

# Western Valve and Fitting Company

## All Metal Hose Products



### Hose Option Examples



**Spring Guards**



**Protective Jackets**



**Insulating Jackets**

### End Connection Examples



**Female VCR® or Female VCO®**



**Compression Fitting 2 Ferrule Design**



**Male Pipe Thread**

- Nominal Hose sizes range from 1/4" up to 12"
- Your choice of virtually any end connection
- Hose ends can match or be different
- Your choice of hose length
- Hoses do not allow for gas permeation

# ***Benefits in using an all metal Flexible Hose***

***PERMEATION CONCERNS.*** Non-metal hose is susceptible to gas permeation through the hose wall and into the atmosphere. Metal hose, on the other hand, does not allow permeation. If containing the gases inside the hose is important, metal hose may be required.

***TEMPERATURE EXTREMES.*** If either the temperature of the media going through the hose or the surrounding atmospheric temperature is very cold or hot, metal may be the only material that can withstand such temperature extremes.

***CHEMICAL COMPATIBILITY.*** Metal hose can handle a wider variety of chemicals than most other hose types. If the hose will be exposed to aggressive chemicals (either internally or externally), metal hose should be considered.

***FIRE SAFETY.*** Other hose types will melt when exposed to fire, while metal hose maintains its integrity up to 1300° F.

***ACHIEVING FULL VACUUM.*** Under full vacuum, metal hose maintains its shape while other hose types may collapse.

***POTENTIAL FOR CATASTROPHIC FAILURE.*** When a metal hose fails, it usually develops small holes or cracks. Other hose types tend to develop larger cracks or come apart completely. If a sudden hose failure is potentially catastrophic, a metal hose may help minimize the effects of a failure by leaking product at a slower rate.

***ABRASION AND OVERBENDING CONCERNS.*** To prevent abrasion and overbending, a metal hose can be used as a protective cover over wires or even other hoses.

***FLEXIBILITY IN CHOOSING HOSE END CONNECTIONS.*** Virtually any type of fitting can be attached to metal hose, while other hose types require special shanks and collars.

## *Steps In Getting Price And Delivery On Your Hose*

- 1. Choose what END CONNECTIONS you want on each end of your hose. End connections can be the same or different. Choose from the end connections below, or advise of other end connections you would need.**
- 2. Choose what SIZE OF END CONNECTIONS you will need on each side of the hose.**
- 3. Choose the TYPE OF HOSE listed below that best meets your application requirements. Base this decision on considerations of working pressure requirements and flexibility(bend radius) considerations.**
- 4. Choose the OVERALL LENGTH OF HOSE you would like from end to end.**
- 5. Feel free to provide us with your application information to include factors such as working pressure requirements, system media, temperature, etc.**
- 6. GIVE US A CALL with your information OR FILL OUT OUR CONTACT FORM on our Web Page with your information and click the send button to get your price and delivery information**

# Choose From The Fitting Options Below

Other fitting options are available upon your request

## Female VCR®



**Alloys** – 316 Stainless Steel  
**Sizes**–1/8" thru 1"

## Male VCR®



**Alloys** – 316 Stainless Steel  
**Sizes**–1/8" thru 1"

## Female VCO®



**Alloys** – 316 Stainless Steel  
**Sizes**–1/8" thru 1"

## **DK-lok® Compression Nut with Ferrules**



**Alloys** – 316 Stainless Steel, Carbon Steel, Brass, HC-276

**Sizes** – 1/8" thru 2"

## **AN Male Flare 37°**



**Alloys** – 316 Stainless Steel, Carbon Steel, HC-276

**Sizes** – 1/8" thru 2"

## **Tube End**



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1/8" thru 8" (seamless and welded)

**Wall Thickness** – various

## Male Pipe



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, HC-276

**Sizes** – 1/8" thru 8"

**Schedules** – 40 and 80

## Hex Male Pipe



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, Brass

**Sizes** – 1/4" thru 4"

## Hex Female Pipe



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, Malleable Iron, Brass

**Sizes** – 1/4" thru 4"

**Class** – 125#, 150# (3000# Carbon Steel Only)

## Female Half Coupling (Threaded/Socket Weld)



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1/4" thru 4"

