

## Thermowell of Type No. Constitution (Thermowell for Temp. Gauge (Option))



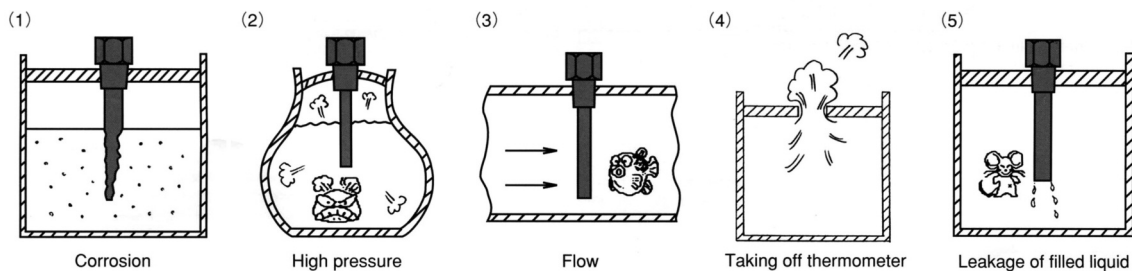
### OUTLINE

When measuring temperature object flows, and the speed is fast, and the pressure is high the same as general temperature indication indicator, thermowell is necessary to temperature sensor department of temperature transmitter and in general application, it uses protecting tube to be easy maintenance.

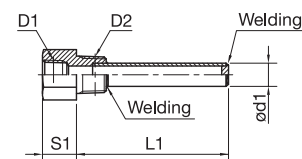
### FEATURES

In the case of following conditions, thermowell should be provided to protect bulb.

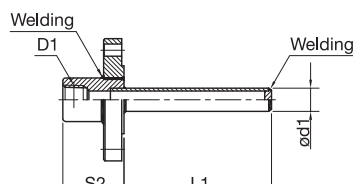
- (1) In case of corrosion fluid, thermowell with suitable material is necessary.
- (2) In case of high pressure, necessary to use thermowell suitable for operating pressure.
- (3) In case of fluid with flow, necessary to use thermowell suitable for flow and viscosity.
- (4) In case of fluid leaking out when taking off the thermometer, necessary to use thermowell.
- (5) In case of filled liquid in thermometer is leak out from bulb and it is harmful, necessary to use thermowell.



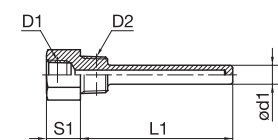
### GENERAL SPECIFICATION



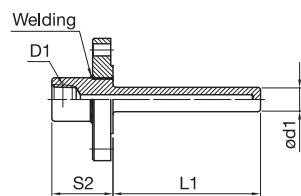
· Welded type Screw



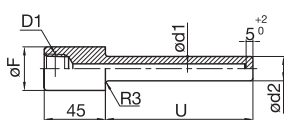
· Welded type Flange



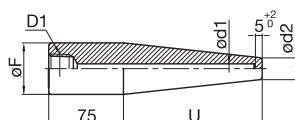
· Drilled type Screw



· Drilled type Flange



· Drilled type Socket weld



· Drilled type Weld-in

- Gauge connection : Female connection  
PT3/8", PF3/8", NPT3/8"  
PT1/2", PF1/2", NPT1/2"  
\* Other size is available by request.

- Process connection : Male connection  
PT1/2", PF1/2", NPT1/2"  
PT3/4", PF3/4", NPT3/4"  
PT1", PF1", NPT1"  
\* Flange type is flange rating by request.  
\* Other size is available by request.

- Material :  
304SS(Std.), 316SS, 316LSS  
\* Other material is available by request.

- Well in dia. :  
7mm, 9mm, 11mm, 13mm  
\* Other size is available by request.

- Well out dia. :  
14mm, 16mm, 18mm, 20mm to 23mm Taper  
\* Other size is available by request.

- Insert length : by Request

## Thermowells type No. configuration

\* For ordering, Please specify the model number and each spec.

