

Metraflex[®]
for pipes in motion

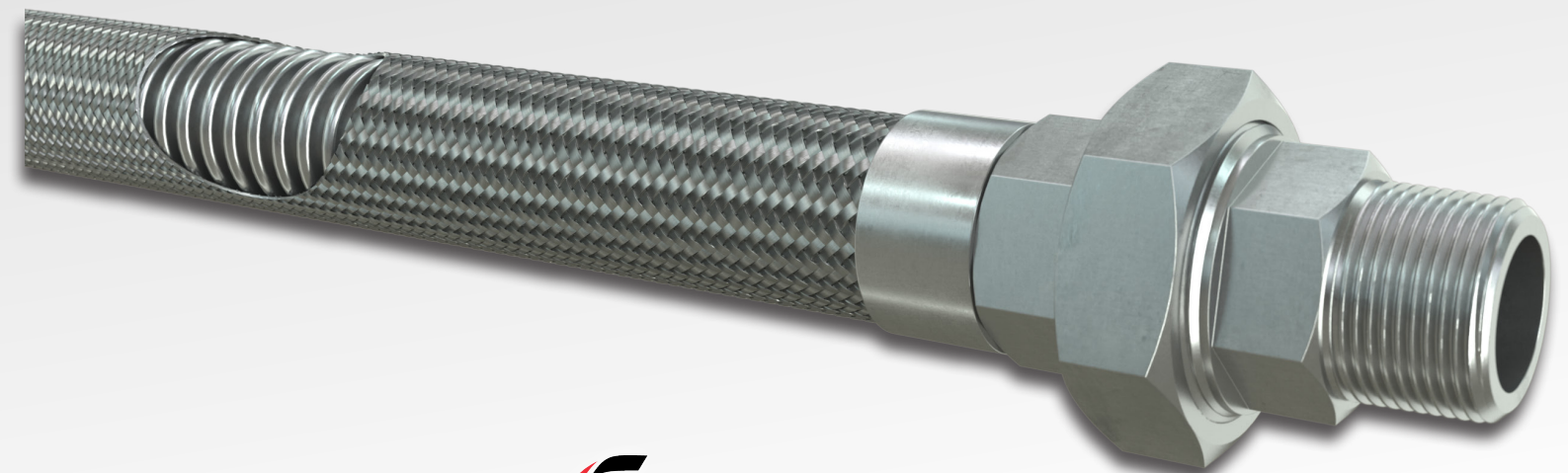
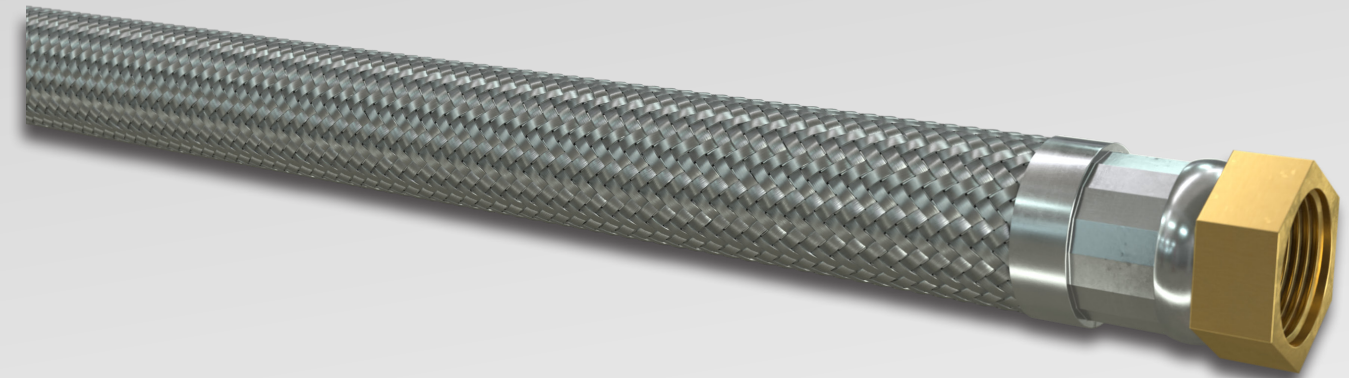


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Metraflex has Revit[®] files, and all other major CAD drawing file types, for Building Information Modeling (BIM). Virtually every product, every model, every size. Our Revit[®] files contain important information on each product, including pressure and temperature ratings, spring rates, compression, flow rates and more. Embedding a Revit[®] file helps ensure the right product gets installed and keeps your engineered piping system in balance. Visit Metraflex.com/Revit to try it today!

