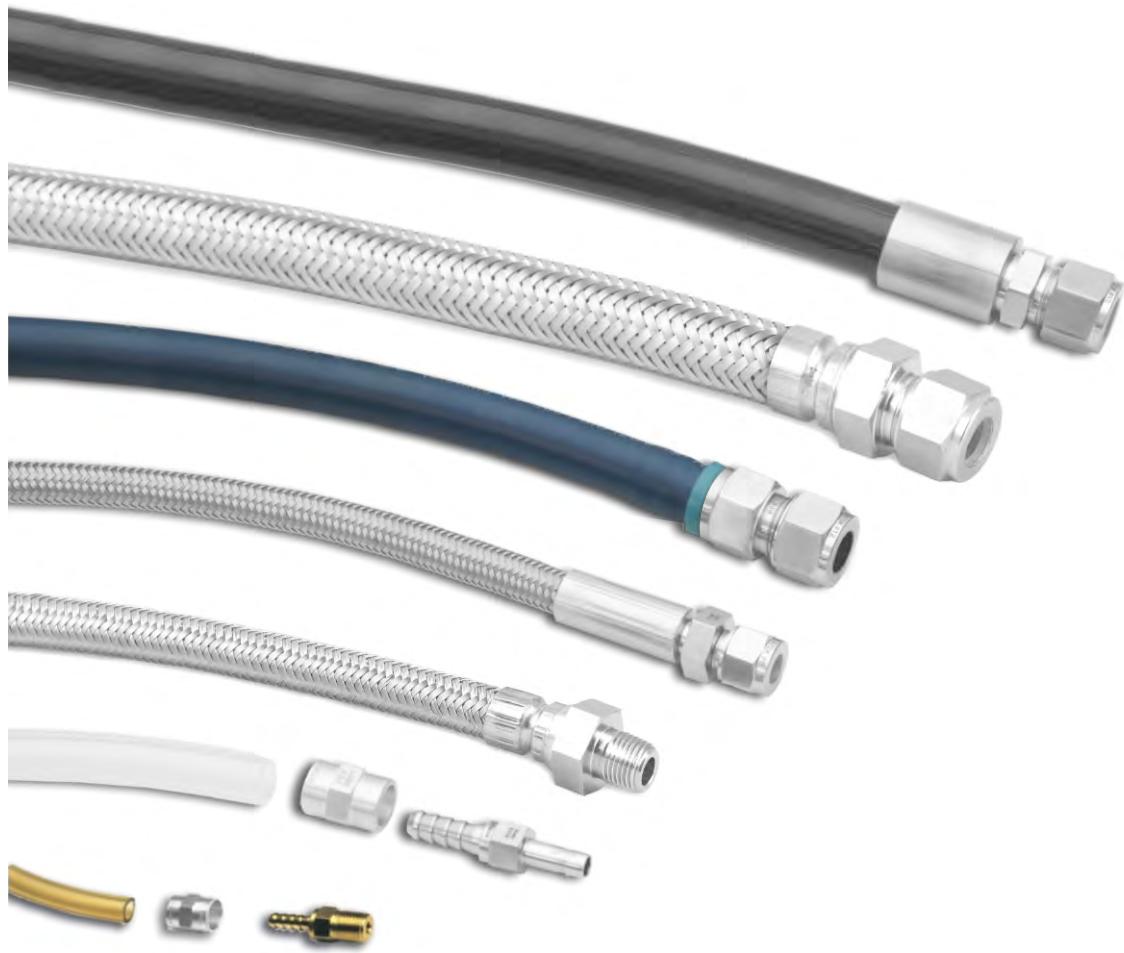


# Hoses and Connectors

**MH, MM, MX, PS, MP, TH, HCH and HC Series**



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# Terms and Definitions

## Hose

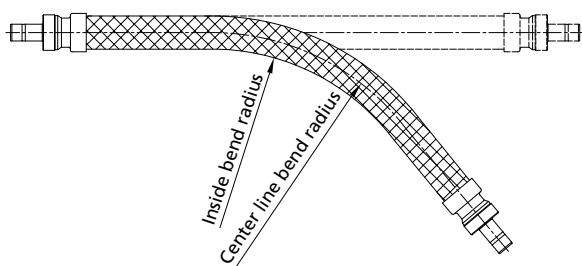
A multiple-layered flexible conduit through which fluid is conveyed from one point to another.

## Nominal Hose Size

An approximation of the hose inside diameter.

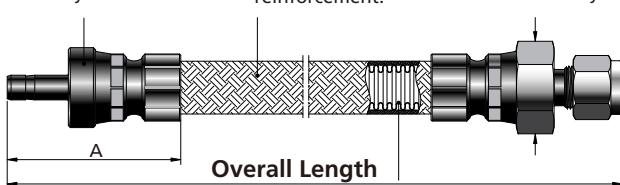
## Bend Radius

The radius of the bent section of a hose, measured to the center line or inside of the curved section.



### End Connection

The fitting that is assembled onto each end of the hose to provide a means of installation into a fluid system.



### Maximum Outside Dimension

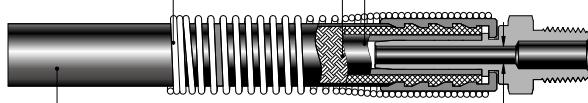
The largest nominal outside dimension of the hose assembly.

### Overbraid

A flexible, woven reinforcement.

### Spring Guard

A helical metal spring used to protect the hose from abrasion overbending, and kinking.



### Reinforcement

Material used to reinforce the core and increase its pressure-containing capacity.

### Core

The hose's innermost material that comes into contact with the system media, often referred to as the wetted surface.

### Cover

The hose's outermost material, used to protect the reinforcement and core from environmental conditions and wear.

### Minimum Inside Diameter

The smallest inside diameter of inner flow path of the hose assembly.

## Minimum Dynamic Bend Radius

The smallest bend radius that a hose is allowed to perform in applications where the hose undergoes dynamic bending and position changes.

## Minimum Static Bend Radius

The smallest bend radius that a hose is allowed to perform in applications where the hose is stationary without any movement in any plane.

## Flexibility

The relative ease or difficulty of bending a non-pressurized hose assembly.

## Burst Pressure

The pressure at which leakage occurs in a laboratory burst test.

## Permeation

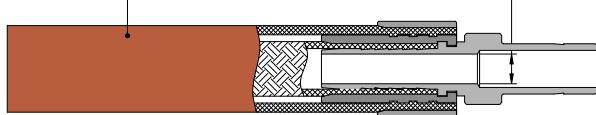
The movement of a liquid, gas, or vapor through a solid. All materials are permeable to a certain degree and must be tested for application compatibility before installation.

### Fire Jacket

Woven fiberglass coated with specially compounded silicone rubber to provide insulation from internal system fluid temperature extremes.

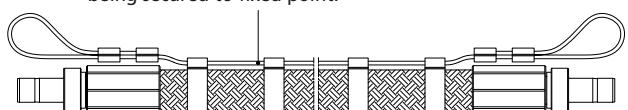
### Minimum Inside Diameter

The smallest inside diameter of inner flow path of the hose assembly.



### Safety Cable

Prevent hoses from whipping around and causing serious injuries in the event of fitting blow-off or hose burst. The knot at each end of cable can be adjusted before being secured to fixed point.



# Considerations for Selecting a Hose Assembly Solution

## Temperature

Identify the minimum and maximum temperatures the hose assembly will be exposed to in the system media and environment.

## Pressure

Identify the minimum and maximum pressures (or vacuum) within and outside the hose assembly.

## Material

Identify the system media and the environment that the hose assembly will be exposed to. This will help determine the materials best suited to the application demands.

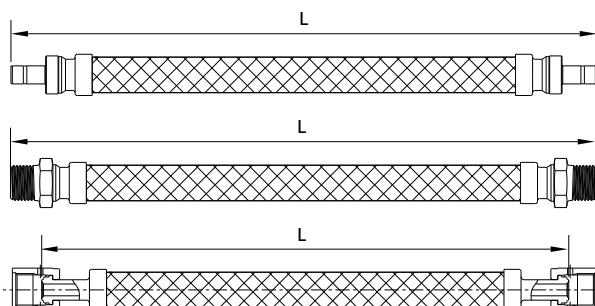
## Movement

Confirm whether the hose assembly will be installed in dynamic applications as this will require different considerations than a static application.

## Length

Determine the most likely route for installation of the hose, use this to identify required length.

Note: Different types of hoses vary in measuring position. For hoses with pipe fittings, length loss due to threading into the mating fitting should be taken into account.



## Cleanliness

Identify the cleanliness need.

## End Connection

Identify the type of end connections that are most compatible with the system requirements. End connections differ in materials of construction and pressure ratings.

## Orientation

Address space constraint concerns. Hose assemblies with elbows and union ball joints may help resolve space constraint issues.

## Desired Flow

Consider desired flow. Hose connection size, core tube construction, and installation route may impact flow.

## Additional Protection

Identify whether additional protection is necessary for the hose assemblies or surrounding systems.

## Permeability

Nylon, PFA, polyethylene, PTFE, and rubber are permeable materials. Gases and vapors may migrate through cores of these materials. The permeation rate is affected by many factor variables.

# Installation and Use Guide

## ⚠ Warning

Product failure or improper use may pose a threat to your personal safety and property.

## Inspection

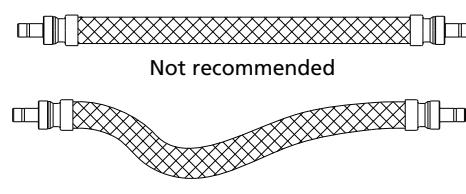
Inspect whether the hose length and layout are reasonable, and whether hose surface is free of defects and damage prior to installation. Establish an inspection schedule based on system application and replacement history.

## Vibration

Evaluate the amount of system vibration when selecting a hose. Metal hose may not be appropriate for systems with constant or severe vibration.

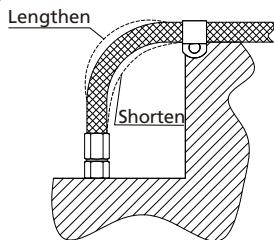
## Length

Consider hose movement, system pressurization, and thermal expansion when identifying hose length. Installing hose that is not long enough to accommodate these factors may shorten hose life.



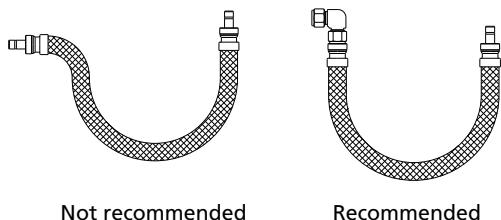
## System Pressure Changes

Use sufficient hose length to accommodate system pressure changes. Do not connect high pressure hoses and low pressure hoses together.



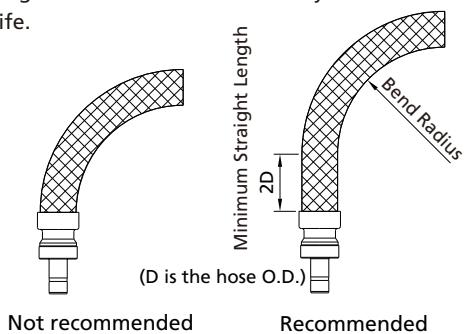
## Hose Strain

Elbows and adapters can be used to relieve hose strain.

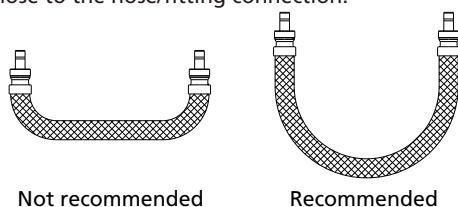


## Minimum Bend Radius & Minimum Straight Length

Follow minimum bend radius requirements for your hose. Installing hose with smaller bends may kink hose and shorten hose life.

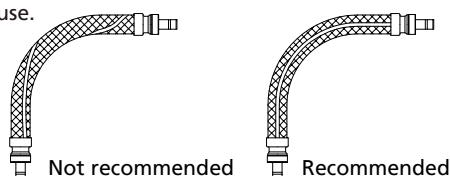


Maintain the minimum straight length for bent section, otherwise, hose rupture or leakage may result from bending too close to the hose/fitting connection.



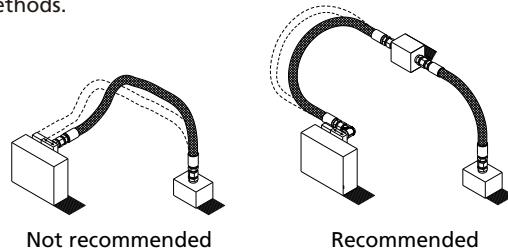
## Twist Avoidance

Avoid twisting the hose assembly and causing stress that may affect its use.



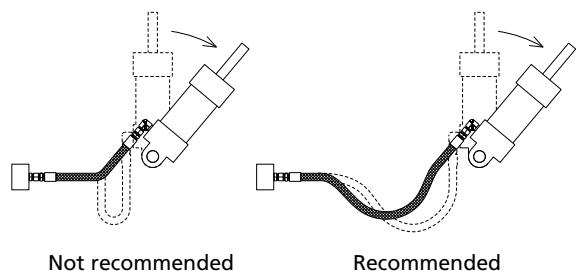
## Bending in One Plane

Bend the hose in one plane only so as to avoid twisting. For a compound bend, use multiple hose pieces or other isolation methods.

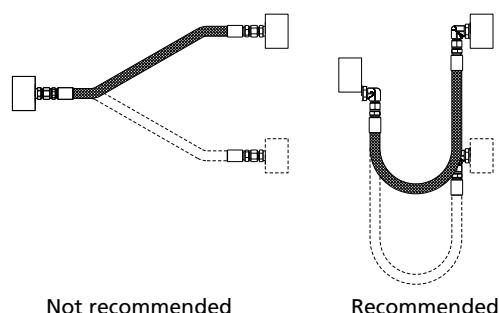


## Motion Absorption

Distribute movement and prevent bends smaller than the hose's minimum bend radius by ensuring sufficient hose length.

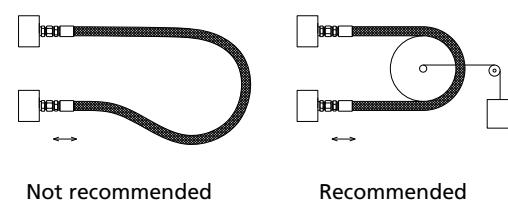


Elbow-connected hoses are better suited for vertical movement than hoses connected with straight fittings.



## Necessary Limits and Protection Devices

Install necessary limits and protection devices to facilitate hose movement and avoid twisting.

