PTFE Hose

Teleflex INCORPORATED
fluid systems
A Division of Teleflex Incorporated (USA)

ENGINEERING AND DESIGN - Our technical staff is next to none. Ready to respond to your special needs, Teleflex engineers have countless ideas and solutions to any fluid handling problem.

MARKETING - Teleflex has been a marketing leader since its inception over 50 years ago. From concept to sale, Teleflex provides the products and services that excel wherever they are specified. We are certain we can help you.

DISTRIBUTION - The key to Teleflex Fluid Systems service excellence is in our distributor organization. Carefully selected and trained, Teleflex distributors are service oriented experts in the application of PTFE hose. Local distributor inventories generate minimum wait with maximum service satisfaction. As a team, Teleflex delivers.

The information set forth in this catalog was developed using accurate testing and engineering techniques. Use of this information is the customers' responsibility. The sole responsibility or liability of Teleflex Fluid Systems is limited to replacement of Teleflex hose products found defective in materials or workmanship.

Dimensions and materials cited in this catalog are subject to change or correction without notice. If certification of dimensions or materials is required, please contact Teleflex.

PROPERTIES OF PTFE	
Tensile Strength, 73°F	1500-3000 lb./sq. in.
Elongation, 73° F	100-200%
Stiffness, 73°	60,000 lb./sq. in.
Impact Strength, Izod - 70°F	2.0 ft. - lb./in.
73°F	3.5 ft. - lb./in.
170°F	6.0 ft. - lb./in.
Hardness Durometer	D55-D70
Compressive Stress at 1% Deformation, 73°F	600 lb./sq. in.
at 1% Offset, 73°F	1000 lb./sq. in.
Deformation Under Load, 122°F	
1200 lb./sq. in., 24 hrs.	4-8%
2000 lb./sq. in., 24 hrs.	25%
Heat-Distortion Temperature, 66 lb./sq. in.	250°F
Coefficient of Linear Thermal Expansion Per °F, 77-140°F	$5.5x10^{-5}$
Thermal Conductivity, 0.18 in.	1.7 B.T.U./hr./sq.ft./°F/in.
Specific Heat	0.25 B.T.U./lb./°F
Water Absorption	0.0°
Flammability	Nonflammable
Specific Gravity	2.1-2.3

USEFUL CONVERSIONS					
1 p.s.i.	=	0.0689 bar	1 Atms	=	14.70 p.s.i.
1 bar	=	14.5035 p.s.i.	1 Atms	=	29.92 in. mercury
1 p.s.i.	=	0.0703 Kg/sq.cm	1 m.	=	3.281 ft.
1 Kg/sq.cm	=	14.22 p.s.i.	1 ft.	=	0.3048 m.

One Firestone Drive ❒ Suffield, CT 06078 ❒ Telephone (860) 668-1285 ❒ Fax (860) 668-2353

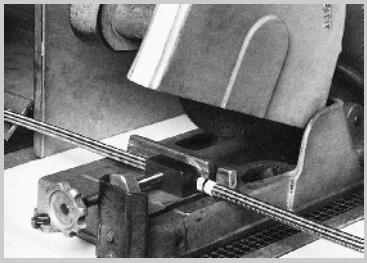
Assembly Instructions
Lightweight High Pressure Hose

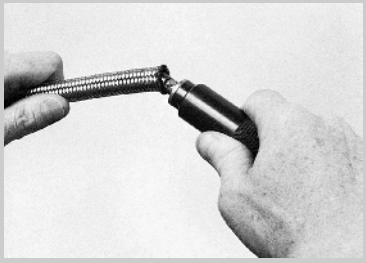
The assembly method described herein, incorporates a permanently attached crimp fitting. This method offers the easiest, most reliable way to attach high pressure fittings, no matter what the quantity. By following these simple steps, you can be sure of "factory-quality" dependability and performance.

High Pres. Dash Size	Crimp Dimension ± .003	Crimp Length
4	.515	Full
6	.620	Full
8	.710	Full
10	.820	Full
12	1.095	Full
16	1.400	Full

The table above gives the correct crimp dimensions by size for reference purposes. Please follow these guidelines precisely. All dimensions must be checked with a micrometer after crimping. Consult Teleflex if you have any questions or for additional information concerning the use of specific types of crimpers. Pressure testing of finished assemblies is recommended.

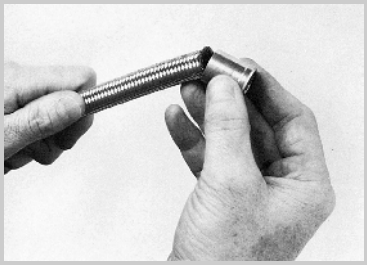
These assembly instructions are provided as a guideline for the proper assembly of Teleflex hose and fittings. Consult Teleflex engineering assembly procedures for best results. No additional product warranties beyond those stated in Teleflex Catalog 1290 apply.





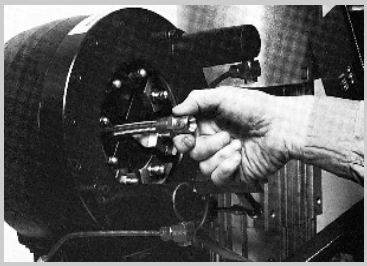
1 After figuring the hose length and deducting for fittings, tape the hose with heavy duty masking tape at the point where it is to be cut and mark the tape. Cut the hose with an abrasive saw. **Note:** To prevent braid flaring, cut through the hose at a slow to moderate pace. Heat welds braid wires together to minimize flaring. Deburr the hose end, clean the I.D. with the proper size I.D. brush and blow the I.D. clean with shop air.

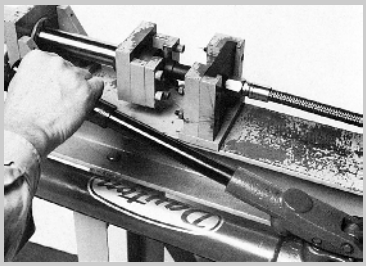
2 Using the proper size cutter, trim out and remove the inner core from the hose end. This is accomplished by rotating the cutter inside the hose at the full depth of the cutter. (Removing the PTFE provides for a metal-to-braid lock on the fitting after crimping.) Clean the I.D. with shop air. Repeat this procedure on the other end. **Note:** For sizes 12, 16 and 20, steps two and three must be reversed.



3 Remove any masking tape from the end of the hose and push the collar onto the hose until the braid bottoms on the inside shoulder of the collar. To monitor insertion depth, mark the braid on the outside at the edge of the collar. Repeat this procedure on the other end.

4 To attach the fitting insert, simply start the barbed end of the fitting into the hose making sure that the insert end does not catch on the PTFE inner core. Push the fitting all the way down until it bottoms on the collar. Check the braid insertion mark to see that the hose is fully inserted.





5 **CRIMP ATTACHMENT.** Select the proper crimp mandrel then lightly lubricate the O.D. with PTFE spray. Fully insert it into the fitting I.D. The crimp mandrel will maintain a minimum fitting I.D. during crimping and insure proper assembly performance. Most standard fully adjustable crimpers can be used to attach Teleflex LWHP hose and fittings. Preset crimpers require special crimp rings with Teleflex products.

6 After the correct crimp has been achieved, remove the crimp mandrel using the Teleflex mandrel extractor. Check the collar for proper crimp diameter and length. Repeat this procedure on the other end. Consult the factory with any questions.

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Assembly Instructions
Medium Pressure Hose

The assembly method described herein, incorporates a permanently attached crimp/swage fitting. This method offers the easiest, most reliable way to attach fittings, no matter what the quantity. By following these simple steps, you can be sure of "factory-quality" dependability and performance.

Smooth bore Dash Size	Swage/Crimp Dimension	Crimp Length*
3	.300 - .305	Full
4	.350 - .355	Full
5	.404 - .409	Full
6	.478 - .483	Full
8	.568 - .573	Full
10	.673 - .678	Full
12	.800 - .805	Full
16	1.044 - 1.049	Full

** Swage length is preset by the fitting pusher*

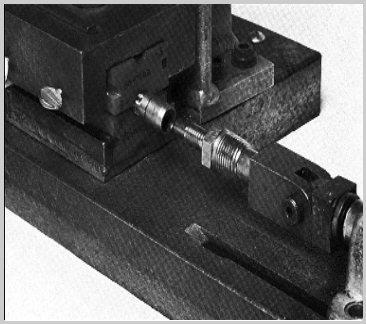
The table above gives the correct crimp/swage dimensions by size for reference purposes. Please follow these guidelines precisely. All dimensions must be checked with a micrometer after swaging/crimping. Consult Teleflex if you have any questions or for additional information concerning the use of specific types of swagers or crimpers. Pressure testing of finished assemblies is recommended.

These assembly instructions are provided as a guideline for the proper assembly of Teleflex hose and fittings. Consult Teleflex engineering assembly procedures for best results. No additional product warranties beyond those stated in Teleflex Catalog 1290 apply.

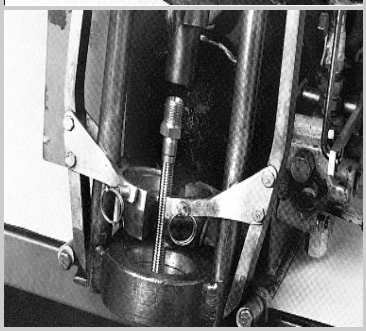
1 After figuring the hose length and deducting for fittings, cut the hose with a hand operated pneumatic shear. No taping or cleaning is necessary since shearing the hose will hold braid flaring to a minimum and will ensure a clean cut. Be sure that the cut is square and even.

2 Collar attachment is made easy by placing the collar in the holder with the shoulder end down. Place the tapered dies over the collar so that the taper will guide the hose into the collar. Push the hose into the collar with a slight twisting motion, then pull the hose out. The split dies will fall out as the hose is removed. Check the end of the collar to insure that the hose is inserted up to the shoulder inside the collar, then repeat the procedure on the other end.

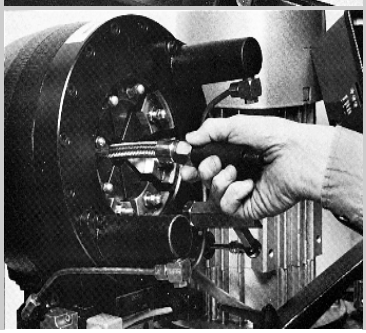
3 Use the correct size mandrel and blocks in the fixture. Place the fitting on the mandrel. The barbed end of the fitting should be toward the end of the mandrel. Place the hose in the clamp blocks tightly so that the collar extends beyond the block 1/8". Move the insertion mandrel toward the hose until the fitting is fully inserted in the hose. Back the insertion mandrel off and open the clamp blocks. **Note:** Some adjustment of the mandrel on the fixture may be necessary. Avoid extending the hose too far beyond the clamp blocks to avoid kinking.



4 **SWAGE ATTACHMENT.** Select the proper size dies and pusher and install them in the swager. Lubricate the collars with dry PTFE spray. Properly position the assembly in the swager and actuate the ram, pushing the assembly into the dies until the fitting pusher bottoms on the dies. Teleflex provides complete die sets for the standard Teleflex swager and other brand swagers. Consult the factory for details.



5 **CRIMP ATTACHMENT.** Teleflex MP smooth bore fittings are uniquely designed to be swaged or crimped using the same inserts and collars. To accomplish fitting attachment by crimping, consult the table for crimp diameter and length dimension. Most standard fully adjustable crimpers can be used to attach Teleflex hose and fittings. Preset crimpers require special crimp rings to work properly with Teleflex products. Please consult the factory with any questions you may have.



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Medium Pressure Convoluted Fittings

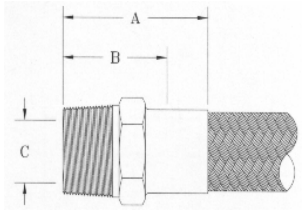
Fittings for convoluted hoses are available in a wide variety of configurations and material options. The positive lock design is uniquely engineered to accommodate both swaging and crimping with no duplication of inventory. The collar-to-insert lock insures a leak-proof seal on the hose.

Male pipe fittings and female swivel inserts are available in carbon steel and type 316 stainless steel. Flange retaining inserts are available in type 316 stainless steel; either plain or PFA lined. Collars are either carbon steel or 304 stainless steel. When only wetted surfaces require corrosion resistance, carbon steel collars may be specified with stainless steel inserts.

For information on other fitting materials or specific application performance data such as vacuum ratings, chemical compatibility, minimum assembly lengths and/or installation configurations, please refer to the technical data sheets or call the Teleflex Sales Department at 1-800-225-9077.

