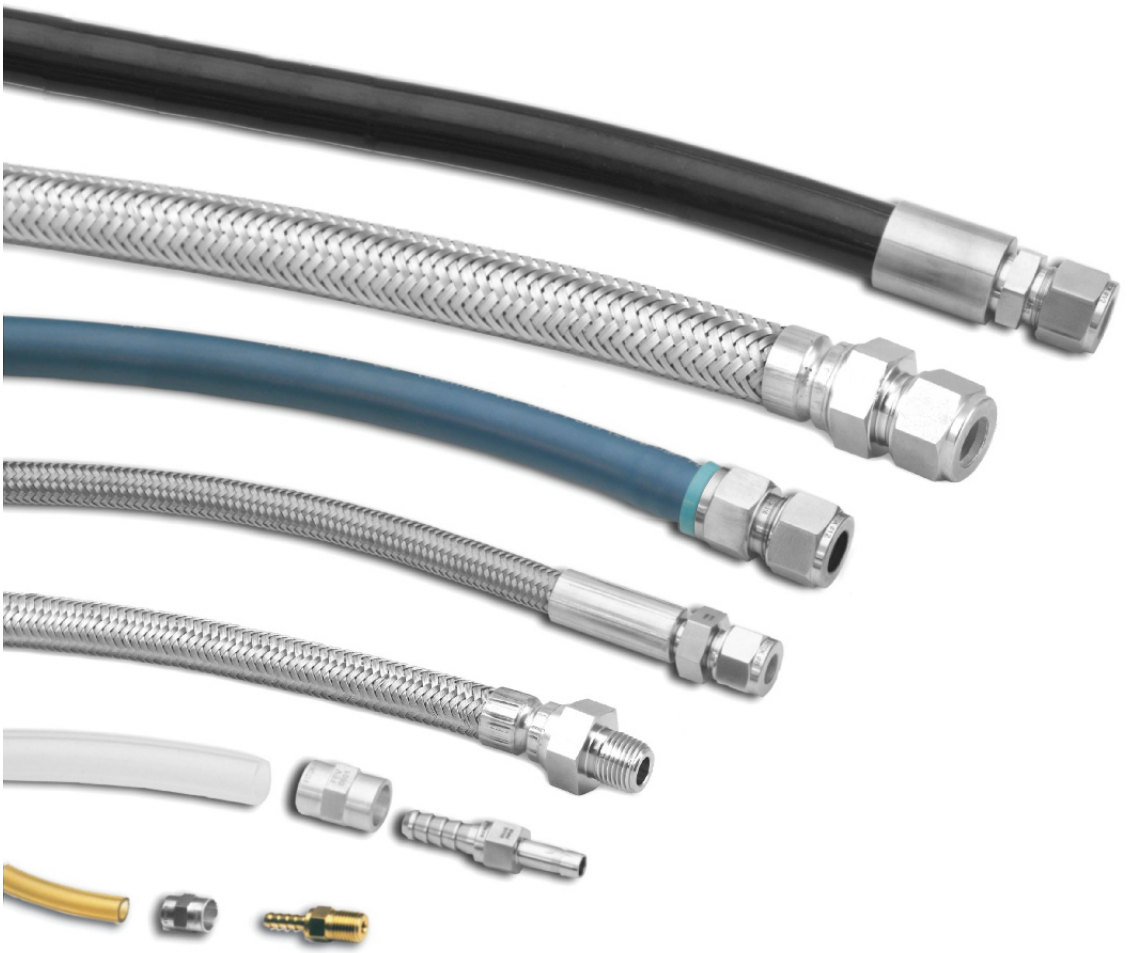
Hoses and Connectors

MH, MM, PS, MP, TH and HC Series



FITOK

Contents

Terms and Definitions

D-04

Considerations for Selecting a Hose Assembly Solution

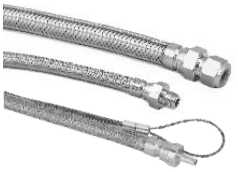
D-05

Installation and Use Guide

D-05

Metal Flexible Hoses

MH, MM Series



D-07

PTFE-lined, Stainless Steel Braided Hoses

PS Series

D-13

Multipurpose Push-on Hoses

MP Series

D-16

Thermoplastic Hoses

TH Series

D-20

Hose Connectors and Sleeves

HC Series

D-22

Terms and Definitions

Hose

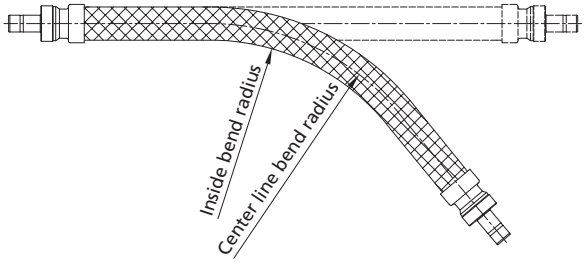
A multiple-layered flexible conduit through which fluid is conveyed from one point to another.

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

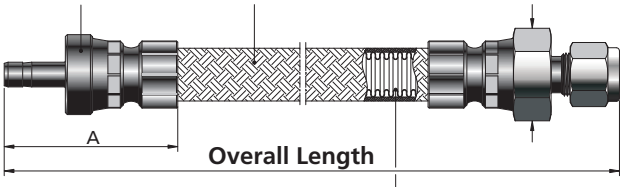
The fitting that is assembled onto each end of the hose to provide a means of installation into a fluid system.

Overbraid

A flexible, woven reinforcement.

Maximum Outside Dimension

The largest nominal outside dimension of the hose assembly.



Spring Guard

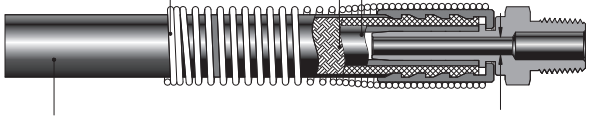
A helical metal spring used to protect the hose from abrasion overbending, and kinking.

Reinforce-ment

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

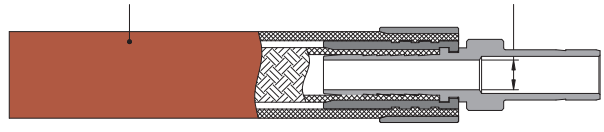
The movement of a liquid, gas, or vapor through a solid. All materials are permeable to a certain degree and must be tested for application compatibility before installation.

