Fluoropolymer Tubing (PFA)
Metric Size
TLM Series

RoHS

Flame resistant (Equivalent to UL-94 Standard V-0)

Compatible with the Food Sanitation Law

- Compatible with the test conforming to the Food Sanitation Law based on the 370th notice given by the Ministry of Health and Welfare in 1959.
- Complies with FDA (Food and Drug Administration) §177.1550 dissolution test.

Series

Size				Metric size												
Model				TLM0201	TLM0302	TLM0425	TLM0403	TLM0604	TLM0806	TLM1075	TLM1008	TLM1209	TLM1210	TLM1613	TLM1916	TLM2522
Tubing size				ø2 x ø1	ø3 x ø2	ø4 x ø2.5	ø4 x ø3	ø6 x ø4	ø8 x ø6	ø10 x ø7.5	ø10 x ø8	ø12 x ø9	ø12 x ø10	ø16 x ø13	ø19 x ø16	ø25 x ø22
O.D. (mm)				2	3	4	4	6	8	10	10	12	12	16	19	25
I.D. (mm)				1	2	2.5	3	4	6	7.5	8	9	10	13	16	22
Length per roll		Color	Symbol													
Roll	10 m	Translucent	N							●	●	●	●	●	●	
	20 m	Translucent	N	●	●	●	●	●	●	●	●	●	●	●	●	●
		Red (Translucent)	R	●	●	●	●	●	●	●	●	●	●	●	●	●
		Blue (Translucent)	BU	●	●	●	●	●	●	●	●	●	●	●	●	●
		Black (Opaque)	B	●	●	●	●	●	●	●	●	●	●	●	●	●
	50 m	Translucent	N	●	●	●	●	●	●	●	●	●	●	●	●	●
	100 m	Translucent	N	●	●	●	●	●	●	●	●	●	●	●	●	
Straight	2 m	Translucent	N	●	●	●	●	●	●	●	●	●	●	●	●	●

Inch O.D. size: 5/32" (TLM0425, TLM0403)

Inch O.D. size: 5/16" (TLM0806)

O.D. 3.2 mm is available in ø 1/8 inch (3.18 mm) tubing. For details, refer to the table "Series" on page 505.

Specifications

Fluid Note 1) 2) 3) **and applicable fittings** Note 1) 2) 3)		Fluid: Refer to "Applicable Fluid List" on page 512. Fittings: Fluoropolymer fittings LQ series Fluid: Air, Water, Inert gas Fittings: One-touch fittings KQ2, KQG2, KQB2, Clean One-touch fittings KP, KP□ Insert fittings KF, KFG2, Miniature fittings M, MS (Hose nipple type)												
Max. operating pressure (MPa)		Refer to the max. operating pressure curve.												
Min. bending radius (mm) Note 4)	Recommended radius	10	20	20	35	35	60	95	100	100	130	160	220	400
	Tube close bend radius	7	15	15	20	20	40	60	65	65	110	130	160	290
Operating temperature (fixed usage)		Air, Inert gas: −65 to 260°C Water: 0 to 100°C (No freezing)												
Material		PFA (Tetrafluoroethylene perfluoroalkoxy vinyl ether copolymer)												

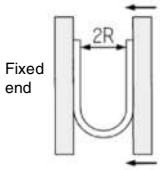
Note 1) Fluid varies depending on the applicable fittings.

Note 2) When using a liquid fluid, the surge pressure must not exceed the maximum operating pressure. If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes. Furthermore, abnormal temperature rise caused by adiabatic compression may result in the tube bursting.

Note 3) Do not use this product in a manner in which the tube is not fixed. Observe the lesser value of the maximum operating pressure between the tubing and fitting. A material change over a long duration or due to high-temperature may cause leakage. Perform periodic maintenance and replace with a new product immediately when abnormalities are detected. (Refer to "Maintenance" of the tubing precautions on page 514.)
For other precautions, refer to "Fittings & Tubing Precautions" on pages 13 to 17. When using the fluoropolymer fittings, refer to the precautions on pages 445 and 446.

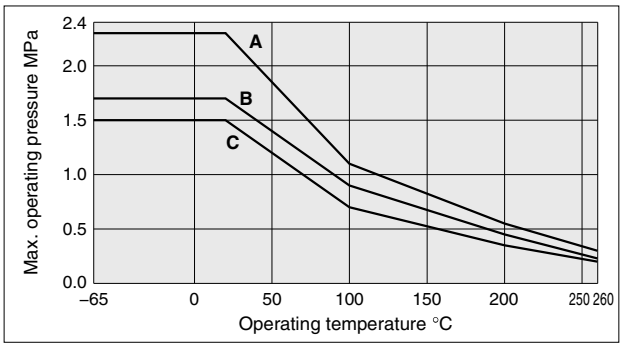
Note 4) Minimum bending radius is measured as shown left as representative values.
- Use a tube above the recommended minimum bending radius.
- The tube may be bent if used under the recommended minimum bending radius. Therefore, refer to the tube close bend radius and make sure that the tube is not bent or flattened.
- Please note that the tube close bend radius is not warranted because of the value when 2R is measured by the method in the right figure if the tube is bent or flattened, etc.
- The minimum bending radius shown above does not apply to the straight pipe (2 m).

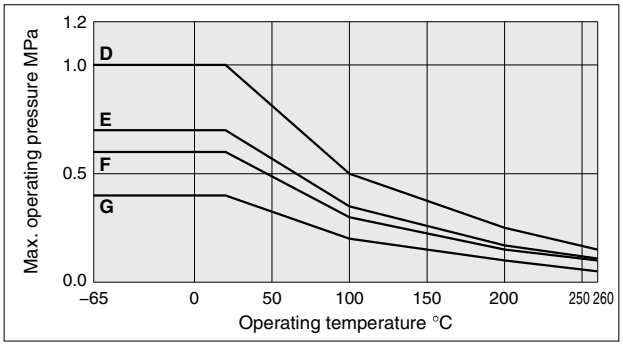
How to measure the minimum bending radius



At a temperature of 20°C, bend the tubing into a U shape. Fix one end and gradually move the other end closer. Measure 2R at the point where the outside diameter's rate of change is 5%.

Max. Operating Pressure





Group	Model	Max. operating pressure (MPa)			
		20°C or less	100°C	200°C	260°C
A	TLM0201	2.3	1.1	0.55	0.3
B	TLM0425	1.7	0.9	0.45	0.23
C	TLM0302 TLM0604	1.5	0.7	0.35	0.2
D	TLM0403 TLM0806 TLM1075 TLM1209	1	0.5	0.25	0.15
E	TLM1008 TLM1613	0.7	0.35	0.17	0.11
F	TLM1210 TLM1916	0.6	0.3	0.15	0.1
G	TLM2522	0.4	0.2	0.1	0.05

How to Order

Metric size

TLM0425 N − 20

Tubing designation

Color indication

Symbol	Color
N	Translucent (Material color)
R	Red (Translucent)
BU	Blue (Translucent)
B	Black (Opaque)

Length per roll

Symbol	Type	Length
10	Roll	10 m
20		20 m
50		50 m
100		100 m
2S	Straight	2 m

Note) Refer to the table "Series" above, as the tubing length differs depending on each size.

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