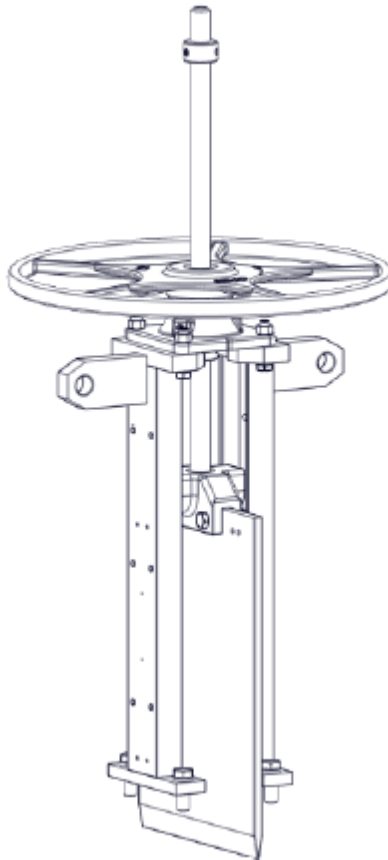


DeZURIK MANUAL ACTUATOR FOR KSL-SD SLURRY VALVES



Instruction **D11047**
September 2016

DeZURIK

Manual Actuator for KSL-SD Slurry Valves

Instructions

These instructions are intended for personnel who are responsible for the installation, operation and maintenance of your manual actuator.

Safety Messages

All safety messages in the instructions are flagged with the word Caution, Warning or Danger. These messages must be followed exactly to avoid equipment damage, personal injury or death.

Safety label(s) on the product indicate hazards that can cause equipment damage, personal injury or death. If a safety label becomes difficult to see, or if a label has been removed, please contact DeZURIK for replacement.



WARNING!

Personnel involved in the installation or maintenance of valves should be constantly alert to potential emission of process material and take appropriate safety precautions. Always wear suitable protection when dealing with hazardous process materials. Handle valves which have been removed from service with the assumption of process material within the valve.

Inspection

Your manual actuator has been packaged to provide protection during shipment. Carefully inspect the unit for damage upon arrival and file a claim with the carrier if damage is apparent.

Parts

Recommended spare parts are listed on the assembly drawing. These parts should be stocked to minimize downtime.

Order parts from your DeZURIK sales representative, or directly from DeZURIK. When ordering parts, please include the serial number or the 7-digit part number and 4-digit revision number (example: **9999999R000**) located on the data plate attached to the valve assembly. Also include the part name, the assembly drawing number, the balloon number and the quantity stated on the assembly drawing.

DeZURIK Service

DeZURIK service personnel are available to install, maintain and repair all DeZURIK products. DeZURIK also offers customized training programs and consultation services. For more information, contact your local DeZURIK sales representative or visit our website at www.dezurik.com.

Lubrication

Lubricate the fitting near the top of the yoke monthly with a silicon-based grease, see Table 1.

<i>Silicone-Based Lubricant</i>	<i>Manufacturer</i>
<i>Recommended:</i>	
MOLYKOTE 111	Dow Corning
<i>Approved Alternatives:</i>	
MOLYKOTE 44	Dow Corning
Sil Glyde	AGS Company
Chemplex 825	FUCHS
7 Release Compound	Dow Corning
G661	Novagard

Operation

Handwheel or Chainwheel

Rotate the handwheel or chainwheel clockwise to close the valve.

Note: There is an arrow cast on the wheel to indicate direction of rotation.

Removing Actuator

1. Close the valve.
2. Disconnect the stem from the gate by removing the two screws and nuts.
3. Remove the screws securing the legs to the valve, then separate the actuator from the valve.

Actuator Installation

1. Close the valve.
2. Set the actuator on the valve and secure it in place with the screws.
3. Connect the stem to the gate with two screws and nuts.

Mounting Handwheel on 2-10" Valves

2-10" Valves—See Figure 2

Two coiled spring pins (B8) provided by DeZURIK are used to connect the handwheel (B2) to the yoke sleeve (B7). The use of any other type of pin could result in actuator failure.