Fire Jacket

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

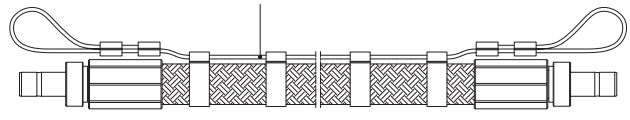
Minimum Inside Diameter

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

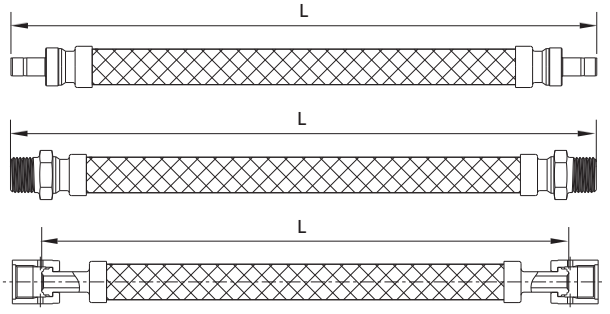
Identify the system media and the environment that the hose assembly will be exposed to. This will help determine the materials best suited to the application demands.

Movement

Confirm whether the hose assembly will be installed in dynamic applications as this will require differentconsiderations 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

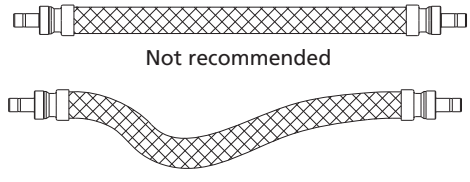
Inspect whether the hose length and layout are reasonable, and whether hose surface is free of defects and damage prior to installation. Establish an inspection schedule based on system application and replacement history.

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.

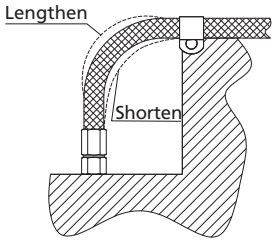


Not recommended

Recommended

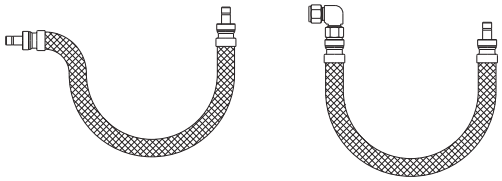
System Pressure Changes

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



Hose Strain

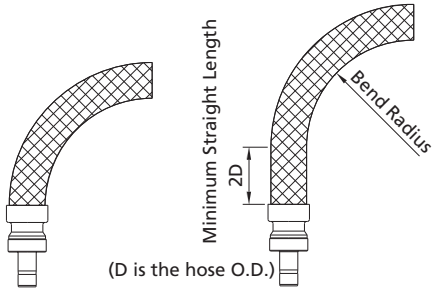
Elbows and adapters can be used to relieve hose strain.



Not recommended Recommended

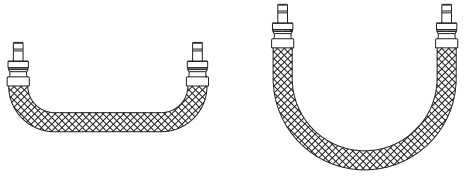
Minimum Bend Radius & Minimum Straight Length

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



Not recommended Recommended

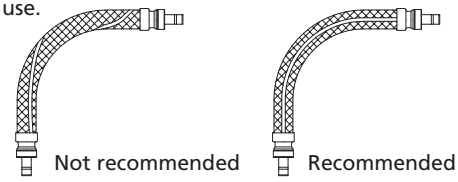
Maintain the minimum straight length for bent section, otherwise, hose rupture or leakage may result from bending too close to the hose/fitting connection.



Not recommended Recommended

Twist Avoidance

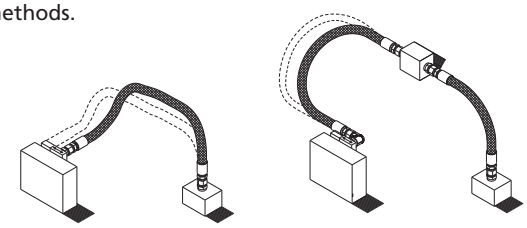
Avoid twisting the hose assembly and causing stress that may affect its use.



Not recommended Recommended

Bending in One Plane

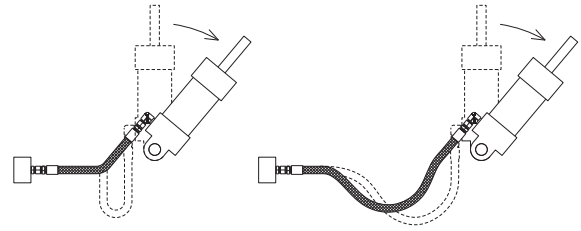
Bend the hose in one plane only so as to avoid twisting. For a compound bend, use multiple hose pieces or other isolation methods.



Not recommended Recommended

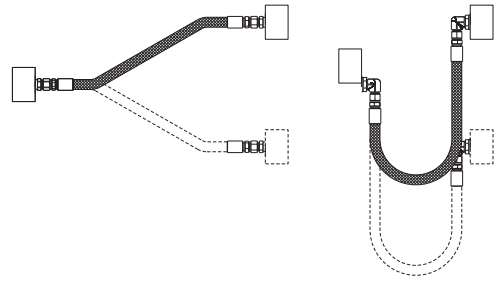
Motion Absorption

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



Not recommended Recommended

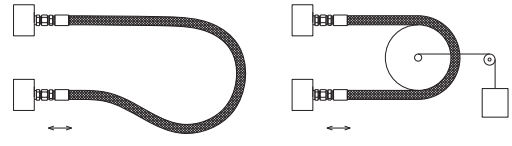
Elbow-connected hoses are better suited for vertical movement than hoses connected with straight fittings.



