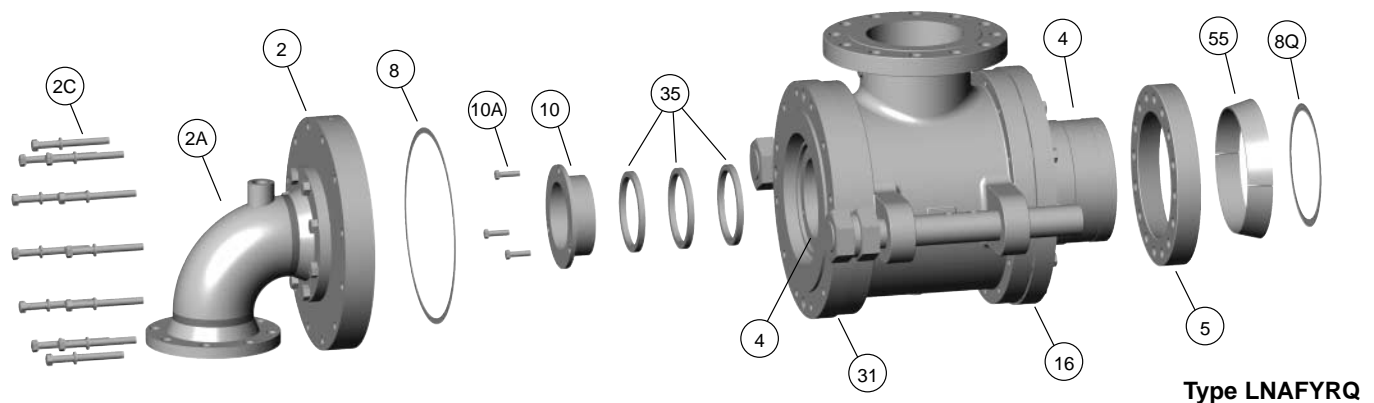


# Installation Instructions for Type 1150LN Joints



Type LNAFYRQ

**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 questions, please contact your Kadant Johnson Representative or Kadant Johnson.

## STEP 1.

Check to make sure that all debris has been removed from the piping, roll, dryer or cylinder before installing the joint. This will help eliminate carbon seal ring scoring and damage to internal joint parts which could cause unnecessary downtime and maintenance.

## STEP 2.

Loosen and remove the head flange bolts (2C), and remove the head flange (2) from the joint body (1) leaving the assembly plate (31) in position.

Remove the packing gland bolts (10A) and remove the packing gland (10) and packing (35).

Make sure the horizontal pipe is cleaned and smooth where is seals in the packing gland.

**IMPORTANT:** THE HORIZONTAL PIPE MUST BE STRAIGHT, TRUE AND ATTACHED WITHIN THE ROLL SO IT ROTATES WITHOUT WOBBLING. THIS WILL PREVENT STRAINING INTERNAL JOINT PARTS WHICH COULD CAUSE IT TO LEAK AND THE CARBON SEAL RINGS TO BREAK.

## STEP 3.

Place a new copper gasket (8Q) into the recess of the journal flange.

## STEP 4.

Slide the quick release nipple flange (5) onto the rotary joint nipple (4) with its taper facing outward.

## STEP 5.

Slide the joint over the horizontal pipe, being careful when the pipe passes through the opening in the nipple (4), do not damage either part. The horizontal pipe should extend beyond the packing gland approximately 3/8".

## STEP 6.

Place the two split taper wedges (55) into the recess of the nipple (4). Slide the quick release nipple flange over the wedges and secure to the journal flange studs with the nuts provided. **Note:** The quick release nipple flange will not seat tightly against the face of the journal flange. When tight, there will be approximately 1/8" to 3/16" gap between the flanges. Measure the gap in several places to make sure the flange is tightened evenly.

**IMPORTANT:** THE ROTARY JOINT MUST BE FREE TO MOVE OUTWARD ALONG THE PIPE TO COMPENSATE FOR CARBON SEAL RING WEAR.

## STEP 7.

Reinstall the packing (35) around the horizontal pipe protruding from nipple. Install the packing gland (10) and bolts (10A). Tighten the bolts evenly to 30 ft-lbs. Install safety wire through bolts if equipped.

