

A weld-in thermowell is a device that protects your temperature sensor from harsh process conditions, such as high pressure, high velocity, and corrosive media. It is made from a solid bar of metal that is welded directly to a pipe or tank, creating a strong and durable connection. A weld-in thermowell allows you to measure the temperature of your process without exposing your sensor to the media, and also enables you to replace the sensor without shutting down the process. A weld-in thermowell is ideal for applications that require a high level of reliability and accuracy, such as petrochemical, power, and industrial processes.



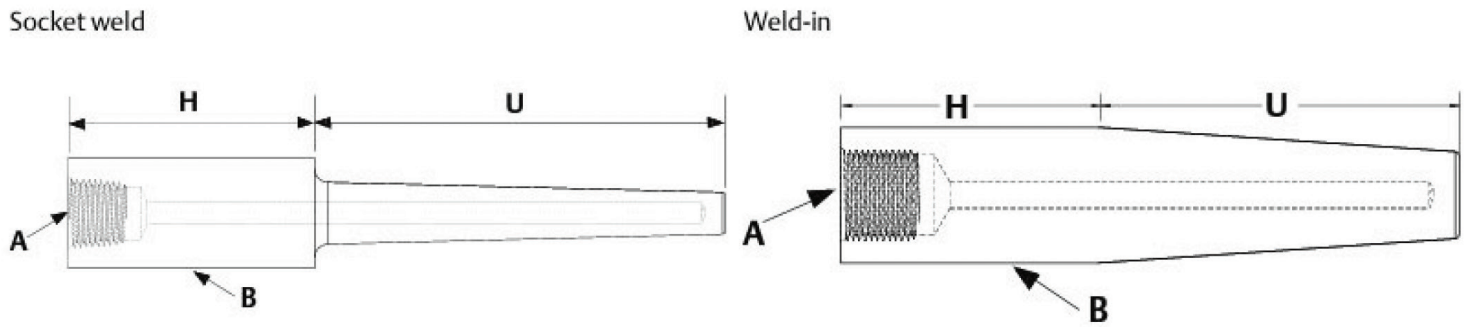
Summary

Rototherm's thermowells are designed and manufactured to meet the highest standards of quality and performance. They protect temperature indicators and sensors from harsh process media and enable easy servicing or replacement without shutting down the plant. Rototherm offers a complete range of thermowells, including threaded, flanged, welded and van stone types.

Main Applications

- Food Industry , dairies and breweries
- Ovens, dryers and tanks
- On/offshore Environments & Refining
- Chemical, Petrochemical & Pharmaceutical
- Heating & Cooling system & pipework

