grade & Manufacturer's internal traceability code(s).

Stem Finish 16-32 RMS over 85% of "U" dimension (Exception: \*high

carbon/low alloy content materials).

Stem Outside Diameter(s) +/- .015"

Maximum "U" length for a full length taper is 16.00". Tapered Allowance

> "U" dimensions greater than 16.00" in length are manufactured with a straight o.d. (Utilizing the Major "taper" diameter) beginning below the process connection radius & following through with only the last 16.00"

(+.000"/-.500") of the "U" dimension tapered to the Minor o.d.

Tip Thickness .250" ±.063"

Weld Reference TTI Doc. No TX-PFT for flanged wells.

> Multiple-piece construction weld joints: Reference TTI Dwg. No. TX-B. Drilled-through tip with full pen. weld to close: Reference TTI Dwg. No.

TX-FP TIP

Wrench Allowance Nominal. Wrench allowance specifications vary with the process

connection size ordered. Request dimensions.

\*A listing of applicable material grades is provided on the TTI Doc. No. TX-CSL which is available upon request.

Notice: Customer supplied specifications will be accepted as an alternative. Manufacturability of such specifications will be determined by Texas Thermowell, Inc.



#### PRODUCT ENGINEERING SPECIFICATIONS

DRILLED BARSTOCK

**OVERALL LENGTHS: GREATER THAN 61.25"** 

Barstock Outside Diameter Mill Standard +.000"/-1/32"

(Hex: Flat to flat measurement; Round: Outside diameter)

Bore "Bottom" Shape "W" (Nominal)

Bore Concentricity .002" drift per inch, .035" Max. T.I.R.

Bore Depth +.500"/-.000"

Bore Diameter +.007"/-.003"

Chamfer Nominal 
t.500"

Instrument Connection 1/2"-14 NPT. Entrance bevel: 60° (±1/2°); Drill .718"(±.005") I.D. x 1.00"

 $(\pm .015")$  depth; 59° (Nom.) drill bottom. Tap (thread) .500" x .875" depth. Yield: 3 full turns (Min.) x 4 full turns (Max.) on plug gauge. In compliance

with ANSI B1.20.1-92.

Material In compliance with ASTM specifications (or other applicable

National Standard such as ASME, AWS, etc.)

Overall Length Nominal

Process Connection Flange Reference Doc. No. TX-PFT

Process Connection Thread In compliance with ANSI B1.20.1-92. Specifications vary

depending upon the required process connection size, request dimensions.

Radius Nominal

Stamping 3/32" minimum height characters indicating material

grade & Manufacturer's internal traceability code(s).

Stem Finish 16-32 RMS over 85% of "U" dimension (Exception: \*high

carbon/low alloy content materials).

Stem Outside Diameter(s) +/- .015"

Tapered Allowance Maximum "U" length for a full length taper is 16.00".

"U" dimensions greater than 16.00" in length are manufactured with a straight o.d. (Utilizing the Major "taper" diameter) beginning below the process connection radius & following through with only the last 16.00"

(+.000"/-.500") of the "U" dimension tapered to the Minor o.d.

Tip Thickness .250" ±.063"

Weld Reference TTI Doc. No TX-PFT for flanged wells.

Multiple-piece construction weld joints: Reference TTI Dwg. No. TX-B. Drilled-through tip with full pen. weld to close: Reference TTI Dwg. No.

TX-FP TIP

Wrench Allowance Nominal. Wrench allowance specifications vary with the process

connection size ordered. Request dimensions.

\*A listing of applicable material grades is provided on the TTI Doc. No. TX-CSL which is available upon request.

Notice: Customer supplied specifications will be accepted as an alternative. Manufacturability of such specifications will be determined by Texas Thermowell, Inc.

Doc # PES G61 Rev 1; 9-96 file: c:\marketing\pr0152

#### POST-FABRICATED FLANGE DIMENSIONAL TOLERANCES

Texas Thermowell, Inc. post-fabricated flange dimensional tolerances are provided below. These dimensional tolerances include those of the ANSI B16.5 National Standard, where applicable. Customer requested specifications will be reviewed for manufacturability upon request.

Flange Overall Thickness

RF, FF, RTJ +.12"/-.000" (18" NPS and smaller). See "Exceptions Notice" following.

All others ±.062" (10" NPS and smaller). See "Exceptions Notice" following.

Exceptions Notice: All post -fabricated "High Carbon/Low Alloy" content material grade flanges are provided per ANSI B16.5 maximum thickness. However, the ANSI B16.5 minimum

thickness may be provided undersized by as much as .063".

**Gasket Surface** 

Standard Flanges 125-200 Microinch. Serrated-spiral (phonographic) grooves.

RTJ (Ring Type)
Vanstone Series
Flanged w/ Sheath

125-200 AARH. Smooth machined surface.
125-200 AARH. Smooth machined surface.
32-64 RMS (thermowell flange gasket surface)

Inside Diameter

Drilled by TTI Non-welded: +.005"/-.000"

Welded: Request TTI standard welding drawing "TX-A1" (or optional full

penetration welding drawing "TX-A2")

Radius Nominal

Stamping In compliance with ANSI B16.5 with additional 3/32" minimum height charac-

ters indicating TTI internal traceability code(s).

Thermowell Stem Reference applicable TTI Doc. No. PES 31, PES 61, or PES G61.

Threaded To standard gauge limits (when threads are applicable). Reference TTI Series

"Threaded-On & Seal-Welded" detail drawings. Note: Standard ANSI B16.5 thread specifications are **not** fabricated to mate with a threaded thermowell stem.

TTI Welding Qualifications

Welders Welding is performed by welders certified under the ASME Sec. IX, Boiler &

Pressure Vessel Code-1992.

WPS/PQR Request welding documents prior to fabrication.

TTI Welding Specifications

Standard Weld Reference TTI Dwg. No. TX-A1
Full Penetration Reference TTI Dwg. No. TX-A2
Non-Standard Specifications provided upon request

#### FLANGED THERMOWELL DISCLOSURE:

Flanged thermowells are considered proprietary products which are not governed by ANSI B16.5. Post-fabricated thermowell flange components do no carry an automatic ANSI B16.5 rating<sup>2</sup> and are not considered in compliance with the standard<sup>3</sup>.

#### ANSI B16.5 PATTERNED FLANGES:

Certain material grades are not included in the ANSI B16.5 National Standard and are offered as "ANSI B16.5 Patterned" flanges. Patterned flanges are **dimensionally** compliant to ANSI B16.5. Prevalent material grades for patterned flanges include: Alloy C22 (Trade name: Hastelloy C22), Alloy 601 (Trade name: Inconel 601), HR 160, Tantalum, Titanium (all grades), and Zirconium (all grades), etc. Reference ANSI B16.5, TABLE 1A - LIST OF MATERIAL SPECIFICATIONS.

DOC # TX-PFT REV. 1, 10-96

<sup>&</sup>lt;sup>1</sup>Price and availability for "high carbon/low alloy" content material grade flanges to meet ANSI B16.5 minimum flange thickness after fabrication is available upon request. TTI Doc. No. TX-CSL provides a listing of applicable materials.

<sup>&</sup>lt;sup>2</sup>Reference ANSI B16.5-1988 (1992); Interpretation: 1-1, Subject: Modification to Flanges; Reply number (1) and number (2). 
<sup>3</sup>Reference ANSI B16.5-1988 (1992); Interpretation: 1-4, Subject: Proprietary Products; Reply number (1) and number (3).

