TUB



PROTECTION TUBES
for thermometers and thermocouples

Protection tubes for thermometers and thermocouples are widely used for temperature measurements in food, chemical (type NAMUR - Normen-Arbeitsgemeinschaft fűr Mess- und Regeltechnik in der Chemischen Industrie) and heavy industry.

Protection tubes can be screwed or fixed using flange to the tag point. Depending on special requirements protection tubes are made of stainless steel 1.4571, 1.4841, Hastelloy C22 Alloy etc.

Accessible materials	
on stock	**on request**
1.4401	Incoloy 800 / 1.4876
1.4404	Hastelloy C276 / 2.4819
1.4571	Hastelloy C22 / 2.4602
1.4301	Inconel 625 / 2.4856
1.4307	Inconel 600 / 2.4816
1.4841	Monel 400 / 2.4360
1.4541	
1.0460	and other…
1.7380	
1.5415	

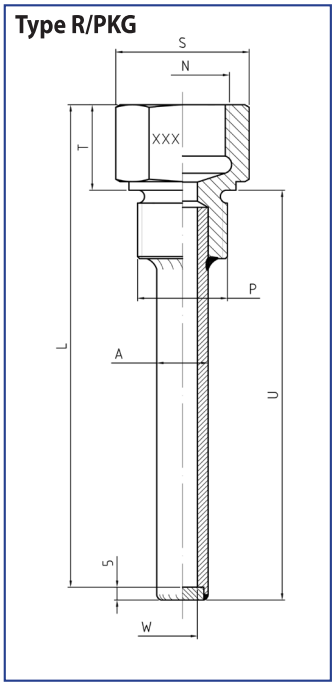
Extra options		
certificates	**tests**	**treatment**
3.1 acc. PN-EN 10204	Hydraulic pressure test	Etching / Pickling
3.2 acc. PN-EN 10204	Positive Material Identification	Electropolishing
	Dye penetration testing	Halar (ECTFE) coating
	X-ray test	Teflon (PFA) coating
	Ultrasonographic examination	Tantalum sleeve
	Hardness test	

Possibility of narrowing tubes (NAMUR style)	
outer tube diameter before necking [mm]	**outer tube diameter after necking [mm]**
Ø6	Ø4
Ø8	Ø5
Ø9	Ø7
Ø9	Ø8
Ø10	Ø6
Ø10	Ø8
Ø12	Ø7,5
Ø12	Ø9
Ø14	Ø9
Ø14	Ø10
Ø14	Ø11
Ø16	Ø12,5

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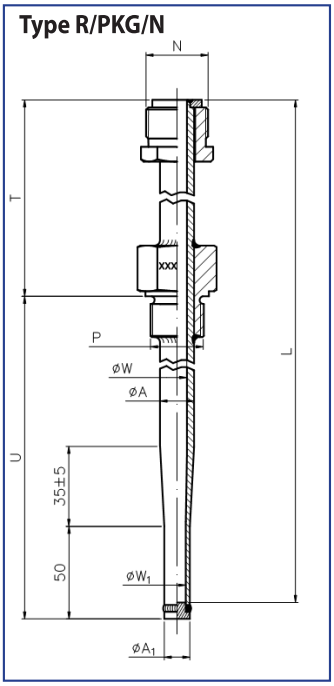
Types of tubular Protection Tubes

