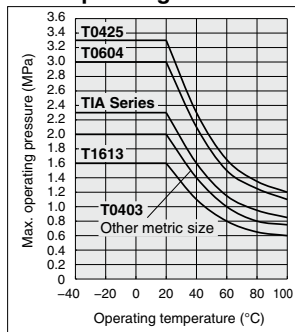


Nylon Tubing T/TIA Series

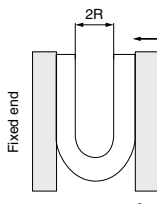
RoHS

For general pneumatic tubing, Nylon tubing

Max. Operating Pressure



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 10%.



Precautions

- Be sure to read this before handling the products.
- Refer to page 11 for safety instructions and pages 14 to 18 for fittings and tubing precautions.

Caution

- Applicable for general industrial water. Please consult with SMC if using other kinds of fluid. Surge pressure must be under the max. operating pressure. If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes.
- Abnormal temperature rise caused by adiabatic compression may result in the tube bursting.
- Please exercise caution when using this item in a clean room. There is a possibility of plasticizer and other materials precipitating on the tube surface and detracting from the cleanliness level of the room.

Model

● — 20 m roll
□ — 100 m roll (T1613 is reel.)

	Tubing size												
	Metric size (T series)								Inch size (TIA series)				
Model	T0425	T0403	T0604	T0645	T0806	T1075	T1209	T1613	TIA01	TIA05	TIA07	TIA11	TIA13
Tubing O.D. (mm)	4	4	6	6	8	10	12	16	3.18	4.76	6.35	9.53	12.7
Tubing I.D. (mm)	2.5	3	4	4.5	6	7.5	9	13	2.18	3.48	4.57	6.99	9.56
Black (B)	●	●	●	●	●	●	●	●	●	●	●	●	●
White (W)	□	□	□	□	□	□	□	□	□	□	□	□	□
Red (R)	●	●	●	●	●	●	●	●	●	●	●	●	●
Blue (BU)	●	●	●	●	●	●	●	●	●	●	●	●	●
Yellow (Y)	●	●	●	●	●	●	●	●	●	●	●	●	●
Green (G)	●	●	●	●	●	●	●	●	●	●	●	●	●
	5/32"				3/16"				Nominal size (inch)				
									1/8" 3/16" 1/4" 3/8" 1/2"				
									Nominal size (mm)				
									3.2				

Specifications

Specifications

Fluid and Applicable fitting size Note 1) Note 2)	Fluid: Air/Water										Fitting: One-touch fittings, Insert fittings, Self-align fittings, Miniature fittings						
	20°C or less	Fluid: Turbine oil class 1 (ISO VG32) Note 3)										Fitting: Insert fittings					
		3.3	2.0	3.0	2.0	2.0	2.0	2.0	1.6	2.3	2.3	2.3	2.3	2.3			
Max. operating pressure Note 1) (MPa)	40°C	2.3	1.4	2.1	1.4	1.4	1.4	1.4	1.1	1.6	1.6	1.6	1.6	1.6			
	60°C	1.65	1.0	1.5	1.0	1.0	1.0	1.0	0.8	1.15	1.15	1.15	1.15	1.15			
	80°C	1.35	0.8	1.25	0.8	0.8	0.8	0.8	0.65	0.95	0.95	0.95	0.95	0.95			
	100°C	1.2	0.75	1.1	0.75	0.75	0.75	0.75	0.6	0.85	0.85	0.85	0.85	0.85			
Operating vacuum pressure (kPa) Note 4)	-101.3																
Min. bending radius (mm) Note 5)	Min. bending radius	13	20	24	30	40	50	60	100	15	25	30	50	65			
	Bending value (Reference value)	10	15	18	23	30	40	45	75	12	20	23	40	48			
Operating temperature Note 1)	Air/Oil: -40 to 100°C, Water: 0 to 70°C (No freezing)																
Material	Nylon 12																

- Note 1) Be sure to operate under the maximum operating pressure conditions using the lower maximum operating specification of either the tubing or fittings.
- Note 2) Mount an inner sleeve when using metal One-touch fittings in high-temperature environments of 60°C or more. Use self-align fittings at a temperature of 60°C or less.
- Note 3) • After long-term use, nylon materials may harden.
• Be sure to use with static piping.
• After removing a tube from the fitting, be sure to replace it with a brand new tube. Please refrain from reusing tubes.
• When using an oil other than turbine oil class 1 (ISO VG32), the deterioration of nylon materials may be accelerated due to the added agents.
- Note 4) The operating vacuum pressure varies depending on the applicable fitting, so refer to the fitting specifications for details.
- Note 5) The minimum bending radius is the representative value measured as shown in the left figure.
- Use a tube above the recommended minimum bending radius.
• The tubing may be bent if used under the recommended minimum bending radius.
Therefore, refer to the refraction value and make sure that the tubing is not bent or flattened.
• Please note that the refraction value is not warranted because of the value when 2R is measured by the method in the left figure if the tubing is bent or flattened, etc.

How to Order

T0425 B - 20	
Tubing model	Length per roll
Color	Symbol Length
	20 20 m roll
	100 100 m roll (Black and white only)
Symbol	Color
B	Black (Opaque)
W	White (Material color)
R	Red (Opaque)
BU	Blue (Opaque)
Y	Yellow (Opaque)
G	Green (Opaque)

Only black is available for the tubing with improved weather resistance.

Details on products with improved weather resistance can be found [here](#).



Made to Order

(Please contact SMC for specifications in detail, dimensions, delivery and specifications other than those mentioned above.)

100 m reel Metric size and Inch size except ø16: Suffix "-X3" to the end of part number. Ex.) T0425R-100-X3

Longer length reel Metric size: Suffix "-X3" to the end of part number. Ex.) T0425G-500-X3

20 m roll Inch size: Suffix "-X4" to the end of part number. Ex.) TIA01BU-20-X4

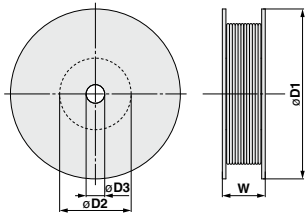
Reinforced corrugated cardboard specification longer length reel ø6, Black and White only: Suffix "-X64" to the end of part number. Ex.) T0604B-500-X64

Made to Order Availability

Part no.	Model	T0425	T0604	T0806	T1075	T1008	T1209	TIA01	TIA05	TIA07	TIA11	TIA13	Color
X3	100 m reel	○	○	○	○	○(Note 1)	○	○	○	○	○	○	Black, White, Red, Blue, Yellow, Green Note 1) Only Black, White, Blue, Green
	150 m reel				○								
	200 m reel			○									
	500 m reel	○	○										
X4	20 m roll							○	○	○	○	○	Red, Blue, Yellow, Green
	250 m reel		○										
X64	300 m reel			○									Black
	500 m reel		○										Black, White

Reinforced corrugated cardboard specification: Longer length reel/-X64

Dimensions



Dimensions

Model	øD1	øD2	øD3	W	Weight (kg)	Color
T0604□-250-X64	475	200	52	120	5.1	Black,
T0604□-500-X64	475	200	52	200	9.4	White
T0806B-300-X64	475	200	52	200	8.1	Black