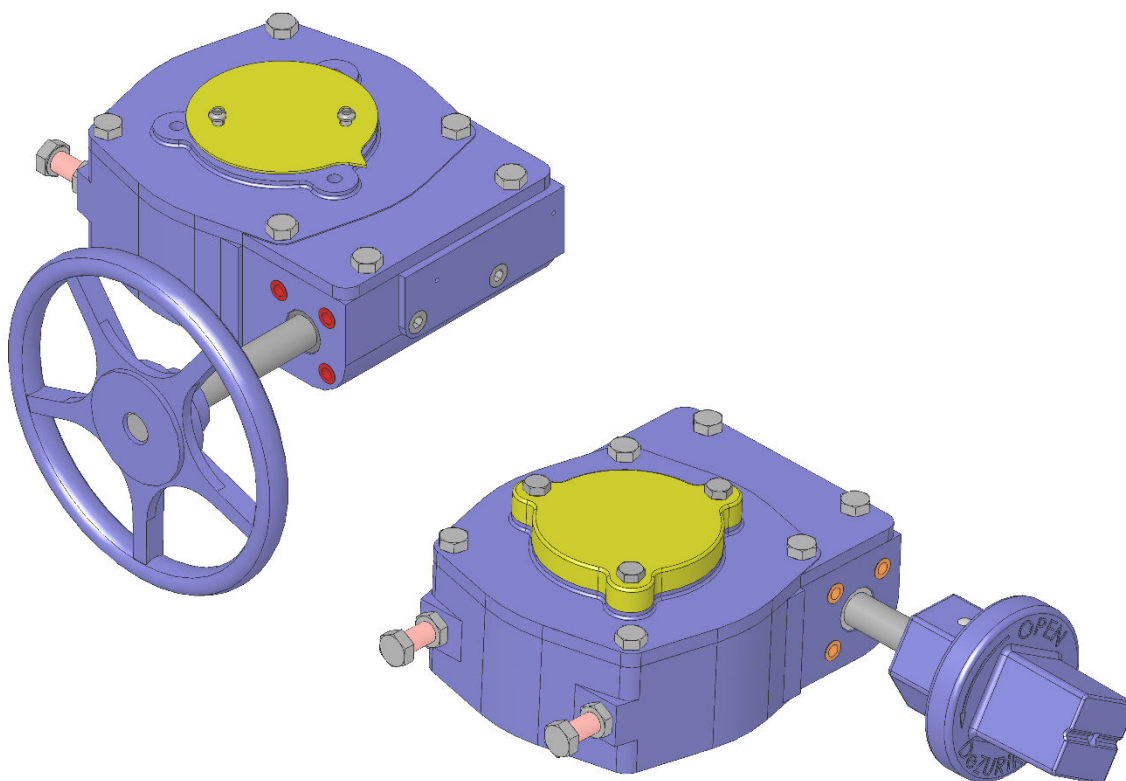


DeZURIK G-SERIES (6B/12A) MANUAL ACTUATOR USED ON BAW BUTTERFLY VALVES



Instruction **D10505**
August 2019

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.

Table of Contents

Instructions	2
Safety Messages	2
Inspection	2
Parts	2
DeZURIK Service	2
Table of Contents	3
Description.....	4
Operation.....	4
Tools Required	4
Lubrication	4
Parts Identification	5
Adjusting Position Stops	6
<i>To adjust the closed position stop</i>	<i>6</i>
<i>To adjust the open position stop.....</i>	<i>6</i>
Removing Actuator from Valve	8
<i>G_-6B Actuator on 3 – 12 Inch Valves (Figure 5).....</i>	<i>10</i>
<i>G_-6B Actuator on 14 – 20 Inch Valves (Figure 5).....</i>	<i>10</i>
<i>G_-12A Actuator on 20 – 30 Inch Valves (Figure 6).....</i>	<i>10</i>
Installing Actuator on Valve.....	11
<i>G_-6B Actuator on 3 – 12 Inch Valves</i>	<i>11</i>
<i>G_-6B Actuator on 14 – 20 Inch Valves</i>	<i>11</i>
<i>G_-12A Actuator on 20 – 30 Inch Valves</i>	<i>12</i>
Convert CCW to CW to Open (Open Right)	14
Actuator Disassembly and Assembly	14
<i>Actuator Disassembly:</i>	<i>14</i>
<i>Actuator Assembly:.....</i>	<i>15</i>
Replace Handwheel or Nut with Chainwheel Operator.....	18
<i>GS-6B-CW_ (8 and 12 Inch Chainwheels)</i>	<i>18</i>
<i>GS-6B-CW_ (20 and 24 Inch Chainwheels)</i>	<i>19</i>
<i>GS-12A-CW_</i>	<i>20</i>
Changing Mounting Positions	21
Troubleshooting	21

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G-Series (6B/12A) Manual Actuator used on BAW Butterfly Valves

Description

The G-Series Manual Actuator is designed to operate a BAW Butterfly valve. External adjustable stops limit actuator stroke for both the open and closed valve positions. This actuator is available in two sizes: Size 6B and Size 12A. See Figure 1 to identify which unit you have.

