

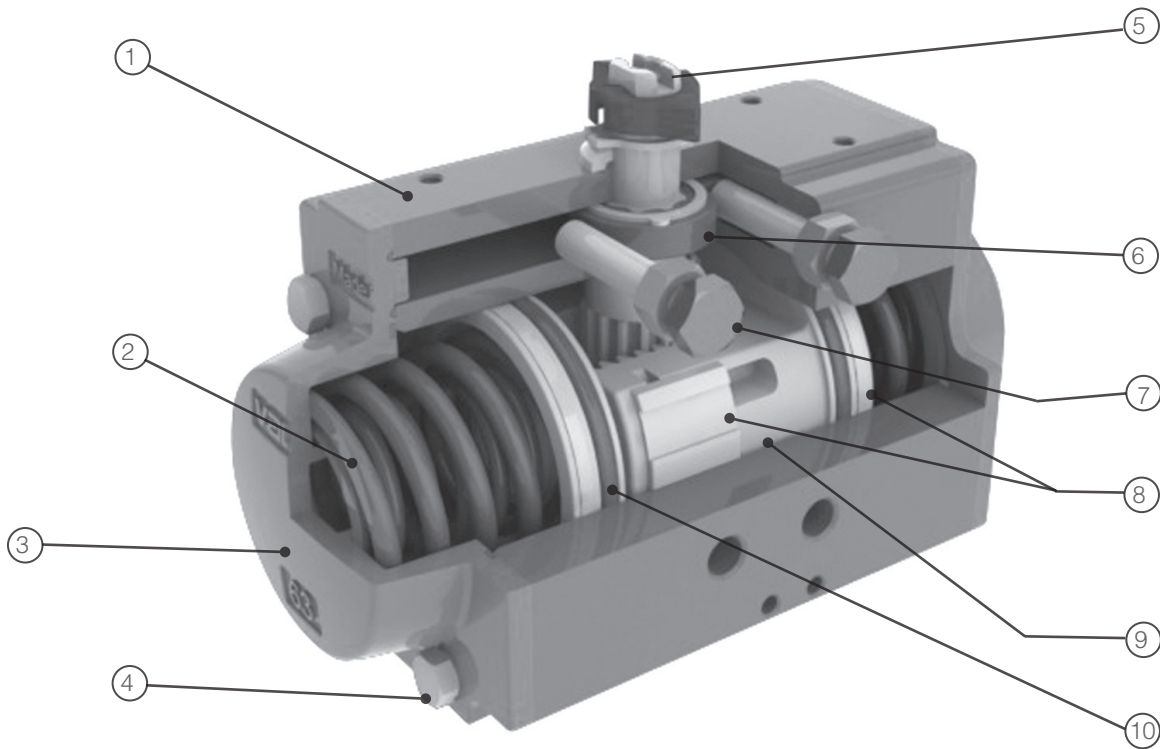
A full range of double acting and spring return actuators designed to NAMUR for air supply ports and top mounting, with ISO 5211 for base mounting patterns.

#### Features

- Dual adjustable open - close stops
- Anti-blowout pinion
- 1,000,000 cycle normal service life
- ISO / DIN actuator to valve Interface
- NAMUR solenoid valve interface
- VDI/VDE 3845 auxiliary equipment interface on top (UT-0 through UT-7.5)
- Long end cap bolts allow spring decompression

#### UT\*\*-DA Series UT\*\*-SR Series

| Quick Spec                   |  |
|------------------------------|--|
| Product Scope                |  |
| Size Range                   | DA: 0A, 0, 1, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5<br>SR: 0, 1, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5 |
| Operating Torque Range       | DA: 71 to 44919 in-lb @ 80 psi<br>SR: 55 to 16541 in-lb @ 80 psi   |
| Operating Pressure           | 40 to 115 psig   |
| Casing Pressure              | 150 psig   |
| Temperature                  | (NBR standard) -4 to 175°F<br>(opt. high temp. Viton) -4 to 302°F<br>(opt. low temp. HBNR) -40 to 185°F                  |
| Media                        | Air dry or lubricated; noncorrosive gas  |
| Rotation                     | 100° (-5°CW to 5°C CW)   |
| Materials                    | Casing: Aluminum UNI 6060<br>Shaft: Steel  |
| Finish                       | Casing: Hard-coated anodized<br>End Caps: Polyester powder coated  |
| Design Standards             |  |
| Thread Design (Port)         | ANSI B1.20.1   |
| Mounting Flange (Valve)      | ISO 5211   |
| NAMUR Mounting (accessories) | VDI/VDE 3845   |
| ATEX                         | Atmospheres Explosibles Directive 94/9/EC  |
| PED                          | Pressure Equipment Directive 97/23/EC  |


