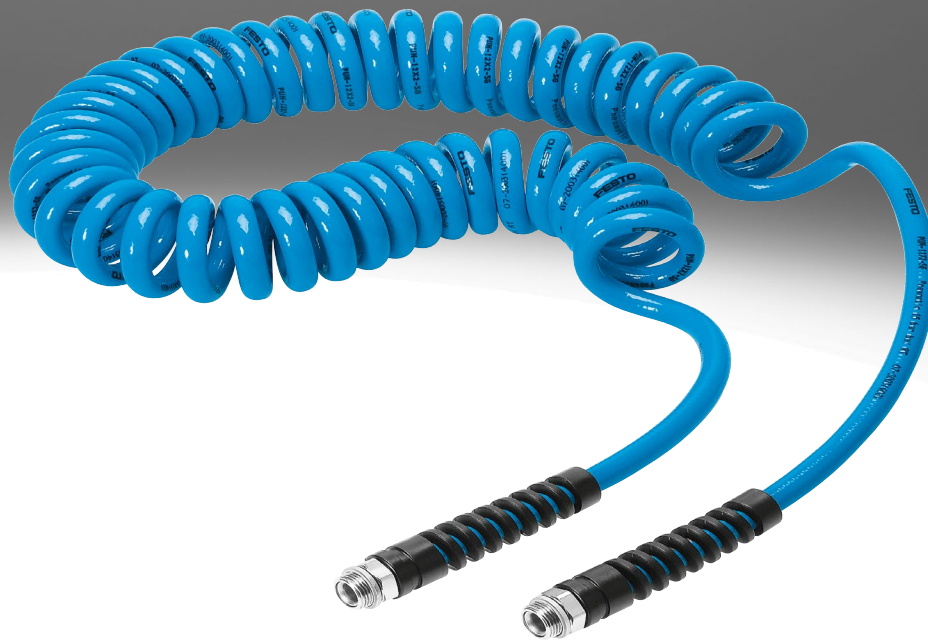







## Overview spiral plastic tubing

**FESTO**



Product range overview

Design	Type	Ø [mm]	Colour			Operating medium		
			Blue	Black	Blue/black	Compressed air	Vacuum	Water
<b>Spiral tubing</b>		<b>Outside Ø</b>						
	<b>PUN-S</b> Polyurethane	4 6 8 10 12	■	■	-	■	■	-
	<b>PUN-S-DUO</b> Polyurethane Paired tubing	4 6 8 10 12	-	-	■	■	■	-
<b>Spiral tubing, pre-assembled</b>		<b>Inside Ø</b>						
	<b>PUN-SG</b> Polyurethane	6.4 7.9	■	-	-	■	■	■
	<b>PPS</b> Polyamide	4.75 6.35	■	-	-	■	■	■

 **Note**

The term 'water' used here should be understood to mean liquid mains water that is free of ice. The suitability of the products for water modified in any way, such as demineralised water, salt water or water with additives, as well as water in the vapour phase, must be enquired about separately.

The suitability of the products for water should not be understood as approval for e.g. drinking water applications.

Product range overview

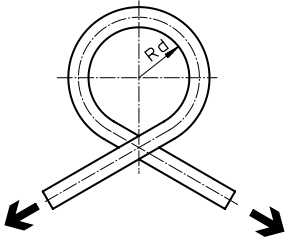
Type	Halogen-free	PWIS-free to FN 942 010	Suitable for energy chains	Approved by the German Technical Control Board (TÜV)	Resistance					Shore hardness <sup>2)</sup>	→ Internet
					Chemicals	Microbes	UV radiation	Hydrolysis	Stress cracks		
<b>Spiral tubing</b>											
PUN-S	■	■	■	■	-	-	++ <sup>1)</sup>	+	++	D 52 ±3	pun-s
PUN-S-DUO	■	■	■	■	-	-	+	+	+	D 52 ±3	pun-s
<b>Spiral tubing, pre-assembled</b>											
PUN-SG	■	■	-	-	+	++	+	++	+	A 87 ±3	pun-sg
PPS	■	■	■	-	+	++	+	+	+	-	pps

++ Very suitable  
 + Limited suitability (on request)  
 - Not suitable  
 1) Applies to black colour  
 2) Values are determined using test boards. Derived values using tubing may vary.

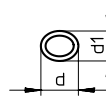
# Overview spiral plastic tubing

## Measurement method

### Flow-relevant bending radius $R_d$



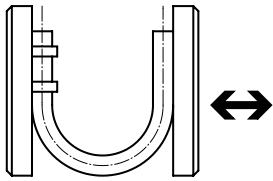
The tube is bent in the direction of its own curve until the tubing outer diameter is flattened by 5%.  $R_d$  is then calculated mathematically. The flow rate is not reduced until  $R_d$  is reached.



Cross section flattened by bending the tube.

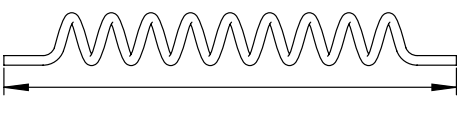
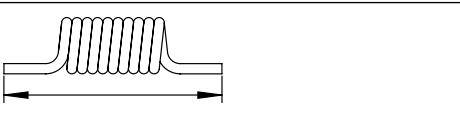
$d$  = non-deformed tubing O.D.  
 $d_1$  = deformed tubing O.D.

### Minimum bending radius $R_{min}$



The tube fixed to the base plate is bent until the deformation results in a kink. The measured value is the minimum bending radius  $R_{min}$ . This  $R_{min}$  results in significant reductions in flow rate.

## Length specifications

	Working length	With tensile load, 80% of the maximum section length
	Block length	Without tensile load



### Note

The working length represents 80% of the maximum permissible expansion. This maximum expansion is the limit value before permanent deformation takes place.