ENGINEERING
TOMORROW

Catalog

Danfoss PTFE Hose and Fittings

Solutions for your most Demanding Applications

Everflex and Winner

Danfoss has been a pioneer in the production of hoses made with Teflon™ fluoropolymer. Everflex hoses are ideally suited for use in applications where high and low temperature, chemical resistance, low coefficient of friction, flexibility, and non-aging characteristics are required. Since 1961, Everflex has been the premier brand of hose products made from Teflon™ fluoropolymer for use in truck, chemical, hot melt, paper and pulp, hot presses, steam, packaging, paint, machinery, and many other demanding applications. The Winner PTFE compliments the Everflex portfolio, by adding a competitive, standard tier offering to Danfoss' PTFE family of products.

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Everflex and Winner PTFE Hose

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Design Considerations

Basic considerations in hose selection

Smooth bore vs. convoluted

The primary differentiators between smooth and convoluted tubes are size and bend radius. Smooth bore hoses are generally only available in tube diameters of one-inch or less, and they will have much greater minimum bend radii. For example, one-inch smooth bore hose has a minimum bend radius of 12 inches, while the same size convoluted hose has a minimum bend radius of only three inches. Convoluted hoses are also more resistant to collapse in vacuum. Smooth bore hoses tend to have a lower price than same-sized convoluted hoses.

Wall thickness

In applications where a hose is flexed severely, thicker walls will provide better resistance to buckling. Thick wall hoses are also less permeable with both fluids and gases than thin wall hoses. Thin wall hoses tend to have a lower price because they contain less material. Most Everflex hoses are classified as either thin wall (.030") or thick wall (.040").

Fittings

Hoses made with Teflon™ fluoropolymer can use crimp, swage, or reusable fittings. The choice is largely one of individual preference, since there are no significant performance differences between the systems.

Interior and exterior treatments

Hoses exposed to severe environmental conditions can be fitted with several different forms of external protection. Options include extruded thermoplastic and silicone sleeves, slip-over or integral fire-resistant sleeves, and a variety of metallic and fabric protective braids. Hoses used in vacuum applications, particularly at high temperatures, are often fitted with internal coils or sleeves to prevent collapse.

Conductive vs. non-conductive Teflon™ fluoropolymer

Hoses, typically fuel lines carrying low-viscosity hydrocarbons at high flow rates, tend to build up static electrical charges that can arc through the Teflon™ fluoropolymer to the braid. This can create a pinhole in the Teflon™ fluoropolymer. Specifying conductive Teflon™ fluoropolymer will allow the static charge to bleed off harmlessly to the fitting.

Braid material

The 304 stainless is the baseline braid material for most hoses made with Teflon™ fluoropolymer. The 316 stainless is the recommended material for marine hose applications. Monel is available for hoses exposed to severe corrosion environments; bronze is used in applications where hoses may rub together or against other pieces of equipment. In the latter case, the excellent lubricity of bronze often can deliver longer wear life than stainless steel. Braid material is also a major factor in the pressure rating for a given hose. Special braid materials and configurations are available to handle pressures up to 5,000 psi.

Safety Information

This catalog is intended as a guide in selecting the proper hose and fittings for the applications listed herein. It contains cautions, warnings, guidelines, and directions for the safe and proper use of Everflex hose. All these directions and footnotes should be read and understood before specifying or using any of these hoses.

This symbol is used when personal injury is possible.

WARNING: A failure of Everflex hose in service can result in personal injury, death, or damage of property. Do not use Everflex hose at temperatures or pressures above those recommended by the manufacturer. All operators must be trained in the care and use of this hose and must always wear protective clothing. A hose or system failure could cause the release of a poisonous, corrosive, or flammable material.

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials that can cause death, serious injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals being conveyed in the hoses.

WARNING: In the case of low viscosity hydrocarbon fluids moving at high flow rates, it is necessary to use conductive tubed Everflex hose products.

WARNING: Selection of the proper end fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for the application can result in leaking or the hose ends blowing off the hose, leading to serious personal injury, death, or property damage.

The use or intermixing of fittings and hose not specifically engineered and designed for use with the Danfoss Everflex equipment may result in the production of an unsafe or unreliable hose assembly. The Danfoss limited warranty is contingent upon the fact that only Danfoss Everflex end fittings and Danfoss Everflex hose be used on Danfoss Everflex assembly equipment. In order to avoid serious bodily injury or property damage resulting from selection of the wrong end fitting, you should carefully review the information in this catalog.

Steam Hose Safety Information

Make your selection with safety in mind

- Select a hose identified as steam hose construction.
- Identify the type of service the steam hose is required to accomplish and review these considerations:
  - a) Is the hose manually handled?
  - b) What is the anticipated frequency of use?
  - c) What is the actual pressure of the steam service?
  - d) Is it subject to surges or peak pressures?
  - e) What is the temperature of the steam?
  - f) Saturated (wet) or superheated (dry) steam?
  - g) What are the external conditions in the area where the hose will be used?

  Recognize that spillage, or accumulations of corrosive chemicals or petroleum, based materials externally, can have a deteriorating effect on the hose cover.

Make sure the hose is installed properly

- Avoid extreme flexing of the hose near the coupling. If necessary, use elbows in the piping system to assure a straight-line connection with the hose.
- Installing and using a shut-off valve between the steam source and the hose will maximize service life and operator safety. Danfoss considers such a valve mandatory for safe operation.
- The use of spring guards can relieve some of the acute flexing encountered in heavy manual handling applications.
- Provide a suitable means of storing the hose when not in use. A permanent rack or tray will minimize the damage to the hose in storage. Do not hang the hose on a hook, nail, or other device which could cut or damage the hose.

Common sense with steam hose

- Provide operators with adequate safety clothing, including gloves, rubber boots, full length protective clothing, and eye protection. The objective is to provide protection from scalding burns resulting from splash-back of steam or hot water.
- Ensure that the work area is free of tripping hazards and other clutter.
- Do not allow the hose to remain pressurized when not in service. Turning off the pressure can provide dramatic increases in steam hose service life.
- The best protection from accidents is the anticipation that they could occur.

Periodic maintenance of steam hose

All steam hoses are expected to wear out in time. It is important to continually be on the look-out for hose that has deteriorated to the point where it can no longer provide safe service. The following guidelines can help in that determination. Operators should be aware of the obvious signs of trouble including:

- Steam leakages at the coupling ends or anywhere along the length of the hose
- Flattened or kinked areas which have damaged the hose

When any of the above abnormalities appear, it is good safety sense to immediately remove the hose from service. Once removed, the hose can be carefully inspected before further use.

WARNING: Exposure to steam is hazardous. If not properly controlled, steam can cause serious injury, death, or damage to property. In order to avoid serious injury, death, or damage to property, you must select the proper steam hose for the given application. Also, proper installation, usage, and maintenance of the steam hose you select will contribute to increased operator safety. Carefully read and understand the safety information provided on this page and the following pages.

WARNING: Failure to properly follow the manufacturer's recommended procedures for the care, maintenance, and storage of a particular hose may result in its failure to perform in the manner intended and may result in serious injury, death, and damage to property.

WARNING: Only specially trained persons should engage in applications or testing procedures that require skills. Failure to do so may result in damage to the hose products or to other property and more importantly, may also result in serious injury.

Steam Temperature

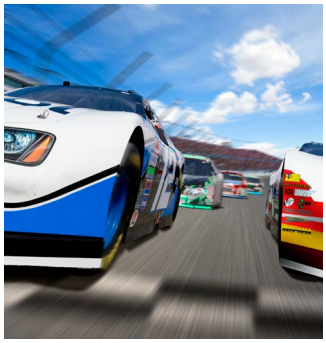
Temperatures of saturated steam at various pressures

Lbs. Per Sq. Inch Pressure	Degrees Fahrenheit	Degrees Centigrade
0	212.0	100.0
5	227.1	108.4
10	239.4	115.2
15	249.8	121.0
20	258.8	126.0
22	261.2	127.8
24	265.3	129.6
26	268.3	131.3
28	271.2	132.9
30	274.1	134.5
32	276.8	136.0
34	279.3	137.4
36	281.8	138.8
38	284.4	140.2
40	286.7	141.5
42	289.0	142.8
44	291.2	144.0
46	293.5	145.3
48	295.5	146.4
50	297.7	147.6
52	299.9	148.7
54	301.6	149.8
56	303.6	150.9
68	305.4	151.9
60	307.4	153.0
62	309.2	154.0
64	310.8	154.9
66	312.6	155.9
68	314.2	156.8
70	316.0	157.0
72	317.7	158.7
74	319.3	159.6
76	320.9	160.5
78	322.3	161.3
80	323.8	162.1
85	327.6	164.2
90	331.2	166.2
95	334.6	168.1
100	337.8	169.9
105	341.1	171.7

Lbs. Per Sq. Inch Pressure	Degrees Fahrenheit	Degrees Centigrade
110	344.1	173.4
115	347.2	175.1
120	350.1	176.7
125	352.9	178.3
130	355.6	179.8
135	358.3	181.3
140	360.9	182.7
145	363.4	184.1
150	365.9	185.5
155	368.2	186.8
160	370.6	188.1
165	373.9	189.4
170	375.3	190.7
175	377.4	191.9
180	379.6	193.1
185	381.7	194.3
190	383.7	195.4
195	385.9	196.6
200	387.9	197.7
205	398.8	198.8
210	391.6	199.8
215	392.9	200.5
220	395.4	201.7
225	397.2	202.9
230	399.0	203.9
235	400.7	204.8
240	402.5	205.8
245	404.2	206.8
250	406.1	207.8
255	407.7	208.7
260	409.4	209.7
265	411.0	210.6
270	412.6	211.4
275	414.2	212.3
280	415.7	213.2
300	421.0	216.1
350	436.5	224.7

WARNING: Steam heat is hotter than 212 °F (boiling water) and increases in temperature as pressure increases.

Why Danfoss Everflex Hose?




- Everflex hose made from Teflon™ fluoropolymer resin has **excellent temperature** characteristics. It works well in high ambient, fluid or gas media temperatures (+450 °F). It works equally well in cryogenic applications (-65 °F).
- Everflex hose has a broad range of **chemical resistance.** It is inert to most commercial chemicals, acids, alcohols, coolants, elastomers, petroleum compounds, solvents, vinyl, synthetic lubricants, and hydraulic fluids.

  Chemical Resistance Chart begins on pages I-2
- Everflex hose withstands **continuous flexing, vibration, or impulse.**
- Everflex hose is **compatible with steam.** It absorbs no moisture — hot or cold.
- Everflex hose is **noncontaminating**. Conveyed materials, fluids, or gases will not contaminate in service. It is easy to clean and sterilize for FDA or pharmaceutical applications.
- Everflex hose has **high flow rates.** Its low coefficient of friction with anti-stick properties insures continuous lower pressure drop during service with good pressure rating.
- Everflex hose **resists deterioration.** It is impervious to weather and can be stored for long periods of time without aging.
- Everflex hose has a **long-life expectancy** when applied within its temperature and pressure ratings.
- Everflex hose can **handle many substances** such as adhesives, asphalt, dyes, greases, glue, latex, lacquers, and paints. It has no carbon build up when used as a compressor discharge line.




How **to Order**

1. Specify quantity required

a. For bulk hose in random lengths, state quantity in feet (e.g. 150 ft, S-12).

b. For specified ("cut") lengths of hose, state number of pieces (e.g. 10 pcs., S-12-00200).

c. Danfoss reserves the right to ship +10% of the maximum reel length quantity or bulk quantity ordered.

2. Specify part number

a. For bulk hose, state hose style number and dash size (e.g. 100 ft, S-12).

b. For cut lengths, state hose style number and dash size plus length to the nearest 1/8 inch (e.g. 10 pcs., S-12-000125) indicates 10 pieces S-12 hose, length of each piece 12-5/8 inches (the fifth digit of the length designator represents eighths of an inch).

3. Bulk Everflex hose is supplied in the following length patterns

Sizes: -3 through -12

- No less than 75% in lengths 25 feet or longer
- No more than 25% in lengths 5 feet to 24 feet

Sizes: -14 through -24

- No less than 65% in lengths 25 feet or longer
- No more than 35% in lengths 5 feet to 25 feet

4. For large quantities or long lengths, please consult Danfoss for price and availability

Note: Length tolerance for cut hose lengths, assemblies and sleeves are

- Up to and including 12": +/- 1/8"
- Above 12" to and including 18": +/- 3/16"
- Above 18" to and including 36": +/- 1/4"
- Above 36": +/- 1% of length

Warranty

Danfoss hydraulics warranty policy is located at www.danfoss.com

Everflex Smooth Bore Hose

Everflex Smooth Bore hose made from Teflon™ fluoropolymer is specified in many of the most difficult applications across various industries. The extruded tube has excellent flex life, high temperature resistance, and chemical resistance. Additionally, Everflex hose is an excellent choice in applications requiring steam cleaning of an assembly or transfer of a highly viscous media, such as adhesives, paints, or food products.

The 304 stainless steel wire reinforcement provides the strength necessary to carry the working pressure and the durability to withstand harsh environments. The optional 316 stainless steel braid is ideal for more corrosive environments. High temperature hydraulic and pneumatic systems—such as those found in steel mills, foundries, and transit buses—are ideal locations to offer Everflex hose as a problem solver. Materials meet 21-CFR-177.1550 for use in food handling applications.

2807 Smooth Bore

Non-Dissipating

Danfoss' EverFlex hoses are the premier choice for hose products made from premium grade Teflon™ fluoropolymer for use in truck, chemical, hot melt, steam, packaging, paint, machinery, and many other demanding applications. EverFlex 2807-Series tube is reinforced with 304 stainless steel wire and all sizes are made from virgin Teflon™ fluoropolymer.

Construction

- Non-conductive Teflon™ fluoropolymer inner tube
- Single layer of 304 stainless steel braid
- Tracer wire in S.S. braid for identification

Applications

- Steam
- Compressor discharge
- Hot air
- Most chemical applications
- Industrial and manufacturing
- Pharmaceutical applications

Temperature Range

- -73 °C to +260 °C (-100 °F to +500 °F)
- Steam 200 psi at 300 °F max

Part Number	Hose I.D.		Hose O.D.		Maximum Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in/Hg
2807-3	3,6	0.14	6,4	0.25	210,0	3000	840,0	12000	38,1	1.50	0,06	0.04	94,8	28
2807-4	4,8	0.19	7,6	0.30	210,0	3000	840,0	12000	50,8	2.00	0,09	0.06	94,8	28
2807-5	6,6	0.26	9,4	0.37	210,0	3000	840,0	12000	76,2	3.00	0,12	0.08	94,8	28
2807-6	8,1	0.32	10,9	0.43	175,0	2500	700,0	10000	101,6	4.00	0,15	0.10	94,8‡	28‡
2807-8	10,7	0.42	13,7	0.54	140,0	2000	560,0	8000	133,4	5.25	0,18	0.12	94,8‡	28‡
2807-10	13,0	0.51	16,0	0.63	105,0	1500	420,0	6000	165,1	6.50	0,24	0.16	94,8‡	28‡
2807-12	16,3	0.64	19,3	0.76	84,0	1200	335,0	4800	196,9	7.75	0,27	0.18	94,8‡	28‡
2807-16	22,4	0.88	26,2	1.03	70,0	1000	280,0	4000	228,6	9.00	0,39	0.26	40,6‡	12‡
2807-20	28,4	1.12	32,8	1.29	43,0	625	175,0	2500	406,4	16.00	0,51	0.34	40,6‡	12‡

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

◊ "Z" designates a double braid of 304 stainless steel wire.

* The operating pressure of 1/2" I.D. hoses are lowered to 1500 psi and 5/8" I.D. hoses are lowered to 1250 psi when brass EverSwage fittings are used.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

FC465 Smooth Bore

Non-Dissipating

B

Danfoss' EverFlex hoses are the premier choice for hose products made from premium grade Teflon™ fluoropolymer for use in truck, chemical, hot melt, steam, packaging, paint, machinery, and many other demanding applications. EverFlex 2807-Series tube is reinforced with 304 stainless steel wire and all sizes are made from virgin Teflon™ fluoropolymer.

Construction

- Conductive Teflon™ fluoropolymer inner tube
- Single layer of 304 stainless steel braid
- Tracer wire in S.S. braid for identification

Applications

- Steam
- Compressor discharge
- Hot air
- Most chemical applications
- Industrial and manufacturing
- Pharmaceutical applications

Temperature Range

- -73 °C to +260 °C (-100 °F to +500 °F)
- Steam 200 psi at +300 °F max

Part Number	I.D. (Ref)		O.D. (Max)		Operating Pressure		Min. Burst Pressure		Operating Pressure ⚠6		Min. Burst Pressure ⚠6		Min. Bend Radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC465-03	3.2	0.13	6.8	0.27	207	3000	827	12000	—	—	—	—	38.1	1.50	0.06	0.04
FC465-04	4.8	0.19	8.2	0.32	207	3000	827	12000	241	3500	965	14000	50.8	2.00	0.09	0.06
FC465-05	6.4	0.25	10.1	0.40	207	3000	827	12000	—	—	—	—	76.2	3.00	0.12	0.08
FC465-06	7.9	0.31	11.6	0.46	172	2500	689	10000	190	2750	758	11000	101.6	4.00	0.15	0.10
FC465-08	10.3	0.41	14.3	0.56	138	2000	552	8000	155	2250	621	9000	133.4	5.25	0.18	0.12
FC465-10	12.7	0.50	16.8	0.66	103	1500	414	6000	138	2000	552	8000	165.1	6.50	0.24	0.16
FC465-12	15.9	0.63	20.1	0.79	83	1200	331	4800	103	1500	414	6000	196.9	7.75	0.27	0.18
FC465-16	22.2	0.88	26.9	1.06	69	1000	276	4000	83	1200	331	4800	228.6	9.00	0.39	0.26
FC465-20	28.6	1.13	33.5	1.32	43	625	172	2500	—	—	—	—	406.4	16.00	0.51	0.34

⚠6 These operating pressures and min. burst pressures apply when E series fittings are used with flat crimp option.

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

* The operating pressure of 1/2" I.D. hoses are lowered to 1500 psi and 5/8" I.D. hoses are lowered to 1250 psi when brass EverSwage fittings are used.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

S-Series Smooth Bore

Non-Dissipating

Everflex S-Series tube is reinforced with 304 or 316 stainless steel wire. All sizes are made from virgin Teflon™ fluoropolymer and have a minimum wall thickness of .040". That is 33% more material than most other manufacturers offer. The additional material results in improved bend radius, kink resistance, and slows permeation of gases. The minimum bend radius is measured in inches to the inside bend. Multiply the bend radius by 1.25 for dynamic applications.

