

# Metal Flexible Tubes

## HMF Series

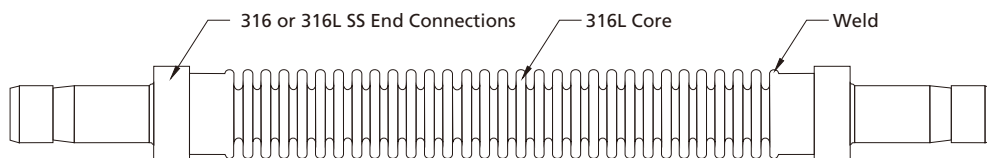


### Introduction

HMF Series Metal Flexible Tubes feature an all-metal construction that prevents media permeation, making them ideal for static applications with stringent sealing requirements. These tubes can be manually formed to the desired shape and will retain their form to compensate for pipeline misalignment and vibration under vacuum or low-pressure conditions, thereby improving installation efficiency and overall system reliability.

### Features

- 316L stainless steel annular convoluted core, 316 or 316L stainless steel end connections
- Nominal tube sizes: 1/4" to 1/2"
- Working pressure range: Vacuum to 135 psig (9.3 bar)
- All-metal construction suitable for applications with strict media permeation requirements
- Optional additional helium leak test with a maximum leak rate of  $1 \times 10^{-9}$  std-cm<sup>3</sup>/s
- Custom lengths available



### Technical Parameters

Nominal Tubing Size	Inside Diameter	Outside Diameter	Min. Bend Radius		Temperature Range	Working Pressure at 70 °F (20 °C)
			Annular Convuluted Core			
			Static	Dynamic <sup>①</sup>		
in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	°F (°C)	psig (bar)
1/4 (6.4)	0.25 (6.4)	0.38 (9.7)	1.00 (25.4)	–	-325 to 1000 (-200 to 537)	135 (9.3)
3/8 (9.7)	0.39 (10.0)	0.59 (15.0)	1.20 (30.5)			70 (4.8)
1/2 (12.7)	0.48 (12.1)	0.73 (18.6)	1.50 (38.1)			70 (4.8)

<sup>①</sup> Not suitable for dynamic applications

## Testing

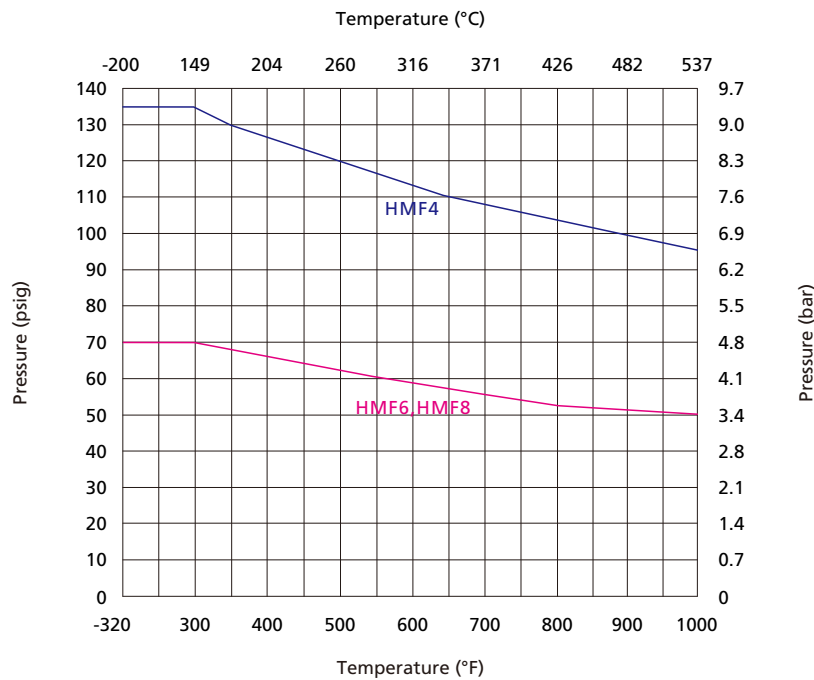
Every FITOK metal flexible tube is factory-tested with nitrogen or air at the maximum working pressure and undergoes sampling helium leak testing to a maximum leak rate of  $1 \times 10^{-7}$  std·cm<sup>3</sup>/s. For additional testing requirements, please contact FITOK Group or our authorized distributors.

