



WNS Lowery
 2221 SE 69th St
 Oklahoma City, OK 73149
 (405) 677-7222

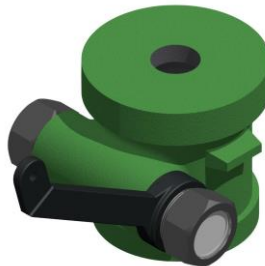
Model 302/302SG, Model 303/303SG, Model 403/403SG Rod Rotators

WNS Lowery has a full offering of Rod Rotators to ensure we have the perfect match for every application. The Rod Rotator is the one of the most critical products for reducing tubing, rod coupling, and packing wear and assisting on removing paraffin from inside the tubing. These rod rotators utilize a helical worm gear design to efficiently transfer the reciprocating action of the horse head to a rotational motion in the polished rod.

Specifications



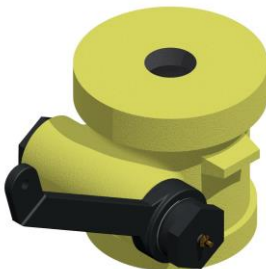
Model 302



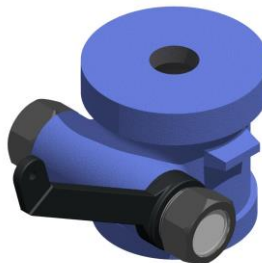
Model 303



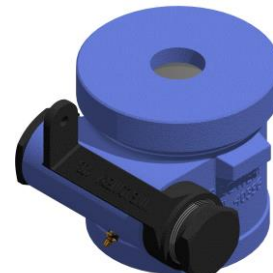
Model 403



Model 302SG



Model 303SG



Model 403SG

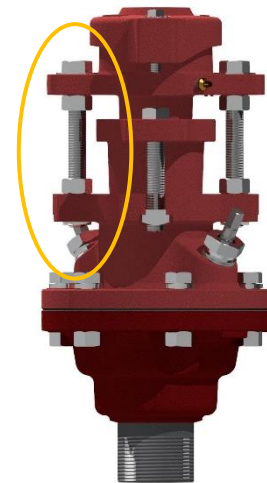
	Model 302/302SG	Model 303/303SG	Model 403/403SG
Maximum Recommended load	40,000 lb	40,000 lb	50,000 lb
Max Output Torque	240 ft/lb	240 ft/lb	240 ft/lb
Required Bridal Clearance Width	7 in	7 in	7 in
Polished Rod Sizes	1 1/8" thru 1 3/4"	1 1/8" thru 1 3/4"	1 1/8" thru 1 3/4"
Actuator Type	Ratchet Pawl	One-Way Bearing	One-Way Bearing
90° Level Pulls per Revolution	77/154	77/154	77/154
Body Material	Ductile Iron	Ductile Iron	Ductile Iron
Height	6.5 in	6.5 in	6.5 in
Weight	47 lb	49 lb	48 lb
Actuator Cable Length*	25'	25'	25'

*10' and 16' cable length available on request

Installation Instructions

Note: There are many different configurations of equipment used above carrier bars and in conjunction with rod rotators. These instructions only describe general procedures and may need to be modified depending on the specific equipment being installed. It is recommended that a leveling plate is installed between the pump-off controllers and the rod rotator to compensate for any horizontal misalignment. All WNS Lowery Rod Rotators will not operate without a load applied to the top of the cover cap, this is required to create internal friction between the cover cap and the worm gear.

1. All rod rotators are factory lubricated; no additional grease is required for the initial installation.
2. Stop the pumping unit at a position slightly above the lowest point on the down stroke. Engage the pump's brakes and any additional safety lock outs.
3. Install a temporary polish rod clamp to the polished rod slightly above the top of the stuffing box. CAUTION: Do not install the rod clamps on the polished rod liners.
 - a. If there is a Standard Style Stuffing Box installed on the well, secure the components of the stuffing box to ensure the weight of the polished rod does not damage the packing. To achieve this, thread the upper nuts, on the gland bolts, up to the underside of the upper lube gland and thread the lower nuts down to the body.
 - b. If a pulling unit or work over rig is on location, step 3.a is not necessary.
4. Once the temporary polished rod clamp is secured, release the pump's brake and slowly lower the rod string onto the stuffing box. Once the temporary polished rod clamp is resting on the stuffing box, the upper polished rod clamp will be able to rise above the carrier bar and any additional equipment.
5. Once the pump is at its lowest point, re-engage the brakes and safety lockouts and remove the polished rod clamp from onto of the carrier bar.