Construction

- Non-conductive Teflon™ fluoropolymer inner tube
- One or two layers of stainless steel braid

Applications

- Steam
- Compressor discharge
- Chemical transfer

Temperature Range

- -54 °C to +230 °C
- (-65 °F to +450 °F)

Number	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst		Min. Bend		Hose Weight		Vacuum Service	Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	In/HG	
S-3	3.2	0.13	6.8	0.27	241	3,500	965	14,000	25.4	1.00	0.07	0.05	28	EverSwage
S-4	4.8	0.19	8.6	0.34	206	3,000	827	12,000	38.1	1.50	0.12	0.08	28	EverSwage
S-5	6.4	0.25	10.2	0.4	206	3,000	827	12,000	50.8	2.00	0.13	0.09	28	EverSwage
S-6	7.9	0.31	11.7	0.46	172	2,500	689	10,000	88.9	3.50	0.18	0.12	28 ‡	EverSwage
S-8	10.4	0.41	14.7	0.58	137	2,000	551	8,000	114.3	4.50	0.22	0.15	28 ‡	EverSwage
S-10 *	12.7	0.50	17.3	0.68	120	1,750	482	7,000	127.0	5.00	0.30	0.20	28 ‡	EverSwage
S-12 *	15.7	0.62	20.3	0.8	103	1,500	413	6,000	152.4	6.00	0.34	0.23	28 ‡	EverSwage
S-16	22.4	0.88	27.2	1.07	68	1,000	275	4,000	228.6	9.00	0.46	0.31	12 ‡	EverSwage
S-16Z ◊	22.4	0.88	28.7	1.13	86	1,250	344	5,000	185.4	7.30	0.73	0.49	12 ‡	EverSwage
S-20Z ◊	28.4	1.12	35.3	1.39	68	1,000	275	4,000	279.4	11.00	0.97	0.65	12 ‡	EverSwage
316 Stainless Steel Braid														
S316-4	4.8	0.19	8.6	0.34	206	3,000	827	12,000	38.1	1.50	0.12	0.08	28	EverSwage
S316-6	7.9	0.31	11.7	0.46	172	2,500	689	10,000	88.9	3.50	0.18	0.12	28 ‡	EverSwage
S316-8	10.4	0.41	14.7	0.58	103	1,500	414	6,000	114.3	4.50	0.22	0.15	28 ‡	EverSwage
S316-12	15.7	0.62	20.1	0.78	86	1,250	345	5,000	152.4	6.00	0.34	0.23	28 ‡	EverSwage
S316-16	22.4	0.88	27.2	1.07	62	900	248	3,600	228.6	9.00	0.46	0.31	12 ‡	EverSwage

The 316 stainless braided hose can be used in marine applications and other environments where corrosion is an issue.

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

◊ "Z" designates a double braid of 304 stainless steel wire.

* The operating pressure of 1/2" I.D. hoses are lowered to 1500 psi and 5/8" I.D. hoses are lowered to 1250 psi when brass EverSwage fittings are used.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

SC Series Smooth Bore

Static Dissipating

SC-Series** hose is identical to the S-Series with one exception. SC hose has an internal conductive static dissipating tube that provides a path to the hose end fittings for applications where flow induced electrostatic charges can occur. The minimum bend radius is measured in inches to the inside bend. Multiply the bend radius by 1.25 for dynamic applications.

*** Carbon black used meets the requirements of 21CFR178.3297 for FDA compliance*

Construction

- Conductive Teflon™ fluoropolymer inner tube
- One or two layers of stainless steel braid
- A minimum wall thickness of .040"

Applications

- Steam
- Compressor discharge
- Chemical transfer

Temperature Range

- -54 °C to +230 °C
- (-65 °F to +450 °F)

Number	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst		Min. Bend		Hose Weight		Vacuum Service	Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	In/HG	
SC-3	3.2	0.13	6.8	0.27	241	3,500	965	14,000	25.4	1.00	0.07	0.05	28	EverSwage
SC-4	4.8	0.19	8.6	0.34	206	3,000	827	12,000	38.1	1.50	0.12	0.08	28	EverSwage
SC-5	6.4	0.25	10.2	0.4	206	3,000	827	12,000	50.8	2.00	0.13	0.09	28	EverSwage
SC-6	7.9	0.31	11.7	0.46	172	2,500	689	10,000	88.9	3.50	0.18	0.12	28 ‡	EverSwage
SC-8	10.4	0.41	14.7	0.58	137	2,000	551	8,000	114.3	4.50	0.22	0.15	28 ‡	EverSwage
SC-10 *	12.7	0.50	17.3	0.68	120	1,750	482	7,000	127.0	5.00	0.30	0.20	28 ‡	EverSwage
SC-12 *	15.7	0.62	20.3	0.8	103	1,500	413	6,000	152.4	6.00	0.34	0.23	28 ‡	EverSwage
SC-16	22.4	0.88	27.2	1.07	68	1,000	275	4,000	228.6	9.00	0.46	0.31	12 ‡	EverSwage
316 Stainless Steel Braid														
SC316-4	4.8	0.19	8.6	0.34	206	3,000	827	12,000	38.1	1.50	0.12	0.08	28	EverSwage
SC316-6	7.9	0.31	11.7	0.46	172	2,500	689	10,000	88.9	3.50	0.18	0.12	28 ‡	EverSwage
SC316-8	10.4	0.41	14.7	0.58	103	1,500	414	6,000	114.3	4.50	0.22	0.15	28 ‡	EverSwage
SC316-12	15.7	0.62	20.1	0.78	86	1,250	345	5,000	152.4	6.00	0.34	0.23	28 ‡	EverSwage
SC316-16	22.4	0.88	27.2	1.07	62	900	248	3,600	228.6	9.00	0.46	0.31	12 ‡	EverSwage

The 316 Stainless braided hose can be used in marine applications and other environments where corrosion is an issue.

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

* The operating pressure of 1/2" I.D. hoses are lowered to 1500 psi and 5/8" I.D. hoses are lowered to 1250 psi when brass EverSwage fittings are used.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

Winner EN-TW Smooth Bore

Reduced, smooth bore PTFE hose
Non-conductive (non-dissipating) PTFE hose

Danfoss' Everflex hoses are the premier choice for hose products made from premium grade Teflon™ fluoropolymer for use in truck, chemical, hot melt, steam, packaging, paint, machinery, and many other demanding applications. The Danfoss Winner PTFE hoses compliment the Everflex family of products by providing performance that meets SAE 100R14 and are ideally suited for use in applications where high and low temperature, chemical resistance, low coefficient of friction, flexibility, and non-aging characteristics are required.

Construction

- Non-conductive Teflon™ fluoropolymer inner tube
- One or two layers of stainless steel wire braid

Applications

- Alternative fuels
- Bus, truck, and off highway
- Chemical transfer
- Electric cooling
- Engine
- Fire/rescue air
- Hot press
- Paint and paint spraying
- Steam

Temperature Range

- -54 °C to +236 °C
- (-85 °F to +456 °F)

Number	Hose I.D.		Hose O.D.		Working pressure		Min. burst		Min. bend radius		Hose Weight		Vacuum Service	Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	In/HG	
EN-4TW	4.8	0.19	7.90	0.31	207	3,000	828	12,000	50	2.0	0.09	0.06	28	E-series/Field Attachable
EN-5TW	6.4	0.25	9.80	0.39	207	3,000	828	12,000	75	3.0	0.12	0.08	28	E-series/Field Attachable
EN-6TW	8.0	0.31	11.60	0.46	172	2,500	688	10,000	100	4.0	0.15	0.10	28 ‡	E-series/Field Attachable
EN-7TW	9.6	0.38	13.00	0.51	155	2,250	620	9,000	125	5.0	0.16	0.11	28 ‡	E-series/Field Attachable
EN-8TW	10.4	0.41	14.20	0.56	138	2,000	552	8,000	135	5.0	0.18	0.12	28 ‡	E-series/Field Attachable
EN-10TW	12.8	0.50	16.40	0.65	103	1,500	412	6,000	165	6.5	0.25	0.17	28 ‡	E-series/Field Attachable
EN-12TW	16.0	0.63	19.80	0.78	86	1,250	344	5,000	200	8.0	0.28	0.19	28 ‡	E-series/Field Attachable
EN-14TW	19.1	0.75	23.30	0.92	75	1,100	300	4,400	230	9.0	0.37	0.25	28 ‡	E-series/Field Attachable
EN-16TW	22.2	0.88	26.70	1.05	70	1,000	280	4,000	230	9.0	0.40	0.27	12 ‡	E-series/Field Attachable
EN-18TW	25.4	1.00	28.80	1.17	70	1,000	280	4,000	300	12.0	0.79	0.53	12 ‡	E-series/Field Attachable

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

Winner EC-TW Smooth Bore

B

Reduced, smooth bore PTFE hose Conductive (static-dissipating) hose

Danfoss' Everflex hoses are the premier choice for hose products made from premium grade Teflon™ fluoropolymer for use in truck, chemical, hot melt, steam, packaging, paint, machinery, and many other demanding applications. The Danfoss Winner PTFE hoses compliment the Everflex family of products by providing performance that meets SAE 100R14 and are ideally suited for use in applications where high and low temperature, chemical resistance, low coefficient of friction, flexibility, and non-aging characteristics are required.

Construction

- Non-conductive Teflon™ fluoropolymer inner tube
- One or two layers of stainless steel wire braid

Applications

- Alternative fuels
- Bus, truck, and off highway
- Chemical transfer
- Electric cooling
- Engine
- Fire/rescue air
- Hot press
- Paint and paint spraying
- Steam

Temperature Range

- -54 °C to +236 °C
- (-85 °F to +456 °F)

Number	Hose I.D.		Hose O.D.		Working pressure		Min. burst		Min. bend radius		Hose Weight		Vacuum Service	Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	In/HG	
EC-4TW	4.80	0.19	7.90	0.31	207	3,000	828	12,000	50	2.0	0.09	0.06	28	E-series/Field Attachable
EC-5TW	6.40	0.25	9.80	0.39	207	3,000	828	12,000	75	3.0	0.12	0.08	28	E-series/Field Attachable
EC-6TW	8.00	0.31	11.60	0.46	172	2,500	688	10,000	100	4.0	0.15	0.10	28 ‡	E-series/Field Attachable
EC-7TW	9.60	0.38	13.00	0.51	155	2,250	620	9,000	125	5.0	0.16	0.11	28 ‡	E-series/Field Attachable
EC-8TW	10.40	0.41	14.20	0.56	138	2,000	552	8,000	135	5.0	0.18	0.12	28 ‡	E-series/Field Attachable
EC-10TW	12.80	0.50	16.40	0.65	103	1,500	412	6,000	165	6.5	0.25	0.17	28 ‡	E-series/Field Attachable
EC-12TW	16.00	0.63	19.80	0.78	86	1,250	344	5,000	200	8.0	0.28	0.19	28 ‡	E-series/Field Attachable
EC-14TW	19.10	0.75	23.30	0.92	75	1,100	300	4,400	230	9.0	0.37	0.25	28 ‡	E-series/Field Attachable
EC-16TW	22.23	0.88	26.70	1.05	70	1,000	280	4,000	230	9.0	0.40	0.27	12 ‡	E-series/Field Attachable
EC-18TW	25.40	1.00	29.80	1.17	70	1,000	280	4,000	300	12.0	0.79	0.53	12 ‡	E-series/Field Attachable

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

‡ Maximum negative pressure for -16 and larger are suitable for hose which has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hoses, the use of an internal support coil is recommended. Use of an internal support coil in -06 and larger hose is recommended for tube support where extended or continuous service at high temperature together with low or negative pressure is expected. For a list of internal support coils available, see page G-3.

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Hi-PSI Series Smooth Bore

Static Dissipating

B

Hi-PSI Series hose is a heavy wall Everflex hose for very high pressure applications. The reinforcement is braided and not spiraled allowing for better hose flexibility.

Construction

- Conductive Teflon™ fluoropolymer inner tube
- One or two layers of 304 stainless steel wire braid

Applications

- Steam
- Compressor discharge
- Chemical transfer

Temperature Range

- -54 °C to +204 °C
- (-65 °F to + 400 °F)

Number	Hose I.D.		Hose O.D.		Working Pressure at 72°		Working Pressure at 400°		Min. Burst		Min. Bend		Hose Weight		Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H504	5.6	0.22	9.8	0.39	345	5,000	207	3,000	1103	16,000	38.1	1.50	0.15	0.10	Factory crimp only
H506	8.0	0.31	13.1	0.52	345	5,000	207	3,000	1103	16,000	63.5	2.50	0.25	0.17	Factory crimp only
H508	10.3	0.41	16	0.63	345	5,000	207	3,000	1103	16,000	73.7	2.90	0.36	0.24	Factory crimp only
H510	12.7	0.50	19.3	0.76	345	5,000	207	3,000	1103	16,000	83.8	3.30	0.51	0.34	Factory crimp only
H512	16.5	0.65	25.1	0.99	345	5,000	207	3,000	1103	16,000	101.6	4.00	1.02	0.68	Factory crimp only
H516	22.2	0.88	33.4	1.32	345	5,000	207	3,000	1103	16,000	127.0	5.00	1.72	1.16	Factory crimp only
H520	28.6	1.13	41.1	1.62	345	5,000	207	3,000	1103	16,000	304.8	12.0	2.47	1.66	Factory crimp only
H524	34.9	1.38	47.5	1.87	276	4,000	207	3,000	827	12,000	355.6	14.0	2.97	1.99	Factory crimp only

Hose assemblies must be assembled by Danfoss. Standard stainless steel JIC fittings are available.

Hose/Tube Size	Insert Part Number	Collar Part Number	Female JIC Thread Size	Hose Assembly Part Number
-4	H20004-4-316/4	H70000-4-304	7/16-20	FK4650EEE-Length
-6	H20006-6-316/4	H70000-6-304	9/16-18	FK4650GGG-Length
-8	H20008-8-316/4	H70000-8-304	3/4-16	FK4650HHH-Length
-10	H20010-10-316/4	H70000-10-304	7/8-14	FK4650JJJ-Length
-12*	H20012-12-316/4	H70000-12-304	1-1/16-12	FK4650KKK-Length
-16*	H20016-16-316/4	H70000-16-304	1-5/16-12	FK4650MMM-Length
-20**	H20020-20-316/4	H70000-20-304	1-5/8-12	FK4650NNN-Length
-24**	H20024-24-316/4	H70000-24-304	1-7/8-12	FK4650PPP-Length

* 55' Max length
** 25' Max length

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FC493 Smooth Bore

Static Dissipating

The FC493 hose has a conductive inner tube and incorporates a fire resistant polyester blend cover which also provides extra abrasion resistance. The hose fittings come in a variety of configurations and materials based on specific application needs. The high pressure wire braid allows operating pressures up to 4,500 psi. Applications include gage lines on self contained breathing apparatus (SCBA) units for emergency use.

Construction

- Static dissipating inner tube
- One layer of stainless steel Hi-PAC wire braid
- Fire resistant polyester blend cover

Applications

- High pressure air lines
- SCBA equipment

Temperature Range

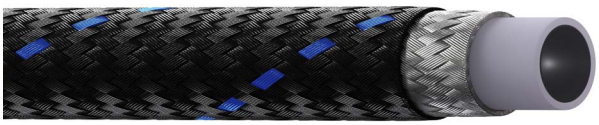
- -60 °C to +148 °C
- (-65 °F to + 300 °F)

Number	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst		Min. Bend		Hose Weight		Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
FC493-03	3.5	0.14	9.5	0.37	310.3	4,500	1241.4	18,000	38.1	1.50	0.12	0.08	Factory crimp only
FC493-04	5.6	0.22	11.2	0.44	310.3	4,500	1241.4	18,000	38.1	1.50	0.21	0.14	Factory crimp only

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

FC740 and FC742 Smooth Bore

FC740
Static Dissipating



FC740 is a conductive Everflex hose made from extruded Teflon™ fluoropolymer with one layer of stainless steel wire braid and covered with a black fire resistant polyester blend yarn cover. The polyester cover also provides extra abrasion resistance.

Construction
- Static dissipating inner tube
- One layer of stainless steel wire braid
- Fire resistant black polyester blend cover with a blue tracer

Applications
- Steam
- Compressor discharge
- Chemical transfer

Temperature Range
- –40 °C to +260 °C
- (–40 °F to +500 °F)

Number	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst		Min. Bend		Hose Weight		Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
FC740-03	3.2	0.13	9.4	0.37	210	3,000	840	12,000	38.1	1.50	0.10	0.07	Factory crimp only
FC740-04	4.8	0.19	10.7	0.42	210	3,000	840	12,000	50.8	2.00	0.12	0.08	Factory crimp only
FC740-05	6.4	0.25	12.1	0.48	210	3,000	840	12,000	76.2	3.00	0.15	0.10	Factory crimp only
FC740-06	7.9	0.31	13.6	0.54	175	2,500	700	10,000	101.6	4.00	0.18	0.12	Factory crimp only
FC740-08	10.3	0.41	16.4	0.65	140	2,000	560	8,000	133.4	5.25	0.24	0.16	Factory crimp only

FC742
Static Dissipating

FC742 is a conductive Everflex hose made from extruded Teflon™ fluoropolymer with one layer of stainless steel wire braid and covered with a brown fire retardant silicone cover. Other cover colors are also available.

Construction
- Full bore inner tube
- One layer of stainless steel wire braid
- Fire retardant silicone cover

Applications
- Steam
- Chemical transfer
- Wash-down environments

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

Number	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst		Min. Bend		Hose Weight		Hose Ends
	mm	in	mm	in	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
FC742-06	7.8	0.31	17.5	0.69	276	4,000	1103	16,000	63.5	2.50	0.40	0.26	Factory crimp only

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

Convoluted Hose and Hose Ends

Everflex Convo-crimp 8000 and 8500 Series hose provides excellent performance, reliability, and durability with tighter bend radii than smooth wall hose. When compared with large diameter rubber hose, Convo-crimp is dramatically lighter weight, more flexible, and more resistant to heat and chemicals. The tube is fabricated with tape of Teflon™ fluoropolymer and reinforced with 304 stainless steel wire. The result is a product ideally suited for applications in truck and bus, chemical processing, food processing, hydraulics, pharmaceutical, tire manufacturing, steel mills, and many others. In addition to the standard 8000 Series virgin white tube of Teflon™ fluoropolymer, the 8500 Series has an internal conductive static dissipating black liner that provides a path to the hose end fitting for applications where flow induced electrostatic charges can occur.

