

Flexible Components

GAS AND CRYOGENIC BUYER'S GUIDE
FOR HOSE AND FITTINGS

BE STRONG.
BE SAFE.
BE FLEXIBLE.™




SAINT-GOBAIN
PERFORMANCE PLASTICS

Golden Rules for Hose Selling STAMPED

S IZE

I.D., O.D. and length

T EMPERATURE

of the material conveyed and the surrounding environment

A PPLICATION

conditions of use

M ATERIAL

being conveyed, type and concentration

P RESSURE

to which the assembly will be exposed

E NDS

style, type, orientation, attachment methods, etc.

D ELIVERY

testing, quality, packaging and delivery requirements

If you have a particular application that requires special attention, please call us at 800-435-3992. Someone from our inside sales or engineering department will be happy to help.

Comments and suggestions for further improving this buyer's guide are welcome. The information it contains supersedes all other previous editions. Please do not refer to previous editions when ordering.

Our products are manufactured under a quality management system registered and complying with 3-A Sanitary Standards where noted and with ISO 9001 and ISO 14001, which have been independently certified by BVQI.



Saint-Gobain Performance Plastics Flexible Components Compressed Gas & Cryogenic Hose Products

For over 30 years, the Flexible Components brand has been the widely acknowledged industry leader in the engineering, manufacture, sales and support of compressed gas and cryogenic hoses. As an active member of CGA, we have played an important role in developing the industry's safety, technological, training and educational standards.

Flexible Components has evolved to become a brand name of Saint-Gobain Performance Plastics, a division of corporate parent Compagnie de Saint-Gobain, which is one of the top 100 industrial companies in the world. As part of Saint-Gobain Performance Plastics, the Flexible Components brand now represents an integral family of products within an industry powerhouse servicing customers throughout the world.

Located in Bridgewater, New Jersey, Saint-Gobain Performance Plastics manufactures Flexible Components brand gas and cryogenic hoses with trademarks that are synonymous with exceptional quality – Chemfluor®, Swiv-L-Flex®, Polar® Hose and Oxy-Flex®.

Excellent Testing and Safety Features

- **Cleaning for Oxygen Service** of products to CGA G-4.1 and higher, using non-toxic chemicals to ensure the level of purity required by major gas producers and to guarantee that our products are free of all flammable and toxic residue or contamination.
- **Pressure Testing** of every hose, pneumatically or hydrostatically, to 1.5x maximum allowable pressure to ensure the integrity of the entire hose assembly.
- **Factory Certified Final Inspection and Certificate of Conformance (COC)** to ensure compliance of industry standards.



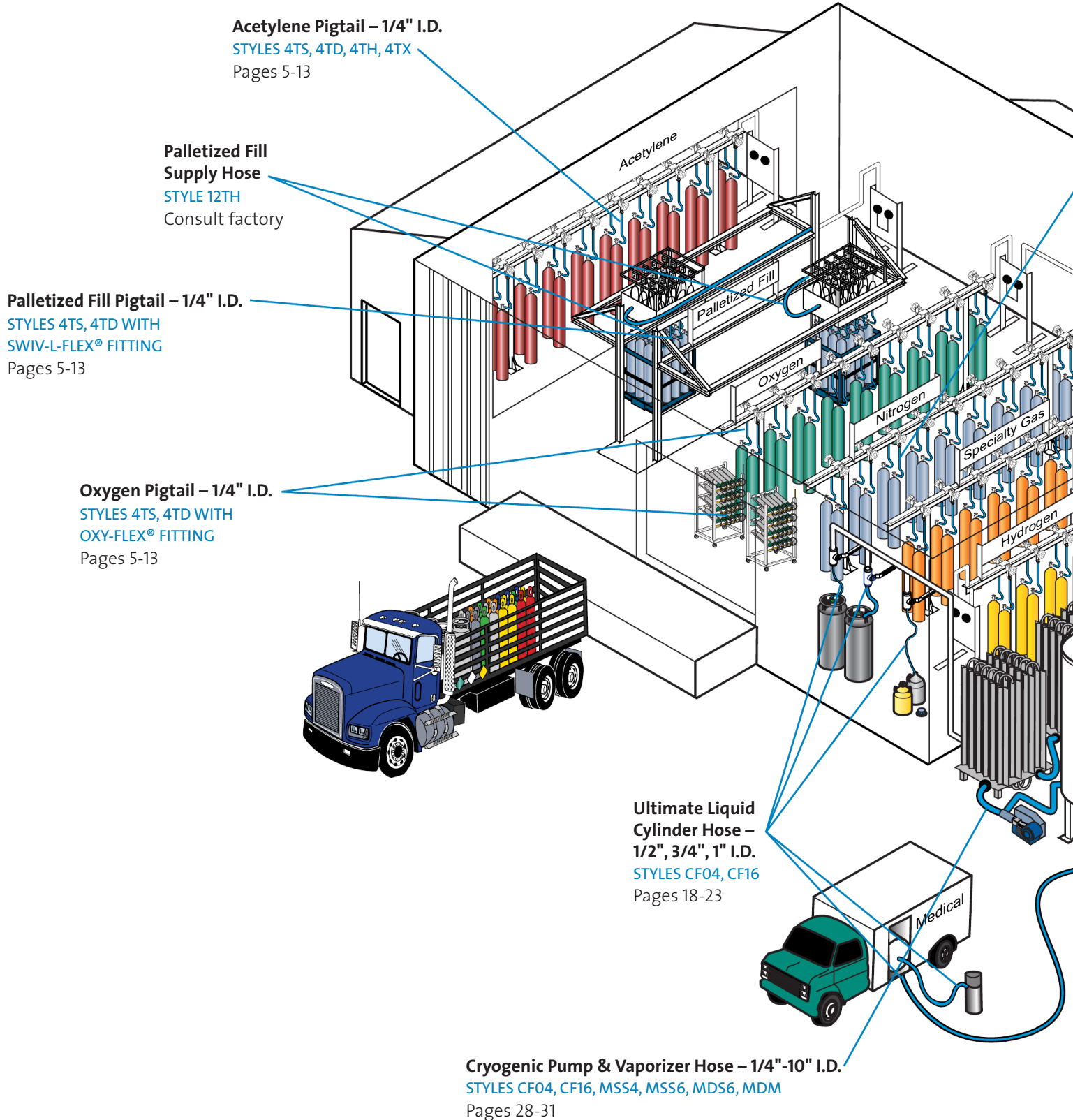
- **Tagging:** All compressed gas and cryogenic hoses are permanently stamped FC, MAWP and month/year of manufacturing for unique identification and lot traceability.
- **Mass Spectrometer Testing** of hoses including inboard (vacuum and inside-tested) or outboard (pressurized and tested for leaks externally) with helium, to detect leakage rates as low as 1×10^{-9} std. cc/sec.
- **Generous Safety Factor:** Periodic burst pressure testing to 4x maximum working pressure ensures a four-to-one safety factor.

Outstanding Customer Support Services

- **Quick Ship Program** available for fastest response to customer needs. Just-in-time supply minimizes inventory and handling costs.
- **Shorter Lead Times** for quick order turn around to ensure fast delivery.
- **Exclusive Warranty Program:** Saint-Gobain Performance Plastics Corporation warrants the hose assembly for a period of 1 year from the date of first sale and for a period of up to 3 years on the armor casing to be free from manufacturing defects. See back cover for warranty details.

Please familiarize yourself with the products in this catalog. If you don't find a product to meet your individual needs, please inquire about custom design and manufacturing services. Saint-Gobain can provide any type of hose for all compressed gas and cryogenic applications. For over 30 years, Flexible Components has been the acknowledged leader in compressed gas and cryogenic hose products.

Product Line Guide



Nitrogen/Argon Pigtail – 1/4" I.D.

STYLES 4TS, 4TD, 4TH, 4TX

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Specialty Gas Pigtail – 1/4" I.D.

STYLES 4MDS6, 4MDHP, 4MDM, 4MDMS

Pages 5-13

Hydrogen/Helium Pigtail – 1/4" I.D.

STYLES 4TZ, 4TZD

Pages 5-13

Tube Trailer Hose – 1/2" I.D.

STYLES 8TH, 8MDS6, 8MDM

Pages 14-17

Polar® Hose – 1", 1-1/2", 2" I.D.

STYLE POL

Pages 33-34

Bulk Tank & Truck Hose – 1-1/2", 2", 2-1/2", 3", 4" I.D.

STYLES MSS4, MSS6

Pages 24-27

Gas/Liquid Sampling Hose Reel

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Flexible Components
= Hose Products

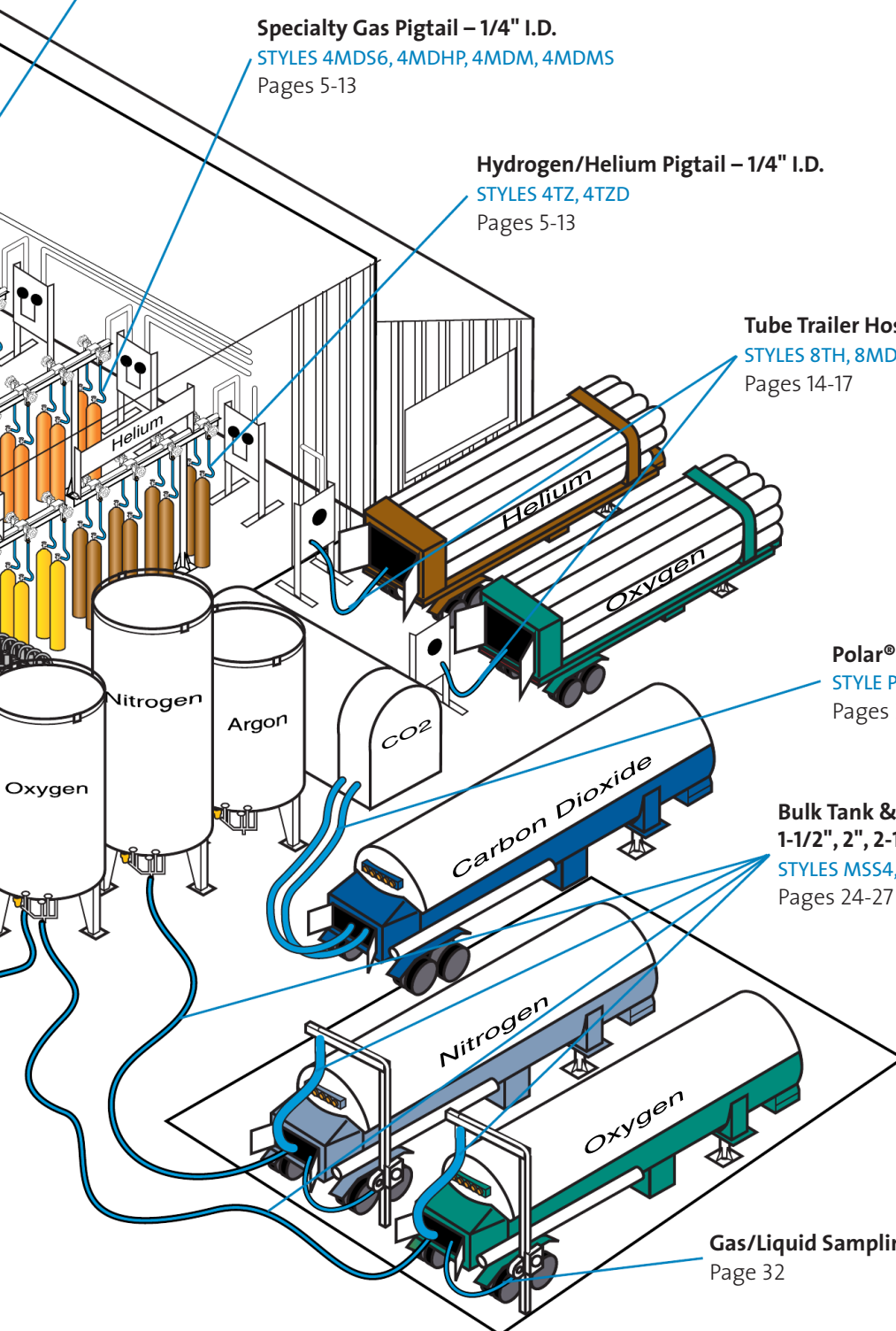


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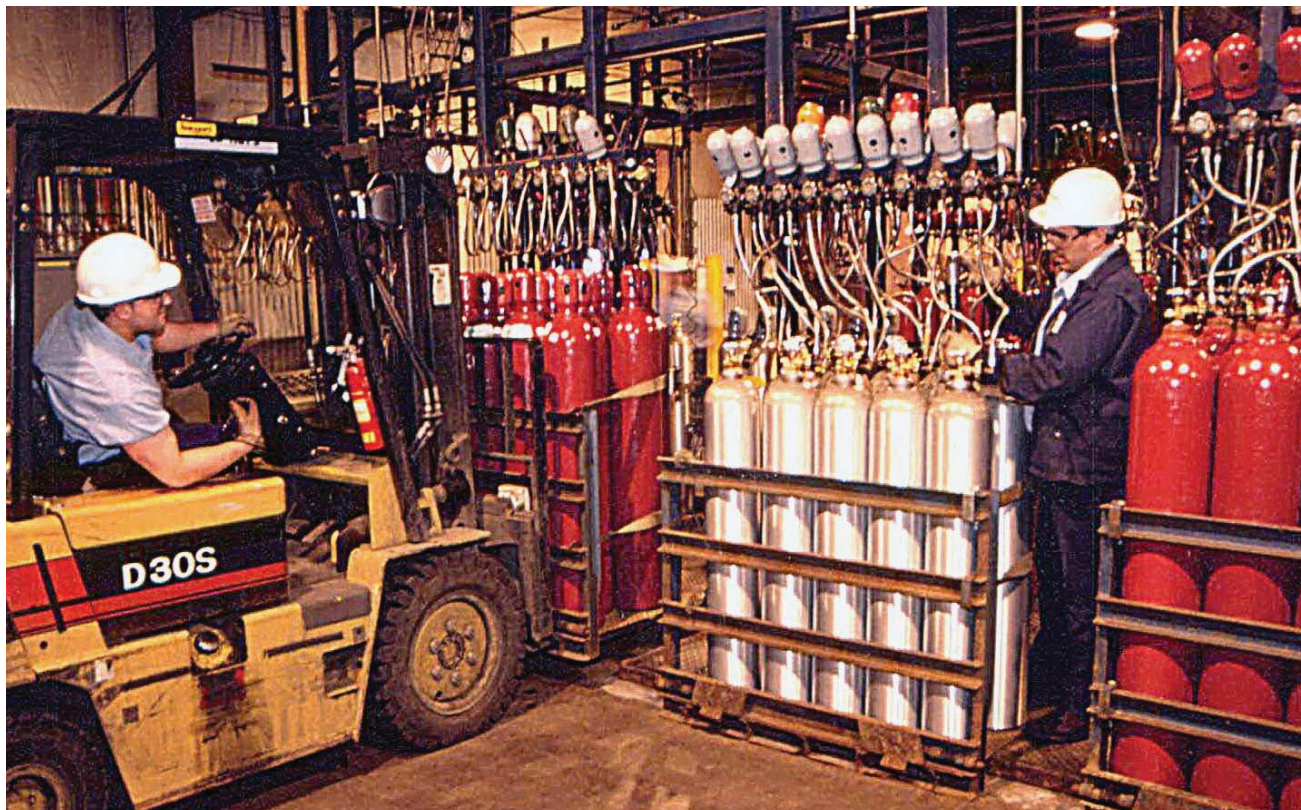
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Compressed Gas – Non-Metallic Core Pigtails for High Pressure Cylinder Filling



Extreme flexibility and durability make non-metallic core pigtails the most widely specified hose assemblies. Our large variety of end fittings, safety and productivity options allows you to select the hose best suited to your application.

