

3" LEVEL SENSOR FOR KNIFE GATE VALVES

Instruction **D10107**
August 2009

Instructions

These instructions are for use by personnel who are responsible for the installation, operation and maintenance of DeZURIK valves, actuators or accessories.

Safety Messages

All safety messages in the instructions are identified by a general warning sign and the signal word CAUTION, WARNING or DANGER. These messages indicate procedures to avoid injury or death.

Safety label(s) on the product indicate hazards that can cause injury or death. If a safety label becomes difficult to see or read, 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 pipeline material and take appropriate safety precautions. Always wear suitable protection when dealing with hazardous pipeline materials. Handle valves which have been removed from service with suitable protection for any potential pipeline material in the valve.

Inspection

Your DeZURIK product has been packaged to provide protection during shipment; however, items can be damaged in transport. Carefully inspect the unit for damage upon arrival and file a claim with the carrier if damage is apparent.

Parts

Replaceable wear parts are listed on the assembly drawing. These parts can be stocked to minimize downtime. Order parts from your local DeZURIK sales representative or directly from DeZURIK. When ordering parts please provide the following information:

If the valve has a data plate: please include the 7-digit part number with either 4-digit revision number (example: 9999999R000) or 8-digit serial number (example: S1900001) whichever is applicable. The data plate will be 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.

If there isn't any data plate visible on the valve: please include valve model number, part name, and item number from the assembly drawing. You may contact your local DeZURIK Representative to help you identify your valve.

DeZURIK Service

DeZURIK service personnel are available to 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 DeZURIK.com.

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3” Level Sensor Knife Gate Valve

Instructions These instructions are intended for personnel who are responsible for the installation, operation and maintenance of Level Sensor Knife Gate Valves.

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 pipeline material and take appropriate safety precautions. Always wear suitable protection when dealing with hazardous pipeline materials. Handle valves which have been removed from service with the assumption of pipeline material within the valve.

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 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 representative or visit our website at www.dezurik.com.

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3" Level Sensor Knife Gate Valve

Description The DeZURIK Level Sensor Knife Gate Valve is a resilient seated valve designed specifically for mounting a level sensor to a stock chest. The valve, when closed, allows the level sensor to be removed without draining the stock chest. A ratcheting lever actuator requires minimum clearance to operate the valve. Two purge connections for flushing the inside of the valve are included.

Installation Install the valve with the seat end away from the stock chest, and toward the level sensor. Refer to Installation Drawing A-42347 for dimensional information. Flange gaskets are required. Before installation, remove foreign material such as weld spatter, oil, grease, and dirt from the valve and pipeline. Tighten the flange bolts evenly, in a crisscross pattern, to prevent distortion of the body and gate.

Lubrication Approximately monthly, lubricate the fitting on the valve actuator with a lithium-based grease.

Packing Adjustment The gate packing is contained and compressed by the packing gland. If packing leakage occurs, tighten the adjustment nuts on top of the packing gland. Tighten the nuts evenly and gently — just enough to stop the leakage. Over tightening will cause excessive operating forces, and will decrease the life of the packing.

Packing Replacement 1. Relieve the pressure in the pipeline and close the valve.



WARNING!

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

2. Remove the two screws and nuts near the top of the gate and disengage the actuator stem from the gate by stroking the actuator (not the valve) to the open position.
3. Remove the gland nuts, washers, and packing gland.
4. Remove the used packing from the packing chamber.
5. With the gate closed, center the gate in the body opening below the packing chamber.
6. Cut 3 new packing rings in 8-3/4" lengths. Assemble and pack the rings one at a time with the ends together, but not overlapped, first ring type CD, second ring type ZJ, last ring type CD. Stagger the joints, on the long sides of the packing chamber. A square-end wood or plastic tool, driven by a hammer or mallet, is recommended for packing the rings. The inside and outside edges of each ring are to be packed against the gate and packing chamber, so that each ring is compressed flat and evenly.
7. Replace the packing gland, washers, and nuts. Tighten the nuts evenly and finger tight, plus 1/2 turn.
8. Reconnect the actuator stem to the gate with the two screws and nuts.
9. The valve may now be pressurized. If packing leakage occurs, tighten the adjustment nuts on top of the packing gland. Tighten the nuts evenly and slowly, just enough to stop the leakage. Over tightening will cause excessive operating forces, and will decrease the life of the packing.

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3” Level Sensor Knife Gate Valve

Seat Replacement

1. Relieve the pressure in the pipeline and close the valve.
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WARNING!

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

2. Remove the valve from the system.
3. Remove the two screws and nuts near the top of the gate and disengage the stem from the gate.
4. Remove the actuator yoke and actuator from the valve.
5. Remove the gland nuts, washers, and packing gland.
6. Remove the gate from the body.
7. Remove the packing from the packing chamber.
8. Push the top of the resilient seat toward the center of the valve, and remove the seat through the packing chamber.
9. Reversing step 8, insert the new seat through the packing chamber and behind the lug at the 6 o'clock position in the body. Then push the top of the seat into position.
10. Replace the gate in the body, with the beveled edge facing away from the resilient seat. Place the gate in the fully closed position.
11. Replace the packing, as described in step 6 in the PACKING REPLACEMENT section.
12. Replace the packing gland, washers, and nuts. Tighten the nuts evenly and finger tight, plus 1/2 turn.
13. Replace the yoke and actuator on the valve.
14. Reconnect the stem to the gate with the two screws and locknuts.
15. Replace the valve in the system. Refer to the requirements in the INSTALLATION section. If packing leakage occurs, tighten the adjustment nuts on top of the packing gland. Tighten the nuts evenly and slowly, just enough to stop the leakage. Over tightening will cause excessive operating forces, and will decrease the life of the packing.

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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Limitation of Liability

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 CAPTIAL, 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:

Web site: www.dezurik.com E-Mail: info@dezurik.com



250 Riverside Ave. N., Sartell, MN 56377 • Phone: 320-259-2000 • Fax: 320-259-2227

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