Model

TW

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

Material

1	Brass
2	304SS
3	316SS
4	316LSS
5	Other

Flange shape

1	FF
2	RF
3	RJ
4	OTHER

D2-1

Screw	Flange rating			
0	A	JIS 10K	I	ANSI 900#
	B	JIS 16K	J	ANSI 1500#
	C	JIS 20K	K	ANSI 2500#
	D	JIS 30K	L	JPI 150#
	E	JIS 40K	M	JPI 300#
	F	ANSI 150#	N	JPI 600#
	G	ANSI 300#	P	JPI 900#
	H	ANSI 600#	Q	JPI 1500#

D1

2	PF1/4"	3	PF3/8"	4	PF1/2"
7	PT1/4"	8	PT3/8"	9	PT1/2"
B	NPT1/4"	C	NPT3/8"	D	NPT1/2"

Fictional

0	End closed
1	Drilled straight
2	Drilled taper
3	End closed lag
4	Drilled step
5	Drilled lag straight
6	Drilled lag taper
7	Drilled lag step
8	Drilled in taper

Type

1	Screw type
2	Flange type
3	Socket welding type
4	Weld-in type
5	Screw type test well
6	Flange type test well

D2-2

Line size				Screw size			
A	10A(3/8")	F	40A(1 1/2")	4	PF1/2"	T	NPT3/4"
B	15A(1/2")	G	50A(2")	9	PT1/2"	U	PF1"
C	20A(3/4")	H	65A(2 1/2")	D	NPT1/2"	V	PT1"
D	25A(1")	I	80A(3")	R	PF3/4"	W	NPT1"
E	32A(1 1/4")	J	100A(4")	S	PT3/4"	X	Other

15 Document

0	Nil
1	Required

12 Other additional spec.

0	Nil
1	Please speccify your requirement. Lag length "T"

d2, d3

0	ø14 to ø14
1	ø16 to ø16
2	ø18 to ø18
3	ø20 to ø20
4	ø14 to ø23
5	ø16 to ø23
6	ø18 to ø23
7	ø20 to ø23
8	Other

d1

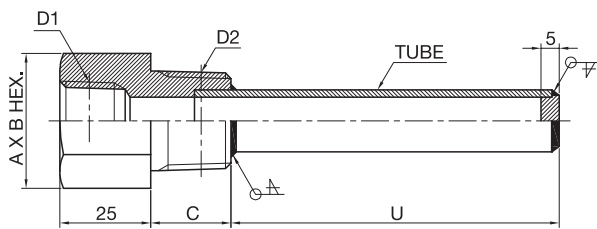
1	ø7
2	ø9
3	ø11
4	ø13

Pocket length "U"

Request length

## Outline dimension &amp; Mounting type (Screw type thermowells)

Model : TW10 - □□□

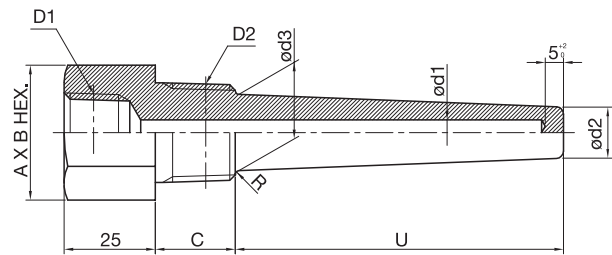


MATERIAL : 304SS □ 316SS □ OTHER \_\_\_\_\_

TUBE SIZE : \_\_\_\_ A \_\_\_\_ Sch OTHER  $\phi$  \_\_\_\_ X \_\_\_\_ t

D1	D2	AXB HEX.	C	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	18		
	PT 3/4	32X37	20		
	PT 1	36X41.6	22		
NPT 1/2	NPT 1/2	27X31.2	18		
	NPT 3/4	32X37	20		
	NPT 1	36X41.6	22		

Model : TW12 - □□□



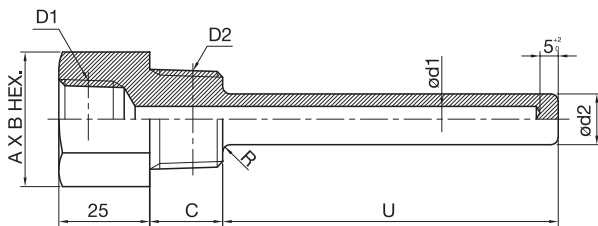
MATERIAL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	C	d1	d2	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14		
	PT 3/4	32X37	20	9	16		
	PT 1	36X41.6	22	11	18		
NPT 1/2	NPT 1/2	27X31.2	18	13	20		
	NPT 3/4	32X37	20				
	NPT 1	36X41.6	22				