#### PROTECTION TUBE ENGINEERING SPECIFICATIONS

Pipe Outside Diameter Pipe Inside Diameter

Mill Standard +/-.032"

Mill Standard: Pre-Fabrication

\*Post-Fabrication: Pipe I.D. is subject to distortion at each welded area.

Pipe I.D. is not drilled or reamed after fabrication.

Closed-End Bottom Shape

**Nominal.** Ref. "TX FP TIP" for TTI standard closed-end tip specifications.

(Pipe caps are available as an option to close the tip. Pipe cap specifica-

tions are available upon request.)

+/- .500" for Depths </= 60"

+/- .750" for Depths > 60" - 96"

+/- 1.00" for Depths > 96"

Chamfer

"Bore" Depth

Nominal Insertion Length

+/- .500" for Insertion Lengths </= 60"

+/- .750" for Insertion Lengths > 60" - 96"

+/- 1.00" for Insertion Lengths > 96"

Material

In compliance with ASTM specifications (or other applicable

National Standard such as ASME, AWS, etc.)

Overall Length

**Process Connection Bushing** Process Connection Flange

Male Pipe Thread

Radius Stamping

Stem Surface Finish Tip Thickness Welding

Nominal

Standard bushing dimensions are per "TX-PTB".

Flange dimensions are compliant to ANSI B16.5 prior to

fabrication. Flange facing finish: 125-200 Microinch In compliance with ANSI B1.20.1-92. The thread specifications

vary with the pipe size ordered, request dimensions.

Nominal

3/32" Minimum height characters indicating material grade & Manufacturer's internal traceability code(s).

RA 50 over 55% of "U" length

1/4" (+/- 1/16"). Valid for closed-end tip thickness per "TX-FP TIP"

- a) Flange to Base Metal Weld: TTI Dwg. No. TX-A1 (Standard weld)
- b) Bushing to Base Metal: Fillet weld
- c) Barstock for Closed-end: TTI Dwg. No. "TX-FP TIP". Full penetration weld locations are subject to distortion and internal filler metal slag.
- d) Pipe Cap for Closed-end: TTI Dwg. No. "TX-B". Full penetration weld locations are subject to distortion and internal filler metal slag.

Notice: Customer supplied specifications will be accepted as an alternative. Manufacturability of such specifications will be determined by Texas Thermowell, Inc.

<sup>\*</sup> Post-fabricated internal pipe diameters are affected by interdependent factors such as welding requirements, overall length and material grade. Internal pipe diameter tolerances are available on an "as needed" basis.



#### MANUFACTURER'S STANDARD PACKAGING PROCEDURES

Texas Thermowell, Inc. standard packaging procedures were devised to insure delivery of our product undamaged as well as minimize the cost of transit charges. \*Price & availability for non-standard packaging procedures are available upon request.

#### INDIVIDUAL PRODUCT PACKAGING

All wells are enclosed in protective packaging prior to accumulation into the transit container(s).

#### Standard Wells

Enclosed in plastic protective webbing then wrapped in brown paper and taped closed.

#### **Coated Wells & Special Surface Finishes**

Enclosed in bubble wrap and cardboard sleeves

High Carbon/Low Alloy Content Materials (Carbon Steel, Chrome/Moly & similar materials)

Coated with Rust inhibitor (WD-40 or similar), enclosed in Vapor Wrap then wrapped in brown paper and taped closed.

#### TRANSIT CONTAINERS

All transit containers have packing material to absorb shock & separate product.

#### **Standard Transit Container**

Corrugated cardboard box rated at 200 lb. Test

#### **WEIGHT LIMITATIONS:**

Threaded wells: 30 lbs. Maximum per cardboard box

Flanged wells: 25 lbs. Maximum per cardboard box (See quantity limitations below)

#### QUANTITY PER BOX LIMITATIONS:

Flanged wells: (All other wells are subject to weight limitations rather than quantity limitations)

150# - 600# Rating flanges

Maximum of two (2) flanged wells per cardboard box (or less to avoid exceeding the standard weight limit)

900# or greater Rating flanges

Maximum of one (1) flanged well per cardboard box

#### Pallet

Cardboard boxes are stacked onto a pallet & wrapped with plastic wrap for transit. \$30.00 per pallet (Not included in net each prices) The estimated number of pallets required for large jobs are available through the TTI Sales Department. Palletization limits freight carrier choices. Generally palletizing does not require a forklift for unloading at the destination.

#### Crate

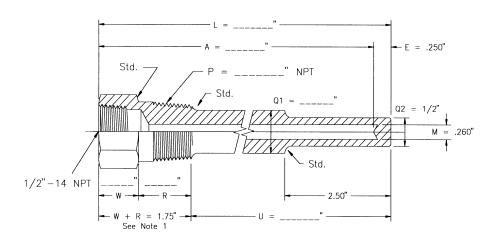
Request crate charges through the TTI Sales Department.

Crating limits freight carrier options. Generally, crating will require a forklift for unloading at the destination.

\*TTI will not absorb any charges for product, freight charges or otherwise should requested non-standard packaging exceed the Manufacturer's standard limitations for weight or quantity per container herein.



## THREADED THERMOWELLS SERIES R .260



EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
1/2" NPT	Ref. Note 2 - U	2-1/2	4	1/2
	R .260 - U	4-1/2	6	5/8
		7-1/2	9	5/8
		10-1/2	12	5/8
		13-1/2	15	5/8
		16-1/2	18	5/8
		22-1/2	24	5/8
3/4" NPT	Ref. Note 2 - U	2-1/2	4	1/2
	R .260 - U	4-1/2	6	3/4
		7-1/2	9	3/4
		10-1/2	12	3/4
		13-1/2	15	3/4
		16-1/2	18	3/4
		22-1/2	24	3/4
1" NPT	Ref. Note 2 - U	2-1/2	4	1/2
	R .260 - U	4-1/2	6	7/8
		7-1/2	9	7/8
		10-1/2	12	7/8
		13-1/2	15	7/8
		16-1/2	18	7/8
		22-1/2	24	7/8

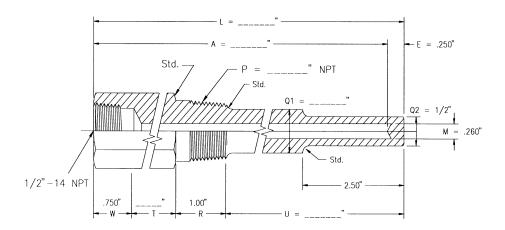
Note 1: When "P" = 1/2" npt, W = 1.00" and R = .750" When "P" = 3/4" or 1" npt, W = .750" and R = 1.00"

Note 2: When U = 2-1/2" or less, the "U" length is manufactured straight construction and the outside diameter is determined by Series specified, for example:

- Series R: Q1 and Q2 = 1/2" o.d. for all Process Connection sizes.
- Series S: Consult the "Series S .260" catalog page to determine the correct diameter.