1. Place the bearing race (B4) and the needle roller bearing (B3) on the yoke sleeve (B7).
2. Rotate the yoke sleeve (B7) until the flange on the yoke sleeve touches the bearing plate (B1).
3. Place needle roller bearing (B3), the bearing race (B5) and the wave washer (B6) over the yoke sleeve (B3) so they are on top of the bearing plate (B1).
4. Set the handwheel (B2) in place. Turn the handwheel so the holes in the handwheel line up with the pin grooves in the yoke sleeve (B7).
5. Insert a 5/16"-diameter bolt in one of the holes.

Note: This will prevent misalignment. If the holes are not aligned with the pin grooves in the yoke sleeve (B7), it could be damaged by the coiled spring pins (B8) provided by DeZURIK.



WARNING!

This actuator has been designed to use only heavy-duty coiled spring pin provided by DeZURIK. The use of any other brand or type of pin will result in actuator failure. See Figure 1.

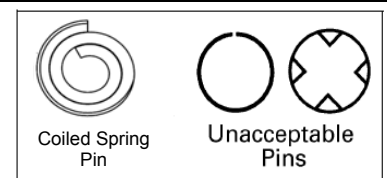
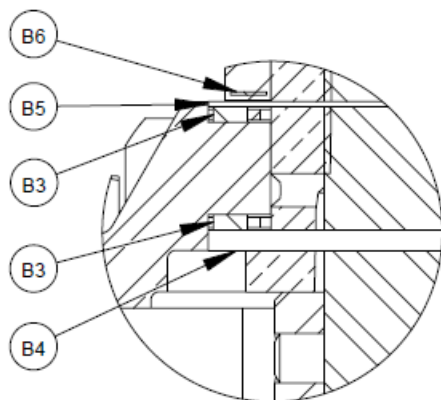
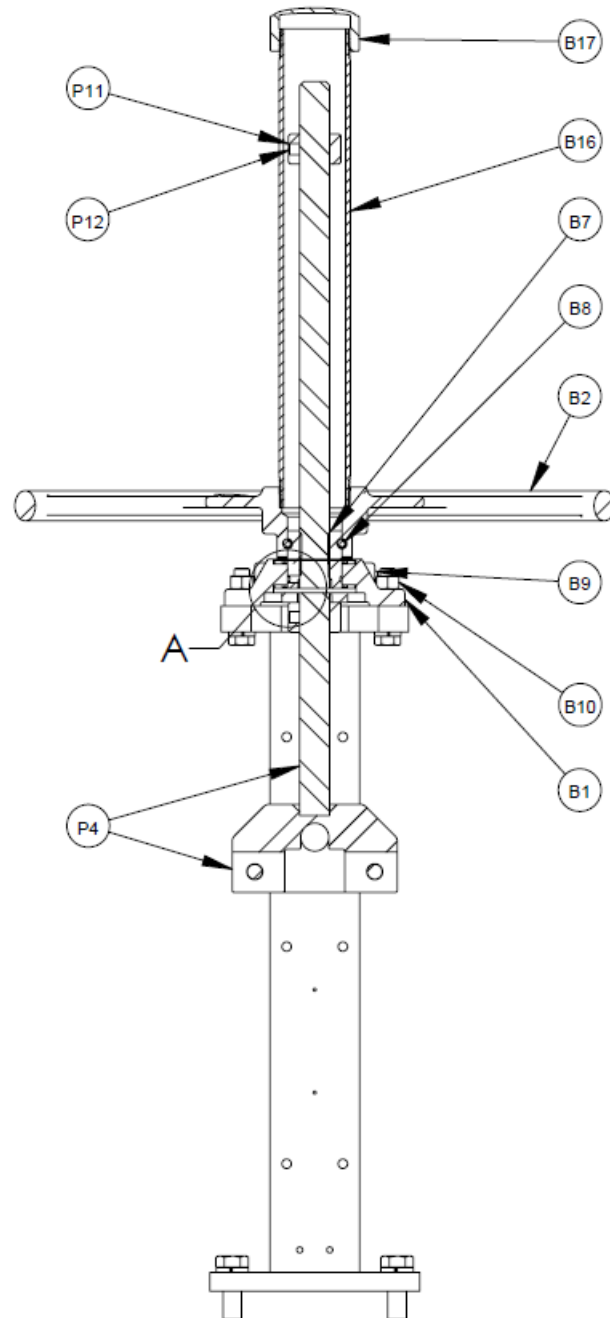