PTFE Chemfluor® Inner Core, Stainless Steel Braid

- Ideal for a wide range of industrial applications, PTFE Chemfluor® is non-porous, chemically inert and requires zero maintenance.
- PTFE is an FDA approved material.
- When coupled with the Oxy-Flex® end fitting and cleaned for oxygen use, high temperature capabilities make PTFE the best choice for medical or industrial oxygen filling.
- Up to 30% thicker than competitive products for greater flexibility, kink resistance, longer life and less permeation.

4TS: Single SS braided PTFE Chemfluor® inner core – 3000 psi

4TD*: Double SS braided PTFE Chemfluor® inner core with SS end fittings – 4500 psi

4TH: High Density SS braided PTFE Chemfluor® inner core – 5000 psi

4TX: Double SS braided and High Pressure Double SS spiral wrapped PTFE Chemfluor® inner core – 6000 psi

*Available with brass end fittings at 3600 psi.

ETFE Tefzel® Inner Core, Stainless Steel Braid

- Tefzel® pigtails are widely specified for use in hydrogen and helium service.
- Tefzel® has a permeation rate approximately 77% lower than PTFE.

4TZ: Single SS braided ETFE inner core – 3000 psi

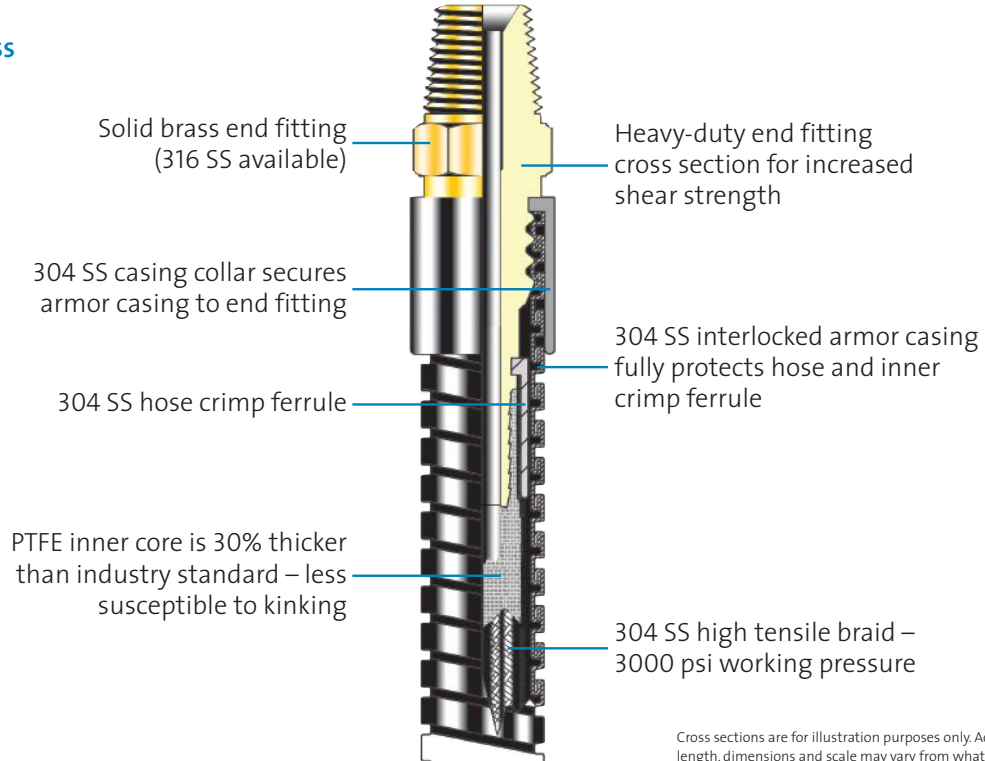
4TZD*: Single SS braided ETFE inner core with SS end fittings – 3500 psi

*Available with brass end fittings at 2800 psi.

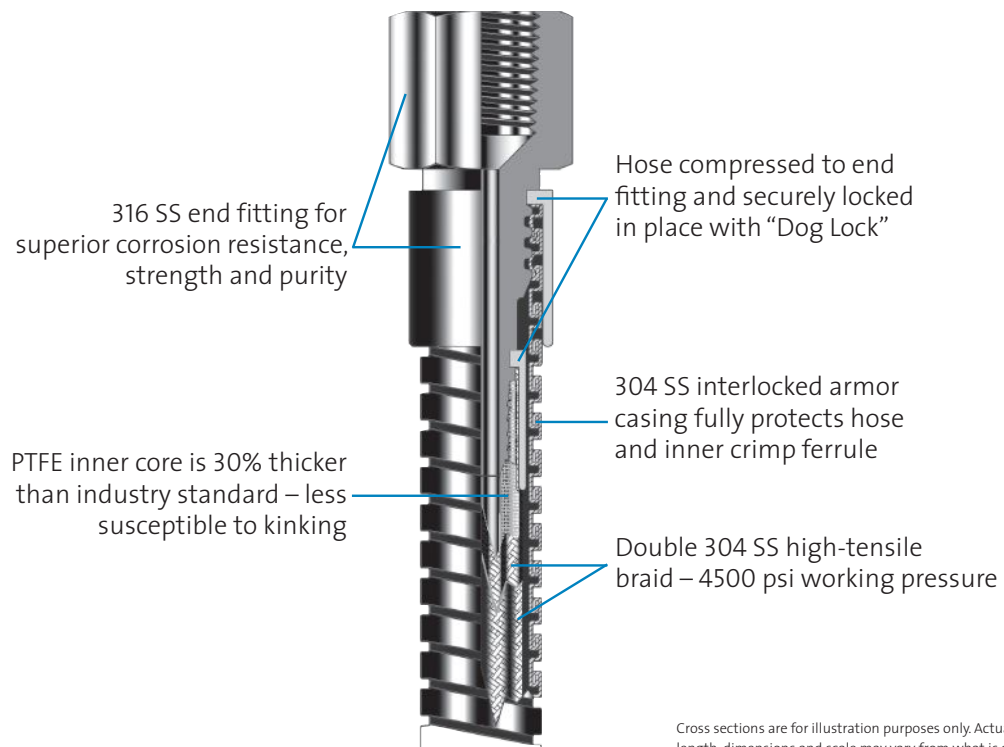
[See Pigtail Hose Selection Guide on page 9](#)

Compressed Gas – Non-Metallic Core Pigtails Cross Sections

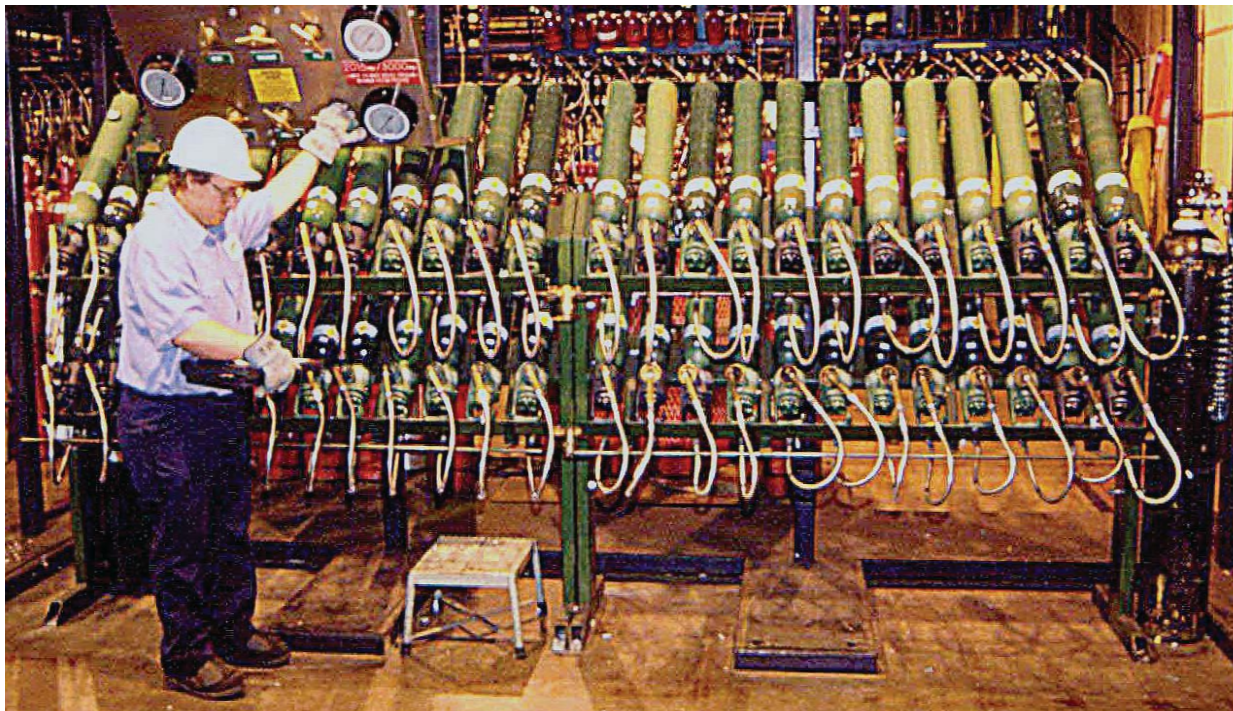
**1/4" Style 4TS
(shown with Brass
Male NPT and SS
Armor Casing)**



**1/4" Style 4TD
(shown with SS
Female NPT and
Armor Casing)**



Compressed Gas – Metallic Core Pigtails for High Pressure Cylinder Filling



Many applications require a metal “bellows” type hose that provides an all welded, flexible alternative to rigid pipe and tubing with zero permeation even at high pressures and cryogenic temperatures. A variety of alloys, safety features and options are available so that an assembly matching your precise needs can be provided. All hose assemblies are constructed with heavy-gauge end fittings. Maximum allowable working pressure and date of manufacture are permanently marked on each assembly.

Stainless Steel Inner Core, Stainless Steel Braid

- Designed for strong, safe and flexible operation in demanding specialty gas environments.
- Zero permeation characteristics do not allow gas or atmosphere to pass through its wall in either pressure or vacuum applications.
- Ideal for flammable, toxic, high purity and small molecule gases.

4MDS6: Double SS braided SS inner core – 4000 psi

4MDHP: Double SS braided SS inner core – 4500 psi

Monel® Inner Core, Monel® Braid

- Specify Monel® pigtails when 316 SS inner core is not compatible with corrosive gas such as hydrochloric acid.

4MDM: Double Monel® braided Monel® inner core – 3000 psi

Available with Monel® fittings

Monel® Inner Core, Stainless Steel Braid

- Ideal for oxygen service where particle impingement failure is a concern.
- SS braid is more economical and allows higher working pressures than Monel® braid.

4MDMS*: Double SS braided Monel® inner core – 4500 psi

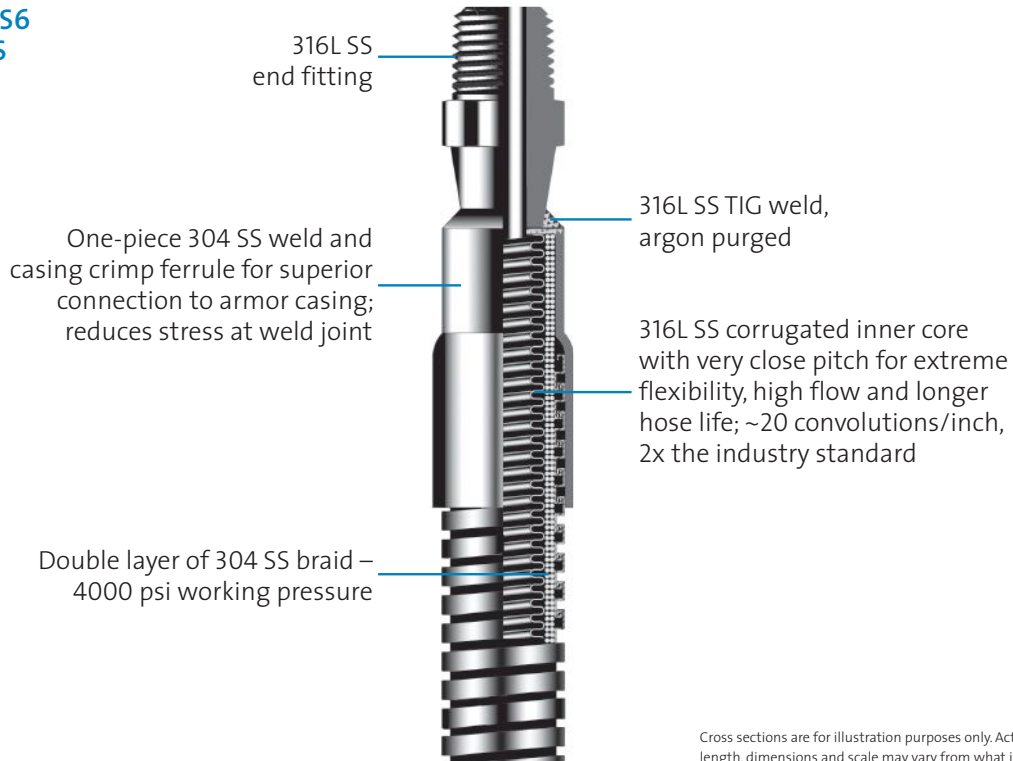
Available with Monel® or SS fittings

* Special order, consult factory.

See Pigtail Hose Selection Guide on page 9

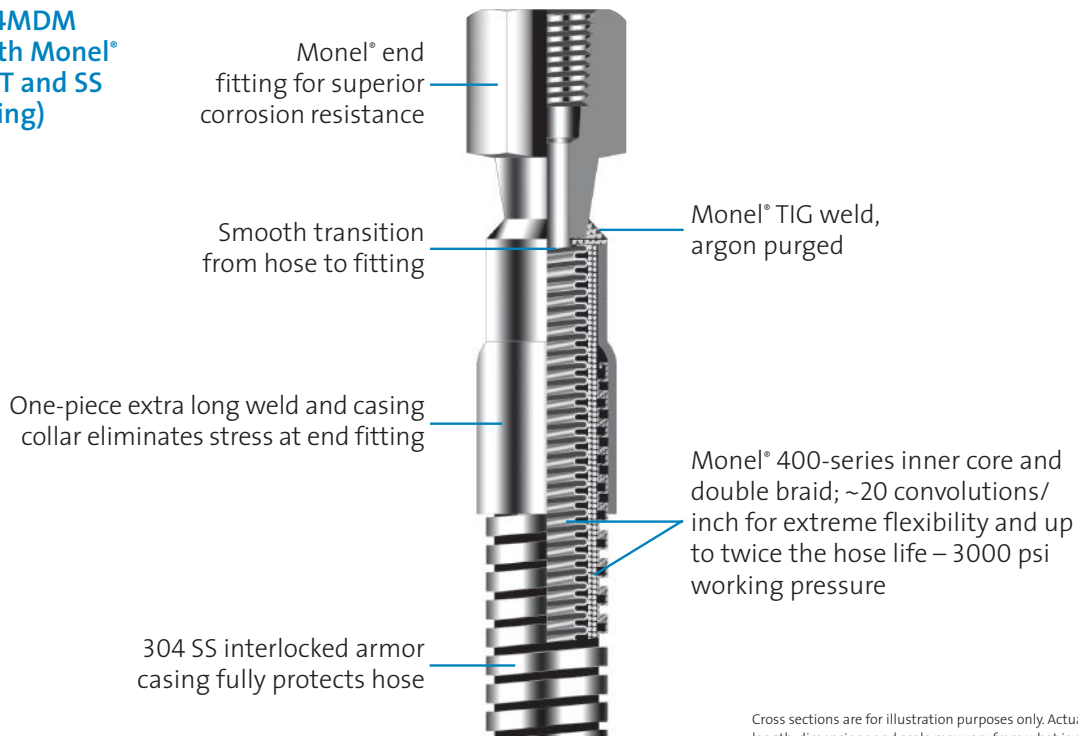
Compressed Gas – Metallic Core Pigtails Cross Sections

1/4" Style 4MDS6 (shown with SS Male NPT and Armor Casing)



Cross sections are for illustration purposes only. Actual fitting length, dimensions and scale may vary from what is shown.