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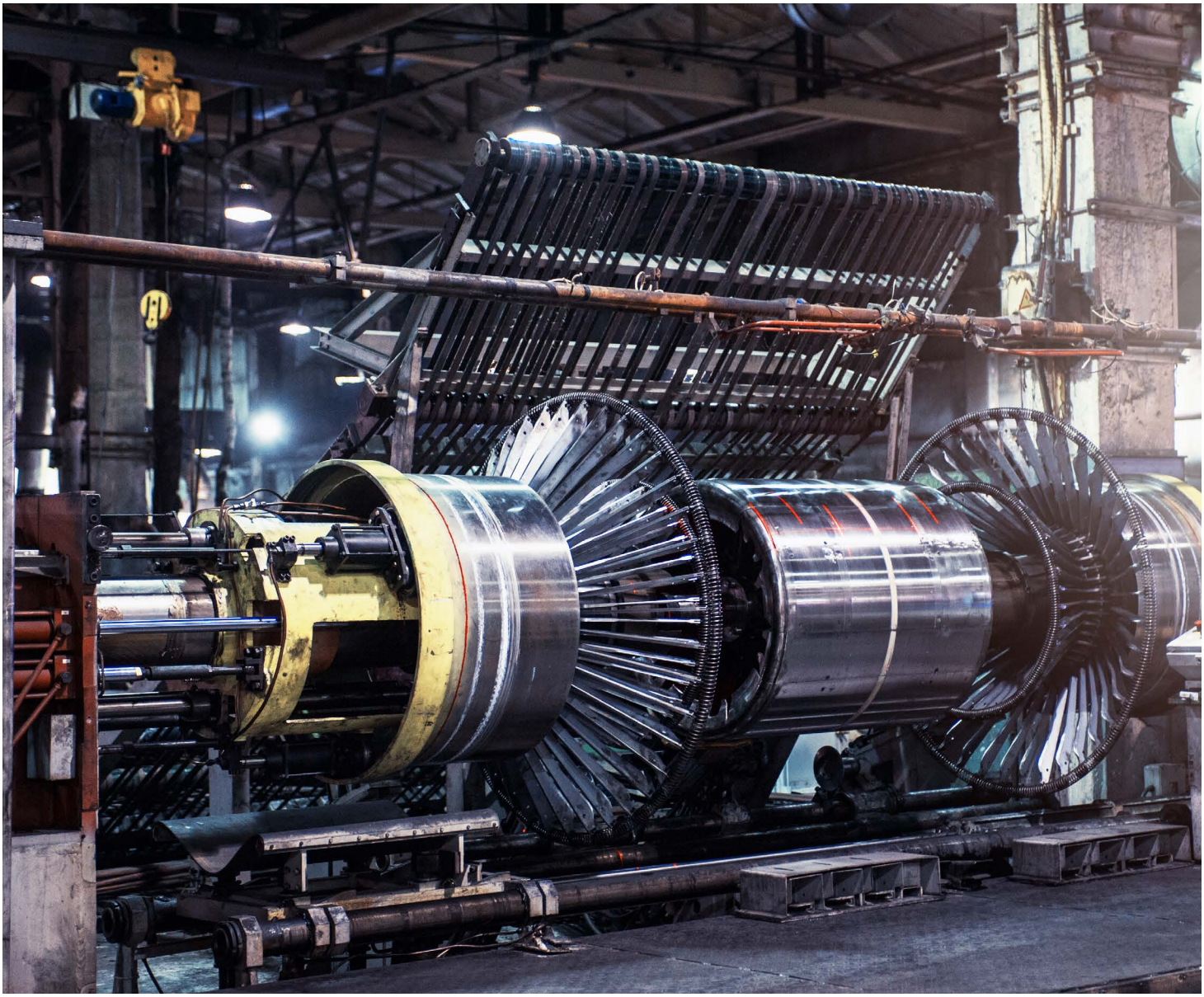


Convoluted Hose - Convo-crimp hose

Non-Conductive and Conductive

Construction

- Convoluted Teflon™ fluoropolymer tube with 304 stainless steel wire braid reinforcement

Temperature Range

- -54 °C to + 204 °C
- (-65 °F to + 400 °F)

Industrial Applications

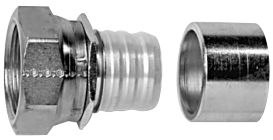
- Automotive
- Platen presses
- Pharmaceutical
- Bus and truck
- Reverse osmosis
- Hydraulics
- Chemical processing
- Steam, air, and water
- Tire manufacturing
- Electronics
- Steel mills
- Food processing
- Tank truck transfer

	Hose Size	Hose I.D.	Part Number	Nominal I.D.	Max. Nominal O.D.	Burst Operating Pressure	Min. Pressure Rm. Temp	Bend Radius	Hose Vacuum	Weight
Non-Conductive				in.	in.	psi	psi	in.	in / hg	lb. / ft
	-8	1/2	8008	.57	.81	1500	6000	1.5	28	.23
	-12	3/4	8012	.83	1.10	1250	5000	2.5	28	.31
	-16	1	8016	1.06	1.34	900	3600	3.0	20	.42
	-20	1-1/4	8020	1.31	1.60	900	3600	3.5	12	.52
	-24	1-1/2	8024	1.58	1.83	750	3000	4.5	10	.59
	-32	2	8032	2.06	2.38	500	2000	6.0	5	.86
Conductive										
	-8	1/2	8508	.57	.81	1500	6000	1.5	28	.23
	-12	3/4	8512	.83	1.10	1250	5000	2.5	28	.31
	-16	1	8516	1.06	1.34	900	3600	3.0	20	.42
	-20	1-1/4	8520	1.31	1.60	900	3600	3.5	12	.52
	-24	1-1/2	8524	1.58	1.83	750	3000	4.5	10	.59
	-32	2	8532	2.06	2.38	500	2000	6.0	5	.86

WARNING: These hoses can be used to convey hazardous chemicals, steam, hot liquids, or other dangerous materials which can cause death, serious bodily injury including burns, pressure wounds, or chemical exposure if released accidentally. They should only be handled or worked on by personnel properly trained in the safe handling of the materials or chemicals conveyed in the hoses.

Convoluted Hose Ends - Convo-crimp hose ends

The unique Everflex Convo-crimp hose end are shipped with factory-installed Teflon™ fluoropolymer sleeves on the insert. This eliminates the time consuming, costly, and subjective step of wrapping the hose end with Teflon™ fluoropolymer tape before assembly. The end result is a hose assembly system that is second to none in ease of assembly fabrication. Common industrial configurations are available in carbon steel and 316 stainless steel (wetted surfaces). Finished assemblies can be acquired from an authorized Everflex distributor or the factory.



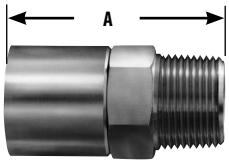
Material Code

A= Insert - 316 S.S.
Nut and Collar - 304 S.S.

B= Insert - 316 S.S.
Nut - 304 S.S.
Collar - Carbon Steel

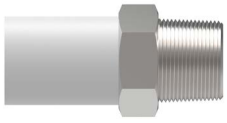
C= All Components -
Carbon Steel

Male Pipe (NPT)



Hose Size	Hose I.D.	Part Number	Part No. Suffix Letter	Thread NPT	A Overall Length In.	Hose Cut-off Factor †	Nominal I.D. In.
-8	1/2	8-108	A, B, C	1/2-14	2.33	1.38	.406
-12	3/4	12-112	A, B, C	3/4-14	2.48	1.38	.625
-16	1	16-116	A, B, C	1 11-1/2	2.95	1.76	.828
-20	1-1/4	20-120	A, B, C	1 1/4-11-1/2	2.98	1.79	1.078
-24	1-1/2	24-124	A, B, C	1 1/2-11-1/2	3.01	1.82	1.305
-32	2	32-132	A, B, C	2 11-1/2	3.43	1.98	1.781

Male Pipe Inserts with Teflon™ fluoropolymer Sleeves Installed



Hose Size	Carbon Steel Insert	Stainless Steel Insert	Carbon Steel Collar	Stainless Steel Collar
-8	800108-8-CZ	800108-8-316	870000-8-CZ	870000-8-304
-12	800112-12-CZ	800112-12-316	870000-12-CZ	870000-12-304
-16	800116-16-CZ	800116-16-316	870000-16-CZ	870000-16-304
-20	800120-20-CZ	800120-20-316	870000-20-CZ	870000-20-304
-24	800124-24-CZ	800124-24-316	870000-24-CZ	870000-24-304
-32	800132-32-CZ	800132-32-316	870000-32-CZ	870000-32-304

WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Convoluted Hose Ends - Convo-crimp hose ends

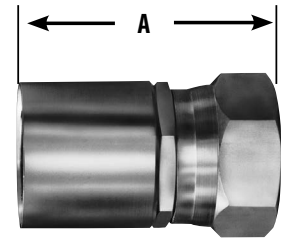
Material Code

A= Insert - 316 S.S.
Nut and Collar - 304 S.S.

B= Insert - 316 S.S.
Nut - 304 S.S.
Collar - Carbon Steel

C= All Components -
Carbon Steel

JIC 37° Swivel (NPT)

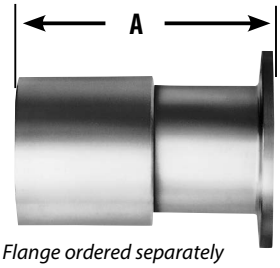


Hose Size	Hose I.D.	Catalog Number	Part No. Suffix Letter	Thread NPT	A Overall Length In.	Hose Cut-off Factor †	Nominal I.D. In.
-8	1/2	8-608	A, B, C	3/4-16	1.82	1.32	0.406
-12	3/4	12-612	A, B, C	1 1/6-12	2.01	1.46	0.625
-16	1	16-616	A, B, C	1 5/16-12	2.14	1.55	0.828
-20	1-1/4	20-620	A, B, C	1 5/8-12	2.20	1.64	1.078
-24	1-1/2	24-624	A, B, C	1 7/8-12	2.27	1.81	1.305
-32	2	32-632	A, B, C	2 1/2-12	2.62	2.10	1.781

JIC 37° Swivel Inserts with PTFE Sleeves Installed

Hose Size	Carbon Steel Insert	Stainless Steel Insert	Carbon Steel Collar	Stainless Steel Collar
-8	820008-8-CZ	820008-8-316	870000-8-CZ	870000-8-304
-12	820012-12-CZ	820012-12-316	870000-12-CZ	870000-12-304
-16	820016-16-CZ	820016-16-316	870000-16-CZ	870000-16-304
-20	820020-20-CZ	820020-20-316	870000-20-CZ	870000-20-304
-24	820024-24-CZ	820024-24-316	870000-24-CZ	870000-24-304
-32	820032-32-CZ	820032-32-316	870000-32-CZ	870000-32-304

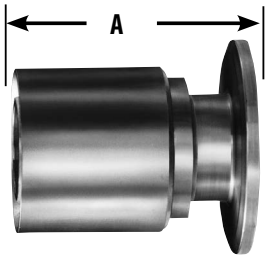
Flange Retainer



Flange ordered separately

Hose Size	Hose I.D.	Catalog Number	Part No. Suffix Letter	A Overall Length In.	Hose Cut-off Factor †	Nominal I.D. In.
-8	1/2	8-F00	A, B	2.13	1.31	0.406
-12	3/4	12-F00	A, B	2.43	1.43	0.625
-16	1	16-F00	A, B	2.58	1.50	0.828
-20	1-1/4	20-F00	A, B	2.60	1.56	1.078
-24	1-1/2	24-F00	A, B	2.72	1.60	1.305
-32	2	32-F00	A, B	3.11	1.81	1.781

Sanitary Tri-Clamp



Hose Size	Hose I.D.	Catalog Number	Part No. Suffix Letter	A Overall Length In.	Hose Cut-off Factor †	Nominal I.D. In.
-16	1	16-S16	A	2.14	1.06	0.828
-24	1-1/2	24-S24	A	2.14	1.06	1.305
-32	2	32-S32	A	2.40	1.06	1.781

WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

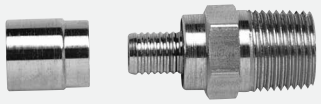
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

EverSwage™ Hose Ends, Components, and Fittings

EverSwage hose ends are permanently attached to Everflex Smooth Bore hose using a swaging process. The unique design of the EverSwage collar allows a hose assembly fabricator to slide several collars at once on the hose. This significantly reduces the time required to fabricate an assembly. The most popular industrial fitting configurations, male pipe (NPT) and female JIC (SAE) swivels, are available in 300 Series stainless steel, carbon steel, or brass.

EverSwage - Hose Ends

For use with Everflex Hoses
B, M, S, SC

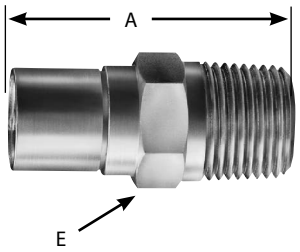


Part Number Example:
B-1104-1

B = Brass
C = Carbon Steel
S = Stainless Steel

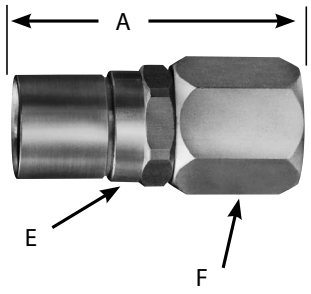
Note: The operating pressure of 1/2" I.D. hoses are lowered to 1500 psi and 5/8" I.D. hoses are lowered to 1250 psi when brass EverSwage fittings are used.

Male Pipe (NPT)



Hose I.D.	Part No. Pre-Fix Letter	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E
5/32	B, S	1103	1/8	1/8-27	1.19	3/4	1/2
3/16	B, C, S	1104-1	1/8	1/8-27	1.34	3/4	1/2
3/16	B, C, S	1104-2	1/4	1/4-18	1.47	7/8	9/16
1/4	B, C, S	1105-1	1/4	1/4-18	1.47	7/8	9/16
1/4	B, C	1105-1/8	1/8	1/8	1.34	15/16	9/16
5/16	B, C, S	1106-1	1/4	1/4-18	1.47	7/8	11/16
5/16	B, C, S	1106-2	3/8	3/8-18	1.53	15/16	11/16
5/16	B, S	1106-3	1/2	1/2	1.75	1-1/8	7/8
13/32	B, C, S	1108-1	3/8	3/8-18	1.84	1	3/4
13/32	B, C, S	1108-2	1/2	1/2-14	1.97	1-1/8	7/8
1/2	B, C, S	1110	1/2	1/2-14	1.97	1-3/16	7/8
5/8	B, C, S	1112	3/4	3/4-14	2.14	1-5/16	1-1/16
7/8	B, C, S	1116	1	1-11.5	2.94	1-5/8	1-3/8
7/8	B, C, S	1116Z ‡	1	1-11.5	2.94	1-5/8	1-3/8
1-1/8	B, C, S	11120Z ‡	1-1/4	1-1/4-11.5	3.03	1-3/4	1-3/4

37˚ JIC Swivel



Hose I.D.	Part No. Pre-Fix Letter	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E	F
5/32	B, S	1303	3/16	3/8-24	1.38	0.85		1/2
5/32	B	1303-4	1/4	7/16-20	1.38	0.90	1/2	9/16
3/16	B, C, S	1304	1/4	7/16-20	1.50	0.90	1/2	9/16
1/4	B, C, S	1305	5/16	1/2-20	1.63	0.94	9/16	5/8
5/16	B, C	1306	3/8	9/16-18	1.63	0.99	5/8	11/16
13/32	B, C, S	1308	1/2	3/4-16	2.00	1.18	3/4	7/8
1/2	B, C, S	1310	5/8	7/8-14	2.00	1.30	7/8	1
5/8	B, S	1312	3/4	1-1/6-12	2.25	1.38	1-1/16	1-1/4
7/8	B, C, S	1316	1	1-5/16-12	2.88	1.51	1-3/8	1-1/2
7/8	B, C, S	1316Z ‡	1	1-5/16-12	2.88	1.51	1-3/8	1-1/2
1-1/8	B, C, S	1320Z ‡	1-1/4	1-5/8-12	3.13	1.26	1-3/4	2

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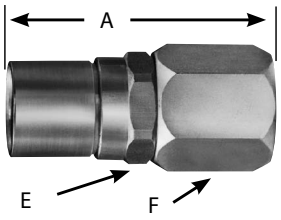
EverSwage - Hose Ends

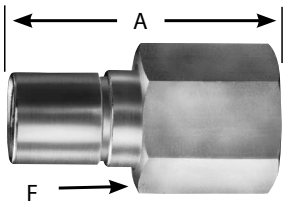
For use with Everflex Hoses
B, M, S, SC

45˚ Brass Swivel



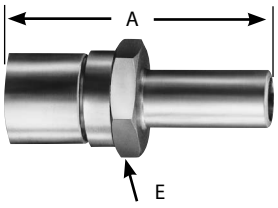
Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E	F
3/16	Fitt. #30	1/4	7/16-20	1.50	0.90	1/2	9/16
1/4	Fitt. #31	5/16	1/2-20	1.50	0.94	9/16	5/8
5/16	Fitt. #32	3/8	5/8-18	1.63	0.96	5/8	3/4
13/32	Fitt. #33	1/2	3/4-16	2.00	1.18	3/4	7/8
1/2	Fitt. #34	5/8	7/8-14	2.13	1.30	7/8	1
5/8	Fitt. #35	3/4	1-1/16-14	2.25	1.38	1-1/16	1-1/4

Female Pipe (NPT)



Hose I.D.	Part No. Pre-Fix Letter	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	F
3/16	B	2104-1	1/8	1/8-27	1.28	11/16	9/16
3/16	B	2104-2	1/4	1/4-18	1.41	13/16	3/4
1/4	B, S	2105	1/4	1/4-18	1.41	13/16	3/4

Stainless Steel Tube Stub



Hose I.D.	Part Number	Tube Size	Connector	A	Hose Cut-off Factor †	E
3/16	STE4-4	1/4" O.D.	0.188	1.50	1-1/8	9/16
1/4	STE4-5	1/4" O.D.	0.203	1.50	7/8	9/16
5/16	STE6-6	3/8" O.D.	0.266	1.63	1	11/16
13/32	STE8-8	1/2" O.D.	0.359	2.25	1-3/8	7/8
5/8	STE12-12	3/4" O.D.	0.578	2.38	1-1/2	1-1/16
5/8	STE16-16	1-" O.D.	0.813	3.00	1-11/16	1-3/8

Brass Laundry Flange

(Flange is plated carbon steel, copper gasket included)

Hose I.D.	Part Number	Nominal ID	A	Hose Cut-off Factor †
5/16	B-6LFC	17/64	1	5/16

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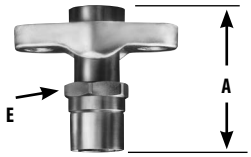
EverSwage - Hose Ends

For use with Everflex Hoses
B, M, S, SC

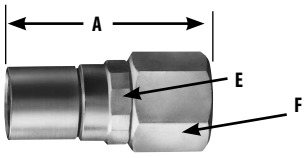
Brass Tire Mold Flange



(Flange is plated carbon steel)

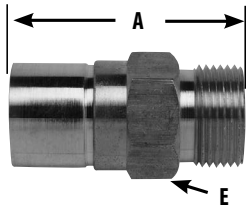
Hose I.D.	Part Number	Nominal ID	A	Hose Cut-off Factor †	E
5/8	FITT. #60	37/64	2.63	1-5/8	1-1/16

Carbon Steel Paint Spray Swivel



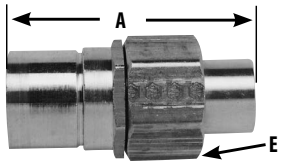
Hose I.D.	Part Number	Thread Size	A	Hose Cut-off Factor †	E	F
1/4	C-5PS	1/4 NPSM	1.50	0.82	9/16	5/8

SAE Brass Male Compression



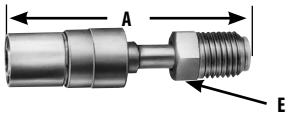
Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E
1/2	FITT. #40	5/8	13/16-18	1.75	29/32	7/8

SAE Brass Female Compression



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E
1/2	FITT. #41	5/8	13/16-18	2.00	1-3/16	15/16

Stainless Steel Power Trim, Straight



(316 stainless steel wetted parts)

Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	E
3/16	PT-S-4	3/16	3/8-24	1.88	1-7/16	3/8

