



**HIGH PERFORMANCE ANNULAR CORRUGATED STAINLESS FLEXIBLE METAL HOSE**

- U.S. Manufactured
- Minimum Effort to Flex or Bend Hose
- Stainless Steel Braided Hose Provides for Thermal Growth Absorption
- Aids as a Vibration Isolator & Help Correct Misalignment
- Suitable for Air Compressors and Vacuum Pumps (Rated for Full Vacuum)
- Maximum Working Temperature 1500 F
- 321 Stainless Steel Hose
- Other Materials Available: SS Braided Teflon, and Bronze
- Consult Midwest Control for Custom Hoses and Pricing

<b>Carbon Steel Male Threaded Ends</b>		
<b>NPT (In)</b>	<b>Part No. 12" Long</b>	<b>Part No. 18" Long</b>
1/2	HCS-5012	HCS-5018
3/4	HCS-7512	HCS-7518
1	HCS-1012	HCS-1018
1-1/4	HCS-1212	HCS-1218
1-1/2	HCS-1512	HCS-1518
2	HCS-2012	HCS-2018
2-1/2	HCS-2512	HCS-2518
3	HCS-3012	HCS-3018
<b>Stainless Steel Male Threaded Ends</b>		
<b>NPT (In)</b>	<b>Part No.</b>	<b>Part No. 18" Long</b>
1/2	HSS-5012	HSS-5018
3/4	HSS-7512	HSS-7518
1	HSS-1012	HSS-1018
1-1/4	HSS-1212	HSS-1218
1-1/2	HSS-1512	HSS-1518
2	HSS-2012	HSS-2018
2-1/2	HSS-2512	HSS-2518
3	HSS-3012	HSS-3018
<b>Carbon Steel 150# Raised Face Flanges</b>		
<b>NPT (In)</b>	<b>Part No.</b>	
2 X 9	HFCS-2009	
2-1/2 X 9	HFCS-2509	
3 X 9	HFCS-3009	
4 X 9	HFCS-4009	
5 X 11	HFCS-5011	
6 X 11	HFCS-6011	
8 X 11	HFCS-8012	

SEE OTHER SIDE FOR ADDITIONAL OPTIONS

TECHNICAL DATA

Flanged Flexible Connectors  
2" & 3" Flex Have 4 Bolt Holes  
4" & Larger Have 8 Bolt Holes

## Available Flex Hose Fittings



Male Threaded End  
Stainless Steel



Carbon Steel  
Union



Carbon Steel  
Hex Male End



150# Flange  
Stainless Steel



Carbon Steel  
Rigid Female



Carbon Steel JIC

## Technical Data

### Correction Factors for Elevated Temperatures

As the Operating Temperature of a Hose Assembly Increases the Working Pressure Decreases. Pressure Ratings are Valid at 70F. For Operating in Excess of 70F the Maximum Working Pressure must be Decreased According to the Correction Factor Chart Below.

- 1) Determine Maximum Operating Temperature
- 2) Located Appropriate Correction Factor on Chart
- 3) Multiply Correction Factor by Maximum Working Pressure at 70 PSIG for Desired Product

HCS and HSS Technical			HFCS Technical		
Size	Max Working Pressure 70 °F	Static Bend Radius (In)	Size	Max Working Pressure 70 °F	Static Bend Radius (In)
1/2	1186	1.5	2 X 9	674	5.1
3/4	898	2.1	2-1/2 X 9	625	6.8
1	718	2.7	3 X 9	519	7.8
1-1/4	645	3.1	4 X 9	448	9.8
1-1/2	531	3.9	5 X11	412	12.8
2	449	5.1	6 X11	315	14.8
2-1/2	417	6.8	8 X12	212	20.0
3	346	7.8			

Temp.F	Material SS	Temp.F	Material SS	Temp. F	Material SS
70°	1	450	.81	1100	.58
150°	.97	500	.78	1200	.55
200°	.94	600	.74	1300	.50
250°	.92	700	.70	1400	.44
300°	.88	800	.66	1500	.40
350°	.86	900	.62		
400°	.86	1000	.60		

## FLEXIBLE HOSE PRECAUTIONS

A Flexible Hose Has a Finite Life Which is Often Difficult to Predict Due to Countless Factors. We Suggest Hoses Be Inspected for Signs of Wear Every 6 Months and Replaced Annually. In Critical Applications or Applications Where the Hose is Carrying a Dangerous Media, We Suggest the Hose be Inspected and Replaced More Frequently.

### Signs of Wear Include But Are Not Limited to the Following

- Broken Wires, Over Bending of the Assembly (Bending the Hose Below the Bend Radius)
- Corrosion
- Bulging or Loose Braid On the Hose
- Abrasion
- Torsion (Twisting of the Flex Hose Assembly)

### The Following Should Not to Be Done When Installing a Hose Assembly

- Do Not Apply a Wrench to Any Part of the Hose Except the Fitting. The Braid Sleeve is Not Part of the Fitting !
- Do Not Torque (Twist) the Hose Assembly During Installation. The Hose Should Not Be Torqued When In Service.
- Do Not Over Bend a Hose. Do Not Bend a Hose Below Its Recommended Bend Radius. Tip — If the Braid Is Not Tight on the Hose it's Most Likely Over Bent or Installed Improperly.
- Do Not Allow the Hose to Rub Against Other Objects. Don't Let the Hose Wear Against Objects Which Could Wear Thru the Braid and Inner Hose Causing a Leak Over Time. Examples Are Concrete or Metal Structures.
- Do Not Stretch Or Compress Hose When Installing to Make it Fit an Installation.
- Do Not Think Because a Hose is Made of Metal It is Indestructible. Quite the Opposition is True. Metal is Subject to Fatigue When Over Stressed. A Metal Hose is No Different.
- Do Not Allow the Metal Hose Assembly to be Exposed to Shock ( A Sudden Rise In Pressure).

### Important Things to Do When Installing a Hose

- Do Make Sure the Hose is the Proper Length to Fit the Installation.
- Do Make Sure the Hose is Installed in Such a Manner That it Can Be Easily Be Removed for Routine Maintenance.
- Do Make Sure the Pressure Rating of the Hose Exceeds the Needs of Your Application.
- Do Make Sure the Hose is Not Bent Below the Radius Given on the Hose Charts.
- Do Make Sure the Bend is Spread Out Over the Length of the Hose Not in Just One Concentrated Area.
- Do Use Common Sense When Installing a Metal Hose. No Sharp Bends. If in Doubt About some Aspect of Your Application, Call Midwest Control 800- 304-5599.