Not recommended Recommended

Necessary Limits and Protection Devices

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



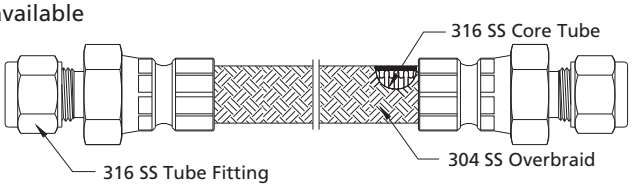
Not recommended Recommended

Metal Flexible Hoses

MH, MM Series

Features

- Core tube and fitting material: 316, 316L stainless steel
- Overbraid material: 304 stainless steel (316 SS available)
- Vacuum and positive pressure applications
- Working pressure up to: 3100 psig (213 bar)
- Nominal hose size: 1/4" to 2"
- End connections:
  1/4" to 2" pipe thread
  1/4" to 2" and 6 mm to 50 mm tube fitting
- Working temperature: -325°F to 800°F (-200°C to 426°C)
- 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)
		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 (-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 (-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)

Testing

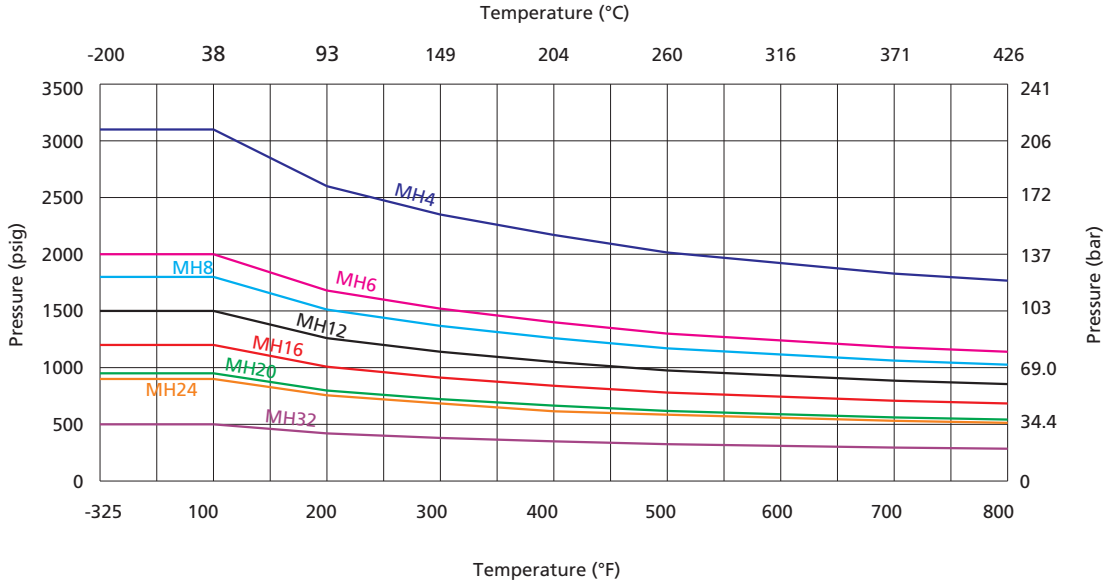
Every FITOK metal flexible hose is factory-tested with nitrogen or air at maximum working pressure and is subject to sampling test with helium to a maximum leak rate of 1×10^{-5} std cm^3/s before shipment . For other requirements, please contact FITOK Group or our authorized distributors.

Cleaning and Packaging

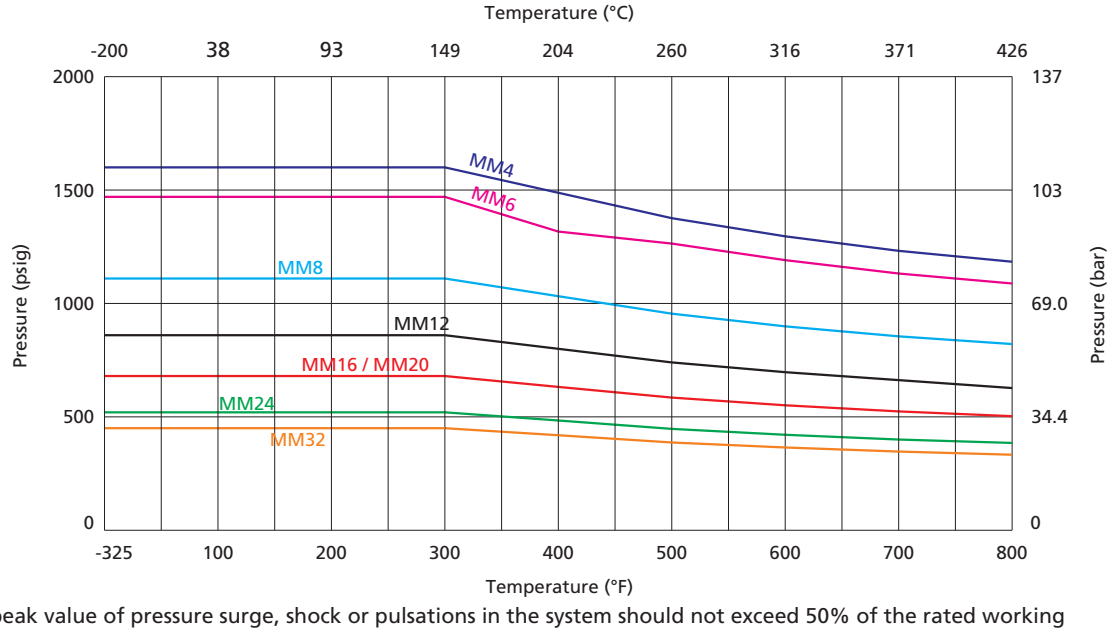
FITOK metal flexible hose components are cleaned in accordance with FITOK *Standard Cleaning and Packaging Process (FC-01)* for general industrial procedures.
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

Pressure vs. Temperature

MH series



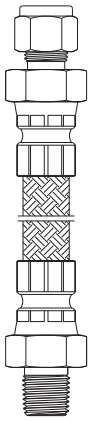
MM series



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

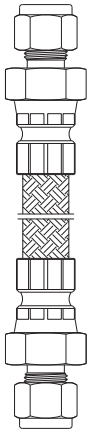
Standard Assemblies

Tube Fitting to Male NPT End



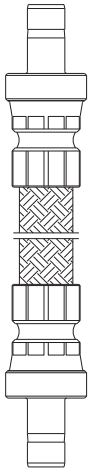
Nominal Hose Size	Tube Fitting Size	NPT Size	Hose Series	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.	in.		in. (mm)		in. (mm)	in. (mm)
1/4	1/4	1/4	MH4	12 (305)	SS-MH4-FL4-NS4-F12	0.19 (4.8)	0.94 (23.8)
			MM4	36 (914)	SS-MM4-FL4-NS4-F36	0.19 (4.8)	0.87 (22.0)
3/8	3/8	3/8	MH6	18 (457)	SS-MH6-FL6-NS6-F18	0.28 (7.1)	1.09 (27.7)
			MM6	36 (914)	SS-MM6-FL6-NS6-F36	0.28 (7.1)	1.01 (25.7)
1/2	1/2	1/2	MH8	18 (457)	SS-MH8-FL8-NS8-F18	0.41 (10.4)	1.23 (31.3)
			MM8	48 (1220)	SS-MM8-FL8-NS8-F48	0.41 (10.4)	1.23 (31.3)
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)	1.82 (46.3)

