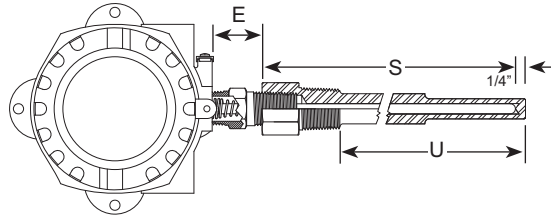


Explosion Proof Sensors

Configuration Code XP03 Hazardous Location Explosion Proof Approved RTD Assemblies with Thermowells - Model 70-20

Explosion Proof RTD Assemblies with Thermowells are for use in U.S. and Canadian hazardous areas. They are designed to extinguish flames inside the device eliminating the potential for ignition of flammable mixtures in the surrounding atmosphere. FM and CSA approved assemblies, dependant on connection head type, meet XP Class I, Division 1, Group A, B, C, and D; DIP Class II, Division I, Groups E, F, G and Class III, Division 1. The required thermowell is available in standard, heavy-duty, and flanged constructions. The assemblies feature 316 stainless steel sheaths. They are available with aluminum or stainless steel explosion proof connection heads.



ORDER CODES

Example Order Number: **XP** - **R1T185L 48 3** - **SC** - **8HN 75T-642B, I**

1-0 2-0 2-1 2-2 3-0 4-0 5-0 5-1 5-2

Select Thermowell Part # from Thermowell Section Select Type and Range from back of Section

1-0 Agency Approval

CODE	DESCRIPTION
XP	FM/CSA explosion proof approved assembly

2-0 100 Ω Platinum RTD Elements $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$

CODE		INITIAL ELEMENT ACCURACY 0 °C
LOW RANGE WIRE WOUND (-200 to 204) °C		
SINGLE	DUPLEX	
R1T185L	R1T285L	± 0.1%
R5T185L	R5T285L	± 0.01%
LOW RANGE THIN FILM (-40 to 204) °C		
RBF185L	RBF285L	± 0.12%
RAF185L	RAF285L	± 0.06%
HIGH RANGE WIRE WOUND (-200 to 600) °C		
R1T185H	R1T285H	± 0.1%

2-1 Sheath Diameters 316 S.S.

CODE	DIAMETERS (inches)
48	1/4

2-2 Element Connection

CODE	DESCRIPTION
2	2 wire
3	3 wire
4 ^[1]	4 wire

[1] Not available in duplex or with 440 Series Transmitter

3-0 Thermowell

Select thermowell part number from Thermowell Section.

4-0 Element Options

CODE	DESCRIPTION
SL ^[1]	Spring loaded element
SC	Self-contained spring loaded element

[1] Not available with option 75T-642B

5-1 Head Terminations

CODE	DESCRIPTION
71	Cast iron/aluminum explosion proof head Group C
72	DIN form B aluminum explosion proof head Group B
74	DIN form B aluminum explosion proof head Group A
75T-642B	(4 to 20) mA HART® Field Transmitter with aluminum explosion proof housing, Group A
81	316L stainless steel explosion proof head Group C
82	DIN form B 316 stainless steel explosion proof head Group B

5-2 Options

SB	1/2" NPT conduit reducer bushing
I	Stainless steel tag
T-440 ^[1]	(4 to 20) mA Head-mounted transmitter
T-441 ^[2]	(4 to 20) mA Isolated Head-mounted transmitter
T-442 ^[2]	(4 to 20) mA Hart® Isolated Head-mounted transmitter

See transmitter ordering information in back of section.

[1] Only available with option 71 or 81

[2] Not available with option 71 or 81

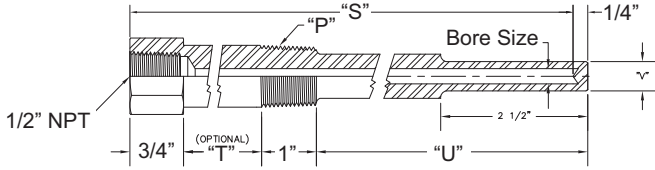
5-0 Head Mounting Fittings

CODE	DESCRIPTION	CODE	DESCRIPTION
STEEL FITTINGS		316SS FITTINGS	
6HN	1/2" x 1/2" NPT hex nipple 1" length	8HN	1/2" x 1/2" NPT hex nipple 1" length
6PN ₋	1/2" NPT pipe nipple (specify "E" length in inches)	8PN	1/2" NPT pipe nipple (specify "E" length in inches)
6XU ₋ ^[1]	1/2" NPT union/nipple (specify "E" length in inches)	8XU ₋ ^[1]	1/2" NPT union/nipple (specify "E" length in inches)

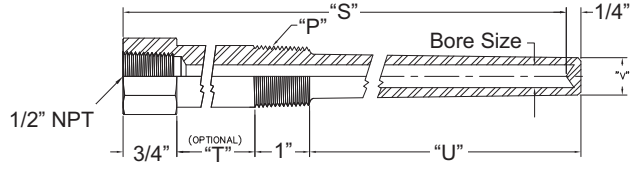
[1] 3 1/2" Minimum length required. Maximum allowable "E" length is 9"

The drilled thermowells listed below are those most commonly found in process applications. Other types and styles are listed later in this section. The thermowells listed below are available as separate component wells and can be ordered by the code numbers listed below. They can also be ordered as a part of a complete sensor assembly. Consult factory for wells with different mounting threads, lengths, and materials.

