

Plastic tubing, standard I.D.

FESTO



Plastic tubing, standard I.D.

Product range overview

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Version	Type	Inside Ø [mm]	Colour				Operating medium		Resistance				
			Blue	Black	Natural	Blue/black	Compressed air	Vacuum	Chemicals	Microbes	UV radiation	Hydrolysis	Stress cracks
	PL Polyethylene	3, 4, 6	■	■	■	–	■	■	++	++	++ ²⁾	++	+
	PL-9/13 Polyvinyl chloride ¹⁾	9, 13	■	–	–	–	■	–	–	++	+	+	+
	PU Polyurethane	2, 3, 4, 6	■	■	–	–	■	■	–	–	++ ²⁾	+	+
	PU-9/13 Polyurethane ¹⁾	9	–	■	–	–	■	–	–	–	++ ²⁾	+	+
		13						■					
	PU-DUO Polyurethane	2, 3, 4, 6	–	–	–	■	■	■	–	–	+	+	+

1) fibre-reinforced

2) Applies for black colour

++ Well suited

+ Limited suitability (upon request)

– Unsuitable

Plastic tubing, standard I.D.

Product range overview



Type	Food approval as per directive 2002/72/EC	Food approval as per directive FDA	Halogen-free	PWIS-free to FN 942 010	Suitable for chain link trunking	Approved by German Technical Control Board	Shore hardness	→ Page/ Internet
PL	■ ¹⁾	■ ¹⁾	■	■	-	■	D 42	6
PL-9/13	-	-	-	■	-	-	A 85	7
PU	-	-	■	■	■	■	D 52	8
PU-9	-	-	■	■	■	-	A 86	8
PU-13							A 91	
PU-DUO	-	-	■	■	■	■	D 52	9

1) Applies for natural colour

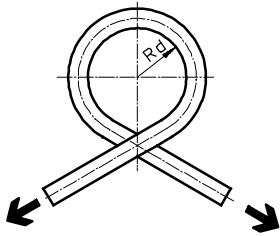
Plastic tubing, standard I.D.

Technical data

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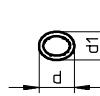
Measuring methods

Flow-relevant bending radius R_d



The tubing is bent in the direction of its inherent flexion until a 5% flattening of the tubing O.D. occurs. The R_d is then calculated.

There is no reduction in the flow rate up until the R_d is reached.

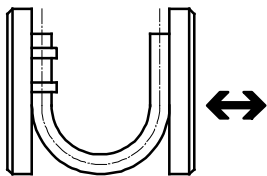


Cross section flattened as a result of bended tubing

d = non deformed tubing OD

d_1 = deformed tubing OD

Minimum bending radius R_{min}



The tubing attached to a movable plate is bent until the deformation results in a kink.

The measured value is the minimum bending radius R_{min} . This R_{min} leads to considerable reductions in flow.

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Type codes

	PU	–	6	–		–	BL
Material							
PL	Polyethylene, I.D. 3, 4, 6						
PL	Polyvinyl chloride, I.D. 9, 13						
PU	Polyurethane						
Internal Ø [mm]							
Twin tubing							
DUO	Twin tubing						
Colour							
SW	Black						
BL	Blue						
NT	Natural						
BS	Blue/black						

- 1 - Type PL discontinued Available up until 2012

Plastic tubing PL, standard I.D.

Technical data

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Plastic tubing PL

Approved for use with food products
in accordance with directive
2002/72/EC and the FDA.

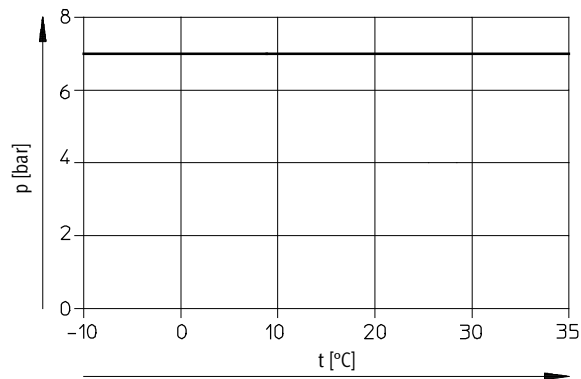
-  - Ambient temperature
-30 ... +60 °C
-  - Temperature dependent
operating pressure
-0.95 ... +9 bar

Material:
Polyethylene

Note on material:
Free of copper and PTFE
RoHS-conform



Operating pressure p as a function of temperature t



Possible fittings



Barbed fittings CN
→ Internet: cn



Quick connectors CK¹⁾
→ Internet: ck

1) Recommended fitting

Dimensions and ordering data							
O.D. [mm]	I.D. [mm]	Flow-relevant bend- ing radius [mm]	Weight [kg/m]	Colour	Part No.	Type	PU ¹⁾ [m]
4.3	3	18	0.0068	Natural	3856	PL-3-NT	- 1 - 50
				Blue	3453	PL-3-BL	- 1 - 50
				Black	4640	PL-3-SW	- 1 - 50
6.2	4	22.5	0.016	Natural	2236	PL-4-NT	- 1 - 50
				Blue	3861	PL-4-BL	- 1 - 50
				Black	4641	PL-4-SW	- 1 - 50
8.4	6	39	0.025	Natural	2237	PL-6-NT	- 1 - 50
				Blue	3862	PL-6-BL	- 1 - 50
				Black	4642	PL-6-SW	- 1 - 50

1) Packaging unit

- 7 - Type PL discontinued
Available up until 2012

Plastic tubing PL, standard I.D.