FLEXIBLE METAL HOSE AND PUMP CONNECTORS



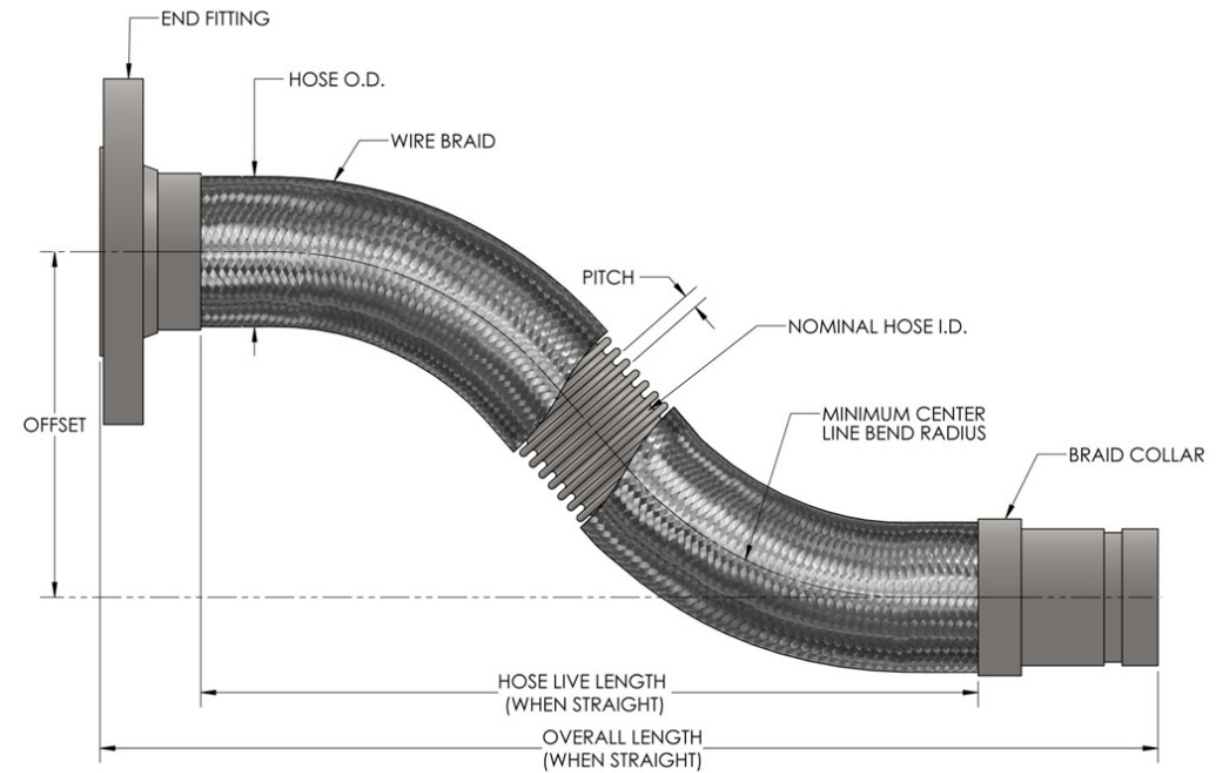
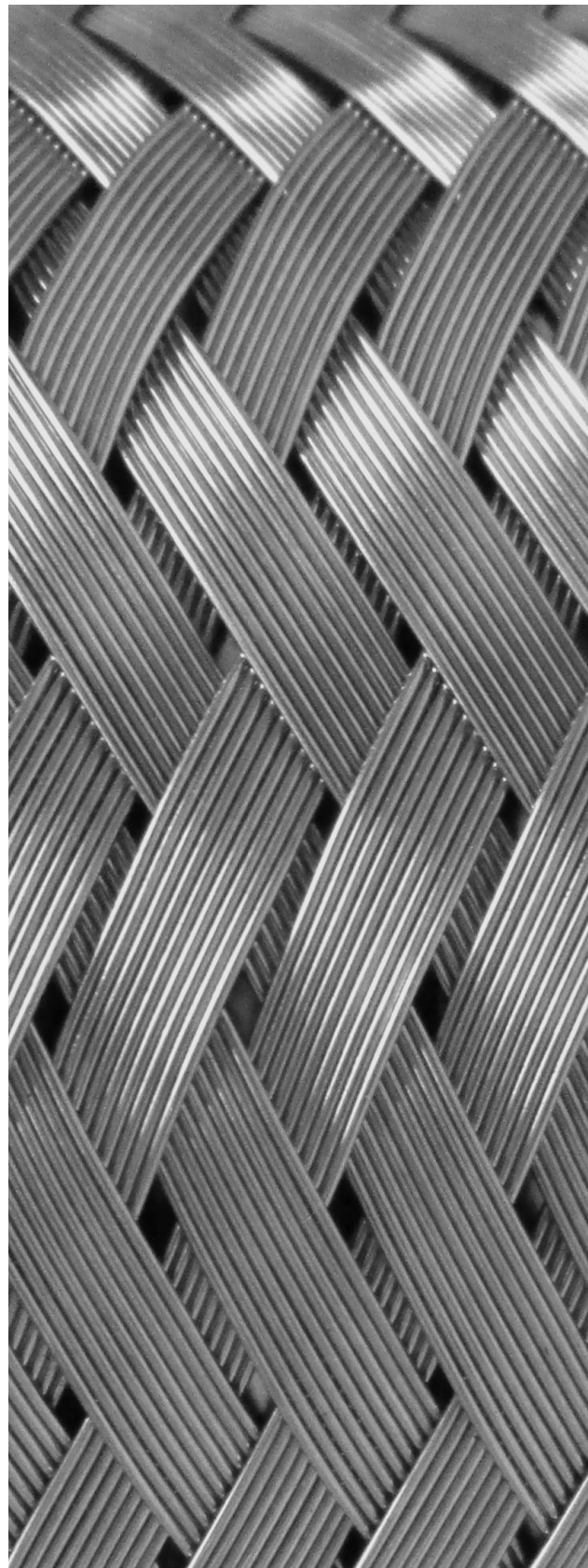
Metraflex[®]
for pipes in motion



