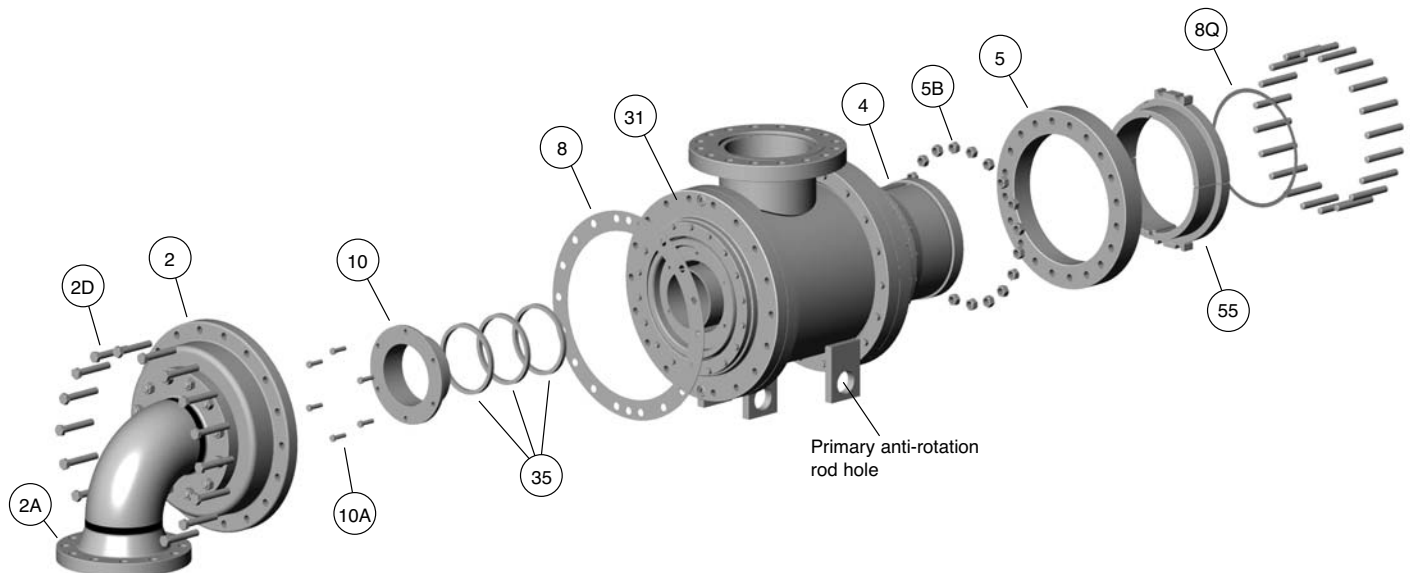


Installation Instructions for Type 1400ELSN Joints



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 Representative or Kadant Johnson.

STEP 1.

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

STEP 2.

Remove the elbow and head assembly (2A and 2) from the joint. Leave the assembly plate (31) attached. Remove packing gland (10), lock wire and bolts (10A) and packing (35).

Make sure the pipe is clean and smooth where it seals in the packing gland.

IMPORTANT: THE HORIZONTAL PIPE MUST BE STRAIGHT, TRUE AND ATTACHED WITHIN THE ROLL SO IT ROTATES WITHOUT RUN-OUT.

STEP 3.

Slide the quick release nipple flange (5) onto the rotary joint nipple (4). Place the two split rings (55) into the recess of the nipple and slide the quick release nipple flange over the split rings.

STEP 4.

Place a new metal gasket (8Q) into the counterbore of the journal flange.

STEP 5.

Slide the joint over the horizontal pipe, being careful when the pipe passes through the opening in the end of the nipple. The end of the horizontal pipe should extend 3/8" past the packing gland (10) when properly positioned.

STEP 6.

Secure the quick release nipple flange (5) to the journal flange studs with nuts (5B) provided. Tighten evenly.

Note: The quick release nipple flange (5) will not seat tightly against the face of the journal flange. When tight there will be approximately a 1.55" to 1.60" space between the flanges. Make sure this gap is equal around the circumference of the flanges.

STEP 7.

Reinstall the packing (35), packing gland (10) and bolts (10A). Tighten bolts (10A) to 30 ft-lbs and install lock wire.

STEP 8.

Make sure gasket (8) is in position between the body (1) and head assembly (2 and 2A). Install head (2) and elbow assembly (2A) over gasket and secure into position using bolts (2D).

Tighten bolts evenly using a star pattern and proper torque. Please refer to Kadant Johnson Drawing Number A37640 for recommended torque specifications.

STEP 9.

Connect piping to joint using Kadant Johnson stainless steel flexible metal hose. The hose(s) should be long enough so no binding or tension will move the joint off the journal centerline. The joint must be free to move outward to compensate for seal ring wear. (See recommended flexible metal hose length chart in Table 2).

IMPORTANT: CONNECT THE HOSE AS CLOSE TO THE JOINT AS POSSIBLE. MINIMIZE THE USE OF FITTINGS AND PIPE. THIS INCREASED WEIGHT CAN AFFECT THE PERFORMANCE OF THE JOINT. PROVIDE SUITABLE SUPPORT FOR THE PIPE AND FITTING BEYOND THE HOSE.

STEP 10.

Install anti-rotation rod in the anti-rotation rod hole. No more than two joints should be joined with one anti-rotation rod. Secure the rod to the rod hole of one joint and let it float in the second joint. This will absorb the torque generated by the joint, and prevent premature hose failure by reducing stresses.

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.

CAUTION

Check the rotary joint regularly to determine seal ring wear. As shown in Figure 1, the shoulder on the nipple will move outward as seal ring wear takes place. Should the seal ring (6) wear away completely, the metal nipple (4) can contact the joint body (1) and the wear plate (16), eventually wearing through it. This will result in a significant leak and create a hazardous condition. Metal to metal contact of these parts may require replacement of the entire joint instead of just the seal rings.

PROCEDURE FOR DETERMINING CARBON SEAL RING WEAR.

STEP 1.

Determine the location of a shoulder that is machined into the shaft of the rotary joint nipple (see Figure 1).

STEP 2.

Reference Table 1 for joint size. As the carbon seal ring begins to wear, the joint moves (due to pressure) away from cylinder.

STEP 3.

When the body moves out from the shoulder to meet the dimension found in Table 1, replace the carbon seal ring.

Dimensions and specifications are for reference only and subject to change. Certified drawings are available on request. Please refer to Kadant Johnson Drawing Number A37640 for torque specifications.

TABLE 1

Joint Size	Seal Wear
12"	1"

TABLE 2

RECOMMENDED MINIMUM HOSE LENGTHS

Hose Size	Minimum Length
8"	36"
10"	40"

TABLE 3

RECOMMENDED SIZES FOR ANTI-ROTATION RODS

Joint Size	Model Number	Rod Size Up To 250 psi (17 bar)
12"	1400	2.5" 4140 Steel Bar

For pressures over 150 psi, two anti-torque rods are recommended.

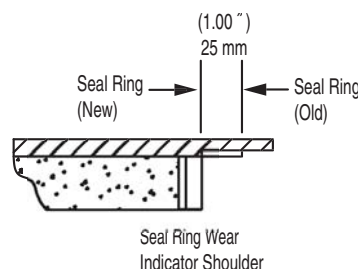


Figure 1

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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