

# Close end tube (Pipe) type thermowell

Model : A500, A510 series

Spec. sheet no. AD05-01

## 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.

A500 and A510 Series are either pipe or tube with one end is sealed. These thermowells are used in the process pipe where a very slow current is exist or in a container, and its length can be vary.



## 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.

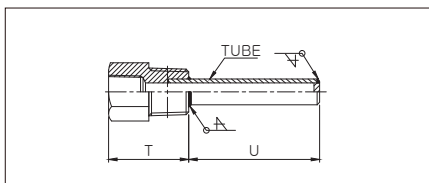
#### ■ Bore size

Almost any installation uses several types of temperature measuring instruments.

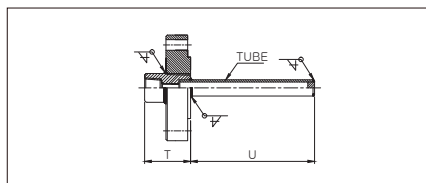
The selection of a standard bore diameter can produce extreme flexibility within the plant.

## Structure

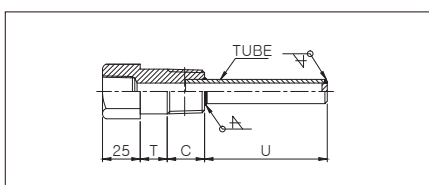
A5000



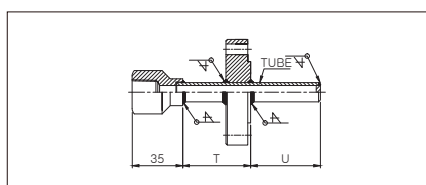
A5100



A5001



A5101



**1. Base model**

<b>A5000</b>	Thread connection
<b>A5001</b>	Thread connection with extension
<b>A5100</b>	Flange connection
<b>A5101</b>	Flange connection with extension

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

<b>AX</b>	S25C	<b>NX</b>	Tantalum clad
<b>BX</b>	304SS	<b>PX</b>	304SS + PTFE lining
<b>CX</b>	316SS	<b>QX</b>	316SS + PTFE lining
<b>DX</b>	304L SS	<b>RX</b>	304L SS + PTFE coating
<b>EX</b>	316L SS	<b>SX</b>	316L SS + PTFE coating
<b>FX</b>	310SS	<b>TX</b>	Incoloy-800
<b>GX</b>	321SS	<b>1X</b>	SSA-S
<b>HX</b>	446SS	<b>WX</b>	A105
<b>JX</b>	Inconel 600	<b>3X</b>	GK-Sic
<b>KX</b>	Hastelloy-C	<b>YX</b>	A182F11
<b>LX</b>	Monel	<b>ZX</b>	Others
<b>MX</b>	Titanium		

Note. Please give XX to 8,9<sup>th</sup> character for A500 series

**3. Internal connection**

<b>0</b>	½" NPT	<b>3</b>	¾" NPT
<b>1</b>	½" PT	<b>4</b>	¾" PF
<b>2</b>	½" PF	<b>5</b>	¾" PT

**4. Pipe (Tube) outer diameter (mm)**

<b>A</b>	14	<b>J</b>	10
<b>B</b>	16	<b>K</b>	12.7
<b>C</b>	17	<b>L</b>	13
<b>D</b>	19	<b>N</b>	21
<b>E</b>	21.7	<b>O</b>	25
<b>F</b>	17.3	<b>P</b>	30
<b>G</b>	15	<b>Q</b>	40
<b>H</b>	12	<b>R</b>	20
<b>I</b>	13.8	<b>S</b>	21.3

**5. Pipe (Tube) thickness (mm)**

<b>A</b>	3.7	<b>G</b>	1.5
<b>B</b>	3.2	<b>H</b>	1.0
<b>C</b>	3.0	<b>J</b>	0.7
<b>D</b>	2.8	<b>K</b>	2.5
<b>E</b>	2.3	<b>L</b>	5.0
<b>F</b>	2.0		

**6. Process connection size**

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

Note. Available for flange connection only

**7. Process connection type**

<b>AZ</b>	S.W.	<b>KM</b>	10K RFSF
<b>AA</b>	NPT	<b>KN</b>	10K FF
<b>AB</b>	PT	<b>DA</b>	PN10 RF
<b>PF</b>	PF	<b>DB</b>	PN16 RF
<b>AC</b>	150 Lb RF	<b>DI</b>	PN25 RF
<b>AD</b>	150 Lb RFSF	<b>DO</b>	PN40 RF
<b>AE</b>	150 Lb FF	<b>KA</b>	5K RF
<b>AF</b>	300 Lb RF	<b>KT</b>	5K FF
<b>AG</b>	300 Lb RFSF	<b>KP</b>	20K RF
<b>AH</b>	300 Lb FF	<b>KQ</b>	20K RFSF
<b>AJ</b>	600 Lb RF	<b>KR</b>	20K FF
<b>AK</b>	600 Lb RFSF	<b>ZZ</b>	Other
<b>KL</b>	10K RF		

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

<b>0</b>	80	<b>B</b>	600	<b>M</b>	4,000
<b>1</b>	100	<b>C</b>	700	<b>N</b>	5,000
<b>2</b>	150	<b>D</b>	800	<b>P</b>	6,000
<b>3</b>	200	<b>E</b>	900	<b>Q</b>	7,000
<b>4</b>	250	<b>F</b>	1,000	<b>R</b>	8,000
<b>5</b>	300	<b>G</b>	1,500	<b>S</b>	9,000
<b>6</b>	350	<b>H</b>	2,000	<b>T</b>	10,000
<b>7</b>	400	<b>J</b>	2,500	<b>Z</b>	Other
<b>8</b>	450	<b>K</b>	3,000		
<b>A</b>	500	<b>L</b>	3,500		

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

**9. 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	8	9
A5000	AX	3	A	A	C	AB	K	1

Sample  
ordering code