

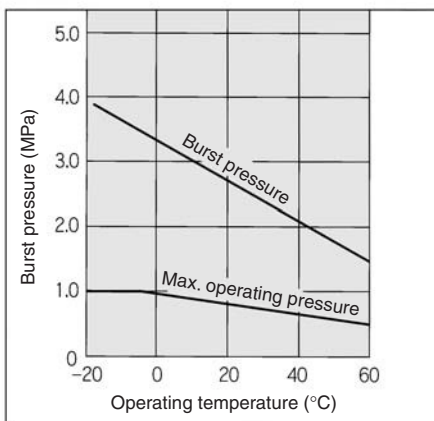
Polyurethane Tubing

Series TU/TIUB



For general pneumatic tubing
Flexible
Polyurethane tubing
Additional 21 new colors.

Burst Pressure Characteristics Curve and Operating Pressure

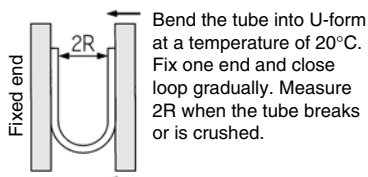


⚠ Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 13 to 16 for Fittings and Tubing Precautions.

⚠ Caution

- Applicable for general industrial water. Please consult with SMC if using for the other kind of fluid. Also, the surge voltage 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.
- The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Furthermore, abnormal temperature rises caused by adiabatic compression may result in the burst of the tube.
- The value of the minimum bending radius is measured at the temperature of 20°C as shown in the figure below.



Model/Specifications

● — 20 m roll □ — 100 m roll
△ — Option ■ — Manufactured upon receipt of order (Please consult with SMC.)

Model	Tubing size											
	Metric size (Series TU)						Inch size (Series TIUB)					
	TU0212	TU0425	TU0604	TU0805	TU1065	TU1208	TU1610	TIUB01	TIUB05	TIUB07	TIUB11	TIUB13
Tubing O.D. (mm)	2	4	6	8	10	12	16	3.18	4.76	6.35	9.53	12.7
Tubing I.D. (mm)	1.2	2.5	4	5	6.5	8	10	2	3.18	4.23	6.35	8.46
Black (B)	●	●	●	●	●	●	●	●	●	●	●	●
White (W)	●	●	●	●	●	●	●	●	△	△	△	△
Red (R)	●	●	●	●	●	●	■	●	△	△	△	△
Blue (BU)	●	●	●	●	●	●	□	●	●	●	●	●
Yellow (Y)	●	●	●	●	●	●	■	●	△	△	△	△
Green (G)	●	●	●	●	●	●	■	●	△	△	△	△
Clear (C)	●	●	●	●	●	●	□	●	△	△	△	△
Orange (YR)	■	●	●	●	●	●	■	●	△	△	△	△
Solid blue (BU1)	■	●	●	●	●	●	■	●	■	■	■	■
Clear blue (BU2)	■	●	●	●	●	●	■	●	■	■	■	■
Medium blue (BU3)	■	●	●	●	●	●	■	●	■	■	■	■
Brown (BR1)	■	●	●	●	●	●	■	●	■	■	■	■
Solid green (G1)	■	●	●	●	●	●	■	●	■	■	■	■
Clear green (G2)	■	●	●	●	●	●	■	●	■	■	■	■
Neon green (G3)	■	●	●	●	●	●	■	●	■	■	■	■
Dark green (G4)	■	●	●	●	●	●	■	●	■	■	■	■
Gray (GR1)	■	●	●	●	●	●	■	●	■	■	■	■
Light gray (GR2)	■	●	●	●	●	●	■	●	■	■	■	■
Neon pink (P1)	■	●	●	●	●	●	■	●	■	■	■	■
Solid purple (PU1)	■	●	●	●	●	●	■	●	■	■	■	■
Clear purple (PU2)	■	●	●	●	●	●	■	●	■	■	■	■
Solid red (R1)	■	●	●	●	●	●	■	●	■	■	■	■
Clear red (R2)	■	●	●	●	●	●	■	●	■	■	■	■
Silver (S1)	■	●	●	●	●	●	■	●	■	■	■	■
Solid yellow (Y1)	■	●	●	●	●	●	■	●	■	■	■	■
Clear yellow (Y2)	■	●	●	●	●	●	■	●	■	■	■	■
Neon yellow (Y3)	■	●	●	●	●	●	■	●	■	■	■	■
Clear orange (YR1)	■	●	●	●	●	●	■	●	■	■	■	■
Neon orange (YR2)	■	●	●	●	●	●	■	●	■	■	■	■

Nominal size (inch)	
5/32"	5/16"
1/8"	3/16"
1/4"	3/8"
1/2"	

