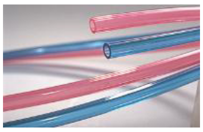
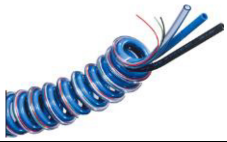
# PIPING FOR PNEUMATIC EQUIPMENT

NEW!

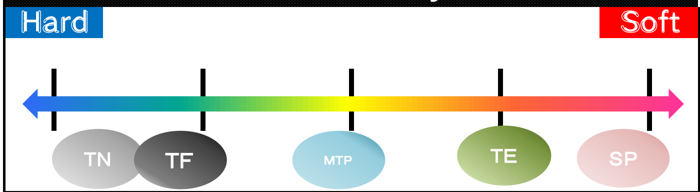
CHIYODA

# ■INDEX

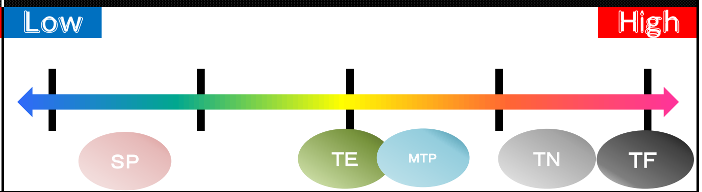
| Material | Polyurethane | | | |
|---|---|---|---|---|
| Item Name | Touch Tube（ＴＥ） | MegaTouch Tube | Soft Polyurethane | Antistatic tube |
| |  |  |  |  |
| Publication page | Ｐ２ | Ｐ３ | Ｐ４ | Ｐ５ |
| Material | Polyurethane | Nylon | Fluorine Resin | Polyurethane |
| Item Name | Hot water resistance Tube | Nylon Tube | Fluorine Resin Tube | Twin Touch Tube |
| |  |  |  |  |
| Publication page | Ｐ６ | Ｐ７ | Ｐ８ | Ｐ９ |
| Material | Polyurethane | | | |
| Item Name | Multi Flat Tube | Multi Straight Tube | Slit Straight Tube | Slit spiral tube |
| |  |  |  |  |
| Publication page | Ｐ１０ | Ｐ１１ | Ｐ１２ | Ｐ13 |
| Material | Polyurethane | | | Bonding, Protection Tube |
| Item Name | Spiral Tube | Multi multi spiral | Soft Multi Spiral | Zip Wrap |
| |  |  |  |  |
| Publication page | Ｐ１４～　１５ | Ｐ１６～１８ | Ｐ１９ | Ｐ２０ |

# ■Performance Comparison Chart

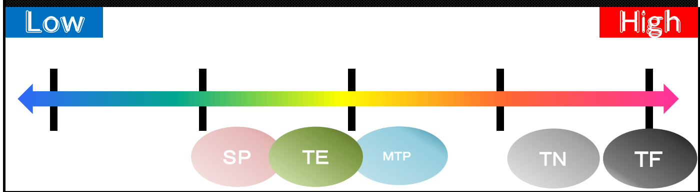
## Flexibility



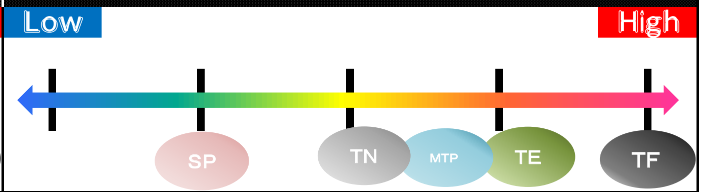

## Pressure Resistance



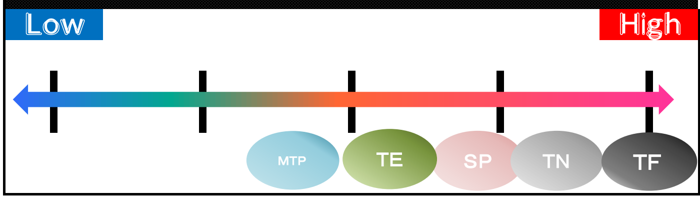

## Hear Resistance



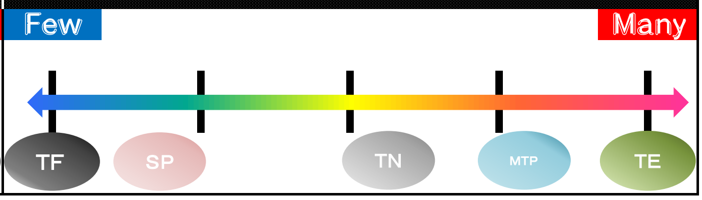

## Water Resistance




## Oil Resistance

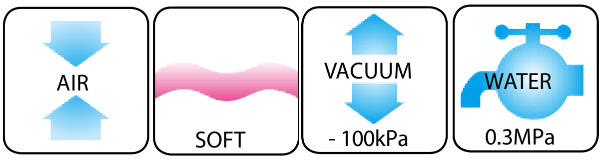



## Variation



# TE HYDROLYSIS RESISTANT POLYURETHANE TUBING

TE




圧縮空気 柔軟性 真空 工業用水

## ■Specification

| Media | Compressed Air | Industrial Water | Vacuum |
|---|---|---|---|
| Working Temperature Range | -5～60 ℃ | 5～40 ℃ | -5～60 ℃ |
| Max. Burst Pressure | 3 MPa | | |
| MAX. Working | 0.8 MPa | 0.3 MPa | -100 kPa |

* Industrial Water is considered a waterhammer.

The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- Industry-leading O.D accuracy
- Meter printing at 1m spacing with cut mark. The remaining number can be confirmed.
- Excellent in water resistance, can be piping regardless of air or Industrial.
- Flexible, very small bend radius that is difficult to break.
- Excellent in mechanical strength, especially abrasion resistance, ideal for equipment piping and robotic piping.

【Cut mark display


| Model | | TE-4×2.5 | TE-6 | TE-8 | TE-10 | TE-12 | TE-16 |
|---|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 | 16 |
| | I.D(mm) | 2.5 | 4 | 5 | 6.5 | 8 | 11 |
| Min. Turning Radius(mm) | | 5 | 12 | 15 | 25 | 28 | 30 |
| Tolerance(mm) | | ± 0.1 | | | + 0.1 / - 0.15 | | |
| Weight(g/m) | | 9 | 19 | 37 | 55 | 76 | 127 |

## ■Model

TE – 6 BK – 20

**Tube O.D**

| Symbol | O.DxI.D |
|---|---|
| 4 | 4 x 2. 5 |
| 6 | 6 x 4 |
| 8 | 8 x 5 |
| 10 | 10 x 6. 5 |
| 12 | 12 x 8 |
| 16 | 11 x 16 |

**Colors**

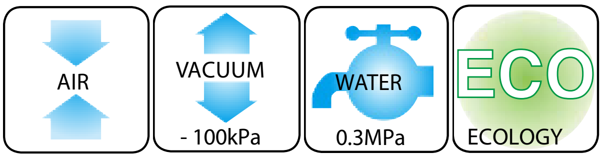
| Symbol | Standard | Symbol | Standard | Symbol | Standard |
|---|---|---|---|---|---|
| BK | Black | LB | Blue | CR | Transparent Red |
| CBL | Transparent Blue | Y | Yellow | CY | Transparent Yellow |
| C | Transparent | W | White | CG | Transparent Green |
| R | Red | LG | Light Green | | |
| OR | Orange | G | Green | | |

※ Transparent Red (CR), transparent yellow (CY), Transparent green (CG) only 16mm is not stocked.

**1 Roll Length**

| Symbol | Length |
|---|---|
| 20 | 【20m Roll】  |
| 100 | 【100m Roll】  |

# MEGA TOUCH POLYURETHANE TUBING MTP




圧縮空気　真空　工業用水　省エネルギー

## ■Specification

| Media | Compressed Air | Industrial Water | Vacuum |
|---|---|---|---|
| Working Temperature Range | -5～60 ℃ | 5～40 ℃ | -5～60 ℃ |
| Max. Burst Pressure | 4 MPa | | |
| MAX. Working Pressure | 1 MPa | 0.3 MPa | -100 kPa |

* Industrial Water is considered a waterhammer.

The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- The inside diameter is larger than the urethane tube of the same outside diameter.
- It is possible to take measures against power shortage (power up) or downsizing.
- Cut mark included Meter printed at 1m intervals. You can check the remaining number.


| Outer Diameter 8mm Tube Comparison | | | |
|---|---|---|---|
| | Standard TE－8 | Mega Tube MTP－8 | Standard TE－10 |
| O.D | 8mm | 8mm | 10 |
| I.D | 5mm | 6mm | 6．5mm |

The conventional product, with an outer diameter of 8 mm, has an inner diameter of 5 mm. When Mega Touch Tube MTP-8 is used, the inner diameter size increases to 6 mm and the flow rate increases.

| Model | | MTP-4 | MTP-6 | MTP-8 | MTP-10 | MTP-12 |
|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2.5 | 4.5 | 6 | 7.5 | 9 |
| | Min. Radius of Curvature(mm) | 5 | 12 | 15 | 25 | 28 |
| | O.D Accuracy(mm) | ± 0.1 | | | ＋ 0.1 / - 0.15 | |
| | Weight(g/m) | 10 | 15 | 28 | 42 | 62 |

## ■ Model Display Example

MTP－ 6 BK － 20

### Tube O.D

| | O.D x I.D |
|---|---|
| 4 | 4 x 2．5 |
| 6 | 6 x 4.5 |
| 8 | 8 x 6 |
| 10 | 10 x 7．5 |
| 12 | 12 x 9 |

### Color

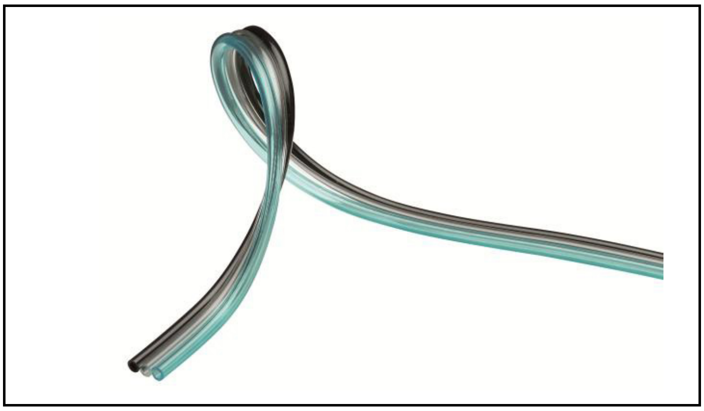
| | Standard Color | | Standard Color |
|---|---|---|---|
| BK | Black | LB | Blue |
| C | Transparent | Y | Yellow |
| R | Red | W | White |
| LG | Light Green | G | Green |

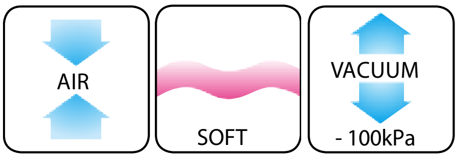
### 1 Roll

| | Length |
|---|---|
| 20 |  |
| 100 |  |

# SOFT POLYURETHANE
# SP TUBING

SP






圧縮空気 柔軟性 真空

## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| Burst Pressure | 1.7 MPa | |
| Maximum working pressure | 0.4 MPa | -100 kPa |

※ The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- Extremely soft and narrow piping is possible.
- One-touch fittings can be used by using the inner support.
- Cut mark included Meter printed at 1m intervals. You can check the remaining number.

