

High-Pressure, Metal Flexible Hose

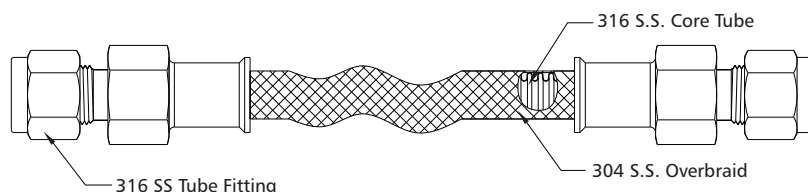
MF1 Series



- ❖ Maximum working pressure up to 3000 psig (207 bar)
- ❖ Working temperature from -325°F to 850°F (-200°C to 454°C)
- ❖ 316L core tube and 304 stainless steel overbraid
- ❖ Hose sizes from 1/4 to 1 in.
- ❖ Standard and custom-length assemblies

Features

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- ❖ Working temperature from -325°F to 850°F (-200°C to 454°C)
- ❖ 316L core tube and 304 stainless steel overbraid
- ❖ Hose sizes from 1/4 to 1 in.
- ❖ Standard and custom-length assemblies



Hose Technical Data

Hose Size in. (mm)	Min. Bend Radius		Temperature Range °F (°C)	Working Pressure at 70°F (20°C) psig (bar)	Min. Burst Pressure at 70°F (20°C) psig (bar)
	Static in. (mm)	Dynamic in. (mm)			
1/4 (6.4)	2.25 (57.2)	10.0 (254)	-325 to 850 (-200 to 454)	3000 (206)	12000 (827)
3/8 (9.7)	3.00 (76.2)	12.0 (305)		2000 (137)	8000 (551)
1/2 (12.7)	4.50 (114)	16.0 (406)		1800 (124)	7200 (496)
3/4 (19.0)	6.00 (152)	17.0 (432)		1500 (103)	6000 (413)
1 (25.4)	6.75 (171)	20.0 (508)		1200 (82.7)	4800 (330)

Pressure vs. Temperature

Hose Size	1/4 (6.4)	3/8 (9.7)	1/2(12.7)	3/4(19.0)	1(25.4)
Temperature, °F (°C)	Working Pressure, psig (bar)				
-325 (-200) to 100 (37)	3000 (206)	2000 (137)	1800 (124)	1500 (103)	1200 (82.7)
200 (93)	2520 (173)	1680 (115)	1512 (104)	1260 (86.5)	1008 (69.4)
300 (148)	2280 (156)	1520 (104)	1368 (94.2)	1140 (78.2)	912 (62.8)
400 (204)	2100 (144)	1400 (95.9)	1260 (86.8)	1050 (72.1)	840 (57.8)
500 (260)	1950 (133)	1300 (89.0)	1170 (80.6)	975 (66.9)	780 (53.7)
600 (315)	1860 (127)	1240 (84.9)	1116 (76.8)	930 (63.8)	744 (51.2)
700 (371)	1770 (121)	1180 (80.8)	1062 (73.1)	885 (60.7)	708 (48.7)
800 (426)	1710 (117)	1140 (78.0)	1026 (70.6)	855 (58.7)	684 (47.1)
850 (454)	1680 (115)	1120 (76.7)	1008 (69.4)	840 (57.6)	672 (46.3)

Testing

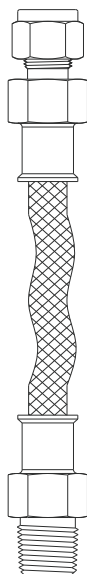
Every CIR-LOK MF1 series hose assembly is factory tested with pure water at 1.5 times the maximum working pressure.

Cleaning and Packaging

CIR-LOK MF1 series hose components are cleaned in accordance with CIR-LOK standard cleaning (CP-01) for general industrial procedures.

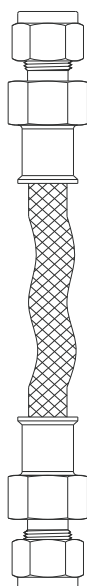
Shorter hoses are packed in cartons with suitable protective material, longer hoses are coiled, bagged and boxed or crated.