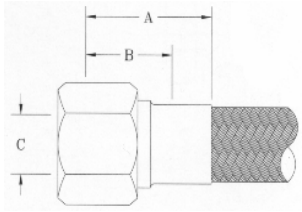
Male Pipe

316 Stainless Steel	Carbon Steel	316 SS, Carbon Steel Collar	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
103006	123006	163006	-06	-	-	-	-
103008	123008	163008	-08	1/2-14	2.70	1.52	.40
103012	123012	163012	-12	3/4-14	2.70	1.65	.63
103016	123016	163016	-16	1-11 1/2	2.90	1.85	.85
103020	123020	163020	-20	1 1/4-11 1/2	3.50	2.04	1.07
103024	123024	163024	-24	1 1/2-11 1/2	3.70	2.13	1.31
103032	123032	163032	-32	2-11 1/2	3.90	2.35	1.76
103024HV	123024HV	163024HV	-24HV	1 1/2-11 1/2	3.70	2.13	1.31



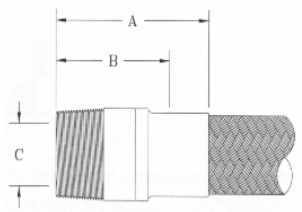
Female Swivel - JIC

316 Stainless Steel	Carbon Steel	316 SS, Carbon Steel Collar	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
103208	123208	163208	-08	3/4-16	2.60	1.04	.40
103212	123212	163212	-12	1 1/16-12	2.80	1.22	.63
103216	123216	163216	-16	1 5/16-12	3.00	1.27	.85
103220	123220	163220	-20	1 5/8-12	3.60	1.45	1.07
103224	123224	163224	-24	1 7/8-12	3.80	1.50	1.31
103232	123232	163232	-32	2 1/2-12	4.10	1.67	1.76



Male Pipe - No Hex

316 Stainless Steel	Carbon Steel	316 SS, Carbon Steel Collar	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
103124	123124	163124	-24	1 1/2-11 1/2	-	2.51	1.27
103132	123132	163132	-32	2-11 1/2	4.75	3.26	1.73
103148	-	-	-48	3-8	5.38	2.50	2.63
103164	-	-	-64	4-8	5.38	2.69	3.63



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Medium Pressure Convoluted Fittings

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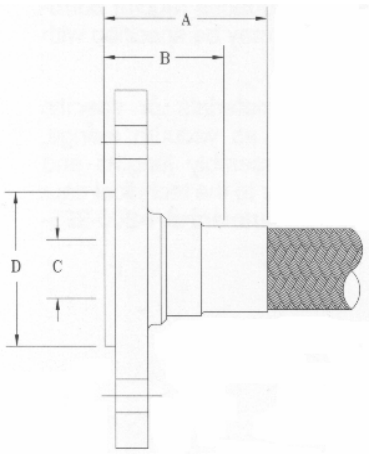
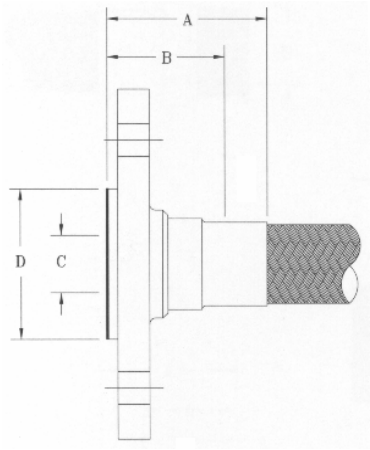


Flange Retainer

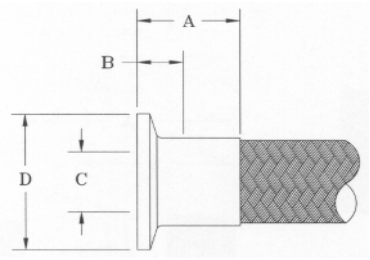
316 Stainless Steel	316 SS, Carbon Steel Collar	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Face Diameter In
103508	163508	-08	2.50	1.39	.40	1.37
103512	163512	-12	2.77	1.64	.63	1.69
103516	163516	-16	2.85	1.72	.85	2.00
103520	163520	-20	3.35	1.84	1.07	2.50
103524	163524	-24	3.56	2.17	1.31	2.87
103532	163532	-32	3.86	2.31	1.76	3.62
103548	-	-48	5.38	2.50	2.63	5.00
103564	-	-64	5.38	2.69	3.50	6.19
103524HV	-	-24HV	3.56	2.17	1.31	2.87



PFA Lined Flange Retainer

316 Stainless Steel	316 SS, Carbon Steel Collar	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Face Diameter In
103708	163708	-08	2.67	1.48	.25	1.38
103712	163712	-12	2.97	1.76	.45	1.69
103716	163716	-16	3.08	1.84	.65	2.00
103720	163720	-20	3.58	1.98	.90	2.50
103724	163724	-24	3.93	2.35	1.12	2.87
103732	163732	-32	4.12	2.50	1.51	3.62
103748	-	-48	5.46	2.54	2.55	5.08
103764	-	-64	5.46	2.73	3.42	6.27
103724HV	-	-24HV	3.93	2.35	1.12	2.87

Pressure ratings are in accordance with flange and gasket materials used. Nominal I.D.'s are measured before swaging. -48, -64 are halar coated, max temperature is 300°F.



Sanitary Fitting - Tri Clamp® Style

316 Stainless Steel	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Face Diameter In
103616	-16	1.81	.71	.85	1.99
103620	-20	2.69	1.17	1.07	1.99
103624	-24	2.87	1.38	1.31	1.99
103632	-32	2.87	1.38	1.76	2.50
103648	-48	5.00	-	2.67	3.50
103664	-64	4.94	-	3.67	4.50

Tri Clamp® is a registered trademark of the Ladish Company.

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Medium Pressure Convoluted Hose

(PTFE)

Temperature Range – 65°F to 400°F (-54°C to 204°)

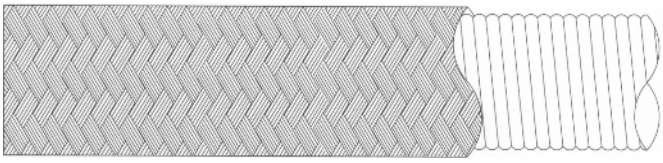
Teleflex Industrial Fluid Systems has brought the manufacture of tape wrapped PTFE convoluted hose to the industry fore-front. Advanced manufacturing techniques combined with strict quality control measures have combined to earn this general purpose hose product a unique place in a wide spectrum of industries and applications. Chemical plants, food processing, pharmaceutical companies, petrochemical sites, pulp and paper processors and general industrial companies of all types and sizes have relied on the performance of Teleflex Industrial Fluid Systems convoluted hose.

The unique construction of tape wrapped convoluted hose combines the properties of PTFE with lighter weight and greater flexibility than any hose of comparable size. As with medium pressure smooth bore hose, tape wrapped convoluted hose is manufactured with both conductive and nonconductive inner cores depending on the demands of the application.

Some applications require a conductive inner liner to dissipate static electrical charges. High resistivity fluids or gases at high velocity cause positive electrical charges to build on the inside of the PTFE liner. If not dissipated to the end of the hose, the charge will build until it arcs through the tube wall to the braid, causing catastrophic hose failure. To alleviate this, Teleflex manufactures a PTFE inner core with a thin conductive liner on the I.D.

Other braid materials such as polyester, polypropylene, nylon and kynar are available for special applications. For information on other hose products or specific application performance data such as vacuum ratings, minimum assembly lengths and installation configurations, please refer to the technical data sheets, or call the Teleflex Sales Department at 1-800-225-9077.

CONVOLUTED TRANSFER HOSE



T1568 - Non-conductive, PTFE lined, fiberglass reinforced inner core, over braided with 300 series stainless steel wire.

T1569 - Conductive (carbon impregnated), PTFE lined, fiberglass reinforced inner core, over braided with 300 series stainless steel wire.

T1568, T1569

Hose Number White	Hose Number Conductive	Nominal I.D. In	Nominal O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft
T1568-06	T1569-06	3/8	.59	1000	4000	1.00	.12
T1568-08	T1569-08	1/2	.76	1250	5000	1.50	.20
T1568-10	T1569-10	5/8	.91	1400	5600	2.00	.38
T1568-12	T1569-12	3/4	1.07	1100	4400	2.50	.33
T1568-16	T1569-16	1	1.34	1000	4000	3.00	.43
T1568-20	T1569-20	1 1/4	1.57	1000	4000	3.50	.53
T1568-24	T1569-24	1 1/2	1.81	750	3000	4.50	.65
T1568-32	T1569-32	2	2.32	500	2000	5.25	.73

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Medium Pressure Convoluted Hose
(PTFE)

Teleflex INCORPORATED
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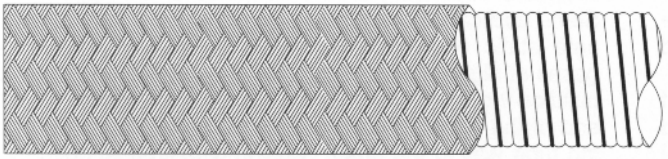
FULL VACUUM CONVOLUTED TRANSFER HOSE



T1568HV - Non-conductive, PTFE lined, fiberglass reinforced inner-core, spiral wire wrapped, over braided with 300 series stainless steel wire.

T1569HV - Conductive (carbon impregnated), PTFE lined, fiberglass reinforced inner core, spiral wire wrapped, over braided with 300 series stainless steel wire.

T1568HV, T1569HV

Hose Number White	Hose Number Conductive	Nominal I.D. In	Nominal O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft
T1568-24HV	T1569-24HV	1 1/2	1.85	750	3000	7.5	.89
T1568-32HV	T1569-32HV	2	2.42	500	2000	10	1.19
T1568-48HV	T1569-48HV	3	3.68	250	1000	15	2.30
T1568-64HV	T1569-64HV	4	4.85	150	600	24	3.50

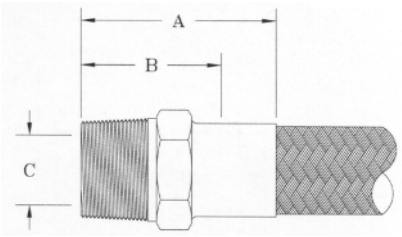
Medium Pressure Smooth Bore Fittings

(Carbon Steel)

Adding to our variety of standard fitting styles, Teleflex now offers a carbon steel fitting line. This flexibility of material choices allows for a wide variety of application needs while maintaining a full range of fittings styles. Teleflex maintains an inventory of popular carbon steel fitting styles which can be supplied with a minimum lead time.

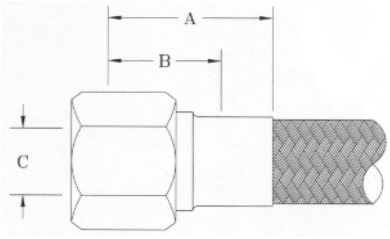
00 / 01 Male Pipe

Part Number	Hose Size	Thread	Inside Diameter	Deduct Length
120104E	-04	1/8-27	0.11	0.83
120005E	-05	1/4-18	0.18	1.03
120006E	-06	3/8-18	0.22	1.08
120010E	-10	1/2-14	0.38	1.34
120012E	-12	3/4-14	0.52	1.46
120018E	-18	1 11-1/2	0.84	1.76



02 Female Swivel - JIC

Part Number	Hose Size	Thread	Inside Diameter	Deduct Length
120204E	-04	7/16-20	0.11	0.57
120205E	-05	1/2-20	0.18	0.63
120206E	-06	9/16-18	0.22	0.65
120210SDE	-10	3/4-16	0.38	0.76
120210E	-10	7/8-14	0.38	0.80
120212E	-12	1 1/16-12	0.51	0.84
120218E	-18	1 5/16-12	0.84	0.95



NOTE: Consult factory for other available sizes and fitting configurations. Options available include SAE Females, BSP, Metric, O-Ring Face Seals, Male Swivels, NPSM Paint Spray Females, Standard Pipes, Code 61 Flanges, Female Pipes, etc.

