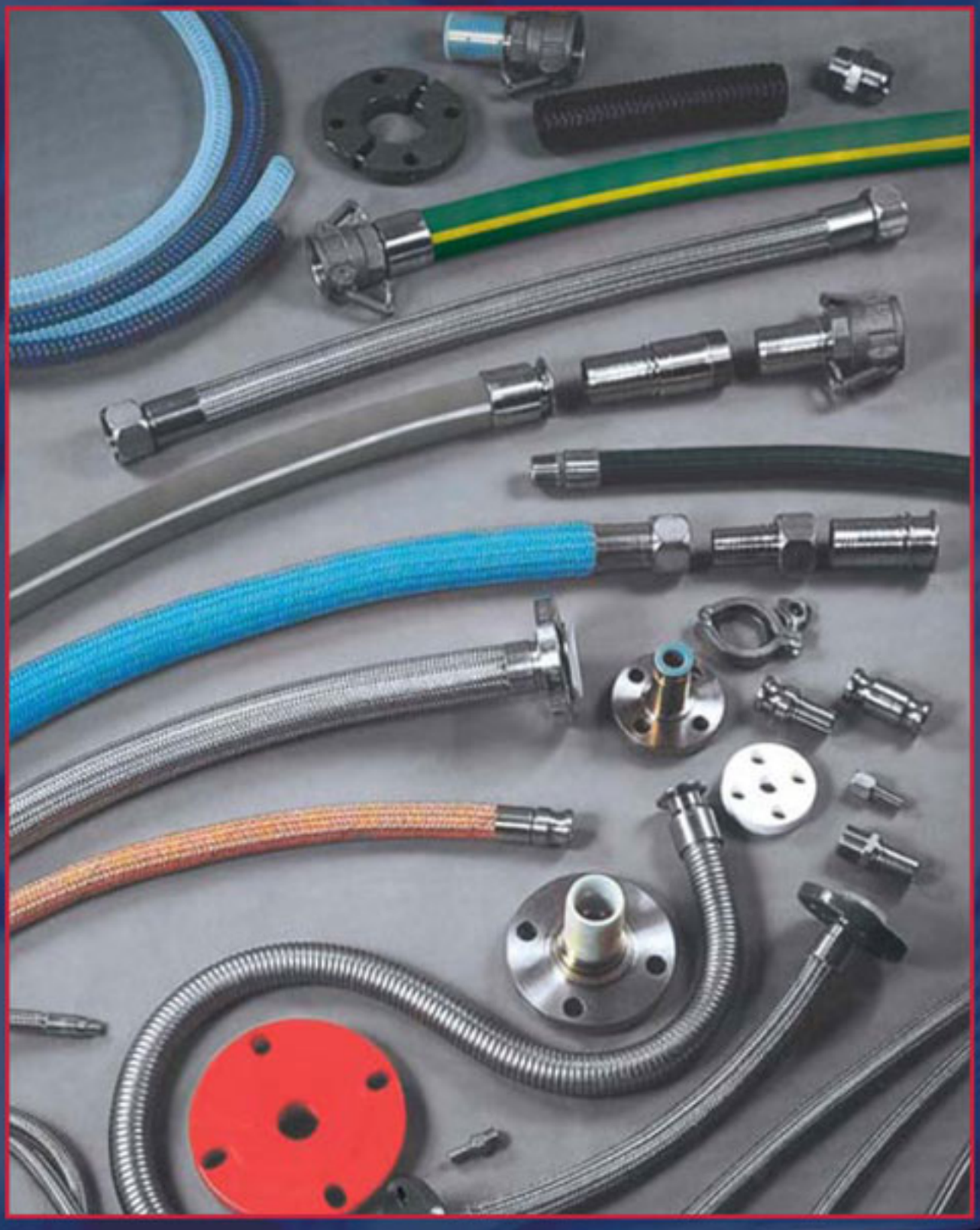
CONNECTALL

PTFE HOSE



TYPE "K" NON-CONDUCTIVE & TYPE "N" CONDUCTIVE CONVOLUTED HOSE

TYPE "K" NON-CONDUCTIVE

TYPE "N" CONDUCTIVE

Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Maximum Operating Pressure	Minimum Burst Pressure	Minimum Bend Radius (inches)	Vacuum Service (in./Hg)	Weight Per Foot (lbs.)
K-08 / N-08	0.512	0.785	1 000	4 000	1	28	0.16
K-12 / N-12	0.750	1.090	1 000	4 000	2	28	0.27
K-16 / N-16	0.998	1.300	1 000	4 000	5	24	0.36
K-20 / N-20	1.239	1.560	1 000	3 600	6-1/4	20	0.48
K-24 / N-24	1.500	1.792	750	3 000	7-1/2	10	0.61
K-32 / N-32	1.982	2.333	500	2 000	10	7	0.97