FIGURE 1— Pin Designs

6. Drive a coiled spring pin (B8) provided by DeZURIK into the remaining hole in the handwheel (B2) until the end of the pin is flush with the outer surface of the handwheel.
7. Remove the 5/16" bolt installed in Step 5, and drive a coiled spring pin (B8) provided by DeZURIK into the hole.
8. Install top stop collar (P11) onto clip & stem (P4) and secure position with set screws (P12). This stop collar (P11) is to stop on top of the yoke sleeve (B7) when the valve is in the closed position. Refer to installation drawing for gate closed measurement.
9. Lubricate the actuator as described in the LUBRICATION section of these instructions.

Figure 2—2-10" Handwheel Mounting Configuration

B1	BEARING PLATE
B2	HANDWHEEL
B3	NEEDLE ROLLER BEARING
B4	BEARING RACE
B5	BEARING RACE
B6	VALVE WASHER
B7	YOKE SLEEVE MACHINING
B8	PIN
B9	GREASE FITTING
B10	NUT
B16	EXTENSION PIPE (OPTION)
B17	CAP (OPTION)
P4	CLIP & STEM
P11	STOP COLLAR
P12	SET SCREW



DETAIL A

Mounting Chainwheel on 2-10" Valves

2-10" Valves—See Figure 3

Two coiled spring pins (B8) provided by DeZURIK are used to connect the chainwheel (B2) to the yoke sleeve (B7). The use of any other type of pin will result in actuator failure.

1. Place the bearing race (B4) and the needle roller bearing (B3) on the yoke sleeve (B7).
2. Rotate the yoke sleeve (B7) until the flange on the yoke sleeve touches the bearing plate (B1).
3. Place needle roller bearing (B3), the bearing race (B5) and the wave washer (B6) over the yoke sleeve (B3) so they are on top of the bearing plate (B1).
4. Assemble chainwheel (B2) with chain guide (B11) by using fasteners (B13, B14). Refer to installation drawing for chain guide (B11) orientation. Set the assembly on top of yoke sleeve (B7) in place. Turn the chainwheel so the holes in the chainwheel line up with the pin grooves in the yoke sleeve (B7).
5. Insert a 5/16"-diameter bolt in one of the holes.

Note: This will prevent misalignment. If the holes are not aligned the pin grooves in the yoke sleeve (B7) could be damaged by the coiled spring pins (B8) provided by DeZURIK.