### THREADED THERMOWELLS SERIES RL .260



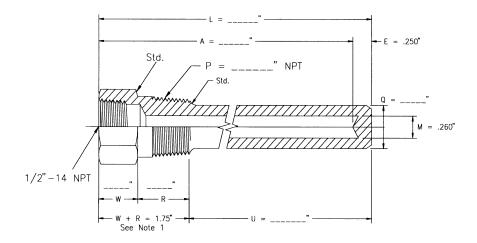
EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q1
1/2" NPT	Ref. Note 1 - U	2-1/2	T2	6	1/2
	RL .260 - U	4-1/2	Т3	9	5/8
		7-1/2	Т3	12	5/8
		10-1/2	Т3	15	5/8
		13-1/2	Т3	18	5/8
		19-1/2	Т3	24	5/8
3/4" NPT	Ref. Note 1 - U	2-1/2	T2	6	1/2
	RL .260 - U	4-1/2	Т3	9	3/4
		7-1/2	T3	12	3/4
		10-1/2	Т3	15	3/4
		13-1/2	Т3	18	3/4
		19-1/2	Т3	24	3/4
1" NPT	Ref. Note 1 - U	2-1/2	T2	6	1/2
	RL .260 - U	4-1/2	Т3	9	7/8
		7-1/2	Т3	12	7/8
		10-1/2	Т3	15	7/8
		13-1/2	Т3	18	7/8
		19-1/2	Т3	24	7/8

Note 1: When U = 2-1/2" or less, the "U" length is manufactured straight construction and the outside diameter is determined by Series specified, for example:

- Series R: Q1 and Q2 = 1/2" o.d. for all Process Connection sizes.
- Series S: Consult the "Series S .260" catalog page to determine the correct diameter.



## THREADED THERMOWELLS SERIES S .260

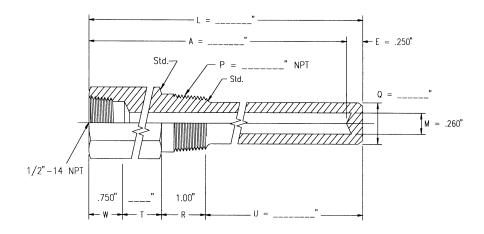


EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q
1/2" NPT	S .260 - U	2-1/2	4	1/2
		4-1/2	6	5/8
		7-1/2	9	5/8
		10-1/2	12	5/8
		13-1/2	15	5/8
		16-1/2	18	5/8
		22-1/2	24	5/8
3/4" NPT	S .260 - U	2-1/2	4	1/2
		4-1/2	6	3/4
		7-1/2	9	3/4
		10-1/2	12	3/4
		13-1/2	15	3/4
		16-1/2	18	3/4
		22-1/2	24	3/4
1" NPT	S .260 - U	2-1/2	4	3/4
		4-1/2	6	7/8
		7-1/2	9	7/8
		10-1/2	12	7/8
		13-1/2	15	7/8
		16-1/2	18	7/8
		22-1/2	24	7/8

Note 1: When "P" = 1/2" npt, W = 1.00" and R = .750" When "P" = 3/4" or 1" npt, W = .750" and R = 1.00"



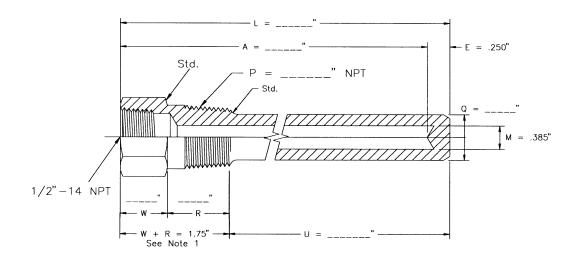
# THREADED THERMOWELLS SERIES SL .260



EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q
1/2" NPT	SL .260 - U	2-1/2	T2	6	1/2
		4-1/2	T3	9	5/8
		7-1/2	T3	12	5/8
		10-1/2	T3	15	5/8
		13-1/2	Т3	18	5/8
		19-1/2	Т3	24	5/8
3/4" NPT	SL .260 - U	2-1/2	T2	6	1/2
		4-1/2	T3	9	3/4
		7-1/2	Т3	12	3/4
		10-1/2	Т3	15	3/4
		13-1/2	T3	18	3/4
		19-1/2	T3	24	3/4
1" NPT	SL .260 - U	2-1/2	T2	6	3/4
		4-1/2	Т3	9	7/8
		7-1/2	Т3	12	7/8
		10-1/2	T3	15	7/8
		13-1/2	T3	18	7/8
		19-1/2	Т3	24	7/8



# THREADED THERMOWELLS SERIES S .385

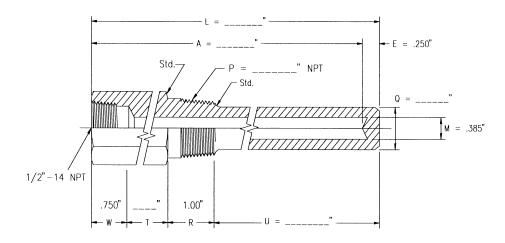


EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q
1/2" NPT	S .385 - U	2-1/2	4	.680
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	
3/4" NPT	S .385 - U	2-1/2	4	49/64
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	
1" NPT	S .385 - U	2-1/2	4	7/8
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	

Note 1: When "P" = 1/2" npt, W = 1.00" and R = .750" When "P" = 3/4" or 1" npt, W = .750" and R = 1.00"



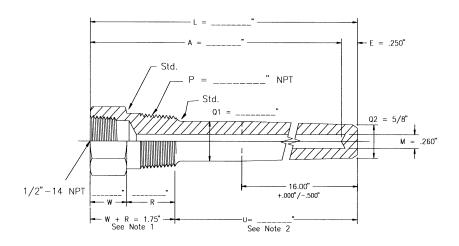
# THREADED THERMOWELLS SERIES SL .385



EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q
1/2" NPT	SL .385 - U	2-1/2	T2	6	.680
		4-1/2	Т3	9	
		7-1/2	Т3	12	
		10-1/2	Т3	15	
		13-1/2	Т3	18	
		19-1/2	Т3	24	
3/4" NPT	SL .385 - U	2-1/2	T2	6	49/64
		4-1/2	Т3	9	
		7-1/2	Т3	12	
		10-1/2	Т3	15	
		13-1/2	Т3	18	
		19-1/2	Т3	24	
1" NPT	SL .385 - U	2-1/2	T2	6	7/8
		4-1/2	T3	9	
		7-1/2	Т3	12	
		10-1/2	T3	15	
		13-1/2	Т3	18	
		19-1/2	Т3	24	



## THREADED THERMOWELLS SERIES H .260

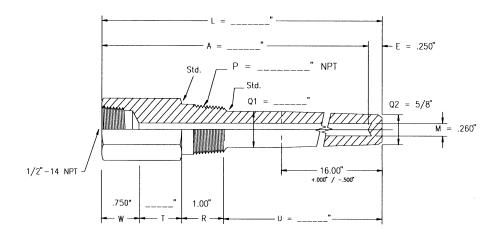


EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
1/2" NPT	H .260 - U	2-1/2	4	.680
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	
3/4" NPT	H .260 - U	2-1/2	4	7/8
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	
1" NPT	H .260 - U	2-1/2	4	1-1/16
		4-1/2	6	
		7-1/2	9	
		10-1/2	12	
		13-1/2	15	
		16-1/2	18	
		22-1/2	24	

Note 1: When "P" = 1/2" npt, W = 1.00" and R = .750" When "P" = 3/4" or 1" npt, W = .750" and R = 1.00"