1/4" Style 4MDM (shown with Monel® Female NPT and SS Armor Casing)



Cross sections are for illustration purposes only. Actual fitting length, dimensions and scale may vary from what is shown.

Compressed Gas – Pigtail Hose Selection Guide & Specifications

Pigtail Hose Selection Guide

Hose Style		4TS	4TD	4TH	4TX	4TZ	4TZD	4MDS6	4MDHP	4MDM	4MDMS*
Inner Core Material		PTFE	PTFE	PTFE	PTFE	ETFE	ETFE	316LSS	316LSS	MONEL®	MONEL®
Maximum Working Pressure	PSI	3,000	4,500	5,000	6,000	3,000	3,500	4,000	4,500	3,000	4,500
	BAR	206.89	310.34	344.82	413.78	206.89	241.37	275.86	310.34	206.89	310.34
Gas	CGA Connection										
Acetylene**	510	V	V	V	E	G	G	G	G	G	G
Air	346	E	E	G	G	G	G	G	G	G	G
Argon	580	E	E	G	G	G	G	G	G	G	G
Arsine**	350 or 660	N	N	N	N	N	N	N	N	G	G
Carbon Dioxide	320	E	E	G	G	N	N	G	G	G	G
Carbon Monoxide**	350	V	V	V	V	V	V	E	E	G	G
Chlorine**	660	N	N	N	N	N	N	N	N	V	V
Fluorine**	679	N	N	N	N	N	N	N	N	V	V
Helium	580	V	V	G	G	E	E	E	E	V	V
Hydrogen**	350	G	G	G	G	V	V	V	V	G	G
Natural Gas**	350	G	G	V	V	G	G	E	E	G	G
Nitrogen	580	E	E	V	V	G	G	G	G	G	G
Nitrous Oxide	326	V	V	G	G	G	G	G	G	G	G
Oxygen	540	E***	E***	G	G	N	N	G	G	V	V
Silane**	350	N	N	N	N	N	N	N	N	V	V

E – Excellent, V – Very Good, G – Good, N – Not Acceptable

All hoses are considered to be 0.250 I.D.

*Special order, consult factory.

**Flammable and poisonous gases should always be filled, stored, transfilled or used in a well-ventilated area.

***When coupled with Oxy-Flex® fitting.

Pigtail Hose Specifications – Part 1 of 2

Hose Style	Size I.D.		Size O.D. Without Armor		Size O.D. With Armor		Inner Core Wall Thickness		Maximum Working Pressure		Minimum Burst Pressure	
	in.	mm	in.	mm	in.	mm	in.	mm	psi	bar	psi	bar
4TS	0.25	6.35	0.38	9.53	0.56	14.22	0.04	1.02	3,000	206.89	12,000	827.57
4TD	0.25	6.35	0.40	10.16	0.63	15.88	0.04	1.02	4,500	310.34	18,000	1241.30
4TH	0.22	5.59	0.38	9.65	0.63	15.88	0.04	1.02	5,000	344.82	16,000	1103.40
4TX	0.23	5.84	0.49	12.45	0.68	17.27	0.04	1.02	6,000	413.78	24,000	1655.10
4TZ	0.25	6.35	0.31	7.87	0.56	14.22	0.03	0.76	3,000	206.89	12,000	827.57
4TZD	0.25	6.35	0.40	10.16	0.63	15.88	0.03	0.76	3,500	241.37	14,000	965.49
4MDS6	0.29	7.24	0.54	13.72	0.83	20.96	0.01	0.25	4,000	275.86	16,000	1103.40
4MDHP	0.29	7.24	0.54	13.72	0.83	20.96	0.01	0.25	4,500	310.34	18,000	1241.30
4MDM	0.29	7.24	0.54	13.72	0.83	20.96	0.01	0.25	3,000	206.89	12,000	827.57
4MDMS*	0.29	7.24	0.54	13.72	0.83	20.96	0.01	0.25	4,500	310.34	18,000	1241.30

Pigtail Hose Specifications – Part 2 of 2

Hose Style	Minimum Bend Radius Without Armor		Minimum Bend Radius With Armor		Weight Without Armor		Weight With Armor		Temperature Range		Conductive
	in.	mm	in.	mm	lb./ft.	kg/m	lb./ft.	kg/m	°F	°C	(Yes/No)
4TS	2.0	50.80	3.6	91.44	0.08	0.12	0.26	0.39	-100 to 450	-73 to 232	No
4TD	2.7	68.58	3.6	91.44	0.10	0.15	0.26	0.39	-100 to 450	-73 to 232	No
4TH	1.5	38.10	2.7	68.58	0.10	0.15	0.26	0.39	-100 to 450	-73 to 232	Yes
4TX	3.0	76.20	5.1	129.54	0.24	0.36	0.40	0.60	-100 to 450	-73 to 232	Yes
4TZ	2.0	50.80	3.6	91.44	0.08	0.12	0.22	0.33	-100 to 250	-73 to 121	No
4TZD	2.7	68.58	3.6	91.44	0.10	0.15	0.26	0.39	-100 to 250	-73 to 121	No
4MDS6	3.0	76.20	3.2	81.28	0.30	0.45	0.53	0.79	Cryo to 1500	Cryo to 815	Yes
4MDHP	3.0	76.20	3.2	81.28	0.30	0.45	0.53	0.79	Cryo to 1500	Cryo to 815	Yes
4MDM	4.0	101.60	4.3	109.22	0.33	0.49	0.53	0.79	Cryo to 1500	Cryo to 815	Yes
4MDMS*	3.0	76.20	3.2	81.28	0.33	0.49	0.53	0.79	Cryo to 1500	Cryo to 815	Yes

*Special order, consult factory.

Compressed Gas – Special Pigtail Assemblies & Safety Options



Flexible Components brand is considered the innovator, not imitator in the industry. Here are a few examples of products designed to enhance your safety and productivity.



Oxy-Flex® Distance Volume Piece

Integral to the Oxy-Flex® pigtail, the Distance Volume Piece (DVP) contains heat of adiabatic compression, which may occur in a quickly pressurized hose where one end is closed off with a valve or check valve. The DVP prevents the heated slug of gas from affecting the PTFE tube of the pigtail. Constructed with solid brass and a 1/4" female NPT for connection to CGA 540 or other nipple.

Option Code DV – Part number of hose shown: 4TS71DV74DVLBA0540-36"



Swiv-L-Flex® (available with TS or TD hose styles)

Specifically designed for palletized cylinder fill operations employing overhead fill manifolds. Swivels 360° for ease of connection regardless of the cylinder valve inlet's orientation to the pigtail.

Style 06X – Shown with optional elbow and hand tight CGA 580



Quick Connect Handwheel with ball valve for Carbon Dioxide (Style HBV)

For quick connection of any Flexible Components pigtail to CGA 320 valves. Comes complete with SS 1/4-turn ball valve and extra gaskets.

Part number: **7704HBV320**

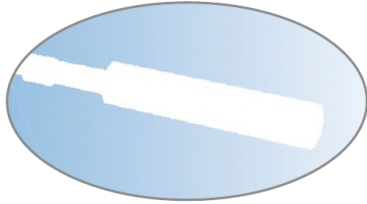


Armor Casing

For hoses that are constantly handled and flexed, armor casing protects against kinking, braid abrasion and stress at the end fittings. The smooth surface also provides additional handling protection for operators, plus the capability to support a 600-pound load under tension. Armor casing is protected under a special 3-year limited warranty. See back cover for details.

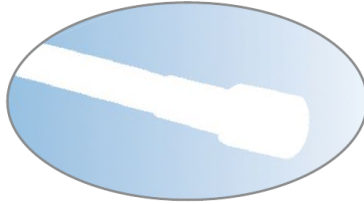
Option Code A – Part number of hose shown: 4MDS60306S6A-36"

Compressed Gas – Pigtail Hose End Fittings



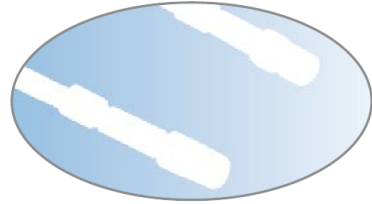
Distance Volume Piece (Oxy-Flex®) – Style DV

For hose styles: TS, TD
Available in: B



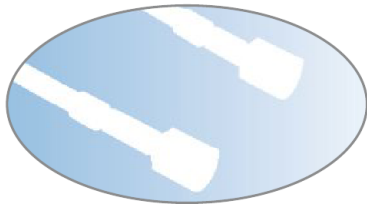
Female Flare 37° & 45° – Style 02

For hose styles: TS, TD, TZ, TZD, TH, MDS6, MDHP, MDM, MDMS
Available in: S6, M, C



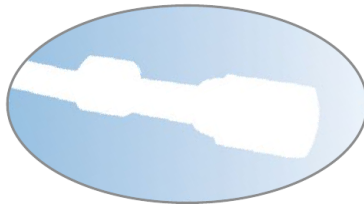
Male NPT – Style 03

For hose styles: TS, TD, TZ, TZD, TH, TX, MDS6, MDHP, MDM, MDMS
Available in: S6, B, M, C



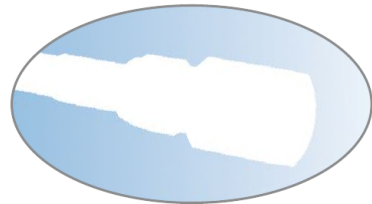
Female NPT – Style 06

For hose styles: TS, TD, TZ, TZD, TH, TX, MDS6, MDHP, MDM, MDMS
Available in: S6, B, M, C



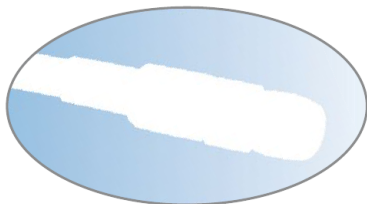
Female NPT (Swiv-L-Flex®) – Style 06X

For hose styles: TS, TD, TZ, TZD
Available in: S6



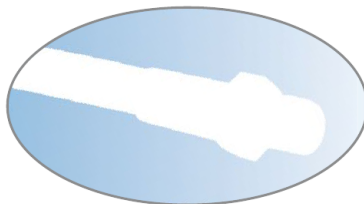
Female Flare x Female NPT Union – Style 07

For hose styles: TS, TD, TZ, TZD, TH, MDS6, MDHP, MDM, MDMS
Available in: S6, C



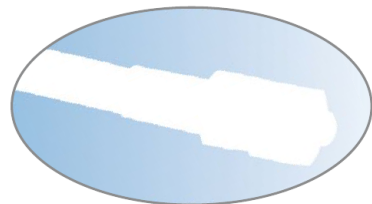
Female Flare x Male NPT Union – Style 08

For hose styles: TS, TD, TZ, TZD, TH, MDS6, MDHP, MDM, MDMS
Available in: S6, C



Compression Connector – Style 31, Style 31 FN (with ferrules & nut)

For hose styles: TS, TD, TZ, TZD, MDS6, MDHP
Available in: S6



Compression Tube Adapter – Style 32, Style 32 FN (with ferrules & nut)

For hose styles: TS, TD, TZ, TZD, MDS6, MDHP
Available in: S6

Fitting material designator:

S6 = 316 Stainless Steel

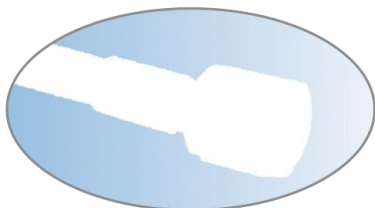
B = Brass

M = Monel®

C = Carbon Steel

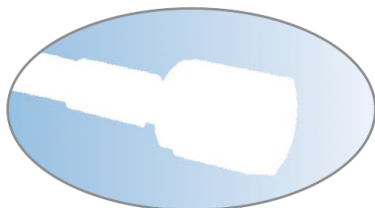
Step-up and step-down fittings available.

Compressed Gas – Pigtail Hose End Fittings



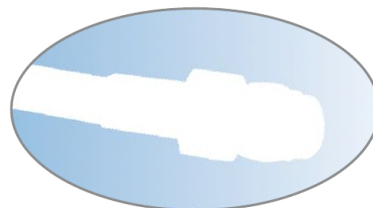
O Ring Female – Style 33

For hose styles: TS, TD, TZ, TZD, MDS6, MDHP
Available in: S6



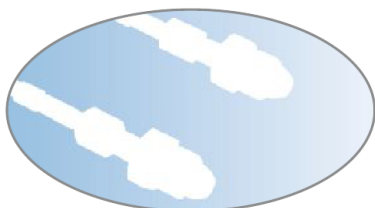
Vacuum Female – Style 34

For hose styles: TS, TD, TZ, TZD, MDS6, MDHP, MDM, MDMS
Available in: S6, M



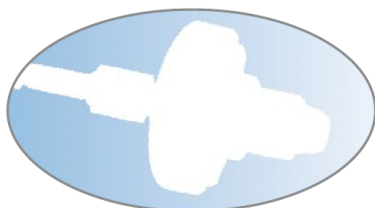
Vacuum Male – Style 35

For hose styles: TS, TD, TZ, TZD, MDS6, MDHP, MDM, MDMS
Available in: S6, M



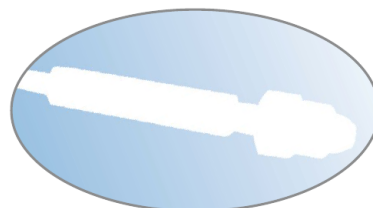
CGA Wrench Tight on Female NPT – Style 71

For hose styles: TS, TD, TZ, TZD, TH, TX, MDS6, MDHP, MDM, MDMS
Available in: S6, B



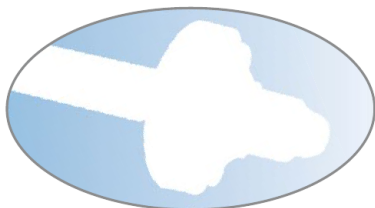
CGA Hand Tight on Female NPT – Style 74

For hose styles: TS, TD, TZ, TZD, TH, TX, MDS6, MDHP, MDM, MDMS
Available in: B



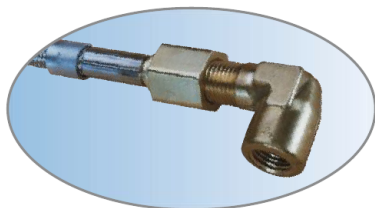
CGA Wrench Tight on Oxy-Flex® – Style 71DV

For hose styles: TS, TD
Available in: B



CGA Hand Tight on Oxy-Flex® – Style 74DV

For hose styles: TS, TD
Available in: B



90° Elbow NPT – Style L

For hose styles: TS, TD, TZ, TZD, TH, TX, MDS6, MDHP, MDM, MDMS
Available in: B

Fitting material designator:

S6 = 316 Stainless Steel

B = Brass

M = Monel®

C = Carbon Steel


Step-up and step-down fittings available.

Compressed Gas – How to Order Compressed Gas Pigtails

How to Order Compressed Gas Pigtails

Part Number Example: 4TD0674DVLBA0540-36"

Description: 1/4" I.D. PTFE inner core, double SS braid, brass female NPT on one end, brass DVP with elbow and CGA 540 hand tight fitting on the opposite end, armor casing, clean for oxygen, 36" overall length.

