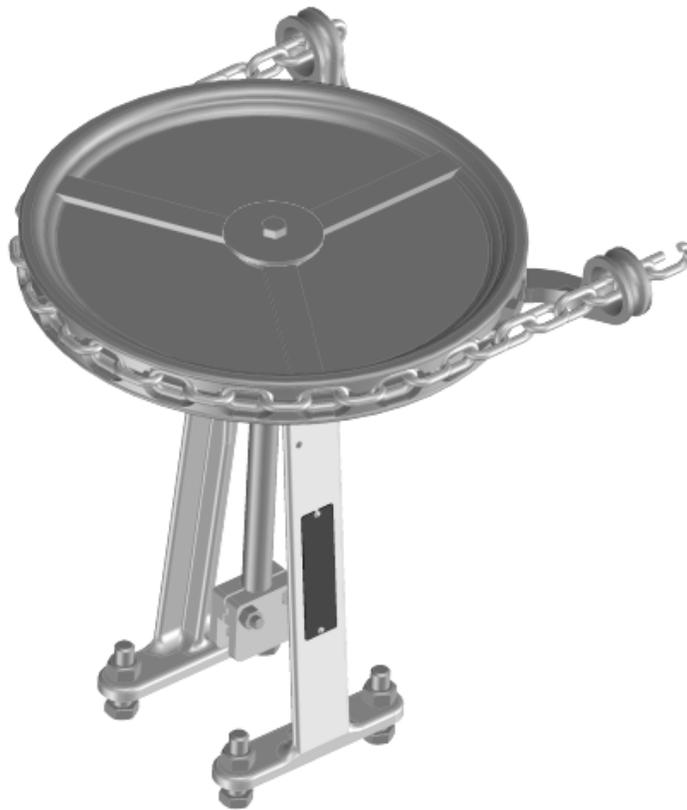




# Manual Actuator for Ported Gate Valves



Instruction D10320  
May 2009

# DeZURIK

## Manual Actuator for Ported Gate Valves

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### 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 label(s).



#### **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.**

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### 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 local sales representative, or directly from DeZURIK as listed on the back cover. When ordering parts, please include the 7-digit part number, 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 representative or visit our website at [www.dezurik.com](http://www.dezurik.com).

### Lubrication

Lubricate the fitting near the top of the yoke monthly with a lithium based grease.

### Operation

#### ***Handwheel, Chainwheel and Bevel-Gear Actuators***

Rotate the handwheel or chainwheel clockwise to close the valve. An arrow cast on the wheel indicates direction of rotation.

## Removing Actuator

1. Close the valve.
  2. Relieve pipeline pressure.
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**WARNING!**

Pipeline pressure can propel loose flange bolts and flanges, and can cause personal injury or equipment damage. Relieve pipeline pressure before removing flange bolts and flanges.

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3. Disconnect the stem from the gate by removing the two screws and nuts.
4. Remove the screws securing the actuator yoke 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

Two Spirol® pins are used to connect the handwheel to the yoke sleeve. To ensure correct alignment during pin installation, follow these steps:

1. Rotate the yoke sleeve until the flange on the yoke sleeve contacts the yoke.
2. Place the thrust washer and the wave washer over the yoke sleeve.
3. Set the handwheel in place. Turn the wheel so the holes in the wheel are aligned with the pin ways in the yoke sleeve.
4. Insert a 5/16-inch-diameter bolt in one of the holes. This will prevent movement that could cause misalignment. If alignment is not correct, the pin ways in the yoke sleeve could be damaged as the Spirol® pins are driven in.
5. Drive a Spirol® pin into the remaining hole in the wheel until the end of the pin is flush with the outer surface of the wheel.

**Note:** This actuator has been designed to use only heavy-duty Spirol-brand pins. The use of any other type of pin will result in actuator failure.

Figure 1 shows acceptable and unacceptable pin styles.

6. Remove the 5/16-inch bolt installed in Step 4 and drive a Spirol® pin into the hole.
7. Lubricate the actuator as described in the LUBRICATION section of these instructions.