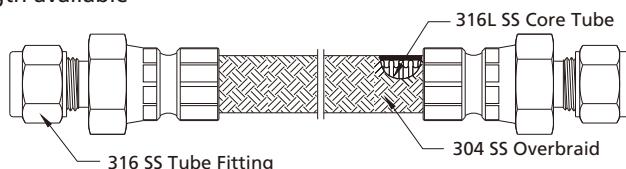


# Metal Flexible Hoses

## MH, MM, MX Series

### Features

- Core tube material: 316L stainless steel  
Fitting material: 316 stainless steel
- Overbraid material: 304, 316 stainless steel available (316 SS not applicable to MM series annular hoses)
- Nominal hose size: 1/4" to 2"
- End connection sizes: 1/4" to 2" and 6 mm to 50 mm
- Working pressure up to: 6000 psig (413 bar)
- Working temperature: -325°F to 800°F (-200°C to 426°C)
- Vacuum and positive pressure applications
- Welded fitting-to-hose construction to ensure reliable seal
- Standard and custom length available



### Hose Technical Parameters (MH Series)

| Nominal Hose Size | Inside Diameter | Min. Bend Radius        |            | Temperature Range            | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) |  |  |  |
|-------------------|-----------------|-------------------------|------------|------------------------------|---------------------------------|------------------------------------|--|--|--|
|                   |                 | Helical Convoluted Core |            |                              |                                 |                                    |  |  |  |
|                   |                 | Static                  | Dynamic    |                              |                                 |                                    |  |  |  |
| in. (mm)          | in. (mm)        | in. (mm)                | in. (mm)   | °F (°C)                      | psig (bar)                      | psig (bar)                         |  |  |  |
| 1/4 (6.4)         | 0.28 (7.1)      | 2.25 (57.2)             | 10.0 (254) | -325 to 800<br>(-200 to 426) | 3100 (213)                      | 12400 (854)                        |  |  |  |
| 3/8 (9.7)         | 0.42 (10.6)     | 3.00 (76.2)             | 12.0 (305) |                              | 2000 (137)                      | 8000 (551)                         |  |  |  |
| 1/2 (12.7)        | 0.53 (13.5)     | 4.50 (114)              | 16.0 (406) |                              | 1800 (124)                      | 7200 (496)                         |  |  |  |
| 3/4 (19.0)        | 0.80 (20.3)     | 6.00 (152)              | 17.0 (432) |                              | 1500 (103)                      | 6000 (413)                         |  |  |  |
| 1 (25.4)          | 1.03 (26.0)     | 6.75 (171)              | 20.0 (508) |                              | 1200 (82.6)                     | 4800 (330)                         |  |  |  |
| 1 1/4 (31.8)      | 1.30 (33.0)     | 8.86 (225)              | 23.0 (584) |                              | 950 (65.4)                      | 3800 (261)                         |  |  |  |
| 1 1/2 (38.1)      | 1.53 (38.9)     | 11.0 (280)              | 26.0 (660) |                              | 900 (62.0)                      | 3600 (248)                         |  |  |  |
| 2 (50.8)          | 2.05 (52.1)     | 13.8 (350)              | 32.0 (813) |                              | 500 (34.4)                      | 2000 (137)                         |  |  |  |

### Hose Technical Parameters (MM Series)

| Nominal Hose Size | Inside Diameter | Min. Bend Radius        |             |                         |            | Temperature Range            | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) |  |  |  |
|-------------------|-----------------|-------------------------|-------------|-------------------------|------------|------------------------------|---------------------------------|------------------------------------|--|--|--|
|                   |                 | Helical Convoluted Core |             | Annular Convoluted Core |            |                              |                                 |                                    |  |  |  |
|                   |                 | Static                  | Dynamic     | Static                  | Dynamic    |                              |                                 |                                    |  |  |  |
| in. (mm)          | in. (mm)        | in. (mm)                | in. (mm)    | in. (mm)                | in. (mm)   | °F (°C)                      | psig (bar)                      | psig (bar)                         |  |  |  |
| 1/4 (6.4)         | 0.25 (6.4)      | 1.38 (35)               | 8.66 (220)  | 0.79 (20)               | 4.33 (110) | -325 to 800<br>(-200 to 426) | 1600 (110)                      | 6400 (440)                         |  |  |  |
| 3/8 (9.7)         | 0.38 (9.5)      | 2.36 (60)               | 10.40 (264) | 0.98 (25)               | 5.91 (150) |                              | 1470 (101)                      | 6000 (413)                         |  |  |  |
| 1/2 (12.7)        | 0.50 (12.7)     | 2.95 (75)               | 11.89 (302) | 1.18 (30)               | 4.88 (124) |                              | 1110 (76.4)                     | 4500 (310)                         |  |  |  |
| 3/4 (19.0)        | 0.75 (19.0)     | 3.54 (90)               | 13.58 (345) | 1.50 (38)               | 6.65 (169) |                              | 860 (59.2)                      | 3500 (241)                         |  |  |  |
| 1 (25.4)          | 1.00 (25.4)     | 4.13 (105)              | 15.00 (381) | 1.77 (45)               | 7.68 (195) |                              | 680 (46.8)                      | 2680 (184)                         |  |  |  |
| 1 1/4 (31.8)      | 1.25 (31.8)     | 4.72 (120)              | 16.22 (412) | 680 (46.8)              | 2600 (179) |                              |                                 |                                    |  |  |  |
| 1 1/2 (38.1)      | 1.50 (38.1)     | 5.51 (140)              | 16.89 (429) | 520 (35.8)              | 2200 (151) |                              |                                 |                                    |  |  |  |
| 2 (50.8)          | 2.00 (50.8)     | 6.30 (160)              | 18.43 (468) | 450 (31.0)              | 1800 (124) |                              |                                 |                                    |  |  |  |

## Hose Technical Parameters (MX Series)

| Nominal Hose Size | Inside Diameter | Min. Bend Radius |              | Temperature Range            | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) |
|-------------------|-----------------|------------------|--------------|------------------------------|---------------------------------|------------------------------------|
|                   |                 | Static           | Dynamic      |                              |                                 |                                    |
| in. (mm)          | in. (mm)        | in. (mm)         | in. (mm)     | °F (°C)                      | psig (bar)                      | psig (bar)                         |
| 1/4 (6.4)         | 0.25 (6.4)      | 1.50 (38.1)      | 5.50 (140.0) | -325 to 800<br>(-200 to 426) | 6000 (413)                      | 24000 (1655)                       |
| 3/8 (9.7)         | 0.38 (9.5)      | 2.50 (64.0)      | 7.00 (178.0) |                              | 5000 (344)                      | 20000 (1378)                       |
| 1/2 (12.7)        | 0.51 (13.0)     | 3.00 (76.2)      | 8.00 (203.0) |                              | 4500 (310)                      | 18000 (1240)                       |

## Testing

Every FITOK metal flexible hose is factory-tested with nitrogen or air at maximum working pressure and is subject to sampling test with helium to a maximum leak rate of  $1 \times 10^{-5}$  std cm<sup>3</sup>/s before shipment . For other requirements, please contact FITOK Group or our authorized distributors.

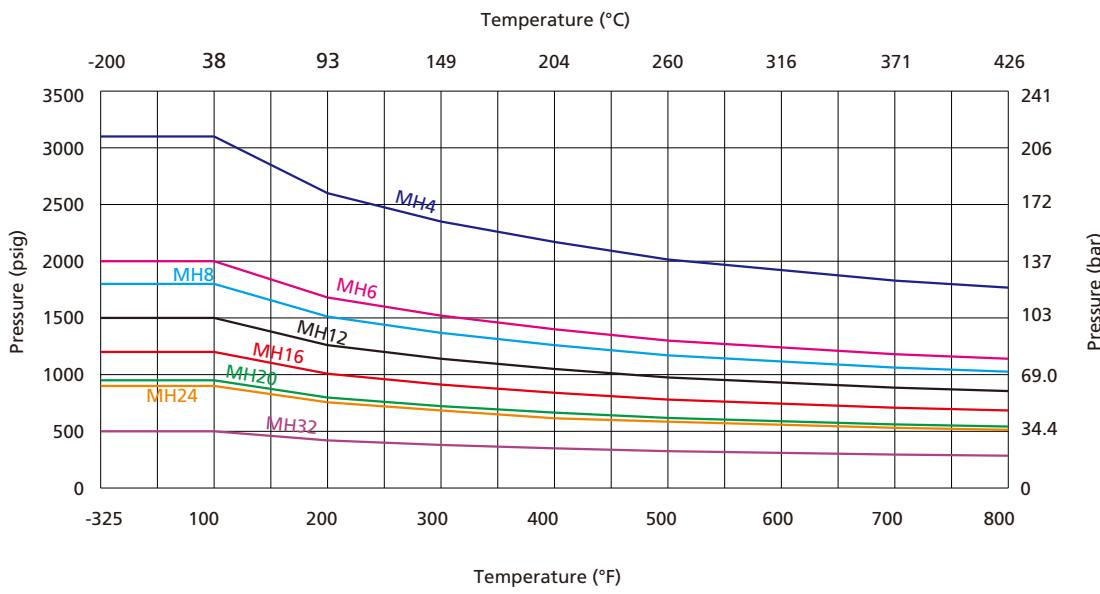
## Cleaning and Packaging

FITOK metal flexible hose components are cleaned in accordance with FITOK Standard Cleaning and Packaging Process (FC-01) for general industrial procedures.

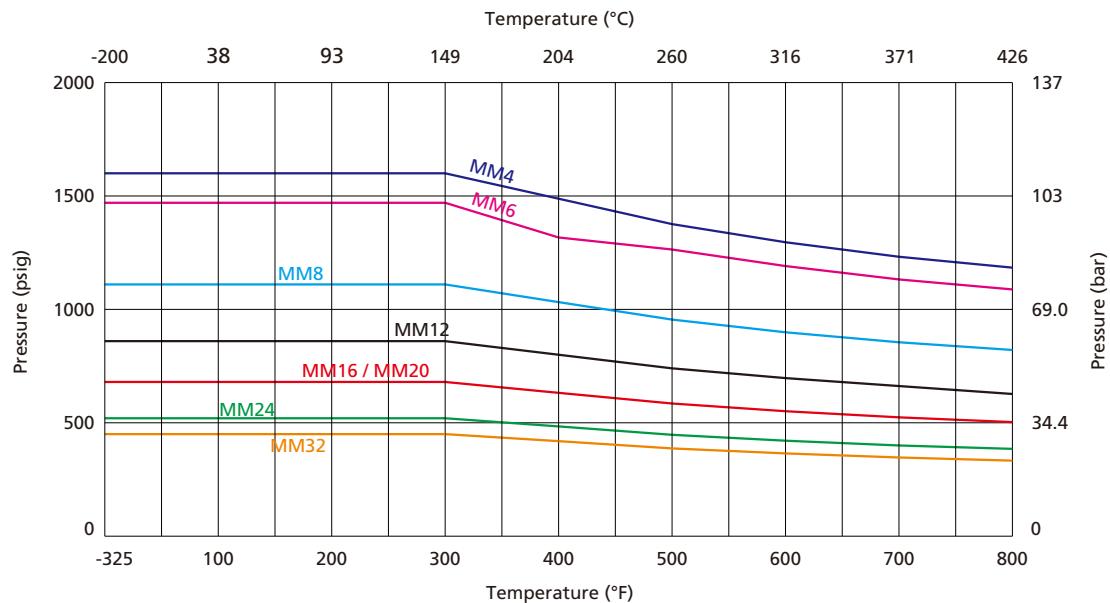
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

## Pressure vs. Temperature

### MH series

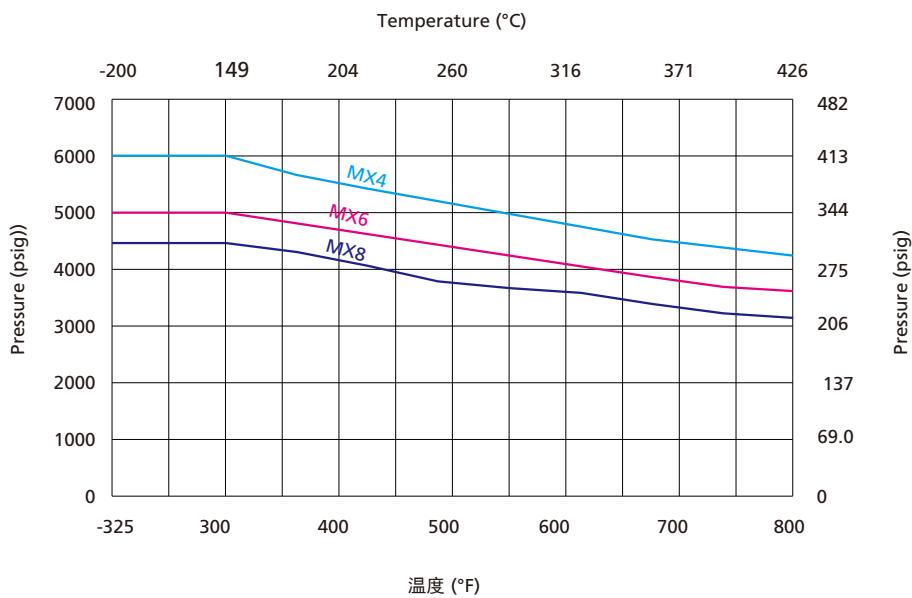


## MM series



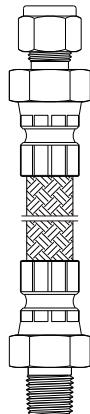
The peak value of pressure surge, shock or pulsations in the system should not exceed 50% of the rated working pressure of the hose.

