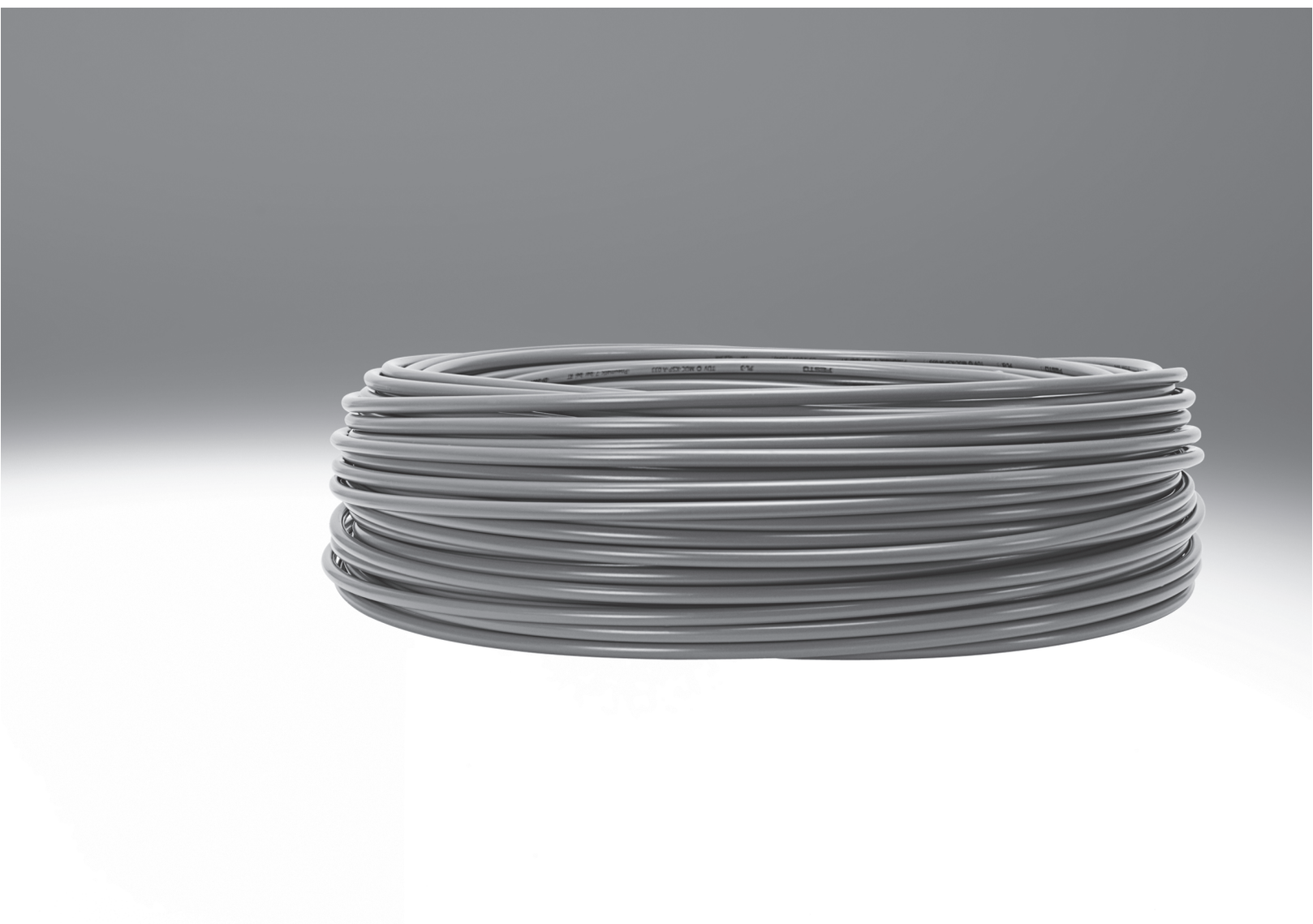
Plastic tubing, standard I.D.

FESTO



Plastic tubing, standard I.D.

Product range overview

Version	Type	Inside ∅ [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 13	–	■	–	–	■	– ■	–	–	++[2]	+	+
	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

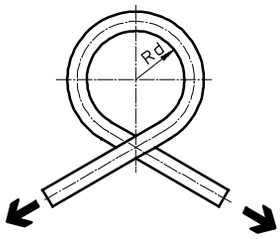
Plastic tubing, standard I.D.

Technical data

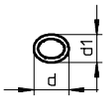
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Measuring methods

Flow-relevant bending radius Rd

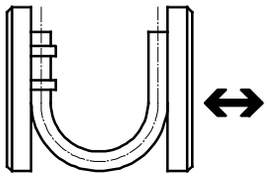


The tubing is bent in the direction of its inherent flection until a 5% flattening of the tubing O.D. occurs. The Rd is then calculated.
There is no reduction in the flow rate up until the Rd is reached.



Cross section flattened as a result of bended tubing
d = non deformed tubing OD
d1 = deformed tubing OD

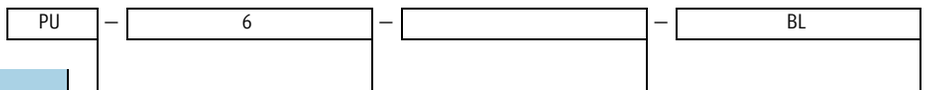
Minimum bending radius Rmin



The tubing attached to a movable plate is bent until the deformation results in a kink.
The measured value is the minimum bending radius Rmin. This Rmin leads to considerable reductions in flow.

