

Vanstone type thermowell

Model : A640 series

Spec. sheet no. AD06-05

Service intended

Vanstone type thermowell is produced without any welding process by processing the whole round bar.

Since it does not involve any welding process, it is used when high pressure, high velocity fluid and corrosive process media such as penetrating gas exist, and serving to isolate and protect from any leakage.

The required flange is not standard and can be provided as an optional extra.



Standard features

Selection of thermowell

■ Material

In general, the thermowell material chosen for the installation is governed mainly by the corrosion condition the thermowell will face. Recommended material for various services are given in the corrosion table.

Occasionally, the material consideration is one of strength rather than corrosion. For example, a stainless steel thermowell may be required for a high pressure water service where otherwise a brass thermowell would be satisfactory from a corrosion standpoint.

■ Insertion

The distance from the end of the well to the underside of the thread or other connection means (Designated as "U") is the insertion length.

■ Tapered or straight type

Tapered type thermowells provide greater stiffness for the same sensitivity. The higher strength to weight ratio gives these thermowells higher natural frequency than for equivalent length straight type thermowells, thus permitting operation at higher fluid velocity.

■ Bore size

Almost any installation uses several type of temperature measuring instruments.

The selection of a standard bore diameter can produce extreme flexibility within the plant.

■ Option

Wake frequency calculations in accordance with ASME PTC 19.3

WISE Inc. offers this as an engineering service.

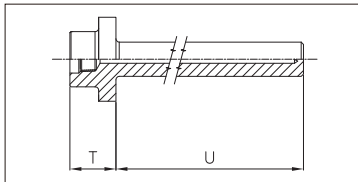
■ Standard "T" length

Well size 1½" or DN40 : 40 mm

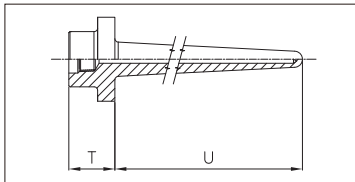
2" or DN50 : 45 mm

Structure

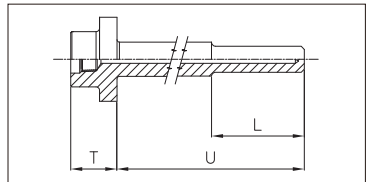
A6400



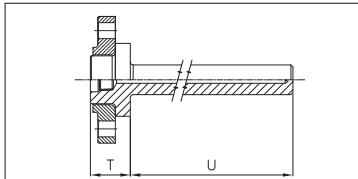
A6410



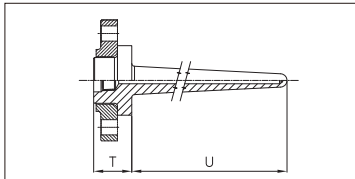
A6420



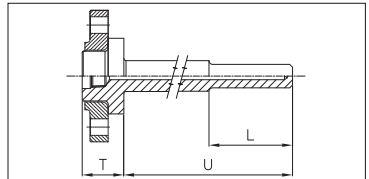
A6401



A6411



A6421



1. Base model

- A6400** Straight bar stock
- A6401** Straight bar stock with flange
- A6410** Tapered bar stock
- A6411** Tapered bar stock with flange
- A6420** Stepped bar stock
- A6421** Stepped bar stock with flange

2. Material of well

- | | |
|-----------------------|-----------------------|
| BX 304SS | LX Monel |
| CX 316SS | MX Titanium |
| DX 304L SS | OX A182F316 |
| EX 316L SS | TX Incoloy-800 |
| FX 310SS | VX A182F91 |
| GX 321SS | WX A105 |
| IX A182F304 | YX A182F11 |
| JX Inconel 600 | Z3 A182F321 |
| KX Hastelloy-C | ZX Others |

3. Material of flanged

- | | |
|-----------------------|--------------------------|
| BX 304SS | MX Titanium |
| CX 316SS | OX A182F316 |
| DX 304L SS | TX Incoloy-800 |
| EX 316L SS | VX A182F91 |
| FX 310SS | WX A105 |
| GX 321SS | YX A182F11 |
| IX A182F304 | Z3 A182F321 |
| JX Inconel 600 | ZX Others |
| KX Hastelloy-C | XX Not applicable |
| LX Monel | |

4. Internal connection

- 0** ½" NPT
- 1** ½" PT
- 2** ½" PF

5. Tip outer diameter / Bore size (mm)

- | | |
|------------------|------------------|
| A 14 / 7 | K 19 / 9 |
| B 14 / 9 | L 19 / 10 |
| C 16 / 7 | M 19 / 12 |
| D 16 / 9 | N 21 / 10 |
| E 16 / 10 | O 14 / 8 |
| F 17 / 7 | P 16 / 8 |
| G 17 / 9 | Q 17 / 8 |
| H 17 / 10 | R 19 / 8 |
| I 17 / 12 | S 21 / 8 |
| J 19 / 7 | |