## MX series



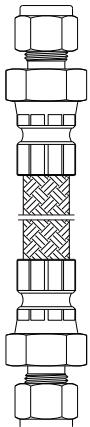
## Standard Assemblies

### Tube Fitting to Male NPT End



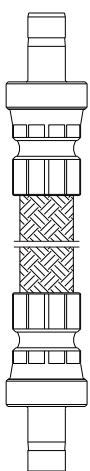
| Nominal Hose Size | Tube Fitting Size | NPT Size | Hose Series | Overall Length | Ordering Number       | Minimum Inside Diameter | Maximum Outside Dimension |
|-------------------|-------------------|----------|-------------|----------------|-----------------------|-------------------------|---------------------------|
|                   |                   |          |             |                |                       | in. (mm)                | in. (mm)                  |
| 1/4               | 1/4               | 1/4      | MX4         | 12 (305)       | SS-MX4-FL4-NS4-F12    | 0.19 (4.8)              | 0.94 (23.8)               |
|                   |                   |          | MH4         | 12 (305)       | SS-MH4-FL4-NS4-F12    | 0.19 (4.8)              | 0.94 (23.8)               |
|                   |                   |          | MM4         | 36 (914)       | SS-MM4-FL4-NS4-F36    | 0.19 (4.8)              | 0.87 (22.0)               |
| 3/8               | 3/8               | 3/8      | MX6         | 18 (457)       | SS-MX6-FL6-NS6-F18    | 0.28 (7.1)              | 1.15 (29.3)               |
|                   |                   |          | MH6         | 18 (457)       | SS-MH6-FL6-NS6-F18    | 0.28 (7.1)              | 1.15 (29.3)               |
|                   |                   |          | MM6         | 36 (914)       | SS-MM6-FL6-NS6-F36    | 0.28 (7.1)              | 1.01 (25.7)               |
| 1/2               | 1/2               | 1/2      | MX8         | 18 (457)       | SS-MX8-FL8-NS8-F18    | 0.41 (10.4)             | 1.30 (33.0)               |
|                   |                   |          | MH8         | 18 (457)       | SS-MH8-FL8-NS8-F18    | 0.41 (10.4)             | 1.30 (33.0)               |
|                   |                   |          | MM8         | 48 (1220)      | SS-MM8-FL8-NS8-F48    | 0.41 (10.4)             | 1.15 (29.3)               |
| 3/4               | 3/4               | 3/4      | MH12        | 18 (457)       | SS-MH12-FL12-NS12-F18 | 0.66 (16.0)             | 1.74 (44.2)               |
|                   |                   |          | MM12        | 48 (1220)      | SS-MM12-FL12-NS12-F48 | 0.66 (16.0)             | 1.59 (40.5)               |
| 1                 | 1                 | 1        | MH16        | 24 (610)       | SS-MH16-FL16-NS16-F24 | 0.88 (22.4)             | 2.02 (51.3)               |

### Tube Fitting End



| Nominal Hose Size | Tube Fitting Size | Hose Series | Overall Length | Ordering Number  | Minimum Inside Diameter | Maximum Outside Dimension |
|-------------------|-------------------|-------------|----------------|------------------|-------------------------|---------------------------|
|                   |                   |             |                |                  | in. (mm)                | in. (mm)                  |
| 1/4               | 1/4               | MX4         | 12 (305)       | SS-MX4-FL4-F12   | 0.19 (4.8)              | 0.94 (23.8)               |
|                   |                   | MH4         | 12 (305)       | SS-MH4-FL4-F12   | 0.19 (4.8)              | 0.94 (23.8)               |
|                   |                   | MM4         | 36 (914)       | SS-MM4-FL4-F36   | 0.19 (4.8)              | 0.87 (22.0)               |
| 3/8               | 3/8               | MX6         | 18 (457)       | SS-MX6-FL6-F18   | 0.28 (7.1)              | 1.15 (29.3)               |
|                   |                   | MH6         | 18 (457)       | SS-MH6-FL6-F18   | 0.28 (7.1)              | 1.15 (29.3)               |
|                   |                   | MM6         | 36 (914)       | SS-MM6-FL6-F36   | 0.28 (7.1)              | 1.01 (25.7)               |
| 1/2               | 1/2               | MX8         | 18 (457)       | SS-MX8-FL8-F18   | 0.41 (10.4)             | 1.30 (33.0)               |
|                   |                   | MH8         | 18 (457)       | SS-MH8-FL8-F18   | 0.41 (10.4)             | 1.30 (33.0)               |
|                   |                   | MM8         | 48 (1220)      | SS-MM8-FL8-F48   | 0.41 (10.4)             | 1.15 (29.3)               |
| 3/4               | 3/4               | MH12        | 18 (457)       | SS-MH12-FL12-F18 | 0.66 (16.0)             | 1.74 (44.2)               |
|                   |                   | MM12        | 48 (1220)      | SS-MM12-FL12-F48 | 0.66 (16.0)             | 1.59 (40.5)               |
| 1                 | 1                 | MH16        | 24 (610)       | SS-MH16-FL16-F24 | 0.88 (22.4)             | 2.02 (51.3)               |

### Tube Adapter End

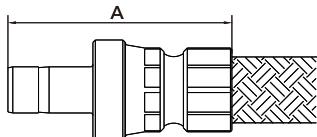


| Nominal Hose Size | Tube Adapter Size | Hose Series | Overall Length | Ordering Number | Minimum Inside Diameter | Maximum Outside Dimension |
|-------------------|-------------------|-------------|----------------|-----------------|-------------------------|---------------------------|
|                   |                   |             |                |                 | in. (mm)                | in. (mm)                  |
| 1/4               | 1/4               | MX4         | 12 (305)       | SS-MX4-FT4-F12  | 0.17 (4.3)              | 0.81 (20.6)               |
|                   |                   | MH4         | 12 (305)       | SS-MH4-FT4-F12  | 0.16 (4.1)              | 0.81 (20.6)               |
|                   |                   | MM4         | 36 (914)       | SS-MM4-FT4-F36  | 0.16 (4.1)              | 0.76 (19.2)               |
| 3/8               | 3/8               | MX6         | 18 (457)       | SS-MX6-FT6-F18  | 0.27 (6.9)              | 1.02 (26.0)               |
|                   |                   | MH6         | 12 (305)       | SS-MH6-FT6-F12  | 0.27 (6.9)              | 1.01 (25.6)               |
|                   |                   | MM6         | 36 (914)       | SS-MM6-FT6-F36  | 0.27 (6.9)              | 0.91 (23.1)               |
| 1/2               | 1/2               | MX8         | 18 (457)       | SS-MX8-FT8-F18  | 0.37 (9.4)              | 1.14 (29.0)               |

1. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.
2. Types listed are standard. Other types are available upon request.

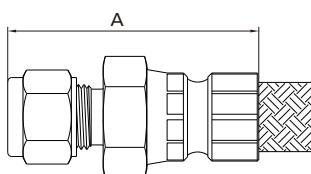
## End Connections

### Tube Adapters



| Tube Adapter Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions      |                           |                         |
|--------------------------|--------------------------|---------------------------|-----------------|---------------------------|-------------------------|
|                          |                          |                           | A               | Maximum Outside Dimension | Minimum Inside Diameter |
|                          |                          |                           |                 | in. (mm)                  |                         |
| 1/4                      | 1/4                      | FT4                       | 1.76 (44.7)     | 0.81 (20.6)               | 0.16 (4.1)              |
| 3/8                      | 3/8                      | FT6                       | 1.82 (46.2)     | 1.02 (26.0)               | 0.27 (6.9)              |
| 1/2                      | 1/2                      | FT8                       | 2.22 (56.4)     | 1.14 (29.0)               | 0.37 (9.4)              |
| 3/4                      | 3/4                      | FT12                      | 2.35 (59.7)     | 1.54 (39.1)               | 0.58 (14.7)             |
| 1                        | 1                        | FT16                      | 2.69 (68.3)     | 1.82 (46.3)               | 0.80 (20.3)             |
| <b>in.</b>               |                          | —                         | <b>mm (in.)</b> |                           |                         |
| 1/4                      | 6                        | MT6                       | 44.4 (1.75)     | 20.6 (0.81)               | 4.1 (0.16)              |
| 3/8                      | 10                       | MT10                      | 47.0 (1.85)     | 26.0 (1.02)               | 7.1 (0.28)              |
| 1/2                      | 12                       | MT12                      | 57.2 (2.25)     | 29.0 (1.14)               | 8.9 (0.35)              |

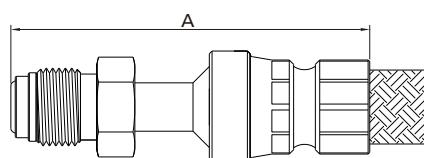
### Tube Fittings



Automatic Weld Style-1 in. and Under

| Tube Fitting Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions      |                           |                         |
|--------------------------|--------------------------|---------------------------|-----------------|---------------------------|-------------------------|
|                          |                          |                           | A               | Maximum Outside Dimension | Minimum Inside Diameter |
|                          |                          |                           |                 | in. (mm)                  |                         |
| 1/4                      | 1/4                      | FL4                       | 1.94 (49.3)     | 0.94 (23.8)               | 0.19 (4.8)              |
| 1/4                      | 3/8                      | FL6                       | 2.00 (50.8)     | 0.94 (23.8)               | 0.28 (7.1)              |
| 3/8                      | 3/8                      | FL6                       | 2.02 (51.3)     | 1.15 (29.3)               | 0.28 (7.1)              |
| 1/2                      | 1/2                      | FL8                       | 2.24 (56.9)     | 1.30 (33.0)               | 0.41 (10.4)             |
| 1/2                      | 5/8                      | FL10                      | 2.27 (57.7)     | 1.30 (33.0)               | 0.50 (12.7)             |
| 3/4                      | 3/4                      | FL12                      | 2.35 (59.7)     | 1.74 (44.2)               | 0.63 (16.0)             |
| 1                        | 1                        | FL16                      | 2.64 (67.1)     | 2.02 (51.3)               | 0.88 (22.4)             |
| 1 1/4                    | 1 1/4                    | FL20                      | 4.04 (103)      | 2.23 (58.9)               | 1.09 (27.7)             |
| 1 1/2                    | 1 1/2                    | FL24                      | 4.75 (121)      | 2.61 (66.3)               | 1.34 (34.0)             |
| 2                        | 2                        | FL32                      | 5.72 (145)      | 3.48 (88.4)               | 1.88 (47.8)             |
| <b>in.</b>               |                          | —                         | <b>mm (in.)</b> |                           |                         |
| 1/4                      | 6                        | ML6                       | 62.2 (2.45)     | 23.8 (0.94)               | 4.8 (0.19)              |
| 1/4                      | 8                        | ML8                       | 63.2 (2.49)     | 23.8 (0.94)               | 6.4 (0.25)              |
| 3/8                      | 10                       | ML10                      | 51.6 (2.03)     | 29.3 (1.15)               | 7.9 (0.31)              |
| 1/2                      | 12                       | ML12                      | 56.9 (2.24)     | 33.0 (1.30)               | 9.7 (0.38)              |

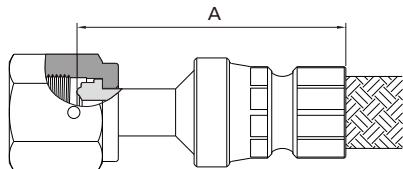
### Male FR Metal Gasket Face Seal Fittings Swivel



| FR Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|----------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
|                |                          |                           |             | in. (mm)                |                           |
| 1/4            | 1/4                      | SFR4                      | 2.60 (66.0) | 0.18 (4.6)              | 0.81 (20.6)               |
| 1/2            | 1/2                      | SFR8                      | 2.83 (71.9) | 0.40 (10.2)             | 1.14 (29.0)               |
| 3/4            | 3/4                      | SFR12                     | 4.19 (106)  | 0.65 (16.5)             | 1.54 (39.1)               |
| 1              | 1                        | SFR16                     | 4.80 (122)  | 0.87 (22.1)             | 1.88 (47.7)               |

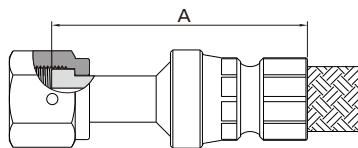
## End Connections

**Female FR Metal Gasket Face Seal Fittings Swivel**



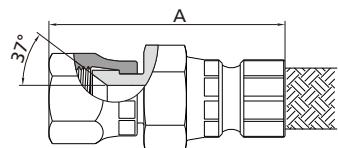
| FR Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|----------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
|                |                          |                           | in. (mm)    |                         |                           |
| 1/4            | 1/4                      | SFFR4                     | 2.00 (50.8) | 0.18 (4.6)              | 0.87 (22.1)               |
| 1/2            | 1/2                      | SFFR8                     | 2.16 (54.9) | 0.40 (10.2)             | 1.23 (31.3)               |
| 3/4            | 3/4                      | SFFR12                    | 4.19 (106)  | 0.65 (16.5)             | 1.74 (44.2)               |
| 1              | 1                        | SFFR16                    | 4.80 (122)  | 0.87 (22.1)             | 2.03 (51.6)               |

**Female FO O-Ring Face Seal Fittings Swivel**



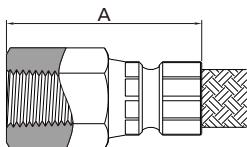
| FO Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|----------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
|                |                          |                           | in. (mm)    |                         |                           |
| 1/4            | 1/4                      | SFFO4                     | 2.11 (53.6) | 0.18 (4.6)              | 0.81 (20.6)               |
| 1/2            | 1/2                      | SFFO8                     | 2.14 (54.4) | 0.40 (10.2)             | 1.23 (31.3)               |

**SAE 37° (JIC) Female Swivel**

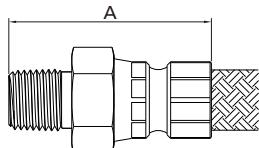


| Swivel Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|--------------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                    |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
|                    |                          |                           | in. (mm)    |                         |                           |
| 1/4                | 1/4                      | SAN4                      | 1.87 (47.5) | 0.17 (4.3)              | 0.81 (20.6)               |
| 3/8                | 3/8                      | SAN6                      | 1.98 (50.3) | 0.28 (7.1)              | 1.05 (26.6)               |
| 1/2                | 1/2                      | SAN8                      | 2.25 (57.2) | 0.42 (10.7)             | 1.23 (31.3)               |

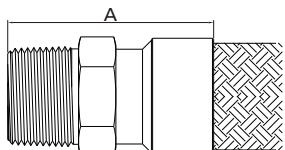
**Female Pipe Threads, NPT**



| NPT Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|-----------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                 |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
|                 |                          |                           | in. (mm)    |                         |                           |
| 1/4             | 1/4                      | FNS4                      | 1.81 (46.0) | 0.28 (7.1)              | 0.94 (23.8)               |
| 3/8             | 3/8                      | FNS6                      | 1.87 (47.5) | 0.38 (9.7)              | 1.15 (29.3)               |
| 1/2             | 1/2                      | FNS8                      | 2.18 (55.4) | 0.47 (11.9)             | 1.30 (33.0)               |
| 3/4             | 3/4                      | FNS12                     | 2.21 (56.1) | 0.72 (18.3)             | 1.74 (44.2)               |

