

UNITED FLEXIBLE

Fluoropolymer Hose, Tubing and Assemblies



UNITED FLE>XIBLE

Your one source for all your flexible requirements:

Metal, composite and fluoropolymer hose, tubing, bellows and assemblies

The strengths of five flexible fluid control companies – US Hose Corp., AmniTec Ltd, AmniTec BV, Habia Teknofluor AB and Fulton Bellows LLC – are being combined into a new company and new brand called United Flexible. United Flexible manufactures and markets a wide range of metallic braided, composite and fluoropolymer hose and tubing, precision bellows and engineered assemblies.

The new United Flexible reflects our commitment to provide you solutions expertise, high-quality products and the premier customer service you expect. With your input, we're continuing to broaden our portfolio of products and assemblies for your diverse applications needs. To meet your evolving needs, United Flexible brings you deep expertise in gas and fluid transfer applications, plus collaborative engineering resources and unique manufacturing processes.

To see the full breadth of our product and assembly capabilities, we invite you to visit our new website at www.unitedflexible.com. There you'll find new product catalogs and the widest range of flexible fluid transport solutions we've ever offered.

Our Flexibility Is Your Strength.



John P. Devine
Chief Executive
United Flexible

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		PSI	BAR
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Chemical Resistance Inert to practically all commercial chemicals, acids, alcohols, coolants, elastomers, petroleum compounds, solvents, vinyls, synthetic lubricants, & hydraulic fluids.

Flex & Shock Resistance Not affected by continuous flexing, vibration, or impulse— withstands alternating cold and heat cycling.

High Flow Rates Low coefficient of friction with anti-stick properties insures continuous lower pressure drop during service with a good pressure rating and full vacuum.

Light Weight Easier to move, handle, and install than rubber hose with a comparable burst pressure rating—ideal as pigtail in gas handling and pneumatic systems where dew point must be low.

Non-Adhesive Handles substances such as adhesives, asphalt, dyes, grease, glue, latex, lacquers, and paints—no carbon build up when used as a compressor discharge line.

Non-Contaminating Will not contaminate material, fluid or gas. PTFE is FDA compliant for food handling and is also a suitable choice for pharmaceutical applications.

Resists Deterioration Impervious to weather and can be stored for long periods without aging—will not age during service.

Steam Compatibility Absorbs no moisture—rated for steam to 250 psi (17 bar) and 406°F (208°C)—has low volumetric expansion characteristics—easy to clean and sterilize.

United Flexible offers engineered solutions that address vibration, thermal, or pressure-related problems as well as applications involving the transfer of liquids or gases. The hose and fittings included in this catalog are precisely manufactured and coupled to assure unequalled quality and immediate response to your needs.

Rapid quotation and delivery response to even the most difficult applications are our specialties. We stock and supply standard medium pressure, ultra high pressure, convolute, smooth-bore, rubber-covered, and large bore fluoropolymer hoses with their associated fittings, adapters, and accessories.

This catalog includes our full product line of chemical transfer and smooth bore hoses as well as associated products.

* Working pressure is calculated at 1:4 burst pressure except Dense-Pac that is calculated 1:3 burst pressure.

General Purpose Smooth Bore PTFE

General Purpose Smooth Bore PTFE hose can be used to solve your demanding transfer challenges for liquids such as acids, solvents, fuels, adhesives, hydraulic fluid, hot oils and chemicals of all types. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



- Applications:** Industrial Equipment, Chemical, Transportation & Food Processing where temperature, pressure, flexing and purity are essential to the service.
- Innercore:** Standard Wall PTFE ; Anti-static also available for conditions that can create static charges. Standard PTFE as well as anti-static tubes are fully FDA compliant. PTFE compliant with ISO 12086 Part 1.
- Reinforcement:** One layer of type 304 stainless steel high tensile wire EN 1.4301
- Temperature Range:** -60°C to +260°C (-76°F to +500°F)
- Chemical Resistance:** Refer to page 30.

Burst pressures are based on 70°F (21°C), for higher temperatures please refer to chart on page 29.

IMPERIAL										
Dash Size	Inch Reference # Natural	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Tol (+/-) OD (in)	Innercore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-3	SB10.12N	0.125	0.008	0.24	0.018	0.039	3000	12000	2.0	0.05
-4	SB10.19N	0.190	0.008	0.32	0.018	0.028	3000	12000	2.0	0.06
-5	SB10.25N	0.250	0.010	0.37	0.020	0.028	3000	12000	3.1	0.07
-6	SB10.32N	0.320	0.012	0.45	0.020	0.031	2500	10000	4.5	0.09
-7	SB10.37N	0.370	0.012	0.52	0.020	0.031	2250	9000	4.7	0.11
-8	SB10.41N	0.410	0.012	0.52	0.020	0.031	2000	8000	4.7	0.11
-10	SB10.5N	0.500	0.014	0.65	0.024	0.031	1750	7000	5.9	0.19
-12	SB10.62N	0.620	0.016	0.80	0.028	0.039	1500	6000	6.3	0.20
-14	SB10.77N	0.770	0.016	0.91	0.028	0.039	1100	4400	6.5	0.24
-16	SB10.87N	0.870	0.020	1.02	0.031	0.039	1000	4000	8.9	0.28
-18	SB11N	1.000	0.020	1.18	0.031	0.047	900	3600	9.8	0.34

METRIC										
Metric Reference # Natural	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Tol (+/-) OD (mm)	Innercore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)	
SBM3.2N	3.2	0.20	6.2	0.45	1.00	240	960	40	0.08	
SBM5N	5.0	0.20	8.0	0.45	0.70	225	900	50	0.09	
SBM6.5N	6.5	0.25	9.5	0.50	0.70	205	820	80	0.10	
SBM8.2N	8.2	0.30	11.4	0.50	0.80	173	690	115	0.13	
SBM10N	10.0	0.30	13.2	0.50	0.80	138	550	120	0.16	
SBM13.4N	13.4	0.35	16.6	0.60	0.80	120	480	150	0.28	
SBM16.4N	16.4	0.40	20.2	0.70	1.00	103	410	160	0.30	
SBM19.6N	19.6	0.40	23.2	0.70	1.00	75	300	165	0.35	
SBM22.2N	22.2	0.50	26.0	0.80	1.00	63	250	225	0.42	
SBM26N	26.0	0.50	30.0	0.80	1.20	63	250	250	0.50	

Note: For anti-static type hose please consult factory for specifications.

Heavy Duty Smooth Bore PTFE Single Braid

This highly durable PTFE hose can be used to solve your demanding transfer challenges for liquids such as acids, solvents, fuels, adhesives, hydraulic fluid, hot oils and chemicals of all types. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



Applications: Industrial Equipment, Chemical, Transportation & Food Processing where temperature, pressure, flexing, purity and extreme durability are essential.

Innecore: Heavy Wall PTFE ; Anti-static also available for conditions that can create static charges. Standard PTFE as well as anti-static tubes are fully FDA compliant. PTFE compliant with ISO 12086 Part 1. The heavier wall of this hose makes it more resistant to kinking and easier to install around obstacles.

Reinforcement: One layer of type 304 stainless steel high tensile wire EN 1.4301

Temperature Range: -60°C to +260°C (-76°F to +500°F)

Chemical Resistance: Refer to page 30.

Burst pressures are based on 70°F (21°C); for higher temperatures please refer to chart on page 29.

IMPERIAL									
Dash Size	Inch Reference # Natural	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Innecore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-3	HDSIO.12N	0.126	0.008	0.27	0.04	3000	12000	2.0	0.05
-4	HDSIO.19N	0.197	0.008	0.34	0.04	3000	12000	2.0	0.08
-5	HDSIO.2N	0.248	0.012	0.40	0.04	3000	12000	2.4	0.09
-6	HDSIO.3N	0.315	0.012	0.46	0.04	2500	10000	3.9	0.13
-8	HDSIO.4N	0.394	0.012	0.56	0.05	2250	9000	4.7	0.17
-10	HDSIO.5N	0.512	0.016	0.68	0.05	1750	7000	5.3	0.22
-12	HDSIO.6N	0.630	0.016	0.80	0.06	1500	6000	6.5	0.30
-14	HDSIO.7N	0.772	0.016	0.94	0.06	1100	4400	7.5	0.35
-16	HDSIO.8N	0.866	0.020	1.03	0.06	1000	4000	7.9	0.38
-18	HDSI1.0N	1.004	0.020	1.17	0.06	900	3600	9.8	0.47

METRIC								
Metric Reference # Natural	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Innecore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)
HDSM3.2N	3.2	0.20	6.9	1.00	300	1200	50	0.08
HDSM5N	5.0	0.20	8.7	1.00	250	1000	50	0.12
HDSM6.2N	6.3	0.30	10.2	1.00	230	920	60	0.14
HDSM8N	8.0	0.30	11.7	1.00	200	800	100	0.19
HDSM10N	10.0	0.30	14.2	1.30	175	700	120	0.25
HDSM13N	13.0	0.40	17.2	1.30	150	600	135	0.32
HDSM16N	16.0	0.40	20.2	1.50	125	500	165	0.44
HDSM19N	19.6	0.40	23.8	1.50	100	400	190	0.52
HDSM22N	22.0	0.50	26.2	1.50	100	400	200	0.56
HDSM25N	25.5	0.50	29.7	1.50	80	320	250	0.70

Note: For anti-static type hose please consult factory for specifications.

Heavy Duty Smooth Bore PTFE Double Braid

This highly durable PTFE hose can be used to solve your demanding transfer challenges for liquids such as acids, solvents, fuels, adhesives, hydraulic fluid, hot oils and chemicals of all types. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



Applications: Industrial Equipment, Chemical, Transportation & Food Processing where temperature, pressure, flexing, purity and extreme durability are essential.

Innercore: Heavy Wall PTFE ; Anti-static also available for conditions that can create static charges. Standard PTFE as well as anti-static tubes are fully FDA compliant. PTFE compliant with ISO 12086 Part 1. The heavier wall of this hose makes it more resistant to kinking and over-bending.

Reinforcement: Two layers of type 304 stainless steel high tensile wire EN 1.4301

Temperature Range: -60°C to +260°C (-76°F to +500°F)

Chemical Resistance: Refer to page 30.

Burst pressures are based on 70°F (21°C), for higher temperatures please refer to page 29.

IMPERIAL									
Dash Size	Inch Reference # Natural	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Innercore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-3	HDDIO.12N	0.126	0.008	0.33	0.04	5076	20306	2.0	0.09
-4	HDDIO.19N	0.197	0.008	0.40	0.04	4714	18855	2.0	0.14
-5	HDDIO.24N	0.244	0.008	0.45	0.04	4351	17405	2.4	0.16
-6	HDDIO.31N	0.315	0.012	0.52	0.04	3916	15664	3.9	0.23
-8	HDDIO.39N	0.394	0.012	0.62	0.05	3336	13344	4.7	0.30
-10	HDDIO.5N	0.512	0.016	0.74	0.05	2756	11023	5.3	0.36
-12	HDDIO.62N	0.630	0.016	0.85	0.06	2357	9428	6.5	0.30
-14	HDDIO.77N	0.772	0.016	1.00	0.06	1813	7252	2.0	0.56
-16	HDDIO.86N	0.866	0.020	1.09	0.06	1250	5000	7.9	0.54
-18	HDDI1.00N	1.004	0.020	1.23	0.06	1450	5802	2.0	0.81
-20	HDDI1.13N	1.142	0.020	1.39	0.06	1000	4000	11.8	0.79

METRIC								
Metric Reference # Natural	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Innercore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)
HDDM3.2N	3.2	0.20	8.4	1.00	350	1400	50	0.14
HDDM5N	5.0	0.20	10.2	1.00	325	1300	50	0.21
HDDM6.2N	6.2	0.20	11.4	1.00	300	1200	60	0.24
HDDM8N	8.0	0.30	13.2	1.00	270	1080	100	0.34
HDDM10N	10.0	0.30	15.7	1.30	230	920	120	0.44
HDDM13N	13.0	0.40	18.7	1.30	190	760	135	0.53
HDDM16N	16.0	0.40	21.7	1.50	163	650	165	0.45
HDDM19.6N	19.6	0.40	25.5	1.50	125	500	190	0.84
HDDM22N	22.0	0.50	27.7	1.50	113	450	200	0.80
HDDM25N	25.5	0.50	31.2	1.50	100	400	250	1.20
HDDM29N	29.0	0.50	35.2	1.50	90	360	300	1.18

Note: For anti-static type hose please consult factory for specifications.

Fittings: Smooth Bore Fluoropolymer Hose

General Purpose, Heavy Duty Single & Double Braid

United Flexible manufactures and stocks over 500 sizes and styles of fittings. Our goal is to ensure rapid delivery of assemblies to you in as short a time as possible. Alloys that we stock are brass, stainless and carbon steel or combinations if preferred. In addition we have the capability to produce fittings in other alloys for highly corrosive applications. **We will manufacture custom fittings to your specifications.** Contact our customer service department for more information on this service.

