



Table of Contents - Tubing

■ Tubing Page TUB-1 to 22

TIA	Nylon Tubing—Inch	TUB-1
T	Nylon Tubing—Metric	TUB-2
TISA	Soft Nylon Tubing—Inch	TUB-3
TS	Soft Nylon Tubing—Metric	TUB-4
TIUB	Polyurethane Tubing—Inch	TUB-5
TU	Polyurethane Tubing—Metric	TUB-6
TUS	Soft Polyurethane Tubing—Metric	TUB-7
TUH	Hard Polyurethane Tubing— Metric	TUB-8
TCU	Polyurethane Coil Tubing—Metric	TUB-10
TFU	Polyurethane Flat Tubing—Metric	TUB-12
TPH	Clean Tubing: Polyolefin Tubing	TUB-13
TPS	Clean Tubing: Soft Polyolefin Tubing	TUB-14
TAS	Antistatic Nylon Tubing	TUB-15
TAU	Antistatic Polyurethane Tubing	TUB-16
TIRS	Flame Resistant Soft Nylon Tubing—Inch	TUB-17
TRS	Flame Resistant Nylon Tubing—Metric	TUB-18
TRB	Flame Resistant Double Layer Tubing—Metric....	TUB-19
TRBU	Flame Resistant Double Layer Polyurethane Tubing—Metric ...	TUB-20
PEAPP	Polyurethane Tubing—Inch/Metric	TUB-21
Related Equipment	TUB-22

Nylon Tubing (Inch)

Series TIA

For general use



How to Order

TIA 07 B 33

Tube size

Colors indication

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

Length per roll

Symbol	Length
33	100ft
153	500ft
305	1000ft

• Longer lengths available upon request

Model	TIA01	T0425	TIA05	TIA07	T0806	TIA11	TIA13
O.D. inch	1/8	5/32 (4mm)	3/16	1/4	5/16 (8mm)	3/8	1/2
I.D. inch	0.086	0.098 (2.5mm)	0.137	0.18	0.236 (6mm)	0.275	0.378
Min. bending radius inch	0.59	0.51 (13mm)	0.79	1.18	1.89 (48mm)	2.36	2.95

Length

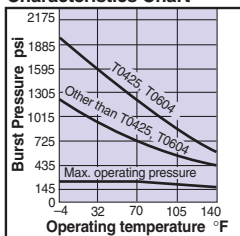
Length	TIA01	T0425	TIA05	TIA07	T0806	TIA11	TIA13
100ft (33m)	Roll		Roll	Roll		Roll	Roll
20m		Roll			Roll		
100m		Roll			Roll		
500ft (153m)	Roll		Roll	Roll		Reel	Reel
1000ft (305m)	Reel		Reel	Reel		Reel	Reel

Roll Reel

Specifications

Operating fluid	Air, Water
Max. operating pressure	218psi (1.5MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C) Water: 32° to 105°F (0° to 40°C) (With no freezing)
Material	Nylon 12
Hardness	Shore D 70

Burst Pressure Characteristics Chart



Nylon Tubing (Metric)

Series T

How to Order

For general use



T 04 25 B 20

Tube O.D.
Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m (Black & White only)

• Longer lengths available upon request

Colors indication

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

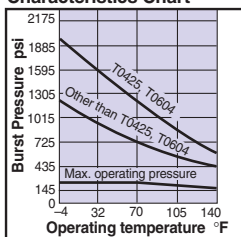
Model	T0425	T0403	T0604	T0645	T0806	T1075	T1209	T1613
O.D. mm	4	4	6	6	8	10	12	16
I.D. mm	2.5	3	4	4.5	6	7.5	9	13
Min. bending radius mm	13	25	24	36	48	60	75	100
Length								
20m	□	□	□	□	□	□	□	□
100m	□	□	□	□	□	□	□	●

□ Roll ● Reel

Specifications

Operating fluid	Air, Water
Max. operating pressure	218psi (1.5MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C) Water: 32° to 105°F (0° to 40°C) (With no freezing)
Material	Nylon 12
Hardness	Shore D 70

Burst Pressure Characteristics Chart



Soft Nylon Tubing (Inch)

Series TISA

All-purpose tubing using Soft Nylon compound for added flexibility



How to Order

TISA 07 B 20

Tube size

Length per roll

Symbol	Length
20	20m

Colors indication

Symbol	Color
B	Black
W	White

• Longer lengths available upon request

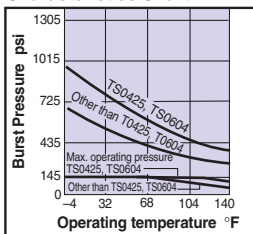
Model	TISA01		TISA05	TISA07		TISA11	TISA13
O.D. inch	1/8		3/16	1/4		3/8	1/2
I.D. inch	0.086		0.137	0.18		0.275	0.378
Min. bending radius inch	0.47		0.59	0.91		1.18	1.57
Length							
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Roll Reel

Specifications

Operating fluid	Air
Max. operating pressure	145 psi (1MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)
Material	Nylon 11, Nylon 12
Hardness	Shore D 70

Burst Pressure Characteristics Chart



Soft Nylon Tubing (Metric)

Series TS

How to Order

All-purpose tubing using Soft Nylon compound for added flexibility



TS 04 25 B 20

Tube I.D. Tube O.D.

