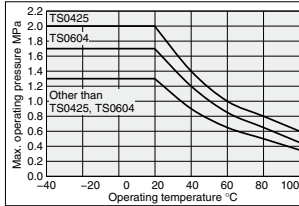


# Soft Nylon Tubing TS/TISA Series

RoHS

For general pneumatic tubing  
Pliable soft nylon tubing

## Max. Operating Pressure



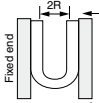
## Precautions

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

- Compatible with water due to a change in materials. Compatible fluid types are printed on the tube body for differentiation, so please be sure to check this. <sup>Note 1</sup> If using the previous TS/TISA series with "water", the tube may shrink and cause air leakage or the tube may fall out.
- The products which changed the material are applicable for general industrial water. Please contact 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.

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%.

## Made to Order

100 m reel

Longer length reel

20 m roll

### Made to Order Availability

Part no.	Length	Model	TS0425	TS0604	TS0806	TS1075	TS1209	TISA01	TISA05	TISA07	TISA11	TISA13	Color
X3	100 m reel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Black, White, Red, Blue, Yellow, Green
	150 m reel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	200 m reel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X4	500 m reel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Red, Blue, Yellow, Green
	20 m roll		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Model

● — 20 m roll □ — 100 m roll (TS1612 is reel.)

Model	Tubing size											
	Metric size (TS series)						Inch size (TISA series)					
Tubing O.D. (mm)	4	6	8	10	12	16	3.18	4.76	6.35	9.53	12.7	
Tubing I.D. (mm)	2.5	4	6	7.5	9	12	2.18	3.48	4.57	6.99	9.56	
Black (B)	●	●	●	●	●	●	●	●	●	●	●	
White (W)	●	●	●	●	●	●	●	●	●	●	●	
Red (R)	●	●	●	●	●	●	●	●	●	●	●	
Blue (BU)	●	●	●	●	●	●	●	●	●	●	●	
Yellow (Y)	●	●	●	●	●	●	●	●	●	●	●	
Green (G)	●	●	●	●	●	●	●	●	●	●	●	
	5/32"			5/16"			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 2</sup>	Fluid: Air/Water <sup>Note 1</sup>						Fluid: Turbine oil class 1 (ISO VG32) <sup>Note 4</sup>					
	20°C or less	40°C	60°C	80°C	100°C	150°C	20°C or less	40°C	60°C	80°C	100°C	150°C
Max. operating pressure (MPa)	2.0	1.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Min. bending radius (mm) <sup>Note 5</sup>	1.4	1.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Min. bending radius (mm) <sup>Note 5</sup>	1.0	0.85	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Min. bending radius (mm) <sup>Note 5</sup>	0.8	0.65	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Min. bending radius (mm) <sup>Note 5</sup>	0.6	0.45	0.35	0.35	0.35	0.4	0.35	0.35	0.35	0.35	0.35	0.35
Min. bending radius (mm) <sup>Note 5</sup>	15	23	45	55	65	90	18	27	30	55	65	65
Min. bending radius (mm) <sup>Note 5</sup>	12	17	34	42	50	70	12	15	23	42	50	50
Operating temperature <sup>Note 2</sup>	Air/Oil: -40 to +100°C, Water: 0 to +50°C (No freezing)						Nylon 12					

- Note 1) Refer to the "Fitting/Fluid".  
 Note 2) Be sure to operate under the maximum operating pressure and operating temperature conditions using the lower specifications of either the tubing or fittings.  
 Note 3) 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 4) • 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 5) The minimum bending radius is the representative value measured as shown in the left figure.  
 • Use a tube above the minimum bending radius.  
 • The tubing may be bent if used under the minimum bending radius. Therefore, refer to the bending value and make sure that the tubing is not bent or flattened.  
 • Please note that the bending value is not warranted because of the representative value when 2R is measured by the method in the left figure if the tubing is bent or flattened, etc.

## Printing/Fluid

Print code		Fluid
Previous	SMC TS 0604 SOFTNYLON 6 x 4	Air
NEW	● SMC TS 0604 SOFTNYLON 6 x 4	Air/Water

## How to Order

TS0604 W - 20

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

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