

[The selection is detailed on page 5](#)



# JW20

## Bar Type Flange Casing

### The role of the protective tube

For measuring media with corrosive, high temperature, high pressure, explosive, easy to burn and other risk factors, the thermometer can not be directly contacted, that is, first weld the threaded installation sleeve or flange installation sleeve in the pipeline or container, and then install the bimetal thermometer in it, then the role of the protective tube will appear. General bimetal thermometers are equipped with protective sleeves, in order to protect the temperature measuring element inside, but also for easy maintenance. It can effectively protect the normal work of bimetal thermometers, and can also be used for special occasions such as anti-corrosion, high pressure and high flow rate, and has a certain auxiliary role for the accuracy of measurement results.

### Product description

The sheath is an important component in all temperature measurement applications, isolating the measurement process from the surrounding environment, not only protecting the environment and workers, but also separating aggressive, high-pressure, high-flow media from the temperature sensor body, allowing users to replace thermometers without stopping at the plant.

The sheath is available in a variety of designs and materials to meet all application requirements. Interface type and basic manufacturing process are important design option elements.

Under normal circumstances, we mainly divide the sheath into threaded type, welded in type and flange type. In addition, the sheath can also be divided into two types of assembly and integral. The packaged jacket is made of pipe and ends are sealed by solid welding. The integral sheath is machined from bar material.

The JW20 series integral flanged sheath is suitable for a wide range of electronic and mechanical thermometers manufactured by Rodwig. This series of sheathing not only meets international standards, but also uses a heavy load design, making it the first choice for chemical and petrochemical industries and equipment manufacturing applications.

### Functional characteristics

Heavy load design F: Full penetration welded type

P: Double Angle welding type, weld = 3mm

R: Double Angle welding type, weld =6mm

High corrosion resistance coating

Available jacket styles: tapered, straight or stepped "Quill Tip" type (with open end)