Fluid	Air/Water											
Max. operating pressure at 20°C	0.8 MPa											
Burst pressure	Refer to the burst pressure characteristics curve.											
Applicable fittings	One-touch fittings, Insert fittings, Self-align fittings, Miniature fittings											
Min. bending radius (mm)	4	10	15	20	27	35	45	10	15	23	27	35
Operating temperature	-20 to +60°C (Water: 0 to 40°C) (No freezing)											
Material	Polyurethane											

How to Order

TU0425 BU - 20

Tubing model

Length per roll

Symbol	Length
20	20 m roll
100	100 m roll

Color

Symbol	Color	Symbol	Color
B	Black	GR1	Gray
W	White	GR2	Light gray
R	Red	P1	Neon pink
BU	Blue	PU1	Solid purple
Y	Yellow	PU2	Clear purple
G	Green	R1	Solid red
C	Clear	R2	Clear red
YR	Orange	S1	Silver
BU1	Solid blue	Y1	Solid yellow
BU2	Clear blue	Y2	Clear yellow
BU3	Medium blue	Y3	Neon yellow
BR1	Brown	YR1	Clear orange
G1	Solid green	YR2	Neon orange
G2	Clear green		
G3	Neon green		
G4	Dark green		

- K**
- M**
- H**
- KK**
- D**
- MS**
- LQ**
- MQR**
- T**

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: Suffix "-X3" to the end of part number. Ex.) TU0425R-100-X3
- Longer length reel** Metric size: Suffix "-X3" to the end of part number. Ex.) TU0425G-500-X3
- 20 m roll** Inch size: Suffix "-X4" to the end of part number. Ex.) TIUB07W-20-X4

Made to Order Availability

Part no.	Length \ Model	TU0425 *	TU0604 *	TU0805 *	TU1065 *	TU1208 *	TIUB01 *	TIUB05 *	TIUB07 *	TIUB11 *	TIUB13 *	Color
X3	100 m reel	○	○	○	○	○	○	○	○	○	○	Black, White, Red, Blue, Yellow, Green, Clear, Orange
	200 m reel			○								
	400 m reel		○									
	500 m reel	○										
X4	20 m roll						○	○	○	○	○	Red, White, Yellow, Green, Clear, Orange

Soft Polyurethane Tubing Series TUS

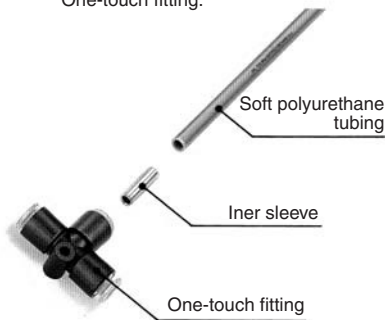


Suitable for piping in confined spaces

Extremely flexible
Soft polyurethane tubing

TUS related accessories Inner sleeve Series TJ

Reinforces soft polyurethane tubing. Insert an inner sleeve into soft polyurethane tubing when used with a One-touch fitting.



Model

Model	Applicable tubing model	Length
TJ-0425	TUS0425	18
TJ-0604	TUS0604	19
TJ-0805	TUS0805	20.5
TJ-1065	TUS1065	23
TJ-1208	TUS1208	24

Specifications

Material	C2700T (Electroless nickel plated)
Wall thickness	0.2 mm

⚠ Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 13 to 16 for Fittings and Tubing Precautions.

⚠ Caution

1. Use a nylon or polyurethane tubing for general industrial water, otherwise the tube may result in being fallen out or bursted when the max. operating pressure is lower and the surge pressure is occurred.
2. The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Furthermore, abnormal temperature rises caused by adiabatic compression may result in the burst of the tube.
3. The value of the minimum bending radius is measured at the temperature of 20°C as shown in the figure on the right.
4. Use inner sleeve, taking the removing force into consideration when used with One-touch fittings.

Model/Specifications

● — 20 m roll □ — 100 m reel

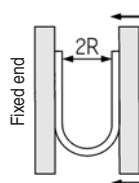
Model	TUS0425	TUS0604	TUS0805	TUS1065	TUS1208
Tubing O.D. (mm)	4	6	8	10	12
Tubing I.D. (mm)	2.5	4	5	6.5	8
Black (B)	●	●	●	●	●
White (W)	□	□	□	□	□
Red (R)	●	●	●	●	●
Blue (BU)	●	●	●	●	●
Yellow (Y)	●	●	●	●	●
Green (G)	●	●	●	●	●
Translucent (N) ⁽¹⁾	●	●	●	●	●
Yellow brown (YB)	●	●	●	●	●

Fluid	Air					
Max. operating pressure at 20°C	0.6 MPa					
Burst pressure	Refer to the burst pressure characteristics curve.					
Applicable fittings	One-touch fitting, Insert tube fitting, Hose nipple ⁽³⁾					
Min. bending radius (mm) ⁽²⁾	8	15	15	22	29	
Operating temperature	-20 to +60°C (No freezing)					
Material	Polyurethane					
Tube drawing strength (N) (Using One-touch fitting)	Without inner sleeve	15	60	60	85	110
	With inner sleeve	80	230	250	300	480



Note 1) Not clear, but translucent due to material.

