











5. Remove bonnet gasket (8), seat retainer (5), seat ring (4) and seal (3). If necessary, remove seat ring by forcing a wooden dowel into seat bore and lifting.

## CLEANING

1. Clean all parts thoroughly. Polish valve plug stem with crocus cloth. It should be smooth and free of scratches in packing area. Use approved, non-residue forming solvent for cleaning. Wipe dry with clean cloth.
2. Inspect all parts and replace any excessively worn or damaged part.
3. Install a new packing set of braided Teflon graphite or Teflon chevron rings as shown on packing installation sketch Fig. 3, 4 or 5. See previous section on renewing valve plug stem packing.
4. The packing bearings have a long wearing life material which under normal usage should not require replacement, however, if damaged or worn the packing bearing (12) and/or the bonnet (6) must be replaced. (Lower bearing in bonnet is not supplied separately.)
5. The gasket (8) and seal (3) should be replaced each time the valve body subassembly is disassembled for cleaning.

All LESLIE control valves are made of the finest material obtainable, time-tested and backed by over seventy-five years of know-how. Machining is done by expert craftsmen and each valve is inspected and service tested before shipment to you.

## REASSEMBLY VALVE BODY SUBASSEMBLY LAPPING VALVE PLUG AND SEAT

1. Insert raised face of seat ring (4) into seat retainer cage (5) and place these into bore of valve body bridge.
2. Place new bonnet gasket (8) into body recess.

3. With light pressure and turning motion assemble valve plug (2) to the bonnet (6) being careful not to damage bearings or packing set (17).
4. Apply very thin film of superfine lapping compound to the valve plug seating surface.
5. Assemble bonnet (6) complete with valve plug (2) to valve body (1) applying nuts (10) only finger tight to studs or bolts (11). The bonnet acts as a guide when grinding valve plug.
6. Use wrench on flats of valve plug stem for turning valve plug (2). Do not bear down on valve plug stem when lapping. Weight of parts is sufficient to cause lapping action.
7. As lapping progresses lift valve plug off seat occasionally and rotate 45° to keep compound evenly distributed. Remove all traces of compound after lapping. Excessive lapping should be avoided.
8. Remove bonnet nuts (10), bonnet assembly, and all body assembly parts. Then remove all traces of lapping compound from both valve plug (2) and seat ring (4). Check that a fine continuous ring of contact has been made on both seats. The contact ring should be visible but without depth.
9. Apply silicone grease to seat ring seal (3) and insert seal into groove of seat ring (4).
10. Insert raised face of seat ring (4) into seat retainer cage (5) and place these into bore of valve body bridge. Seat ring (4) sealing face must be firmly seated in place.
11. Place the bonnet gasket (8) in body recess and add the bonnet assembly. Apply nuts (10) to bolts or studs (11) and tighten evenly for metal to metal joint.
12. Place actuator back on bonnet. CAUTION: *For reverse acting actuators only, air pressure must be supplied to the diaphragm chamber sufficient to cause actuator stem to lift its full travel so valve plug threads may later be engaged.*
13. Place packing flange (13) with concaved side of hole facing down thru window of

actuator over valve plug stem and bolts (9) to top of packing bearing (12). Secure with two nuts (7) finger tightened.

14. Secure Actuator flange to bonnet flange with Cap Screws.
15. With wrench on flats of valve stem, lift valve plug (2) and with counter-clockwise motion engage threads in upper stem (31) of actuator until valve plug can be turned no more.

#### **SETTING VALVE TRAVEL**

##### **CLASSES: DLO-2 AND DLOS DIRECT ACTING ACTUATOR (See Fig. 7 in Appendix)**

1. Connect controlled air line to diaphragm case connector.
2. Supply 3 PSIG air pressure to actuator diaphragm.
3. Compress actuator spring by turning spring adjuster (35) until travel indicator (37) just starts to move when air pressure is raised above 3 PSIG.

*NOTE: Alternately add compression and check starting pressure slightly above 3 PSIG until correct adjustment is attained. After each check return air pressure to 3 PSIG.*

4. Actuator spring preload adjustment can be made either with or without pressure in valve body. Once correct compression is made no further adjustment is necessary.
5. With valve plug and coupling threads engaged supply 20 PSIG operating pressure to actuator diaphragm. Valve will move to closed position. Observe travel obtained as shown by travel indicator and indicator scale. Read- just as follows:
6. **OVERTRAVEL** – If travel is too great, loosen stem locknut and turn valve plug stem out of coupling the amount necessary to obtain correct travel.

7. **UNDERTRAVEL** – (Travel is too short)  
This is not possible if prior step 15 was done and correct parts were used.

8. When correct travel has been obtained reduce operating pressure sufficiently to move valve plug away from seat ring. Then turn valve stem one full turn out of upper stem threads. Secure locknut.
9. The one full turn toward the seat ring, made after obtaining travel, provides the positive closing force required to obtain tight valve closure. In all cases be sure to make this final adjustment.

10. Tighten locknut. Reconnect operating medium tubing from the sensing element or manual loading device to the diaphragm case.

#### **SETTING VALVE TRAVEL**

##### **CLASSES: DDLO & DDLOS REVERSE ACTING ACTUATOR (See Fig. 9 in Appendix)**

1. Connect controlled air line to diaphragm case connection.
2. Supply 3 PSIG air pressure to actuator diaphragm.
3. Compress actuator spring until travel indicator begins to move when air pressure is raised above 3 PSIG.

*NOTE: Alternately add compression and check starting pressure slightly above 3 PSIG until correct adjustment is attained. After each check return air pressure to 3 PSIG.*

4. The valve plug is closed against upward fluid thrust by actuator spring force. Total compression placed on actuator spring must be sufficient to provide the 3 PSIG preload plug force required to close the valve.
5. If preload adjustment is made with no pressure in valve body, then, when the control valve is placed in operation, additional compression must be placed on the actuator spring to provide valve closure force. With proper adjustment valve will

close tightly and will not begin to open until the 3 PSIG operation pressure is exceeded.

NOTE A: *A control valve which has been adjusted to provide 3 PSIG starting pressure plus valve closure force (with pressure in body) will have a considerably higher start-pressure than 3 PSIG, when tested at 0 body pressure.*

NOTE B: *Air pressures quoted are relative. Actual pressures required in operation may vary with pressure drop conditions existing and/or actuator springs used.*

6. Loosen lock nut. Apply air to diaphragm. Turn valve plug stem into upper stem threads until valve plug is out of contact with seat ring, when air is removed from diaphragm. Then turn valve plug stem out of coupling threads until valve plug just contacts seat ring again.
7. Supply sufficient operating pressure to actuator diaphragm to move valve plug away from seat ring. Then turn valve plug stem one full turn out of actuator upper stem threads. Diaphragm disc determines travel. With proper diaphragm disc correct travel will result from adjustment.
8. **OVERTRAVEL** – If travel is too great, loosen and turn valve plug stem out of upper stem (35) and the amount necessary to obtain correct travel.
9. **UNDERTRAVEL** – If travel is too short, loosen lock nut and turn valve plug stem further into upper stem (35) the amount necessary to obtain correct travel.
10. When correct travel has been obtained increase operating pressure sufficiently to move valve plug away from seat ring. Then turn valve plug stem one full turn out of upper stem threads.
11. The one full turn toward the seat ring, made after obtaining travel, provides the positive closing force required to obtain tight valve closure in single ported valves. In all cases be sure to make this final adjustment.
12. Tighten locknut. Reconnect operating medium tubing from the sensing element or manual loading device to the diaphragm case.

## **DISASSEMBLY**

### **REPLACING DIAPHRAGM, STEM SEALS, ETC.**

**(See Fig. 7 and 9 in Appendix)**

1. Shut inlet and outlet stop valves for fluid supply lines and air supply to actuator connection.
2. Disconnect tubing at diaphragm case connection.
3. Remove compression on spring by turning spring adjuster until spring is free. See label on yoke for proper directions of rotation.

### **REPLACING DIAPHRAGM DIRECT ACTING ACTUATOR ONLY**

**(See Fig. 7 in Appendix)**

**Follow steps 1 to 3**

4. Remove diaphragm case nuts and bolts, diaphragm case upper and diaphragm.
5. Replace diaphragm with a new one then reposition diaphragm case upper bolts and nuts. Tighten all nuts.

### **REPLACING DIAPHRAGM AND/OR STEM SEALS REVERSE ACTING ACTUATOR**

**(See Fig. 9 in Appendix)**

6. Insert a lock rod through hole in the yoke and into hole in actuator stem. (Secure actuator stem with wrench if stem has no hole.)
7. Dismantle upper diaphragm case and Hand Operating Device (if so fitted) from actuator as described in instructions.
8. Remove the lock nut (16), diaphragm disc (17), diaphragm (20) and collar (22).
9. 35R – Remove 8 cap screws from lower diaphragm case, lift off case and remove stem seal.  
  
55R & 85R – Take out screws from seal ring. Remove seal ring, stem seal, and stem collar.



10. Examine gasket. Replace seal if necessary to obtain an air-tight seal.
11. Clean all metal parts. Remove any rust, dirt or sharp edges that might damage stem seal.
12. Lubricate spring washer(s) (33 & 34), spring adjustor (35) and actuator stem threads with anti-seize compound.

#### **REASSEMBLY**

1. 55R & 85R – Place the new stem seal in position and install the seal ring with the lip upward. Tighten screws. Press stem seal down until flush with spacer, install lower diaphragm case and tighten nuts.
2. When reassembling, place a block under the actuator stem to hold the stem high enough so that clearance between the stem seal bead and the groove is not greater than 1/8 inch. Line up the actuator stem in the center of the opening in the lower diaphragm case so that the stem seal bead will enter the groove in the stem collar when the lock nut is tightened.
3. Place the stem collar over the actuator stem with the groove upward followed by the diaphragm and the diaphragm disc. Be sure that the center hole in the diaphragm fits properly over the raised lip of the collar.
4. Install the lock nut and tighten. REMOVE THE LOCK ROD.
5. Install the upper diaphragm case and Hand Operating Device (if fitted) to actuator and tighten the nuts and bolts.

#### **ALL ACTUATORS**

Reset valve for proper travel and spring preload as previously described, by compressing actuator adjusting spring(s) sufficiently to move diaphragm(s) up against actuator stop. Align travel indicator plate and tighten screws. Plate scale indicates rated valve travel.