Type "K" Construction: A white non-conductive PTFE liner, externally reinforced with PTFE impregnated fiberglass and a single stainless steel wire braid.

Applications: Chemical processing, pulp and paper, foam packaging, turbine engine componentry, air compressor discharge, tire press

Temperature Range: -65°F to 400°F

Standards: Accepted by U.S. Coast Guard. PTFE meets FDA 21 CFR 177.1550

Type "N" Construction: The PTFE innercore has a precisely controlled amount of carbon black added to the PTFE innercore. This Conductive PTFE core material provides a continuous conductive path to the metal end fittings to bleed off static electricity.

Applications: Steam compressor discharge, and virtually all chemicals.

Temperature Range: -65°F to 400°F

Standards: Accepted by U.S. Coast Guard. PTFE meets FDA 21 CFR 177.1550

TYPE "M" NON-CONDUCTIVE & TYPE "S" CONDUCTIVE SMOOTH BORE

TYPE "M" NON-CONDUCTIVE SMOOTH BORE

TYPE "S" CONDUCTIVE SMOOTH BORE

Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Maximum Operating Pressure	Minimum Burst Pressure	Minimum Bend Radius (inches)	Vacuum Service (in./Hg)	Weight Per Foot (lbs.)
M-03 / S-03	0.125	0.234	3 000	12 000	2	28	0.05
M-04 / S-04	0.187	0.312	3 000	12 000	2	28	0.07
M-05 / S-05	0.250	0.375	3 000	12 000	3	28	0.099
M-06 / S-06	0.312	0.445	2 500	10 000	4	28	0.11
M-08 / S-08	0.406	0.549	2 000	8 000	5.2	28	0.123
M-10 / S-10	0.500	0.648	1 500	6 000	6.5	28	0.154
M-12 / S-12	0.625	0.776	1 200	4 800	7.7	28	0.17
M-16 / S-16	0.875	1.030	1 000	4 000	9	12	0.273
M-20 / S-20	1.125	1.315	800	3 200	16	12	0.54

Type "M" Construction: A white non-conductive PTFE tube with single layer of stainless steel wire braid reinforcement.

Applications: Compressed gas, fuel and lubricant handling, Hydraulic systems.

Temperature Range: -65°F to 400°F

Standards: Accepted by U.S. Coast Guard. PTFE meets FDA 21 CFR 177.1550. Meets or exceeds requirements of SAE 100R 14.

Type "S" Construction: The PTFE innercore has a precisely controlled amount of carbon black added to the PTFE innercore. This Conductive PTFE core material provides a continuous conductive path to the metal end fittings to bleed off static electricity.

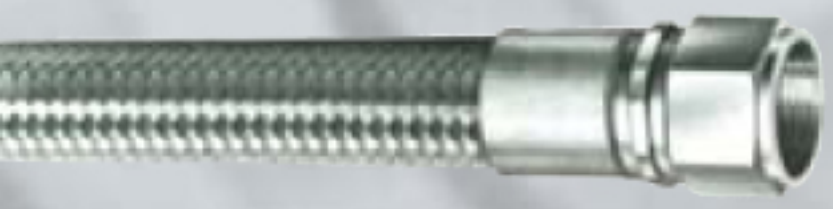
Applications: Steam compressor discharge, and virtually all chemicals.

Temperature Range: -65°F to 400°F

Standards: Accepted by U.S. Coast Guard. PTFE meets FDA 21 CFR 177.1550. Meets or exceeds requirements of SAE 100R 14.