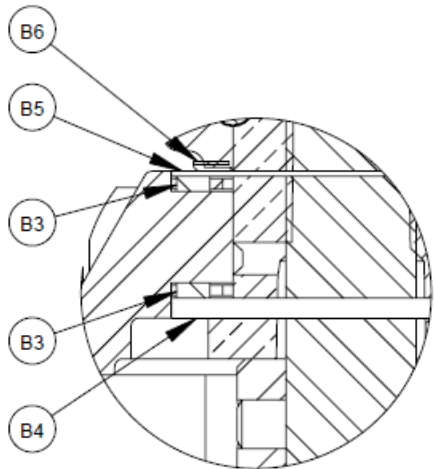
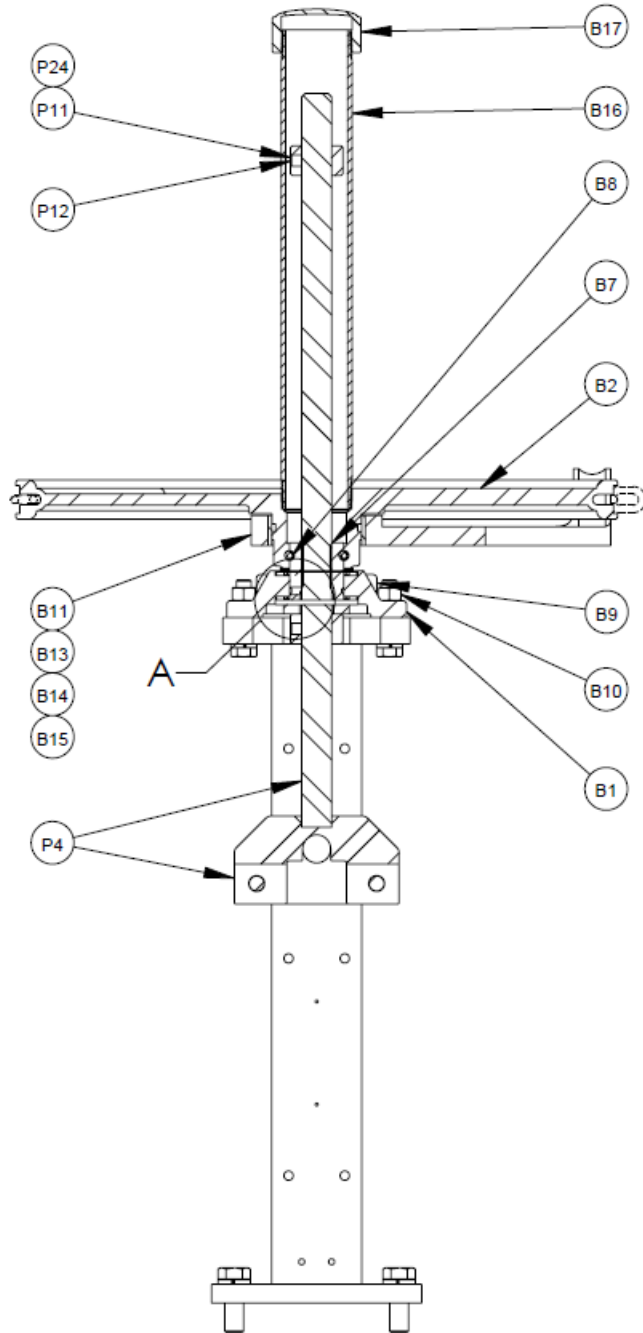
WARNING!

This actuator has been designed to use only coiled spring pins provided by DeZURIK. The use of any other brand or type of pin will result in actuator failure. See Figure 1.

6. Drive a coiled spring pin (B8) provided by DeZURIK into the remaining hole in the chainwheel (B2) until the end of the pin is flush with the outer surface of the chainwheel.
7. Remove the 5/16" bolt installed in Step 5, and drive a coiled spring pin (B8) provided by DeZURIK into the hole.
8. Install top stop collar (P24 for 2~4" or top stop collar P11 for 6~10") onto the clip & stem (P4) and secure position with set screw (P12). This stop collar is to stop on top of the yoke sleeve (B7) when the valve is in the closed position. Refer to installation drawing for gate closed measurement. The top stop collar prevents the retaining bolt assembly (and the chainwheel) from being dislodged if the two coiled spring pins provided by DeZURIK are damaged or fatigued.
9. Lubricate the actuator as described in the LUBRICATION section of these instructions.

Figure 3—2-10" Chainwheel Mounting Configuration

B1	BEARING PLATE
B2	CHAINWHEEL
B3	NEEDLE ROLLER BEARING
B4	BEARING RACE
B5	BEARING RACE
B6	WAVE WASHER
B7	YOKE SLEEVE MACHINING
B8	PIN
B9	GREASE FITTING
B10	NUT
B11	CHAIN GUIDE
B13	SET SCREW
B14	NUT
B15	LINK CLOSING
B16	EXTENSION TUBE (OPTION)
B17	CAP (OPTION)
P4	CLIP & STEM
P11	STOP COLLAR (6-10")
P12	SET SCREW
P24	STOP COLLAR (2-4")



DETAIL A

Limited Warranty

DeZURIK, Inc. ("Seller") manufactured products, auxiliaries and parts thereof that we manufacture for a period of twenty-four (24) months from date of shipment from Seller's factory, are warranted to the original purchaser only against defective workmanship and material, but only if properly stored, installed, operated, and serviced in accordance with Seller's recommendations and instructions.