**Class** – 150# (3000#)

## Beveled Pipe End



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, HC-276

**Sizes** – 1/8" thru 8"

**Schedules** – Various

## Grooved-End Fitting



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1" thru 8"

**Schedule** – 40

## Swivel Fitting



**Alloys** – 304 Stainless Steel

**Sizes** – 1/4" thru 2"

## 1, 2, or 3 Piece Female SAE (JIC)



**Alloys** – 316 Stainless Steel, Carbon Steel, Brass (nut only)

**Sizes** – 1/4" thru 2"

## 45° and 90° SAE (JIC)



**Alloys** – 316 Stainless Steel, Carbon Steel

**Sizes** – 1/2" thru 2"

## Sanitary Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel,

**Sizes** – 1" thru 3"



## Slip-on Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1/2" thru 12"

**Class** – 150#, 300#

## Plate Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1/2" thru 12"

**Class** – 150#

## Weld Neck Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 1/2" thru 6"

**Class** – 150#, 300#

## TTMA Flange



**Alloys** – 316 Stainless Steel, Carbon Steel  
**Sizes** – 2" thru 6"

## C Stub with Floating Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel,  
**Sizes** – 1/2" thru 10"  
**Schedule** – 10

## A Stub with Lap Joint Flange



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, 276  
**Sizes** – 1/2" thru 8"  
**Schedules** – 10, 40

## TTMC C Stub Swivel



**Alloys** – 304 Stainless Steel and 316 Stainless Steel,

**Sizes** – 4" thru 6"

**Schedule** – 10

## Part A and Part D (Cam-Lock)



**Alloys** – T316 Stainless Steel, Brass, Aluminum

**Sizes** – 1/2" thru 8"

## Short and Long Radius Elbows (45° and 90°)



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, HC-276

**Sizes** – 1/4" thru 6"

## Reducer



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel

**Sizes** – 3/4" thru 6"

**Schedule** – 10 (40 Carbon Steel)

## Beveled Pipe End



**Alloys** – 304 Stainless Steel and 316 Stainless Steel, Carbon Steel, HC-276

**Sizes** – 1/8" thru 8"

**Schedules** – Various

## Ground Joint Female



**Alloys** – Carbon Steel

**Sizes** – 1/2" thru 4"

## Specialty Gas Nuts



**Alloys** – Brass

**Sizes** – A, B, C, D

**Thread Type** – SAE and BSP

## Western Valve and Fitting

**In order to receive your hose quote, please provide:**

**1st End Connection required**

**2nd End Connection required**

**Series of Hose required**

**Inside Diameter of Hose required**

**End to End length of Hose required( length including installed fittings)**

**Number of Overbraids required(0, 1 or 2)**

Choose from the Hose Options below that meet your hose size requirements, your pressure requirements, flexibility requirements and compatibility requirements

Standard Flex is the foundation of our companies extensive line of annular products. Proprietary manufacturing processes produce a hose with minimal residual stress, uniform wall thickness throughout the corrugations, and minimal work hardening. These processes create a very flexible, long-lasting corrugated metal hose.



**Material Codes**

- 4 - T321 Stainless Steel
- 5 - T316L Stainless Steel
- 7 - T304L Stainless Steel

**Braid Codes**

- 00 - Unbraided
- 50 - T304 Single Braid
- 55 - T304 Double Braid
- T316 Braid available upon request

