


## Overview plastic tubing, standard O.D. (inch) and additional information

**FESTO**



Product range overview

Version	Type	O.D. [inch]	Colour									Operating medium		
			Silver	Blue	Black	Yellow	Green	Red	Brown	White	Natural	Compressed air	Vacuum	Water
	<b>PEN</b> Polyethylene	(5/32) <sup>1)</sup> , 3/16, 1/4, 5/16, 3/8, 1/2, 5/8	(■) <sup>1)</sup>	■	■	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	■	■	■
	<b>PLN</b> Polyethylene	(5/32) <sup>1)</sup> , 3/16, 1/4, 5/16, 3/8, (1/2) <sup>1)</sup> , 5/8	(■) <sup>1)</sup>	■	■	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	(■) <sup>1)</sup>	■	■	■	-
	<b>PUN-H</b> Polyurethane	1/8, 5/32, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8	■	■	■	■	■	■	■	■	■	■	■	■

1) Please note the information below.

 **Note**

Product options in brackets can only be ordered using the modular product system.

Please note the minimum order quantity of 10000 ft.

There is a modular product system for plastic tubing:

- PEN
- PLN
- PUN

Product range overview

Type	Food-safe	Halogen-free	Contact with electrical cables	PWIS-free to FN 942 010	Suitable for use with energy chains	Resistance				Flexible	Shore hardness <sup>3)</sup>
						Chemicals	Microbes	UV radiation	Hydrolysis		
PEN	-	■	■	■	+++	++	++	++ <sup>2)</sup>	+++	++	D 52 ±3
PLN	■	■	■	■	-	++	++	++ <sup>2)</sup>	+++	+	D 52 ±3
PUN-H	■	■	■	■	++	+	++	++ <sup>2)</sup>	++	+++	D 52 ±3

+++ Extremely suitable  
 ++ Very suitable

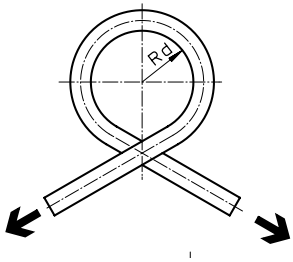
+ Limited suitability (on request)  
 - Not suitable

2) Applies to the colour black  
 3) Values are determined using test panels. Values determined using tubing may vary.

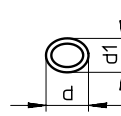
## Measurement method

### Measurement method

#### Flow-relevant bending radius $R_d$



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

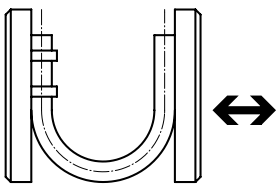


Cross-section flattened by bending the tube.

$d$  = 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 the flow rate.