Flexible Metal Hose

Stainless Steel Flexible Hose

Applications

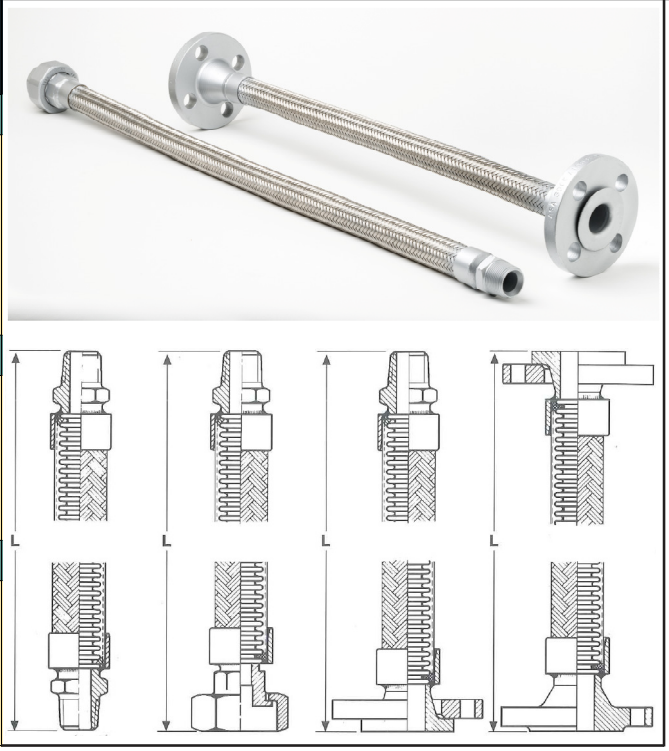
Johnson-Fluiten flexible hose has been engineered for use as inlet and outlet connections to Johnson-Fluiten rotary joints. It prevents pipe strains from creating tension or stress on the rotary joint, and does not restrict the rotary joint's built-in flexibility.

Features

Parallel convolution Stainless steel AISI321
Braided hose AISI304
Threaded and flanged couplings
Custom configurations available on request
Sizes range from 1/4" to 8"

Benefits

Reduces stress on rotary joints and internal components
Provides flexibility during installation and operation
Prevents pipe strain



Flexible hose

Johnson-Fluiten flexible hose is available in sizes from 1/4" to 8"; couplings are threaded, flanged, or in combination.
The table below lists the recommended minimum lengths and bend radius for each size.
Other lengths and connections can be furnished according to the application.

PIPE SIZE		STANDARD LENGHTS	MINIMUM LENGHT	BEND RADIUS
Inches	mm	mm	mm	mm
3/8"	DN10	400 - 500	305	55
1/2"	DN15	400 – 500 - 600	305	65
3/4"	DN20	400 – 500 - 600	305	105
1"	DN25	500 – 600 - 800	380	120
1-1/4"	DN32	400 – 500 - 600	455	140
1-1/2"	DN40	500 – 800 - 900	455	160
2"	DN50	500 – 800 - 1000	530	210
2-1/2"	DN65	500 - 1000	560	250
3"	DN80	500 - 1000	610	310
4"	DN100	500 - 1000	710	

How to order

Letters and numbers identify all details of size and construction. The example below will explain.

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Product	**Size**	**Lenght**	**First coupling**	**Second coupling**	**Special**
Flexible hose	10=3/8" 12=1/2" 20= 3/4" 25 = 1" 32=1-1/4" 40 =1-1/2" 50 = 2"	mm	1 = fixed male 2 = female 3= DN flange	1 = fixed male 2 = female 3= DN flange	All connections and configurations different than standard