6. Stepped bore size (mm)

- A** None
- B** 6.5 (Standard)
- C** Other

7. Well size for flange

- C** 1"
- E** 1½"
- F** 2"
- Z** Other

8. Flange class, sealing face

- | | |
|---|--|
| AC 150 Lb RF | DI PN25 RF |
| AF 300 Lb RF | DO PN40 RF |
| AJ 600 Lb RF | AV 600 Lb RTJ |
| AS 900 Lb RF | AW 900 Lb RTJ |
| AU 2,500 Lb RF
(Not available 1½" and DN) | AX 1,500 Lb RTJ |
| AT 1,500 Lb RF | AY 2,500 Lb RTJ
(Not available 1½" and DN) |
| DA PN10 RF | ZZ Other |
| DB PN16 RF | XX None |

9. Insertion length ("U") length (mm)

- | | | |
|--------------|--------------|----------------|
| 0 80 | 6 350 | D 800 |
| 1 100 | 7 400 | E 900 |
| 2 150 | 8 450 | F 1,000 |
| 3 200 | A 500 | Z Other |
| 4 250 | B 600 | |
| 5 300 | C 700 | |

Note : Please choose a code of next higher length if applicable length is not. Actual length shall be specified.

10. Option

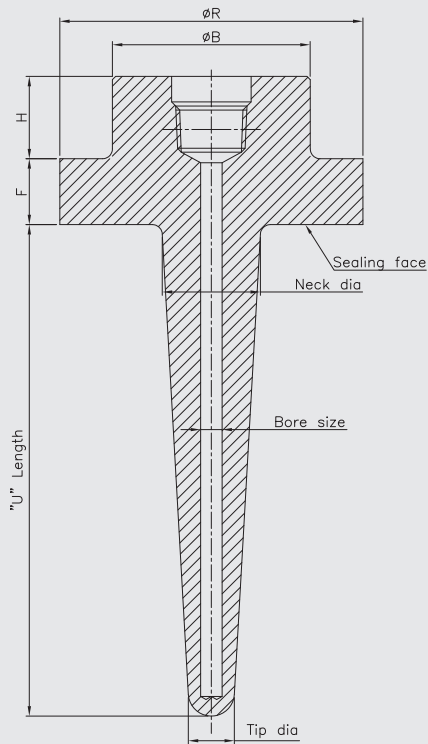
- 0** None
- 1** Plug and chain (304SS)
- 2** Plug and chain (316SS)

Note : Actual length shall be specified.

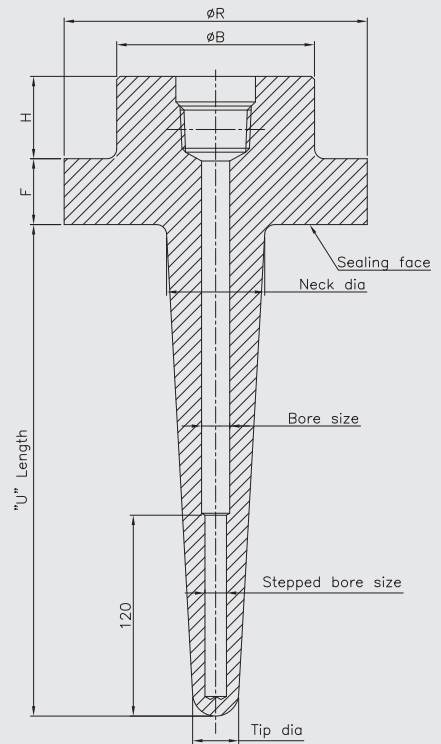
1	2	3	4	5	6	7	8	9	10
A6400	BX	BX	0	A	B	C	AC	1	1

Sample ordering code

Straight bore type



Stepped bore type



		1"	1 1/2"	2"
	R	51	73	92
	B	33	48	60
	F	15	15	20
H	~ 150lb	25	25	25
	~ 300lb	30	35	35
	~ 600lb	30	35	40
	~ 1500lb	45	45	60
	~ 2500lb	50	65	70

	Thread type		Flange type	
	Plane type	Lag type	Plane type	Lag type
Closed end tube straight type				
	A5000	A5001	A5100	A5101
Bar stock straight type				
	A6000	A6001	A6100	A6101
Bar stock taper type				
	A6010	A6011	A6110	A6111
Bar stock step type				
	A6020	A6021	A6120	A6121
Bar stock weld in type	Full penetration welding flange type			
	A6311	A6230	A6231	
Bar stock socket weld type				
	A6300	A6310	A6320	
Bar stock vanstone flange				
	A6400	A6410	A6420	