Permanent Crimp Fittings

Male Pipe Brass



Male Pipe Stainless



Male Pipe Carbon



Male Pipe Fittings-Brass	
Reference #	Description-Hose Size
0304TW	MNPT (1/8-27)-4
0504TW	MNPT (1/4-18)-4
0505TW	MNPT (1/4-18)-5
0306TW	MNPT (1/4-18)-6
0506TW	MNPT (3/8-18)-6
0308TW	MNPT (3/8-18)-8
0508TW	MNPT (1/2-14)-8
0510TW	MNPT (1/2-14)-10
0512TW	MNPT (3/4-14)-12
0516TW	MNPT (1-11 1/2)-16
0516Z	MNPT (1-11 1/2)-16Z

Male Pipe Fittings-303 Stainless	
Reference #	Description-Hose Size
1704TW	MNPT (1/8-27)-4
2004TW	MNPT (1/4-18)-4
2005TW	MNPT (1/4-18)-5
1705TW	MNPT (1/8-27)-5
1706TW	MNPT (1/4-18)-6
2006TW	MNPT (3/8-18)-6
1708TW	MNPT (3/8-18)-8
2008TW	MNPT (1/2-14)-8
2010TW	MNPT (1/2-14)-10
2012TW	MNPT (3/4-14)-12
2016TW	MNPT (1-11.5)-16
2016Z	MNPT (1-11 1/2)-16Z
2020Z	MNPT (1 1/4-11 1/2)-20Z

Male Pipe Fittings-Carbon Steel	
Reference #	Description-Hose Size
0904TW	MNPT (1/8-27)-4
1004TW	MNPT (1/4-18)-4
1005TW	MNPT (1/4-18)-5
0905TW	MNPT (1/8-27)-5
0906TW	MNPT (1/4-18)-6
1006TW	MNPT (3/8-18)-6
0908TW	MNPT (3/8-18)-8
1008TW	MNPT (1/2-14)-8
1010TW	MNPT (1/2-14)-10
1012TW	MNPT (3/4-14)-12
1016TW	MNPT (1-11 1/2)-16
1016Z	MNPT (1-11 1/2)-16Z
1020Z	MNPT (1 1/4-11 1/2)-20Z

316 Stainless Steel also available

Female Swivel Brass



Female Swivel Stainless



Female Swivel Carbon



Jic 37°/Sae 45° Female Swivel	
Reference #	Description-Hose Size
3504TW	JIC/SAE SWIVEL (7/16-20)-4
3505TW	JIC/SAE SWIVEL (1/2-20)-5
3506TW	JIC (9/16-18)-6
3606TW	SAE SWIVEL (5/8-18)-6
3508TW	JIC/SAE SWIVEL (3/4-16)-8
3510TW	JIC/SAE SWIVEL (7/8-14)-10
3512TW	JIC (1 1/16-12)-12
3612TW	SAE SWIVEL (1 1/16-14)-12
3516TW	JIC (1 5/16-12)-16
3516Z	JIC (1 5/16-12)-16Z

JIC Swivel Fittings-303 Stainless	
Reference #	Description-Hose Size
4003TW	37 JIC SWIVEL (3/8-24)-3
4303TW	37 JIC SWIVEL (7/16-20)-3
4004TW	37 JIC SWIVEL (7/16-20)-4
3905TW	37 JIC SWIVEL (7/16-20)-5
4005TW	37 JIC SWIVEL (1/2-20)-5
4006TW	37 JIC SWIVEL (9/16-18)-6
4008TW	37 JIC SWIVEL (3/4-16)-8
4010TW	37 JIC SWIVEL (7/8-14)-10
4012TW	37 JIC SWIVEL (1 1/16-12)-12
4016TW	37 JIC SWIVEL (1 5/16-12)-16
4016Z	37 JIC SWIVEL (1 5/16-12)-16Z
4020Z	37 JIC SWIVEL (1 5/8-12)-20Z

JIC Swivel Fittings-Carbon Steel	
Reference #	Description-Hose Size
3004TW	37 JIC SWIVEL (7/16-20)-4
2905TW	37 JIC SWIVEL (7/16-20)-5
3005TW	37 JIC SWIVEL (1/2-20)-5
3006TW	37 JIC SWIVEL (9/16-18)-6
3007TW	37 JIC SWIVEL (9/16-18)-7N
3008TW	37 JIC SWIVEL (3/4-16)-8
3010TW	37 JIC SWIVEL (7/8-14)-10
3012TW	37 JIC SWIVEL (1 1/16-12)-12
3016TW	37 JIC SWIVEL (1 5/16-12)-16
3016Z	37 JIC SWIVEL (1 5/16-12)-16Z
3020Z	37 JIC SWIVEL (1 5/8-12)-20Z
3206TW	SAE SWIVEL (5/8-18)-6
3212TW	SAE SWIVEL (1 1/16-14)-12

Special Application Fittings: General Purpose and Heavy Duty Single Braid PTFE Hose.

Tube End Fitting Stainless



Tube End Fittings-316 Stainless	
Reference #	Description-Hose Size
4804TW	1/4 OD Tube End-4
4806TW	3/8 OD Tube End-6
4808TW	1/2 OD Tube End-8
4812TW	3/4 OD Tube End-12

Brass Female Pipe



Brass Female Pipe		
Hose Size	Reference #	Thread
-5	0405TW	1/4-18

Stainless Female Pipe



Stainless Female Pipe		
Hose Size	Reference #	Thread
-5	2405TW	1/4-18

NPSM 1/4 Inch Swivel



Female Pipe Fittings-Carbon Steel			
Description	Hose Size	Reference #	Thread Size
Paint Spray Swivel	-5	1505TW	1/4-18

Paint Spray Swivel available in Carbon Steel.

Power Trim Fittings



Male Inverted Flare -Stainless Steel			
Description	Hose Size	Reference #	Thread Size
Power Trim 45°	-4	PT-45-4	3/8-24
Power Trim 90°	-4	PT-90-4	3/8-24
Power Trim Straight	-4	PT-S-4	3/8-24

Power Trim fittings are available in 304 Stainless Steel.

Female AN Stainless Swivel



Female Swivel AN Fittngs Class 3B		
Hose Size	Reference #	Thread
-4	4004N-AN	7/16-20
-6	4006N-AN	9/16-18
-8	4008N-AN	3/4-16
-12	4012N-AN	1 1/16-12
-16	4016N-AN	1 5/16-12

Developed for high tolerance military and aerospace ground support connections. Assemblies with AN class 3B fittings can be built with General Purpose or Heavy Duty Single Braid smooth bore PTFE hose. We can also provide AN fittings with tie wire holes.

True Bore Hose Fittings: General Purpose Hose

Male NPT



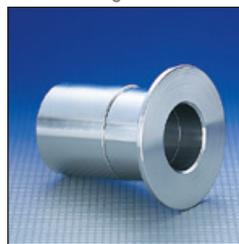
Male NPT		
Hose Size ID (inch)	316 SS Male NPT	Carbon Steel Male NPT
.50	2008L	1008L
.75	2012L	1012L
1.00	2016L	1016L

Female JIC



Female JIC		
Hose Size ID (inch)	316 SS Female JIC	Carbon Steel Female JIC
.50	4008L	3008L
.75	4012L	3012L
1.00	4016L	3016L

SS Flange Retainer



SS Flange Retainer	
Hose Size ID (inch)	SS Flange Retainer
.50	5008L
.75	5012L
1.00	5016L

PFA Flange Retainer



PFA Flange Retainer	
Hose Size ID (inch)	PFA Flange Retainer
.50	NA
.75	6012
1.00	6016

Tri Clamp Sanitary



Tri Clamp Sanitary	
Hose Size ID (inch)	Tri Clamp Sanitary
.50	NA
.75	7312L
1.00	7316L

Tri Clamp Mini-Sanitary



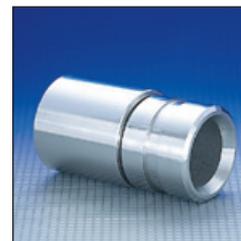
Tri Clamp Mini-Sanitary	
Hose Size ID (inch)	Tri Clamp Mini-Sanitary
.50	7108L
.75	7112L
1.00	NA

Compression Tube End



Compression Tube End	
Hose Size ID (inch)	Compression Tube End
.50	4808L
.75	4812L
1.00	4816L

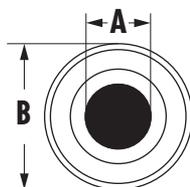
Butt Weld



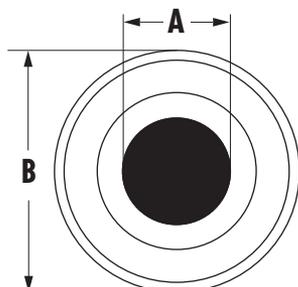
Butt Weld	
Hose Size ID (inch)	Butt Weld
.50	NA
.75	NA
1.00	9116L

For stainless all wetted surfaces are 316SS, crimp collars are either 304SS or carbon steel
NA Not Available from stock.

Tri Clamp Sanitary Fitting Specifications



Mini Sanitary		
Size	A	B
1/2	0.375	0.984
3/4	0.625	0.984



Standard Sanitary			
Size	A	B	Bore Thru
1/2	0.875	1.984	0.375
3/4	0.875	1.984	0.609
1	0.875	1.984	0.844
1 1/2	1.375	1.984	1.312
2	1.870	2.5	1.75
3	2.875	3.576	2.73

A = OPENING ID
B = FACE OD

37° JIC to NPT Pipe Thread Adapters

Adapters are available in brass, carbon steel, and 300 Series Stainless Steel. Additional adapters are available-consult the factory for details.

37° JIC to NPT Pipe Thread Adapters							
Pipe Thread	JIC Straight Thread	JIC Dash Size					
			Male Adapter Part	Male 90 Elbow Part	Male 45 Elbow Part	Female Adapter Part	Female 90 Elbow Part
1/8-20	3/8-24	3	1003-1	9003-1	4503-1	1003-1F	9003-1F
1/8-27	7/16-20	4	1004-1	9004-1	4504-1	1004-1F	9004-1F
1/4-18	7/16-20	4	1004-2	9004-2	4504-2	1004-2F	9004-2F
3/8-18	7/16-20	4	1004-3	9004-3	4504-3	1004-3F	9004-3F
1/8-27	1/2-20	5	1005-1	9005-1	4505-1	1005-1F	9005-1F
1/4-18	1/2-20	5	1005	9005	4505	1005-F	9005-F
3/8-18	1/2-20	5	1005-2	9005-2	4505-2	1005-2F	9005-2F
1/4-18	9/16-18	6	1006-1	9006-1	4506-1	1006-1F	9006-1F
3/8-18	9/16-18	6	1006-2	9006-2	4506-2	1006-2F	9006-2F
1/2-14	9/16-18	6	1006-3	9006-3	4506-3	1006-3F	9006-3F
1/4-18	3/4-16	8	1008	9008	4508	1008-F	9008-F
3/8-18	3/4-16	8	1008-1	9008-1	4508-1	1008-1F	9008-1F
1/2-14	3/4-16	8	1008-2	9008-2	4508-2	1008-2F	9008-2F
3/4-14	3/4-16	8	1008-3	9008-3	4508-3	1008-3F	9008-3F
3/8-18	7/8-14	10	1010-1	9010-1	4510-1	1010-1F	9010-1F
1/2-14	7/8-14	10	1010	9010	4510	1010-F	9010-F
3/4-14	7/8-14	10	1010-2	9010-2	4510-2	1010-2F	9010-2F
1/2-14	1 1/16-12	12	1012-1	9012-1	4512-1	1012-1F	9012-1F
3/4-14	1 1/16-12	12	1012	9012	4512	1012-F	9012-F
1-1 1/2	1 1/16-12	12	1012-2	9012-2	4512-2	1012-2F	9012-2F
3/4-14	1 5/16-12	16	1016-1	9016-1	4516-1	1016-1F	9016-1F
1-1 1/2	1 5/16-12	16	1016	9016	4516	1016-F	9016-F
1 1/4-1 1/2	1 5/16-12	16	1016-2	9016-2	4516-2	1016-2F	9016-2F
1-1 1/2	1 5/8-12	20	1020-1	9020-1	4520-1	1020-1F	9020-1F
1 1/4-1 1/2	1 5/8-12	20	1020	9020	4520	1020-F	9020-F
1 1/2-1 1/2	1 5/8-12	20	1020-2	9020-2	4520-2	1020-2F	9020-2F
1 1/2-1 1/2	1 7/8-12	24	1024	9024	4524	1024-F	9024-F
2-1 1/2	2 1/2-12	32	1032	9032	4532	1032-F	9032-F

Prefix Part Number B for Brass, C for Carbon Steel, and S for 300 Series Stainless Steel. Please consult the factory for additional sizes, shapes, and materials.