TYPE "P" HIGH PRESSURE

TYPE "P" HIGH PRESSURE



Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Maximum Operating Pressure	Minimum Burst Pressure	Minimum Bend Radius (inches)	Vacuum Service (in./Hg)	Weight Per Foot (lbs.)
P-04	0.222	0.390	5 000	12 000	1.50		0.1
P-06	0.308	0.490	5 000	12 000	2.50		0.163
P-08	0.401	0.615	5 000	12 000	2.875		0.232
P-10	0.495	0.730	5 000	12 000	3.25		0.325
P-12	0.617	0.990	5 000	9 000	3.875		0.66
P-16	0.867	1.270	5 000	9 000	5.00		1.02
P-20	1.118	1.660	5 000	9 000	12.00		1.85
P-24	1.375	1.900	4 000	9 000	14.00		1.91

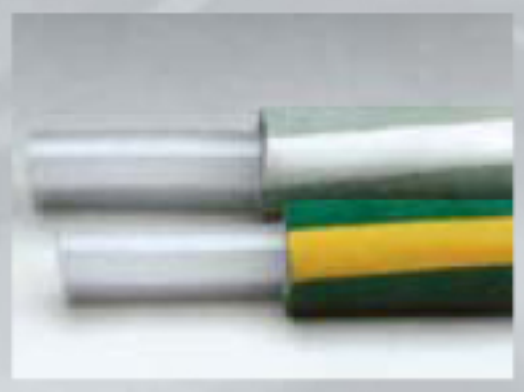
Type "P" Construction: A conductive PTFE liner, specially designed to bleed off static build-up in high flow applications and eliminate the risk of static burning the core reinforced with a special braid.

Applications: The ultimate high pressure hose. Reaction injection molding, industrial gases, hydraulic service with phosphate ester fluids, Compressed natural gas, transfer of automotive sealants.

Temperature Range: -65°F to 400°F

TYPE "WJ" GREY COVER & TYPE "WY" GREEN COVER FLEXCHEM

Smoothbore PTFE Tube with EPDM Rubber Cover: Advantages: External abrasion and corrosion resistance, cleanability. Rated from full suction to 525 psi. Temperatures from -40°F (-40°C) to 350°F (177°C). 1/2" to 6" I.D. sizes.



Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Max. Operating Pressure	Minimum Burst Pressure	Minimum Bend Radius (inches)	Vacuum Service (in./Hg)	Weight Per Foot (lbs.)
WJ-08 / WY-08	0.5	1.05	525	2 100	2.65	29.9	0.34
WJ-12 / WY-12	0.75	1.25	525	2 100	4.15	29.9	0.51
WJ-16 / WY-16	1	1.55	450	1 800	5.75	29.9	0.72
WJ-24 / WY-24	1.5	2.05	350	1 400	10.5	29.9	0.99
WJ-32 / WY-32	2	2.60	300	1 200	13.0	29.9	1.38
WJ-48 / WY-48	3	3.75	250	1 000	21.0	29.9	2.46
WJ-64 / WY-64	4	4.75	175	700	39.0	29.9	3.50
WJ-96 / WY-96	6	7.35	100	400	58.0	29.9	4.75

Operating pressure ratings are one fourth the minimum burst pressure at 70°F (21°C).

CHLORINE TRANSFER HOSE

Chlorine Transfer hose assemblies are specifically designed for the safe transfer of chlorine in manufacturing, transporting and packaging industries. It is ideal for loading / unloading barges, rail cars, tankers and filling 1-ton, 100 lb and 150 lb cylinders. Chlorine Transfer hose has excellent chemical resistance and is not subject to stress fatigue or corroding like metal hose. It is light weight, easy to clean and resists corrosion from any exposure to moisture / humidity which can unintentionally enter systems. Chlorine Transfer hose assemblies are 100% compliant with the Chlorine Institute's Pamphlet 6.

Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Max. Operating Pressure	Minimum Burst Pressure	Proof Pressure Test* (psi)	Weight** Per Foot (lbs.)
ZZ-08	0.5	1	500	2 500	1 000	0.19
ZZ-16	1	1.5	375	1 875	750	0.50
ZZ-24	1.5	2.1	375	1 875	750	0.90
ZZ-32	2	Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory

Max. Temperature Rating: Kynar Braid +225°F * Pressure ratings are based at +70°F (21°C). ** Weight can vary depending on chafe guard selection.

