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.

Standard features

Selection of thermowell

■ Material

In general, the thermowell material chosen for the installation is governed mainly by the corrosion condition the themowell 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

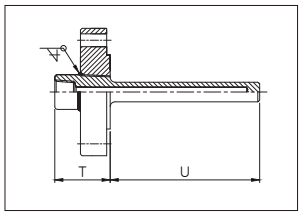
Almost any installation uses several type of temperature measuring instruments.
The selection of a standard bore diameter can produce extreme flexibility within the plant.

■ Option

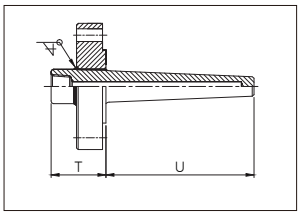
Wake frequency calculations in accordance with ASME PTC 19.3
WISE Inc. offers this as an engineering service.

Structure

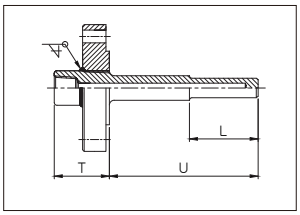
A6100



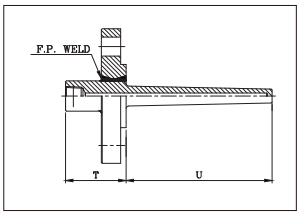
A6110



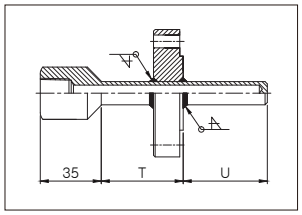
A6120



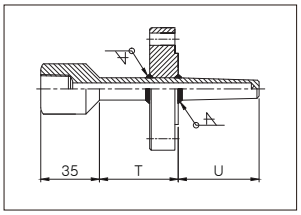
A6230



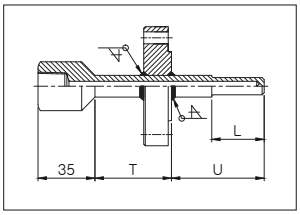
A6101



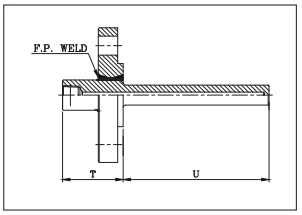
A6111



A6121



A6231



1. Base model

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

2. Material of well

AX	S25C	**MX**	Titanium
BX	304SS	**NX**	Tantalum clad
CX	316SS	**OX**	A182F316
DX	304L SS	**PX**	304SS + PTFE lining
EX	316L SS	**QX**	316SS + PTFE lining
FX	310SS	**RX**	304L SS + PTFE coating
GX	321SS	**SX**	316L SS + PTFE coating
HX	446SS	**TX**	Incoloy-800
IX	A182F304	**VX**	A182F91
JX	Inconel 600	**WX**	A105
KX	Hastelloy-C	**YX**	A182F11
LX	Monel	**23**	A182F321
		ZX	Others

Note : Not available for flange
N code is not available for A611, A612

3. Material of flange

AX	S25C	**MX**	Titanium
BX	304SS	**NX**	Tantalum clad
CX	316SS	**OX**	A182F316
DX	304L SS	**PX**	304SS + PTFE lining
EX	316L SS	**QX**	316SS + PTFE lining
FX	310SS	**RX**	304L SS + PTFE coating
GX	321SS	**SX**	316L SS + PTFE coating
HX	446SS	**TX**	Incoloy-800
IX	A182F304	**VX**	A182F91
JX	Inconel 600	**WX**	A105
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LX	Monel	**23**	A182F321
		ZX	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

5. Tip outer diameter / Bore size (mm)

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

6. Flange size

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

7.Process connection type

DA	PN10 RF	**AW**	B16.5 class 900 RTJ
DB	PN16 RF	**AT**	B16.5 class 1,500 RF
AE	B16.5 class 150 FF	**AX**	B16.5 class 1,500 RTJ
AC	B16.5 class 150 RF	**AU**	B16.5 class 2,500 RF
AD	B16.5 class 150 RFSF	**AY**	B16.5 class 2,500 RTJ
AH	B16.5 class 300 FF	**KN**	10K FF
AF	B16.5 class 300 RF	**KL**	10K RF
AG	B16.5 class 300 RFSF	**KM**	10K RFSF
DI	PN25 RF	**KR**	20K FF
AJ	B16.5 class 600 RF	**KP**	20K RF
AK	B16.5 class 600 RFSF	**KQ**	20K RFSF
AV	B16.5 class 600 RTJ	**DO**	PN40 RF
AS	B16.5 class 900 RF	**ZZ**	Other

8. 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.

9. "T" length (mm)

0	45
1	50 below
2	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.)

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.

Sample ordering code

1	2	3	4	5	6	7	8	9	10
A6100	**AX**	**BX**	**0**	**A0**	**A(1)**	**DB**	**1**	**1**	**1**