

# Bar stock thermowell with welded connection

Model : A630, A631, A632

Spec. sheet no. AD06-04

## 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 thermowells can be used in a high steam line or Vapor line. These are directly welded onto the socket or pipe so can be a semipermanent. Therefore, the user must carefully decide its material and specification before welding process is performed.



## 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.

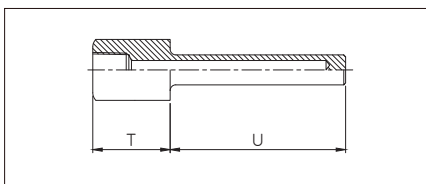
#### ■ Option

Wake frequency calculations in accordance with ASME PTC 19.3

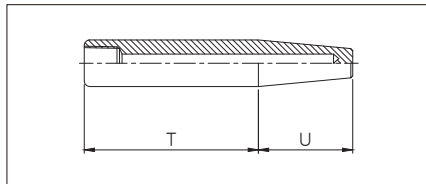
WISE Inc. offers this as an engineering service.

## Structure

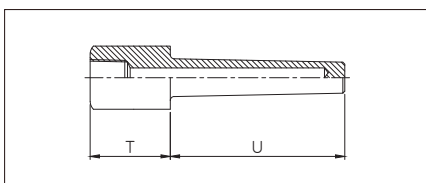
A6300



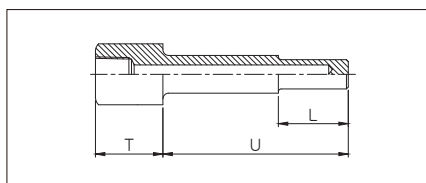
A6311



A6310



A6320



## Main order

## Ordering information

### 1. Base model

<b>A6300</b>	Straight bar stock (Socket welded type)
<b>A6310</b>	Tapered bar stock (Socket welded type)
<b>A6311</b>	Tapered bar stock (Weld in type)
<b>A6320</b>	Stepped bar stock (Socket welded type)

### 2. Material of well and material of flange

<b>AXXX</b>	S25C	<b>NXXX</b>	Tantalum clad
<b>BXXX</b>	304SS	<b>OXXX</b>	A182F316
<b>CXXX</b>	316SS	<b>PXXX</b>	304SS + PTFE lining
<b>DXXX</b>	304L SS	<b>QXXX</b>	316SS + PTFE lining
<b>EXXX</b>	316L SS	<b>RXXX</b>	304L SS + PTFE coating
<b>FXXX</b>	310SS	<b>SXXX</b>	316L SS + PTFE coating
<b>GXXX</b>	321SS	<b>TXXX</b>	Incoloy-800
<b>HXXX</b>	446SS	<b>UXXX</b>	A182F22
<b>IXXX</b>	A182F304	<b>VXXX</b>	A182F91
<b>JXXX</b>	Inconel 600	<b>WXXX</b>	A105
<b>KXXX</b>	Hastelloy-C	<b>XXXX</b>	A182F321
<b>LXXX</b>	Monel	<b>YXXX</b>	A182F11
<b>MXXX</b>	Titanium	<b>ZXXX</b>	Others

### 3. Internal connection

<b>0</b>	½" NPT
<b>1</b>	½" PT
<b>2</b>	½" PF

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

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

### 5. Flange size

<b>AAZ</b>	½"
<b>BAZ</b>	¾"
<b>CAZ</b>	1"
<b>DAZ</b>	1¼"
<b>EAZ</b>	1½"
<b>FAZ</b>	2"

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

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

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

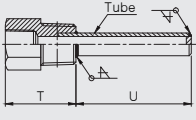
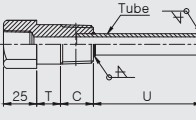
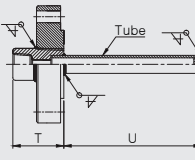
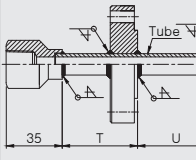
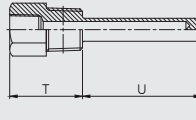
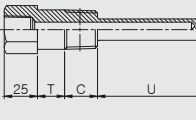
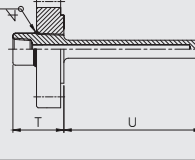
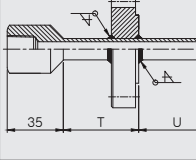
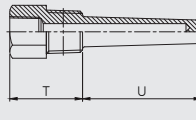
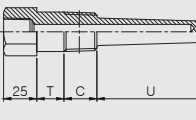
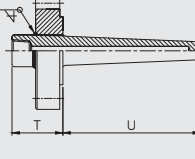
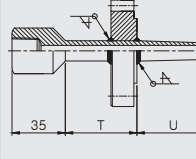
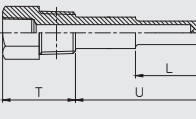
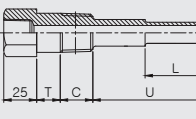
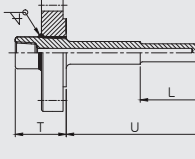
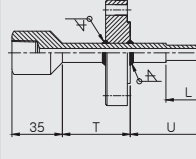
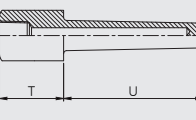
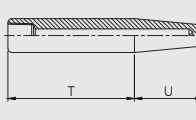
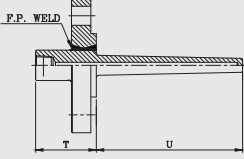
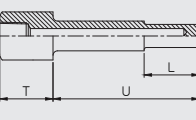
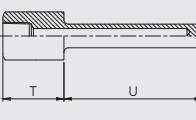
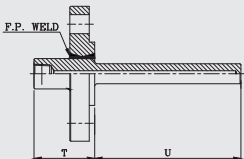
### 7. Option

<b>0</b>	45 mm
<b>1</b>	Plug and chain (304SS)
<b>2</b>	Plug and chain (316SS)

Note : Actual length shall be specified.

1	2	3	4	5	6	7
<b>A6300</b>	<b>AXXX</b>	<b>0</b>	<b>A0</b>	<b>AAZ</b>	<b>2</b>	<b>1</b>

Sample  
ordering code

	Thread type		Flange type	
	Plane type	LAG type	Plane type	LAG type
Closed end tube Straight type				
	A5000	A5001	A5100	A5101
Drilled bar stock Straight type				
	A6000	A6001	A6100	A6101
Drilled bar stock Taper type				
	A6010	A6011	A6110	A6111
Drilled bar stock Step type				
	A6020	A6021	A6120	A6121
Drilled bar stock Weld type			F. P. Weld taper type	
	A6310	A6311		
Drilled bar stock socket weld type			F. P. weld straight type	
	A6320	A6300		
	A6320	A6300	A6231	