Flexible metal hose and pump connectors are a broad category of products that can be applied to a wide range of applications. These products are available in both standard off-the-shelf designs and custom configurations to provide solutions for these applications. What these products have in common is the corrugated hose and braid technology that is time proven to be versatile and long lasting. To ensure quality, many of these products are listed by testing agencies and are all subject to the Metraflex QC program.

Metraflex flexible hose and braid connectors are specifically designed to dampen or suppress noise, absorb vibration (horizontal, vertical, angular), accommodate thermal expansion and stresses, adjust or correct for misalignment in piping systems. The elimination of any of the above problem areas will extend the life of the entire system substantially.

Metraflex manufacturing is headquartered in Chicago, Illinois. The production department is led by a staff of engineers who guide production to make custom fabrications. Metraflex also has a worldwide network of factory trained representatives to provide for local support and service.



Hose The function of the hose is to carry the internal pressure. The standard products design is based on our standard corrugated 304 stainless steel hose, 321 and 316 are also available. The performance for the hose is show in the tables. There are other hoses available such as high pressure and close pitch hose.

Braid has two functions. The first is to restrain the hydrostatic end load of the hose under pressure. The second is to restrain the hose from squirming under pressure and stay flexible. Braid is generally all 304 SS, 316 SS is available on special order.



Single braid is made up of groups of wires called carriers or bands.



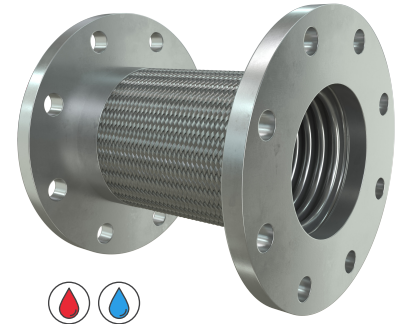
Braided braid is made up of wires braided together to form the carriers or bands.

Braid Sleeve of Braid Collar has two functions. First is acts as a clamp to keep the braid compressed against the hose during the cap weld. Second it acts as protexction of the hose in the hjeat affected zone of the cap weld.

Live Length is the length of hose between the braid collars. The amount of live length will determine the amount of lateral or angular movement the hose is capable of. In order to calculate live length, the correct bend radius must be selected. See our Hose and Braid Design Guide or visit www.metraflex.com for complete assistance.

STANDARD PRODUCTS

METRA MINI

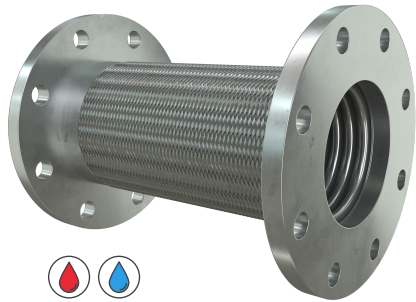


Primarily a pump connector, the Metramini features carbon steel plate flanges and stainless-steel hose and braid. Fully stocked in sizes 2" through 14", the Metramini has an intermittent offset of .125" and a permanent offset of .375".

Part Number	Pipe Size	Length	Pressure at 70 ° F	Part Number	Pipe Size	Length	Pressure at 70 ° F
MMCC0200	2"	9"	285*	MMCC0600	6"	11"	200
MMCC0250	2 1/2"	9"	285*	MMCC0800	8"	12"	190
MMCC0300	3"	9"	285*	MMCC1000	10"	13"	150
MMCC0400	4"	9"	285*	MMCC1200	12"	14"	125
MMCC0500	5"	11"	220	MMCC1400	14"	14"	105

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SLP

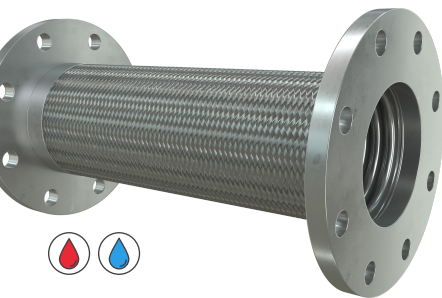


The SLP is very similar to the Metramini as it is primarily a pump connector and features carbon steel plate flanges and stainless-steel hose and braid. Fully stocked in sizes 2" through 14", the SLP has an intermittent offset of .375" and a permanent offset of .75".