# **SECTION IV – PARTS LIST**

**DIAPHRAGM CONTROL VALVE**

**CLASS DLOS-2, DLOAS-2**

**CLASS DDLOS-2, DDLOAS-2**

**CAST STEEL**

**CAST IRON**

**CAST STAINLESS STEEL**

**1” – 2” THREADED & SWE**

**1” – 4” FLANGED ANSI 150 & 300**

**1” – 4” FLANGED DIN ND-16, & ND-40**

**(DIMENSIONS IN INCHES/MILLIMETERS)**

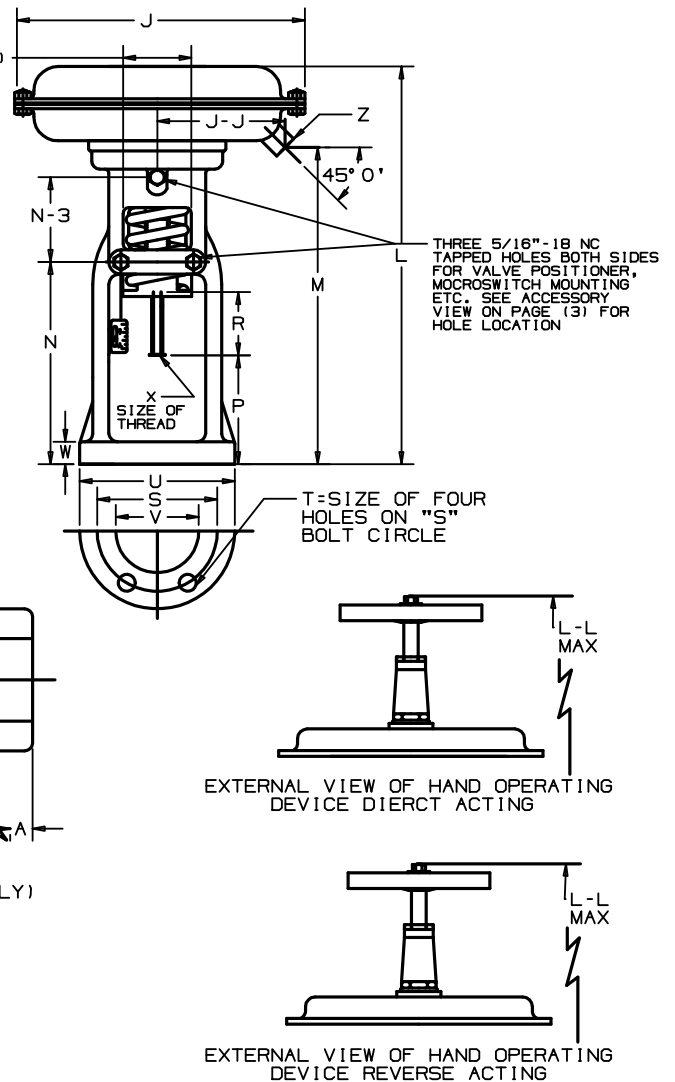
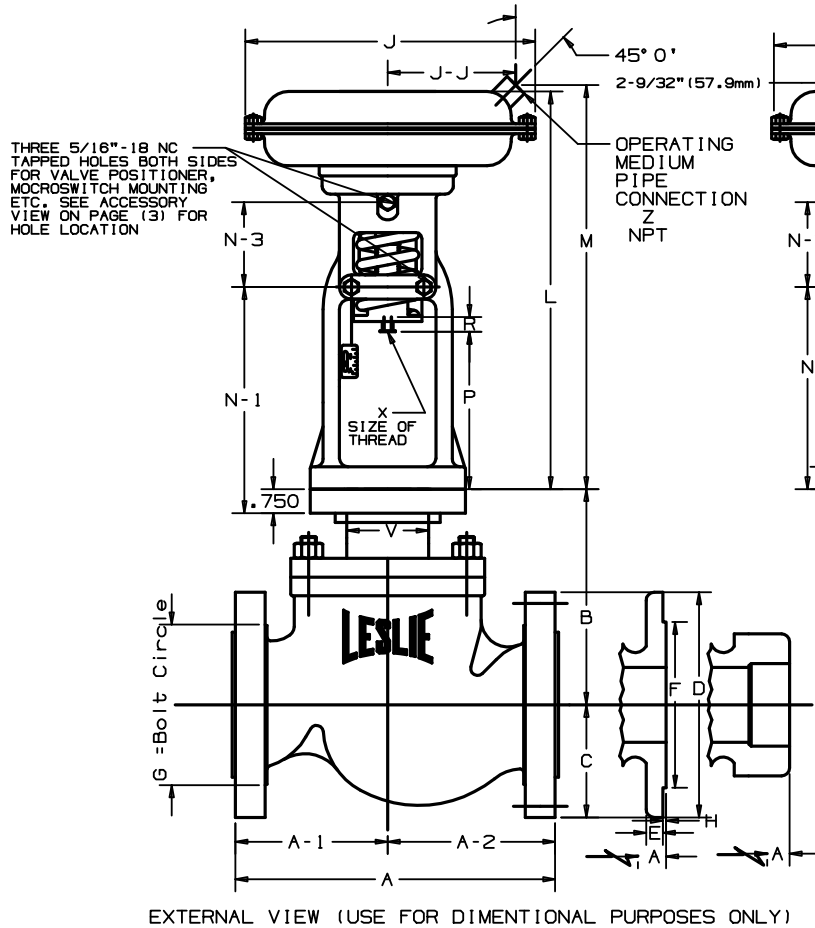
**LESLIE  
DIAPHRAGM CONTROL VALVE**

**CLASS DLOS-2 CAST STEEL, IRON AND  
STAINLESS STEEL WITH DIAPHRAGM  
ACTUATORS**

**CLASS DDLOS-2 CAST STEEL, IRON  
AND STAINLESS STEEL  
WITH DIAPHRAGM ACTUATORS**

**DIRECT ACTING**

**REVERSE ACTING**



**MAXIMUM ALLOWABLE AIR PRESSURE  
FOR ALL DIAPHRAGM ACTUATORS IS  
60 PSIG**

## DIRECT ACTING DIAPHRAGM ACTUATORS AND HAND OPERATING DEVICE

| SIZE<br>DIAPHRAGM<br>ACTUATOR |    | DIMENSIONS IN INCHES AND MILLIMETERS |         |        |        |       |        |       |         |      |         |       |       |        |     | NET WT. lb/kg* |           | L-L<br>(MAX)     | NET WT. lb/kg*<br>WITH H.O.D. |           |
|-------------------------------|----|--------------------------------------|---------|--------|--------|-------|--------|-------|---------|------|---------|-------|-------|--------|-----|----------------|-----------|------------------|-------------------------------|-----------|
|                               |    | J                                    | J-J     | L      | M      | N-1   | P      | R     | S       | T    | U       | V     | W     | X      | Z   | ALUM           | CAST IRON | HAND OPER DEVICE | ALUM.                         | CAST IRON |
|                               |    | in                                   | mm      | in     | mm     | in    | mm     | in    | mm      | in   | mm      | in    | mm    | in     | mm  | in             | mm        | lb               | kg                            |           |
| 35                            | in | 9-1/4                                | 3-15/16 | 12-3/8 | 12-3/8 | 6-1/4 | 5-1/2  | 1-3/8 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 11/16 | 3/8-24 | 1/4 | 20 lb          | 35 lb     | 17-7/8           | 23 lb                         | 38 lb     |
|                               | mm | 235.0                                | 100.0   | 314.3  | 314.3  | 158.8 | 139.7  | 34.9  | 96.8    | 14.3 | 122.2   | 68.2  | 17.5  |        | NPT | 9.1 kg         | 15.9 kg   | 454.0            | 10.4 kg                       | 17.2 kg   |
| 55                            | in | 12                                   | 5-1/16  | 15-1/4 | 15-1/4 | 7     | 5-1/2  | 1-3/8 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1     | 3/8-24 | 1/4 | 23 lb          | 50 lb     | 24-7/8           | 28 lb                         | 55 lb     |
|                               | mm | 304.8                                | 128.6   | 387.4  | 387.4  | 177.8 | 139.7  | 34.9  | 96.8    | 14.3 | 122.2   | 68.2  | 25.4  |        | NPT | 10.4 kg        | 22.7 kg   | 631.8            | 12.7 kg                       | 24.9 kg   |
| 55A                           | in | 12                                   | 5-1/16  | 15-1/4 | 15-1/4 | 7     | 5-1/2  | 1-3/8 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1     | 1/2-20 | 1/4 | 23 lb          | 50 lb     | 24-7/8           | 28 lb                         | 55 lb     |
|                               | mm | 304.8                                | 128.6   | 387.4  | 387.4  | 177.8 | 139.7  | 34.9  | 96.8    | 14.3 | 122.2   | 68.2  | 25.4  |        | NPT | 10.4 kg        | 22.7 kg   | 631.8            | 12.7 kg                       | 24.9 kg   |
| 85                            | in | 14-3/4                               | 6-1/4   | 19-5/8 | 19-5/8 | 8-1/2 | 6-7/16 | 1-3/4 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1-1/4 | 1/2-20 | 1/4 | 43 lb          | 96 lb     | 29-1/4           | 48 lb                         | 101 lb    |
|                               | mm | 374.7                                | 158.8   | 498.5  | 498.5  | 215.9 | 163.5  | 44.5  | 96.8    | 14.3 | 122.2   | 68.2  | 31.8  |        | NPT | 19.5 kg        | 43.5 kg   | 743.0            | 21.8 kg                       | 45.8 kg   |