【Cut Mark Displayed】


| Model | | SP-4 | SP-6 |
|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 |
| | I.D(mm) | 2.5 | 4 |
| | |  |  |
| | Minimum Radius of Curvature(mm) | 17 | 28 |
| | O.D Accuracy(mm) | ＋0.05 -0.2 | |
| | Weight(g/m) | 9 | 19 |

Inner support insertion proc

Inner Support

1Pack：10Pcs

| | | Model |
|---|---|---|
|  | SP-4 | IS-4 |
| | SP-6 | IS-6 |

## ■ Model Display Example

SP－ 6 BK － 20

Tube O.D

| | O.D x I.D |
|---|---|
| 4 | 4 x 2．5 |
| 6 | 6 x 4 |

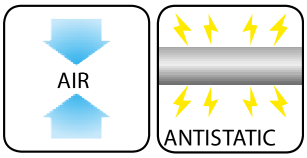
Color

| | Standard Color | |
|---|---|---|
| BK | Black |  |
| C | Transparent |  |
| CB | Transparent ブルー |  |

1Roll

| | Length |
|---|---|
| 20 |  |
| 100 |  |

# ANTISTATIC TUBING TE-EP



圧縮空気　帯電防止

## ■Specification

| | |
|---|---|
| Media | Compressed Air |
| Working Temperature Range | -5～60 ℃ |
| Burst Pressure | 3 MPa |
| Maximum working pressure | 0.8 MPa |
| Volume Resistivity | Under $10^{10}\Omega\cdot cm$ ＊ |

※ The resistance value of the tube may differ depending on the moisture absorption condition of the polyurethane material.
※Freezing Nothing

## ■Features

- Prevent static charge and prevent adhesion of dust etc.
- Main material TE tube adopted. There is flexibility.

| Model | | TE-4-EP | TE-6-EP | TE-8-EP | TE-10-EP | TE-12-EP |
|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2.5 | 4 | 5 | 6.5 | 8 |
| Min. Radius of Curvature(mm) | | 10 | 15 | 20 | 25 | 30 |
| O.D Accuracy(mm) | | ±0.1 | | | +0.1 -0.15 | |
| Weight(g/m) | | 9 | 19 | 37 | 55 | 76 |

## ■ Model Display Example

TE－ 6 － EP 20

**Tube O.D**

| | O.D x I.D |
|---|---|
| 4 | 4 x 2．5 |
| 6 | 6 x 4 |
| 8 | 8 x 5 |
| 10 | 10 x 6．5 |
| 12 | 12 x 8 |

**1 Roll Length**

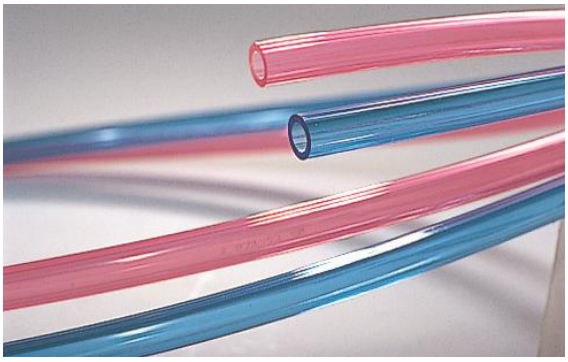
| | Length |
|---|---|
| 10 |  |
| 20 | |
| 100 |  |

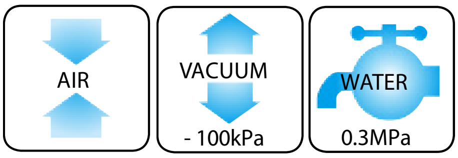
**Color**

Standard Color：BlackColor

# POLYURETHANE TUBING
# P-FLEX SERIES

P






圧縮空気　真空　工業用水

■Specification

| Media | Industrial Water |
|---|---|
| Working Temperature Range | 0～80 ℃ |
| Burst Pressure | 3 MPa |
| Maximum working pressure | 0.3 MPa |

* Industrial Water is considered a waterhammer.

The above pressure figures were measured at room temperature (20 ° c).

■Features

- Ideal for cooling water piping with very strong Materials in hot water.
- Excellent oil resistance. Ideal for air and Industrial water piping in the factory.
- Excellent O.D accuracy O.D the Model table.

| Model | | 8P | 10P | 12P |
|---|---|---|---|---|
| Tube Size | O.D(mm) | 8 | 10 | 12 |
| | I.D(mm) | 5 | 6.5 | 8 |
| | |  |  |  |
| Min. Turning Radius(mm) | | 15 | 25 | 28 |
| Tolerance(mm) | | +0.05 / -0.2 | +0.1 / -0.2 | |
| Weight(g/m) | | 37 | 55 | 76 |

■ Model Display Example

8 P – CB – 20

Tube O.D

| | O.D x I.D |
|---|---|
| 8 | 8 x 5 |
| 10 | 10 x 6.5 |
| 12 | 12 x 8 |

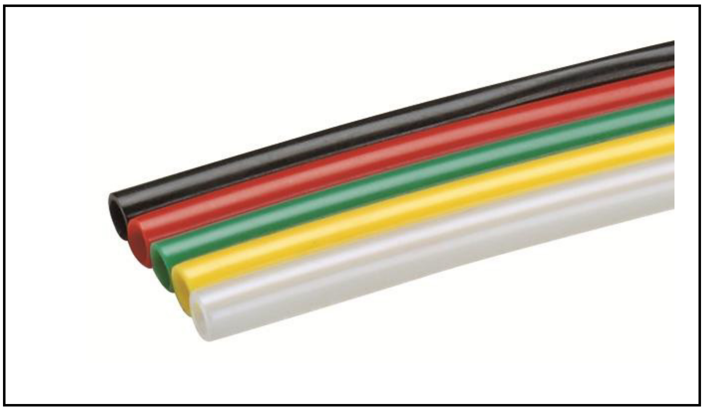
Color

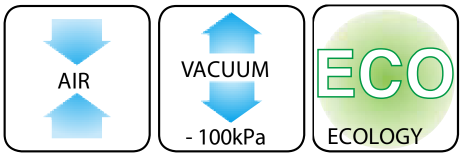
| | Standard Color | |
|---|---|---|
| CB | Transparent Blue |  |
| CP | Transparent Red |  |

1 Roll

| | Length |
|---|---|
| 20 |  |
| 100 |  |

# NYLON TUBING TN






圧縮空気 真空 省エネルギー

## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| Burst Pressure | 6 MPa | |
| Maximum working pressure | 1.5 MPa | -100 kPa |

※ The above pressure value is measured at (20 ° C). Freezing nothing.

## ■Features

- The maximum working pressure is higher than Polyurethane tube, and it has excellent weather resistance and chemical resistance.
- Cut mark included Meter printed at 1m intervals. You can check the remaining number.

【Cut Mark Display】


| Model | | TN-4×2.5 | TN-4 | TN-6×4 | TN-6 | TN-8 | TN-10 | TN-12 |
|---|---|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 4 | 6 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2.5 | 3 | 4 | 4.5 | 6 | 7.5 | 9 |
| Min. Radius of Curvature(mm) | | 15 | 21 | 25 | 30 | 47 | 58 | 69 |
| O.D Accuracy(mm) | | ±0.1 | | | | | +0.1 | -0.15 |
| Weight(g/m) | | 8 | 6 | 16 | 13 | 22 | 36 | 52 |

## ■ Model Display Example

TN— 6 BK – 20

**Tube O.D**

| | O.D x I.D |
|---|---|
| 4×2.5 | 4 x 2. 5 |
| 4 | 4 x 3 |
| 6×4 | 6 x 4 |
| 6 | 6 x 4.5 |
| 8 | 8 x 6 |
| 10 | 10 x 7.5 |
| 12 | 12 x 9 |

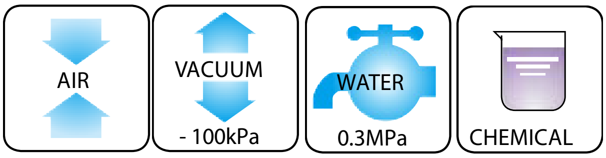
**Color**

| | Standard Color | |
|---|---|---|
| BK | Black | |
| W | White | |
| Y | Yellow | |
| R | Red | |
| G | Green | |

**1 Roll**

| | Length |
|---|---|
| 20 | |
| 100 | |

# FLUORINE RESIN TUBING TF (PFA) TFN




圧縮空気 真空 工業用水 対薬品性

## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | 260 ℃ | |

※ 260 ° in the table is the heat resistance temperature of the material PFA. The normal operating pressure should be determined according to the temperature-specific breakdown pressure correction factor in the table below.

## ■Features

- Fluorine resin (PFA) is the most heat resistant and chemically resistant among thermoplastics.
- It is inert to many chemicals, gases and organic solvents, and can be used widely in food, chemicals, medicine, semiconductor manufacturing, etc.

| Model | | TFN-4 | TFN-6 | TFN-8 | TFN-10 | TFN-12 |
|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2 | 4 | 6 | 8 | 10 |
| | | | | | | |
| Min. Turning Radius(mm) | | 30 | 50 | 80 | 120 | 200 |
| Tolerance(mm) | | ±0.1 | | | ±0.12 | ±0.15 |
| Weight(g/m) | | 20 | 30 | 50 | 60 | 80 |
| Max. Burst Pressure(MPa) | | 10 | 7 | 4 | 3.5 | 3 |
| MAX. Working Pressure(MPa) | | 2.5 | 1.7 | 1 | 0.8 | 0.7 |

## ■Model

TFN— 6 — 20

Colors
Standard：Milky

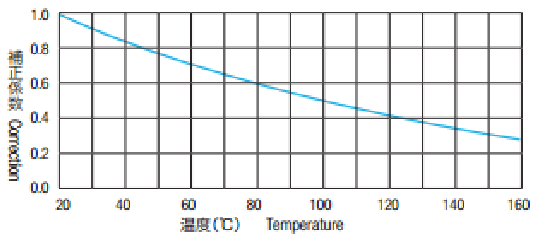
**Tube O.D**

| Symbol | O.DxI.D |
|---|---|
| 4 | 4 x 2 |
| 6 | 6 x 4 |
| 8 | 8 x 6 |
| 10 | 10 x 8 |
| 12 | 12 x 10 |

**1 Roll Length**

| Symbol | Length | Size |
|---|---|---|
| 10 | 10m Roll | All Size |
| 20 | 20m Roll | All Size |
| 50 | 50m Roll | TFN-8 / TFN-10 / TFN-12 |
| 100 | 100m Roll | TFN-4 / TFN-6 |

■ Correction coefficient of breakdown pressure by temperature




常用使用圧力 (MPa) =破壊圧力×補正係数×1/4
Working Pressure=Burst Pressure×Correction factor×1/4

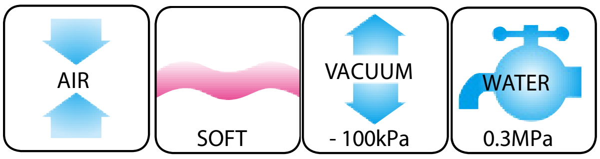
(Example)

The max. working pressure of TFN-8 used in a 100℃ enviroment is caluculated as follows.