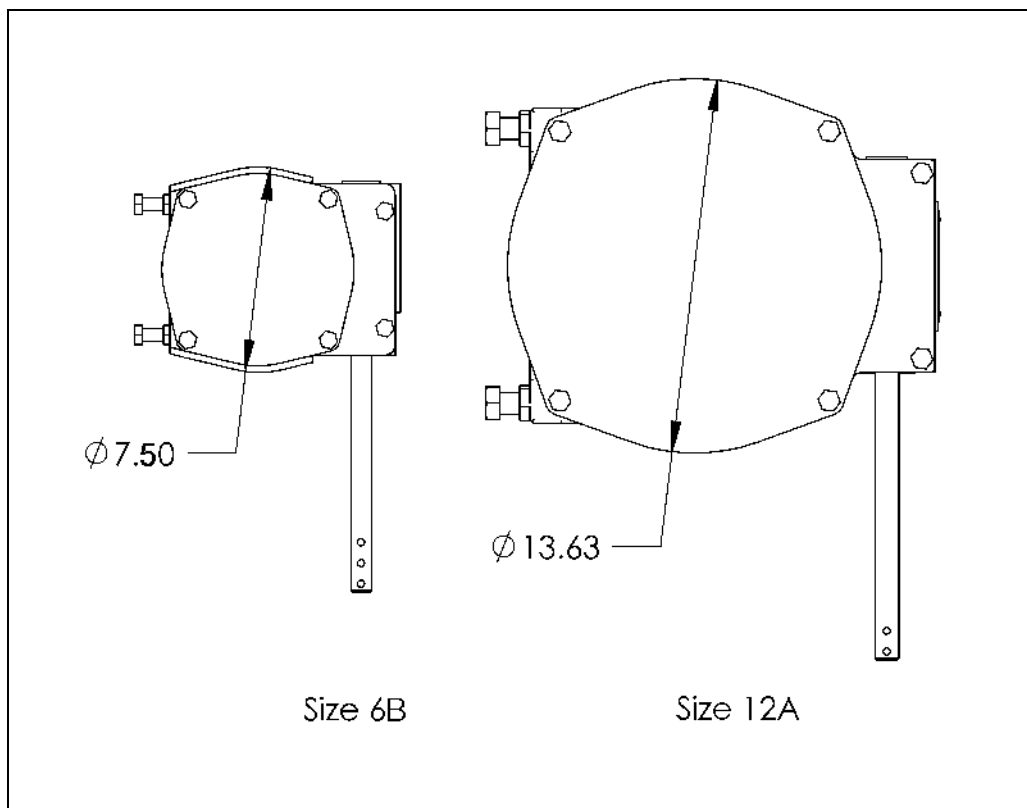


Figure 1 - Actuator Identification

Operation

Rotating the operator (handwheel, chainwheel or 2" wrenching square) clockwise closes the valve. Counterclockwise rotation of the operator opens the valve. To actuate the valve from full open to full closed (or vice-versa), the Size 6B requires 13 revolutions and the Size 12A requires 19 revolutions of the operator.

Tools Required

This actuator is assembled using metric fasteners. To service this unit, you should have a full set of combination or ratchet wrenches, Allen wrenches, flat tipped screwdrivers, a 1/4" pin punch and a dead blow hammer.

Lubrication

The G-Series manual Actuator has been lubricated at the factory and requires no routine maintenance lubrication. If the actuator requires disassembly, see the ACTUATOR DISASSEMBLY AND ASSEMBLY section in this instruction for disassembly, lubrication and assembly procedures.

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G-Series (6B/12A) Manual Actuator
used on BAW Butterfly Valves

Parts Identification

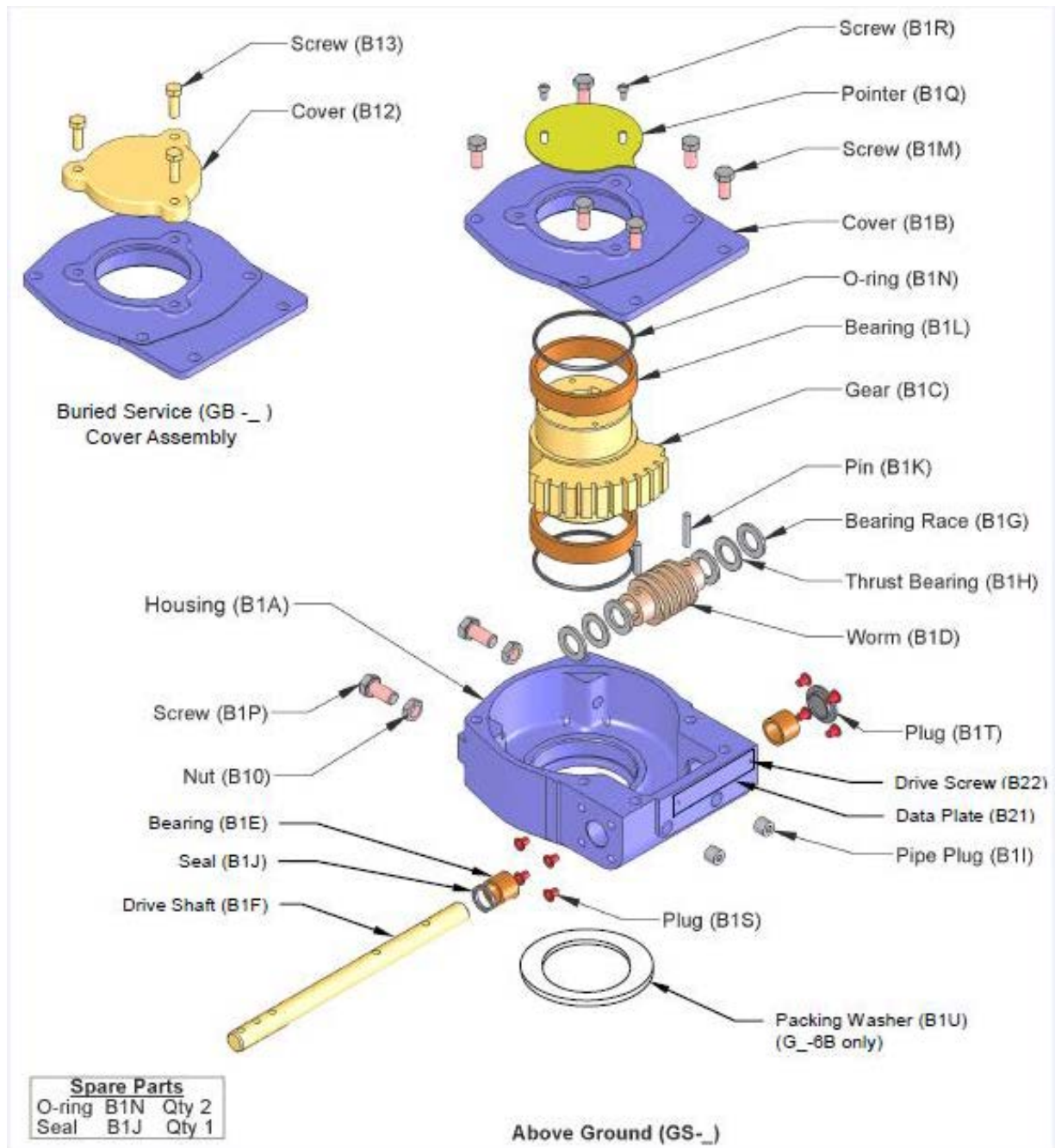


Figure 2— Actuator Parts Identification

Adjusting Position Stops

The open and closed position stops prevent the valve disc from rotating beyond the optimum open and shutoff positions.

If the actuator is factory-mounted on the valve, the stops are preset, and do not require further adjustment. If the actuator is not factory mounted on the valve, or if the actuator has been removed, the stops will require adjustment as described below; also refer to the Valve Instructions for specific closed-position requirements for the valve.

To adjust the closed position stop

(See Figure 4 for stop identification)



WARNING!

Adjusting stops with flow in the pipeline can allow the valve to close causing personal injury and damaging the flow system.

Shut down the flow and relieve pipeline pressure before making stop adjustments.