Standard Assemblies



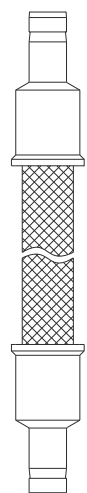
Tube Fitting to Male NPT End

Nominal Hose Size	Tube Fitting Size	NPT Size	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.	in.	in.(mm)	in.(mm)	in.(mm)	in.(mm)
1/4	1/4	1/4	12(305)	MF1-4-F4-NPT4-F12-	0.19 (4.8)	0.94 (23.8)
3/8	3/8	3/8	18(457)	MF1-6-F6-NPT6-F18-	0.28 (7.1)	1.09 (27.7)
1/2	1/2	1/2	18(457)	MF1-8-F8-NPT8-F18-	0.41 (10.4)	1.23 (31.3)
3/4	3/4	3/4	18(457)	MF1-12-F12-NPT12-F18-	0.66 (16.0)	1.74 (44.2)
1	1	1	24(610)	MF1-16-F16-NPT16-F24-	0.88 (22.4)	1.82 (46.3)



Tube Fitting End

Nominal Hose Size	Tube Fitting Size	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.	in.(mm)		in.(mm)	in.(mm)
1/4	1/4	12(305)	MF1-4-F4-F12-	0.19 (4.8)	0.94 (23.8)
3/8	3/8	18(457)	MF1-6-F6-F18-	0.28 (7.1)	1.09 (27.7)
1/2	1/2	18(457)	MF1-8-F8-F18-	0.41 (10.4)	1.23 (31.3)
3/4	3/4	18(457)	MF1-12-F12-F18-	0.66 (16.0)	1.74 (44.2)
1	1	24(610)	MF1-16-F16-F24-	0.88 (22.4)	1.82 (46.3)



Tube Adapter End

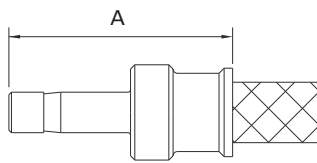
Nominal Hose Size	Tube Fitting Size	Overall Length	Ordering Number	Minimum Inside Diameter	Maximum Outside Dimension
in.	in.	in.(mm)		in.(mm)	in.(mm)
1/4	1/4	12(305)	MF1-4-FT4-F12-	0.16(4.1)	0.81(20.6)
3/8	3/8	12(305)	MF1-6-FT6-F12-	0.27(6.9)	1.01(25.6)

1. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or CIR-LOK Group.

2. Types listed are standard. Other types are available upon request, refer to the ordering information.

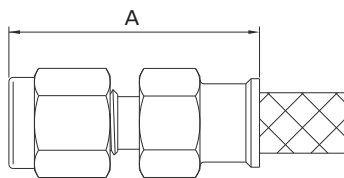
End Connections

Tube Adapters



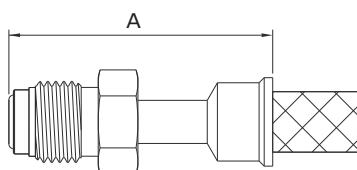
Tube Adapters Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	FT4	1.76 (44.7)	0.16 (4.1)	0.81 (20.6)
3/8	3/8	FT6	1.82 (46.2)	0.27 (6.9)	1.01 (25.6)
1/2	1/2	FT8	2.22 (56.4)	0.37 (9.4)	1.23 (31.3)
3/4	3/4	FT12	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 (0.61)	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)	21.3 (1.23)

Tube Fittings



Tube Fitting Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	F4	1.94 (49.3)	0.19 (4.8)	0.94 (23.8)
3/8	1/4	F6	2.00 (50.8)	0.28 (7.1)	0.94 (23.8)
3/8	3/8	F6	2.02 (51.3)	0.28 (7.1)	1.09 (27.7)
1/2	1/2	F8	2.24 (56.9)	0.41 (10.4)	1.23 (31.3)
5/8	1/2	F10	2.27 (57.7)	0.50 (12.7)	1.23 (31.3)
3/4	3/4	F12	2.35 (59.7)	0.63 (16.0)	1.74 (44.2)
1	1	F16	2.64 (67.1)	0.88 (22.4)	1.82 (46.3)
1 1/4	1 1/4	F20	4.04 (103)	1.09 (27.7)	2.23 (58.9)
1 1/2	1 1/2	F24	4.75 (121)	1.34 (34.0)	2.61 (66.3)
2	2	F32	5.72 (145)	1.88 (47.8)	3.48 (88.4)
mm	in.	—	mm(in.)		
6	1/4	M6	62.2 (2.45)	4.8 (0.19)	20.6 (0.81)
8	1/4	M8	63.2 (2.49)	6.4 (0.25)	20.6 (0.81)
10	3/8	M10	51.6 (2.03)	7.9 (0.31)	31.3 (1.23)
12	1/2	M12	56.7(2.24)	9.7 (0.38)	38.8 (1.53)

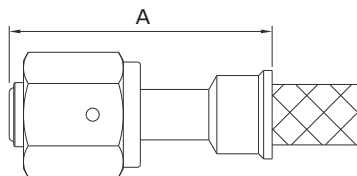
Male GFS Metal Gasket Face Seal Fittings Swivel