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Medium Pressure Smooth Bore Fittings

(Carbon Steel)

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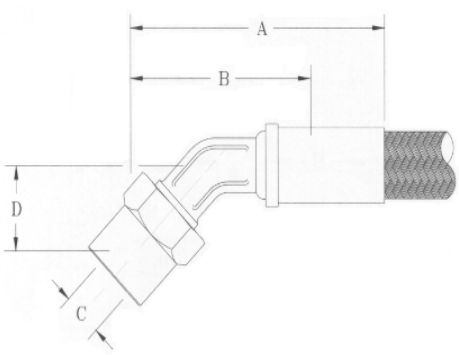
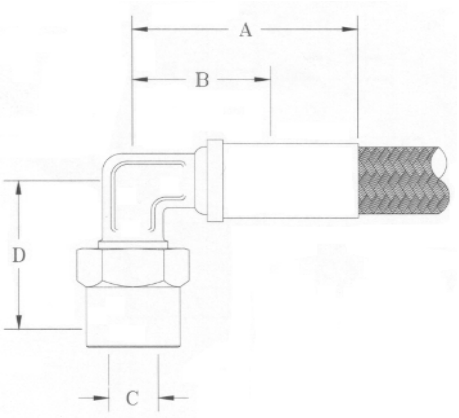


18 Female Swivel - JIC - 45° Elbow

Part Number	Hose Size	Thread	Inside Diameter	Deduct Length	Elbow Drop
121804E	-04	7/16-20	0.11	1.41	0.64
121805E	-05	1/2-20	0.18	1.45	0.66
121806E	-06	9/16-18	0.22	1.55	0.71
121810SDE	-10	3/4-16	0.38	1.60	0.81
121810E	-10	7/8-14	0.38	1.68	0.89
121812E	-12	1 1/16-12	0.51	1.90	0.82
121818E	-18	1 5/16-12	0.84	2.32	0.95



19 Female Swivel - JIC - 90° Elbow

Part Number	Hose Size	Thread	Inside Diameter	Deduct Length	Elbow Drop
121904E	-04	7/16-20	0.11	1.05	1.15
121905E	-05	1/2-20	0.18	1.05	1.22
121906E	-06	9/16-18	0.22	1.18	1.35
121910SDE	-10	3/4-16	0.38	1.31	1.66
121910E	-10	7/8-14	0.38	2.31	1.76
121912E	-12	1 1/16-12	0.51	1.74	1.82
121918E	-18	1 5/16-12	0.84	2.23	2.21

Crimp/Swage Program

ASSEMBLY PROCEDURES & TOOLING

Teleflex Fluid Systems has uniquely designed its fittings and tooling to adapt to either crimping or swaging. With a minimum investment, factory quality assemblies can be made virtually anywhere.

From the initial development of PTFE hose, swaging has been the attachment method preferred by the aerospace industry. This preference was carried over into the industrial market and has been used for decades. The tooling required to swage PTFE hose is costly, effectively preventing most distributors from participating in the market. The ability to precisely crimp PTFE hose using almost any fully adjustable crimper has now brought PTFE within reach of even the smallest company.

Teleflex Fluid Systems provides complete distributor support for establishing your own PTFE hose program. Consider these features:

- A low cost tooling package ($).
- Complete instructional information; written and video.
- On-site training and engineering assistance.
- An available low cost crimper with tooling.
- Access to applications engineering assistance.
- Broad form insurance coverage for product liability.
- Aerospace qualified assemblies for sale to the aircraft aftermarket.
- Sales lead support and sales literature.

REQUIRED TOOLING AND EQUIPMENT

To insure proper assembly results use only Teleflex recommended tooling. The following list describes the tooling to be used for each product line. Before assembly, be sure to refer to the list for the appropriate part numbers and check them against the part number marked on the tool.

For cutting smooth bore hose, a metal shear is required. To cut convoluted and high pressure hose, a cut-off saw with an abrasive wheel must be used. For a complete step-by-step review, refer to the Teleflex instructional video and assembly sheets. For a complete list of assembly tooling used for swaging, please contact Teleflex Sales at 1-800-225-9077.

For Smooth Bore Crimped Assemblies	
PART NUMBER	**DESCRIPTION**
80-10006	Bench Mount
80-10302	Collar Assembly Holder
80-10303-(size)	Split Bushing
80-10030-(size)	Fitting Insertion Tool
For Convoluted Crimped Assemblies	
PART NUMBER	**DESCRIPTION**
829029	PTFE Tape

For T1700 High Pressure Crimped Assemblies	
PART NUMBER	**DESCRIPTION**
84-10014	Inner Core Cutter Handle
84-10013-(size)	Inner Core Cutter Blade
85-10012-(size)	Inner Core Cutter Holder
D1169-(size)	Crimp Mandrel
D1169-XX	Pilot Extractor
84-10017-01	ID Brush Handle
84-10021-(size)	ID Brush

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60-10997 Brake Hose

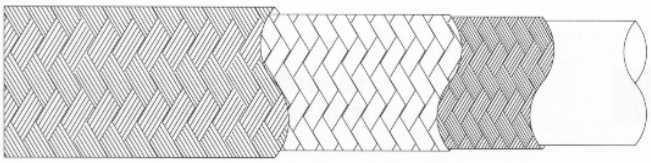
Designed to Meet MVSS-106 for D.O.T. Brake Hose Assemblies

Teleflex Fluid Systems, through continuous research and design innovation has developed many unique products in recent years. Based on a careful study of market needs, Teleflex IFS has engineered the most advanced brake hose in the industry. Unlike other metal braided PTFE brake hoses, which rely on special fittings or attachment methods, Teleflex D.O.T. brake hose assemblies rely on the hose design to pass the very difficult whip test. This allows any high performance product distributor or auto manufacturer to build legal brake hoses with standard Teleflex attachment methods.

Consider the advantages of Teleflex brake hose:

- There is virtually no volumetric expansion. Brake pedal response is immediate, not "soft" as with other standard hoses.
- Teleflex brake assemblies comply with federal regulation D.O.T. MVSS-106. Product is legal for all street and racing applications.
- Hoses can be used with standard brake fittings and adapters.
- This product is inert to all approved brake fluids, including D.O.T. 5 silicone.
- Teleflex brake hoses consist of a rugged construction which resists shock and road hazards. There is also a higher fitting pull-off than other D.O.T. assemblies.

HOSE



60-10997-03 - A proprietary hose design consisting of a PTFE inner core, a single braid of Kevlar, a barrier layer, and a single layer of 300 series stainless steel wire braid.

60-10997

Hose Part Number	Hose Size	Average I.D. In	Average O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft
60-10997-03	3/16	.126	.320	1750	7000	2.0	.069

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60-10997 Brake Hose Fittings

For D.O.T. Brake Hose Assemblies

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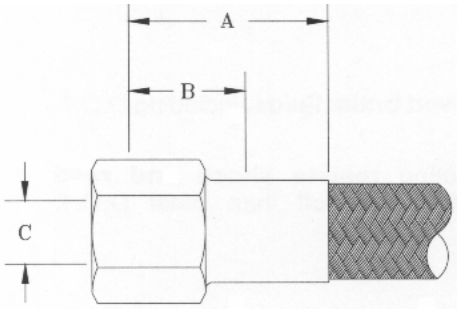
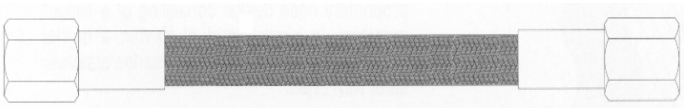
Standard 300 series stainless steel JIC/SAE female fittings are available from Teleflex. Other adapters typically used include 3/8”-24 straight male inverted flare; 3/8”-24 45° male inverted flare; 3/8”-24 90° male inverted flare; 10mm and 12mm banjo fittings in straight and 35° configurations. For information on availability, call the Teleflex Sales Department at 1-800-225-9077.



Female Swivel SAE

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
60-11094	-03	3/8-24	1.31	.50	.086



60-11074 (Length) - Available in lengths to fit any brake application.

Teleflex 60-11074 (length) brake hose assemblies meet or exceed the test parameters outlined in the National Highway Traffic Safety Administration D.O.T. 571.106 Standard 106, for brake hoses. These assemblies are approved by the U.S. Department of Transportation, National Highway Traffic Safety Administration and by the Canadian Superintendent of Motor Vehicles, Motor Vehicle Branch.

* For more information on brake hose assemblies, contact the Teleflex Sales Department at 1-800-225-9077.

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Medium Pressure Fluoro-Comp Fittings

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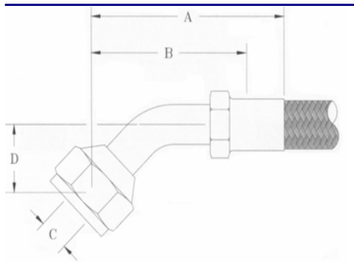
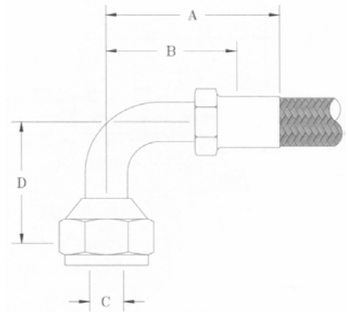


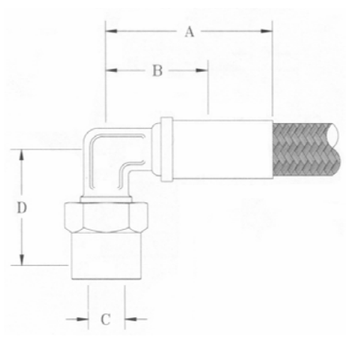
45° Female Swivel SAE

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
F130904	-04	7/16-20	1.69	1.25	1/4	.41
F130905	-05	1/2-20	1.85	1.44	5/16	.49
F130906	-06	5/8-18	2.13	1.63	3/8	.55
F130908	-08	3/4-16	2.44	1.88	1/2	.63



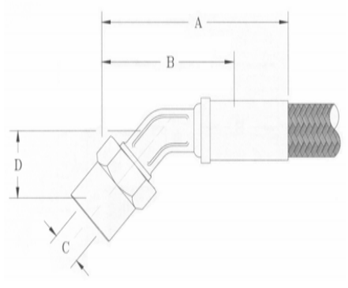
90° Female Swivel SAE

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
F131004	-04	7/16-20	1.42	1.0	1/4	.71
F131005	-05	1/2-20	1.55	1.1	5/16	.88
F131006	-06	5/8-18	1.80	1.3	3/8	1.00
F131008	-08	3/4-16	2.10	1.5	1/2	1.18
F131010	-10	7/8-14	2.47	1.8	5/8	1.50



90° Female Swivel Forged Elbow JIC

Part Number	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D In	D Drop In
F100504	-04	7/16-20	1.28	.79	.156	.63
F100505	-05	1/2-20	1.35	.87	.207	.70
F100506	-06	9/16-18	1.44	.90	.277	.78
F100508	-08	3/4-16	1.61	1.00	.358	.91
F100510	-10	7/8-14	1.80	1.10	.469	.99
F100512	-12	1 1/16-12	2.06	1.27	.550	1.13
F100516	-16	1 5/16-12	2.38	1.41	.812	1.34



45° Female Swivel Forged Elbow JIC

Part Number	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D. In	D Drop In
F100404	-04	7/16-20	1.56	1.00	.156	.29
F100405	-05	1/2-20	1.61	1.06	.207	.35
F100406	-06	9/16-18	1.84	1.15	.277	.41
F100408	-08	3/4-16	2.07	1.25	.358	.46
F100410	-10	7/8-14	2.29	1.40	.469	.50
F100412	-12	1 1/16-12	2.61	1.54	.550	.55
F100416	-16	1 5/16-12	3.02	1.68	.812	.65

Medium Pressure Fluoro-Comp Fittings

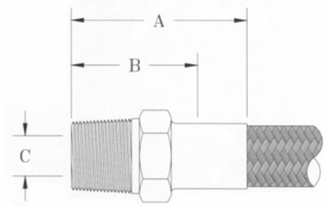
The same variety of fittings for standard medium pressure PTFE hoses is available for use with Teleflex Fluoro-Comp hose. All these fittings are uniquely designed to accommodate crimping. This attachment method provides for the full rated catalog performance of the finished assembly.

Standard fitting materials are 300 series stainless steel, CA360 brass or low carbon steel. Collars are available in stainless steel only. Teleflex maintains an inventory of popular fitting styles in most of these materials. Non-standard fittings and materials are often supplied with a minimum lead time. If a specific item is not found in our catalog, call the Teleflex Sales Department at 1-800-225-9077. Teleflex IFS also makes stainless steel forged elbow fittings in all standard dash sizes, both 45° and 90° JIC female swivels with a light weight crimp design.

For information on chemical compatibility, effusion, specific properties of PTFE and/or other application considerations, refer to the technical data section of this catalog.