JOHNSON-FLUITEN

FLEXIBLE HOSE

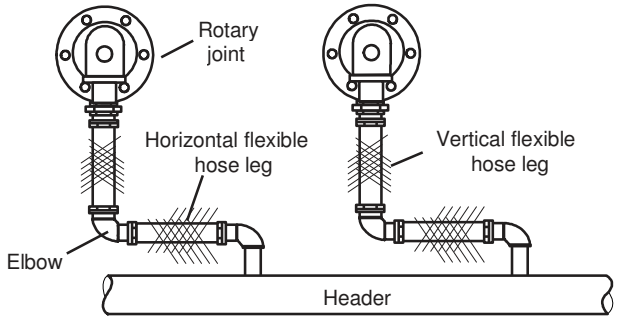

Figure 1

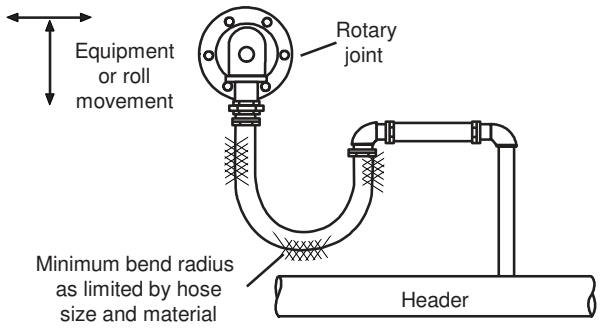

Figure 2

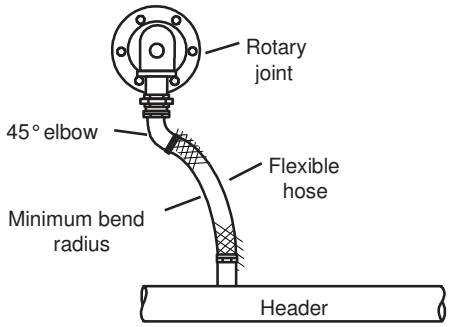

Figure 3

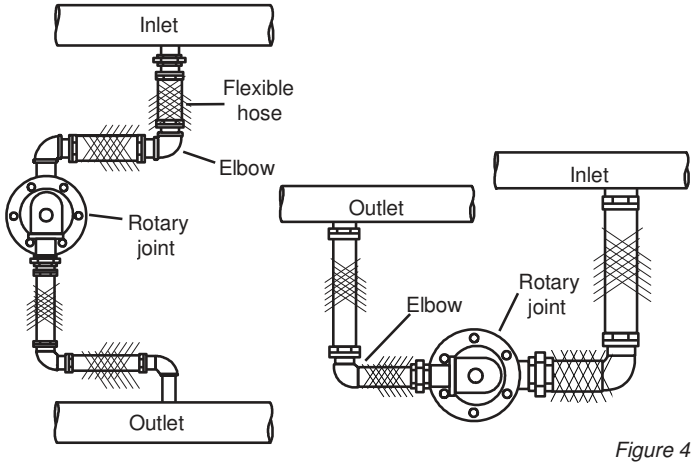

Figure 4

Flexible hose piping recommendations for rotary joints and rotating unions

1. Flexible metal hose should be attached directly to the rotary joint between fixed piping and rotary joint.
2. Piping must be supported independent of the rotary joint. Do not support piping with rotary joint.
3. Flexible hose is used to minimize piping loads due to thermal expansion of piping or process equipment. Also when equipment moves or vibration is present, the flexible hose absorbs this motion with minimal effect on rotary joint.

Examples of flexible hose installations

Figure 1 – The vertical piece of hose allows for header expansion and misalignment of header connection relative to rotary joint connection. The horizontal leg of flexible hose allows for thermal and hydraulic expansion of vertical hose leg without exerting large forces on rotary joint or rotating union.

Figure 2 – This method provides flexibility of hose length, piping and roll movement vertical or horizontal. Generally the hose must be much longer than needed for Figure 1 due to the minimum bend radius allowable, which is dependent on size and material of hose and amount of equipment movement.

This method is only recommended for ball bearing joints
where axial movement of rotary joint is not present. If rotary joint moves axially, a torsional stress is built up in the hose thus shortening the hose life.

Figure 3 – An example of using a single piece of hose which requires sufficient hose length to stay within the minimum bend radius of the specified hose size and material. This arrangement minimizes hydraulic loads developed by the hose caused from length and space tolerance.

Figure 4 – Recommended dual-flow arrangements.

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