Title : Screw type with end closed

Title : Screw type with drilled bar taper

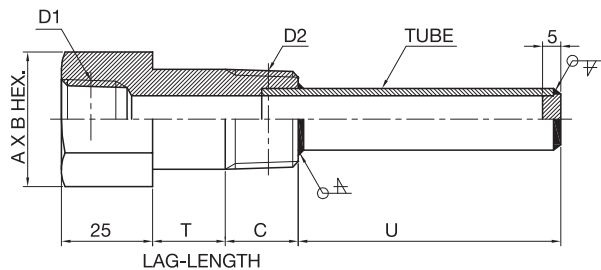
Model : TW11 - □□□



MATERIAL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	C	d1	d2	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14		
	PT 3/4	32X37	20	9	16		
	PT 1	36X41.6	22	11	18		
NPT 1/2	NPT 1/2	27X31.2	18	13	20		
	NPT 3/4	32X37	20				
	NPT 1	36X41.6	22				

Model : TW13 - □□□



MATERIAL : 304SS □ 316SS □ OTHER \_\_\_\_\_

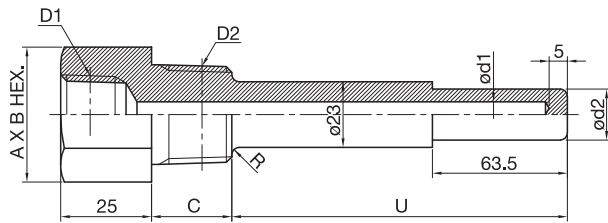
TUBE SIZE : \_\_\_\_ A \_\_\_\_ Sch OTHER  $\phi$  \_\_\_\_ X \_\_\_\_ t

D1	D2	AXB HEX.	C	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	18			
	PT 3/4	32X37	20			
	PT 1	36X41.6	22			
NPT 1/2	NPT 1/2	27X31.2	18			
	NPT 3/4	32X37	20			
	NPT 1	36X41.6	22			

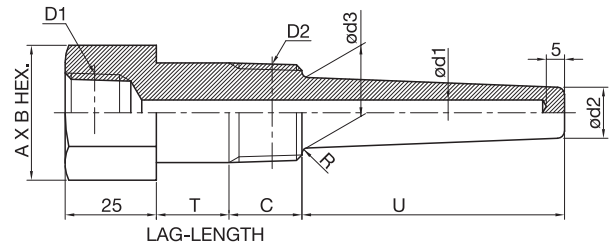
Title : Screw type with drilled bar straight

Title : Screw type with end closed lag

## Outline dimension &amp; Mounting type (Screw type thermowells)

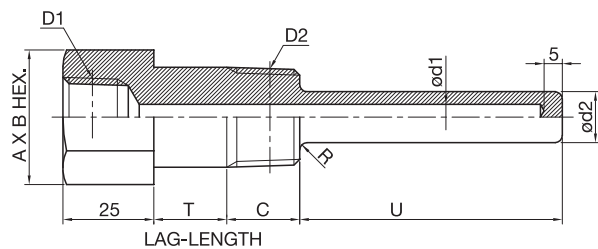
Model : TW14 - ☐☐☐MATERIAL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	C	d1	d2	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14		
	PT 3/4	32X37	20	9	16		
	PT 1	36X41.6	22	11	18		
NPT 1/2	NPT 1/2	27X31.2	18	13	20		
	NPT 3/4	32X37	20				
	NPT 1	36X41.6	22				

Model : TW16 - ☐☐☐MATERIAL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

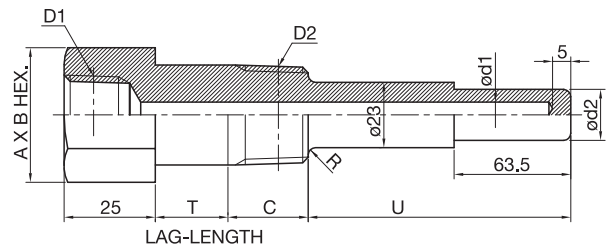
D1	D2	AXB HEX.	C	d1	d2	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14			
	PT 3/4	32X37	20	9	16			
	PT 1	36X41.6	22	11	18			
NPT 1/2	NPT 1/2	27X31.2	18	13	20			
	NPT 3/4	32X37	20					
	NPT 1	36X41.6	22					