Technical data

FESTO

Plastic tubing PL

-  - Ambient temperature
-10 ... +35 °C

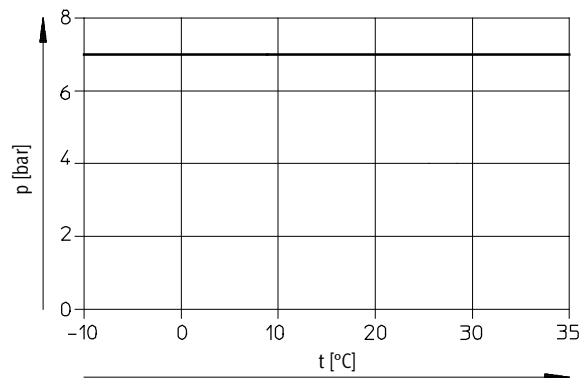
-  - Temperature dependent
operating pressure
0 ... 7 bar

Material:
Plasticiser-containing polyvinyl
chloride with reinforcing fabric

Note on material:
Free of copper and PTFE
RoHS-conform



Operating pressure p as a function of temperature t



Possible fittings



Quick connectors CK
→ Internet: ck

Dimensions and ordering data

O.D. [mm]	I.D. [mm]	Flow-relevant bend- ing radius [mm]	Weight [kg/m]	Colour	Part No.	Type	PJ ¹⁾ [m]
11.6	9	85	0.049	Blue	2238	PL-9-BL - 7 -	50
17.6	13	100	0.135	Blue	4103	PL-13-BL - 7 -	50

1) Packaging unit

- 7 - Type PU-2 ... 6 discontinued Available up until 2012

Plastic tubing PU, standard I.D.

Technical data

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Plastic tubing PU

Highly flexible plastic tubing distinguished by its great resistance to abrasion and kinks.

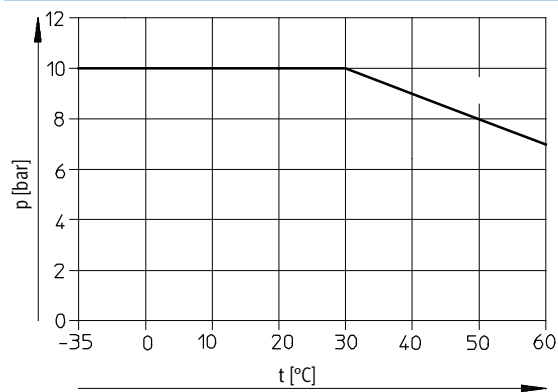
-  - Ambient temperature
-35 ... +60 °C
-  - Temperature dependent operating pressure
-0.95 ... +10 bar
PU-9:
0 ... 10 bar

Material:
Polyurethane
PU-9 and PU-13 Polyurethane with reinforcing fabric

Note on material:
Free of copper and PTFE
RoHS-conform



Operating pressure p as a function of temperature t



Possible fittings



Barbed fittings CN
→ Internet: cn



Quick connectors CK¹⁾
→ Internet: ck

1) Recommended fitting

Dimensions and ordering data							
O.D.	I.D.	Flow-relevant bend- ing radius	Weight	Colour	Part No.	Type	PU ¹⁾
[mm]	[mm]	[mm]	[kg/m]				[m]
3.2	2.3	13	0.005	Blue	13365	PU-2-BL	50
				Black	13366	PU-2-SW	50
4.4	2.9	14	0.0096	Blue	5732	PU-3-BL	50
				Black	5731	PU-3-SW	50
6.1	4	20	0.021	Blue	6204	PU-4-BL	50
				Black	5733	PU-4-SW	50
8.3	6	36	0.033	Blue	9159	PU-6-BL	50
				Black	6731	PU-6-SW	50
Fibre-reinforced							
11.6	9	76	0.051	Black	12134	PU-9-SW	50
17.6	13	83	0.140	Black	12133	PU-13-SW	50

1) Packaging unit

Plastic tubing PU-DUO, standard I.D.

Technical data

DUO tubing PU-DUO

Highly flexible paired plastic tubing distinguished by great resistance to abrasion and kinks. Two lengths of tubing are fused together into a tubing pair. For fitting, the paired tubing is separated as required at both ends.

-  - Ambient temperature
 -35 ... +60 °C

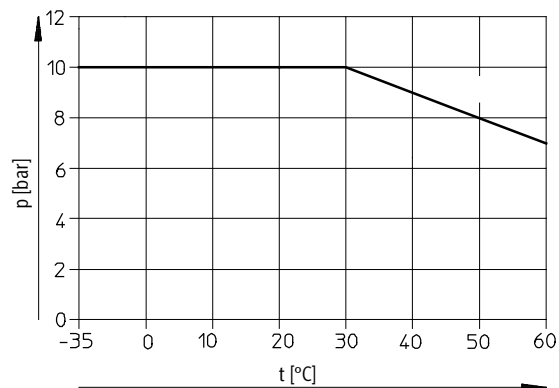
-  - Temperature dependent
 operating pressure
 -0.95 ... +10 bar

Material:
 Polyurethane

Note on material:
 Free of copper and PTFE



Operating pressure p as a function of temperature t



Possible fittings



Barbed fittings CN
 → Internet: cn



Quick connectors CK¹⁾
 → Internet: ck

1) Recommended fitting

Dimensions and ordering data

O.D.	I.D.	Flow-relevant bend- ing radius	Weight	Colour	Part No.	Type	PU ¹⁾
[mm]	[mm]	[mm]	[kg/m]				[m]
3.2	2.3	13	0.010	Blue/black	19581	PU-2-DUO-BS - 2 -	50
4.4	2.9	14	0.0192	Blue/black	11958	PU-3-DUO-BS - 3 -	50
6.1	4	20	0.042	Blue/black	11959	PU-4-DUO-BS - 4 -	50
8.3	6	36	0.066	Blue/black	11960	PU-6-DUO-BS - 6 -	50

1) Packaging unit