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.41	1.0	4.5	90	n/a	0.04
	1	0.47			1800	7233	0.11
	2	0.53			2700	9100	0.18
3/8	0	0.65	1.2	5.0	70	n/a	0.10
	1	0.71			1558	6230	0.20
	2	0.77			2336	9345	0.30
1/2	0	0.77	1.5	5.5	70	n/a	0.11
	1	0.83			1186	4743	0.22
	2	0.89			1779	7115	0.33
5/8	0	0.96	1.8	7.0	57	n/a	0.17
	1	1.02			1205	4820	0.33
	2	1.08			1808	7230	0.49
3/4	0	1.16	2.1	8.0	43	n/a	0.19
	1	1.22			898	3591	0.37
	2	1.28			1347	5387	0.55
1	0	1.47	2.7	9.0	43	n/a	0.26
	1	1.53			718	2872	0.50
	2	1.59			1077	4308	0.74
1 1/4	0	1.75	3.1	10.0	43	n/a	0.29
	1	1.83			645	2581	0.61
	2	1.91			968	3872	0.93
1 1/2	0	2.08	3.9	11.0	28	n/a	0.47
	1	2.16			531	2125	0.85
	2	2.24			797	3188	1.23
2	0	2.61	5.1	13.0	14	n/a	0.59
	1	2.69			449	1797	1.11
	2	2.77			674	2696	1.63
2 1/2	0	3.40	6.8	16.0	14	n/a	0.84
	1	3.50			417	1669	1.64
	2	3.60			626	2504	2.44
3	0	3.88	7.8	18.0	14	n/a	1.18
	1	3.98			346	1384	2.06
	2	4.08			519	2076	2.94
4	0	4.96	9.8	22.0	14	n/a	1.41
	1	5.06			299	1194	2.69
	2	5.16			448	1791	3.97
5	0	6.00	12.8	28.0	14	n/a	2.18
	1	6.12			275	1099	3.61
	2	6.24			412	1649	5.04
6	0	7.01	14.8	32.0	11	n/a	2.69
	1	7.13			210	839	4.44
	2	7.25			315	1259	6.19
8*	0	9.04	18.0	29.0	3	n/a	4.88
	1	9.32			250	1000	8.21
	2	9.60			360	1446	11.53
10*	0	11.34	21.0	34.0	4	n/a	7.42
	1	11.56			175	700	11.05
	2	11.78			310	1247	14.67
12*	0	13.45	27.0	44.0	3	n/a	11.04
	1	13.73			185	745	16.71
	2	14.00			325	1308	22.38

\* 8 inch, 10 inch and 12 inch diameter AF4750 are supplied with braided braid

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information

Extra Flex is manufactured using the same high quality process used to make Standard Flex but the number of corrugations per foot is increased to provide for greater flexibility.



**Material Codes**

4 - T321 Stainless Steel  
 5 - T316L Stainless Steel  
 7 - T304L Stainless Steel

**Braid Codes**

00 - Unbraided  
 50 - T304 Single Braid  
 55 - T304 Double Braid  
 T316 Braid available upon request

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.42	0.9	3.7	90	n/a	0.07
	1	0.48			1800	7233	0.14
	2	0.54			2700	9100	0.20
3/8	0	0.65	1.0	4.0	70	n/a	0.15
	1	0.71			1558	6230	0.25
	2	0.77			2336	9345	0.36
1/2	0	0.77	1.2	4.4	70	n/a	0.18
	1	0.83			1186	4743	0.32
	2	0.89			1779	7115	0.47
5/8	0	0.96	1.4	5.6	57	n/a	0.19
	1	1.02			1205	4820	0.37
	2	1.08			1808	7230	0.54
3/4	0	1.16	1.7	6.4	43	n/a	0.31
	1	1.22			898	3591	0.53
	2	1.28			1347	5387	0.74
1	0	1.47	2.1	7.1	43	n/a	0.41
	1	1.53			718	2872	0.76
	2	1.63			1077	4308	1.11
1 1/4	0	1.75	2.5	7.9	43	n/a	0.63
	1	1.83			645	2581	1.00
	2	1.91			968	3872	1.37
1 1/2	0	2.08	3.1	8.7	28	n/a	0.70
	1	2.16			531	2125	1.16
	2	2.24			797	3188	1.63
2	0	2.61	4.0	10.3	14	n/a	0.88
	1	2.69			449	1797	1.44
	2	2.77			674	2696	1.99
2 1/2	0	3.40	5.4	12.8	14	n/a	1.36
	1	3.50			417	1669	2.16
	2	3.60			626	2504	2.96
3	0	3.88	6.3	14.5	14	n/a	1.63
	1	3.98			346	1384	2.50
	2	4.08			519	2076	3.37
4	0	4.96	7.7	17.4	14	n/a	2.53
	1	5.06			299	1194	3.90
	2	5.16			448	1791	5.29
5	0	6.00	10.0	21.9	14	n/a	4.07
	1	6.12			275	1099	5.53
	2	6.24			412	1649	6.99
6	0	7.01	11.6	25.0	11	n/a	4.46
	1	7.13			210	839	6.34
	2	7.25			315	1259	8.22

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information

**Extreme Flex** is our companies T321 helical seam welded corrugated metal hose, specifically designed to maximize flexibility while maintaining good pressure ratings. The helical design facilitates draining and reduces in-line turbulence.