FR Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	RGFS4	2.6 (66.6)	0.18 (4.6)	0.81 (20.6)
1/2	1/2	RGFS8	2.83 (71.9)	0.40 (10.2)	1.23 (31.3)
3/4	3/4	RGFS12	4.19 (106)	0.65 (16.5)	1.52 (38.7)
1	1	RGFS16	4.80 (122)	0.87 (22.1)	1.53 (38.8)

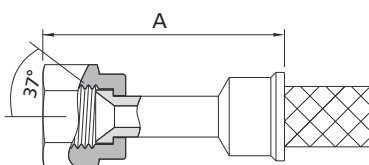
End Connections

Female GFS Metal Gasket Face Seal Fittings Swivel



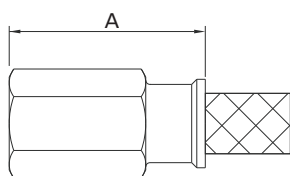
FR Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	FGFS4	2.00 (50.8)	0.18 (4.6)	0.87 (22.1)
1/2	1/2	FGFS8	2.16 (54.9)	0.40 (10.2)	1.23 (31.3)
3/4	3/4	FGFS12	4.19 (106)	0.65 (16.5)	1.74 (44.2)
1	1	FGFS16	4.80 (122)	0.87 (22.1)	2.03 (51.6)

SAE 37°(JIC) Female Swivel



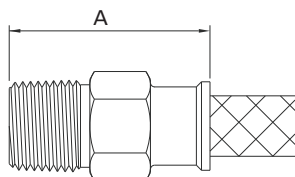
Swivel Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	SAN4	1.87 (47.5)	0.17 (4.3)	0.81 (20.6)
3/8	3/8	SAN6	1.98 (50.3)	0.28 (7.1)	1.01 (25.6)
1/2	1/2	SAN8	2.25 (57.2)	0.42 (10.7)	1.23 (31.3)

Female Pipe Threads,NPT



NPT Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	FNPT4	1.81 (46.0)	0.28 (7.1)	0.94 (23.9)
3/8	3/8	FNPT6	1.87 (47.5)	0.38 (9.7)	1.09 (27.7)
1/2	1/2	FNPT8	2.18 (55.4)	0.47 (11.9)	1.23 (31.3)
3/4	3/4	FNPT12	2.21 (56.1)	0.72 (18.3)	1.74 (44.2)

Male Pipe Threads,NPT



NPT Size	Nominal Hose Size	End connection Designator	Dimensions		
			A	Minimum Inside Diameter	Minimum Outside Diameter
in.	in.		in.(mm)		
1/4	1/4	NPT4	1.80 (45.7)	0.28 (7.1)	0.94 (23.9)
1/4	1/4	NPT4	1.81 (46.0)	0.28 (7.1)	1.09 (27.7)
3/8	3/8	NPT6	1.81 (46.0)	0.38 (9.7)	1.09 (27.7)
1/2	1/2	NPT8	1.99 (50.6)	0.47 (11.9)	1.02 (25.8)
1/2	1/2	NPT8	2.15 (54.6)	0.47 (11.9)	1.23 (31.3)
3/4	3/4	NPT12	2.22 (56.4)	0.63 (16.0)	1.74 (44.2)
1	1	NPT16	2.54 (64.5)	0.88 (22.4)	1.82 (46.3)
1 1/4	1 1/4	NPT20	3.06 (77.7)	1.09 (27.7)	2.03 (51.6)
1 1/2	1 1/2	NPT24	3.72 (94.5)	1.34 (34.0)	2.47 (62.6)
2	2	NPT32	4.19 (106)	1.81 (46.0)	3.19 (81.0)

How to Order

MF1 — 6 — M10 — NPT4 — F36 — 316

Hose Series	Nominal Hose Size	End Connection 1 Type	End Connection 1 Size	End Connection 2 Type and Size	Overall Length	End Connection Material	
MF1	4 1/4"	FNPT Female NPT	4 1/4 in.	Same as port 1 type and port 1 size	F** ** in	316 316 S.S.	
	6 3/8"	NPT Male NPT	6 3/8 in. or 6 mm		M** ** mm	304 304 S.S.	
	8 1/2"	FBT Female BSPT	8 1/2 in. or 8 mm	If port 2 and port 1 are the same, eliminate the port 2 designator			
	12 3/4"	MBT Male BSPT	10 5/8 in. or 10 mm				
	16 1"	MS Male ISO	12 3/4 in. or 12 mm				
		F Fractional Tube Fitting	14 M14 x 1.5				
		M Metric Tube Fitting	16 1 in. or 16 mm				
	FT Fractional Tube Adapter	18 M18 x 1.5					
	MT Metric Tube Adapter	20 M20 x 1.5					
	SAN Swivel Female SAE 37° (JIC)						
	SFMS Female ISO Swivel						
	SBGS Female BSPP Swivel						
	RGFS Rotatable Male GFS Metal						
	FGFS Female GFS Metal						