Dense-Pac High Pressure Hose

High Pressure Dense-Pac PTFE hose is ideal for chemicals, hydraulic fluids, epoxies, sealants, adhesives and compressed gases. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



- Applications:** High temperature hydraulics (phosphate-ester based) in steel mills, plastics reaction injection molding (RIM), heated hose dispensing hot-melts and high pressure gas and oxygen transfer.
- Innercore:** Heavy Wall PTFE fully Anti-static innercore to eliminate potential dangerous build-up of static charges (see Technical Bulletin). FDA compliant. PTFE compliant with ISO 12086 Part 1. Dense-Pac assemblies are manufactured with either a post-sintered PTFE core for gas and pneumatic service or a non post-sintered PTFE innercore for transferring liquids which provides lower cost without sacrificing performance.
- Reinforcement:** Exterior braid is constructed with multiple wires twisted together to form a lighter-weight more flexible high pressure hose. Sizes .22 (5.6mm) to .50 (12.6mm) ID have a single layer of type 304 stainless steel high tensile wire EN 1.4301 and sizes .62 (15.7mm) to 1.38 (34.9mm) have two layers of braid.
- Temperature Range:** -65°F (-54°C) to +500°F (+260°C)
- Chemical Resistance:** Refer to page 30.
- Fittings:** Female JICs in type 300 series stainless steel.

IMPERIAL												
Dash Size	Inch Reference # Non Post-Sintered	Inch Reference # Sintered	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Tol (+/-) OD (in)	Innercore Wall Thickness (in)	Max Working Pressure PSI	Test Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-4	DPNI.22	DPSI.22	0.22	0.010	0.38	0.015	0.041	5000	10,000	16,000	1.5	0.10
-6	DPNI.31	DPSI.31	0.31	0.010	0.49	0.015	0.041	5000	10,000	16,000	2.5	0.16
-8	DPNI.40	DPSI.40	0.40	0.010	0.61	0.018	0.046	5000	10,000	16,000	2.9	0.23
-10	DPNI.50	DPSI.50	0.50	0.010	0.72	0.018	0.051	5000	10,000	16,000	3.3	0.32
-12	DPNI.62	DPSI.62	0.62	0.015	0.97	0.020	0.051	5000	10,000	16,000	4	0.66
-16	DPNI.87	DPSI.87	0.87	0.015	1.26	0.020	0.051	5000	10,000	16,000	5	1.02
-20	DPNI1.12	DPSI1.12	1.12	0.025	1.65	0.040	0.071	5000	10,000	16,000	12	1.85
-24	DPNI1.380	DPSI1.380	1.38	0.025	1.90	0.040	0.071	4000	8,000	12,000	14	1.91

METRIC												
Metric Reference # Non Post-Sintered	Metric Reference # Sintered	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Tol (+/-) OD (mm)	Innercore Wall Thickness (mm)	Max Working Pressure Bar	Test Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)	
DPNM5.6C	DPSM5.6C	5.6	0.25	9.7	0.38	1.03	340	690	1100	38	0.14	
DPNM7.8C	DPSM7.8C	7.8	0.25	12.5	0.38	1.03	340	690	1100	64	0.24	
DPNM10.C	DPSM10.C	10.2	0.25	15.5	0.44	1.17	340	690	1100	74	0.34	
DPNM12.C	DPSM12.C	12.6	0.25	18.3	0.46	1.30	340	690	1100	84	0.47	
DPNM15.C	DPSM15.C	15.7	0.38	24.6	0.51	1.30	340	690	1100	102	0.98	
DPNM22.C	DPSM22.C	22.0	0.38	32.0	0.51	1.30	340	690	1100	127	1.50	
DPNM28.C	DPSM28.C	28.6	0.64	41.9	1.02	1.80	340	690	1100	305	2.75	
DPNM34.C	DPSM34.C	34.9	0.64	48.3	1.02	1.80	275	315	825	356	2.84	

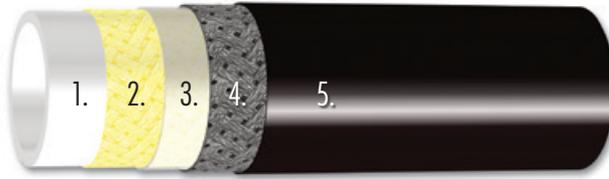
*Minimum burst pressures calculated at 70°F (21°C). Non-impulse applications. For impulse applications, working pressure is 3000 PSI (207 Bar). High temperature pressures calculated at 400°F (205°C): working pressure drops to 3000 PSI (207 Bar). Please contact the factory. For gas and air applications specify DP post-sintered only.

Ultra Extra High Pressure Hose

Ultra High Pressure hose is ideal for high pressure gas and liquid applications that use natural non conductive innercores. We can produce the longest high pressure hose Fluoropolymer assemblies in the industry to any custom length required for your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.

Basic Design

1. PFA or ETFE Inner Tubing
2. Kevlar Braid
3. Interlayer PTFE Tape
4. Stainless Steel Braid
5. Hytrel Jacket (optional)



Applications:

Ultra is ideal for inert gas applications and liquids requiring FDA compliance. Examples of applications included compressed gas cylinder filling, spray dryers in milk powder production and replacement of rigid high pressure stainless steel tubing or corrugated metal hose in long lengths. We are able to couple up to 150 feet (46m) continuous lengths with no splices.

Innercore:

Fluoropolymer innercores of non-conductive ETFE or PFA that are fully FDA compliant. PFA and ETFE innercores for gas and pneumatic service; these Fluoropolymers unlike PTFE do not require any post sintering.

Reinforcement:

Ultra incorporates the use of one braided layer of high tensile aramid fiber and one layer of stainless steel. This value engineered construction reduces weight and improves bend radius while increasing burst pressure. An integral abrasion resistant Hytrel jacket protects the exterior braid and has a smooth finished appearance.

Temperature Range:

Without Hytrel Cover -65°F (54°C) to +500°F (260°C)
 With Hytrel Cover -20°F (-29°C) to +180°F (82°C)

Chemical Resistance:

Refer to page 30.

IMPERIAL

Dash Size	PFA Inch Reference # Natural	ETFE Inch Reference # Natural	Actual ID (in)	Actual OD (in)	Innercore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-4	ULPID.22N	ULEID.22N	0.220	0.460	0.039	6000	24000	1.0	0.11
-6	ULPID.31N	ULEID.31N	0.315	0.551	0.039	6000	24000	2.0	0.33
-8	ULPIT.39N	ULEIT.39N	0.394	0.748	0.049	6000	24000	2.3	0.35

METRIC

PFA Metric Reference # Natural	ETFE Metric Reference # Natural	Actual ID (mm)	Actual OD (mm)	Innercore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)
ULPMD5N	ULEMD5.1N	5.0	9.7	1.00	300	1200	25	0.16
ULPMD6.5N	ULEMD6.5N	6.5	13.0	1.00	415	1660	25	0.23
ULPMT6.5N	ULEMT6.5N	6.5	16.0	1.00	475	1900	25	0.31
ULPMD8N	ULEMD8N	8.0	14.0	1.00	320	1280	50	0.49
ULPMD10N	ULEMD10N	10.0	18.0	1.25	320	1280	58	0.38
ULPMT10N	ULEMT10N	10.0	19.0	1.25	415	1660	58	0.52
ULPMD13N	ULEMD13N	13.0	19.0	1.25	320	1280	75	0.79

Minimum burst pressures are based on 70°F (21°C). For high temperatures please consult the factory.

Multi-Braid Extra High Pressure Hose

Multi-Braid High Pressure PTFE hose is ideal for chemicals, hydraulic fluids, epoxies, sealants, adhesives and compressed gases. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



- Applications:** Multi-Braid Series excels at in high temperature and high impulse service conditions. High temperature or extreme impulse hydraulics, plastics reaction injection molding (RIM), heated hose, high pressure gas and oxygen transfer, liquids and chemicals.
- Innercore:** Heavy Wall PTFE fully Anti-static innercore to eliminate potential dangerous build-up of static charges (see Technical Bulletin). FDA compliant. PTFE compliant with ISO 12086 Part 1. Multi-Braid series assemblies are manufactured with a post-sintered PTFE core for gas and pneumatic service to minimize effusion.
- Reinforcement:** Exterior braid is constructed with multiple layers of alternating spiral wrap and braid of type 304 stainless steel high tensile wire EN 1.4301
- Temperature Range:** -65°F (-54°C) to +500°F (+260°C)
- Chemical Resistance:** Refer to page 30.
- Fittings:** Female JICs in type 300 series stainless steel. Fixed ¼" female NPT and ¼" male NPT available for -4 size.

IMPERIAL										
Dash Size	Inch Reference # Sintered	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Tol (+/-) OD (in)	Innercore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-4	ULPT10.2C	0.23	0.005	0.48	0.010	0.041	6000	24000	3.0	0.24
-6	ULPT10.3C	0.30	0.008	0.59	0.012	0.041	6000	24000	5.0	0.40
-8	ULPT10.4C	0.40	0.010	0.73	0.013	0.051	6000	24000	5.7	0.49

METRIC										
Metric Reference # Sintered	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Tol (+/-) OD (mm)	Innercore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)	
ULPTM5.8C	5.8	0.13	12.3	0.25	1.00	414	1655	76	0.35	
ULPTM7.6C	7.7	0.19	15.1	0.29	1.00	414	1655	127	0.59	
ULPTM10.6C	10.2	0.25	18.6	0.32	1.30	414	1655	146	0.72	

Minimum burst pressures are based on 70°F (21°C). For high temperatures please consult the factory.

Easy Bend Open Pitch Convuluted Hose

Easy Bend PTFE hose is ideal for solvents, acids, caustics, fuels, lubricants, hot water, air and transfer conditions at elevated temperatures. Convuluted PTFE innercore is recommended for installations where extremely tight bend radius is required for routing. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



Applications:

Gas turbines, air compressors, tank truck, pulp and paper, transporation, plastic and rubber forming and curing.

Innercore:

PTFE non-conductive and fully Anti-static innercores to eliminate potential dangerous build-up of static charges (see Technical Bulletin). FDA compliant. PTFE compliant with ISO 12086 Part 1. Helical profile design aids in self draining.

Reinforcement:

One layer of type 304 stainless steel high tensile wire EN 1.4301 Type 316SS braid reinforcement available upon request. Three inch internal diameter also available with double braid for increased working pressure.

Temperature Range:

-65°F (-54°C) to +500°F (+260°C)

Chemical Resistance:

Refer to page 30.

IMPERIAL								
Dash Size	Inch Reference # Natural	Inch Reference # Conductive	Actual ID (in)	Actual OD (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-4	EBI.25N	EBI.25C	0.236	0.42	2175	8700	0.7	0.09
-6	EBI.37N	EBI.37C	0.382	0.65	1595	6380	0.8	0.12
-8	EBI.5N	EBI.5C	0.512	0.75	1450	5800	1.0	0.19
-12	EBI.75N	EBI.75C	0.772	1.02	900	3600	2.6	0.24
-16	EBI1N	EBI1C	0.961	1.33	1000	4000	3.5	0.41
-20	EBI1.25N	EBI1.25C	1.280	1.59	875	3500	4.3	0.46
-24	EBI1.5N	EBI1.5C	1.500	1.89	700	2800	2.0	0.58
-32	EBI2N	EBI2C	2.000	2.38	500	2000	2.4	0.98
-48	EBI3N	EBI3C	3.000	4.00	250	1000	3.9	2.10
-48Z	EBI3NB2	EBI3CB2	3.000	4.95	100	400	4.7	2.90

METRIC							
Metric Reference # Natural	Metric Reference # Conductive	Actual ID (mm)	Actual OD (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)
EBM6.7N	EBM6.7C	6.0	10.6	150	600	18	0.13
EBM8.5N	EBM8.5	7.9	14.0	125	500	19	0.15
EBM9.8N	EBM9.8	9.7	16.4	110	440	20	0.18
EBM13.6N	EBM13.6	13.0	19.0	100	400	25	0.29
EBM16N	EBM16	15.5	22.6	70	280	50	0.31
EBM19.1N	EBM19.1	19.6	26.0	63	250	65	0.36
EBM25.6N	EBM25.6	24.4	33.7	40	160	90	0.61
EBM31.7N	EBM31.7	32.5	40.3	30	120	110	0.68
EBM38.1N	EBM38.1	38.1	48.0	48	193	115	0.86
EBM50.8N	EBM50.8	50.8	60.5	35	138	127	1.46
EBM74N	EBM74	74.0	101.6	17	69	406	4.30
EBM100N	EBM100	100.0	125.7	7	28	457	4.60

All pressures calculated at 70°F (21°C). Consult factory for vacuum ratings and service conditions at elevated temperatures.

Fittings For Easy Bend Open Pitch PTFE Convuluted & Rubber Covered FEP Hose

Threaded Fittings

United Flexible manufactures and inventories over 500 sizes and styles of fittings. Fitting materials consist of carbon steel, stainless steel, combination, and polypropylene. We will manufacture custom fittings to your specifications. Contact our customer service department for more information about this service.