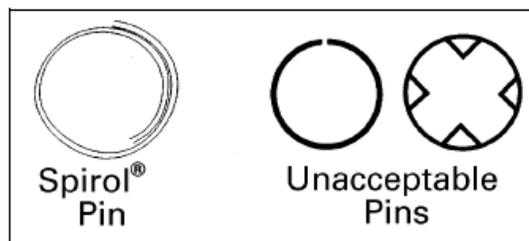


FIGURE 1– Acceptable and Unacceptable Pin Styles

### Chainwheel Mounting

Two Spirol® pins are used to connect the chainwheel to the yoke sleeve. To ensure correct alignment during pin installation, follow these steps:

1. Rotate the yoke sleeve until the flange on the yoke sleeve contacts the yoke.
2. Place the thrust washer and the wave washer over the yoke sleeve.
3. Set the chainwheel in place. Turn the wheel so the holes in the wheel are aligned with the pin ways in the yoke sleeve.
4. Insert a 5/16-inch-diameter bolt in one of the holes. This will prevent movement that could cause misalignment. If alignment is not correct, the pin ways in the yoke sleeve could be damaged as the Spirol® pins are driven in.
5. Drive a Spirol® pin into the remaining hole in the wheel until the end of the pin is flush with the outer surface of the wheel.

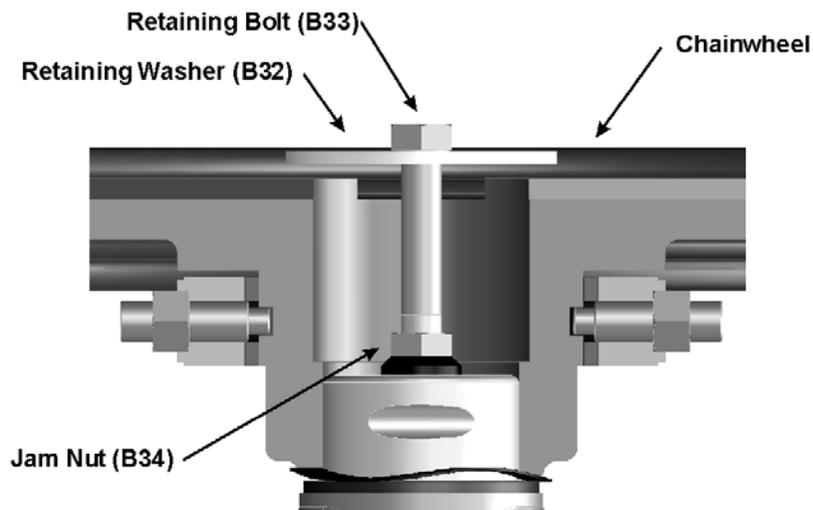
**Note:** This actuator has been designed to use only heavy-duty Spirol-brand pins. The use of any other type of pin will result in actuator failure.

Figure 1 shows acceptable and unacceptable pin styles.

6. Remove the 5/16-inch bolt installed in Step 4 and drive a Spirol® pin into the hole.

7. As shown in Figure 2, insert the large hex-head retaining bolt (B33) through the 2.5-inch retaining washer (B32) and stake the washer to the head of the bolt. This keeps the washer from sliding down the shaft of the bolt when the valve is open (when the stem is extended upward).

8. Turn the 3/8-16 jam nut (B34) onto the retaining bolt/washer assembly. Turn the nut on far enough to allow the bolt to be fully inserted into the valve stem (detailed in the next step).



**FIGURE 2—Detailed View of Chainwheel Retaining Components**

9. Turn the retaining bolt assembly into the tapped hole on the valve stem until it bottoms out.
10. Tighten the jam nut firmly against the valve stem. This prevents the retaining bolt assembly (and the chainwheel) from being dislodged if the two Spirol® pins are damaged or fatigued.
11. Lubricate the actuator as described in the LUBRICATION section of these instructions.

## Limited Warranty

DeZURIK, Inc. ("Seller") manufactured products, auxiliaries and parts 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 will 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, 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 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.

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## Sales and Service

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