Part Number	Pipe Size	Length	Pressure at 70 ° F	Part Number	Pipe Size	Length	Pressure at 70 ° F
SLPC0250	2 1/2"	10 1/4"	285*	SLPC0800	8"	15 3/8"	190
SLPC0300	3"	10 5/8"	285*	SLPC1000	10"	17 3/4"	150
SLPC0400	4"	11 3/4"	285*	SLPC1200	12"	18 3/8"	125
SLPC0500	5"	13 5/8"	285*	SLPC1400	14"	20"	105
SLPC0600	6"	14 1/8"	200				

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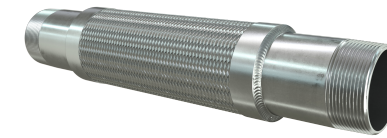
MLP



The MLP is also primarily a pump connector and features carbon steel plate flanges and stainless-steel hose and braid. Fully stocked in sizes 2.5" through 14", the MLP has an intermittent offset of .75" and a permanent offset of 1.0".

Part Number	Pipe Size	Length	Pressure at 70 ° F	Part Number	Pipe Size	Length	Pressure at 70 ° F
MLPC0250	2 1/2"	12"	285*	MLPC0800	8"	22"	190
MLPC0300	3"	14"	285*	MLPC1000	10"	24"	150
MLPC0400	4"	16"	285*	MLPC1200	12"	26"	125
MLPC0500	5"	18"	285*	MLPC1400	14"	28"	105
MLPC0600	6"	20"	200				

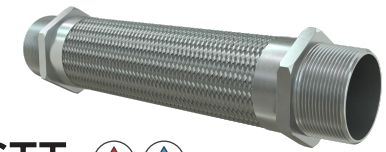
*Flange Limited



SST

The SST features carbon MPT ends and stainless-steel hose and braid. Stock sizes available in .5" through 3" with customations available. The SST has an intermittent offset of .25" and a permanent offset of .5".

Part Number	Pipe Size	Length	Pressure at 70 ° F
SSTC0075	3/4"	10"	750
SSTC0100	1"	10"	605
SSTC0125	1 1/4"	10"	570
SSTC0150	1 1/2"	12"	525
SSTC0200	2"	14"	455
SSTC0250	2 1/2"	16"	345
SSTC0300	3"	16"	290

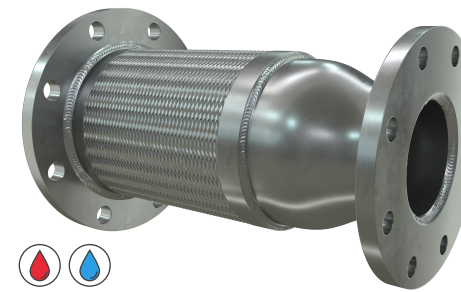


SSTT

The SSTT also features carbon MPT ends and stainless-steel hose and braid. Stock sizes available in sizes .5" through 3". The SSTT has an intermittent offset of .125" and a permanent offset of .375".

Part Number	Pipe Size	Length	Pressure at 70 ° F
SSTT0050	1/2"	6 1/2"	1100
SSTT0075	3/4"	7"	792
SSTT0100	1"	8"	571
SSTT0125	1 1/4"	8 1/2"	531
SSTT0150	1 1/2"	9"	472
SSTT0200	2"	10 1/2"	516

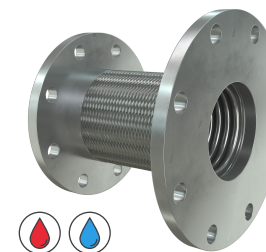
RMF



The RMF features carbon steel plate flanges and stainless-steel hose and braid. Primarily used as a pump connector, the RMF is stocked in sizes 2"x1 1/2" trough 12"x10". Intermittent offset of .125" and permanent offset of .375".

Part Number	Pipe Size	OAL	Pressure at 70 ° F	Part Number	Pipe Size	OAL	Pressure at 70 ° F	Part Number	Pipe Size	OAL	Pressure at 70 ° F
RMF0215	2" x 1 1/2"	12.25"	285*	RMF0503	5" x 3"	15.75"	220	RMF0805	8" x 5"	17.50"	190
RMF2502	2.5" x 2"	12.25"	285*	RMF0504	5" x 4"	15.75"	220	RMF0806	8" x 6"	17.50"	190
RMF0302	3" x 2"	12.25"	285*	RMF0602	6" x 2"	16.25"	200	RMF1006	10" x 6"	19.50"	150
RMF0325	3" x 2 1/2"	12.25"	285*	RMF0625	6" x 2.5"	16.25"	200	RMF1008	10" x 8"	19.50"	150
RMF0402	4" x 2"	12.75"	285*	RMF0603	6" x 3"	16.25"	200	RMF1206	12" x 6"	21.50"	125
RMF0425	4" x 2 1/2"	12.75"	285*	RMF0604	6" x 4"	16.25"	200	RMF1208	12" x 8"	21.50"	125
RMF0403	4" x 3"	12.75"	285*	RMF0605	6" x 5"	16.25"	200	RMF1210	12" x 10"	21.50"	125
RMF0525	5" x 2 1/2"	15.75"	220	RMF0804	8" x 4"	17.50"	190				

*Flange Limited



RSS

The RSS is the cheaper version of the RMF. It features the same carbon steel plate flanges and stainless-steel hose and braid. Primarily used as a pump connector, the RMF is stocked in sizes 2"x1 1/2" trough 12"x10". Intermittent offset of .125" and permanent offset of .375". Note that this cheaper version will result in a higher pressure drop.