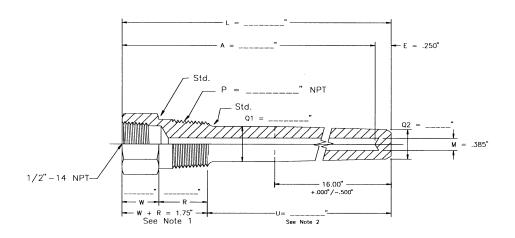
# THREADED THERMOWELLS SERIES HL .260



EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U		STEM LGTH A	SHANK DIA Q1
1/2" NPT	HL .260 - U	2-1/2	T2	6	.680
		4-1/2	Т3	9	
		7-1/2	Т3	12	
		10-1/2	Т3	15	
		13-1/2	Т3	18	
		16-1/2	Т3	24	
3/4" NPT	HL .260 - U	2-1/2	T2	6	7/8
		4-1/2	Т3	9	
		7-1/2	T3	12	
		10-1/2	Т3	15	
		13-1/2	Т3	18	
		16-1/2	Т3	24	
1" NPT	HL .260 - U	2-1/2	T2	6	1-1/16
		4-1/2	Т3	9	
		7-1/2	Т3	12	
		10-1/2	Т3	15	
		13-1/2	Т3	18	
		16-1/2	Т3	24	



## THREADED THERMOWELLS SERIES H .385



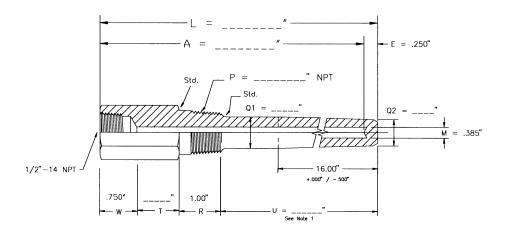
EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
1/2" NPT	H .385 - U	2-1/2	4	.680	5/8
		4-1/2	6		
1		7-1/2	9		
		10-1/2	12		
		13-1/2	15		
		16-1/2	18		
		22-1/2	24		
3/4" NPT	H .385 - U	2-1/2	4	7/8	49/64
		4-1/2	6		
		7-1/2	9		
		10-1/2	12		
		13-1/2	15		
		16-1/2	18		
		22-1/2	24		
1" NPT	H .385 - U	2-1/2	4	1-1/16	49/64
		4-1/2	6		
		7-1/2	9		
		10-1/2	12		
		13-1/2	15		
		16-1/2	18		
		22-1/2	24		

Note 1: When "P" = 1/2" npt, W = 1.00" and R = .750"

When "P" = 3/4" or 1" npt, W = .750" and R = 1.00" Note 2: Full length taper provided when "U" <= 16.00"



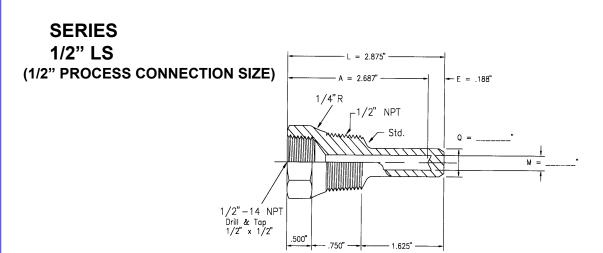
## THREADED THERMOWELLS SERIES HL .385



EXTERNAL THREAD P	CODE NUMBER	INSERT LENGTH U			SHANK DIA Q1	SHANK DIA Q2
1/2" NPT	HL .385 - U	2-1/2	T2	6	.680	5/8
		4-1/2	Т3	9		
		7-1/2	Т3	12		
		10-1/2	Т3	15		
		13-1/2	Т3	18		
		16-1/2	Т3	24		
3/4" NPT	HL .385 - U	2-1/2	T2	6	7/8	49/64
		4-1/2	Т3	9		
		7-1/2	Т3	12		
	*	10-1/2	Т3	15		
		13-1/2	Т3	18		
		16-1/2	Т3	24		
1" NPT	HL .385 - U	2-1/2	T2	6	1-1/16	49/64
		4-1/2	Т3	9		
		7-1/2	T3	12		
		10-1/2	Т3	15		
		13-1/2	Т3	18		
		16-1/2	Т3	24		

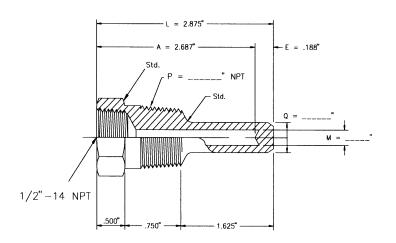


### THREADED THERMOWELLS SERIES LS



Note 1: When "M" = .260", "Q" = .500" When "M" = .385", "Q" = .680"

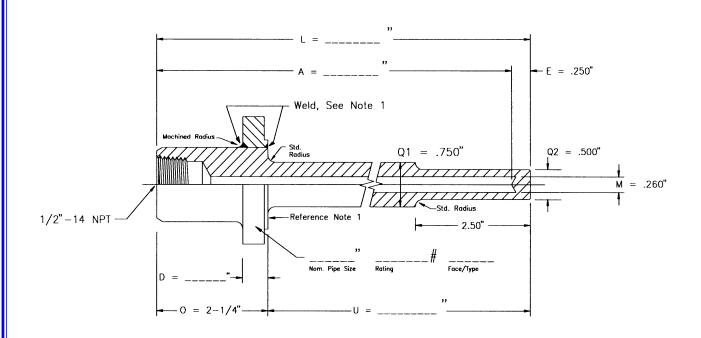
> SERIES 3/4" LS & 1" LS



Note 1: When "M" = .260", "Q" = .500" When "M" = .385", "Q" = .766"



### FLANGED THERMOWELLS SERIES FR .260



FLG (NPS)		_		INSERT LENGTH	STEM LGTH
SIZE	RATING	FACE / TYPE	CODE NUMBER	U	Α
*	*	*	Ref. Note 2 -U	2	4
			FR .260 - U	4	6
				7	9
				10	12
				13	15
				16	18
				22	24

Note 1: Reference Doc. No. TX-PFT for welding and gasket surface finish information.

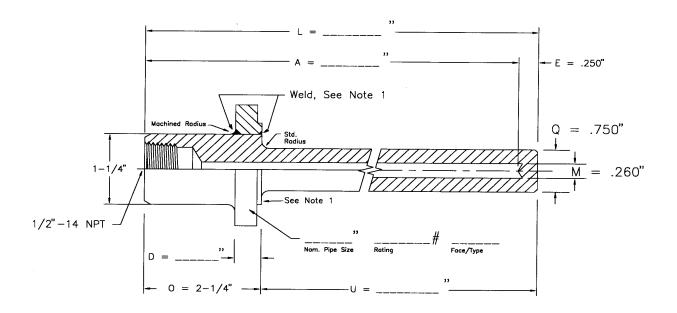
Note 2: When U = 2-1/2" or less, the "U" length is manufactured straight construction and the outside diameter is determined by Series specified, for example:

- Series FR: Q1 and Q2 = 1/2" o.d. for all Process Connection sizes.
- Series FS: Consult the "Series FS .260" catalog page to determine the correct diameter.

<sup>\*</sup> Customer supplied specifications.



