

# DelTorq<sup>®</sup> SERIES 25

## Pneumatic Scotch Yoke Actuators

Double Acting and Spring Return



[delvalflow.com](http://delvalflow.com)

1-833-DELVAL1



# STANDARD FEATURES

## Quality & Performance

DelVal Flow Controls provides a wide range of quality products with the reliability you can count on. All Series 25 actuators are manufactured in ISO 9001 certified facilities with a robust quality management system.

## Design Construction and Features

### 1. Ductile Iron Housing

Ductile iron housing provides better strength with water ingress protection meeting IP 67 grade.

### 2. Hard Chrome Plated, Honed Finished Cylinder Bore

The chrome plated cylinder bore increases seal life.

### 3. Hard Chrome Plated Steel Piston Rod

The piston rod provides strength and corrosion resistance for enduring high cycle applications.

### 4. Heat Treated Stainless Steel Thrust Pin

The thrust pin transfers piston force to the steel yoke for efficient transmission of torque.

### 5. Guide Bands And Piston Quad Seals

Guide bands and piston seals ensure low-friction piston guidance during operation to protect cylinder walls from potential scoring and provide continuous cylinder wiping action.

### 6. Spring Return Actuators

Pre-piped with stainless steel tubing to provide air to both pistons with one single connection.

### 7. Unique "Safe Spring Cartridge" Design

The design allows the actuator to be safely assembled and disassembled in the field without the need for special tools. A double acting actuator can be converted to spring return unit by simply changing the cylinder and installing corresponding size of spring cartridge assembly. A spring return can be converted to a double acting actuator by removing the spring cartridge.

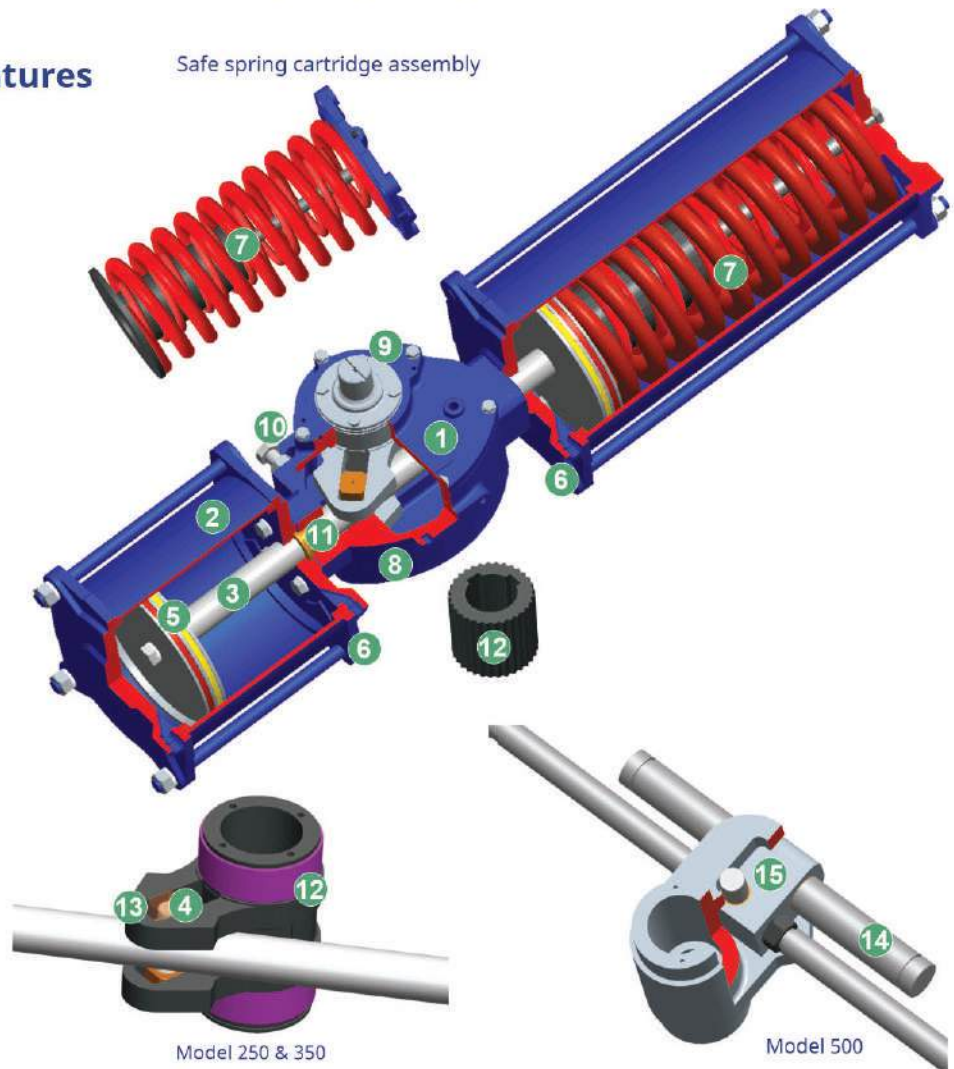
### 8. ISO 5211 Mounting Pattern

The mounting pattern provides easy valve/actuator mounting using international standards.

### 9. Top Cover Drilled To Namur Standards

Namur drive slot in shaft on top of yoke enables accessory driven components to maintain a compact assembly.

Safe spring cartridge assembly



### 10. Bi-directional Travel Stop

The travel stop is located in the main housing to provide adjustment in open and closed direction  $\pm 5^\circ$ .

### 11. Phosphor Bronze Piston Rod Bushing

The bushing provides low-friction support. Precise alignment of the piston rod increases efficiency and provides extended actuator life and efficient torque transmission.

### 12. High Strength Yoke

The yoke is a very critical part of the scotch yoke actuator. This part is most often where the life of the actuator is controlled. The yoke converts the linear force to torque. On 250 yoke arm DelTorq<sup>®</sup> uses 17-4 Ph stainless steel as standard for this critical part. Unique hollow yoke design permits the use of a universal adapter for direct mounting to quarter turn valves.

### 13. Aluminum Bronze Roller (25-250 and 25-350)

The roller provides low friction and high strength and increases efficiency and life cycle of actuator.

