

# 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.

\* Note. Depending on the material and U-length, the appearance of the connector may change.



### 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.

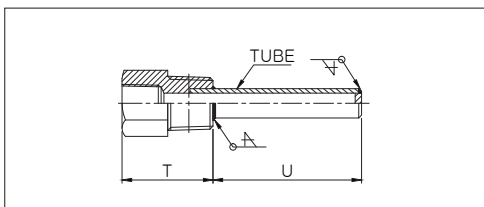
##### ■ Bore size

Almost any installation uses several types of temperature measuring instruments.

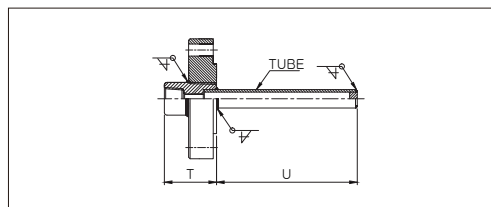
The selection of a standard bore diameter can produce extreme flexibility within the plant.

### Structure

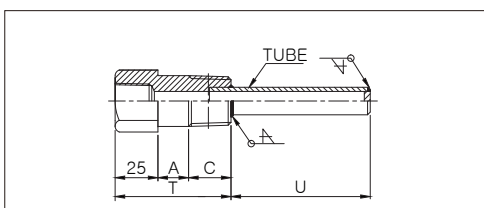
A5000



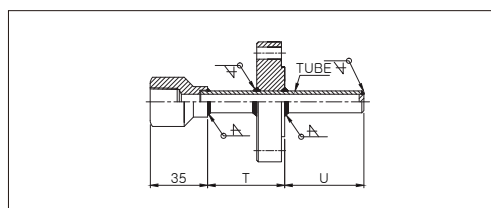
A5100



A5001



A5101



**WISE**<sup>®</sup>

## 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

<b>AX</b>	S25C	<b>PX</b>	304SS + PTFE lining
<b>BX</b>	304SS	<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>	A106
<b>JX</b>	Inconel 600	<b>3X</b>	GK-Sic
<b>KX</b>	Hastelloy-C	<b>YX</b>	A335P11
<b>LX</b>	Monel	<b>ZX</b>	Others
<b>MX</b>	Titanium		

## 3. Material of flange

<b>AX</b>	S25C	<b>MX</b>	Titanium
<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>WX</b>	A105
<b>JX</b>	Inconel 600	<b>YX</b>	A182F11
<b>KX</b>	Hastelloy-C	<b>ZX</b>	Others
<b>LX</b>	Monel		

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

## 4. 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

## 5. Pipe (Tube) outer diameter (mm)

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

## 6. Pipe (Tube) thickness (mm)

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

## Sample ordering code

1	2	3	4	5	6	7	8	9	10	11
A5000	AX	AX	0	A	A	A(1)	AZ	0	0	1

## 7. Process connection size

<b>A(1)</b>	½" (15A)	<b>F</b>	2" (50A)
<b>B(1)</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

## 8. 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>	B16.5 class 150 RF	<b>DI</b>	PN25 RF
<b>AD</b>	B16.5 class 150 RFSF	<b>DO</b>	PN40 RF
<b>AE</b>	B16.5 class 150 FF	<b>KA</b>	5K RF
<b>AF</b>	B16.5 class 300 RF	<b>KT</b>	5K FF
<b>AG</b>	B16.5 class 300 RFSF	<b>KP</b>	20K RF
<b>AH</b>	B16.5 class 300 FF	<b>KQ</b>	20K RFSF
<b>AJ</b>	B16.5 class 600 RF	<b>KR</b>	20K FF
<b>AK</b>	B16.5 class 600 RFSF	<b>ZZ</b>	Other
<b>KL</b>	10K RF		

## 9. 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.

## 10. "T" length (mm)

<b>0</b>	45
<b>1</b>	50 below
<b>2</b>	50 above

Note : Actual length shall be specified.  
A5100: "T"length is designed with 70 mm or longer in case of flange thickness more than 28 mm.  
(Flange thickness is more than 50mm, please contact the head office before selecting.)

## 11. Option

<b>0</b>	None
<b>1</b>	Plug and chain (304SS)
<b>2</b>	Plug and chain (316SS)