Male Pipe

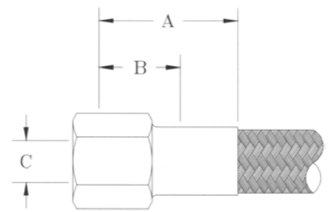
Stainless Steel	Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
F100104	F110104	-04	1/8-27	1.26	.80	.156
F100004	F110004	-04	1/4-18	1.47	1.02	.156
F100005	F110005	-05	1/4-18	1.47	1.02	.207
F100106	F110106	-06	1/4-18	1.60	1.05	.277
F100006	F110006	-06	3/8-18	1.63	1.08	.277
F100108	F110108	-08	3/8-18	1.68	1.08	.358
F100008	F110008	-08	1/2-14	1.93	1.32	.358
F100010	F110010	-10	1/2-14	2.05	1.35	.469
F100012	F110012	-12	3/4-14	2.21	1.44	.594
F100016	F110016	-16	1-11 1/2	2.56	1.65	.812



Female Swivel SAE/JIC

Stainless Steel	Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
F100204	F110204	-04	7/16-20	1.33	.50	.156
F100205	F110205	-05	1/2-20	1.40	.56	.207
F100206	F110206	-06*	9/16-18	1.56	.63	.277
F100208	F110208	-08	3/4-16	1.72	.69	.358
F100210	F110210	-10	7/8-14	1.99	.77	.469
F100212	F110212	-12*	1 1/16-12	2.13	.79	.594
F100216	F110216	-16	1 5/16-12	2.37	.84	.812

* JIC Only



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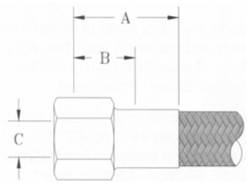
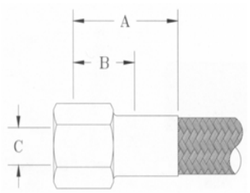
Medium Pressure Fluoro-Comp Fittings

Medium Pressure Fluoro-Comp Fittings



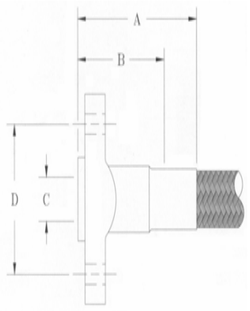
Female Swivel - SAE

Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
F110306	-06	5/8-18	1.56	1.00	.277
F110312	-12	1-1/16-14	1.97	1.22	.594



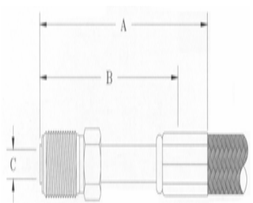
Female Pipe

Stainless Steel	Brass	Hose Size	Pipe Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
F100405	F110405	-05	1/4-18	1.42	.96	.207



2-Bolt Flange

Brass Iron Flange	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Bolt Hole Length In
F110505	-05	.98	.53	.207	2.0
F110506	-06	1.11	.56	.277	2.0
F110512	-12	2.27	1.50	.594	2.0
F110516	-16	2.45	1.54	.812	2.0



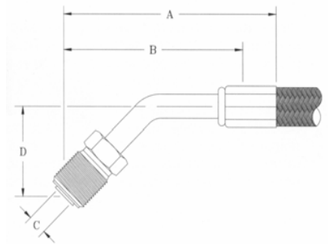
Male Inverted Flare - Straight

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size
F132604	-04	7/16-24	1.84	1.39	1/4
F132605	-05	1/20-20	1.90	1.45	5/16
F132606	-06	5/8-18	2.07	1.52	3/8
F132608	-08	3/4-18	2.21	1.60	1/2
F132610	-10	7/8-18	2.47	1.77	5/8

Medium Pressure Fluoro-Comp Fittings

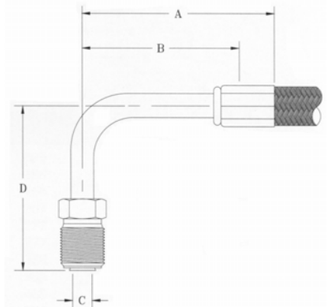
Male Inverted Flare - 45° Elbow

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
F132704	-04	7/16-24	1.99	1.53	1/4	.73
F132706	-06	5/8-18	2.48	1.93	3/8	.94
F132708	-08	3/4-18	2.95	2.10	1/2	1.14



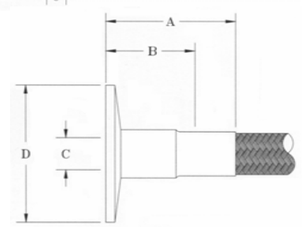
Male Inverted Flare - 90° Elbow

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
F132804	-04	7/16-24	1.42	.97	1/4	1.30
F132805	-05	1/2-20	1.54	1.09	5/16	1.48
F132806	-06	5/8-18	1.80	1.25	3/8	1.63
F132808	-08	3/4-18	2.10	1.49	1/2	1.91
F132810	-10	7/8-18	2.47	1.77	5/8	2.16



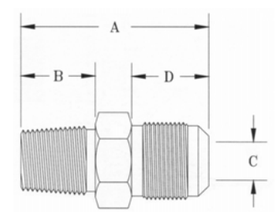
Sanitary Fitting

316 Stainless Steel	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Face Diameter In
F101616	-16	1.85	.94	.812	1.985



Adapter - Male JIC to Male Pipe

316 Stainless Steel	Brass	Hose Size	A Overall Length In	B Pipe Thread	C Nominal I.D. In	D JIC Thread
F101204	111204	-04	1.17	1/8-27	.172	7/16-20
F101104	111104	-04	1.43	1/4-18	.172	7/16-20
F101105	111105	-05	1.43	1/4-18	.234	1/2-20
F101206	111206	-06	1.38	1/4-18	.297	9/16-18
F101106	111106	-06	1.43	3/8-18	.297	9/16-18
F101208	111208	-08	1.50	3/8-18	.390	3/4-16
F101108	111108	-08	1.60	1/2-14	.390	3/4-16
F101110	111110	-10	1.89	1/2-14	.484	7/8-14
F101210	111210	-10	1.86	3/8-18	.484	7/8-14
F101112	111112	-12	2.06	3/4-14	.609	1 1/16-12
F101116	111116	-16	2.30	1-11 1/2	.844	1 5/16-12



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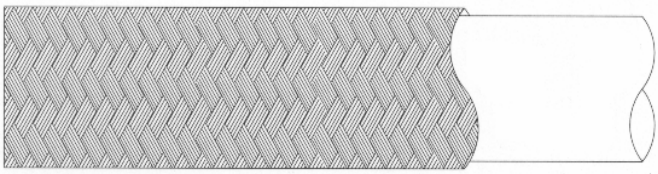
Medium Pressure Fluoro-Comp Hose

Temperature Range - 65°F to 400°F (-54°C to 204°C) Continuous Service
- 65°F to 450°F (-54°C to 232°C) Intermittent Service

After years of research, Teleflex has developed a hose product that combines the outstanding properties of fiberglass and fluoropolymers to create the first fluoropolymer, fiberglass-braided, composite hose. FLUORO-COMP's resistance to a wide range of temperatures, chemicals, pressures and thermal shock are outstanding. The fluoropolymer gives the hose its chemical resistance and is therefore virtually inert to all chemicals. Organic solvents do not attack or dissolve PTFE. The combination of the fiberglass braid and PTFE, both internally (PTFE liner) and externally, make the hose essentially non-flammable. This unique combination of materials also imparts the needed strength and flexibility required in many applications. Fluoro-Comp is produced in standard "dash" sizes and can be readily substituted, size on size in many applications where its unique performance characteristics are needed.

Teleflex Industrial Fluid Systems (TIFS) has successfully completed an extensive proof testing program of our Fluoro-Comp product. This program was conducted under Teleflex Fluid Systems specification TQC-107 and SAE AS4468. Hose assemblies were produced by mating the Fluoro-Comp product with TIFS standard medium pressure smooth bore fittings.

HOSE



T1757 - A unique patented composite construction consisting of an inner liner of .030 wall, non-conductive PTFE bonded to an outer layer of fiberglass/PTFE.

T1757*

Hose Part Number	Hose Size	Average I.D. In	Average O.D. In	Operating Pressure** PSI	Burst Pressure** PSI	Bend Radius In	Weight Lbs/ Ft
T1757-04	1/4	.193	.332	800	3200	2.50	.042
T1757-05	5/16	.250	.413	800	3200	3.00	.062
T1757-06	3/8	.312	.475	800	3200	3.00	.080
T1757-08	1/2	.425	.595	800	3200	3.75	.122
T1757-10	5/8	.515	.710	800	3200	5.25	.125
T1757-12	3/4	.627	.820	400	1600	6.00	.145
T1757-16	1	.885	1.102	400	1600	7.00	.245

* Not for impulse service.
** Room temperature only - **NOTE:** for sizes –12 and –16 operating pressures are as follows: -65°F to 275°F; maximum operating pressure is 400 PSI. 276°F to 400°F; maximum operating pressure is 200 PSI. For sizes –04, -06, -08, -10 operating pressures are as follows: -65°F to 275°F; maximum operating pressure is 800 PSI. 276°F to 400°F; maximum operating pressure is 500 PSI.

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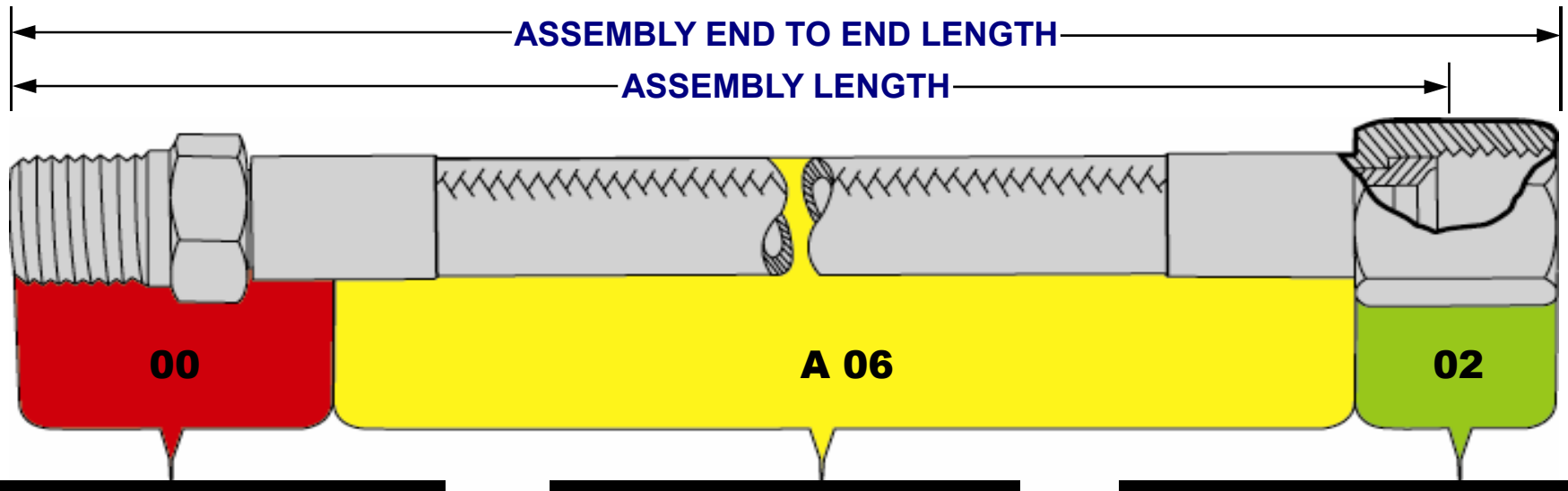


STEP 1

Fitting First End Configuration

- 00 - Male Pipe - Medium Pressure
- 01 - Male Pipe - Step Down - Medium Pressure
- 02 - Female Swivel JIC/SAE - Medium Pressure
- 03 - Female Swivel SAE - Medium Pressure
- 04 - Female Pipe - Medium Pressure
- 05 - Two Bolt Swivel Flange (Complete Fitting or Insert Only)
- 06 - Male Inverted Flare - Straight - Medium Pressure - SD
- 07 - Male Inverted Flare - 45° - Medium Pressure - SD
- 08 - Male Inverted Flare - 90° - Medium Pressure - SD
- 09 - SAE Female Swivel - 45° - Medium Pressure
- 10 - SAE Female Swivel - 90° - Medium Pressure
- 11 - Male JIC to MP Adapter - Union
- 12 - Male JIC to MP Adapter Step Down - Union
- 13 - Male JIC to Male JIC Adapter
- 15 - Female Pipe Adapter
- 16 - Sanitary Fitting
- 18 - JIC Female Swivel 45° Forged Medium Pressure
- 19 - JIC Female Swivel 90° Forged Medium Pressure
- 20 - Male Pipe - High Pressure
- 21 - Male Pipe Step Down - High Pressure
- 22 - Female Swivel JIC - High Pressure
- 23 - Light Weight Female Swivel - JIC - High Pressure
- 26 - Male Inverted Flare - ST - Medium Pressure
- 27 - Male Inverted Flare - 45° - Medium Pressure
- 28 - Male Inverted Flare - 90° - Medium Pressure
- 29 - Instrumentation Tube Fitting - Medium Pressure
- 30 - Male Pipe Hex - Convoluted
- 31 - Male Pipe No Hex - Convoluted
- 32 - Female Swivel JIC/SAE - Convoluted
- 35 - Flange Retaining Insert - Convoluted
- 36 - Sanitary Fitting - Convoluted
- 37 - Flange Retaining Insert - PTFE Lined - Convoluted
- 50 - Female Cam & Groove - Convoluted
- 51 - Female Cam & Groove PTFE Lined - Convoluted
- 52 - Male Cam & Groove - Convoluted
- 53 - Male Cam & Groove PTFE Lined - Convoluted
- 54 - Instrumentation Tube End
- 60 - SAE Female Swivel - Wrenching Hex - Medium Pressure
- 61 - Female Swivel JIC - H.D. High Pressure
- 64 - Female Pipe - H.D. High Pressure
- XX - No Fitting