### 14. Chrome Plated Guide Bar (25-500)

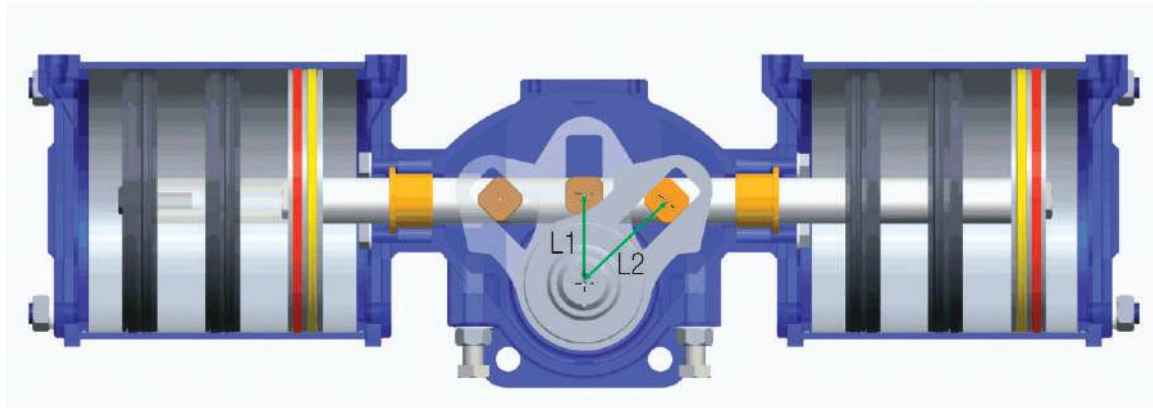
The guide bar and guide block connection bearing with guide bar support the transverse force and ensure proper support of the piston to give high cycle life and smooth operation.

### 15. Ductile Iron Guide Block (25-500)

Guide block with bearing ensures proper lubrication to pin & guide bar, provides low friction and increases efficiency of the actuator.

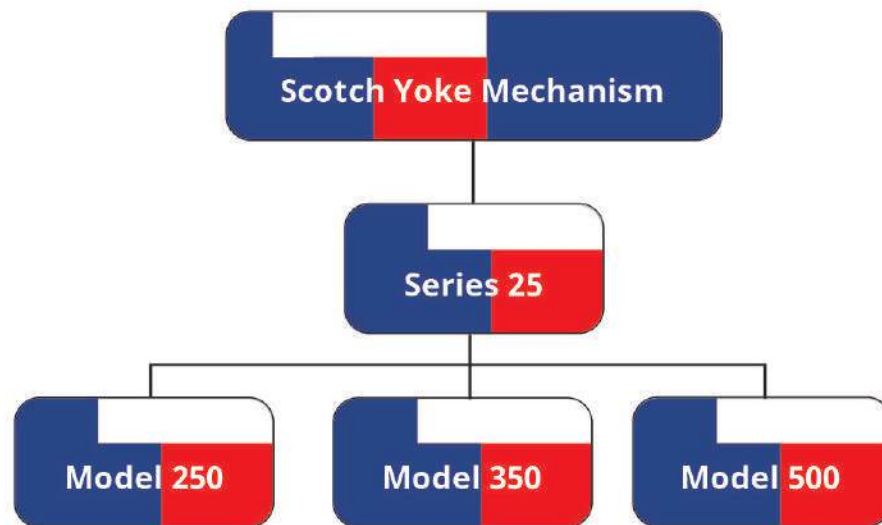
# SCOTCH YOKE MECHANISM

The scotch yoke mechanism produces torque that closely matches the required torque characteristic of most quarter-turn valves. As per the characteristic of the valve, the scotch yoke produces its highest torque at the start and the end of each stroke, providing maximum torque at opening and closing of the valve.



As the piston moves, the length of the moment arm is changing constantly. Because the effective moment arm is longest at the start and the end of the stroke (L2), the starting torque (torque output at the start and the end of a stroke) approaches nearly twice the magnitude of the minimum torque (L1)(torque output at the shortest moment arm length). Thus, scotch yoke mechanism torque output allows the use of a smaller piston, shorter moment arm and lower operating pressures than many other mechanisms.