Length per roll

Symbol	Length
20	20m
100	100m (Black & White only)

• Longer lengths available upon request

Colors indication

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

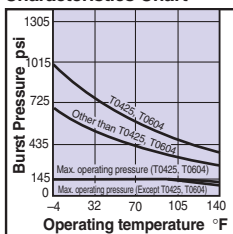
Model	TS0425	TS0604	TS0806	TS1075	TS1209	TS1612
O.D. mm	4	6	8	10	12	16
I.D. mm	2.5	4	6	7.5	9	12
Min. bending radius mm	12	15	23	27	31	60
Length						
20m	□	□	□	□	□	□
100m	□	□	□	□	□	●
150m				●		
200m			●			
500m	●	●				

□ Roll ● Reel

Specifications

Operating fluid	Air
Max. operating pressure	145psi (1MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)
Material	Nylon 11, Nylon 12
Hardness	Shore D 70

Burst Pressure Characteristics Chart



Polyurethane Tubing (Inch)

Series TIUB

How to Order



TIUB 05 BU 20

Tube size

Length per roll

Symbol	Length
20	66ft
33	100ft
153	500ft
305	1000ft

Colors indication

Symbol	Color	Symbol	Color
B	Black	Y	Yellow
W	White	G	Green
R	Red	C	Clear
BU	Blue	YR	Orange

Refer to Best Pneumatics for other 21 available colors.

- Longer lengths available upon request
- 33, 153 and 305 are stocked item.

Model	TIUB01	TU0425	TIUB05	TIUB07	TU0805	TIUB11	TIUB13
O.D. inch	1/8	5/32 (4mm)	3/16	1/4	5/16 (8mm)	3/8	1/2
I.D. inch	0.08	0.1 (2.5mm)	0.13	0.17	0.2 (5mm)	0.25	0.33
Min. bending radius inch	0.39	0.39 (10mm)	0.6	0.91	0.79 (20mm)	1.06	1.38

Length

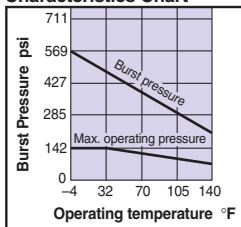
Length	TIUB01	TU0425	TIUB05	TIUB07	TU0805	TIUB11	TIUB13
66ft (20m)	□	□	□	□	□	□	□
100ft (33m)	□	□	□	□	□	□	□
500ft (153m)	□	□	□	□	●	●	●
1000ft (305m)	●	●	●	●	●	●	●
500m		●			●		

□ Roll ● Reel

Specifications

Operating fluid	Air, Water
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C) Water: 32° to 105°F (0° to 40°C) (With no freezing)
Material	Polyurethane
Hardness	Shore A95

Burst Pressure Characteristics Chart



Polyurethane Tubing (Metric)

Series TU

How to Order



TU 04 25 BU 20

Tube O.D. ↓

Tube I.D. ↓

Length per roll ↓

Symbol	Length
20	20m
33	33m
100	100m
153	153m
305	305m
500	500m

Colors indication ↓

Symbol	Color	Symbol	Color
B	Black	Y	Yellow
W	White	G	Green
R	Red	C	Clear
BU	Blue	YR	Orange

- Longer lengths available upon request
- 20m and 100m are stocked item.

Refer to Best Pneumatics for other 21 available colors.

Model	TU0425	TU0604	TU0805	TU1065	TU1208
O.D. mm	4 (5/32 inch)	6	8 (5/16inch)	10	12
I.D. mm	2.5	4	5	6.5	8
Min. bending radius mm	10	15	20	27	35

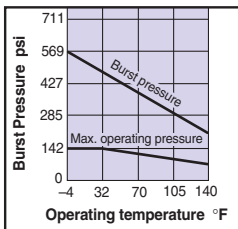
Length	TU0425	TU0604	TU0805	TU1065	TU1208
20m	□	□	□	□	□
33m	□		□		□
100m	□	□	□	□	□
153m	□		□		□
305m	●		●		●
500m	●	●	●		

□ Roll ● Reel

Specifications

Operating fluid	Air, Water
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C) Water: 32° to 105°F (0° to 40°C) (With no freezing)
Material	Polyurethane
Hardness	Shore A95

Burst Pressure Characteristics Chart



Made to Order

Reel			X3
100m roll			
O.D.	I.D.	Model	
4	2.5	TU0425□-100-X3	□ B (Black)
6	4	TU0604□-100-X3	W (White)
8	5	TU0805□-100-X3	R (Red)
10	6.5	TU1065□-100-X3	BU (Blue)
12	8	TU1208□-100-X3	Y (Yellow)
			G (Green)
			C (Transparent)
			YR (Orange)

Clean Series 10-

Only available in 20m rolls. (Example) 10-TU0425W-20



How to Order

Suitable for environments where extreme flexibility is required



TUS 10 65 B-100

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m (Black and Blue only)

Color indication

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

• Longer lengths available upon request.

Note 1) Not transparent but translucent owing to the material.

Model	TUS0425	TUS0604	TUS0805	TUS1065	TUS1208
O.D. mm	4	6	8	10	12
I.D. mm	2.5	4	5	6.5	8
Min. bending radius mm	8	15	15	22	29

Length

20m

100m

□ Roll ● Reel

Specifications

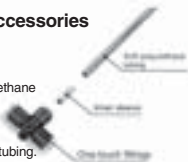
Operating fluid	Air					
Max. operating pressure	87psi (0.6MPa) at 68°F (20°C)					
Burst pressure	Refer to burst pressure characteristics curve					
Applicable fitting	One-touch fitting, insert fittings, hose nipple					
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)					
Material	Polyurethane					
Tubing drawing strength N (with one-touch fitting)	Without inner sleeve	15	60	60	85	110
	With inner sleeve	80	230	250	300	480

TUS Related Accessories

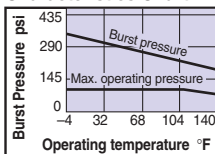
Inner Sleeve

Series TJ

Reinforces soft polyurethane tubing connected to One-touch fitting. Insert an inner sleeve into soft polyurethane tubing.