4	TD	06		74DV	L	B	A	O	540	36
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	Elbow Option 1st End	Fitting Style 2nd End	Elbow Option 2nd End	Fitting Material – Both Ends	Armor Casing	Oxygen Clean	CGA Spec.	Length (Inches) 
4 (1/4)	TS	02	L	02	L	S6 = 316 SS	A	O	320	
	TD	03		03		B = Brass			326	
	TH	06		06		M = Monel®			346	
	TX	06X		06X		C = Carbon steel			350	
	TZ	07		07					510	
	TZD	08		08					540	
	MDS6	31		31					580	
	MDHP	31FN		31FN					660	
	MDM	32		32					679	
	MDMS	32FN		32FN						
		33		33						
		34		34						
		35		35						
		71		71						
		74		74						
		DV		DV						
		71DV		71DV						
		74DV		74DV						

Important:

- Minimum length of hose without armor = 6"
- Minimum length of hose with armor = 18"
- Minimum length of hose with Oxy-Flex® style DV on one end = 24"
- Minimum length of hose with Oxy-Flex® style DV on both ends = 24"
- Overall length is measured to the end of the permanently attached end fitting, not including elbows and/or CGA fittings

Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 4
2. Select hose style = TD
3. Select the fitting style for the first end = 06
4. Select an elbow option for the first end = None (Leave blank for no elbow)
5. Select the fitting style for the second end = 74DV
6. Select an elbow option for the second end = L (Leave blank for no elbow)
7. Select fitting material for both ends = B
8. Select A for armor = A (Leave blank for no armor)
9. Select O for oxygen clean = O (Leave blank for no oxygen clean)
10. Select CGA style = 540
11. Select length in inches = 36

Compressed Gas – Tube Trailer Hose



All tube trailer hoses are specifically designed with higher working pressures and smoother inner cores for faster flow. The maximum allowable working pressure and the date of manufacture are permanently marked on each assembly. Armor casing is recommended for all hoses with a wire braided exterior.

PTFE Chemfluor® Inner Core, Stainless Steel Braid

- Ideal for a wide range of tube trailer applications, PTFE Chemfluor® is clean, non-stick, chemically inert and requires zero maintenance.
- PTFE is an FDA approved material.
- Up to 30% thicker than most manufacturer's for greater flexibility, kink resistance, longer life and lower permeation rates.

8TH: High density SS braided PTFE Chemfluor® inner core – 5000 psi

Stainless Steel Inner Core, Stainless Steel Braid

- Designed for strong, safe and flexible operation in demanding specialty gas environments.
- Zero permeation characteristics do not allow gas or atmosphere to pass through its wall in either pressure or vacuum applications.
- Ideal for flammable, toxic, high purity and small molecule gases.

8MDS6: Double SS braided SS inner core – 3500 psi

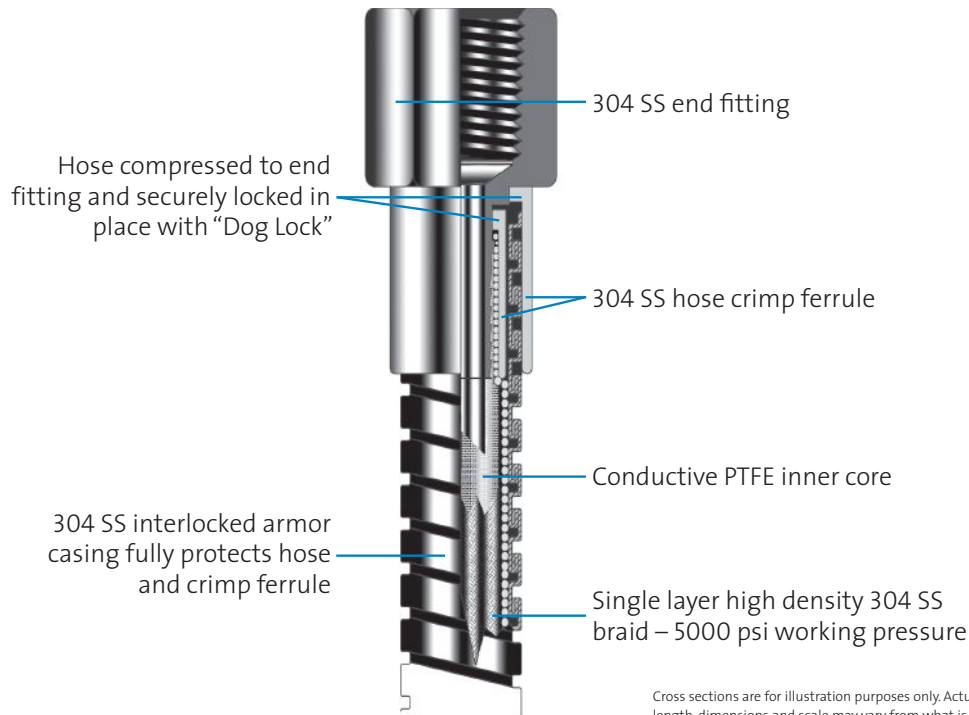
Monel® Inner Core, Monel® Braid

- Specifically designed for corrosive gas applications, the Monel® inner core hose features the same heavy-duty construction as stainless steel assemblies.

8MDM: Double Monel® braided Monel® inner core – 2000 psi

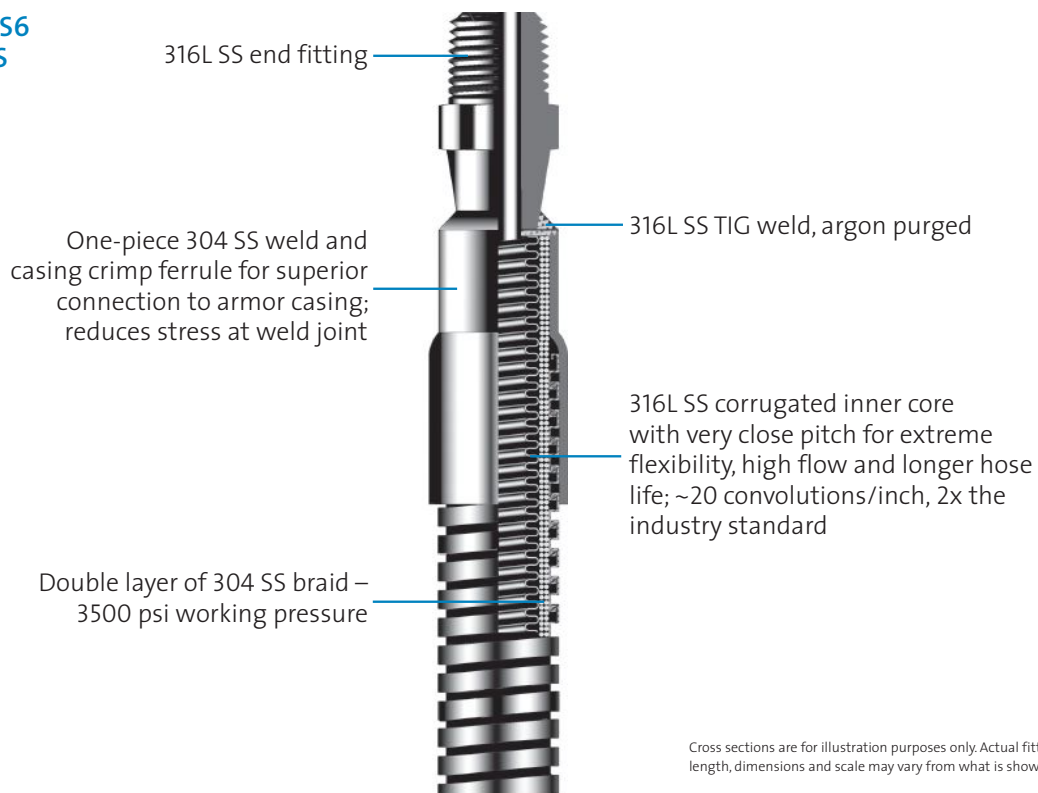
Compressed Gas – Tube Trailer Hose Cross Sections

1/2" Style 8TH
(shown with SS
Female NPT and
Armor Casing)



Cross sections are for illustration purposes only. Actual fitting length, dimensions and scale may vary from what is shown.

1/2" Style 8MDS6
(shown with SS
Male NPT and
Armor Casing)



Cross sections are for illustration purposes only. Actual fitting length, dimensions and scale may vary from what is shown.

Compressed Gas – Tube Trailer Hose Selection Guide & Specifications

Tube Trailer Hose Selection Guide

Hose Style		8TH	8MDS6	8MDM
Inner Core Material		PTFE	316SS	MONEL®
Maximum Working Pressure	PSI	5,000	3,500	2,000
	BAR	344.82	241.37	137.93
Gas				
Air		V	G	G
Argon		V	G	G
Carbon Dioxide		V	E	G
Carbon Monoxide*		V	E	G
Helium		G	E	G
Hydrogen*		G	E	G
Natural Gas*		V	G	G
Nitrogen		V	G	G
Nitrous Oxide		G	G	G
Oxygen		G	G	G

E – Excellent, V – Very Good, G – Good

*Flammable and poisonous gases should always be filled, stored, transferred or used in a well-ventilated area.

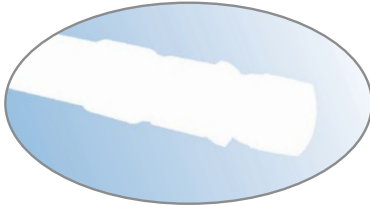
Tube Trailer Hose Specifications – Part 1 of 2

Hose Style	Size I.D.		Size O.D. Without Armor		Size O.D. With Armor		Inner Core Wall Thickness		Maximum Working Pressure		Minimum Burst Pressure	
	in.	mm	in.	mm	in.	mm	in.	mm	psi	bar	psi	bar
8TH	0.41	10.54	0.62	15.62	0.87	21.97	0.04	1.02	5,000	344.82	16,000	1103.40
8MDS6	0.50	12.70	0.86	21.84	0.97	24.51	0.01	0.25	3,500	241.37	14,000	965.49
8MDM	0.53	13.34	0.94	23.88	1.04	26.42	0.01	0.25	2,000	137.93	8,000	551.71

Tube Trailer Hose Specifications – Part 2 of 2

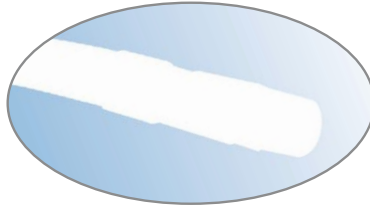
Hose Style	Minimum Bend Radius Without Armor		Minimum Bend Radius With Armor		Weight Without Armor		Weight With Armor		Temperature Range		Conductive
	in.	mm	in.	mm	lb./ft.	kg/m	lb./ft.	kg/m	°F	°C	(Yes/No)
8TH	2.9	73.66	3.0	76.20	0.35	0.52	0.58	0.86	-65 to 400	-54 to 204	Yes
8MDS6	5.0	127.00	5.6	142.24	0.64	0.95	0.97	1.44	Cryo to 1500	Cryo to 815	Yes
8MDM	5.0	127.00	5.6	142.24	0.67	1.00	1.00	1.49	Cryo to 1500	Cryo to 815	Yes

Compressed Gas – Tube Trailer Hose End Fittings & How to Order



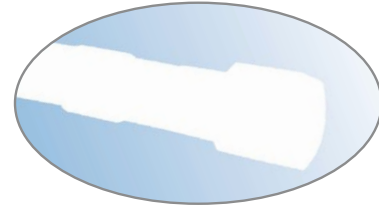
Female JIC 37° or 45° Flare – Style 02

For hose styles: TH, MDS6, MDM
Available in: S4, S6, M, C



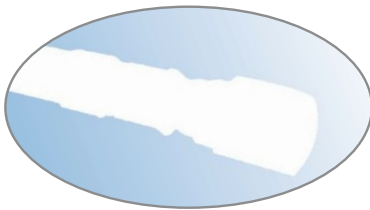
Male NPT – Style 03

For hose styles: TH, MDS6, MDM
Available in: S4, S6, M, C



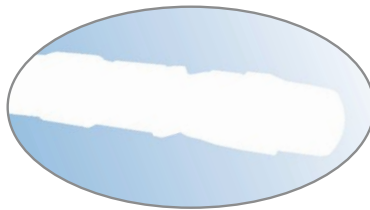
Female NPT – Style 06

For hose styles: TH, MDS6, MDM
Available in: S4, S6, M, C



Female JIC x Female NPT Union – Style 07

For hose styles: TH, MDS6, MDM
Available in: S6, C



Female JIC x Male NPT Union – Style 08

For hose styles: TH, MDS6, MDM
Available in: S6, C

Fitting material designator:

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

M = Monel®

C = Carbon Steel

Step-up and step-down fittings available.

How to Order Tube Trailer Hose

Part Number Example: 8MDS60306S6A O 144

Description: 1/2" I.D. 316 SS corrugated inner core, double SS braid, 316 SS 1/2" male NPT one end, 1/2" 316 SS female NPT on the other end, full length armor casing, cleaned for oxygen service, 144 inches end to end.

8	MDS6	03	06	S6	A	O	144
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	Fitting Style 2nd End	Fitting Material – Both Ends	Armor Casing	Oxygen Clean	Length (Inches)
8 (1/2)	TH	02	02	S4 = 304 SS	A	O	
	MDS6	03	03	S6 = 316 SS			
	MDM	06	06	M = Monel®			
		07	07	C = Carbon Steel			
		08	08				

For Example:

1. Select hose size in 16ths of an inch = 8
2. Select hose style = MDS6
3. Select the fitting style for the first end = 03
4. Select the fitting style for the second end = 06
5. Select fitting material = S6
6. Select A for armor = A (Leave blank for no armor)
7. Select O for oxygen clean = O (Leave blank for no oxygen clean)
8. Select length in inches = 144

Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

Cryogenic Liquid – Ultimate Liquid Cylinder Hose



Flexible Components brand liquid cylinder hose is considered the highest quality liquid cylinder hose on the market. It effectively transfers cryogenic liquids for bulk transfilling, home care, food, biological preservation, laboratories, electronics and more. The liquid cylinder hose is perfect for filling and dispensing from home healthcare vans.



Features & Benefits

- Ultra flexible.
- Easy connection, coils up for storage, no broken wires.
- Full armor casing protects hose from abrasion.
- Design protects flare end from damage.
- All stainless steel construction for longer life, faster cool-down and high durability.
- Low profile corrugations for faster filling, lower pressure drop and less product loss.
- Hoses and adapters can be provided cleaned, capped and bagged for oxygen service.
- Available in 304 SS (Style CF04) or 316 SS (Style CF16).