## Classification

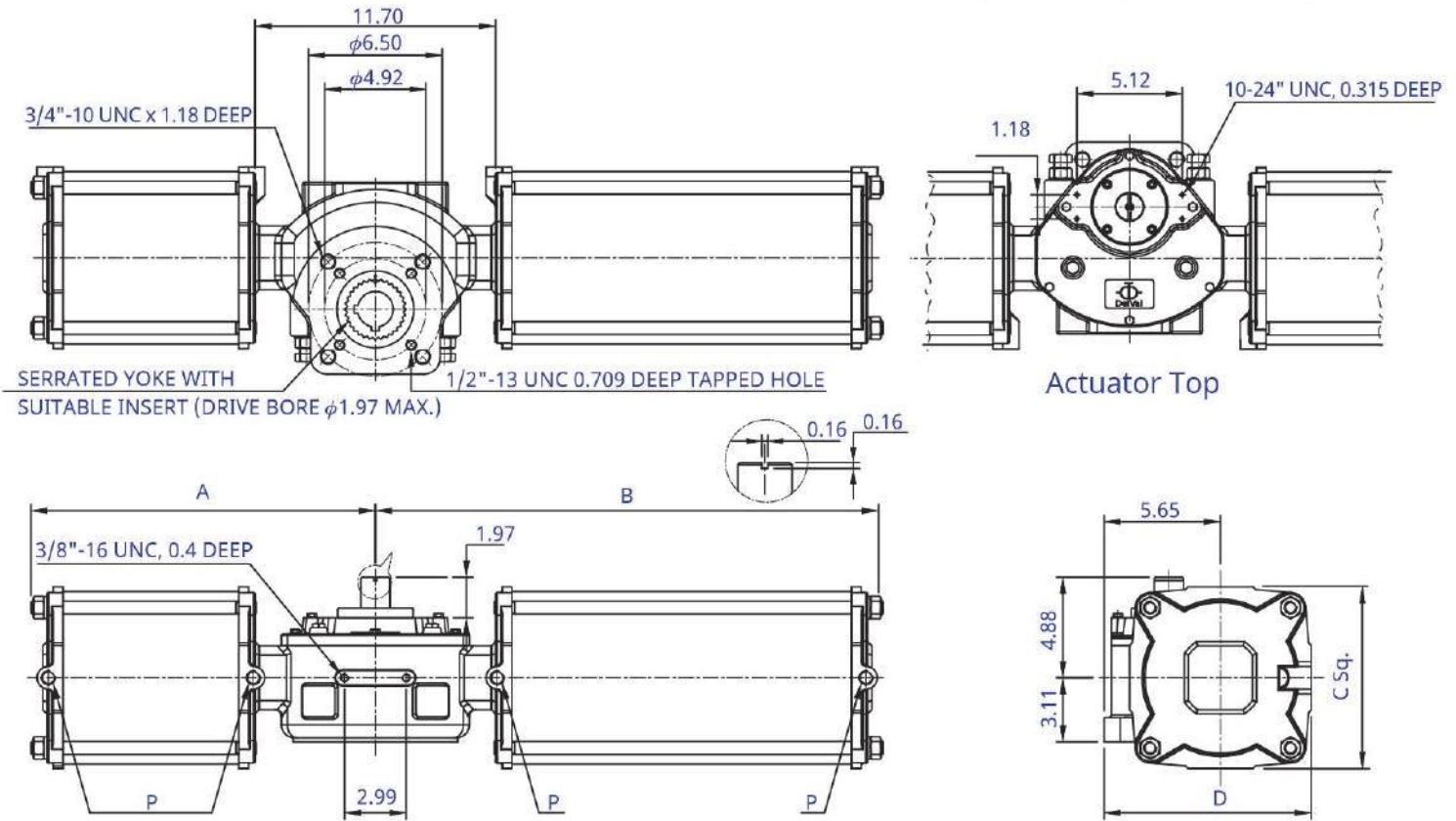


## Standards and Specifications

**Standard Working Temperature:** -4°F to +176°F (with Nitrile O-ring)  
**Low Temperatures:** -40°F to +302°F (Optional with Silicone O-ring)  
**High Temperatures:** -4°F to +356°F (Optional with Viton O-ring)  
**Maximum Working Pressure:** 130 Psi  
**Operating Media:** Clean dry air, nitrogen, non-corrosive gas or sweet gas  
**Supply Pressure:** 43 to 130 Psi  
**Rotation:** 0 +/-5° to 90 +/-5°

**Top Accessories Mounting Interface:** VDI/VDE 3845  
**Valve Mounting Interface:** ISO 5211  
**Housing Ingress Protection:** IEC 60529 IP 67  
**Housing Surface Coating:** Epoxy coated blue (RAL 5010)

# DIMENSIONS, WEIGHTS AND TORQUES (25 - 250)



## Spring Return Actuator Torques (Lbf-Inch)

| Model  | Type | Air Supply Pressure(Psi) |               |               |                 |
|--------|------|--------------------------|---------------|---------------|-----------------|
|        |      | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 250-06 | PB   | 4921                     | 7381          | 10709         | 13390           |
|        | PE   | 2735                     | 4098          | 4593          | 5735            |
|        | SB   | 4699                     | 7053          | 10239         | 12797           |
|        | SE   | 2611                     | 3912          | 4390          | 5487            |
|        | RUN  | 1965                     | 2956          | 3938          | 4921            |
| 250-07 | PB   | 6744                     | 10116         | 14691         | 18355           |
|        | PE   | 3744                     | 5620          | 6292          | 7868            |
|        | SB   | 6452                     | 9673          | 14036         | 17550           |
|        | SE   | 3584                     | 5372          | 6018          | 7523            |
|        | RUN  | 2699                     | 4053          | 5399          | 6753            |
| 250-08 | PB   | 8770                     | 13160         | 17550         | 23877           |
|        | PE   | 4868                     | 7310          | 9744          | 10231           |
|        | SB   | 8390                     | 12576         | 16771         | 22824           |
|        | SE   | 4655                     | 6983          | 9310          | 9779            |
|        | RUN  | 3513                     | 5266          | 7027          | 8779            |
| 250-10 | PB   | 13735                    | 20603         | 29904         | 37382           |
|        | PE   | 7629                     | 11443         | 12815         | 16019           |
|        | SB   | 13133                    | 19691         | 28586         | 35736           |
|        | SE   | 7292                     | 10939         | 12248         | 15311           |
|        | RUN  | 5496                     | 8248          | 10992         | 13744           |

For spring return actuator refer volume as mentioned in the table and for double acting multiply values by 2.  
 Air consumption = Volume (inch<sup>3</sup>) x air supply pressure in psi  
 i.e. 250-10-DA at 60 psi = 1078 x 60 x 2 = 129360 inch<sup>3</sup>  
 250-10-SR at 60 psi = 1078 x 60 = 64680 inch<sup>3</sup>.

## Double Acting Actuator Torques (Lbf-Inch)

| Model  | Type  | Air Supply Pressure(Psi) |               |               |                 |
|--------|-------|--------------------------|---------------|---------------|-----------------|
|        |       | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 250-06 | Break | 7310                     | 10965         | 14620         | 18284           |
|        | Run   | 4779                     | 7169          | 9558          | 11956           |
| 250-07 | Break | 10027                    | 15045         | 20054         | 25072           |
|        | Run   | 6558                     | 9832          | 13116         | 16390           |
| 250-08 | Break | 13045                    | 19567         | 26081         | 32603           |
|        | Run   | 8531                     | 12788         | 17054         | 21320           |
| 250-10 | Break | 20417                    | 30630         | 40834         | N.A.            |
|        | Run   | 13355                    | 20028         | 26700         |                 |