STEP 2

Hose and Fitting Type

- A - (T1167) Stainless Steel Fittings
- B - (T1167) Brass Fittings
- C - (T1168) Brass Fittings
- D - (T1557) Stainless Steel Fittings
- E - (T1568) Stainless Steel Fittings
- F - (T1568) Carbon Steel Fittings
- G - (T1568) Stainless Steel Wetted Parts
- J - (T1569) Stainless Steel Fittings
- K - (T1569) Carbon Steel Fittings
- L - (T1569) Stainless Steel Wetted Parts
- M - (T1170) Stainless Steel Fittings
- N - (T1170) Brass Fittings
- P - (T1167) Carbon Steel Fittings E Style
- Q - Mixed Hose & Fittings / Non-Designated
- R - (T1568) Stainless Steel Fittings / Carbon Steel Flange
- S - (T1569) Stainless Steel Fittings / Carbon Steel Flange
- T - (T1794) Stainless Steel Fittings
- U - (T1794) Carbon Steel Fittings
- W - (T1710) Stainless Steel Fittings
- X - (T1700) Stainless Steel Fittings
- Y - (T2000) Stainless Steel Fittings
- Z - (T1561) Stainless Steel Fittings
- EHV - (T1568-XXHV) Stainless Steel Fittings
- FHV - (T1568-XXHV) Carbon Steel Fittings
- GHV - (T1568-XXHV) Stainless Steel Wetted Fittings
- JHV - (T1569-XXHV) Stainless Steel Fittings
- KHV - (T1569-XXHV) Carbon Steel Fittings
- LHV - (T1569-XXHV) Stainless Steel Wetted Fittings
- RHV - (T1568-XXHV) Stainless Steel Fittings / CS Flange
- SHV - (T1569-XXHV) Stainless Steel Fittings / CS Flange
- AA - (T1757) Stainless Steel Fittings
- BB - (T1757) Brass Fittings
- CC - (T1758) Stainless Steel Fittings
- DD - (T1758) Brass Fittings
- EE - (T1764) Stainless Steel Fittings
- FF - (T1764) Brass Fittings
- GG - (T1765) Stainless Steel Fittings
- HH - (T1765) Brass Fittings
- XP - (TP1700) Stainless Steel Fittings
- MP - (TP1170) Stainless Steel Fittings

STEP 3

Fitting Second End Configuration

Refer Back to Step 1

STEP 4

Assembly Length - Whole Inches

010 = 10" ; 240 = 240"

STEP 5

Additional Length - Eighth Inch

(1/8 inch) 2 = 1/4" ; 4 = 1/2"

STEP 6

Accessories - Suffix

- A - Armor
- AE - Armor (One Foot Each End)
- B - Polyolefin Heat Shrink (Black)
- C - Polyolefin Heat Shrink (Clear)
- D - Vinyl Chafe Sleeve (Clear)
- E - FEP Heat Shrink
- F - Firesleeve (Silicone / Fiberglass)
- G - Spring Guard (Carbon Steel)
- H - Hypalon
- I - Internal Spring
- K - Caps
- N - Neoprene
- Q - Non-Designated Sleeving
- T - Aluminum Tag on Assembly
- X - Customer Supplied Components

Nominal Size of Hose - Sixteenths of an Inch (1/16)

Use Two Digits. 03 = 3/16" ; 06 = 3/8"

For Extruded Sleeving Insert - Letter Code After Hose Size

- H - Black Hytrel
- HS - Silicone Heat Sleeve
- S(XX) - Santoprene (Color)
- XLC - Clear PVC

Steps =	1	2	3	4	5	6
Example =	00	A 06	02 -	020	4	A
	Fitting First End	Hose & Fitting Type	Size	Fitting Second End	Assembly Length Inches	Additional Fractional Lgth (8ths)	Accessories

HOSE LENGTH TOLERANCES	
Up to 18"	± 1/8"
18" to 36"	± 1/4"
36" to 50"	± 1/2"
Above 50"	1% of Total Lgth

How to Order

1. Select a two digit number from the configuration list above.
2. Select a letter for the type, and a two digit number indicating nominal size in 1/16th of an inch.
3. Select a two digit number from the configuration list above.
4. Specify the desired assembly length expressed in whole inches.
5. Specify the additional fractional length in 1/8th of an inch. When female swivels are specified, the measurement is taken from the insert seat. If end to end length is required, please indicate when ordering. For assembly orders with special fittings or non-standard materials, consult the Teleflex Sales Department at 1-800-225-9077.
6. If required, select an accessory. For example, "A" designates armor.

How to Specify the Right Hose

Review These Parameters of Performance:
Details of Coupling
Material Transferred
Concentration Levels
Composition of Substance
Internal & External Diameter
Temperature - Pressure and Vacuum (Including Surges)

External Conditions:
Abrasion, Climate, Heat, Contamination, Loads, Flexing, Crushing, Kinking, Bending

Steam Pressure:
Steam pressure is usually the most severe. Determine temperature, saturation, superheat, and degree of flexing involved. With air, water, and suction hose, the same precautions apply. Even with Teleflex all-purpose PTFE hose, chemical tables should be consulted to ensure proper performance.

1-800-225-9077

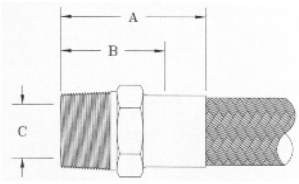
High Pressure Smooth Bore Fittings

FOR T1557 HOSE

Teleflex High Pressure permanently attached fittings for T1557 hose incorporates a low profile O.D. and compact construction for maximum flexibility, minimum pressure drop and minimum interference through heat exchanger and boiler piping. A positive lock, metal-to-metal design insures fitting to hose integrity even at intermittent pressures above the listed WPSI. All fitting components are 300 series stainless steel. For special fittings, contact the Teleflex Sales Department at 1-800-225-9077.

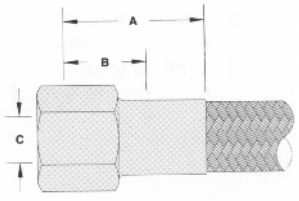
Male Pipe

Stainless Steel	Hose Size	Thread	Max O.D. In	A Overall Length In	B Deduct Length In	C Nominal I.D. In
102003	-03	1/8-27	.475	.77	.80	.095
102104	-04	1/8-27	.500	.77	.80	.156



Female Swivel - JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
102203	-03	3/8-24	.85	.50	.095
102204	-04	7/16-20	.95	.50	.156



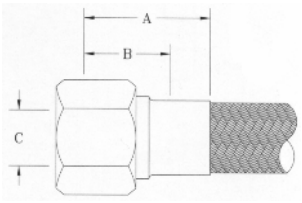
FOR T1700 HOSE

T1700 Crimp Style fittings are uniquely designed for optimum performance. A positive, metal-to-metal lock insures the integrity of the attachment throughout the pressure range to beyond minimum specified burst. Elbow fittings are the lightest weight, lowest profile forged design in the industry.

The fitting material is 300 series stainless steel or zinc plated carbon steel as specified by the part number. The inside diameters are minimum diameters after crimping. For other fitting styles, call the Teleflex Sales Department at 1-800-225-9077.

Straight Female Swivel - JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
102304	-04	7/16-20	1.695	.449	.139
102306	-06	9/16-18	1.97	.498	.244
102308	-08	3/4-16	2.120	.673	.340
102310	-10	7/8-14	2.426	.745	.410
102312	-12	1-1/16-12	2.679	.762	.518
102316	-16	1-5/16-12	2.858	.820	.769
102320	-20	1-5/8-12	3.28	.985	.955
102324	-24	1-7/8-12	3.31	1.20	1.185



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High Pressure Smooth Bore Fittings

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fluid systems
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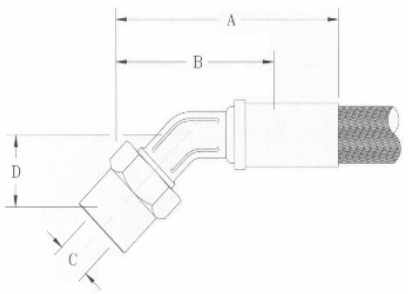
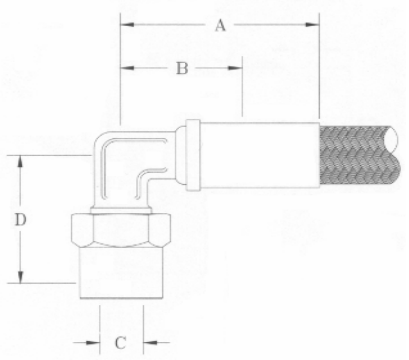


45° Female Swivel - JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D. In	D Drop In
I103504	-04	7/16-20	1.56	1.00	.156	.29
I103506	-06	9/16-18	1.84	1.15	.277	.41
I103508	-08	3/4-16	2.07	1.25	.340	.46
I103510	-10	7/8-14	2.29	1.40	.469	.50
I103512	-12	1 1/16-12	2.61	1.54	.550	.55
I103516	-16	1 5/16-12	3.02	1.68	.812	.65

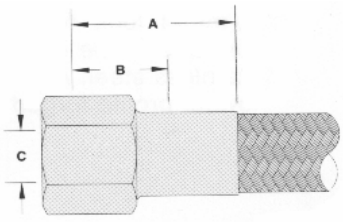


90° Female Swivel - JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D. In	D Drop In
I103604	-04	7/16-20	1.28	.79	.156	.63
I103606	-06	9/16-18	1.44	.90	.277	.78
I103608	-08	3/4-16	1.61	1.00	.340	.91
I103610	-10	7/8-14	1.80	1.10	.469	.99
I103612	-12	1 1/16-12	2.06	1.27	.550	1.13
I103616	-16	1 5/16-12	2.38	1.41	.812	1.34

FOR T1561 HOSE

Permanently attached fittings for this hose are designed to be swaged. T1561 fittings also utilize the unique metal-to-metal lock for complete fitting integrity and performance. The material for these fittings is 300 series stainless steel. All elbow fittings are the lightest weight, lowest profile forged tube design in the industry. The inside diameters shown are minimum dimensions obtained after swaging or crimping. For information on other fitting types and materials, contact the Teleflex Sales Department at 1-800-225-9077.



Straight Female Swivel - JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
106104	-04	7/16-20	1.34	.57	.141
106106	-06	9/16-18	1.42	.65	.250
106108	-08	3/4-16	1.78	.79	.360
106110	-10	7/8-14	1.90	.77	.469
106112	-12	1-1/16-12	1.96	.86	.568
106116	-16	1-5/16-12	2.20	.97	.760

High Pressure Smooth Bore Hose

Teleflex IFS
Industrial Fluid Systems
A Division of Teleflex Fluid Systems, Inc.

T1700 Light Weight High Pressure Hose is specially constructed for applications requiring strength, reliability and long term performance along with low profile and flexibility. Added to this is the wide temperature range in which T1700 operates. These advantages combine to make Teleflex Hose the choice for hot oils, phosphate esters, industrial gases and chemicals and many more. (For more information on chemical resistance and fitting material selection, refer to the tables in the technical section of the catalog.)

This hose is constructed of a smooth innertube of PTFE, impregnated with carbon black to provide conductivity for static dissipation. The outer braid is a unique bunch braid design made with 300 series stainless steel.

T1700

Hose Part Number	Hose Size	Average I.D. (In)	Average O.D. (In)	Operating Pressure* (PSI)	Burst Pressure (PSI)	Bend Radius (In)	Weight (Lbs/Ft)	Maximum Continuous Length (Ft)
T1700-04	1/4	.222	.375	5,000	16,000	1.5	.108	35
T1700-06	3/8	.308	.473	5,000	16,000	2.5	.180	35
T1700-08	1/2	.401	.600	5,000	16,000	2.9	.240	35
T1700-10	5/8	.495	.710	5,000	16,000	3.3	.324	35
T1700-12	3/4	.617	.970	5,000	16,000	4.0	.660	35
T1700-16	1	.867	1.250	5,000	16,000	5.0	1.020	35
T1700-20	1-1/4	1.125	1.600	4,000	16,000	12.0	1.680	25

*Operating pressure shown are for non-impulse service. Reduce operating pressures by 1,000 PSI for pump discharge and similar impulse service applications. For service at 400°F, maximum operating pressure for all sizes is 3,000 PSI.

T1561 Heavy Duty High Pressure Hose is the most rugged construction of all; designed to perform in high shock and high vibration applications, especially where the hose may be subject to external abuse. This product is ideal for high pressure impulse and cycling such as reaction injection molding. Hydraulic fluids, oils, acids and corrosive chemicals are no problem for this hose. (For specific information on chemical resistance and fitting material selection, refer to the tables in the technical section of this catalog.)