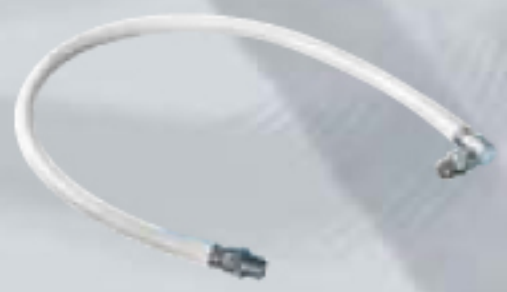
ALUM-FLEX

Hose Construction: Innercore of white convoluted PTFE externally reinforced with PTFE-impregnated fiberglass and a double Kevlar braid, covered with a flame retardant abrasive resistant polyester barid, specially designed to protect the Kevlar braid from UV degradation. Applications: Compressed air lines in aluminum plants. Temperature Range: -65°F to 350°F (-54°C to 175°C) -100°F to 400°F (-73°F to 204°F) intermittent service.

Part Number	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Max. Operating Pressure	Minimum Burst Pressure	Max. Continuous length (ft)	Minimum Bend Radius (inches)	Weight Per Foot (lbs.)
109744-4	0.25	0.465	1 000	4 000	75	0.5	0.045
109744-6	0.375	0.570	1 000	4 000	75	0.75	0.061
109744-8	0.5	0.770	1 000	4 000	50	1	0.124
109744-12	.75	1.01	1 000	4 000	30	2	0.184
109744-16	1	1.310	1 000	4 000	30	3	0.240
109744-20	1.25	1.540	750	3 000	30	3.5	0.268
109744-24	1.5	1.800	625	2 500	30	4	0.350
109744-32	2	2.340	625	2 500	30	6	0.400

FRY-SAFE

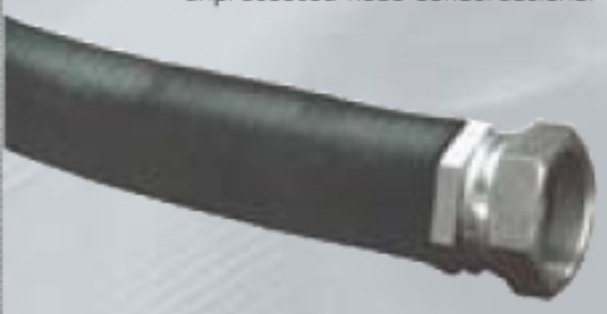
FrySafe hose has been custom designed by Titeflex engineers for safely protecting operators in the transfer of hot cooking oils in retail food operations. FrySafe hose is listed by Underwriters Laboratories and meets purity certification requirements of the NSF International.



Assembly Part Number	Nominal Size (inches)	Average Hose I.D. (inches)	Nominal Hose O.D. (inches)	Max. Operating Pressure	Minimum Burst Pressure	Minimum Bend Radius (inches)	Weight Per Foot (lbs.)
117360-(inches)	0.625	0.495 - 0.515	0.850	1 500	6 000	5.50	0.27
End Fitting Styles: Straight ½" Male NPT Swivel Each End							
117361-(inches)	0.625	0.495 - 0.515	0.850	1 500	6 000	5.50	0.27
End Fitting Styles: Straight ½" Male NPT Swivel x 90° ½" Male NPT Swivel							
117358-(inches)	0.625	0.495 - 0.515	0.850	1 500	6 000	5.50	0.27
End Fitting Styles: Straight ½" Male NPT Swivel Each End							

STEAM-SAFE

Titeflex has engineered the new SteamSafe Hose for safely transferring steam and hot fluids. Operator protection was the key focus during the development of the SteamSafe product line. SteamSafe utilizes a (PTFE) innercore that will withstand the extreme temperature fluctuations of most steam service conditions. The hose exterior is covered with a space age compound that both improves flexibility and minimizes the potential for operator injury normally associated with unprotected hose constructions.