Max. working pressure=burst pressure 4MPa x correction 0.5 x 1/4=0.5MPa

The max. working pressure is 0.5 Mpa.

# TWIN TOUCH TUBING 2TE




圧縮空気 柔軟性 真空 工業用水

## ■Specification

| Media | Compressed Air | Industrial Water | Vacuum |
|---|---|---|---|
| Working Temperature Range | -5～60 ℃ | 5～40 ℃ | -5～60 ℃ |
| Burst Pressure | 3 MPa | | |
| Maximum working pressure | 0.8 MPa | 0.3 MPa | -100 kPa |

* Industrial Water is considered a waterhammer.

The above pressure figures were measured at room temperature (20 °c).

## ■Features

- It is a tube which welded two tubes and put them into one tube.
- A line mark is attached to the tube on one side to identify the piping.
- Prevent piping error to air cylinder.
- Reduction of piping work man-hours.
- There is no burrs when the tube is torn and maintains excellent Outer Diameter accuracy.


| Model | | 2TE-4×2.5 | 2TE-6 | 2TE-8 | 2TE-10 | 2TE-12 |
|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2.5 | 4 | 5 | 6.5 | 8 |
| | |  |  |  |  |  |
| Min. Radius of Curvature(mm) | | 5 | 12 | 15 | 25 | 28 |
| O.D Accuracy(mm) | | ±0.1 | | | +0.1 -0.15 | |
| Weight(g/m) | | 18 | 38 | 74 | 110 | 152 |

## ■ Model Display Example

2TE－ 6 － 20

**Tube O.D**

| | O.D x I.D |
|---|---|
| 4 | 4 x 2． 5 |
| 6 | 6 x 4 |
| 8 | 8 x 5 |
| 10 | 10 x 6． 5 |
| 12 | 12 x 8 |

**1 RollLength**

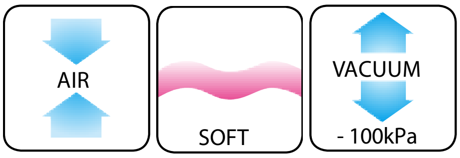
| | Length | サイズ |
|---|---|---|
| 10 |  | 2TE-10 / 2TE-12 |
| 20 | | 2TE-4 x 2． 5/ 2TE-6 /2TE-8 |
| 50 | | 2TE-10 / 2TE-12 |
| 100 |  | 2TE-4 x 2． 5/ 2TE-6 /2TE-8 |

**Color**

Standard Color：Black+Black

※ Please use Multi Straight Tube (P11) for other color support.

# MULTIFLAT TUBING TP



圧縮空気　柔軟性　真空

## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| Burst Pressure | 3 MPa | |
| Maximum working pressure | 0.8 MPa | -100 kPa |

※ The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- **The polyurethane tubes are arranged in a row (3 to 10 cores).**
- By special welding, no marks are left at the time of peeling, and connection with a one-touch joint is possible.
- Abundant color variations By changing the color one by one, piping identification is easy.

※ Differences from the multi-straight By bending in a horizontal row, bending in the longitudinal direction can be reduced and it is most suitable for cable bears with small bending radius.

| Model | Tube Size (mm) | Core | Array | Weight(g/m) | Length (1pcs) 20m | 100m |
|---|---|---|---|---|---|---|
| 3TP-4×2.5S | 4 x 2.5 | 3 Core | ①②③ | 27 | 20m | 100m |
| 4TP-4×2.5S | | 4 Core | ①②③④ | 36 | 20m | 100m |
| 5TP-4×2.5S | | 5 Core | ①②③④⑤ | 45 | 20m | 100m |
| 6TP-4×2.5S | | 6 Core | ①②③④⑤⑥ | 54 | 20m | 100m |
| 8TP-4×2.5S | | 8 Core | ①②③④⑤⑥⑦⑧ | 72 | 20m | 100m |
| 10TP-4×2.5S | | 10 Core | ①②③④⑤⑥⑦⑧⑨⑩ | 90 | 20m | 100m |
| 3TP-6S | 6 x 4 | 3 Core | ①②③ | 57 | 20m | 100m |
| 4TP-6S | | 4 Core | ①②③④ | 76 | 20m | 100m |
| 5TP-6S | | 5 Core | ①②③④⑤ | 95 | 20m | 100m |
| 6TP-6S | | 6 Core | ①②③④⑤⑥ | 76 | 20m | 100m |
| 8TP-6S | | 8 Core | ①②③④⑤⑥⑦⑧ | 114 | 20m | 100m |
| 3TP-8S | 8 x 5 | 3 Core | ①②③ | 111 | 20m | 100m |
| 4TP-8S | | 4 Core | ①②③④ | 148 | 20m | 100m |
| 5TP-8S | | 5 Core | ①②③④⑤ | 185 | 20m | 100m |
| 6TP-8S | | 6 Core | ①②③④⑤⑥ | 222 | 20m | 100m |
| 4TP-10S | 10 x 6.5 | 4 Core | ①②③④⑤⑥⑦⑧⑨⑩ | 220 | 20m | 100m |
| 4TP-12S | 12 x 8 | 4 Core | ①②③④⑤⑥⑦⑧⑨⑩⑪⑫ | 304 | 20m | 100m |

## ■ Model Display Example

3 TP- 6 S - 20

Core

| Core |
|---|
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |

Tube O.D

| | O.D×I.D |
|---|---|
| 4 | 4×2.5 |
| 6 | 6×4 |
| 8 | 8×5 |
| 10 | 10×6.5 |
| 12 | 12×8 |

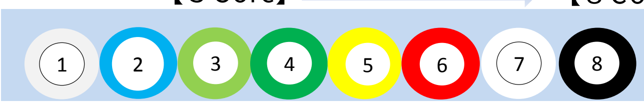
Length

| | Length |
|---|---|
| 20 |  |
| 100 |  |

## ■Colors

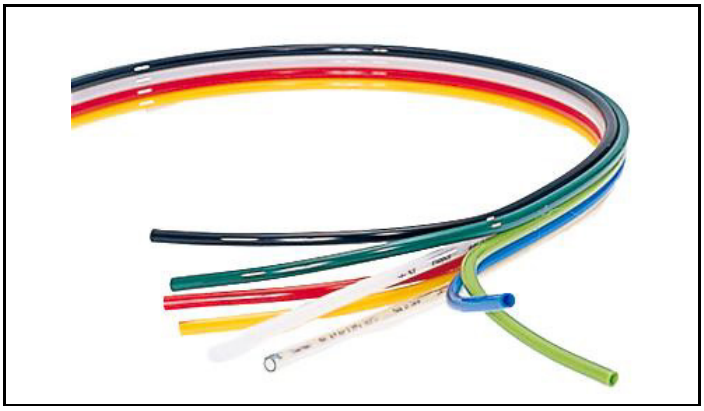
Standard's layout color will be the layout color in the above order.

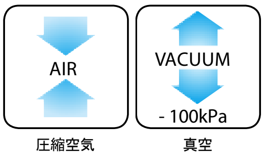
【3 Core】 → 【8 Core】




①Transparent ②Blue ③Light Green ④Green ⑤Yellow ⑥Red ⑦White ⑧Black

# MULTI-STRAIGHT TUBING MP






## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| Burst Pressure | 3 MPa | |
| Maximum working pressure | 0.8 MPa | -100 kPa |

※ The above pressure figures were measured at room temperature (20 °c).

## ■Features

- We have put together the polyurethane tube into multiple cores (2 to 8 cores).
- By special welding, no marks are left at the time of peeling, and connection with a one-touch joint is possible.
- Abundant color variations. By changing the color one by one, piping identification is easy.

## ■ Model display

4 - MP - 6 S - 20

Core

| Core |
|---|
| 2 |
| 4 |
| 6 |
| 8 |

Tube O.D

| | O.D ×I.D |
|---|---|
| 4 | 4×2 |
| 6 | 6×4 |
| 8 | 8×5 |
| 10 | 10×6.5 |
| 12 | 12×8 |

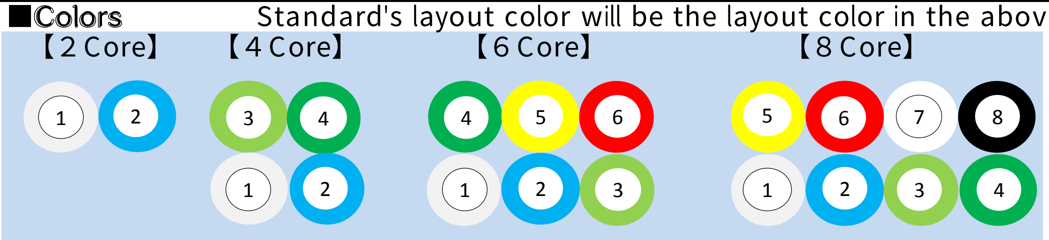
Length

| | Length |
|---|---|
| 20 | |
| 100 | |

| Core | Tube Size (mm) | Model | Minimum Radius of Curvature | Weight (g/m) | Length | |
|---|---|---|---|---|---|---|
| | | | | | 20m | 100m |
| 2Core | 4 x 2 | 2-MP-4S | 15 | 22 | 20m | 100m |
| 4Core | | 4-MP-4S | 40 | 44 | 20m | 100m |
| 6Core | | 6-MP-4S | 40 | 66 | 20m | 100m |
| 8Core | | 8-MP-4S | 45 | 88 | 20m | 100m |
| 2Core | 6 x 4 | 2-MP-6S | 25 | 38 | 20m | 100m |
| 4Core | | 4-MP-6S | 65 | 76 | 20m | 100m |
| 6Core | | 6-MP-6S | 65 | 114 | 20m | 100m |
| 8Core | | 8-MP-6S | 65 | 152 | 20m | 100m |
| 2Core | 8 x 5 | 2-MP-8S | 40 | 74 | 20m | 100m |
| 4Core | | 4-MP-8S | 90 | 148 | 20m | 100m |
| 6Core | | 6-MP-8S | 110 | 222 | 20m | 100m |
| 8Core | | 8-MP-8S | 110 | 296 | 20m | 100m |
| 2Core | 10 x 6.5 | 2-MP-10S | 55 | 110 | 20m | 100m |
| 4Core | | 4-MP-10S | 160 | 220 | 20m | 100m |
| 6Core | | 6-MP-10S | 160 | 330 | 20m | 100m |
| 8Core | | 8-MP-10S | 160 | 440 | 20m | 100m |
| 2Core | 12 x 8 | 2-MP-12S | 65 | 152 | 20m | 100m |
| 4Core | | 4-MP-12S | 230 | 304 | 20m | 100m |
| 6Core | | 6-MP-12S | 230 | 456 | 20m | 100m |
| 8Core | | 8-MP-12S | 230 | 608 | 20m | 100m |

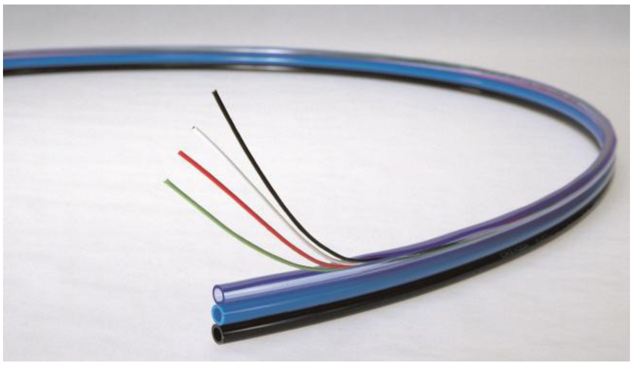
## ■Colors

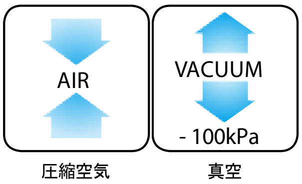
Standard's layout color will be the layout color in the above order




①Transparent ②Blue ③Light Green ④Green ⑤Yellow ⑥Red ⑦White ⑧Black

# SLITTED STRAIGHT TUBING　STE






## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| TubeMAX Working Pressure | 0．8MPa | -100kPa |
| TubeMax Burst Pressure | 3MPa | |

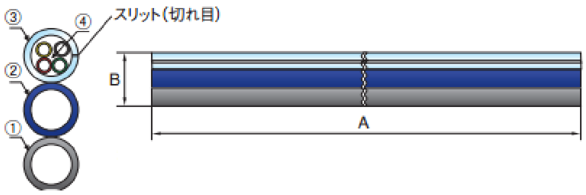
※ Please do not flush air into the slit Tube.