Technical Drawing



A. Instrument connection

B. Process connection (dependent on weld point)

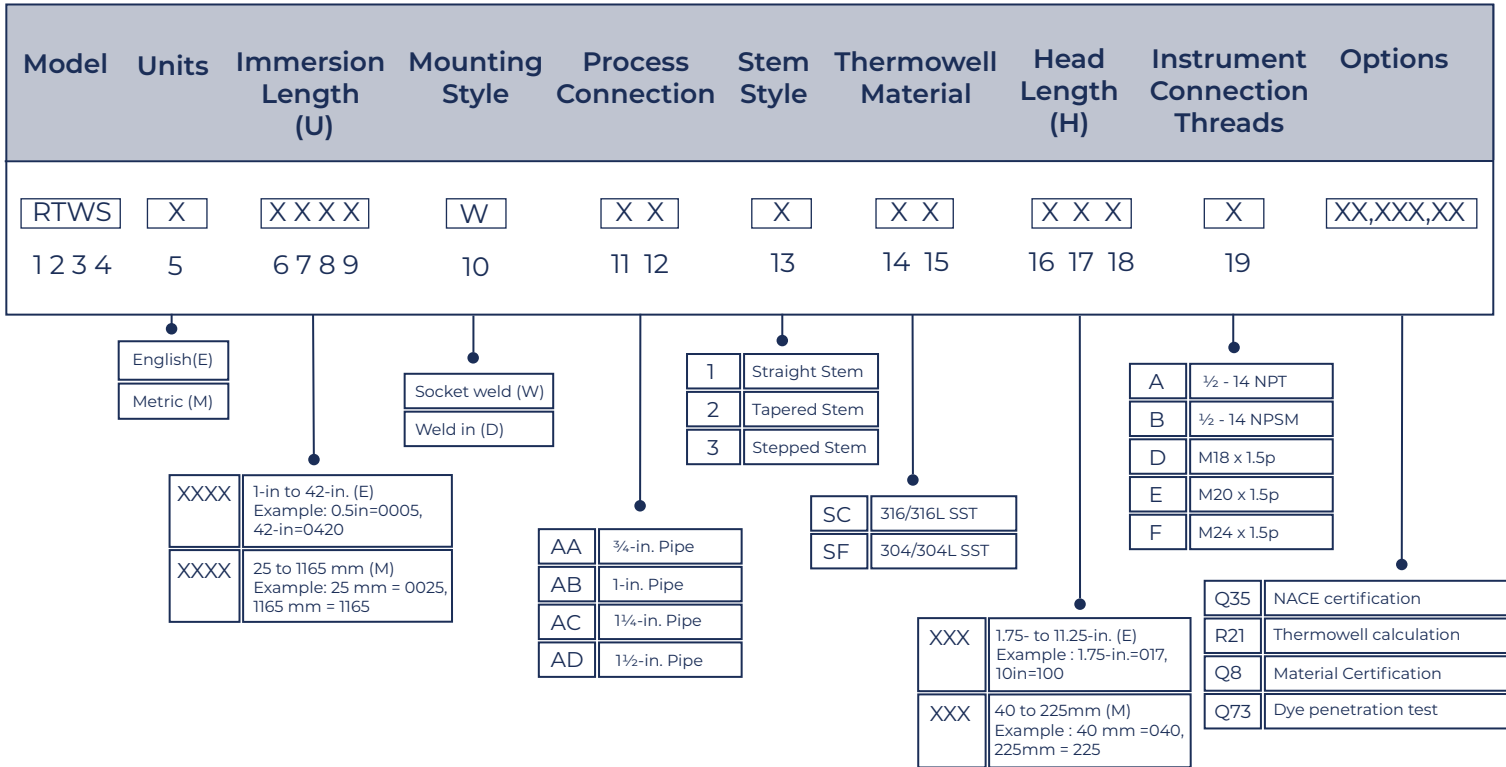
U. Immersion length

H. Head length

Note

Actual wetted surface varies; it is measured from the weld point to the thermowell tip.

Standard Offering



Ordering information


Model

Places 1-4	Description	Details
RTWS	Barstock temperature thermowell	Made with a standard bore diameter of 0.26-in. (6.6 mm) and tip wall thickness of 0.25-in. (6.4 mm)

Dimension units

Place 5	Description	Details
E	English units (in.)	Specifies whether length units will be in inches (in.) or millimeters (mm.)
M	Metric units (mm.)	

Immersion length (U)

Places 6-9	Description	
		
XXX	xxx-in., 1.00 to 100-in. in ¼-in. increments (when ordered with dimensions units code E) Examples of a 6.25-in. length where the second decimal is dropped off: 0062	
XXXX	xxxx mm, 25 to 2540 mm in 5 mm increments (when ordered with dimension units code M) Example of a 50 mm length: 0050	

Mounting Style

Place 10	Description
W	Welded-socket weld
D	Welded-weld-in (only available in tapered stem profile)