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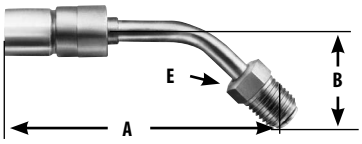
EverSwage - Hose Ends

For use with Everflex Hoses
B, M, S, SC

Stainless Steel Power Trim, 45˚ Elbow

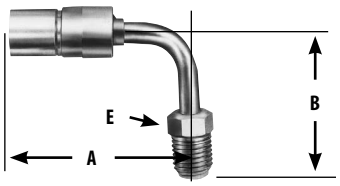


(316 stainless steel wetted parts)

Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	B	E
3/16	PT-45-4	3/16	3/8-24	2.75	2	3/4	3/8

D

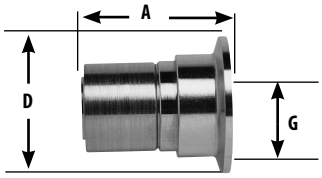
Stainless Steel Power Trim, 90˚ Elbow



(316 stainless steel wetted parts)

Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	B	E
3/16	PT-90-4	3/16	3/8-24	2.00	1-1/2	1	3/8

Sanitary Tri Clamp



(316 stainless steel wetted parts)

Hose I.D.	Part Number	Nominal ID	A	Hose Cut-off Factor †	D	G
1/2	10-S.37-316	0.45	1.5	.6875	0.985	0.375
7/8	16-S.37-316	0.81	2.0	.6875	1.984	0.86

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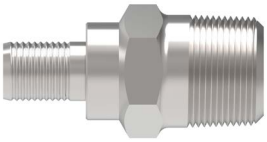
EverSwage - Components

For use with Everflex Hoses
B, M, S, SC

Swage Collars

Hose I.D.	Part Number	Part No. Suffix Letter	JIC Size
3/16	NC-4	B, C, S	1/4
1/4	NC-5	B, C, S	5/16
5/16	NC-6	B, C, S	3/8
13/32	NC-8	B, C, S	1/2
1/2	NC-10	B, C, S	5/8
5/8	NC-12	B, C, S	3/4
7/8	NC-16	B, C, S	1
7/8	NC-16Z	B, C, S	1
1-1/8	NC-20Z	B, C, S	1-1/4

Male Pipe Insert

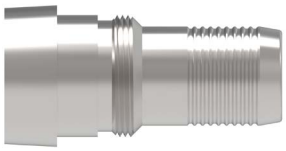


Hose I.D.	Part Number	Part No. Suffix Letter	Tube Size
3/16	NM2-4	B, C, S	1/8
3/16	NM4-4	B, C, S	1/4
1/4	NM4-5	B, C, S	5/16
5/16	NM4-6	B, C, S	1/4
5/16	NM6-6	B, C, S	3/8
13/32	NM6-8	B, C, S	3/8
13/32	NM8-8	B, C, S	1/2
1/2	NM8-10	B, C, S	1/2
5/8	NM12-12	B, C, S	1
7/8	NM16-16	B, C, S	1
1-1/8	NM20-20	B, C, S	1-1/4

EverSwage - Components

For use with Everflex Hoses
B, M, S, SC

37˚ JIC Female Insert



Hose I.D.	Part Number	Part No. Suffix Letter	JIC Size
3/16	NJ-4	B, C, S	1/4
1/4	NJ-5	B, C, S	5/16
5/16	NJ-6	B, C, S	3/8
13/32	NJ-8	B, C, S	1/2
1/2	NJ-10	B, C, S	5/8
5/8	NJ-12	B, C, S	3/4
7/8	NJ-16	B, C, S	1
7/8	NJ-16	B, C, S	1
1-1/8	NJ-20	B, C, S	1-1/4

37˚ JIC Female Short Collars

Hose I.D.	Part Number	Part No. Suffix Letter	JIC Size
3/16	NJC-4	B, C, S	1/4
1/4	NJC-5	B, C, S	5/16
5/16	NJC-6	B, C, S	3/8
13/32	NJC-8	B, C, S	1/2
1/2	NJC-10	B, C, S	5/8
5/8	NJC-12	B, C, S	3/4
7/8	NJC-16	B, C, S	1
7/8	NJC-16	B, C, S	1
1-1/8	NJC-20	B, C, S	1-1/4

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37˚ JIC Female Nuts

Hose I.D.	Part Number	Part No. Suffix Letter	JIC Size
3/16	NNJ-4	B, C, S	1/4
1/4	NNJ-5	B, C, S	5/16
5/16	NNJ-6	B, C, S	3/8
13/32	NNJ-8	B, C, S	1/2
1/2	NNJ-10	B, C, S	5/8
5/8	NNJ-12	B, C, S	3/4
7/8	NNJ-16	B, C, S	1
7/8	NNJ-16	B, C, S	1
1-1/8	NNJ20	B, C, S	1-1/4

WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

EverSwage - Fittings bill of material cross reference

Top Assembly Catalog Number	Insert Part Number*	Collar Part Number
B-1112	NM12-12-B	NC-12-B
C-1112	NM12-12-C	NC-12-C
S-1112	NM12-12-S	NC-12-S
B-1116	NM16-16-B	NC-16-B
C-1116	NM16-16-C	NC-16-C
S-1116	NM16-16-S	NC-16-S
B-1103	NM2-3-B	NC-3-B
S-1103	NM2-3-S	NC-3-S
B-1104-1	NM2-4-B	NC-4-B
C-1104-1	NM2-4-C	NC-4-C
S-1104-1	NM2-4-S	NC-4-S
B-1105-1/8	NM2-5-B	NC-5-B
B-1116Z	NM16-16-B	NC-16Z-B
C-1116Z	NM16-16-C	NC-16Z-C
S-1116Z	NM16-16S	NC-16Z-S
B-1120Z	NM20-20-B	NC-20Z-B
C-1120Z	NM20-20-C	NC-20Z-C
S-1120Z	NM20-20-S	NC-20Z-S
B-1104-2	NM4-4-B	NC-4-B
C-1104-2	NM4-4-C	NC-4-C
S-1104-2	NM4-4-S	NC-4-S
B-1105	NM4-5-B	NC-5-B
C-1105	NM4-5-C	NC-5-C
S-1105	NM4-5-S	NC-5-S
B-1106-1	NM4-6-B	NC-6-B
C-1106-1	NM4-6-C	NC-6-C
S-1106-1	NM4-6-S	NC-6-S
B-1106-2	NM6-6-B	NC-6-B
C-1106-2	NM6-6-C	NC-6-C
S-1106-2	NM6-6-S	NC-6-S
B-1108-1	NM6-8-B	NC-8-B
C-1108-1	NM6-8-C	NC-8-C
S-1108-1	NM6-8-S	NC-8-S
B-1110	NM8-10-B	NC-10-B
C-1110	NM8-10-C	NC-10-C
S-1110	NM8-10-S	NC-10-S
B-1106-3	NM8-6-B	NC-6-B
C-1106-3	NM8-6-C	NC-6-C
S-1106-3	NM8-6-S	NC-6-S
B-1108-2	NM8-8-B	NC-8-B
C-1108-2	NM8-8-C	NC-8-C
S-1108-2	NM8-8-S	NC-8-S
C-5PS	NPS-5-C	NC-5-C
Fitt. #30	NSAE-4-B	NC-4-B
Fitt. #32	NSAE-6-B	NC-6-B
Fitt. #33	NSAE-8-B	NC-8-B
Fitt. #34	NSAE-10-B	NC-10-B
Fitt. #35	NSAE-12-B	NC-12-B

Top Assembly Catalog Number	Insert Part Number	Collar Part Number
B-1303	NJIC-3-B	NC-3-B
S-1303	NJIC-3-S	NC-3-S
B-1303-4	NJIC4-3-B	NC-3-B
S-1303-4	NJIC4-3-S	NC-3-S
B-1304	NJICSAE-4-B	NC-4-B
C-1304	NJIC-4-C	NC-4-C
S-1304	NJIC-4-S	NC-4-S
B-1305	NJIC-5-B	NC-5-B
C-1305	NJIC-5-C	NC-5-C
S-1305	NJIC-5-S	NC-5-S
B-1306	NJIC-6-B	NC-6-B
C-1306	NJIC-6-C	NC-6-C
S-1306	NJIC-6-S	NC-6-S
B-1308	NJIC-8-B	NC-8-B
C-1308	NJIC-8-C	NC-8-C
S-1308	NJIC-8-S	NC-8-S
B-1310	NJIC-10-B	NC-10-B
C-1310	NJIC-10-C	NC-10-C
S-1310	NJIC-10-S	NC-10-S
B-1312	NJIC-12-B	NC-12-B
C-1312	NJIC-12-C	NC-12-C
S-1312	NJIC-12-S	NC-12-S
B-1316	NJIC-16-B	NC-16-B
C-1316	NJIC-16-C	NC-16-C
S-1316	NJIC-16-S	NC-16-S
B-1316Z	NJIC-16-B	NC-16Z-B
C-1316Z	NJIC-16-C	NC-16Z-C
S-1316Z	NJIC-16-S	NC-16Z-S
B-1320Z	NJIC-20-B	NC-20Z-B
C-1320Z	NJIC-20-C	NC-20Z-C
S-1320Z	NJIC-20-S	NC-20Z-S
B-2104-1	NF2-4-B	NC-4-B
B-2104-2	NF4-4-B	NC-4-B
B-2105	NF4-5-B	NC-5-B
S-2105	NF4-5-S	NC-5-S
FITT. #40	NMC-10-B	NC-10-B
PT-S-4	NPTS-4-S	NC-4-S
PT-45-4	NPT45-4-S	NC-4-S
PT-90-4	NPT90-4-S	NC-4-S

* Insert part number includes nut and short collar

D

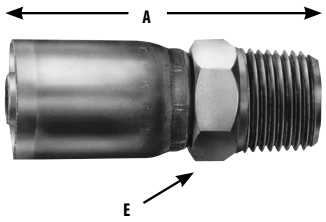
E-Series Crimp Hose Ends and Fittings

E-Series crimp hose ends are permanently attached to Winner PTFE smooth bore hoses using a crimping process. These one-piece hose ends eliminate the need for handling inserts and collars separately which reduces assembly fabrication time. The wide variety of carbon steel end configurations, including 45° and 90° elbows, open opportunities in applications where hose assembly routing space is very tight, such as transit buses and many high temperature hydraulic setups. **E-SERIES FITTINGS ARE AVAILABLE FOR SPECIFIC SIZES OF 0.030" WALL HOSE ONLY.**

E-Series Crimp - Hose Ends

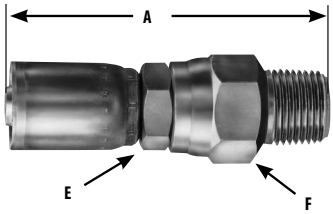
For use with
Winner EN-TW and Winner EC-TW

Male Pipe Rigid (NPT)



Hose I.D.	Carbon Steel Number	Stainless Steel Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E
3/16	03E-102		1/8	1/8-27	1.58	0.75	0.09	7/16
3/16	03E-104	03ER-104	1/4	1/4-18	1.83	1.00	0.09	9/16
1/4	04E-102		1/8	1/8-27	1.60	0.75	0.16	7/16
1/4	04E-104		1/4	1/4-18	1.79	1.00	0.16	9/16
1/4	04E-106		3/8	3/8-18	1.82	1.00	0.16	11/16
5/16	05E-104	05ER-104	1/4	1/4-18	1.86	0.94	0.22	9/16
5/16	05E-106		3/8	3/8-18	1.89	1.00	0.22	11/16
3/8	06E-104		1/4	1/4-18	1.90	1.00	0.27	9/16
3/8	06E-106		3/8	3/8-18	1.93	1.00	0.27	11/16
3/8	06E-108		1/2	1/2-14	2.17	1.25	0.27	7/8
13/32	07E-106	07ER-106	3/8	3/8-18	1.93	0.98	0.30	11/16
1/2	08E-106		3/8	3/8-18	2.02	1.00	0.38	3/4
1/2	08E-108	08ER-108	1/2	1/2-14	2.27	1.25	0.38	7/8
5/8	10E-112	10ER-112	3/4	3/4-14	2.28	1.45	0.50	1-1/16
3/4	12E-112		3/4	3/4-14	2.51	1.31	0.61	1-1/16
7/8	14E-116	14ER-116	1	1-11-1/2	2.87	1.59	0.75	1-3/8
1	16E-116		1	1-11-1/2	2.95	1.63	0.84	1-3/8

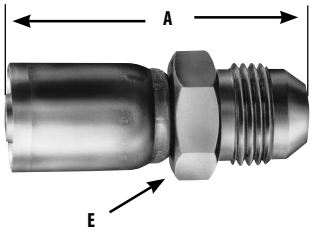
Male Pipe Swivel (NPT)



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-J04	1/4	1/4-18	2.68	1-7/8	0.16	5/8	13/16
5/16	05E-J04	1/4	1/4-18	2.74	1-7/8	0.22	5/8	13/16
3/8	06E-J06	3/8	3/8-18	2.79	1-13/16	0.27	11/16	7/8
1/2	08E-J08	1/2	1/2-14	3.03	2-1/16	0.38	3/4	7/8
3/4	12E-J12	3/4	3/4-14	3.73	2-9/16	0.61	1-1/4	1-1/4

Not for temperatures above 212 ˚F with nitrile o-rings

SAE 37° (JIC) Male Rigid



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E
1/4	04E-504	1/4	7/16-20	1.78	15/16	0.16	1/2
1/4	04E-505	5/16	1/2-20	1.78	15/16	0.16	9/16
1/4	04E-506	3/8	9/16-18	1.82	1	0.16	5/8
5/16	05E-505	5/16	1/2-20	1.86	1	0.22	9/16
3/8	06E-506	3/8	9/16-18	1.92	1	0.27	5/8
3/8	06E-508	1/2	3/4-16	2.08	13/16	0.27	13/16
1/2	08E-508	1/2	3/4-16	2.18	13/16	0.38	13/16
1/2	08E-510	5/8	7/8-14	2.31	1-1/4	0.38	15/16
3/4	12E-512	3/4	1-1/16-12	2.63	1-7/16	0.61	1-1/8
1	16E-516	1	1-5/16-12	2.83	1-1/2	0.84	1-3/8

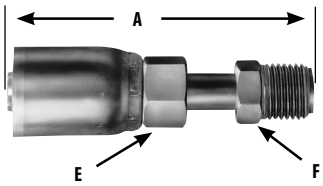
WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

E-Series Crimp - Hose Ends

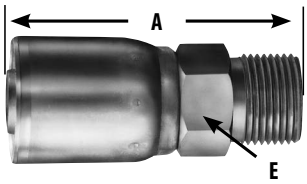
For use with
Winner EN-TW and Winner EC-TW

Inverted Male Swivel Straight



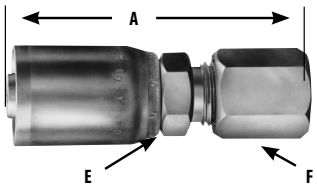
Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-B03	3/16	3/8-24	3.06	2-3/16	0.12	7/16	3/8
1/4	04E-B04	1/4	7/16-24	2.44	1-5/8	0.15	7/16	7/16
1/4	04E-B05	5/16	1/2-20	3.71	2-7/8	0.21	7/16	1/2
3/8	06E-B05	5/16	1/2-20	2.56	1-9/16	0.21	9/16	1/2
3/8	06E-B06	3/8	5/8-18	2.18	1-13/16	0.24	5/8	5/8
1/2	08E-B08	1/2	3/4-18	3.14	2-1/16	0.33	3/4	3/4

Air Brake Connection - Tube



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
1/2	08E-Y58	1/2	11/16-20	2.12	1-1/16	0.38	3/4	3/4
1/2	08E-Y60	5/8	13/16-18	2.18	1-1/8	0.38	7/8	7/8
3/4	12E-Y60	5/8	13/16-18	2.33	1-1/8	0.61	1	1
3/4	12E-Y62	3/4	1-18	2.40	1-3/16	0.61	1	1

Flareless Tube Rigid



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
5/16	05E-756	3/8	9/16-18	1.88	1	0.22	5/8	11/16
3/8	06E-755	5/16	1/2-20	1.78	7/8	0.23	9/16	5/8
3/8	06E-756	3/8	9/16-28	1.82	15/16	0.27	5/8	11/16
1/2	08E-758	1/2	3/4-16	2.08	1-1/16	0.38	13/16	7/8

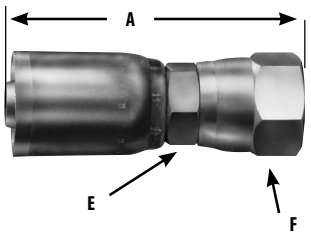
WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

E-Series Crimp - Hose Ends

For use with
Winner EN-TW and Winner EC-TW

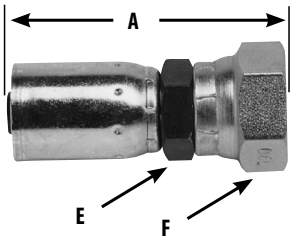
SAE 37° (JIC) Female Swivel



Hose I.D.	Carbon Steel Number	Stainless Steel Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
3/16	03E-604[1]	03E-604	1/4	7/16-20	1.89	1-1/32	0.09	7/16	9/16
1/4	04E-604[1]		1/4	7/16-20	1.92	1-1/8	0.16	7/16	9/16
1/4	04E-605[1]		5/16	1/2-20	2.00	1-3/16	0.16	1/2	5/8
1/4	04E-606[1]		3/8	9/16-18	2.05	1-1/4	0.16	9/16	11/16
5/16	05E-605[1]		5/16	1/2-20	2.07	1-3/16	0.22	1/2	5/8
5/16	05E-406[2]		3/8	5/8-18	2.06	1-1/8	0.22	9/16	3/4
5/16	05E-606[3]	05ER-606	3/8	9/16-18	2.15	1-1/4	0.22	9/16	11/16
3/8	06E-406[2]		3/8	5/8-18	2.06	1-1/8	0.27	9/16	3/4
3/8	06E-606[3]		3/8	9/16-18	2.19	1-1/4	0.27	9/16	11/16
3/8	06E-608[1]		1/2	3/4-16	2.30	1-3/8	0.27	3/4	7/8
13/13	07E-606	07ER-606	3/8	9/16-18	2.15	1-3/16	0.30	9/16	11/16
1/2	08E-608[1]	08ER-608	1/2	3/4-16	2.45	1-1/2	0.38	3/4	7/8
1/2	08E-610[1]		5/8	7/8-14	2.56	1-1/2	0.38	7/8	1
5/8	10E-612	10ER-612	3/4	1-1/16-12	2.50	1-11/16	0.50	1	1-1/4
3/4	12E-412[2]		3/4	1-1/16-14	2.98	1-11/16	0.61	1-1/8	1-3/8
7/8	12E-612[3]		3/4	1-1/16-12	2.75	1-9/16	0.61	1	1-1/4
7/8	14E-616	14ER-616	1	1-5/16-12	3.09	1-13/16	0.75	1-1/4	1-1/2
1	16E-616[3]		1	1-5/16-12	3.08	1-3/4	0.84	1-1/4	1-1/2

1 - Swivel nuts are universal - Both SAE 45° and JIC 37° connections
2 - SAE 45° Flare connection only
3 - JIC 37° Flare connection only

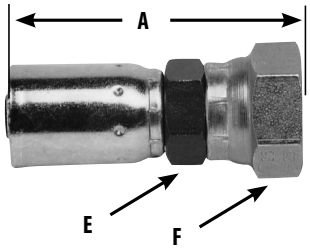
British Standard (BSPP) 60° Cone Female Pipe Swivel



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
3/16	03E-354	1/4	G-1/4-19 •	2.01	1-1/32	0.16	9/16	11/16
1/4	04E-354	1/4	G-1/4-19 •	1.88	1-1/32	0.16	9/16	11/16
3/8	06E-356	3/8	G-3/8-19 •	2.09	1-1/8	0.27	3/4	7/8
3/8	06E-358	1/2	G-1/2-19 •	2.47	1-1/2	0.27	13/16	1
1/2	08E-358	1/2	G-1/2-19 •	2.56	1-1/2	0.39	13/16	1
1/2	08E-360	5/8	G-5/8-19 •	2.70	1-21/32	0.39	7/8	1-3/16
3/4	12E-362	3/4	G-3/4-19 •	2.94	19/32	0.61	1	1-1/4
1	16E-366	1	G-1-11 •	3.38	2-1/32	0.84	1-1/4	1-1/2

• G in thread size is ISO designation for parallel thread.

