Installation Instructions for the 3000 SX® Rotary Joint

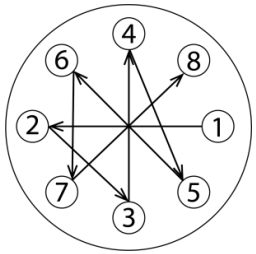
fluidhandling.kadant.com/en/knowledge-center/installation-and-repair-instructions/sx-snx-rotary-joint/installation-instructions-for-the-3000-sx-rotary-joint

Effective: June 1, 2021

Introduction

Read all of the instructions before proceeding.

Refer to Kadant Johnson assembly drawing for part identification and to drawing A37640 for torque specifications. For easy identification, parts used in individual steps are often accompanied with their position in the assembly drawing [e.g. gasket (8B)]. Tighten all fasteners in a star pattern. Certified drawings are available upon request. Dimensions are for reference only and subject to change.



Important: Minimize running Kadant Johnson steam joints dry. Excessive seal wear may occur. Rotary joints using thermal oil should be run dry for five minutes for break-in. Reference “Thermal Oil Rotary Joint - General Guidelines.”

Never apply oil or grease to Kadant Johnson rotary joints. The saturated steam, condensate, or liquid passing through it is the only lubrication required for the carbon-graphite parts.

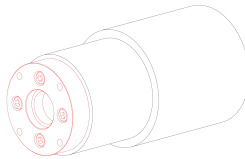
Safety

⚠ This safety symbol alerts you to risk of death or injury if the instructions are not followed. In all steps, death or injury may result if the machine is not de-energized, depressurized, cooled, and stopped. Death or injury may occur if the product is operated with a fluid type or at a pressure, temperature, or speed that do not meet its specifications. Death or injury may occur if heavy parts and pinch hazards are not handled properly. Follow your company’s safety procedures.

Step 1

Remove all debris from inside piping and roll.

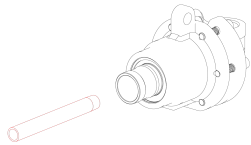
⚠ Equipment must be cooled and free of pressure.



Step 2

Thread the horizontal pipe into the rotary joint head. Check that the head is properly secured to the rotary joint.

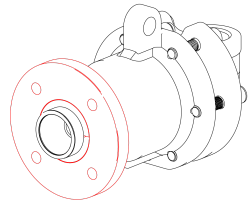
Important: Check the pipe is straight and true to prevent excess wear and breakage.



Step 3a, Quick release connection

(if you have a threaded connection proceed to Step 4)

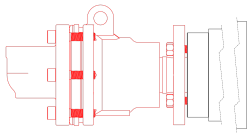
Slide the nipple flange over the rotary joint nipple with taper facing out. Place the split wedges into the recess of the nipple. Slide the quick release flange over the wedges.



Step 3B

Place metal gasket (8Q) into the journal flange. Lift rotary joint up and slide the nipple into the journal flange. Secure to studs with nuts. An even gap 1/8" to

3/16" (3 to 5 mm) should remain in between the journal flange and nipple flange.



Step 4, Threaded Connection

Thread nipple into journal.

Step 5

Connect piping to rotary joint using Kadant Johnson flexible metal hose.

Important: Refer to “Flexible Hose Installation.”

Recommended Minimum Hose Lengths	
Hose Size	Minimum Length
1/4"	8" (200 mm)
3/8"	10" (250 mm)
1/2"	10" (250 mm)
3/4"	12" (300 mm)
1"	15" (380 mm)
1-1/4"	18" (450 mm)
1-1/2'	18" (450 mm)
2"	21" (520 mm)
2-1/2"	24" (610 mm)
3"	27" (690 mm)

Step 6

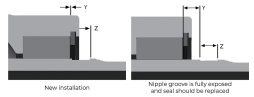
Install anti-rotation device.

Important: Refer to “Anti Rotation Rod Installation.”

Recommended Sizes for Anti-Rotation Rods			
Rotary Joint Size	Rotary Joint Number	Schedule 80 Pipe Size	Rod Diameter
3/4"	3200	1/8"	10 mm
1"	3300	1/8"	10 mm
1-1/4"	3400	1/4"	12 mm
1-1/2"	3500	3/8"	16 mm
2"	3550	1/2"	20 mm
2-1/2"	3600	1/2"	20 mm
3"	3700	3/4"	25 mm

Measuring Seal Ring Wear

Measure the width (Z) of the groove in the nipple. Measure the distance between the dry guide and the edge of the groove (Y). When they are equal (Z = Y) the seal ring is worn and should be replaced. Ring wear may be also be measured using the “X” dimension. Refer to “Measuring Seal Ring Wear.”



KĀDANT

IS-3000SX Rotary Joints-6

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 the 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.

Kadant Johnson Rotary joints and accessories are (could be) subject to European Pressure Equipment Directive 2014/68/EU (PED). Modifications or changes to the Rotary joints and/or accessories are only permitted upon approval of Kadant Johnson. Only genuine Kadant parts and original accessories will ensure the safety of these assemblies. The use of other than original parts voids the warranty and will lead to forfeiture of the declaration of conformity and will invalidate any liability for damages cause thereby.