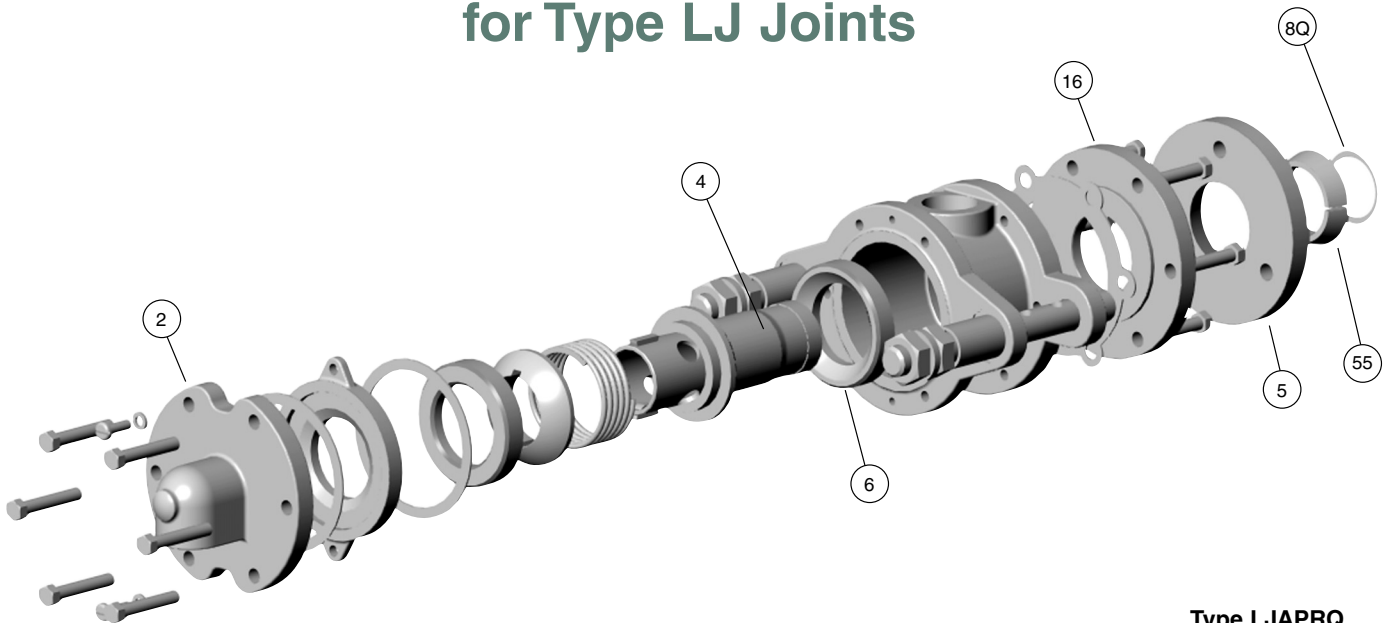


Installation Instructions for Type LJ Joints



Type LJAPRQ

NOTE: Please follow your company's safety procedures whenever working on Kadant Johnson Rotary Joints and read all of the instructions completely before proceeding.

Please refer to the assembly drawings supplied with your Kadant Johnson Rotary Joint for part identification. If you have any further questions, please contact your Representative or Kadant Johnson.

STEP 1.

Check to make sure that all core sand, dirt, weld beads, pipe turnings, metal dust and other foreign matter has been removed from the piping, roll, dryer or cylinder before installing joint. This will help eliminate carbon seal ring scoring and damage to internal joint parts which could cause unnecessary downtime and maintenance.

STEP 2.

Thread horizontal pipe into rotary joint head (2).

IMPORTANT: PIPE MUST BE STRAIGHT AND TRUE. THIS WILL PREVENT EXCESSIVE PIPE WEAR AND PIPE BREAKAGE.

STEP 3. For quick release style connections to your journal:

Place a new metal gasket (8Q) into the recess in the journal flange. Slide quick release nipple flange (5) over rotary joint nipple (4) with its taper facing outward. Place the two split taper wedges (55) into the recess of the nipple and slide the quick release flange over them to hold in place. Lift the joint up and slide nipple (4) into the journal flange recess and secure to the studs with nuts provided, tightening evenly. Note that the quick release nipple flange will not seat tightly against the face of the journal flange. When tight, there may be 3 – 5mm between the two flanges. Measure the gap to make sure it is even.

If the rotary joint has a threaded nipple (4) connection for attachment to your roll, simply thread it into the journal flange and proceed to Step 4.

STEP 4.

Using a suitable support, mount the rotary joint to it. Make sure components are in alignment. The rotating nipple (4) should be centered where it passes through wearing plate (16) of the joint. Gauge this clearance using a wire gauge as shown on Table 3. Most rotary joints have 3mm clearance at this location.

STEP 5.

Connect piping to joint using Kadant Johnson flexible metal hose. The hose(s) should be long enough so there is no binding or tension tending to move the joint off the journal centerline of the roll.

The joint must be reasonably free to move outward to compensate for carbon seal ring wear.

The recommended flexible metal hose length chart is Table 2.