## Cleaning and Packaging

FITOK metal flexible tubes are cleaned in accordance with the FITOK Standard Cleaning and Packaging Process (FC-01) by default. Products cleaned per the Special Cleaning and Packaging Process (FC-02) are available upon request. Each metal flexible tube is packed in a PC transparent tube or bagged and boxed/crated. Longer tubes are coiled, then bagged and boxed or crated.

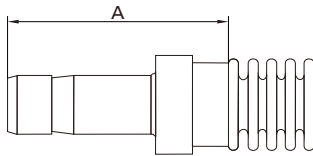
## Pressure vs. Temperature

The peak value of pressure fluctuations, vibrations, or pulses in the system must not exceed 50% of the selected flexible tube's rated working pressure.



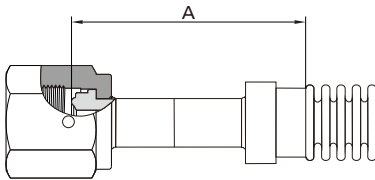
## End Connections

### Tube Adapters



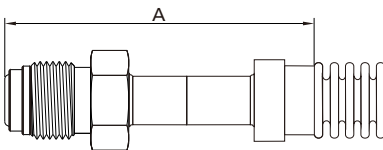
Tube Adapter Size	Nominal Tube Size	End Connection Designator	Dimensions		
			Minimum Inside Diameter	Maximum Outside Dimension	A
in.	in.		in. (mm)		
1/4	1/4	FT4	0.17 (4.3)	0.41 (10.4)	0.96 (24.5)
3/8	3/8	FT6	0.27 (6.8)	0.63 (16.0)	1.03 (26.2)
1/2	1/2	FT8	0.37 (9.4)	0.83 (21.0)	1.30 (33.1)
mm	in.	—	mm (in.)		
6	1/4	MT6	4.1 (0.16)	10.4 (0.41)	24.4 (0.96)
10	3/8	MT10	7.1 (0.28)	16.0 (0.63)	26.2 (1.03)
12	1/2	MT12	8.8 (0.35)	21.0 (0.83)	31.8 (1.25)

### Rotatable Female FR Fittings



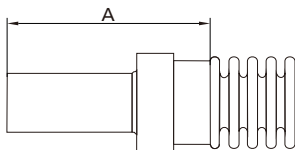
FR Fitting Size	Nominal Tube Size	End Connection Designator	Dimensions		
			Minimum Inside Diameter	Maximum Outside Dimension	A
in.	in.		in. (mm)		
1/4	1/4	SFFR4	0.18 (4.6)	0.87 (22.0)	1.32 (33.5)
1/2	1/2	SFFR8	0.41 (10.4)	1.23 (31.2)	1.38 (35.0)