\*Approximate

## REVERSE ACTING DIAPHRAGM ACTUATORS AND HAND OPERATING DEVICE

| ACTUATOR<br>SIZE |    | DIMENSIONS IN INCHES AND MILLIMETERS |         |        |        |        |        |       |         |      |         |       |       |        |     | NET WT. lb/kg* |         | L-L<br>(MAX)     | NET WT. lb/kg*<br>WITH H.O.D. |         |
|------------------|----|--------------------------------------|---------|--------|--------|--------|--------|-------|---------|------|---------|-------|-------|--------|-----|----------------|---------|------------------|-------------------------------|---------|
|                  |    | J                                    | J-J     | L      | M      | N-1    | P      | R     | S       | T    | U       | V     | W     | X      | Z   | CAST IRON      | ALUM    | HAND OPER DEVICE | CAST IRON                     | ALUM    |
|                  |    | in                                   | mm      | in     | mm     | in     | mm     | in    | mm      | in   | mm      | in    | mm    | in     | mm  | in             | mm      | lb               | kg                            |         |
| 35R              | in | 9-1/4                                | 3-15/16 | 12-3/8 | 9-7/8  | 6-1/4  | 4      | 1-3/4 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 11/16 | 3/8-24 | 1/4 | 35 lb          | 20 lb   | 16-3/4           | 38 lb                         | 23 lb   |
|                  | mm | 235.0                                | 100.0   | 314.3  | 250.8  | 158.8  | 101.6  | 44.5  | 96.8    | 14.3 | 122.2   | 68.2  | 17.5  |        | NPT | 15.9 kg        | 9.1 kg  | 425.5            | 17.2 kg                       | 10.4 kg |
| 55R              | in | 12                                   | 5-1/16  | 18     | 14-1/4 | 6-7/8  | 4      | 1-3/4 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1     | 3/8-24 | 1/4 | 60 lb          | 30 lb   | 26-3/8           | 65 lb                         | 35 lb   |
|                  | mm | 304.8                                | 128.6   | 457.2  | 362.0  | 174.6  | 101.6  | 44.5  | 96.8    | 14.3 | 122.2   | 68.2  | 25.4  |        | NPT | 27.2 kg        | 13.6 kg | 669.9            | 29.5 kg                       | 15.9 kg |
| 55AR             | in | 12                                   | 5-1/16  | 18     | 14-1/4 | 6-7/8  | 4      | 1-3/4 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1     | 1/2-20 | 1/4 | 60 lb          | 30 lb   | 26-3/8           | 65 lb                         | 35 lb   |
|                  | mm | 304.8                                | 128.6   | 457.2  | 362.0  | 174.6  | 101.6  | 44.5  | 96.8    | 14.3 | 122.2   | 68.2  | 25.4  |        | NPT | 27.2 kg        | 13.6 kg | 669.9            | 29.5 kg                       | 15.9 kg |
| 85R              | in | 14-3/4                               | 6-1/4   | 23-1/4 | 18-3/4 | 8-9/16 | 4-5/16 | 2-1/4 | 3-13/16 | 9/16 | 4-13/16 | 2.687 | 1-1/4 | 1/2-20 | 1/4 | 117 lb         | 54 lb   | 31-5/8           | 122 lb                        | 59 lb   |
|                  | mm | 374.7                                | 158.8   | 590.6  | 476.3  | 217.5  | 109.5  | 57.2  | 96.8    | 14.3 | 122.2   | 68.2  | 31.8  |        | NPT | 53.1 kg        | 24.5 kg | 803.3            | 55.3 kg                       | 26.8 kg |

\*Approximate

## DIAPHRAGM CONTROL VALVE – CAST STEEL & STAINLESS STEEL BODY

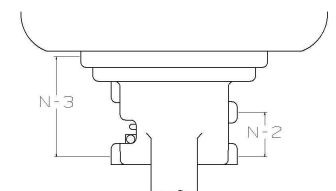
| DIMENSIONS IN INCHES           |        |         |         |         |         |       |        |        |       |      |              |           |                    |
|--------------------------------|--------|---------|---------|---------|---------|-------|--------|--------|-------|------|--------------|-----------|--------------------|
| SIZE                           | A      | A-1     | A-2     | B       | C       | D     | E      | F      | G     | H    | No. of Holes | Hole Size | Approx Net Wt. lb. |
| THREADED                       |        |         |         |         |         |       |        |        |       |      |              |           |                    |
| 1                              | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-1/4   | -     | -      | -      | -     | -    | -            | -         | 16                 |
| 1-1/2                          | 9-1/4  | 4-5/8   | 4-5/8   | 7-1/2   | 2-3/8   | -     | -      | -      | -     | -    | -            | -         | 27                 |
| 2                              | 10-1/2 | 5-1/4   | 5-1/4   | 7-3/4   | 3-1/32  | -     | -      | -      | -     | -    | -            | -         | 34                 |
| 150 LB. ANSI FLANGE STANDARD   |        |         |         |         |         |       |        |        |       |      |              |           |                    |
| 1/2                            | -      | -       | -       | 5-3/16  | -       | -     | -      | -      | -     | -    | -            | -         | -                  |
| 3/4                            | -      | -       | -       | 7-1/2   | -       | -     | -      | -      | -     | -    | -            | -         | -                  |
| 1                              | 7-1/4  | 3-7/8   | 3-3/8   | 7-3/4   | 2-1/4   | 4-1/4 | 3/8    | 2      | 3-1/8 | 1/16 | 4            | 3/4       | 19                 |
| 1-1/2                          | 8-3/4  | 4-3/8   | 4-5/8   | 8-3/16  | 2-1/2   | 5     | 5/8    | 2-7/8  | 3-7/8 | 1/16 | 4            | 3/4       | 35                 |
| 2                              | 10     | 5       | 5       | 8-1/2   | 3-1/2   | 6     | 9/16   | 3-5/8  | 4-3/4 | 1/16 | 4            | 3/4       | 41                 |
| 2-1/2                          | 10-7/8 | 5-13/16 | 5-1/16  | 10-5/16 | 3-17/32 | 7     | 5/8    | 4-1/8  | 5-1/2 | 1/16 | 4            | 3/4       | 57                 |
| 3                              | 11-3/4 | 5-7/8   | 5-7/8   | 10-5/16 | 3-3/4   | 7-1/2 | 1-1/16 | 5      | 6     | 1/16 | 4            | 3/4       | 77                 |
| 4                              | 13-7/8 | 6-15/16 | 6-15/16 | 10-5/16 | 4-27/32 | 9     | 7/8    | 6-3/16 | 7-1/2 | 1/16 | 8            | 3/4       | 121                |
| 300 LB. ANSI FLANGE STANDARD   |        |         |         |         |         |       |        |        |       |      |              |           |                    |
| 1/2                            | -      | -       | -       | -       | -       | -     | -      | -      | -     | -    | -            | -         | -                  |
| 3/4                            | -      | -       | -       | -       | -       | -     | -      | -      | -     | -    | -            | -         | -                  |
| 1                              | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-1/4   | 4-7/8 | 5/8    | 2      | 3-1/2 | 1/16 | 4            | 3/4       | 21                 |
| DIN 2543 FLANGE STANDARD ND-16 |        |         |         |         |         |       |        |        |       |      |              |           |                    |
| 1-1/2                          | 9-1/4  | 4-5/8   | 4-5/8   | 7-1/2   | 3-1/16  | 6-1/8 | 3/4    | 2-7/8  | 4-1/2 | 1/16 | 4            | 7/8       | 37                 |
| 2                              | 10-1/2 | 5       | 5       | 7-3/4   | 3-1/32  | 6-1/2 | 13/16  | 3-5/8  | 5     | 1/16 | 8            | 3/4       | 45                 |
| 2-1/2                          | 11-1/2 | 6-1/8   | 5-3/8   | 8-3/16  | 3-17/32 | 7-1/2 | 15/16  | 4-1/8  | 5-7/8 | 1/16 | 8            | 7/8       | 66                 |
| 3                              | 12-1/2 | 6-1/4   | 6-1/4   | 8-1/2   | 4-1/8   | 8-1/4 | 1-1/16 | 5      | 6-5/8 | 1/16 | 8            | 7/8       | 88                 |
| 4                              | 14-1/2 | 7-1/4   | 7-1/4   | 10-5/16 | 4-27/32 | 10    | 1-3/16 | 6-3/16 | 7-7/8 | 1/16 | 8            | 7/8       | 140                |

|        |    | MAX. TRAVEL |
|--------|----|-------------|
| 35 (R) | in | 3/4         |
|        | mm | 19.0        |
| 55 (R) | in | 1-1/2       |
|        | mm | 38.1        |
| 85 (R) | in | 2-1/8       |
|        | mm | 54.0        |

## DIAPHRAGM CONTROL VALVE – CAST STEEL & STAINLESS STEEL BODY

| DIMENSIONS IN MILLIMETERS      |       |       |       |       |       |     |    |     |     |   |              |           |                     |
|--------------------------------|-------|-------|-------|-------|-------|-----|----|-----|-----|---|--------------|-----------|---------------------|
| SIZE                           | A     | A-1   | A-2   | B     | C     | D   | E  | F   | G   | H | No. of Holes | Hole Size | Approx. Net Wt. kg. |
| THREADED                       |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 25                             | 196.9 | 104.8 | 92.1  | 142.4 | 57.2  | -   | -  | -   | -   | - | -            | -         | 7.3                 |
| 40                             | 235.0 | 117.5 | 117.5 | 190.5 | 60.3  | -   | -  | -   | -   | - | -            | -         | 12.3                |
| 50                             | 266.7 | 133.4 | 133.4 | 196.9 | 77.0  | -   | -  | -   | -   | - | -            | -         | 15.5                |
| DIN 2543 FLANGE STANDARD ND-16 |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 15                             | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 20                             | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 25                             | 197.6 | 105   | 92.4  | 142.4 | 57.2  | 115 | 16 | 68  | 85  | 2 | 4            | 14        | 8.6                 |
| 40                             | 230   | 115   | 115   | 190.5 | 63.5  | 150 | 15 | 88  | 110 | 3 | 4            | 18        | 15.9                |
| 50                             | 262.7 | 131.3 | 131.3 | 196.9 | 77.8  | 165 | 17 | 102 | 125 | 3 | 4            | 18        | 18.6                |
| 65                             | 290   | 154.8 | 135.2 | 200.6 | 89.7  | 185 | 15 | 122 | 145 | 3 | 4            | 18        | 25.9                |
| 80                             | 310   | 155   | 155   | 215.9 | 95.3  | 200 | 17 | 138 | 160 | 3 | 8            | 18        | 35                  |
| 100                            | 350   | 175   | 175   | 261.9 | 123   | 220 | 17 | 158 | 180 | 3 | 8            | 18        | 55                  |
| DIN 2545 FLANGE STANDARD ND-40 |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 15                             | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 20                             | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 25                             | 197.6 | 105   | 92.4  | 142.4 | 57.2  | 115 | 16 | 68  | 85  | 2 | 4            | 14        | 9.5                 |
| 40                             | 230   | 115   | 115   | 190.5 | 77.8  | 150 | 15 | 88  | 110 | 3 | 4            | 18        | 16.8                |
| 50                             | 262.7 | 131.3 | 131.3 | 196.9 | 77    | 165 | 17 | 102 | 125 | 3 | 4            | 18        | 20.5                |
| 65                             | 290   | 154.8 | 135.2 | 200.6 | 89.7  | 185 | 19 | 122 | 145 | 3 | 8            | 18        | 30                  |
| 80                             | 310   | 155   | 155   | 215.9 | 104.8 | 200 | 21 | 138 | 160 | 3 | 8            | 18        | 40                  |
| 100                            | 350   | 175   | 175   | 261.9 | 123   | 235 | 21 | 162 | 190 | 3 | 8            | 23        | 63.6                |

| SIZE   |    | N-2   | N-3   |
|--------|----|-------|-------|
| 35 (R) | in | 2-1/2 | 2-1/2 |
|        | mm | 63.5  | 63.5  |
| 55 (R) | in | 2-1/2 | 3     |
|        | mm | 63.5  | 76.2  |
| 85 (R) | in | 2-1/2 | 4-1/8 |
|        | mm | 63.5  | 104.8 |



VIEW SHOWING TAPPED HOLE LOCATION FOR VALVE POSITIONER, MICRO-SWITCH MOUNTING, ETC.