## Dimension (Inch)

| Model  | A     | B     |       |       |       |        | C     | D     | P        |
|--------|-------|-------|-------|-------|-------|--------|-------|-------|----------|
|        |       | DA    | SR 40 | SR 60 | SR 80 | SR 100 |       |       |          |
| 250-06 | 16.92 | 16.93 | 23.90 | 23.90 | 24.57 | 26.22  | 6.81  | 9.06  | 3/8" NPT |
| 250-07 | 16.73 | 16.73 | 24.25 | 24.25 | 25.28 | 26.69  | 7.87  | 9.61  | 3/8" NPT |
| 250-08 | 17.32 | 17.32 | 24.13 | 24.13 | 27.17 | 27.44  | 8.98  | 10.08 | 1/2" NPT |
| 250-10 | 17.91 | 17.91 | 25.35 | 25.79 | 26.06 | 28.19  | 11.14 | 11.06 | 1/2" NPT |

| App Weight (Lbs) |     |       |       |       |        |
|------------------|-----|-------|-------|-------|--------|
| Model            | DA  | SR 40 | SR 60 | SR 80 | SR 100 |
| 250-06           | 267 | 137   | 143   | 143   | 172    |
| 250-07           | 316 | 170   | 176   | 176   | 198    |
| 250-08           | 364 | 203   | 209   | 209   | 256    |
| 250-10           | 559 | 313   | 320   | 320   | 335    |

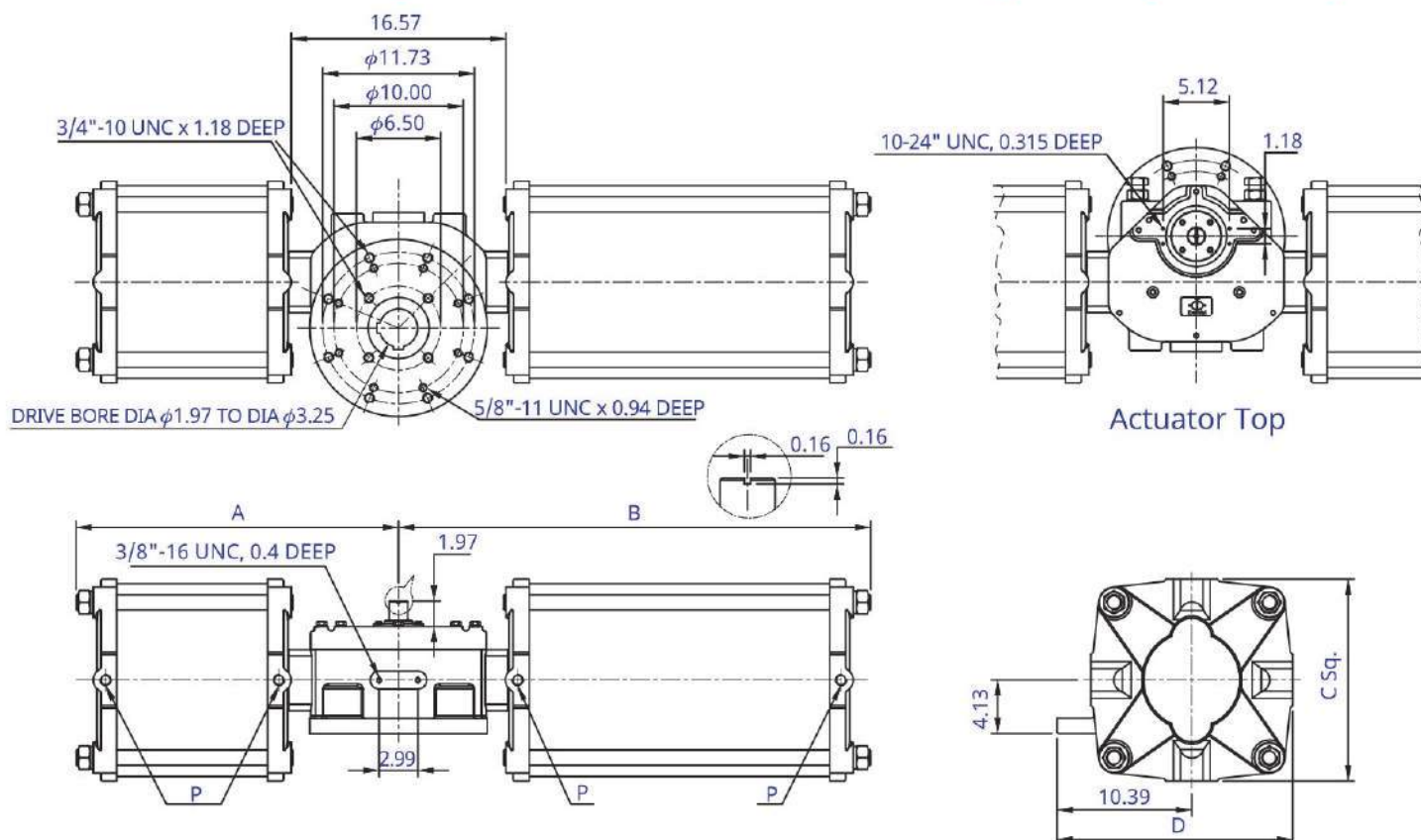
| Volume (Inch <sup>3</sup> ) at 14.5 Psi Pressure |              |
|--------------------------------------------------|--------------|
| Model                                            | Open / Close |
| 250-06                                           | 382          |
| 250-07                                           | 523          |
| 250-08                                           | 686          |
| 250-10                                           | 1078         |

Actual torque are in the range of  $\pm 5^\circ$  of the above value. In-between torque values are to be interpolated.

PB = Pneumatic Break, PE = Pneumatic End, SB = Spring Break, SE = Spring End.

DelVal reserves rights to change contents without notice.

