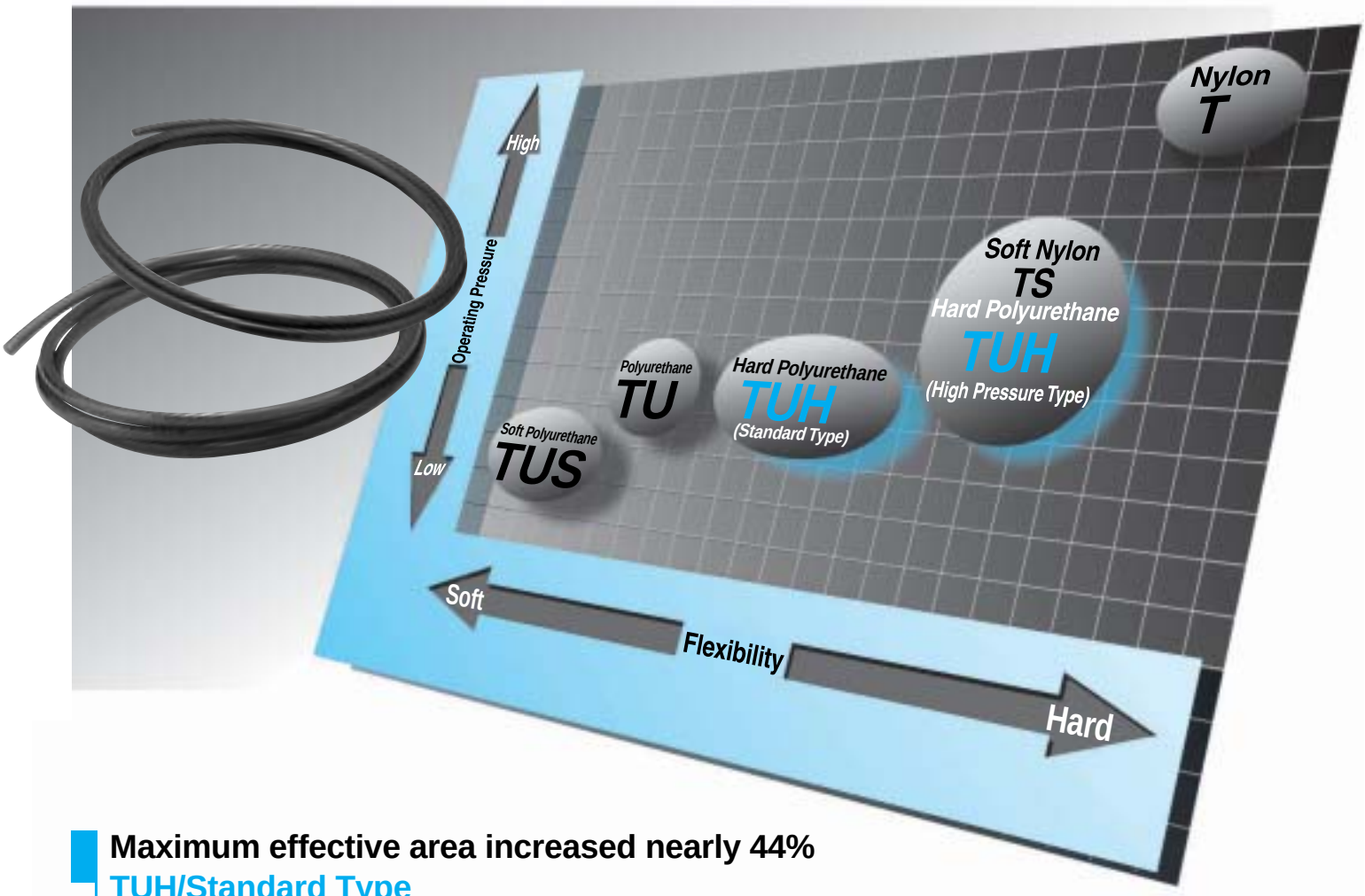
SMC

Hard Polyurethane Tubing

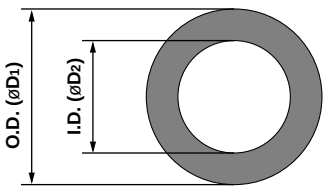
Series TUH



Maximum effective area increased nearly 44%

TUH/Standard Type

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



Tubing inside diameter comparison (mm)

Tubing O.D. (øD1)		4	6	8	10	12
Tubing I.D. (øD2)	TUH/Standard type	2.8	4.4	5.8	7.3	8.8
	TUH/High pressure type	2.5	4	5	6.5	8
	TU					

Operating pressure 1.0MPa (at 20℃)

TUH/High Pressure Type

Has the same operating pressure as series TS soft nylon tubing, and a bending radius equivalent to series TU polyurethane tubing.

Can be restored even after folding

Restoration is outstanding compared to nylon tubing, leaving no creases from folding.

