



**NT NUT AND LEVER ACTUATOR
USED ON 4" - 8" PEC ECCENTRIC VALVES**

Instructions

These instructions provide information about NT Nut and Lever Actuators. They are for use by personnel who are responsible for installation, operation and maintenance of NT Nut and Lever Actuators.

Safety Messages

All safety messages in the instructions are flagged with an exclamation symbol and the word Caution, Warning or Danger. These messages indicate procedures that 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 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 the assumption of pipeline material within the valve.

Inspection

Your NT Nut and Lever Actuator has been packaged to provide protection during shipment, however, it 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

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

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Description

The 4" - 8" PEC Eccentric valve can be actuated with the LV or LVF lever operators or with other levers that fit the 2" NT wrenching nut. Recommended lengths for levers are dependent upon valve size and maximum pressure drop expected across the valve as shown in Table A.

Table A: Lever Length

Valve Size	Lever Length			
	Pressure Drop			
	25 psi 170 kPa	50 & 75 psi 345 & 515 kPa	100 psi 690 kPa	125 psi 860 kPa
4 in 100 mm	15 in 381mm	15 in 381mm	15 in 381mm	15 in 381mm
5 & 6 in 125 & 150 mm	23 in 584 mm	30 in 762 mm	33 in 838 mm	-
8 in 200 mm	30 in 762 mm	33 in 838 mm	43 in 1092 mm	-

Pressure Ratings

Direct shutoff pressure differentials for nut or lever actuated valves must not exceed the limits shown in Table B.

Note: Reverse shutoff differentials must not exceed 25 psi (170 kPa).

If valves must seal higher pressures, use handwheel actuators.

Table B: Maximum Shutoff Pressure Differentials

Valve Size	Nitrile-Butadiene (Buna V) NBR Packing (with Friction Cone)	Low Friction Nitrile-Butadiene (Buna V) NBRL Packing (without Friction Cone)
4 in 100 mm	125 psi 860 kPa	40 psi 275 kPa
5 - 8 in 125 - 200 mm	100 psi 690 kPa	25 psi 170 kPa

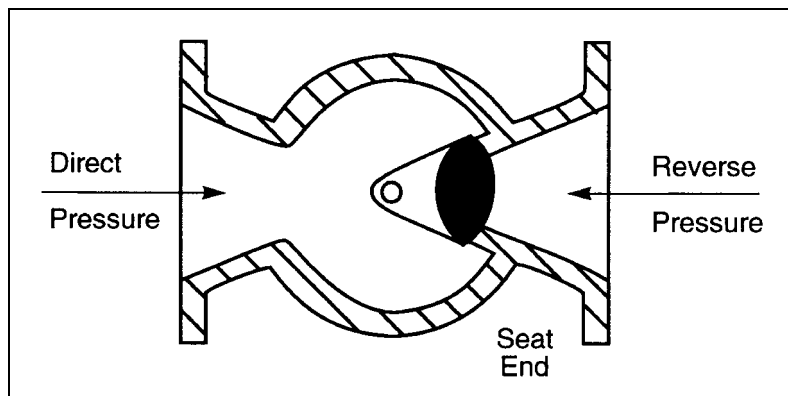


Figure 1 - Direct and Reverse Pressure Detail

Operation

Slowly rotate the lever clockwise around the valve stem to close the valve.



CAUTION!

Close the valve slowly. Rapid closure of the valve can cause pipeline pressure surges that will damage pipeline equipment.

Stop Adjustments

This actuator features open and closed position stops. These stops can be adjusted to stop valve stroke at the fully open and fully closed valve positions, or at any other valve position as desired to allow full control of your flow system.

Open Position Stop

The open position stop is a socket head cap screw and nut located in the slot in the gland. To change the stop setting, loosen the nut, slide the screw to the desired stop location, then tighten the nut. Check the stop setting by operating the valve until the lug contacts the stop; readjust the stop if necessary.

Closed Position Stop

The closed position setting for PEC Eccentric valves is determined by torquing the valve plug into the seat. To set the closed position stop, turn the closed position stop screw counterclockwise several turns, torque the plug into the seat to the torque specified in Table C, then turn the closed position stop screw clockwise until it contacts the adaptor.

Table C: Valve Seating Torque

Valve Size	Valve Seating Torque
4 in 100 mm	150 ft lbs 200 N-M
5 & 6 in 125 mm & 150 mm	180 ft lbs 245 N-M
8 in 200 mm	300 ft lbs 400 N-M

Removing Actuator

1. Stop pipeline flow.



WARNING!

Flow in the pipeline with the actuator removed can allow the valve to slam closed and cause personal injury and/or damage to the flow system. Shut down the flow in the pipeline before removing the actuator.

2. Scribe a line on the wrenching nut, packing gland and the valve bonnet for alignment during assembly.
3. Remove the nut recessed in the top of the wrenching nut.
4. Lift the wrenching nut off the plug stem.

Note: Do not loosen the washers that are in the recessed hole.

Installing Actuator

1. Line up the scribe marks on the wrenching nut and packing gland, then set the wrenching nut on the plug stem.
2. Slide the flat washer down the plug stem stud, then install the spring washers as shown in Figure 2.
3. Screw the nut down the plug stem until the spring washers are fully compressed. Back the nut off one full turn.

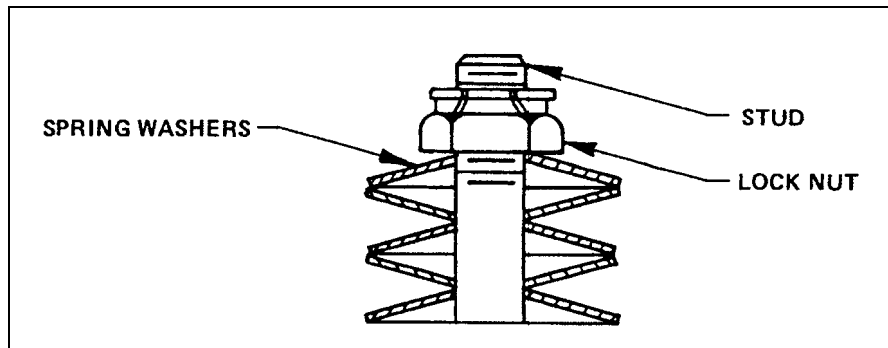


Figure 2 – Spring Washer Stackup