Tube Fitting End



Nominal Hose Size	Tube Fitting Size	Hose Series	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		in. (mm)	in. (mm)
1/4	1/4	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	MH6	18 (457)	SS-MH6-FL6-F18	0.28 (7.1)	1.09 (27.7)
		MM6	36 (914)	SS-MM6-FL6-F36	0.28 (7.1)	1.01 (25.7)
1/2	1/2	MH8	18 (457)	SS-MH8-FL8-F18	0.41 (10.4)	1.23 (31.3)
		MM8	48 (1220)	SS-MM8-FL8-F48	0.41 (10.4)	1.23 (31.3)
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)	1.82 (46.3)

Tube Adapter End

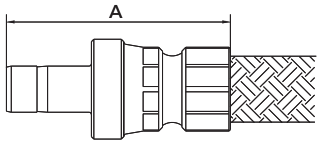


Nominal Hose Size	Tube Adapter Size	Hose Series	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		in. (mm)	in. (mm)
1/4	1/4	MH4	12 (305)	SS-MH4-FT4-F12	0.16 (4.1)	0.81 (20.6)
		MM4	36 (914)	SS-MM4-FT4-F36	0.16 (4.1)	0.76 (19.2)
3/8	3/8	MH6	12 (305)	SS-MH6-FT6-F12	0.27 (6.9)	1.01 (25.6)
		MM6	36 (914)	SS-MM6-FT6-F36	0.27 (6.9)	0.91 (23.1)

1. 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.

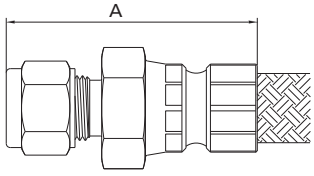
End Connections

Tube Adapters

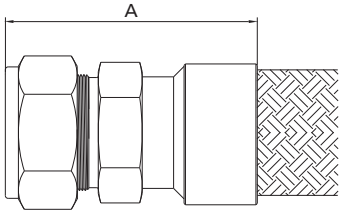


Tube Adapter Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	FT4	1.76 (44.7)	0.16 (4.1)	0.81 (20.6)
3/8	3/8	FT6	1.82 (46.2)	0.27 (6.9)	1.01 (25.6)
1/2	1/2	FT8	2.22 (56.4)	0.37 (9.4)	1.23 (31.3)
3/4	3/4	FT12	2.35 (59.7)	0.58 (14.7)	1.53 (38.8)
1	1	FT16	2.69 (68.3)	0.80 (20.3)	1.82 (46.3)
mm	in.	——	mm (in.)		
6	1/4	MT6	44.4 (1.75)	4.1 (0.16)	20.6 (0.81)
10	3/8	MT10	47.0 (1.85)	7.1 (0.28)	25.6 (1.01)
12	1/2	MT12	57.2 (2.25)	8.9 (0.35)	31.3 (1.23)

Tube Fittings



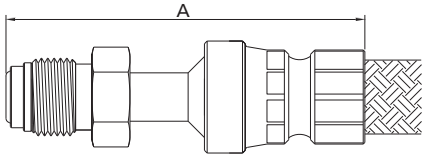
Automatic Weld Style-1 in. and Under



Manual Weld Style-Over 1 in.

Tube Fitting Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	FL4	1.94 (49.3)	0.19 (4.8)	0.94 (23.8)
3/8	1/4	FL6	2.00 (50.8)	0.28 (7.1)	0.94 (23.8)
3/8	3/8	FL6	2.02 (51.3)	0.28 (7.1)	1.09 (27.7)
1/2	1/2	FL8	2.24 (56.9)	0.41 (10.4)	1.23 (31.3)
5/8	1/2	FL10	2.27 (57.7)	0.50 (12.7)	1.23 (31.3)
3/4	3/4	FL12	2.35 (59.7)	0.63 (16.0)	1.74 (44.2)
1	1	FL16	2.64 (67.1)	0.88 (22.4)	1.82 (46.3)
1 1/4	1 1/4	FL20	4.04 (103)	1.09 (27.7)	2.23 (58.9)
1 1/2	1 1/2	FL24	4.75 (121)	1.34 (34.0)	2.61 (66.3)
2	2	FL32	5.72 (145)	1.88 (47.8)	3.48 (88.4)
mm	in.	——	mm (in.)		
6	1/4	ML6	62.2 (2.45)	4.8 (0.19)	20.6 (0.81)
8	1/4	ML8	63.2 (2.49)	6.4 (0.25)	20.6 (0.81)
10	3/8	ML10	51.6 (2.03)	7.9 (0.31)	31.3 (1.23)
12	1/2	ML12	56.9 (2.24)	9.7 (0.38)	38.8 (1.53)

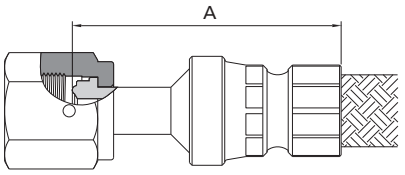
Male FR Metal Gasket Face Seal Fittings Swivel



FR Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		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)	1.23 (31.3)
3/4	3/4	SFR12	4.19 (106)	0.65 (16.5)	1.52 (38.7)
1	1	SFR16	4.80 (122)	0.87 (22.1)	1.53 (38.8)

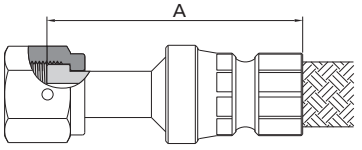
End Connections

Female FR Metal Gasket Face Seal Fittings Swivel



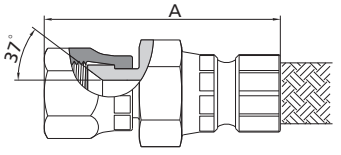
FR Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	SFFR4	2.00 (50.8)	0.18 (4.6)	0.87 (22.1)
1/2	1/2	SFFR8	2.16 (54.9)	0.40 (10.2)	1.23 (31.3)
3/4	3/4	SFFR12	4.19 (106)	0.65 (16.5)	1.74 (44.2)
1	1	SFFR16	4.80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

Female FO O-Ring Face Seal Fittings Swivel



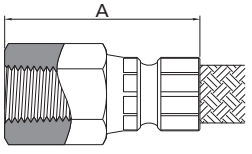
FO Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	SFFO4	2.11 (53.6)	0.18 (4.6)	0.81 (20.6)
1/2	1/2	SFFO8	2.14 (54.4)	0.40 (10.2)	1.23 (31.3)