* The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- The electric wire can be exchanged by applying slit processing to tube.
- It is possible to neatly summarize the wire and the air piping.
- Best for protection.
- One-touch fittings can be used for air piping.
- It can be manufactured from one as a separate note other than the standard product. And quick delivery.

You can also freely specify the number of cores, array of Colors and wire.




① Black
② Blue
③ Transparent Blue
④ Wire Colors　white / Black / Red / Green
※ There is no wire excess at both ends.
Please disconnect and use Tube if necessary.

| Core | Model | Tube | Wire | Length A ( m ) | Width B ( mm ) | Min. Turning Radius( mm ) |
|---|---|---|---|---|---|---|
| 3 Core | 3-STE-4-5 | TE-4×2.5 | 0.15 | 5 | 20 | 20 |
| | 3-STE-4-50 | | | 50 | 40 | |
| | 3-STE-4-100 | | | 100 | 60 | |
| | 3-STE-6-5 | TE-6 | 0.3 | 5 | 30 | 30 |
| | 3-STE-6-50 | | | 50 | 60 | |
| | 3-STE-6-100 | | | 100 | 90 | |
| | 3-STE-8-5 | TE-8 | 0.3 | 5 | 45 | 40 |
| | 3-STE-8-50 | | | 50 | 90 | |
| | 3-STE-8-100 | | | 100 | 130 | |

## ■ Model Display Example

3-STE- $\boxed{6}$ - $\boxed{5}$

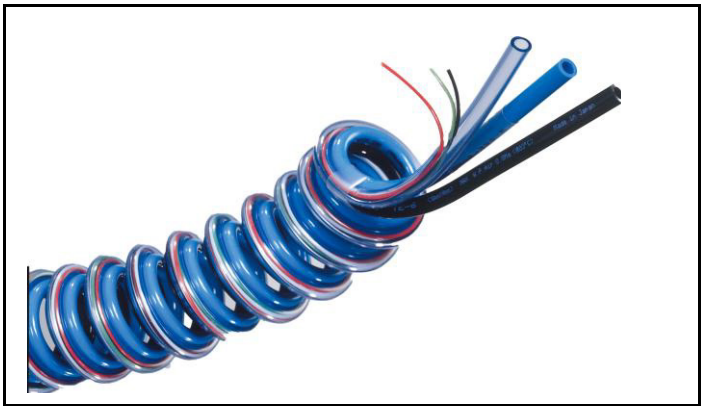
Tube O.D

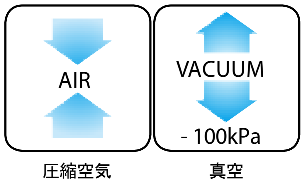
| | O.D ×I.D |
|---|---|
| 4 | 4×2.5 |
| 6 | 6×4 |
| 8 | 8×5 |

Length

| (m) | Length |
|---|---|
| 5 |  |
| 50 | |
| 100 | |

# SLITTED SPIRAL TUBING SSE






## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| TubeMAX Working | 0．8MPa | -100kPa |
| TubeMax Burst Pressure | 3MPa | |

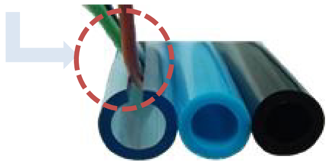
※ Do not allow air to flow through the slitted tube.

## ■Features

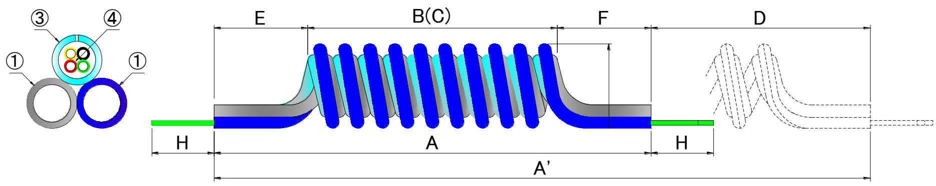
- The electric wire can be exchanged by applying slit processing to tube.
- It is possible to neatly summarize the wire and the air piping.

  Best for protection.
- One-touch fittings can be used for air piping.
- It can be manufactured from one as a separate note other than the standard product. And quick delivery.

  You can also freely specify the number of cores, array of Colors and wire.
- No wires available. (Model: 3-SSE-⇒ 3SS-).



## ■ Dimension

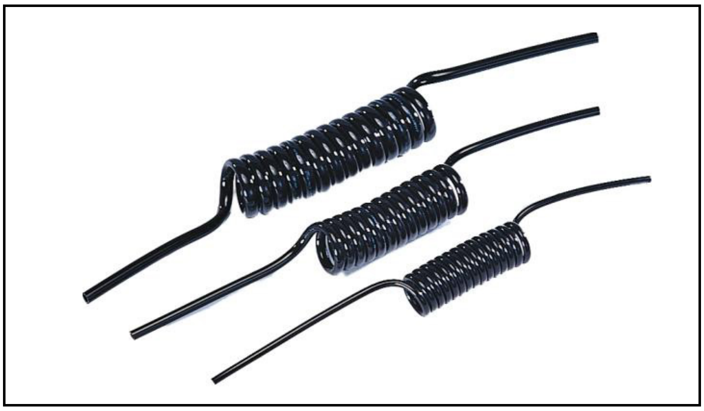


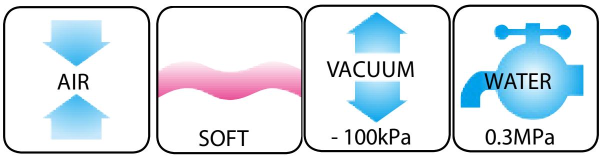

① Black
② Blue
③ Transparent Blue
④ Wire Colors White / Black / Red / Green

| Core | Model | Tube | Wire (mm) | Service Length (mm) | A ( mm ) | B ( mm ) | E ( mm ) | F ( mm ) | G ( mm ) | H ( mm ) | D (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 Core | 3-SSE-4-5 | TE-4 | 0.15 | 535 | 445 | 45 | 150 | 250 | 35 | 300 | 90 |
| | 3-SSE-4-10 | | | 670 | 490 | 90 | | | | | 180 |
| | 3-SSE-4-15 | | | 805 | 535 | 135 | | | | | 270 |
| | 3-SSE-4-20 | | | 940 | 580 | 180 | | | | | 360 |
| | 3-SSE-4-25 | | | 1,075 | 625 | 225 | | | | | 450 |
| | 3-SSE-6-5 | TE-6 | 0.3 | 560 | 465 | 65 | | | 49 | | 95 |
| | 3-SSE-6-10 | | | 725 | 530 | 130 | | | | | 195 |
| | 3-SSE-6-15 | | | 890 | 595 | 195 | | | | | 295 |
| | 3-SSE-6-20 | | | 1,050 | 660 | 260 | | | | | 390 |
| | 3-SSE-6-25 | | | 1,210 | 725 | 325 | | | | | 485 |
| | 3-SSE-8-5 | TE-8 | 0.3 | 670 | 490 | 90 | | | 66 | | 180 |
| | 3-SSE-8-10 | | | 940 | 580 | 180 | | | | | 360 |
| | 3-SSE-8-15 | | | 1,210 | 670 | 270 | | | | | 540 |
| | 3-SSE-8-20 | | | 1,480 | 760 | 360 | | | | | 720 |
| | 3-SSE-8-25 | | | 1,750 | 850 | 450 | | | | | 900 |

# POLYURETHANE SPIRAL TUBING

# TPS






圧縮空気 柔軟性 真空 工業用水

## ■Specification

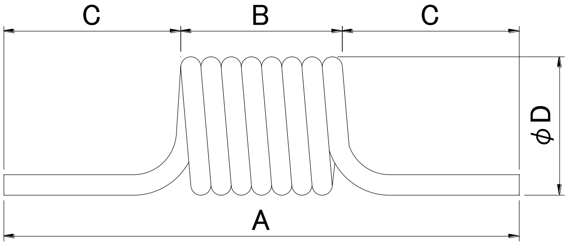
| Media | Compressed Air | Industrial Water | Vacuum |
|---|---|---|---|
| Working Temperature Range | -5～60 ℃ | 5～40 ℃ | -5～60 ℃ |
| Burst Pressure | 3MPa | | |
| Maximum working pressure | 0．8 MPa | 0.3 MPa | -100 kPa |

※ The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- 59 types of standard products are available.
- Straight part (C dimension) Both ends 200 mm Can be finely adjusted in the working range.
- If it can not support Standard, it can be manufactured from 1 as a separately ordered item. (Each part size, color change possible.)