**Braid Codes**

- 00 - Unbraided
- 50 - T304 Single Braid
- 55 - Double Braid
- T316 Braid available upon request

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.39	0.4	2.2	71	n/a	0.09
	1	0.45			1778	7112	0.13
	2	0.51			2489	9956	0.19
5/16	0	0.47	0.6	2.4	43	n/a	0.10
	1	0.53			1422	5688	0.18
	2	0.59			1991	7964	0.26
3/8	0	0.55	0.6	2.8	36	n/a	0.11
	1	0.61			1138	4552	0.19
	2	0.67			1707	6828	0.28
1/2	0	0.67	0.8	3.1	28	n/a	0.14
	1	0.73			910	3640	0.26
	2	0.79			1422	5688	0.39
5/8	0	0.85	1.2	3.9	28	n/a	0.19
	1	0.91			910	3640	0.32
	2	0.96			1422	5688	0.46
3/4	0	1.02	1.4	5.1	14	n/a	0.22
	1	1.08			711	2844	0.38
	2	1.18			1138	4552	0.55
1	0	1.22	1.8	6.3	11	n/a	0.24
	1	1.28			569	2276	0.54
	2	1.34			910	3640	0.83
1 1/4	0	1.57	2.4	7.9	9	n/a	0.45
	1	1.65			455	1820	0.76
	2	1.73			711	2844	1.09
1 1/2	0	1.89	3.0	9.4	7	n/a	0.65
	1	1.97			356	1424	1.02
	2	2.05			569	2276	1.40
2	0	2.36	3.5	11.0	6	n/a	0.71
	1	2.44			284	1136	1.22
	2	2.52			455	1820	1.75

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information



**Chem Flex** is our companies chemical-resistant, annular corrugated metal hose. Manufactured with a special 276 alloy, ChemKing® offers excellent flexibility and corrosion resistance for many of the most severe applications found in chemical processing.



#### Braid Codes

00 - Unbraided  
 60 - T316 Single Braid  
 66 - T316 Double Braid  
 20 - C276 Single Braid  
 22 - C276 Double Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/2	0	0.77	1.5	5.5	70	n/a	0.11
	1	0.83			1186	4743	0.22
	2	0.89			1779	7115	0.33
3/4	0	1.16	2.1	8.0	43	n/a	0.19
	1	1.22			898	3591	0.37
	2	1.28			1347	5387	0.55
1	0	1.47	2.7	9.0	43	n/a	0.26
	1	1.53			718	2872	0.50
	2	1.59			1077	4308	0.74
1 1/2	0	2.08	3.9	11.0	28	n/a	0.47
	1	2.16			531	2125	0.85
	2	2.24			797	3188	1.23
2	0	2.61	5.1	13.0	14	n/a	0.59
	1	2.69			449	1797	1.11
	2	2.77			674	2696	1.63
3	0	3.88	7.8	18.0	14	n/a	1.18
	1	3.98			346	1384	2.06
	2	4.08			519	2076	2.94
4*	0	4.96	9.8	22.0	14	n/a	1.41
	1	5.06			299	1194	2.47
	2	5.16			448	1791	3.53
5*	0	6.00	12.8	28.0	14	n/a	2.18
	1	6.12			275	1099	3.61
	2	6.24			412	1646	5.04
6*	0	7.01	14.8	32.0	11	n/a	2.69
	1	7.13			210	839	4.44
	2	7.25			315	1259	6.19

\* For 4 inch, 5 inch, and 6 inch diameters, consult factory for delivery

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information
- For rapid pressure fluctuations, consult factory
- Braid is T316 stainless steel or C276 alloy. Monel™ braid is available upon request. When Monel™ braid is used, stated pressure ratings need to be reduced by 0.75. Part numbers for Monel™ braid are AF6780 (single braid) and AF6788 (double braid)

**Chlorine Flex** is our company's 276 alloy, corrugated chlorine-transfer assemblies, designed specifically to meet the demands of this application. With considerations made for both wet and dry chlorine, these assemblies are the safest available. Hose Master's ChlorSafe™ assemblies are manufactured in compliance with the Chlorine Institute Pamphlet 6, Appendix A, latest edition.