1. Discontinue flow and relieve pipeline pressure.
2. Loosen the nut on the closed position screw, and back out the screw about two turns.
3. Close the valve.
4. Turn the closed position screw clockwise until resistance is felt from the screw contacting the gear sector (B1C).
5. Prevent the screw from turning and tighten the nut against housing (B1A).
6. Pipeline flow may now be restored.

To adjust the open position stop

(See Figure 4 for stop identification)



WARNING!

Adjusting stops with flow in the pipeline can allow the valve to close causing personal injury and damaging the flow system.

Shut down the flow and relieve pipeline pressure before making stop adjustments.

1. Discontinue flow and relieve pipeline pressure.
2. To visually determine when the valve is in the open position:
Above Ground Service (GS_) actuator - Remove the screws (B1R) and pointer (B1Q).
Buried Service (GB_) actuator - Remove the screws (B13) and cover (B12).
3. Loosen the nut on the open position screw, and back out the screw about two turns.

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G-Series (6B/12A) Manual Actuator
used on BAW Butterfly Valves

Adjusting Position Stops *(Continued)*

4. Turn the handwheel, chainwheel or 2" wrenching square operator so the drive key/plug alignment is parallel to the valve flanges. See Figure 3 for valve open position.

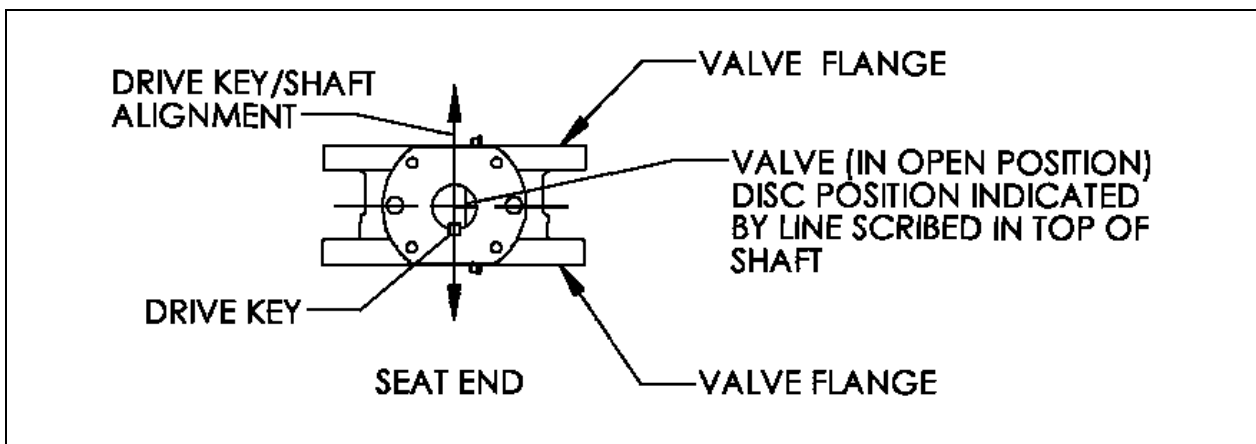


Figure 3 – Valve Open Position

5. Turn the open position screw clockwise until resistance is felt from the screw contacting the gear sector (B1C).
6. **Buried Service (GB_) actuator:** Apply 2 wraps of string packing (1013701) to the actuator stop screw threads between jam nut and actuator.
7. Prevent the screw from turning, and tighten the nut (B10) against housing (B1A).
8. **Above Ground Service (GS_) actuator:** Replace the pointer (B1Q) so it is pointing at the OPEN mark on the cover (B1B) and tighten screws (B1R).

Buried Service (GB_) actuator: Remove old sealant from cover (B12) and cover (B1B) mating mounting surfaces. Apply a bead of silicone sealant DOW RTV-732 (1055515) or similar to the cover (B12) and cover (B1B) mating surfaces. Fasten the cover (B12) to cover (B1B) with screws (B13).

9. Pipeline flow may now be restored.

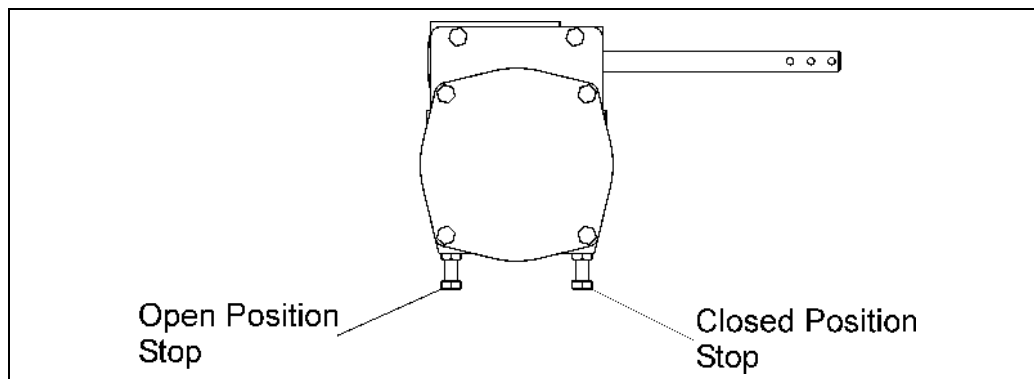


Figure 4 – Open and Closed Position Stop Identification

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G-Series (6B/12A) Manual Actuator

used on BAW Butterfly Valves

Removing Actuator from Valve

Refer to Figure 5 (G_-6B) and Figure 6 (G_-12A) for connecting parts identification.