Part Number	Nominal Size (inches)	Average Hose I.D. (inches)	Average Hose O.D. (inches)	Max. Operating Pressure	Minimum Burst Pressure	Max. Continuous Length (feet)	Minimum Bend Radius (inches)	Weight Per Foot (lbs.)
117092-6	0.375	0.312	0.63	2 500	10 000	50	4.0	0.18
117092-8	0.5	0.406	0.72	2 000	8 000	50	5.2	0.23
117092-10	0.625	0.500	0.85	1 500	6 000	50	6.5	0.27
117092-12	0.75	0.625	0.96	1 200	6 000	50	7.7	0.33
117092-16	1	0.875	1.31	1 000	4 000	25	9.0	0.58

Temperature Range: -65°F to 450°F for continuous service

UNI-BRAID PTFE

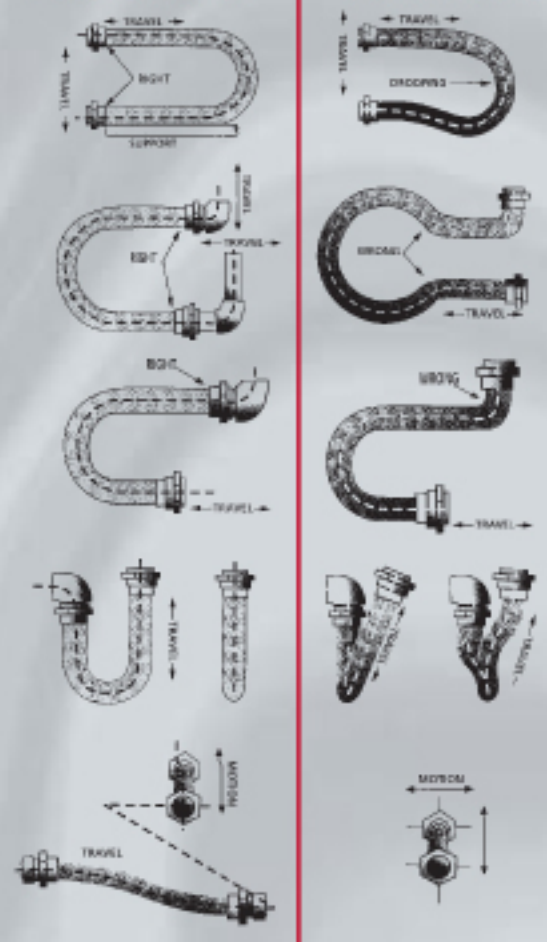
Developed in conjuntion with one of the largest Aerospace manufacturers to meet the harsh demands of transferring under high-pressure, aggressive ester hydraulic fluids. In this demanding service, users have experienced seepages and failure of elastomer tube hose construction. The proven performance of the Uni-Braid PTFE hose has been further enhanced by the addition of the RTPE (rubberized thermoplastic elastomer) jacket.

Part No.	Nominal Size (inches)	Nominal Hose I.D. (inches)	Nominal Hose O.D. (inches)	Max. Operating Pressure*	Room Temp Burst Pressure	High Temp Burst Pressure	Max. Continuous Length (feet)	Min. Bend Radius (inches)	Weight Per Foot (lbs.)
117297-4	0.25	0.222	0.435	5 000	15 000	12 000	Consult	1.5	0.120
117297-6	0.375	0.309	0.535	5 000	15 000	12 000	Factory	2.5	0.190
117297-8	0.5	0.403	0.660	5 000	15 000	12 000		2.875	0.270
117297-10	0.625	0.505	0.765	5 000	15 000	12 000		3.25	0.380
117297-12	0.75	0.630	1.050	5 000	15 000	12 000		3.875	0.770
117297-16	1	0.867	1.330	5 000	15 000	9 000		5.00	1.220
117297-20	1.25	1.118	1.720	5 000	16 000	9 000		12.00	2.05
117297-24	1.5	1.383	1.990	4 000	12 000	9 000		14.00	2.15

* Operating pressure shown are for non-impulse service. Consult factory for temperature-adjusted ratings and impulse cycle applications.
Temperature Range: -40°F to 257°F Continuous and -65°F to 300°F Intermittent.

INSTALLING FLEXIBLE PTFE HOSE FOR OPTIMUM SERVICE LIFE

Correct | **Incorrect**



Avoid Overbending: Overbending the PTFE can result in permanent failure. This often occurs at the end connections and may be avoided by installing an elbow or interlock guard

Avoid Improper Handling: PTFE hose can be damaged by dragging or when subjected to external abrasive or corrosive conditions. Avoid installing hose in areas where it may be subjected to corrosive sprays, spills, etc.

