


Top Line E-360™ Diaphragm Valve Actuator

Installation, operation and maintenance manual

➤ Requirements

- Maximum air supply: 120 PSIG
- Operating air supply range: 80 – 100 PSIG
- Maximum ambient temperature: 120°F



 Warning – Risk of injury from high pressure
Do not exceed pressure ratings on actuator label

➤ Storage

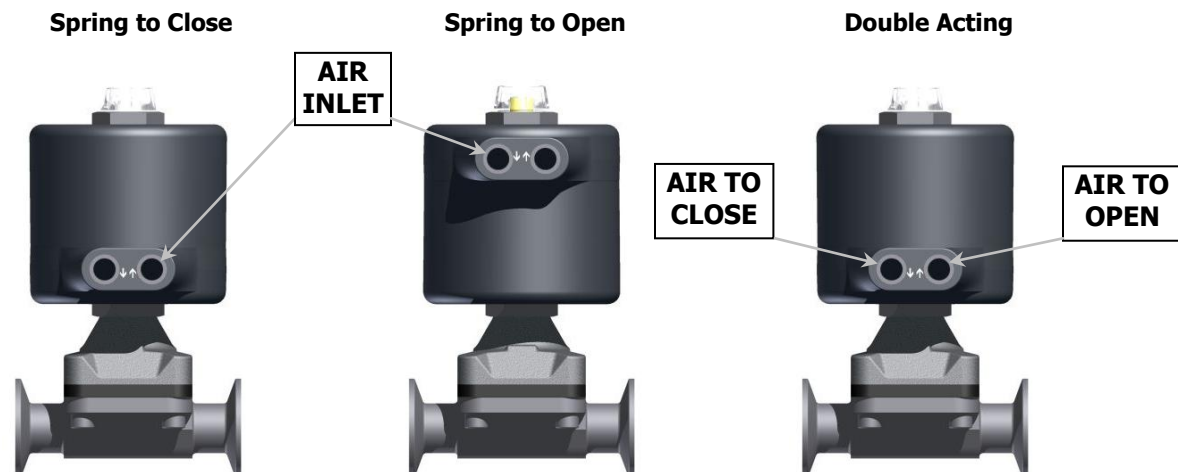
It is recommended that the actuator be kept in a clean and dry location with supplied plugs in ports.

➤ Installation

- Mount valve per drain angle
- Connect air line to the connection on the Swivel Ring (11). The arrow indicates the direction in which the piston moves when actuated.
- Use clean dry filtered air
- Use the torque values shown at the end of this document (table #1) to tighten the bolts

➤ Changing configuration with valve inline

Please note that unlike similar products, the piston does not have to be removed for function changes – instead, once configured, the head is flipped in order to provide the proper orientation (see below for details). No extra parts/kits are required.



The process piping can remain sealed for actuator head function change!

Top Line E-360™ Diaphragm Valve Actuator

Installation, operation and maintenance manual

➤ Changing configuration with valve inline (continued)

1. Disconnect air lines
2. Remove sight glass (9) - *the o-ring (6) must stay on the sight glass*
3. Remove locknut (8) - *the locknut o-ring (7) must stay on the locknut*
4. Unscrew & remove head from stainless steel base with a wrench
5. Clamp or hold the lower hex (the one closest to the swivel ring) in a vise or similar tool to maintain the head in a stable position - *Care must be taken not to over tighten or you may otherwise damage the hex or the polymer head.*
6. Unscrew the cap (18) - *keep the swivel ring (12) and o-ring (11) in place*
7. Change spring set (16)

Spring to Close

Valve Size	Head A200	Head A316	Head B492
Compact	Blue	Not applicable	Not applicable
1/2"	Blue	Yellow	
3/4"	Not applicable	Yellow & Green	
1"		Yellow & Green	
1 1/2"		Not applicable	
2"			Red & White

Spring to Open

Valve Size	Head A200	Head A316	Head B492
Compact	Blue	Not applicable	Not applicable
1/2"	Blue	Yellow	
3/4"	Not applicable	Yellow	
1"		Yellow	
1 1/2"		Not applicable	Red
2"			Red

