Installation Instructions for Type 9750 PTX™ Rotary Joints

Follow your company's safety procedures whenever working on Kadant Johnson products. Read all of the instructions before proceeding with installation or repair.

Please refer to the Kadant Johnson assembly drawing for part identification. Assembly drawings are available on request from Kadant Johnson.

Tighten all fasteners in a star pattern. Torque specifications are listed on the product assembly drawing and are available from Kadant Johnson.

The 9750 PTX rotary joint is shipped partially assembled. Disassemble rotary joint, inventory and stage parts prior to installation.

STEP 1.
Remove all existing equipment down to a bare journal. Clean all gasket surfaces. Chase and clean all threaded holes. If necessary remove bearing cover. Note: Some installations may not require removing the bearing cover, please consult your factory representative if you have any questions.

STEP 2. (See Figure 1)
The rotary joints are supported by a ring bracket or a ring bracket and bearing cover supplied as individual parts.

1. **With ring bracket only.** Perform Step 3 first. Then install ring bracket (20). Secure into position using hex head cap screws (20C).

2. **With ring bracket and bearing cover supplied as individual parts.** Make sure the bearing cover is clean and free of debris. Apply sealer to the appropriate area of the machine's bearing housing. Slide the bearing cover over the journal and secure into position with the proper size bolts. Then perform Step 3. Install ring bracket (20) onto bearing cover and secure into position using hex head cap screws (20C).

STEP 3.
If an insulating sleeve is required, install it during this step following the instructions that came with the insulating sleeve. Place journal flange (5) and gasket (8B) onto journal. Secure into position using socket head cap screws (5A). Tighten flange screws evenly in a star pattern. In some cases it is necessary to install a filler flange also. If required, do so in the above manner.

STEP 4.
Place wear plate (16) and gasket (8A) onto journal flange. Secure into position using socket head cap screws (16A). Tighten wear plate screws evenly in a star pattern.

STEP 5.
Clean the spherical face of the wear plate (16), the flat face of the nipple (4), and the mating surfaces of the seal ring (6). These sealing surfaces must be free of debris, oil or other contaminants. Place seal ring (6) with its spherical face into the mating surface of the wear plate (16). While holding the seal ring in position, install the end cap assembly (4) onto the ring bracket and secure into position with four socket head cap screws (3C). As the socket head cap screws are tightened, spring force will be applied to the seal ring and the X dimension will be created. The X dimension is 0.5” ± 0.25” (12 ± 6 mm). When used with CARB bearings, contact Kadant Johnson for the proper X dimension. Make sure seal ring (6) is centered on the nipple (4). Please contact Kadant Johnson if the X dimension is incorrect or if the seal ring is not centered properly.

STEP 6. (See Figure 1)
There are two options for installing the cantilever support tube (H). In both options, the support tube must be installed so that the weld bead on the end of the support tube and indexing slot at the opposite end will be in the 12 o'clock position. The large hollow bolt (J) must be removed and the threads lubricated with never seize.
Option 1. If there is enough clearance between the dryer hood and the journal, you can install cantilever support tube (H) by inserting it through the partially assembled rotary joint and down the journal bore. The plain end of the tube without the taper goes into the journal first. Leave the tapered end of the tube protruding out of the end cap approximately 7” (178 mm). Lubricate the o-ring (26) with silicone lubricant and place it into the face groove on the rotary joint body (1). Apply never seize to the tapered portion on the cantilever support tube. Position the body over the cantilever support tube. Align the pins (10) in the body with the support tube indexing slots. Lift the body and support tube and position them over the studs (20A) on the ring bracket. Secure the body to the bracket with hex nuts (20B).

Option 2. Lubricate the o-ring (26) and place it into the face groove on the rotary joint body. Position the body over the studs (20A) on the ring bracket and secure into position with nuts (20B). Apply never seize to the tapered portion on the cantilever support tube (H). From inside the dryer, insert the cantilever support tube, with the tapered end going in first, into the journal. Align the pins (10) in the body with the support tube indexing slots and push into position.

STEP 7. Bend two lockwasher tabs into the holes in the body and install the lockwasher (I). Install the hollow bolt (J) into the syphon support tube and tighten the hollow bolt to 300 ft-lbs. Bend two lockwasher tabs over the bolt flats in a manner that will prevent the hollow bolt from loosening.

STEP 8. From inside the dryer. Lubricate the o-ring (K) with silicone o-ring lubricant. Slide pick-up fitting (A) onto the vertical syphon pipe (F). Slide the pick-up fitting, support bracket and vertical pipe, (A, E, F) assembly into the support tube until the end of the vertical pipe slides through the o-ring (K) and the support bracket fits over the end of the support tube. Secure the vertical syphon pipe to the support bracket using clamps (D) and nuts provided.

STEP 9. Final Bracket and Pick-up Foot Adjustment.

Make sure the support bracket (E) is vertical and the syphon pick-up fitting (A) is at the bottom of the dryer. The pick-up fitting must be pointed into the rotation of the dryer for proper condensate evacuation (see Figure 2). Adjust the circular portion of the support bracket so that it is 4” (102 mm) back from the end of the support tube, or if the dryer has groove in the shell, center the pick-up foot in the dryer groove. Tighten support bracket clamp bolts (L) to 50 ft-lbs. Set the pick-up fitting clearance by placing a gauge in the center of the pick-up fitting (contact Kadant Johnson for clearance specification). Secure into final position by tightening bolt/nut (B & C). If the desired pick-up fitting clearance can not be obtained, please contact Kadant Johnson.

STEP 10. Check all counter weights and make sure they clear the syphon assembly as the dryer rotates. If necessary, the support bracket can be moved away from the dryer head up to 4” (102 mm) by loosening support bracket clamp bolts and repositioning the bracket. Check the cantilever support tube for clearance through the journal. The cantilever support tube must have at least 3/16” (5 mm) clearance between its O.D. and the journal I.D.

STEP 11. Place gasket (8) onto head (2). Install head onto body (1) and secure into position with head bolts (2A). The Kadant Johnson rotary joint is now ready to accept piping.

Dimensions 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.

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.