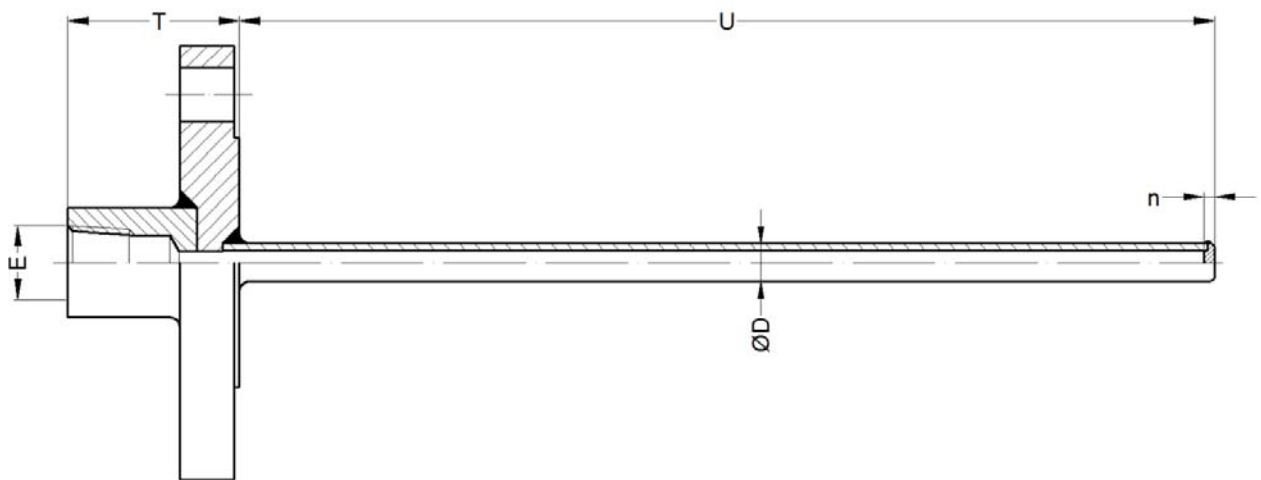
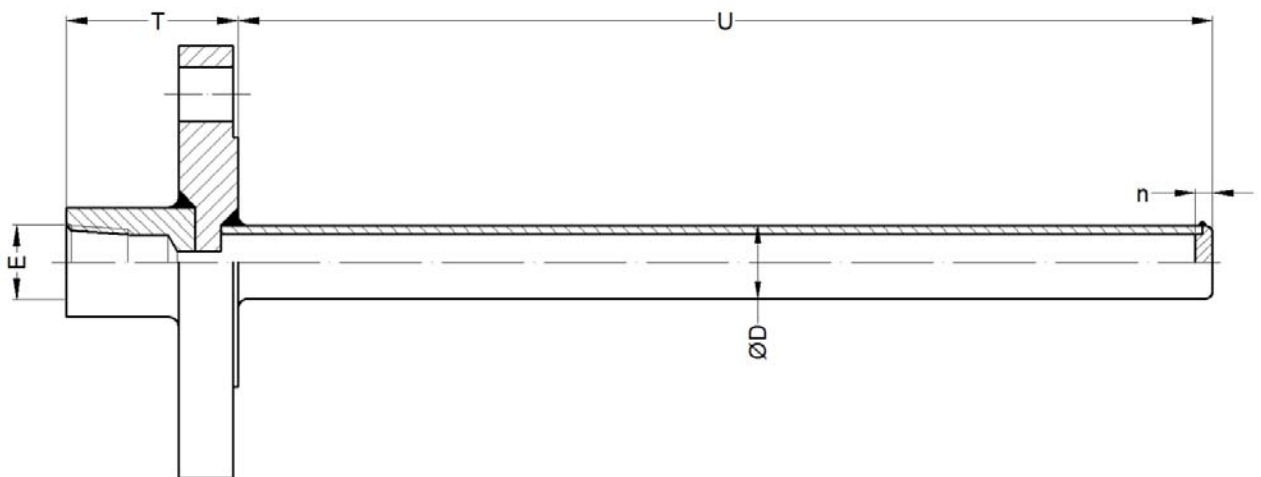


