

# Bar stock thermowell with flange connection

**Model : A610, A611, A612, A623**

Spec. sheet no. **AD06-03**

## Service intended

Temperature sensors or indicating type temperature gauges are not directly inserted into the process pipe, unless these are used to measure the outside temperature of process pipe, instead, these are used with thermowells. By using thermowells, sensors and gauges will not interfere with the process line operation, and the users are able to perform the maintenance procedure of the process line more easily. These types are most common bar type, and these are installed onto the process line by attaching a flange. It is useful in the process line where a high pressure and a fast current exist. A623 is manufactured with a Full Penetration welding procedure so it can be used in a high pressure gas line.

**CRN**



## 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.

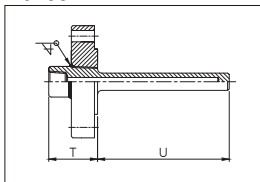
#### ■ Option

Wake frequency calculations in accordance with ASME PTC 19.3

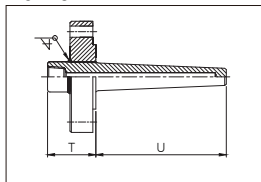
WISE Inc. offers this as an engineering service.

## Structure

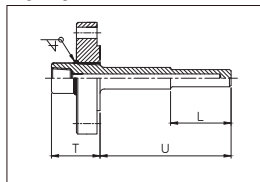
**A6100**



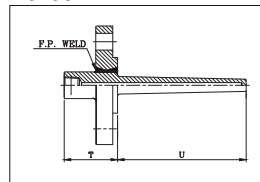
**A6110**



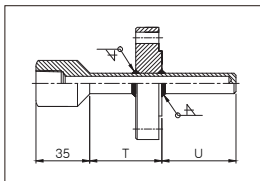
**A6120**



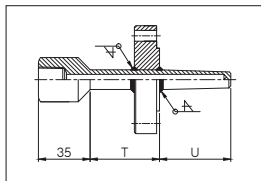
**A6230**



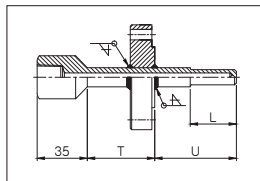
**A6101**



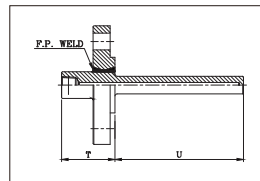
**A6111**



**A6121**



**A6231**



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## Main order

## Ordering information

## 1. Base model

<b>A6100</b>	Straight bar stock (Flanged connection)
<b>A6101</b>	Straight bar stock (Flanged connection with extension)
<b>A6110</b>	Tapered bar stock (Flanged connection)
<b>A6111</b>	Tapered bar stock (Flanged connection with extension)
<b>A6120</b>	Stepped bar stock (Flanged connection)
<b>A6121</b>	Stepped bar stock (Flanged connection with extension)
<b>A6230</b>	Tapered bar stock (F.P welding)
<b>A6231</b>	Straight bar stock (F.P welding)

## 2. Material of well

<b>AX</b>	S25C	<b>MX</b>	Titanium
<b>BX</b>	304SS	<b>NX</b>	Tantalum clad
<b>CX</b>	316SS	<b>OX</b>	A182F316
<b>DX</b>	304L SS	<b>PX</b>	304SS + PTFE lining
<b>EX</b>	316L SS	<b>QX</b>	316SS + PTFE lining
<b>FX</b>	310SS	<b>RX</b>	304L SS + PTFE coating
<b>GX</b>	321SS	<b>SX</b>	316L SS + PTFE coating
<b>HX</b>	446SS	<b>TX</b>	Incoloy-800
<b>IX</b>	A182F304	<b>VX</b>	A182F91
<b>JX</b>	Inconel 600	<b>WX</b>	A105
<b>KX</b>	Hastelloy-C	<b>YX</b>	A182F11
<b>LX</b>	Monel	<b>Z3</b>	A182F321
		<b>ZX</b>	Others