SAE 37° (JIC) Female Swivel



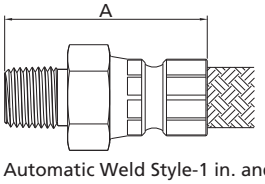
Swivel Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	SAN4	1.87 (47.5)	0.17 (4.3)	0.81 (20.6)
3/8	3/8	SAN6	1.98 (50.3)	0.28 (7.1)	1.01 (25.6)
1/2	1/2	SAN8	2.25 (57.2)	0.42 (10.7)	1.23 (31.3)

Female Pipe Threads, NPT

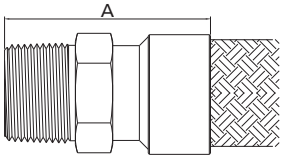


NPT Size	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	FNS4	1.81 (46.0)	0.28 (7.1)	0.94 (23.9)
3/8	3/8	FNS6	1.87 (47.5)	0.38 (9.7)	1.09 (27.7)
1/2	1/2	FNS8	2.18 (55.4)	0.47 (11.9)	1.23 (31.3)
3/4	3/4	FNS12	2.21 (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	Nominal Hose Size	End Connection Designator	Dimensions		
			A	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.		in. (mm)		
1/4	1/4	NS4	1.80 (45.7)	0.28 (7.1)	0.94 (23.9)
1/4	3/8	NS4	1.81 (46.0)	0.28 (7.1)	1.09 (27.7)
3/8	3/8	NS6	1.81 (46.0)	0.38 (9.7)	1.09 (27.7)
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)	1.23 (31.3)
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)	1.82 (46.3)
1 1/4	1 1/4	NS20	3.06 (77.7)	1.09 (27.7)	2.03 (51.6)
1 1/2	1 1/2	NS24	3.72 (94.5)	1.34 (34.0)	2.47 (62.6)
2	2	NS32	4.19 (106)	1.81 (46.0)	3.19 (81.0)

FITOK

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

SS - MH4 - FL6 - NS6 - F36 - R - Z - SK

End Connection Material	Hose	Nominal Hose Size	End Connection 1 Type	End Connection 1 Size	End Connection 2 Type and Size	Overall Length	Convolution	Overbraid	Option①
SS 316 SS	MH High pressure hose	4 1/4"	ML Metric Tube Fitting	3 3/16"	Same as End 1	FXX XX in.	Helical	304	SK Anti-whip Cable
904L 904L SS	MM Medium pressure hose	6 3/8"	FL Fractional Tube Fitting	4 1/4"	Specify in the same way as the end connection 1 type and size	MXX XX mm	R Annular (for MM series only)	Z 316	AR2 Helium Leak Testing (1×10^{-9} std m^3/s)
		8 1/2"	MT Metric Tube Adapter	6 3/8" or 6 mm					
		12 3/4"	FT Fractional Tube Adapter	8 1/2" or 8 mm					
		16 1"	FNS Female NPT	10 5/8" or 10 mm					
		20 1 1/4"	NS Male NPT	12 3/4" or 12 mm					
		24 1 1/2"	FRT Female BSPT	14 M14 x 1.5					
		32 2"	RT Male BSPT	16 1" or 16 mm					
			FMS Female Metric Thread (for RG-M)	18 M18 x 1.5					
			MS Male Metric Thread (for RG-M)	20 M20 x 1.5					
			SAN Female JIC 37° Flare Swivel						
			AN Male JIC 37° Flare						
			SFFR Female FR Fitting Swivel						
			SFR Male FR Fitting Swivel						
			OTB Tube Butt Weld Fitting						

① To order multiple options, please add designators in alphabetical order and separate them with dashes.

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.

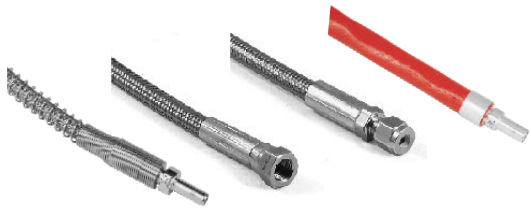
Connections are described based on the following rules:
1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - FR Fitting - OTB Tube Butt Weld Fitting - Others
2. Put the sizes 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.

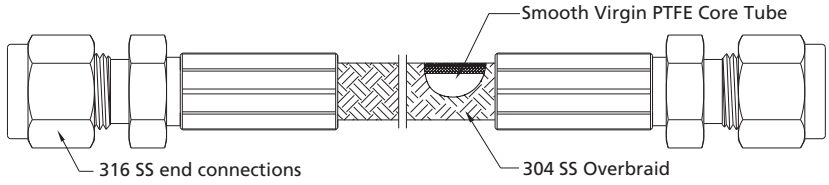
PTFE-lined, Stainless Steel Braided Hoses

PS Series

Features

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

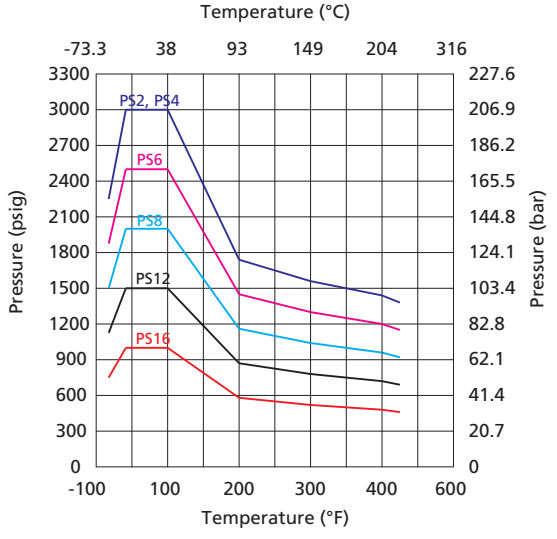




Hose Technical Parameters

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 (-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



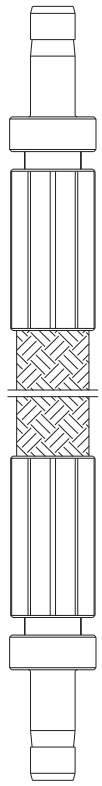
Testing

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	Tube Adapter Size	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.	in. (mm)		in. (mm)	in. (mm)
1/8	1/8	6.0 (153)	SS-PS2-FT2-F6	0.08 (2.0)	0.46 (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	0.16 (4.1)	0.54 (13.7)
		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 (6.9)	0.73 (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 (9.1)	0.86 (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 (13.5)	1.04 (26.4)
		36.0 (915)	SS-PS12-FT12-F36		
1	1	36.0 (915)	SS-PS16-FT16-F36	0.80 (20.3)	1.36 (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 (4.1)	0.54 (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 (8.4)	0.86 (21.8)
		36.0 (915)	SS-PS8-MT12-F36		

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. Sizes and types listed are standard. Other sizes and types are available on request.