Male Pipe Hex



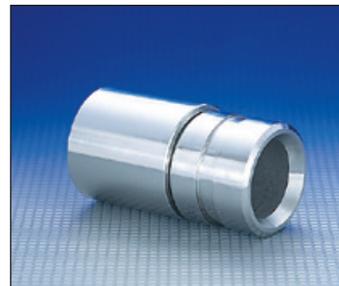
Male Pipe Hex	
Reference #	Fitting Material
10	Carbon Steel
20	Stainless Steel

Female JIC 37°



Female JIC 37°	
Reference #	Fitting Material
30	Carbon Steel
40	Stainless Steel

Butt Weld/Victaulic**



Butt Weld/Victaulic**	
Reference #	Fitting Material
91	Stainless Steel

**Pipe is standard, tube available. Please specify.

For Special Fittings - Please consult the factory for pricing and availability.

I-Line Fittings

Male I-Line



Male I-Line	
Reference #	Fitting Material
98	Stainless Steel

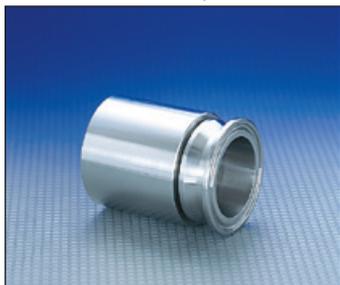
Female I-Line



Female I-Line	
Reference #	Fitting Material
99	Stainless Steel

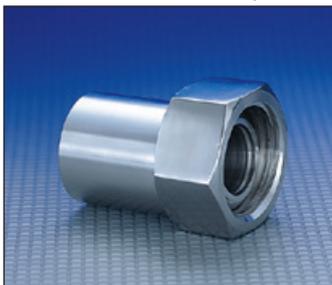
Sanitary

Sanitary



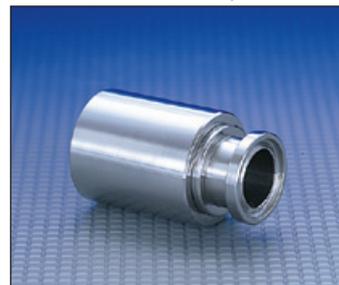
Sanitary	
Reference #	Fitting Material
70	Stainless Steel

Bevel Seat Sanitary



Bevel Seat Sanitary	
Reference #	Fitting Material
69	Stainless Steel

Mini Sanitary



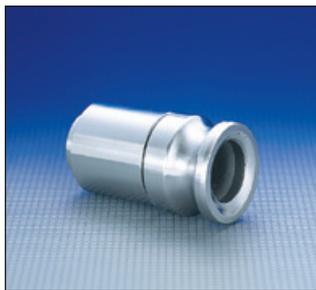
Mini Sanitary	
Reference #	Fitting Material
71	Stainless Steel

Other sanitary fittings available - contact the factory for additional fitting information.

Fittings For Easy Bend Open Pitch PTFE Convuluted & Rubber Covered FEP Hose

Cam & Groove

Male C & G



Male C & G	
Reference #	Fitting Material
73	Stainless Steel

Female Rigid C & G



Female Rigid C & G	
Reference #	Fitting Material
83	Stainless Steel

Encapsulated C & G



Encapsulated C & G	
Reference #	Fitting Material
88	Stainless Steel

Encapsulated C & G



Encapsulated C & G	
Reference #	Fitting Material
85	Stainless Steel

Flanges

Flange Retainer



Flange Retainer	
Reference #	Fitting Material
50	Stainless Steel

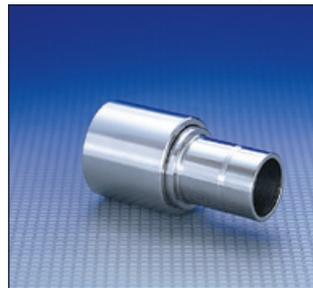
PFA Encapsulated Flange Retainer



PFA Encapsulated Flange Retainer	
Reference #	Fitting Material
60	Stainless Steel

Compression

Tube Stub for Instrumentation Fitting*



Tube Stub for Instrumentation Fitting*	
Reference #	Fitting Material
48	Stainless Steel

*Please consult the factory for pricing & availability.

Polypropylene Fittings

Male Pipe



Male Pipe	
Reference #	Fitting Material
P20	Polypropylene Stainless Steel Collar

Sanitary



Sanitary	
Reference #	Fitting Material
P70	Polypropylene Stainless Steel Collar

Female C & G



Female C & G	
Reference #	Fitting Material
P83	Polypropylene Stainless Steel Collar

Male C & G



Male C & G	
Reference #	Fitting Material
P73	Polypropylene Stainless Steel Collar

Polypropylene fittings have a pressure rating of 120 PSI (8.3 bar) and temperature rating of up to 180°F (82°C).

Heavy Duty Easy Bend Flared Hose • Jack-Flex

Heavy Duty Easy Bend Flared Hose is ideal for applications where internal corrosion of the fittings and contamination of the chemical substrate is not tolerable. We can produce assemblies to your specific length and diameter needs to connect to your system. The entire wetted flow path is inert PTFE Fluoropolymer so you can have a long lasting transfer hose solution.



- Applications:** Chemical and Pharmaceutical
- Innercore:** Heavy duty convoluted PTFE liner that is FDA compliant and chemically inert to a wide range of acids and caustics. The PTFE liner is made to last with a heavy wall construction that provides more hoop strength and resistance to kinking during flexing.
- Reinforcement:** One layer of type 304 stainless steel high tensile wire EN 1.4301 Type 316SS braid reinforcement available upon request. Three inch internal diameter also available with double braid for increased working pressure.
- Temperature Range:** -65°F (-54°C) to to +500°F (+260°C)
- Chemical Resistance:** Refer to page 30.
- Fittings:** PTFE flare over stainless steel flange retainer with your choice of backing flange. Backing flanges can be provided to meet various standards. Typical flange alloys are carbon steel, 304 and 316 stainless steel.

IMPERIAL								
Dash Size)	Inch Reference # Natural	Inch Reference # Conductive	Actual ID (in)	Actual OD (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-12	HDFI0.7N	HDFI0.7C	0.78	1.08	425	1700	3.0	3.0
-16	HDFI0.9N	HDFI0.9C	0.97	1.36	350	1400	4.0	4.0
-20	HDFI1.3N	HDFI1.3C	1.32	1.70	330	1350	5.5	5.5
-24	HDFI1.4N	HDFI1.4C	1.49	1.85	275	1100	7.0	7.0
-32	HDFI1.9N	HDFI1.9C	1.92	2.43	250	1000	8.5	8.5
-48	HDFI2.9N	HDFI2.9C	2.91	3.80	100	400	12.0	12.0
-48Z	HDFI2.9ND	HDFI2.9CD	2.91	4.00	250	1000	16.0	16.0
-64	HDFI3.9N	HDFI3.9C	3.92	4.95	100	400	18.0	18.0

METRIC							
Metric Reference # Natural	Metric Reference # Conductive	Actual ID (mm)	Actual OD (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Min Bend Radius (mm)	Weight (kg/m)
HDFI20N	HDFI20C	20	27	29	117	76	0.90
HDFI25N	HDFI25C	25	35	24	97	102	1.00
HDFI34N	HDFI34C	34	43	23	93	140	1.80
HDFI38N	HDFI38C	38	47	19	76	178	2.00
HDFI49N	HDFI49C	49	62	17	69	216	2.10
HDFI74N	HDFI74C	74	97	7	28	305	3.70
HDFI74ND	HDFI74CD	74	102	17	69	406	4.30
HDFI100N	HDFI100C	100	126	7	28	457	4.60

All pressure are calculated at 70°F (21°C). For applications involving higher temperatures, please consult the factory.

Rubber Covered FEP Hose • Jack-Chem

Our rubber covered hose has been custom engineered for lasting service in critical transfer applications. We can produce assemblies to your specific length and diameter needs to connect to your system. If you do not find the exact hose and fitting combination required for your service please contact our Customer Service. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



- Applications:** Chemical, Pharmaceutical and Food Processing
- Innecore:** Starts with a chemically inert smooth FEP liner that is FDA compliant. The FEP liner is made to last with a heavy wall construction that provides more hoop strength and resistance to kinking during flexing.
- Reinforcement:** Multiple plies of synthetic EPDM rubber are reinforced with a horizontal fabric braid, the inner layer of synthetic rubber is permanently bonded to the exterior of the FEP innercore. A wire helix is included to support the shape in full vacuum service and to further prevent kinking.
- Temperature Range:** -65°F (-54°C) to +300°F (148°C) For temperatures over +300°F (148°C) contact the factory.
- Chemical Resistance:** Refer to page 30.
- Fittings:** Complete range stainless steel couplings in type 316SS also PFA encapsulated fittings for extreme corrosion resistance throughout entire wetted flow path.

IMPERIAL											
Dash Size	Inch Reference #	Actual ID (in)	Tol (+/-) ID (in)	Actual OD (in)	Tol (+/-) OD (in)	Innecore Wall Thickness (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Vacuum Rating*	Min Bend Radius (in)	Weight (lb/ft)
-8	RRI0.5N	0.500	0.005	0.870	0.010	0.030	500	2000	Full	3.0	0.33
-12	RRI0.7N	0.750	0.008	1.250	0.012	0.035	500	2000	Full	4.0	0.60
-16	RRI1N	1.000	0.010	1.500	0.013	0.035	450	1800	Full	7.0	0.73
-24	RRI1.5N	1.500	0.005	2.000	0.010	0.040	350	1400	Full	10.0	1.20
-32	RRI2N	2.000	0.008	2.500	0.012	0.045	300	1200	Full	14.0	1.45
-48	RRI3N	3.000	0.010	3.500	0.013	0.050	200	800	Full	30.0	2.40

METRIC										
Metric Reference #	Actual ID (mm)	Tol (+/-) ID (mm)	Actual OD (mm)	Tol (+/-) OD (mm)	Innecore Wall Thickness (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Vacuum Rating*	Min Bend Radius (mm)	Weight (kg/m)
RRM12.N	12.7	0.13	22.0	0.25	0.760	35	140	Full	76	0.49
RRM19N	19.1	0.19	31.8	0.29	0.900	35	140	Full	102	0.89
RRM25.N	25.4	0.25	38.1	0.32	0.900	31	124	Full	178	1.08
RRM38.N	38.1	0.13	50.8	0.25	1.000	24	96	Full	254	1.78
RRM50.N	50.8	0.19	63.5	0.29	1.140	20	80	Full	355	2.15
RRM76N	76.2	0.25	89.0	0.32	1.270	14	56	Full	762	3.56

All pressure and vacuum ranges are calculated at 70°F (21°C).

Silicone Covered Smooth Bore Hose

Constructed for Protection: Silicone covered smooth bore hose starts with smooth-bore high-performance PTFE core which permits higher flow rates and ease in cleaning of the nonstick PTFE innercore. We can produce assemblies to your specific length a to securely connect to your system. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.

In addition to the PTFE innercore two layers of protection are provided consisting of :

- Stainless Steel type 304 Braid for pressure resistance and tube support
- Extruded White Silicone Outer Cover is smooth for easy cleaning; kink, abrasion and tear resistance. Insulates and protects operators from elevated temperature conditions.



Applications: Hot oils, food slurries, liquids, solvents, light sensitive chemicals, steam and adhesives.

Approvals: Underwriters Laboratories— National Sanitary Foundation — FDA Compliant 21 CFR 177.1550

Available Fittings & Accessories:

- Live Male Swivel Pipe Threads & Male Swivel Elbow Pipe Threads (90°)
- Optional-Internal Support Spring for high temperature vacuum service

Silicone Covered Smooth Bore Hose- The Right Choice...

- Superior construction properties for long life, flexibility and durability
- Silicone smooth bore hose has passed the UL 60-day hot oil immersion testing
- Highly flexible hose which lends itself to easy and quick installation
- Smooth exterior silicone cover can be wiped down for cleaning convenience
- PTFE core with smooth exterior silicone suitable for temperatures to 400°F

Chemical Resistance: Refer to page 30.

IMPERIAL							
Dash Size	Inch Reference # Natural	Actual ID (in)	Actual OD (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Min Bend Radius (in)	Weight (lb/ft)
-10	SSI0.5N	0.50	0.77	1750	7000	5.3	0.19
-12	SSI0.6N	0.62	0.98	1500	6000	6.5	0.28

METRIC						
Metric Reference # Natural	Actual ID (mm)	Actual OD (mm)	Max Working Pressure Bar	Min Burst Pressure PSI	Min Bend Radius (mm)	Weight (kg/m)
SSM10.5N	12.7	19.5	120	480	135	0.28
SSN10.6N	15.7	24.9	103	412	165	0.41

The optional addition of inner spring support provides full vacuum support and resistance to overbending. Stated MBR values above are without internal support spring.

Burst pressures are based on 70°F (21°C), for higher temperatures please refer charts on page 29.

MTLC Hose

MTLC hose is engineered with a smooth PTFE innercore which is inserted and locked in place in reinforced corrugated metal hose that is also manufactured by United Flexible. The PTFE liner is flared over each end so that the entire wetted flow path is in contact with PTFE Fluoropolymer. This is a heavy duty containment hose. Vent holes in the metal assembly prevents gas build up between the PTFE liner and metal hose. We can produce assemblies to your specific length and diameter needs to connect to your system. You can be assured our Engineering experts will be easy to talk to and focused on solving your problem.



