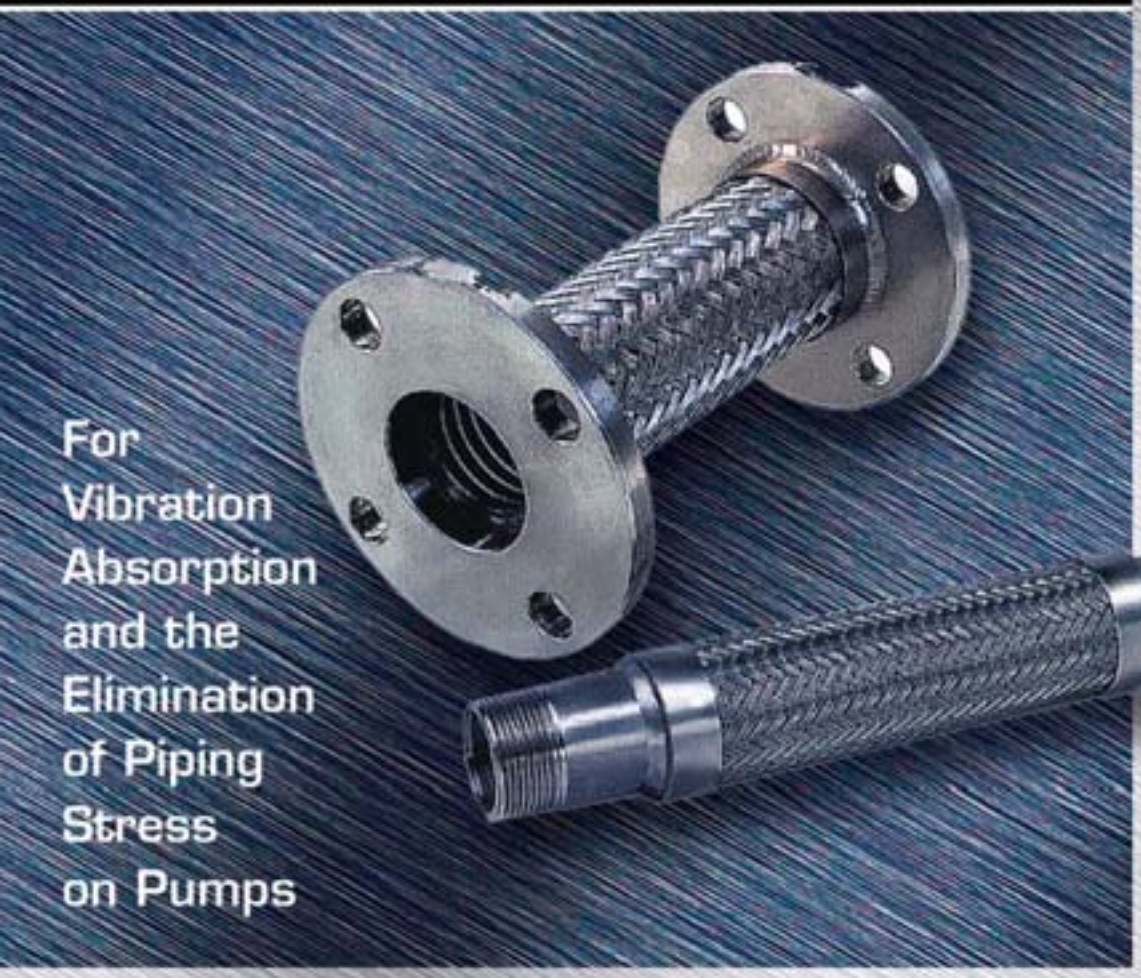
Flexible Pump Connectors



For Vibration Absorption and the Elimination of Piping Stress on Pumps

NEW

CRN & CGA APPROVED ASSEMBLIES,

CONNECTALL Braided Flexible Pump Connectors are constructed of stainless steel annular corrugated metal hose surrounded with a heavy duty woven wire braid of high tensile stainless steel. This combination provides a highly flexible unit (with a longer service life than lighter duty type connectors) which has high pressure and temperature capability that can absorb pump vibration and noise, accept thermal expansion and reduce piping stress due to minor misalignment and pressure variations.