Avoid Torque: Torquing or twisting PTFE hose reduces service life substantially. When installing PTFE hose it is important that all movement originates in the same plane as the center line. Another precaution against torque is the use of a floating flange or union on one end of the assembly.

Offset Motion (max. dist. from center line)	0.125	0.25	0.375	0.5	0.75	1	1.5	2	3	4	5	6	8	10
Center Line Bend Radius (inches)▼	Minimum Live Length Required for Offset Motion													
2	1.25	1.75	2.25	2.5	3.25	3.75	4.5	5.25	6.75	8	9.25	10.5	12.75	15
4	1.75	2.5	3	3.5	4.5	5	6.25	7.25	9	11.75	12	13.5	16	18.5
6	2.25	3.25	3.75	4.25	5.25	6.25	7.5	8.75	10.75	12.75	14.25	16	19	21.5
8	2.5	3.5	4.25	5	6	7	8.75	10	12.5	14.5	16.25	18	21.25	24.25
10	2.75	4	4.75	5.5	6.75	8	9.75	11.25	13.75	16	18	20	23.5	26.5
12	3	4.25	5.25	6	7.5	8.5	10.5	12.25	15	17.5	19.5	21.5	25.5	28.75
14	3.25	4.75	5.75	6.5	8	9.25	11.25	13.25	16.25	18.75	21	23.5	27.25	30.75
16	3.5	5	6	7	8.5	10	12.25	14	17.25	20	22.5	25	29	32.75
18	3.75	5.25	6.5	7.5	9	10.5	13	14.75	18.25	21.25	24	26	30.5	34
20	4	5.5	6.75	7.75	9.5	11	13.5	15.75	19.25	22.5	25	27.5	32.25	36.25
25	4.5	6.25	7.5	8.75	10.75	12.25	15	17.5	21.5	25	28	30.5	35.75	40
30	4.75	6.75	8.25	9.5	11.75	13.5	16.5	19	23.5	27.25	30.5	33.5	40	43.75
35	5.25	7.25	9	10.25	12.5	14.25	17.75	20.25	26.25	29.5	32.75	36	42	47
40	5.5	8	9.5	11	13.5	15.5	19	22	27	31.25	35	38.5	44.75	50
45	6	8.25	10	11.75	14.25	16.5	20.25	23.5	28.5	33	37	41	47.5	53
50	6.25	8.75	10.75	12.25	15	17.5	21.5	24.5	30	35	39	43	50	56
60	6.75	9.5	11.75	13.5	16.5	19	23.25	27	33	38	43	47	54.5	61
70	7.25	10.25	12.75	14.75	17.75	20.5	25	29	35.5	41.5	46	51	58.75	65.75
80	7.75	11	13.5	15.5	19	22	27	31	38	44	49.5	54	62.75	70
90	8.25	11.75	14.25	16.5	20.25	23.5	28.5	33	40.5	46.75	52	57	66.5	74.5
100	8.75	12.25	15	17.5	21.25	24.5	30	35	42.5	49	55	60	70	78.25
110	9.25	13	15.75	18.25	22.5	26	31.75	36.5	44.75	51.5	58	63.5	73.25	82
120	9.5	13.5	16.5	19	23.25	27	33	38.25	46.75	54	60.5	66.25	76.5	85.5
130	10	14	17.25	20	24.25	28	34.75	39.75	48.5	56	62.75	69	79.75	89

Saturated Steam Pressure - Temperature

	Saturated Steam Pressure P.S.I.G.	Temp. °F	Saturated Steam Pressure P.S.I.G.	Temp. °F	Saturated Steam Pressure P.S.I.G.	Temp. °F	Saturated Steam Pressure P.S.I.G.	Temp. °F
Vacuum HG	–	0	0	212	150	366	450	460
	29.84	20	10	238	175	377	475	465
	29.74	32	20	259	200	388	500	470
	29.67	40	30	274	225	397	550	480
	29.39	60	40	287	250	406	600	489
	28.89	80	50	298	275	414	700	505
	27.99	100	60	307	300	422	800	520
	26.48	120	75	320	325	429	900	534
	29.04	140	80	324	350	436	1 000	546
	20.27	160	90	331	375	442	1 250	574
	14.63	180	100	338	400	448	1 500	606
	6.46	200	125	353	425	454	2 500	669

Design Computations

1. Select proper hose, from product pages taking into consideration the size, pressure, and temperature requirement.

2. To compute minimum live length requirements, follow the instructions below:

A. Locate the minimum bend radius by referring to that column on the product specification page for that hose. Then add 1/2 hose O.D.