# DIMENSIONS, WEIGHTS AND TORQUES (25 - 350)



## Spring Return Actuator Torques (Lbf-Inch)

| Model  | Type | Air Supply Pressure(Psi) |               |               |                 |
|--------|------|--------------------------|---------------|---------------|-----------------|
|        |      | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 350-10 | PB   | 19470                    | 29205         | 38931         | 48666           |
|        | PE   | 10806                    | 16213         | 21621         | 27019           |
|        | SB   | 18612                    | 27913         | 37214         | 46524           |
|        | SE   | 10328                    | 15496         | 20665         | 25833           |
|        | RUN  | 7788                     | 11691         | 15585         | 19479           |
| 350-12 | PB   | 29187                    | 43781         | 58366         | 72959           |
|        | PE   | 16204                    | 24302         | 32409         | 40506           |
|        | SB   | 27895                    | 41843         | 55790         | 69747           |
|        | SE   | 15488                    | 23231         | 30975         | 38719           |
|        | RUN  | 11682                    | 17523         | 23364         | 29205           |
| 350-14 | PB   | 39542                    | 59313         | 79084         | 98855           |
|        | PE   | 21957                    | 32931         | 43905         | 54888           |
|        | SB   | 37798                    | 56693         | 75597         | 94491           |
|        | SE   | 20983                    | 31479         | 41967         | 52463           |
|        | RUN  | 15824                    | 23736         | 31648         | 39568           |

For spring return actuator refer volume as mentioned in the table and for double acting multiply values by 2.  
 Air consumption = Volume (inch<sup>3</sup>) x air supply pressure in psi  
 i.e. 350-10-DA at 60 psi = 1119 x 60 x 2 = 134280 inch<sup>3</sup>  
 350-10-SR at 60 psi = 1119 x 60 = 67140 inch<sup>3</sup>.

## Double Acting Actuator Torques (Lbf-Inch)

| Model  | Type  | Air Supply Pressure(Psi) |               |               |                 |
|--------|-------|--------------------------|---------------|---------------|-----------------|
|        |       | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 350-10 | Break | 28940                    | 43409         | 57879         | 72349           |
|        | Run   | 18921                    | 28382         | 37843         | 47303           |
| 350-12 | Break | 43383                    | 65083         | 86774         | 108466          |
|        | Run   | 28364                    | 42551         | 56737         | 70915           |
| 350-14 | Break | 58782                    | 88173         | 117563        | N.A.            |
|        | Run   | 38436                    | 57649         | 76871         |                 |

## Dimension (Inch)

| Model  | A     | B     |       |       |       |        | C     | D     | P        |
|--------|-------|-------|-------|-------|-------|--------|-------|-------|----------|
|        |       | DA    | SR 40 | SR 60 | SR 80 | SR 100 |       |       |          |
| 350-10 | 23.54 | 23.54 | 31.06 | 34.50 | 37.59 | 39.94  | 28.76 | 15.47 | 1/2" NPT |
| 350-12 | 23.93 | 23.93 | 31.06 | 34.50 | 37.63 | 39.94  | 28.76 | 17.02 | 3/4" NPT |
| 350-14 | 24.41 | 24.41 | 31.06 | 34.50 | 37.59 | 39.94  | 28.76 | 17.83 | 3/4" NPT |

| App Weight (Lbs) |     |       |       |       |        |
|------------------|-----|-------|-------|-------|--------|
| Model            | DA  | SR 40 | SR 60 | SR 80 | SR 100 |
| 350-10           | 694 | 827   | 882   | 948   | 1036   |
| 350-12           | 705 | 860   | 926   | 1003  | 1069   |
| 350-14           | 727 | 871   | 974   | 1058  | 1146   |

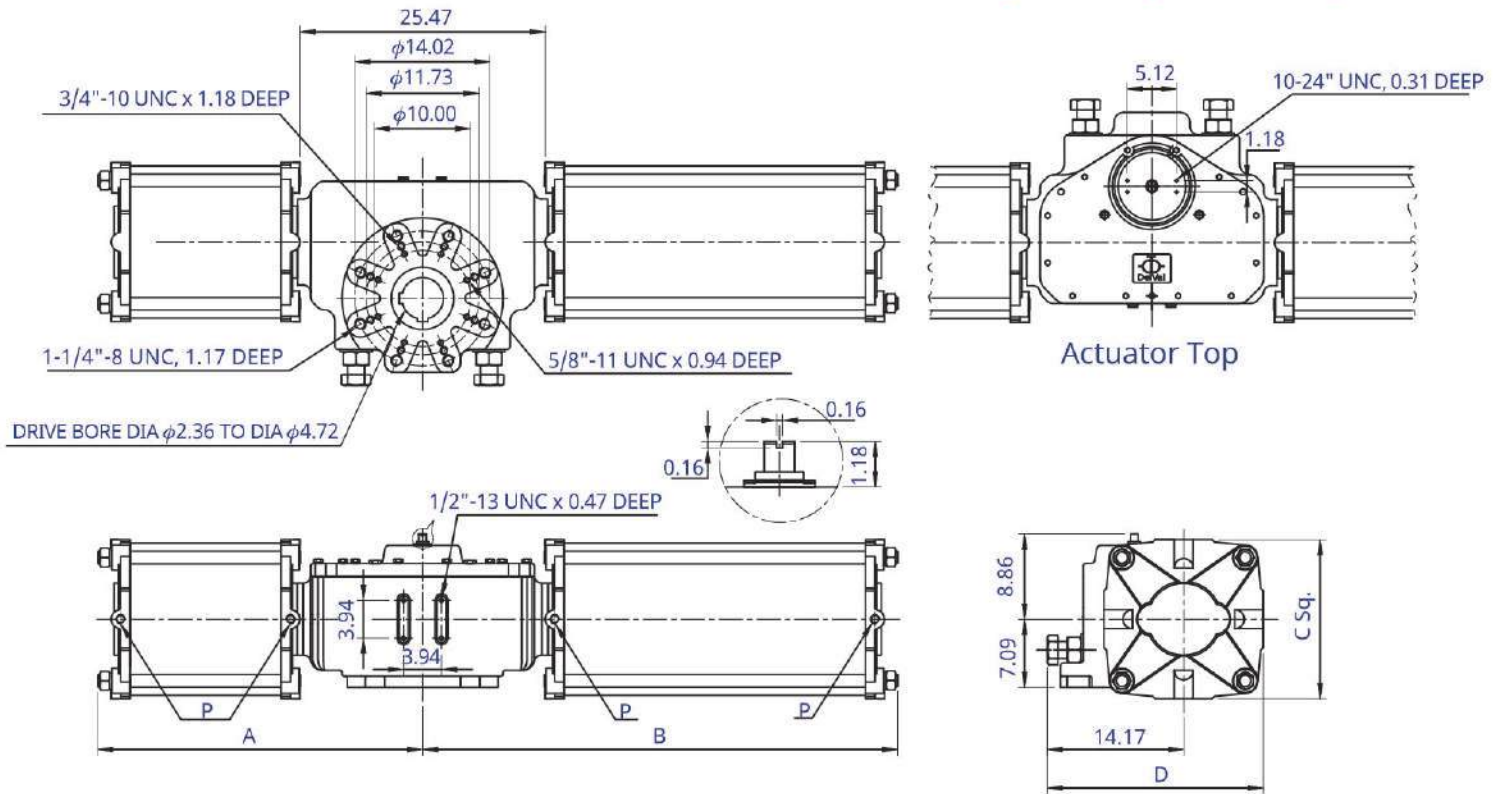
| Volume (Inch <sup>3</sup> ) at 14.5 Psi Pressure |              |
|--------------------------------------------------|--------------|
| Model                                            | Open / Close |
| 350-10                                           | 1119         |
| 350-12                                           | 1622         |
| 350-14                                           | 2217         |