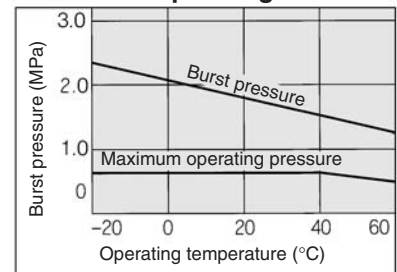
Note 2) Min. bending radius is measured as shown in the figure below.



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

Note 3) Always use inner sleeve (Series TJ) in safety circuit or critical area.

Burst Pressure Characteristics Curve and Operating Pressure



How to Order

TUS1065 B - 100

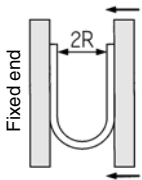
Tubing model Color Length per roll

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green
N	Translucent
YB	Yellow brown

Symbol	Length
20	20 m roll
100	100 m reel (Black, Blue only)

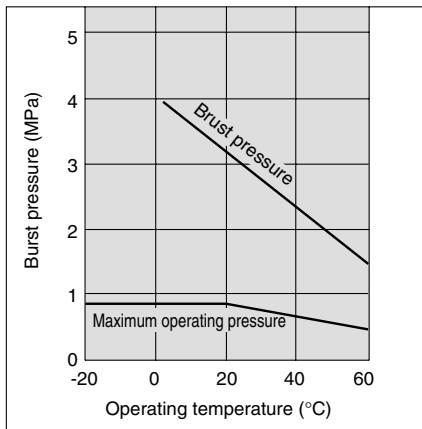
Hard Polyurethane Tubing/Standard Type

Series *TUH*



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

Burst Pressure Characteristics Curve and Operating Pressure



⚠️ Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 13 to 16 for Fittings and Tubing Precautions.

⚠️ Caution

- Please consult with SMC regarding other fluids. Because ester polyurethane is used, water cannot be used due to the occurrence of hydrolysis.
- The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Furthermore, abnormal temperature rises caused by adiabatic compression may result in the burst of the tube.
- The value of the minimum bending radius is measured at the temperature of 20°C as shown in the figure above.

Model/Specifications

● — 20 m roll □ — 100 m roll

Model	TUH0428	TUH0644	TUH0858	TUH1073	TUH1288
O.D. (mm)	4	6	8	10	12
I.D. (mm)	2.8	4.4	5.8	7.3	8.8

Black (B)	●	●	●	●	●
White (W)	□	□	□	□	□
Blue (BU)	□	□	□	□	□
Translucent (N)	□	□	□	□	□

Fluid	Air				
Max operating pressure (at 20°C)	0.8 MPa				
Applicable fittings	One-touch fittings				
Min. bending radius (mm)	10	18	24	30	36
Burst pressure	Refer to the burst pressure characteristics curve.				
Operating temperature	-20 to 60°C				
Material	Polyurethane				

How to Order

TUH0644 **B** - **20**

Tubing model ●

● Length per roll

Symbol	Length
20	20 m roll
100	100 m roll

● Color

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

K□

M□

H□

KK

D□

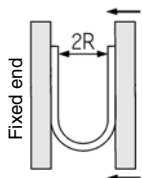
MS

LQ

MQR

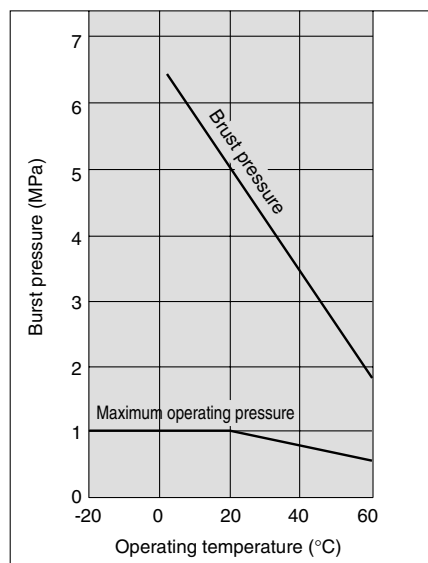
T□

Hard Polyurethane Tubing/High Pressure Type Series *TUH*



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

Burst Pressure Characteristics Curve and Operating Pressure



⚠ Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 13 to 16 for Fittings and Tubing Precautions.