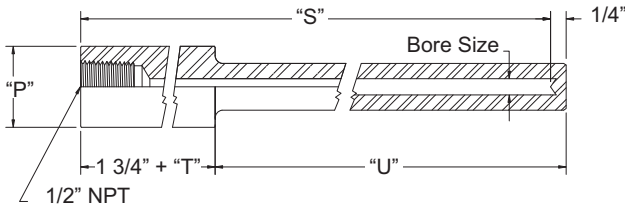
STANDARD DUTY WELLS



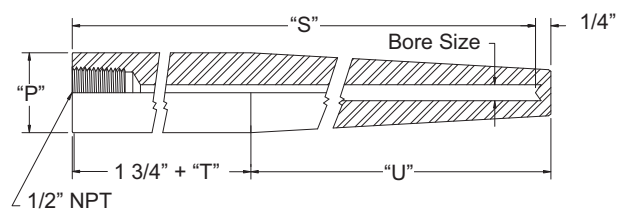
HEAVY DUTY WELLS



STRAIGHT SHANK SOCKET WELD



WELD-IN WELLS



ORDER CODES

Example Order Number:

1-0 1-1 1-2 1-3 1-4 1-5 1-6
S 4 D 06 08 T2 S

1-0 Well Type

CODE	DESCRIPTION
S	Standard duty threaded (NPT)
H	Heavy duty threaded (NPT)
SW	Straight shank socket weld
WI	Weld-in

1-6 Well Options

CODE	DESCRIPTION
C8	316 stainless steel well cap and chain
C22	Brass well cap and chain
S	Customer specified part number marked on the thermowell - (10 digit maximum)

1-1 Bore Size

CODE	DESCRIPTION
4	0.260 Dia. Bore

1-2 Pipe Size "P"

CODE	DESCRIPTION
C	1/2" Pipe ^[1]
D	3/4" Pipe
E	1" Pipe

[1] Only available with well type S or H

1-5 Optional "T" Lag Dimension

CODE	DESCRIPTION
	Leave blank if No Lag is required
T2	2" Lag standard on 6" well
T3	3" Lag standard on 9, 12, 15, 18, 24" wells
T__	Special Lag specify "T" dimension in inches

1-3 Length Dimensions (inches)

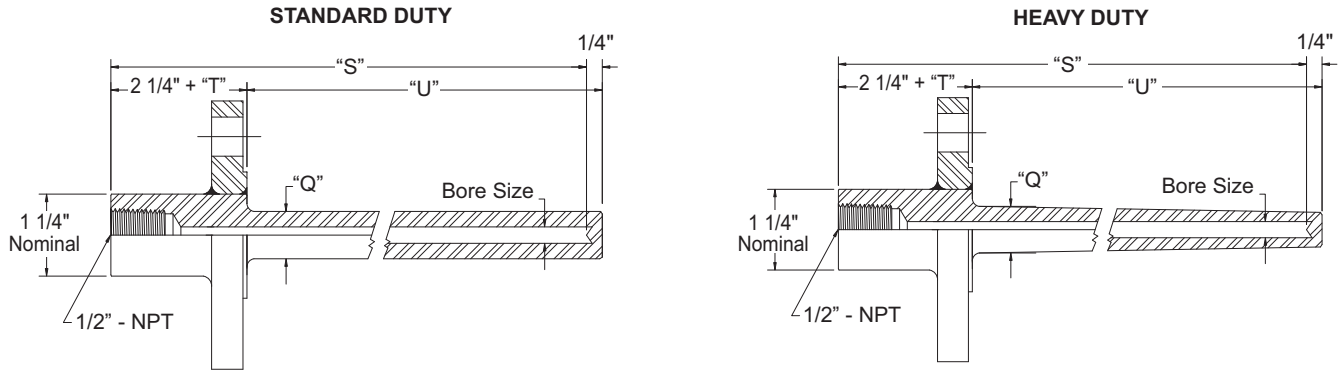
CODE	"S" DIMENSIONS	"U" DIMENSIONS	
		NO LAG	WITH STANDARD LAG
04	4	2(1/2)	N/A
06	6	4(1/2)	2(1/2)
09	9	7(1/2)	4(1/2)
12	12	10(1/2)	7(1/2)
15	15	13(1/2)	10(1/2)
18	18	16(1/2)	13(1/2)
24	24	22(1/2)	19(1/2)

1-4 Material

CODE	DESCRIPTION
8	316 stainless steel
9	304 stainless steel

The flanged thermowells described on this page are those commonly found in most process applications. These wells are supplied as standard or heavy duty with raised-faced flanges. Other types and styles are listed later in this section. Consult factory for wells with different flange sides, lengths, and materials.

FLANGED THERMOWELLS



ORDER CODES

Example Order Number:

1-0 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8
SF 4 15 R 3 12 08 T2 C8

1-0 Well Type

CODE	DESCRIPTION
SF	Standard flanged
HF	Heavy Duty flanged

1-1 Bore Size

CODE	DESCRIPTION
4	0.260 Bore

1-2 Flange Size

CODE	DESCRIPTION
10	1"
15	1 1/2"
20	2"

1-3 Flange Type

CODE	DESCRIPTION
R	Raised face

1-4 Pressure Rating

CODE	DESCRIPTION
1	150 class
3	300 class

1-8 Well Options

CODE	DESCRIPTION
C8	316 stainless steel well cap and chain
C22	Brass well cap and chain
S	Customer specified part number marked on thermowell (10 digit maximum)

1-7 Optional "T" Lag Dimension

CODE	DESCRIPTION
	Leave blank if no lag is required
T__	Specify "T" dimension in inches

1-6 Well Material

CODE	DESCRIPTION
08	316 Stainless steel
09	304 Stainless steel

1-5 Well Length (inches)

CODE	DESCRIPTION	
	"S" DIMENSION	"U" DIMENSION
06	6	4
09	9	7
12	12	10
15	15	13
18	18	16
24	24	22