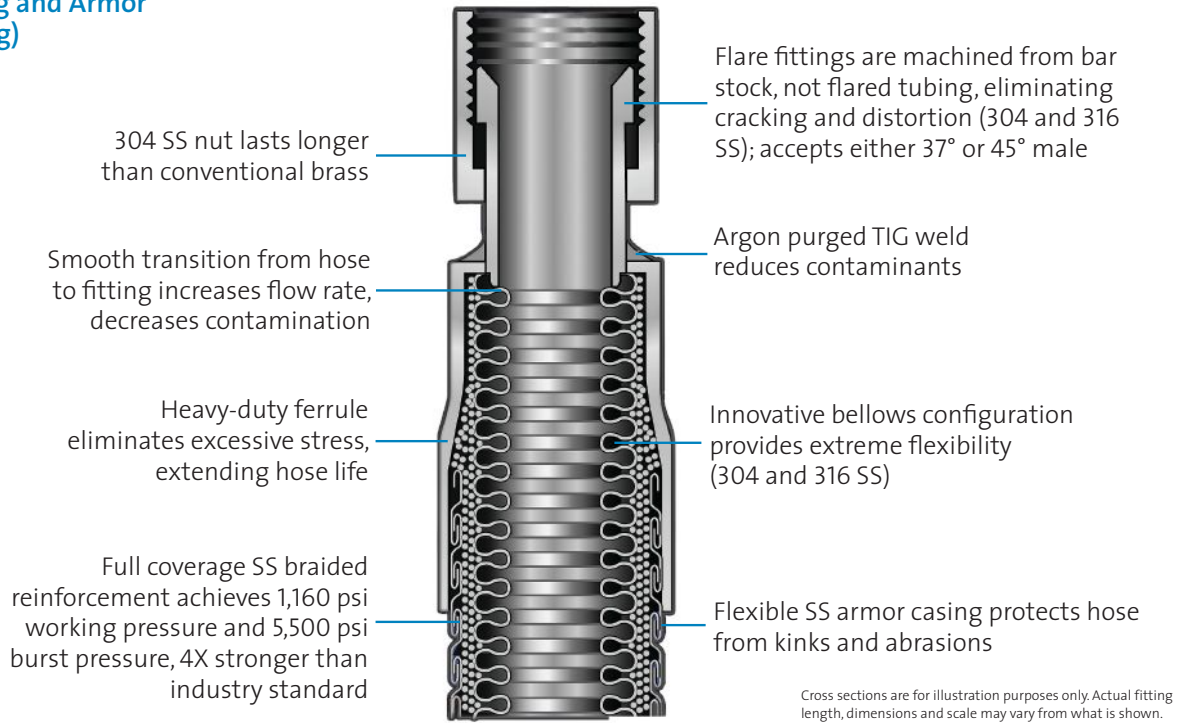


Accessories

- **Safety Tee Assembly** – Prevents over-pressurization of hose assembly due to trapped liquid. Complete with 235 psi relief valve. For hose use only; not intended for tanks or other equipment.
- **90° Elbow Extension** – Connects to liquid cylinder. Prevents cylinder abrasion and overbending of hose.
- **T Handle Spinner** – Allows quick and easy connection of hose to liquid cylinder without the use of tools.
- **Phase Separator** – Provides safe, efficient filling of dewars from liquid cylinders (3/8" female NPT).
- **Adapter** – Allows easy connection of CGA 295, 440 and all female flares to male or female NPT.

Cryogenic Liquid – Ultimate Liquid Cylinder Hose Cross Section & Specifications

1/2" Style CF04 (shown with Flare Fitting and Armor Casing)



Ultimate Liquid Cylinder Hose Specifications – Part 1 of 2

Style Prefix Available	Nominal Size I.D.		Size O.D. Without Armor		Size O.D. With Armor		Maximum Working Pressure		Minimum Burst Pressure	
	in.	mm	in.	mm	in.	mm	psi	bar	psi	bar
CF04	1/2	12.70	0.79	20.07	0.96	24.38	1,160	80.00	5,500	379.30
CF16	1/2	12.70	0.79	20.07	0.96	24.38	1,160	80.00	5,500	379.30
CF04	3/4	19.05	1.18	29.97	1.47	37.34	725	50.00	3,509	241.99
CF16	3/4	19.05	1.18	29.97	1.47	37.34	725	50.00	3,509	241.99
CF04	1	25.40	1.43	36.32	1.67	42.42	580	40.00	2,755	190.00
CF16	1	25.40	1.43	36.32	1.67	42.42	580	40.00	2,755	190.00

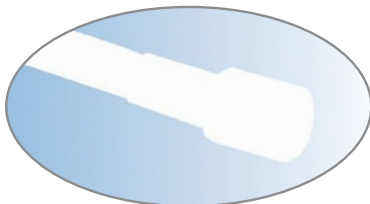
Ultimate Liquid Cylinder Hose Specifications – Part 2 of 2

Style Prefix Available	Minimum Bend Radius Without Armor		Minimum Bend Radius With Armor		Weight Without Armor		Weight With Armor		Temperature Range	
	in.	mm	in.	mm	lb./ft.	kg/m	lb./ft.	kg/m	°F	°C
CF04	1.3	33.02	3.0	76.20	0.24	0.36	0.64	0.95	Cryo to 1500	Cryo to 815
CF16	1.3	33.02	3.0	76.20	0.24	0.36	0.64	0.95	Cryo to 1500	Cryo to 815
CF04	2.1	53.34	6.0	152.40	0.36	0.54	0.98	1.46	Cryo to 1500	Cryo to 815
CF16	2.1	53.34	6.0	152.40	0.36	0.54	0.98	1.46	Cryo to 1500	Cryo to 815
CF04	2.5	63.50	6.5	165.10	0.44	0.65	1.24	1.85	Cryo to 1500	Cryo to 815
CF16	2.5	63.50	6.5	165.10	0.44	0.65	1.24	1.85	Cryo to 1500	Cryo to 815

CF16 – 316 SS inner core
CF04 – 304 SS inner core

All of the above hoses are available with double braid for increased working pressure.

Cryogenic Liquid – Ultimate Liquid Cylinder Hose End Fittings



Female Flare 37° or 45° – Style 02

Sizes: 1/4"-1"

For hose styles: CF04, CF16

Available in: S4, S6

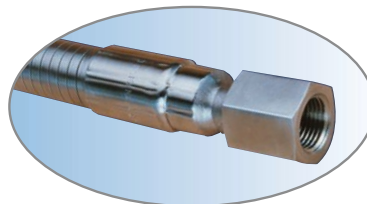


Hex Male NPT – Style 03

Sizes: 1/4"-1"

For hose styles: CF04, CF16

Available in: S4, S6

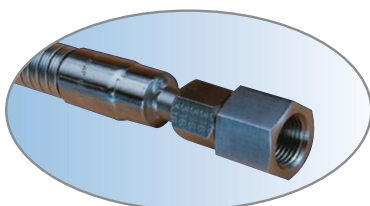


Hex Female NPT – Style 06

Sizes: 1/4"-1"

For hose styles: CF04, CF16

Available in: S4, S6

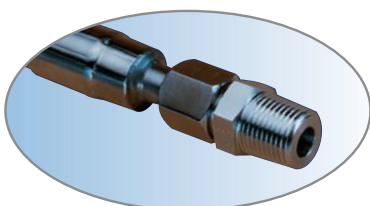


Female Flare with Male NPT Adapter – Style 07

Sizes: 1/4"-1"

For hose styles: CF04, CF16

Available in: S4

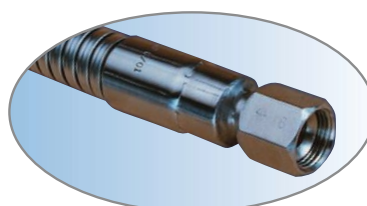


Female Flare with Male NPT Adapter – Style 08

Sizes: 1/4"-1"

For hose styles: CF04, CF16

Available in: S4

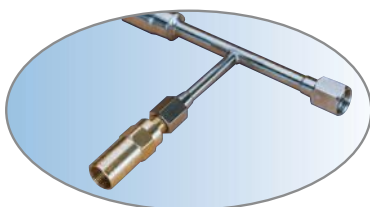


CGA 295 1/2", 45° Flare Female – Style 21

Size: 1/2" only

For hose styles: CF04, CF16

Available in: S4, S6



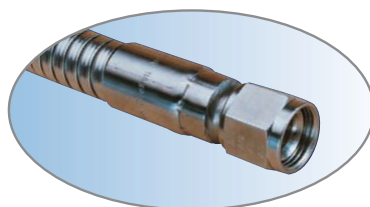
CGA 295 1/2", 45° Flare Female with Safety Relief – Style 21T

Size: 1/2" only

For hose styles: CF04, CF16

Available in: S4, S6

Brass relief

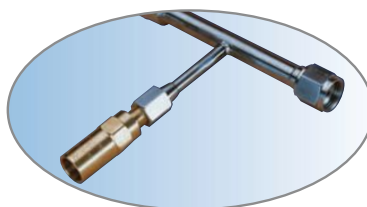


CGA 440, 5/8" 45° Flare Female – Style 22

Size: 5/8" only

For hose styles: CF04, CF16

Available in: S4, S6



CGA 440 with Safety Relief – Style 22T

Size: 5/8" only

For hose styles: CF04, CF16

Available in: S4, S6

Brass relief

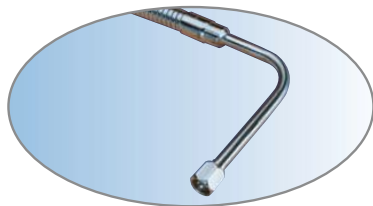
Fitting material designator:

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

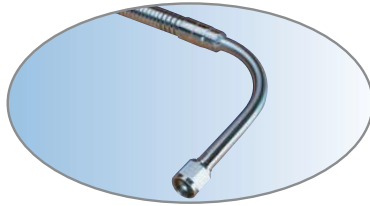
Step-up and step-down fittings available.

Cryogenic Liquid – Ultimate Liquid Cylinder Hose End Fittings & Accessories



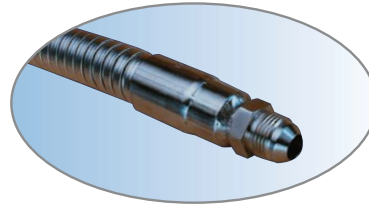
CGA 295 Elbow 1/2", 45° Flare – Style 26

Size: 1/2" only
For hose styles: CF04, CF16
Available in: S4, S6



CGA 440, Elbow 5/8", 45° Flare – Style 27

Size: 5/8" only
For hose styles: CF04, CF16
Available in: S4, S6



Male Flare 45° – Style 37

Sizes: 1/4"-1"
For hose styles: CF04, CF16
Available in: S4, S6

Accessories

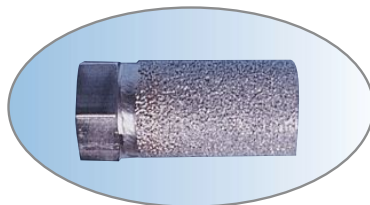


Safety Tees – 8T-295

CGA 295 male x female with 235
psi relief valve

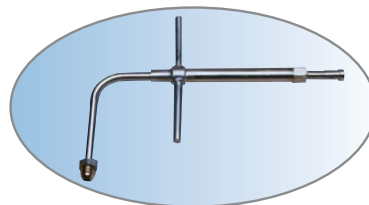
10T-440

CGA 440 male x female with 235
psi relief valve. Other end fitting
combinations available. Consult
factory for details.
Available in: S4 with brass relief



Phase Separator – 7706PSS00

Equipped with 3/8" female NPT
Available in: S4

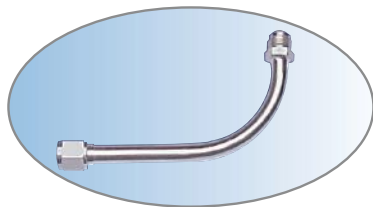


T Handle Spinners – 8L-295T

CGA 295 male x female with built-
in elbow

10L-440T

CGA 440 male x female with
built-in elbow. Other end fitting
combinations available. Consult
factory for details.
Available in: S4

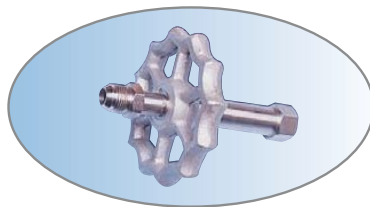


90° Elbow Extension – 8L-295

CGA 295 male x female

10L-440

CGA 440 male x female. Other
end fitting combinations
available. Consult factory for details.
Available in: S4



Liquid Cylinder Handwheels – 770821S4H

1/2" CGA 295 handwheel swivel
adapter with male SAE
Available in: S4

771022S4HO

5/8" CGA 440 handwheel swivel
adapter with male SAE
Available in: S4

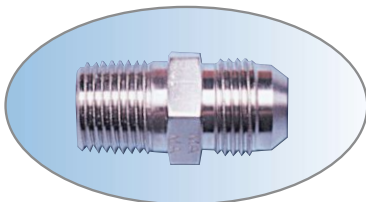
Fitting material designator:

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

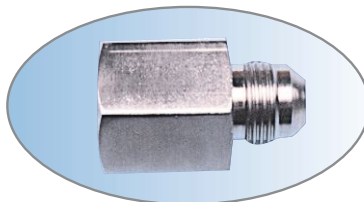
Step-up and step-down fittings available.

Cryogenic Liquid – Ultimate Liquid Cylinder Hose Adapters



Male Flare x Male NPT Adapters

- 4448-8BB0** – Male 295 x 1/4" Male NPT (Brass)
- 4448-8B60** – Male 295 x 1/4" Male NPT (SS)
- 4448-8CB0** – Male 295 x 3/8" Male NPT (Brass)
- 4448-8C60** – Male 295 x 3/8" Male NPT (SS)
- 4448-8DB0** – Male 295 x 1/2" Male NPT (Brass)
- 4448-8D60** – Male 295 x 1/2" Male NPT (SS)
- 4448-10BB** – Male 440 x 1/4" Male NPT (Brass)
- 4448-10CB** – Male 440 x 3/8" Male NPT (Brass)
- 4448-10DB** – Male 440 x 1/2" Male NPT (Brass)
- 4448-10D6** – Male 440 x 1/2" Male NPT (SS)
- 4448-12D6** – 3/4" Male Flare x 1/2" Male NPT (SS)
- 4448-12E6** – 3/4" Male Flare x 3/4" Male NPT (SS)
- 4448-16E6** – 1" Male Flare x 3/4" Male NPT (SS)
- 4448-16H6** – 1" Male Flare x 1" Male NPT (SS)
- 4448-16J6** – 1" Male Flare x 1-1/2" Male NPT (SS)



Male Flare x Female NPT Adapters

- 4446-8BB0** – Male 295 x 1/4" Female NPT (Brass)
- 4446-8B60** – Male 295 x 1/4" Female NPT (SS)
- 4446-8CB0** – Male 295 x 3/8" Female NPT (Brass)
- 4446-8C60** – Male 295 x 3/8" Female NPT (SS)
- 4446-8DB0** – Male 295 x 1/2" Female NPT (Brass)
- 4446-8D60** – Male 295 x 1/2" Female NPT (SS)
- 4446-10CB** – Male 440 x 3/8" Female NPT (Brass)
- 4446-10DB** – Male 440 x 1/2" Female NPT (Brass)
- 4446-10D6** – Male 440 x 1/2" Female NPT (SS)
- 4446-10EB** – Male 440 x 3/4" Female NPT (Brass)
- 4446-12E6** – 3/4" Male Flare x 3/4" Male NPT (SS)
- 4446-16H6** – 1" Male Flare x 1" Female NPT (SS)



Female Flare x Male Flare Adapters

- 77082138S4** – CGA 295 Male x Female (SS)
- 77102238S40** – CGA 440 Male x Female (SS)
- 77102238UUS40** – 1" Male Flare x 440 Female (SS)

Many other flare x NPT and flare x flare adapters available. Please consult factory for details.

Cryogenic Liquid – How to Order Ultimate Liquid Cylinder Hose

How to Order Ultimate Liquid Cylinder Hose

Part Number Example: 8CF0403D27S4AO-120"

Description: 1/2" I.D. 304 SS hose with 3/8" Male NPT one end and a CGA 440 elbow on the other end, armor casing full length, cleaned for oxygen service, 120" overall length.