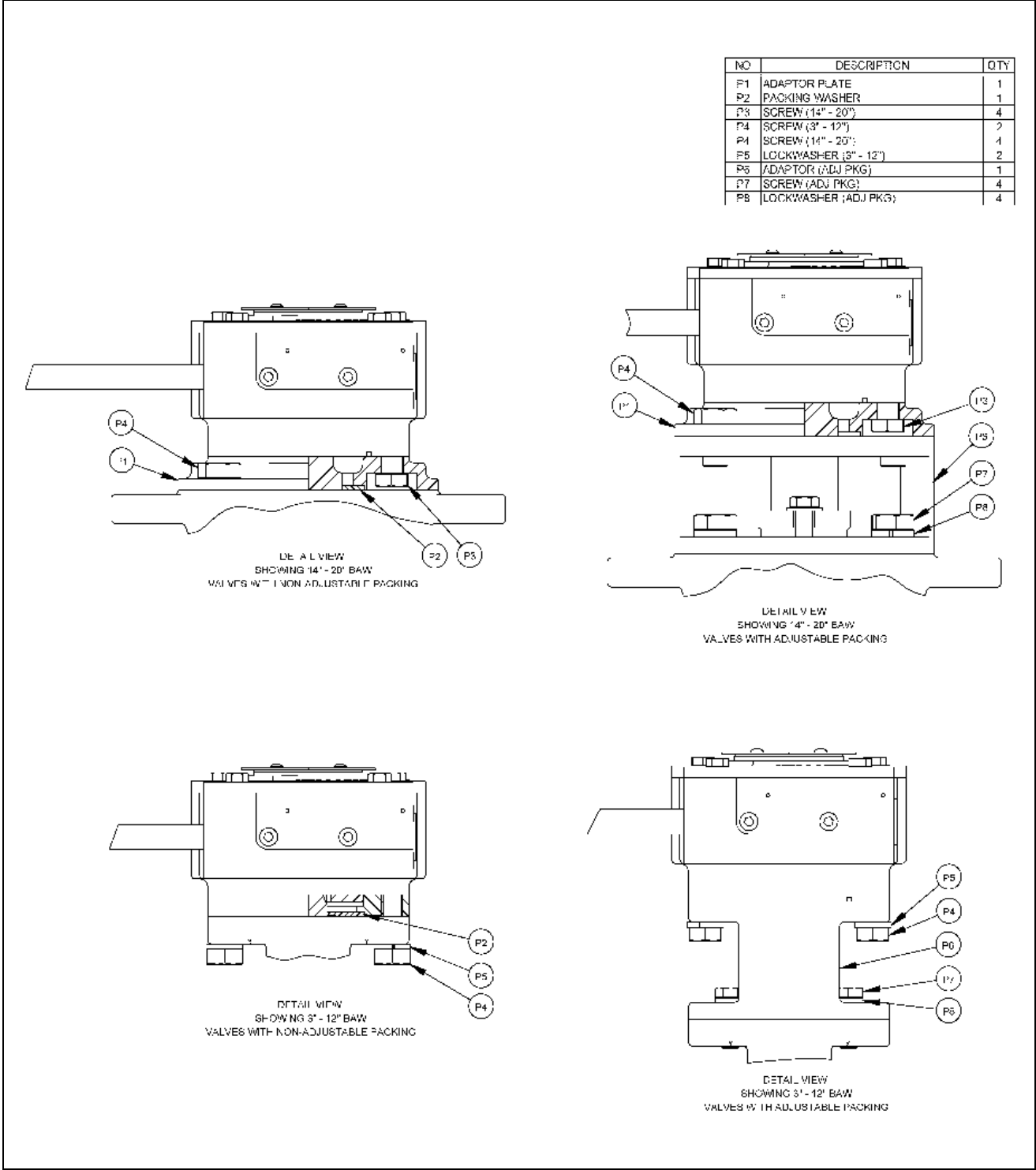
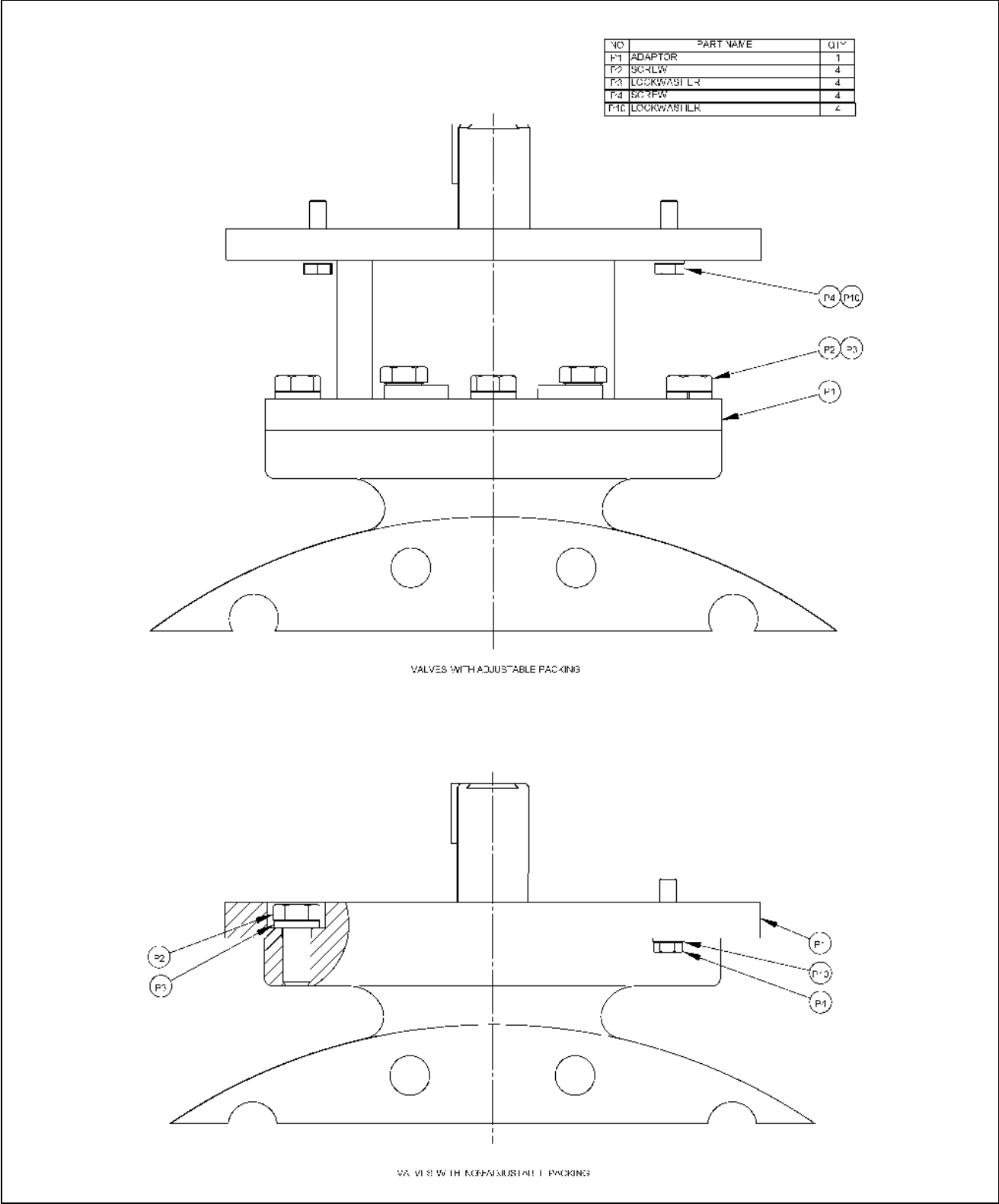


Figure 5 – G_-6B Connecting Parts Identification
3” – 20” Valves

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used on BAW Butterfly Valves



VALVES WITH NON-ADJUSTABLE PACKING

Figure 6 – G_ -12A Connecting Parts Identification
20” – 30” Valves

Removing Actuator from Valve *(Continued)*



WARNING!