Female Swivel JIS 30° Flare



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-04L	1/4	1/4-19	1.83	1	0.16	9/16	3/4
3/8	06E-06L	3/8	3/8-19	2.07	1-1/8	0.27	11/16	7/8
1/2	08E-08L	1/2	1/2-14	2.03	1-1/4	0.39	13/16	1-1/16
3/4	12E-12L	3/4	3/4-14	2.75	1-17/32	0.61	1	1-5/16
1	16E-16L	1	1-11	3.05	1-23/32	0.84	1-1/4	1-5/8

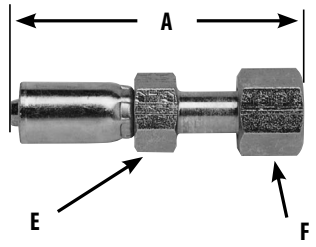
WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

E-Series Crimp - Hose Ends

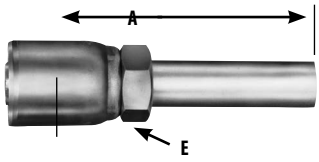
For use with
Winner EN-TW and Winner EC-TW

Female For-Seal® (ORS) Swivel Straight



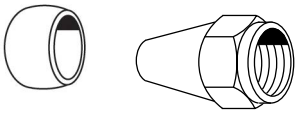
Hose I.D.	Part Number	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-S64	9/16-18	2.14	9/16-18	0.15	5/8	11/16
1/4	04E-S66	11/16-16	2.20	11/16-16	0.16	5/8	13/16
5/16	05E-S66	11/16-16	2.28	11/16-16	0.22	9/16	13/16
3/8	06E-S66	11/16-16	2.37	11/16-16	0.24	9/16	13/16
3/8	06E-S68	13/16-16	2.65	13/16-16	0.24	5/8	15/16
1/2	08E-S68	13/16-16	2.74	13/16-16	0.33	3/4	15/16
1/2	08E-S70	1-14	2.83	1-14	0.39	3/4	1-1/8
3/4	12E-S72	1-3/16-12	2.98	1-3/16-12	0.59	1	1-3/8
1	16E-S76	1-7/16-12	3.31	1-7/16-12	0.76	1-1/4	1-5/8

Straight Tube Brass



Hose I.D.	Part Number	Tube Size	Thread Size	A	Hose Cut-off Factor †	Hole Dia.	Hex E
1/2	08E-T58	1/2	11/16-20	3.32	2.31	0.39	3/4
1/2	08E-T60	5/8	13/16-18	3.45	2.44	0.47	3/4
3/4	12E-T60	5/8	13/16-18	3.66	2.44	0.47	1
3/4	12E-T62	3/4	1-18	4.00	2.81	0.61	1

Sleeve - Nut

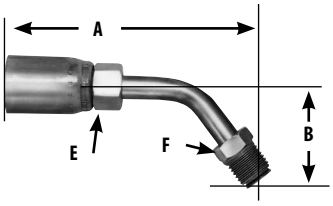


Tube I.D.	Part Number Sleeve	Part Number Nut
3/8	1360X6	1361X6
1/2	1360X8	1361X8
5/8	1360X10	1361X10
3/4	1360X12	1361X12

E-Series Crimp - Hose Ends

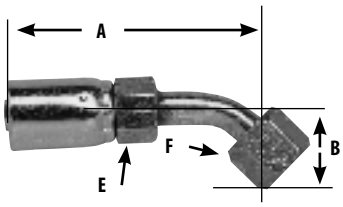
For use with
Winner EN-TW and Winner EC-TW

Inverted Male Swivel 45° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-B43	3/16	3/8-24	2.79	0.69	1-5/16	0.12	7/16	3/8
1/4	04E-B44	1/4	7/16-24	2.74	0.93	1-15/16	0.15	7/16	7/16
3/8	06E-B45	5/16	1/2-20	3.37	1.14	2-7/16	0.21	9/16	1/2
3/8	06E-B46	3/8	5/8-18	3.63	1.34	2-11/16	0.24	5/8	5/8
1/2	08E-B48	1/2	3/4-18	4.32	1.58	3-1/4	0.33	3/4	3/4

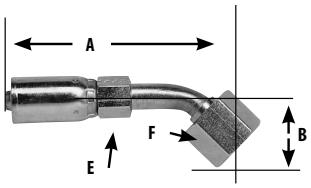
SAE 37° (JIC) Female Swivel 45° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-684[1]	1/4	7/16-20	2.37	0.33	1-9/16	0.15	7/16	9/16
1/4	04E-685[1]	5/16	1/2-20	2.50	0.36	1-5/8	0.16	7/16	5/8
5/16	05E-686[3]	3/8	9/16-18	2.65	0.39	1-11/16	0.22	9/16	11/16
3/8	06E-686[3]	3/8	9/16-18	2.74	0.39	1-3/4	0.24	5/8	11/16
3/8	06E-688[1]	1/2	3/4-16	2.99	0.55	2	0.27	5/8	7/8
1/2	08E-688[1]	1/2	3/4-16	3.08	0.55	2	0.33	3/4	1
1/2	08E-690[1]	5/8	7/8-12	3.28	0.63	2-1/4	0.37	3/4	1
3/4	12E-692[3]	3/4	1-1/16-12	3.69	0.78	2-7/16	0.58	1	1-1/4
1	16E-696[3]	1	1-5/16-12	4.09	0.89	2-3/4	0.84	1-1/4	1-1/2

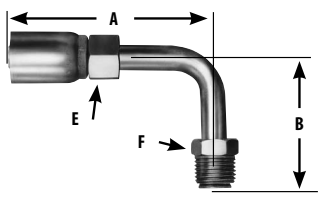
1 - Swivel nuts are universal - Both SAE 45° and JIC 37° connections
2 - SAE 45° Flare connection only
3 - JIC 37° Flare connection only

Female For-Seal® Swivel 45° Tube Elbow



Hose I.D.	Part Number	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-L64	9/16-18	2.46	0.41	1-5/8	0.15	7/16	11/16
3/8	04E-L66	11/16-16	2.69	0.43	1-3/4	0.15	5/8	13/16
3/8	06E-L66	11/16-16	2.79	0.43	1-13/16	0.24	5/8	13/16
1/2	08E-L68	13/16-16	3.14	0.60	2-1/8	0.33	3/4	15/16
3/4	12E-L72	1-3/16-12	3.38	0.83	2-5/8	0.59	1	1-3/8
1	16E-L76	1-7/16-12	4.31	0.94	3	0.76	1-1/4	1-5/8

Inverted Male Swivel 90° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-B63	3/16	3/8-24	2.16	1.06	1-5/16	0.12	7/16	3/8
1/4	04E-B64	1/4	7/19-24	2.18	1.36	1-5/16	0.15	7/16	7/16
3/8	06E-B65	5/16	1/2-20	2.58	1.16	1-5/8	0.21	9/16	1/2
3/8	06E-B66	3/8	5/8-18	2.92	1.97	1-15/16	0.24	5/8	5/8
1/2	08E-B68	1/2	3/4-18	3.03	2.32	1-15/16	0.33	3/4	3/4

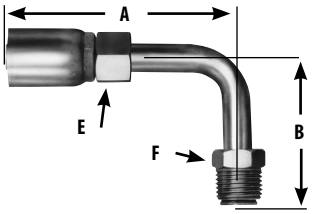
WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

E-Series Crimp - Hose Ends

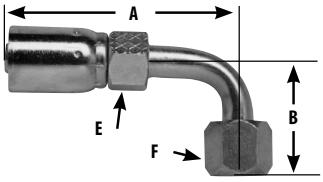
For use with
Winner EN-TW and Winner EC-TW

Inverted Male Swivel 90° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-B63	3/16	3/8-24	2.16	1.06	1-5/16	0.12	7/16	3/8
1/4	04E-B64	1/4	7/19-24	2.18	1.36	1-5/16	0.15	7/16	7/16
3/8	06E-B65	5/16	1/2-20	2.58	1.16	1-5/8	0.21	9/16	1/2
3/8	06E-B66	3/8	5/8-18	2.92	1.97	1-15/16	0.24	5/8	5/8
1/2	08E-B68	1/2	3/4-18	3.03	2.32	1-15/16	0.33	3/4	3/4

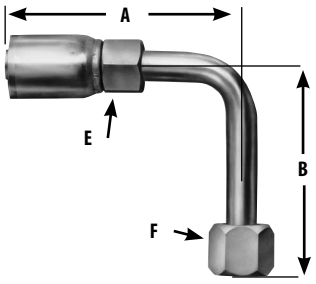
SAE 37° (JIC) Female Swivel 90° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-664[1]	1/4	7/16-20	2.27	0.68	1-7/16	0.15	7/16	9/16
1/4	04E-665[1]	5/16	1/2-20	2.51	0.77	1-5/8	0.16	7/16	5/8
5/16	05E-665[1]	5/16	1/2-20	2.58	0.77	1-5/8	0.18	9/16	5/8
5/16	05E-666[3]	3/8	9/16-18	2.63	0.85	1-11/16	0.22	9/16	11/16
3/8	06E-466[3]	3/8	5/8-18	2.27	0.85	1-3/4	0.24	5/8	11/16
3/8	06E-666[3]	3/8	9/16-18	2.72	0.85	1-3/4	0.24	5/8	11/16
3/8	06E-668[1]	1/2	3/4-16	2.83	1.09	1-3/4	0.27	5/8	7/8
1/2	08E-668[1]	1/2	3/4-16	2.93	1.09	1-7/8	0.33	3/4	7/8
1/2	08E-670[1]	5/8	7/8-14	3.54	1.23	1-7/8	0.38	3/4	1
3/4	12E-672[3]	3/4	1-1/16-12	3.56	1.82	2-5/16	0.58	1	1-1/4
1	16E-676[3]	1	1-5/16-12	4.06	2.14	2-5/16	0.84	1-1/4	1-1/2

1 - Swivel nuts are universal - Both SAE 45° and JIC 37° connections
2 - SAE 45° Flare connection only
3 - JIC 37° Flare connection only

SAE 37° (JIC) Female Swivel Long Drop 90° Tube Elbow



Hose I.D.	Part Number	Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-664[1]	1/4	7/16-20	2.40	1.80	1-7/16	0.15	7/16	9/16
1/4	04E-645[1]	5/16	1/2-20	2.51	1.80	1-5/8	0.16	7/16	5/8
5/16	05E-646[3]	3/8	9/16-18	2.63	2.18	1-11/16	0.22	9/16	11/16
3/8	06E-646[3]	3/8	9/16-18	2.72	2.18	1-3/4	0.24	5/8	11/16
3/8	06E-648[1]	1/2	3/4-16	2.83	2.43	1-7/8	0.27	5/8	11/16
1/2	08E-648[1]	1/2	3/4-16	2.92	2.43	1-7/8	0.33	3/4	7/8
1/2	08E-650[1]	5/8	7/8-14	3.09	2.57	2-1/16	0.38	3/4	1
1/2	2E-652[3]	5/8	1-1/16-12	3.60	3.60	2-3/8	0.58	1	1-1/4
1	16E-656[3]	1	1-5/16-12	4.20	4.20	2-13/16	0.84	1-1/4	1-1/2

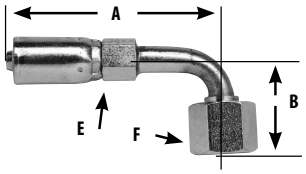
WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

E-Series Crimp - Hose Ends

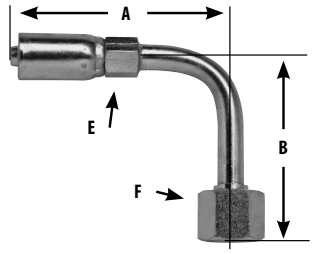
For use with
Winner EN-TW and Winner EC-TW

Female For-Seal® (ORS) Swivel Short Drop 90° Tube Elbow



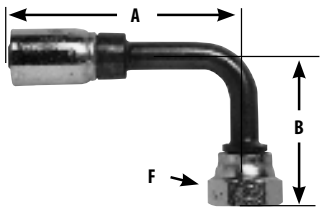
Hose I.D.	Part Number	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-A24	9/16-18	2.35	0.81	1-1/2	0.21	7/16	11/16
1/4	04E-A26	11/16-16	2.54	0.90	1-11/16	0.16	5/8	13/16
3/8	06E-A26	11/16-16	2.71	0.90	1-3/4	0.24	5/8	13/16
3/8	06E-A28	13/16-16	2.81	1.15	1-7/8	0.27	5/8	15/16
1/2	08E-A28	13/16-16	2.90	1.15	1-7/8	0.33	3/4	15/16
3/4	12E-A32	1-3/16-12	3.70	1.88	2-1/2	0.59	1	1-3/8
1	16E-A36	1-7/16-12	4.11	2.21	2-3/4	0.76	1-1/4	1-5/8

Female For-Seal® (ORS) Swivel Long Drop 90° Tube Elbow



Hose I.D.	Part Number	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-A64	9/16-18	2.41	1.80	1-9/16	0.21	7/16	11/16
5/16	05E-A66	11/16-18	2.73	2.12	1-13/16	0.22	9/16	13/16
3/8	06E-A66	11/16-16	2.82	2.21	1-7/8	0.24	5/8	13/16
3/8	06E-A68	13/16-16	2.80	2.50	1-7/8	0.27	5/8	15/16
1/2	08E-A68	13/16-16	2.89	2.50	1-7/8	0.33	3/4	15/16

British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow



Hose I.D.	Part Number	BSPP Tube Size	Thread Size	A	B	Hose Cut-Off Factor †	Hole Dia.	Hex E	Hex F
1/4	04E-74P	1/4	G-1/4-19 •	2.81	1.45	1-13/16	0.16	7/16	11/16
3/8	06E-76P	3/8	G-3/8-19 •	2.96	1.67	2	0.27	5/8	7/8
1/2	08E-78P	1/2	G-1/2-14 •	2.95	1.73	1-29/32	0.37	3/4	1-1/4
3/4	12E-82P	3/4	G-3/4-14 •	3.83	2.43	1-19/32	0.61	1	1-1/4

G in thread size is ISO designation for parallel thread.

WARNING: Selection of the proper end fitting for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose end blowing off the hose, leading to serious personal injury, death or property damage.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable Fittings

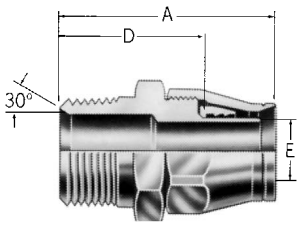
Field Attachable Fittings

For use with
Winner EN-TW and EC-TW

Part Number Example
FC9063-0808S

S = Carbon Steel

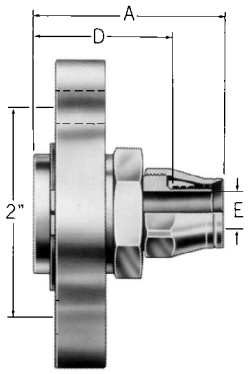
Male Pipe NPTF



Part Number	Thread	Hose I.D.	A	D	Eø
38–190627–					
2–4*	1/8-27	3/16	1.35	0.89	0.16
4–4*	1/4-18	3/16	1.54	1.08	0.16
4–5*	1/4-18	1/4	1.58	1.07	0.23
4–6*	1/4-18	5/16	1.66	1.13	0.28
6–6*	3/8-18	5/16	1.66	1.13	0.28
6–8*	3/8-18	13/32	1.79	1.16	0.38
8–10*	1/2-14	1/2	2.13	1.46	0.47
12–12*	3/4-14	5/8	2.26	1.61	0.59
16–16*	1-11-1/2	7/8	2.48	1.86	0.83

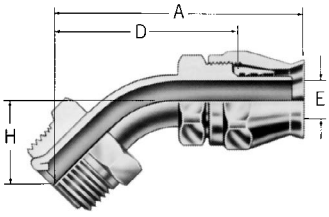
** Also supplied in stainless steel. Add suffix "C" to part number and delete prefix "38". Example part number for stainless steel is 190627-4-5C.*

2-Bolt Swivel Flange



Part Number	Flange Head Diameter	Hose I.D.	A	D	Eø
63–190626–					
6	2.88	5/16	1.78	1.26	0.28
12	2.88	5/8	2.07	1.42	0.56
16	2.88	7/8	2.18	1.49	0.19

SAE Male Inverted Flare 45° Elbow



Part Number	Thread	Hose I.D.	A	D	Eø	H
FC9063–						
0505S	1/2-20	1/4	2.46	1.94	0.23	0.96
0506S	1/2-20	5/16	2.50	1.97	0.21	0.96
0606S	5/8-18	5/16	2.50	1.97	0.28	0.96
0808S	3/4-18	13/32	2.66	2.04	0.38	0.93
1010S	7/8-18	1/2	2.96	2.29	0.47	1.03
1212S	11/16-16	5/8	3.10	2.44	0.59	1.10

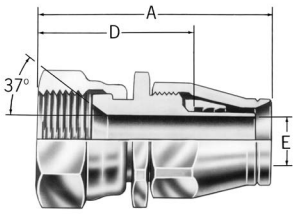
Field Attachable Fittings

For use with
Winner EN-TW and EC-TW

Part Number Example
FC9063-0808S

S = Carbon Steel

SAE 37° (JIC) Swivel

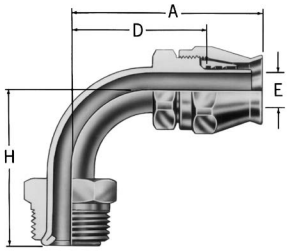


Part Number	Thread	Hose I.D.	A	D	Eø
63–190600–					
4*	7/16-20	3/16	1.58	1.13	0.16
5*	1/2-20	1/4	1.68	1.17	0.23
6*	9/16-18	5/16	1.74	1.22	0.26
8*	3/4-16	13/32	1.98	1.35	0.38
10*	7/8-14	1/2	2.22	1.54	0.47
12*	1-1/16-12	5/8	2.33	1.67	0.59
16*	1-15/16-12	7/8	2.52	1.91	0.83