- Applications:** Chemical processing industry to aid in eliminating vibration and slight misalignment in lined pipe systems.
- Innercore:** MTLC starts with a chemically inert smooth PTFE liner that is FDA compliant. The PTFE liner is made to last with a heavy wall construction.
- Reinforcement:** Heavy wall 321 stainless steel corrugated metal hose outer assembly with one layer of 300 series stainless steel braid reinforcement.
- Temperature Range:** -65°F (-54°C) to +500°F (+260°C)
- Chemical Resistance:** Refer to page 30.
- Fittings:** PTFE flare over stainless steel flange retainer with your choice of backing flange. Backing flanges can be provided to meet various standards. Typical flange alloys are carbon steel, 304 and 316 stainless steel.

IMPERIAL								
Dash Size	Inch Reference # Natural	Inch Reference # Conductive	Actual ID (in)	Actual OD (in)	Max Working Pressure PSI	Min Burst Pressure PSI	Vacuum Rating (Hg)	Weight (lb/ft)
-16	MT11N	MT11C	1.00	1.6	500	2000	26	2.0
-24	MT11.5N	MT11.5C	1.50	2.3	400	1600	26	3.9
-32	MT12N	MT12C	2.00	2.9	300	1200	24	5.0
-48	MT13N	MT13C	3.00	3.9	200	800	24	5.3
-64	MT14N	MT14C	4.00	5.0	150	600	20	5.6
-96	MT16N	MT16C	6.00	7.0	150	600	20	13.0
-128	MT18N	MT18C	8.00	9.1	125	500	20	20.0
-160	MT110N	MT110C	10.00	11.2	100	400	20	26.0
-192	MT112N	MT112C	12.00	13.2	90	360	20	34.5

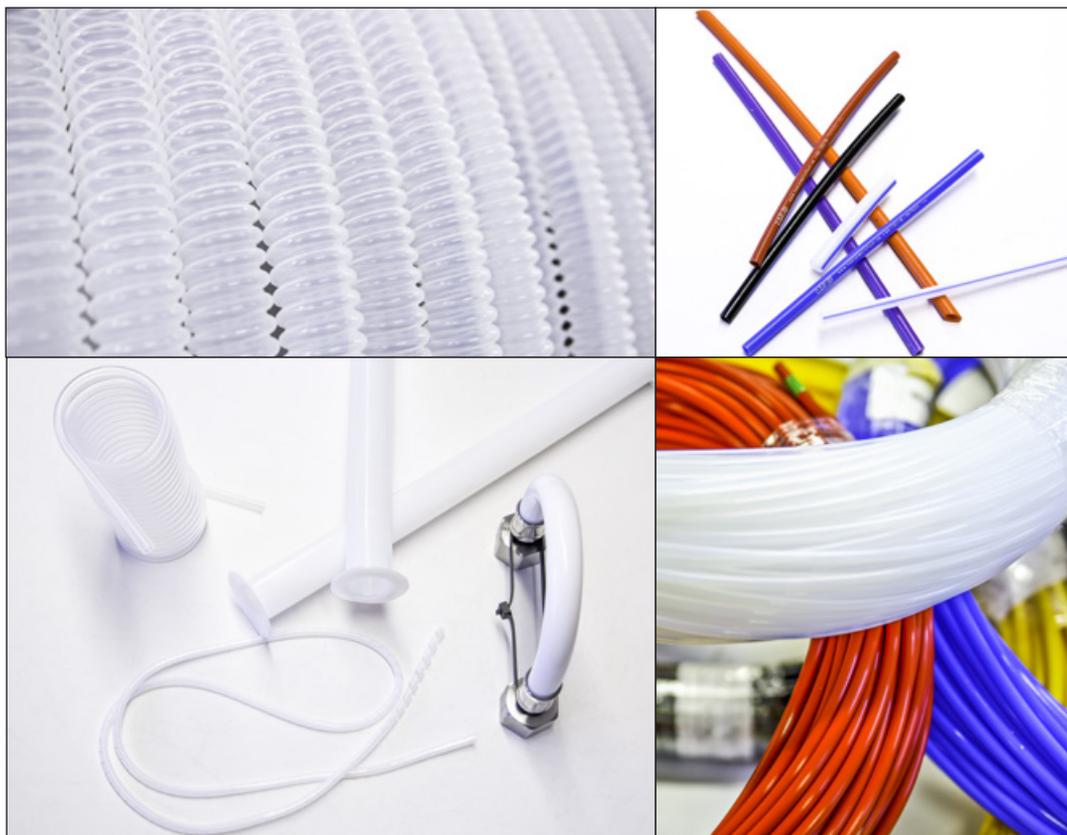
METRIC							
Metric Reference # Natural	Metric Reference # Conductive	Actual ID (mm)	Actual OD (mm)	Max Working Pressure Bar	Min Burst Pressure Bar	Vacuum Rating (Hg)	Weight (kg/m)
MTM25N	MTM25C	25	42	34	138	26	3.0
MTM38N	MTM38C	38	59	28	110	26	5.7
MTM51N	MTM51C	51	73	21	83	24	7.4
MTM76N	MTM76C	76	100	14	55	24	7.8
MTM102N	MTM102C	102	126	10	41	20	8.3
MTM152N	MTM152C	152	178	10	41	20	19.3
MTM203N	MTM203C	203	231	9	34	20	29.8
MTM254N	MTM254C	254	284	7	28	20	38.7
MTM305N	MTM305C	305	336	6	25	20	51.3

All pressure and vacuum ratings are calculated at 70°F (21°C). Note MTLC assemblies have limited flexibility and are not intended to be used in dynamic constant flexing service.

Fluoropolymer Smooth Bore Tubing Capabilities

United Flexible's tube production comprises many fluoropolymers. The following technical data shows specifications for our standard dimensions. In addition to our standard range, we also produce according to customer demands.

PTFE tubing has in natural stage a milky white to transparent appearance. PTFE is the fluoropolymer with the highest temperature range and best chemical resistance. We can as well produce it in different colors, with fillers to enhance properties and customized to your application demands. Antistatic PTFE is available even with FDA compliant filler. PTFE tubing can be laser marked for tracability and is even available as convoluted tubing. See some examples below.



Sizes Available: ID 0,20 mm (.0078 in) to ID 40,00 mm (1.5748 in)
Wall 0,15 mm (.0059 in) to 5,00 mm (.1968 in)

Applications: Food processing, chemical processing, water handling, ink and painting systems, delivery of natural gas and mineral oils, adhesive delivery lines and cryogenic applications. PTFE tubing is used in a variety of applications in the automotive, aviation, electrical and appliance markets.

Pressure Range: Low to mid pressure applications

Temperature Range: -60°C to +260°C (-76°F to +500°F)

Chemical Resistance: Refer to page 30

Compliance: PTFE Grades in use are compliant to FDA 21 CFR 177.1550, REACH and RoHS, Some grades are compliant to EU 10/2011, USP class VI and WRAS.

PTFE TUBING TOLERANCES (ID & OD)							
ID (mm)	ID (in)	Tol. (mm)	Tol. (in)	OD (mm)	OD (in)	Tol. (mm)	Tol. (in)
0,20-1,00	.008 - .039	±0,05	± .002	0,30-1,00	.008 - .039	±0,05	± .002
1,01-4,00	.039 - .157	±0,10	± .004	1,01-4,00	.039 - .157	±0,10	± .004
4,01-8,00	.158 - .315	±0,15	± .006	4,01-8,00	.158 - .315	±0,15	± .006
8,01-12,50	.315 - .492	±0,20	± .008	8,01-12,50	.315 - .492	±0,20	± .008
12,51-20,00	.492 - .787	±0,25	± .010	12,51-20,00	.492 - .787	±0,25	± .010
20,01-30,00	.788 - 1.181	±0,30	± .012	20,01-30,00	.788 - 1.181	±0,30	± .012
30,01-40,00	1.181 - 1.575	±0,35	± .014	30,01-40,00	1.181 - 1.575	±0,35	± .014

Fluoropolymer Smooth Bore Tubing Capabilities

FEP tubing has in natural stage a totally transparent appearance. In some applications even colored FEP tubing is desired. Here we can help with different colorings. FEP tubing is favoured in food and beverage application due to the excellent clarity. FEP is virtually unaffected by UV light and ozone

Applications: Food processing, chemical processing, water handling, insulation,

Pressure Range: Low to mid pressure applications

Temperature Range: -60°C to +205°C (-76°F to +401°F)

Chemical Resistance: Refer to page 30

Compliance: FEP grades in use are compliant to FDA 21 CFR 177.1550, REACH and RoHS. Some grades are compliant to EU 10/2011, USP Class VI, WRAS.

FEP as material is classified UL 94 = V0.

PFA tubing has in natural stage a totally transparent appearance. In some applications even colored PFA tubing is desired. Here we can help with different colorings. PFA tubing is favoured in application where purity is an issue.

Applications: Semi conductive Industry, food and pharma processing, analytics, heat exchangers, gas distribution,

Pressure Range: Low to mid pressure applications

Temperature Range: -60°C to +260°C (-76°F to +500°F)

Chemical Resistance: Refer to page 30

Compliance: PFA Grades in use are compliant to FDA 21 CFR 177.1550, REACH and RoHS. Some grades are compliant to EU 10/2011, USP Class VI, WRAS.

PFA is classified UL94 = V0.

FEP & PFA

Sizes available: ID 0,50 mm (.0197 in) to 25,00 mm (.9842 in)
Wall 0.50 mm (.197 in) to 4,00 mm (.1574 in)

FEP & PFA (ID&OD)							
ID (mm)	ID (in)	Tol. (mm)	Tol. (in)	OD (mm)	OD (in)	Tol. (mm)	Tol. (in)
0,50-1,00	.020 - .039	±0,05	± .002	0,50-1,00	.020- .039	±0,05	± .002
1,01-2,00	.039 - 079	±0,07	± .003	1,01-2,00	.039 - 079	±0,07	± .003
2,01-4,00	.079 - .157	±0,10	± .004	2,01-4,00	.079 - .157	±0,10	± .004
4,01-8,00	.158 - .315	±0,15	± .006	4,01-8,00	.158 - .315	±0,15	± .006
8,01-12,50	.315 - .492	±0,20	± .008	8,01-12,50	.315 - .492	±0,20	± .008
12,51-20,00	.492 - .787	±0,30	± .012	12,51-20,00	.492 - .787	±0,30	± .012
20,01-30,00	.788 - 1.181	±0,35	± .014	20,01-30,00	.787 - 1.181	±0,35	± .014

Machined PTFE Parts

Our production range contains everything from standard guide rings and sealings to customer specific products. Many of the products which we manufacture today are very advanced. In this production, we benefit our long experience in materials and know how which we have gained during the years. Our solid experience of different techniques, especially isostatic molding gives us the ability to produce material samples for testing matching the properties which our customers are requiring.

Machined PTFE Parts can be produced in pure PTFE or in PTFE combined with fillers. Fillers used are glass, carbon, bronze, steel and MoS₂. We produce among others nozzles, sleeves, bushings, flexible PTFE membranes, bellows, lab equipment in PTFE, filled and natural rollers, encapsulation of other objects in PTFE.



United Flexible Fluoropolymer Gas Hoses

We manufacture assembled fluoropolymer hoses for the gas industry and for other companies which provide gas equipment world wide. Hoses and fittings are optimized to fulfill the various quality standards which are necessary to meet the security levels within the gas industry. We have a long history and experience of manufacturing fluoropolymer gas filling hoses since we invented the fluoropolymer gas filling hose back in the late 1950's. We serve all the gas filling companies globally.



Advantages with Fluoropolymer gas hoses

- **Extremely chemical resistant** - can withstand close to all known gases
- **Superior flex life** - compared to metallic gas hoses, gives longer service life
- **Excellent temperature range** - -60°C to +260°C (-76°F to +500°F)
- **Minimal diffusion** - compared to other polymeric materials
- **Light construction**
- **Cost effective assembly** - no welding required

We design and produce from inner tubing to assembled hose in-house which means that we have full control of the entire process. We use PTFE, PFA and ETFE (Tefzel) to meet application requirements and customer demands. We have a wide fitting program both in design and material in order to meet different market demands and standards.

We have many different accessories for our gas filling hoses. See next side for further examples.

Temperature Range: -60°C to +260°C (-76°F to +500°F)

Chemical Resistance: Refer to separate data pages or website (URL)

Compliance: We have many designs approved according to ISO 14113 for Oxygen, acetylene and many other gases. The raw material grades used for the inner tubing are compliant to FDA 21 CFR 177.1550 and/or USP Class VI, EU 10/2011 or WRAS. Contact the factory for more information.