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 & alkili
- 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

SS – PS4 – FL6 – FT6 – M1000 – Z – SPF2

End Connection Material	
SS	316 SS
6L	316L SS
S4	304 SS
INC	Alloy 600
A20	Alloy 20
HC	Alloy C-276
TI	Titanium
904L	904L SS

Hose	
PS	PTFE hose (high-pressure)

Nominal Hose Size	
2	1/8"
4	1/4"
6	3/8"
8	1/2"
12	3/4"
16	1"

End Connection 1 Type	
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
FMS	Female Metric Thread (for RG)
MS	Male Metric Thread (for RG)
FL	Fractional Tube Fitting
ML	Metric Tube Fitting
FT	Fractional Tube Adapter
MT	Metric Tube Adapter
AN	Male JIC 37° Flare
SAN	Female JIC 37° Flare Swivel
SMS	Female Metric Thread Swivel (for RG)
SNS	Male NPT Swivel
SRT	Metric BSPT Swivel
SRG	Female BSPP Swivel (for RG)

End Connection 1 Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
14	M14 x 1.5
16	1" or 16 mm
18	M18 x 1.5
20	M20 x 1.5

End Connection 2 Type and Size	
	Same as End 1
Specify in the same way as the end connection 1 type and size	

Overall Length	
FXX	XX in.
MXX	XX mm

Overbraid	
	304
Z	316

Option	
SP	Spring Guard
SK	Anti-whip Cable
F	Fire Jacket

Cleaning and Packaging	
	FC-01
F2	FC-02

Notes: 1. PS series hoses are not suitable for hydrogen applications. For helium applications, please contact FITOK Group.
2. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

Example: **SS-PS4-SAN4-M500**

SS: End connection material is 316 stainless steel.

PS4: PS series, hose inside diameter is 3/16".

SAN4: End connection 1 is 1/4" female JIC 37° flare swivel.
End connection 2 is 1/4" female JIC 37° flare swivel.

M500: Overall length is 500 mm.

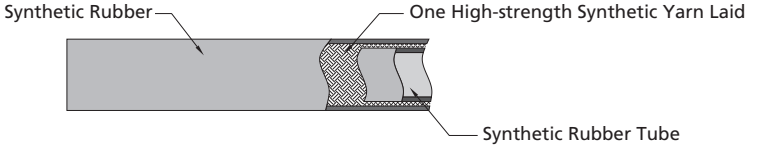
Connections are described based on the following rules:
1. Metric Tube Fitting - Fractional Tube Fitting - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - Others
2. Put the sizes from the biggest down to the smallest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

Multipurpose Push-on Hoses

MP Series

Features

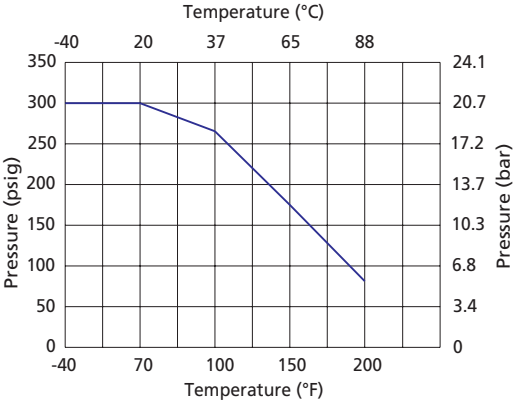
- Cover: weatherproof, abrasion withstanding and oil-resistant synthetic rubber
- Reinforcement: single-braid high-strength synthetic fiber woven for maximum strength and end connection retention
- Core tube: highly oil-resistant rubber
- Hose colors: blue, black, green, gray, red and yellow
- Working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

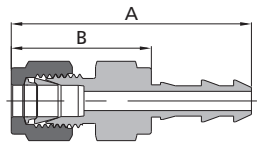
FITOK multipurpose push-on hose components are cleaned in accordance with FITOK *Standard Cleaning and Packaging Process (FC-01)* for general industrial procedures.
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

Caution

- Do not reuse the hose.

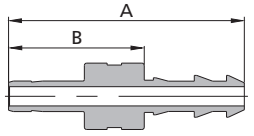
Multipurpose Push-on Hose End Connections

Tube Fittings



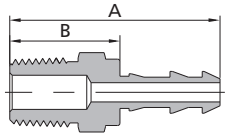
Nominal Hose Size	Tube Fitting Size	Basic Ordering Number	Dimensions, in. (mm)			
			A	B	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.					
1/4	1/4	-MP4-FL4	1.97 (50.0)	1.15 (29.2)	0.16 (4.0)	0.65 (16.5)
3/8	3/8	-MP6-FL6	2.11 (53.6)	1.18 (30.0)	0.27 (6.8)	0.87 (22.0)
1/2	1/2	-MP8-FL8	2.48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

Tube Adapters



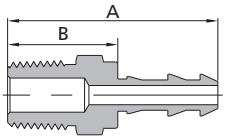
Nominal Hose Size	Tube Adapter Size	Basic Ordering Number	Dimensions, in. (mm)			
			A	B	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.					
1/4	1/4	-MP4-FT4	1.93 (49.0)	1.11 (28.2)	0.16 (4.0)	0.54 (13.8)
3/8	3/8	-MP6-FT6	2.03 (51.6)	1.10 (28.0)	0.27 (6.8)	0.73 (18.5)
1/2	1/2	-MP8-FT8	2.47 (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



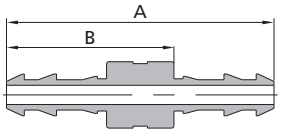
Nominal Hose Size	NPT Tapered Thread Size	Basic Ordering Number	Dimensions, in. (mm)			
			A	B	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.					
1/4	1/4	-MP4-NS4	1.72 (43.7)	0.90 (22.9)	0.16 (4.0)	0.65 (16.5)
3/8	1/4	-MP6-NS4	1.80 (45.7)	0.87 (22.1)	0.27 (6.8)	0.87 (22.0)
3/8	3/8	-MP6-NS6	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