** Also supplied in stainless steel. Add suffix "C" to part number and delete prefix "63". Example part number for stainless steel is 190600-6C.*

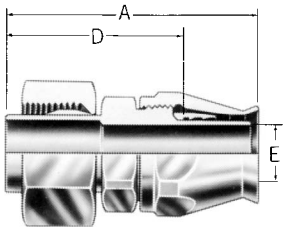
F

SAE Male Inverted Flare 90° Elbow



Part Number	Thread	Hose I.D.	A	D	Eø	H
190950–						
4S	7/16-24	3/16	2.04	1.57	0.16	1.69
5S	1/2-20	1/4	2.08	1.57	0.23	1.69
5-6S	1/2-20	5/16	2.12	1.60	0.21	1.69
6S	5/8-18	5/16	2.12	1.60	0.28	1.73
8S	3/4-18	13/32	2.32	1.69	0.38	1.74
10S	7/8-18	1/2	2.66	1.99	0.47	2.21
12S	1-1/16-16	5/8	2.73	2.07	0.59	2.35

SAE Ball Sleeve



Part Number	Thread	Hose I.D.	A	D	Eø
190718–					
8S	11/16-20	13/32	2.07	1.44	0.38
10–8S	13/16-18	13/32	2.07	1.44	0.38
10S	13/16-18	1/2	2.16	1.49	0.48
12S	1-18	5/8	2.42	1.76	0.59

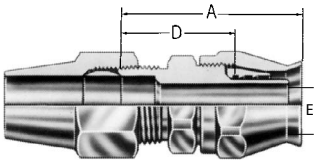
Field Attachable Fittings

For use with
Winner EN-TW and EC-TW

Part Number Example
FC9063-0808S

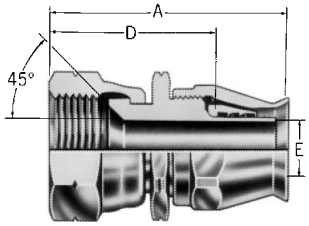
S = Carbon Steel

Compression Ball Sleeve



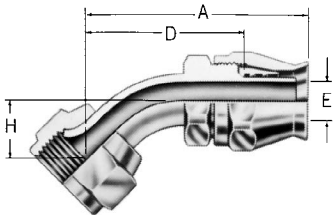
Part Number	Hose I.D.	A	D	Eø
38–191074–				
8	13/32	1.66	1.04	0.38
10	1/2	1.85	1.18	0.47
12	5/8	2.08	1.41	0.59

SAE 45° Swivel



Part Number	Thread	Hose I.D.	A	D	Eø
63–190990–					
4	7/16-20	3/16	1.58	1.12	0.16
5	1/2-20	1/4	1.68	1.17	0.23
6	5/8-18	5/16	1.77	1.25	0.28
8	3/4-16	13/32	1.98	1.36	0.38
10	7/8-14	1/2	2.22	1.54	0.47
12	1-1/16-14	5/8	2.33	1.67	0.59

45° Elbow



Part Number	Thread	Hose I.D.	A	D	Eø	H
190773-	Universal					
4S	7/16-20	3/16	1.51	1.05	0.16	0.33
5S	1/2-20	1/4	1.62	1.11	0.23	0.36
6S	9/16-18	5/16	1.72	1.20	0.28	0.39
8S	3/4-16	13/32	2.27	1.64	0.38	0.55
10S	7/8-14	1/2	2.46	1.79	0.47	0.64
12S	11/16-12	3/8	2.86	2.21	0.59	0.78
16S	15/16-12	7/8	3.30	2.68	0.83	1.07
FC9341- SAE 45° Swivel						
0606S	5/8-18	5/16	1.72	1.20	0.28	0.39
1212S	1-1/16-14	5/8	2.86	2.21	0.59	0.78

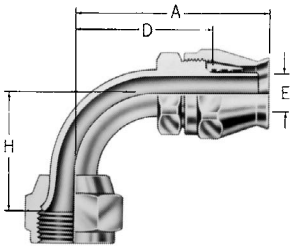
Field Attachable Fittings

For use with
Winner EN-TW and EC-TW

Part Number Example
FC9063-0808S

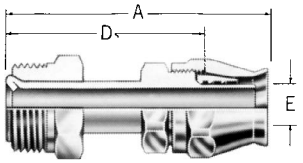
S = Carbon Steel

90° Elbow



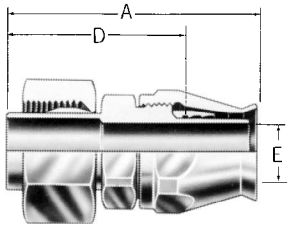
Part Number	Thread	Hose I.D.	A	D	Eø	H
190772-	Universal					
4S	7/16-20	3/16	1.41	0.95	0.16	0.68
5S	1/2-20	1/4	1.52	1.00	0.23	0.77
6S	9/16-18	5/16	1.62	1.10	0.28	0.85
8S	3/4-16	13/32	2.03	1.41	0.38	1.09
10S	7/8-14	1/2	2.16	1.49	0.47	1.23
10-12S	7/8-14	5/8	2.23	1.57	0.46	1.23
12S	1-1/16-12	5/8	2.82	2.17	0.59	1.82
12-16S	1-1/16-14	7/8	2.87	2.22	0.58	1.82
16S	1-5/16-12	7/8	3.10	2.49	0.82	2.39
FC9171–	SAE 45° Swivel					
0606S	5/8-18	5/16	1.62	1.10	0.28	0.85
1212S	1-1/16-14	5/8	2.80	2.19	0.59	1.82

SAE Male Inverted Flare Straight



Part Number	Thread	Hose I.D.	A	D	Eø
FC9062–					
0404S	7/16-24	3/16	2.13	1.66	0.16
0505S	1/2-20	1/4	2.17	1.66	0.23
0506S	1/2-20	5/16	2.21	1.69	0.21
0606S	5/8-18	5/16	2.21	1.69	0.28
0808S	3/4-18	13/32	2.47	1.84	0.38
1010S	7/8-18	1/2	2.78	2.11	0.47
1212S	1-1/16-16	5/8	3.02	2.37	0.59

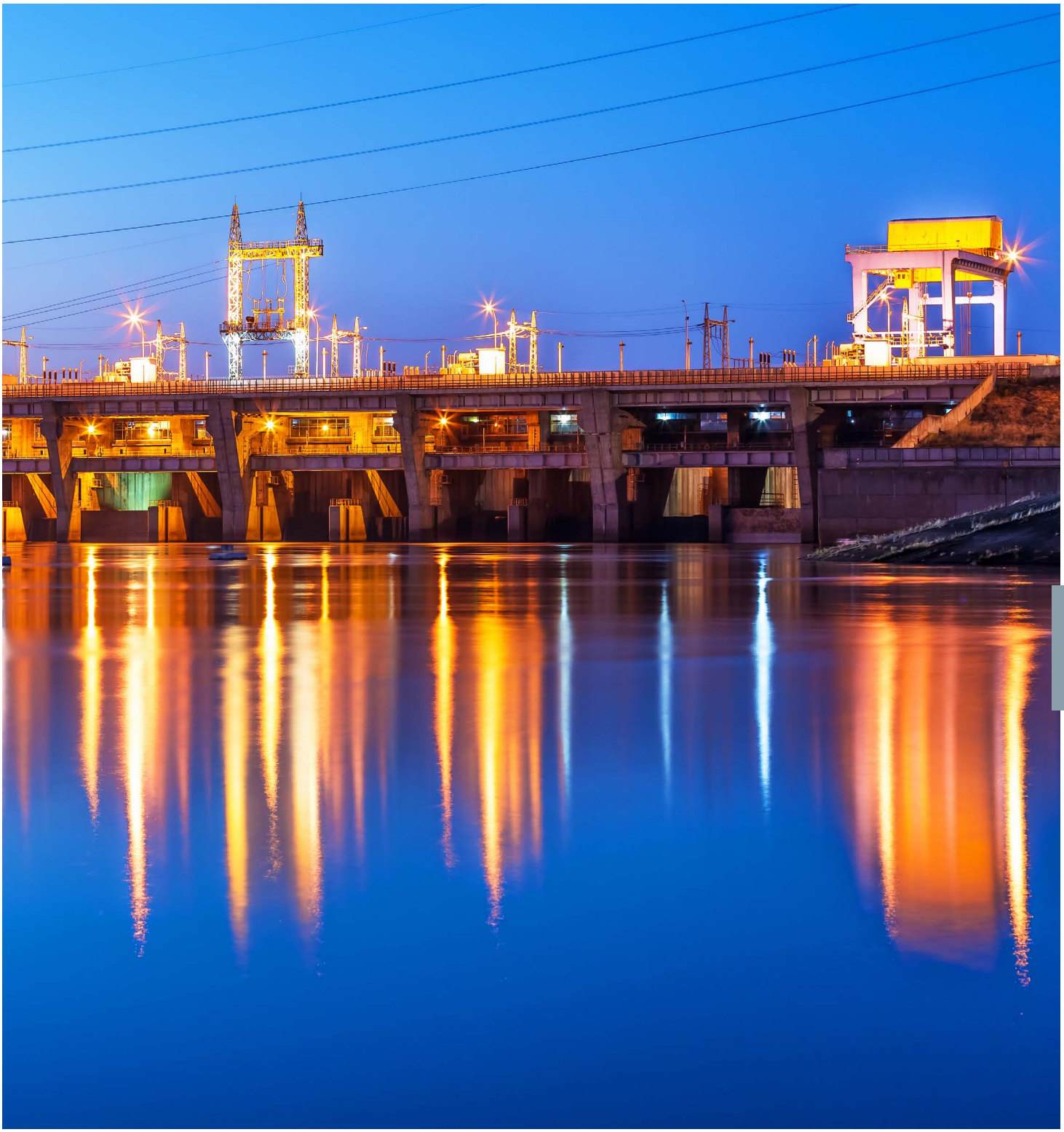
Special Ball Sleeve



Part Number	Thread	Hose I.D.	A	D	Eø
190742–					
10S	7/8-18	1/2	2.16	1.49	0.48

F

Everflex Hose Accessories



Everflex Hose Accessories - Firesleeve and Chafe Sleeve

Tubular Firesleeve

Everflex tubular firesleeve has a coating of specially compounded silicone rubber bonded to a low density, high bulk fiberglass sleeve. This combination offers a temporary barrier to flame penetration and provides long term mechanical and environmental protection. Ideal applications include steel plants, foundries, glass plants, and welding/cutting shops.

Operating temperatures

Continuous
-65° to +500 °F

Intermittent
-65° to +2000 °F

Tested in accordance with
UL-73, NFPA-250, ASTM-E84

Hose Size	Hose I.D.	Assembly Part Number
-4	3/16	SFS-1/2
-5	1/4	SFS-1/2
-6	5/16	SFS-11/16
-8	13/32	SFS-11/16
-10	1/2	SFS-11/16
-12	5/8	SFS-15/16
-16	7/8	SFS-1 1/4
-16Z‡	7/8	SFS-1 1/4
-20Z‡	1-1/8	SFS-1 1/2

Heat Shrinkable Chafe Sleeve

Everflex heat shrink chafe sleeve is made of black flame retardant polyolefin. In addition to providing excellent chafe resistance, the sleeve can also be wiped clean. This problem solver is ideal for any application where the assembly is subjected to abuse through abrasion.

Operating temperature

-65° to +275 °F

Hose Size	Hose I.D.	Assembly Part Number
-4	3/16	HSP-1/2
-5	1/4	HSP-1/2
-6	5/16	HSP-3/4
-8	13/32	HSP-5/8
-10	1/2	HSP-1
-12	5/8	HSP-1
-16	7/8	HSP-1 1/2
-16Z‡	7/8	HSP-1 1/2
-20Z‡	1-1/8	HSP-1 1/2

‡ The 16Z, and 20Z sizes have a double stainless steel wire reinforcement.

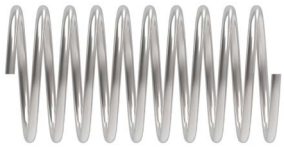
Everflex Hose Accessories - Firesleeve and Chafe Sleeve

Spring Guard

Everflex spring guard is available in hot dipped galvanized carbon steel. This method of protection is well suited for applications where rough handling, abrasion, and severe flexing will occur. Spring guards are required on some fuel dispensing applications.

Hose Size	Hose I.D.	Assembly Part Number
-4	3/16	2004
-5	1/4	2005
-6	5/16	2006
-8	13/32	2008
-10	1/2	2010
-12	5/8	2012
-16	7/8	2016
-16Z‡	7/8	2016Z
-20Z‡	1-1/8	2020Z

Tight Pitch Spring Guard



Everflex spring guard is available in hot dipped galvanized carbon steel. This method of protection is well suited for applications where rough handling, abrasion, and severe flexing will occur. Tight pitch spring guard is widely accepted in maintenance applications on rubber tire manufacturing presses.

Hose Size	Hose I.D.	Assembly Part Number
-4	3/16	2004T
-5	1/4	2005T
-6	5/16	2006T
-8	13/32	2008T
-10	1/2	2010T
-12	5/8	2012T
-16	7/8	2016T
-16Z‡	7/8	2016ZT
-20Z‡	1-1/8	2020ZT

302 Stainless Steel Internal Support Coil

Everflex internal support coil is available in 302 stainless steel.

Hose Size	Hose I.D.	Assembly Part Number
-5*	1/4	2005I
-8	13/32	2008I
-16	7/8	2016I
-20Z‡	1-1/8	2020ZI

‡ The 16Z, and 20Z sizes have a double stainless steel wire reinforcement.

** Closed pitch coil with round wire.*

G

Everflex Hose Accessories
Guardian Sleeve

Guardian Sleeve

Danfoss' Guardian Sleeve is designed to provide protection against hydraulic hose failure by containing pressure and fluids that may escape during a hose burst or pinhole leak. With this line of sight sleeving which meets industry standards, both equipment operators and the environment are guarded from the effects of hose failures.

Benefits

- Meets new line of sight operator specification EN982 ISO norm 833 EN414 and ISO 3457
- The ultra tight weave resists oil spillage from hose failure
- Meets ASTM D6770 for abrasion resistance of textile webbing
- Meets abrasion standard ISO 6945
- Meets Fed-STD191-test method 5309 for abrasion
- Densely twisted polyamide 6 yarn offers optimum UV and abrasion protection
- MSHA approved # IC-234/0 – meets standard application procedures for acceptance of flame resistance solid products taken into mines
- Meets conductivity requirements of ISO 8031
- Tight, smooth surface resists wear

Chemical Compatibility Chart for Guardian Sleeving

Chemical	Compatibility
Gasoline	Very Good
Oil	Very Good
Mineral and Vegetable Oil	Very Good
Ionic Metallic Solutions	Very Good
Alcohols	Very Good
Diluted Bases	Very Good
Diluted acids	Good
Benzene	Very Good
Acetone	Very Good
Ether	Very Good
Carbon Tetrachloride	Very Good
Chlorine Based Solvent	Very Good
Mold, Bacteria, Moths	Very Good

Strong and concentrated acids; ie. Hcl or Formic Acid may have some corrosive action.

Denier: 1260

Melting Point: 215 °C / 420 °F

Material: Polyamide 6, made with pre-dyed yarn

Dim. Stability: Great resistance to sun, atmospheric agents and aging

Toxicity: Non-Toxic

Color: Black

Packing Requirements: Danfoss Guardian Sleeve comes in a 300 foot roll with no more than 3 cuts per roll and no piece shorter than 30 feet

Assembly: Slide sleeve onto the hose before assembling the ends. After assembly, clamp the hose onto the fitting using a metal banding product.

Properties	Specication	Description
Burst Pressure	16,000 psi	Capable to contain hose burst up to 16,000 psi
Pin Hole Leak Pressure	4,000 psi	Sustained 4,000 psi pin hole deflection from focused 1mm pin hole
Abrasion Cycles	250,000	Holds up to 250,000 abrasion cycles per ISO 6945

General and Dimensional Information

Part Number	Nominal I.D. (in)	A – Flat Width (in) +/- 0.125	Weights in lbs per 300 ft Roll	Rolls per Box
FF90754-68	0.68	1.290	7.43	8
FF90754-79	0.79	1.400	8.50	7
FF90754-91	0.91	1.590	9.70	6
F90754-98	0.98	1.590	10.13	6
FF90754-106	1.06	1.825	11.10	5
FF90754-122	1.22	2.076	12.60	4
FF90754-142	1.42	2.390	14.50	4
FF90754-157	1.57	2.650	16.10	3
FF90754-173	1.73	2.910	17.70	3
FF90754-185	1.85	3.100	18.80	3
FF90754-209	2.09	3.470	21.10	2
FF90754-219	2.19	3.630	22.10	2
FF90754-238	2.38	3.925	23.90	2
FF90754-288	2.88	4.714	28.60	2
FF90754-366	3.66	5.938	36.10	1

Guardian Sleeve Selection Chart

Suggested Sleeve Part Number	Sleeve I.D. (in)	Max Hose OD that Sleeve can accept (in)	Hose Size as a Ref.
FF90754-68	0.68	0.52	-4
FF90754-79	0.79	0.61	-4
FF90754-91	0.91	0.70	-6
FF90754-98	0.98	0.76	-6
FF90754-106	1.06	0.80	-6
FF90754-122	1.22	0.92	-8
FF90754-142	1.42	1.02	-10
FF90754-157	1.57	1.13	-10
FF90754-173	1.73	1.24	-12
FF90754-185	1.85	1.34	-16
FF90754-209	2.09	1.50	-16
FF90754-219	2.19	1.54	-20
FF90754-238	2.38	1.70	-20
FF90754-288	2.88	2.00	-20
FF90754-366	3.66	2.40	-24

Assembly Equipment

EverSwage - Equipment and Tooling

T-400-1 EverSwage Press

T-401-EF Fabricating Distributor Kit

Fabricating distributor kit including a press with master pusher, hydraulic pump, hose assembly, swage die holder, pusher adapters, and swage dies for 'S' series, .040 wall hose -4 to -16.

T-400-71 Conversion Kit for Weatherhead T-400-1 Press

Conversion kit for Weatherhead T-400-1 press including master pusher, swage die holder, and pusher adapters.

T-400-89 Conversion Kit for Weatherhead T-400-1 Press

Conversion kit for Weatherhead T-400-1 press including master pusher, swage die holder, pusher adapter, and swage dies for 'S' Series, .040 wall hose -4 to -16.

TE-Kit

Includes all tube expanders for smooth bore hose.

WARNING: You must hold the hose assembly in place from below throughout the swage or crimping operation. Do not place fingers or hands at the swage or crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.

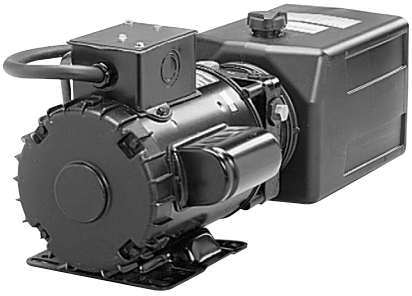
The use or intermixing of fittings and hose not specifically engineered and designed for use with the Everflex equipment may result in the production of an unsafe or unreliable hose assembly. The Everflex limited warranty is contingent upon the fact that only Everflex end fittings and Everflex hose be used on Everflex assembly equipment.