COMPRESSED GAS CYLINDER FILL HOSE GUIDE

Working Pressure PSI	3000	4000	6000	3000	4350	6000	6000	4000	5300	3000
Working Pressure BAR	207	276	414	207	300	414	414	276	366	207
Innercore Type	PTFE	PTFE	PTFE	ETFE	PFA	ETFE	PFA	316SS	316SS	Monel
Hose Part # Imperial	HDSIO.2N	DPSI.22C	ULPIMO.2C	HDSTFIO.24N	HDDPFIO.25N	ULEIO.2N	ULPIDO.2N	402H	402X	A400-2
Hose Part # Metric	HDSM6.2N	DPSM5.6C	ULPIMM5.8C	HDSTFM6.2N	HDDPFMO.25N	ULEMD6.5N	ULPMD6.5N	402H	402X	A400-2
Gas	CGA #									
Acetylene**	510	1	1	1	3	2	3	2	3	3
Air	346	1	1	3	3	2	3	2	3	3
Argon	580	1	1	3	3	2	3	2	3	3
Arsine**	510	5	5	5	5	5	5	5	5	3
Carbon Dioxide	320	1	1	3	5	5	5	5	3	3
Carbon Monox-	350	2	2	2	2	2	2	1	1	3
Chlorine**	660	5	5	5	5	5	5	5	5	2
Fluorine**	679	5	5	5	5	5	5	5	5	2
Helium	580	5	5	5	1	5	CF	5	1	2
Hydrogen	350	5	5	5	2	5	CF	5	2	3
Natural Gas**	350	2	2	3	3	1	3	1	1	3
Nitrogen	580	1	1	2	3	1	3	1	3	3
Nitrous Oxide	326	2	2	3	3	1	3	1	3	3
Oxygen	540	1*	1*	3*	5*	1*	5	1*	3	2
Silane**	350 OR 510	5	5	5	5	5	5	5	5	2

Compatibility Rating: Excellent = 1: Very Good =2: Good = 3: Acceptable = 4: Not Recommended =5: CF= Consult Factory

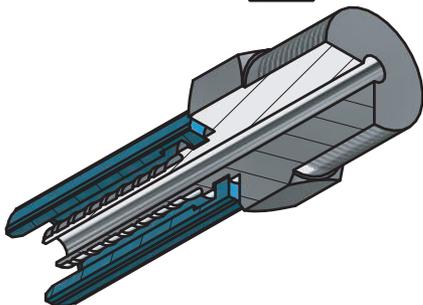
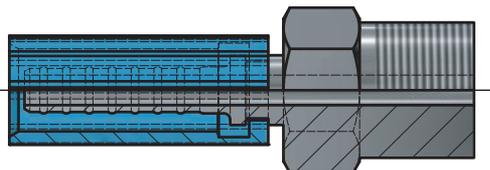
* Distance piece/flash arrestor should be used with Fluoropolymer assemblies in case of adiabatic compression.

** Combustible and toxic gasses should be transferred in a well ventilated environment.

Standard fittings - Male

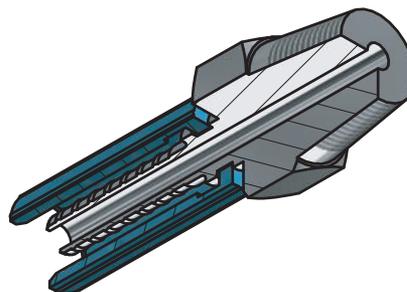
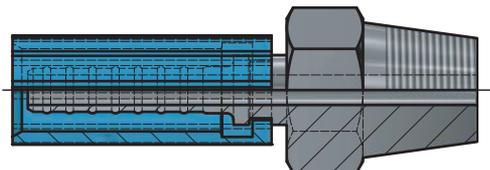
Type A

Male fixed (Cylindrical)
Flat faced (Thread type BSP, UNF, ISO 228/1 or Metric)



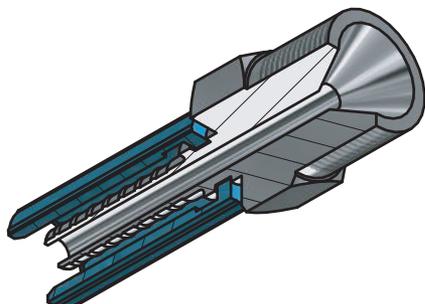
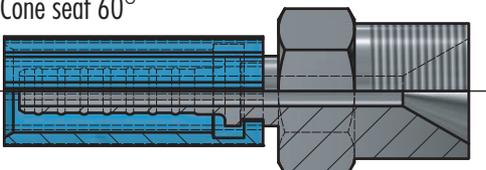
Type B

Male fixed (Taper)
Flat faced (Thread type NPT, BSTP, ISO 7/1)



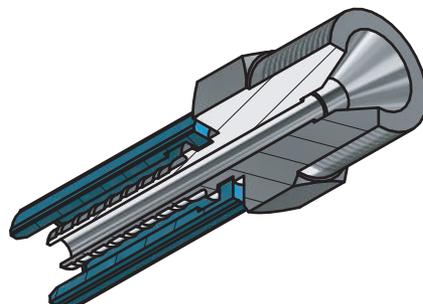
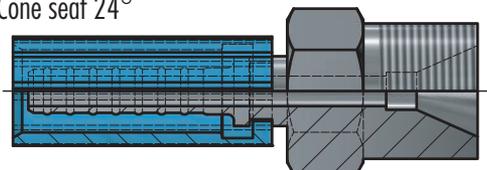
Type J

Male fixed (Cylindrical)
Cone seat 60°



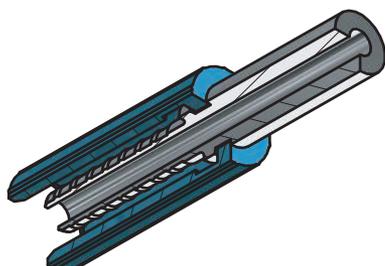
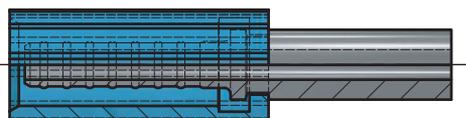
Type K

Male fixed (Cylindrical)
Cone seat 24°



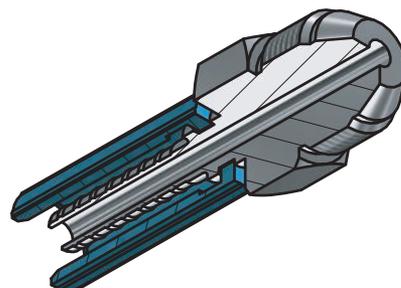
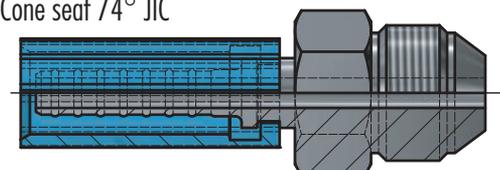
Type M

Stand pipe, straight



Type N

Male fixed (UNF)
Cone seat 74° JIC



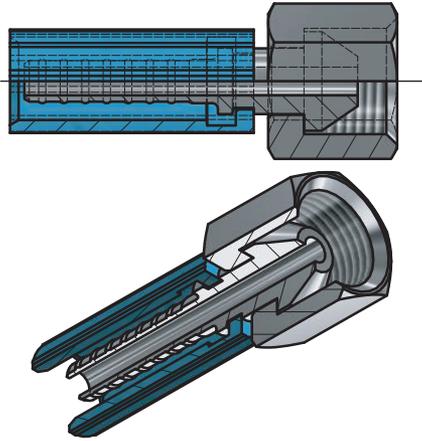
Materials:

- A = Carbon steel
- R = Stainless steel
- S = Acid proof steel
- M = Brass

Standard fittings - Female

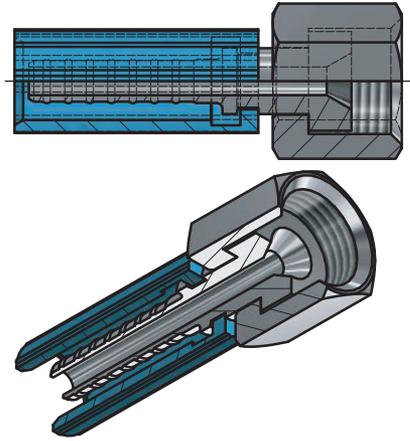
Type C

Female (Swivel)
Cone seat
EX. 90° 60°



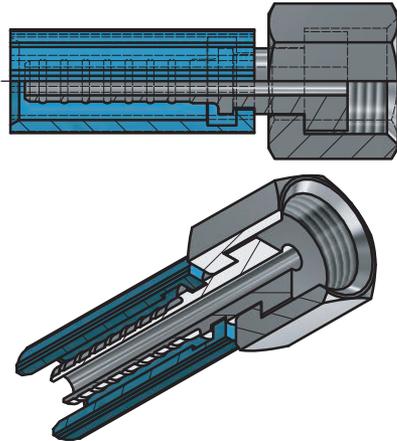
Type D

Female (Swivel)
Cone seat
EX. 90° 60° JIC 74°



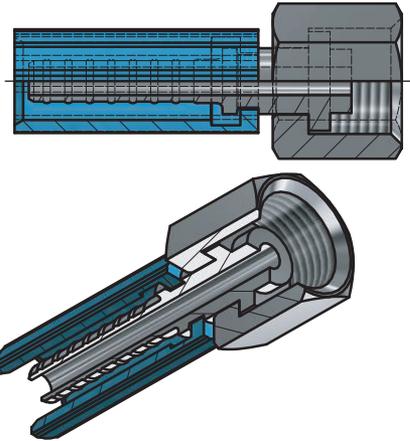
Type E

Female (Swivel)
Flat faced



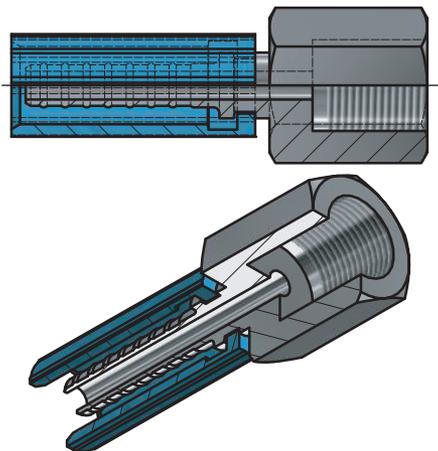
Type F

Female (Swivel)
Flat faced (Tap)



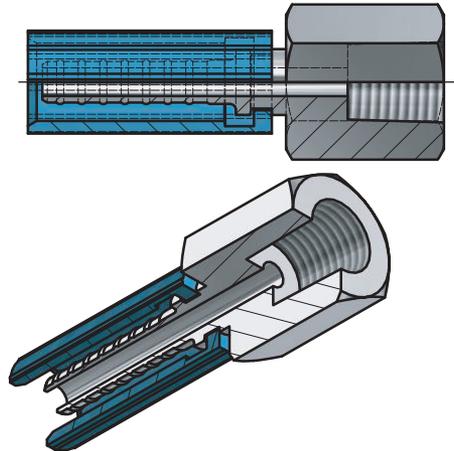
Type H

Female fixed
(Cylindrical)
Flat faced



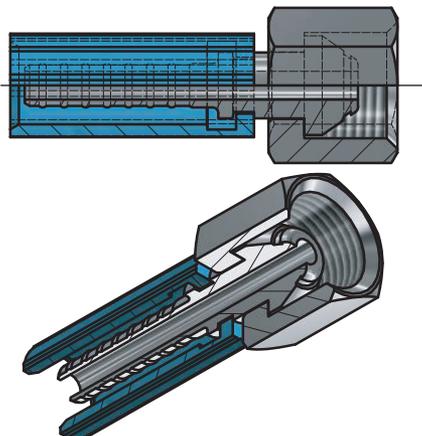
Type I

Female fixed (Taper)



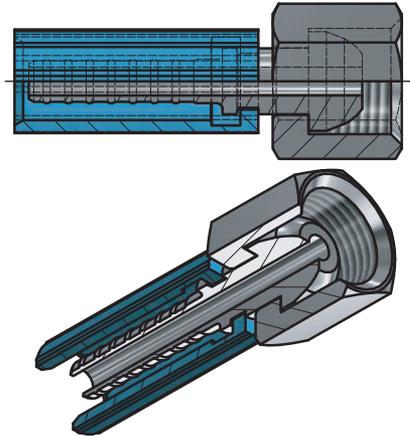
Type L

Female (Swivel)
Cone seat 24°
with O-ring



Type S

Female (Swivel)
Multi seal (Spherical)