B. Locate this bend radii number in the left column of the table above. (If the radii falls between numbers on the table, use the next highest number.)

C. Locate the required offset for your applications in the blue figures at the top of the table.

D. The minimum live length required is the intersecting box of the 2 columns (A & C.)

E. To determine the O.A.L. of assembly, add the fitting lengths found on pages 3 through 5 to the minimum live length computed plus 2 times hose O.D.

F. To assure long life of hose assemblies, it is important to remove all chances of stretch or torque in the installation. It is reccomended that if in doubt, exceed the minimum lengths.

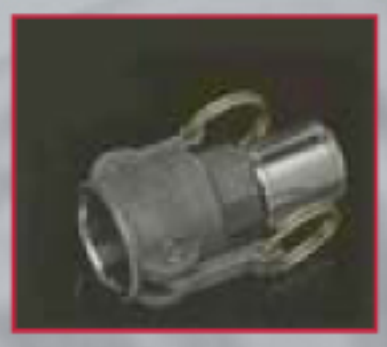
FITTINGS FOR CONNECTALL PTFE HOSE

FLANGE RETAINER

STEEL: **U1**
STAINLESS 304: **U4**
STAINLESS 316: **U6**

FLANGE RETAINER
(PTFE ENCAPSULATED)

STEEL: **V1**
STAINLESS 304: **V4**
STAINLESS 316: **V6**



FEMALE CAM LOCK "D"

STEEL: **X1**
STAINLESS 304: **X4**
STAINLESS 316: **X6**

MALE CAM LOCK "D"

STEEL: **Z1**
STAINLESS 304: **Z4**
STAINLESS 316: **Z6**

MALE PIPE (NPT) HEX

STEEL: **30**
STAINLESS: **31**
BRASS: **32**

O-RING FEMALE SWIVEL

STEEL: **65**
STAINLESS: **66**

FEMALE PIPE

STEEL: **38**
STAINLESS: **39**
BRASS: **46**

JIC FEMALE SWIVEL

STEEL: **50**
STAINLESS: **51**
BRASS: **52**

FEMALE UNION NPT

STEEL: **64**
STAINLESS: **63**
BRASS: **62**

MALE UNION (NPT)

STEEL: **53**
STAINLESS: **54**
BRASS: **55**

SANITARY
(TRI CLAMP)

STAINLESS 316: **68**

SANITARY STEP UP

STAINLESS 316: **68**

MINI SANITARY

STAINLESS 316: **68**

BEVEL SEAT FEMALE

STAINLESS 316: **56**

BEVEL SEAT MALE

STAINLESS 316: **57**

BUTTWELD - PIPE

STAINLESS 316: **03**

COMPRESSION ADAPTER

STAINLESS 316: **12**

COMPRESSION CONNECTOR WITH NUT AND FERRULE

STAINLESS 316: **13**

SPLICE

STAINLESS 316: **58**

For other fitting types
please contact us

ACCESSORIES

Spring Guard: To prolong the life of hose lines that are exposed to rugged operating conditions, such as severe flexing, Spring Guard prevents kinking and protects the hose from abrasion and rough handling.

Silicone Firesleeve: This fiberglass sleeving has a coating of silicone rubber bonded to it which offers flame resistance that will protect the hose from extreme temperature conditions.

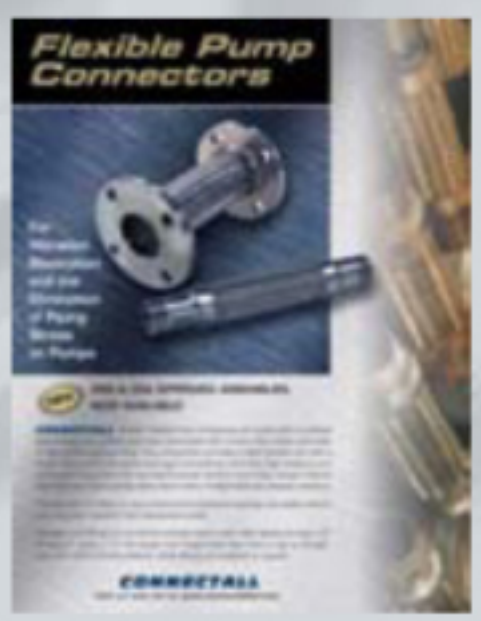
Heat Shrink Tubing: To minimize hose O.D., heat shrinkable tubing is used in applications where cleanliness is essential, such as food and pharmaceutical processing. This provides easy cleaning of the outer hose surface.