Flow in the pipeline with the actuator removed can slam the valve closed causing personal injury and damaging the flow system. Shut down the flow in the pipeline before removing the actuator from the valve.

G_-6B Actuator on 3 – 12 Inch Valves (Figure 5)

1. Discontinue flow and relieve pipeline pressure.
2. Close the valve.
3. Remove the indicator (B1Q) or buried service cover (B12).
4. Remove the two actuator mounting screws (P4) and lock-washers (P5).
5. Remove the actuator from the mounting flange.
6. Do not lose the drive key used in the valve shaft and actuator gear sector.
7. Clean the keyways, removing the silicon residue. Wipe away any remaining cleaning residue.

G_-6B Actuator on 14 – 20 Inch Valves (Figure 5)

1. Discontinue flow and relieve pipeline pressure.
2. Close the valve.
3. Remove the indicator (B1Q) or buried service cover (B12).
4. Remove the four adaptor mounting screws (P4).
5. Remove the actuator with adaptor plate (P1) from the mounting flange.
6. Do not lose the drive key used in the valve shaft and actuator gear sector.
7. Clean the keyways, removing the silicon residue. Wipe away any remaining cleaning residue.

G_-12A Actuator on 20 – 30 Inch Valves (Figure 6)

1. Discontinue flow and relieve pipeline pressure.
2. Close the valve.
3. Remove the indicator (B1Q) or buried service cover (B12).
4. Remove the four actuator mounting screws (P4) and lock-washers (P10).
5. Remove the actuator from the adaptor (P1).
6. Do not lose the drive key used in the valve shaft and actuator gear sector.
7. Clean the keyways, removing the silicon residue. Wipe away any remaining cleaning residue.

Installing Actuator on Valve

Refer to Figure 2 and Figure 5 for parts identification.

G_-6B Actuator on 3 – 12 Inch Valves

1. Place the valve in the position it was in when the actuator was removed. Normally this will be in the closed position.
2. **For Buried Service (GB_) actuators only:** Before reassembly, remove old sealant from all mating mounting surfaces. Apply a thin bead of silicone sealant DOW RTV-732 (1055515) or similar to the valve top mounting flange and the actuator housing (B1A) mounting surfaces.
3. **For Above Ground Service (GS_) actuators mounted on valves with non-adjustable packing only:** Verify the packing washer (P2) is located on the valve shaft.
4. Install the actuator onto the valve shaft and verify the valve shaft keyway is properly aligned with the keyway in the actuator gear sector. Mount the actuator to the mounting flange with the two mounting screws (P4) and lock-washers (P5). Tighten screws.
5. Insert the key into the gear sector and shaft keyway. Apply enough Dow Corning 732 silicone sealant in the gear sector keyway to cover the exposed end of the key and secure the key to the gear sector.
6. Check the closed position stop setting and readjust if necessary as described in the **ADJUSTING POSITION STOPS** Section of this Instruction.
7. Replace the indicator (B1Q) or buried service cover (B12).
8. Pipeline flow may now be restored.

G_-6B Actuator on 14 – 20 Inch Valves

1. Place the valve in the position it was in when the actuator was removed. Normally this will be in the closed position.
2. **For Buried Service (GB_) actuators only:** Before reassembly, remove old sealant from all mating mounting surfaces. Apply a thin bead of silicone sealant DOW RTV-732 (1055515) or similar to the adaptor plate (P1) and the actuator housing (B1A) mounting surfaces.
3. **For Above Ground Service (GS_) actuators mounted on valves with non-adjustable packing only:** Verify the packing washer (P2) is located on the valve shaft.
4. Install the actuator onto the valve shaft and verify the valve shaft keyway is properly aligned with the keyway in the actuator gear sector. Mount the actuator with adaptor to the mounting flange with the four mounting screws (P4). Tighten screws.
5. Insert the key into the gear sector and shaft keyway. Apply enough Dow Corning 732 silicone sealant in the gear sector keyway to cover the exposed end of the key and secure the key to the gear sector.
6. Check the closed position stop setting and readjust if necessary as described in the **ADJUSTING POSITION STOPS** Section of this Instruction.
7. Replace the indicator (B1Q) or buried service cover (B12).
8. Pipeline flow may now be restored.

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G-Series (6B/12A) Manual Actuator used on BAW Butterfly Valves

Installing Actuator on Valve *(Continued)*

G_-12A Actuator on 20 – 30 Inch Valves

1. Place the valve in the position it was in when the actuator was removed. Normally this will be in the closed position.
2. **For Buried Service (GB_) actuators only:** Before reassembly, remove old sealant from all mating mounting surfaces. Apply a thin bead of silicone sealant DOW RTV-732 (1055515) or similar to the adaptor plate (P1) and the actuator housing (B1A) mounting surfaces.
3. Install the actuator onto the valve shaft and verify the valve shaft keyway is properly aligned with the keyway in the actuator gear sector. Mount the actuator to the adaptor plate (P1) with the four mounting screws (P4) and lock-washers (P10). Tighten screws.
4. Insert the key into the gear sector and shaft keyway. Apply enough Dow Corning 732 silicone sealant in the gear sector keyway to cover the exposed end of the key and secure the key to the gear sector.
5. Check the closed position stop setting and readjust if necessary as described in the **ADJUSTING POSITION STOPS** Section of this Instruction.
6. Replace the indicator (B1Q) or buried service cover (B12).
7. Pipeline flow may now be restored.

Convert from CCW to CW to Open (Open Right)

1. Remove the actuator from the valve as described in the REMOVING ACTUATOR FROM VALVE section of this instruction.
2. Rotate the operator of the actuator CCW until the gear sector moves 90 degrees from the closed position.
3. Re-install actuator onto valve per INSTALLING ACUTATOR ON VALVE section of this instruction.

Actuator Disassembly and Assembly

Under normal operating conditions the G-Series actuator does not require routine maintenance. If the actuator has excessive wear or has been damaged, it is recommended that the actuator be replaced, not repaired.

Use the following procedure for replacing leaking seals and O-rings. Refer to Figure 2 for component identification.

Actuator Disassembly:



WARNING!

Flow in the pipeline with the actuator removed can slam the valve closed causing personal injury and damaging the flow system. Shut down the flow in the pipeline before removing the actuator from the valve.

4. Discontinue flow and relieve pipeline pressure.
5. Close the valve.
6. Remove the actuator from the valve as described in the REMOVING ACTUATOR FROM VALVE section of this Instruction.
7. **Above Ground Service (GS_) actuator only:** Note the position of the pointer (B1Q), then remove the screws (B1R) and pointer.

Buried Service (GB_) actuator only: Remove screws (B13) and cover (B12).