**Male Pipe Threads, NPT**

Automatic Weld Style-1 in. and Under



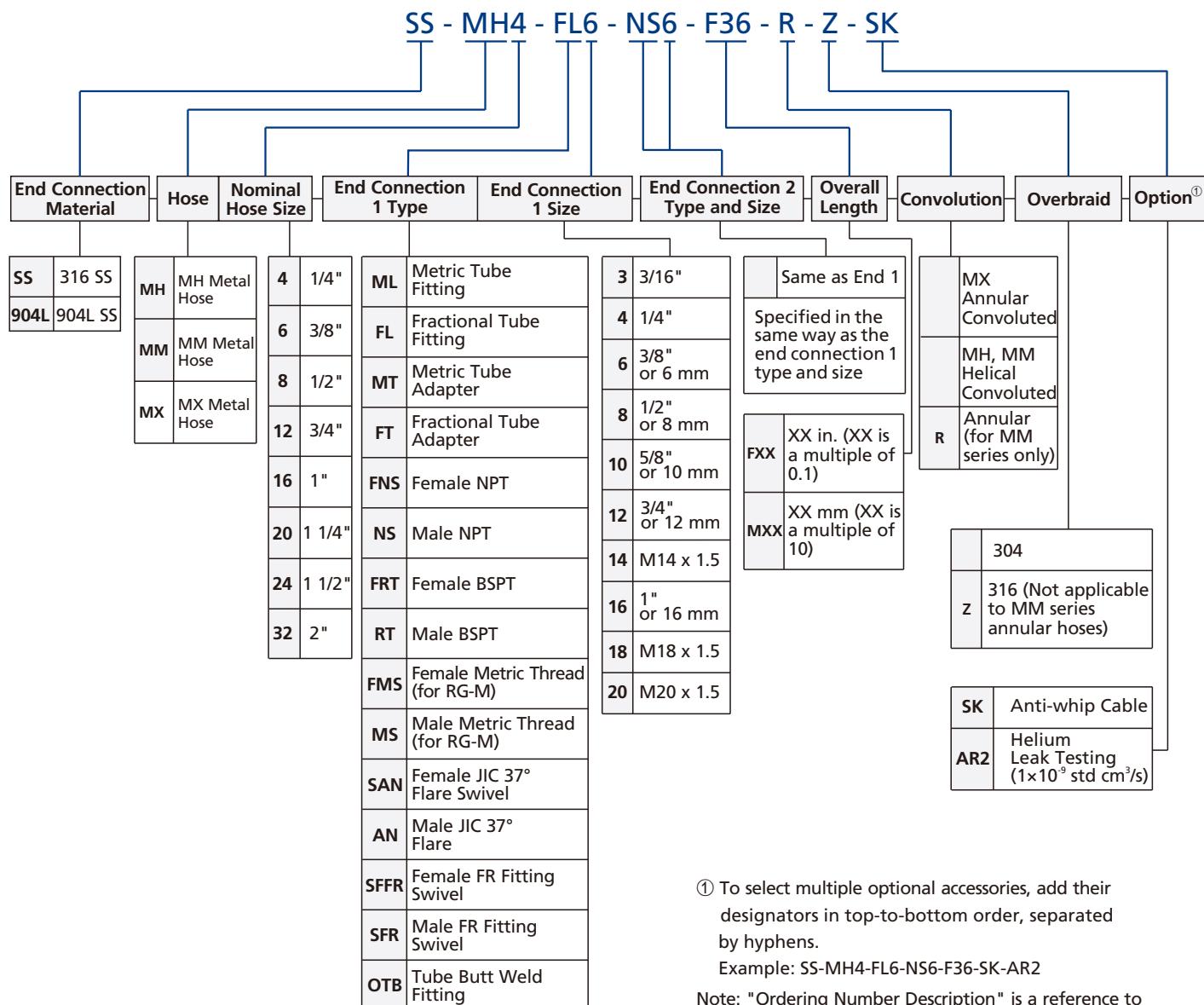
Manual Weld Style-Over 1 in.

| NPT Size<br>in. | Nominal Hose Size<br>in. | End Connection Designator | Dimensions  |                         |                           |
|-----------------|--------------------------|---------------------------|-------------|-------------------------|---------------------------|
|                 |                          |                           | A           | Minimum Inside Diameter | Maximum Outside Dimension |
| in. (mm)        |                          |                           |             |                         |                           |
| 1/4             | 1/4                      | NS4                       | 1.80 (45.7) | 0.28 (7.1)              | 0.94 (23.8)               |
| 1/4             | 3/8                      | NS4                       | 1.81 (46.0) | 0.28 (7.1)              | 1.15 (29.3)               |
| 3/8             | 3/8                      | NS6                       | 1.81 (46.0) | 0.38 (9.7)              | 1.15 (29.3)               |
| 1/2             | 1/4                      | NS8                       | 1.99 (50.6) | 0.47 (11.9)             | 1.02 (25.8)               |
| 1/2             | 1/2                      | NS8                       | 2.15 (54.6) | 0.47 (11.9)             | 1.30 (33.0)               |
| 3/4             | 3/4                      | NS12                      | 2.22 (56.4) | 0.63 (16.0)             | 1.74 (44.2)               |
| 1               | 1                        | NS16                      | 2.54 (64.5) | 0.88 (22.4)             | 2.02 (51.3)               |
| 1 1/4           | 1 1/4                    | NS20                      | 3.06 (77.7) | 1.09 (27.7)             | 2.31 (58.7)               |
| 1 1/2           | 1 1/2                    | NS24                      | 3.72 (94.5) | 1.34 (34.0)             | 2.31 (58.7)               |
| 2               | 2                        | NS32                      | 4.19 (106)  | 1.81 (46.0)             | 3.19 (81.0)               |

**Options****Anti-whip Cable**

- ◎ 304 stainless steel cable
- ◎ Available on hoses without changing the technical parameters of hoses
- ◎ Prevent hoses from whipping around and causing serious injuries in the event of fitting blow-off or hose burst

## Ordering Number Description



① To select multiple optional accessories, add their designators in top-to-bottom order, separated by hyphens.

Example: SS-MH4-FL6-NS6-F36-SK-AR2

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

**Example: SS-MH4-FT6-M710**

**SS:** End connection material is 316 stainless steel.

**MH4:** MH series, nominal hose size is 1/4".

**FT6:** End connection 1 is 3/8" tube adapter.

End connection 2 is 3/8" tube adapter.

**M710:** Overall length is 710 mm.

Connections are described based on the following rules:

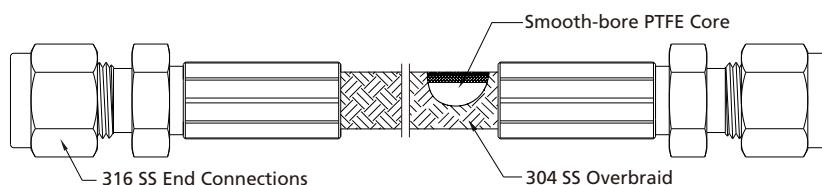
1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - FR Fitting - OTB Tube Butt Weld Fitting - Others
2. Put the sizes from the biggest down to the smallest if they are of the same type.
3. Put the female before male if they are of the same type and size.

# PTFE-lined, Stainless Steel Braided Hoses

## PS Series

### Features

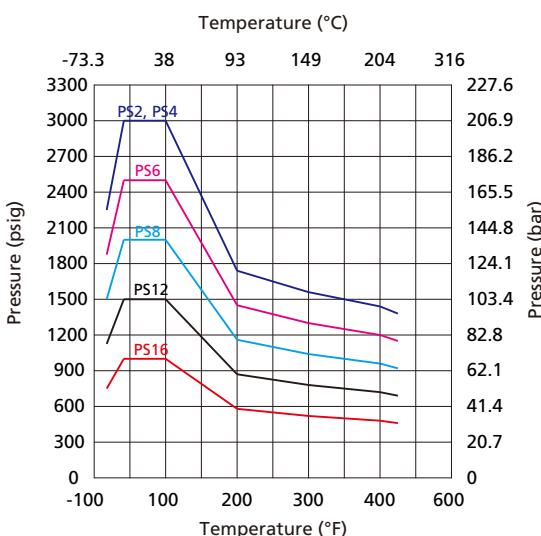
- Core tube material: PTFE
- Overbraid material: 304 stainless steel
- Nominal hose size: 1/8" to 1"
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -65°F to 400°F (-53°C to 204°C)
- Lightweight construction for easy handling and installation
- Standard and custom length available



### Hose Technical Parameters

| Nominal Hose Size | Inside Diameter | Min. Inside Bend Radius |             | Temperature Range          | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) |
|-------------------|-----------------|-------------------------|-------------|----------------------------|---------------------------------|------------------------------------|
|                   |                 | Static                  | Dynamic     |                            |                                 |                                    |
| in. (mm)          | in. (mm)        | in. (mm)                | in. (mm)    | °F (°C)                    | psig (bar)                      | psig (bar)                         |
| 1/8 (3.2)         | 0.13 (3.2)      | 1.5 (38.1)              | 3.75 (95.2) | -65 to 400<br>(-53 to 204) | 3000 (206)                      | 12000 (826)                        |
| 1/4 (6.4)         | 0.19 (4.8)      | 1.5 (38.1)              | 2.0 (50.8)  |                            | 3000 (206)                      | 12000 (826)                        |
| 3/8 (9.5)         | 0.31 (7.9)      | 3.5 (88.9)              | 5.0 (127)   |                            | 2500 (172)                      | 10000 (690)                        |
| 1/2 (12.7)        | 0.41 (10.3)     | 4.5 (114)               | 6.0 (152)   |                            | 2000 (137)                      | 8000 (551)                         |
| 3/4 (19.0)        | 0.63 (15.9)     | 6.0 (152)               | 7.5 (190)   |                            | 1500 (103)                      | 6000 (413)                         |
| 1 (25.4)          | 0.88 (22.2)     | 9.0 (229)               | 11.3 (287)  |                            | 1000 (68)                       | 4000 (275)                         |

### Pressure vs. Temperature



### Testing

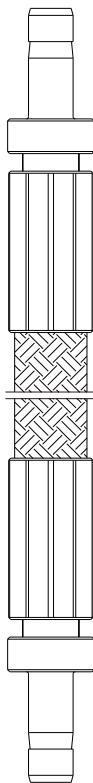
Every FITOK PTFE-lined hose assembly is factory tested with pure water at 1.5 times the maximum working pressure.

### Cleaning and Packaging

FITOK PTFE-lined hose components are cleaned in accordance with FITOK Standard Cleaning and Packaging Process (FC-01) for general industrial procedures.

Shorter hoses are packed in cartons with suitable protective material; longer hoses are coiled, bagged and boxed or crated.

## PTFE-lined Hose Standard Assemblies



| Nominal Hose Size<br>in. | Tube Adapter Size<br>in. | Overall Length<br>in. (mm) | Ordering Number  | Minimum Inside Diameter<br>in. (mm) | Maximum Outside Dimension<br>in. (mm) |
|--------------------------|--------------------------|----------------------------|------------------|-------------------------------------|---------------------------------------|
|                          |                          |                            |                  | in. (mm)                            | in. (mm)                              |
| 1/8                      | 1/8                      | 6.0 (153)                  | SS-PS2-FT2-F6    | 0.08<br>(2.0)                       | 0.46<br>(11.6)                        |
|                          |                          | 12.0 (305)                 | SS-PS2-FT2-F12   |                                     |                                       |
|                          |                          | 18.0 (458)                 | SS-PS2-FT2-F18   |                                     |                                       |
|                          |                          | 24.0 (610)                 | SS-PS2-FT2-F24   |                                     |                                       |
|                          |                          | 36.0 (915)                 | SS-PS2-FT2-F36   |                                     |                                       |
| 1/4                      | 1/4                      | 6.0 (153)                  | SS-PS4-FT4-F6    | 0.13<br>(3.3)                       | 0.49<br>(12.4)                        |
|                          |                          | 12.0 (305)                 | SS-PS4-FT4-F12   |                                     |                                       |
|                          |                          | 18.0 (458)                 | SS-PS4-FT4-F18   |                                     |                                       |
|                          |                          | 24.0 (610)                 | SS-PS4-FT4-F24   |                                     |                                       |
|                          |                          | 36.0 (915)                 | SS-PS4-FT4-F36   |                                     |                                       |
|                          |                          | 48.0 (1220)                | SS-PS4-FT4-F48   |                                     |                                       |
|                          |                          | 60.0 (1530)                | SS-PS4-FT4-F60   |                                     |                                       |
|                          |                          | 72.0 (1829)                | SS-PS4-FT4-F72   |                                     |                                       |
|                          |                          | 120.0 (3050)               | SS-PS4-FT4-F120  |                                     |                                       |
| 3/8                      | 3/8                      | 12.0 (305)                 | SS-PS6-FT6-F12   | 0.27<br>(6.9)                       | 0.73<br>(18.5)                        |
|                          |                          | 18.0 (458)                 | SS-PS6-FT6-F18   |                                     |                                       |
|                          |                          | 24.0 (610)                 | SS-PS6-FT6-F24   |                                     |                                       |
|                          |                          | 36.0 (915)                 | SS-PS6-FT6-F36   |                                     |                                       |
|                          |                          | 48.0 (1220)                | SS-PS6-FT6-F48   |                                     |                                       |
|                          |                          | 60.0 (1530)                | SS-PS6-FT6-F60   |                                     |                                       |
|                          |                          | 72.0 (1829)                | SS-PS6-FT6-F72   |                                     |                                       |
|                          |                          | 96.0 (2439)                | SS-PS6-FT6-F96   |                                     |                                       |
|                          |                          | 120.0 (3050)               | SS-PS6-FT6-F120  |                                     |                                       |
| 1/2                      | 1/2                      | 12.0 (305)                 | SS-PS8-FT8-F12   | 0.36<br>(9.1)                       | 0.86<br>(21.8)                        |
|                          |                          | 24.0 (610)                 | SS-PS8-FT8-F24   |                                     |                                       |
|                          |                          | 36.0 (915)                 | SS-PS8-FT8-F36   |                                     |                                       |
|                          |                          | 48.0 (1220)                | SS-PS8-FT8-F48   |                                     |                                       |
|                          |                          | 60.0 (1530)                | SS-PS8-FT8-F60   |                                     |                                       |
|                          |                          | 72.0 (1829)                | SS-PS8-FT8-F72   |                                     |                                       |
| 3/4                      | 3/4                      | 24.0 (610)                 | SS-PS12-FT12-F24 | 0.53<br>(13.5)                      | 1.04<br>(26.4)                        |
|                          |                          | 36.0 (915)                 | SS-PS12-FT12-F36 |                                     |                                       |
| 1                        | 1                        | 36.0 (915)                 | SS-PS16-FT16-F36 | 0.80<br>(20.3)                      | 1.36<br>(34.5)                        |
|                          |                          | 48.0 (1220)                | SS-PS16-FT16-F48 |                                     |                                       |
| in.                      | mm                       | in. (mm)                   | —                | in. (mm)                            | in. (mm)                              |
| 1/4                      | 6                        | 12.0 (305)                 | SS-PS4-MT6-F12   | 0.16<br>(4.1)                       | 0.54<br>(13.7)                        |
|                          |                          | 24.0 (610)                 | SS-PS4-MT6-F24   |                                     |                                       |
|                          |                          | 36.0 (915)                 | SS-PS4-MT6-F36   |                                     |                                       |
| 1/2                      | 12                       | 24.0 (610)                 | SS-PS8-MT12-F24  | 0.33<br>(8.4)                       | 0.86<br>(21.8)                        |
|                          |                          | 36.0 (915)                 | SS-PS8-MT12-F36  |                                     |                                       |

## Options

### Anti-whip Cable

- 304 stainless steel cable
- Available on hoses without changing the technical parameters of hoses
- Prevent hoses from whipping around and causing serious injuries in the event of fitting blow-off or hose burst