Burst Pressure Characteristics Chart



Model

Model	Applicable tubing model	Length mm
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 plating)
Wall thickness	0.2mm

Standard



Increased flow capability as compared to SMC's standard polyurethane tubing

(Compared with polyurethane tubing TU0805: O.D. 8mm, length 1m)

How to Order

TUH 06 04 B 20

Tube O.D.

Tube I.D.

Length per roll

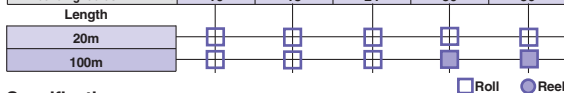
Symbol	Length
20	20m
100	100m

Color indication

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

• Longer lengths available upon request.

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
Min. bending radius mm ^{Note 3)}	10	18	24	30	36



Specifications

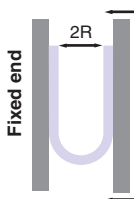
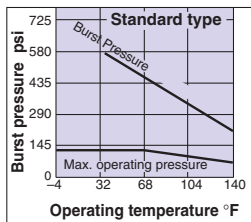
Operating fluid	Air ^{Note 1)}
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C) ^{Note 2)}
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	-4° to 140°F (-20° to 60°C)
Material	Polyurethane
Hardness	Shore D 57

Note 1) Consult SMC regarding other fluids. Can not be used for water due to occurrence of hydrolysis.

Note 2) The maximum operating pressure is the value at 68°F (20°C). Refer to the burst pressure characteristics and operating pressure curve for other temperatures. Abnormal temperature rises due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 68°F (20°C) based on the method shown in the figure below. At higher temperatures, breakage or flattening may occur even with a value larger than the minimum bending radius.

Burst Pressure Characteristics Chart



Bend the tube into U-form temperature of 68°F. Fix one end and close loop gradually. Measure 2R when the tubing starts to kink.

High pressure



How to Order

TUH 06 04 B 20

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

Color indication

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

Operating pressure is 25% higher than standard TUH Tubing

(Has the same operating pressure as series TS soft nylon tubing, and a bending strength equivalent to that of series TU polyurethane tubing.)

Model	TUH0425	TUH0604	TUH0805	TUH1065	TUH1208
O.D. mm	4	6	8	10	12
I.D. mm	2.5	4	5	6.5	8
Min. bending radius mm ^{Note 3)}	10	15	20	27	35

Length	TUH0425	TUH0604	TUH0805	TUH1065	TUH1208
20m	□	□	□	□	□
100m	□	□	□	■	■

□ Roll ● Reel

Specifications

Operating fluid	Air ^{Note 1)}
Max. operating pressure	145 psi (1.0MPa) at 68°F (20°C) ^{Note 2)}
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)
Material	Polyurethane
Hardness	Shore D 57

Note 1) Consult SMC regarding other fluids.

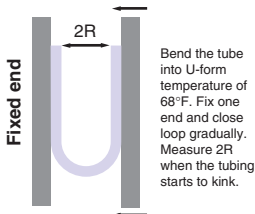
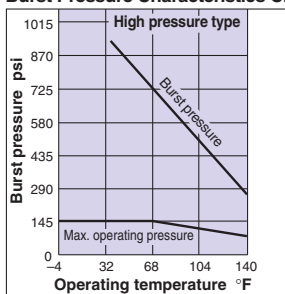
Can not be used for water due to occurrence of hydrolysis.

Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.

Abnormal temperature rises due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 68°F (20°C) based on the method shown in the figure below. At higher temperatures, breakage or flattening may occur even with a value larger than the minimum bending radius.

Burst Pressure Characteristics Chart



Ideal for use robotics
and pneumatic pick
and place
applications



How to Order

TCU 04 25 B 2

Tube O.D.

Tube I.D.

Number of tubes

Symbol	Number of tubes
1	1
2	2
3	3

Colors indication

Symbol	Color	Symbol	Color
B	Black	Y	Yellow
C	Clear	R	Red
BU	Blue	G	Green
W	White	YR	Orange

Specifications

* Colors other than Black are made to order only. See -X6 options on page TUB-11

Model	TCU 0425B-1	TCU 0425B-2	TCU 0425B-3	TCU 0604B-1	TCU 0604B-2	TCU 0604B-3	TCU 0805B-1
Number of tubes	1	2	3	1	2	3	1
Tube O.D. mm	4			6			8
Tube I.D. mm	2.5			4			5
Operating fluid	Air (Note 1)						
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C) (Note2)						
Burst pressure	Refer to burst pressure characteristics chart						
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)						
Material	Polyurethane						
Hardness	Shore A 95						

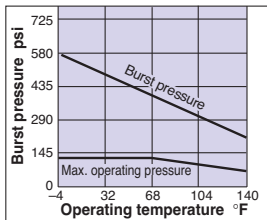
Note 1) Consult SMC regarding other fluids.

Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures. Avoid abnormal temperature rises due to adiabatic compression.

Coil Dimensions

Part No.	Tube size		Dimension of coil (mm)		Number of tubes	Number of coil windings per tube length	Max. operating length (m)
	O.D.	I.D.	L	øD			
TCU0425B-1	4	2.5	210	18	1	52	1.5
TCU0425B-2			280	28	2	35	
TCU0425B-3			265		3	22	
TCU0604B-1	6	4	325	24	1	54	2
TCU0604B-2			37	305	2	27	1.5
TCU0604B-3				3	17	1	
TCU0805B-1	8	5	330	31	1	41	2

Burst Pressure Characteristics Chart





Made to Order

Change in the Number of Coil Windings and Color

X6

Consult SMC for detailed specification, dimensions and delivery

Part No.	Tube size		Dimension of coil (mm)		Number of tubes	Number of coil windings per tube length	Max. operating length (m)
	O.D.	I.D.	L*	øD			
TCU0425□-1N-X6	4	2.5	N x 4	18	1	3 to 90	LX5.9 + 200
TCU0425□-2N-X6			N x 8	28	2	3 to 90	LX4.4 + 200
TCU0425□-3N-X6	6	4	N x 12	28	3	3 to 63	LX2.9 + 200
TCU0604□-1N-X6			N x 6	24	1	3 to 90	LX5.3 + 200
TCU0604□-2N-X6			N x 12	37	2	3 to 66	LX3.8 + 200
TCU0604□-3N-X6			N x 18	37	3	3 to 44	LX2.5 + 200
TCU0805□-1N-X6	8	5	N x 8	31	1	3 to 90	LX5.2 + 200
TCU0805□-2N-X6			N x 16	42	2	3 to 40	LX3 + 200
TCU1065□-1N-X6	10	6.5	N x 10	52	1	3 to 45	LX5 + 200
TCU1065□-2N-X6			N x 20	52	2	3 to 35	LX3 + 200
TCU1208□-1N-X6	12	8	N x 12	67	1	3 to 35	LX5 + 200
TCU1208□-2N-X6			N x 24	67	2	3 to 30	LX3 + 200

□ — B (Black), W (White), R (Red), BU (Blue), Y (Yellow), G (Green), C (Transparent), YR (Orange)

L* is calculated by the number of coils (N) x O.D.

Clean Series

10-

(Example) 10-TCU0425B-1

Polyurethane Flat Tubing (Metric)

Series TFU

How to Order

Eliminates the need for jacketing or spiral wrapping of multiple tubes



TFU 04 25 B-2

Tube O.D.

Tube I.D.

Number of rolls

Symbol	Number of rolls
2	2
3	3

Color indication

Symbol	Color
B	Black

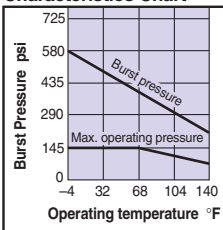
Specifications

Note 1) Consult SMC regarding other fluids.

Note 2) Avoid abnormal temperature rises due to adiabatic compression.

Model	TFU 0425B-2	TFU 0425B-3	TFU 0604B-2	TFU 0604B-3	TFU 0805B-2	TFU 0805B-3
Length per roll	2	3	2	3	2	3
Tube O.D. mm	4		6		8	
Tube I.D. mm	2.5		4		5	
Min. bending radius mm	10		15		20	
Operating fluid	Air (Note 1)					
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C)					
Burst pressure	Refer to burst pressure characteristics curve.					
Operating temperature	-4° to 140°F (-20° to 60°C) (With no condensation)					
Material	Polyurethane					
Color	Black					
Tube length per roll (m)	10					
Hardness	Shore A 95					

Burst Pressure Characteristics Chart



Made to Order

Change in the Number of Rolls and Color **X4**

10m roll

O.D.	I.D.	Number	Model
4	2.5	2 to 8	TFU0425□-2-Length per roll-10-X4
6	4	2 to 8	TFU0604□-2-Length per roll-10-X4
8	5	2 to 6	TFU0805□-2-Length per roll-10-X4
10	6.5	2 to 3	TFU1065□-2-Length per roll-10-X4
12	8	2 to 3	TFU1208□-2-Length per roll-10-X4

□ — W (White), R (Red), BU (Blue), Y (Yellow), G (Green), C (Transparent), YR (Orange)

Reel **X3**

50m & 100m roll

O.D.	I.D.	Number	Model
4	2.5	2	TFU0425□-2-50 (100)-X3
		3	TFU0425□-3-50 (100)-X3
6	4	2	TFU0604□-2-50 (100)-X3
		3	TFU0604□-3-50 (100)-X3
8	5	2	TFU0805□-2-50 (100)-X3
		3	TFU0805□-3-50 (100)-X3

50m or 100m roll □

□ — B (Black), W (White), R (Red), BU (Blue), Y (Yellow), G (Green), C (Transparent), YR (Orange)

Clean Series **10-**

(Example) 10-TFU0425B-2

How to Order

Designed to be used for blow-off and washing lines in clean room environments



TPH 06 04 B 20

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

Color indication

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

Caution

Series TP has less resistance to lithium grease and is not suitable for piping of pneumatic equipment using lithium grease.