### CONTROL VALVE – CAST IRON BODY

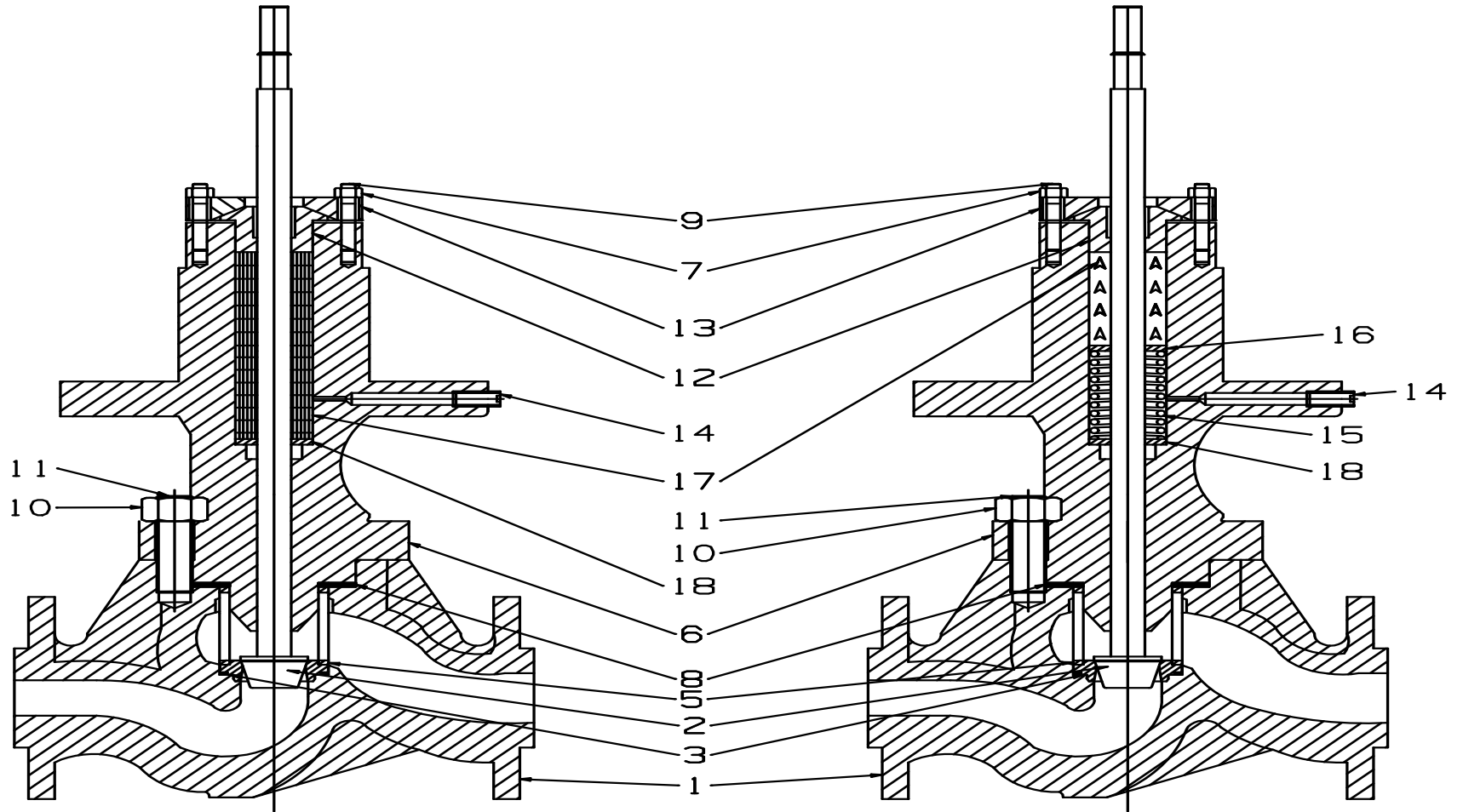
| DIMENSIONS IN INCHES                     |        |         |         |         |        |       |        |         |       |      |              |           |                     |
|--|--------|---------|---------|---------|--------|-------|--------|---------|-------|------|--------------|-----------|---------------------|
| SIZE                                     | A      | A-1     | A-2     | B       | C      | D     | E      | F       | G     | H    | No. of Holes | Hole Size | Approx. Net wt. lb. |
| THREADED (CAST IRON)                     |        |         |         |         |        |       |        |         |       |      |              |           |                     |
| ½  | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-3/8  | -     | -      | -       | -     | -    | -            | -         | 17                  |
| ¾  | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-3/8  | -     | -      | -       | -     | -    | -            | -         | 17                  |
| 1  | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-3/8  | -     | -      | -       | -     | -    | -            | -         | 17                  |
| 1-1/2                                    | 9-1/4  | 4-5/8   | 4-5/8   | 7-1/2   | 2-3/8  | -     | -      | -       | -     | -    | -            | -         | 28                  |
| 2  | 10-1/2 | 5-1/4   | 5-1/4   | 7-3/4   | 3      | -     | -      | -       | -     | -    | -            | -         | 35                  |
| 125 LB. ANSI FLANGE STANDARD (CAST IRON) |        |         |         |         |        |       |        |         |       |      |              |           |                     |
| 1  | 7-1/4  | 3-7/8   | 3-3/8   | 5-3/16  | 2-1/8  | 4-1/4 | 7/16   | -       | 3-1/8 | -    | 4            | 5/8       | 19                  |
| 1-1/2                                    | 8-3/4  | 4-3/8   | 4-3/8   | 7-1/2   | 2-1/2  | 5     | 9/16   | -       | 3-7/8 | -    | 4            | 5/8       | 35                  |
| 2  | 10-1/2 | 5       | 5       | 7-3/4   | 3      | 6     | 5/8    | -       | 4-3/4 | -    | 4            | ¾         | 41                  |
| 2-1/2                                    | 10-7/8 | 5-13/16 | 5-1/16  | 8-3/16  | 3-1/2  | 7     | 11/16  | -       | 5-1/2 | -    | 4            | ¾         | 58                  |
| 3  | 11-3/4 | 5-7/8   | 5-7/8   | 8-1/2   | 3-3/4  | 7-1/2 | ¾      | -       | 6     | -    | 4            | ¾         | 80                  |
| 4  | 13-7/8 | 6-15/16 | 6-15/16 | 10-5/16 | 4-1/2  | 9     | 15/16  | -       | 7-1/2 | -    | 8            | ¾         | 135                 |
| 250 LB. ANSI FLANGE STANDARD (CAST IRON) |        |         |         |         |        |       |        |         |       |      |              |           |                     |
| 1  | 7-3/4  | 4-1/8   | 3-5/8   | 5-3/16  | 2-1/8  | 4-7/8 | 5/8    | 2-11/16 | 3-1/2 | 1/16 | 4            | ¾         | 21                  |
| 1-1/2                                    | 9-1/4  | 4-5/8   | 4-5/8   | 7-1/2   | 3-1/16 | 6-1/8 | ¾      | 3-9/16  | 4-1/2 | 1/16 | 4            | 7/8       | 37                  |
| 2  | 10-1/2 | 5-1/4   | 5-1/4   | 7-3/4   | 3-1/4  | 6-1/2 | 13/16  | 4-3/16  | 5     | 1/16 | 8            | ¾         | 45                  |
| 2-1/2                                    | 11-1/2 | 6-1/8   | 5-3/8   | 8-3/16  | 3-3/4  | 7-1/2 | 15/16  | 4-15/16 | 5-7/8 | 1/16 | 8            | 7/8       | 64                  |
| 3  | 12-1/2 | 6-1/4   | 6-1/4   | 8-1/2   | 4-1/8  | 8-1/4 | 1-1/16 | 5-11/16 | 6-5/8 | 1/16 | 8            | 7/8       | 91                  |
| 4  | 14-1/2 | 7-1/4   | 7-1/4   | 10-5/16 | 5      | 10    | 1-3/16 | 6-15/16 | 7-7/8 | 1/16 | 8            | 7/8       | 152                 |

### CONTROL VALVE – CAST IRON BODY

| DIMENSIONS IN MILLIMETERS                                 |       |       |       |       |       |     |    |     |     |   |              |           |                     |
|---|-------|-------|-------|-------|-------|-----|----|-----|-----|---|--------------|-----------|---------------------|
| SIZE  | A     | A-1   | A-2   | B     | C     | D   | E  | F   | G   | H | No. of Holes | Hole Size | Approx. Net Wt. kg. |
| THREADED (CAST IRON)                                      |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 15  | 196.9 | 104.8 | 92.1  | 142.4 | 60.3  | -   | -  | -   | -   | - | -            | -         | 7.7                 |
| 20  | 196.9 | 104.8 | 92.1  | 142.4 | 60.3  | -   | -  | -   | -   | - | -            | -         | 7.7                 |
| 25  | 196.9 | 104.8 | 92.1  | 142.4 | 60.3  | -   | -  | -   | -   | - | -            | -         | 7.7                 |
| 40  | 235.0 | 117.5 | 117.5 | 190.5 | 60.3  | -   | -  | -   | -   | - | -            | -         | 12.7                |
| 50  | 266.7 | 133.4 | 133.4 | 196.9 | 76.2  | -   | -  | -   | -   | - | -            | -         | 15.9                |
| DIN 2532/DIN 2533 FLANGE STANDARD (CAST IRON) ND-10/ND-16 |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 15  | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 20  | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 25  | 194.5 | 103.6 | 90.9  | 142.4 | 54    | 115 | 14 | 68  | 85  | 2 | 4            | 14        | 12.7                |
| 40  | 230.2 | 115.1 | -     | 190.5 | 63.5  | 150 | 15 | 88  | 110 | 3 | 4            | 18        | 15.9                |
| 50  | 262.7 | 131.4 | 131.4 | 196.9 | 76.2  | 165 | 17 | 102 | 125 | 3 | 4            | 18        | 18.6                |
| 65  | 290   | 154.8 | 135.2 | 200.6 | 88.9  | 185 | 17 | 122 | 145 | 3 | 4            | 18        | 26.4                |
| 80  | 310   | 155   | 155   | 215.9 | 95.3  | 200 | 19 | 138 | 160 | 3 | 8            | 18        | 36.3                |
| 100   | 385   | 175   | 175   | 261.9 | 114.3 | 220 | 21 | 158 | 180 | 3 | 8            | 18        | 61.3                |
| DIN 2534/DIN 2535 FLANGE STANDARD (CAST IRON) ND-25/ND-40 |       |       |       |       |       |     |    |     |     |   |              |           |                     |
| 15  | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 20  | -     | -     | -     | -     | -     | -   | -  | -   | -   | - | -            | -         | -                   |
| 25  | 197.6 | 105.2 | 92.5  | 142.4 | 54    | 115 | 16 | 68  | 85  | 2 | 4            | 14        | 9.5                 |
| 40  | 234.2 | 117.1 | -     | 190.5 | 77.8  | 150 | 17 | 88  | 110 | 3 | 4            | 18        | 16.8                |
| 50  | 266.7 | 133.4 | 133.4 | 196.9 | 82.6  | 165 | 19 | 102 | 125 | 3 | 4            | 18        | 20.5                |
| 65  | 290   | 154.8 | 135.2 | 200.6 | 95.3  | 185 | 21 | 122 | 145 | 3 | 8            | 18        | 29                  |
| 80  | 310   | 155   | 155   | 215.9 | 104.8 | 200 | 23 | 138 | 160 | 3 | 8            | 18        | 41.4                |
| 100   | 393   | 175   | 175   | 261.9 | 127   | 235 | 25 | 162 | 190 | 3 | 8            | 22        | 69                  |

