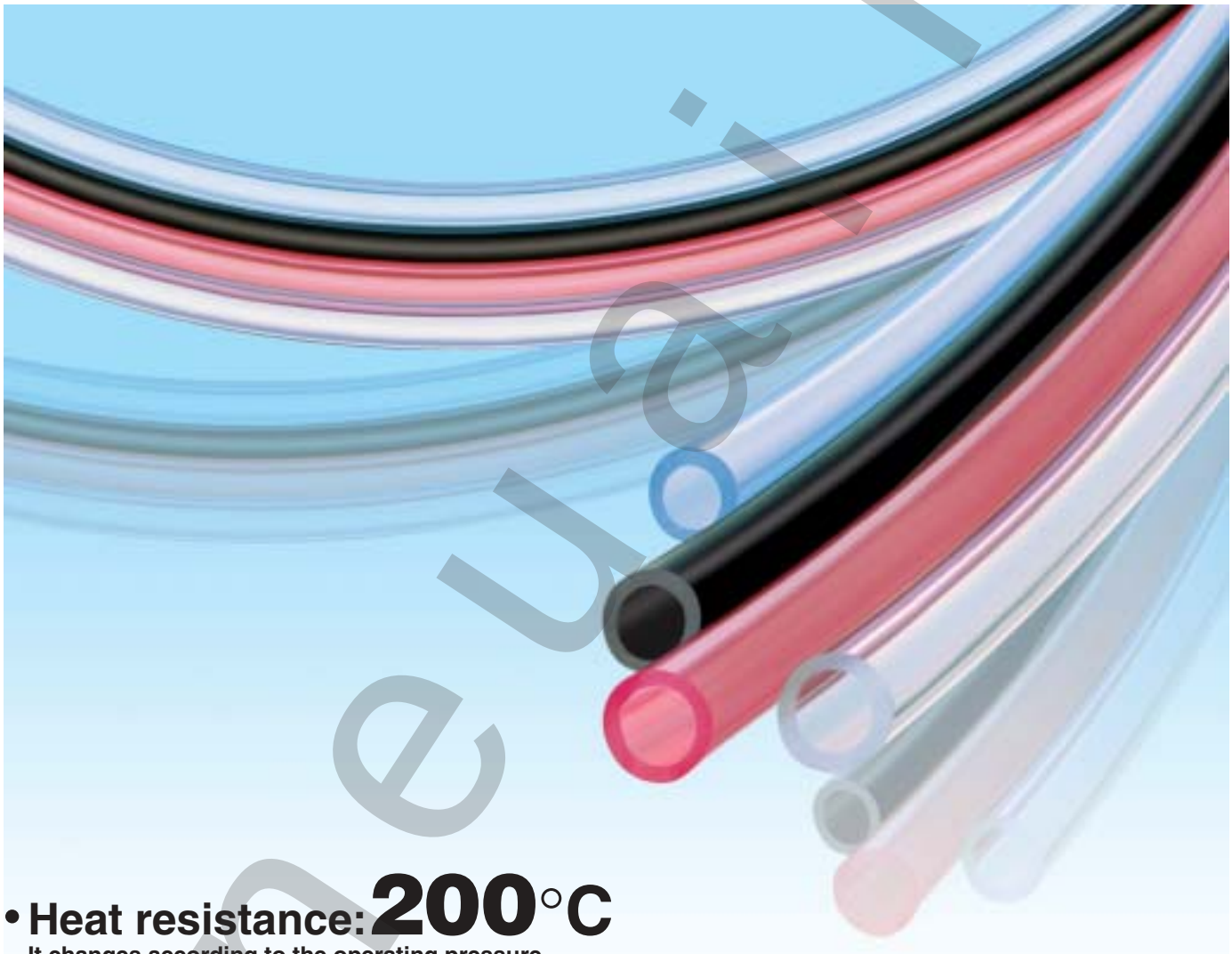
FEP Tubing (Fluoropolymer)



Series TH

- **Heat resistance: 200°C**
  It changes according to the operating pressure.
  Refer to the graph of the max. operating pressures on page 1.