**1 Body manufactured from extruded aluminum UNI 6060**

- Hard-coated anodized as standard finish Ra 1-1.5 micro-inch (Ra 45-50 micron)
- High corrosion resistance
- Special finishes epoxy-coated - optional
- Bore finished to high standard to ensure low friction and long life

**2 Spring sets**

- Standard coating painted
- High resistance and reliability
- Spring sets to suit different air pressure/torque requirements

**3 Die cast aluminium end caps**

- Polyester powder coated - standard
- Nickel plated - optional for corrosive environments

**4 End cap screw**

- Stainless steel standard

**5 Pinon made in steel**

- Nickel-plated standard to resist internal and external corrosion
- Stainless steel for corrosive environments- optional
- Anti-blowout design standard

**6 Cam for limit switch adjustment 0° - 90°**

- Stainless Steel
- Adjustment for open and close position  $\pm 5^\circ$

**7 0 - 90° Adjusting Screws**

- Stainless Steel

**8 Piston guides in POM**

- Large contact area
- Low friction for self-lubricating material
- Long life

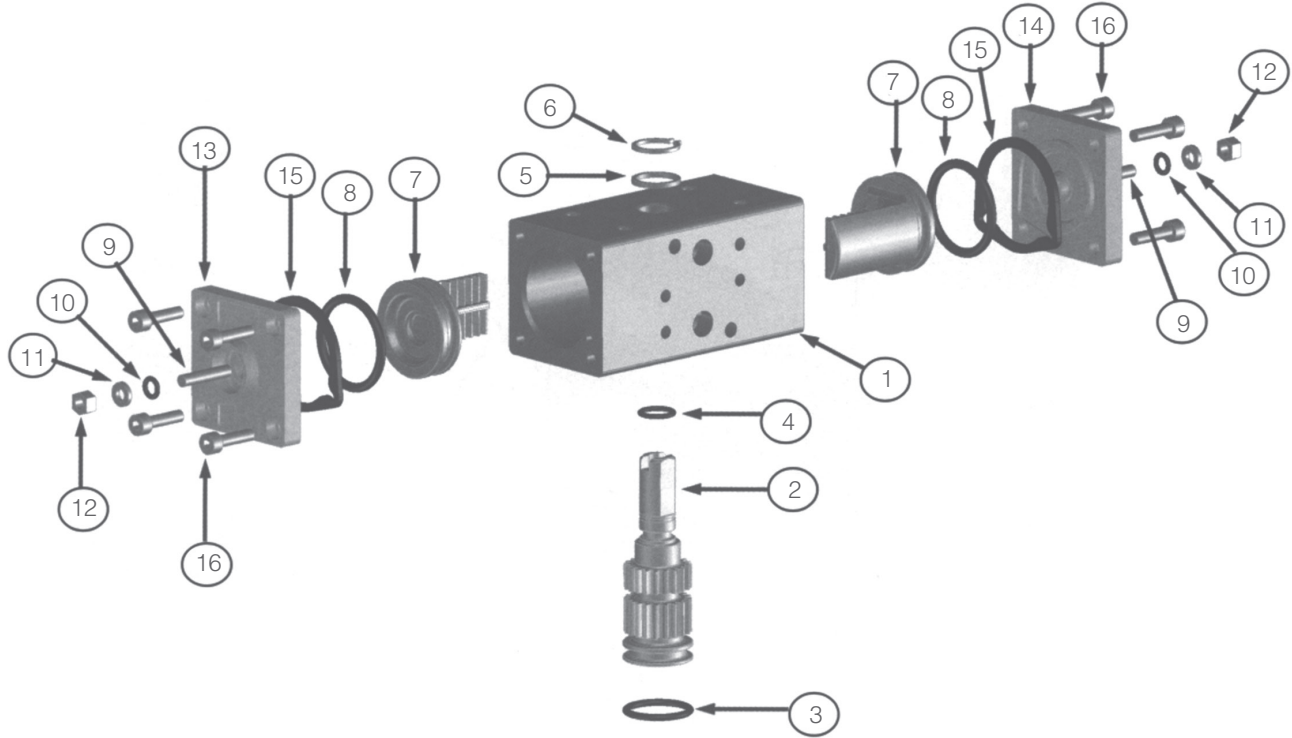
**9 Pistons made from die cast aluminum**

