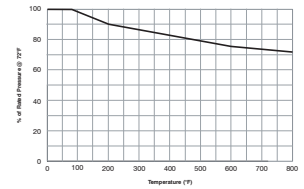


**ISO-9001  
CERTIFIED**



## Air Valve Rebuild Instructions

### SECTION 1.0

#### Installation

All valves are factory adjusted and tested at full pressure.

For information on proper tubing connection and installation, please refer to the tools and installation section of the Maxpro Technologies Catalogue.

<https://www.maxprotech.com/literature-downloads.html>

The air supply connection on the operator is 1/8" NPT. The recommended value for air pressure at the maximum valve operating pressure is shown label. The maximum allowable working pressure of the operator is 100 psi. (6.9 bar).

Use minimum required air pressure on air to open actuators (Normally closed) or minimum required spring pre-compression (Normally open) to increase stem and seat life.

### SECTION 2.0

#### Packing Adjustment

If the valve packing is leaking, follow the steps listed below to reseal the valve stem:

1. Relieve all pressure in the valve body.

#### 2. Normally Open Valves

Relieve all air pressure to the operator inlet

#### Normally Closed Valves

Apply and maintain air pressure to the operator inlet to unseat the stem

3. Remove the two screws holding the clear plastic cover to the yoke. This will allow access to the packing gland.

4. Loosen the packing gland locking device.

5. While holding the valve body secure, use a torque wrench to tighten the packing gland to the value shown on the chart following these instructions.

6. Pressurize the valve and check for leaks.

7. If the packing still leaks, relieve all pressure in the valve and repeat steps 4 and 5. If the packing does not seal after several attempts, it probably needs replacement (refer to Section 4.0).

8. Reinstall the packing gland locking device.

9. Reinstall the clear plastic cover to the yoke.

10. Relieve air pressure to the operator for Normally Closed Valves Only

## SECTION 3.0

### Valve Packing or Stem Replacement

To change the packing or stem, follow the steps listed below:

1. Relieve all pressure from the valve and operator.
2. **Normally Closed Valves Only:**

Loosen the jam nut on top of the spring housing, then loosen the screw until all spring compression is relieved. Apply air (approximately 20 psi) (1.4 bar) to the operator to move the piston to the “open” position.
3. Remove the two screws holding the clear plastic cover to the yoke. This will allow access to the packing gland.
4. Loosen the packing gland locking device.
5. While holding the valve body secure, loosen the packing gland.
6. Remove the screws holding the valve body to the yoke.
7. Completely loosen the packing gland and remove the valve body. The packing will stay on the stems that have larger stem tip below the packing.
8. If the stem does not have a larger stem tip, go to step #8.

For stems that do have a larger stem tip, the stem must be removed from the operator shaft to remove the packing. Loosen the nut on the stem and unscrew the stem. If the stem is difficult to remove, use pliers to grip the portion of the stem inside the yoke. **Do not grip the stem below the yoke.** This section seals against the packing.
9. Remove the packing from the stem (stems with larger stem tip, ½” or larger) or from the valve body (stems with smaller diameter).
10. Place the new packing on the stem or in the valve body
11. Apply a compatible lubricant between the packing and stem surfaces, Maximator uses Polylub GA 352 on standard installations.
12. Slide the threaded end of the stem through the packing gland and locking device. Screw the nut back onto the stem and place the locking device on the packing gland.
13. Screw the stem into the shaft until the distance from the stem tip to the yoke equals the dimension shown on the attached Installation Summary Chart. (Piston must be in the “open” position). Reinstall the position indicator and tighten the stem nut.
14. Place the valve body up to the yoke and hand tighten the packing gland into the valve body.
15. Insert and tighten the body/yoke screws.
16. While holding the valve body secure, tighten the packing gland to the value shown on the attached Installation Summary Chart.
17. Secure the packing gland locking device.
18. Reinstall the clear plastic cover to the yoke.
19. **Normally Closed Valves Only**

Tighten the screw on top of the spring housing until the stem bottoms out on the seat (position indicator at “C”). Back the screw off, then hand tighten. Tighten the screw the distance shown on the Installation Summary Chart. An equivalent amount of screw revolutions is also given. Once completed, tighten the jam nut securely in place.

**Note:** The above pressure temperature chart is for 316 cold worked materials, this chart does not account for the temperature rating of packing or o-ring material which could be the limiting factor. Contact factory for other material limitations.

## SECTION 4.0

### Seat Replacement

When the seat requires replacement, use the below procedure

1. Relieve all pressure from the valve
2. **Normally Closed valves only**

Loosen the jam nut on top of the spring housing then loosen the screw until all spring compression is relieved. Apply air (approximately 20 psi) to the operator to move the stem to the “open” position.

### Normally Open Valves only

Relieve all pressure to the air operator.

3. While holding the valve body secure, remove the seat retainer or the seat
4. Inspect the seat for signs of wear or damage. Replaceable seats may be reversed if only one side is worn. If both sides are worn, use a new seat.
5. Place the seat in the body and install the seat retainer. While holding the body secure, torque the seat retainer to the value in the installation summary chart.
6. Normally Closed valves only

Adjust the spring pre-compression per the specification sheets

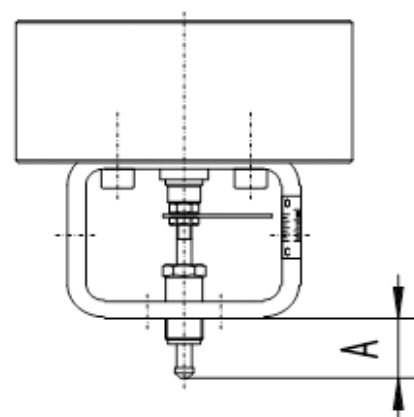
## SECTION 5.0

### Operator Seal Replacement

Consult the factory if the seals in the operator require replacement

INSTALLATION CHART

VALVE SIZE	PACKING GLAND HEX	PACKING GLAND TORQUE	Stem Location (Dimension A in figure 1)	Spring Pre- compression (Normally Closed)	Replaceable Seat Retainer Torque	Tube Gland Torque
	Inches	Ft/Lbs	Inches	Inches	Ft/lbs	Ft/Lbs
21V4M	5/8	40	1.134	0.59	35	20
21V6M	5/8	40	1.134	0.56	35	30
21V9M	13/16	80	1.673	0.56	125	55
36V4H	13/16	40	1.083	0.37	35	25
36V6H	13/16	40	1.083	0.5	35	50
36V9H	13/16	40	1.083	0.5	35	110
65V4H	13/16	60	1.201	0.44	45	25
65V6H	13/16	60	1.201	0.44	45	50
65V9H	13/16	60	1.201	0.56	45	110



*The Stem Location is the distance from the bottom of the yoke to the tip of the stem, with the piston in the up position(open)*

*Spring pre-compression required at the maximum working pressure*