Note : Not available for flange

N code is not available for A611, A612

## 3. Material of flange

<b>AX</b>	S25C	<b>MX</b>	Titanium
<b>BX</b>	304SS	<b>NX</b>	Tantalum clad
<b>CX</b>	316SS	<b>OX</b>	A182F316
<b>DX</b>	304L SS	<b>PX</b>	304SS + PTFE lining
<b>EX</b>	316L SS	<b>QX</b>	316SS + PTFE lining
<b>FX</b>	310SS	<b>RX</b>	304L SS + PTFE coating
<b>GX</b>	321SS	<b>SX</b>	316L SS + PTFE coating
<b>HX</b>	446SS	<b>TX</b>	Incoloy-800
<b>IX</b>	A182F304	<b>VX</b>	A182F91
<b>JX</b>	Inconel 600	<b>WX</b>	A105
<b>KX</b>	Hastelloy-C	<b>YX</b>	A182F11
<b>LX</b>	Monel	<b>Z3</b>	A182F321
		<b>ZX</b>	Others

Note : Not available for flange

N code is not available for A611, A612

## 4. Internal connection

- 0 ½" NPT  
1 ½" PT  
2 ½" PF

1	2	3	4	5	6
A6100	AX	BX	0	A0	A(1)

## 5. Tip outer diameter / Bore size (mm)

<b>A0</b>	14 / 7	<b>C0</b>	17 / 7	<b>D1</b>	19 / 9
<b>A1</b>	14 / 9	<b>C1</b>	17 / 9	<b>D2</b>	19 / 10
<b>B0</b>	16 / 7	<b>C2</b>	17 / 10	<b>D3</b>	19 / 12
<b>B1</b>	16 / 9	<b>C3</b>	17 / 12	<b>D4</b>	21 / 10
<b>B2</b>	16 / 10	<b>D0</b>	19 / 7		

## 6. Flange size

<b>A(1)</b>	½" (15A)	<b>E</b>	1½" (40A)	<b>H</b>	3" (80A)
<b>B(1)</b>	¾" (20A)	<b>F</b>	2" (50A)	<b>I</b>	4" (100A)
<b>C</b>	1" (25A)	<b>G</b>	2½" (65A)	<b>Z</b>	Other
<b>D</b>	1¼" (32A)				

## 7. Process connection type

<b>DA</b>	PN10 RF	<b>AW</b>	900 Lb RTJ
<b>DB</b>	PN16 RF	<b>AT</b>	1,500 Lb RF
<b>AE</b>	150 Lb FF	<b>AX</b>	1,500 Lb RTJ
<b>AC</b>	150 Lb RF	<b>AU</b>	2,500 Lb RF
<b>AD</b>	150 Lb RFSF	<b>AY</b>	2,500 Lb RTJ
<b>AH</b>	300 Lb FF	<b>KN</b>	10K FF
<b>AF</b>	300 Lb RF	<b>KL</b>	10K RF
<b>AG</b>	300 Lb RFSF	<b>KM</b>	10K RFSF
<b>DI</b>	PN25 RF	<b>KR</b>	20K FF
<b>AJ</b>	600 Lb RF	<b>KP</b>	20K RF
<b>AK</b>	600 Lb RFSF	<b>KQ</b>	20K RFSF
<b>AV</b>	600 Lb RTJ	<b>DO</b>	PN40 RF
<b>AS</b>	900 Lb RF	<b>ZZ</b>	Other

## 8. Insertion length ("U") length (mm)

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

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

## 9. "T" length (mm)

- 0 45  
1 50 below  
2 50 above  
Note : Actual length shall be specified.

## 10. Option

- 0 None  
1 Plug and chain (304SS)  
2 Plug and chain (316SS)  
5 Velocity color  
6 Velocity color with plug and chain  
Note : Actual length shall be specified.

7	8	9	10
DB	1	1	1

Sample ordering code