

Van Stone/lap joint thermowells are mounted between the mating flange and lap joint flange. This unique design enables thermowell designers to specify thermowell flange materials different than the thermowell stem material; flanges are easily replaceable.



Summary

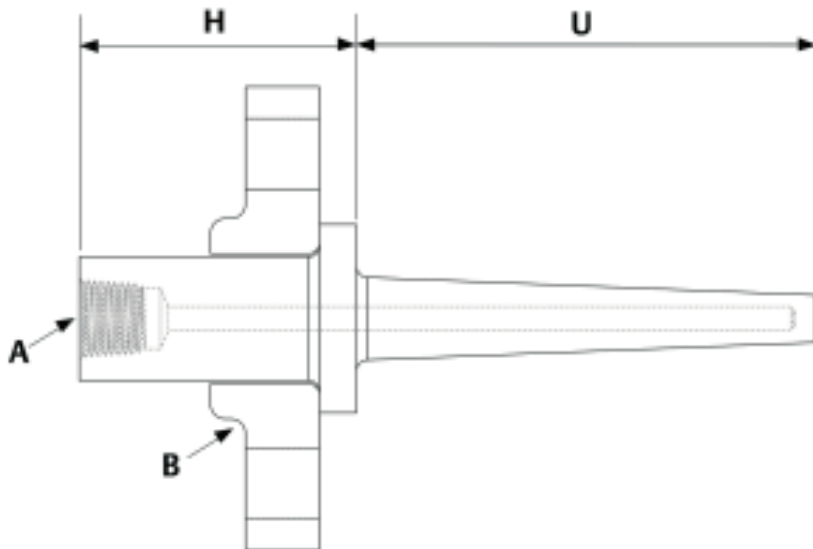
These thermowells allow use of different thermowell materials for the flange contacting the process and overlaying flange which can save material and manufacturing costs. They are a good choice for corrosive applications, because there are no welds so weld-joint corrosion is eliminated. The standard for the van stone thermowell is a raised face style made of carbon steel. Other styles and flange materials are also available.

Main Applications

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

Technical Drawing

Figure 13: Van Stone Thermowell Components



- A. Instrument connection
- B. Process connection
- H. Head length
- U. Immersion length

Note

Wetted surface includes flange face and immersion length (U).

Standard Offering

Model	Units	Immersion Length (U)	Mounting Style	Process Connection	Stem Style	Thermowell Material	Head Length (H)	Instrument Connection Threads	Options
RTWS	X	XXXX	V	XX	T	XX	XXX	X	XX,XXX,XX
1 2 3 4	5	6 7 8 9	10	11 12	13	14 15	16 17 18	19	

English (E)
Metric (M)

Van Stone (V)

T Twisted Stem

A ½ - 14 NPT
B ½ - 14 NPSM

XXXX 1-in to 40-in. (E)
Example: 2in=0200,
40-in=0400
XXXX 50 to 1000 mm (M)
Example: 50 mm = 0050,
1000 mm = 1000

AA 1-in.Class 150
AB 1½-in.Class 150
AC 2-in.Class 150

SC 316/316L SST
SF 304/304L SST
CS Carbon Steel

XXX 2.25 in to 11.25 (E)
Example : 2.25 in=022,
10in=100
XXX 40 to 225mm (M)
Example : 40 mm =040,
225mm = 225

Sxxx Shielded length
Q35 NACE certification
R21 Thermowell calculation
Q8 Material Certification
C01 Van Stone w/ho cover flange
C02 Van Stone w/SST cover flange



Ordering information

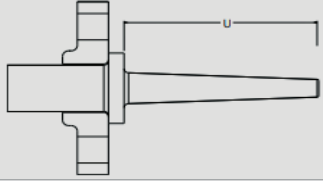
Model

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) Default cover flange materials is carbon steel.

