

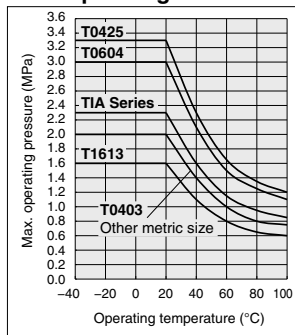
# Nylon Tubing T/TIA Series



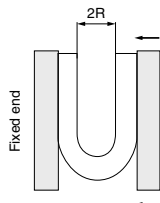
RoHS

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 back page 50 for Safety Instructions and pages 13 to 17 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.
- 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.)

Model	Tubing size												
	Metric size (T series)						Inch size (TIA series)						
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

Fluid and Applicable fitting size <sup>Note 1) Note 2)</sup>	Fluid: Air/Water												Fitting: One-touch fittings, Insert fittings, Self-align fittings, Miniature fittings			
	Fluid: Turbine oil class 1 (ISO VG32) <sup>Note 3)</sup>												Fitting: Insert fittings			
Max. operating pressure <sup>Note 1)</sup> (MPa)	20°C or less	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		
	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			
Min. bending radius (mm) <sup>Note 4)</sup>	Min. bending radius	13	20	24	30	40	50	60	100	15	25	30	50	65		
	Bending value (Reference)	10	15	18	23	30	40	45	75	12	20	23	40	48		
Operating temperature <sup>Note 1)</sup>	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 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

Color

Symbol	Color
B	Black (Opaque)
W	White (Material color)
R	Red (Opaque)
BU	Blue (Opaque)
Y	Yellow (Opaque)
G	Green (Opaque)

Length per roll

Symbol	Length
20	20 m roll
100	100 m roll (Black and white only)

**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  $\phi 16$ : 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

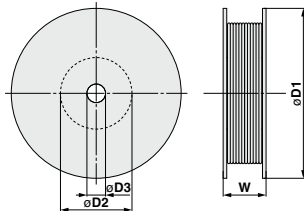
**Reinforced corrugated cardboard specification longer length reel**  $\phi 6$ , Black and White only: Suffix "-X64" to the end of part number. Ex.) T0604B-500-X64

**Made to Order Availability**

Part no.	Length	Model	T0425*	T0604*	T0806*	T1075*	T1209*	TIA01*	TIA05*	TIA07*	TIA11*	TIA13*	Color
X3	100 m reel		○	○	○	○	○	○	○	○	○	○	Black, White, Red, Blue, Yellow, Green
	150 m reel					○							
	200 m reel				○								
	500 m reel	○	○										
X4	20 m roll							○	○	○	○	○	Red, Blue, Yellow, Green
	500 m reel		○										
X64	250 m reel		○										Black, White
	500 m reel		○										

**Reinforced corrugated cardboard specification: Longer length reel/-X64**

**Dimensions**



**Dimensions**

Model	$\phi D1$	$\phi D2$	$\phi D3$	W	Weight (kg)	Color
T0604□-250-X64	475	200	52	120	5.1	Black
T0604□-500-X64	475	200	52	200	9.4	White

**KQ2**

**KQB2**

**KS  
KX**

**KM**

**KF**

**M**

**H/DL  
L/LL**

**KC**

**KK**

**KK130**

**DM**

**KDM**

**KB**

**KR**

**KA**

**KQG2**

**KG**

**KFG2**

**MS**

**KKA**

**KP**

**LQ**

**MQR**

**T**

**IDK**