GG

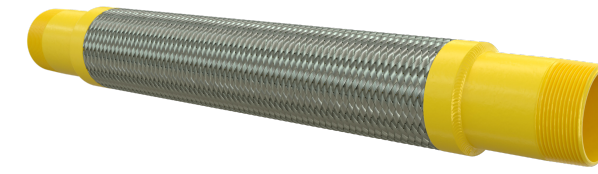
The Model GG flexible metal hose/pump connector features a carbon steel grooved end and stainless-steel hose and braid. Stocked in sizes 2" through 14", the GG has an intermittent offset of .125" and a permanent offset of .375".

Part Number	Pipe Size	Length	Pressure at 70 ° F	Weight (lbs.)
GGC0200	2"	12"	450	9
GGC0250	2 1/2"	14"	345	13
GGC0300	3"	14"	289	14
GGC0400	4"	16"	300	18
GGC0500	5"	17"	220	25

Part Number	Pipe Size	Length	Pressure at 70 ° F	Weight (lbs.)
GGC0600	6"	18"	200	28
GGC0800	8"	20"	190	52
GGC1000	10"	24"	150	75
GGC1200	12"	25"	125	100

STRAIGHT GAS CONNECTOR

Straight Gas Connector has stainless steel hose and braid with carbon steel ends, also available with MPT and weld ends. Certified to meet UL and ANSI 536 for gas service and comes stocked in sizes .5" through 4". Can handle up to 2" lateral movement. CSA and AGA listed.



Part Number	Pipe Size	A Weld/ Thread	Pressure at 70 ° F
GASCT0050/ GASCW0050	1/2"	16 7/8"	150
GASCT0075/ GASCW0075	3/4"	18 3/8"	150
GASCT0100/ GASCW0100	1"	19 3/8"	150
GASCT0125/ GASCW0125	1 1/4"	19 3/8"	150
GASCT0150/ GASCW0150	1 1/2"	20 1/8"	150

Part Number	Pipe Size	A Weld/ Thread	Pressure at 70 ° F
GASCT0200/ GASCW0200	2"	20 7/8"	150
GASCT0250/ GASCW0250	2 1/2"	22 1/2"	150
GASCT0300/ GASCW0300	3"	25 5/8"	150
GASCT0400/ GASCW0400	4"	30 1/4"	150

GF

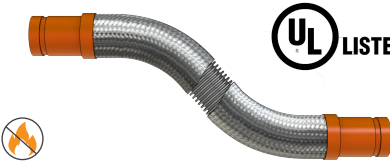
The Model GF features carbon steel plate flanges by carbon steel grooved ends and stainless-steel hose and braid. Primarily used as a pump connector. Stocked in sizes 2" through 14", the GF has an intermittent offset of .125" and a permanent offset of .375".

Part Number	Pipe Size	Length	Pressure at 70 ° F	Weight (lbs.)
GFC0200	2"	12"	285*	9
GFC0250	2 1/2"	14"	285*	13
GFC0300	3"	14"	285*	14
GFC0400	4"	16"	300	18

Part Number	Pipe Size	Length	Pressure at 70 ° F	Weight (lbs.)
GFC0500	5"	17"	220	25
GFC0600	6"	18"	200	28
GFC0800	8"	20"	190	52

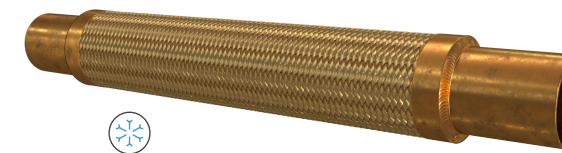
*Flange Limited

FIRESTRAIT



The FireStrait is a flexible pump connector for use in wet or dry fire systems. Available in sizes 2" through 12" with lateral movements of 1/8" through 12". Flanged and grooved end fittings. UL Listed. Contact Metraflex for more information.