## ■Dimension Drawing




## ■ Model Display Example

TPS- 6 - 5

Tube O.D　Coil Core

| | Model | Tube | Service Length | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | Weight (g) |
|---|---|---|---|---|---|---|---|---|
| 1 Core | TPS-4-5 | TE-4×2 | 500 | 420 | 20 | 200 | 21 | 7 |
| | TPS-4-10 | | 600 | 440 | 40 | | | 9 |
| | TPS-4-15 | | 700 | 460 | 60 | | | 11 |
| | TPS-4-20 | | 800 | 480 | 80 | | | 13 |
| | TPS-4-25 | | 900 | 500 | 100 | | | 16 |
| | TPS-4-30 | | 1,000 | 520 | 120 | | | 18 |
| | TPS-4-35 | | 1,100 | 540 | 140 | | | 20 |
| | TPS-4-40 | | 1,200 | 560 | 160 | | | 22 |
| | TPS-4-45 | | 1,300 | 580 | 180 | | | 25 |
| | TPS-4-50 | | 1,400 | 600 | 200 | | | 27 |
| | TPS-4-55 | | 1,500 | 620 | 220 | | | 29 |
| | TPS-4-60 | | 1,600 | 640 | 240 | | | 31 |
| | TPS-6-5 | TE-6 | 550 | 430 | 30 | | 38 | 15 |
| | TPS-6-10 | | 700 | 460 | 60 | | | 23 |
| | TPS-6-15 | | 850 | 490 | 90 | | | 31 |
| | TPS-6-20 | | 1,000 | 520 | 120 | | | 39 |
| | TPS-6-25 | | 1,150 | 550 | 150 | | | 46 |
| | TPS-6-30 | | 1,300 | 580 | 180 | | | 54 |
| | TPS-6-35 | | 1,450 | 610 | 210 | | | 62 |
| | TPS-6-40 | | 1,600 | 640 | 240 | | | 70 |
| | TPS-6-45 | | 1,750 | 670 | 270 | | | 77 |
| | TPS-6-50 | | 1,900 | 700 | 300 | | | 85 |
| | TPS-6-55 | | 2,050 | 730 | 330 | | | 93 |
| | TPS-6-60 | | 2,200 | 760 | 360 | | | 101 |

| | Model | Tube | Service Length | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | Weight (g) |
|---|---|---|---|---|---|---|---|---|
| 1 Core | TPS-8-5 | TE-8 | 600 | 440 | 40 | 200 | 42 | 30 |
| | TPS-8-10 | | 800 | 480 | 80 | | | 45 |
| | TPS-8-15 | | 1,000 | 520 | 120 | | | 60 |
| | TPS-8-20 | | 1,200 | 560 | 160 | | | 75 |
| | TPS-8-25 | | 1,400 | 600 | 200 | | | 90 |
| | TPS-8-30 | | 1,600 | 640 | 240 | | | 105 |
| | TPS-8-35 | | 1,800 | 680 | 280 | | | 121 |
| | TPS-8-40 | | 2,000 | 720 | 320 | | | 136 |
| | TPS-8-45 | | 2,200 | 760 | 360 | | | 151 |
| | TPS-8-50 | | 2,400 | 800 | 400 | | | 166 |
| | TPS-8-55 | | 2,600 | 840 | 440 | | | 181 |
| | TPS-8-60 | | 2,800 | 880 | 480 | | | 196 |
| | TPS-10-5 | TE-10 | 650 | 450 | 50 | | 52 | 50 |
| | TPS-10-10 | | 900 | 500 | 100 | | | 77 |
| | TPS-10-15 | | 1,150 | 550 | 150 | | | 105 |
| | TPS-10-20 | | 1,400 | 600 | 200 | | | 133 |
| | TPS-10-25 | | 1,650 | 650 | 250 | | | 160 |
| | TPS-10-30 | | 1,900 | 700 | 300 | | | 188 |
| | TPS-10-35 | | 2,150 | 750 | 350 | | | 215 |
| | TPS-10-40 | | 2,400 | 800 | 400 | | | 243 |
| | TPS-10-45 | | 2,650 | 850 | 450 | | | 271 |
| | TPS-10-50 | | 2,900 | 900 | 500 | | | 298 |
| | TPS-10-55 | | 3,150 | 950 | 550 | | | 326 |
| | TPS-10-60 | | 3,400 | 1,000 | 600 | | | 354 |
| | TPS-12-5 | TE-12 | 700 | 460 | 60 | | 67 | 82 |
| | TPS-12-10 | | 1,000 | 520 | 120 | | | 133 |
| | TPS-12-15 | | 1,300 | 580 | 180 | | | 184 |
| | TPS-12-20 | | 1,600 | 640 | 240 | | | 236 |
| | TPS-12-25 | | 1,900 | 700 | 300 | | | 287 |
| | TPS-12-30 | | 2,200 | 760 | 360 | | | 338 |
| | TPS-12-35 | | 2,500 | 820 | 420 | | | 390 |
| | TPS-12-40 | | 2,800 | 880 | 480 | | | 441 |
| | TPS-12-45 | | 3,100 | 940 | 540 | | | 492 |
| | TPS-12-50 | | 3,400 | 1,000 | 600 | | | 543 |
| | TPS-12-55 | | 3,700 | 1,060 | 660 | | | 595 |

# TUBE CUTTER　TC—16

【Spare Blade】

## ■Specification

| | |
|---|---|
| Tube O.D | 3～16mm |

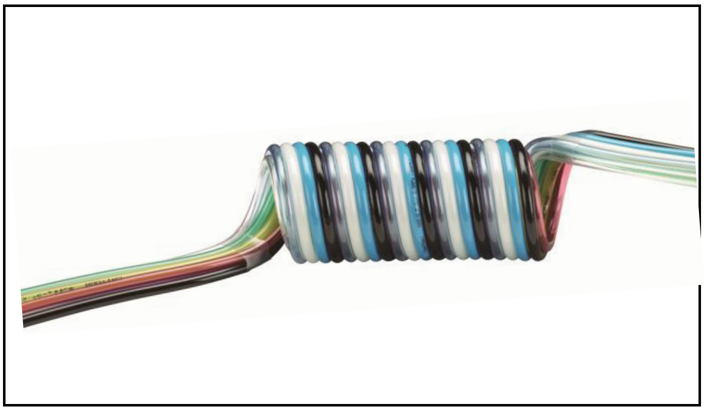
| | Model |
|---|---|
| Body | TC－16 |
| Spare Blade | TC－16SC |

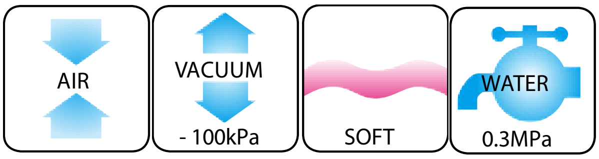
※ The price of the main unit is one, the replacement blade is 10 pieces.

## ■Features

- Just set the tube, you can cut at right angles.
- It can be cut with light force such as urethane, nylon, fluorine resin tube.

# MULTI SPIRAL POLYURETHANE TUBING（2 Core～8 Core） MES






圧縮空気 真空 柔軟性 工業用水

## ■Specification

| Media | Compressed Air | Industrial Water | Vacuum |
|---|---|---|---|
| Working Temperature Range | -5～60 ℃ | 5～40 ℃ | -5～60 ℃ |
| Burst Pressure | 3MPa | | |
| Maximum working pressure | 0．8 MPa | 0.3 MPa | -100 kPa |

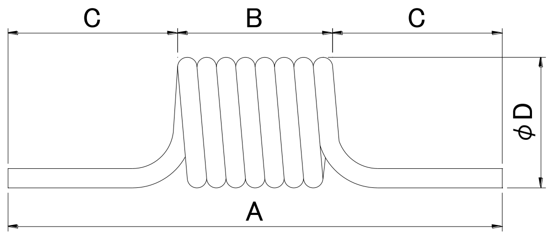
* Industrial Water is considered a waterhammer.

The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- 150 types of standard products are available.
- Straight part (C dimension) both ends 200 mm There is fine adjustment of Service Length.
- If it is not possible to support Standard, it can be manufactured from 1 as a bespoke product. (Each part size, color change is possible.)

## ■Dimension Drawing



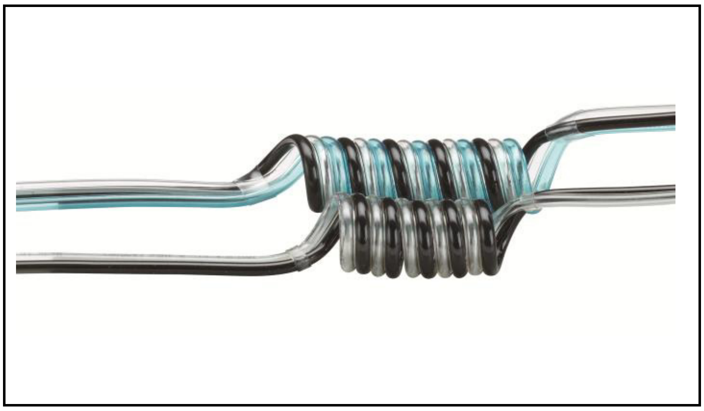

| | Model | Tube | Service Length | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | Weight (g) |
|---|---|---|---|---|---|---|---|---|
| 2 Core | 2-MES-6-5S | TE-6 | 595 | 465 | 65 | 200 | 38 | 40 |
| | 2-MES-6-10S | | 790 | 530 | 130 | | | 60 |
| | 2-MES-6-15S | | 985 | 595 | 195 | | | 80 |
| | 2-MES-6-20S | | 1,180 | 660 | 260 | | | 110 |
| | 2-MES-6-25S | | 1,375 | 725 | 325 | | | 130 |
| | 2-MES-6-30S | | 1,570 | 790 | 390 | | | 150 |
| | 2-MES-6-35S | | 1,765 | 855 | 455 | | | 170 |
| | 2-MES-6-40S | | 1,960 | 920 | 520 | | | 200 |
| | 2-MES-6-45S | | 2,155 | 985 | 585 | | | 220 |
| | 2-MES-8-5S | TE-8 | 670 | 490 | 90 | | 42 | 80 |
| | 2-MES-8-10S | | 940 | 580 | 180 | | | 130 |
| | 2-MES-8-15S | | 1,210 | 670 | 270 | | | 180 |
| | 2-MES-8-20S | | 1,480 | 760 | 360 | | | 220 |
| | 2-MES-8-25S | | 1,750 | 850 | 450 | | | 270 |
| | 2-MES-8-30S | | 2,020 | 940 | 540 | | | 320 |
| | 2-MES-8-35S | | 2,290 | 1,030 | 630 | | | 370 |
| | 2-MES-8-40S | | 2,560 | 1,120 | 720 | | | 420 |
| | 2-MES-8-45S | | 2,830 | 1,210 | 810 | | | 470 |
| | 2-MES-10-5S | TE-10 | 739 | 513 | 113 | | 52 | 130 |
| | 2-MES-10-10S | | 1,078 | 626 | 226 | | | 220 |
| | 2-MES-10-15S | | 1,417 | 739 | 339 | | | 310 |
| | 2-MES-10-20S | | 1,756 | 852 | 452 | | | 400 |
| | 2-MES-10-25S | | 2,095 | 965 | 565 | | | 490 |
| | 2-MES-10-30S | | 2,434 | 1,078 | 678 | | | 580 |
| | 2-MES-12-5S | TE-12 | 805 | 535 | 135 | | 67 | 220 |
| | 2-MES-12-10S | | 1,210 | 670 | 270 | | | 380 |
| | 2-MES-12-15S | | 1,715 | 805 | 405 | | | 540 |
| | 2-MES-12-20S | | 2,020 | 940 | 540 | | | 700 |
| | 2-MES-12-25S | | 2,425 | 1,075 | 675 | | | 860 |