- **4 Color variations**

- **8 Size variations**
  Metric size: ø4 to ø12

- **Applicable fittings**
  One-touch fittings (Series KQ2,KJ)
  Miniature fittings (Series M,MS) (Hose nipple type)
  Insert fittings (Series KF)
  High Purity Fluoropolymer fittings (Series LQ)

- **Applications**
  General pneumatic piping
  (Food, Semiconductor, Medical care, Automobile)

- **Certified to current Food Sanitation Legislation**
  (Ministry of Japanese Health and Safety, directive #370,1959)

FEP Tubing (Fluoropolymer)

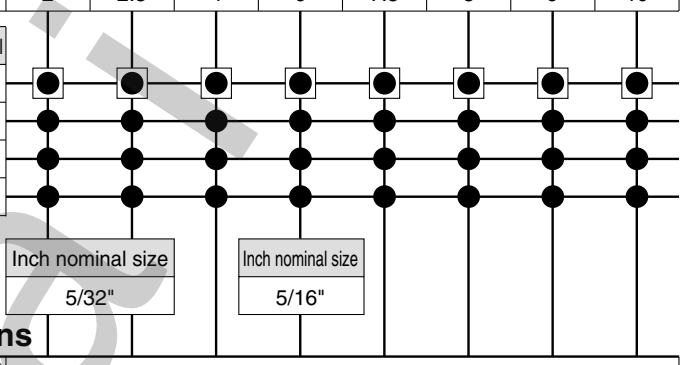
Series TH

Series

▽-20m roll □-100m roll

	Metric size							
Model	TH0402	TH0425	TH0604	TH0806	TH1075	TH1008	TH1209	TH1210
Tubing O.D. (mm)	4	4	6	8	10	10	12	12
Tubing I.D. (mm)	2	2.5	4	6	7.5	8	9	10

Color	Symbol
Translucent	N
Red (Translucent)	R
Blue (Translucent)	BU
Black (Opaque)	B



Specifications

Fluid Note 4)	Air, Water Note 1), Inert gas						
Applicable fittings Note 2)	One-touch fittings: Series KQ, KJ Insert fittings: Series KF Fluoropolymer fittings: Series LQ Miniature fittings: Series M, MS (Hose nipple type)						
Max. operating pressure	Refer to below "Max. Operating Pressure."						
Min. bending radius (mm) Note 3)	15	20	35	60	95	100	130
Operating temperature Note 4)	Air, Inert gas: -20 to 200°C Water: 0 to 100°C (No freezing)						
Material	FEP (Fluorinated Ethylene Propylene Resin)						

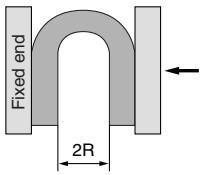
Note 1) When using a fluid in liquid form, the surge pressure must not exceed the maximum operating pressure. A surge pressure higher than the maximum operating pressure can cause breakage of the fittings, or rupture of the tubing. Furthermore, an abnormal temperature increase due to adiabatic compression can also result in ruptured tubing.

Note 2) Do not use in locations where the FEP tubing will move.
Be sure to operate under the maximum operating pressure conditions using the lower maximum operating specification of either the tubing or fittings.
After long term use or under high temperatures, some fittings leakage may occur due to material deterioration with age. Perform periodic inspections, and if any leakage is detected, replace with a new product immediately.
(Refer to maintenance part of "Tubing Precautions 1" on the page 4.)
Refer to Best Pneumatics 4 in "Fittings and Tubing" for all other precautions.
For High Purity Fluoropolymer, refer to the precautions of CAT.ES70-17, "High Purity Fluoropolymer Fittings & Tubing."

Note 3) Minimum bending radius is measured as shown left as representative values.
Allow extra length when piping since the tubing may crush if bent more than the min. bending radius.

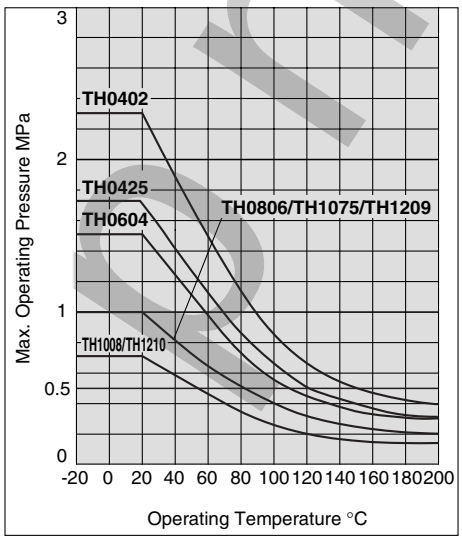
Note 4) Consult P/A if using any other fluids.