- Chemical nickel plating - optional

**10 Seals**

- NBR standard version -4°F to +185°F (-20°C to +85°C)
- Viton high temperature version - optional -4°F to +302°F (-20°C to +150°C)
- Silicon low temperature version - optional -40°F to +185°F (-40°C to +85°C)

Model: UT-0A-DA

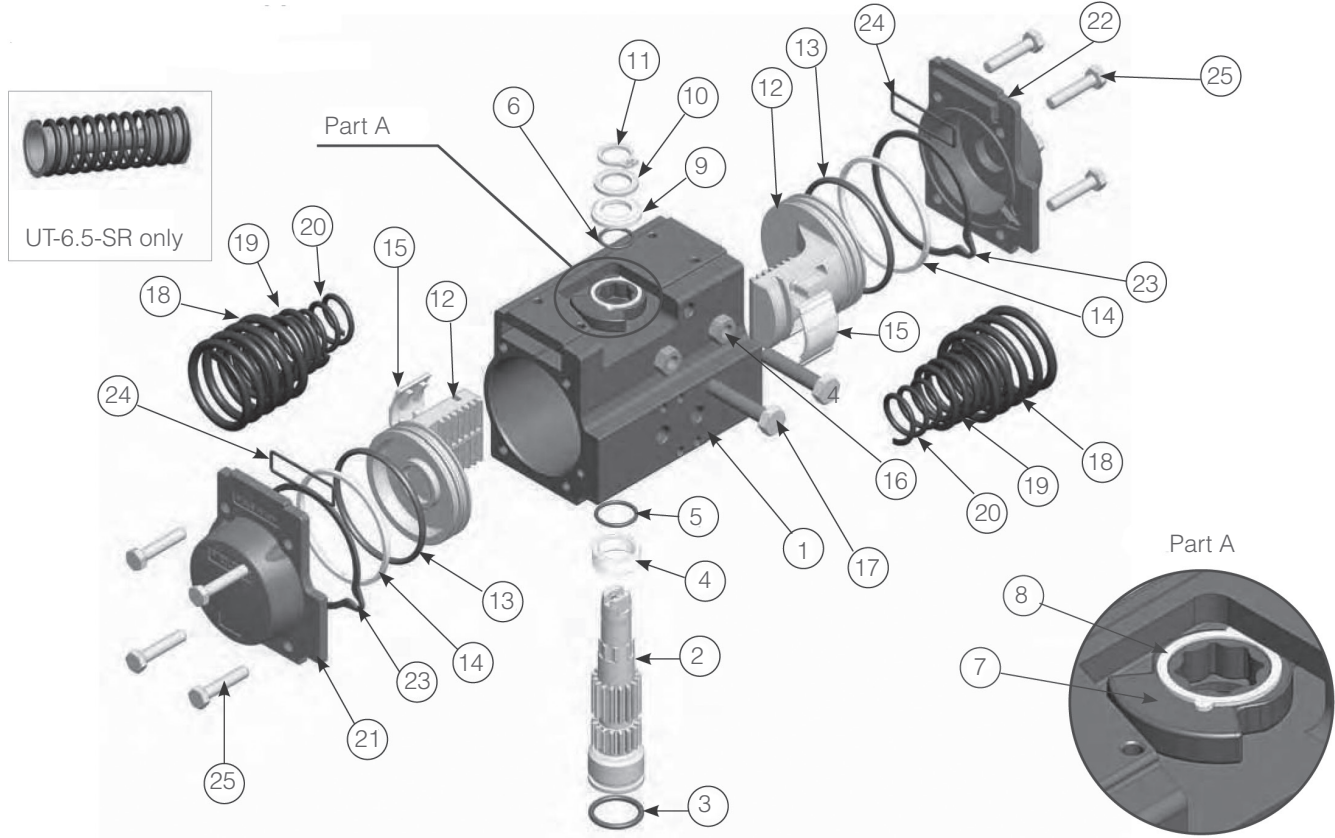


| Actuator Parts — UT0A |            |                         |                        |               |             |
|-----------------------|------------|-------------------------|------------------------|---------------|-------------|
| Item                  | Repair Kit | Description             | Material               | Treatment     | Quantity DA |
| 1                     |            | Body                    | Extruded Aluminum      | Hard Anodized | 1           |
| 2                     |            | Anti-blowout Pinion     | Steel                  | Nickel Plated | 1           |
| *3                    | R          | Lower Pinion O-Ring     | NBR                    |               | 1           |
| *4                    | R          | Top Pinion O-Ring       | NBR                    |               | 1           |
| *5                    | R          | Spacer Ring             | (POM) PolyOxyMethylene |               | 1           |
| 6                     | R          | Pinion Snap Ring        | Steel                  | Nickel Plated | 1           |
| 7                     |            | Piston                  | Die Cast Aluminum      |               | 2           |
| *8                    | R          | Piston O-Ring           | NBR                    |               | 2           |
| 9                     |            | Stop Bolt               | Stainless Steel        |               | 2           |
| *10                   | R          | Stop Bolt O-Ring        | NBR                    |               | 2           |
| 11                    |            | Washer                  | Stainless Steel        |               | 2           |
| 12                    |            | Stop Bolt Retaining Nut | Stainless Steel        |               | 2           |
| 13                    |            | Left End Cap            | Die Cast Aluminium     | Painted       | 1           |
| 14                    |            | Right End Cap           | Die Cast Aluminum      | Painted       | 1           |
| 15                    | R          | End Cap Gaskets         | NBR                    |               | 2           |
| 16                    |            | End Cap Fixing Screw    | Stainless Steel        |               | 8           |

\* Parts subject to wear

Note: For high temperature option, Viton replaces NBR, and high temperature grease is used.