RAF



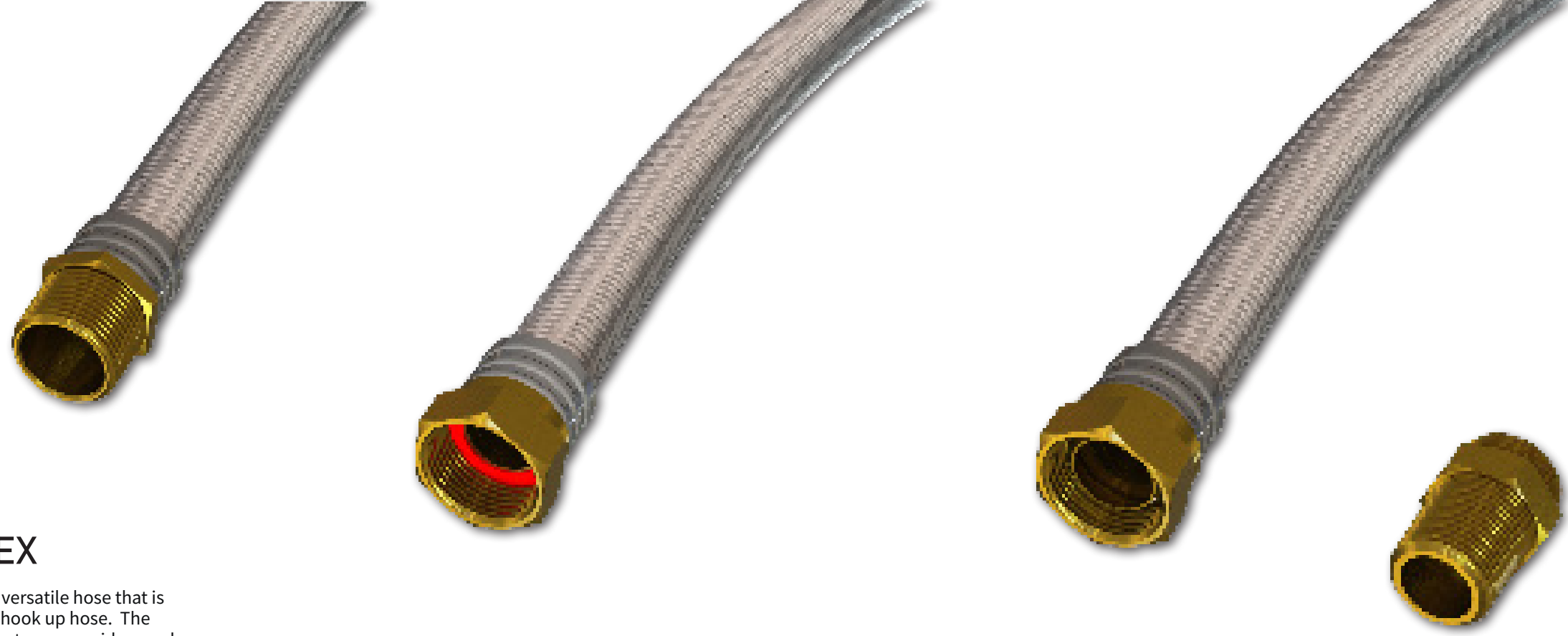
Model RAF features a bronze flex connector with sweat ends and is used for refrigeration services. Mass spectrometer tested with hydrogen and nitrogen. RAF is stocked in sizes .125" through 4" with custom sizes available to order. Intermittent offset is approximately .75".

BBS

The model BBS features bronze hose and braid with female copper sweat ends. The BBS is used whenever additional flexibility is needed. Stocked in sizes .5" through 3"

Part Number	Pipe Size	Length	DIMENSIONS		PERMANENT OFFSET	INTERMITTENT OFFSET	Pressure PSI @ 70 ° F	Weight (lbs.)
			B ± 1/8"	C. MAX.				
BBSC0050	1/2"	10"	7/8"	1.031"	1"	.3"	450	1
BBSC0075	3/4"	10"	1 1/4"	1.406"	3/4"	.25"	340	1
BBSC0100	1"	10"	1 1/2"	1.781"	1/2"	.17"	302	1
BBSC0125	1 1/4"	10"	1 5/8"	2.109"	3/8"	.125"	280	2
BBSC0150	1 1/2"	12"	2"	2.438"	3/8"	.125"	245	3
BBSC0200	2"	14"	2 1/2"	3.078"	3/8"	.125"	190	4
BBSC0250	2 1/2"	16"	2 29/32"	3.969"	3/4"	.25"	320	5
BBSC0300	3"	16"	3 13/32"	4.422"	1/2"	.17"	302	6

Part Number	TO FIT COPPER TUBE		Nom. Hose I.D.	DIMENSIONS			Pressure PSI @ 70 ° F	Weight (lbs.)
	Pipe Size	Actual O.D.		A ± 1/4"	B ± 1/8"	C. MAX.		
RAF2	1/8"	1/4"	1/4"	7 1/2"	1/2"	0.672	450	0.5
RAF3	1/4"	3/8"	5/16"	8 1/4"	5/8"	0.766	450	0.5
RAF4	3/8"	1/2"	3/8"	9"	3/4"	0.859	450	0.5
RAF5	1/2"	5/8"	1/2"	9 3/4"	7/8"	1.031	450	0.5
RAF6	5/8"	3/4"	1/2"	10"	1"	1.031	450	1
RAF7	5/8"	3/4"	3/4"	11 1/4"	1 1/8"	1.406	340	1
RAF8	3/4"	7/8"	3/4"	11 1/2"	1 1/4"	1.406	340	1
RAF9	1"	1 1/8"	1"	13"	1 1/2"	1.781	302	1.5
RAF10	1 1/4"	1 3/8"	1 1/4"	14 3/4"	1 5/8"	2.109	280	2.5
RAF11	1 1/2"	1 5/8"	1 1/2"	17"	2"	2.438	245	3.5
RAF12	2"	2 1/8"	2"	20"	2 1/2"	3.078	190	5.5
RAF13	2 1/2"	2 5/8"	2 1/2"	24"	2 29/32"	3.969	320	10
RAF14	3"	3 1/8"	3"	27"	3 13/32"	4.422	302	15
RAF16	4"	4 1/8"	4"	33"	4 13/32"	5.406	150	25



ELASTOFLEX

The Elastoflex hose is a versatile hose that is primarily used as a coil hook up hose. The Elastoflex hose incorporates a peroxide cured EPDM core with 304 stainless steel braid and brass end fittings. The Elastoflex hoses are available in a variety of lengths (12", 18", 24", 36", 48") to accommodate most hot and cold-water applications up to 230° F

The Elastoflex hose are available in two end configurations. Fixed MPT X Female swivel with gasket seal and fixed MPT X Female cone seat with included cone seat by MPT adaptor.

