

Plastic tubing PUN-H-SF

FESTO



Characteristics

At a glance

Flexible and hydrolysis-resistant tubing with standard O.D. in various colours

- Polyurethane
- Highly resistant to microbes and hydrolysis
- Food grade see www.festo.com/certificates/PUN_H
- Suitable for energy chains

Additional documents

[Link](#) [pun-h-sf](#)



The additional document TUBING-ADD contains further information on application details, such as tubing/fitting combinations, installation instructions and measurement procedures.

Engineering tools

[Link](#) [engineering tools](#)



Save time with engineering tools: Smart engineering for the optimal solution. Our goal is to increase your productivity. Our engineering tools play an integral part in achieving this goal. They help you size your system correctly, tap into unimagined productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernisation of your machine, you will come across a number of different tools that will be of use to you.

- Flow calculation: Determine the nominal flow rate by entering parameters such as input pressure, output pressure, tube length and internal diameter (www.festo.com/x/flowrate-calculation).
- Media resistance: Evaluate the resistance of various types of materials and tubing from Festo to different chemicals and media (www.festo.com/x/media-resistance).

Diagrams

[Link](#) [pun-h-sf](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

Alternative material characteristic

[H] Hydrolysis-resistant

Hydrolysis-resistant and suitable for water applications.

Additional characteristics

[SF] Sturdy and flexible

Kink-resistant yet still flexible thanks to increased wall thickness.

Pipe/tubing O.D. x wall thickness

For standard O.D. tubing, the outside diameter of the tube and the wall thickness are given as the tube size.

Type code

001	Series	
PUN	Plastic tubing, polyurethane	
002	Alternative material characteristic	
H	Hydrolysis-resistant	
003	Additional characteristics	
SF	Sturdy and flexible	

004	Pipe/tubing O.D. x wall thickness	
4x0,85	4x0.85 mm	
6x1,25	6x1.25 mm	
8x1,55	8x1.55 mm	
10x2	10x2 mm	
12x2,3	12x2.3 mm	
14x2,7	14x2.7 mm	
16x3,1	16x3.1 mm	
18x3,4	18x3.4 mm	
22x4,3	22x4.3 mm	
25x4,85	25x4.85 mm	

005	Colour	
BL	Blue	
SW	Black	

006	Packaging unit [m]	
	Standard	
25	25 m	

Datasheet

Operating and environmental conditions – PUN-H-SF with outer Ø 4 ... 12 mm					
Outside diameter	4 mm	6 mm	8 mm	10 mm	12 mm
Inside diameter	2.3 mm	3.5 mm	4.9 mm	6 mm	7.4 mm
Pneumatic connection	For push-in connector O.D. 4 mm	For push-in connector O.D. 6 mm	For push-in connector O.D. 8 mm	For push-in connector O.D. 10 mm	For push-in connector out- side diameter of 12 mm
Flow-relevant bending radius	11 mm	19 mm	31 mm	38 mm	45 mm
Min. bending radius	6 mm	9 mm	15 mm		22 mm
Temperature-dependent oper- ating pressure	-0.095 ... 1.3 MPa				
Temperature-dependent oper- ating pressure	-0.95 ... 13 bar				
Temperature-dependent oper- ating pressure	-13.775 ... 188.5 psi				
Operating pressure complete temperature range	-0.095 ... 0.6 MPa				
Operating pressure complete temperature range	-0.95 ... 6 bar				
Operating pressure complete temperature range	-13.775 ... 87 psi				
Note on operating pressure	Water: temperature-dependent operating pressure, see diagram, max. 0.7 MPa at 0–60°C				
Operating medium	Compressed air to ISO 8573-1:2010 [7:::] Water (liquid, ice-free)				
Suitable for use with food ¹⁾	See supplementary material information				
Ambient temperature	-35 ... 80°C				
Fire test material	UL94 HB				
Tubing characteristics	Suitable for energy chains				

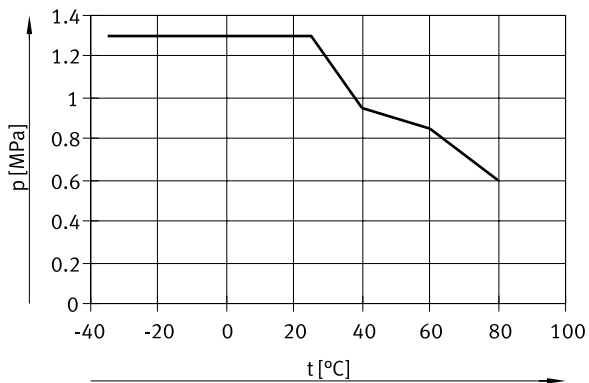
1) More information www.festo.com/catalogue/pun-h → Support/Downloads.