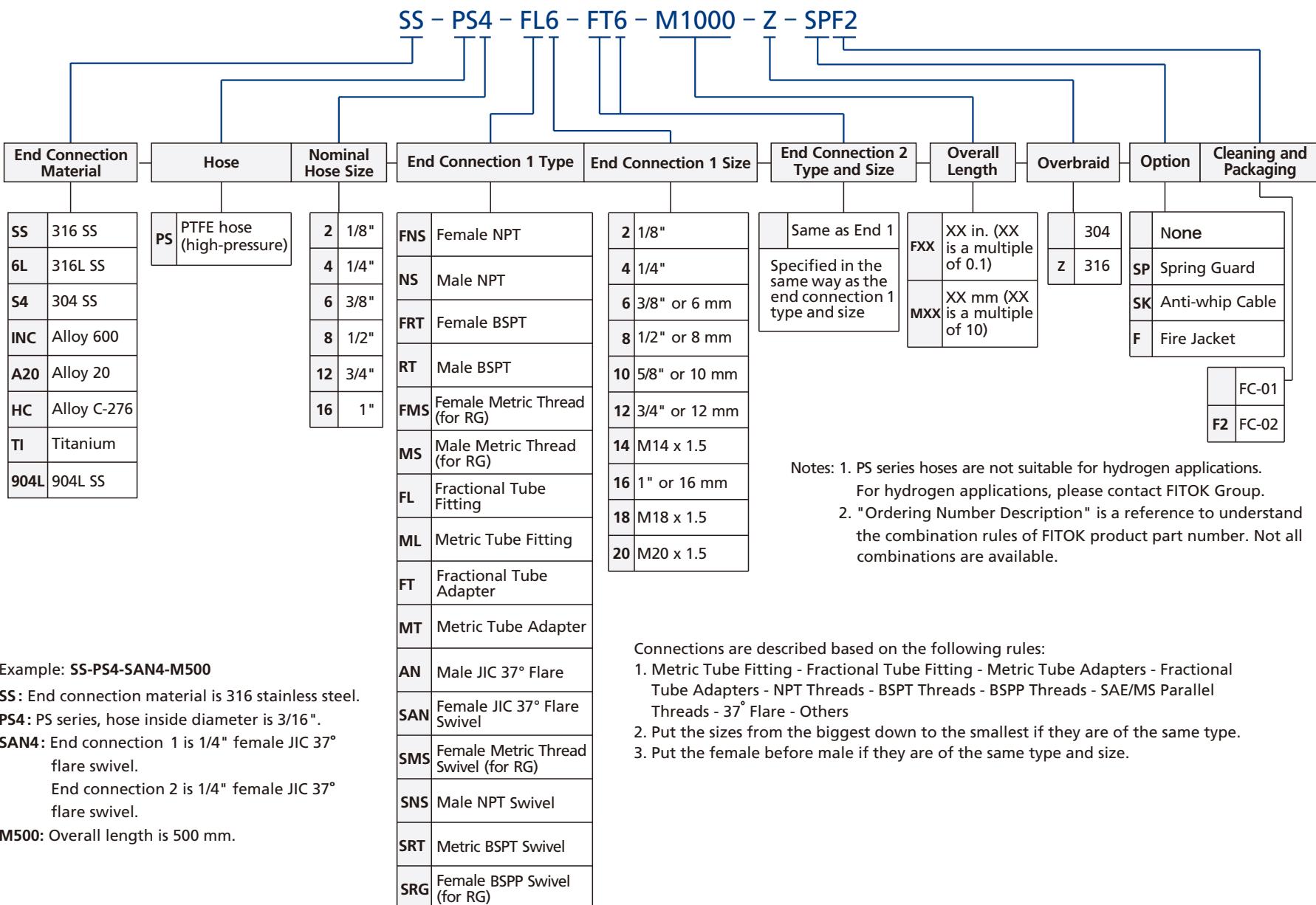
### Spring Guard

- 302 stainless steel material
- Available on hoses without changing the technical parameters of hoses
- Protect the hose from abrasion, overbending, and kinking

### Fire Jacket

- Braided fiberglass coated with organic, high-temperature-resistant iron oxide red silicone rubber
- Offers excellent flame and fire protection and has good thermal and electrical insulation with resistance to acid & alkali
- Operating temperature from -65 to 500°F (-53 to 260°C) with max. short-term exposure temperature to 3002°F (1650°C).

## Ordering Number Description

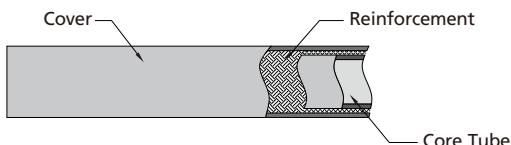


# Multipurpose Push-on Hoses

## MP Series

### Features

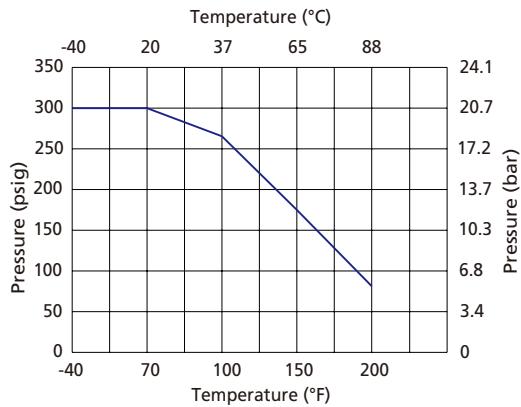
- Cover: weatherproof, abrasion withstanding and oil-resistant synthetic rubber
- Reinforcement: single-braid high-strength synthetic fiber woven for maximum strength and end connection retention
- Core tube: highly oil-resistant rubber
- End connection materials: stainless steel and brass
- Hose colors: blue, black, green, gray, red and yellow
- Nominal hose size: 1/4" to 3/4"
- Working pressure up to: 300 psig (20.7 bar)
- Working temperature: -40°F to 200°F (-40°C to 93°C)
- End connections reusable
- Custom length available



### Hose Technical Parameters

| Nominal Hose Size | Inside Diameter | Min. Inside Bend Radius | Temperature Range         | Working Pressure at -40 to 70°F (-40 to 20°C) | Min. Burst Pressure at 70°F (20°C) |
|-------------------|-----------------|-------------------------|---------------------------|---|------------------------------------|
| in. (mm)          | in. (mm)        | in. (mm)                | °F (°C)                   | psig (bar)                                    | psig (bar)                         |
| 1/4 (6.4)         | 0.26 (6.6)      | 2.50 (63.5)             | -40 to 200<br>(-40 to 93) | 300 (20.6)                                    | 1200 (82.7)                        |
| 3/8 (9.5)         | 0.39 (9.9)      | 3.00 (76.2)             |                           |   |                                    |
| 1/2 (12.7)        | 0.50 (12.7)     | 5.00 (127)              |                           |   |                                    |
| 3/4 (19.0)        | 0.76 (19.3)     | 7.00 (178)              |                           |   |                                    |

### Pressure vs. Temperature



### Testing

Every FITOK multipurpose push-on hose assembly is factory tested with pure water at 1.5 times the maximum working pressure.

### Cleaning and Packaging

FITOK multipurpose push-on hose components are cleaned in accordance with FITOK Standard Cleaning and Packaging Process (FC-01) for general industrial procedures.

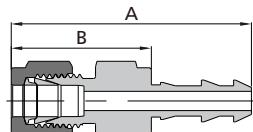
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

### Caution

Do not reuse the hose.

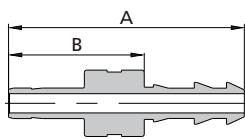
## Multipurpose Push-on Hose End Connections

### Tube Fittings



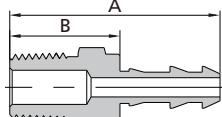
| Nominal Hose Size<br>in. | Tube Fitting Size<br>in. | Basic Ordering Number | Dimensions, in. (mm) |             |                         |                           |
|--------------------------|--------------------------|-----------------------|----------------------|-------------|-------------------------|---------------------------|
|                          |                          |                       | A                    | B           | Minimum Inside Diameter | Maximum Outside Dimension |
| 1/4                      | 1/4                      | -MP4-FL4              | 1.97 (50.0)          | 1.15 (29.2) | 0.16 (4.0)              | 0.65 (16.5)               |
| 3/8                      | 3/8                      | -MP6-FL6              | 2.11 (53.6)          | 1.18 (30.0) | 0.27 (6.8)              | 0.87 (22.0)               |
| 1/2                      | 1/2                      | -MP8-FL8              | 2.48 (63.0)          | 1.37 (34.9) | 0.37 (9.5)              | 1.01 (25.7)               |

### Tube Adapters



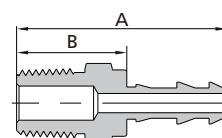
| Nominal Hose Size<br>in. | Tube Adapter Size<br>in. | Basic Ordering Number | Dimensions, in. (mm) |             |                         |                           |
|--------------------------|--------------------------|-----------------------|----------------------|-------------|-------------------------|---------------------------|
|                          |                          |                       | A                    | B           | Minimum Inside Diameter | Maximum Outside Dimension |
| 1/4                      | 1/4                      | -MP4-FT4              | 1.93 (49.0)          | 1.11 (28.2) | 0.16 (4.0)              | 0.54 (13.8)               |
| 3/8                      | 3/8                      | -MP6-FT6              | 2.03 (51.6)          | 1.10 (28.0) | 0.27 (6.8)              | 0.73 (18.5)               |
| 1/2                      | 1/2                      | -MP8-FT8              | 2.47 (62.7)          | 1.36 (34.6) | 0.37 (9.4)              | 0.85 (21.5)               |
| 3/4                      | 3/4                      | -MP12-FT12            | 3.14 (79.8)          | 1.43 (36.2) | 0.58 (14.7)             | 1.09 (27.7)               |
| in.                      | mm                       | —                     | mm (in.)             |             |                         |                           |
| 1/4                      | 6                        | -MP4-MT6              | 49.0 (1.93)          | 28.2 (1.11) | 4.0 (0.16)              | 13.8 (0.54)               |
| 1/4                      | 8                        | -MP4-MT8              | 48.8 (1.92)          | 28.0 (1.10) | 4.0 (0.16)              | 13.8 (0.54)               |
| 3/8                      | 8                        | -MP6-MT8              | 52.1 (2.05)          | 28.5 (1.12) | 5.6 (0.22)              | 18.5 (0.73)               |
| 3/8                      | 10                       | -MP6-MT10             | 51.6 (2.03)          | 28.0 (1.10) | 6.8 (0.27)              | 18.5 (0.73)               |
| 1/2                      | 12                       | -MP8-MT12             | 62.7 (2.47)          | 34.6 (1.36) | 8.8 (0.35)              | 21.5 (0.85)               |
| 3/4                      | 18                       | -MP12-MT18            | 79.8 (3.14)          | 36.2 (1.43) | 13.9 (0.55)             | 27.7 (1.09)               |

### Male NPT Connectors



| Nominal Hose Size<br>in. | NPT Tapered Thread Size<br>in. | Basic Ordering Number | Dimensions, in. (mm) |             |                         |                           |
|--------------------------|--------------------------------|-----------------------|----------------------|-------------|-------------------------|---------------------------|
|                          |                                |                       | A                    | B           | Minimum Inside Diameter | Maximum Outside Dimension |
| 1/4                      | 1/4                            | -MP4-NS4              | 1.72 (43.7)          | 0.90 (22.9) | 0.16 (4.0)              | 0.65 (16.5)               |
| 3/8                      | 1/4                            | -MP6-NS4              | 1.80 (45.7)          | 0.87 (22.1) | 0.27 (6.8)              | 0.87 (22.0)               |
| 3/8                      | 3/8                            | -MP6-NS6              | 1.80 (45.7)          | 0.87 (22.1) | 0.27 (6.8)              | 0.87 (22.0)               |
| 1/2                      | 1/2                            | -MP8-NS8              | 2.19 (55.6)          | 1.08 (27.5) | 0.37 (9.5)              | 1.01 (25.7)               |
| 3/4                      | 3/4                            | -MP12-NS12            | 2.81 (71.4)          | 1.09 (27.8) | 0.61 (15.5)             | 1.30 (33.0)               |

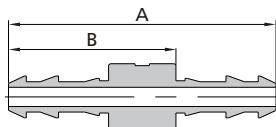
### Male BSPT Connectors



| Nominal Hose Size<br>in. | BSPT Tapered Thread Size<br>in. | Basic Ordering Number | Dimensions, in. (mm) |             |                         |                           |
|--------------------------|---------------------------------|-----------------------|----------------------|-------------|-------------------------|---------------------------|
|                          |                                 |                       | A                    | B           | Minimum Inside Diameter | Maximum Outside Dimension |
| 1/4                      | 1/4                             | -MP4-RT4              | 1.72 (43.7)          | 0.90 (22.9) | 0.16 (4.0)              | 0.65 (16.5)               |
| 3/8                      | 1/4                             | -MP6-RT4              | 1.80 (45.7)          | 0.87 (22.1) | 0.27 (6.8)              | 0.87 (22.0)               |
| 3/8                      | 3/8                             | -MP6-RT6              | 1.80 (45.7)          | 0.87 (22.1) | 0.27 (6.8)              | 0.87 (22.0)               |
| 1/2                      | 1/2                             | -MP8-RT8              | 2.19 (55.6)          | 1.08 (27.5) | 0.37 (9.5)              | 1.01 (25.7)               |
| 3/4                      | 3/4                             | -MP12-RT12            | 2.81 (71.4)          | 1.09 (27.8) | 0.61 (15.5)             | 1.30 (33.0)               |

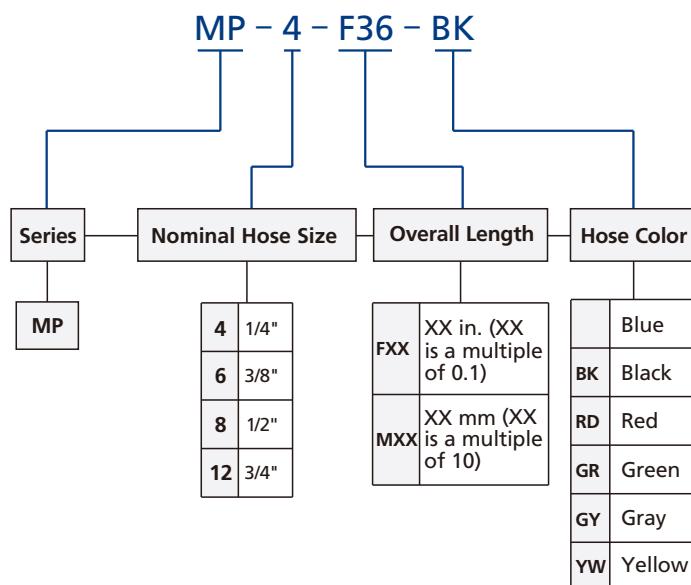
## D-20 Hoses and Connectors

### Unions



| Nominal Hose Size<br>in. | Basic Ordering Number | Dimensions, in. (mm) |             |                         |                           |
|--------------------------|-----------------------|----------------------|-------------|-------------------------|---------------------------|
|                          |                       | A                    | B           | Minimum Inside Diameter | Maximum Outside Dimension |
| 1/4                      | -MP4-4                | 2.19 (55.6)          | 0.55 (14.0) | 0.16 (4.0)              | 0.54 (13.8)               |
| 3/8                      | -MP6-6                | 2.38 (60.4)          | 0.52 (13.2) | 0.27 (6.8)              | 0.73 (18.5)               |
| 1/2                      | -MP8-8                | 2.75 (69.8)          | 0.54 (13.6) | 0.37 (9.5)              | 0.85 (21.5)               |
| 3/4                      | -MP12-12              | 3.96 (100.5)         | 0.52 (13.3) | 0.61 (15.5)             | 1.09 (27.7)               |

### Hose Ordering Number Description



Example: MP-8-F60-BK

MP: Hose series

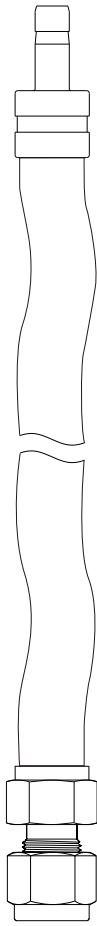
8: Nominal hose size is 1/2".