Hypalon: This rubber covering offers protection against extreme environmental exposure, and is ideal where continuous handling is involved, as in loading and unloading operations.

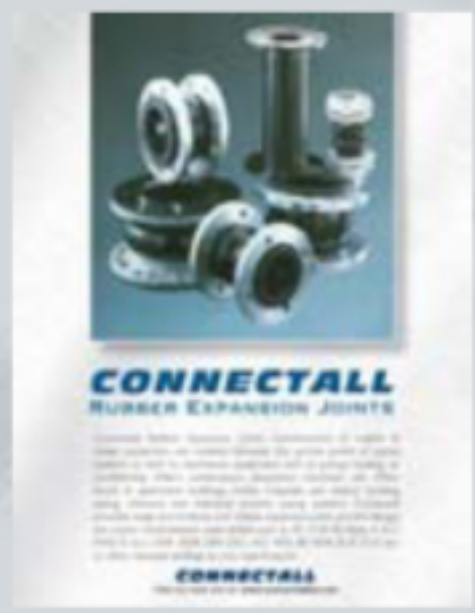
Armor: A highly flexible heavy duty metal casing to protect the hose against severe handling abuse and overbending. This can be applied over the entire length or in short sections at the end connection.

Nylon: Woven from thousands of nylon filaments into an abrasion-resistant sleeve, the nylon cover extends individual hose life in severe abrasive environments. As it is scuffed and worn, it's filaments frizz, forming and even thicker, more protective shield.

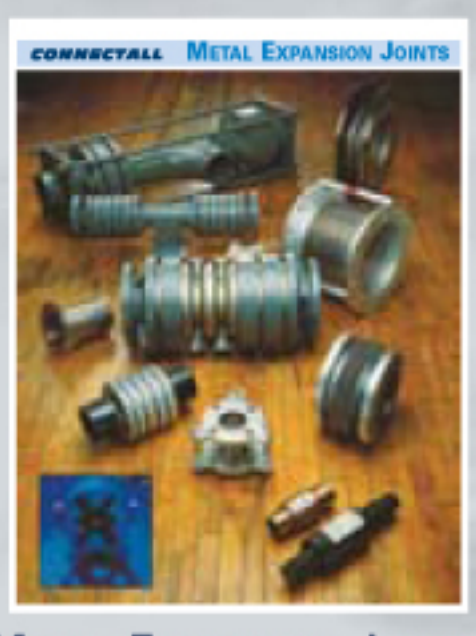
For other CONNECTALL products, just ask for the following brochures...



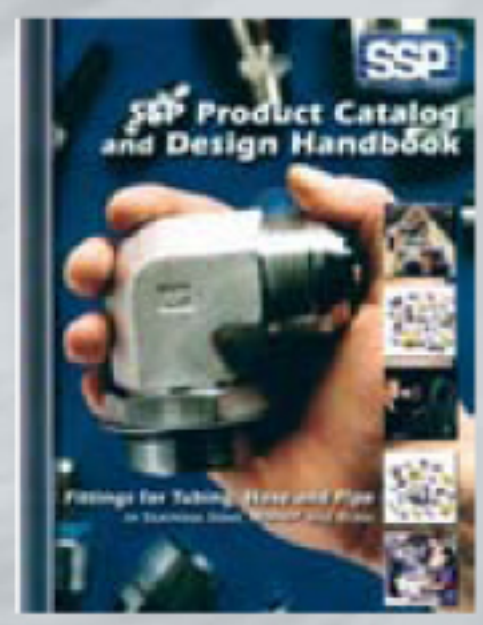
METAL HOSE



RUBBER EXPANSION JOINTS



METAL EXPANSION JOINTS



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