

Plastic tubing PEN

FESTO



Characteristics

At a glance

Very flexible with high abrasion resistance as well as an attractive price for a wide range of applications.

- Polyethylene
- High resistance to chemicals and very high resistance to hydrolysis
- Resistant to most cleaning agents and lubricants
- Suitable for energy chains
- Operating medium: compressed air, vacuum, water

Additional documents

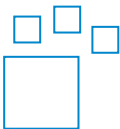
[Link](#)  [pen](#)



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

Ordering data - modular system

[Link](#)  [pen](#)



Configurable product

This product and all its product options can be ordered online via the configurator.

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](#)  [pen](#)



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

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.

Packaging unit [m]

- Standard: 50 m
- In some cases, available in longer lengths on a reel.

Type code

001	Series	
PEN	Plastic tubing	
002	Pipe/tubing O.D. x wall thickness	
4x0,75	4x0.75 mm	
6x1	6x1 mm	
8x1,25	8x1.25 mm	
10x1,5	10x1.5 mm	
12x1,75	12x1.75 mm	
14x2	14x2 mm	
16x2,5	16x2.5 mm	

003	Colour	
BL	Blue	
GE	Yellow	
GN	Green	
NT	Natural	
RT	Red	
SI	Silver	
SW	Black	

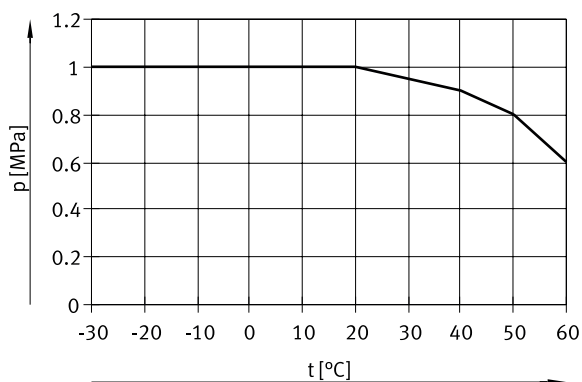
004	Packaging unit [m]	
	Standard	
100	100 m	
200	200 m	
300	300 m	
400	400 m	
500	500 m	

Datasheet

Operating and environmental conditions

Outside diameter	4 mm	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm
Inside diameter	2.7 mm	4 mm	5.7 mm	7 mm	8.4 mm	9.5 mm	10.8 mm
Pneumatic connection	For push-in connector O.D. 4 mm For push-in connector outside diameter of 5/32" For barbed fitting I.D. 3 mm with union nut For barbed fitting I.D. 3 mm	For push-in connector O.D. 6 mm For barbed fitting I.D. 4 mm with union nut For barbed fitting I.D. 4 mm	For push-in connector O.D. 8 mm For push-in connector outside diameter of 5/16" For barbed fitting inside diameter of 6 mm with union nut For barbed fitting inside diameter of 6 mm	For push-in connector O.D. 10 mm	For push-in connector outside diameter of 12 mm	For push-in connector outer diameter of 14 mm	For push-in connector O.D. 16 mm
Flow-relevant bending radius	20 mm	26 mm	35 mm	40 mm	58 mm	80 mm	122 mm
Min. bending radius	10 mm	13.5 mm	22.5 mm	23.5 mm	33 mm	45 mm	57.5 mm
Temperature-dependent operating pressure	-0.095 ... 1 MPa						
Temperature-dependent operating pressure	-0.95 ... 10 bar						
Temperature-dependent operating pressure	-13.775 ... 145 psi						
Note on operating pressure	Water: max. 0.6 MPa at 0 - 50°C						
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-] Water (liquid, ice-free)						
Ambient temperature	-30 ... 60°C						
Approval	German Technical Control Board (TÜV)						
Certificate issuing authority	B 013277 0527 00						
Tubing characteristics	Suitable for energy chains						

