

FR Three-layer Polyurethane Tubing

TRTU Series

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

RoHS

Improved spatter resistance

Spatter resistance is **twice** that of FR double layer polyurethane tubing TRBU series. * In SMC conditions

For general pneumatic and water piping in environments exposed to sparks from arc welding, etc.

Spatter resistance is improved by installing an aluminum layer between the outer layer and inner tube.

Three-layer design

Outer layer Flame resistant polyolefin (Equivalent to UL-94 standard V-0)

Middle layer Aluminum laminated film

Inner tube Polyurethane

6-color variations



Model

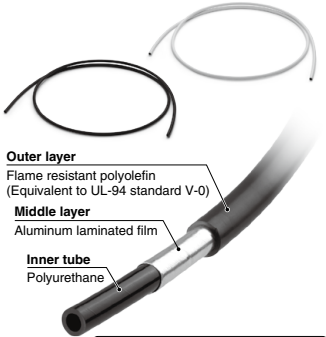
● — 20 m roll □ — 100 m reel

Model	TRTU0604	TRTU0805	TRTU1065	TRTU1208
Inner tube O.D. (mm)	6	8	10	12
Inner tube I.D. (mm)	4	5	6.5	8
Outer layer thickness (mm)	1	1	1	1
Outer layer color	Black (B)	●	●	●
	White (W)	●	●	●
	Red (R)	●	●	●
	Blue (BU)	●	●	●
	Yellow (Y)	●	●	●
	Green (G)	●	●	●

Flame Resistant (Equivalent to UL-94 Standard V-0) FR Three-layer Polyurethane Tubing

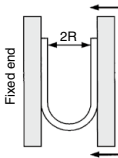
TRTU Series

RoHS



For general pneumatic and water piping in environments exposed to sparks from arc welding, etc.

How to measure the minimum bending radius



Bend the tube into the U-form at a temperature of 20°C. Fix one end and close loop gradually. Measure 2R when the deformed ratio of the tube diameter at bending reaches 5%.

Model

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Inner tube O.D. (mm)	6	8	10	12
Inner tube I.D. (mm)	4	5	6.5	8
Outer layer thickness (mm)	1	1	1	1

Outer layer color	Model			
	TRTU0604	TRTU0805	TRTU1065	TRTU1208
Black (B)	●	●	●	●
White (W)	●	●	●	●
Red (R)	●	●	●	●
Blue (BU)	●	●	●	●
Yellow (Y)	●	●	●	●
Green (G)	●	●	●	●

Specifications

Fluid (Note 2)	Air, Water			
Applicable fittings	FR One-touch fittings: KR-W2 series Metal One-touch fittings: KQB2 series			
Max. operating pressure (MPa)	20°C	0.8		
	40°C	0.65		
	60°C	0.5		
Operating vacuum pressure (kPa) (Note 3)	-101.3			
Min. bending radius (mm) (Note 4)	50	60	70	80
Ambient and fluid temperature	-20 to 60°C, Water: 0 to 40°C (No freezing)			
Material	Inner tube	Polyurethane		
	Middle layer	Aluminum laminated film		
	Outer layer	Polyolefin (Equivalent to UL-94 standard V-0)		

Note 1) The color of all inner tubes is black.

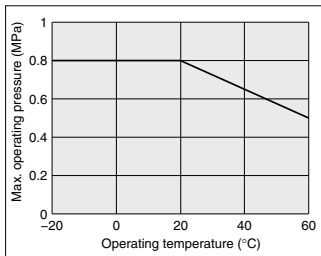
Note 2) Applicable for general industrial water. Please consult with SMC if using for the other kind of fluid. The surge pressure must be under the maximum operating pressure.

If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes. Also, abnormal temperature rise caused by adiabatic compression may result in the tube bursting.

Note 3) The operating vacuum pressure varies depending on the applicable fitting, so refer to the fitting specifications for details.

Note 4) The minimum bending radius is the representative value measured as shown in the left figure. Allow extra length when piping since the tube may be bent if used under the minimum bending radius.

Max. Operating Pressure



How to Order

TRTU1065 B - 20

Model	Inner tube O.D. x I.D. (mm)
TRTU0604	6 x 4
TRTU0805	8 x 5
TRTU1065	10 x 6.5
TRTU1208	12 x 8

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green

Symbol	Length
20	20 m roll
100	100 m reel

Note) The color of the outer layer of all tubing is opaque.

Installation on One-touch Fittings

Pitch length for installation on a One-touch fitting is indicated on the outer layer of the TRTU tubing.

(There are two types of applicable fittings, so two types of pitch length for installation are available.)

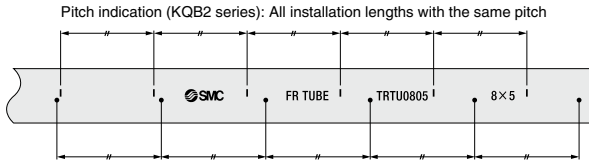
Cut the tube according to this indication (Step 1) and strip off the outer layer (Step 2) using a special tool.

Strip off the aluminum laminated film to prevent the inner tube from being damaged (Step 3) and install it on the One-touch fitting.

Refer to the Operation Manual for details of installation on the One-touch fitting.

The Operation Manual can be downloaded from the SMC URL below.

<https://www.smcworld.com>

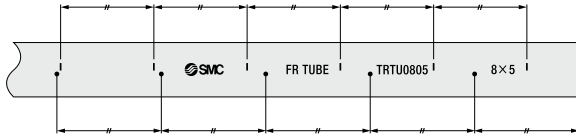


Pitch indication (KR-W2 series): All installation lengths with the same pitch

Identification of the pitch length for installation
 "┆": KQB2 series
 "•": KR-W2 series

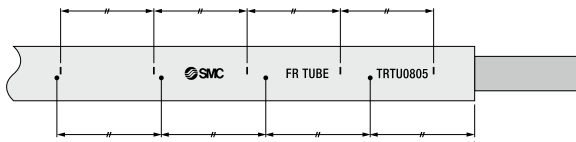
Installation on the KR-W2 series

Step 1



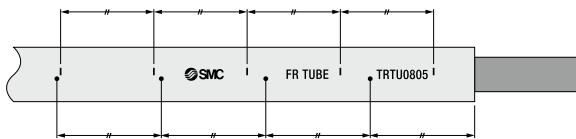
Outer layer, aluminum laminated film and inner tube are cut at the "•" mark.

Step 2



Strip off the outer layer.

Step 3



Strip off the aluminum laminated film to prevent the inner tube from being damaged.

Metal One-touch fittings KQB2 series



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Flame resistant (equivalent to UL-94 standard V-0) FR One-touch fittings KR-W2 series



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Use a special tool for stripping off the outer layer.

Part no.: YS-100

* Refer to the Operation Manual for details of how to use the special tool.