# LESLIE DIAPHRAGM CONTROL VALVE

CLASS D(D)LOS-2, CLASS D(D)LOAS-2 AND CLASS D(D)LO-2, D(D)LOA-2  
 MAIN BODY SUBASSY (CAST IRON, CAST CARBON STEEL OR STAINLESS STEEL)



1 / 2" THRU 4" VALVE  
 (WITH BRAIDED TEFLON GRAPHITE PACKING)

1 / 2" THRU 4" VALVE  
 (WITH TEFLON CHEVRON PACKING)

## DIAPHRAGM CONTROL VALVE PARTS LIST

WHEN ORDERING PARTS, PLEASE GIVE PART NAME AND PART REF. NO. FROM TABLE BELOW. USE PART NUMBER ONLY TO LOCATE PART ON DRAWING.

| PART NO. | PART NAME                           | MATERIAL          | MATERIAL SPEC.       | QTY/<br>UNIT | REFERENCE NUMBERS |         |         |         |         |         |         |         |  |
|----------|-------------------------------------|-------------------|----------------------|--------------|-------------------|---------|---------|---------|---------|---------|---------|---------|--|
|          |                                     |                   |                      |              | ½"                | ¾"      | 1"      | 1-1/2"  | 2"      | 2-1/2"  | 3"      | 4"      |  |
| 1★       | Valve Body, Threaded                | Cast Steel        | ASTM A-216           | 1            | A654170           | A654180 | A651860 | A652960 | A653320 | --      | --      | --      |  |
| 1★       | Valve Body, 150 Flanged             | Cast Steel        | GRWCB                | 1            | 3                 | 3       | 3       | 3       | 3       | A654040 | A654360 | A654850 |  |
| 1★       | Valve Body, 300 Flanged             | Cast Steel        | ASTM A-216<br>GRWCB  | 1            | --                | --      | A651870 | A652940 | A653330 | 3       | A654370 | A654860 |  |
|          |                                     |                   | ASTM A-216<br>GRWCB  | 1            | --                | --      | A651880 | A652950 | A653340 | 3       | 3       | 3       |  |
| 1★       | Valve Body, DIN 2543 ND 16          | Cast Steel        | ASTM A-216           | 1            | --                | --      | A658040 | A658050 | A658060 | A658070 | A658090 | A658110 |  |
| 1★       | Valve Body, DIN 2545 ND 40          | Cast Steel        | GRWCB                | 1            | --                | --      | 3       | 3       | 3       | 3       | 3       | 3       |  |
| 1★       | Valve Body, Threaded                | Stainless Steel   | ASTM A-216<br>GRWCB  | 1            | A654170           | A654180 | A658040 | A658050 | A658060 | A658080 | A658100 | A658120 |  |
|          |                                     |                   | ASTM A-296<br>GRW316 | 1            | 5                 | 5       | A651860 | A652960 | A653320 | --      | --      | --      |  |
| 1★       | Valve Body, 150 Flanged             | Stainless Steel   | ASTM A-296 GR 316    | 1            | --                | --      | A651870 | A652940 | A653330 | A654040 | A654360 | A654850 |  |
| 1★       | Valve Body, 300 Flanged             | Stainless Steel   | ASTM A-296 GR 316    | 1            | --                | --      | 5       | 5       | 5       | 5       | 5       | 5       |  |
| 1★       | Valve Body, DIN 2543 ND16           | Stainless Steel   | ASTM A-296 GR 316    | 1            | --                | --      | A651880 | A652950 | A653340 | A654050 | A654370 | A654860 |  |
|          |                                     |                   |                      | 1            | --                | --      | A658040 | A658050 | A658060 | A658070 | A658090 | A658110 |  |
| 1★       | Valve Body, DIN 2545 ND 40          | Stainless Steel   | ASTM A-296 GR 316    | 1            | --                | --      | A658040 | A658050 | A658060 | A658080 | A658100 | A658120 |  |
| 2★       | Valve Body, Threaded                | Cast Iron         | ASTM A-126 CLB       | 1            | A65429            | A65430  | 5       | 5       | 5       | 5       | 5       | 5       |  |
| 2★       | Valve Body, 125 Flanged             | Cast Iron         | ASTM A-126 CLB       | 1            | --                | --      | A65268  | A65293  | A65337  | --      | --      | --      |  |
|          |                                     |                   |                      | 1            | --                | --      | A65269  | A65291  | A65335  | A65402  | A65438  | A65487  |  |
| 2★       | Valve Body, 250 Flanged             | Cast Iron         | ASTM A-126 CLB       | 1            | --                | --      | A65270  | A65292  | A65336  | A65403  | A65439  | A65448  |  |
| 2★       | Valve Body, DIN 2533 ND 16          | Cast Iron         | ASTM A-126 CLB       | 1            | --                | --      | A65903  | A65905  | A65907  | A65909  | A65911  | A65929  |  |
| 2★       | Valve Body, DIN 2535 ND 40          | Cast Iron         | ASTM A-126 CLB       | 1            | --                | --      | A65904  | A65906  | A65908  | A65910  | A65912  | A65930  |  |
| 2★       | Valve Plug, Linear, Full Trim       | Stainless Steel   | AISI TYPE 316        | 1            | A69327            | A69339  | A69345  | A69367  | A69373  | A69379  | A69389  | A69395  |  |
| 2★       | Valve Plug, Linear, Res. Trim       | Stainless Steel   | AISI TYPE 316        | 1            | A69331            | A69344  | A69353  | A69371  | A69377  | A69383  | A69393  | A69399  |  |
| 2★       | Valve Plug, Linear, ¼" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | A69323            | A69323  | A69323  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, ½" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | --                | A69327  | A69327  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, ¾" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | A69339  | A69341  | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, 1" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | A69348  | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, 1-1/2" Trim     | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A69385  | A69385  | --      |  |
| 2★       | Valve Plug, Linear, 2" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A69401  |  |
| 2★       | Valve Plug, Microtaper ¼" (NOTE 1)  | Stainless Steel   | AISI TYPE 316        | 1            | A69322            | A69322  | A69322  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% Full Trim           | Stainless Steel   | AISI TYPE 316        | 1            | A69329            | A69333  | A69349  | A69369  | A69375  | A69381  | A69391  | A69397  |  |
| 2★       | Valve Plug, Res. Trim               | Stainless Steel   | AISI TYPE 316        | 1            | A69332            | A69343  | A69354  | A69372  | A69378  | A69384  | A69394  | A69400  |  |
| 2★       | Valve Plug, EQ% ¼" Trim             | Stainless Steel   | AISI TYPE 316        | 1            | A69325            | A69325  | A69325  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% ½" Trim             | Stainless Steel   | AISI TYPE 316        | 1            | --                | A69329  | A69329  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% ¾" Trim             | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | A69333  | A69336  | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% 1" Trim             | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | A69351  | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% 1-1/2" Trim         | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A69387  | A69387  | --      |  |
| 2★       | Valve Plug, EQ% 2" Trim             | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A69403  |  |
| 2★       | Valve Plug, Linear, Full Trim       | St. Steel Stell.  | AISI TYPE 316        | 1            | A69328            | A69338  | A69346  | A69368  | A69374  | A69380  | A69390  | A69396  |  |
| 2★       | Valve Plug, Linear, ¼" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | A69324            | A69324  | A69324  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, ½" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | A69328  | A69328  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, ¾" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | A69338  | A69342  | --      | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, 1" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | A69347  | --      | --      | --      |  |
| 2★       | Valve Plug, Linear, 1-1/2" Trim     | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A69386  | A69386  | --      |  |
| 2★       | Valve Plug, Linear, 2" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A69402  |  |
| 2★       | Valve Plug, EQ% Full Trim           | St. Steel Stell.  | AISI TYPE 316        | 1            | A69330            | A69334  | A69350  | A69370  | A69376  | A69382  | A69392  | A69398  |  |
| 2★       | Valve Plug, EQ% ¼" Trim             | St. Steel Stell.  | AISI TYPE 316        | 1            | A69326            | A69326  | A69326  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% ½" Trim             | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | A69330  | A69330  | --      | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% ¾" Trim             | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | A69334  | A69337  | --      | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% 1" Trim             | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | A69352  | --      | --      | --      |  |
| 2★       | Valve Plug, EQ% 1-1/2" Trim         | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A69388  | A69388  | --      |  |
| 2★       | Valve Plug, EQ% 2" Trim             | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A69404  |  |
| 3†       | Seat Ring Gasket (To 450°F)         | RTFE              | COMMERCIAL           | 1            | A79477            | A79477  | A79477  | A79478  | A79479  | A79480  | A79481  | A79482  |  |
| 3†       | Seat Ring Gasket (Above 450°F)      | Inconel 600/Grap. | COMMERCIAL           | 1            | A72654            | A72654  | A72654  | A72655  | A72516  | A72656  | A72657  | A72658  |  |
| 3†       | S.R. Gasket for Resilient Trim only | Fluorocarbon      | COMMERCIAL           | 1            | A65361            | A65361  | A65361  | A65362  | A65363  | A66218  | A65479  | A65480  |  |
| 4★       | Seat Ring, Full Trim                | Stainless Steel   | AISI TYPE 316        | 1            | A72565            | A72569  | A72566  | A72573  | A72493  | A72563  | A72554  | A72558  |  |
| 4★       | Seat Ring, ¼" Trim                  | Stainless Steel   | AISI TYPE 316        | 1            | A72567            | A72567  | A72567  | --      | --      | --      | --      | --      |  |
| 4★       | Seat Ring, ½" Trim                  | Stainless Steel   | AISI TYPE 316        | 1            | --                | A72565  | A72565  | --      | --      | --      | --      | --      |  |
| 4★       | Seat Ring, ¾" Trim                  | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | A72569  | A72572  | --      | --      | --      | --      |  |
| 4★       | Seat Ring, 1" Trim                  | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | A72494  | --      | --      | --      |  |
| 4★       | Seat Ring, 1-1/2" Trim              | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A72560  | A72555  | --      |  |
| 4★       | Seat Ring, 2" Trim                  | Stainless Steel   | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A74410  |  |
| 4★       | Seat Ring, Full Trim                | St. Steel Stell.  | AISI TYPE 316        | 1            | A72571            | A72564  | A72570  | A72574  | A72495  | A72561  | A72557  | A72559  |  |
| 4★       | Seat Ring, ¼" Trim                  | St. Steel Stell.  | AISI TYPE 316        | 1            | A72568            | A72568  | A72568  | --      | --      | --      | --      | --      |  |
| 4★       | Seat Ring, ½" Trim                  | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | A72571  | A72571  | --      | --      | --      | --      | --      |  |
| 4★       | Seat Ring, ¾" Trim                  | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | A72564  | A72575  | --      | --      | --      | --      |  |
| 4★       | Seat Ring, 1" Trim                  | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | A72492  | --      | --      | --      |  |
| 4★       | Seat Ring, 1-1/2" Trim              | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | A72562  | A72556  | --      |  |
| 4★       | Seat Ring, 2" Trim                  | St. Steel Stell.  | AISI TYPE 316        | 1            | --                | --      | --      | --      | --      | --      | --      | A74409  |  |
| 4★       | Seat Ring, Res. Trim                | Stainless Steel   | AISI TYPE 316        | 1            | A65717            | A65718  | A65719  | A65720  | A65721  | A65722  | A65723  | A65724  |  |
| 5★       | Seat Retainer Cage                  | Stainless Steel   | ASTM A351            | 1            | A652640           | A652640 | A652640 | A652990 | A653030 | A654120 | A653740 | A653750 |  |
| 6        | Bonnet                              | Cast Steel        | GRCF8M               | 1            | 5                 | 5       | 5       | 5       | 5       | 5       | 5       | 5       |  |
|          |                                     |                   | ASTM A216 GRWCB      | 1            | A72597            | A72597  | A72597  | A72594  | A72514  | A72599  | A72601  | A72603  |  |
| 6        | Bonnet (For C.I. Body)              | Note 2            |                      | 1            | A72597            | A72597  | A72597  | A72594  | A72514  | A72599  | A72601  | A72603  |  |
| 6        | Bonnet (For SS Body)                | 316 SS            | ASTM A351CF8M        | 1            | A691160           | A691160 | A691160 | A691180 | A75879  | A691220 | A72430  | A72205  |  |
| 7        | Packing Nut                         | Stainless Steel   | AISI TYPE 304        | 2            | 5                 | 5       | 5       | 5       | A23194  | 5       | A23194  | A23194  |  |
|          |                                     |                   |                      | 2            | A23194            | A23194  | A23194  | A23194  | A23194  | A23194  | A23194  | A23194  |  |
| 8†       | Bonnet Gasket                       | Inconel 600/Grap. | COMMERCIAL           | 1            | A72659            | A72659  | A72659  | A72660  | A72661  | A72662  | A72663  | A72664  |  |
| 9        | Packing Stud                        | Steel             | AISI A-193GRB7       | 2            | A57572            | A57572  | A57572  | A57572  | A57572  | A57572  | A57572  | A57572  |  |
| 10       | Nut                                 | Steel Stell.      | ASTM A194GB2H        | 8            | A13243            | A13243  | A13243  | A03676  | A03676  | A03677  | A03677  | A03678  |  |
| 11       | Stud                                | Steel Stell.      | ASTM A-193 GRB7      | 4            | A44867            | A44867  | A44867  | A23209  | A23207  | A11083  | A09393  | A42747  |  |
| 11       | Stud Bolt                           | Steel             | ASTM A-193 GRB7      | 4            | A69471            | A69471  | A69471  | A69472  | A69472  | A69473  | A69474  | A69475  |  |
| 12       | Packing Bearing                     | Stainless Steel   | AISI TYPE 316        | 1            | A65370            | A65370  | A65370  | A65370  | A65371  | A65371  | A65371  | A65371  |  |