Model #	Description
T-400-1EF	EverSwage Press w/ Master Pusher*
T-400-16	Hose Assembly
T-400-72	Pusher Adapter
T-400-73	Pusher Adapter
T-400-74	Pusher Adapter
T-400-75	Pusher Adapter
T-400-76	Pusher Adapter
T-400-77	Pusher Adapter
T-400-78	Pusher Adapter
T-400-79	Pusher Adapter
T-400-80	Pusher Adapter
T-400-81	Pusher Adapter
T-400-82	Pusher Adapter
PT-Pusher	Power Trim Fitting Pusher
T-400-84	Master Pusher
T-400-85	Swage Die Holder
T-421U	Hydraulic Pump
T-400-BB	Convert switch for T-421U Pump
TE-3	Tube Expander for -3
TE-4	Tube Expander for -4
TE-5	Tube Expander for -5
TE-6	Tube Expander for -6
TE-8	Tube Expander for -8
TE-10	Tube Expander for -10
TE-12	Tube Expander for -12

Model #	Description
TE-16	Tube Expander for -16
TE-20	Tube Expander for -20
T-400-ED	Pusher Selector Decal
.040" Wall	**Swage Dies**
SD-3-15	Swage Die 1/8"
SD-4-15	Swage Die 3/16"
SD-5-15	Swage Die 1/4"
SD-6-15	Swage Die 5/16"
SD-8-15	Swage Die 13/32"
SD-10-15	Swage Die 1/2"
SD-12-15	Swage Die 5/8"
SD-16-15	Swage Die 7/8"
SD-20Z-15	Swage Die 1-1/8"
.030" Wall	**Swage Dies**
SD-4TW-15	Swage Die 3/16" TW
SD-5TW-15	Swage Die 1/4" TW
SD-6TW-15	Swage Die 5/16" TW
SD-8TW-15	Swage Die 13/32" TW
SD-10TW-15	Swage Die 1/2" TW
SD-12TW-15	Swage Die 5/8" TW
SD-16TW-15	Swage Die 7/8" TW
EFH-135X	50 Drawer Cabinet
EFS-100	Blank Labels for EFH-135X

* Requires the T-421U pump

T-421U Electric Pump



Dimensions	7 1/2" high, 10" wide, 22" long
Weight	66 lbs.
Reservoir Size	145 cu. in.
Outlet Port Size	3/4"-16 Straight Thread Orb
Motor	1 H.P., 3450 RPM, 115/220 Volts, 60 Cycles, Single Phase
Hydraulic Oil	Gulf Harmony 100 AW Gulf Harmony 64 or 68, SAE 10 Grade, ISO-32, SAE 20 Grade, Sunvis 931, Mobil DTE 26 or, Mobil DTE 24 (30 °F Below)
Reservoir Capacity	3 Quarts
Flow	0.5 GPM

EverSwage - Tooling Selector Chart

					B, M, S, SC Series	STW, SCTW Series
Hose I.D.	**Hose End**	**0.040" Wall Hose Swage Die**	**0.030" Wall Hose Swage Die**	**Pusher Adapter**	**0.040" Wall Hose Dia**	**0.030" Wall Hose Dia**
5/32	1103	SD-3-15	NA	T-400-73	0.308	0.367
3/16	1104-1	SD-4-15	SD-4TW-15	T-400-73	0.382	0.367
3/16	1104-2	SD-4-15	SD-4TW-15	T-400-72	0.382	0.453
1/4	1105	SD-5-15	SD-5TW-15	T-400-72	0.468	0.453
1/4	1105-1/8	SD-5-15	SD-5TW-15	T-400-73	0.468	0.453
5/16	1106-1	SD-6-15	SD-6TW-15	T-400-72	0.533	0.527
5/16	1106-2	SD-6-15	SD-6TW-15	T-400-80	0.533	0.527
5/16	1106-3	SD-6-15	SD-6TW-15	T-400-78	0.533	0.527
13/32	1108-1	SD-8-15	SD-8TW-15	T-400-79	0.632	0.614
13/32	1108-2	SD-8-15	SD-8TW-15	T-400-78	0.632	0.614
1/2	1110	SD-10-15	SD-10TW-15	T-400-77	0.739	0.724
5/8	1112	SD-12-15	SD-12TW-15	T-400-76	0.883	0.875
7/8	1116	SD-16-15	SD-16TW-15	T-400-74	1.194	1.179
7/8	1116Z	SD-16-15	NA	T-400-74	1.194	NA
1-1/8	1120Z	SD-20Z-15	NA	Not Needed	1.423	NA
5/32	1303	SD-3-15	NA	T-400-81	0.308	NA
5/32	1303-4	SD-3-15	NA	T-400-81	0.308	NA
3/16	1304	SD-4-15	SD-4TW-15	T-400-81	0.382	0.367
1/4	1305	SD-5-15	SD-5TW-15	T-400-72	0.468	0.453
5/16	1306	SD-6-15	SD-6TW-15	T-400-72	0.533	0.518
13/32	1308	SD-8-15	SD-8TW-15	T-400-78	0.632	0.614
1/2	1310	SD-10-15	SD-10TW-15	T-400-76	0.739	0.724
5/8	1312	SD-12-15	SD-12TW-15	T-400-76	0.883	0.875
7/8	1316	SD-16-15	SD-16TW-15	T-400-75	1.194	1.179
7/8	1316Z	SD-16-15	NA	T-400-75	1.194	NA
1-1/8	1320Z	SD-20Z-15	NA	T-400-74	1.423	NA
3/16	#30	SD-4-15	SD-4TW-15	T-400-81	0.382	0.367
1/4	#31	SD-5-15	SD-5TW-15	T-400-72	0.468	0.453
5/16	#32	SD-6-15	SD-6TW-15	T-400-72	0.533	0.518
13/32	#33	SD-8-15	SD-8TW-15	T-400-78	0.632	0.614
1/2	#34	SD-10-15	SD-10TW-15	T-400-76	0.739	0.724
5/8	#35	SD-12-15	SD-12TW-15	T-400-76	0.883	0.875
3/16	2104-1	SD-4-15	SD-4TW-15	T-400-82	0.382	0.367
3/16	2104-2	SD-4-15	SD-4TW-15	T-400-81	0.382	0.367
1/4	2105	SD-5-15	SD-5TW-15	T-400-81	0.468	0.453
3/16	STE4-4	SD-4-15	SD-4TW-15	TE4-4 With T-400-75	0.382	0.367
1/4	STE4-5	SD-5-15	SD-5TW-15	TE4-5 With T-400-75	0.468	0.453
5/16	STE6-6	SD-6-15	SD-6TW-15	TE6-6 With T-400-75	0.533	0.518
13/32	STE8-8	SD-8-15	SD-8TW-15	TE8-8 With T-400-75	0.632	0.614
5/8	STE12-12	SD-12-15	SD-12TW-15	TE12-12 With T-400-75	0.883	0.875
7/8	STE16-16	SD-16-15	SD-16TW-15	TE16-16 With T-400-75	1.194	1.179
5/16	B-6LFC	SD-6-15	SD-6TW-15	T-400-73	0.533	0.518
5/8	#60	SD-12-15	SD-12TW-15	Consult Factory	0.883	0.875
7/8	#62	SD-16-15	SD-16TW-15	Consult Factory	1.194	1.179
1/4	C-5PS	SD-5-15	SD-5TW-15	T-400-81	0.468	0.453
3/16	PT-S-4	SD-4-15	SD-4TW-15	PT-Pusher	0.382	0.367
3/16	PT-45-4	SD-4-15	SD-4TW-15	PT-Pusher	0.382	0.367
3/16	PT-90-4	SD-4-15	SD-4TW-15	PT-Pusher	0.382	0.367
1/2	10-S.37-316	SD-10-15	SD-10TW-15	T-400-82	0.739	0.724
7/8	16-S.87-316	SD-16-15	SD-16TW-15	T-400-82	1.194	1.179
1/2	#40	SD-10-15	Sd-10TW-15	40 With T-40-75	0.739	0.724
1/2	#41	SD-10-15	SD-10TW-15	TE10-10 With T-400-75	0.739	0.724

E-Series Barrel Crimp Tooling - Selector Chart

Nominal crimp diameter measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps:

1. Measure the diameter in the middle of the crimped portion of the hose end (see illustration #1)
2. Place the caliper in a position to allow a measurement in the horizontal depressions of the crimp spaced 180° apart (see illustration #1 and #2)
3. See crimp diameters on the following chart

   Note: In the larger sizes, calipers may be used; however in the smaller sizes, a point micrometer will provide an accurate reading.

Illustration #1

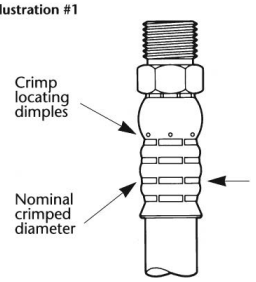
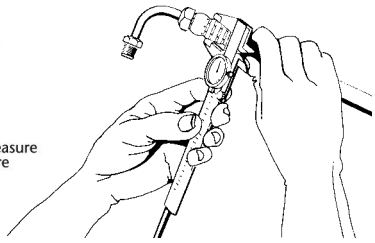


Illustration #2



Model #	Decription
T-400-30C	Kit includes 1 each of all collets
FS-1200	Label set/layout Guide
T-400-8	Die ring
T-432-15	Master pusher
T-400-37	Green spacer ring
T-400-38	Red spacer ring
T-400-112	Tan spacer ring

E-Series Barrel Crimp Tooling

For crimping E-Series hose ends using the EverSwage Press or T-400

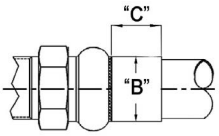
Hose Dash Size	Hose I.D.	Hose End Prefix	Collet	Spacer Ring Color	Flat Size (Up Or Down)	Spacer Ring Nominal Crimp Dia +/-.003"
EN-4TW	3/16	03E	T-400-113C	Tan	Up	0.355
EN-5TW	1/4	04E	T-400-31C	Green	Up	0.405
EN-6TW	5/16	05E	T-400-32C	Red	Up	0.475
EN-7TW	3/8	06E	T-400-33C	Red	Up	0.545
EN-10TW	1/2	08E	T-400-34C	Red	Up	0.695
EN-14TW	3/4	12E	T-400-35C	Red	Up	0.978
EN-18TW	1	16E	T-400-36C	Red	Up	1.225

NOTE: Spacer Rings not included in T-400-30C Kit.

E-Series Barrel Crimp Tooling

For Winner EN-TW and Winner EC-TW Hoses

Hose Size	E-Series Fitting	Crimp Diameter "B"		Crimp Die Cage	Crimp Position "C"	
		mm	inch		mm	inch
-4 PTFE Hose	03E-xxx / 03ER-xxx	9.4 ± 0.10	.370 ± .005	FT1380-275-M090	14.5 ± 0.76	.57 ± .030
-6 PTFE Hose	05E-xxx / 05ER-xxx	12.3 ± 0.10	.485 ± .005	FT1380-275-M120	19.6 ± 0.76	.77 ± .030
-8 PTFE Hose	07E-xxx / 07ER-xxx	14.9 ± 0.10	.587 ± .005	FT1380-200-M150	19.6 ± 0.76	.77 ± .030
-10 PTFE Hose	08E-xxx / 08ER-xxx	17.9 ± 0.10	.705 ± .005	FT1380-200-M180	21.6 ± 0.76	.85 ± .030
-12 PTFE Hose	10E-xxx / 10ER-xxx	20.75 ± 0.10	.816 ± .005	FT1380-200-M180	18.5 ± 0.76	.73 ± .030
-16 PTFE Hose	14E-xxx / 14ER-xxx	28.05 ± 0.10	1.105 ± .005	FT1380-200-M280	26.4 ± 0.76	1.04 ± .030



ET1000 Crimpers

E-Series Fitting	Collet Segment	Spacer Ring	Spacer Ring Flat Side UP/DN	Spacer Ring Color	Adapter Die Ring
03E-xxx / 03ER-xxx	ET1000DC-M065S	T-400-10	UP	Black	ET1000AR-001
05E-xxx / 05ER-xxx	T-400-120C	T-400-10	DN	Black	ET1000AR-001
07E-xxx / 07ER-xxx	T-400-2C	T-400-62	UP	Yellow	ET1000AR-001
08E-xxx / 08ER-xxx	T-400-40C	T-400-10	UP	Black	ET1000AR-001
10E-xxx / 10ER-xxx	T-400-4C	ET1000SR-M215A	UP	Magenta	ET1000AR-001
14E-xxx / 14ER-xxx	T-400-5C	T-400-38	UP	Red	ET1000AR-001

T-400-1 or T-400-17 or T-407-1 or T-460 or T-462 or T-465 Crimpers

E-Series Fitting	Collet Segment	Spacer Ring	Spacer Ring Flat Side UP/DN	Spacer Ring Color	Adapter Die Ring
03E-xxx / 03ER-xxx	ET1000DC-M065S	T-400-10	UP	Black	ET1000AR-001
05E-xxx / 05ER-xxx	T-400-120C	T-400-10	DN	Black	ET1000AR-001
07E-xxx / 07ER-xxx	T-400-2C	T-400-62	UP	Yellow	ET1000AR-001
08E-xxx / 08ER-xxx	T-400-40C	T-400-10	UP	Black	ET1000AR-001
10E-xxx / 10ER-xxx	T-400-4C	ET1000SR-M215A	UP	Magenta	ET1000AR-001
14E-xxx / 14ER-xxx	T-400-5C	T-400-38	UP	Red	ET1000AR-001

FT1380 or ET1280 Crimpers

E-Series Fitting	Crimp Die Cage
03E-xxx / 03ER-xxx	FT1380-275-M090
05E-xxx / 05ER-xxx	FT1380-275-M120
07E-xxx / 07ER-xxx	FT1380-200-M150
08E-xxx / 08ER-xxx	FT1380-200-M180
10E-xxx / 10ER-xxx	FT1380-200-M180
14E-xxx / 14ER-xxx	FT1380-200-M280

ET4020 Crimpers

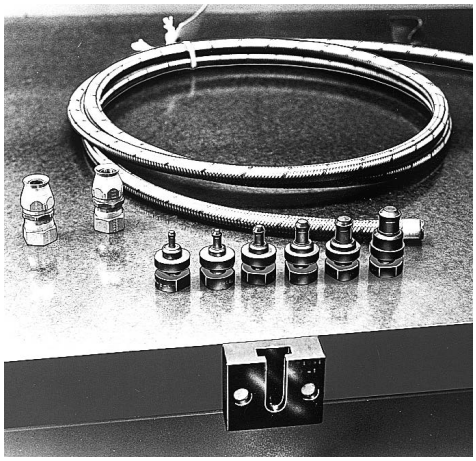
E-Series Fitting	Crimp Die Cage
03E-xxx / 03ER-xxx	FT1380-275-M090
05E-xxx / 05ER-xxx	FT1380-275-M120
07E-xxx / 07ER-xxx	FT1380-200-M150
08E-xxx / 08ER-xxx	FT1380-200-M180
10E-xxx / 10ER-xxx	FT1380-200-M180
14E-xxx / 14ER-xxx	FT1380-200-M280

ET4040 Crimpers

E-Series Fitting	Crimp Die Cage
3E-xxx / 03ER-xxx	FT1307-200-M090
05E-xxx / 05ER-xxx	FT1307-200-M120
07E-xxx / 07ER-xxx	FT1307-200-M150
08E-xxx / 08ER-xxx	FT1307-200-M180
10E-xxx / 10ER-xxx	FT1307-200-M180
14E-xxx / 14ER-xxx	FT1307-200-M280

Field Attachable Fittings - Assembly Equipment

FT1081
Everflex Complete Tool Kit



Hose Specifications

Smooth Bore Everflex Hose, -03, -04, -05, -06, -08, -10 and -12 hose.

Features

- Seats Everflex tube against sleeve
- Inexpensive
- Easy to use

Ordering Instructions

FT1081 Complete tool kit

Includes:

FT1081-3-1 mandrel holder
FT1081-3-2-3 mandrel -3 hose
FT1081-3-2-4 mandrel -4 hose
FT1081-3-3-5 mandrel -5 hose
FT1081-3-4-6 mandrel -6 hose
FT1081-3-5-8 mandrel -8 hose
FT1081-3-6-10 mandrel -10 hose
FT1081-3-7-12 mandrel -12 hose

FT1038A
Everflex Hose Tool

Hose Specifications

Smooth Bore Everflex Hose, -03, -04, -05, -06, -08, -10, -12

Features

- Used for sizing the ID of hoses made from Teflon™ fluoropolymer resin
- Small
- Hand held tool

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H

ENGINEERING
TOMORROW

Chemical Resistance Chart

Chemical Resistance Chart
Danfoss Everflex hoses made with Teflon™ fluoropolymer and Winner PTFE Hoses

Hoses: Wetted Surfaces Only

Partial List of Chemicals

This chart has been prepared as a guide only and is NOT a guarantee.

The number of variables present in any particular chemical environment makes firm ratings impossible. Testing under actual service conditions is advisable in all cases to establish suitability of hose for a given purpose.

End fitting material compatibility ratings are based on a fluid temperature of 70 °F and higher temperatures may accelerate adverse affects.

Where unusual conditions exist, or where questions arise, consult Danfoss Technical Support for assistance.