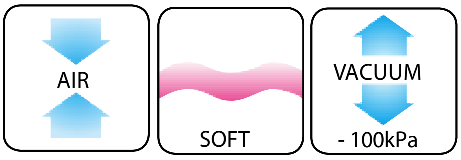
| | Model | Tube | Service Length | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | Weight (g) |
|---|---|---|---|---|---|---|---|---|
| 3 Core | 3-MES-6-5S | TE-6 | 645 | 498 | 98 | 200 | 44 | 60 |
| | 3-MES-6-10S | | 888 | 595 | 195 | | | 100 |
| | 3-MES-6-15S | | 1,133 | 693 | 293 | | | 140 |
| | 3-MES-6-20S | | 1,375 | 790 | 390 | | | 180 |
| | 3-MES-6-25S | | 1,620 | 888 | 488 | | | 220 |
| | 3-MES-6-30S | | 1,863 | 985 | 585 | | | 260 |
| | 3-MES-6-35S | | 2,108 | 1,083 | 683 | | | 300 |
| | 3-MES-6-40S | | 2,350 | 1,180 | 780 | | | 340 |
| | 3-MES-8-5S | TE-8 | 738 | 535 | 135 | | 50 | 130 |
| | 3-MES-8-10S | | 1,075 | 670 | 270 | | | 220 |
| | 3-MES-8-15S | | 1,413 | 805 | 405 | | | 310 |
| | 3-MES-8-20S | | 1,750 | 940 | 540 | | | 390 |
| | 3-MES-8-25S | | 2,088 | 1,075 | 675 | | | 480 |
| | 3-MES-10-5S | TE-10 | 825 | 570 | 170 | | 63 | 230 |
| | 3-MES-10-10S | | 1,248 | 739 | 339 | | | 390 |
| | 3-MES-10-15S | | 1,673 | 909 | 509 | | | 560 |
| | 3-MES-10-20S | | 2,095 | 1,078 | 678 | | | 720 |
| | 3-MES-12-5S | TE-12 | 908 | 603 | 203 | | 84 | 390 |
| | 3-MES-12-10S | | 1,413 | 805 | 405 | | | 690 |
| | 3-MES-12-15S | | 1,920 | 1,008 | 608 | | | 990 |
| 4 Core | 4-MES-6-5S | TE-6 | 595 | 465 | 65 | 200 | 56 | 100 |
| | 4-MES-6-10S | | 790 | 530 | 130 | | | 160 |
| | 4-MES-6-15S | | 985 | 595 | 195 | | | 230 |
| | 4-MES-6-20S | | 1,180 | 660 | 260 | | | 300 |
| | 4-MES-6-25S | | 1,375 | 725 | 325 | | | 360 |
| | 4-MES-6-30S | | 1,570 | 790 | 390 | | | 430 |
| | 4-MES-6-35S | | 1,765 | 855 | 455 | | | 500 |
| | 4-MES-6-40S | | 1,960 | 920 | 520 | | | 560 |
| | 4-MES-6-45S | | 2,155 | 985 | 585 | | | 630 |
| | 4-MES-8-5S | TE-8 | 670 | 490 | 90 | 200 | 66 | 210 |
| | 4-MES-8-10S | | 940 | 580 | 180 | | | 370 |
| | 4-MES-8-15S | | 1,210 | 670 | 270 | | | 520 |
| | 4-MES-8-20S | | 1,480 | 760 | 360 | | | 670 |
| | 4-MES-8-25S | | 1,750 | 850 | 450 | | | 830 |
| | 4-MES-8-30S | | 2,020 | 940 | 540 | | | 980 |
| | 4-MES-8-35S | | 2,290 | 1,030 | 630 | | | 1,130 |
| | 4-MES-8-40S | | 2,560 | 1,120 | 720 | | | 1,290 |
| | 4-MES-8-45S | | 2,830 | 1,210 | 810 | | | 1,440 |
| | 4-MES-10-5S | TE-10 | 739 | 513 | 113 | | 83 | 370 |
| | 4-MES-10-10S | | 1,078 | 626 | 226 | | | 660 |
| | 4-MES-10-15S | | 1,417 | 739 | 339 | | | 950 |
| | 4-MES-10-20S | | 1,756 | 852 | 452 | | | 1,230 |
| | 4-MES-10-25S | | 2,095 | 965 | 565 | | | 1,520 |
| | 4-MES-10-30S | | 2,434 | 1,078 | 678 | | | 1,810 |
| | 4-MES-12-5S | TE-12 | 805 | 535 | 135 | | 108 | 640 |
| | 4-MES-12-10S | | 1,210 | 670 | 270 | | | 1,150 |
| | 4-MES-12-15S | | 1,615 | 805 | 405 | | | 1,670 |
| | 4-MES-12-20S | | 2,020 | 940 | 540 | | | 2,180 |
| | 4-MES-12-25S | | 2,425 | 1,075 | 675 | | | 2,700 |
| 5 Core | 5-MES-6-5S | TE-6 | 645 | 498 | 98 | 200 | 56 | 120 |
| | 5-MES-6-10S | | 888 | 595 | 195 | | | 210 |
| | 5-MES-6-15S | | 1,133 | 693 | 293 | | | 290 |
| | 5-MES-6-20S | | 1,375 | 790 | 390 | | | 370 |
| | 5-MES-6-25S | | 1,620 | 888 | 488 | | | 460 |
| | 5-MES-6-30S | | 1,863 | 985 | 585 | | | 540 |
| | 5-MES-6-35S | | 2,108 | 1,083 | 683 | | | 620 |
| | 5-MES-6-40S | | 2,350 | 1,180 | 780 | | | 710 |
| | 5-MES-8-5S | TE-8 | 738 | 535 | 135 | | 73 | 290 |
| | 5-MES-8-10S | | 1,075 | 670 | 270 | | | 500 |
| | 5-MES-8-15S | | 1,413 | 805 | 405 | | | 710 |
| | 5-MES-8-20S | | 1,750 | 940 | 540 | | | 920 |
| | 5-MES-8-25S | | 2,088 | 1,075 | 675 | | | 1,130 |

| | Model | Tube | Service Length | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | Weight (g) |
|---|---|---|---|---|---|---|---|---|
| 5 Core | 5-MES-10-5S | TE-10 | 825 | 570 | 170 | 200 | 97 | 530 |
| | 5-MES-10-10S | | 1,248 | 739 | 339 | | | 950 |
| | 5-MES-10-15S | | 1,673 | 909 | 509 | | | 1,370 |
| | 5-MES-10-20S | | 2,095 | 1,078 | 678 | | | 1,790 |
| | 5-MES-12-5S | TE-12 | 908 | 603 | 203 | | 121 | 870 |
| | 5-MES-12-10S | | 1,413 | 805 | 405 | | | 1,600 |
| | 5-MES-12-15S | | 1,920 | 1,008 | 608 | | | 2,320 |
| 6 Core | 6-MES-6-5S | TE-6 | 645 | 498 | 98 | 200 | 58 | 150 |
| | 6-MES-6-10S | | 888 | 595 | 195 | | | 250 |
| | 6-MES-6-15S | | 1,133 | 693 | 293 | | | 360 |
| | 6-MES-6-20S | | 1,375 | 790 | 390 | | | 460 |
| | 6-MES-6-25S | | 1,620 | 888 | 488 | | | 560 |
| | 6-MES-6-30S | | 1,863 | 985 | 585 | | | 670 |
| | 6-MES-6-35S | | 2,108 | 1,083 | 683 | | | 770 |
| | 6-MES-6-40S | | 2,350 | 1,180 | 780 | | | 880 |
| | 6-MES-8-5S | TE-8 | 738 | 535 | 135 | | 75 | 350 |
| | 6-MES-8-10S | | 1,075 | 670 | 270 | | | 610 |
| | 6-MES-8-15S | | 1,413 | 805 | 405 | | | 870 |
| | 6-MES-8-20S | | 1,750 | 940 | 540 | | | 1,130 |
| | 6-MES-8-25S | | 2,088 | 1,075 | 675 | | | 1,400 |
| | 6-MES-10-5S | TE-10 | 825 | 570 | 170 | | 100 | 650 |
| | 6-MES-10-10S | | 1,248 | 739 | 339 | | | 1,170 |
| | 6-MES-10-15S | | 1,673 | 909 | 509 | | | 1,690 |
| | 6-MES-10-20S | | 2,095 | 1,078 | 678 | | | 2,200 |
| | 6-MES-12-5S | TE-12 | 908 | 603 | 203 | | 124 | 1,070 |
| | 6-MES-12-10S | | 1,413 | 805 | 405 | | | 1,960 |
| | 6-MES-12-15S | | 1,920 | 1,008 | 608 | | | 2,850 |
| 7 Core | 7-MES-6-5S | TE-6 | 660 | 530 | 130 | 200 | 65 | 190 |
| | 7-MES-6-10S | | 920 | 660 | 260 | | | 320 |
| | 7-MES-6-15S | | 1,180 | 790 | 390 | | | 460 |
| | 7-MES-6-20S | | 1,440 | 920 | 520 | | | 600 |
| | 7-MES-6-25S | | 1,700 | 1,050 | 650 | | | 730 |
| | 7-MES-6-30S | | 1,960 | 1,180 | 780 | | | 870 |
| | 7-MES-8-5S | TE-8 | 760 | 580 | 180 | | 90 | 470 |
| | 7-MES-8-10S | | 1,120 | 760 | 360 | | | 840 |
| | 7-MES-8-15S | | 1,480 | 940 | 540 | | | 1,200 |
| | 7-MES-8-20S | | 1,840 | 1,120 | 720 | | | 1,570 |
| | 7-MES-10-5S | TE-10 | 852 | 626 | 226 | | 113 | 840 |
| | 7-MES-10-10S | | 1,304 | 852 | 452 | | | 1,520 |
| | 7-MES-10-15S | | 1,756 | 1,078 | 678 | | | 2,200 |
| | 7-MES-12-5S | TE-12 | 940 | 670 | 270 | | 145 | 1,420 |
| | 7-MES-12-10S | | 1,480 | 940 | 540 | | | 2,630 |
| | 7-MES-12-14S | | 1,912 | 1,156 | 756 | | | 3,600 |
| 8 Core | 8-MES-6-5S | TE-6 | 660 | 530 | 130 | 200 | 67 | 220 |
| | 8-MES-6-10S | | 920 | 660 | 260 | | | 380 |
| | 8-MES-6-15S | | 1,180 | 790 | 390 | | | 540 |
| | 8-MES-6-20S | | 1,440 | 920 | 520 | | | 700 |
| | 8-MES-6-25S | | 1,700 | 1,050 | 650 | | | 860 |
| | 8-MES-6-30S | | 1,960 | 1,180 | 780 | | | 1,020 |
| | 8-MES-8-5S | TE-8 | 760 | 580 | 180 | | 92 | 550 |
| | 8-MES-8-10S | | 1,120 | 760 | 360 | | | 970 |
| | 8-MES-8-15S | | 1,480 | 940 | 540 | | | 1,400 |
| | 8-MES-8-20S | | 1,840 | 1,120 | 720 | | | 1,830 |
| | 8-MES-10-5S | TE-10 | 852 | 626 | 226 | | 116 | 980 |
| | 8-MES-10-10S | | 1,304 | 852 | 452 | | | 1,780 |
| | 8-MES-10-15S | | 1,756 | 1,078 | 678 | | | 2,580 |
| | 8-MES-12-5S | TE-12 | 940 | 670 | 270 | | 148 | 1,660 |
| | 8-MES-12-10S | | 1,480 | 940 | 540 | | | 3,070 |
| | 8-MES-12-14S | | 1,912 | 1,156 | 756 | | | 4,200 |

# SOFT POLYURETHANE SPIRAL TUBING

# SPS






圧縮空気　柔軟性　真空

## ■Specification

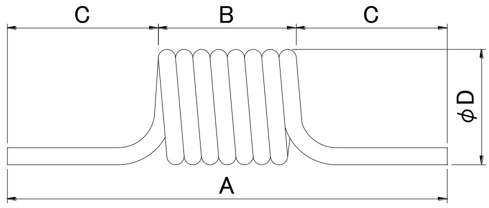
| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | |
| Burst Pressure | 1.7 MPa | |
| Maximum working pressure | 0.4 MPa | -100 kPa |

* The above pressure figures were measured at room temperature (20 ° c).