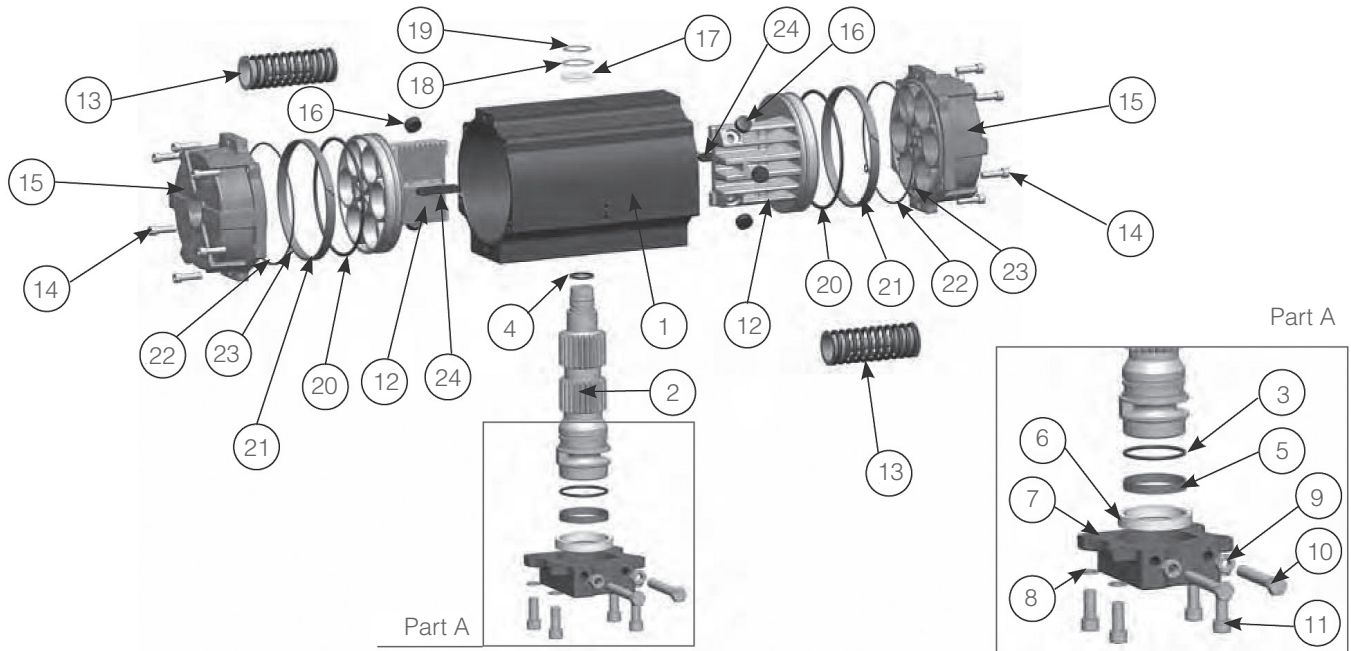
Models: UT-0 to UT-6.5



| Actuator Parts — UTOA |                         |                    |               |             |                          |
|-----------------------|-------------------------|--------------------|---------------|-------------|--------------------------|
| Item                  | Description             | Material           | Treatment     | Quantity DA | Quantity SR              |
| 1                     | Body                    | Extruded Aluminum  | Hard Anodized | 1           | 1                        |
| 2                     | Anti-blowout Pinion     | Steel              | Nickel Plated | 1           | 1                        |
| *3                    | O-Ring                  | NBR                |               | 1           | 1                        |
| *4                    | Spacer Ring             | POM                |               | 1           | 1                        |
| *5                    | O-Ring                  | NBR                |               | 1           | 1                        |
| *6                    | O-Ring                  | NBR                |               | 1           | 1                        |
| 7                     | Cam                     | Stainless Steel    |               | 1           | 1                        |
| 8                     | Spacer                  | POM                |               | 1           | 1                        |
| *9                    | Spacer                  | POM                |               | 1           | 1                        |
| 10                    | Washer                  | Stainless Steel    |               | 1           | 1                        |
| **11                  | Snap Ring               | Steel              | Nickel Plated | 1           | 1                        |
| 12                    | Piston                  | Die Cast Aluminum  |               | 2           | 2                        |
| *13                   | O-Ring                  | NBR                |               | 2           | 2                        |
| *14                   | Anti-friction Ring      | POM                |               | 2           | 2                        |
| *15                   | Thrust block            | POM                |               | 2 [4]       | 2 [4]                    |
| 16                    | Stop Bolt Retaining Nut | Stainless Steel    |               | 2           | 2                        |
| 17                    | Stop Bolt               | Stainless Steel    |               | 2           | 2                        |
| 18                    | External Spring         | Steel              | Painted       | 0           | See Spring Setting Chart |
| ***19                 | Central Spring          | Steel              | Painted       | 0           |                          |
| 20                    | Internal Spring         | Steel              | Painted       | 0           |                          |
| 21                    | Left End Cap            | Die Cast Aluminum  | Painted       | 1           | 1                        |
| 22                    | Right End Cap           | Die Cast Aluminium | Painted       | 1           | 1                        |
| 23                    | End Cap Seals           | NBR                |               | 2           | 2                        |
| 24                    | O-Ring                  | NBR                |               | 2           | 2                        |
| 25                    | End Cap Fixing Screw    | Stainless Steel    |               | 8           | 8                        |

\* Parts subject to wear  
 \*\* Reinforced series DIN 471 - UNI 7436  
 [4] Valid for models UT-4.5, 5, 5.5, 6, 6.5  
 \*\*\* Valid for models UT-5, 5.5, 6 only