Process Connection

Places 11-12	Welded-socket weld (W)	Welded-weld-in (D) ⁽¹⁾
AA	¾-in. pipe	¾-in. pipe
AB	1-in. pipe	1-in. pipe
AC	1¼-in. pipe	1¼-in. pipe
AD	1½-in. pipe	1½-in. pipe
AE	N/A	Custom diameters ⁽²⁾
DA	N/A	DIN 43772-4-7 (18h7/3.5 mm bore/M14)
DB	N/A	DIN 43772-4-7 (24h7/7.0 mm bore/M18)
DC	N/A	DIN 43772-4-7 (26h7/7.0 mm bore/G½ or M20)
DD	N/A	DIN 43772-4-7 (26h7/9.0 mm bore/G½ or M20)
DE	N/A	DIN 43772-4-7 (32h11/11.0 mm bore/G¾ or M27)
DH	N/A	Custom diameters ⁽²⁾

(1) Only available in tapered stem profile.

(2) Required for Root [Axxx] and tip [Bxxx] modifications.

Ordering information


Stem Style

Place 13	Description	Details	Image
1	Straight	Minimum immersion length 1-in. (25 mm)	
2	Tapered	Minimum immersion length 1-in. (25 mm)	
3	Stepped	Minimum immersion length 3-in. (75 mm)	


Thermowell Material

Places 14-15	Description	Details
SC	316/316L dual rated	
SD	316/316L dual rated (NORSOK)	Must order the Q8 Material Certificate to get NORSOK documentation
SF	304/304L dual rated	
SG	316Ti SST	
SH	316/316L SST with tantalum sheath	
SJ	316/316L SST with PFA coating	
SK	304/304L SST with PTFE coating	
SL	310 SST	
SM	321 SST	
SN	321H SST	

Head length (H)

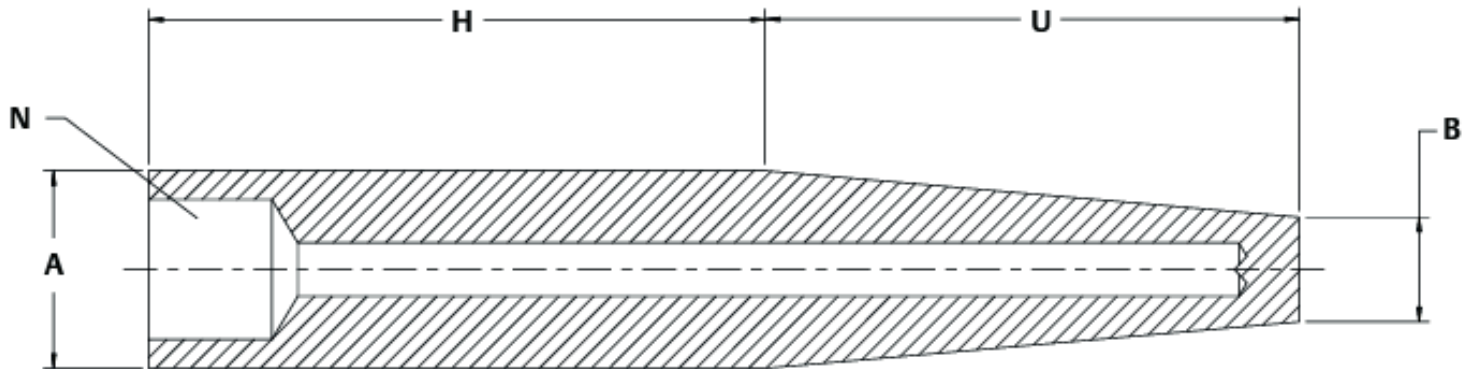
Places 16-18	Description	
		
XXX	xx.x-in., 1.75 to 11.25-in. in ¼-in. increments (when ordered with dimension units code E) Examples of a 6.25-in. length where the second decimal is dropped off: 0062 (default head length = 1.75-in.)	
XXX	xxx mm, 40 to 225 mm in 5 mm increments (when ordered with dimension units code M) Example of a 50 mm length: 0050 (default head length = 45 mm)	

