KĀDANT
AN ACCENT ON INNOVATION

Flexible Metal Hose

Stainless Steel Flex Hose

Applications

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

Features

- *Stainless steel corrugated lining*
- *Threaded and flanged couplings*
- *Custom lengths available on request*
- *Sizes range from 1/4" to 8"*

Benefits

- *Engineered specifically for rotary joints*
- *Reduces stress on rotary joints and internal components*
- *Provides flexibility during installation and operation*
- *Prevents pipe strain*

Flexible hose helps prevent pipe strain by reducing tension and stress.

Flexible hose

Kadant Johnson flexible hose is available in sizes from 1/4" to 8"; couplings are threaded, flanged, or in combination. The construction is of 300 series stainless steel corrugated lining. The table below lists the recommended minimum lengths for each size, other lengths can be furnished according to the application.

PIPE SIZE		MINIMUM LENGTH	
inches	mm	inches	mm
¼	DN 6	8	200
⅜	DN 10	10	250
½	DN 15	10	250
¾	DN 20	12	305
1	DN 25	15	380
1 ¼	DN 32	18	455
1 ½	DN 40	18	455
2	DN 50	21	530
2 ½	DN 65	22	560
3	DN 80	24	610
4	DN 100	28	710
5	DN 125	30	760
6	DN 150	33	840
8	DN 200	36	915

FLEXIBLE HOSE

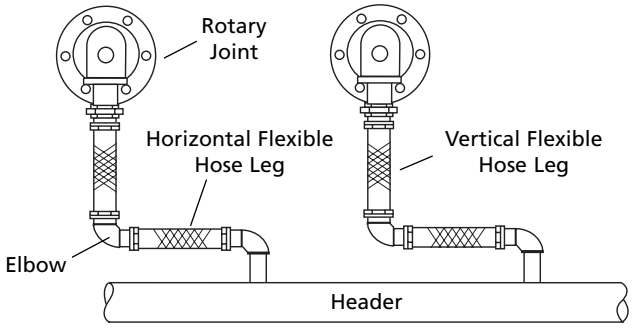

Figure 1

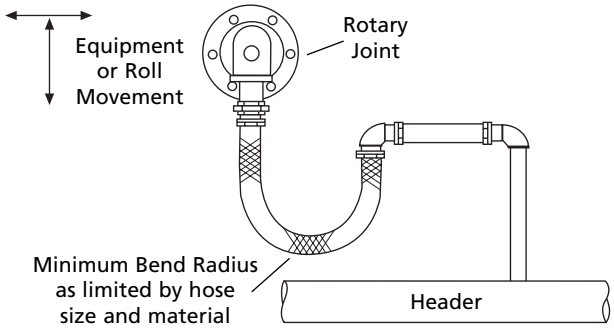

Figure 2

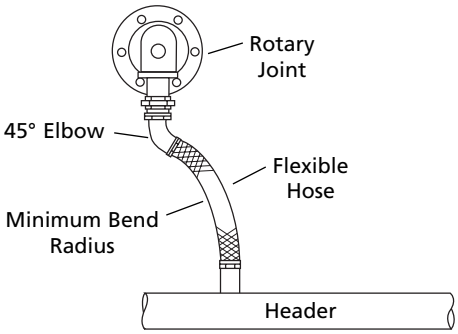

Figure 3

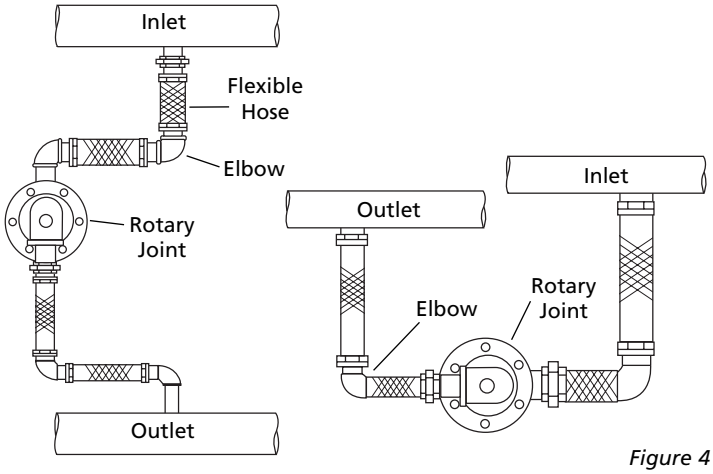

Figure 4

Flexible hose piping recommendations for rotary joints

1. Flexible metal hose should be attached directly to the 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 joint.

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 or internally compensated joints where axial movement of joint is not present. If 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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Kadant Johnson is a leading provider of rotary joints, rotary unions, and precision unions for efficient fluid handling in a range of industries.

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