Type R/PKG



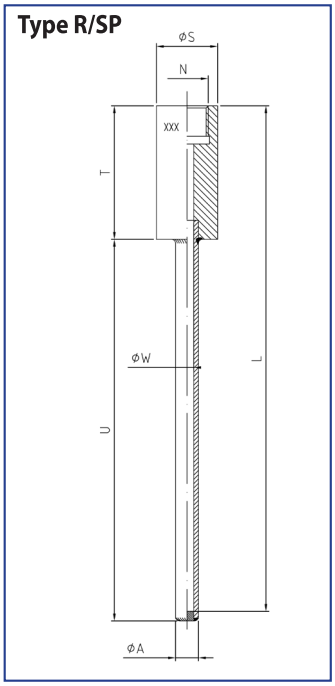
Protection tube threaded

Type R/PKG/N



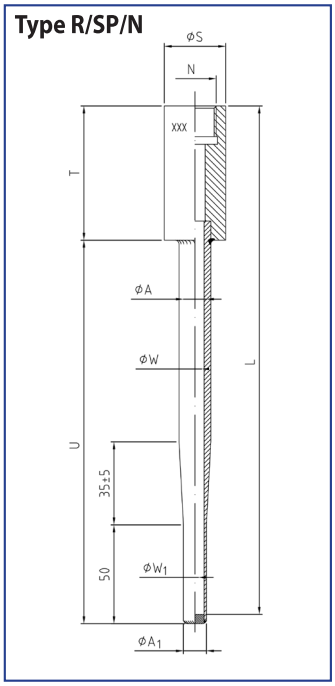
Protection tube threaded, NAMUR

Type R/SP



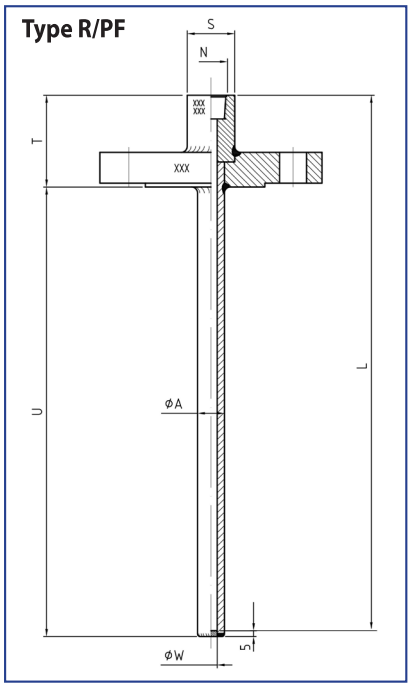
Protection tube in-weld

Type R/SP/N



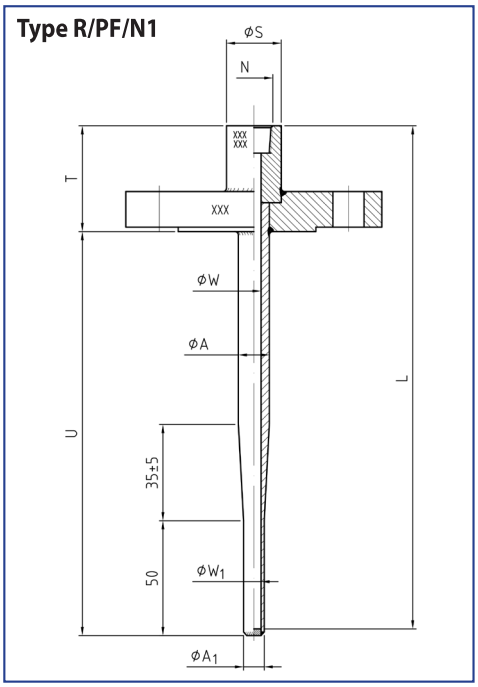
Protection tube in-weld, NAMUR

Type R/PF



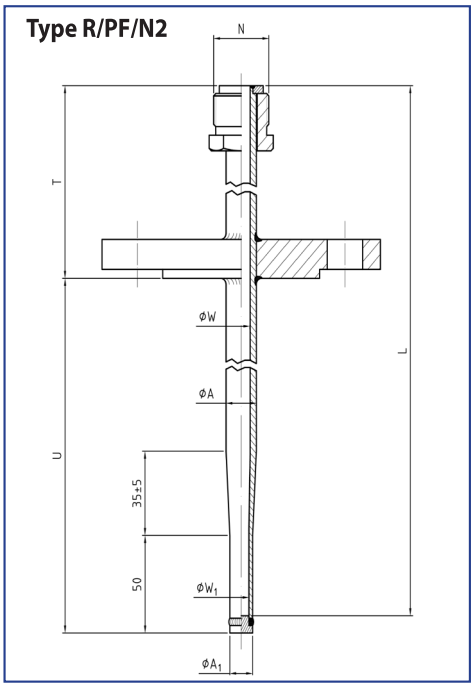
Protection tube with flange and lagging thread, straight

Type R/PF/N1



Protection tube with flange and lagging thread, NAMUR

Type R/PF/N2



Protection tube with flange and instrument thread, NAMUR

ALF-SENSOR Sp. J.
seat: ul. Narcyzowa 3, 31-342 Kraków
manufacturing plant: ul. Krakowska 294, 32-080 Zabierzów
Phone: (+48) 12 258 08 40 | Fax: (+48) 12 258 08 48 | E-mail: office@alf-sensor.com

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Ordering Information

TUB	A	B	C	D	E	F	G	H	I	J

A	Protection tube type
R/PF/N1	Protection tube with flange NAMUR
R/PF/N2	Protection tube with flange NAMUR
R/PKG/N	Protection tube threaded NAMUR
R/SP/N	Protection tube in-weld NAMUR
R/PF	Protection tube with flange
R/PKG	Protection tube threaded
R/SP	Protection tube in-weld

B	Material
1.4571	1.4571 / 316Ti
1.4841	1.4841 / 314
1.7335	1.7335 / A182 Grade F11
2.4602	2.4602 / Hastelloy C22
	specify material grade

C	Process connection type (flange, thread P)
	specify type

D	Tube diameter outer A / inner W
12 / 7	A=12mm / W=7mm
15 / 9	A=15mm / W=9mm
18 / 12	A=18mm / W=12mm
13,7 / 9,22	A=13,7mm / W=9,22mm (mat. C22)
	specify in mm

E	Tube diameter outer A1 / inner W1 (only if stepped NAMUR style)
9 / 6,1	A1=9mm / W1=6,1mm
	specify in mm

F	Instrument connection thread (inside) N
	specify thread type

G	Immersion length U
	specify in mm

H	Lagging length T
	specify in mm

I	Diameter or hex S of lagging
	specify in mm

J	Sensor immersion length L
	specify in mm

Ordering Example:

TUB-R/PF-1.4571-DN25 PN40-12-7-M12x1-150-60-32-205

stands for: Protection tube with flange, straight, material 1.4571, flange DN25 PN40, tube diam. outer A=12mm, inner W=7mm, lagging thread (inside) M12x1,5, immersion length U=150mm, lagging length T=60mm, lagging diam. S=32mm, sensor immersion length L=205mm.

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