The reduction of stress on your pumps and compressor housings can greatly reduce your long term operation and maintenance costs.

Standard end fittings for connectors include carbon steel male nipples for sizes 1/2" through 2". Sizes 2-1/2" and larger have forged steel weld neck or slip on flanges with ASA 150# bolt hole patterns. Other fittings are available on request.

CONNECTALL

Visit our web site at: www.connectallltd.com

Bronze Braided Connectors, Copper Weld Ends

STYLE BB-09					
Nom. Dia. & Overall length (inch)	Maximum Offset		Maximum Working Pressure (psig)		
	Intermittent	Static	@ 70 °F	@250 °F	@ 400 °F
1/2 x 12	3/8”	3/4”	600	516	450
3/4 x 12	1/4”	1/2”	495	426	371
1 x 12	1/4”	1/2”	420	361	315
1-1/4 x 12	1/4”	1/2”	320	275	250
1-1/2 x 12	1/4”	1/2”	300	260	235
2 x 12	1/4”	1/2”	290	250	225
2-1/2 x 14	1/4”	3/8”	245	210	190
3 x 14	1/4”	3/8”	175	150	135
Copper weld ends					

Weld end connectors are also available
in stainless steel, with steel or stainless steel ends.

Bronze Braided Connectors, Steel Male NPT Ends

STYLE BB-19					
Nom. Dia. & Overall length (inch)	Maximum Offset		Maximum Working Pressure (psig)		
	Intermittent	Static	@ 70 °F	@250 °F	@ 400 °F
1/2 x 12	3/8”	3/4”	600	516	450
3/4 x 12	1/4”	1/2”	525	450	410
1 x 12	1/4”	1/2”	425	365	330
1-1/4 x 12	1/4”	1/2”	320	275	250
1-1/2 x 12	1/4”	1/2”	300	260	235
2 x 12	1/4”	1/2”	290	250	225
2-1/2 x 14	1/4”	1/2”	245	210	190
3 x 14	1/4”	1/2”	175	150	135
Steel male NPT nipples					

Flexible connectors must be anchored at the outboard end so as to contain vibration within the connector, and prevent mechanical noises from being transmitted into the piping system. To increase the life of the flexible connector torsional stresses must be avoided. Companion bolt holes should be in perfect alignment and "torque" must be avoided when connecting to a threaded line.

Standard Male Threaded Connectors

STYLE - 19					
Nom. Dia. & Overall length (inch)	Maximum offset		Maximum Working Pressure (psig)		
	Intermittent	Static	@ 70 °F	@250 °F	@ 400 °F
1/2 x 12	3/8”	3/4”	600	575	445
3/4 x 12	1/4”	1/2”	600	575	445
1 x 12	1/4”	1/2”	570	490	445
1-1/4 x 12	1/4”	1/2”	530	455	415
1-1/2 x 12	1/4”	1/2”	475	410	370
2 x 12	1/4”	1/2”	520	450	405
2-1/2 x 14	1/4”	3/8”	390	335	305
3 x 14	1/4”	3/8”	320	275	250
4 x 18	1/4”	3/8”	230	200	180
5 x 18	1/8”	3/8”	190	165	150
6 x 18	1/8”	3/8”	135	120	105
Steel male NPT nipples					

Also available with steel hex male nipple up to 2" diameter.