T1561 Hose is designed with a smooth bore conductive PTFE liner, overbraided with multiple layers of stainless steel wire. Sizes 1/4" and 3/8" consist of an inner braid, two spiral layers and an outer braid. Sizes 1/2" through 1" have an inner braid, four spiral layers and an outer braid.

For approval of specific critical operating conditions, contact Teleflex IFS Engineering Department.

T1561

Hose Part Number	Hose Size	Average I.D. (In)	Average O.D. (In)	Operating Pressure (PSI)	Burst Pressure (PSI)	Bend Radius (In)	Weight (Lbs/Ft)	Maximum Continuous Length (Ft)
T1561-04	1/4	.229	.495	6000	24,000	3	.24	50
T1561-06	3/8	.300	.615	6000	24,000	5	.40	50
T1561-08	1/2	.395	.725	6000	24,000	5.75	.49	35
T1561-10	5/8	.525	.885	4000*	12,000	6.25	.67	30
T1561-12	3/4	.650	1.060	4000*	12,000	7.75	.93	30
T1561-16	1	.875	1.370	4000*	12,000	9.63	1.45	30

*For service at 400°F maximum operating pressure is 3,000 PSI.

Medium Pressure Smooth Bore Fittings

Teleflex INCORPORATED
fluid systems
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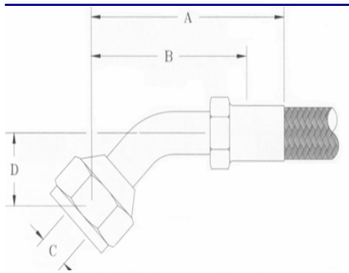
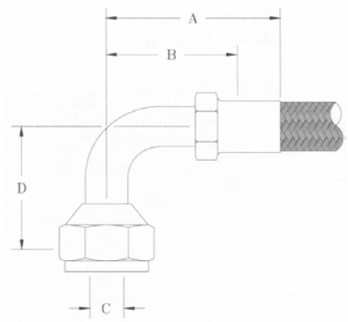


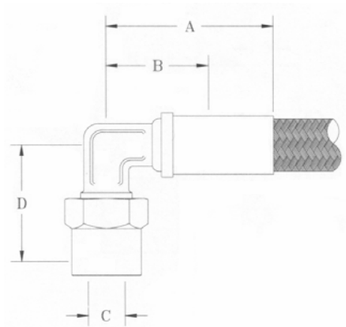
45° Female Swivel SAE

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
130904	-04	7/16-20	1.69	1.25	1/4	.41
130905	-05	1/2-20	1.85	1.44	5/16	.49
130906	-06	5/8-18	2.13	1.63	3/8	.55
130908	-08	3/4-16	2.44	1.88	1/2	.63



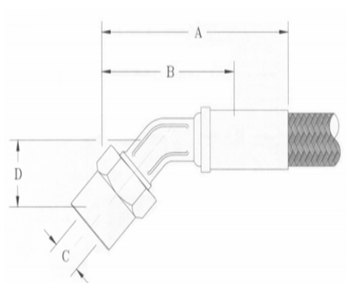
90° Female Swivel SAE

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
131004	-04	7/16-20	1.42	1.0	1/4	.71
131005	-05	1/2-20	1.55	1.1	5/16	.88
131006	-06	5/8-18	1.80	1.3	3/8	1.00
131008	-08	3/4-16	2.10	1.5	1/2	1.18
131010	-10	7/8-14	2.47	1.8	5/8	1.50



90° Female Swivel Forged Elbow JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D In	D Drop In
I100504	-04	7/16-20	1.28	.79	.156	.63
I100505	-05	1/2-20	1.35	.87	.207	.70
I100506	-06	9/16-18	1.44	.90	.277	.78
I100508	-08	3/4-16	1.61	1.00	.358	.91
I100510	-10	7/8-14	1.80	1.10	.469	.99
I100512	-12	1 1/16-12	2.06	1.27	.550	1.13
I100516	-16	1 5/16-12	2.38	1.41	.812	1.34



45° Female Swivel Forged Elbow JIC

Stainless Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C I.D. In	D Drop In
I100404	-04	7/16-20	1.56	1.00	.156	.29
I100405	-05	1/2-20	1.61	1.06	.207	.35
I100406	-06	9/16-18	1.84	1.15	.277	.41
I100408	-08	3/4-16	2.07	1.25	.358	.46
I100410	-10	7/8-14	2.29	1.40	.469	.50
I100412	-12	1 1/16-12	2.61	1.54	.550	.55
I100416	-16	1 5/16-12	3.02	1.68	.812	.65

Medium Pressure Smooth Bore Fittings

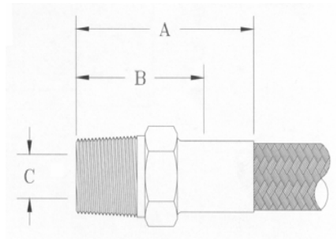
Teleflex Fluid Systems offers a wide variety of standard fittings for medium pressure, smooth bore PTFE hoses. All fittings are uniquely designed to accommodate either swaging or crimping with the same insert and collar, eliminating the need for double inventory. This flexibility of design allows for a wide variety of application needs while maintaining the full integrity and quality of the fitting. Either attachment method provides for the full rated catalog performance of the finished assembly.

Standard fitting materials include 300 series stainless steel, CA360 brass or low carbon steel. Teleflex maintains an inventory of popular fitting styles in most of these materials. Non-standard fittings and materials are often supplied with a minimum lead time. If a specific item is not found in the catalog, call the Teleflex Sales Department at 1-800-225-9077.

Teleflex also makes stainless steel forged elbow fittings in all eight standard dash sizes, both 45° and 90° JIC female swivels with a light weight crimp design. For information on chemical compatibility, effusion, specific properties of PTFE and other application considerations, refer to the technical data section of this catalog.

Male Pipe

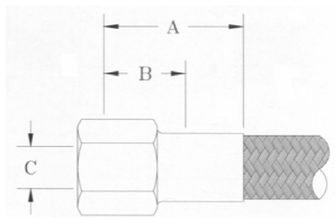
Stainless Steel	Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
100003	110003	-03	1/8-27	1.26	.80	.095
100104	110104	-04	1/8-27	1.26	.80	.156
100004	110004	-04	1/4-18	1.47	1.02	.156
100005	110005	-05	1/4-18	1.47	1.02	.207
100106	110106	-06	1/4-18	1.60	1.05	.277
100006	110006	-06	3/8-18	1.63	1.08	.277
100108	110108	-08	3/8-18	1.68	1.08	.358
100008	110008	-08	1/2-14	1.93	1.32	.358
100010	110010	-10	1/2-14	2.05	1.35	.469
100012	110012	-12	3/4-14	2.21	1.44	.594
100016	110016	-16	1-11 1/2	2.56	1.65	.812



Female Swivel SAE/JIC

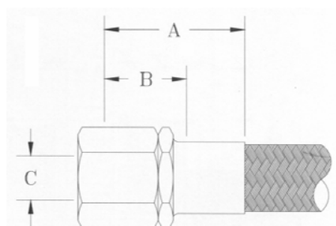
Stainless Steel	Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
100203	110203	-03	3/8-24	1.31	.50	.095
100204	110204	-04	7/16-20	1.33	.50	.156
100205	110205	-05	1/2-20	1.40	.56	.207
100206	110206	-06*	9/16-18	1.56	.63	.277
100208	110208	-08	3/4-16	1.72	.69	.358
100210	110210	-10	7/8-14	1.99	.77	.469
100212	110212	-12*	1 1/16-12	2.13	.79	.594
100216	110216	-16	1 5/16-12	2.37	.84	.812

* JIC Only



Female Swivel SAE - Wrenching Hex

Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
116004	-04	7/16-20	1.45	.63	.156
116005	-05	1/2-20	1.50	.69	.207
116006	-06	5/8-18	1.68	.76	.277
116008	-08	3/4-16	1.88	.82	.358
116010	-10	7/8-14	2.09	.90	.469
116016	-16	1-5/16-12	2.71	1.02	.812



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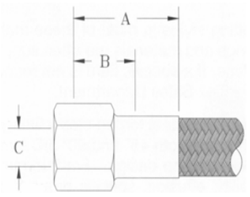
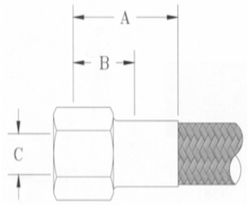
Medium Pressure Smooth Bore Fittings

Medium Pressure Smooth Bore Fittings



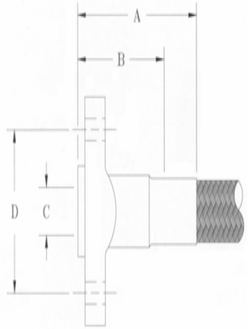
Female Swivel - SAE

Brass	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
110306	-06	5/8-18	1.56	1.00	.277
110312	-12	1-1/16-14	1.97	1.22	.594



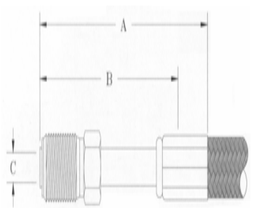
Female Pipe

Stainless Steel	Brass	Hose Size	Pipe Thread	A Overall Length In	B Deduct Length In	C Nominal I.D. In
100405	110405	-05	1/4-18	1.42	.96	.207



2-Bolt Flange

Brass Iron Flange	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Bolt Hole Length In
110505	-05	.98	.53	.207	2.0
110506	-06	1.11	.56	.277	2.0
110512	-12	2.27	1.50	.594	2.0
110516	-16	2.45	1.54	.812	2.0



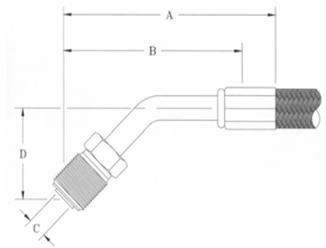
Male Inverted Flare - Straight

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size
132604	-04	7/16-24	1.84	1.39	1/4
132605	-05	1/20-20	1.90	1.45	5/16
132606	-06	5/8-18	2.07	1.52	3/8
132608	-08	3/4-18	2.21	1.60	1/2
132610	-10	7/8-18	2.47	1.77	5/8

Medium Pressure Smooth Bore Fittings

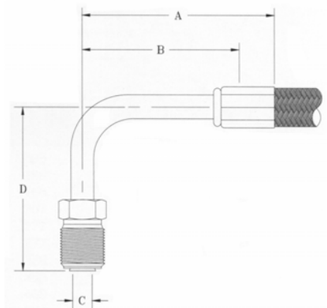
Male Inverted Flare - 45° Elbow

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
132704	-04	7/16-24	1.99	1.53	1/4	.73
132706	-06	5/8-18	2.48	1.93	3/8	.94
132708	-08	3/4-18	2.95	2.10	1/2	1.14



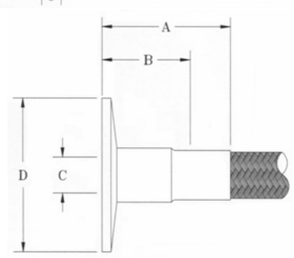
Male Inverted Flare - 90° Elbow

Carbon Steel	Hose Size	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
132804	-04	7/16-24	1.42	.97	1/4	1.30
132805	-05	1/2-20	1.54	1.09	5/16	1.48
132806	-06	5/8-18	1.80	1.25	3/8	1.63
132808	-08	3/4-18	2.10	1.49	1/2	1.91
132810	-10	7/8-18	2.47	1.77	5/8	2.16



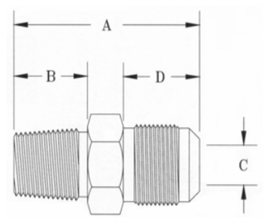
Sanitary Fitting

316 Stainless Steel	Hose Size	A Overall Length In	B Deduct Length In	C Nominal I.D. In	D Face Diameter In
101616	-16	1.85	.94	.812	1.985



Adapter - Male JIC to Male Pipe

316 Stainless Steel	Brass	Hose Size	A Overall Length In	B Pipe Thread	C Nominal I.D. In	D JIC Thread
101204	111204	-04	1.17	1/8-27	.172	7/16-20
101104	111104	-04	1.43	1/4-18	.172	7/16-20
101105	111105	-05	1.43	1/4-18	.234	1/2-20
101206	111206	-06	1.38	1/4-18	.297	9/16-18
101106	111106	-06	1.43	3/8-18	.297	9/16-18
101208	111208	-08	1.50	3/8-18	.390	3/4-16
101108	111108	-08	1.60	1/2-14	.390	3/4-16
101110	111110	-10	1.89	1/2-14	.484	7/8-14
101210	111210	-10	1.86	3/8-18	.484	7/8-14
101112	111112	-12	2.06	3/4-14	.609	1 1/16-12
101116	111116	-16	2.30	1-11 1/2	.844	1 5/16-12



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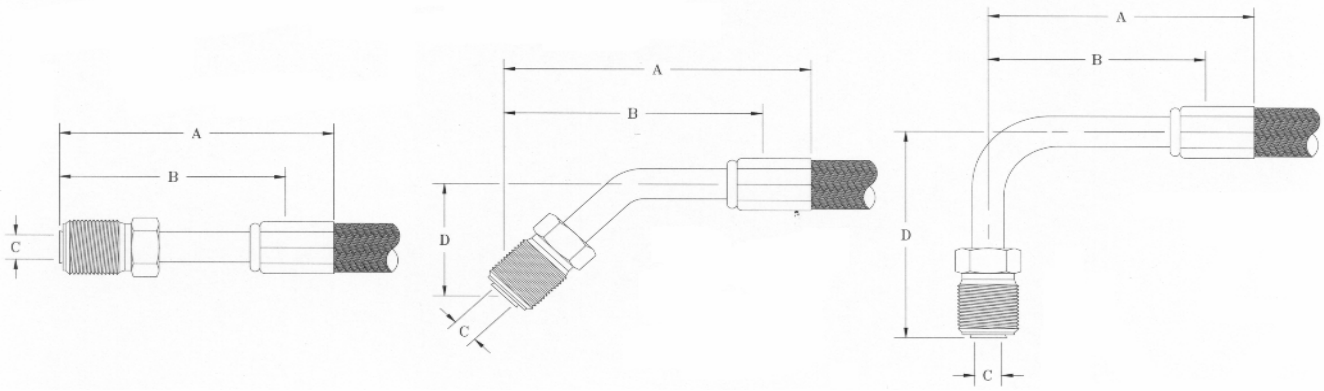
Medium Pressure Smooth Bore Fittings

Power Trim Fittings

300 series stainless steel fittings in size –04 with crimp style collars. Complete factory assembled power trim hose lines are available in standard 14.5 - inch length.