Operating pressure p as a function of temperature t

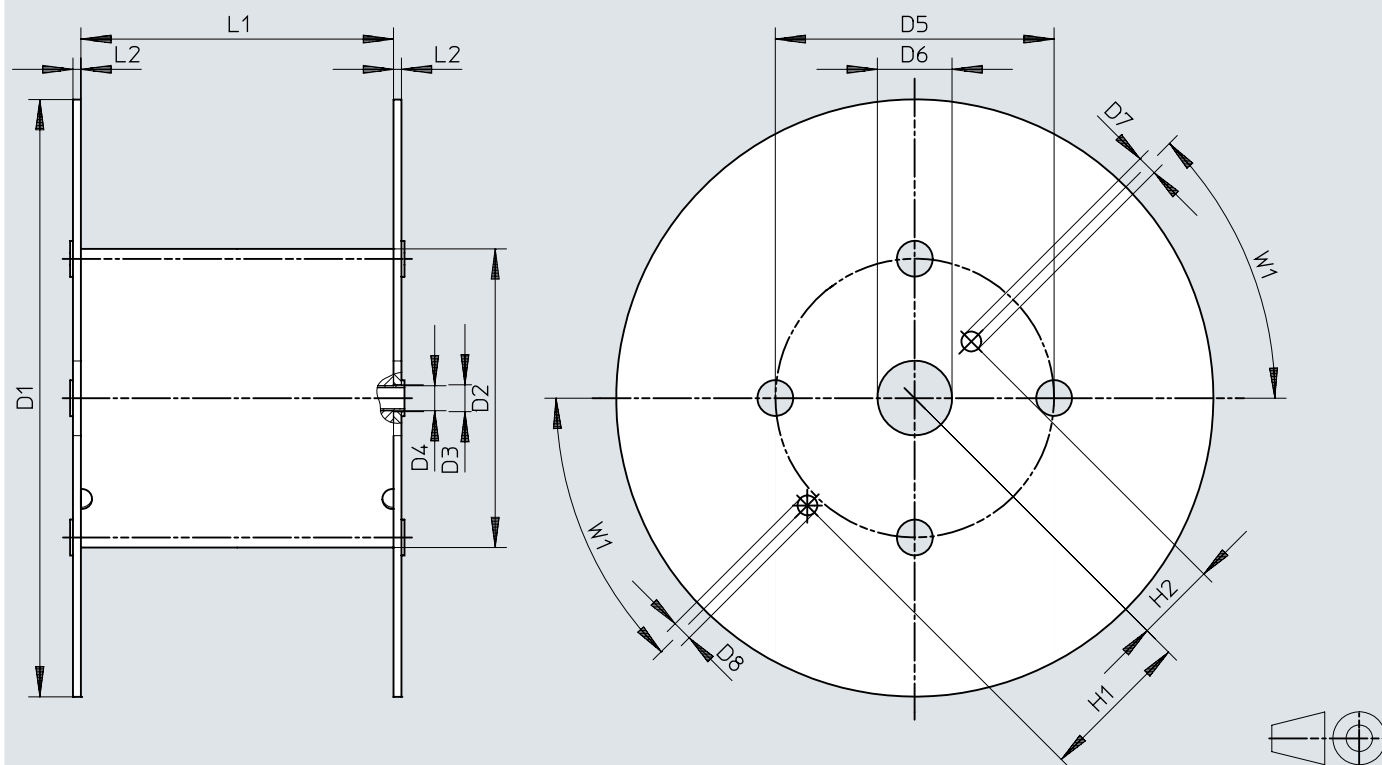


Materials

Shore hardness	D 52 +/-3
Material tubing	Packaging unit
Note on materials	RoHS compliant
LABS (PWIS) conformity	VDMA24364-B2-L
Cleanroom suitability, measured according to ISO 14644-14	Element installed statically, no meaningful evaluation possible according to ISO 14644-1

Dimensions

Dimensions – Reel

[Download CAD data](http://www.festo.com) www.festo.com


	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6 Ø	D7 Ø	D8 Ø	H1	H2	L1	L2	W1
PEN-4x0,75-...-500	545	246	21	20	216	75	20	20	152,5	80,5	128	8	45°
PEN-6x1-...-500	545	246	21	20	216	75	20	20	152,5	80,5	128	8	45°
PEN-8x1,25-...-400	545	310	21	20	280	75	20	20	152,5	80,5	254	8	45°
PEN-10x1,5-...-300	600	310	21	20	280	75	20	20	152,5	80,5	254	8	45°
PEN-12x1,75-...-200	600	310	21	20	280	75	20	20	152,5	80,5	254	8	45°
PEN-16x2,5-...-100	545	310	21	20	280	75	20	20	152,5	80,5	254	8	45°