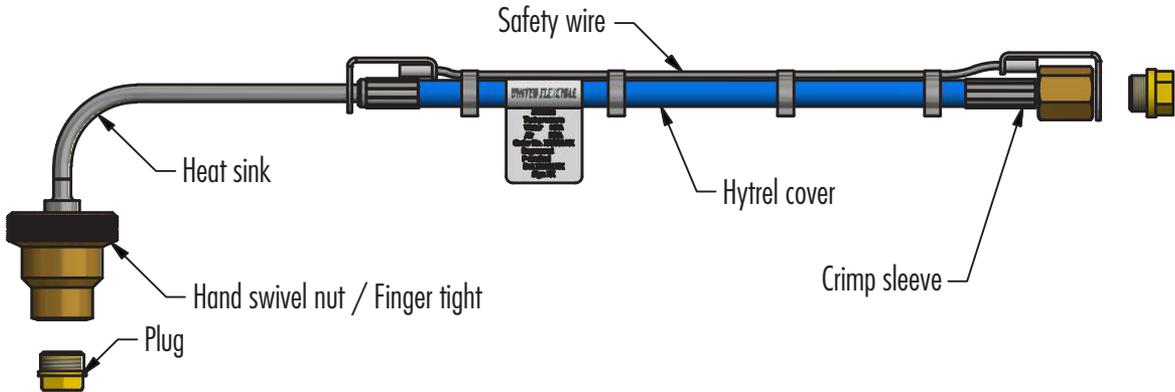
Materials:

- A = Carbon steel
- R = Stainless steel
- S = Acid proof steel
- M = Brass

Compressed Gas Hose Assemblies & Accessories

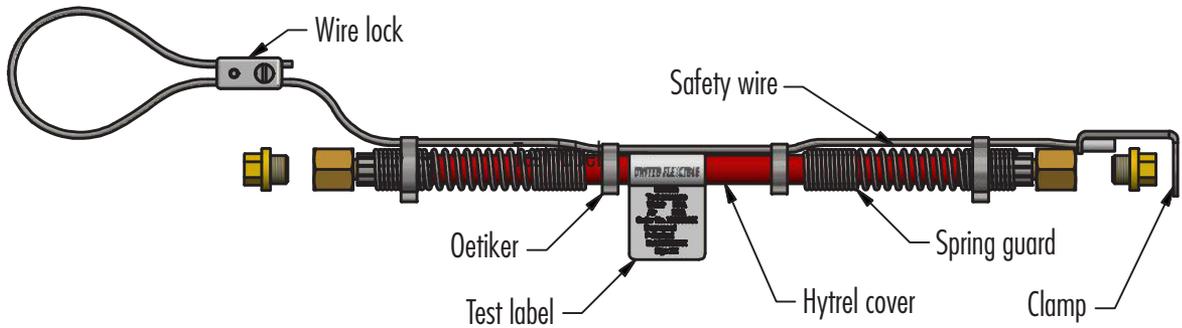
O2 Hose:

Gas hose assembly for Oxygen filling
(Example with heat sink, safety wire and fingertight hand swivel nut)



C2H2 Hose:

Gas hose assembly for Acetylene filling
(Example with safety wire, spring guard and loop with wire lock)



Besides these examples, we manufacture many different configurations.
Hoses for O2 and C2H2 can be designed to pass the decomposition (O2) or ignition (C2H2) tests acc. to. ISO 14113
Please ask the factory for details.

Protective Hose Coverings

United Flexible offers several types of protective hose coverings to help extend the service life of our Fluoropolymer hoses.

Spring Guard



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

Silicone Firesleeve



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

Heat Shrink Tubing



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

Armor



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

Nylon



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

Hytrel™



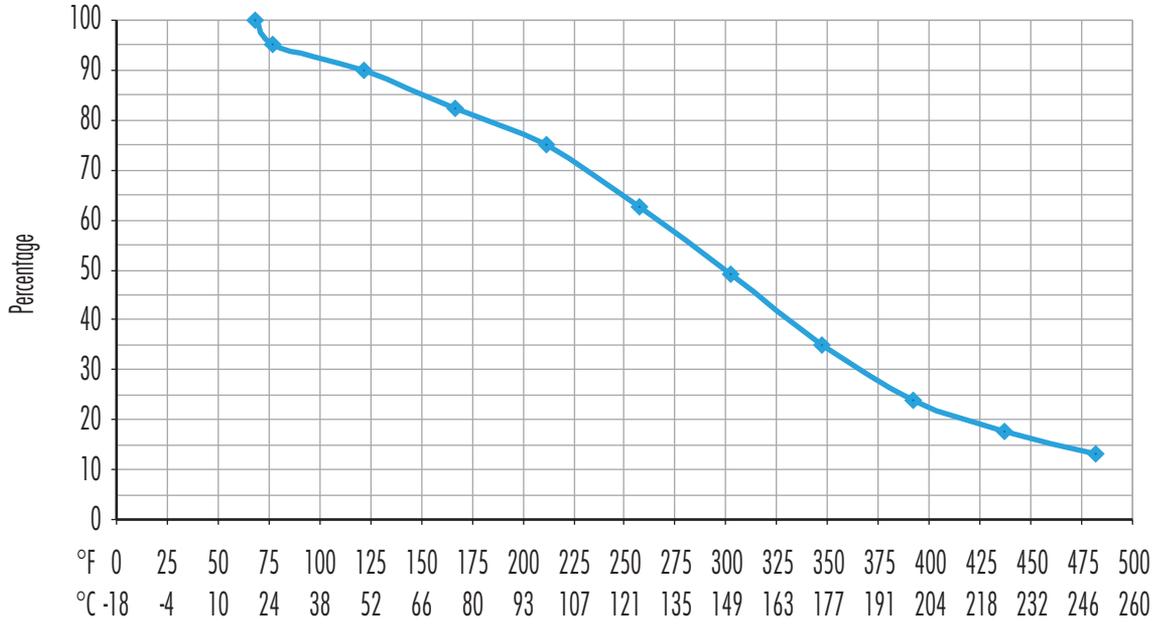
The Hytrel hose cover is available for covering smooth bore and high pressure hoses. United Flexible uses Hytrel grade 4056 which is ideal for flex fatigue resistance. Hytrel is extruded in custom colors to suit a particular service or media transfer condition. Consult customer service on how we can customize your hose with with our Hytrel extrusion capability.

™Hytrel is a registered trademark of E.I. du Pont de Nemours and Company

Contact Customer Service for more information about protective hose coverings.

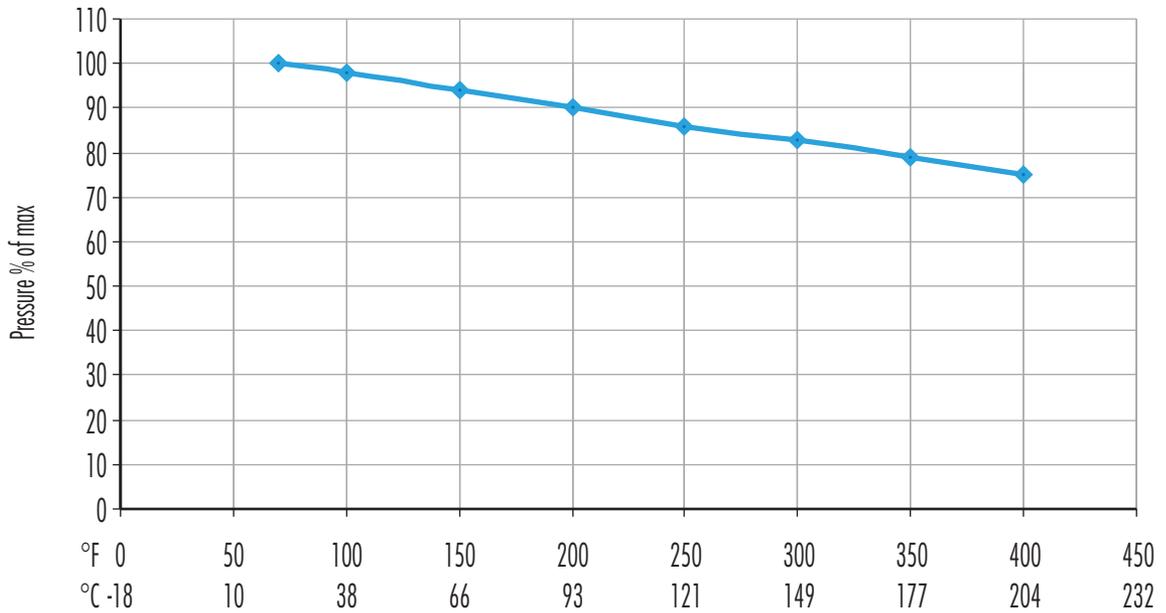
Temperature Derating

Temperature Derating Curve For General Purpose, Single and Double Braided Heavy Duty Hose



For Easybend Convuluted PTFE Hose — Decrease Working Pressure 1% For Every 2°F Above 250°F(120°C)

Temperature Pressure Derating For Dense-Pak and Multi-Braid High Pressure Hose



Chemical Resistance & Effusion Data for PTFE Hose

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test Before Using

Effusion Chart Key:

- A. Effusion will occur with potential to displace breathable air in an enclosed environment. For further information contact factory.
- B. These compounds have the capability to effuse and with certain atmospheric conditions can corrode metallic components such as braid and fittings. Applications with these compounds require using hose assemblies only in well ventilated spaces, please consult factory with questions.
- C. Chemicals in this category are in a gas phase at atmospheric pressures and at temperatures of 56°F (12°C) or less. For further information on compatibility please consult factory.

Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Acetaldehyde	1	1	1	1	1	B
Acetic Acid Glacial	1	0	2	2	0	
Acetic Acid 30%	1	3	2	2	3	
Acetic Anhydride	1	3	2	2	3	
Acetone	1	1	1	1	1	
Acetylene	1	0	1	1	2	C
Acrylonitrile	1	1	1	1	0	
Alum Ammonium or Potassium	1	3	2	2	3	
Aluminum Acetate	1	0	1	1	3	
Aluminum Bromide	1	3	2	2	3	
Aluminum Chloride	1	3	2	2	3	
Aluminum Fluoride	1	3	2	2	3	
Aluminum Hydroxide	1	0	1	1	1	
Aluminum Nitrate	1	3	1	1	0	
Aluminum Salts	1	0	2	2	0	
Aluminum Sulfate	1	3	3	2	3	
Ammonia, Anhydrous	1	1	1	1	0	
Ammonia, Aqueous	1	0	1	1	3	
Ammonium Carbonate	0	1	1	1	0	
Ammonium Chloride	1	0	2	2	3	
Ammonium Hydroxide	1	2	1	1	3	
Ammonium Metaphosphate	1	1	1	1	0	
Ammonium Nitrate	1	1	1	1	3	
Ammonium Nitrite	0	0	1	1	0	
Ammonium Persulfate	0	0	1	1	0	
Ammonium Phosphate	1	3	2	1	0	
Ammonium Sulphate	1	1	1	1	3	
Ammonium Thiocyanate	1	1	1	1	0	
Amyl Acetate	1	3	1	1	1	
Amyl Alcohol	1	1	1	1	1	
Amyl Chloride	1	0	1	1	0	
Amyl Chloronaphthalene	1	0	1	1	0	
Amyl Naphthalene	1	0	1	1	0	
Aniline	1	2	1	1	3	
Aniline Dyes	1	3	1	1	0	
Aniline Hydrochloride	1	0	3	3	3	
Animal Fats	1	1	1	1	0	
Aqua Regia	1	0	3	3	0	
Arsenic Acid	1	2	0	1	0	
Askarel	0	1	1	1	1	
Asphalt	1	1	1	1	2	
Barium Carbonate	1	2	1	1	1	
Barium Chloride	1	3	1	1	2	
Barium Hydroxide	1	2	1	1	0	
Barium Sulfate	1	1	1	1	2	
Barium Sulfide	1	3	1	1	3	
Beer	1	2	1	1	1	
Beet Sugar Liquors	1	1	1	1	0	
Benzene	1	1	1	1	1	
Benzenesulfonic Acid	0	3	0	2	0	

Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Benzaldehyde	1	1	0	0	0	
Benzene	1	1	1	1	1	B
Benzyl Alcohol	1	1	1	1	0	
Benzyl Benzoate	1	1	1	1	0	
Benzyl Chloride	1	1	0	0	0	
Bismuth Carbonate	1	1	1	1	0	
Black Sulphate Liquor	1	1	1	1	0	
Blast Furnace Gas	1	1	1	1	1	C
Borax	1	2	1	1	2	
Bordeaux Mixture	1	0	1	1	0	
Boric Acid	1	3	2	1	3	
Bunker Oil	1	1	1	1	1	
Butadiene	1	0	1	1	1	
Butane	1	1	1	1	1	C
Butter Oil	1	1	1	1	1	
Butyric Acid	1	3	1	1	2	
Butyl Acetate	1	2	1	1	1	
Butyl Alcohol	1	1	1	1	1	
Butyl Amine	0	1	1	1	1	
Butyl Carbitol	1	1	1	1	1	
Butyl Stearate	1	1	1	1	1	
Butyl Mercaptan	1	0	1	1	0	
Butyraldehyde	1	0	0	0	1	
Calcium Acetate	1	1	1	1	1	
Calcium Bisulfate	1	0	2	1	3	
Calcium Bisulfite	1	0	1	1	0	
Calcium Carbonate	1	1	1	1	1	
Calcium Chlorate	1	0	2	1	0	
Calcium Chloride	1	3	2	1	2	
Calcium Hydroxide	1	3	3	1	2	
Calcium Hypochlorite	1	0	3	2	3	
Calcium Nitrate	1	1	1	1	1	
Calcium Silicate	1	1	1	1	1	B
Calcium Sulfate	1	1	1	1	1	
Calcium Sulfide	1	1	1	1	0	
Cane Sugar Liquors	1	1	1	1	2	
Carbolic Acid	1	3	1	1	3	
Carbon Dioxide	1	1	1	1	1	A
Carbon Disulfide	0	2	1	1	2	
Carbonic Acid	1	3	1	1	3	
Carbon Monoxide	1	1	1	1	1	C
Carbon Tetrachloride	1	3	2	2	2	
Castor Oil	1	1	1	1	1	
Caustic Soda	1	2	1	1	3	
Cellosolve, Acetate	1	1	1	1	0	
Cellosolve, Butyl	1	1	1	1	0	
Cellulube	1	1	1	1	1	
Chlorine, Gaseous, Dry*	*	2	3	3	2	C
Chlorine, Gaseous, Wet*	*	3	3	3	3	B
Chlorine Trifluoride	0	3	0	0	0	C

*DO NOT USE stainless steel braided PTFE hose.