For items proven to be defective within the warranty period, your exclusive remedy under this limited warranty is repair or replacement of the defective item, at Seller's option, FCA Incoterms 2020 Seller's facility with removal, transportation, and installation at your cost.

Products or parts manufactured by others but furnished by Seller are not covered by this limited warranty. Seller may provide repair or replacement for other's products or parts only to the extent provided in and honored by the original manufacturer's warranty to Seller, in each case subject to the limitations contained in the original manufacturer's warranty.

No claim for transportation, labor, or special or consequential damages or any other loss, cost or damage is being provided in this limited warranty. You shall be solely responsible for determining suitability for use and in no event shall Seller be liable in this respect.

This limited warranty does not warrant that any Seller product or part is resistant to corrosion, erosion, abrasion or other sources of failure, nor does Seller warrant a minimum length of service.

Your failure to give written notice to us of any alleged defect under this warranty within twenty (20) days of its discovery, or attempts by someone other than Seller or its authorized representatives to remedy the alleged defects therein, or failure to return product or parts for repair or replacement as herein provided, or failure to store, install, or operate said products and parts according to the recommendations and instructions furnished by Seller shall be a waiver by you of all rights under this limited warranty.

This limited warranty is voided by any misuse, modification, abuse or alteration of Seller's product or part, accident, fire, flood or other Act of God, or your failure to pay entire contract price when due.

The foregoing limited warranty shall be null and void if, after shipment from our factory, the item is modified in any way or a component of another manufacturer, such as but not limited to; an actuator is attached to the item by anyone other than a Seller factory authorized service personnel.

All orders accepted shall be deemed accepted subject to this limited warranty, which shall be exclusive of any other or previous warranty, and this shall be the only effective guarantee or warranty binding on Seller, despite anything to the contrary contained in the purchase order or represented by any agent or employee of Seller in writing or otherwise, notwithstanding, including but not limited to implied warranties.

THE FOREGOING REPAIR AND REPLACEMENT LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS AND LIABILITIES, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY OR OTHERWISE, EXPRESSED OR IMPLIED IN FACT OR BY LAW, AND STATE SELLER'S ENTIRE AND EXCLUSIVE LIABILITY AND YOUR EXCLUSIVE REMEDY FOR ANY CLAIM IN CONNECTION WITH THE SALE AND FURNISHING OF SERVICES, GOODS OR PARTS, THEIR DESIGN, SUITABILITY FOR USE, INSTALLATION OR OPERATIONS. NEITHER ANY PERFORMANCE OR OTHER CONDUCT, NOR ANY ORAL OR WRITTEN INFORMATION, STATEMENT, OR ADVICE PREPARED BY SELLER OR ANY OF OUR EMPLOYEES OR AGENTS WILL CREATE A WARRANTY, OR IN ANY WAY INCREASE THE SCOPE OR DURATION OF THE LIMITED WARRANTY.

Disclaimer

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IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO; DAMAGE TO OR LOSS OF OTHER PROPERTY OR EQUIPMENT, BUSINESS INTERRUPTION, COST OF SUBSTITUTE PRODUCTS, LOSS OF TIME, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, LOSS OF USE, OR DIMINUTION IN VALUE) WHATSOEVER, AND SELLER'S LIABILITY, UNDER NO CIRCUMSTANCES, WILL EXCEED THE CONTRACT PRICE FOR THE GOODS AND/OR SERVICES FOR WHICH LIABILITY IS CLAIMED. ANY ACTION FOR BREACH OF CONTRACT BY YOU, OTHER THAN RIGHTS RESPECTING OUR LIMITED WARRANTY DESCRIBED ABOVE, MUST BE COMMENCED WITHIN 12 MONTHS AFTER THE DATE OF SALE.

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

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