F60: Overall length is 60".

BK: Hose color is black.

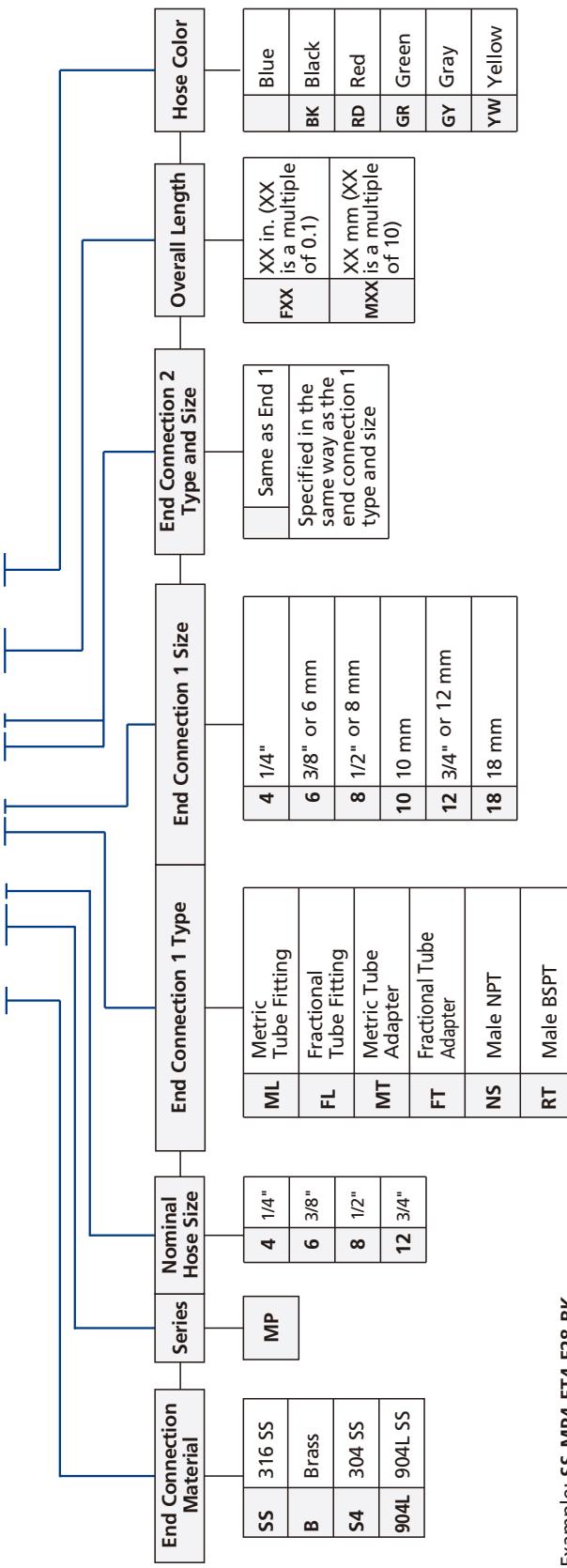
Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

## Multipurpose Push-On Hose Assemblies



### Ordering Number Description

**SS - MP4 - FL4 - FT4 - F36 - BK**



Example: **SS-MP4-FT4-F28-BK**

**SS:** End connection material is 316 stainless steel.

**MP4:** MP series, nominal hose size is 1/4".

**FT4:** End connection 1 is 1/4" tube adapter.  
End connection 2 is 1/4" tube adapter.

**F28:** Overall length is 28".

**BK:** Hose color is black.

Connections are described based on the following rules:

1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - SAE/MS Parallel Threads - 37° Flare - Others
2. Put the sizes from the biggest down to the smallest if they are of the same type.
3. Put the female before male if they are of the same type and size.

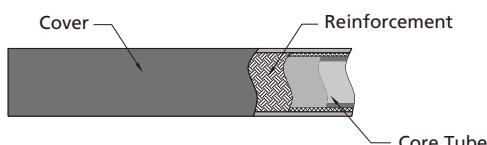
Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

# Thermoplastic Hoses

## TH Series

### Features

- Cover: Polyurethane, resists oil, weather and abrasion
- Reinforcement: double-braid high-strength synthetic fiber
- Core tube: nylon
- End connection materials: stainless steel
- Nominal hose size: 3/16" to 1"
- End connection sizes: 1/4" to 1" and 6 mm to 25 mm
- Working pressure up to: 5000 psig (345 bar)
- Working temperature: -40°F to 200°F (-40°C to 93°C)
- Custom length available



### Technical Parameters

#### Thermoplastic Hydraulic Hose (SAE 100R7)

| Nominal Hose Size | Min. Inside Bend Radius | Inside Diameter | Temperature Range         | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) | Specification     |
|-------------------|-------------------------|-----------------|---------------------------|---------------------------------|------------------------------------|-------------------|
| in. (mm)          | in. (mm)                | in. (mm)        | °F (°C)                   | psig (bar)                      | psig (bar)                         |                   |
| 3/16 (4.8)        | 1.58 (40)               | 0.19 (4.8)      | -40 to 200<br>(-40 to 93) | 3000 (207)                      | 12000 (828)                        | SAE J517<br>100R7 |
| 1/4 (6.4)         | 1.97 (50)               | 0.25 (6.4)      |                           | 2750 (189)                      | 11000 (758)                        |                   |
| 5/16 (8.0)        | 2.36 (60)               | 0.31 (7.9)      |                           | 2500 (173)                      | 10000 (690)                        |                   |
| 3/8 (9.6)         | 2.95 (75)               | 0.38 (9.8)      |                           | 2250 (155)                      | 9000 (620)                         |                   |
| 1/2 (12.7)        | 3.74 (95)               | 0.50 (12.7)     |                           | 2000 (137)                      | 8000 (551)                         |                   |

#### Thermoplastic Hydraulic Hose (SAE 100R8)

| Nominal Hose Size | Min. Inside Bend Radius | Inside Diameter | Temperature Range         | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) | Specification     |
|-------------------|-------------------------|-----------------|---------------------------|---------------------------------|------------------------------------|-------------------|
| in. (mm)          | in. (mm)                | in. (mm)        | °F (°C)                   | psig (bar)                      | psig (bar)                         |                   |
| 3/16 (4.8)        | 2.00 (50.8)             | 0.19 (4.8)      | -40 to 200<br>(-40 to 93) | 5000 (344)                      | 20000 (1378)                       | SAE J517<br>100R8 |
| 1/4 (6.4)         | 2.00 (50.8)             | 0.25 (6.4)      |                           | 5000 (344)                      | 20000 (1378)                       |                   |
| 3/8 (9.6)         | 2.50 (63.5)             | 0.38 (9.8)      |                           | 4000 (275)                      | 16000 (1102)                       |                   |
| 1/2 (12.7)        | 4.00 (102)              | 0.50 (12.7)     |                           | 3500 (241)                      | 14000 (964)                        |                   |
| 3/4 (19.0)        | 6.50 (165)              | 0.75 (19.0)     |                           | 2250 (155)                      | 9000 (620)                         |                   |
| 1 (25.4)          | 10.0 (254)              | 1.00 (25.4)     |                           | 2000 (137)                      | 8000 (551)                         |                   |

### Testing

Every FITOK thermoplastic hose assembly is factory tested with pure water at 1.5 times the maximum working pressure.

### Cleaning and Packaging

FITOK thermoplastic hose components are cleaned in accordance with FITOK Standard Cleaning and Packaging Process (FC-01) for general industrial procedures.

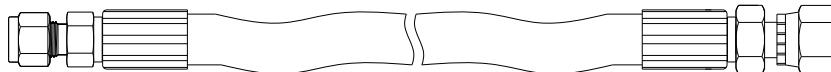
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

## Options

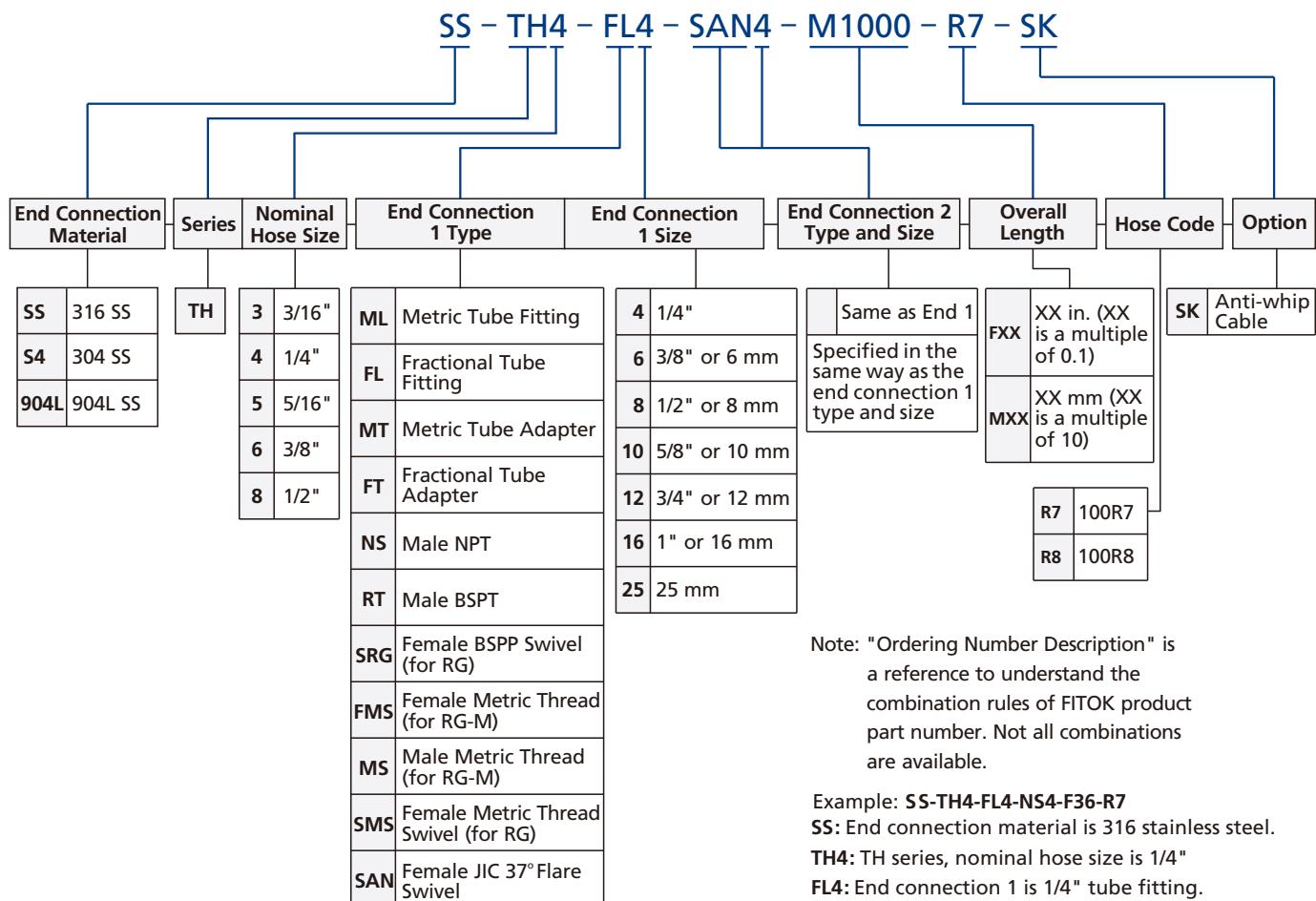
### Anti-whip Cable

- 304 stainless steel cable
- Available on hoses without changing the technical parameters of hoses
- Prevent hoses from whipping around and causing serious injuries in the event of fitting blow-off or hose burst

## Thermoplastic Hose Assemblies



## Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

Example: SS-TH4-FL4-NS4-F36-R7  
**SS:** End connection material is 316 stainless steel.  
**TH4:** TH series, nominal hose size is 1/4"  
**FL4:** End connection 1 is 1/4" tube fitting.  
**NS4 :** End connection 2 is 1/4 male NPT.  
**F36 :** Overall length is 36".  
**R7 :** SAE J517 100R7.

Connections are described based on the following rules:

1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - Others
2. Put the sizes from the biggest down to the smallest if they are of the same type.
3. Put the female before male if they are of the same type and size.

# Compact Steel Wire Braided Hydraulic Hoses

## HCH Series

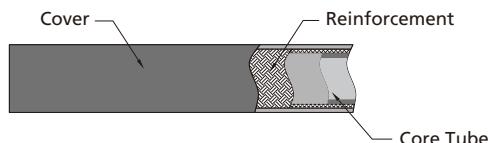
### Introduction

HCH Series Compact Steel Wire Braided Hydraulic Hoses are designed with a synthetic rubber core for oil based or water based fluids. They feature multiple layers of high-tensile steel wire braiding for reinforcement, along with a weather-resistant, oil-resistant synthetic rubber cover. This construction provides excellent high-pressure resistance and a minimal bend radius. These hoses are primarily used with oil-based liquids such as hydraulic oil, gasoline, diesel, lubricating oil, as well as biodegradable hydraulic fluids, fire-resistant synthetic polyol esters, and other similar media.