Double Acting: Remove all springs

**Colors indicate spring compression set*

8. Reinstall & tighten the cap (18) - *Take care that the cap o-ring (17) stays in the groove as you screw the cap on. Do not over tighten as damage to the housing could result. The swivel ring should remain loose enough to rotate by hand.*
9. Install the head on the base assembly - **The bearing surface where the stem rests on the piston shall be lubricated with Molykote 111 or equivalent grease so that induced torsion in the springs during step 8 is released at this step. This prevents wearing of the Compressor in the Bonnet.*
 - **Spring to Close:** Swivel ports in the lower position. See picture "Spring to Close".
 - **Spring to Open:** Swivel ports in the upper position. See picture "Spring to Open".
 - **Double Acting:** Swivel ports in the lower position. See picture "Double Acting".
10. Install locknut (8) with the o-ring (7) in place.
11. Install sight glass (9) with the o-ring (6) in place.



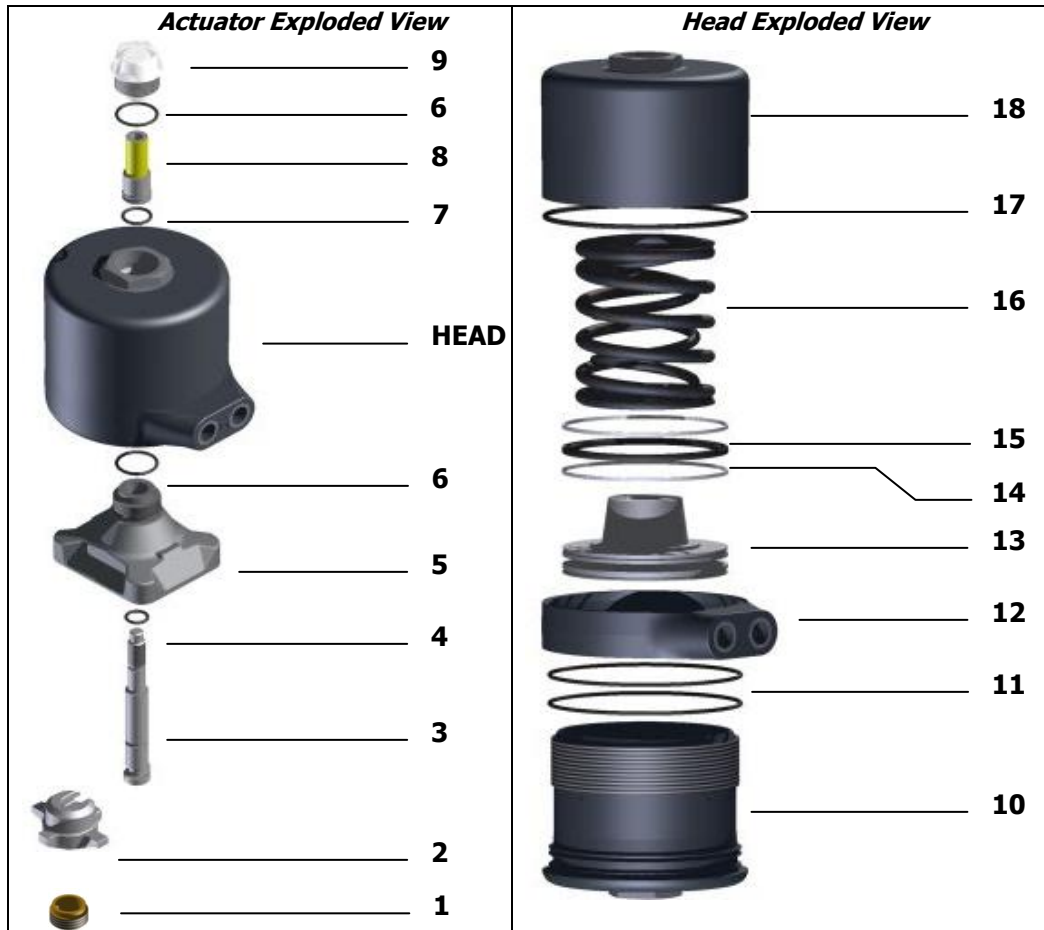
➤ Maintenance

No maintenance is required on the actuator under normal operating conditions for 1,000,000 cycles.