Hard Polyurethane Tubing/Standard Type

Series TUH



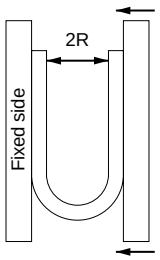
Series

● – 20m bundle ☐ – 100m bundle

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)	●	●	●	●	●

Specifications

Fluid	Air Note 1)				
Max. operating pressure (at 20℃)	0.8MPa Note 2)				
Min. bending radius mm	10	18	24	30	36
Burst pressure	Refer to the burst pressure characteristics curve.				
Operating temperature	–20 to 60℃				
Material	Polyurethane				



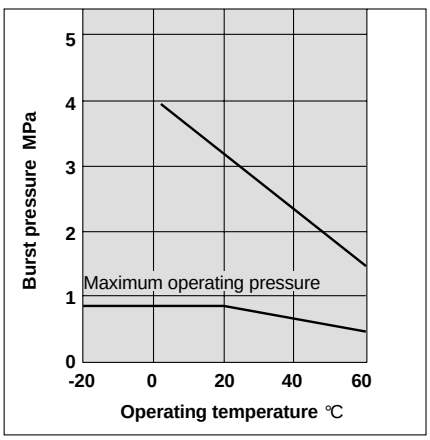
At a temperature of 20℃ bend the tubing into a U shape. Then with one side fixed, gradually close the other side and measure 2R at the point where the tubing folds or flattens, etc.

Note 1) Consult SMC regarding other fluids.
Water cannot be used due to the occurrence of hydrolysis.

Note 2) The maximum operating pressure is the value at 20℃. Refer to the burst pressure characteristic curve for other temperatures.
Furthermore, an abnormal temperature increase due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 20℃ using the method shown in the figure at the left. At higher temperatures, breakage or flattening, etc., may occur at more than the minimum bending radius.

Burst Pressure Characteristic Curve and Operating Pressure



How to Order

TUH0644 **B** — **20**

Tubing model

Color

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

Bundle length

Symbol	Length
20	20m bundle
100	100m bundle

SMC

Hard Polyurethane Tubing/High Pressure Type

Series TUH



Series

● – 20m bundle ☐ – 100m bundle

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)	●	●	●	●	●

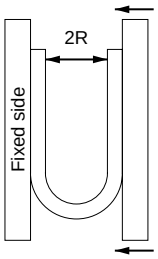
Specifications

Fluid	Air Note 1)				
Max. operating pressure (at 20℃)	1.0MPa Note 2)				
Min. bending radius mm	10	15	20	27	35
Burst pressure	Refer to the burst pressure characteristics curve.				
Operating temperature	–20 to 60℃				
Material	Polyurethane				

Note 1) Consult SMC regarding other fluids.
Water cannot be used due to the occurrence of hydrolysis.

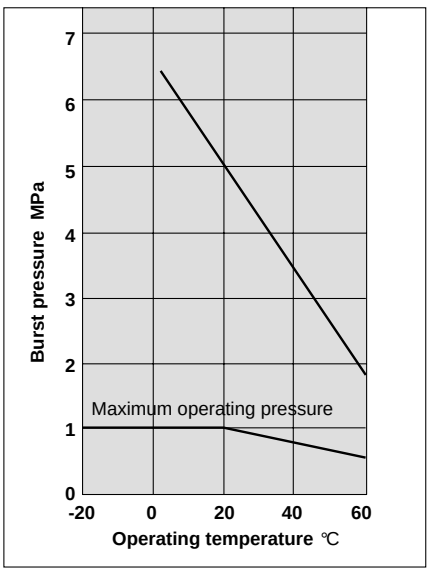
Note 2) The maximum operating pressure is the value at 20℃. Refer to the burst pressure characteristic curve for other temperatures.
Furthermore, an abnormal temperature increase due to adiabatic compression can cause tubing to burst.

Note 3) The minimum bending radius is measured at 20℃ using the method shown in the figure at the left. At higher temperatures, breakage or flattening, etc., may occur at more than the minimum bending radius.



At a temperature of 20℃ bend the tubing into a U shape. Then with one side fixed, gradually close the other side and measure 2R at the point where the tubing folds or flattens, etc.

Burst Pressure Characteristic Curve and Operating Pressure



How to Order

TUH0604 B – 20

Tubing Model

Color

Symbol	Color
B	Black
W	White
BU	Blue
N	Translucent

Bundle length

Symbol	Length
20	20m bundle
100	100m bundle

Series TUH
Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by a label of **"Caution", "Warning" or "Danger"**. To ensure safety, be sure to observe ISO 4414 Note 1), JIS B 8370 Note 2) and other safety practices.

⚠ Caution : Operator error could result in injury or equipment damage.

⚠ Warning : Operator error could result in serious injury or loss of life.

⚠ Danger : In extreme conditions, there is a possible result of serious injury or loss of life.

Note 1) ISO 4414 : Pneumatic fluid power – Recommendations for the application of equipment to transmission and control systems.

Note 2) JIS B 8370 : General Rules for Pneumatic Systems.

⚠ Warning

1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic systems should be performed by trained and experienced operators.