## ■Features

- More flexible than touch spiral hoses, suitable for piping in narrow areas.
- One-touch fittings can be used by using the inner support.
- Excellent oil resistance Ideal for factory air piping.

## ■Dimension Drawing




## ■ Model Display Example

Example of 1Core

SPS- 6 - 5

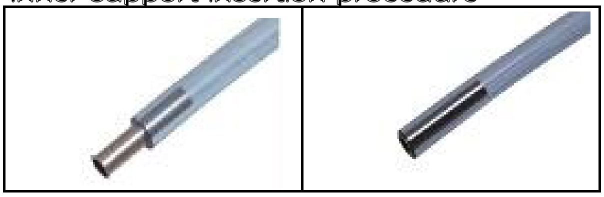
Tube O.D　Coil Core

Example of 2Core～3Core

2 - MSS - 6 - 5

Core　Tube O.D　Coil Core

### Inner support insertion procedure



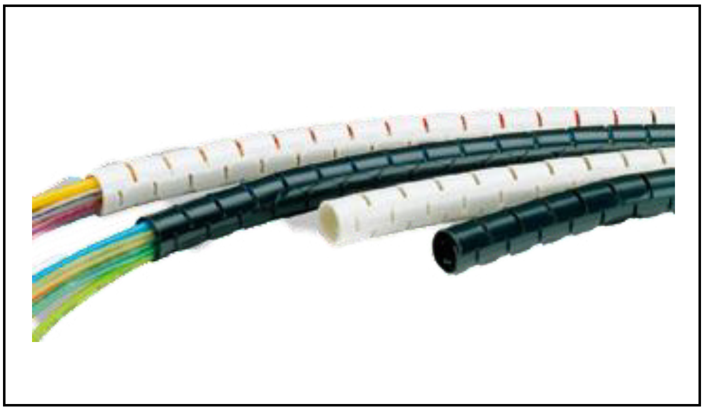
### Inner Support

1pack：10pcs

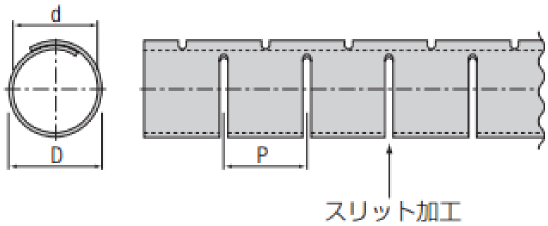
| | Model |
|---|---|
| SP-4 | IS-4 |
| SP-6 | IS-6 |

| | Standard Color | Model | Tube | Service Length | A (mm) | B (mm) | C (mm) | D (mm) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| 1 Core | Black | SPS-4-5 | SP-4 (4 x 2.5) | 500 | 220 | 20 | 100 | 23 | 5 |
| | | SPS-4-10 | | 600 | 240 | 40 | | | 8 |
| | | SPS-4-15 | | 700 | 260 | 60 | | | 11 |
| | | SPS-6-5 | SP-6 (6 x 4) | 550 | 230 | 30 | 100 | 38 | 14 |
| | | SPS-6-10 | | 700 | 260 | 60 | | | 23 |
| | | SPS-6-15 | | 850 | 290 | 90 | | | 32 |
| 2 Core | Black Transparent | 2-MSS-4-5 | SP-4 (4 x 2.5) | 550 | 245 | 45 | 100 | 23 | 10 |
| | | 2-MSS-4-10 | | 650 | 290 | 90 | | | 16 |
| | | 2-MSS-4-15 | | 900 | 330 | 130 | | | 22 |
| | | 2-MSS-6-5 | SP-6 (6 x 4) | 650 | 265 | 65 | 100 | 38 | 28 |
| | | 2-MSS-6-10 | | 900 | 325 | 125 | | | 46 |
| | | 2-MSS-6-15 | | 1,150 | 390 | 190 | | | 64 |
| 3 Core | Black Transparent Transparent Blue | 3-MSS-4-5 | SP-4 (4 x 2.5) | 550 | 265 | 65 | 100 | 23 | 15 |
| | | 3-MSS-4-10 | | 700 | 330 | 130 | | | 24 |
| | | 3-MSS-4-15 | | 850 | 400 | 200 | | | 33 |
| | | 3-MSS-6-5 | SP-6 (6 x 4) | 600 | 295 | 95 | 100 | 38 | 42 |
| | | 3-MSS-6-10 | | 850 | 390 | 190 | | | 69 |
| | | 3-MSS-6-15 | | 1,100 | 490 | 290 | | | 96 |

# ZIPWRAP ZW



■Structure




■Features

- Bonding work is completed in a short time by using a dedicated tool.
- The slit process applied to the side freely follows the bending operation of the device.
- It is removable and can be used repeatedly.
- The material is nylon 6 and is excellent in heat resistance, oil resistance and chemical resistance.

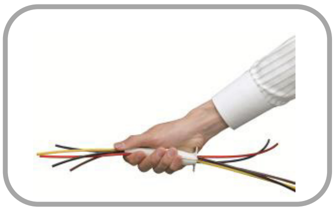
Wrap Tool

| Model | Color | Tube Dimension ( mm ) I.D | Tube Dimension ( mm ) O.D | Slit Pitch ( mm ) | Length ( m ) |
|---|---|---|---|---|---|
| ZW-9W-20 | White | 9 | 11 | 10 | 20 |
| ZW-9BK-20 | Black | | | | |
| ZW-15W-20 | White | 15 | 17 | 14 | |
| ZW-15BK-20 | Black | | | | |
| ZW-20W-20 | White | 20 | 22 | 17 | |
| ZW-20BK-20 | Black | | | | |
| ZW-25W-20 | White | 25 | 27 | 20 | |
| ZW-25BK-20 | Black | | | | |

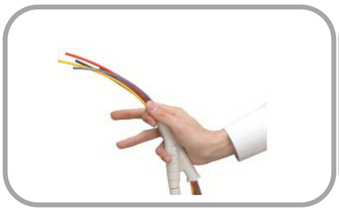
| Tool |
|---|
| WK-9W |
| WK-15W |
| WK-20W |
| WK-25W |

## Operating procedure

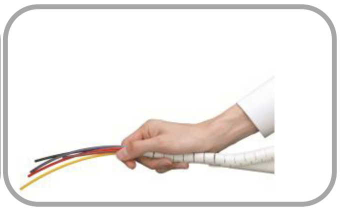
①Hold the lap tool and pinch the tube and wire



②Insert the tube and wire and close the wrap tool.



③Insert the protrusion of the wrap tool into the Zip Warp cut.



④Hold the tube, wire, and zip wrap firmly, and pull the wrap tool towards you, and the tube and wire will be continuous.
It will be united

■ Model Display Example

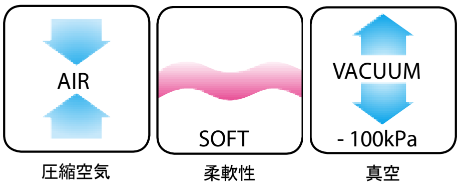
ZW- 9 BK - 20

| | O.D ×I.D |
|---|---|
| 9 | 11×9 |
| 15 | 17×15 |
| 20 | 22×20 |
| 25 | 27×25 |

| | Color |
|---|---|
| BK | Black |
| W | White |

# POLYURETHANE SPIRAL YELLOW LINE

# TPS




## ■Specification

| Media | Compressed Air | Vacuum |
|---|---|---|
| Working Temperature Range | -5～60 ℃ | -5～60 ℃ |
| Max Burst Pressure | 3MPa | |
| MAX Working Pressure | 0．8 MPa | -100 kPa |

* The above pressure figures were measured at room temperature (20 ° c)

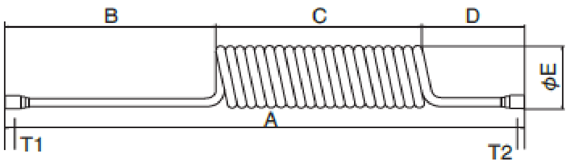
## ■Features

- 59 Types of standard products are available.
- Straight part (C size) both ends 200mm

  You can fine-tune the range of use.
- If it is not possible to support the standard, from one as a separate note

  Can be produced. (Each part dimension, Colors change is possible.)

## ■Dimension




## ■Model

TPS- 805-0105Y

| Model | Hose Size I.D x O.D | Service Length ( mm ) | A ( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | ΦE ( mm ) | Standard Fitting T1 | Standard Fitting T2 |
|---|---|---|---|---|---|---|---|---|---|
| TPS-803-0105Y | 5x8 | 2,000 | 780 | 500 | 180 | 100 | 42 | H5-G2FU | H5-G2F + N-2M-2M |
| TPS-805-0105Y | 5x8 | 4,000 | 1,000 | 500 | 400 | 100 | 42 | | |
| TPS-808-0105Y | 5x8 | 6,000 | 1,230 | 500 | 630 | 100 | 42 | | |
| TPS-810-0105Y | 5x8 | 8,000 | 1,400 | 500 | 800 | 100 | 42 | | |
| TPS-1003-0105Y | 6.5x10 | 2,000 | 785 | 500 | 185 | 100 | 52 | H6.5-G2FU | H6.5-G2F |
| TPS-1005-0105Y | 6.5x10 | 4,000 | 1,000 | 500 | 400 | 100 | 52 | | |
| TPS-1008-0105Y | 6.5x10 | 6,000 | 1,230 | 500 | 635 | 100 | 52 | | |
| TPS-1010-0105Y | 6.5x10 | 8,000 | 1,400 | 500 | 800 | 100 | 52 | | |
| TPS-1203-0105Y | 8x12 | 2,000 | 780 | 500 | 180 | 100 | 65 | H8-G2FU | H8-G2F |
| TPS-1205-0105Y | 8x12 | 4,000 | 990 | 500 | 390 | 100 | 65 | | |
| TPS-1208-0105Y | 8x12 | 6,000 | 1,190 | 500 | 590 | 100 | 65 | | |
| TPS-1210-0105Y | 8x12 | 8,000 | 1,380 | 500 | 780 | 100 | 65 | | |
| TPS-1603-0105Y | 11x16 | 2,000 | 720 | 500 | 120 | 100 | 108 | H11-4FU | H11-4F |
| TPS-1605-0105Y | 11x16 | 4,000 | 840 | 500 | 240 | 100 | 108 | | |
| TPS-1608-0105Y | 11x16 | 6,000 | 1,000 | 500 | 400 | 100 | 108 | | |
| TPS-1610-0105Y | 11x16 | 8,000 | 1,170 | 500 | 570 | 100 | 108 | | |

# Blow Gun BG-50 Series

BG

## Blow Gun


At hand lever
Any flow rate
can be
adjusted.