Chemical Resistance & Effusion Data for PTFE Hose

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Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Chloroacetic	1	3	3	3	2	
Chlorobenzene	1	1	1	1	1	
Chlorobromomethane	1	1	1	1	1	
Chloroform	1	1	1	1	1	
O-Chloronaphthalene	1	1	1	1	1	
Chlorotoluene	1	1	1	1	1	
Chromic Acid	1	3	3	2	3	
Citric Acid	1	3	3	1	3	
Cod Liver Oil	1	3	1	1	3	
Coke Over Gas	1	1	1	1	0	
Copper Chloride	1	3	3	1	3	
Copper Chanide	1	0	1	1	3	
Copper Sulfate	1	3	1	1	3	
Corn Oil	1	3	1	1	3	
Corn Syrup	1	1	1	1	0	
Cottonseed Oil	1	2	1	1	3	
Creosote	1	2	1	1	3	
Cresol	1	2	1	1	0	
Crude Wax	1	1	1	1	1	
Cutting Oil	1	1	1	1	1	
Cyclohexane	1	1	1	1	1	
Cyclohexanone	1	0	1	1	0	
Cymene	1	0	0	0	1	
Decalin	1	0	0	0	1	
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	1	1	1	
Dichlorobenzene	1	0	1	1	1	
Diesel Oil	1	1	1	1	1	
Diethylamine	1	3	0	2	3	
Diethyl Ether	1	1	1	1	1	B
Diethylene Glycol	1	1	1	1	1	
Diethyl Phthalate	1	0	1	1	1	
Diethyl Sebacate	1	0	1	1	1	
Di-Isobutylene	0	0	1	1	1	
Di-Isopropyl Keytone	1	0	1	1	1	
Dimethyl Aniline	1	0	0	0	1	
Dimethyl Formamide	0	1	1	1	0	
Dimethyl Phthalate	1	0	0	0	1	
Diocetyl Phthlatate	1	1	1	1	1	
Dioxane	1	1	1	1	1	
Dipentene	1	1	1	1	1	
Ethanolamine	1	1	1	1	1	
Ethyl Acetate	1	1	1	1	1	
Ethyl Atrylate	0	1	1	1	0	
Ethyl Alcohol	1	1	1	1	2	

Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Ethyl Benzene	1	1	1	1	1	
Ethyl Cellulose	1	1	1	1	1	
Ethyl Chloride	1	2	1	1	2	
Ethyl Ether	1	2	1	1	1	
Ethyl Mertaptan	1	2	0	0	2	B
Ethyl Pentachlorobenzene	1	2	1	1	1	
Ethylene Chloride	1	2	1	1	2	
Ethylene Chlorohydrin	1	0	0	0	0	
Ethylene Diamine	1	0	0	0	1	
Ethylene Glycol	1	2	1	1	1	
Fatty Acids	1	0	1	1	0	
Ferric Chloride	1	3	3	3	3	
Ferric Nitrate	1	3	1	1	0	
Ferric Sulfate	1	3	1	1	3	
Ferrous Chloride	1	3	1	2	2	
Ferrous Nitrate	1	0	1	1	0	
Ferrous Sulfate	1	3	1	1	2	
Fluoroboric Acid	1	0	1	1	0	
Flormaldehyde	1	0	1	1	1	
Formic Acid	1	3	1	2	1	
Freon 12	2	3	1	1	0	A
Freon 114	2	3	1	1	0	A
Fuel Oil	1	2	2	2	1	
Fumaric Acid	0	0	1	1	0	
Furon Furfuran	1	1	1	1	1	
Fufural	1	2	1	1	1	
Gallic Acid	1	3	1	1	0	
Gasoline	1	2	1	1	1	
Glauber's Salt	0	1	1	1	0	
Glucose	1	1	1	1	1	
Glue	1	2	1	1	3	
Glycerin	1	2	1	1	1	
Glycols	1	1	1	1	1	
Green Sulfate Liquor	1	1	1	1	0	
n-Hexaldehyde	1	1	1	1	1	
Hexane	1	1	1	1	1	
Hexene	1	1	1	1	1	
Hexyl Alcohol	1	1	1	2	0	
Hydraulic Oil, Petroleum	1	1	1	1	1	
Hydrochloric Acid, 15%	1	3	3	3	3	B
Hydrochloric Acid, 37%	1	3	3	3	3	B
Hydrocarbon Acid	1	3	1	1	3	
Hydrofluoric Acid Concentrated	1	3	3	3	3	
Hydrofluosilicic Acid	1	0	3	3	3	
Hydrogen, Gaseous	*	1	1	1	1	C
Hydrogen Peroxide, 70%	1	3	2	1	3	
Hydrogen Sulfide, Gaseous	1	3	2	1	3	
Hydroquinone	0	1	0	1	0	
Isobutyl Alcohol	1	1	1	1	2	
Iso Octane	1	1	1	1	1	

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Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Isopropyl Acetate	1	1	1	1	1	
Isopropyl Alcohol	1	1	1	1	2	
Isopropyl Ether	1	1	1	1	1	
Kerosene	1	1	1	1	1	
Lacquers	1	3	3	1	1	
Lacquer Solvents	1	3	3	1	1	B
Lactic Acid	1	3	2	1	2	
Lard	1	1	1	1	3	
Lead Acetate	1	2	1	1	1	
Lead Nitrate	0	1	1	1	0	
Lime Bleath	0	3	2	1	0	
Linoleic Acid	1	0	0	0	0	
Linseed Oil	1	2	1	1	2	
Lubricating Oils, Petroleum	1	1	1	1	1	
Magnesium Chloride	1	3	2	1	2	
Magnesium Hydroxide	1	1	1	1	0	
Magnesium Sulfate	1	2	1	1	1	
Molic Acid	1	2	2	1	0	
Mercuric Chloride	1	3	1	1	3	B
Mercury	1	1	1	1	3	
Mesityl Oxide	1	1	1	1	1	
Methyl Acetate	1	1	1	1	1	
Methyl Atrylote	0	1	1	1	1	
Methyl Alcohol	1	1	1	1	2	C
Methyl Bromide	1	1	1	1	1	
Methyl Butyl Ketone	0	1	1	1	1	
Methyl Chloride	1	1	1	1	1	
Methylene Chloride	1	1	1	1	1	
Methyl Ethyl Ketone (MEK)	1	1	1	1	1	
Methyl Formate	1	1	1	1	1	B
Methyl Isobutyl Ketone	1	1	1	1	1	
Methyl Methacrylate	1	1	1	1	1	
Methyl Salicylate	1	1	1	1	1	
Milk	1	3	1	1	3	
Mineral Oil	1	1	1	1	1	
Monochlorobenzene	1	1	1	1	1	
Monoethanolamine	0	1	1	1	1	
Naphtha	1	2	1	1	1	
Naphthalene	1	0	1	1	0	
Napthenic Acid	1	0	2	1	0	
Natural Gas	1	1	1	1	2	
Nickel Acetate	1	1	1	1	1	
Nickel Chloride	1	3	2	2	3	
Nickel Sulfate	1	0	2	1	3	
Niter Coke	0	3	2	1	0	
Nitric Acid, All Concentrations	1	3	2	2	3	
Nitric Acid, Red Fuming	1	3	2	2	3	
Nitrobenzene	1	1	1	1	1	
Nitroethane	1	0	1	1	1	
Nitrogen, Gaseous	1	1	1	1	1	A

Chemical	PTFE Hose	Fitting Material				Effusion
		CS	304SS	316SS	Brass	
Nitrogen Tetroxide	0	0	0	2	0	
n-Octane	0	1	1	1	1	
Octyl Alcohol	1	1	1	1	2	
Oil, SAE	1	1	1	1	1	
Oleic Acid	1	2	2	1	2	
Olive Oil	1	2	2	1	2	
Oxalic Acid	1	3	2	1	3	
Oxygen, Gaseous	1	1	1	1	1	A
Ozone	1	1	1	1	1	
Paint	1	0	1	1	1	
Palmitic Acid	1	1	2	1	3	
Peanut Oil	1	1	1	1	1	
Perchloric Acid	1	0	2	1	0	
Perchlorethylene	1	1	1	1	1	
Petroleum	1	1	1	1	1	
Phenol	1	3	1	1	3	
Phorone 1	1	1	1	1	1	
Piric Acid	1	3	1	1	3	
Pinene	1	1	1	1	1	
Pine Oil	1	1	1	1	0	
Plating Solution, Chrome	1	0	3	3	0	
Potassium Acetate	1	0	1	1	0	
Potassium Chloride	1	2	2	1	3	
Potassium Cyanide	1	2	1	1	3	
Potassium Dichromate	1	0	1	1	0	
Potassium Hydroxide, 30%	1	3	1	1	3	
Potassium Nitrate	1	3	1	1	2	
Potassium Sulfate	1	2	1	1	2	
Propane	1	1	1	1	1	A
Propyl Acetate	0	1	1	1	1	
Propyl Alcohol	1	1	1	1	2	
Pyricine, 50%	1	0	1	1	1	
Red Oil	1	2	2	1	2	
Salicylic Acid	0	0	1	1	0	
Salt Water	1	2	1	1	3	
Sewage	1	3	1	1	1	
Silicone Greases	0	1	1	1	1	
Silcone Oils	0	1	1	1	1	
Silver Nitrate	1	2	1	1	2	
Skydrol 500 & 7000	1	1	1	1	0	
Soap Solutions	1	1	1	1	1	
Soda Ash	1	1	1	1	2	
Sodium Acetate	1	1	1	1	1	
Sodium Bicarbonate	1	2	1	1	2	
Sodium Bisulfite	1	1	1	1	0	
Sodium Borate	1	1	1	1	0	
Sodium Chloride	1	2	2	1	3	
Sodium Cyanide	1	2	1	1	3	
Sodium Hydroxide, 40%	1	2	1	1	3	
Sodium Hypochlorite	1	3	3	2	3	

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NOTES

NOTES

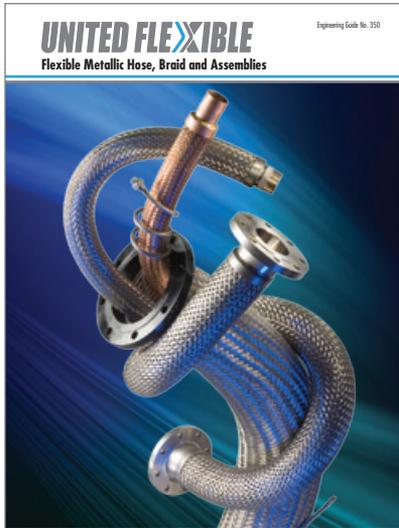
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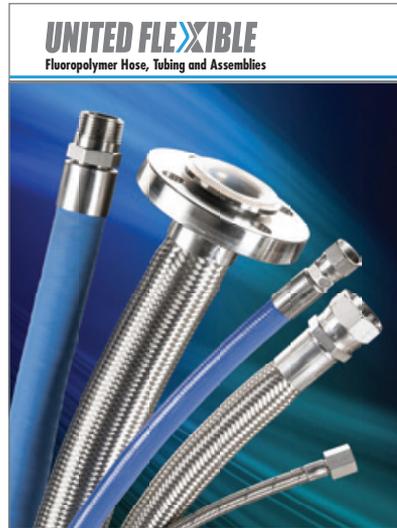
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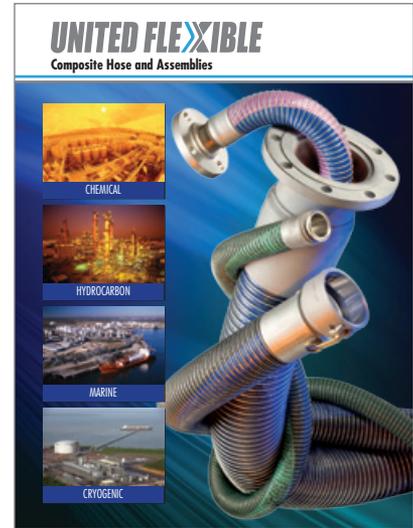
Metal



Fluoropolymer



Composite



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