## FLANGED THERMOWELLS SERIES FS .260



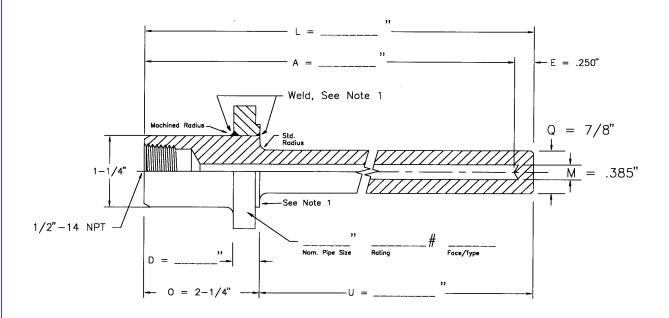
FLG (NPS)				INSERT LENGTH	STEM LGTH
SIZE	RATING	FACE / TYPE	CODE NUMBER	U	A
*	*	*	FS .260 - U	2	4
				4	6
	•			7	9
				10	12
				13	15
				16	18
				22	24

Note 1: Reference Doc. No. TX-PFT for welding and gasket surface finish information.

<sup>\*</sup> Customer supplied specifications.



# FLANGED THERMOWELLS SERIES FS .385



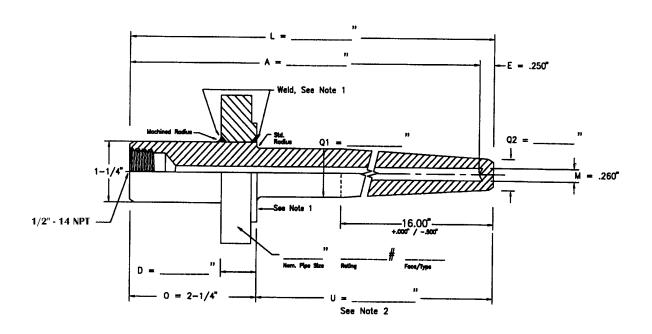
FLG (NPS) SIZE	RATING	FACE / TYPE	CODE NUMBER	INSERT LENGTH U	STEM LGTH A
*	*	*	FS .385 - U	2	4
				4	6
				7	9
				10	12
•				13	15
				16	18
				22	24

Note 1: Reference Doc. No. TX-PFT for welding and gasket surface finish information.

<sup>\*</sup> Customer supplied specifications.



## FLANGED THERMOWELLS SERIES FH .260



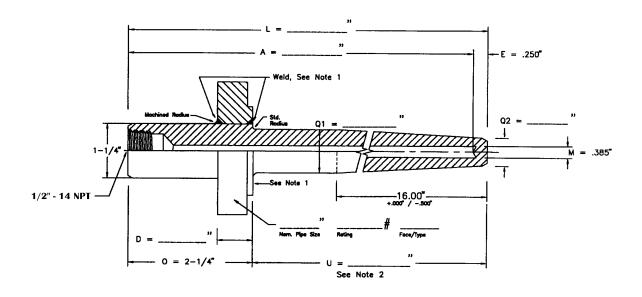
FLG (NPS) SIZE	RATING	FACE / TYPE	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
3/4"	*	*	FH .260 - U	2	4	3/4"	5/8"
				4	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1"	*	*	FH .260 - U	2	4	7/8"	5/8"
				4	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1-1/2"	*	*	FH .260 - U	2	4	1-1/16"	5/8"
OR				4	6		
LARGER				7	9		
				10	12		
				13	15		
				16	18		
		L		22	24		

<sup>\*</sup> Customer supplied specifications.

Note 1: Reference Doc. No. TX-PFT for welding and gasket surface finish information.



### FLANGED THERMOWELLS SERIES FH .385



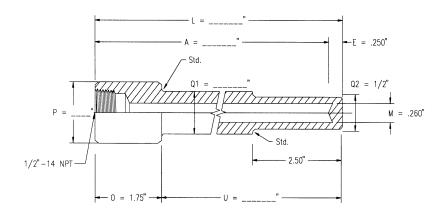
FLG (NPS) SIZE	RATING	FACE / TYPE	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
3/4"	*	*	FH .385 - U	2	4	3/4"	5/8"
				4	6		
				7	9		
				10	12		
]				13	15		
				16	18		
				22	24		
1"	*	*	FH .385 - U	2	4	7/8"	49/64"
				4	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1-1/2"	*	*	FH .385 - U	2	4	1-1/16"	49/64"
OR				4	6		
LARGER				7	9		
			:	10	12		
				13	15		
				16	18		
				22	24		

<sup>\*</sup> Customer supplied specifications.

Note 1: Reference Doc. No. TX-PFT for welding and gasket surface finish information.



## SOCKET-WELD THERMOWELLS SERIES SWR .260



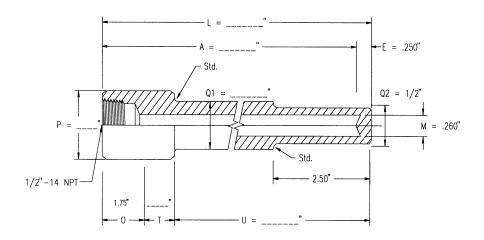
PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	Ref. Note 1 - U	2-1/2	4	1/2
		SWR .260 - U	4-1/2	6	3/4
			7-1/2	9	3/4
			10-1/2	12	3/4
			13-1/2	15	3/4
			16-1/2	18	3/4
			22-1/2	24	3/4
1" Nominal	1.315	Ref. Note 1 - U	2-1/2	4	3/4
		SWR .260 - U	4-1/2	6	7/8
			7-1/2	9	7/8
			10-1/2	12	7/8
			13-1/2	15	7/8
			16-1/2	18	7/8
			22-1/2	24	7/8

Note 1: When U = 2-1/2" or less, the "U" length is manufactured straight construction and the outside diameter is determined by Series specified, for example:

- Series SWR: Q1 and Q2 = 1/2" o.d. for all Process Connection sizes.
- Series SWS: Consult the "Series SWS .260" catalog page to determine the correct diameter.



## SOCKET-WELD THERMOWELLS SERIES SWRL .260



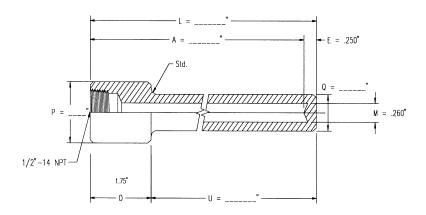
PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	Ref. Note 1 - U	2-1/2	T2	6	1/2
ļ		SWRL .260 - U	4-1/2	Т3	9	3/4
			7-1/2	Т3	12	3/4
l			10-1/2	Т3	15	3/4
			13-1/2	T3	18	3/4
			16-1/2	Т3	21	3/4
			19-1/2	Т3	24	3/4
1" Nominal	1.315	Ref. Note 1 - U	2-1/2	T2	6	3/4
		SWRL .260 - U	4-1/2	Т3	9	7/8
			7-1/2	Т3	12	7/8
<b>j</b>			10-1/2	Т3	15	7/8
			13-1/2	Т3	18	7/8
			16-1/2	Т3	21	7/8
			19-1/2	Т3	24	7/8

Note 1: When U = 2-1/2" or less, the "U" length is manufactured straight construction and the outside diameter is determined by Series specified, for example:

- Series SWRL: Q1 and Q2 = Q1 Dimension in above matrix.
- Series SWSL: Consult the "Series SWSL .260" catalog page to determine the correct diameter.