### Features

- Cover: Weatherproof, oil-resistant synthetic rubber
- Reinforcement: Double-layer of high-tensile steel wire braid
- Core tube: Synthetic rubber for oil based or water based fluids
- End connection material: Stainless steel
- Nominal hose size: 1/4" to 1/2"
- End connection sizes: 1/4" to 1" and 6 mm to 25 mm
- Working pressure up to 5800 psig (400 bar)
- Working temperature: -40°F to 212°F (-40°C to 100°C)



### Hose Technical Parameters

| Nominal Hose Size | Inside Diameter | Min. Bend Radius | Working Pressure at 70°F (20°C) | Min. Burst Pressure at 70°F (20°C) | Standard                    |
|-------------------|-----------------|------------------|---------------------------------|------------------------------------|-----------------------------|
| in. (mm)          | in. (mm)        | in. (mm)         | psig (bar)                      | psig (bar)                         |                             |
| 1/4 (6.4)         | 0.26 (6.6)      | 2.95 (75)        | 5800 (400)                      | 23200 (1600)                       | ISO 11237 2SC<br>EN 857 2SC |
| 1/2 (12.7)        | 0.51 (13.0)     | 5.12 (130)       | 3990 (275)                      | 15950 (1100)                       |                             |

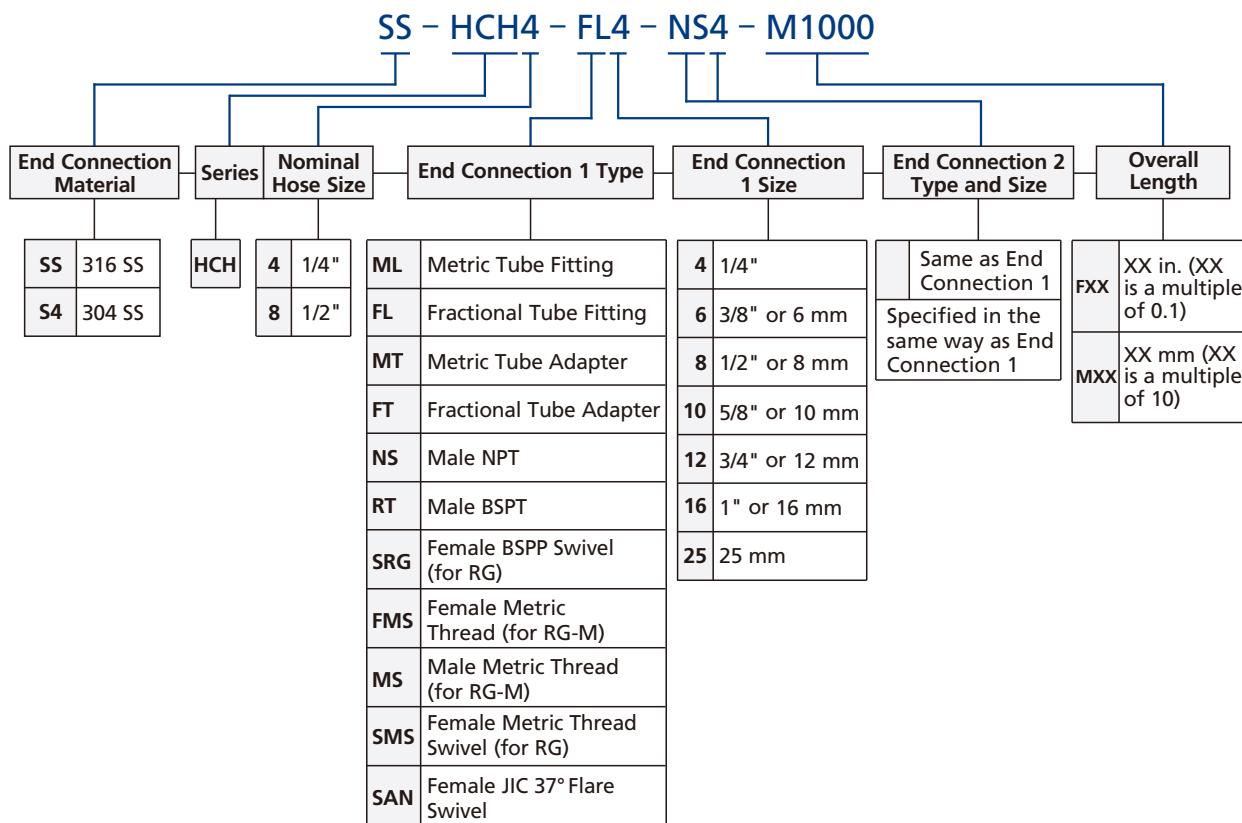
### Testing

Every FITOK hydraulic hose assembly is factory tested with pure water at 2 times the maximum working pressure.

### Cleaning and Packaging

FITOK hydraulic hose components are cleaned in accordance with FITOK Standard Cleaning and Packaging Process (FC-01). Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

## Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number.  
Not all combinations are available.

Example: **SS-HCH4-FL4-NS4-F36**

**SS:** End connection material is 316 stainless steel

**HCH4:** HCH series, nominal hose size is 6.4 mm

**FL4:** End connection 1 is 1/4" tube fitting

**NS4:** End connection 2 is 1/4" male NPT

**F36:** Overall length is 36"

Connections are described based on the following rules:

1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - Others
2. Put the sizes from the biggest down to the smallest if they are of the same type.
3. Put the female before male if they are of the same type and size.

# Hose Connectors and Sleeves

## HC Series

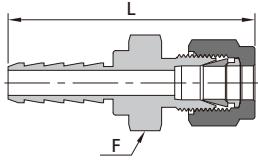
### Features

- Used to connect soft plastic or rubber tubing
- Working pressures and working temperatures are wider than those of the connected hoses
- Stainless steel or brass is available
- Shank design holds tubing inside diameter securely
- Hose connectors are reusable



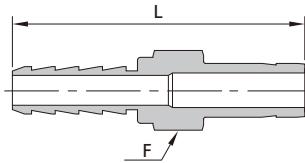
### Hose Connectors

#### Tube Fittings



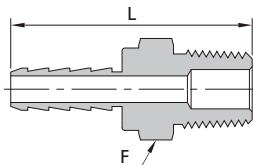
| Hose ID   | Tube Size | Basic Ordering Number | Dimensions              |           |                 |
|-----------|-----------|-----------------------|-------------------------|-----------|-----------------|
|           |           |                       | Minimum Inside Diameter | F         | L               |
|           |           |                       | in. (mm)                | in.       | in. (mm)        |
| 1/8       | 1/8       | -HC-F2-FL2            | 0.08 (2.0)              | 7/16      | 1.42 (36.1)     |
| 1/4       | 1/8       | -HC-F4-FL2            | 0.09 (2.3)              | 7/16      | 1.81 (46.0)     |
|           | 1/4       | -HC-F4-FL4            | 0.19 (4.8)              | 9/16      | 1.92 (48.8)     |
| 3/8       | 1/4       | -HC-F6-FL4            | 0.19 (4.8)              | 9/16      | 1.99 (50.6)     |
|           | 3/8       | -HC-F6-FL6            | 0.28 (7.1)              | 3/4       | 2.06 (52.3)     |
| 1/2       | 1/2       | -HC-F8-FL8            | 0.38 (9.7)              | 7/8       | 2.24 (56.9)     |
| <b>mm</b> |           | —                     | <b>mm (in.)</b>         | <b>mm</b> | <b>mm (in.)</b> |
| 6         | 6         | -HC-M6-ML6            | 4.8 (0.19)              | 14        | 49.5 (1.95)     |
| 8         | 8         | -HC-M8-ML8            | 6.4 (0.25)              | 16        | 49.8 (1.96)     |
|           | 10        | -HC-M8-ML10           | 6.4 (0.25)              | 18        | 51.6 (2.03)     |
| 10        | 10        | -HC-M10-ML10          | 7.9 (0.31)              | 19        | 52.3 (2.06)     |
| 12        | 12        | -HC-M12-ML12          | 9.7 (0.38)              | 22        | 57.4 (2.26)     |

#### Tube Adapters



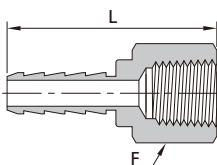
| Hose ID | Tube Size | Basic Ordering Number | Dimensions              |       |             |
|---------|-----------|-----------------------|-------------------------|-------|-------------|
|         |           |                       | Minimum Inside Diameter | F     | L           |
|         |           |                       | in. (mm)                | in.   | in. (mm)    |
| 1/8     | 1/8       | -HC-F2-FT2            | 0.08 (2.0)              | 5/16  | 1.37 (34.8) |
|         | 1/4       | -HC-F2-FT4            | 0.09 (2.3)              | 3/8   | 1.47 (37.3) |
| 1/4     | 1/4       | -HC-F4-FT4            | 0.19 (4.8)              | 7/16  | 1.86 (47.2) |
|         | 3/8       | -HC-F4-FT6            | 0.19 (4.8)              | 7/16  | 1.92 (48.8) |
| 5/16    | 1/4       | -HC-F5-FT4            | 0.19 (4.8)              | 7/16  | 1.94 (49.3) |
|         | 1/4       | -HC-F6-FT4            | 0.19 (4.8)              | 9/16  | 1.94 (49.3) |
| 3/8     | 3/8       | -HC-F6-FT6            | 0.28 (7.1)              | 9/16  | 2.00 (50.8) |
|         | 1/2       | -HC-F6-FT8            | 0.30 (7.6)              | 5/8   | 2.26 (57.4) |
| 1/2     | 3/8       | -HC-F8-FT6            | 0.28 (7.1)              | 11/16 | 2.07 (52.6) |
|         | 1/2       | -HC-F8-FT8            | 0.38 (9.7)              | 11/16 | 2.33 (59.2) |
| 3/4     | 3/4       | -HC-F12-FT12          | 0.63 (16.0)             | 13/16 | 2.50 (63.5) |
| 1       | 1         | -HC-F16-FT16          | 0.80 (20.3)             | 1 3/8 | 3.03 (77.0) |

## Male NPT Connectors



| Hose ID | NPT Tapered Thread Size | Basic Ordering Number | Dimensions              |        |             |
|---------|-------------------------|-----------------------|-------------------------|--------|-------------|
|         |                         |                       | Minimum Inside Diameter | F      | L           |
|         |                         |                       | in. (mm)                | in.    | in. (mm)    |
| 1/8     | 1/8                     | -HC-F2-NS2            | 0.08 (2.0)              | 7/16   | 1.08 (27.4) |
|         | 1/4                     | -HC-F2-NS4            | 0.08 (2.0)              | 9/16   | 1.26 (32.0) |
| 3/16    | 1/8                     | -HC-F3-NS2            | 0.13 (3.3)              | 7/16   | 1.27 (32.2) |
|         | 1/4                     | -HC-F3-NS4            | 0.13 (3.3)              | 9/16   | 1.45 (36.8) |
| 1/4     | 1/8                     | -HC-F4-NS2            | 0.19 (4.8)              | 7/16   | 1.47 (37.3) |
|         | 1/4                     | -HC-F4-NS4            | 0.19 (4.8)              | 9/16   | 1.65 (41.9) |
|         | 3/8                     | -HC-F4-NS6            | 0.19 (4.8)              | 11/16  | 1.66 (42.2) |
|         | 1/2                     | -HC-F4-NS8            | 0.19 (4.8)              | 7/8    | 1.85 (47.0) |
| 5/16    | 1/8                     | -HC-F5-NS2            | 0.19 (4.8)              | 7/16   | 1.55 (39.4) |
|         | 1/4                     | -HC-F5-NS4            | 0.19 (4.8)              | 9/16   | 1.73 (43.9) |
|         | 3/8                     | -HC-F5-NS6            | 0.19 (4.8)              | 11/16  | 1.74 (44.2) |
| 3/8     | 1/2                     | -HC-F5-NS8            | 0.19 (4.8)              | 7/8    | 1.96 (49.8) |
|         | 1/4                     | -HC-F6-NS4            | 0.30 (7.6)              | 9/16   | 1.73 (43.9) |
|         | 3/8                     | -HC-F6-NS6            | 0.30 (7.6)              | 11/16  | 1.74 (44.2) |
| 1/2     | 1/2                     | -HC-F6-NS8            | 0.30 (7.6)              | 7/8    | 1.96 (49.8) |
|         | 1/4                     | -HC-F8-NS4            | 0.30 (7.6)              | 11/16  | 1.80 (45.7) |
|         | 3/8                     | -HC-F8-NS6            | 0.38 (9.7)              | 11/16  | 1.81 (46.0) |
| 5/8     | 1/2                     | -HC-F8-NS8            | 0.38 (9.7)              | 7/8    | 2.03 (51.6) |
|         | 3/8                     | -HC-F10-NS6           | 0.38 (9.7)              | 1 1/16 | 1.88 (47.8) |
|         | 1/2                     | -HC-F10-NS8           | 0.47 (11.9)             | 1 1/16 | 2.07 (52.6) |
| 3/4     | 3/4                     | -HC-F10-NS12          | 0.50 (12.7)             | 1 1/16 | 2.07 (52.6) |
|         | 1/2                     | -HC-F12-NS8           | 0.47 (11.9)             | 1 1/16 | 2.14 (54.4) |
|         | 3/4                     | -HC-F12-NS12          | 0.63 (16.0)             | 1 1/16 | 2.14 (54.4) |
| 1       | 1                       | -HC-F12-NS16          | 0.63 (16.0)             | 1 3/8  | 2.43 (61.7) |
|         | 3/4                     | -HC-F16-NS12          | 0.63 (16.0)             | 1 3/8  | 2.38 (60.5) |
|         | 1                       | -HC-F16-NS16          | 0.88 (22.4)             | 1 3/8  | 2.57 (65.3) |

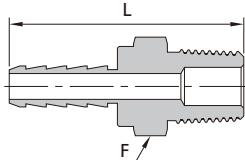
## Female NPT Connectors



| Hose ID | NPT Size | Basic Ordering Number | Dimensions              |        |             |
|---------|----------|-----------------------|-------------------------|--------|-------------|
|         |          |                       | Minimum Inside Diameter | F      | L           |
|         |          |                       | in. (mm)                | in.    | in. (mm)    |
| 1/8     | 1/8      | -HC-F2-FNS2           | 0.08 (2.0)              | 9/16   | 1.11 (28.2) |
|         | 1/4      | -HC-F2-FNS4           | 0.08 (2.0)              | 3/4    | 1.26 (32.0) |
| 3/16    | 1/8      | -HC-F3-FNS2           | 0.13 (3.3)              | 9/16   | 1.29 (32.8) |
|         | 1/4      | -HC-F3-FNS4           | 0.13 (3.3)              | 3/4    | 1.44 (36.6) |
| 1/4     | 1/8      | -HC-F4-FNS2           | 0.19 (4.8)              | 9/16   | 1.47 (37.3) |
|         | 1/4      | -HC-F4-FNS4           | 0.19 (4.8)              | 3/4    | 1.64 (41.7) |
|         | 3/8      | -HC-F4-FNS6           | 0.19 (4.8)              | 7/8    | 1.71 (43.4) |
| 5/16    | 1/4      | -HC-F5-FNS4           | 0.19 (4.8)              | 3/4    | 1.73 (43.9) |
|         | 3/8      | -HC-F5-FNS6           | 0.19 (4.8)              | 7/8    | 1.82 (46.2) |
| 3/8     | 1/4      | -HC-F6-FNS4           | 0.30 (7.6)              | 3/4    | 1.69 (42.9) |
|         | 3/8      | -HC-F6-FNS6           | 0.30 (7.6)              | 7/8    | 1.78 (45.2) |
|         | 1/2      | -HC-F6-FNS8           | 0.30 (7.6)              | 1 1/16 | 2.03 (51.6) |
| 1/2     | 1/2      | -HC-F8-FNS8           | 0.38 (9.7)              | 1 1/16 | 2.13 (54.1) |