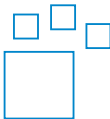
Ordering data

Ordering data						
	Outside diameter	Packaging unit [m] ¹⁾	Product weight according to length	Colour	Part no.	Type
	4 mm	Standard	0.006 kg/m	Blue	551456	PEN-4X0,75-BL
				Yellow	551480	PEN-4X0,75-GE
				Green	551468	PEN-4X0,75-GN
				Natural	543246	PEN-4X0,75-NT
				Red	551474	PEN-4X0,75-RT
				Black	543240	PEN-4X0,75-SW
				Silver	551462	PEN-4X0,75-SI
		500 m		Blue	551444	PEN-4X0,75-BL-500
		Black		551438	PEN-4X0,75-SW-500	
		Silver		551450	PEN-4X0,75-SI-500	
	6 mm	Standard	0.015 kg/m	Blue	551457	PEN-6X1-BL
				Yellow	551481	PEN-6X1-GE
				Green	551469	PEN-6X1-GN
				Natural	543247	PEN-6X1-NT
				Red	551475	PEN-6X1-RT
				Black	543241	PEN-6X1-SW
				Silver	551463	PEN-6X1-SI
		500 m		Blue	551445	PEN-6X1-BL-500
		Black		551439	PEN-6X1-SW-500	
		Silver		551451	PEN-6X1-SI-500	
	8 mm	Standard	0.023 kg/m	Blue	551458	PEN-8X1,25-BL
				Yellow	551482	PEN-8X1,25-GE
				Green	551470	PEN-8X1,25-GN
				Natural	543248	PEN-8X1,25-NT
				Red	551476	PEN-8X1,25-RT
				Black	543242	PEN-8X1,25-SW
				Silver	551464	PEN-8X1,25-SI
		400 m		Blue	551446	PEN-8X1,25-BL-400
		Black		551440	PEN-8X1,25-SW-400	
		Silver		551452	PEN-8X1,25-SI-400	
	10 mm	Standard	0.038 kg/m	Blue	551459	PEN-10X1,5-BL
				Yellow	551483	PEN-10X1,5-GE
				Green	551471	PEN-10X1,5-GN
				Natural	543249	PEN-10X1,5-NT
				Red	551477	PEN-10X1,5-RT
				Black	543243	PEN-10X1,5-SW
				Silver	551465	PEN-10X1,5-SI
		300 m		Blue	551447	PEN-10X1,5-BL-300
		Black		551441	PEN-10X1,5-SW-300	
		Silver		551453	PEN-10X1,5-SI-300	
	12 mm	Standard	0.054 kg/m	Blue	551460	PEN-12X1,75-BL
				Yellow	551484	PEN-12X1,75-GE
Green				551472	PEN-12X1,75-GN	
Natural				543250	PEN-12X1,75-NT	
Red				551478	PEN-12X1,75-RT	
Black				543244	PEN-12X1,75-SW	
Silver				551466	PEN-12X1,75-SI	
200 m		Blue		551448	PEN-12X1,75-BL-200	
Black		551442		PEN-12X1,75-SW-200		
Silver		551454		PEN-12X1,75-SI-200		
14 mm	Standard	0.077 kg/m	Natural	570517	PEN-14X2-NT	
			Black	570516	PEN-14X2-SW	

Ordering data

Ordering data							
	Outside diameter	Packaging unit [m] ¹⁾	Product weight according to length	Colour	Part no.	Type	
	16 mm	Standard	0.103 kg/m	Blue	551461	PEN-16X2,5-BL	
				Yellow	551485	PEN-16X2,5-GE	
				Green	551473	PEN-16X2,5-GN	
				Natural	543251	PEN-16X2,5-NT	
				Red	551479	PEN-16X2,5-RT	
				Black	543245	PEN-16X2,5-SW	
				100 m	Silver	551467	PEN-16X2,5-SI
		Blue			551449	PEN-16X2,5-BL-100	
		Black			551443	PEN-16X2,5-SW-100	
		Silver			551455	PEN-16X2,5-SI-100	

1) Standard: 50 m

Ordering data – Modular product system			
	Short type code	Part no.	Type
	PEN	553769	PEN