Title : Screw type with drilled step

Model : TW15 - ☐☐☐MATERIAL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	C	d1	d2	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14			
	PT 3/4	32X37	20	9	16			
	PT 1	36X41.6	22	11	18			
NPT 1/2	NPT 1/2	27X31.2	18	13	20			
	NPT 3/4	32X37	20					
	NPT 1	36X41.6	22					

Title : Screw type with drilled lag taper

Model : TW17 - ☐☐☐MATERIAL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

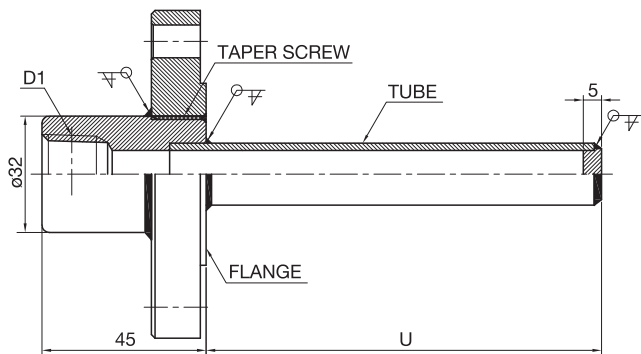
D1	D2	AXB HEX.	C	d1	d2	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	18	7	14			
	PT 3/4	32X37	20	9	16			
	PT 1	36X41.6	22	11	18			
NPT 1/2	NPT 1/2	27X31.2	18	13	20			
	NPT 3/4	32X37	20					
	NPT 1	36X41.6	22					

Title : Screw type with drilled lag straight

Title : Screw type with drilled lag step

## Outline dimension &amp; Mounting type (Flange type thermowells)

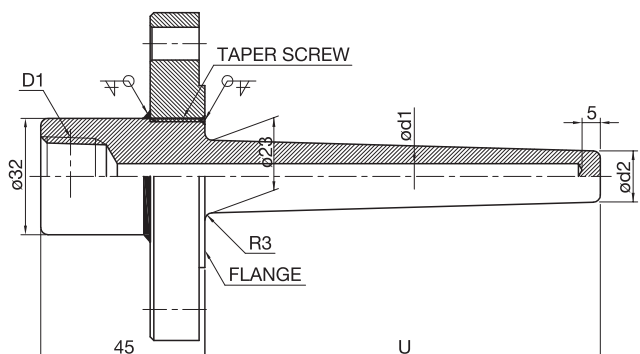
Model : TW20 - □□□



MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 TUBE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 TUBE SIZE : \_\_\_\_A\_\_\_\_Sch OTHER  $\phi$  \_\_\_\_ X \_\_\_\_t

D1	FLANGE RATING	LENGTH U	Q'TY
PT 1/2			
NPT 1/2			

Model : TW22 - □□□

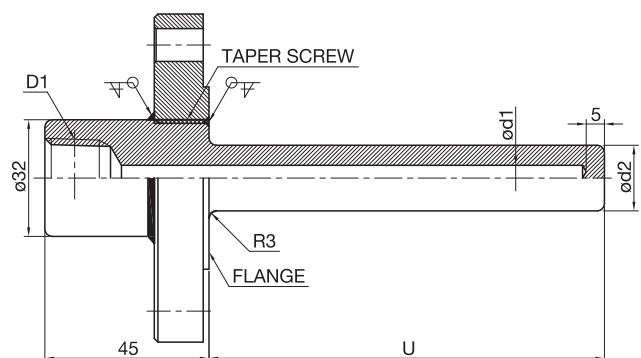


MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Title : Flange type with end closed

Model : TW21 - □□□



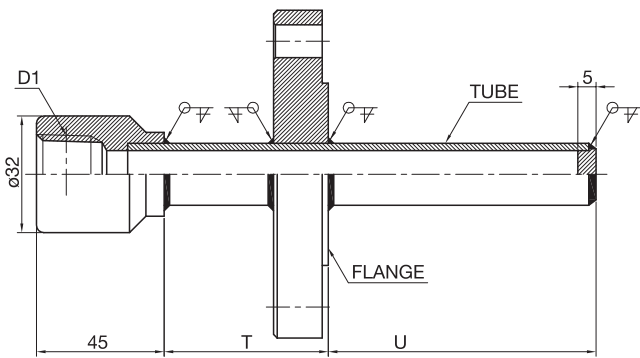
MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Title : Flange type with drilled straight