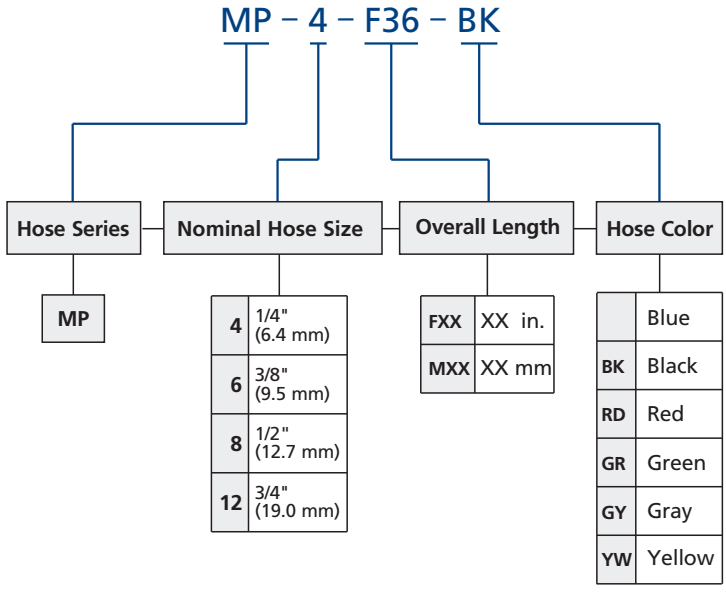
Nominal Hose Size	BSPT Tapered Thread Size	Basic Ordering Number	Dimensions, in. (mm)			
			A	B	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.					
1/4	1/4	-MP4-RT4	1.72 (43.7)	0.90 (22.9)	0.16 (4.0)	0.65 (16.5)
3/8	1/4	-MP6-RT4	1.80 (45.7)	0.87 (22.1)	0.27 (6.8)	0.87 (22.0)
3/8	3/8	-MP6-RT6	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)

Unions



Nominal Hose Size	Basic Ordering Number	Dimensions, in. (mm)			
		A	B	Minimum Inside Diameter	Maximum Outside Dimension
in.					
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

End Connection Material

SS	316 SS
B	Brass
S4	304 SS
904L	904L SS

Hose Series

MP4	1/4" (6.4 mm)
MP6	3/8" (9.5 mm)
MP8	1/2" (12.7 mm)
MP12	3/4" (19.0 mm)

End Connection 1 Type

ML	Metric Tube Fitting
FL	Fractional Tube Fitting
MT	Metric Tube Adapter
FT	Fractional Tube Adapter
NS	Male NPT
RT	Male BSPT

End Connection 1 Size

4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	10 mm
12	3/4" or 12 mm
18	18 mm

End Connection 2 Type and Size

	Same as End 1
Specify in the same way as the end connection 1 type and size	

Overall Length

FXX	XX in.
MXX	XX mm

Hose Color

	Blue
BK	Black
RD	Red
GR	Green
GY	Gray
YW	Yellow

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 - 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.

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

- Polyurethane cover: resists oil, weather and abrasion
- Reinforcement: double-braid high-strength synthetic fiber
- Core tube: nylon
- Working pressure up to: 5000 psig (345 bar)
- Nominal hose size: 3/16" to 1"
- Working temperature: -40°F to 200°F (-40°C to 93°C)
- End connections: 1/4 to 1 thread, 1/4" to 1" and 6 mm to 22 mm tube fitting
- End connection materials: stainless steel
- Custom length available

Technical Parameters

Thermoplastic Hydraulic Hose (SAE 100R7)

Nominal Hose Size	Hose Series	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)	TH3	1.58 (40)	0.19 (4.8)	-40 to 200 (-40 to 93)	3000 (207)	12000 (828)	SAE J517 100R7
1/4 (6.4)	TH4	1.97 (50)	0.25 (6.4)		2750 (189)	11000 (758)	
5/16 (8.0)	TH5	2.36 (60)	0.31 (7.9)		2500 (173)	10000 (690)	
3/8 (9.6)	TH6	2.95 (75)	0.38 (9.8)		2250 (155)	9000 (620)	
1/2 (12.7)	TH8	3.74 (95)	0.50 (12.7)		2000 (137)	8000 (551)	

Thermoplastic Hydraulic Hose (SAE 100R8)

Nominal Hose Size	Hose Series	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)	TH3	2.00 (50.8)	0.19 (4.8)	-40 to 200 (-40 to 93)	5000 (344)	20000 (1378)	SAE J517 100R8
1/4 (6.4)	TH4	2.00 (50.8)	0.25 (6.4)		5000 (344)	20000 (1378)	
3/8 (9.6)	TH6	2.50 (63.5)	0.38 (9.8)		4000 (275)	16000 (1102)	
1/2 (12.7)	TH8	4.00 (102)	0.50 (12.7)		3500 (241)	14000 (964)	
3/4 (19.0)	TH12	6.50 (165)	0.75 (19.0)		2250 (155)	9000 (620)	
1 (25.4)	TH16	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

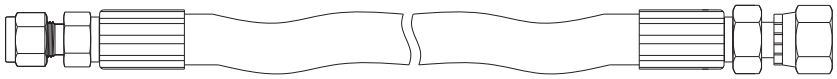
FITOK thermoplastic hose components are cleaned in accordance with FITOK *Standard Cleaning and Packaging Process (FC-01)* for general industrial procedures.
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

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

SS – TH4 – FL4 – SAN4 – M1000 – R7 – SK

End Connection Material		Hose Series		End Connection 1 Type		End Connection 1 Size		End Connection 2 Type and Size		Overall Length		Hose Code		Option	
SS	316 SS	TH3	3/16" (4.8 mm)	ML	Metric Tube Fitting	4	1/4"		Same as End 1	FXX	XX in.	R7	100R7	SK	Anti-whip Cable
S4	304 SS	TH4	1/4" (6.4 mm)	FL	Fractional Tube Fitting	6	3/8" or 6 mm	Specify in the same way as the end connection 1 type and size		MXX	XX mm	R8	100R8		
904L	904L SS	TH5	5/16" (7.9 mm)	MT	Metric Tube Adapter	8	1/2" or 8 mm								
		TH6	3/8" (9.5 mm)	FT	Fractional Tube Adapter	10	5/8" or 10 mm								
		TH8	1/2" (12.7 mm)	NS	Male NPT	12	3/4" or 12 mm								
				RT	Male BSPT	16	1" or 16 mm								
				SRG	Female BSPP Swivel (for RG)										
				FMS	Female Metric Thread (for RG-M)										
				MS	Male Metric Thread (for RG-M)										
				SMS	Female Metric Thread Swivel (for RG)										
				SAN	Female JIC 37° Flare Swivel										

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.