Actual torque are in the range of  $\pm 5^\circ$  of the above value. In-between torque values are to be interpolated.

PB = Pneumatic Break, PE = Pneumatic End, SB = Spring Break, SE = Spring End.

DelVal reserves rights to change contents without notice.

# DIMENSIONS, WEIGHTS AND TORQUES (25 - 500)



**Spring Return Actuator Torques (Lbf-Inch)**

| Model  | Type | Air Supply Pressure(Psi) |               |               |                 |
|--------|------|--------------------------|---------------|---------------|-----------------|
|        |      | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 500-12 | PB   | 42153                    | 63233         | 84314         | 105386          |
|        | PE   | 23408                    | 35108         | 46808         | 58516           |
|        | SB   | 40294                    | 60446         | 80588         | 100740          |
|        | SE   | 22373                    | 33559         | 44746         | 55932           |
|        | RUN  | 16868                    | 25311         | 33745         | 42179           |
| 500-14 | PB   | 57118                    | 85677         | 107058        | 142786          |
|        | PE   | 31710                    | 47569         | 63419         | 79278           |
|        | SB   | 54596                    | 81889         | 109191        | 136485          |
|        | SE   | 30311                    | 45471         | 60623         | 75783           |
|        | RUN  | 22860                    | 34294         | 45719         | 57153           |
| 500-16 | PB   | 74234                    | 111351        | 148468        | 185585          |
|        | PE   | 41214                    | 61826         | 82429         | 103041          |
|        | SB   | 70959                    | 106439        | 141919        | 177398          |
|        | SE   | 39400                    | 59100         | 78792         | 98492           |
|        | RUN  | 29709                    | 44569         | 59419         | 74278           |
| 500-18 | PB   | 91828                    | 127697        | 178637        | 229596          |
|        | PE   | 52560                    | 68782         | 100094        | 122413          |
|        | SB   | 88296                    | 132449        | 176593        | 229737          |
|        | SE   | 49029                    | 73535         | 98049         | 122555          |
|        | RUN  | 36878                    | 55711         | 74278         | 92845           |
| 500-20 | PB   | 114608                   | 169354        |               |                 |
|        | PE   | 67260                    | 106200        |               |                 |
|        | SB   | 106439                   | 141919        |               |                 |
|        | SE   | 59100                    | 78792         |               |                 |
|        | RUN  | 44772                    | 59693         |               |                 |
| 500-22 | PB   | 129847                   |               |               |                 |
|        | PE   | 66614                    |               |               |                 |
|        | SB   | 141919                   |               |               |                 |
|        | SE   | 78792                    |               |               |                 |
|        | RUN  | 59693                    |               |               |                 |

Consult Factory

**Double Acting Actuator Torques (Lbf-Inch)**

| Model  | Type  | Air Supply Pressure(Psi) |               |               |                 |
|--------|-------|--------------------------|---------------|---------------|-----------------|
|        |       | 40<br>(SR 40)            | 60<br>(SR 60) | 80<br>(SR 80) | 100<br>(SR 100) |
| 500-12 | Break | 62667                    | 94005         | 125334        | 156672          |
|        | Run   | 40976                    | 61463         | 81951         | 102439          |
| 500-14 | Break | 84907                    | 127360        | 169814        | 212267          |
|        | Run   | 55516                    | 83279         | 111032        | 138795          |
| 500-16 | Break | 110360                   | 165539        | 220710        | 275890          |
|        | Run   | 72154                    | 108236        | 144317        | 180390          |
| 500-18 | Break | 140857                   | 201249        | 276686        | 352150          |
|        | Run   | 92093                    | 131582        | 180912        | 230250          |
| 500-20 | Break | 171787                   | 245419        | 337451        |                 |
|        | Run   | 112351                   | 160512        | 220701        |                 |
| 500-22 | Break | 208763                   | 298227        | 410065        |                 |
|        | Run   | 136538                   | 195045        | 268190        |                 |

| Volume (Inch <sup>3</sup> ) at 14.5 Psi Pressure |              |
|--------------------------------------------------|--------------|
| Model                                            | Open / Close |
| 500-12                                           | 3093         |
| 500-14                                           | 4218         |
| 500-16                                           | 5517         |
| 500-18                                           | 6989         |
| 500-20                                           | 8633         |
| 500-22                                           | 10451        |

**Dimension (Inch)**

| Model  | A     | B     |       |       |       |        | C     | D     | P     |
|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
|        |       | DA    | SR 40 | SR 60 | SR 80 | SR 100 |       |       |       |
| 500-12 | 32.67 | 32.67 | 32.67 | 44.08 | 48.29 | 53.21  | 56.56 | 13.78 | 21.06 |
| 500-14 | 33.46 | 33.46 | 33.46 | 44.16 | 49.04 | 53.53  | 55.93 | 15.59 | 21.96 |
| 500-16 | 33.46 | 33.46 | 33.46 | 44.95 | 49.00 | 53.73  | 58.06 | 16.53 | 23.03 |
| 500-18 | 35.43 | 35.42 | 35.42 | 46.44 | 49.40 | 53.92  | 59.04 | 19.68 | 24.01 |
| 500-20 | 35.43 | 35.42 | 35.42 | 53.73 | 53.73 |        |       | 21.65 | 26.57 |
| 500-22 | 35.43 | 35.42 | 35.42 | 54.12 |       |        |       | 23.62 | 27.55 |

For spring return actuator refer volume as mentioned in the table and for double acting multiply values by 2. Air consumption = Volume (inch<sup>3</sup>) x air supply pressure in psi  
 i.e. 500-12-DA at 60 psi = 3093 x 60 x 2 = 371160 inch<sup>3</sup>  
 500-12-SR at 60 psi = 3093 x 60 = 185580 inch<sup>3</sup>.