## STANDARD TUBULAR THERMOWELL TUBE/PIPE - FLANGED - STRAIGHT

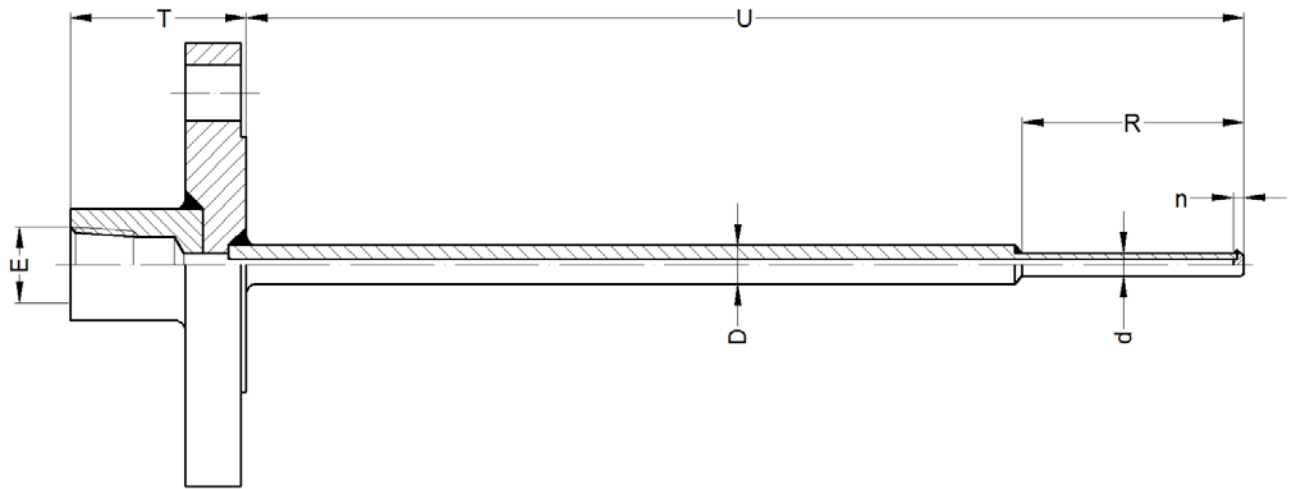
### TFS (seamless tube Flanged Straight)



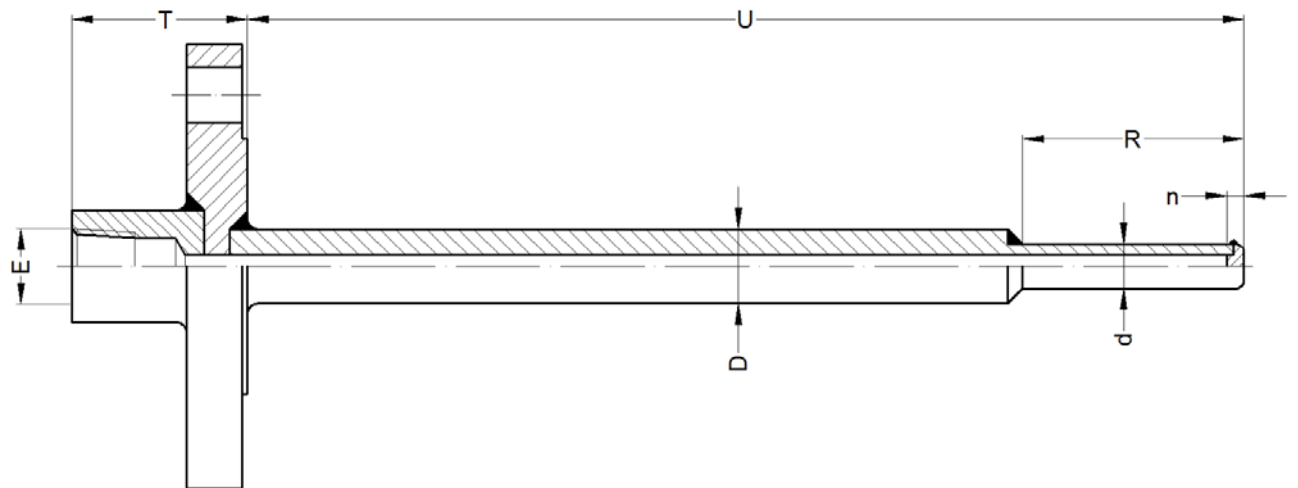
### PFS (seamless pipe Flanged Straight)



**TFSR (seamless tube Flanged Straight Reduced tip)**



**PFSR (seamless pipe Flanged Straight Reduced tip)**



### Features

Our tubular thermowells are machined from seamless pipe or tube . The flange is welded to the pipe. For fast response applications, the tip can be reduced.  
Metric and fractional connections are available.