Part Number	NPS (in.)	OAL (in.)	Min. Bend Radius	Max. Working Pressure @ 70° F (PSI)
ELFT05012	1/2	12	2 5/8"	350
ELFT05018	1/2	18	2 5/8"	350
ELFT05024	1/2	24	2 5/8"	350
ELFT05030	1/2	30	2 5/8"	350
ELFT05036	1/2	36	2 5/8"	350
ELFT07512	3/4	12	4 1/2"	300
ELFT07518	3/4	18	4 1/2"	300
ELFT07524	3/4	24	4 1/2"	300
ELFT07530	3/4	30	4 1/2"	300
ELFT07536	3/4	36	4 1/2"	300
ELFT10012	1	12	5 1/2"	230
ELFT10018	1	18	5 1/2"	230

GASKET SEAT

The gasket seat version of the Elastoflex features a brass MPT X Female swivel that includes a gasket that allows it to be connected to an MPT end. The fiber gasket will swell when wet, creating a seal. This connection may initially leak a few drops of water until seal forms. Can be over tightened – see install instructions. Available in sizes .5" to 2".

Part Number	NPS (in.)	OAL (in.)	Min. Bend Radius	Max. Working Pressure @ 70° F (PSI)
ELFT10024	1	24	5 1/2"	230
ELFT10030	1	30	5 1/2"	230
ELFT10036	1	36	5 1/2"	230
ELFT12512	1 1/4	12	6 3/4"	160
ELFT12518	1 1/4	18	6 3/4"	160
ELFT12524	1 1/4	24	6 3/4"	160
ELFT12530	1 1/4	30	6 3/4"	160
ELFT12536	1 1/4	36	6 3/4"	160
ELFT15018	1 1/2	18	8 3/8"	150
ELFT15024	1 1/2	24	8 3/8"	150
ELFT15030	1 1/2	30	8 3/8"	150
ELFT15036	1 1/2	36	8 3/8"	150

CONE SEAT

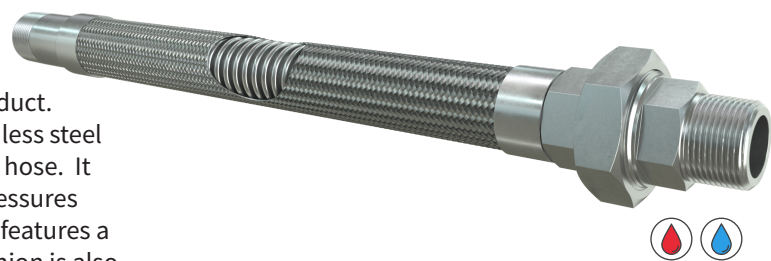
The cone seat version of the Elastoflex features a brass MPT X Female cone seat with included brass cone seat by MPT adaptor and is available in sizes from .5" to 1".

Part Number	NPS (in.)	OAL (in.)	Min. Bend Radius	Max. Working Pressure @ 70° F (PSI)
ELFTFFC05012	1/2	12	2 5/8"	350
ELFTFFC05018	1/2	18	2 5/8"	350
ELFTFFC05024	1/2	24	2 5/8"	350
ELFTFFC05030	1/2	30	2 5/8"	350
ELFTFFC05036	1/2	36	2 5/8"	350
ELFTFFC07512	3/4	12	4 1/2"	300
ELFTFFC07518	3/4	18	4 1/2"	300

Part Number	NPS (in.)	OAL (in.)	Min. Bend Radius	Max. Working Pressure @ 70° F (PSI)
ELFTFFC07524	3/4	24	4 1/2"	300
ELFTFFC07530	3/4	30	4 1/2"	300
ELFTFFC07536	3/4	36	4 1/2"	300
ELFTFFC10012	1	12	5 1/2"	230
ELFTFFC10018	1	18	5 1/2"	230
ELFTFFC10024	1	24	5 1/2"	230
ELFTFFC10030	1	30	5 1/2"	230
ELFTFFC10036	1	36	5 1/2"	230

SUPERFLEX

Superflex is a versatile hose that is primarily used as a coil hook up hose but can be used for just about any application. The all stainless steel all welded construction makes it a life of building product. The Superflex features close pitch corrugated stainless steel hose so it can match the flexibility of a rubber core hose. It can also handle much higher temperatures and pressures than a rubber cored hose. The standard Superflex features a fixed MPT by FPT union ends. Fixed MPT by MPT union is also available, as well as customs.