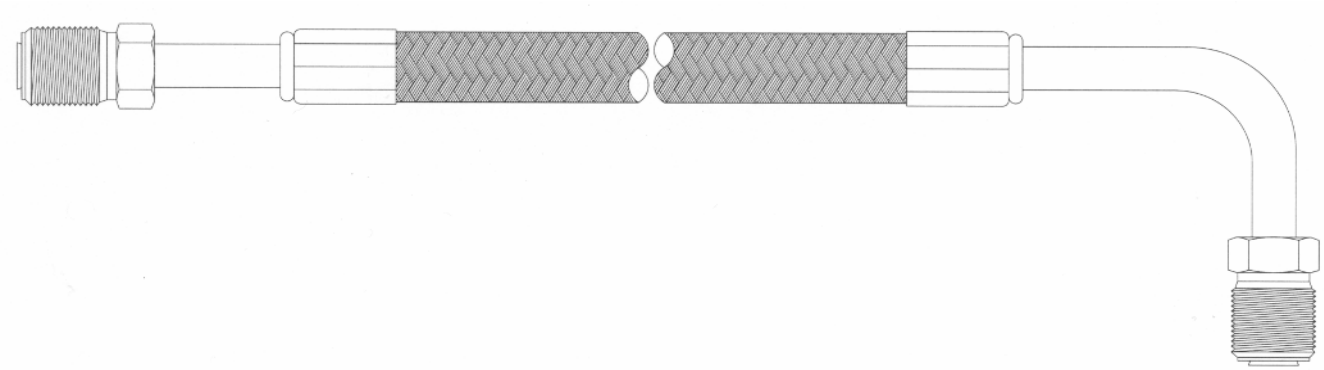


Stainless Steel	Thread	A Overall Length In	B Deduct Length In	C Tube Size	D Drop In
100604	3/8-24	1.76	1.27	3/16	-
100704	3/8-24	1.89	1.43	3/16	.73
100804	3/8-24	1.54	1.05	3/16	1.32

Power Trim Assemblies

Teleflex power trim assemblies offer numerous advantages over rubber and nylon hoses for the rugged marine application. Teleflex PTFE hoses are not subject to aging or degradation from UV exposure. Only Teleflex hoses offer low volumetric expansion and long life, making Teleflex power trim hoses the most cost effective product for marine hydraulics.

For information on marine fuel lines and other marine hose applications, contact the Teleflex Sales Department at 1-800-225-9077.



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Medium Pressure Smooth Bore Hose

(PTFE)

Temperature Range - 100°F to 500°F (-73°C to 260°) Intermittent Service
- 65°F to 450°F (-54°C to 232°) Continuous Service

GENERAL PURPOSE SMOOTH BORE PTFE HOSE MEETS OR EXCEEDS SAE 100R14 SPECIFICATIONS

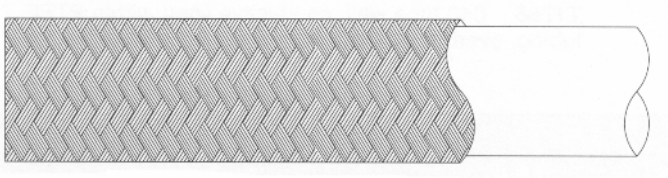
Teleflex smooth bore PTFE hoses have been the universal problem solver in the industry for decades. Through a process known as cold head extrusion, tetrafluoroethylene powder is transformed into a smooth tube of PTFE. Utilizing only the finest DuPont T62, Teleflex processes tons of powder into the best quality PTFE tubing on the market today. State-of-the-art quality control methods, meticulous attention throughout our product line, and proprietary processes unique to the industry, make Teleflex Fluid Systems PTFE hose products the very best in the world.

HOSE

The industry standard is T1167. It has been widely specified for an endless variety of applications including automotive, food processing, pharmaceutical, chemical and petrochemical.

Teleflex hoses can be found in factories, on trucks and buses, on automobiles (both on and off road), in laboratories, and in endless manufacturing situations; anywhere that the limitations of rubber, metal and synthetic hoses make PTFE hose the only solution.

Some applications require a conductive inner liner to dissipate static electrical charges. High resistivity fluids or gases at high velocities cause positive electrical charges to build on the inside of the PTFE liner. If not dissipated to the end of the hose, the charge will build until it arcs through the tube wall to the braid, causing catastrophic hose failure. To alleviate this, Teleflex manufactures a PTFE tubing with a thin conductive liner on the inside diameter.



T1167 - .030 tube wall, non-conductive virgin PTFE tubing, over braided with 300 series stainless steel wire.

T1170 - .030 tube wall, conductive lined, virgin PTFE tubing, over braided with 300 series stainless steel wire.

T1167, T1170

Hose Part Number	Hose Part Number Conductive	Hose Size	Average I.D. In	Average O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft	Maximum Cont Lgth In/Ft
T1167-03	T1170-03	3/16	.125	.250	3000	12000	2	.047	300
T1167-04	T1170-04	1/4	.187	.312	3000	12000	2	.077	400
T1167-05	T1170-05	5/16	.250	.375	3000	12000	3	.098	300
T1167-06	T1170-06	3/8	.312	.445	2500	10000	4	.110	300
T1167-07	T1170-07	7/16	.375	.503	2250	9000	4.5	.124	300
T1167-08	T1170-08	1/2	.405	.549	2000	8000	5.2	.124	200
T1167-10	T1170-10	5/8	.500	.648	1500	6000	6.5	.154	180
T1167-12	T1170-12	3/4	.625	.778	1200	4800	7.7	.170	150
T1167-14	T1170-14	7/8	.750	.885	1100	4400	8.2	.198	100
T1167-16	T1170-16	1	.875	1.030	1000	4000	9	.273	100
T1167-18	T1170-18	1-1/8	1.000	1.135	900	3600	10	.305	75
T1167-20	T1170-20	1-1/4	1.125	1.290	750	3000	16	.350	75

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Medium Pressure Smooth Bore Hose
(PTFE)

Teleflex INCORPORATED
fluid systems
A Division of Teleflex Incorporated (USA)

A number of industries still follow the practice of specifying the product with bronze wire for applications utilizing steam. For these applications we recommend:

T1168 - .030 tube wall, non-conductive virgin PTFE tubing, over braided with 80/20 bronze wire.

T1168

Hose Part Number	Hose Size	Average I.D. In	Average O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft	Maximum Cont Lgth In/Ft
T1168-04	1/4	.187	.312	1000	4000	2	.080	400
T1168-05	5/16	.250	.375	750	3000	3	.100	300
T1168-06	3/8	.312	.445	625	2500	4	.115	300
T1168-08	1/2	.405	.549	500	2000	5	.140	200
T1168-10	5/8	.500	.648	425	1700	6.5	.150	180
T1168-12	3/4	.625	.778	300	1200	7.5	.175	150
T1168-16	1	.875	1.030	200	800	9	.205	100
T1168-20	1-1/4	1.125	1.290	175	700	16	.260	75

Where a heavier tubing wall is desired, Teleflex produces a .040 wall product with both conductive and non-conductive liners.

T1702 - .040 tube wall, non-conductive virgin PTFE tubing, over braided with 300 series stainless steel wire.

T1756 - .040 tube wall, conductive lined, virgin PTFE tubing, over braided with 300 series stainless steel wire.

T1702, T1756

Hose Part Number	Hose Part Number Conductive	Hose Size	Average I.D. In	Average O.D. In	Operating Pressure PSI	Burst Pressure PSI	Bend Radius In	Weight Lbs/ Ft	Maximum Cont Lgth In/Ft
T1702-04	T1756-04	1/4	.188	.323	3000	12000	2	.077	360
T1702-05	T1756-05	5/16	.250	.386	3000	12000	3	.098	270
T1702-06	T1756-06	3/8	.313	.447	2500	10000	4	.114	270
T1702-07	T1756-07	7/16	.381	.513	2250	9000	4-1/2	.122	270
T1702-08	T1756-08	1/2	.406	.565	2000	8000	5	.141	180
T1702-10	T1756-10	5/8	.500	.664	1500	6000	6-1/2	.174	162
T1702-12	T1756-12	3/4	.630	.789	1250	5000	7-1/2	.255	135
T1702-16	T1756-16	1	.878	1.050	1000	4000	9	.299	90
T1702-20	T1756-20	1-1/4	1.128	1.310	750	3000	16	.468	67.5

Other applications may require hose products that are unique to a specific set of criteria. Here is where Teleflex Industrial Fluid Systems excels as the problem solver in the industry. For Information on other hose products or specific application performance data such as vacuum ratings, minimum assembly lengths and/or installation configurations please refer to the technical data sheets or call the Teleflex Sales Department at 1-800-225-9077.

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Technical Data

Technical Data

SIZE

Selecting the Right Hose Size
With the help of this nomograph, you can easily select the correct I.D. (inches) size, desired flow rate (GPM) and recommended velocity (FPS). If you know any two factors, you can determine the third. This chart is based on the formula:

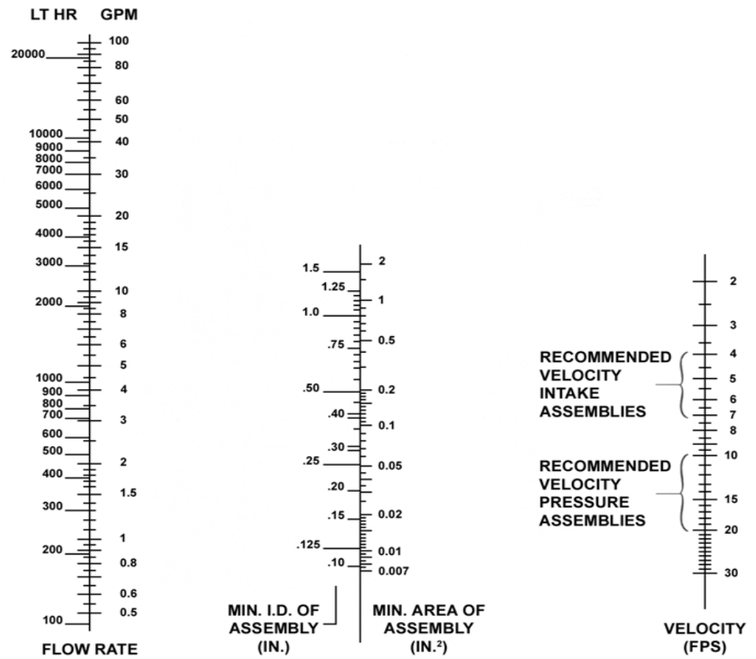
$$\text{Area} = \frac{\text{Flow Rate} \times 0.3208}{\text{Velocity}}$$

Using the Nomograph:
1. Pick two known values.
2. Lay a straight edge to intersect the two values.
3. Intersection on the third vertical line is the value of that factor.

Example:
A flow rate of 4 GPM is obtained through a pressure hose having an inner diameter of 1/2 inch. A line would intersect the two values and cross the velocity line at 6.5 indicating 6.5 FPS.