How to measure the minimum bending radius.



At a temperature of 20°C, bend the tubing into a U shape. Fix one end and gradually move the other end closer. Measure 2R at the point where the outside diameter's rate of change is 5%.

Max. Operating Pressure



Note) The maximum operating pressure varies dependant on the I.D. bore size even if the O.D. is the same.

How to Order

Metric size

TH0604 **N** — **20**

Indication of tubing model

Color indication

Symbol	Color
N	Translucent
R	Red (Translucent)
BU	Blue (Translucent)
B	Black (Opaque)

Length per roll

Symbol	Roll size
20	20m roll
100	100m roll

Chemical Resistance of the Fluoropolymer FEP Material

Chemicals in this table are inactive against FEP material Note 1)**, however physical properties may be effected by temperature or pressure change.**
Please make sure that operating conditions do not cause problems since the use of FEP tubing under chemical environment is unsecured.

2-nitro-2-methyl propanol	Sodium hypochlorite	Dimethyl phthalate
2-nitrobutanol	Carbon tetrachloride	Hydrofluoric acid
Pentabasic benzamide	Dioxane	Naphthalene fluoride
N-butylamine	Cyclohexanone	Nitrobenzene fluoride
N-octadecanol	Cyclohexane	Furan
N-butyl acetate	Dimethyl ether	Hexachlorethane
O-cresol	Dimethylsulfoxide	Hexane
Di-isobutyl adipate	Dimethylformamide	Ethyl hexanoate
Acetophenone	Bromine	Phenylcarbinol
Acetone	Deionized water	Benzaldehyde
Alniline	Nitric acid	Benzonitrile
Abietic acid	Mercury	Borax
Sulfuric chloride	Ammonium hydroxide	Boric acid
Isooctane	Potassium hydroxide	Formic aldehyde (Formalin)
Liquid ammonia	Sodium hydroxide	Acrylic anhydride
Ethyl alcohol	Cetane	Acetic anhydride
Ethyl ether	Soap, detergent	Methacrylic acid
Ethylene glycol	Dibutyl sebacate	Allyl methacrylate
Ethylenediamine	Diethyl carbonate	Vinyl methacrylate
Zinc chloride	Tetrachloroethylene	Methyl alcohol
Aluminum chloride	Tetrahydrofuran	Methyl ethyl ketone
Ammonium chloride	Tetrabromoethane	Methylene chloride
Calcium chloride	Triethanolamine	Sulphuric acid
Sulfuric chloride	Trichloroethylene	Phosphoric acid
Iron chloride (III)	Trichloroacetic acid	Iron phosphate (III)
Benzoyl chloride	Toluene	Tri-n-butyl phosphate
Magnesium chloride	Naphtha	Tricresyl phosphate
Hydrochloric acid	Naphthalene	
Chlorine (absolute)	Naphthol	
Aqua regia	Lead	
Ozone	Carbon dioxide	
Hydrogen peroxide	Nitrogen dioxide	
Natrium peroxide	Nitrobenzene	
Gasoline	Nitromethane	
Permanganate	Perchloroethylene	
Formic acid	Perphloroxylene	
Xylene	Unsymmetrical dimethylhydrazine	
Chromic acid	Hydrazine	
Chlorosulfonic acid	Pinene	
Chloroform	Piperidine	
Paraffinum liquidum	Glacial acetic acid (Acetic acid)	
Allyl acetate	Pyridine	
Ethyl acetate	Phenol	
Potassium	Phthalic acid	
Butyl acetate	Dybutyl phthalate	

Note 1) “Inactive in chemistry terminology” means - not to cause any chemical reaction.
Reference cited: Teflon®, the fluoropolymer handbook, Manual for the chemical applications of Teflon®. Du Pond-Mitsui Fluorochemicals Co., Ltd.

Teflon® is a registered trademark for the fluoropolymer produced by E.I du Pond de Nemours & Company (Inc.) and Du Pond-Mitsui Fluorochemicals Co., Ltd.