⚠ Caution

- Please consult with SMC regarding other fluids. Because ester polyurethane is used, water cannot be used due to the occurrence of hydrolysis.
- The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Furthermore, abnormal temperature rises caused by adiabatic compression may result in the burst of the tube.
- The value of the minimum bending radius is measured at the temperature of 20°C as shown in the figure above.

Model/Specifications

● — 20 m roll □ — 100 m roll

Model	TUH0425	TUH0604	TUH0805	TUH1065	TUH1208
O.D. (mm)	4	6	8	10	12
I.D. (mm)	2.5	4	5	6.5	8

Black (B)	●	□	●	□	●
White (W)	●	□	●	□	●
Blue (BU)	●	□	●	□	●
Translucent (N)	●	□	●	□	●

Fluid	Air				
Max operating pressure (at 20°C)	1.0 MPa				
Applicable fittings	One-touch fittings, Insert fittings, Self-align fittings, Miniature fittings				
Min. bending radius (mm)	10	15	20	27	35
Burst pressure	Refer to the burst pressure characteristics curve.				
Operating temperature	-20 to 60°C				
Material	Polyurethane				

How to Order

TUH0604 **B** - **20**

Tubing model ●

● Length per roll

Symbol	Length
20	20 m roll
100	100 m roll

● Color

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

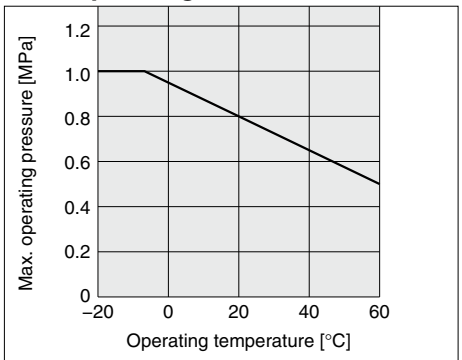
FDA (U.S. Food and Drug Administration) and (EU) No 10/2011 Compliant Polyurethane Tubing



In compliance with the FDA's (U.S. Food and Drug Administration) § 177.2600 dissolution test and the (EU) No 10/2011 dissolution test

- Color variations: Black, White, Red, Blue, Yellow, Green, Clear, and Orange
- Size variations (O.D./mm): $\varnothing 4$, $\varnothing 6$, $\varnothing 8$, $\varnothing 10$, and $\varnothing 12$
- Length per roll: 20 m

Max. Operating Pressure



Model

● - 20 m roll

Model	Tubing size (Metric size)				
	TU0425	TU0604	TU0805	TU1065	TU1208
O.D. [mm]	4	6	8	10	12
I.D. [mm]	2.5	4	5	6.5	8
Black (B)	●	●	●	●	●
White (W)	●	●	●	●	●
Red (R)	●	●	●	●	●
Blue (BU)	●	●	●	●	●
Yellow (Y)	●	●	●	●	●
Green (G)	●	●	●	●	●
Clear (C)	●	●	●	●	●
Orange (YR)	●	●	●	●	●

⚠ Precautions

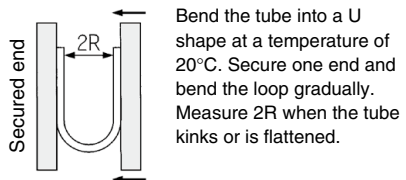
Be sure to read this before handling the products. For safety instructions and fittings & tubing precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: <https://www.smcworld.com>

Specifications

Fluid	Air, Water				
Max. operating pressure [MPa]	20°C	0.8			
	40°C	0.65			
	60°C	0.5			
Applicable fittings	One-touch fittings, Insert fittings, Miniature fittings				
Min. bending radius [mm]	10	15	20	27	35
Operating temperature	-20 to +60°C, Water: 0 to 40°C (No freezing)				
Material	Polyurethane				

⚠ Caution

- Applicable for general industrial water. Please consult with SMC if using any other kind of fluid. Also, the surge pressure must not exceed the maximum operating pressure. If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes.
- Abnormal temperature rises caused by adiabatic compression may result in the tube bursting.
- The value of the minimum bending radius is measured at the temperature of 20°C as shown in the figure below.



How to Order

TU0425 BU - 20 - X214

Tubing model

Model	O.D. x I.D. [mm]
TU0425	4 x 2.5
TU0604	6 x 4
TU0805	8 x 5
TU1065	10 x 6.5
TU1208	12 x 8

● FDA (U.S. Food and Drug Administration) and (EU) No 10/2011 compliant

● 20 m roll


● Color

Symbol	Color	Symbol	Color
B	Black (Opaque)	Y	Yellow (Opaque)
W	White (Opaque)	G	Green (Opaque)
R	Red (Translucent)	C	Clear (Material color)
BU	Blue (Translucent)	YR	Orange (Opaque)

* Note that the model number is not printed on the tube body.

TU-X214



 **Safety Instructions** Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.