Roll Reel

Model	TPH0425	TPH0604	TPH0806	TPH1075	TPH1209
O.D. mm	4	6	8	10	12
I.D. mm	2.5	4	6	7.5	9
Min. bending radius mm ^{Note 3)}	15	25	35	45	55
Length					
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Specifications

Operating fluid	Air, Nitrogen gas, Water (Pure water) ^{Note 1)}				
Max. operating pressure ^{Note 2)}	145psi (1.0MPa) at 68°F (20°C)		102psi (0.7MPa) at 68°F (20°C)		
Burst pressure	Refer to burst pressure characteristics chart				
Operating temperature	Air: -4° to 176°F (-20° to 80°C), Water: 32° to 176°F (0° to 80°C)				
Material	Polyolefin resin				
Hardness	Shore D 59				

Note 1) Contact SMC regarding other fluids.

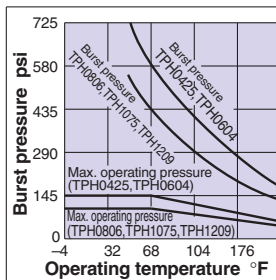
Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.

Abnormal temperature rises due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 20°C based on the method shown in the figure at the right.

At higher temperatures, breakage or flattening may occur even with a value larger than the minimum bending radius.

Burst Pressure Characteristics Chart



How to Order



⚠ Caution

Series TP has less resistance to lithium grease and is not suitable for piping of pneumatic equipment using lithium grease.

TPS 06 04 B-20

Tube O.D. ↓

Tube I.D. ↓

Length per roll

Symbol	Length
20	20m
100	100m

Color indication

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

Roll Reel

Model	TPS0425	TPS0604	TPS0805	TPS1065	TPS1208
O.D. mm	4	6	8	10	12
I.D. mm	2.5	4	5	6.5	8
Min. bending radius mm <small>Note 3)</small>	10	20	25	30	40

Length

Length	TPS0425	TPS0604	TPS0805	TPS1065	TPS1208
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specifications

Operating fluid	Air, Nitrogen gas, Water (Pure water) <small>Note 1)</small>
Max. operating pressure	102psi (0.7MPa) at 68°F (20°C) <small>Note 2)</small>
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 176°F (-20° to 80°C), Water: 32° to 176°F (0° to 80°C)
Material	Polyolefin resin
Hardness	Shore D 54

Note 1) Contact SMC regarding other fluids.

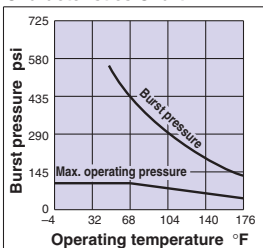
Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.

Abnormal temperature rises due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 68°F (20°C) based on the method shown in the figure at the right.

At higher temperatures, breakage or flattening may occur even with a value larger than the minimum bending radius.

Burst Pressure Characteristics Chart



Antistatic Soft Nylon Tubing

Series TAS



Antistatic Measures

Flame resistant
conductive tubing
to minimize
problems
associated with
static electricity

How to Order

TAS 10 65 B-100

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

Color indication

Symbol	Color
B	Black

• Longer lengths
available upon
request.



Model	TAS3222	TAS0425	TAS0604	TAS0805	TAS1065	TAS1208
O.D. mm	3.2	4	6	8	10	12
I.D. mm	2.2	2.5	4	5	6.5	8
Min. bending radius mm ^{Note 2)}	12	12	15	19	27	32

Length

Length	TAS3222	TAS0425	TAS0604	TAS0805	TAS1065	TAS1208
20m	□	□	□	□	□	□
100m	●	●	●	●	●	●

□ Roll ● Reel

Specifications

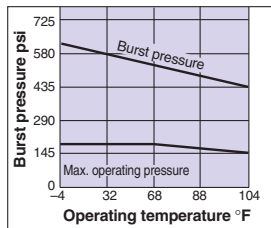
Operating fluid	Air
Max. operating pressure	174psi (1.2MPa) at 68°F (20°C) ^{Note 1)}
Burst pressure	Refer to burst pressure characteristics curve.
Operating temperature	32° to 104°F (0° to 40°C)
Material	Conductive nylon + Flame resistant nylon (Equivalent to UL-94 Standards V-0)
Surface resistance	10 ⁴ to 10 ⁷ Ω
Hardness	Shore D 48

Note 1) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.

Avoid abnormal temperature rises due to adiabatic compression.

Note 2) The value at a temperature of 68°F (20°C), with a 10% or less O.D. variable rate.

Burst Pressure Characteristics Chart





Antistatic Measures

Conductive tubing minimizes problem associated with static electricity

How to Order

TAU 10 65 B - 100

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

Color indication

Symbol	Color
B	Black



Model	TAU3220	TAU0425	TAU0604	TAU0805	TAU1065	TAU1208
O.D. mm	3.2	4	6	8	10	12
I.D. mm	2	2.5	4	5	6.5	8
Min. bending radius mm ^{Note2)}	10	10	15	20	27	35
Length						
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Roll Reel

Specifications

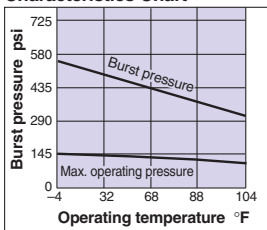
Operating fluid	Air
Max. operating pressure	131psi (0.9MPa) at 68°F (20°C) ^{Note1)}
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	32° to 104°F (0° to 40°C)
Material	Conductive polyurethane
Surface resistance	10 ⁴ to 10 ⁷ Ω
Hardness	Shore A95

Note 1) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.

Avoid abnormal temperature rises due to adiabatic compression.

Note 2) The value at a temperature of 68°F (20°C).