Instrument Connection

Place 19	Description	Details	Image
A	½-14 NPT	Female threads	
B	½-14 NPSM		
C	¾-14NPT		
D	M18 x 1.5p		
E	M20 x 1.5p		
F	M24 x 1.5p		
G	G ½ -in. (BSPF)		
H	G ¾-in. (BSPF)		
J	M27 x 2p		
K	M14 x 1.5p		

Ordering information

Weld Mounted Thermowell Drawings (Weld-in)



H. Head length

U. Immersion length

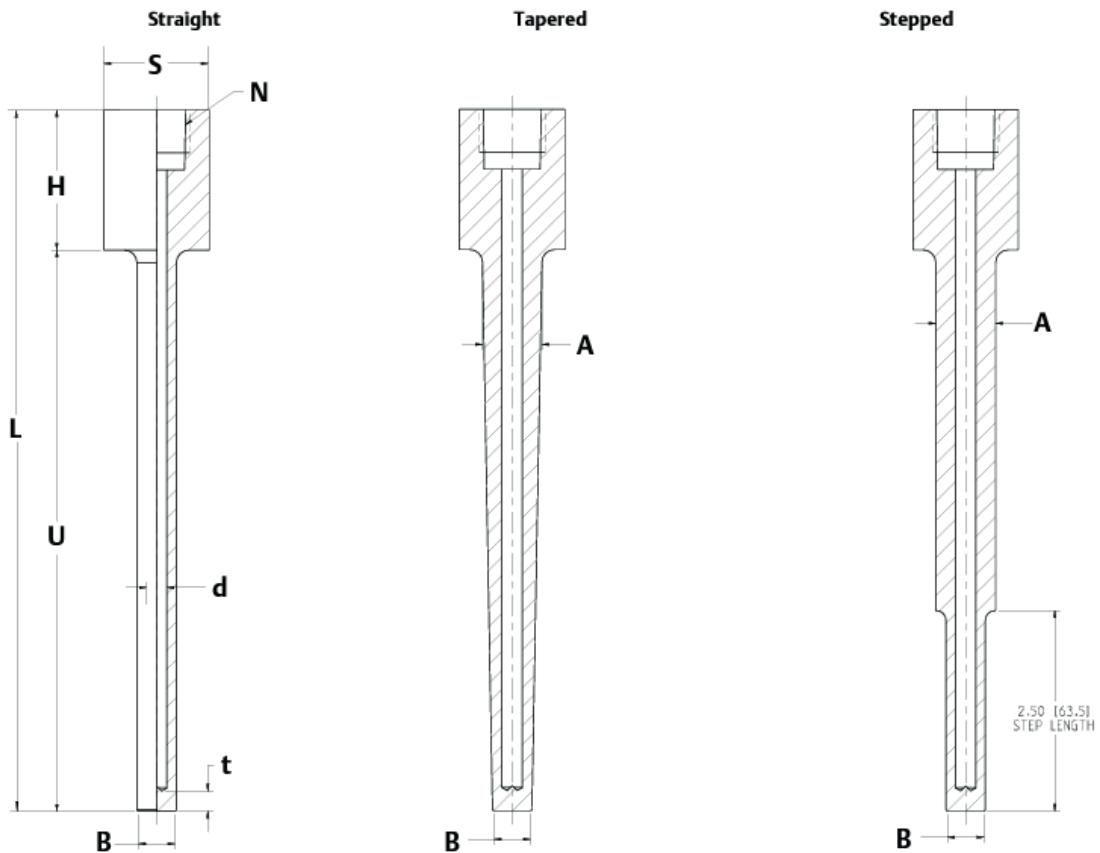
∅F₂, ∅F₃, and H₁, refer to [Table 9](#).