Top Line E-360™ Diaphragm Valve Actuator

Installation, operation and maintenance manual

➤ Actuator parts



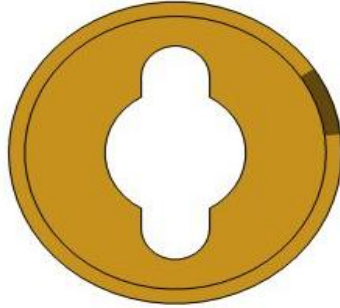
No.	Qty	ITEM	MATERIAL
1	1	COMPRESSOR INSERT	BRASS
2	1	COMPRESSOR	SS ASTM A743 CF8
3	1	STEM	SS ASTM A276 316
4	1	STEM O-RING	NITRILE
5	1	BONNET	SS ASTM A351 CF8
6	2	BONNET/SIGHT GLASS O-RING	NITRILE
7	1	LOCKNUT O-RING	NITRILE
8	1	LOCKNUT/INDICATOR	SS ASTM A582 303
9	1	SIGHT GLASS	POLYCARBONATE
10	1	HOUSING	GLASS REINFORCED PA
11	2	SWIVEL RING O-RING	NITRILE
12	1	SWIVEL RING	GLASS REINFORCED PA
13	1	PISTON	ALUMINIUM
14	2	GUIDING RING	PTFE
15	1	PISTON SEAL	NITRILE
16	1	SPRING SET	Cr-Si STEEL ASTM A401
17	1	CAP O-RING	NITRILE
18	1	CAP	GLASS REINFORCED PA

For replacement parts, order HEAD#-Item# (Ex: Sight glass for B492 head → B492-8)
See replacement parts table #2 below

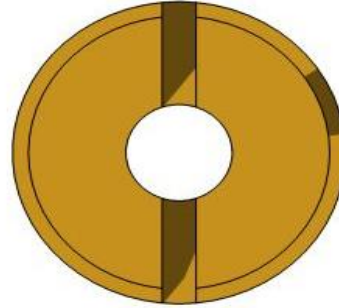
Top Line ϵ -360™ Diaphragm Valve Actuator

Installation, operation and maintenance manual

➤ Compressor Insert Type



**Bayonet type
TFM/EPDM Diaphragm**



**Screw type
EPDM Diaphragm**

Table #1 - Bolt torque for bonnet assembly to weir body diaphragm valves (inch lbs)

Body/bonnet torque values		
Valve Size	Elastomer Diaphragms	Teflon Diaphragm
1/2"	26	55
3/4"	30	65
1"	45	85
1 1/2"	60	125
2"	150	190

Top Line ϵ -360™ Diaphragm Valve Actuator

Installation, operation and maintenance manual

➤ Limited Warranty:

Top Line Process Equipment Company products are warranted to be free of defects in material or workmanship for a period of one year from date of shipment. Warranty covers those Top Line products used in an approved installation and maintained in strict accordance with recognized standard industry practice. If, after properly authorized return, Top Line determines that products are defective, Top line may at its option, repair or replace such defective products.

Top Line shall not be liable for consequential, indirect or incidental damages. The above warranty is in lieu of all warranties, expressed or implied.

➤ Contact Information:



Contact your Top Line Representative for Assistance

Office: P.O. Box 264 Bradford, PA 16701

Plant: 21 Valley Hunt Drive – Lewis Run, PA 16738

Telephone: 814-362-4626

Toll Free: 800-458-6095

Fax: 814-362-4453

E-mail: topline@toplineonline.com

Website: www.toplineonline.com



The ONLY one of its kind!

Page | 5