Standard Flanged Connectors

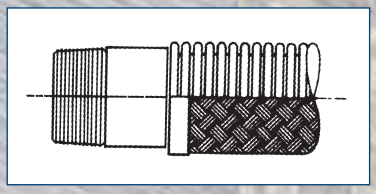
STYLE - T1 plate flanged

STYLE - A1					
Nom. Dia. & Overall length (inch)	Maximum offset		Maximum Working Pressure (psig)		
	Intermittent	Static	@ 70 °F	@250 °F	@ 400 °F
1/2 x 12	3/16”	1/2”	275	253	204
1-1/4 x 12	1/8”	1/2”	275	253	204
1-1/4 x 12	1/8”	3/8”	275	253	204
2 x 12	1/16”	1/4”	275	253	204
2-1/2 x 12	1/16”	1/8”	275	253	204
3 x 12	1/16”	1/8”	275	253	204
4 x 15	1/16”	3/16”	230	200	180
5 x 18	1/16”	1/8”	190	165	150
6 x 18	1/16”	3/16”	135	120	105
8 x 18	1/16”	1/8”	235	205	185
10 x 18	1/16”	1/8”	230	200	180
12 x 18	1/16”	1/8”	160	140	125
150# Forged steel weld neck flanges					

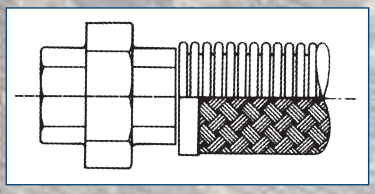
Also available with fixed or floating slip-on flanges.

End fittings are also available in type 304 and 316 stainless steel.

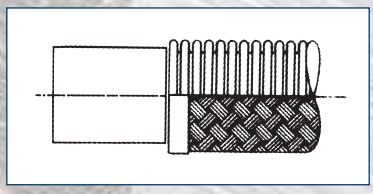
Fittings for CONNECTALL Corrugated Metal Hose



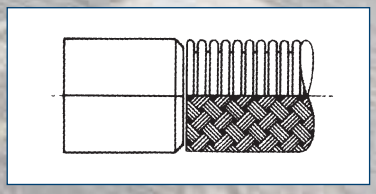
Male nipple
Steel - **19**
316 Stainless - **21**



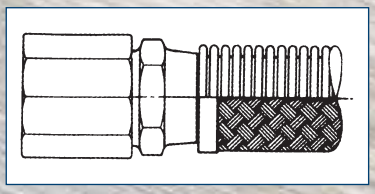
Female union
Steel - **42**
316 Stainless - **43**



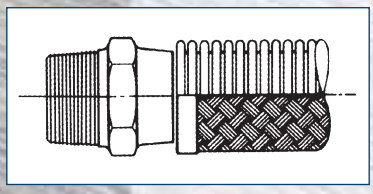
Weld nipple
Steel - **01**
316 Stainless - **06**



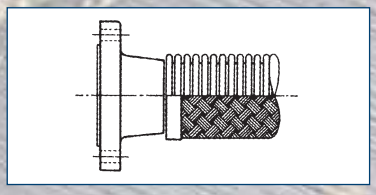
Female half coupling
Steel - **36**
316 Stainless - **37**



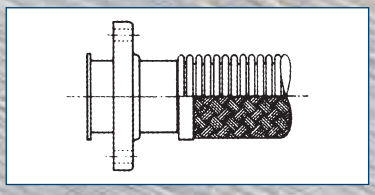
Female JIC swivel
Steel - **50**
316 Stainless - **51**



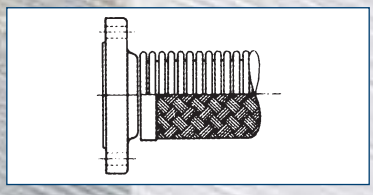
Male hex nipple
Steel - **30**
316 Stainless - **31**