Title : Flange type with drilled taper

Model : TW23 - □□□



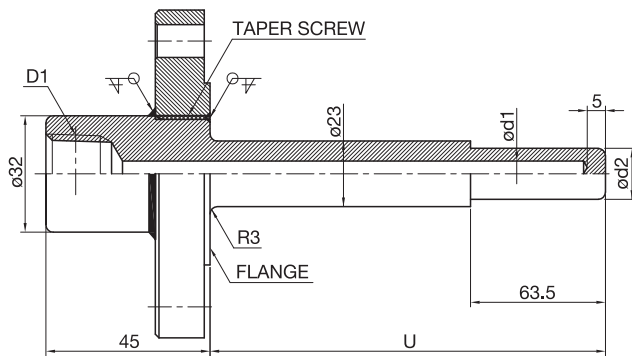
MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 TUBE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 TUBE SIZE : \_\_\_\_A\_\_\_\_Sch OTHER  $\phi$  \_\_\_\_ X \_\_\_\_t

D1	FLANGE RATING	T	LENGTH U	Q'TY
PT 1/2				
NPT 1/2				

Title : Flange type with end closed lag

## Outline dimension &amp; Mounting type (Flange type thermowells)

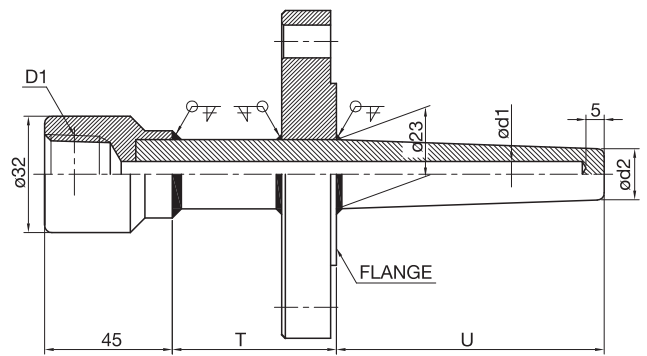
Model : TW24 - □□□



MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Model : TW26 - □□□

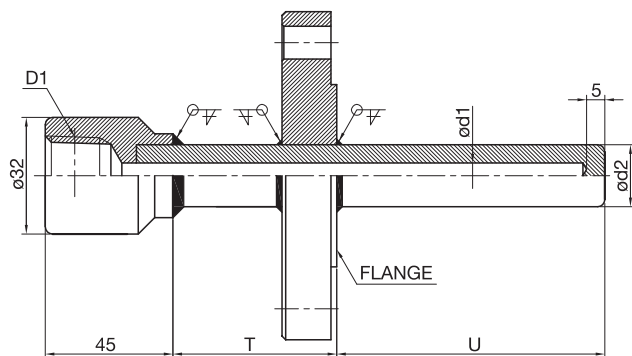


MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	T	LENGTH U	Q'TY
PT 1/2	7	14				
NPT 1/2	9	16				
	11	18				
	13	20				

Title : Flange type with drilled step

Model : TW25 - □□□



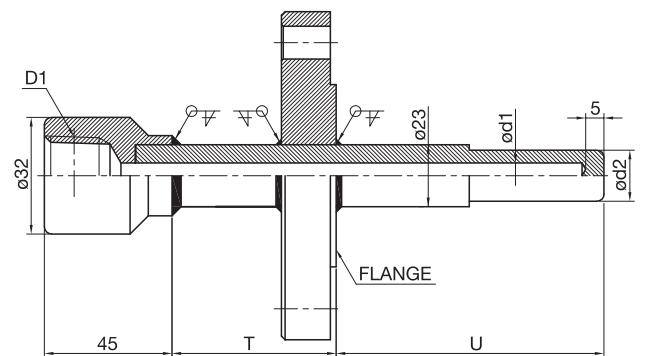
MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	T	LENGTH U	Q'TY
PT 1/2	7	14				
NPT 1/2	9	16				
	11	18				
	13	20				

Title : Flange type with drilled lag straight

Title : Flange type with drilled lag taper

Model : TW27 - □□□



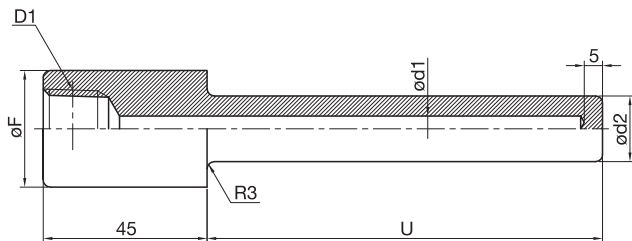
MATERIAL : FLANGE : 304SS □ 316SS □ OTHER \_\_\_\_\_  
 WELL : 304SS □ 316SS □ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	T	LENGTH U	Q'TY
PT 1/2	7	14				
NPT 1/2	9	16				
	11	18				
	13	20				