### Rotatable Male FR Fittings



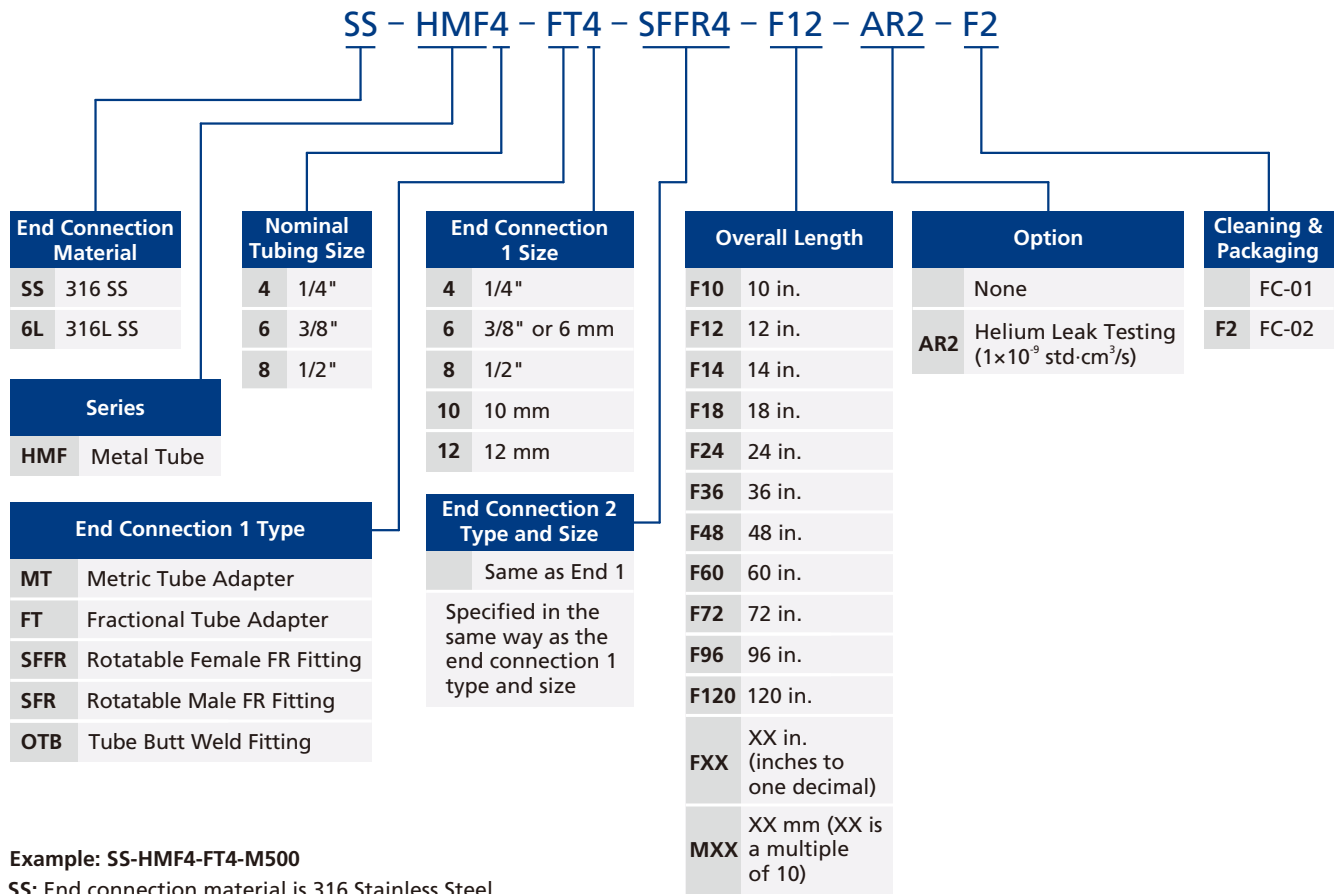
FR Fitting Size	Nominal Tube Size	End Connection Designator	Dimensions		
			Minimum Inside Diameter	Maximum Outside Dimension	A
in.	in.		in. (mm)		
1/4	1/4	SFR4	0.18 (4.6)	0.72 (18.4)	2.04 (51.8)
1/2	1/2	SFR8	0.41 (10.4)	1.08 (27.5)	1.99 (50.5)

### Tube Butt Welds



Tube Butt Weld Size	Nominal Tube Size	End Connection Designator	Dimensions		
			Minimum Inside Diameter	Maximum Outside Dimension	A
in.	in.		in. (mm)		
1/4	1/4	OTB4	0.18 (4.6)	0.41 (10.4)	1.09 (27.8)
3/8	3/8	OTB6	0.30 (7.7)	0.63 (16.0)	1.09 (27.8)
1/2	1/2	OTB8	0.40 (10.2)	0.83 (21.0)	1.09 (27.8)

## Ordering Number Description



### Example: SS-HMF4-FT4-M500

**SS:** End connection material is 316 Stainless Steel.

**HMF4:** HMF Series, nominal tubing size is 1/4".

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

End connection 2 is a 1/4" tube adapter.

**M500:** Overall length is 500 mm

Connections are described based on the following rules:

1. Metric Tube Adapter - Fractional Tube Adapter - FR Fitting - OTB Tube Butt Weld Fitting - Others
2. For connections of the same type, list sizes from largest to smallest.
3. For the same type and size, list female before male.

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