Operating and ambient conditions – PUN-H-SF with O.D. 14 ... 25 mm					
Outside diameter	14 mm	16 mm	18 mm	22 mm	25 mm
Inside diameter	8.6 mm	9.85 mm	11.2 mm	13.4 mm	15.3 mm
Pneumatic connection	For push-in connector outer diameter of 14 mm	For push-in connector O.D. 16 mm	–	For push-in connector O.D. 22 mm	–
Flow-relevant bending radius	51 mm	63 mm	70 mm	83 mm	116 mm
Min. bending radius	26 mm	31 mm	38 mm	46 mm	58 mm
Operating pressure complete temperature range	-0.095 ... 0.6 MPa				
Operating pressure complete temperature range	-0.95 ... 6 bar				
Operating pressure complete temperature range	-13.775 ... 87 psi				
Temperature-dependent oper- ating pressure	-0.095 ... 1.3 MPa				
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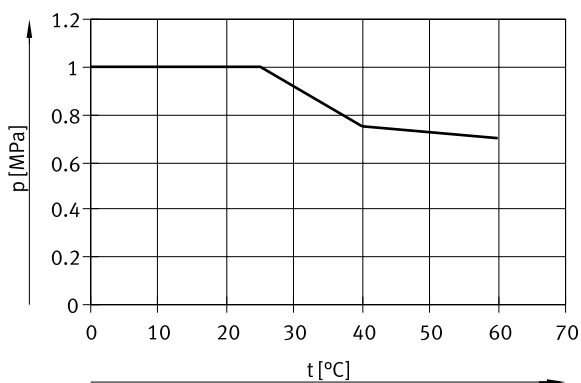
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Datasheet

Operating pressure p as a function of temperature t



Operating pressure p as a function of temperature t (medium: water)



A restricted temperature range and deviating maximum operating pressures apply to the medium water, with a safety factor of $s=4$.

Materials

Shore hardness	D 54 +/- 3
Material tubing	TPE-U(PU)
Note on materials	RoHS compliant
LABS (PWIS) conformity ¹⁾	VDMA24364-B2-L
Cleanroom suitability, measured according to ISO 14644-14	Element installed statically, no meaningful evaluation possible according to ISO 14644-1
Instructions on use	TPE-U, ether-based

¹⁾ applies to PUN-H with O.D. 3 ... 16 mm and PUN-H-DUO

Ordering data

Ordering data						
	Outside diameter	Packaging unit [m] ¹⁾	Product weight according to length	Colour	Part no.	Type
	4 mm	Standard	0.01 kg/m	Blue	8174912	PUN-H-SF-4X0,85-BL
				Black	8174911	PUN-H-SF-4X0,85-SW
	6 mm		0.025 kg/m	Blue	8167900	PUN-H-SF-6X1,25-BL
				Black	8167899	PUN-H-SF-6X1,25-SW
	8 mm		0.04 kg/m	Blue	8167902	PUN-H-SF-8X1,55-BL
				Black	8167901	PUN-H-SF-8X1,55-SW
	10 mm		0.061 kg/m	Blue	8167904	PUN-H-SF-10X2-BL
				Black	8167905	PUN-H-SF-10X2-SW
	12 mm		0.085 kg/m	Blue	8167907	PUN-H-SF-12X2,3-BL
				Black	8167906	PUN-H-SF-12X2,3-SW
	14 mm		0.118 kg/m	Blue	8167909	PUN-H-SF-14X2,7-BL
				Black	8167908	PUN-H-SF-14X2,7-SW
	16 mm		0.145 kg/m	Blue	8167911	PUN-H-SF-16X3,1-BL
				Black	8167910	PUN-H-SF-16X3,1-SW
	18 mm	25 m	0.188 kg/m	Blue	8167912	PUN-H-SF-18X3,4-BL-25
				Black	8167913	PUN-H-SF-18X3,4-SW-25
	22 mm		0.302 kg/m	Blue	8167915	PUN-H-SF-22X4,3-BL-25
				Black	8167914	PUN-H-SF-22X4,3-SW-25
	25 mm		0.372 kg/m	Blue	8167916	PUN-H-SF-25X4,85-BL-25
				Black	8167917	PUN-H-SF-25X4,85-SW-25

1) Standard: 50 m