8	CF04	03	D	27		S4	A	O	120
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up/Down From Hose Size	Fitting Style 2nd End	2nd Fitting Step Up/Down From Hose Size	Fitting Material – Both Ends	Armor Casing	Oxygen Clean	Length (Inches)
8 (1/2)	CF04	02	D = Step Down	02	D = Step Down	S4 = 304 SS	A	O	
12 (3/4)	CF16	03	DD = Step Down x2	03	DD = Step Down x2	S6 = 316 SS			
16 (1)		06	U = Step Up	06	U = Step Up				
		07	UU = Step Up x2	07	UU = Step Up x2				
		08		08					
		21		21					
		21T		21T					
		22		22					
		22T		22T					
		26		26					
		27		27					
		37		37					

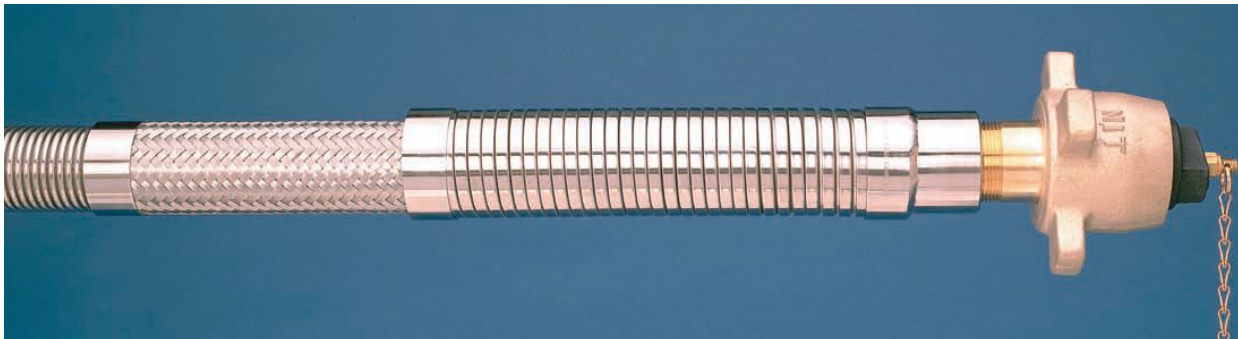
Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 8
2. Select hose style = CF04
3. Select the fitting style for the first end = 03
4. Add the step up/down letter for off-size fitting from the hose size for the first fitting = D
(Leave blank if fitting size is same as hose size)
5. Select the fitting style for the second end = 27
6. Add the step up/down letter for off-size fitting from the hose size for the second fitting = None
(Leave blank if fitting size is same as hose size)
7. Select the fitting material = S4
8. Select A for armor = A
(Leave blank for no armor)
9. Select O for oxygen clean = O
(Leave blank for no oxygen clean)
10. Select length in inches = 120

Cryogenic Liquid – Bulk Tank & Truck Hose



Flexible Components brand bulk tank and truck hose is specifically designed for the extreme requirements of bulk loading and unloading. Heavy-duty construction delivers longer hose life, enhanced operator safety and quicker fill times. The industry choice, Flexible Components brand bulk liquid transfer hose has earned a reputation for reliability.

Features & Benefits

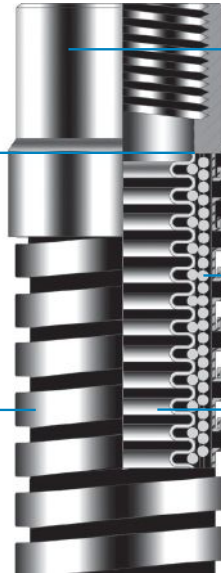
- Full coverage, large diameter wire braid for maximum abrasion resistance.
- Heavy gauge braid provides a higher pressure rating, a greater safety factor and better protection to the inner core.
- End fittings exceed ANSI ratings, eliminate thread sealing problems and will not warp.
- High standard welding procedure allows for a smooth transition from corrugation to fitting, reducing product entrapment and pressure loss.
- Casing weld ring prevents armor casing from pulling away from the fitting and serves as an identification ring that provides the date of manufacture, MAWP and a unique identification mark.
- Closely pitched, omega shaped convolutions provide maximum flexibility and longer hose life.
- Shallow convolution height minimizes pressure drop inside the hose.
- Heavy-duty armor cuffs prevent strain and overbending at hose ends.
- Armor cuffs support the weight of the hose, remove stress from the end fittings and inner hose weld, and provide a safe handling point for the operator.
- 18" length standard. Custom or full-length armor casing optional.

Cryogenic Liquid – Bulk Tank & Truck Hose Cross Section & Specifications

1-1/2" Style
24MSS4 (shown
with SS cuff and
Female NPT)

Smooth transition
from end fitting
to hose – no sharp
edges, improved
flow rates, reduced
entrapment areas

Fully interlocked armor casing
available as 18" cuff or full length



Heavy-duty 304 or 316 SS end fitting,
machined from bar stock, no pipe
coupling used

316L SS TIG weld, argon purged

Single layer of 304 SS heavy-
gauge full coverage braid

304 SS inner core – close pitch for high
flexibility and improved flow rates

Cross sections are for illustration purposes only. Actual fitting
length, dimensions and scale may vary from what is shown.

Bulk Tank & Truck Hose Specifications – Part 1 of 2

Hose Style	Nominal Size I.D.		Size O.D. Without Armor		Size O.D. With Armor		Maximum Working Pressure		Minimum Burst Pressure	
	in.	mm	in.	mm	in.	mm	psi	bar	psi	bar
MSS4	1-1/2	38.10	2.14	54.36	2.52	64.01	465	32.07	2,465	170.00
MSS6	1-1/2	38.10	2.14	54.36	2.52	64.01	465	32.07	2,465	170.00
MSS4	2	50.80	2.65	67.31	3.16	80.26	465	32.07	2,436	168.00
MSS6	2	50.80	2.65	67.31	3.16	80.26	465	32.07	2,436	168.00
MSS4	2-1/2	63.50	3.45	87.63	3.81	96.77	400	27.59	1,600	110.34
MSS6	2-1/2	63.50	3.45	87.63	3.81	96.77	400	27.59	1,600	110.34
MSS4	3	76.20	4.01	101.85	4.17	105.92	285	19.66	1,150	79.31
MSS6	3	76.20	4.01	101.85	4.17	105.92	285	19.66	1,150	79.31
MSS4	4	101.60	5.03	127.76	N/A	N/A	250	17.24	1,000	68.96
MSS6	4	101.60	5.03	127.76	N/A	N/A	250	17.24	1,000	68.96

Bulk Tank & Truck Hose Specifications – Part 2 of 2

Hose Style	Minimum Bend Radius Without Armor		Minimum Bend Radius With Armor		Weight Without Armor		Weight With Armor		Temperature Range	
	in.	mm	in.	mm	lb./ft.	kg/m	lb./ft.	kg/m	°F	°C
MSS4	3.9	99.06	12.8	325.12	0.88	1.31	2.49	3.71	Cryo to 1500	Cryo to 815
MSS6	3.9	99.06	12.8	325.12	0.88	1.31	2.32	3.45	Cryo to 1500	Cryo to 815
MSS4	4.7	119.38	14.1	358.14	1.35	2.01	4.15	6.18	Cryo to 1500	Cryo to 815
MSS6	4.7	119.38	14.1	358.14	1.35	2.01	3.33	4.96	Cryo to 1500	Cryo to 815
MSS4	5.0	127.00	16.5	419.10	2.09	3.11	4.03	6.00	Cryo to 1500	Cryo to 815
MSS6	5.0	127.00	16.5	419.10	2.09	3.11	4.03	6.00	Cryo to 1500	Cryo to 815
MSS4	7.5	190.50	20.0	508.00	2.39	3.56	4.69	6.98	Cryo to 1500	Cryo to 815
MSS6	7.5	190.50	20.0	508.00	2.39	3.56	4.69	6.98	Cryo to 1500	Cryo to 815
MSS4	10.0	254.00	N/A	N/A	3.14	4.67	N/A	N/A	Cryo to 1500	Cryo to 815
MSS6	10.0	254.00	N/A	N/A	3.14	4.67	N/A	N/A	Cryo to 1500	Cryo to 815

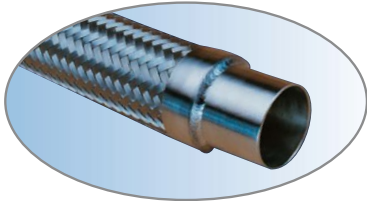
MSS4 – 304 SS inner core

MSS6 – 316 SS inner core

All of the above hoses are available with double braid for increased working pressure.

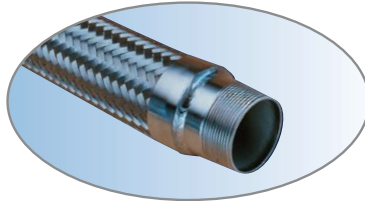
Cryogenic Liquid – Bulk Tank & Truck Hose End Fittings & Hose Headpieces

End Fittings



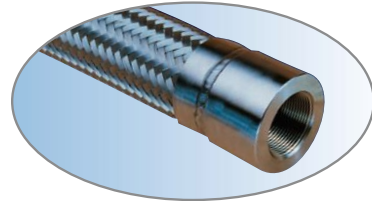
Pipe Butt Weld – Style 01

Schedule: 5, 10, 40, 80
 Sizes: 1/4" - 8"
 For hose styles: MSS4, MSS6
 Standard length 2". Specify other lengths. Specify schedule.
 Available in: S4, S6



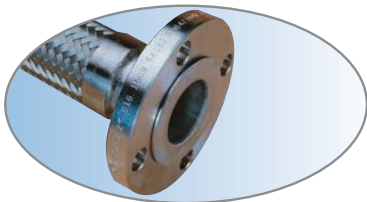
Plain Male NPT – Style 04

Sizes: 1/2" - 6"
 For hose styles: MSS4, MSS6
 Available in: S4, S6



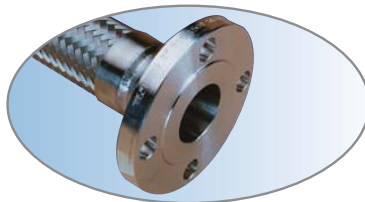
Plain Female NPT – Style 05

Sizes: 1/2" - 6"
 For hose styles: MSS4, MSS6
 Available in: S4, S6



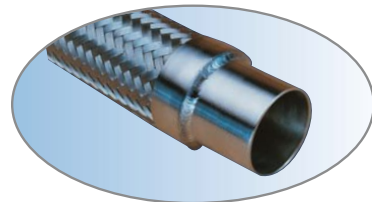
Lap Joint Flange – Style 12

Sizes: 1/2" - 8"
 For hose styles: MSS4, MSS6
 Available in: S4, S6, C



Weld Neck Flange – Style 14

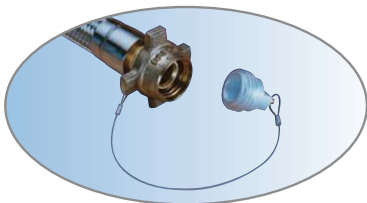
Sizes: 1/2" - 8"
 For hose styles: MSS4, MSS6
 Available in: S4, S6



Tube Butt Weld – Style 41

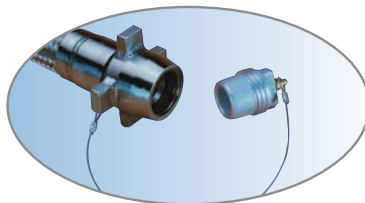
Sizes: 1/4" - 8"
 For hose styles: MSS4, MSS6
 Standard length 2". Specify other lengths. Available in: S4, S6

Hose Headpieces



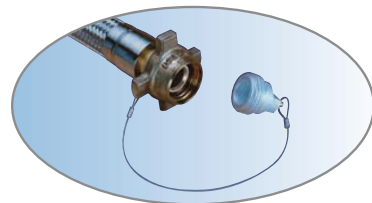
CGA Head, Brass Head, Brass Nut – Style ARB, STYLE NIB, STYLE OXB*

All equipped with dustcap
 CGA head sizes available:
 Argon: 1-1/2", 2-1/2"
 Nitrogen: 1-1/2", 2-1/2"
 Oxygen: 1-1/2", 2", 3"



CGA Head, SS Head, SS Nut – Style ARS4, STYLE NIS4, STYLE OXS4*

All equipped with dustcap
 CGA head sizes available:
 Argon: 1-1/2", 2-1/2"
 Nitrogen: 1-1/2", 2-1/2"
 Oxygen: 1-1/2", 2", 3"



CGA Head, SS Head, Brass Nut – Style ARSB, STYLE NISB, STYLE OXSB*

All equipped with dustcap
 CGA head sizes available:
 Argon: 1-1/2", 2-1/2"
 Nitrogen: 1-1/2", 2-1/2"
 Oxygen: 1-1/2", 2", 3"

*All headpieces are threaded style. Back welding is available on SS heads to prevent removal in the field. Butt weld style heads are available to eliminate any threaded connection. Please consult factory for more details.

Fitting material designator:

S4 = 304 Stainless Steel
 S6 = 316 Stainless Steel
 C = Carbon Steel

Step-up and step-down fittings available.

Cryogenic Liquid – How to Order Bulk Tank & Truck Hose

How to Order Bulk Tank & Truck Hose Without CGA Heads

Part Number Example: 32MSS405D05DS4CO-192"

Description: 2" I.D. 304 SS hose with 1-1/2" female NPT each end and 18" armor casing cuffs each end, cleaned for oxygen service, 192" overall length.


32	MSS4	05	D	05	D	S4	C	O	192
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up/Down from Hose Size	Fitting Style 2nd End	2nd Fitting Step Up/Down from Hose Size	Fitting Material – Both Ends	Armor	Oxygen Clean	Length (Inches)
24 (1-1/2)	MSS4	01	D = Step Down	01	D = Step Down	S4 = 304 SS	A = Armor casing	O	
32 (2)	MSS6	04	DD = Step Down x2	04	DD = Step Down x2	S6 = 316 SS	C = 18" cuffs		
40 (2-1/2)		05	U = Step Up	05	U = Step Up				
48 (3)		12	UU = Step Up x2	12	UU = Step Up x2				
64 (4)		14		14					
		41		41					

How to Order Bulk Tank & Truck Hose With CGA Heads

Part Number Example: 32MSS4OXDOXDS4SBCO-192"

Description: 2" I.D. 304 SS hose with 1-1/2" SS oxygen head and 1-1/2" brass oxygen nut each end and 18" armor casing cuffs each end, cleaned for oxygen service, 192" overall length.

CGA headpieces are threaded to Flexible Components heavy-duty female NPT fittings. The female NPT fittings are permanently attached to the hose. Back welding to permanently attach the CGA fitting to the female NPT fitting is available.

32	MSS4	OX	D	OX	D	S4	SB	C	O	192
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up/Down From Hose Size	Fitting Style 2nd End	2nd Fitting Step Up/Down from Hose Size	Fitting Material – Both Ends	CGA Insert and Nut Material	Armor	Oxygen Clean	Length (Inches) 
24 (1-1/2)	MSS4	OX	D = Step Down	OX	D = Step Down	S4 = 304 SS	B	A = Armor casing	O	
32 (2)	MSS6	NI	DD = Step Down x2	NI	DD = Step Down x2	S6 = 316 SS	SB	C = 18" cuffs		
40 (2-1/2)		AR	U = Step Up	AR	U = Step Up		S			
48 (3)			UU = Step Up x2		UU = Step Up x2					
64 (4)										

Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

- Select hose size in 16ths of an inch = 32
- Select hose style = MSS4
- Select the fitting style for the first end = 05 (OX for part number with CGA heads)
- Add the step up/down letter for off-size fitting from the hose size for the first fitting = D (Leave blank if fitting size is same as hose size)
- Select the fitting style for the second end = 05 (OX for part number with CGA heads)
- Add the step up/down letter for off-size fitting from the hose size for the second fitting = D (Leave blank if fitting size is same as hose size)
- Select the fitting material = S4
- Select the head/nut material = SB (Only for part number with CGA heads)
- Select A for armor, C for 18" cuffs = C (Leave blank for no armor or cuffs)
- Select O for oxygen clean = O (Leave blank for no oxygen clean)
- Select length in inches = 192

Important:

Overall length is measured from end of permanently attached fittings and does not include the added length of the CGA nut and headpiece.