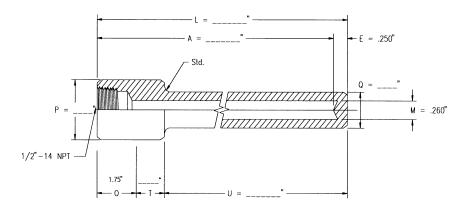
# SOCKET-WELD THERMOWELLS SERIES SWS .260



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q
3/4" Nominal	1.050	SWS .260 - U	2-1/2	4	1/2
			4-1/2	6	3/4
ļ	i		7-1/2	9	3/4
			10-1/2	12	3/4
			13-1/2	15	3/4
			16-1/2	18	3/4
			22-1/2	24	3/4
1" Nominal	1.315	SWS .260 - U	2-1/2	4	3/4
			4-1/2	6	7/8
1			7-1/2	9	7/8
			10-1/2	12	7/8
			13-1/2	15	7/8
			16-1/2	18	7/8
			22-1/2	24	7/8



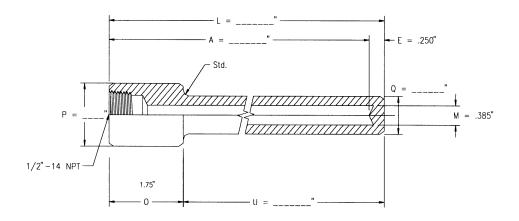
## SOCKET-WELD THERMOWELLS SERIES SWSL .260



PIPE SIZE	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q
3/4" Nominal	1.050	SWSL .260 - U	2-1/2	T2	6	1/2
			4-1/2	Т3	9	3/4
			7-1/2	Т3	12	3/4
			10-1/2	Т3	15	3/4
			13-1/2	Т3	18	3/4
			16-1/2	ТЗ	21	3/4
			19-1/2	Т3	24	3/4
1" Nominal	1.315	SWSL .260 - U	2-1/2	T2	6	3/4
			4-1/2	Т3	9	7/8
			7-1/2	Т3	12	7/8
			10-1/2	Т3	15	7/8
			13-1/2	Т3	18	7/8
			16-1/2	Т3	21	7/8
			19-1/2	Т3	24	7/8



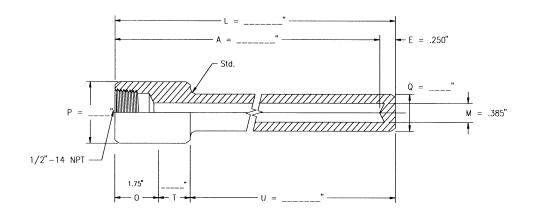
# SOCKET-WELD THERMOWELLS SERIES SWS .385



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	SWS .385 - U	2-1/2	4	49/64
			4-1/2	6	
			7-1/2	9	
			10-1/2	12	
]			13-1/2	15	
			16-1/2	18	
			22-1/2	24	
1" Nominal	1.315	SWS .385 - U	2-1/2	4	49/64
			4-1/2	6	7/8
			7-1/2	9	7/8
			10-1/2	12	7/8
			13-1/2	15	7/8
			16-1/2	18	7/8
			22-1/2	24	7/8



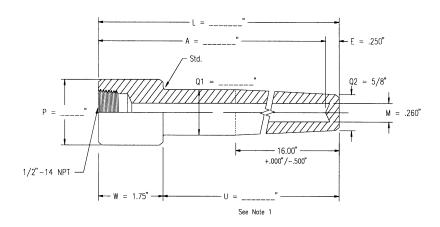
### SOCKET-WELD THERMOWELLS SERIES SWSL .385



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q
3/4" Nominal	1.050	SWSL .385 - U	2-1/2	T2	6	49/64
			4-1/2	Т3	9	
			7-1/2	Т3	12	
			10-1/2	Т3	15	
			13-1/2	Т3	18	
			16-1/2	Т3	21	
			19-1/2	Т3	24	
1" Nominal	1.315	SWSL .385 - U	2-1/2	T2	6	49/64
			4-1/2	Т3	9	7/8
			7-1/2	Т3	12	7/8
			10-1/2	Т3	15	7/8
			13-1/2	Т3	18	7/8
			16-1/2	Т3	21	7/8
			19-1/2	ТЗ	24	7/8



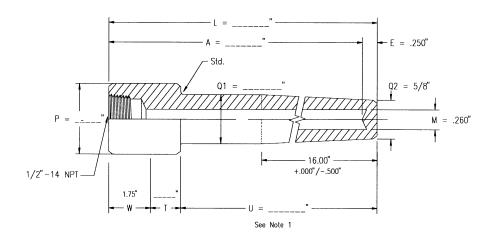
### SOCKET-WELD THERMOWELLS SERIES SWH .260



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	SWH .260 - U	2-1/2	4	3/4"
1			4-1/2	6	
			7-1/2	9	
			10-1/2	12	
			13-1/2	15	
			16-1/2	18	
			22-1/2	24	
1" Nominal	1.315	SWH .260 - U	2-1/2	4	1"
			4-1/2	6	
			7-1/2	9	
			10-1/2	12	
			13-1/2	15	
			16-1/2	18	
			22-1/2	24	



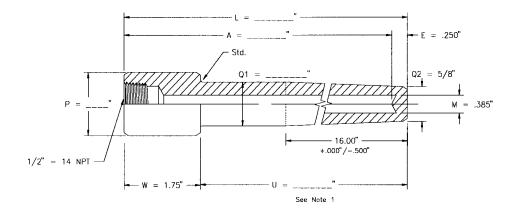
## SOCKET-WELD THERMOWELLS SERIES SWHL .260



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	SWHL .260 - U	2-1/2	T2	6	3/4"
			4-1/2	Т3	9	
			7-1/2	Т3	12	
			10-1/2	Т3	15	
			13-1/2	Т3	18	
			16-1/2	Т3	21	
			19-1/2	Т3	24	
1" Nominal	1.315	SWHL .260 - U	2-1/2	T2	6	1"
			4-1/2	Т3	9	
			7-1/2	Т3	12	
			10-1/2	Т3	15	
			13-1/2	Т3	18	
			16-1/2	Т3	21	
			19-1/2	Т3	24	



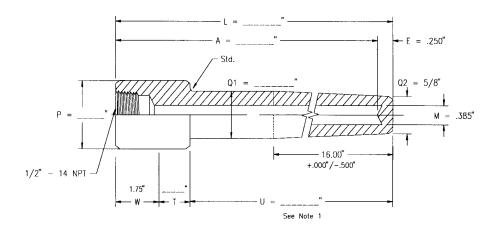
### SOCKET-WELD THERMOWELLS SERIES SWH . 385



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	SWH .385 - U	2-1/2	4	3/4"
			4-1/2	6	
			7-1/2	9	
			10-1/2	12	
			13-1/2	15	
			16-1/2	18	
			22-1/2	24	
1" Nominal	1.315	SWH .385 - U	2-1/2	4	1"
			4-1/2	6	
			7-1/2	9	
			10-1/2	12	
			13-1/2	15	
			16-1/2	18	
			22-1/2	24	



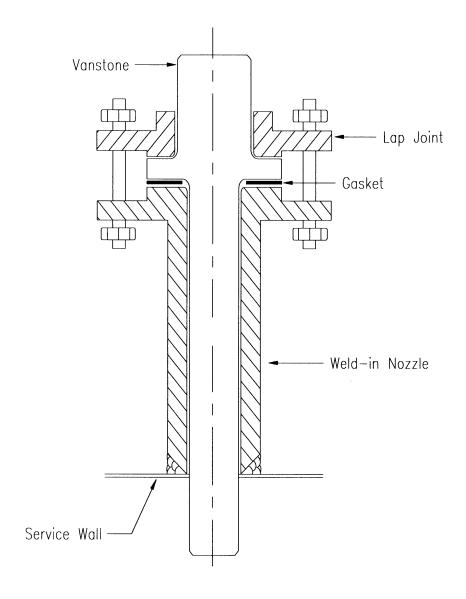
### SOCKET-WELD THERMOWELLS SERIES SWHL .385