Burst Pressure Characteristics Chart





Flame resistant tubing for use in spot welding environments



How to Order

TIRS 07 B 20

Tube size

Colors indication

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

Length per roll

Symbol	Length
20	20m
100	100m

• Longer lengths available upon request

Roll Reel

Model	TIRS07	TRS0805	TIRS11	TIRS13
O.D. inch	1/4	5/16 (8mm)	3/8	1/2
I.D. inch	0.167	0.2 (5mm)	0.25	0.35
Min. bending radius inch	0.91	0.75 (19mm)	1.06	1.38

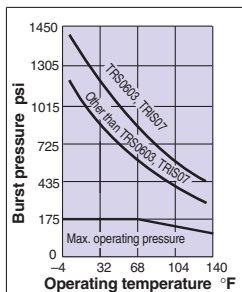
Length

Length	TIRS07	TRS0805	TIRS11	TIRS13
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/>
100m	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Specifications

Operating fluid	Air, Water
Max. operating pressure	174psi (1.2MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C), Water: 32° to 140°F (0° to 60°C)
Material	Flame resistant Nylon (UL-94 standard V-O)
Hardness	Shore D 48

Burst Pressure Characteristics Chart



FR Soft Nylon Tubing (Metric)

Series TRS

Spatter Resistant

Flame resistant tubing for use in spot welding environments



How to Order

TRS 10 65 B 20

Tube O.D.

Tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

Colors indication

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

- Longer lengths available upon request

Roll Reel

Model	TRS0603	TRS0805	TRS1065	TRS1208
O.D. mm	6	8	10	12
I.D. mm	3	5	6.5	8
Min. bending radius inch	17	19	27	32

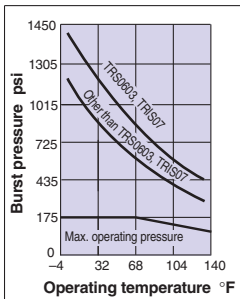
Length

Length	TRS0603	TRS0805	TRS1065	TRS1208
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Specifications

Operating fluid	Air, Water
Max. operating pressure	174psi (1.2MPa) at 68°F (20°C)
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C), Water: 32° to 140°F (0° to 60°C)
Material	Flame resistant Nylon (UL-94 standard V-O)
Hardness	Shore D 48

Burst Pressure Characteristics Chart



Spatter Resistant

Nylon

Weld spatter resistant
double layer tubing
uses flame resistant
resin for outer layer

How to Order

TRB 10 75 B 20

Inner tube O.D.
Inner tube I.D.

Colors indication

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

Length per roll

Symbol	Length
20	20m
100	100m

• Longer lengths
available upon
request

• The inner tubing
are all black.



Roll Reel

Model	TRB0604	TRB0806	TRB1075	TRB1209
Inner O.D. mm	6	8	10	12
Inner I.D. mm	4	6	7.5	9
Outer layer tube thickness mm	1	1	1	1
Min. bending radius mm <small>Note 3)</small>	15	28	35	45

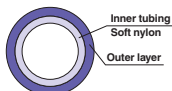
Length

Length	TRB0604	TRB0806	TRB1075	TRB1209
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Specifications

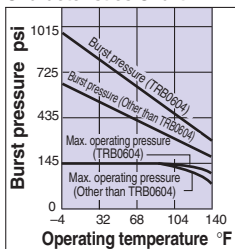
Operating fluid	Air, Water <small>Note 1)</small>
Max. operating pressure	145psi (1MPa) at 68°F (20°C) <small>Note 2)</small>
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C), Water: 32° to 140°F (0° to 60°C)
Material inner tube	Nylon 11
Material	PVC (Equivalent to UL-94, standard V-O)
Hardness	Shore D 53

- Note 1) Applicable to general industrial water.
Consult SMC if using other fluids. Surge pressure must be under the maximum operating temperature.
- Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures.
Avoid abnormal temperature rises due to adiabatic compression.
- Note 3) The value at a temperature of 20°C, with a 10% or less O.D. variable rate.



FR double layer polyurethane tubing
(Sectional view)

Burst Pressure Characteristics Chart



FR Double Layer Polyurethane Tubing (Metric)

Series TRBU

Spatter Resistant

Polyurethane

Weld spatter resistant double layer tubing uses flame resistant resin for outer layer



How to Order

TRBU 10 65 B 20

Inner tube O.D.

Inner tube I.D.

Length per roll

Symbol	Length
20	20m
100	100m

• Longer lengths available upon request

Color indication

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

• The inner tubing are all black.

Roll Reel

Model	TRBU0604	TRBU0805	TRBU1065	TRBU1208
Inner O.D. mm	6	8	10	12
Inner I.D. mm	4	5	6.5	8
Outer layer tube thickness mm	1	1	1	1
Min. bending radius mm <small>(Note 1)</small>	15	20	27	35

Length

Length	TRBU0604	TRBU0805	TRBU1065	TRBU1208
20m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100m	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Specifications

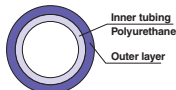
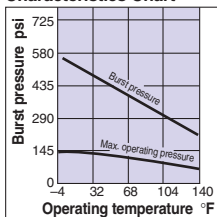
Operating fluid	Air, Water <small>Note 1)</small>
Max. operating pressure	116psi (0.8MPa) at 68°F (20°C) <small>Note 2)</small>
Burst pressure	Refer to burst pressure characteristics chart
Operating temperature	Air: -4° to 140°F (-20° to 60°C), Water: 32° to 105°F (0° to 40°C)
Material inner tube	Polyurethane
Material outer tube	Polyolefin resin (Equivalent to UL-94, standard V-O)
Hardness	Shore A 95

Note 1) Applicable to general industrial water. Consult SMC for use of other types of fluids. Keep the surge pressure below the maximum operating temperature.

Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures. Avoid abnormal temperature rises due to adiabatic compression.

Note 3) The value at a temperature of 20°C.

Burst Pressure Characteristics Chart



FR double layer polyurethane tubing (Sectional view)

Related Accessories

Tubing Cutter

Series TKS

Tool to peel off outer layer tubing.



Refer to TUB-22 for more information.



Linear low density polyethylene tubing, Industrial grade

How to Order

PEAPP 07 BU 153

Tube O.D.

Inch Sizes		Metric Sizes	
0.7	ø1/4"	04*	ø4mm (ø5/32)
11	ø3/8"	06	ø6mm
13	ø1/2"	08*	ø8mm (ø5/16)
15	ø5/8"	10	ø10mm
		12	ø12mm

* Coming soon

Note: 4mm tubing is suitable for use with 5/32" SMC One-Touch fittings as are 8mm tubing and 5/16" fittings

Length per roll

Symbol	Length
33	100' (33m)
100	250' (100m)
153	500' (153m)
305	1000' (305m)

Colors

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

Model	PEAPP04	PEAPP66	PEAPP08	PEAPP10	PEAPP12
O.D. mm	4 (5/32")	6	8 (5/16")	10	12
I.D. mm	2.5	4	5	5	9
Min. bending radius mm	25.4	31.8	38	51	63.5

Length

100 ft (33m)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250 ft (100m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
500 ft (153m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1000ft (305m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Model	PEAPP07	PEAPP11	PEAPP13	PEAPP15
O.D. mm	4 (5/32")	6	8 (5/16")	10
I.D. mm	2.5	4	5	5
Min. bending radius mm	25.4	31.8	38	51

Length

100 ft (33m)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250ft (100m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
500 ft (153m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1000ft (305m)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Roll Reel

Specifications

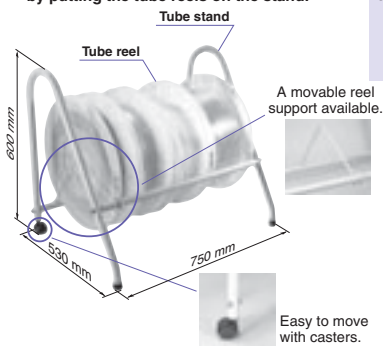
Operating fluid	Air, Water, Compatible chemicals
Operating temperature	-50 to 140°F (-45 to 60°C)
Material	Low linear density polyethylene
Hardness	Shore A A93, Shore D 45D

Tube Stand & Reel

Series TB/TBR

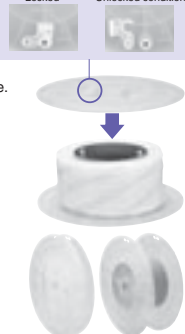
- Compact size with a small footprint.
- Installation can be easily completed by putting the tube reels on the stand.

- Easy replacement of tube



One-touch snap fit operation

Locked Unlocked condition



TB-3VS Vertical Stand



Tube Stand: TB-2



Tube Reel

Applicable tube size mm	Model
4, 6	TBR-1
8	TBR-2
10	TBR-3
12	TBR-4

TB-3VS Vertical Stand

Dimension:

37 1/4" W x 27 9/16" D x 68 11/16" H

Designed for high capacity and reel size flexibility. This stand comes with two cross bars. A third cross bar can be ordered separately (TB-3CB)

Tube Cutter

Series TK

TK-1

Applicable tube O.D.:
13mm or less



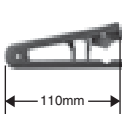
TK-2

Applicable tube O.D.:
18mm or less



TK-3 (Simple type)

Applicable tube O.D.:
12mm or less



Note) Do not use the cutter to cut metal such as wires.

Multiple Tube Holder

Series **TM**

Can be separated at any position depending on the number of tube.
Adopts flame resistant resin (Equivalent to UL-94 Standards V-0).

How to Use

⚠ Caution

- ① The multiple tube holder can be cut apart according to the number of tube to be connected.

<Cutting method>
Align the cutter with the cutting groove and cut the holder.



- ② Cut the multiple tube holder at a desired position and mount it on the equipment with the attached phillips countersunk tapping screws.
- ③ Align the tube with the holding position and push down to fit it into the holding part.
- ④ Pull up a tube to remove it from the holder.

Model

Applicable tube O.D.	Model	Number of tube (Max.)			Accessory: Phillips countersunk tapping screw	
		6	8	12	Size: nominal size X length	Number of pieces
4	TM-04			●	2 X 6	4
6	TM-06			●	2.6 X 8	
8	TM-08		●			
10	TM-10	●			3 X 8	
12	TM-12	●				

Tube Release Tool

Series **TG**

To remove tube in a confined space or from manifolded one-touch fittings.



Model	TG-1	TG-2
Applicable tube size	ø4, ø6	ø1/8", ø1/4"
Applicable tube material	Nylon, Soft nylon, Polyurethane	Nylon, Soft nylon, Polyurethane
Handle color	Blue	Red
Weight	33g	33g

Double Layer Tube Stripper

Series **TKS**

The outer layer of double layer tube is peeled off easily.