Hose Connectors and Sleeves

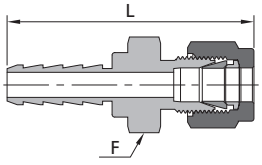
HC Series

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

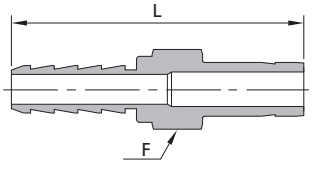
Hose Connectors

Tube Fittings



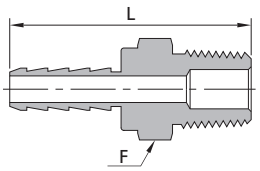
Hose ID	Tube Size	Basic Ordering Number	Dimensions		
			Minimum Inside Diameter	F	L
in.	in.		in. (mm)	in.	in. (mm)
1/8	1/8	-HC-F2-FL2	0.08 (2.0)	7/16	1.42 (36.1)
1/4	1/8	-HC-F4-FL2	0.09 (2.3)	7/16	1.81 (46.0)
	1/4	-HC-F4-FL4	0.19 (4.8)	9/16	1.92 (48.8)
3/8	1/4	-HC-F6-FL4	0.19 (4.8)	9/16	1.99 (50.6)
	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)
mm	mm	——	mm (in.)	mm	mm (in.)
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



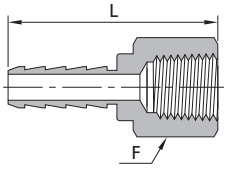
Hose ID	Tube Size	Basic Ordering Number	Dimensions		
			Minimum Inside Diameter	F	L
in.	in.		in. (mm)	in.	in. (mm)
1/8	1/8	-HC-F2-FT2	0.08 (2.0)	5/16	1.37 (34.8)
	1/4	-HC-F2-FT4	0.09 (2.3)	3/8	1.47 (37.3)
1/4	1/4	-HC-F4-FT4	0.19 (4.8)	7/16	1.86 (47.2)
	3/8	-HC-F4-FT6	0.19 (4.8)	7/16	1.92 (48.8)
5/16	1/4	-HC-F5-FT4	0.19 (4.8)	7/16	1.94 (49.3)
3/8	1/4	-HC-F6-FT4	0.19 (4.8)	9/16	1.94 (49.3)
	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.	in.		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)
	1/2	-HC-F5-NS8	0.19 (4.8)	7/8	1.96 (49.8)
3/8	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	-HC-F6-NS8	0.30 (7.6)	7/8	1.96 (49.8)
1/2	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)
	1/2	-HC-F8-NS8	0.38 (9.7)	7/8	2.03 (51.6)
5/8	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	-HC-F10-NS12	0.50 (12.7)	1 1/16	2.07 (52.6)
3/4	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	-HC-F12-NS16	0.63 (16.0)	1 3/8	2.43 (61.7)
1	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)

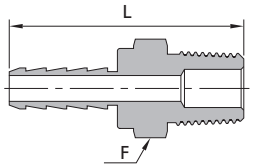
Female NPT Connectors



Hose ID	NPT Size	Basic Ordering Number	Dimensions		
			Minimum Inside Diameter	F	L
in.	in.		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)

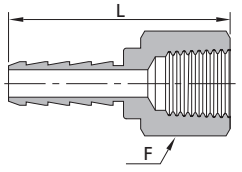
FITOK

Male BSPT Connectors



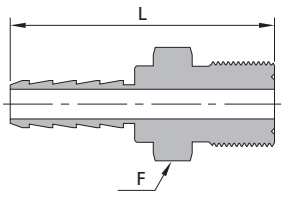
Hose ID	BSPT Tapered Thread Size	Basic Ordering Number	Dimensions		
			Minimum Inside Diameter	F	L
in.	in.		in. (mm)	in.	in. (mm)
1/8	1/8	-HC-F2-RT2	0.08 (2.0)	7/16	1.28 (32.5)
	1/4	-HC-F2-RT4	0.08 (2.0)	9/16	1.40 (35.5)
3/16	1/8	-HC-F3-RT2	0.13 (3.3)	7/16	1.40 (35.5)
	1/4	-HC-F3-RT4	0.13 (3.3)	9/16	1.58 (40.1)
1/4	1/8	-HC-F4-RT2	0.19 (4.8)	716	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



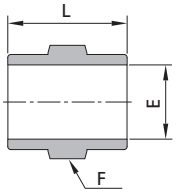
Hose ID	BSPT Size	Basic Ordering Number	Dimensions		
			Minimum Inside Diameter	F	L
in.	in.		in. (mm)	in.	in. (mm)
1/8	1/8	-HC-F2-FRT2	0.08 (2.0)	9/16	1.11 (28.2)
	1/4	-HC-F2-FRT4	0.08 (2.0)	3/4	1.26 (32.0)
3/16	1/8	-HC-F3-FRT2	0.13 (3.3)	9/16	1.29 (32.8)
	1/4	-HC-F3-FRT4	0.13 (3.3)	3/4	1.44 (36.6)
1/4	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
mm	in.		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)

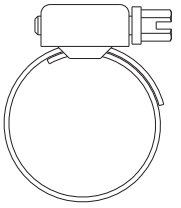
Hose Connector Sleeves



- Material: Aluminum
- Reusable

Hose I.D.	Hose O.D.	Ordering Number	Dimensions, in. (mm)		
			E	F	L
in.	in.				
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

SS – HC – F4 – NS4

End Connection Material	Series	End Connection 1 Type	End Connection 1 Size	End Connection 2 Type	End 2 Connection Size
SS 316 SS	HC	F Fractional	4 1/4" or 4 mm	ML Metric Tube Fitting	4 1/4"
S4 304 SS		M Metric	6 3/8" or 6 mm	FL Fractional Tube Fitting	6 3/8" or 6 mm
A20 Alloy 20			8 1/2" or 8 mm	MT Metric Tube Adapter	8 1/2" or 8 mm
INC Alloy 600			10 5/8" or 10 mm	FT Fractional Tube Adapter	10 5/8" or 10 mm
HC Alloy C-276			12 3/4" or 12 mm	FNS Female NPT	12 3/4" or 12 mm
TI Titanium			16 1" or 16 mm	NS Male NPT	16 1" or 16 mm
AL Aluminum				FRT Female BSPT	18 M18 x 1.5
904L 904L SS				RT Male BSPT	20 M20 x 1.5
				FMS Female Metric Thread (for RG-M)	
				MS Male Metric Thread (for RG-M)	

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.