Cryogenic Liquid – Cryogenic Pump & Vaporizer Hose Specifications

Pump removal and installation is easy with Flexible Components flanged end sections of hose, available for any size centrifugal pump inlet or outlet for trailers and bulk stations.

Features & Benefits

- Help dampen pump vibrations.
- Reduce piping stress.
- Isolate vibration.
- Wide variety of end connections (flanged, butt weld or threaded) for use in any application where motion can cause bending or cracking of piping or welds.
- Custom fabrication of any diameter or length to meet your specifications.
- Full braid coverage for our high quality and extremely flexible hose.
- Heavy-duty end fittings for longer hose and component life.



Cryogenic Pump And Vaporizer Hose Specifications – Part 1 of 2

Hose Style	Number Of Braids	Nominal Size I.D.		Size O.D. Without Armor		Size O.D. With Armor		Maximum Working Pressure		Minimum Burst Pressure		Minimum Bend Radius Without Armor	
		in.	mm	in.	mm	in.	mm	psi	bar	psi	bar	in.	mm
CF16	1	1/4	6.35	0.45	11.43	0.63	16.00	2,030	140.00	11,165	769.98	0.8	20.32
MDS6	2	1/4	6.35	0.54	13.72	0.83	21.08	4,000	275.86	16,000	1103.40	3.0	76.20
MDM	2	1/4	6.35	0.54	13.72	0.83	21.08	3,000	206.89	12,000	827.57	3.0	76.20
CF16	1	3/8	9.53	0.70	17.78	0.88	22.35	1,450	100.00	8,000	551.71	1.1	27.94
CF04	1	1/2	12.70	0.79	20.07	0.96	24.38	1,160	80.00	5,500	379.30	1.3	33.02
CF16	1	1/2	12.70	0.79	20.07	0.96	24.38	1,160	80.00	5,500	379.30	1.3	33.02
MDS6	2	1/2	12.70	0.86	21.84	0.97	24.64	3,500	241.37	14,000	965.49	5.0	127.00
MDM	2	1/2	12.70	0.94	23.88	1.04	26.42	2,500	172.41	10,000	689.64	5.0	127.00
CF16	1	3/4	19.05	1.18	29.97	1.47	37.34	725	50.00	3,509	241.99	2.1	53.34
CF04	1	3/4	19.05	1.18	29.97	1.47	37.34	725	50.00	3,509	241.99	2.1	53.34
MSS4	1	1	25.40	1.43	36.32	1.67	42.42	580	40.00	2,755	190.00	2.5	63.50
MSS6	1	1	25.40	1.43	36.32	1.67	42.42	580	40.00	2,755	190.00	2.5	63.50
MSS4	1	1-1/4	31.75	1.79	45.47	2.19	55.63	580	40.00	2,973	205.03	3.1	78.74
MSS6	1	1-1/4	31.75	1.79	45.47	2.19	55.63	580	40.00	2,973	205.03	3.1	78.74
MSS4	1	1-1/2	38.10	2.14	54.36	2.52	64.01	465	32.07	2,465	170.00	3.9	99.06
MSS6	1	1-1/2	38.10	2.14	54.36	2.52	64.01	465	32.07	2,465	170.00	3.9	99.06
MSS4	1	2	50.80	2.65	67.31	3.16	80.26	465	32.07	2,436	168.00	4.7	119.38
MSS6	1	2	50.80	2.65	67.31	3.16	80.26	465	32.07	2,436	168.00	4.7	119.38
MSS4	1	2-1/2	63.50	3.45	87.63	3.81	96.77	400	27.59	1,600	110.34	5.0	127.00
MSS6	1	2-1/2	63.50	3.45	87.63	3.81	96.77	400	27.59	1,600	110.34	5.0	127.00
MSS4	1	3	76.20	4.01	101.85	4.17	105.92	285	19.66	1,150	79.31	7.5	190.50
MSS6	1	3	76.20	4.01	101.85	4.17	105.92	285	19.66	1,150	79.31	7.5	190.50
MSS4	1	4	101.60	5.03	127.76	N/A	N/A	250	17.24	1,000	68.96	10.0	254.00
MSS6	1	4	101.60	5.03	127.76	N/A	N/A	250	17.24	1,000	68.96	10.0	254.00
MSS4	1	6	152.40	7.20	182.88	N/A	N/A	275*	18.97	1,100*	75.86	15.0	381.00
MSS6	1	6	152.40	7.20	182.88	N/A	N/A	275*	18.97	1,100*	75.86	15.0	381.00
MSS4	1	8	203.20	9.44	239.78	N/A	N/A	212*	14.62	850*	58.62	20.0	508.00
MSS6	1	8	203.20	9.44	239.78	N/A	N/A	212*	14.62	850*	58.62	20.0	508.00
MSS4	1	10	254.00	11.49	291.85	N/A	N/A	175*	12.07	700*	48.28	25.0	635.00
MSS6	1	10	254.00	11.49	291.85	N/A	N/A	175*	12.07	700*	48.28	25.0	635.00

CF16 – 316 SS inner core, CF04 – 304 SS inner core, MSS6 – 316 SS inner core, MSS4 – 304 SS inner core, MDS6 – 316 SS inner core with 304 SS double braid, MDM – Monel® inner core with Monel® double braid
Working and burst pressure ratings at ambient 70°F (21°C).

*Indicates braided braid. All of the above hoses are available with double braid for increased working pressure.

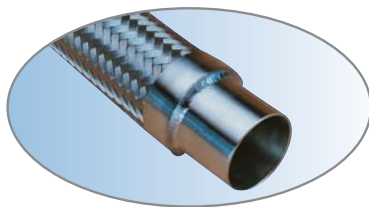
Cryogenic Liquid – Cryogenic Pump & Vaporizer Hose Specifications

Cryogenic Pump And Vaporizer Hose Specifications – Part 2 of 2

Hose Style	Number Of Braids	Nominal Size I.D.		Minimum Bend Radius With Armor		Weight Without Armor		Weight With Armor		Temperature Range	
		in.	mm	in.	mm	lb./ft.	kg/m	lb./ft.	kg/m	°F	°C
CF16	1	1/4	6.35	1.8	45.72	0.12	0.18	0.28	0.42	Cryo to 1500	Cryo to 815
MDS6	2	1/4	6.35	3.2	81.28	0.30	0.45	0.53	0.79	Cryo to 1500	Cryo to 815
MDM	2	1/4	6.35	3.2	81.28	0.33	0.49	0.53	0.79	Cryo to 1500	Cryo to 815
CF16	1	3/8	9.53	3.0	76.20	0.23	0.34	0.46	0.68	Cryo to 1500	Cryo to 815
CF04	1	1/2	12.70	3.0	76.20	0.24	0.36	0.64	0.95	Cryo to 1500	Cryo to 815
CF16	1	1/2	12.70	3.0	76.20	0.24	0.36	0.64	0.95	Cryo to 1500	Cryo to 815
MDS6	2	1/2	12.70	5.6	142.24	0.64	0.95	0.97	1.44	Cryo to 1500	Cryo to 815
MDM	2	1/2	12.70	5.6	142.24	0.67	1.00	1.00	1.49	Cryo to 1500	Cryo to 815
CF16	1	3/4	19.05	6.0	152.40	0.36	0.54	0.98	1.46	Cryo to 1500	Cryo to 815
CF04	1	3/4	19.05	6.0	152.40	0.36	0.54	0.98	1.46	Cryo to 1500	Cryo to 815
MSS4	1	1	25.40	6.5	165.10	0.44	0.65	1.24	1.85	Cryo to 1500	Cryo to 815
MSS6	1	1	25.40	6.5	165.10	0.44	0.65	1.24	1.85	Cryo to 1500	Cryo to 815
MSS4	1	1-1/4	31.75	9.0	228.60	0.68	1.01	1.89	2.81	Cryo to 1500	Cryo to 815
MSS6	1	1-1/4	31.75	9.0	228.60	0.68	1.01	1.89	2.81	Cryo to 1500	Cryo to 815
MSS4	1	1-1/2	38.10	12.8	325.12	0.88	1.31	2.49	3.71	Cryo to 1500	Cryo to 815
MSS6	1	1-1/2	38.10	12.8	325.12	0.88	1.31	2.32	3.45	Cryo to 1500	Cryo to 815
MSS4	1	2	50.80	14.1	358.14	1.35	2.01	4.15	6.18	Cryo to 1500	Cryo to 815
MSS6	1	2	50.80	14.1	358.14	1.35	2.01	3.33	4.96	Cryo to 1500	Cryo to 815
MSS4	1	2-1/2	63.50	16.5	419.10	2.09	3.11	4.03	6.00	Cryo to 1500	Cryo to 815
MSS6	1	2-1/2	63.50	16.5	419.10	2.09	3.11	4.03	6.00	Cryo to 1500	Cryo to 815
MSS4	1	3	76.20	20.0	508.00	2.39	3.56	4.69	6.98	Cryo to 1500	Cryo to 815
MSS6	1	3	76.20	20.0	508.00	2.39	3.56	4.69	6.98	Cryo to 1500	Cryo to 815
MSS4	1	4	101.60	N/A	N/A	3.14	4.67	N/A	N/A	Cryo to 1500	Cryo to 815
MSS6	1	4	101.60	N/A	N/A	3.14	4.67	N/A	N/A	Cryo to 1500	Cryo to 815
MSS4	1	6	152.40	N/A	N/A	6.04	8.99	N/A	N/A	Cryo to 1500	Cryo to 815
MSS6	1	6	152.40	N/A	N/A	6.04	8.99	N/A	N/A	Cryo to 1500	Cryo to 815
MSS4	1	8	203.20	N/A	N/A	7.66	11.40	N/A	N/A	Cryo to 1500	Cryo to 815
MSS6	1	8	203.20	N/A	N/A	7.66	11.40	N/A	N/A	Cryo to 1500	Cryo to 815
MSS4	1	10	254.00	N/A	N/A	12.65	18.83	N/A	N/A	Cryo to 1500	Cryo to 815
MSS6	1	10	254.00	N/A	N/A	12.65	18.83	N/A	N/A	Cryo to 1500	Cryo to 815

CF16 – 316 SS inner core, CF04 – 304 SS inner core, MSS6 – 316 SS inner core, MSS4 – 304 SS inner core, MDS6 – 316 SS inner core with 304 SS double braid, MDM – Monel® inner core with Monel® double braid

Cryogenic Liquid – Cryogenic Pump & Vaporizer Hose End Fittings



Pipe Butt Weld – Style 01

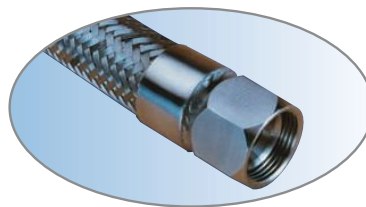
Schedule: 5, 10, 40, 80

Sizes: 1/4"-10"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Standard length 2". Specify other lengths. Specify schedule.

Available in: S4, S6, M

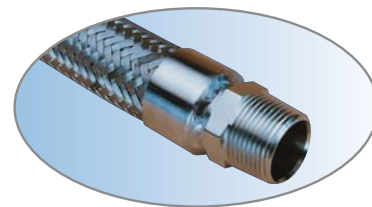


Female JIC – Style 02

Sizes: 1/4"-2"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6, M, B



Hex Male NPT – Style 03

Sizes: 1/4"-1"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6, M

Fitting material designator:

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

B = Brass

M = Monel®

Step-up and step-down fittings available.

Cryogenic Liquid – Cryogenic Pump & Vaporizer Hose End Fittings

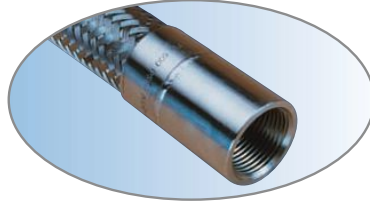


Plain Male NPT – Style 04

Sizes: 1/2"-4"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6, M

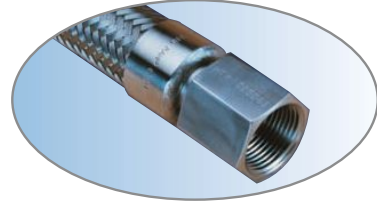


Plain Female NPT – Style 05

Sizes: 1/2"-4"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6, M

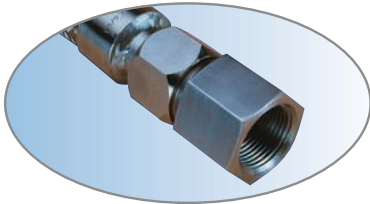


Hex Female NPT – Style 06

Sizes: 1/4"-1"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6, M

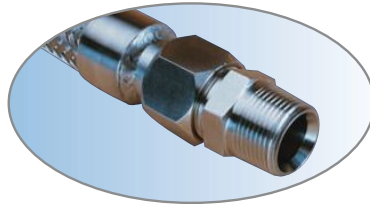


Female JIC x Female NPT Adapter – Style 07

Sizes: 1/4"-1/2"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6

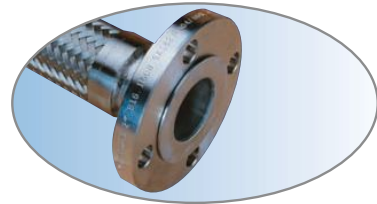


Female JIC x Male NPT Adapter – Style 08

Sizes: 1/4"-1/2"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6

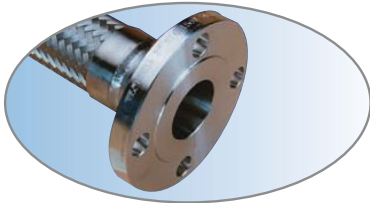


Lap Joint Flange – Style 12

Sizes: 1/2"-10"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: C, S4, S6

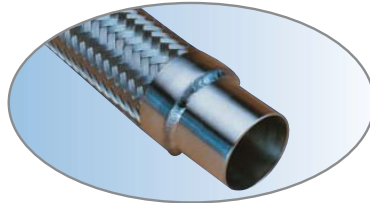


Weld Neck Flange – Style 14

Sizes: 1/2"-8"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Available in: S4, S6



Tube Butt Weld – Style 41

Sizes: 1/4"-4"

For hose styles: CF04, CF16, MSS4, MSS6, MDS6, MDM

Standard length 2". Specify other lengths.

Available in: S4, S6, M

Fitting material designator:

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

M = Monel®

C = Carbon Steel

Step-up and step-down fittings available.

Cryogenic Liquid – How to Order Cryogenic Pump & Vaporizer Hose

How to Order Cryogenic Pump & Vaporizer Hose

Part Number Example: 16MSS40112S4AOSCH10-18"

Description: 1" I.D. 304 SS hose with 1" schedule 10 pipe butt weld one end and a 304 SS lap joint flange on the other end, full length armor casing, cleaned for oxygen, 18" overall length.

