

Wear Resistant Tubing

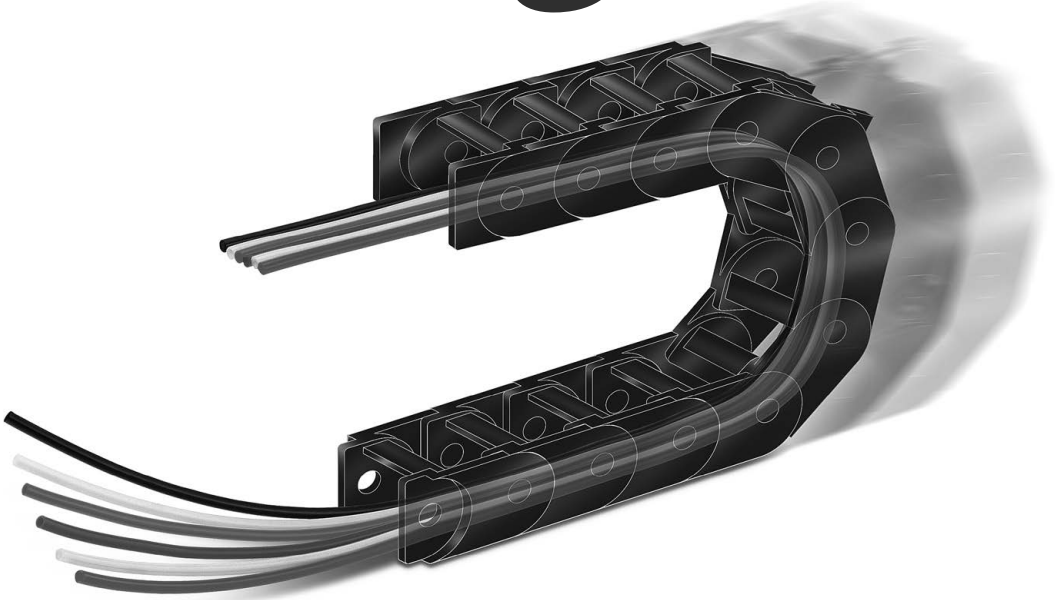
TUZ/TIUZB Series

RoHS

Abrasion: Approx. $\frac{1}{3}$
 (Compared with SMC polyurethane tubing TU series)

Description	Maximum abrasion (mm) After 10 million cycles
Wear resistant tubing TUZ/TIUZB series	0.16
Polyurethane tubing TU series	0.46

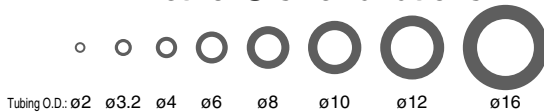
Note) Comparison based on the SMC's specific testing condition



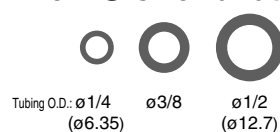
6-color variations



Metric: 8-size variations



Inch: 3-size variations



Wear Resistant Tubing TUZ/TIUZB Series

RoHS



Model

● — 20 m roll □ — 100 m roll

Model	Tubing size										
	Metric size (TUZ series)							Inch size (TIUZB series)			
	TUZ0212	TUZ3220	TUZ0425	TUZ0604	TUZ0805	TUZ1065	TUZ1208	TUZ1610	TIUZB07	TIUZB11	TIUZB13
Tubing O.D. (mm)	2	3.2	4	6	8	10	12	16	6.35	9.53	12.7
Tubing I.D. (mm)	1.2	2	2.5	4	5	6.5	8	10	4.23	6.35	8.46

Black (B)	□	●	●	●	●	●	●	□	●	●	●
White (W)		●	●	●	●	●	●		●	●	●
Red (R)			●	●	●	●	●		●	●	●
Blue (BU)		●	●	●	●	●	●		●	●	●
Yellow (Y)			●	●	●	●	●		●	●	●
Green (G)			●	●	●	●	●		●	●	●

Specifications

Fluid ^{Note 1, 2)}		Air/Water										
Applicable fittings		One-touch fittings KQ2 series, Insert fittings KF series, Stainless steel 316 insert fittings KFG2 series, Miniature fittings M/MS series (nose nipple type)										
Max. operating pressure (MPa)	20°C	0.8										
	40°C	0.6										
	60°C	0.4										
Operating vacuum pressure ^{Note 3)} (kPa)		-101.3										
Min. bending radius ^{Note 4)} (mm)		4	10	10	15	20	27	35	45	23	27	35
Operating temperature		-20 to 60°C (Water: 0 to 40°C) (No freezing)										
Material		Special polyurethane										