Plastic tubing, standard I.D.

Type codes



Material	
PL	Polyethylene, I.D. 3, 4, 6
PL	Polyvinyl chloride, I.D. 9, 13
PU	Polyurethane

Internal ∅ [mm]

Twin tubing	
DUO	Twin tubing

Colour	
SW	Black
BL	Blue
NT	Natural
BS	Blue/black

Type PL discontinued
Available up until 2012

Plastic tubing PL, standard I.D.

Technical data

Plastic tubing PL

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

Ambient temperature
–30 ... +60 °C

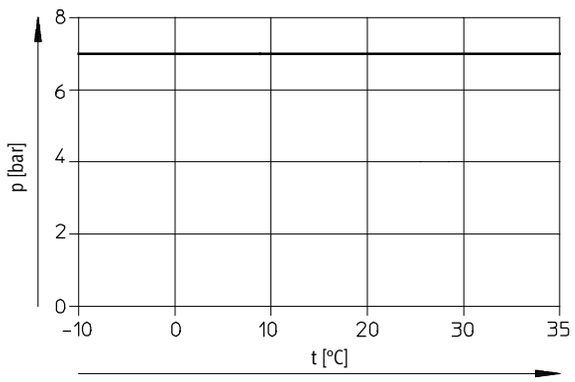
Temperature dependent operating pressure
–0.95 ... +9 bar

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 CK[1)]
➔ Internet: ck

1) Recommended fitting

Dimensions and ordering data

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

1) Packaging unit

Type PL discontinued
Available up until 2012

Plastic tubing PL, standard I.D.

Technical data

Plastic tubing PL

Ambient temperature
–10 ... +35 °C

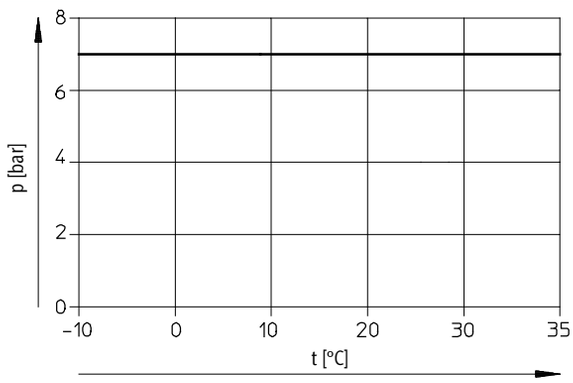
Temperature dependent operating pressure
0 ... 7 bar

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 bending radius [mm]	Weight [kg/m]	Colour	Part No.	Type	PU[1] [m]
11.6	9	85	0.049	Blue	2238	PL-9-BL	50
17.6	13	100	0.135	Blue	4103	PL-13-BL	50

1) Packaging unit

Plastic tubing PU, standard I.D.

Technical data

FESTO

Plastic tubing PU

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

Ambient temperature
–35 ... +60 °C

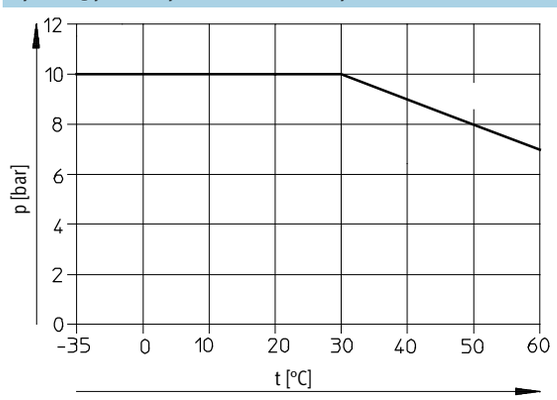
Temperature dependent operating pressure
–0.95 ... +10 bar
PU-9:
0 ... 10 bar

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 CK[1)]
➔ Internet: ck

1) Recommended fitting

Dimensions and ordering data

O.D. [mm]	I.D. [mm]	Flow-relevant bending radius [mm]	Weight [kg/m]	Colour	Part No.	Type	PU[1)] [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

Type PU-DUO discontinued
Available up until 2012

Plastic tubing PU-DUO, standard I.D.

Technical data

FESTO

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

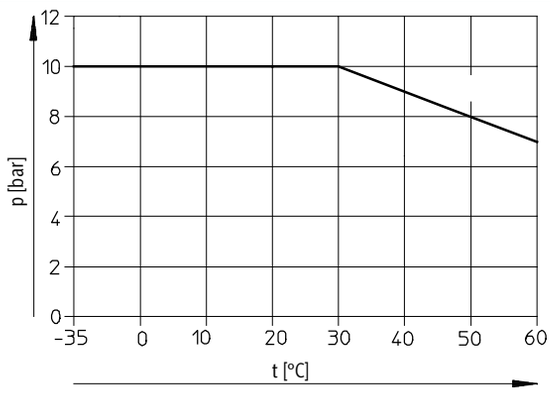
Temperature dependent operating pressure
–0.95 ... +10 bar

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 CK[1)]
➔ Internet: ck

1) Recommended fitting

Dimensions and ordering data

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

1) Packaging unit