The welding process is tested in accordance with ASME Section IX

Various thread standards, wall thickness, length optional

### Product application

Petrochemical industry

Land/ocean platform

Equipment construction

Suitable for heavy load applications



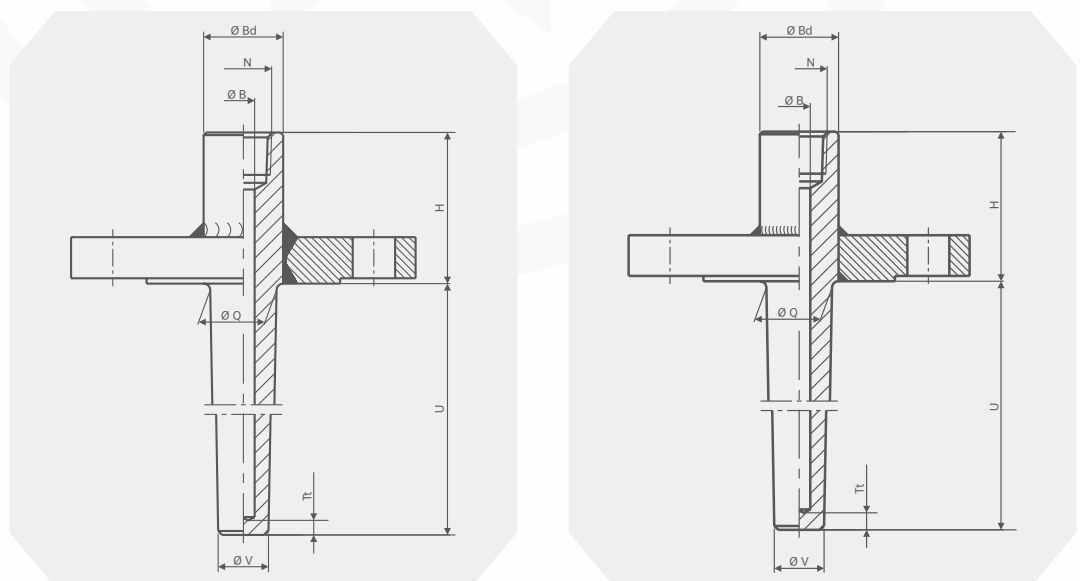
Technical parameter

Flange sheath material	Stainless Steel 304SS/304L, 316/316L, 1.4571, 1.4404, A105	
	Special material	
Francois	Blind flanges according to ASME, EN 1092-1, DIN 2527	
Connect to thermometer	1/2NPT, G1/2 (female thread)	
Hole size	Ø6.6mm, Ø8.5mm	
Insertion length U	According to customer specification	
Connection length H	57 and 83mm (standard) [other upon request]	
Coating		
<ul style="list-style-type: none"> <li>Wear-resistant surfacing with Stellite alloys is suitable for grinding process load</li> </ul>	High velocity oxide fuel (HVOF spray) [0.5 mm thickness]	
	Plasma Arc Transfer (PTA) [Thickness 1.6 mm (standard) to 3.2 mm]	
	Laser plating [Thickness 1.6mm (standard) Higher thickness on request]	
	Air plasma spraying [Thickness up to 1.6 mm]	
<ul style="list-style-type: none"> <li>Suitable for high chemical load anticorrosion (other protective coatings upon request)</li> </ul>	Polytetrafluoroethylene [minimum thickness 0.4 mm (standard) or 0.6 mm (special design)]	
	Ethylene-trifluorochloroethylene copolymer (HyRULE®) [min. 0.6 mm thickness]	
Maximum process temperature, process pressure depends	Flange sheath design	dimension
		material
		coating
		French pressure rating
	Process condition	Velocity of flow
		Density of medium
Options	Other flanges, dimensions and materials	
	"Piercing the end" version	
	Tantalum sleeve for liquid connection parts (insert length U+ Max. 3 mm)	

Size mm

Legend:

- H Connection length
- U Insertion length
- N Connect to thermometer
- ØB Hole size
- ØQ Root diameter
- ØV End diameter
- ØBd Top diameter
- Tt End thickness (6.5mm)



Size mm

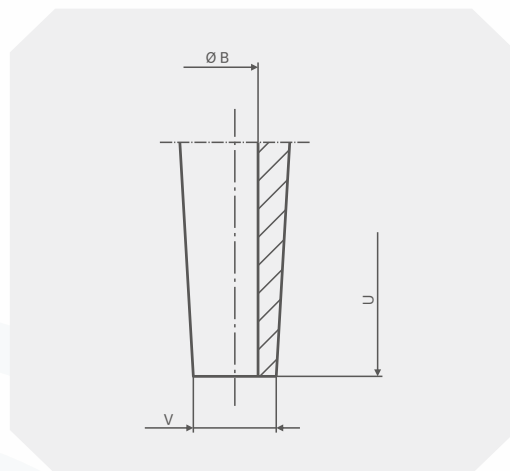
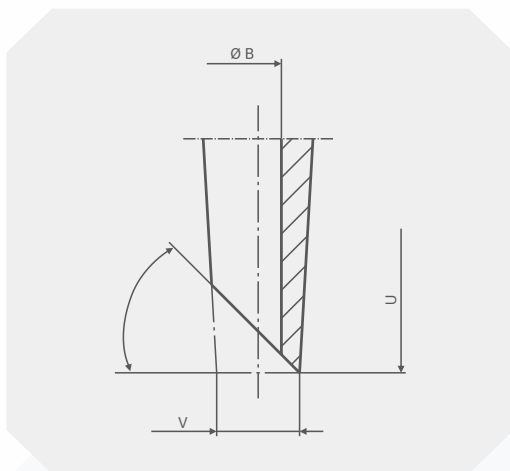
"Pierce the end" version

Standard

Option: Straight

Legend:

- H Connection length
- U Insertion length
- N Connect to thermometer
- ØB Hole size
- ØQ Root diameter
- ØV End diameter
- ØBd Top diameter
- Tt End thickness (6.5mm)



ASME Flanges, Conical thermocouple casing forms

DN	PN (lbs)	Geometric size mm					weight kg		
		H	Ø Q	Ø V	Ø B	Ø Bd	U=4"	U=13"	U=22"
1"	150	2¼" (approximately 57 mm)	22	16	6.6 or 8.5	30	1.4	1.9	2.3
	300	2¼" (approximately 57 mm)	22	16	6.6 or 8.5	30	2.1	2.6	3.0
	600	2¼" (approximately 57 mm)	22	16	6.6 or 8.5	30	2.3	2.8	3.2
	1,500	3¼" (approximately 83 mm)	22	16	6.6 or 8.5	30	4.3	4.8	5.2
1 ½"	150	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	1.8	2.4	3.0
	300	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	3.3	3.9	4.5
	600	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	4.0	4.7	5.3
	1,500	3¼" (approximately 83 mm)	25	19	6.6 or 8.5	30	6.4	7.1	7.7
2"	150	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	2.5	3.1	3.7
	300	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	3.7	4.3	4.9
	600	2¼" (approximately 57 mm)	25	19	6.6 or 8.5	30	4.2	4.9	5.5
	1,500	3¼" (approximately 83 mm)	25	19	6.6 or 8.5	30	11.0	11.6	12.3