### Technical specifications

- -n: for tube : n= 3 mm  
for pipe : n= 5 mm
- Tolerances : all dimensions +/- 1 mm
- Standard finish : 1.6<Ra <3.2 μ
- Material : wide range of materials for tubes and pipes available as per DIN 10088 /AISI-ASTM and many others
- Process connection : standard always SS316L (Other on request )
  
- Flanges  
ANSI B16.5  
EN1092-1  
DIN2527
  
- Welding : ASME Section IX – Ed. 2010, Add. 11  
ISO15614-1:2004/A1:2008/A2:2012

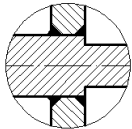
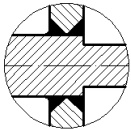
### ORDERING INFORMATION

	<b>M2101</b>	<b>M2103</b>	<b>M2108</b>	<b>M2118</b>	<b>M0601</b>	<b>M0703</b>	<b>M0803</b>
Materials	SS304L	SS321	SS316L	SS310S	Inconel 600	Incoloy 800HT	Hastelloy C22
	1.4307	1.4541	1.4404/1.4435	1.4845	2.4816	1.4959	2.4605
Process Connection	<b>A</b>	<b>E</b>	<b>D</b>				
	<b>ANSI</b>	<b>IEC</b>	<b>DIN</b>				

A: Flanges according ANSI B16.5												
Pressure rating [lbs/inch <sup>2</sup> ]	1	150#	2	300#	3	600#	4	900#	5	1500		
Nominal size (NPS)	07	1"	09	1 1/2"	10	2"	11	2 1/2"	12	3"		
Flange facing	RF	Raised face		FF	Flat face		RTJ	Ring type joint				
Surface finish	ST : stock finish						Other finishes on request					
E: Flanges according EN 1092-1												
Pressure rating [PN]	1	6	2	10	3	16	4	40	5	63	6	100
Nominal size (DN)	07	25	09	40	10	50	11	65	12	80	13	100
Flange facing	FF	Flat face		RF	Raised Face		TG	Tongue/groove		PR	Project/recess	
Surface finish	Form A			Form B1 /B2 *			Form C- Form D			Form E – Form F		
*B1 : PN6 to PN40 B2 : PN63-PN100				A/B1/E/F: Ra 3.2 to max 12.5				B2/C/D/G/H : Ra 0.8 to max 3.2				
D: Flanges according to DIN2527-Facinc acc.to DIN2526-Form F/N=DIN2512-Form V13/R13=DIN2513												
Pressure rating [PN]	1	6	2	10	3	16	4	40	5	64	6	100
Nominal size (DN)	07	25	09	40	10	50	11	65	12	80	13	100
Flange facing	FF	Flat face		RF	Raised Face		TG	Tongue/groove		PR	Project/recess	
Surface finish acc.DIN2526	A		B		C		D		E		F	
A no finishing req		B: Rz = 160			C: Rz = 160			D: Rz = 40			E : Rz = 16	

Diameter Wall thickness	D6	D8	D9	D11	D12	D16	DAC
	6x1	8x1	9x1	11x2	12x1.5	16x2	Customer spec
	D03	D05	D06	D07	D09	D10	DAC
	1/4"-sched 40	1/2"-sched 40	3/4"-sched 40	1"-sched 40	1 1/2"-sched 40	2"-sched 40	Customer spec

Instrument Connection	E205	E405	E206	E406			Other
	1/2" G	1/2" NPT	3/4" G	3/4" NPT			
	T (mm) minimum				For 1500/2500lbs flanges length T minimum		
	50 mm				70 mm		
Options	Ra	Domed tip					
	Indicate value stem	DT					
Welding	SW	FP					

	Seal welded 	Full penetration welded 	
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Code	Certificates
Q701MC	Material certificate En10204-3.1
Q625ND	External pressure test report (liquid)
Q610ND	Internal pressure test report (liquid)
Q665NT	PMI testing after construction by third party
Q820CC	Test report EN10204-2.2

HOW TO ORDER (example)			
Code	Description	Example	Your code
<b>Type</b>	Thermowell type	TFS	
<b>Flange Norm</b>	ANSI	A	
<b>Material TW</b>	Thermowell material SS316L	M2108	
<b>Material Flange</b>	Flange material (if other than stem)		
<b>Process connection</b>	e.g. 1 ½"-300lbs	F209	
<b>Facing and finish</b>	Flange facing and finish	RFSF	
<b>Tube/pipe size</b>	Diameter and wall thickness of the stem e.g. 12x1.5	D12	
<b>Instrument connection</b>	Connection for the instrument ½"NPT	E405	
<b>U</b>	Length below process thread (R included)	U150	
<b>d</b>	Diameter in mm of reduced tip (if required)		
<b>R</b>	Reduced tip length in mm if required		
<b>T</b>	Length top to process	T50	
<b>Options</b>	Domed tip = with end cap.	DT	
<b>Welding</b>	Seal welded	SW	
<b>Q701MC</b>	Material certificate EN10204-3.1	Q701MC	

Ordering example

TFSA M2108 F209 RFSF D12 E405 U150 T50 DT SW Q701MC

**For all options: please contact Rodax**