Title : Flange type with drilled leg step

## Outline dimension &amp; Mounting type (Socket weld &amp; Weld-in type thermowells)

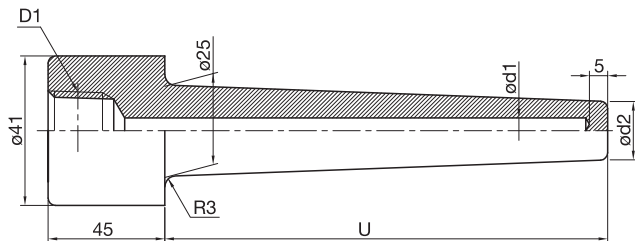
Model : TW31 - □□□



MATERIAL : 304SS ☐ 316SS ☐  
CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	øF	d1	d2	LENGTH U	Q'TY
PT 1/2	3/4"	26.5	7 14		
NPT 1/2	1"	33.2	9 16		
			11 18		
			13 20		

Model : TW42 - □□□



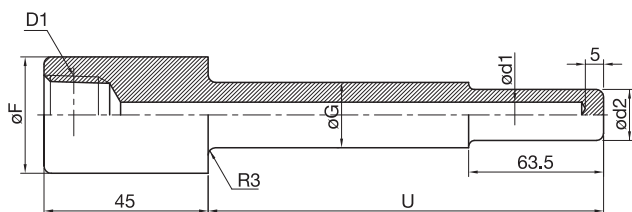
MATERIAL : 304SS ☐ 316SS ☐  
CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	d1	d2	LENGTH U	Q'TY
PT 1/2	7	14		
NPT 1/2	9	16		
	11	18		
	13	20		

Title : Socket weld with drilled straight

Title : Weld In with drilled taper

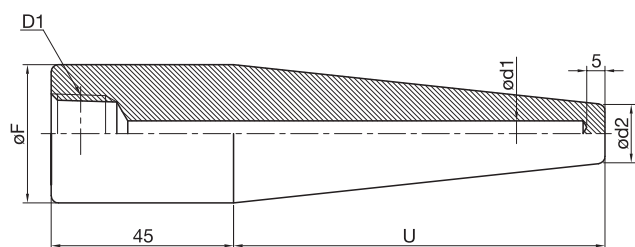
Model : TW34 - □□□



MATERIAL : 304SS ☐ 316SS ☐  
CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	øF	G	d1	d2	LENGTH U	Q'TY
PT 1/2	3/4"	26.5	19	7 12.7		
NPT 1/2	1"	33.2	22			

Model : TW48 - □□□



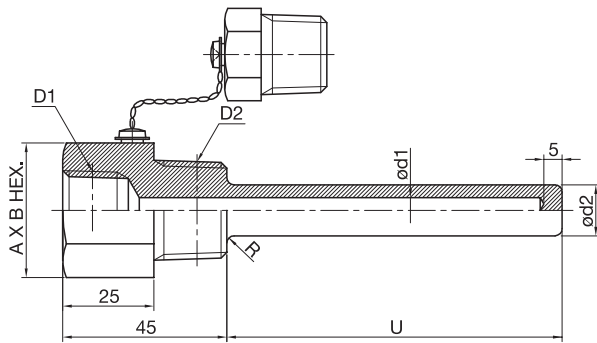
MATERIAL : 304SS ☐ 316SS ☐  
CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	øF	d1	d2	LENGTH U	Q'TY
PT 1/2	3/4"	26.5	7 14		
NPT 1/2	1"	33.2	9 16		
	1 1/2"	38	11 18		
			13 20		

