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.

**NOTE:** Do not use anti-seize or petroleum-based products on O-rings. Only lubricate the O-rings with the silicone lubricant supplied with the Kadant Johnson repair kit. Prior to handling lubricants, consult MSDS information.

These instructions cover the installation of the Kadant Johnson ISSS Tripod Stationary Syphon System. The syphon assembly can be adapted to fit most of the Kadant Johnson rotary joints that utilize an assembly plate. If you are installing a new rotary joint assembly, the wedge plate (40) is factory installed. See Figure 1.

**STEP 1.**
Remove all existing equipment that is necessary for the installation. Further disassembly of the rotary joint and replacement of other internal rotary joint parts may be necessary if an existing rotary joint is being converted to accept an ISSS syphon. Please contact your representative or Kadant Johnson if you have any questions.

**STEP 2.**
Install related equipment onto the dryer journal. This could consist of an insulating sleeve, journal flange, and related gaskets.

**STEP 3.**
Install the rotary joint following the instructions that were supplied with it.

**INSIDE THE DRYER**

**STEP 4.**
Assembling the tripod. The three leg support is shipped in four pieces with the bolts (M10 x 40 mm, lock washer and nuts) in a bag tied to the center hub (9) and must be assembled inside the dryer.

The adjustable leg (6) with the spring has a letter stamped on the connection flange. The adjustable legs with the stub pipe (7 and 8) are also stamped on the flange with a letter designation. The three leg center hub (9) that holds the guides has a corresponding letter on the flange for each leg.

Assemble the adjustable legs (6, 7, and 8) to the center hub (9), matching the corresponding letters on the flange to each other. Secure with the fasteners provided.

**STEP 5.**
Install a retaining ring (10) in the center hub (9). Place guides (11) into the center hub and install remaining retaining ring (10), securing the guides. Refer to syphon assembly drawing for the amount of guides being used. See Figure 2.

**INITIAL POSITIONING OF THE SYPHON**

**STEP 6.**
Stand the tripod assembly up, positioning one of the tripod legs (7 or 8) without the spring at the bottom of the dryer.

**STEP 7.**
Carefully slide the horizontal pipe (99) through the guides (11) and the journal, engaging the O-rings (41) in the wedge plate (40). See Figure 1 and 2.

**STEP 8.**
Outside the dryer, make sure the horizontal pipe (99) sticks out from of the pressure plate (43) on the wedge plate (40) 1/2” (13 mm). See Figure 1.
CENTERING THE CENTER HUB INSIDE THE DRYER

STEP 9
Place a level on the horizontal pipe (99). Using the nuts, adjust the vertical tripod leg (7 or 8) until the horizontal pipe indicates that it is level. Check the vertical tripod leg, make sure it is plumb relative to the dryer head. See Figure 3.

STEP 10
Locate the tripod assembly so that there is 5/8” (16 mm) gap between the center hub (9) and the horizontal pipe flange (13). See Figure 1. Make sure the horizontal pipe still protrudes from the pressure plate (43) 1/2” (13 mm) on the rotary joint.

STEP 11
Adjust the legs (7 and 8) of the tripod so that the center hub (9) is as close to the center (axially) of the dryer as possible. Tighten the spring leg just enough to support the assembly.

STEP 12
Place O-ring (14) into horizontal pipe’s O-ring groove and install the condensate vertical leg assembly (15) securing it with the 10 mm bolts and lock washers (17) provided. Tighten bolts to 20 ft-lbs using a star pattern. Make sure the condensate pick-up fitting (16) is pointed into the rotation of the dryer. Consult factory for pick-up fitting clearance specifications. See Figure 4.

LOCATING THE CENTER HUB

STEP 12A
Slowly rotate the pick-up fitting (16) 360°, while checking the clearance in several locations as it is turned within the dryer. Adjust the tripod syphon legs (7 and 8) until the gap between the pick-up fitting and the dryer shell is equal (the gap may or may not be the original set-up). This will center the center hub of the syphon in the dryer.

STEP 13
Once the center hub (9) is in position, tighten the locking nuts (5) on the stubbed legs then run the second nut (4) next to it and tighten, locking the pressure plate in position. Tighten jam nut on the spring leg until it hits the weld stop, then run the second nut next to it and tighten, locking the spring into position.

STEP 14
Make sure the horizontal pipe (99) protrudes 1/2” (13 mm) past the pressure plate (43) on the rotary joint and that the 5/8” (16 mm) gap is maintained between the center hub (9) and the horizontal pipe flange (13). See Figure 1 and 2. These dimensions are critical, readjust tripod as required.

STEP 15
Position the condensate vertical leg (15) at the 6 o’clock position. Tighten the screws (45) on the pressure plate (40) to 8 ft-lbs (11 Nm). Tap pressure plate with a soft-faced hammer to seat split wedges. Then tighten screws evenly to 16 ft-lbs (22 Nm), securing the syphon assembly. Check the pick-up fitting (16) clearance, re-set it to the factory specified clearance. In some instances the syphon pick-up fitting will need to be offset 17 degrees from the 6 o’clock position. Please consult factory.

STEP 16
If the tripod assembly is going to be installed in other dryers, measure and record the distance from the pressure plate (15) on tripod leg (7 and 8) to flange interface (18) on the center hub (9). Setting the remaining tripod legs to this dimension should make positioning the center hub easier. The location of the center hub within all dryers still has to be confirmed. Please refer to step 12A.

Make sure all fasteners are tightened. This completes the tripod support assembly. Complete the rotary joint installation, following the installation instructions accompanying it.

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.

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