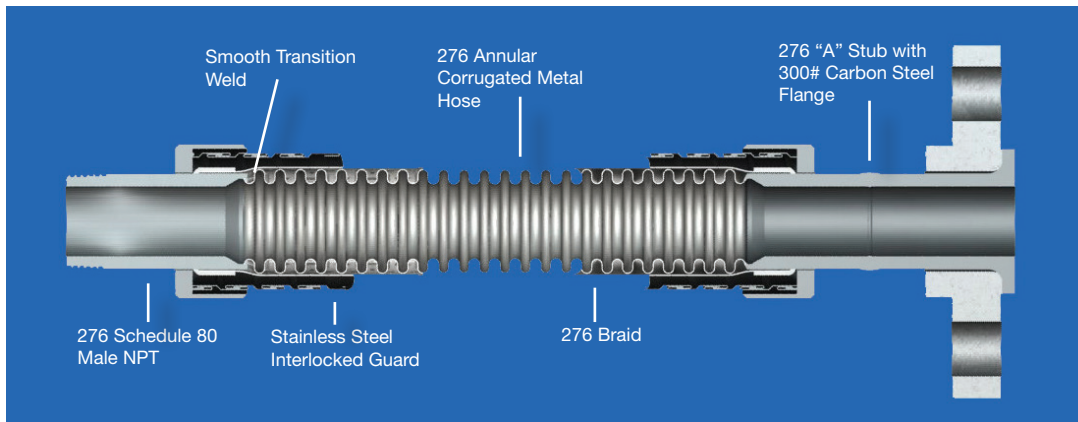


#### Braid Codes

- 20 - C276 Single Braid
- 22 - C276 Double Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)
1/2	1	0.83	8.0	500	2500
	2	0.89			
3/4	1	1.22	9.0	375	1875
	2	1.28			
1	1	1.53	10.0	375	1875
	2	1.59			
1 1/2	1	2.16	11.0	375	1875
	2	2.24			
2	1	2.69	13.0	375	1875
	2	2.77			

- The minimum bend radius is measured from the center-line of the hose
- Per Chlorine Institute specifications, pressure ratings represent a 5:1 safety factor
- For pressures in excess of Chlorine Institute standards, please consult the factory



#### Chlorine Flex Features:

- **Our factory** proprietary manufacturing processes reduce residual stress and produce the most flexible chlorine-transfer hose available
- **Chlorine Flex** all-metal construction makes it fire-resistant
- Proprietary welding techniques provide a smooth transition from hose to fitting with no gaps or crevices to entrap contaminants
- All welds are argon-purged to eliminate oxidation

#### Chlorine Flex Specifications:

- All wetted surfaces and the braid are made from UNS N10276 (referred to as either C276 or 276 alloy) which has the highest chemical resistance rating for both dry and wet chlorine<sup>1</sup>
- Every assembly is helium mass spectrometer leak tested to at least  $5.0 \times 10^{-6}$  std cc/sec
- Each assembly is covered by a stainless steel interlocked metal hose for maximum durability
- All assemblies are strength-tested to twice maximum allowable working pressure

<sup>1</sup> Kenneth M. Pruett, *Chemical Resistance Guide for Metals and Alloys: A Guide to Chemical Resistance of Metals Alloys* (Derby: Compass Publications, 1995), 93.

**High Pressure Flex** is our companies high-pressure, annular corrugated metal hose. **High Pressure Flex** is made from heavy-wall stainless steel, and offers flexibility and dependability when higher pressures are a factor.