**App Weight (Lbs)**

| Model  | DA   | SR 40 | SR 60 | SR 80 | SR 100 |
|--------|------|-------|-------|-------|--------|
| 500-12 | 1278 | 1470  | 1488  | 1587  | 1697   |
| 500-14 | 1333 | 1640  | 1664  | 1774  | 1871   |
| 500-16 | 1421 | 1802  | 1829  | 1962  | 2072   |
| 500-18 | 1505 | 1999  | 2028  | 2178  | 2299   |
| 500-20 | 1596 | 2219  | 2250  |       |        |
| 500-22 | 1029 | 2462  |       |       |        |

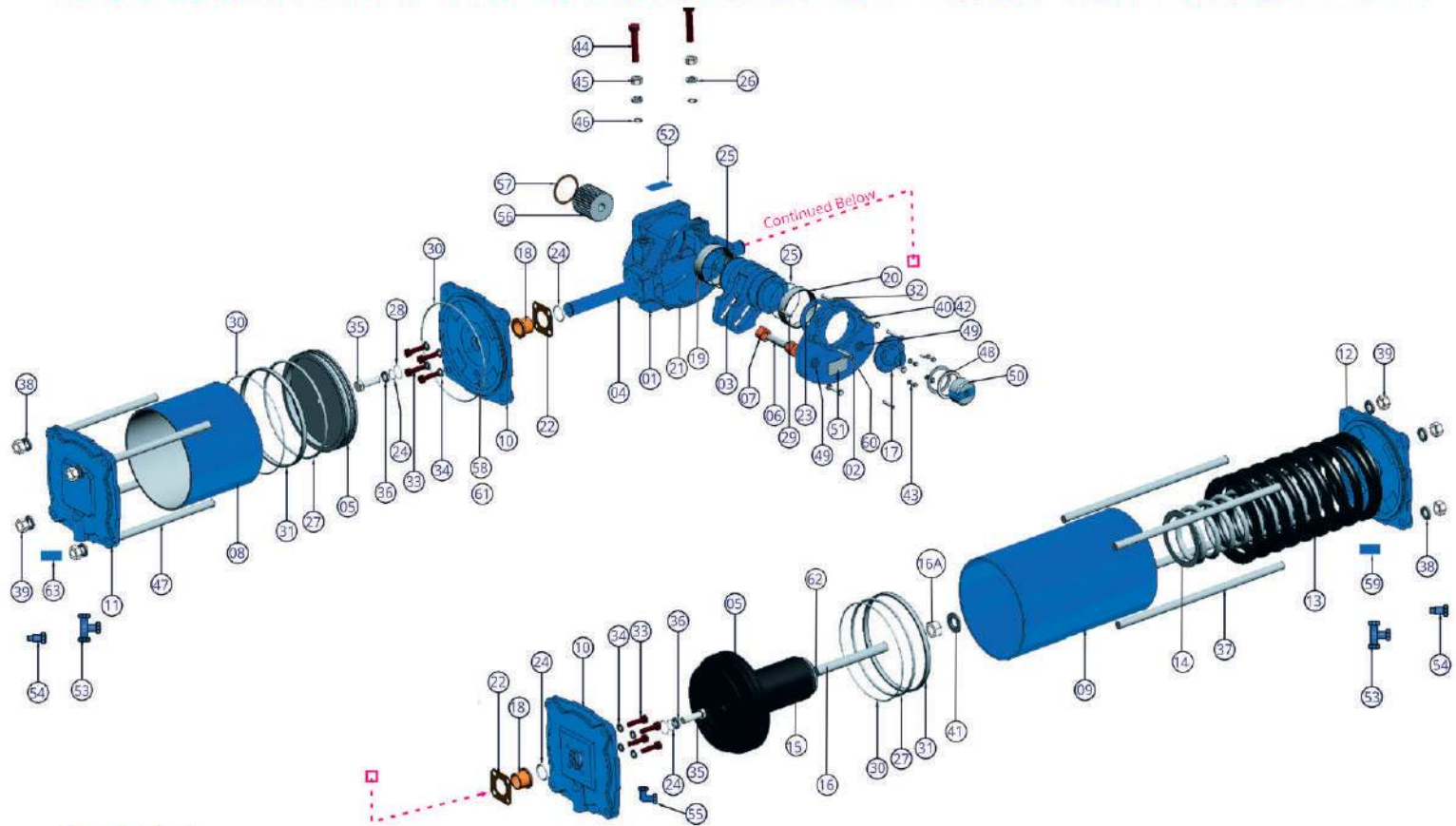
Consult Factory

Actual torque are in the range of  $\pm 5\%$  of the above value. In-between torque values are to be interpolated.

PB = Pneumatic Break, PE = Pneumatic End, SB = Spring Break, SE = Spring End.

DeVal reserves rights to change contents without notice.