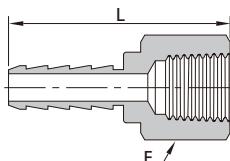
## D-28 Hoses and Connectors

### Male BSPT Connectors

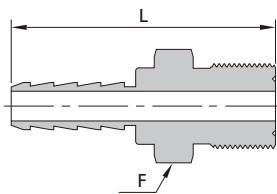


| Hose ID | BSPT Tapered Thread Size | Basic Ordering Number | Dimensions              |        |             |
|---------|--------------------------|-----------------------|-------------------------|--------|-------------|
|         |                          |                       | Minimum Inside Diameter | F      | L           |
|         |                          |                       | in. (mm)                | in.    | in. (mm)    |
| 1/8     | 1/8                      | -HC-F2-RT2            | 0.08 (2.0)              | 7/16   | 1.28 (32.5) |
|         | 1/4                      | -HC-F2-RT4            | 0.08 (2.0)              | 9/16   | 1.40 (35.5) |
| 3/16    | 1/8                      | -HC-F3-RT2            | 0.13 (3.3)              | 7/16   | 1.40 (35.5) |
|         | 1/4                      | -HC-F3-RT4            | 0.13 (3.3)              | 9/16   | 1.58 (40.1) |
| 1/4     | 1/8                      | -HC-F4-RT2            | 0.19 (4.8)              | 7/16   | 1.47 (37.3) |
|         | 1/4                      | -HC-F4-RT4            | 0.19 (4.8)              | 9/16   | 1.65 (41.9) |
|         | 3/8                      | -HC-F4-RT6            | 0.19 (4.8)              | 11/16  | 1.66 (42.2) |
|         | 1/2                      | -HC-F4-RT8            | 0.19 (4.8)              | 7/8    | 1.90 (48.3) |
| 5/16    | 1/8                      | -HC-F5-RT2            | 0.19 (4.8)              | 7/16   | 1.67 (42.4) |
|         | 1/4                      | -HC-F5-RT4            | 0.19 (4.8)              | 9/16   | 1.86 (47.2) |
|         | 3/8                      | -HC-F5-RT6            | 0.19 (4.8)              | 11/16  | 1.87 (47.5) |
|         | 1/2                      | -HC-F5-RT8            | 0.19 (4.8)              | 7/8    | 2.10 (53.3) |
| 3/8     | 1/4                      | -HC-F6-RT4            | 0.30 (7.6)              | 9/16   | 1.73 (43.9) |
|         | 3/8                      | -HC-F6-RT6            | 0.30 (7.6)              | 11/16  | 1.74 (44.2) |
|         | 1/2                      | -HC-F6-RT8            | 0.30 (7.6)              | 7/8    | 1.96 (49.8) |
| 1/2     | 1/4                      | -HC-F8-RT4            | 0.30 (7.6)              | 11/16  | 1.80 (45.7) |
|         | 3/8                      | -HC-F8-RT6            | 0.38 (9.7)              | 11/16  | 1.81 (46.0) |
|         | 1/2                      | -HC-F8-RT8            | 0.38 (9.7)              | 7/8    | 2.03 (51.6) |
| 5/8     | 3/8                      | -HC-F10-RT6           | 0.38 (9.7)              | 1 1/16 | 1.88 (47.8) |
|         | 1/2                      | -HC-F10-RT8           | 0.47 (11.9)             | 1 1/16 | 2.07 (52.6) |
|         | 3/4                      | -HC-F10-RT12          | 0.50 (12.7)             | 1 1/16 | 2.07 (52.6) |
| 3/4     | 1/2                      | -HC-F12-RT8           | 0.47 (11.9)             | 1 1/16 | 2.14 (54.4) |
|         | 3/4                      | -HC-F12-RT12          | 0.63 (16.0)             | 1 1/16 | 2.14 (54.4) |
|         | 1                        | -HC-F12-RT16          | 0.63 (16.0)             | 1 3/8  | 2.43 (61.7) |
| 1       | 3/4                      | -HC-F16-RT12          | 0.63 (16.0)             | 1 3/8  | 2.38 (60.5) |
|         | 1                        | -HC-F16-RT16          | 0.88 (22.4)             | 1 3/8  | 2.57 (65.3) |

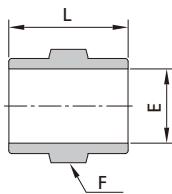
### Female BSPT Connectors



| Hose ID | BSPT Size | Basic Ordering Number | Dimensions              |        |             |
|---------|-----------|-----------------------|-------------------------|--------|-------------|
|         |           |                       | Minimum Inside Diameter | F      | L           |
|         |           |                       | in. (mm)                | in.    | in. (mm)    |
| 1/8     | 1/8       | -HC-F2-FRT2           | 0.08 (2.0)              | 9/16   | 1.11 (28.2) |
|         | 1/4       | -HC-F2-FRT4           | 0.08 (2.0)              | 3/4    | 1.26 (32.0) |
| 3/16    | 1/8       | -HC-F3-FRT2           | 0.13 (3.3)              | 9/16   | 1.29 (32.8) |
|         | 1/4       | -HC-F3-FRT4           | 0.13 (3.3)              | 3/4    | 1.44 (36.6) |
| 1/4     | 1/8       | -HC-F4-FRT2           | 0.19 (4.8)              | 9/16   | 1.47 (37.3) |
|         | 1/4       | -HC-F4-FRT4           | 0.19 (4.8)              | 3/4    | 1.64 (41.7) |
|         | 3/8       | -HC-F4-FRT6           | 0.19 (4.8)              | 7/8    | 1.71 (43.4) |
| 5/16    | 1/4       | -HC-F5-FRT4           | 0.19 (4.8)              | 3/4    | 1.73 (43.9) |
|         | 3/8       | -HC-F5-FRT6           | 0.19 (4.8)              | 7/8    | 1.82 (46.2) |
| 3/8     | 1/4       | -HC-F6-FRT4           | 0.30 (7.6)              | 3/4    | 1.69 (42.9) |
|         | 3/8       | -HC-F6-FRT6           | 0.30 (7.6)              | 7/8    | 1.78 (45.2) |
|         | 1/2       | -HC-F6-FRT8           | 0.30 (7.6)              | 1 1/16 | 2.03 (51.6) |
| 1/2     | 1/2       | -HC-F8-FRT8           | 0.38 (9.7)              | 1 1/16 | 2.13 (54.1) |

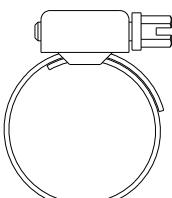
**Metric Thread Connectors**

| Hose I.D. | Thread Size | Basic Ordering Number | Dimensions              |    |             |
|-----------|-------------|-----------------------|-------------------------|----|-------------|
|           |             |                       | Minimum Inside Diameter | F  | L           |
|           |             |                       | in. (mm)                | mm | in. (mm)    |
| 6         | M10 x 1     | -HC-M6-MS10           | 0.18 (4.6)              | 12 | 1.54 (39.6) |
|           | M12 x 1.5   | -HC-M6-MS12           | 0.18 (4.6)              | 14 | 1.59 (40.4) |
|           | M14 x 1.5   | -HC-M6-MS14           | 0.18 (4.6)              | 15 | 1.66 (42.2) |
| 8         | M14 x 1.5   | -HC-M8-MS14           | 0.19 (4.8)              | 15 | 1.74 (44.2) |
|           | M16 x 1.5   | -HC-M8-MS16           | 0.19 (4.8)              | 18 | 1.82 (46.2) |
| 10        | M16 x 1.5   | -HC-M10-MS16          | 0.31 (7.9)              | 18 | 1.82 (46.2) |
|           | M18 x 1.5   | -HC-M10-MS18          | 0.31 (7.9)              | 19 | 1.86 (47.2) |
| 12        | M20 x 1.5   | -HC-M12-MS20          | 0.35 (8.9)              | 22 | 1.98 (50.3) |
|           | M22 x 1.5   | -HC-M12-MS22          | 0.35 (8.9)              | 24 | 2.08 (52.8) |

**Hose Connector Sleeves**

- Material: Aluminum
- Reusable

| Hose I.D. | Hose O.D. | Ordering Number | Dimensions, in. (mm) |       |             |
|-----------|-----------|-----------------|----------------------|-------|-------------|
|           |           |                 | E                    | F     | L           |
| 1/8       | 1/4       | AL-HC-F2-F4     | 0.26 (6.6)           | 3/8   | 0.40 (10.2) |
| 1/4       | 3/8       | AL-HC-F4-F6     | 0.41 (10.4)          | 9/16  | 0.79 (20.1) |
| 1/4       | 7/16      | AL-HC-F4-F7     | 0.46 (11.7)          | 5/8   | 0.79 (20.1) |
| 1/4       | 1/2       | AL-HC-F4-F8     | 0.52 (13.2)          | 11/16 | 0.79 (20.1) |
| 5/16      | 7/16      | AL-HC-F5-F7     | 0.48 (12.2)          | 5/8   | 0.87 (22.1) |
| 3/8       | 1/2       | AL-HC-F6-F8     | 0.55 (14.0)          | 11/16 | 0.87 (22.1) |
| 3/8       | 9/16      | AL-HC-F6-F9     | 0.61 (15.5)          | 3/4   | 0.87 (22.1) |
| 7/16      | 5/8       | AL-HC-F7-F10    | 0.69 (17.5)          | 13/16 | 0.94 (23.9) |
| 1/2       | 11/16     | AL-HC-F8-F11    | 0.76 (19.3)          | 7/8   | 0.94 (23.9) |
| 3/4       | 1         | AL-HC-F12-F16   | 1.10 (27.9)          | 1 1/4 | 1.07 (27.2) |

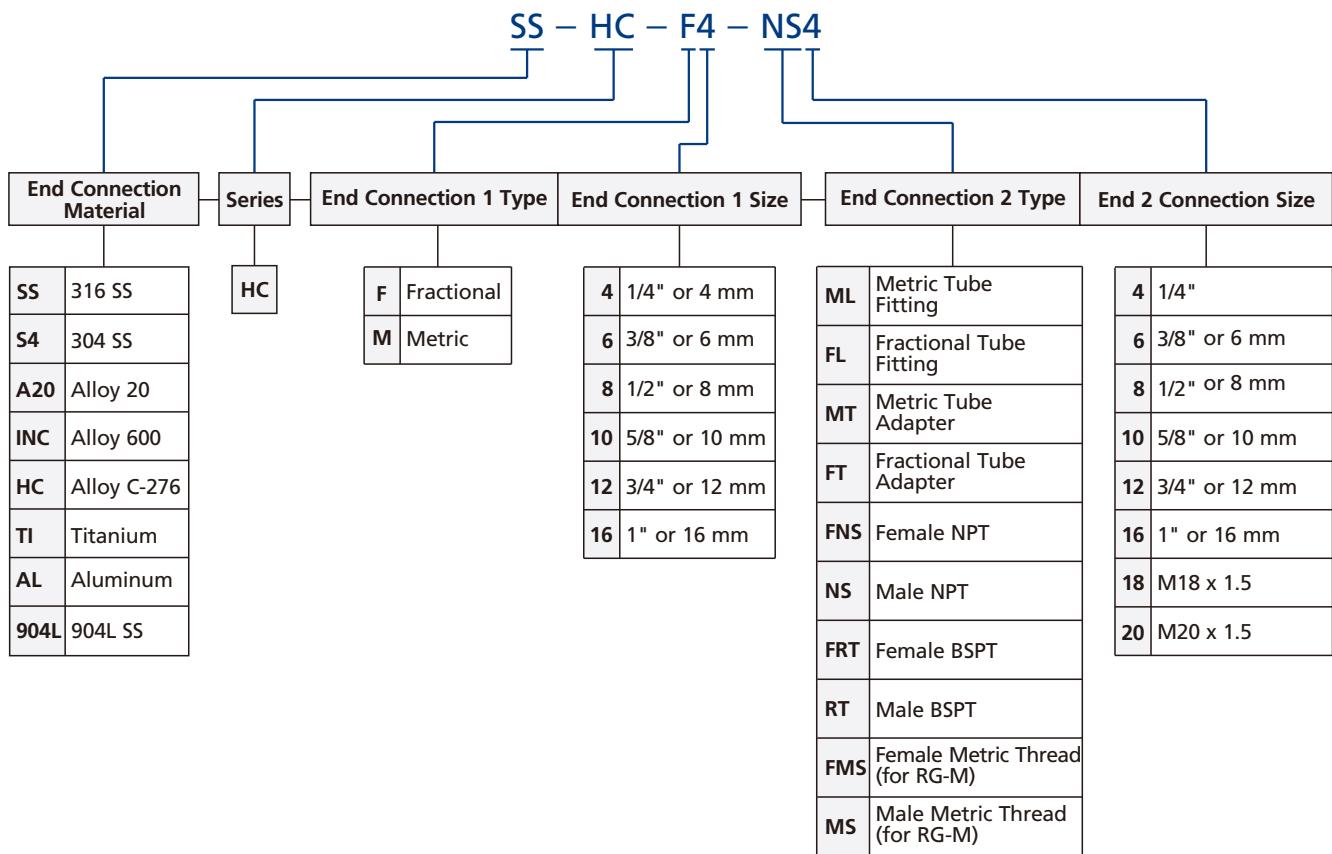
**Hose Clamps**

- Material: 304 SS
- Reusable

| Min. Hose O.D. | Max. Hose O.D. | Ordering Number |    |    |
|----------------|----------------|-----------------|----|----|
|                |                |                 | mm | mm |
| 8              | 12             | S4-CP8-12       |    |    |
| 10             | 16             | S4-CP10-16      |    |    |
| 12             | 20             | S4-CP12-20      |    |    |
| 16             | 25             | S4-CP16-25      |    |    |
| 20             | 32             | S4-CP20-32      |    |    |
| 25             | 40             | S4-CP25-40      |    |    |

1. Sizes and types listed are standard. Other sizes and types are available upon request.
2. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

## Ordering Number Description


**Example: SS-HC-F4-FT6**

**SS:** End connection material is 316 stainless steel.

**HC:** HC series.

**F4:** Hose ID is 1/4".

**FT6:** 3/8" tube adapter.

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.