Dimensions are in millimeters

Code	Code D, welded (weld-in) style	Head diameter "∅F ₂ "	Tip diameter "∅F ₃ "	Thread length "H ₁ "
	Process connection			
DA	DIN 43772-4-7 (18 h7/3.5 mm bore/M14)	18 h7 (+0.000/0.018 mm)	9 ±0.27	16
DB	DIN 43772-4-7 (24 h7/7 mm bore/M18)	24 h7 (+0.000/0.021 mm)	12.5 ±0.38	16
DC	DIN 43772-4-7 (26 h7/7 mm bore/G½ or M20)	26 h7 (+0.000/0.021 mm)	12.5 ±0.38	19
DD	DIN 43772-4-7 (26 h7/9 mm bore/G½ or M20)	26 h7 (+0.000/0.021 mm)	15 ±0.38	19
DE	DIN 43772-4-7 (32 h11/11 mm bore/G¾ or M27)	32 h11 (+0.000/0.160 mm)	17 ±0.38	22
DH	Custom	Specified by design modifier "AXXX"	Specified by design modifier "BXXX"	19

Ordering information

Weld Mounted Thermowell Drawings (Socket Weld) Total Length = U + H.



A - Root diameter
B - Tip diameter
H - Head length

N - Instrument connection
S - Socket Size
U - Immersion length

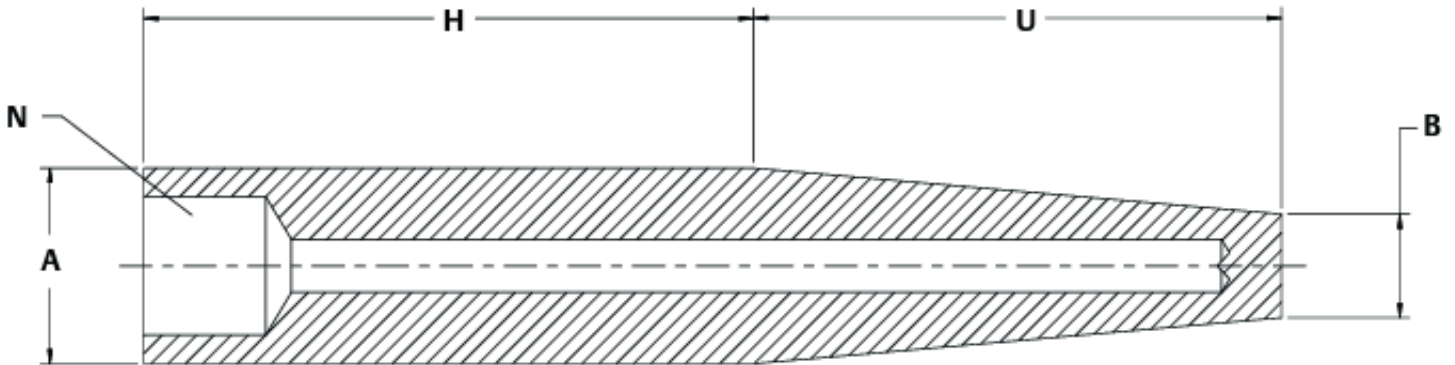
d - Bore diameter
t - Tip thickness

Dimensions are in millimeters

Code	Code W, welded mounting style	Socket size S	Root diameter A	Tip diameter B
	Process connection			
AA	¾-in. pipe	26.67	19	12.7
AB	1-in. pipe	33.4	19	12.7
AC	1¼-in. pipe	42.16	19	12.7
AD	1½-in. pipe	48.26	19	12.7

Ordering information

Weld Mounted Thermowell Drawings (Weld-in) Total length = U + H.



- A - Root diameter
- B - Tip diameter
- H - Head length
- N - Instrument connection
- U - Immersion length

Dimensions are in millimeters

Code	Code W, welded mounting style	Root diameter "A"	Tip diameter "B"
	Process connection		
AA	¾-in. pipe	26.67	19
AB	1-in. pipe	33.40	21.5
AC	1¼-in. pipe	42.16	26.5
AD	1½-in. pipe	48.26	31.75
AE	Custom	Specified by design modifier "AXXX"	Specified by design modifier "BXXX"