8. Remove the screws (B1M) and cover (B1B).
9. Remove the O-ring (B1N) thru the top of the cover (B1B).
10. Note the position of the gear sector (B1C) in the housing (B1A).
11. Remove the two pipe plugs (B1I) from the housing (B1A).
12. Rotate the drive shaft (B1F) until the pins (B1K) line up with the pipe plug holes in the housing (B1A).
13. Drive both pins (B1K) thru the worm (B1D) and drive shaft (B1F).
14. Slide the drive shaft (B1F) out of the housing (B1A).
15. Remove the worm gear (B1D), four bearing race (B1G), two thrust bearings (B1H), two spacer sleeves (B1V), gear sector (B1C) and seal (B1J) from the housing (B1A).
16. Remove the O-ring (B1N) thru the bottom of the housing (B1A).
17. Remove old gasket sealant from the top of the housing (B1A) and bottom of the cover (B1B).

Buried Service (GB_) actuator only: Remove old gasket sealant from the bottom of the housing (B1A), top of adaptor plate (P1), top of cover (B1B) and bottom of cover (B12) mating surfaces.

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G-Series (6B/12A) Manual Actuator
used on BAW Butterfly Valves

Actuator Assembly:

1. Install a new seal (B1J) into the housing (B1A).
2. Apply a light film of grease to a new O-ring (B1N) and insert it into the groove in the bottom of the housing (B1A).
3. Grease the bearing (B1L) in the housing (B1A) and slide the gear sector (B1C) into the bearing in the position noted in Step 7. of the ACTUATOR DISASSEMBLY section.
4. Slide the drive shaft (B1F) into the housing (B1A) and thru bearing race (B1G), thrust bearing (B1H), bearing race (B1G), spacer sleeve (B1V), worm (B1D), bearing race (B1G), thrust bearing (B1H) and bearing race (B1G), spacer sleeve (B1V).
5. Rotate the drive shaft (B1F) until the pin holes in the drive shaft and the worm (B1D) line up.
6. Drive the two pins (B1K) thru the worm (B1D) and drive shaft (B1F).
7. Apply removable thread sealant to the threads of pipe plugs (B1I) and install the pipe plugs flush or below the surface of the housing (B1A).
8. **Above Ground Service (GS_) actuator only:** Apply a liberal amount of Lithium based grease such as Shell Alvania EP2 or Mobilux EP2 to the gear sector (B1C), bearings (B1L) and worm (B1D).

Buried Service (GB_) actuator only: Pack the housing (B1) full of Lithium based grease such as Shell Alvania EP2 or Mobilux EP2.

9. Apply a light film of grease to a new O-ring (B1N) and insert into groove in the cover (B1B).
10. Apply a bead of silicone sealant DOW RTV-732 (1055515) or similar to the housing (B1A) or cover (B1B) mating surface. Grease the bearing (B1L) in the cover, slide the cover onto the gear sector (B1C) and fasten with screws (B1M) to the housing.
11. Insert the drive key into the valve shaft/gear sector (B1C) keyway.
12. **Above Ground Service (GS_) actuator only:** Fasten the pointer (B1Q) to the gear sector (B1C) with the two screws (B1R) in the position noted in Step 4. of the ACTUATOR DISASSEMBLY section.

Buried Service (GB_) actuator only: Apply a bead of silicone sealant DOW RTV-732 (1055515) or similar to the cover (B12) or cover (B1B) mating surface. Fasten the cover (B12) to cover (B1B) with screws (B13).

13. Install the actuator on the valve as described in the REPLACING ACTUATOR ON VALVE Section of this Instruction.

G-Series (6B/12A) Manual Actuator used on BAW Butterfly Valves

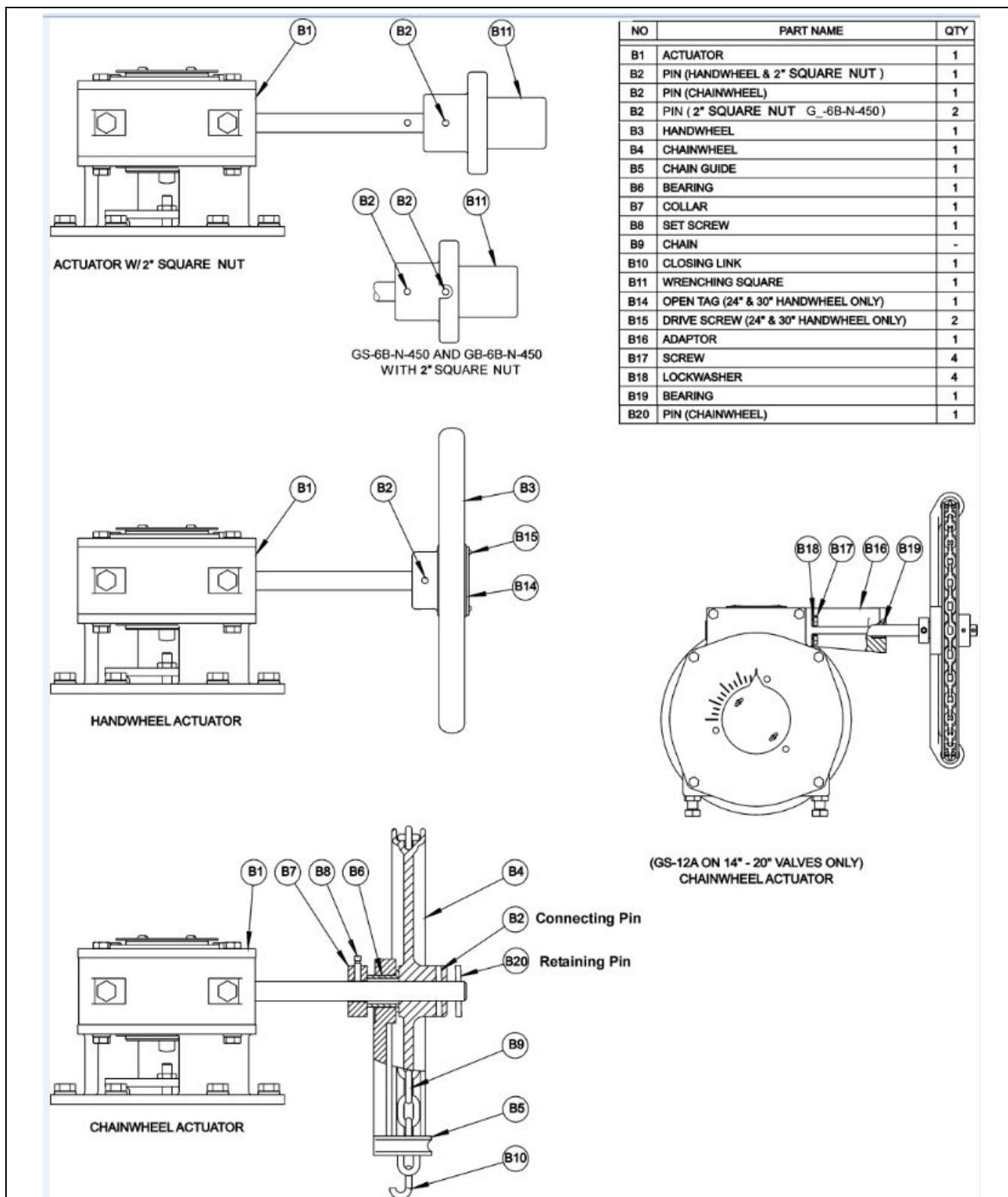


Figure 7 – G_-6B and G_-12A Operator Component Identification

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G-Series (6B/12A) Manual Actuator used on BAW Butterfly Valves