Title : Socket weld with drilled step

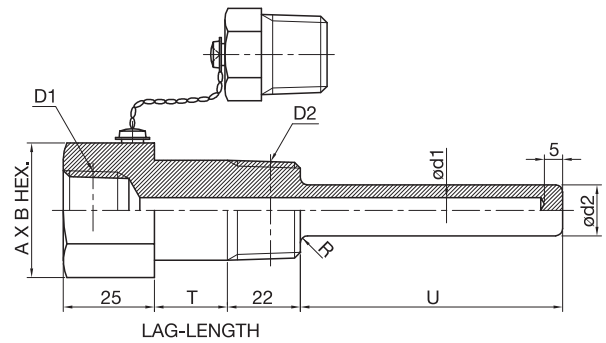
Title : Weld-in with drilled in taper

# Outline dimension & Mounting type (Screw type with Test thermowells)

**Model : TW51 -** ☐ ☐ ☐


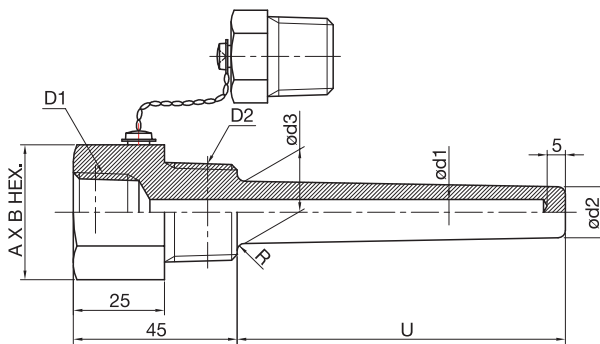
MATERIAL : 304SS ☐ 316SS ☐  
 CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	d1	d2	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	7	14		
	PT 3/4	32X37	9	16		
	PT 1	36X41.6	11	18		
NPT 1/2	NPT 1/2	27X31.2	13	20		
	NPT 3/4	32X37				
	NPT 1	36X41.6				

**Model : TW55 -** ☐ ☐ ☐


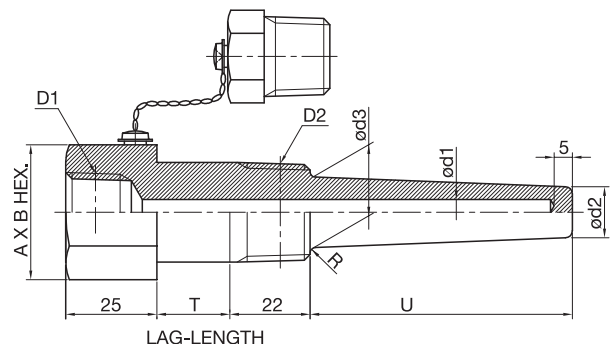
MATERIAL : 304SS ☐ 316SS ☐  
 CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	d1	d2	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	7	14			
	PT 3/4	32X37	9	16			
	PT 1	36X41.6	11	18			
NPT 1/2	NPT 1/2	27X31.2	13	20			
	NPT 3/4	32X37					
	NPT 1	36X41.6					

**Title : Screw type with test drilled straight**
**Title : Screw type with test drilled lag straight**
**Model : TW52 -** ☐ ☐ ☐


MATERIAL : 304SS ☐ 316SS ☐  
 CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	d1	d2	LENGTH U	Q'TY
PT 1/2	PT 1/2	27X31.2	7	14		
	PT 3/4	32X37	9	16		
	PT 1	36X41.6	11	18		
NPT 1/2	NPT 1/2	27X31.2	13	20		
	NPT 3/4	32X37				
	NPT 1	36X41.6				

**Model : TW56 -** ☐ ☐ ☐


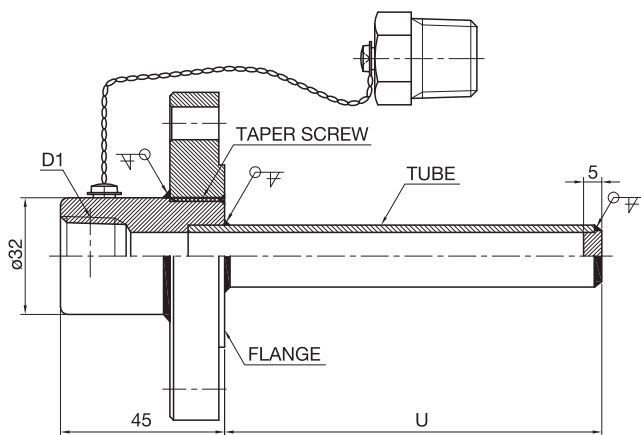
MATERIAL : 304SS ☐ 316SS ☐  
 CARBON STEEL ☐ OTHER \_\_\_\_\_