### Series

Example

Air supply from the top

Air supply from the bottom

### Feature

- There is an air supply port in two places up and down and you can choose depending on where you use.
- You can choose an optional nozzle at the tip of the nozzle.
- Easy flow adjustment is possible with the hand lever.

### Air Supply Fittings

Plug

| Model | Thread |
|---|---|
| C4P−02M | R1/8 |

Plug with Flow adjustment

| Model | Thread |
|---|---|
| FRP−02 | R1/8 |

### Specifications

| | |
|---|---|
| Media | Compressed Air |
| Working Temperature Range | −5～60℃ |
| MAX Working Pressure | 1.6MPa |

### Material

| | |
|---|---|
| Body | PolyacetalResin |
| Nozzle | BG-50 Brass Nickel plating treatment<br>BG-50-S1, S2 aluminum alumite treatment |

### Blow Gun (Nozzle: L type)


| Model | Body Colors | Nozzle Length | Nozzle I.D |
|---|---|---|---|
| BG−50 | Black | 90 | 3.6mm |
| BG−50−01 | White | | |
| BG−50−L320 | Black | 320 | 3.6mm |
| BG−50−L490 | | 490 | |
| BG−50−L1000 | | 1000 | |

### Blow Gun (nozzle: straight type)


| Model | Body Colors | Nozzle Length | Nozzle I.D |
|---|---|---|---|
| BG−50−S320 | Black | 320 | 3.6mm |
| BG−50−S490 | | 490 | |
| BG−50−S1000 | | 1000 | |

### Blow Gun (Short Nozzle)

(Body : White)


| Model (Nozzle I.D) |
|---|
| BG−50−S1-01(1mm) |
| BG−50−S2-01(2mm) |

* Optional nozzle cannot be used.

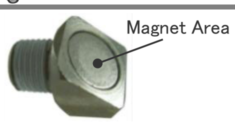
### Blow Gun (Female G1/8)


| Model | Colors |
|---|---|
| BG−50−G01F | Black |
| BG−50−G01F−01 | White |

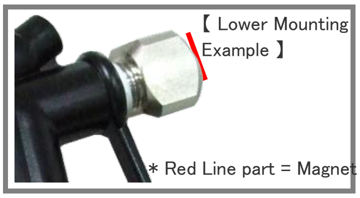
* Optional nozzle cannot be used.

## Options

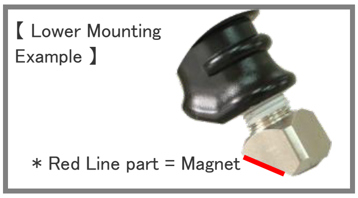
### Magnet




| Model |
|---|
| MCL45−02 |




Movie

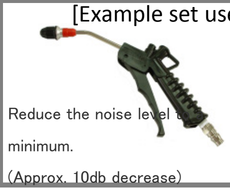



Movie

### Silencer Nozzle

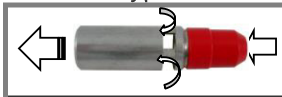
| Model |
|---|
| NS−24 |

[Example set use]



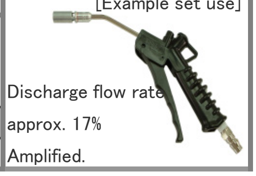

Movie

### Venturi Bypass Nozzle



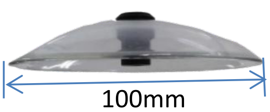
| Model |
|---|
| VN−20 |

[Example set use]




Movie

### Shield Nozzle




| Model |
|---|
| SN−22 |

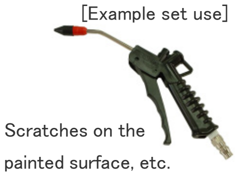
[Example set use]


Movie

### Rubber Tip Nozzle

| Model |
|---|
| RC−20 |

[Example set use]




Movie

# CUSTOM MADE FORMAT

We will manufacture multi-flat straight tubes from 1 tube by order.
If you wish to make a quote, please fill out the required information on the format and request a quote from us or our product agent. Correspondence with different diameter tubes is also possible.
※ In addition, thank you so that you can contact us if you have any unclear points.

①Core ②ArrayNo ③Length

Core ______ ※ Please refer to the following Array table ______ m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| No1 | ① | No2 | ①② | No3 | ①②③ | No4 | ①②③④ | No5 | ③④<br>①② |
| No6 | ①②③④⑤ | No7 | ④⑤⑥<br>①②③ | No8 | ①②③④⑤⑥⑦ | No8 | ①②③④⑤⑥⑦⑧ | | |
| No9 | ⑤⑥⑦⑧<br>①②③④ | No10 | ①②③④⑤⑥⑦⑧⑨ | | | | | | |

## ④Color

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① | | ② | | ③ | | ④ | | ⑤ | | ⑥ | | ⑦ | | ⑧ | | ⑨ | |

## ⑤Tube Size

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ① | mm | ② | mm | ③ | mm | ④ | mm | ⑤ | mm |
| ⑥ | mm | ⑦ | mm | ⑧ | mm | ⑨ | mm | | |

## ⑥Estimated Amount

______ pcs

■Multi core production example

Company Name: ______ Department: ______

Address: ______

Name: ______ Agent: ______

TEL ______ FAX ______

Questions: ______

# CUSTOM MADE FORMAT

We will manufacture Spiral Tubes from 1 pc.
If you wish to make a quote, please fill out the required information on the format and request a quote from us or our product agent. Correspondence with different diameter tubes is also possible.
※ In addition, thank you so that you can contact us if you have any unclear points.

①Tube Model ②Core ③ArrayＮo

______________________ ______________________ Pcs ______________________

※ Please refer to the following Array table

【ArrayTable】 Please contact us for more than 8 Core or special Array.

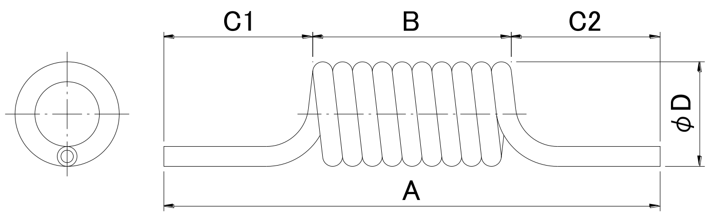
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Ｎo１ | ① | Ｎo２ | ①② | Ｎo３ | ①②③ | Ｎo４ | ③<br>①② | Ｎo５ | ③④<br>①② |
| Ｎo６ | ④⑤<br>①②③ | Ｎo７ | ④⑤⑥<br>①②③ | Ｎo８ | ⑤⑥⑦<br>①②③④ | Ｎo９ | ⑤⑥⑦⑧<br>①②③④ | | |

④Color

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① | | ② | | ③ | | ④ | | ⑤ | | ⑥ | | ⑦ | | ⑧ | |

⑤Estimated Amount

______________________ pcs




⑥Desired size of each part

A Dimension ______ mm

B Dimension ______ mm (core)

C１Dimension ______ mm

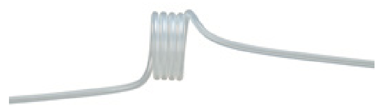
C２Dimension ______ mm

D Dimension ______ mm

最大Service Length ______ mm

※Stroke = Maximum Service Length-A Dimension

■Example of fluorine tube spiral data



Company Name: ______________________ Department: ______________________

Address: ______________________

Name: ______________________ Agent: ______________________

ＴＥＬ ______________________ ＦＡＸ ______________________

Questions: ------------------------------------------------

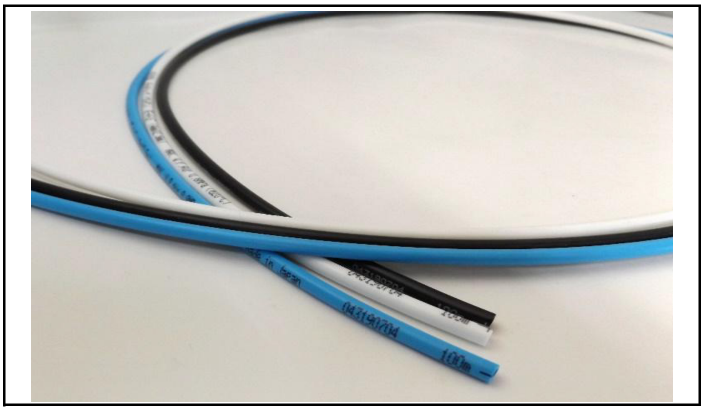
------------------------------------------------

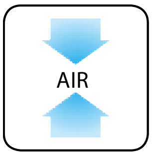
------------------------------------------------

------------------------------------------------

# Low Friction Tubing Touch Tube
# TE-LF Series

TE-LF NEW!






圧縮空気

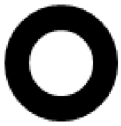
## ■Specification

| Media | Compressed Air |
|---|---|
| Working Temperature Range | -5～60 ℃ |
| Max Burst Pressure | 3 MPa |
| MAX Working Pressure | 0.8 MPa |

## ■Features

- Shut out tube wear on moving part of piping
- Meter printing at 1m spacing with cut mark. The remaining number can be confirmed.
- Excellent wear resistance
- Flexible, very small bend radius that is difficult to kink.
- Special polyurethane material containing fluorine resin fine particles

【Cut mark display

| Model | | TE-4-LF | TE-6-LF | TE-8-LF | TE-10-LF | TE-12-LF |
|---|---|---|---|---|---|---|
| Tube Size | O.D(mm) | 4 | 6 | 8 | 10 | 12 |
| | I.D(mm) | 2.5 | 4 | 5 | 6.5 | 8 |
| | |  |  |  |  |  |
| Min. Turning Radius(mm) | | 5 | 12 | 15 | 25 | 28 |
| Tolerance(mm) | | ± 0.1 | | | + 0.1 / - 0.15 | |
| Weight(g/m) | | 9 | 19 | 37 | 55 | 76 |

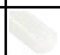
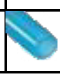
## ■ Model Display Example

TE-4-LF BK - 20

Tube O.D

| | O.D x I.D |
|---|---|
| 4 | 4 x 2. 5 |
| 6 | 6 x 4 |
| 8 | 8x5 |
| 10 | 10x6.5 |
| 12 | 12x8 |

Color

| | Standard Color | |
|---|---|---|
| BK | Black |  |
| W | White |  |
| LB | Light Blue |  |

1Roll

| | Length |
|---|---|
| 20 |  |
| 100 |  |

บริษัท นานดีอินเตอร์เทรด จำกัด
NANDEE INTER-TRADE CO., LTD.
314,316,318,320,322 ซอยจันทน์ 32 ถนนจันทน์ แขวงทุ่งวัดดอน เขตสาทร กทม. 10120

: 0-2675-8239
: @nandeeintertrade
: nandeeintertrade
: www.nandee.co.th
: marketing@nandee.co.th
sales@nandee.co.th