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	
XXXX	xxx.x-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 2500 mm in 5 mm increments (when ordered with dimension units code M) Example of a 50 mm length: 0050	

Mounting Style

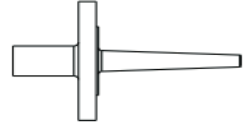
Place 10	Description	Details
V	Van Stone, lap flange	Default cover flange material is carbon steel

Process Connection

Places 11-12	Description
AA	1-in. Class 150
AB	1½-in. Class 150
AC	2-in. Class 150
AH	1-in. Class 300
AJ	1½-in. Class 300
AK	2-in. Class 300
AL	1-in. Class 400/600
AM	1½-in. Class 400/600
AN	2-in. Class 400/600
AP	1-in. Class 900/1500
AQ	1½-in. Class 900/1500
AR	2-in. Class 900/1500
AS	1-in. Class 2500
AT	1½-in. Class 2500
AU	2-in. Class 2500

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)	

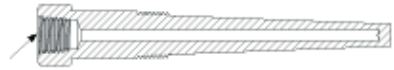
Thermowell Material

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)

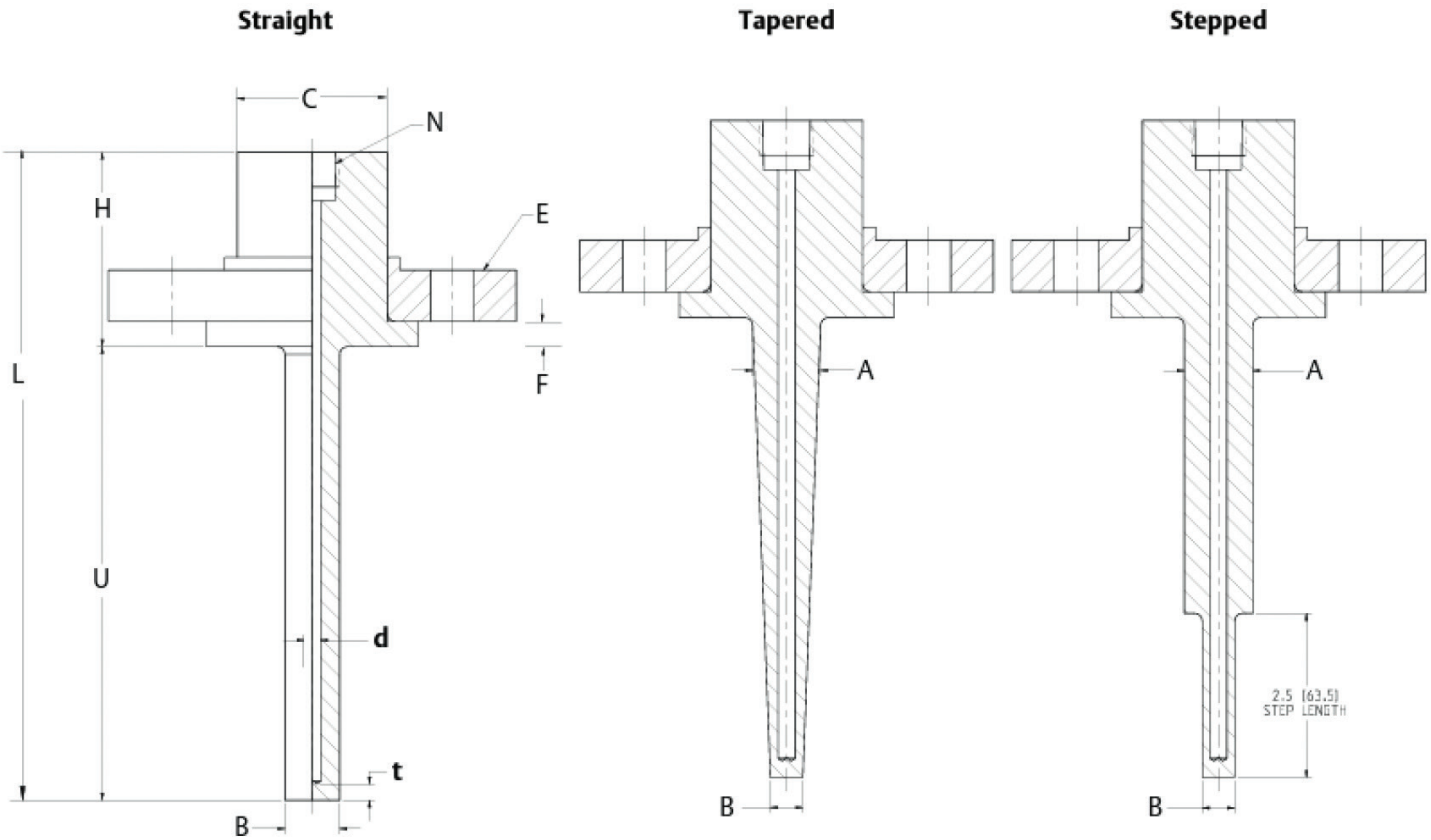
Places 16-18	Description	Image
XXX	xx.x-in., 2.25 to 11.25-in. in ¼-in. increments (when ordered with dimension units code E) Examples of a 6.25-in. length where the second decimal is dropped off: 0062 (default head length = 1.75-in.)	
XXX	xxx mm, 45 to 225 mm in 5 mm increments (when ordered with dimension 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