D1	D2	AXB HEX.	d1	d2	LENGTH U	T	Q'TY
PT 1/2	PT 1/2	27X31.2	7	14			
	PT 3/4	32X37	9	16			
	PT 1	36X41.6	11	18			
NPT 1/2	NPT 1/2	27X31.2	13	20			
	NPT 3/4	32X37					
	NPT 1	36X41.6					

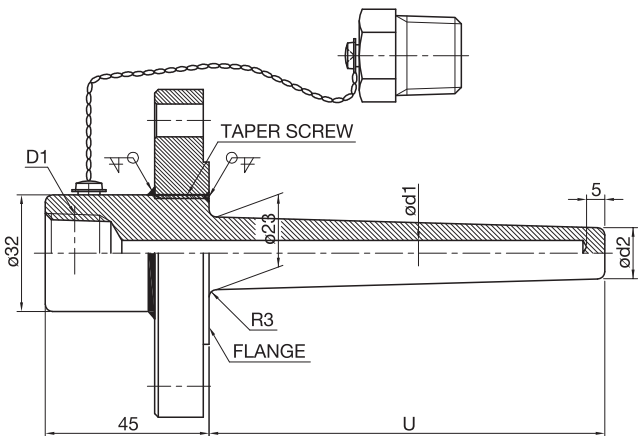
**Title : Screw type with test drilled taper**
**Title : Screw type with test drilled lag taper**



## Outline dimension &amp; Mounting type (Flange type with Test thermowells)

Model : TW60 - ☐☐☐MATERIAL : FLANGE : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_TUBE : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_TUBE SIZE : \_\_\_\_ A \_\_\_\_ Sch OTHER  $\phi$  \_\_\_\_ X \_\_\_\_ t

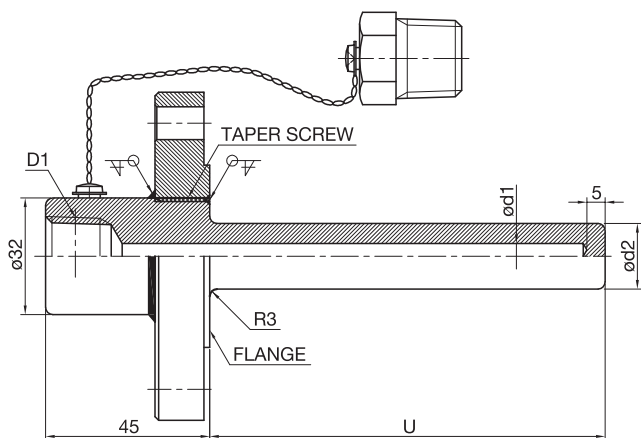
D1	FLANGE RATING	LENGTH U	Q'TY
PT 1/2			
NPT 1/2			

Model : TW62 - ☐☐☐MATERIAL : FLANGE : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_WELL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

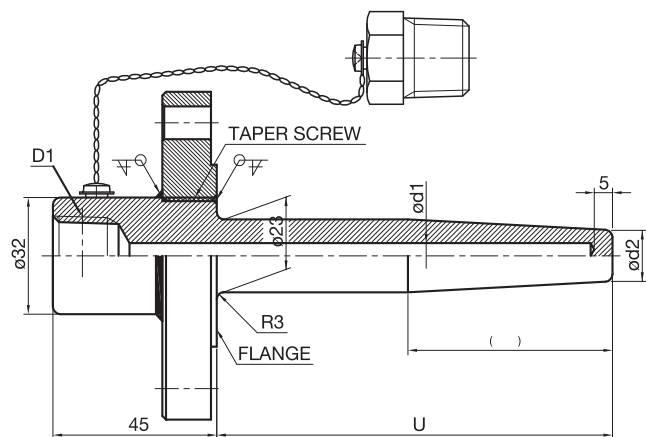
D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Title : Flange type with test end closed

Title : Flange type with test drilled taper

Model : TW61 - ☐☐☐MATERIAL : FLANGE : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_WELL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Model : TW68 - ☐☐☐MATERIAL : FLANGE : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_WELL : 304SS ☐ 316SS ☐ OTHER \_\_\_\_\_

D1	d1	d2	FLANGE RATING	LENGTH U	Q'TY
PT 1/2	7	14			
NPT 1/2	9	16			
	11	18			
	13	20			

Title : Flange type with test drilled straight

Title : Flange type with test drilled in taper