37° HOSE END TORQUE VALUES SEAT & NUT

Size	SS Max In / Lbs	Brass Max In / Lbs
-4	150	75
-5	200	100
-6	300	150
-8	500	250
-10	700	350
-12	1000	500
-16	1400	700
-20	2100	-
-24	3000	-
-32	4500	-



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Technical Data

Technical Data

Hose and Fitting Application Considerations

As with any properly engineered application, selection of the optimum hose assembly is extremely important so that it will perform within the application as the design intended. Therefore, for proper selection, a number of areas should be considered as they relate to the installed application:

1. Maximum operating pressure, i.e., constant pressure or pressure surges (impulse).
2. Maximum operating temperature.
3. Vacuum service conditions.
4. Fluid compatibility of hose and fittings.
5. Fluid media and velocity (potential for static discharge).
6. Potential for media effusion.
7. Installation:
   - Fitting style
   - Fixed versus flexing application
   - Minimum bend radius
   - Potential for abrasion
8. Special sleeving required.
9. Any additional data that may impact the performance of an installed hose assembly within the special application.

The above does not preclude the necessity for consideration of any other mechanical, thermal or chemical parameters when specifying, selecting or ordering hose, fittings, or hose assemblies. If you are not certain of which Teleflex hose product best fits your needs, contact your sales representative or call the factory.

Effusion/Corrosion for PTFE Hose Assemblies

Effusion is the process by which molecules of a chemical will move through the wall of PTFE and escape from a hose or hose assembly. The rate at which effusion occurs depends upon temperature, pressure, wall thickness, and the hose material. The fact that effusion occurs is not usually the problem. Effusion will occur with almost all media in almost every hose material. The basic issues are:

1. At what rate will the effusion take place? (The rate of effusion is a function of the media, temperature, and pressure.)
2. How hazardous is the media?
3. What is the environment in which the effusion will take place; i.e., a closed room, outside, etc.

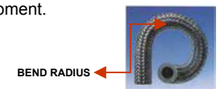
There are three categories of media that are of general concern when considering the potential effects of effusion:

1. Media that will not be of concern from a corrosion standpoint, but may effuse and displace breathable air in a confined space and consequently be a hazard to personnel.
2. Media that have the potential to effuse when their "vapor phase" exists: i.e., when they reach their boiling point of approximately 125°F at atmospheric pressure. These media, with atmosphere, can form chemicals that can corrode the braid and/or cause injury to personnel.
3. Media with the potential to effuse and cause corrosion of the braid reinforcement and fitting materials. These chemicals are all gases while at atmospheric pressure and at a temperature of 56°F or lower.

It is important that hose assemblies used in these applications be installed in areas that are well vented to avoid potential problems for personnel and/or equipment.

Hose Radius Considerations

Definitions:



Bend Radius - The radius of a bent section of hose is always measured to the innermost surface of the curved portion.

Minimum Bend Radius - This is the maximum amount a hose can be bent prior to putting excessive force on the hose before causing kinking or damage.

This formula shows how to determine the minimum length of a hose to make the angle of bend required. The bend should take place over the entire minimum length - not just a portion of it.

General Formula - Angle of Bend

360° x 2 π r = minimum length of hose to make bend
r = given bend radius of hose

Example: To make a 90° bend with T1568-24, 1½ I.D.
Given r = 4.5 inches

$$\frac{90°}{360° \times 2 \times 3.14 \times 4.5}$$

.25 x 2 x 3.14 x 4.5 = 7" minimum length of hose to make bend without damage to hose. **Note:** If the 90° bend takes place in less than 7", the hose could be damaged.

Electrostatic Discharge

Most applications of PTFE hose do not require the use of a conductive inner tube. Under certain applications, the potential for STATIC DISCHARGE must be considered and that there is an awareness that static electricity can be a hazard. Under those conditions where static discharge can occur, the use of conductive PTFE is recommended. The following should serve to increase your knowledge and understanding of this phenomenon and how to avoid its occurrence. When two different materials are in contact, electrons from one material can move across its boundary and associate with the other. These electrons align themselves with the material contacted. If the two materials are good conductors of electricity, the positive and negative electrons will flow back and forth between them, keeping them in balance. If one or both of them are insulators, this flow will not occur. A charge will build up on the surface of one of the materials. When the charge exceeds the dielectric strength of the material, dielectric breakdown occurs. In the application of PTFE, we must consider fluids and gases which are poor conductors of electricity and the flow rates of those fluids and gases. A liquid or gas to be a poor conductor of electricity will usually satisfy one or more of the following conditions:

1. Be non-polar - that is, an imbalance exists between protons and electrons, and or
2. Contain an immiscible component or a suspended solid, i.e., water in kerosene.

Therefore, when a liquid comes in contact with a PTFE tube that is not a good conductor (white PTFE inner core), phase separation occurs and the electric charge starts to build. The rate of static charge build up now becomes a function of the fluid flow rate. When the dielectric strength of the PTFE tube is exceeded, the electric charge will puncture the tube wall and ground itself on the braid. In hydraulics, high pressures usually mean high velocities. Historically, fluids were filtered upstream using metallic filter elements. The metallic element helped to ground the charge. Today, however, most filtration is accomplished with paper type and glass-fiber filter elements that have a tendency to put an electrostatic charge in the fluid they are filtering. There are two specific material areas of concern; fuels and steam. Fuels are generally "non-conductive" liquids and have a resistivity greater than 10^8 ohm, i.e., gasoline and white spirits, hydrazine, benzene, diesel oils, etc. Generally these fluids are transferred at fairly low velocities but the potential does still exist for an electrostatic discharge due to external environmental factors such as humidity and to some extent temperature. All of these factors should be taken into account even at fluid velocities at or below 1 meter/second. When it comes to the use of PTFE hose, the potential for electrostatic discharge can be overcome by the use of a conductive PTFE inner tube. Carbon is added to the PTFE inner tube wall during the manufacturing process. The carbon black allows for the electrostatic charge to be conducted down the inner diameter of the hose to the metal end fittings, thereby preventing the charge from building up on the inner tube wall, exceeding the dielectric strength of the PTFE and discharging through to the outer metallic braid causing static pin holing or burn through. Therefore, from an applications standpoint it is important to examine any application where non-conductive fluids are used and any of the above conditions exist. The above is not meant to cover all applications or situations when it comes to the use of fuels, steam, or other media which may have the ability to cause electrostatic build up or potential discharge. If you have any questions about an individual application, please contact the Teleflex Sales Department at 1-800-225-9077.

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FRICTION LOSS (P.S.I. Per 100 Feet of Hose)

The pressure loss of liquid flowing through a hose depends on the rate of flow, viscosity of the liquid, the smoothness of the tube, and the hose length. This chart shows the relationship between rate of flow, I.D. and pressure loss for water at 68°F with a viscosity of one centipoise (CP). This chart serves only as a reference in determining pressure drop in a transfer system. Contact the Teleflex Sales Department at 1-800-225-9077 for details on specific applications.

Flow of Water in US Gal Per Min	Flow of Water in Cu Feet Per Sec	Actual Internal Diameter Inches						
		1/2	5/8	3/4	1	1 1/4	1 1/2	2
0.5	.001	0.4	-	-	-	-	-	-
1.5	.003	3.02	1.01	0.42	-	-	-	-
2.5	.005	7.75	2.58	1.08	-	-	-	-
5	.011	27.8	9.27	3.86	0.95	0.32	0.13	-
10	.022	99.5	33.2	13.8	3.38	1.14	0.47	0.12
15	.033	-	71.0	29.6	7.25	2.45	1.01	0.25
20	.044	-	121.0	50.3	12.4	4.15	1.71	0.42
25	.055	-	-	76.5	18.7	6.34	2.60	0.64
30	.066	-	-	108.0	26.5	8.96	3.68	0.90
35	.077	-	-	142.0	34.8	11.8	4.83	1.18
40	.088	-	-	-	44.7	15.1	6.20	1.52
45	.099	-	-	-	55.0	18.6	7.65	1.87
50	.110	-	-	-	67.5	22.8	9.35	2.28
60	.132	-	-	-	94.3	31.8	13.1	3.19
70	.154	-	-	-	126.0	42.5	17.5	4.25
80	.176	-	-	-	-	54.6	22.5	5.48
90	.198	-	-	-	-	67.5	27.8	6.80
100	.223	-	-	-	-	81.5	33.5	8.19
125	.278	-	-	-	-	124.0	50.6	12.4
150	.334	-	-	-	-	-	72.1	17.6
175	.390	-	-	-	-	-	94.5	23.1
200	.446	-	-	-	-	-	122.0	29.6
225	.501	-	-	-	-	-	-	36.8
250	.557	-	-	-	-	-	-	44.6
275	.613	-	-	-	-	-	-	53.3
300	.688	-	-	-	-	-	-	62.5
325	.724	-	-	-	-	-	-	72.5
350	.780	-	-	-	-	-	-	83.2
375	.836	-	-	-	-	-	-	94.5
400	.891	-	-	-	-	-	-	107.0

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Assembly Instructions
Convoluted Hose

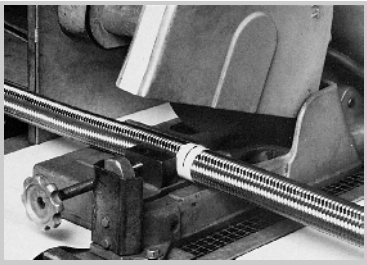
The assembly method described herein, incorporates a permanently attached crimp/swage fitting. This method offers the easiest, most reliable way to attach fittings, no matter what the quantity. By following these simple steps, you can be sure of "factory-quality" dependability and performance.

Convoluted Dash Size	Swage/Crimp Dimension ± .005	Crimp Length*
8	.800	Full
12	1.063	Full
16	1.295	Full
20	1.557 **	Full
24	1.810	Full
32	2.375	Full

** Gauge length is preset by the fitting pusher*
***Swage diameter is 1.547*

The table above gives the correct crimp/swage dimensions by size for reference purposes. Please follow these guidelines precisely. All dimensions must be checked with a micrometer after swaging/crimping. Consult Teleflex if you have any questions or for additional information concerning the use of specific types of swagers or crimpers. Pressure testing of finished assemblies is recommended.

These assembly instructions are provided as a guideline for the proper assembly of Teleflex hose and fittings. Consult Teleflex engineering assembly procedures for best results. No additional product warranties beyond those stated in Teleflex Catalog 1290 apply.

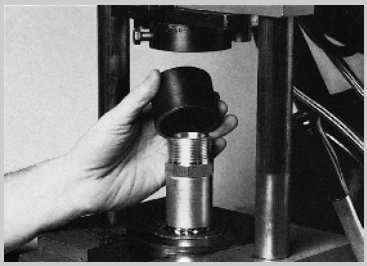


1 After figuring the hose length and deducting for fittings, tape the hose with heavy duty masking tape at the point where it is to be cut and mark the length on the tape. Cut the hose with an abrasive saw. **Note:** If the braid is loose prior to being cut to length, work it down tightly from one end, tape it to prevent movement, and cut the excess braid off.

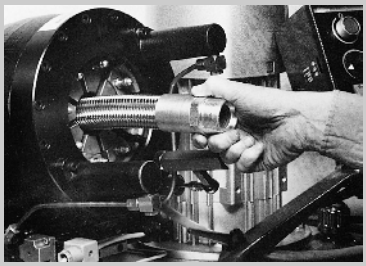
2 Deburr the I.D. of the hose with a sharp knife and blow the inside clean with shop air. **Note:** To maintain a tight braid during assembly, tape the braid down approximately 4" from each end of the cut hose.

3 To attach the collar, remove the masking tape and insert the hose in the large I.D. end of the collar. Be sure that the braid and inner core are inserted all the way up to the inside shoulder of the collar where the I.D. is reduced. **Note:** To monitor proper insertion depth, mark the braid on the outside at the edge of the collar. Repeat this procedure on the other end.

4 Rotate the fitting onto the hose counterclockwise until the insert stops on the collar. It is best to use a rotating pipe threader. To insert by hand, use a vice to hold the fitting and rotate the hose clockwise. Secure the fitting in the chuck with the barbed end out. Clockwise, apply three or four wraps of Teleflex PTFE tape to the barbed area. As the fitting rotates, push the hose in until you feel it lock up on the insert.



5 **SWAGE ATTACHMENT.** Select the proper size dies and swage pusher and install in the swager. Lubricate the collars with a dry PTFE spray available from Teleflex. Properly position the assembly and tooling in the swager and apply swaging oil to the collar. Actuate the swager and push the assembly down into the dies until the pusher bottoms on the dies. Retract the swager and remove the tooling. Repeat on other end.



6 **CRIMP ATTACHMENT.** Consult the table at left for crimp diameter and length dimensions. Most standard fully adjustable crimpers can be used to attach Teleflex hose and fittings. Preset crimpers require special crimp rings to work properly with Teleflex products. All Teleflex convoluted fittings are designed to be swaged or crimped using the same inserts and collars. Consult the factory with any questions you may have.

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