### Material Codes

8 - T321 Stainless Steel  
9 - T316L Stainless Steel

### Braid Codes

00 - Unbraided  
50 - T304 Single Braid  
55 - T304 Double Braid  
60 - T316 Single Braid  
66 - T316 Double Braid  
70 - T321 Single Braid  
77 - T321 Double Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.423	1.0	5.5	450	n/a	0.08
	1	0.483			3000	12000	0.15
	2	0.543			4000	16000	0.22
3/8	0	0.655	1.5	8.5	400	n/a	0.12
	1	0.735			2400	9600	0.31
	2	0.815			3300	14000	0.48
1/2	0	0.774	2.5	10.0	400	n/a	0.24
	1	0.854			2400	9600	0.40
	2	0.934			3200	12800	0.57
3/4	0	1.13	4.0	8.0	220	n/a	0.41
	1	1.19			1100	4430	0.58
	2	1.25			1650	6696	0.76
1	0	1.43	5.0	9.0	190	n/a	0.52
	1	1.49			1000	4187	0.76
	2	1.55			1400	5837	0.99
1 1/4	0	1.74	6.5	12.0	200	n/a	0.76
	1	1.82			900	3758	1.13
	2	1.90			1350	5494	1.50
1 1/2	0	2.10	7.5	13.0	90	n/a	1.13
	1	2.18			750	3070	1.54
	2	2.26			1200	4842	1.96
2	0	2.55	9.0	15.0	105	n/a	1.10
	1	2.68			800	3304	2.29
	2	2.80			1150	4738	3.47
2 1/2	0	3.35	10.5	17.0	46	n/a	1.75
	1	3.48			575	2461	3.05
	2	3.60			900	3857	4.35
3	0	3.67	12.0	20.0	36	n/a	1.92
	1	3.79			550	2252	3.18
	2	3.92			800	3254	4.46
4	0	4.92	9.8	25.0	23	n/a	2.29
	1	5.04			425	1754	4.12
	2	5.16			575	2350	5.98
5*	0	5.96	12.8	34.0	28	n/a	3.03
	1	6.13			331	1324	5.14
6*	0	6.97	14.8	40.0	23	n/a	3.74
	1	7.22			285	1140	6.44

- Some hose material and braid code combinations may be unavailable.
- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information
- For rapid pressure fluctuations, consult factory
- \* 5 inch and 6 inch diameters are supplied with braided braid

Ultra Pressure Flex is our companies annular, heavy-wall corrugated metal hose, specifically designed for **ULTRA** high-pressure applications. Ultra Pressure Flex offers superior flexibility and is made from heavy-wall T321 or T316L stainless



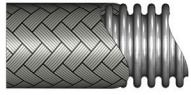
**Material Codes**  
 8 - T321 Stainless Steel  
 9 - T316L Stainless Steel

**Braid Codes**  
 00 - Unbraided  
 70 - T321 Single Braid  
 77 - T321 Double Braid  
 7T - T321 Triple Braid  
 7Q - T321 Quad Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.431	0.5		500	n/a	0.15
	1	0.556	1.5	4.5	5000	20000	0.32
	2	0.681	1.5		6000	24000	0.49
3/8	0	0.670	1.5		400	n/a	0.18
	1	0.795	2.5	7.0	3500	14000	0.46
	2	0.920	2.5		5000	20000	0.77
1/2	0	0.784	2.0		200	n/a	0.43
	1	0.884	3.0	8.0	2700	10800	0.64
	2	0.984	3.0		4500	18000	0.85
3/4	0	1.15	2.5	4.5	250	n/a	0.63
	1	1.28	4.0	10.0	2650	10669	1.09
	2	1.40	4.0	10.0	3600	14521	1.58
1	0	1.45	3.25	7.0	180	n/a	0.84
	1	1.57	5.0	11.0	2500	10000	1.53
	2	1.70	5.0	11.0	3000	12083	2.25
1 1/4	0	1.75	5.0	9.5	190	n/a	1.32
	1	1.88	6.5	12.5	1775	7119	2.09
	2	2.00	6.5	12.5	2600	10400	2.88
	3	2.13	7.0	14.0	3000	12082	3.71
1 1/2	0	2.11	6.0	11.5	110	n/a	1.75
	1	2.23	7.5	13.0	1450	5800	2.64
	2	2.36	7.5	13.0	2200	8892	3.57
2	0	2.57	7.5	12.0	100	n/a	2.04
	1	2.70	9.0	14.0	1100	4415	3.23
	2	2.82	9.0	14.0	1675	6710	4.45
2 1/2	0	3.38	8.0	14.5	46	n/a	2.73
	1	3.51	9.5	16.0	700	2800	4.29
	2	3.63	9.5	16.0	1050	4200	5.59
3	0	3.70	8.5	16.0	36	n/a	3.13
	1	3.83	10.5	20.0	600	2400	4.39
	2	3.95	10.5	20.0	900	3600	5.67
	3	4.08	23.0	75.0	1200	4800	6.99
4	0	4.82	10.0	19.0	23	n/a	5.11
	1	4.94	13.0	26.0	525	2100	6.94
	2	5.07	13.0	26.0	875	3500	8.80
	4	5.32	32.0	96.0	1200	4800	12.62