KEY
B- Brass
CS- Carbon Steel
SS- Stainless Steel

1- Excellent
2- Good
3- Not Recommended
0- No Information - Test Before Using

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Acetaldehyde	1	1	1	1	1
Acetic Acid 10%	1	3	3	2	2
Acetic Acid 30%	1	3	3	2	2
Acetic Acid Glacial	1	2	0	2	2
Acetic Anhydride	1	3	3	2	2
Acetone	1	1	1	1	1
Acetylene	1	2	0	1	1
Acrylonitrile	1	0	1	1	1
Acetyl Chloride	0	0	0	0	0
Alcohols	1	0	3	1	1
Allyl Chloride	0	0	0	0	0
Alum, Ammonium Or Potassium	1	3	3	2	2
Aluminum Acetate	1	3	0	1	1
Aluminum Bromide	1	3	3	2	2
Aluminum Chloride	1	3	3	2	2
Aluminum Fluoride	1	3	3	2	2
Aluminum Hydroxide	1	1	0	1	1
Aluminum Nitrite	1	0	3	1	1
Aluminum Oxychloride	0	0	0	0	0
Aluminum Salts	1	0	0	1	2
Aluminium Sulfate	1	3	3	3	2
Ammonia, Anhydrous	1	0	1	1	1
Ammonia, Aqueous	1	3	0	1	1
Ammonium Acetate	0	0	0	0	0
Ammonium Carbonate	0	0	1	1	1
Ammonium Chloride	1	3	0	2	2
Ammonium Fluoride	0	0	0	0	0
Ammonium Hydroxide	1	3	2	1	1
Ammonium Metaphosphate	1	0	1	1	1
Ammonium Nitrate	1	3	1	1	1
Ammonium Nitrite	0	0	0	1	1
Ammonium Persulfate	0	0	0	1	1
Ammonium Phosphate	1	0	3	2	1
Ammonium Sulfate	1	3	1	1	1
Ammonium Thiocyanate	1	0	1	1	1
Amyl Acetate	1	1	3	1	1
Amyl Alcohol	1	1	1	1	1
Amyl Chloride	1	0	0	1	1

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Amyl Chloronaphthalene	1	0	0	1	1
Amyl Naphthalene	1	0	0	1	1
Aniline	1	3	2	1	1
Aniline Dyes	1	0	3	1	1
Aniline Hydroxide	1	3	0	3	3
Animal Fats	1	0	1	1	1
Antimony Chloride	0	0	0	0	0
Antimony Trochloride	0	0	0	0	0
Aqua Regia	1	0	0	3	3
Arsenic Acid	1	0	2	0	1
Askarel	0	1	1	1	1
Asphalt	1	2	1	1	1
Barium Carbonate	1	1	2	1	1
Barium Chloride	1	2	3	1	1
Barium Hydroxide	1	0	2	1	1
Barium Sulfate	1	2	1	1	1
Barium Sulfide	1	3	3	1	1
Beer	1	1	2	1	1
Beet Sugar Liquids	1	0	1	1	1
Benzene	1	1	1	1	1
Benzenesulfonic Acid	0	0	3	0	2
Benzalsdehyde	1	0	1	0	0
Benzine	1	1	1	1	1
Benzyl Alcohol	1	0	1	1	1
Benzonic Acid	0	0	0	0	0
Benzoyl Chloride	0	0	0	0	0
Benzyl Benzoate	1	0	1	1	1
Benzyl Chloride	1	0	1	0	0
Bismuth Carbonate	1	0	1	1	1
Black Sulphate Liquor	1	0	1	1	1
Blast Furnace Gas	1	1	1	1	1
Borax	1	1	2	2	1
Bordeaux Mixture	1	0	0	1	1
Boric Acid	1	3	3	2	1
Brine	1	2	2	1	1
Bromine Gas	1	3	3	3	3
Bromine Liquid	1	3	3	3	3
Bromine Water	1	3	3	3	3
Bunker Oil	1	1	1	1	1

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Butadiene	1	1	0	1	1
Butane	1	1	1	1	1
Butter Oil	1	1	1	1	1
Butyric Acid	1	2	3	1	1
Butyl Acetate	1	1	2	1	1
Butyl Alcohol	1	1	1	1	1
Butyl Amine	0	1	1	1	1
Butyl Carbitol	1	1	1	1	1
Butyl Chloride	0	0	0	0	0
Butyl Phenol	0	0	0	0	0
Butyl Stearate	1	1	1	1	1
Butyl Mercaptan	1	0	0	1	1
Butyraldehyde	1	1	0	0	0
Cadmium Cyanide	0	0	0	0	0
Calcium Acetate	1	1	1	1	1
Calcium Bisulfate	1	3	0	2	1
Calcium Carbonate	1	1	1	1	1
Calcium Chlorate	1	0	0	2	1
Calcium Chloride	1	2	3	2	1
Calcium Hydroxide	1	2	3	3	1
Calcium Hypochlorite	1	3	0	3	2
Calcium Nitrate	1	1	1	1	1
Calcium Silicate	1	1	1	1	1
Calcium Sulfate	1	1	1	1	1
Calcium Sulfide	1	0	1	1	1
Calcium Phosphate	0	0	0	0	0
Cane Sugar Liquors	1	2	1	1	1
Caprylic Acid	0	0	0	0	0
Carbonic Acid	1	3	3	1	1
Carbon Dioxide	1	1	1	1	1
Carbon Disulfide	0	2	2	1	1
Carbonic Acid	1	3	3	1	1
Carbon Monoxide	1	1	1	1	1
Carbon Tetrachloride	1	2	3	2	2
Castor Oil	1	1	1	1	1
Caustic Soda	1	3	2	1	1
Cellosolve, Acetate	1	0	1	1	1
Cellosolve, Butyl	1	0	1	1	1
Cellulube	1	1	1	1	1
Cetyl Alcohol	0	0	0	0	0
Chloroacetic Acid	1	2	3	3	3
Chloral Hydrate	0	0	0	0	0
Chlorine, Gaseous, Dry	1	2	2	3	3
Chlorine, Gaseous, Wet	1	3	3	3	3
Chlorine, Triflouride	0	0	3	0	0
Chloroacetic, Acid	1	2	3	3	3
Chlorobenzine	1	1	1	1	1
Chloribenzene Chloride	0	0	0	0	0
Chlorobromomethane	1	1	1	1	1
Chloroform	1	1	1	1	1
O-Chloronaphthalene	1	1	1	1	1
Chlorosulfonic Acid	1	0	3	0	1
Chlorotoluene	1	1	1	1	1
Chromium Trioxide	0	0	0	0	0
Chromic Acid	1	3	3	3	2

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Citric Acid	1	3	3	3	1
Cod Liver Oil	1	1	1	1	1
Code Oven Gas	1	0	1	1	1
Copper Chloride	1	3	3	3	1
Copper Cyanide	1	3	0	1	1
Copper Fluoride	0	0	0	0	0
Copper Nitrate	0	0	0	0	0
Copper Sulfate	1	3	3	1	1
Corn Oil	1	1	1	1	1
Corn Syrup	1	0	1	1	1
Cottonseed Oil	1	1	1	1	1
Creosote	1	3	2	1	1
Cresol	1	0	2	1	1
Cresylic Acid	0	0	0	0	0
Crude Wax	1	1	1	1	1
Cutting Oil	1	1	1	1	1
Cyclohexane	1	1	1	1	1
Cyclohexanone	1	0	0	1	1
Cymene	1	1	0	0	0
Decalin	1	1	0	0	0
Denatured Alcohol	1	1	1	1	1
Diacetone	1	1	1	1	1
Diacetone Alcohol	1	1	1	1	1
Dibenzyl Ether	1	1	1	1	1
Dibutyl Ether	1	1	1	1	1
Dibutyl Phthalate	1	1	1	1	1
Dibutyl Sebacate	1	1	0	0	0
Dichlorethylene	0	0	0	0	0
Dichlorobenzene	1	1	0	1	1
Diesel Oil	1	1	1	1	1
Diethylamine	1	3	0	0	1
Diethyl Ether	1	1	1	1	1
Diethylene Glycol	1	1	1	1	1
Diethyl Phthalate	1	1	0	1	1
Diethyl Sebacate	1	1	0	1	1
Di-Isobutylene	0	1	0	1	1
Di-Isopropyl Ketone	1	1	0	1	1
Dimethyl Analine	1	1	0	0	0
Dimethyl Formamide	0	0	1	1	1
Dimetyl Phthalate	1	1	0	1	0
Dioctyl Phthalate	1	1	1	1	1
Dioxane	1	1	1	1	1
Dipentene	1	1	1	1	1
Ethanolamine	1	1	1	1	1
Ethers	1	1	1	1	1
Ethyl Acetate	1	1	1	1	1
Ethyl Acetoacetate	1	1	1	1	1
Ethyl Acrylate	0	0	1	1	1
Ethyl Alcohol	1	2	1	1	1
Ethyl Benzene	1	1	1	1	1
Ethyl Bromide	0	0	0	0	0
Ethyl Cellulose	1	1	1	1	1
Ethyl Chloride	1	2	2	1	1
Ethyl Ether	1	1	2	1	1
Ethyl Lactate	0	0	0	0	0

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Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Ethyl Mercaptan	1	0	2	0	0
Ethyl Pentochlorobenzene	1	1	2	1	1
Ethyl Silicate	1	1	1	1	1
Ethylene Chloride	1	2	2	1	1
Ethylene Chlorohydrin	1	0	0	0	0
Ethylene Diamine	1	1	0	0	0
Ethylene Dichloride	1	1	3	3	3
Ethylene Glycol	1	1	2	1	1
Ethylene Oxide	0	0	0	0	0
Fatty Acids	1	0	0	1	1
Ferric Chloride	1	3	3	3	3
Ferric Nitrate	1	0	3	1	1
Ferric Sulfate	1	3	3	1	1
Ferrous Chloride	1	2	3	1	2
Ferrous Nitrate	1	0	0	1	1
Ferrous Sulfate	1	2	3	1	1
Fluorine	0	0	0	0	0
Floroboric Acid	1	0	0	1	1
Formaldehyde	1	1	0	1	1
Formic Acid	1	2	3	2	1
Freon 12	2	0	3	1	1
Freon 114	2	0	3	1	1
Fuel Oil	1	1	2	2	2
Fumaric Acid	0	0	0	1	1
Furan Furfuran	1	1	1	1	1
Furfural	1	1	2	1	1
Gallic Acid	1	0	3	1	1
Gasoline	1	1	2	1	1
Glauber's Salt	0	0	1	1	1
Glucose	1	1	1	1	1
Glue	1	3	2	1	1
Glycerin	1	1	2	1	1
Glycerol	1	2	1	1	1
Glycols	1	1	1	1	1
Green Sulphate Liquor	1	0	1	1	1
Heptane	1	1	1	1	1
n-Hexaldehyde	1	1	1	1	1
Hexane	1	1	1	1	1
Hexene	1	1	1	1	1
Hexyl Alcohol	1	2	1	1	1
Hydraulic Oil, Petroleum	1	1	1	1	1
Hydrobromic Acid 10%	1	0	3	3	3
Hydrobromic Acid 30%	1	0	3	3	3
Hydrochloric Acid 10%	1	3	3	3	3
Hydrochloric Acid 50%	1	3	3	3	3
Hydrochloric Acid Concentrate	1	3	3	3	3
Hydrocyanic Acid	1	0	3	0	1
Hydrofluoric Acid Concentrated	1	3	3	3	3
Hydrofluoric Acid 40%	1	3	3	3	3
Hydrofluoric Acid 60%	1	3	3	3	3
Hydrofluosolicic Acid	1	3	3	3	3
Hydrogen Bromide	0	0	0	0	0
Hydrogen Gaseous	1	1	1	1	1
Hydrogen Peroxide 70%	1	3	3	2	1

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Hydrogen Sulfide Gaseous	1	3	3	2	1
Hydroquinone	0	0	0	1	1
Hydroxylamine Sulfate	0	0	0	0	0
Iodine	0	0	0	0	0
Isobutyl Alcohol	1	2	1	1	1
Iso Octane	1	1	1	1	1
Isopropyl Acetate	1	1	1	1	1
Isopropyl Alcohol	1	1	1	1	1
Isopropyl Ether	1	1	1	1	1
Kerosene	1	1	1	1	1
Ketones	0	0	0	1	1
Lacquers	1	1	3	3	1
Lacquers Solvents	1	1	3	2	1
Lactic Acid	1	2	3	2	1
Lard	1	3	1	1	1
Lead Acetate	1	1	2	1	1
Lead Nitrate	1	1	2	1	1
Lyme Bleach	0	0	3	2	1
Linoleic Acid	1	0	0	0	0
Linseed Oil	1	2	2	1	1
Lubricating Oils, Petroleum	1	1	1	1	1
Magnesium Chloride	1	2	3	2	1
Magnesium Hydroxide	1	0	1	1	1
Magnesium Nitrate	0	0	0	0	0
Magnesium Sulfate	1	1	2	1	1
Malic Acid	1	0	2	2	1
Mercuric Chloride	1	3	3	1	1
Mercury	1	3	1	1	1
Mesityl Oxide	1	1	1	1	1
Methanol	1	1	0	1	1
Methyl Acetate	1	1	1	1	1
Methyl Acrylate	0	1	1	1	1
Methyl Alcohol	1	2	1	1	1
Methyl Bromide	1	1	1	1	1
Methyl Butyl Katone	0	1	1	1	1
Methyl Chloride	1	1	1	1	1
Methylene Chloride	1	1	1	1	1
Methylethyl Ketone (MEK)	1	1	1	1	1
Methyl Formate	1	1	1	1	1
Methyl Isobutyl Ketone	1	1	1	1	1
Methyl Methacrylate	1	0	1	1	1
Methyl Salicylate	1	1	1	1	1
Methyl Sulphate	0	0	0	0	0
Methyl Trichlorosilane	0	0	0	0	0
Milk	1	3	3	1	1
Mineral Oil	1	1	1	1	1
Molasses	0	0	0	0	0
Monochlorobenzene	1	1	1	1	1
Monoethanolamine	0	1	1	1	1
Naptha	1	1	2	1	1
Napthalene	1	0	0	1	1
Naphthenic Acid	1	0	0	2	1
Natural Gas	1	2	1	1	1
Nickel Acetate	1	1	1	1	1
Nickel Chloride	1	3	3	2	2

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Nickel Nitrate	0	0	0	0	0
Nickel Sulfate	1	3	0	2	1
Niter Cake	0	0	3	2	1
Nitric Acid 5%	1	3	3	2	2
Nitric Acid 10%	1	3	3	2	2
Nitric Acid 30%	1	3	3	2	2
Nitric Acid above 30%	1	3	3	2	2
Nitric Acid, Red Fuming	1	3	3	2	2
Nitrobenzene	1	1	1	1	1
Nitroethane	1	1	0	1	1
Nitrogen, Gaseous	1	1	1	1	1
Nitrogen Tetroxide	0	0	0	0	2
Nitrous Acid	0	0	0	0	0
Nitrous Oxide	0	0	0	0	0
n-Octane	0	1	1	1	1
Octyl Alcohol	1	2	1	1	1
Oil, SAE	1	1	1	1	1
Oleic Acid	1	2	2	2	1
Olive Oil	1	2	2	2	1
Oxalic Acid	1	3	3	2	1
Oxygen Gaseous	1	1	1	1	1
Ozone	1	1	1	1	1
Paint	1	1	0	1	1
Palmitic Acid	1	3	1	2	1
Peanut Oil	1	1	1	1	1
Perchloric Acid	1	0	0	2	1
Perchloroethylene	1	1	1	1	1
Petroleum	1	1	1	1	1
Phenol	1	3	3	1	1
Phorone	1	1	1	1	1
Phosgene	0	0	0	0	0
Phosphoric Acid 20%	1	3	3	0	2
Phosphoric Acid 100%	1	3	3	0	2
Picric Acid	1	3	3	1	1
Pinene	1	1	1	1	1
Pine Oil	1	0	1	1	1
Plating Solutions Brass	0	0	0	0	0
Cadmium	0	0	0	0	0
Chrome	1	0	0	3	3
Potassium Acetate	1	0	0	1	1
Potassium Chloride	1	3	2	2	1
Potassium Cyanide	1	3	2	1	1
Potassium Dichromate	1	0	0	1	1
Potassium Hydroxide 30%	1	3	3	1	1
Potassium Hydroxide 100%	1	2	3	1	1
Potassium Nitrate	1	2	3	1	1
Potassium Sulfate	1	2	2	1	1
Propane	1	1	1	1	1
Propyl Acetate	0	1	1	1	1
Propyl Alcohol	1	2	1	1	1
Pyridine 50%	1	1	0	1	1
Red Oil	1	2	2	2	1
Salicylic Acid	0	0	0	1	1
Salt Water	1	3	2	1	1
Sewage	1	1	3	1	1

Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Silicone Greases	0	1	1	1	1
Silicone Oils	0	1	1	1	1
Silver Cyanide	0	0	0	0	0
Silver Nitrate	1	2	2	1	1
Skydrol 500 and 7000	1	0	1	1	1
Soap Solutions	1	1	1	1	1
Soda Ash	0	2	1	1	1
Sodium Acetate	1	1	1	1	1
Sodium Benzoate	1	2	2	1	1
Sodium Bicarbonate	1	2	2	1	1
Sodium Bisulfate	1	0	1	1	1
Sodium Borate	1	0	1	1	1
Sodium Chloride	1	3	2	2	1
Sodium Cyanide	1	3	2	1	1
Sodium Chlorate	0	0	0	0	0
Sodium Hydroxide 30%	1	3	2	1	1
Sodium Hydroxide 40%	1	3	2	1	1
Sodium Hydroxide 100%	1	3	2	2	1
Sodium Chlorite	0	0	0	0	0
Sodium Metaphosphate	1	3	3	1	1
Sodium Nitrate	1	2	1	1	1
Sodium Perborate	1	3	3	1	1
Sodium Peroxide	1	3	3	1	1
Sodium Phosphate	1	3	0	1	1
Sodium Thiosulfate	1	3	3	1	1
Soybean Oil	1	0	1	1	1
Stannic Chloride	1	3	3	0	0
Starch	0	0	0	0	0
Steam	1	2	1	1	1
Stearic Acid	1	3	3	2	1
Stoddard Solvent	1	1	2	1	1
Styrene	1	2	2	0	2
Sucrose Solution	1	0	1	1	1
Sulfur 200°F	1	3	2	2	1
Sulfur Chloride	1	3	3	3	2
Sulfur Dioxide	1	1	2	1	1
Sulfur Dioxide Liquid	1	0	0	0	0
Sulfur Dioxide Wet Gas	1	0	0	0	0
Sulfur Monochloride	0	0	0	0	0
Sulfur Trioxide	1	0	2	2	2
Sulfur Trioxide Liquid	0	0	0	0	0
Sulfur Trioxide Wet Gas	0	0	0	0	0
Sulfuric Acid 10%	1	3	3	3	2
96%	1	3	3	3	2
98%	1	3	2	3	2
100%	1	0	0	0	0
Fuming	1	3	2	0	1
Sulfurous Acid 10%	1	3	3	2	1
Sulfurous Acid 75%	1	3	3	3	2
Tallow	0	0	0	0	0
Tannic Acid 10%	1	3	2	1	1
Tar, Bituminous	1	2	1	1	1
Tartaric Acid	1	0	0	2	2
Tetrachloroethyene	0	0	0	0	0
Terpineol	1	0	0	0	0

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Media	End Fitting Material				
	Danfoss Everflex hoses made with Teflon™ fluoropolymer	Brass	CS	303/304 S.S	316SS
Titanium Tetrachloride	0	3	1	2	2
Toluene	1	1	1	1	1
Toluene Disocyanate	0	0	0	0	0
Transformer Oil	1	1	1	1	1
Transmission Fluid Type A	1	1	1	1	1
Tributoxyethyl Phosphate	1	0	1	0	0
Tributyl Phosphate	1	0	1	0	0
Trichloroacetic Acid 10%	0	0	0	0	0
Trichloroacetic Acid 100%	0	0	0	0	0
Trichlorethylene	1	1	3	0	1
Trichloroethylene	1	0	3	0	1
Trichlorophenol	0	0	0	0	0
Tricresyl Phosphate	1	0	1	0	2
Tung Oil	1	1	1	1	1
Turpentine	1	2	0	1	1
Urea Solution 50%	1	0	1	1	1
Urine	1	0	0	0	0
Varnish	0	2	2	1	1
Vegetable Oils	1	0	1	1	1
Versilube	1	1	1	1	1
Vinegar	1	3	3	2	1
Vinyl Acetate	0	0	0	0	0
Vinyl Chloride	1	3	2	1	1
Water	1	1	2	1	1
Whiskey, Wines	1	3	3	2	1
Xylene	1	0	3	2	2
Zinc Acetate	1	1	1	1	1
Zinc Chloride	1	3	3	2	1
Zinc Sulfate	1	3	3	2	1

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