3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.

1. Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
3. Before machinery/equipment is re-started, take measures to prevent shooting-out of cylinder piston rod etc. (Bleed air into the system gradually to create back-pressure.)

4. Contact SMC if the product is to be used in any of the following conditions:

1. Conditions and environments beyond the given specifications, or if product is used outdoors.
2. Installation on equipment in conjuction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, press applications, or safety equipment.
3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

Series TUH
Fitting and Tubing Precautions 1

Be sure to read before handling.

Selection

⚠ Warning

1. Confirm the specifications.

The products appearing in this catalogue are designed for use only in compressed air systems (including vacuum).

Do not use outside the specified ranges of pressure, temperature, etc., as this may cause damage or malfunction (Refer to specifications.)

Consult with SMC if fluids other than compressed air (including vacuum) are to be used.

⚠ Caution

1. Do not use in locations where the connecting thread section and tube connecting section will slide or rotate. The connecting thread section and tube connecting section will come apart under these conditions. Use rotary One-touch fittings (Series KS, KX) in locations that slide or rotate.

2. Use tubing at or above the minimum bend radius. Using below the minimum bend radius can cause breakage or flattening of the tube.

3. Do not use with gas, gas fuels, and flamable, explosive or poisonous fluids such as refrigerants. These may percolate through the tubing and be released to the outside.

4. Water cannot be used due to the occurrence of hydrolysis.
Use nylon or polyurethane tubing for general industrial water.
Furthermore, consult SMC regarding use with any fluids other than air.

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. When connecting a tube, consider factors such as changes in the tubing length due to pressure, and allow sufficient leeway.

3. Mount so that fittings and tubes are not subjected to twisting, pulling or moment loads. This can cause damage to fittings and flattening, bursting or disconnection of tubing, etc.

4. Mount so that tubing is not damaged due to tangling or abrasion.
This can cause flattening, bursting or disconnection of tubing, etc.

Piping

⚠ Caution

1. Preparation before piping

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil and other debris from inside the pipe.

2. Wrapping of pipe tape

When screwing together pipes and fittings, etc., be certain that chips from the pipe threads and sealing material do not get inside the piping.

Further, when pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end of the pipe.

Air Supply

⚠ Warning

1. Types of fluid

This product is designed for use with compressed air. Consult SMC if a different fluid is to be used.

Consult SMC regarding products for use with general purpose fluids, to confirm which fluids can be used.

2. When there is a large amount of drainage.

Compressed air containing a large amount of drainage can cause the malfunction of pneumatic equipment. An air dryer or Drain Catch should be installed upstream from filters.

3. Drain management

If air filter drains are not flushed regularly, the drainage will flow downstream leading to the malfunction of pneumatic equipment.

In cases where the management of drain flushing will be difficult, the use of filters with automatic drains is recommended.

For details on the quality of compressed air mentioned above, refer to SMC's "Compressed Air Cleaning Systems" catalog.

4. Types of air

Do not use compressed air containing chemicals, synthetic oil which includes organic solvents, salt, corrosive gases, etc., as this can cause damage or malfunction.

Operating Environment

⚠ Warning

1. Do not use ordinary fittings in locations where static electric charge will cause a problem. This can cause defects or failure of the system, etc. In this kind of location, the use of antistatic fittings (Series KA) and antistatic tubing (Series TA) is recommended.

2. Do not use ordinary One-touch fittings in locations where spatter is generated. There is a danger of spatter causing a fire. In this kind of location, the use of flame resistant fittings (Series KR, KRM) and flame resistant tubing (Series TRS, TRB, TRBU) is recommended.

3. Do not use in environments where there is direct contact with liquids such as cutting oil, lubricating oil or coolant oil, etc. Consult SMC regarding use in environments where there will be direct contact with liquids such as these.

Maintenance

⚠ Caution

1. Make periodic inspections to check for the following problems, and replace parts as necessary.

a) Blemishes, Nicks, Abrasion, Corrosion
b) Air leakage
c) Twisting, flattening or tangling of the tubing
d) Hardening, deterioration or softening of the tubing

2. Do not attempt to patch or repair fittings and tubing which have been replaced.

Series TUH/Specific Product Precautions 1

Be sure to read before handling.

Refer to pages 3 and 4 for safety instructions and fitting and tubing precautions.

Precautions on Usage

⚠ Caution

1. Water cannot be used due to the occurance of hydrolysis.

   Use nylon or polyurethane tubing for general industrial water.

   Furthermore, consult SMC regarding use with any fluids other than air.

2. The maximum operating pressure is the value at 20℃. Refer to the burst pressure characteristic curve for other temperatures.

   Furthermore, an abnormal temperature increase due to adiabatic compression can cause tubing to burst.

3. The minimum bending radius indicates the value at which the tubing will fold at a temperature of 20℃. At higher temperatures, the tubing may fold at more than the minimum bending radius.

4. Store away from direct sunlight in a location at no more than 40℃.

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Specifications are subject to change without prior notice
and any obligation on the part of the manufacturer.