## STEP 8.

Using a suitable support, mount the rotary joint. Make sure components are in alignment, and that the rotating nipple is aligned squarely with the wear plate. If necessary, loosen supports and re-align joint. Check for clearance at two locations: between the nipple (4) and wear plate (16) and between the nipple (4) and assembly plate (31). The nipple should be centered in the wear plate and centered in the assembly plate. The clearance should be 1/4" (+/- .060") around the entire circumference of the parts in each location.

## STEP 9.

Reattach the head flange (2) to the joint, using a new gasket (8) between the head flange and assembly plate (31). Tighten bolts to 60 ft-lbs.

## STEP 10.

Connect piping to joint using 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 free to move outward to compensate for seal ring wear. When a flanged hose is used, spool pieces in place of the hose are recommended for fabrication purposes. See Table 1 for recommended minimum hose lengths.

**IMPORTANT:** CONNECT THE HOSE AS CLOSE TO THE JOINT AS POSSIBLE. MINIMIZE THE USE OF FITTINGS 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 THIS SERIES OF 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.**

**PROCEDURE FOR DETERMINING CARBON SEAL RING WEAR.**

**STEP 1.**

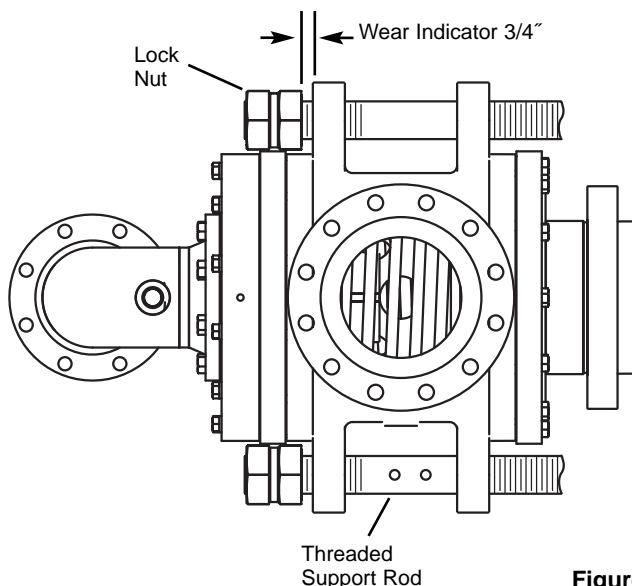
The LN rod-supported rotary joint allows for the use of hex nuts on each support rod to provide a visual seal ring wear indicator. See Figure 1.

**STEP 2.**

Set the location of the hex nut such that the wear indicator distance is 0.75". Using a lock washer and second hex nut, tighten the hex nuts in place. Measure the wear indicator distance again to confirm the measurement is 0.75".

**STEP 3.**

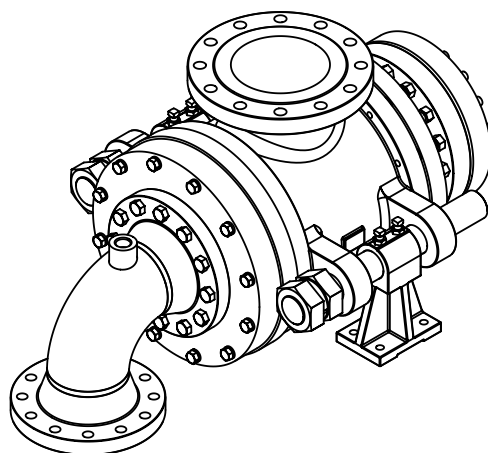
As the seal ring wears, the rotary joint assembly will move away from the roll to compensate for seal wear. When the rotary joint lug reaches the hex nut, it will no longer be able to move away from the roll, and any additional seal wear will result in a minor steam leak from the back of the rotary joint. When the rotary joint lug reaches the hex nut, the carbon seal ring should be replaced.



**Figure 1**

**TABLE 1  
RECOMMENDED MINIMUM HOSE LENGTHS**

Hose Size	Minimum Length
4"	28"
5"	30"
6"	33"
8"	36"



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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