Variations

Model	Tip color	Applicable tube*
TKS-06	Orange	TRB0604, TRBU0604
TKS-08	Yellow	TRB0806, TRBU0805
TKS-10	Blue	TRB1075, TRBU1065
TKS-12	Green	TRB1209, TRBU1208

* Inner tube material

TRB: soft nylon, TRBU: polyurethane



Miniature Tubing and Miniature Fittings Specific Product Precautions

Be sure to read before handling. Refer to Page INF-1 for Safety Instructions.

Slection

Caution

1. Do not use in locations where the connected tubing will slide or rotate. This may result in damage of the fittings.
2. The tube bending radius in the vicinity of the fitting should be at least the minimum bending radius of the tubing. If bent more than the min. bending radius, tubing may fail or be crushed.
3. Do not use with fluids other than those shown in the applicable specifications. The tubing is applicable for air and general industrial water. Please consult with SMC when using with other fluids.
4. When using water, be careful than the surge pressure dose not cause the tubing to burst.

Mounting

Caution

1. Before mounting confirm the model and size, etc. Also, confirm that there are no blemishes, nicks or cracks in the product.
2. Mount so than the tubing and fittings are not subjected to twisting, pulling or moment loads, allowing sufficient leeway in the tubing length. Failure to consider this factor, can cause damage to the fittings and flattening, bursting or disconnection of the tubing.
3. All tubing is specified as immovable piping, except in the case of the coil tubing. For example, if tubing is used inside the cable carrier, any piping movement may result in increased frictional abrasion, tensile expansion, or tubing disconnection from the fittings. Please check carefully when piping.

Operation Environment

Warning

1. Do not use in locations where static electric charges will be a problem. Please consult with SMC regarding use in this kind of environment.
2. Do not use in locations where spatter occurs.
There is a danger of spatter causing a fire.
3. Do not use in environments where there is direct contact with liquids such as cutting oil, lubricating oil or coolant oil, etc. Please contact SMC regarding use in environments where there will be direct contact with cutting oil, lubricating oil or coolant oil, etc.

Maintenance

Caution

1. Check for the following during regular maintenance, and replace components as necessary.
 - a) Scratches, gouges, abrasion, corrosion
 - b) Leakage
 - c) Twisting, flattening or distortion of tubing
 - d) Hardening, deterioration or softness of tubing
2. Do not repair or patch the replaced tubing or fittings for reuse.



Miniature Tubing and Miniature Fittings

Specific Product Precautions

Be sure to read before handling. Refer to Page INF-1 for Safety Instructions.

Handling of One-touch Fittings

Caution

1. Tubing attachment/detachment for One-touch fittings
 - 1) Attaching of tube
 1. Take a tubing having no flaws on its periphery and cut it off at a right angle. When cutting the tubing, use tubing cutters TK-1, 2 or 3. Do not use pinchers, nippers or scissors, etc. If cutting is done with tools other than tubing cutters, the tubing may be cut diagonally or become flattened, etc. This can make a secure installation impossible, and cause problems such as the tubing pulling out after installation or air leakage. Allow some extra length in the tubing.
 2. The polyurethane tubing with internal pressure expands its O.D. This may result in failure of reconnection to One-touch fittings. Examine the tubing and do not cut the tubing but reconnect to the One-touch fittings when its O.D. accuracy is +0.15 or more. Make sure the tubing goes through the release bushing smoothly when reconnecting it to the One-touch fittings.
 3. Grasp the tubing and push it in slowly, inserting it securely all the way into the fitting.
 4. After inserting the tubing, pull on it lightly to confirm that it will not come out. If it is not installed securely all the way into the fitting, this can cause problems such as air leakage or the tubing pulling out.
 - 2) Detaching of tube
 1. Push in the release bushing sufficiently. When doing this, push the collar evenly.
 2. Pull out the tubing while holding down the release bushing so that it does not come out. If the release bushing is not pressed down sufficiently, there will be increased bite on the tubing and it will become more difficult to pull it out.
 3. When the removed tubing is to be used again, cut off the portion which has been chewed before reusing it. If the chewed portion of the tubing is used as is, this can cause trouble such as air leakage or difficulty in removing the tubing.
2. Tightening of M3 and M5 screws
 - 1) M3
 1. After tightening by hand, the barb fitting type should be tightened by an additional 1/4 rotation using an appropriate wrench.
 2. After tightening by hand, the barb elbow type should be tightened by an additional 1/2 rotation using an appropriate wrench.
 - 2) M5
 1. After tightening by hand, the barb fitting type should be tightened by an additional 1/6 rotation using a suitable tool.
 2. After tightening by hand, the barb elbow type should be tightened an additional 1/3 rotation using an appropriate wrench.

Over tightening can cause air leakage due to damage to the threads and/or deformation of the gasket. Under tightening can cause loose threads and air leakage, etc.



SMC Corporation of America
10100 SMC Blvd., Noblesville, IN 46060
www.smcusa.com

SMC Pneumatics (Canada) Ltd.
www.pneumatics.ca

(800) SMC.SMC1 (762-7621)

e-mail: sales@smcusa.com

For International inquires: www.smcworld.com

© 2011 SMC Corporation of America, All Rights Reserved.

All reasonable efforts to ensure the accuracy of the information detailed in this catalog were made at the time of publishing. However, SMC can in no way warrant the information herein contained as specifications are subject to change without notice.

PS-10M-RRD