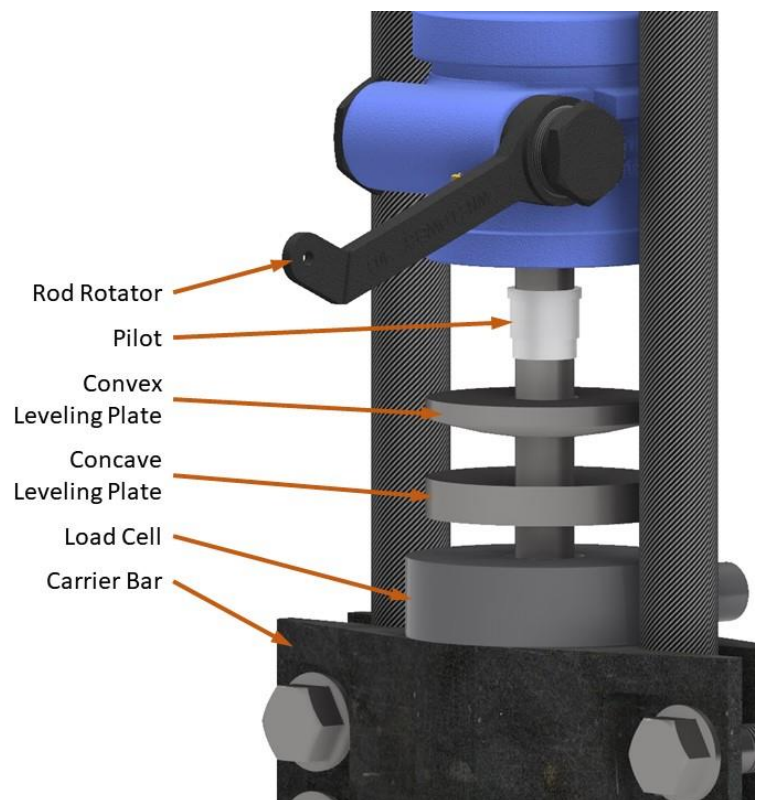


6. If using a leveling plate and/or a load cell, install now over the top of the polished rod. Place the leveling plate on top of the load cell with the concave plate on top of the load cell then the convex plate.
7. Place the aluminum bushing/pilot that matches most closely to the size of the polished rod with the narrow side going into the leveling plate.
8. Slide the Rod Rotator overtop of the polished rod and onto the leveling plate ensuring the pilot aligns the Rod Rotator and is sitting flush on the leveling plate.
 - a. CAUTION: Never install the Rod Rotator upside down. The rotating cover cap must always face upwards to function properly.

9. Reinstall the polished rod clamp on top of the rod rotator and tighten the bolts to their proper torque specification.

10. Install and attach the Safety Beam Clamp onto the walking beam and torque the set screws to 75 ftlb. Ensure that the Safety Beam Clamp is located in a position that horse head will not come into contact with the cable as it can wear out or break the cable.

- a. Note: The design of some pumping units may require the Beam Clamp to be installed on Samson Post or side of Horse Head.



11. Attach the crimped metal yoke end of the actuator cable to the predrilled hole that is adjacent to the spring on lever arm of the beam clamp. Crimp the cotter pin to ensure the it will not slide out of yoke during use.



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12. Attach adjustable yoke end of the actuator cable into the hole on the end of the polished rod rotator's actuator lever. Move the actuator lever to a horizontal position by hand. Slide the actuator cable through the shank of the adjustable yoke until a small amount to no slack is left in the actuator cable. Tighten the wing nut on the adjustable yoke firmly. Cut off most of the excess, but leave enough for future adjustment.
 13. Disengage the pump's brake and any electronic safety lockouts used. Slowly lift the carrier bar to allow the temporary polished rod clamp to raise enough to allow for safe removal.
 14. Once the temporary polished rod clamp is not longer resting on the stuffing box, Reengage the pump's brake and any electrical safety lockouts. Remove the temporary polished rod clamp and back off the hex nuts on the stuffing box to allow the packing to properly seal.
 15. Mark the rod rotator's cap and body with a permanent marker or paint pen with collinear two lines. Release pump's brake and electrical safety lockouts. Start the pumping unit. Allow the rod rotator to start cycling. Watch for the spacing of the lines to verify that the rotator is operating properly. If rod rotator is not actuating properly, turn off pumping unit at the bottom of the down stroke and apply pump's brake and electrical safety lockouts. Re-adjust actuator cable to allow for better operation.

Maintenance Instructions:

Note: Routine preventative maintenance should be performed every 1-2 months of operation.

1. Turn off the pumping unit at the bottom of the down stroke and engage the pump's brake and any electrical safety lockouts.
2. Apply grease to the accordingly:
 - a. Model 302/302SG: 2 shots of EP-2 lithium grease in the handle cap, 10 shots of EP-2 lithium grease in the body.
 - b. Model 303/303SG: 10 shots of EP-2 lithium grease in the body.
 - c. Model 403/403SG: 2 shots of EP-2 lithium grease in the shaft housing, 10 shots of EP-2 lithium grease in the body.

CAUTION: Over grease of the rod rotator's body can cause the cover cap to hydraulically lift off of the worm gear causing the unit to be non-operational.