|      |                                  |                  |               |   |        |        |        |        |        |        |        |        |
|------|----------------------------------|------------------|---------------|---|--------|--------|--------|--------|--------|--------|--------|--------|
| 13   | Packing Flange                   | Steel            | AISI 1144     | 1 | A69405 | A69405 | A69405 | A69405 | A69405 | A69405 | A69405 | A69405 |
| 14   | Pipe Plug                        | Steel            | COMMERCIAL    | 1 | A66166 | A66166 | A66166 | A66166 | A66166 | A66166 | A66166 | A66166 |
| 15†  | Packing Spring Teflon Packing    | Monel 400        | COMMERCIAL    | 1 | A65353 | A65363 | A65353 | A65353 | A65355 | A65355 | A65355 | A65355 |
| 16   | Washer, Teflon Packing           | Monel 400        | COMMERCIAL    | 1 | A63926 | A63926 | A63926 | A63926 | A65368 | A65368 | A65368 | A65368 |
| 17†  | Packing Set, Teflon Chevron      | Teflon           | COMMERCIAL    | 1 | A28015 | A28015 | A28015 | A28015 | A69460 | A69460 | A69460 | A69460 |
| 17†  | Packing Set Braided Teflon Grpht | Teflon/Graphite  | COMMERCIAL    | 1 | A69423 | A69423 | A69423 | A69423 | A69424 | A69424 | A69424 | A69424 |
| 17†  | Packing Set, Hi-Temp             | Graphite Type II | COMMERCIAL    | 1 | A72363 | A72363 | A72363 | A72363 | A72647 | A72647 | A72647 | A72647 |
| 17†▲ | Packing Set, Hi-Temp             | Graphite Type II | COMMERCIAL    | 1 | A70380 | A70380 | A70380 | A70380 | A72653 | A72653 | A72653 | A72653 |
| 18   | Packing Ring, Teflon             | Stainless Steel  | AISI TYPE 302 | 1 | A23192 | A23192 | A23192 | A23192 | A66909 | A66909 | A66909 | A66909 |
| 18   | Packing Spacer, Graphite Packing | Stainless Steel  | AISI TYPE 302 | 1 | A72626 | A72626 | A72626 | A72626 | A72627 | A72627 | A72627 | A72627 |
| 18▲  | Packing Spacer                   | Stainless Steel  | AISI TYPE 302 | 1 | A72646 | A72646 | A72646 | A72646 | A66909 | A66909 | A66909 | A66909 |

\* Resilient Seat Only

† Recommended Spare Parts

★ These parts should be on hand, plus recommended spare parts when overhauling this equipment

▲ For use with Bleedport option only

■ Not used with Iron Body

NOTE 1: Microtaper valve plug furnished only as valve plug and seat set. Not available separately.

NOTE 2: Bonnet material is cast steel ASTM A215WCB for ½" – 3" valves. Material is C.I. A126CLB for 4" valves.



## DIRECT ACTING

WHEN ORDERING PARTS, PLEASE GIVE PART NAME AND PART REFERENCE NUMBER FROM TABLE BELOW. USE PART NUMBER ONLY TO LOCATE PART ON DRAWING.

| PART NO. | PART NAME                       | MATERIAL                 | QTY PER UNIT | REFERENCE NUMBER – EACH SIZE |          |          |
|----------|---------------------------------|--------------------------|--------------|------------------------------|----------|----------|
|          |                                 |                          |              | 35                           | 55 & 55A | 85       |
| 1        | Nut                             | Steel                    | 1            | 13243                        | 13243    | 13243    |
| 2        | Lock Washer                     | Steel                    | 1            | 10392                        | 10392    | 10392    |
| 3        | Handwheel                       | Cast Aluminum            | 1            | 43064                        | 23649    | 23649    |
| 4        | Handscrew                       | Stainless Steel          | 1            | 43016                        | 49228    | 49228    |
| 5        | Packing Gland                   | Stainless Steel (NOTE 1) | 1            | 38644                        | 34859    | 34859    |
| 6*       | Packing Ring                    | Molded Rings             | 1            | 69609                        | 33551    | 33551    |
| 7        | Washer                          | (NOTE 1)                 | 1            | 38658                        | 35760    | 35760    |
| 8*       | O-Ring                          | Synthetic Rubber         | 1            | 38664-94                     | 27293-94 | 27293-94 |
| 9        | Bonnet, Compl., Iron Actuator   | (NOTE 2)                 | 1            | 38635                        | 42228    | 42228    |
| 9        | Bonnet, Compl., Alum. Actuator  | (NOTE 3)                 | 1            | 39069                        | 42228    | 42228    |
| 15       | Handscrew Disc, Compl. (NOTE 6) | Stainless Steel          | 1            | 43008                        | 42077    | 42077    |
| 16*      | Gasket                          | Sheet Packing            | 1            | 38657-95                     | 37845-95 | 37845-95 |
| 17       | Lock Nut, Iron Actuator         | (NOTE 2)                 | 1            | 38655                        | 37710    | 37710    |
| 17       | Lock Nut, Aluminum Actuator     | (NOTE 3)                 | 1            | 39070                        | 37710    | 37710    |
| 18       | Diaphragm Case, Upper           | Pressed Steel            | 1            | 38661                        | 37764    | 37770    |