Part Number	NPS (in.)	Overall Length (in.)	Bend Radius		Max. Working Pressure @ 70° F (PSI)
			STATIC	DYNAMIC	
SFLXT005012	1/2	12	1.5	6	985
SFLXT005018	1/2	18	1.5	6	985
SFLXT005024	1/2	24	1.5	6	985
SFLXT005030	1/2	30	1.5	6	985
SFLXT005036	1/2	36	1.5	6	985
SFLXT007512	3/4	12	2	9	960
SFLXT007518	3/4	18	2	9	960
SFLXT007524	3/4	24	2	9	960
SFLXT007530	3/4	30	2	9	960
SFLXT007536	3/4	36	2	9	960
SFLXT010012	1	12	2.5	10	555
SFLXT010018	1	18	2.5	10	555
SFLXT010024	1	24	2.5	10	555

Part Number	NPS (in.)	Overall Length (in.)	Bend Radius		Max. Working Pressure @ 70° F (PSI)
			STATIC	DYNAMIC	
SFLXT010030	1	30	2.5	10	555
SFLXT010036	1	36	2.5	10	555
SFLXT012518	1 1/4	18	3	11.5	520
SFLXT012524	1 1/4	24	3	11.5	520
SFLXT012530	1 1/4	30	3	11.5	520
SFLXT012536	1 1/4	36	3	11.5	520
SFLXT015018	1 1/2	18	3.5	12	480
SFLXT015024	1 1/2	24	3.5	12	480
SFLXT015030	1 1/2	30	3.5	12	480
SFLXT015036	1 1/2	36	3.5	12	480
SFLXT020018	2	18	4.5	17.5	415
SFLXT020024	2	24	4.5	17.5	415
SFLXT020030	2	30	4.5	17.5	415
SFLXT020036	2	36	4.5	17.5	415

HOSE TEMPERATURE CORRECTION FACTOR

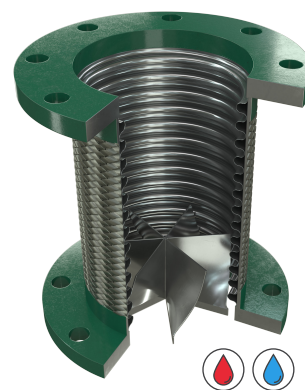
Temperature	304 SS Multiplier	Bronze Multiplier
70 °F	1.00	1.00
150 °F	0.95	0.92
200 °F	0.91	0.89
250 °F	0.88	0.86
300 °F	0.85	0.83
350 °F	0.81	0.81
400 °F	0.78	0.78
450 °F	0.77	0.75

Temperature	304 SS Multiplier	Bronze Multiplier
500 °F	0.77	N/R
600 °F	0.76	N/R
700 °F	0.74	N/R
800 °F	0.73	N/R
900 °F	0.68	N/R
1000 °F	0.60	N/R
1200 °F	0.53	N/R

Have a question? Need design assistance? Maybe you just feel like hearing another human voice? Give Metraflex a call! Our team of engineers are happy to assist you with any application.
1-800-621-4347

FLOW CONDITIONING FLEX CONNECTORS

SUCTION DIFFUSER FLEX

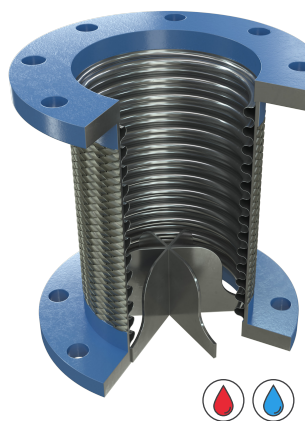


The Suction Diffuser Flex (SDF) consists of a specially designed set of stationary vanes placed upstream of an elbow. The SDF is installed on the pump intake before the elbow to condition the flow around the elbow and is shown to improve pump efficiency and pump life. Available in a wide range of sizes and end fittings. Permanent Offset: .375" / Intermittent Offset: .125"

Part Number	Pipe Size	OAL	Pressure at 70° F	Part Number	Pipe Size	OAL	Pressure at 70° F
VF0200	2"	9"	285*	VF0600	6"	11"	200
VF0250	2 1/2"	9"	285*	VF0800	8"	12"	190
VF0300	3"	9"	285*	VF1000	10"	13"	150
VF0400	4"	9"	285*	VF1200	12"	14"	125
VF0500	5"	11"	220	VF1400	14"	14"	105

*Flange Limited

VANE FLEX



The Vane Flex flexible pump connector is installed on the pump discharge to eliminate the turbulence of the fluid leaving the pump. It protects control valves and helps flow meters be more accurate. Vanes are installed in a standard Metra Mini flex connector. + 10 pipe diameters. Permanent Offset: .375" / Intermittent Offset .125"

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SDFS0250	2 1/2"	9"	285*	SDFS0800	8"	12"	190
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SDFS0500	5"	11"	220	SDFS1400	14"	14"	105

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Metraflex has identified pain points in a typical pump system and has developed products that will combat high pressure drops and protect heavily-maintenanced components. A powerful, yet cost-effective, combination of out-performing pump specialties, improved strainer technology and silent valves works together to measurably improve system performance. View pressure drop information and custom configurations in our High Performance Pump Package literature or visit

www.Metraflex.com/pump-connectors to learn more.