Weld neck flange
Steel - **A1**
316 Stainless - **A6**



Floating flange
Steel - **J1**
316 Stainless - **J6**

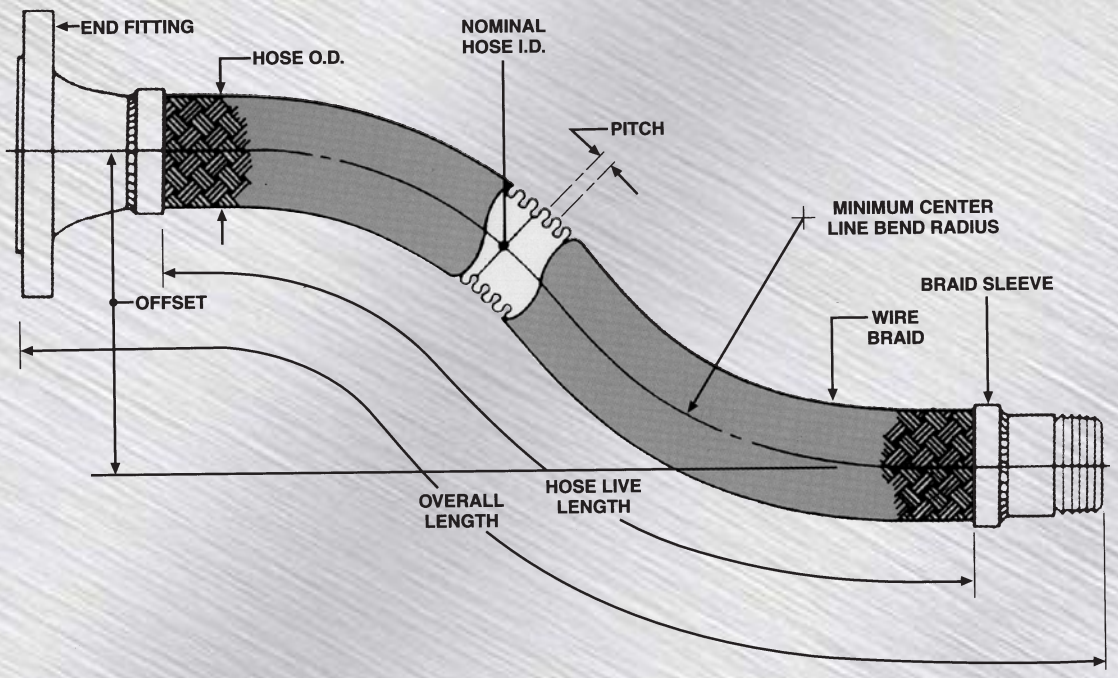


Slip on flange
Steel - **B1**
316 Stainless - **B6**

* Many more fitting styles also available from stock.

Selection for fittings can be made of any material compatible with the hose and media.

CONNECTALL Metal Hose Terminology



Definition of Terms:

Pressures

Maximum Working Pressure. The maximum operating pressure to which a hose assembly should be subjected. It is normally computed at 25% of the design burst pressure.

Maximum Test Pressure. The maximum pressure to which a hose should be subjected without harmful deformation. Normally computed at 150% of the working pressure.

Burst Pressure. The pressure at which the hose can be expected to fail. Computed based upon installation in a straight line at room temperature.

Shock and Pulsating Pressure. Where shock or repetative pulsating pressures exist. The maximum allowed pressure shall not exceed 50% of the normal working pressure.

Pressure Drop. As a standard simplification, pressure drop through a corrugated metal hose could average three times that of a steel pipe depending upon flow rate.

Flow Velocity. When the flow velocity exceeds 50 ft./second liquid, 100 ft./second gas, in unbraided hose; or 75 ft./second liquid, 150 ft./second gas in braided hose, an interlock liner should be used. The use of this liner will increase the service life of the assembly by reducing harmful resonance.

Motions

Vibration. The vibration normally encountered in industrial applications.

Discharge lines on pumps and compressors along with diesel engine exhaust are typical vibration applications.

Random. Uncontrolled motion such as experienced by manual handling.

Continuous Flexing. A controlled cyclical motion based on a constant amount of travel.

Intermittent Flexing. Motion that occurs either regularly or irregularly along a path of full travel.

Key Installation Recommendations

- **Avoid hose twisting**
- **Prevent out-of-plane flexing**
- **Respect bend radius**
- **Always support piping**