# STANDARD MATERIALS OF CONSTRUCTION



## Part List

| Item | Description                      | *Standard Material                |
|------|----------------------------------|-----------------------------------|
| 01   | Bottom Housing                   | Ductile Iron Gr. 100-70-03        |
| 02   | Housing Top Cover                | Ductile Iron Gr. 100-70-03        |
| 03   | Yoke                             | 17-4ph - 2.5" Yoke & DI 3.5" & 5" |
| 04   | Piston Rod                       | En24 Chrome Plated                |
| 05   | Piston                           | Ductile Iron Gr. 100-70-03        |
| 06   | Yoke Pin                         | En24 (Full Hardened)              |
| **07 | Yoke Pin Roller                  | AB2 (Aluminum Bronze)             |
| 08   | Cylinder                         | Carbon Steel                      |
| 09   | Cylinder Spring side             | Carbon Steel                      |
| 10   | Cylinder/Spring Side Adpt. Plate | Ductile Iron Gr. 100-70-03        |
| 11   | Cylinder Side End Plate          | Ductile Iron Gr. 100-70-03        |
| 12   | Spring Side End Plate            | Ductile Iron Gr. 100-70-03        |
| 13   | Outer Spring                     | 50CRV4 (Powder Coated)            |
| 14   | Inner Spring                     | 50CRV4 (Powder Coated)            |
| 15   | Spring Guide Cup                 | Ductile Iron Gr. 100-70-03        |
| 16   | Spring Cartridge Mounting Rod    | HTS Gr. 10.9                      |
| 16A  | Spring Mounting Rod Nut          | HTS Gr. 10.9                      |
| 17   | Yoke Mounted Indication Plate    | En8 (Black Passivated)            |
| **18 | Piston Rod Bearing               | Ph Bronze                         |
| **19 | Steel Backup Bearing             | DU (Steel + PTFE)                 |
| **20 | Steel Backup Bearing (Top cover) | DU (Steel + PTFE)                 |
| **21 | Housing/Top Cover Gasket         | Champion AF 159                   |
| **22 | Housing End Gasket               | Champion AF 159                   |
| **23 | Yoke Indication Plate Gasket     | Champion AF 159                   |
| **24 | O-Ring                           | NBR (Nitrile)                     |
| **25 | O-Ring                           | NBR (Nitrile)                     |
| **26 | O-Ring                           | NBR (Nitrile)                     |
| **27 | O-Ring                           | NBR (Nitrile)                     |
| **28 | O-Ring                           | NBR (Nitrile)                     |
| **29 | O-Ring                           | NBR (Nitrile)                     |
| **30 | Piston Seal                      | NBR (Nitrile)                     |
| **31 | Piston Band                      | Nylon 6 (Mos2 Filled)             |

| Item | Description                  | *Standard Material        |
|------|------------------------------|---------------------------|
| 32   | Dowel Pin                    | En24 (Induction Hardened) |
| 33   | Adaptor Plate Hex Bolt       | HTSGr.10.9                |
| **34 | Adapter Bolt Dowty Washer    | Carbon Steel Zinc Plated  |
| 35   | Piston Bolt                  | HTS Gr. 10.9              |
| **36 | Piston Bolt Spring Washer    | Spring Steel              |
| 37   | Spring Side Tie Rod          | HTS Gr. 10.9              |
| **38 | Tie Rod Washer               | Spring Steel              |
| 39   | Tie Rod Nut                  | HTS Gr. 10.9              |
| **40 | Housing Top Cover Hex Bolt   | HTS Gr. 10.9              |
| 41   | Locater rod punch washer     | SS 304                    |
| **42 | Top Cover Hex Bolt Washer    | Spring Steel              |
| 43   | Indicator Plate Hex Bolt     | SS 304                    |
| 44   | Stroke Adj. Bolts            | HTS Gr. 10.9              |
| 45   | Stroke Adj. Bolt Nut         | HTS Gr. 10.9              |
| **46 | Stroke Adj. Bolts M/C Washer | SS 304                    |
| 47   | Tie Rod Cylinder Side        | HTS Gr. 10.9              |
| 48   | Position indicator washer    | SS 304                    |
| 49   | Greasing Plug                | Carbon Steel              |
| 50   | Local Position Indicator     | Plastic                   |
| 51   | Name Plate                   | SS 304                    |
| 52   | Pressure Name Plate          | SS 304                    |
| 53   | Tee                          | SS 304                    |
| 54   | Connector                    | SS 304                    |
| 55   | Elbow                        | SS 304                    |
| 56   | Insert                       | En8                       |
| 57   | Circlip                      | 70 C6                     |
| 58   | 1/2" NPT Plug                | Carbon Steel Zinc Plated  |
| 59   | Warning Name Plate For Plug  | SS 304                    |
| 60   | Top Cover Countersunk Bolt   | HTS Gr. 10.9              |
| 61   | Silencer                     | Brass                     |
| 62   | Locking Plate & Pin Assembly | CS Trivalent Passivated   |
| 63   | Warning Name Plate           | SS 304                    |

\*Other materials may be available upon request.

\*\*Recommended spares.

DelVal reserves rights to change the contents without notice.

DI = Ductile Iron, SS = Stainless Steel, HTS = High Tensile Steel, CS= Carbon Steel

# 100% TESTING 100% SERIALIZATION



## CERTIFICATES



### Manufacturing & Sales International DelVal Flow Controls Pvt. Ltd.

Gat No: 25, Kavathe  
Post-Javale, Tal. Khandala  
Dist. Satara Pin-412801 | India  
salesindia@delvalflow.com

### Manufacturing & Sales Americas DelVal Flow Controls USA

6068 Highway 73  
Geismar, Louisiana 70734 | USA  
T: +1 833-DELVAL1  
F: +1 225-744-4328  
sales@delvalflow.com

### International Projects DelVal Flow Controls USA

77 Sugar Creek Center Blvd.,  
Suite 600  
Sugar Land, Texas 77478 | USA  
T: +1 833-DELVAL1  
projects@delvalflow.com

### Middle East DelVal Flow Controls Middle East Company Ltd.

Factory No. 103, 3rd Industrial  
Area.  
Dammam | Saudi Arabia  
T: +966 13 864 2040  
salesmea@delvalflow.com

### Australia DelVal Flow Controls (ANZ) Pty Ltd.

Unit 6, 561 Great Western  
Highway, Werrington,  
NSW 2747 | Australia  
T: +61 (0)2 97431271  
delvalanz@delvalflow.com