Van Stone Thermowell Drawings



- A - Root diameter
- B - Tip diameter
- C - Head diameter
- d - Bore diameter
- E - ASME B16.5 lap flange
- F - Stub thickness
- L - Total thermowell length
- H - Head length
- N - Instrument connection (½-in. NPT)
- t - Tip thickness
- U - Immersion length

Dimensions are in millimeters

Code	Code V Van Stone lap flange mounting style	Lagging diameter "C"	Stub diameter K standard raised face	Stub diameter K ring type joint option R16	Stub thickness "F" standard raised face	Stub thickness "F" ring type joint option R16	Root diameter stepped stem	Root diameter tapered stem	Tip diameter tapered stem	Tip diameter straight stem
	Process connection "P"									
AA	1-in. Class 150	33.4	50.8	63.5	10	16.35	19	22.5	16	19
AB	1½-in. Class 150	48.3	73	82.5		16.35	21.5	26.5	18	21.5
AC	2-in. Class 150	60.3	92.1	102		16.35	21.5	26.5	18	21.5

rototechnology.com
 sales@rototechnology.com
 (USA) +1 832 930 8600
 (UK) +44 1656 740551

British Rototherm Group
 Kenfig Industrial Estate,
 Margam, Port Talbot
 SA13 2PW United Kingdom



Ordering information

Dimensions are in millimeters

Code	Code V Van Stone lap flange mounting style	Lagging diameter "C"	Stub diameter K standard raised face	Stub diameter K ring type joint option R16	Stub thickness "F" standard raised face	Stub thickness "F" ring type joint option R16	Root diameter stepped stem	Root diameter tapered stem	Tip diameter tapered stem	Tip diameter straight stem
	Process connection "P"									
AH	1-in. Class 300	33.4	50.8	63.5	10	16.35	19	22.5	16	19
AJ	1½-in. Class 300	48.3	73	82.5		16.35	21.5	26.5	18	21.5
AK	2-in. Class 300	60.3	92.1	102		16.35	21.5	26.5	18	21.5
AL	1-in. Class 400/600	33.4	50.8	63.5		16.35	19	22.5	16	19
AM	1½-in. Class 400/600	48.3	73	82.5		16.35	21.5	26.5	18	21.5
AN	2-in. Class 400/600	60.3	92.1	102		16.35	21.5	26.5	18	21.5
AP	1-in. Class 900/1500	33.4	50.8	63.5		16.35	19	22.5	16	19
AQ	1½-in. Class 900/1500	48.3	73	82.5		16.35	21.5	26.5	18	21.5
AR	2-in. Class 900/1500	60.3	92.1	102		16.35	21.5	26.5	18	21.5
AS	1-in. Class 2500	33.4	50.8	63.5		16.35	19	22.5	16	19
AT	1½-in. Class 2500	48.3	73	82.5		16.35	21.5	26.5	18	21.5
AU	2-in. Class 2500	60.3	92.1	102		16.35	21.5	26.5	18	21.5