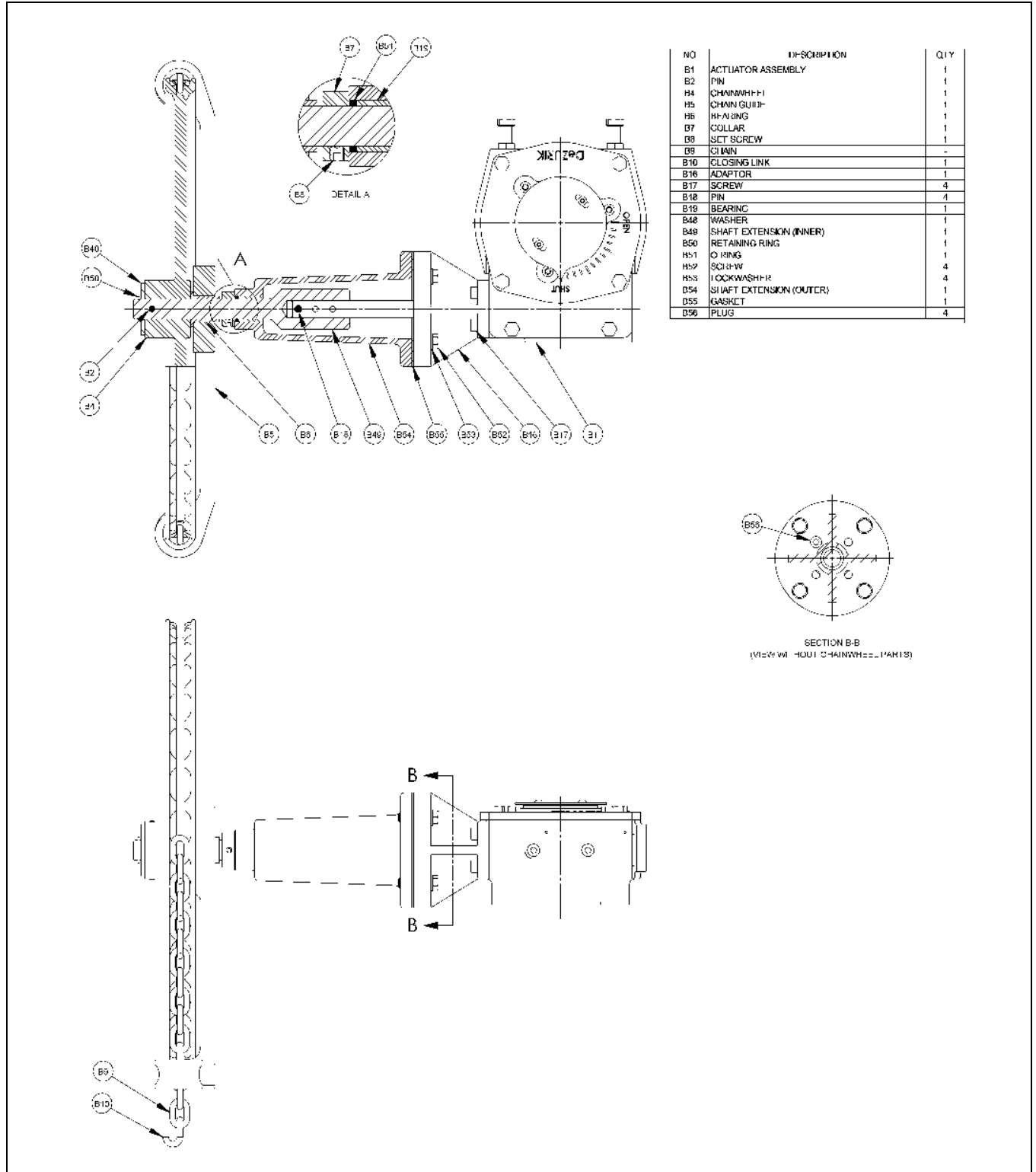


Figure 8 – G_-6B with 20" and 24" Chainwheels Operator Component Identification

Replace Handwheel or Nut with Chainwheel Operator

Carefully follow these steps to convert the actuator from a handwheel or nut operator to a chainwheel operator.



WARNING!

Flow in the pipeline with the actuator removed can slam the valve closed causing personal injury and damaging the flow system. Shut down the flow in the pipeline before removing the actuator from the valve.

1. Discontinue flow and relieve pipeline pressure.
2. Close the valve.
3. Remove actuator from valve. Refer to “Removing Actuator from Valve” section in this instruction.
4. Support actuator shaft (B1F) with a solid surface. Drive out pin (B2) and remove handwheel (B3) or nut (B11) from actuator shaft.

GS-6B-CW_ (8 and 12 Inch Chainwheels)

Refer to Figure 6 for parts identification.

1. Slide collar (B7) with set screw (B8) onto actuator shaft (B1F).
2. Insert bearing (B6) into chain guide (B5) and slide chain guide onto actuator shaft (B1F) with the bearing flange facing actuator and openings in chain guide facing away from actuator.
3. Slide chainwheel (B4) onto actuator shaft (B1F) with the pin hole in hub facing away from actuator and line up pin hole in chainwheel hub with second hole in actuator shaft. Support the hub of chainwheel with a solid surface and drive connecting pin (B2) into position. See Figure 6 for location of connecting pin.



WARNING!

The “connecting” pin securing the chainwheel hub to the actuator shaft could potentially shear allowing the chainwheel to disengage from the actuator shaft and cause personal injury or equipment damage.

A “retaining” pin at the end of the actuator shaft must be in-place to insure the chainwheel cannot disengage from the actuator shaft.