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U		STEM LGTH A	SHANK DIA Q1
3/4" Nominal	1.050	SWHL .385 - U	2-1/2	T2	6	3/4"
			4-1/2	Т3	9	
			7-1/2	ТЗ	12	
	'		10-1/2	Т3	15	
			13-1/2	ТЗ	18	
			16-1/2	ТЗ	21	
			19-1/2	Т3	24	
1" Nominal	1.315	SWHL .385 - U	2-1/2	T2	6	1"
			4-1/2	Т3	9	
			7-1/2	Т3	12	
			10-1/2	Т3	15	
•			13-1/2	Т3	18	
			16-1/2	Т3	21	
			19-1/2	Т3	24	

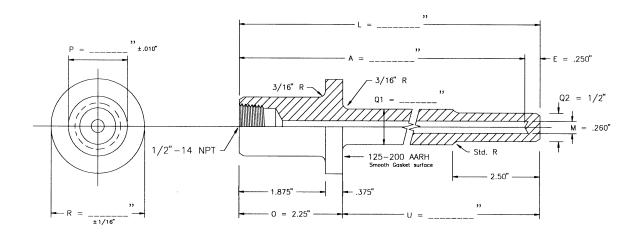


#### **VANSTONE ASSEMBLY**





### VANSTONE THERMOWELLS SERIES VR .260



PIPE SIZE	ACTUAL DIA P	RAISED FACE DIA R	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
1" Nominal	1.315	2"	Ref. Note 1 - U	2	4	3/4"	1/2"
			VR .260 - U	4	6		
				4 7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1-1/2" Nominal	1.900	2-7/8"	Ref. Note 1 - U	2	4	7/8"	1/2"
			VR .260 - U	4	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
2" Nominal	2.375	3-5/8"	Ref. Note 1 - U	2	4	(Ref.	(Ref.
			VR .260 - U	4	6	Note 2)	Note 2)
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		

Note 1: When U = 2" or less, the "U" length is manufactured straight construction and the outside

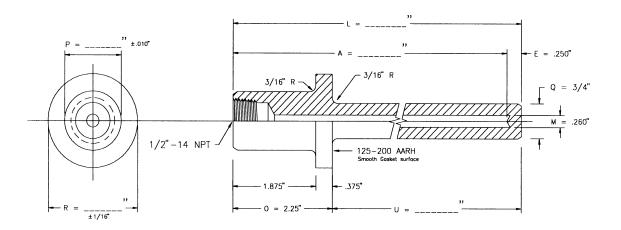
- diameter is determined by Series specified, for example:

   Series VR: Q1 and Q2 = 1/2" o.d. for all Process Connection sizes.
- Series VS: Consult the "Series VS .260" catalog page to determine the correct diameter.

Note 2: Customer specified Q1 and Q2 dimensions.



# VANSTONE THERMOWELLS SERIES VS .260

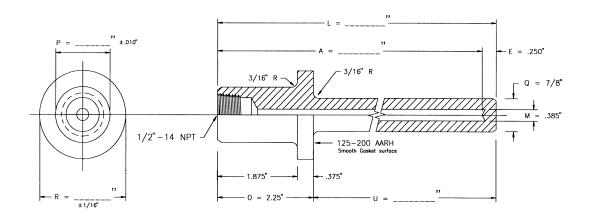


	ACTUAL DIA	RAISED FACE DIA		INSERT LENGTH	STEM LGTH
PIPE SIZE	Р	R	CODE NUMBER	U	Α
1" Nominal	1.315	2"	VS .260 - U	2	4
				4	6
1-1/2" Nominal	1.900	2-7/8"		7	9
				10	12
2" Nominal	2.375	3-5/8"		13	15
(Ref. Note 1)				16	18
				22	24

Note 1: Customer specified Q1 and Q2 dimensions.



# VANSTONE THERMOWELLS SERIES VS .385

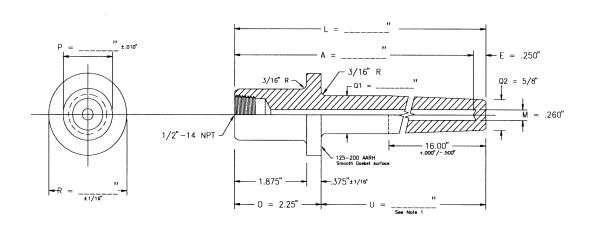


PIPE SIZE	ACTUAL DIA P	RAISED FACE DIA R	CODE NUMBER	INSERT LENGTH U	STEM LGTH A
1" Nominal	1.315	2"	VS .365 - U	2	4
				4	6
1-1/2" Nominal	1.900	2-7/8"		7	9
				10	12
2" Nominal	2.375	3-5/8"		13	15
(Ref. Note 1)				16	18
				22	24

Note 1: Customer specified Q1 and Q2 dimensions.



# VANSTONE THERMOWELLS SERIES VH .260

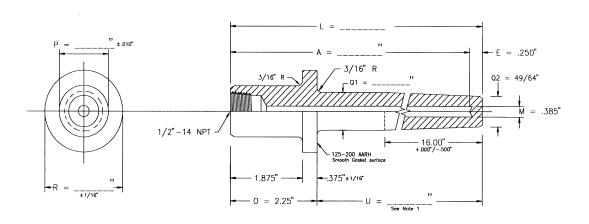


PIPE SIZE	ACTUAL DIA P	RAISED FACE DIA R	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
1" Nominal	1.315	2"	VH .260 - U	2	4	7/8"	5/8"
				4	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1-1/2" Nominal	1.900	2-7/8"	VH .260 - U	2	4	1-1/16"	5/8"
				4	6		
				7	9		
				10	12		
				13	15		
				16	18		
011 November 1	0.075	0.5/0"	\/\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	22	24	(D ) f	(D : f
2" Nominal	2.375	3-5/8"	VH .260 - U	2	4	(Ref.	(Ref.
				4 7	6	Note 2)	Note 2)
				7 10	9 12		
				13	15		
				16	18		
				22	24		

Note 1: Full length taper provided when "U" <= 16.00" Note 2: Customer specified Q1 and Q2 dimensions.



# VANSTONE THERMOWELLS SERIES VH .385

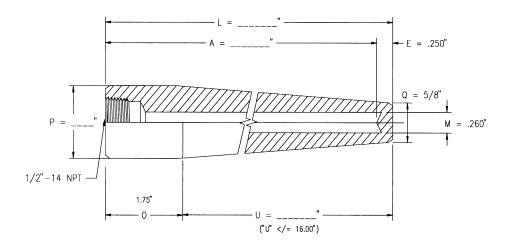


PIPE SIZE	ACTUAL DIA P	RAISED FACE DIA R	CODE NUMBER	INSERT LENGTH U	STEM LGTH A	SHANK DIA Q1	SHANK DIA Q2
1" Nominal	1.315	2"	VH .365 - U	2	4	7/8"	49/64"
				4 7	6		
				7	9		
				10	12		
				13	15		
				16	18		
				22	24		
1-1/2" Nominal	1.900	2-7/8"	VH .365 - U	2	4	1-1/16"	49/64"
				4 7	6		
					9		
				10	12		
				13	15		
				16	18		
				22	24		
2" Nominal	2.375	3-5/8"	VH .365 - U	2	4	(Ref.	(Ref.
				4 7	6	Note 2)	Note 2)
					9		
				10	12		
				13	15		
				16	18		
				22	24		

Note 1: Full length taper provided when "U" <= 16.00" Note 2: Customer specified Q1 and Q2 dimensions.