16	MSS4	01		12		S4	A	O	SCH10	18
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up/Down From Hose Size	Fitting Style 2nd End	2nd Fitting Step Up/Down From Hose Size	Fitting Material – Both Ends	Armor Casing	Oxygen Clean	Pipe Butt Weld Schedule	Length (Inches)
4 (1/4)	CF04	01	D = Step Down	01	D = Step Down	S4 = 304 SS	A	O	SCH5	
6 (3/8)	CF16	02	DD = Step Down x2	02	DD = Step Down x2	S6 = 316 SS			SCH10	
8 (1/2)	MSS4	03	U = Step Up	03	U = Step Up	B = Brass			SCH40	
12 (3/4)	MSS6	04	UU = Step Up x2	04	UU = Step Up x2	M = Monel®			SCH80	
16 (1)	MDS6	05		05		C = Carbon Steel				
20 (1-1/4)	MDM	06		06						
24 (1-1/2)		07		07						
32 (2)		08		08						
40 (2-1/2)		12		12						
48 (3)		14		14						
64 (4)		41		41						
96 (6)										
128 (8)										
160 (10)										

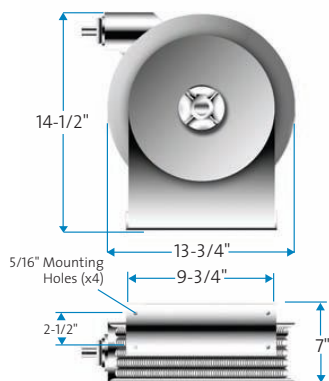
Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 16
2. Select hose style = MSS4
3. Select the fitting style for the first end = 01
4. Add the step up/down letter for off-size fitting from the hose size for the first fitting = None
(Leave blank if fitting size is same as hose size)
5. Select the fitting style for the second end = 12
6. Add the step up/down letter for off-size fitting from the hose size for the second fitting = None
(Leave blank if fitting size is same as hose size)
7. Select the fitting material = S4
8. Select A for armor = A
(Leave blank for no armor)
9. Select O for oxygen clean = O
(Leave blank for no oxygen clean)
10. Specify pipe schedule if one or both ends is a style 01
(pipe butt weld) = SCH10
11. Select length in inches = 18

Cryogenic Liquid – Gas/Liquid Sampling Hose Reel & How to Order



Flexible Components brand all stainless steel hose reel safely stores up to 30 feet of hose for trailer product sampling, line purging or argon boiloff recovery systems.

Features & Benefits

- Comes with either a 1/4" I.D. PTFE lined hose for gas applications or with a stainless steel lined hose for low-temperature applications.
- All wetted parts of the hose reel and hose are cleaned for oxygen use.
- A large placard indicating nitrogen, argon or oxygen service is placed on each reel.
- Equipped with a universal mounting bracket for easy, convenient mounting on the floor, wall or ceiling.
- Hose guide arm can be moved to any desired position.
- Adjustable hose stop can be moved up and down the hose so that the right amount of hose is exposed in the retracted position.

How to Order Gas/Liquid Sampling Hose Reels

Maximum working pressure: 500 psi

Maximum hose length: 30 feet of 1/4" I.D. hose with armor casing

With stainless steel lined hose: Indicate length of hose from 10 feet to 30 feet in multiples of 5 feet.

Product Number	Description
GSHR5600-Length of hose	Use end of hose has SS 1/4" female NPT.
GSHR5600AR-Length of hose	Use end of hose has brass CGA 580 handwheel and nipple attached.
GSHR5600N2-Length of hose	Use end of hose has brass CGA 580 handwheel and nipple attached.
GSHR5600O2-Length of hose	Use end of hose has brass CGA 540 handwheel and nipple attached.

With PTFE lined hose: Indicate length of hose from 10 to 30 feet in multiples of 5 feet.

Product Number	Description
GSHR5600T-Length of hose	Use end of hose has SS 1/4" female NPT.
GSHR5600TAR-Length of hose	Use end of hose has brass CGA 580 handwheel and nipple attached.
GSHR5600TN2-Length of hose	Use end of hose has brass CGA 580 handwheel and nipple attached.
GSHR5600TO2-Length of hose	Use end of hose has brass CGA 540 handwheel and nipple attached.

How to Order Replacement Hose

Stainless steel inner core replacement hose product number:

4CF1603U06S6AO-10 to 30 feet – 1/4" I.D. 316L SS inner core, 1 layer 304 SS braid, 316 SS 3/8" male NPT on fixed end, 316 SS 1/4" female NPT on use end, armor casing full length, cleaned for oxygen service.

PTFE inner core replacement hose product number:

4TS03U06S6AO-10 to 30 feet – 1/4" I.D. PTFE inner core, 1 layer 304 SS braid, 316 SS 3/8" male NPT on fixed end, 316 SS 1/4" female NPT on use end, armor casing full length, cleaned for oxygen service.

Carbon Dioxide Applications – Polar® Hose Specifications



Flexible Components brand Polar® hose overcomes the problems caused by misapplication of rubber hoses used in earlier carbon dioxide (CO₂) transfer applications. Typically, these were rubber hoses designed for hydraulic uses. They were not resistant to deterioration caused when rubber comes in contact with carbon dioxide. They had reinforcing braids and fittings made from carbon steel, which were susceptible to corrosion from carbonic acid that forms when CO₂ combines with moisture. They tended to crack due to the cold temperatures associated with CO₂ transfer and could become stiff, brittle and hard to handle.

Later attempts to use stainless steel cryogenic transfer hoses avoided some of these problems. Metal hose remained flexible in the cold but was much heavier and harder to handle. In addition, corrugations inside metal hose can trap solid CO₂ ice, causing plugging of hose, valves and pipes during CO₂ transfer.

Features & Benefits

- Specifically designed for bulk CO₂ transfer.
- Uses a specially formulated elastomer that is compatible with CO₂ and low temperatures.
- Strength and durability from stainless steel braids and non-corrosive fittings.
- Lightweight.
- Flexible.
- Strong.
- Best choice for CO₂ bulk liquid transfer.

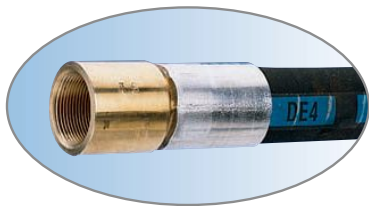
Hose Comparison

Hose Style	Lightweight	Smooth Inner Core	Maintains Flexibility When Cold	Corrosion Resistant Reinforcing Braid	Resists Swelling, Blistering, Cracking	Designed Specifically For Carbon Dioxide
Polar®	Yes	Yes	Yes	Yes	Yes	Yes
Metal	No	No	Yes	Yes	Yes	No

Polar® Hose Specifications

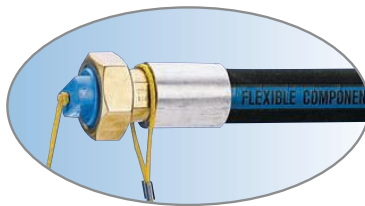
Part Number	Nominal Size I.D.		Size O.D.		Maximum Working Pressure		Minimum Burst Pressure		Weight		Temperature Range	
	in.	mm	in.	mm	psi	bar	psi	bar	lb./ft.	kg/m	°F	°C
16POL	1	25.40	1.50	38.10	450	31.03	1800	124.13	0.64	0.95	-65 to 212	-54 to 100
24POL	1-1/2	38.10	2.00	50.80	450	31.03	1800	124.13	0.93	1.38	-65 to 212	-54 to 100
32POL	2	50.80	2.63	66.80	450	31.03	1800	124.13	1.54	2.29	-65 to 212	-54 to 100

Carbon Dioxide Applications – Polar® Hose End Fittings & How to Order



Female NPT – Style 05

Sizes: 1", 1-1/2", 2"
Available in: Brass



CGA Connection – Style 77

Sizes: 1", 1-1/2", 2"
Available in: Brass

How to Order Polar® Hose

Part Number Example: 16POL0505UAB-240"

Description: 1" I.D. Polar Hose, with 1" brass female NPT one end and 1-1/2" brass female NPT on the other end, 240" overall length.

16	POL	05		05	U	AB	240
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up From Hose Size	Fitting Style 2nd End	2nd Fitting Step Up From Hose Size	Fitting Material – Both Ends	Length (Inches)
16 (1) 24 (1-1/2) 32 (2)	POL	05 77	U = Step Up	05 77	U = Step Up	AB = A for aluminum collar, B for brass fitting	

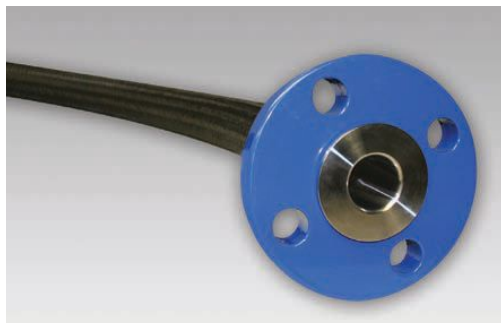
Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 16
2. Select hose style = POL
3. Select the fitting style for the first end = 05
4. Add the step up letter for off-size fitting from the hose size for the first fitting = None
(Leave blank if fitting size is same as hose size)
5. Select the fitting style for the second end = 05
6. Add the step up letter for off-size fitting from the hose size for the second fitting = U
(Leave blank if fitting size is same as hose size)
7. Select the fitting material = AB
8. Select length in inches = 240

Chlorine Applications – Chlorine Transfer Hose Specifications



Flexible Components brand chlorine transfer hose is ideal for tough, demanding applications such as chlorine, bromine, sodium hydroxide, sodium hypochlorite, sulfuric and hydrochloric acids, and other corrosive materials. Manufactured in accordance with Chlorine Institute Pamphlet 6 piping specifications, chlorine transfer hose has unexcelled chemical resistance for longer service life.

Features & Benefits

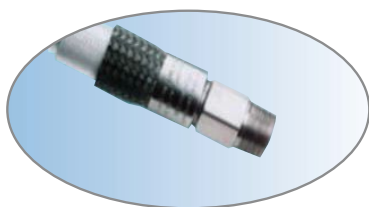
- Unexcelled chemical resistance for longer service life.
- Not subject to stress corrosion, pinholing or flex cracking.
- Convuluted inner core is low profile and helical formed to promote self-drainage.
- Moisture will not affect inner core.
- Does not need to be cleaned and capped after every use.
- Minimum pressure drop for faster loading and unloading.
- Lightweight and ultra flexible for handling ease.
- Low force to bend.
- Can be inspected safely.
- Less costly than Monel® (metal) hose.
- Wide hex flats for easy wrenching.
- One-piece extruded Chemfluor® PTFE fluoropolymer inner core.
- Thick-strand chafe-resistant PVDF (Kynar®) cover.
- Two high tensile strength PVDF (Kynar®) braids.

Chlorine Transfer Hose Specifications

Part Number	Size I.D.		Size O.D.		Maximum Working Pressure		Minimum Burst Pressure		Minimum Bend Radius		Temperature Range	
	in.	mm	in.	mm	psi	bar	psi	bar	in.	mm	°F	°C
8CL	1/2	12.70	1	25.40	500	34.48	2,500	172.41	2.50	63.50	-40 to 120	-40 to 49
16CL	1	25.40	1-5/8	41.28	375	25.86	1,875	129.31	8.00	203.20	-40 to 120	-40 to 49
24CL	1-1/2	38.10	2-1/8	53.98	375	25.86	1,875	129.31	10.00	254.00	-40 to 120	-40 to 49

Burst pressure ratings at ambient 70°F (21°C).

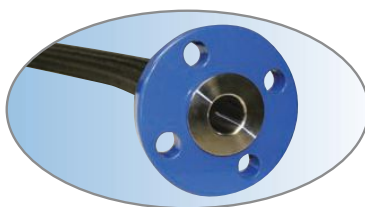
Chlorine Applications – Chlorine Transfer Hose End Fittings



Hex Male NPT – Style 03

Sizes: 1/2"-1"

Available in: Schedule 80 M



Lap Joint Flange – Style 12

Sizes: 1/2"-1-1/2"

Available in: C3, M

Alternative materials available by special order:

- PVDF (Kynar®)
- Hastelloy for wet chlorine applications

Fitting material designator:

M = Monel®

C3 = Carbon Steel Epoxy Coated 300#

Chlorine Applications – How to Order Chlorine Transfer Hose

How to Order Chlorine Transfer Hose

Part Number Example: 16CL0312MC3KYA – 36"

Description: 1" Chlorine transfer hose with 1" Monel® hex male pipe on one end and 300# carbon steel lap joint flange on the other end, armor casing, 36" overall length.

16	CL	03	12	M	C3	KY	A	36
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	Fitting Style 2nd End	Fitting Material	Flange Material	Abrasion Cover	Accessory Code Optional	Length (inches)
8 (1/2)	CL	03	03	Ferrule and fitting material (Always Monel® M)	M = Monel®	KY = Kynar®	A = Armor casing	
16 (1)		*12	*12		C3 = Carbon steel 300#		C = Casing strain cuffs	
24 (1-1/2)					43 = 304 SS 300#			
					63 = 316 SS 300#			

⚠ Important:

- *Must specify flange material. Carbon steel, epoxy coated 300# standard. 1" and 1-1/2" sizes only.
- Fitting material is always Monel®.
- Special Hastelloy® fitting material should be used for wet chlorine applications.
- Chlorine transfer hose should always be used in a well-ventilated area.

Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 16
2. Select hose style = CL
3. Select the fitting style for the first end = 03
4. Select the fitting style for the second end = 12
5. Select the fitting material = M
6. Select the flange material = C3
7. Select the abrasion cover = KY
8. Select the optional accessory code = A
9. Select length in inches = 36

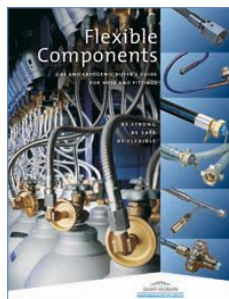
Literature Request

More high performance products for fluid handling from Saint-Gobain Performance Plastics



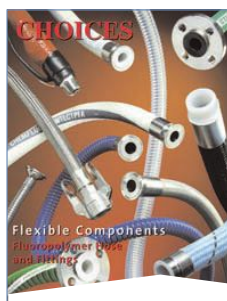
Flexible Components Fluoropolymer Hose and Fitting Buyer's Guide

An invaluable reference source for customers requiring innovative, performance-tested hose assemblies. Features an extensive selection of products incorporating Chemfluor® fluoropolymers.



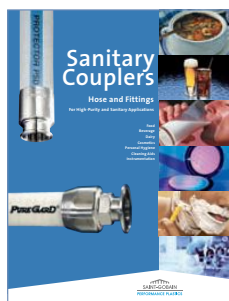
Flexible Components Compressed Gas and Cryogenic Hose Catalog

Aids customers in selecting appropriate transfer hoses and related equipment for custom and individual applications with exacting requirements.



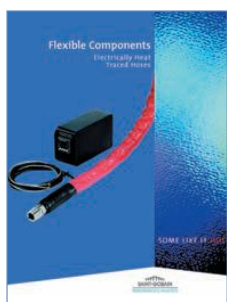
Choices Brochure

Condensed version of the Flexible Components Fluoropolymer Hose and Fitting Buyer's Guide. Useful as a quick reference.



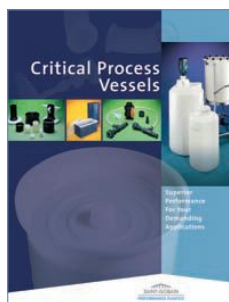
Sanitary Couplers Dairy, Food and Beverage Process Catalog

Featuring ReSeal®, re-usable coupling technology, this catalog provides a full range of hose, tubing and fitting options that comply with the most stringent 3-A, FDA/PMO, and USDA requirements.



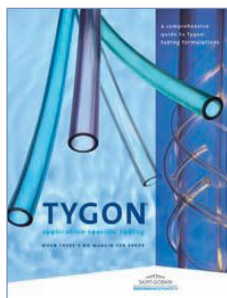
Electrically Heat Traced Hose Assemblies Guide

Flexible Components offers a guide for the selection of the electric heat trace option for corrosive-resistant and ultra-pure hoses from Saint-Gobain Performance Plastics.



Molded Products Catalog

Provides complete data on Saint-Gobain Performance Plastics high-performance molded products, including tanks, biosystems, blowers, fittings and accessories.



Tygon® Tubing Catalog

Offers the broadest range of Tygon® tubing formulations to meet such needs as temperature resistance, long service life, autoclavability, biocompatibility and abrasion resistance.



Acutech Catalog

Contains a wide range of extruded thermoplastic products, including tubing, pipe, rod and specialty profiles, as well as heat shrink tubing and highly specialized, proprietary custom products and profiles.