Installation Instructions for Type 9750 PTX™ Rotary Joints with Air Adapter Plate

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.

Lubricate all fasteners with anti-seize compound. 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. 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 Kadant Johnson if you have any questions.

STEP 2.
Various methods are used to support the rotary joint. Most rotary joints are supported by either 1) a ring bracket, 2) an integral ring bracket and bearing cover, 3) a ring bracket and bearing cover supplied as individual parts. Refer to Figure 1.

1. With ring bracket only. Install ring bracket (20). Secure into position using hex head cap screws (20C).

2. With integral ring bracket and bearing cover. Make sure the inside bearing area of the cover is clean and free of debris. Apply sealer to the appropriate area of the machine's bearing housing. Slide the bracket/bearing cover unit over the journal and secure into position with the proper size bolts. Install ring bracket (20) onto bearing cover and secure into position using hex head cap screws (20C).

3. 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. Install ring bracket (20) onto bearing cover and secure into position using hex head cap screws (20C).

STEP 3.
Place gasket (8B) and filler flange (5) 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 second flange. If required, do so in the above manner.

STEP 4.
Place gasket (8A) and wear plate (16) onto filler flange (5). 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 the seal ring (6) spherical face into the mating surface of the wear plate (16). While holding the seal ring in position, install the end cap assembly (3) onto the ring bracket assembly 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˝ (13 ± 6 mm). Make sure seal ring (6) is centered on the nipple (4). Please consult factory if the X dimension is incorrect or if the seal ring is not centered properly. Refer to Figure 1.

STEP 6.
Lubricate o-ring (26A) and place it into the o-ring groove in the adapter plate (32). Position the air adapter plate over studs (1B) that protrude through the end cap assembly (3 and 4). Secure the O-ring with four socket head cap screws (16A).

INSTALLING THE SYPHON ASSEMBLY

Before installing the syphon assembly, make sure o-rings (A and B) are lubricated and in position. Refer to Figure 1.

STEP 7.
On a bench, orient the body (1) to predetermine the inlet connection's desired direction at final installation.
STEP 8.
Lubricate and install o-ring (26B) into face groove in body (1).

STEP 9.
Apply anti-seize compound to the tapered portion and on the end of the support tube (C) where it fits into the body (1). See Figure 2.

STEP 10.
Remove the large hollow bolt (D) and lock washer (E) from the syphon support tube assembly (A-G) and set aside. With the syphon elbow (F) closed, insert the syphon support tube assembly into the body (1) while aligning the pins in the body with the slots in the end of the support tube. Make sure the syphon foot (G) location is in the 6 o’clock position of the dryer after the body is installed. Apply anti-seize compound to the threads and re-install the large hollow bolt (D) and lock washer (E) and tighten by hand.

STEP 11.
Confirm the syphon foot (G) is pointed into the rotation of the dryer. See Figure 3. Make sure the syphon foot has the correct clearance between it and the shell.

STEP 12.
Slowly rotate the body (1) 180 degrees so the syphon elbow (F) will open. With the elbow open, slide the syphon and body assembly through the journal.

STEP 13.
After the syphon support tube assembly (A-G) is fully inserted into the journal, rotate the syphon and body assembly 180 degrees allowing the syphon elbow (F) to close. The pick-up foot (G) should be positioned at the bottom of the dryer (6 o’clock position) and the inlet connection in its proper orientation so the inlet piping can be connected.

STEP 14.
Place the body onto the studs (1B) and secure into position using the nuts (1C) provided.

STEP 15.
Tighten large hollow bolt (D) to 300 ft-lbs. Bend back two tabs on the lock-washer (C) to prevent the bolt from loosening.

STEP 16.
Note: Take care during this step so the o-rings (A and B) are not damaged. Apply thread sealer to the threads on the horizontal locking pipe (H). Lock the syphon elbow (F) into position by inserting the threaded end of the horizontal locking pipe through the large hollow bolt (D), past the o-rings and threading it into the syphon elbow. Make sure the horizontal locking pipe engages the syphon elbow correctly by tightening the pipe by hand. It should turn smoothly for several rotations, and then stop. After engagement, finish tightening the horizontal locking pipe by inserting a rod through the hole provided (J).

STEP 17.
Install head gasket (8) onto body (1).

STEP 18.
Install head (2) and secure with bolts (2A).
The rotary joint is now ready for piping. Install flex hoses on the inlet and outlet flanges as close to the rotary joint as possible.

Note: If the machine is running faster than 500 mpm (1600 fpm), connect a water line to the third hole in the air adapter plate (32). This connection lubricates the seal ring (6) during operation at higher speeds.

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.

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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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