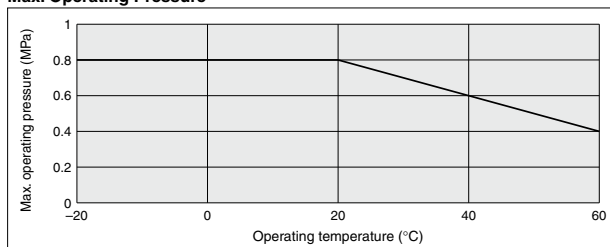
Note 1) Applicable for general industrial water. Please consult with SMC if using other kinds of fluid. Surge pressure must be under the max. operating pressure. If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes.

Note 2) Abnormal temperature rise caused by adiabatic compression may result in the tube bursting.

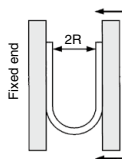
Note 3) As the operating vacuum pressure varies depending on the applicable fittings, be sure to check the fitting specifications beforehand.

Note 4) The minimum bending radius means the value measured by the method shown in the figure at the right at the temperature of 20°C when the tube is bent. The minimum bending radius assumes static piping. If the tube is used in a moving part, provide extra length to the tube. Check the bending radius recommended by the flexible protection tube manufacturer for sure if the tube is used in the flexible protection tube.

Max. Operating Pressure



How to Calculate Minimum Bending Radius



Bend the tube into U-form at the temperature of 20°C. Fix one end and close loop gradually. Measure 2R when the tube breaks or is crushed.

How to Order

TUZ0425 BU - 20

Tubing model

Color

Length per roll

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

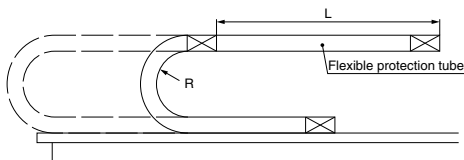
Symbol	Length
20	20 m roll
100	100 m roll

Note) Not clear, but translucent due to material.

Reference Data: Abrasion due to Flexible Protection Tube

Test Conditions

Test tube	TUZ0604, TU0604
Quantity of tube tested	5 pcs. for each
Operating speed	1500 mm/s
Operating frequency	90 c.p.m
Stroke L	500 mm
Bending radius R	28 mm
Material of flexible protection tube	Special engineering plastic
Tube tie	Not used



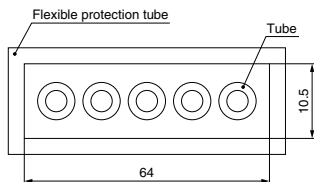
Test Results

Model	Maximum abrasion after 10 million cycles (mm)
TUZ0604	0.16
TU0604	0.46

As this test was an acceleration test, the tube bending radius was out of the flexible protection tube manufacturer's allowable range.

When the flexible protection tube is used in the actual application, check the manufacturer's catalog specifications.

The values in the table above are representative values, and not guaranteed.



Tube dimensions inside the flexible protection tube

Made to Order

Multi-core, same color specification TFU-X73

Flat type of the TUZ series

Number of cores: 2 to 12 cores

Specification: **Same color**

Multi-core, multi-color specification TUZ-X169 to X172, -X204

Number of cores: 2 to 12 cores

Specification: **Multi-color**

Refer to page 696 for details.

The identification line is not shown.

Please contact SMC for detailed specifications, dimensions, and delivery.

How to Order

TFU0425 BU - 2 - 20 - X73

● **Color**

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

(Note) Not clear, but translucent due to material.

● **Special polyurethane (Multi-core, same color specification)**

● **Length per roll**

Nil	10 m
n	n m (Note)

(Note) It is also available in lengths other than 10 m.

Enter the length you need (1, 2, 3, 4, 5, 20).

Example) **TFU0425BU-2-20-X73**

● **Number of cores**
2 to 12

● 20 m

● **Tubing model**

Model	O.D. x I.D. (mm)
TFU0425	4 x 2.5
TFU0604	6 x 4
TFU0805	8 x 5
TFU1065	10 x 6.5
TFU1208	12 x 8