IMPORTANT: CONNECT THE HOSE DIRECTLY TO THE JOINT. DO NOT USE FITTING AND PIPE, AS THIS INCREASED WEIGHT CAN AFFECT THE PERFORMANCE OF THE JOINT. PROVIDE SUITABLE SUPPORT FOR THE PIPE AND FITTING BEYOND THE HOSE.

NEVER APPLY OIL OR GREASE TO KADANT JOHNSON JOINTS. THE SATURATED STEAM, CONDENSATE OR LIQUID PASSING THROUGH IS THE ONLY LUBRICATION REQUIRED FOR THE CARBON-GRAPHITE PARTS.

MINIMIZE RUNNING KADANT JOHNSON JOINTS DRY. EXCESSIVE CARBON SEAL WEAR MAY OCCUR.

CAUTION

Check the rotary joint regularly to determine carbon seal ring wear. Should carbon seal ring (6) wear away completely, the metal nipple will wear into the joint body or wear plate, and eventually through it. This will result in significant leakage, creating a possibly hazardous condition, and will require replacement of the entire joint instead of just the seal rings. (Reference Table 1 for allowable seal ring wear).

PROCEDURE FOR DETERMINING CARBON SEAL RING WEAR.

STEP 1.

Measure from the face of the journal flange to the rotary joint (Dimension X) as shown on page 1.

STEP 2.

As the seal ring begins to wear the joint moves away from the roll journal end.

STEP 3.

Reference Table 1 and determining the seal wear allowable for your joint size.

STEP 4.

Add the Dimension found in Table 1 (Step 3) to Dimension X.

STEP 5.

As the seal ring wear takes place and the joint body begins to move away from the roll journal check Dimension X occasionally. When Dimension X equals the dimension found in Step 4 the carbon seal ring should be replaced.

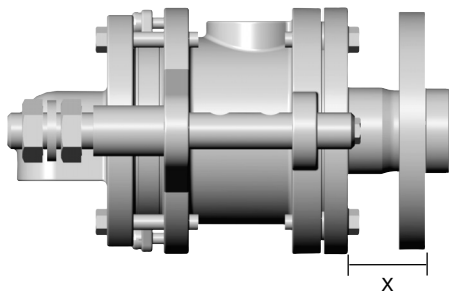


TABLE 1

Joint Size	Seal Wear (mm)
3/4"	6,5
1"	9,0
1-1/4"	10,2
1-1/2"	8,0
2"	9,0
2-1/2"	10,2
3"	11,1
3-1/2"	11,1
4"	14,3
5"	14,3
6"	11,1
7-1/2"	17,5
8"	20,6

TABLE 2

RECOMMENDED MINIMUM HOSE LENGTHS

Hose Size	Minimum Length (mm)
1/4"	200
3/8"	250
1/2"	250
3/4"	300
1"	380
1-1/4"	450
1-1/2"	450
2"	530
2-1/2"	610
3"	690

TABLE 3

ROTARY JOINT CLEARANCE RELATION CHART J-JOINTS

Size	A (Inboard) Nipple Wear Plate	Gauge Size	B (Outboard) Thrust Collar/ Assembly Plate	Gauge Size	C Sealing Ring/ Body ID
3/4" - 2200	1,60	0,80	2,40	1,60	1,60
1" - 2300	2,40	1,60	2,40	1,60	2,40
1-1/4" - 2400	1,60	0,80	2,40	1,60	3,20
1-1/2" - 2500	4,80	3,20	4,00	3,20	3,20
2" - 2550	3,20	2,40	3,20	2,40	4,80
2-1/2" - 2600	3,20	2,40	4,00	3,20	3,20
3" - 2700	3,20	2,40	3,20	2,40	3,20
3-1/2" - 2750	3,20	2,40	8,00	6,35	8,00
4" - 2800	6,35	4,80	6,35	4,80	6,35
5" - 950	12,70	9,50	11,10	9,50	12,70
6" - 1000	6,35	4,80	8,75	4,80	6,35
7-1/2" - 1075	3,20	2,40	12,70	11,10	6,35
8" - 1100	6,35	4,80	6,35	4,80	8,00

NOTES:

1. Dimensions are per side, not diameter.
2. 'A' is maximum offset allowable before interference of rotating parts and stationary parts will occur.
3. Maximum recommended eccentricity of joint nipple run-out in relation to joint body is $\pm 1/16$ T.I.R.
4. For Trunion driven dryers, vertical movement should be allowed for due to thermal expansion.
5. Centerline of support rods must be parallel with centerline of dryer journal $\pm 1^\circ$ during operation.
6. The above are rounded off to the nearest lower fraction and are meant for reference only. Actual dimensions should be obtained from Kadant Johnson Engineering Drawings.
7. Gauge clearance A & B with a welding rod gauge. You will have to remove head casting to check dimension B.

Dimensions are for reference only and subject to change. Certified drawings are available on request.

The Kadant Johnson Warranty

Kadant Johnson products are built to a high standard of quality. Performance is what you desire: that is what we provide. Kadant Johnson products are warranted against defects in materials and workmanship for a period of one year after date of shipment. It is expressly understood and agreed that the limit of Kadant Johnson's liability shall, at Kadant Johnson's sole option, be the repair or resupply of a like quantity of non-defective product.



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