EN and DIN flanges, tapered thermocouple casing forms (for welded versions with chamfered welds only, a = 3 or 6 mm on both sides)

DN	PN (lbs)	Geometric size mm					weight kg	
		H	Ø Q	Ø V	Ø B	Ø Bd	U=160 mm	U=500 mm
25	4	45	22	16	6.2 ... 10.2	30	1.9	2.6
	6.3/6.4	45	22	16	6.2 ... 10.2	30	3.2	3.9
	10	45	22	16	6.2 ... 10.2	30	3.2	3.9
40	4	45	25	19	6.2 ... 10.2	30	3.1	4.0
	6.3/6.4	45	25	19	6.2 ... 10.2	30	4.8	5.7
	10	45	25	19	6.2 ... 10.2	30	4.8	5.7
50	4	45	25	19	6.2 ... 10.2	30	3.9	4.8
	6.3/6.4	45	25	19	6.2 ... 10.2	30	5.2	6.1

EN and DIN flanges, tapered thermocouple casing forms (for welded versions with chamfered welds only,  $\alpha = 3$  or  $6$  mm on both sides)

DN	PN (MPa)	Geometric size mm					weight kg	
		H	$\varnothing Q$	$\varnothing V$	$\varnothing B$	$\varnothing Bd$	U=160 mm	U=500 mm
50	10	45	25	19	6.2 ... 10.2	30	6.6	7.5
80	4	60	25	19	6.2 ... 10.2	30	6.6	7.5
	6.3/6.4	60	25	19	6.2 ... 10.2	30	7.6	8.5
	10	60	25	19	6.2 ... 10.2	30	10.2	11.1
100	4	60	25	19	6.2 ... 10.2	30	8.3	9.2
	6.3/6.4	60	25	19	6.2 ... 10.2	30	10.9	11.8
	10	60	25	19	6.2 ... 10.2	30	15.0	15.9

### Matching rod length (dial thermometer)

Connection type	Rod length $l_1$
S, 4, 5	$l_1 = U + H - 10$ mm
2	$l_1 = U + H - 30$ mm

### Roughness of sealing surface

Flange standard		AARH ( $\mu$ inch)	Ra ( $\mu$ m)	Rz ( $\mu$ m)
ASME B16.5	finishing	125 ... 250	3.2 ... 6.3	-
	Degree of finish	< 125	< 3.2	-
	Annular groove surface	< 63	< 1.6	-
	groove	< 125	< 3.2	-
EN 1092-1	B1 type	-	3.2 ... 12.5	12.5 ... 50
	Type B2	-	0.8 ... 3.2	3.2 ... 12.5
DIN 2527	Type C	-	-	40 ... 160
	E type	-	-	< 16



## JW20-Selection composition

 Selection example JW20 **S** **A** **G** **N** **U**

1.Material	<b>S</b>	304SS
	<b>L</b>	316L
	<b>T( )</b>	Other materials
2.Instrument interface specification	<b>A</b>	G1/2 Internal thread
	<b>B</b>	1/2NPT Internal thread
	<b>C</b>	M20*1.5 Internal thread
	<b>D</b>	M27*1.5 Internal thread
	<b>T( )</b>	Other thread specifications
3.Field connection specification	<b>G</b>	DN25
	<b>H</b>	DN40
	<b>I</b>	DN80
	<b>J</b>	DN50
	<b>K</b>	DN100
	<b>L</b>	ANSI 1"
	<b>M</b>	ANSI 2"
	<b>T( )</b>	Other flange specifications
4.Insertion length mm	<b>N</b>	100
	<b>O</b>	200
	<b>P</b>	300
	<b>Q</b>	400
	<b>R</b>	500
	<b>T( )</b>	Other size
5.Sheath diameter mm	<b>U</b>	10 (Suitable for 8MM probe rod)
	<b>V</b>	12 (Suitable for 10MM probe rod)
	<b>W</b>	14 (Suitable for 12MM probe rod)
	<b>T( )</b>	Other inner diameter dimensions

## Instructions:

It indicates that the JW20 flanged protective sleeve is made of 304 stainless steel, the interface with the instrument is G1/2 internal thread, and the field connection is flange DN25, the insertion length is 100mm, and the inner diameter of the sheath is 10mm.

## Product certification

Compliance and approval; Rodewieg temperature instruments meet key standards and certifications for process measurement technology; This guarantees the highest reliability in such Settings;