- Some hose material and braid code combinations may be unavailable.
- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information

Form Flex is our companies ‘stay-put,’ annular corrugated metal hose. Form Flex is designed to bend and stay in one position, providing a stress-free connection between piping systems.



Material Codes

4 - T321 Stainless Steel  
5 - T316L Stainless Steel

Braid Codes

00 - Unbraided  
50 - T304 Single Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4	0	0.41	1.0	n/a	90	n/a	0.04
	1	0.47			900	3600	0.11
3/8	0	0.65	1.2	n/a	70	n/a	0.10
	1	0.71			800	3200	0.17
1/2	0	0.77	1.5	n/a	70	n/a	0.11
	1	0.83			665	2660	0.19
5/8	0	0.96	1.8	n/a	57	n/a	0.17
	1	1.02			500	2000	0.26
3/4	0	1.16	2.1	n/a	43	n/a	0.19
	1	1.22			380	1520	0.29
1	0	1.47	2.7	n/a	43	n/a	0.26
	1	1.53			355	1420	0.42
1 1/4	0	1.75	3.1	n/a	43	n/a	0.29
	1	1.81			280	1120	0.47
1 1/2	0	2.08	3.9	n/a	28	n/a	0.47
	1	2.14			264	1056	0.71
2	0	2.61	5.1	n/a	14	n/a	0.59
	1	2.69			221	884	0.90

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information

**Bronze Flex** is our companies heavy-duty corrugated hose, designed for use in those applications that specifically require a bronze hose.



#### Braid Codes

- 00 - Unbraided
- 10 - Single Bronze Braid
- 11 - Double Bronze Braid

Inside Diameter (in.)	Number of Braids (#)	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
3/8	0	0.61	2.0	6.0	60	n/a	0.16
	1	0.67			704	2815	0.29
	2	0.73			936	3744	0.42
1/2	0	0.76	2.3	7.0	50	n/a	0.23
	1	0.81			566	2265	0.38
	2	0.87			753	3012	0.53
3/4	0	1.05	2.5	8.0	30	n/a	0.33
	1	1.10			468	1870	0.55
	2	1.16			622	2487	0.77
1	0	1.34	3.0	9.0	26	n/a	0.41
	1	1.42			334	1335	0.68
	2	1.50			444	1776	0.95
1 1/4	0	1.66	3.5	10.0	16	n/a	0.71
	1	1.74			306	1225	1.15
	2	1.82			407	1629	1.59
1 1/2	0	1.89	4.0	10.0	15	n/a	0.93
	1	1.96			297	1187	1.47
	2	2.03			395	1579	2.01
2	0	2.48	6.0	11.0	10	n/a	1.00
	1	2.57			210	840	1.62
	2	2.66			279	1117	2.24
2 1/2	0	3.33	8.5	16.0	8	n/a	1.70
	1	3.45			194	775	2.68
	2	3.57			258	1031	3.66
3	0	3.89	10.0	20.0	5	n/a	2.10
	1	4.01			166	665	3.30
	2	4.13			221	884	4.50

- The minimum bend radius is measured from the centerline of the hose
- The working pressure decreases with temperature - obtain derating factor on page 33 in Technical Information

**In order to receive your hose quote, please provide:**

**1st End Connection required**

**2nd End Connection required**

**Series of Hose required**

**Inside Diameter of Hose required**

**Length of Hose required(including installed fittings)**

**Number of Overbraids required(0, 1 or 2)**

**Western Valve and Fitting, Inc.**  
**4355 Technology Drive, Unit G**  
**Livermore, CA. 94551**  
**925-443-8500**

[info@westernvalveandfitting.com](mailto:info@westernvalveandfitting.com)