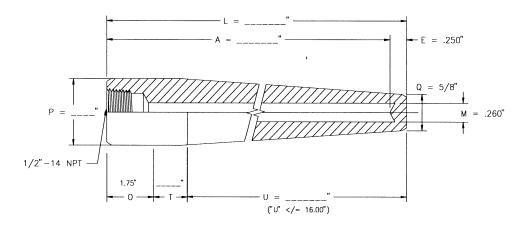
### WELD-IN THERMOWELLS SERIES WIH .260



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A
3/4" Nominal	1.050	WIH .260 - U	2-1/2	4
			4-1/2	6
1" Nominal	1.315		7-1/2	9
			10-1/2	12
N/A	1.375		13-1/2	15
			16-1/2	18
N/A	1.500		22-1/2	24



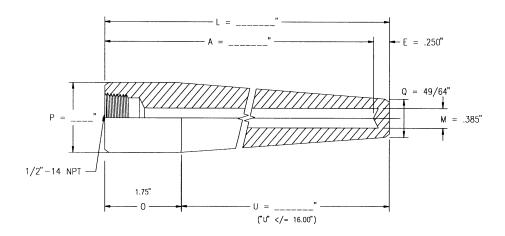
# WELD-IN THERMOWELLS SERIES WIHL .260



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U		STEM LGTH A
3/4" Nominal	1.050	WIHL .260 - U	2-1/2	T2	6
			4-1/2	Т3	9
1" Nominal	1.315		7-1/2	Т3	12
			10-1/2	Т3	15
N/A	1.375		13-1/2	Т3	18
			19-1/2	Т3	24
N/A	1.500				



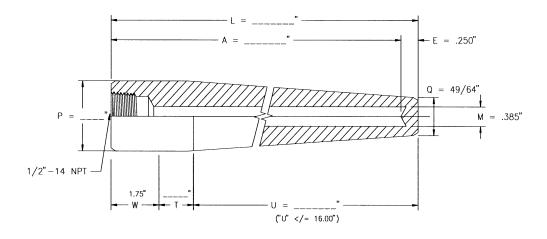
### WELD-IN THERMOWELLS SERIES WIH .385



PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	STEM LGTH A
3/4" Nominal	1.050	WIH .385 - U	2-1/2	4
			4-1/2	6
1" Nominal	1.315		7-1/2	9
			10-1/2	12
N/A	1.375		13-1/2	15
			16-1/2	18
N/A	1.500		22-1/2	24



### WELD-IN THERMOWELLS SERIES WIHL .385

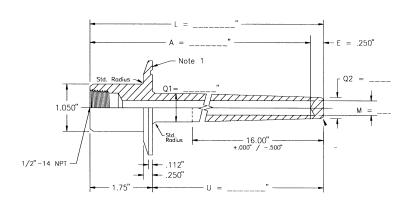


PIPE SIZE P	ACTUAL DIA P	CODE NUMBER	INSERT LENGTH U	LAG EXT T	STEM LGTH A
3/4" Nominal	1.050	WIHL .385 - U	2-1/2	T2	6
			4-1/2	Т3	9
1" Nominal	1.315		7-1/2	Т3	12
			10-1/2	Т3	15
N/A	1.375		13-1/2	Т3	18
			19-1/2	Т3	24
N/A	1.500				

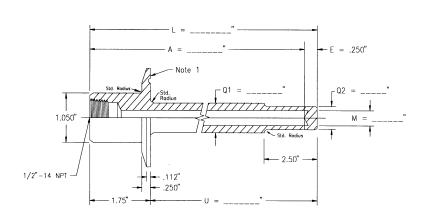


# SANITARY THERMOWELLS SERIES: EC

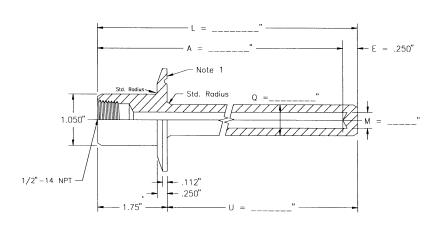
#### SERIES ECH



#### SERIES ECR



#### SERIES ECS



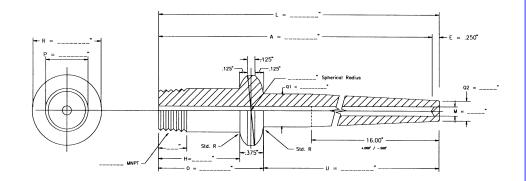
Note 1: Manufactured one piece construction with dimensions to mate to industry standard end caps.

Note 2: Specify: Series, Mating end cap size, surface finish, dimensions, and material grade.

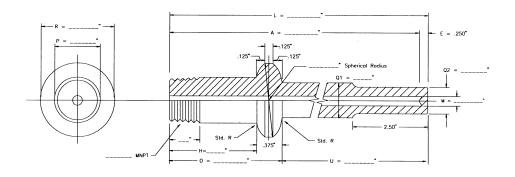


# GROUND JOINT THERMOWELLS SERIES: GJ

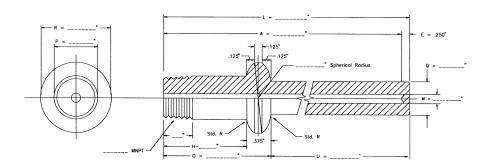
#### SERIES GJH



#### SERIES GJR



#### SERIES GJS



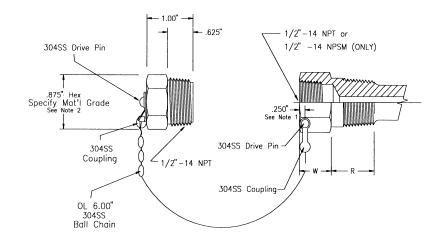
Note 1: Specify size of sperical radius (1", 1-1/4", 1-1/2"), dimensions and material grade.

Note 2: Backing flange is available upon request. Specify flange size, rating and material grade.

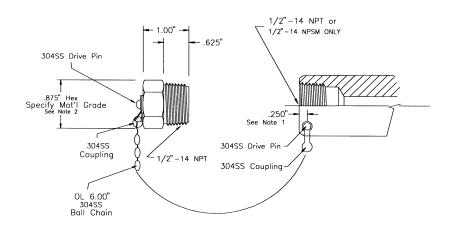


### **PLUG & CHAIN ATTACHMENTS**

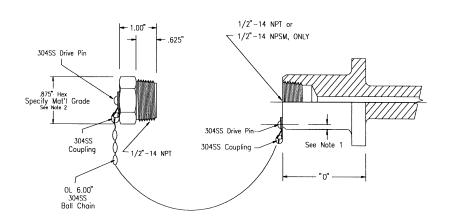
### HEX BAR ATTACHMENT



### ROUND BAR ATTACHMENT



#### VANSTONE SERIES ATTACHMENT



- Note 1: Manufacturer reserves the right to alter the attachment location in order to accommodate the actual wall thickness.
- Note 2: Hex head plug is available in Brass, 304SS, and 316SS materials.
- Note 3: All dimensions are for reference and tolerance is nominal.