4. Support the hub of chainwheel (B4) with a solid surface and drive retaining pin (B20) into the remaining hole at the end of actuator shaft. See Figure 6 for location of retaining pin.
5. Slide collar (B7) and chain guide (B5) against chainwheel (B4) and tighten set screw (B8).
6. Install actuator on valve. Refer to “Installing Actuator on Valve” section in this instruction.
7. Feed chain (B9) over chainwheel (B4) and through both openings in chain guide (B5).
8. Connect ends of chain (B9) with closing link (B10).

Replace Handwheel or Nut with Chainwheel Operator *(Continued)*

GS-6B-CW_ (20 and 24 Inch Chainwheels)

Refer to Figure 8 for parts identification.

1. Remove plastic plugs from mounting holes on shaft side of actuator housing (B1A).
2. Slide adaptor (B16) onto actuator shaft (B1F). Tighten with screws (B17).
3. Slide inner shaft extension (B49) onto actuator shaft (B1F) and align pin holes.
4. Support the hub of inner shaft extension (B49) with a solid surface and drive pin (B18) into the aligned pin holes.
5. Insert bearing (B19) in hole of outer shaft extension (B54).
Note: Bearing must be recessed .18" from end of outer shaft extension.
6. Place gasket (B55) on adaptor (B16).
7. Slide outer shaft extension (B54) onto inner shaft extension (B49).
8. Align gasket (B55) and outer shaft extension (B54) with adaptor (B16). Secure outer shaft extension to adaptor with screws (B52) and lock-washers (B53).
9. Apply a light film of grease to a new O-ring (B51) and slide over inner shaft extension (B49) and insert into outer shaft extension (B54) O-ring groove.
10. Slide collar (B7) with set screw (B8) onto inner shaft extension (B49) and secure up against outer shaft extension (B54).
11. Insert the four plugs (B56) into thru holes in adaptor (B16).
12. Insert bearing (B6) into chain guide (B5) and slide chain guide onto inner shaft extension (B49) with the bearing flange and openings in chain guide facing away from actuator.
13. Slide chainwheel (B4) onto inner shaft extension (B49) with pin hole in hub facing away from actuator. Line up pin hole in chainwheel hub with hole in inner shaft extension. Support hub of chainwheel with a solid surface and drive pin (B2) into position.



WARNING!

The “connecting” pin securing the chainwheel hub to the inner shaft extension could potentially shear allowing the chainwheel to disengage from the actuator shaft and cause personal injury or equipment damage.

A washer and retaining ring must be in-place to insure the chainwheel cannot disengage from the inner shaft extension.

14. Slide washer (B48) onto inner shaft extension (B49) and attach retaining ring (B50) to inner shaft extension.
15. Install actuator on valve. Refer to “Installing Actuator on Valve” section in this instruction.
16. Feed chain (B9) over chainwheel (B4) and through both openings in chain guide (B5).
17. Connect the ends of chain (B9) with closing link (B10).

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G-Series (6B/12A) Manual Actuator used on BAW Butterfly Valves

Replace Handwheel or Nut with Chainwheel Operator *(Continued)*

GS-12A-CW_

Refer to Figure 6 for parts identification.

1. Remove plastic plugs from mounting holes on shaft side of actuator housing (B1A).
2. Slide adaptor (B16) onto actuator shaft (B1F). Tighten with screws (B17) and lock-washers (B18).
3. Slide collar (B7) with set screw (B8) onto actuator shaft (B1F).
4. Insert bearing (B6) into chain guide (B5) and slide chain guide onto actuator shaft (B1F) with the bearing flange facing actuator and chain holes in guide facing away from actuator.
5. Slide chainwheel (B4) onto actuator shaft (B1F) with pin hole in hub facing away from actuator and line up pin hole in chainwheel hub with second hole in actuator shaft. Support the hub of chainwheel with a solid surface and drive connecting pin (B2) into position. See Figure 7 for location of connecting pin.



WARNING!

The connecting pin securing the chainwheel hub to the actuator shaft could potentially shear allowing the chainwheel to disengage from the actuator shaft and cause personal injury or equipment damage.

A retaining pin at the end of the actuator shaft must be in-place to insure the chainwheel cannot disengage from the actuator shaft.

6. Support hub of chainwheel (B4) with a solid surface and drive retaining pin (B20) into remaining hole at end of actuator shaft. See Figure 6 for location of retaining pin.
7. Slide collar (B7) and chain guide (B5) against chain wheel (B4) and tighten set screw (B8).
8. Install actuator on valve. Refer to "Installing Actuator on Valve" section in this instruction.
9. Feed chain (B9) over chainwheel (B4) and through both openings in chain guide (B5).
10. Connect ends of chain (B9) with closing link (B10).

Changing Mounting Positions

The actuator can be mounted in 90° increments around the valve shaft.

To move the actuator mounting position in 90° increments from its present position, follow these steps.

1. Remove the actuator from the valve as described in the REMOVING ACTUATOR FROM VALVE Section of this Instruction.
2. Rotate the actuator to the desired position.

Install the actuator on the valve as described in the INSTALLING ACTUATOR ON VALVE Section of this Instruction.

Troubleshooting

Condition	Possible Cause	Corrective Action
Actuator closes to wrong position	Closed position stop is set incorrectly	Adjust closed position stop. See <i>Adjusting Position Stops</i> section
	Pointer is installed incorrectly.	Rotate pointer to correct position.
Actuator opens to wrong position	Open position stop is set incorrectly	Adjust open position stop. See <i>Adjusting Position Stops</i> section
	Pointer is installed incorrectly.	Rotate pointer to correct position.
High operating torque.	Misalignment of adaptor.	Check valve-adaptor-actuator alignment and adjust.
	Misalignment of ENK extension.	Check valve-extension-actuator alignment and adjust.
	Bent actuator input shaft.	Replace actuator.

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

Metric fasteners should not be used with ASME Class 150/300 bolt holes and flange bolt patterns. If you use metric fasteners with ASME Class 150/300 bolt holes and flange bolt patterns, it may lead to product failure, injury, and loss of life. DeZURIK Inc. disclaims all liability associated with the use of metric fasteners with ASME Class 150/300 bolt holes and flange patterns, including but not limited to personal injury, loss of life, loss of product, production time, equipment, property damage, lost profits, consequential damages of any kind and environment damage and/or cleanup. Use of metric fasteners with ASME Class 150/300 bolt holes and flange bolt patterns is a misuse that voids all warranties and contractual assurances. If you use metric fasteners with ASME Class 150/300 bolt holes and flange bolt patterns, you do so at your sole risk and any liability associated with such use shall not be the responsibility of DeZURIK, Inc. In addition to the foregoing, DeZURIK's Manufacturer's Conditions apply.

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Sales and Service

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

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Design features, materials of construction and dimensional data, as described in this manual, are provided for your information only and should not be relied upon unless confirmed in writing by DeZURIK, Inc. Certified drawings are available upon request.