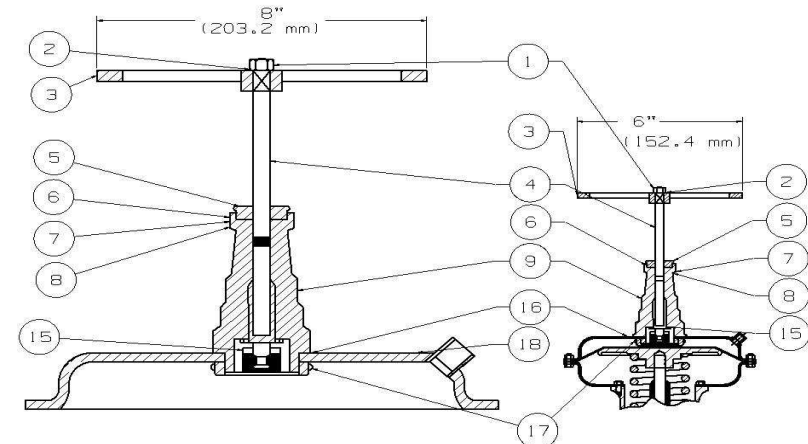
| PART NO. | PART NAME                     | MATERIAL           | QTY PER UNIT | REFERENCE NUMBER – EACH SIZE |             |          |             |
|----------|-------------------------------|--------------------|--------------|------------------------------|-------------|----------|-------------|
|          |                               |                    |              | 35                           | 55          | 55A      | 85          |
| 20*      | Diaphragm Case, Upper         | Pressed Steel      | 1            | 38369                        | 37795       | 37795    | 37791       |
| 21       | Diaphragm                     | Synthetic Rubber   | 1            | 38399-94                     | 37810-94    | 37810-94 | 37819-94    |
| 22       | Nut                           | Steel              | (NOTE 7)     | 13901                        | 26585       | 26585    | 26585       |
| 23       | Bolt                          | Steel              | (NOTE 7)     | 38420                        | 37797       | 37797    | 37797       |
| 24       | Diaphragm Disc (NOTE 4)       | Cast Iron          | 1            | 38393                        | 37838       | 37838    | 37843       |
| 24       | Diaphragm Disc (NOTE 5)       | Cast Aluminum      | 1            | 38877                        | 37839       | 37839    | 37844       |
| 25       | Diaphragm Case, Lower         | Pressed Steel      | 1            | 38345                        | 37672       | 37672    | 37678       |
| 26       | Cap Screw                     | Steel              | (NOTE 8)     | 38420                        | 37796       | 37796    | 23400       |
| 28       | Adjusting Spring              | Steel, Plated      | 1            | (SEE TABLE)                  |             |          |             |
| 29       | Inner Adjusting Spring        | Steel, Plated      | 1            | --                           | --          | --       | (SEE TABLE) |
| 30       | Limit Stop                    | Steel              | 1            | (SEE TABLE)                  |             |          |             |
| 31       | Upper Stem                    | Stainless Steel    | 1            | 38398                        | 23263       | 61386    | 24273       |
| 32       | Yoke (NOTE 10) (NOTE 4)       | Cast Iron          | 1            | 38335                        | 37693       | 37693    | 37995       |
| 32       | Yoke (NOTE 10) (NOTE 5)       | Cast Aluminum      | 1            | 38876                        | 37692       | 37692    | 37994       |
| 33       | Washer, Inner Spring (NOTE 9) | Stainless Steel    | 1            | --                           | --          | --       | --          |
| 34       | Washer                        | Stainless Steel    | 1            | 38401                        | 23260       | 23260    | 24271       |
| 35       | Adjusting Nut (NOTE 4)        | Cast Iron          | 1            | 38394                        | 23262       | 23262    | 24274       |
| 35       | Adjusting Nut (NOTE 5)        | Cast Bronze        | 1            | 58349                        | 27978       | 27978    | 30081       |
| 36       | Adjusting Sleeve              | Stainless Steel    | 1            | 38397                        | 37694       | 37694    | 37766       |
| 37       | Travel Indicator              | Stainless Steel    | 1            | 38405                        | 38920       | 15672    | 38921       |
| 38       | Travel Indicator Scale        | Aluminum           | 1            | 38404                        | (SEE TABLE) |          |             |
| 39       | Screw                         | Steel, Cad. Plated | (NOTE 11)    | 34728                        | 34728       | 34728    | 34728       |

**\* RECOMMENDED SPARE PARTS**

- NOTE 1 – Material is Brass for size 35 Actuator and Aluminum for 55, 55A and 85 Actuators
- NOTE 2 – Material is Cast Iron for 35 Actuator and Cast Aluminum for 55, 55A and 85 Actuators.
- NOTE 3 – Material is Cast Bronze for 35 Actuator and Cast Aluminum for 55, 55A and 85 Actuators.
- NOTE 4 – Used on Cast Iron Actuators only.
- NOTE 5 – Used on Cast Aluminum Actuators only.
- NOTE 6 – Includes one each, Handscrew Disc, Retainer Insert and two each Split ring.
- NOTE 7 – Quantities are: Twelve (12) for the 35 size, Fourteen (14) for the 55 and 55A sizes, Sixteen (16) for the 85 sizes.
- NOTE 8 – Quantities are: Eight (8) for the 35, 55 & 55A sizes and Six (6) for the 85 size Actuators.
- NOTE 9 – Used only when Inner Adjusting Spring, Part No. 29 is used.
- NOTE 10 – Yoke, Part No. 32, is furnished complete with Adjusting Sleeve, Part No. 36.
- NOTE 11 – Quantities are: One (1) for 35 Actuator and Two (2) for all other sizes.

**NOTE:** Part Numbers 10, 11, 12, 13, 14, 19 and 27 have been deleted. For Part Numbers 28, 29, 30 and 38 see back page.

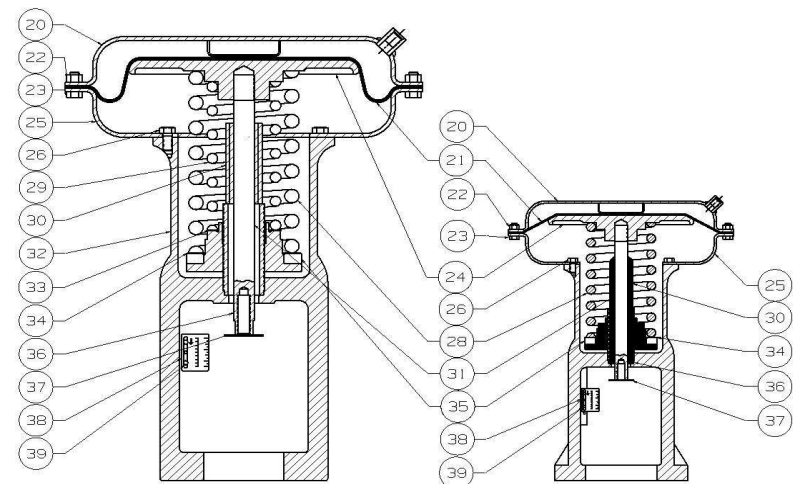
### HAND OPERATING DEVICE



VIEW SHOWING SIZES 55, 55A, & 85  
HAND OPERATING DEVICES

VIEW SHOWING SIZE 35  
HAND OPERATING DEVICE

### DIAPHRAGM ACTUATOR



VIEW SHOWING SIZES 55, 55A, & 85  
DIAPHRAGM ACTUATORS

VIEW SHOWING SIZE 35  
DIAPHRAGM ACTUATOR

## REVERSE ACTING

WHEN ORDERING PARTS, PLEASE GIVE PART NAME AND PART REFERENCE NUMBER FROM TABLE BELOW. USE PART NUMBER ONLY TO LOCATE PART ON DRAWING.

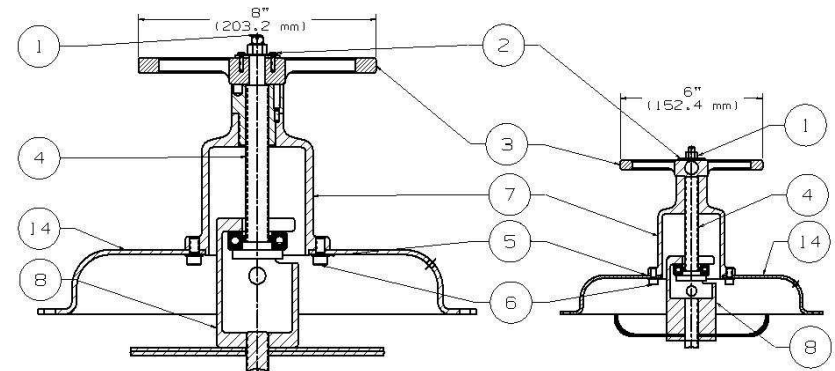
| PART NO. | PART NAME                 | MATERIAL        | QTY PER UNIT | REFERENCE NUMBER – EACH SIZE |            |       |
|----------|---------------------------|-----------------|--------------|------------------------------|------------|-------|
|          |                           |                 |              | 35                           | 55R & 55AR | 85R   |
| 1        | Nut                       | Steel           | 1            | 13243                        | 13243      | 13243 |
| 2        | Lockwasher                | Steel           | 1            | 10392                        | 10392      | 10392 |
| 3        | Handwheel, Complete       | Cast Aluminum   | 1            | 43064                        | 42226      | 42226 |
| 4        | Handscrew Bearing         | Stainless Steel | 1            | 43043                        | 51456      | 51456 |
| 5        | Assembly                  | Steel           | (NOTE 3)     | 11467                        | 13077      | 13077 |
| 6        | Lockwasher<br>Screw       | Stainless Steel | (NOTE 3)     | 17186                        | 41933      | 41933 |
| 7        | Bonnet, Complete (NOTE 4) | (NOTE 1)        | 1            | 38720                        | 42224      | 42224 |
| 7        | Bonnet, Complete (NOTE 5) | (NOTE 2)        | 1            | 39077                        | 42224      | 42224 |
| 8        | Diaphragm Nut             | Steel           | 1            | 38696                        | 42220      | 41793 |
| 14       | Diaphragm Case, Upper     | Pressed Steel   | 1            | 38748                        | 41788      | 41787 |

| PART NO. | PART NAME                       | MATERIAL             | QTY PER UNIT | REFERENCE NUMBERS – EACH SIZE |             |             |          |
|----------|---------------------------------|----------------------|--------------|-------------------------------|-------------|-------------|----------|
|          |                                 |                      |              | 35R                           | 55R         | 55AR        | 85R      |
| 15       | Diaphragm Case, Upper           | Pressed Steel        | 1            | 38392                         | 37832       | 37832       | 37833    |
| 16       | Nut                             | Steel                | 1            | 24005                         | 36229       | 36229       | 36229    |
| 17       | Diaphragm Disc                  | Steel (NOTE 6)       | 1            | 38391                         | 37774       | 37774       | 38081    |
| 18       | Nut                             | Steel                | (NOTE 7)     | 13901                         | TABLE       | 26585       | 26585    |
| 19       | Bolt                            | Steel                | (NOTE 7)     | 38420                         | 37797       | 37797       | 37797    |
| 20*      | Diaphragm                       | Synthetic Rubber     | 1            | 38400-94                      | 37809-94    | 37809-94    | 37818-94 |
| 21       | Diaphragm Case, Lower           | Pressed Steel        | 1            | 38391                         | 37774       | 37774       | 38081    |
| 22       | Collar, Comp. (NOTE 4)          | (NOTE 11)            | 1            | 38412                         | 37760       | 37760       | 38113    |
| 22       | Collar, Comp. (NOTE 5)          | (NOTE 11)            | 1            | 38412                         | 37760       | 37760       | 38113    |
| 23       | Cap Screw                       | Steel                | (NOTE 8)     | 38420                         | 37796       | 37796       | 23400    |
| 26*      | Diaphragm Base Gasket           | Synthetic Rubber     | 1            | --                            | 37761-95    | 37761-95    | 38107-95 |
| 27       | Stem Seal Ring                  | Steel                | 1            | --                            | 37731       | 37731       | 37731    |
| 28       | Screw                           | Stainless Steel      | 6            | --                            | 30501       | 30501       | 30501    |
| 29*      | Stem Seal                       | Synthetic Rubber     | 1            | 38417-94                      | 37740-95    | 37740-95    | 37740-95 |
| 30       | Top Spring Seat                 | (NOTE 9)             | 1            | --                            | (NOTE 9)    | (NOTE 9)    | (NOTE 9) |
| 31       | Stem Seat Collar                | Cold Rolled Steel    | 1            | 38416                         | 28177       | 28177       | 28177    |
| 34       | Yoke (NOTE 4)                   | Cast Iron            | 1            | 38343                         | 37728       | 37728       | 37973    |
| 34       | Yoke (NOTE 5)                   | Cast Aluminum        | 1            | 38940                         | 37727       | 37727       | 37972    |
| 35       | Upper Stem                      | Stainless Steel      | 1            | 38408                         | 37758       | 61387       | 38085    |
| 36       | Adjusting Spring                | Steel, Blk. Japanned | 1            | --                            | (SEE TABLE) | --          | --       |
| 37       | Inner Adjusting Spring          | Steel, Blk. Japanned | 1            | --                            | (SEE TABLE) | --          | --       |
| 38       | Washer, Inner Adj Spg (NOTE 10) | Stainless Steel      | 1            | --                            | (SEE TABLE) | --          | 25393    |
| 39       | Washer                          | Stainless Steel      | 1            | 38401                         | 23260       | 23260       | 24271    |
| 40       | Adjusting Nut (NOTE 4)          | Case Iron            | 1            | 38395                         | 31641       | 31641       | 28174    |
| 40       | Adjusting Nut (NOTE 5)          | Cast Bronze          | 1            | 58350                         | 30623       | 30623       | 31592    |
| 41       | Indicator Disc                  | Stainless Steel      | 1            | 38406                         | 38920       | 1 5 6 7 2   | 38921    |
| 42       | Indicator Scale                 | Aluminum             | 1            | 38404                         | --          | (SEE TABLE) | --       |
| 43       | Screw                           | Steel, Plated        | (NOTE 12)    | 34728                         | 34728       | 3 4 7 2 8   | 34728    |
| 45       | Washer                          | Steel                | 1            | 39784                         | --          | --          | --       |

**\* RECOMMENDED SPARE PARTS**

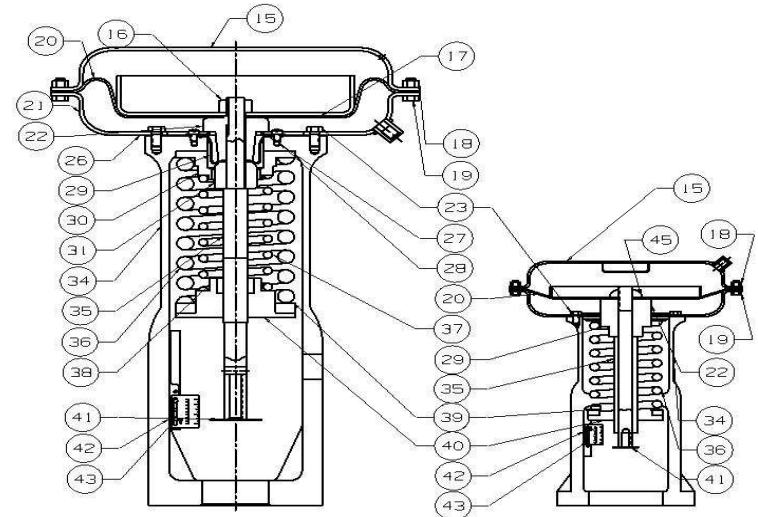
- NOTE 1 – Material is Cast Iron for size 35R Actuator and Case Aluminum for 55R, 55AR and 85R Iron Actuators.
  - NOTE 2 – Material is Cast Bronze for 35R Actuator and Cast Aluminum for 55R, 55AR and 85R Actuators.
  - NOTE 3 – Quantities are: Four (4) for 35R Actuator and Six (6) for 55R, 55AR and 85R Actuator.
  - NOTE 4 – Used on Cast Iron Actuators only.
  - NOTE 5 – Used on Cast Aluminum Actuators only.
  - NOTE 6 – Material is Steel for the 35R, 55R and 85R Iron Actuator.
  - NOTE 7 – Quantities are: Twelve (12) for the 35R size, Fourteen (14) for the 55R & 55AR sizes, Sixteen (16) for the 85R sizes.
  - NOTE 8 – Quantities are: Eight (8) for the 35R, 55R & 55AR sizes and Six (6) for the 85R size Actuators.
  - NOTE 9 – Material is Steel for the 55R & 55AR, Ref. No. 37802; Cast Iron for the 85R Iron Actuator, Ref. No. 38116 and Cast Aluminum for the 85R Aluminum Actuator, Ref. No. 38117.
  - NOTE 10 – Used only when Inner Adjusting Spring, Part No. 37 is used.
  - NOTE 11 – Material is Steel for 35R Iron Actuators, Aluminum Alloy for 55R, 55AR and 85R Aluminum and Iron Actuators.
  - NOTE 12 – Quantity is One (1) for 35R size and Two (2) for all other size Actuators.
- NOTE:** - Part Numbers 24, 32 and 33 have been deleted. For Part Numbers 17, 36, 37 and 42 see back page.

### HAND OPERATING DEVICE



VIEW SHOWING SIZES 55R, 55AR, & 8:      VIEW SHOWING SIZE 35R  
HAND OPERATING DEVICES                      HAND OPERATING DEVICE

### DIAPHRAGM ACTUATOR



VIEW SHOWING SIZES 55R, 55AR, & 85R      VIEW SHOWING SIZE 35R  
DIAPHRAGM ACTUATORS                      DIAPHRAGM ACTUATOR

**FOR DIRECT ACTING ACTUATOR**

**FOR REVERSE ACTING ACTUATOR**

| VALVE TRAVEL |         | PART NO. 30 LIIT STOP |          |       |
|--------------|---------|-----------------------|----------|-------|
|              |         | ACTUATOR SIZE         |          |       |
|              |         | 35                    | 55 & 55A | 85    |
| 5/8 in       | 15.9 mm | 38403                 | 44077    | 24482 |
| 3/4 in       | 19.1 mm | --                    | 23393    | 46890 |
| 7/8 in       | 22.2 mm | --                    | 23393    | 24482 |
| 1 in         | 25.4 mm | --                    | 23394    | 24483 |
| 1-1/8 in     | 28.6 mm | --                    | 23395    | 23366 |
| 1-1/4 in     | 31.8 mm | --                    | 23395    | 23366 |
| 1-1/2 in     | 38.1 mm | --                    | 23997    | 23367 |
| 2 in         | 50.8 mm | --                    | --       | 23368 |

| VALVE TRAVEL |  | PART NO. 17 DIAPHRAGM DISC |            |       |
|--------------|--|----------------------------|------------|-------|
|              |  | ACTUATOR SIZE              |            |       |
|              |  | 35                         | 55R & 55AR | 85R   |
| 5/8 in       |  | 38351                      | 37683      | 37686 |
| 3/4 in       |  | 38351                      | 37683      | 37686 |
| 7/8 in       |  | --                         | 37683      | 37686 |
| 1 in         |  | --                         | 37683      | 37686 |
| 1-1/4 in     |  | --                         | 49950      | 38699 |
| 1-1/2 in     |  | --                         | 37684      | 38699 |
| 2 in         |  | --                         | --         | 37685 |

**ADJUSTING SPRING, INNER ADJUSTING SPRINGS AND TRAVEL INDICATOR SCALES ARE THE SAME FOR EITHER DIRECT OR REVERSE ACTING ACTUATORS**

| VALVE TRAVEL |         | PART NO. 28<br>PART NO. 36<br>ADJUSTING SPRING ** |            |       |
|--------------|---------|---|------------|-------|
|              |         | ACTUATOR SIZE                                     |            |       |
|              |         | 35®   | 55® & 55A® | 85®   |
| 5/8 in       | 15.9 mm | 38422   | 41969      | 35014 |
| 3/4 in       | 19.1 mm | 38422   | 41968      | 37719 |
| 7/8 in       | 22.2 mm | --  | 23239      | 24299 |
| 1 in         | 25.4 mm | --  | 24296      | 35014 |
| 1-1/8 in     | 28.6 mm | --  | 43078      | 41970 |
| 1-1/4 in     | 31.8 mm | --  | 24297      | 24299 |
| 1-1/2 in     | 38.1 mm | --  | 24298      | 24300 |
| 2 in         | 50.8 mm | --  | --         | 24301 |

| VALVE TRAVEL |         | PART NO. 29<br>PART NO. 37<br>INNER ADJUSTING SPRING |  |
|--------------|---------|--|--|
|              |         | ACTUATOR SIZE  |  |
|              |         | 85®  |  |
| 5/8 in       | 15.9 mm | 37718  |  |
| 7/8 in       | 22.2 mm | 24481  |  |
| 1 in         | 25.4 mm | --   |  |
| 1-1/4 in     | 31.8 mm | --   |  |
| 1-1/2 in     | 38.1 mm | --   |  |

| VALVE TRAVEL |         | PART NO. 38<br>PART NO. 42<br>TRAVEL INDICATOR SCALE            |  |
|--------------|---------|---|--|
|              |         | INDICATOR SCALES<br>SUBJECT TO ACTUATOR<br>MAXIMUM TRAVEL LIMIT |  |
|              |         | REF. NO.  |  |
| 1/4 in       | 6.4 mm  | 48224   |  |
| 3/8 in       | 9.5 mm  | 48048   |  |
| 1/2 in       | 12.7 mm | 48047   |  |
| 5/8 in       | 15.9 mm | 38904   |  |
| 3/4 in       | 19.1 mm | 38905   |  |
| 7/8 in       | 22.2 mm | 38906   |  |
| 1 in         | 25.4 mm | 38907   |  |
| 1-1/8 in     | 28.6 mm | 38908   |  |
| 1-1/4 in     | 31.8 mm | 38909   |  |
| 1-1/2 in     | 38.1 mm | 38910   |  |
| 1-3/4 in     | 44.5 mm | 49641   |  |
| 2 in         | 50.8 mm | 38911   |  |

\*\* Springs listed are based on Standard Spring that will give the nearest range to 3-15 psi for the travel indicated. This is based on zero pressure drop through valve. For various pressure drops or ranges, these Springs can be interchanged any way in each particular size. Consult Leslie Controls when special range is required.



*It is solely responsibility of system designer and user to select products and materials suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Assistance shall be afforded with selection of materials based on technical information supplied to Leslie Controls Inc.; however, system designer and user retain final responsibility. Designer should consider applicable Codes, material compatibility, product ratings and application details in selection and application. Improper selection, application or use of products described herein can cause personal injury or property damage. If designer or user intends to use product for an application or use other than originally specified, he must reconfirm tat selection is suitable for new operating conditions. Life expectancy for this product defaults to warranty period of sales contract.*