Models: UT-6.5 to UT-7.5



| Actuator Parts — UT5, UT6, UT7, UT0A |                         |                    |               |                        |                          |
|--------------------------------------|-------------------------|--------------------|---------------|------------------------|--------------------------|
| Item                                 | Description             | Material           | Treatment     | Quantity DA            | Quantity SR              |
| 1                                    | Body                    | Extruded Aluminum  | Hard Anodized | 1                      | 1                        |
| 2                                    | Anti-blowout Pinion     | Steel              | Nickel Plated | 1                      | 1                        |
| *3                                   | O-Ring                  | NBR                |               | 1                      | 1                        |
| *4                                   | O-Ring                  | NBR                |               | 1                      | 1                        |
| *5                                   | Anti-friction Ring      | PTFE 15% Graphite  |               | 1                      | 1                        |
| *6                                   | Anti-friction Ring      | PTFE               |               | 1                      | 1                        |
| 7                                    | Plate                   | Ductile Iron GGG40 | Painted       | 1                      | 1                        |
| 8                                    | Washer                  | Stainless Steel    |               | 4                      | 8                        |
| 9                                    | Stop Bolt Retaining Nut | Stainless Steel    |               | 2                      | 2                        |
| 10                                   | Stop Screw              | Steel              | Zinc Plated   | 2                      | 2                        |
| 11                                   | Fixing Screws           | Stainless Steel    |               | UT-7: 4<br>UT-7.5: 8   | UT-7: 4<br>UT-7.5: 8     |
| 12                                   | Piston                  | Die Cast Aluminum  |               | 2                      | 2                        |
| 13                                   | Precompressed Spring    | Steel              | Painted       | 0                      | See Spring Setting Chart |
| 14                                   | End Cap Fixing Screw    | Stainless Steel    |               | UT-7: 12<br>UT-7.5: 16 | UT-7: 12<br>UT-7.5: 16   |
| 15                                   | End Cap                 | Die Cast Aluminum  | Painted       | 2                      | 2                        |
| *16                                  | Thrust block            | POM                |               | UT-7: 6<br>UT-7.5: 8   | UT-7: 6<br>UT-7.5: 8     |
| *17                                  | Spacer Ring             | POM                |               | 1                      | 1                        |
| 18                                   | Pinion Washer           | Stainless Steel    |               | 1                      | 1                        |
|                                      | Snap Ring               | Steel              | Nickel Plated | 1                      | 1                        |
| *20                                  | O-Ring                  | NBR                |               | 2                      | 2                        |
| *21                                  | Anti-friction Ring      | PTFE 15% Graphite  |               | 2                      | 2                        |
| 22                                   | O-Ring                  | NBR                |               | 2                      | 2                        |
| 23                                   | O-Ring                  | NBR                |               | UT-7: 4<br>UT-7.5: 2   | UT-7: 4<br>UT-7.5: 2     |
| 24                                   | Anti-blowout Key        | POM                |               | 2                      | 2                        |

\* Parts subject to wear

**Spring Charts**

| UT-0-SR thru UT-4.5SR |            |                 |                 | UT-5-SR thru UT-6-SR |            |                 |               |                 | UT-6.5-SR |            |                       | UT-7-SR & UT-7.5-SR |            |                       |
|-----------------------|------------|-----------------|-----------------|----------------------|------------|-----------------|---------------|-----------------|-----------|------------|-----------------------|---------------------|------------|-----------------------|
| Set No.               | Air Supply | External Spring | Internal Spring | Set No.              | Air Supply | External Spring | Center Spring | Internal Spring | Set No.   | Air Supply | Springs for Each Side | Set No.             | Air Supply | Springs for Each Side |
| 1                     | 40         | 1               | 1               | 1                    | 40         | --              | 2             | --              | 1         | 50         | 2/3                   | 1                   | 30         | 2/3                   |
| 2                     | 50         | 2               | --              | 2                    | 50         | 2               | --            | --              | 2         | 55         | 3/3                   | 2                   | 40         | 3/3                   |
| 3                     | 60         | 1               | 2               | 3                    | 60         | 1               | 2             | --              | 3         | 60         | 3/4                   | 3                   | 50         | 3/4                   |
| 4                     | 70         | 2               | 1               | 4                    | 70         | 2               | --            | 2               | 4         | 70         | 4/4                   | 4                   | 60         | 4/4                   |
| *5                    | 80-115     | 2               | 2               | 5                    | 75         | 2               | 2             | --              | *5        | 80         | 4/5                   | 5                   | 70         | 4/5                   |
|                       |            |                 |                 | *6                   | 80-115     | 2               | 2             | 2               | 6         | 90-100     | 5/5                   | 6                   | 75         | 5/5                   |
|                       |            |                 |                 |                      |            |                 |               |                 |           |            |                       | *7                  | 80         | 5/6                   |
|                       |            |                 |                 |                      |            |                 |               |                 |           |            |                       | 8                   | 90         | 6/6                   |

\* Standard spring set unless otherwise specified.

| Approximate Cycle Time Per Stroke in Seconds (One Direction) |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |  |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|--|
| Type   | 0A   | 0    | 1    | 2    | 2.5  | 3    | 3.5  | 4    | 4.5  | 5    | 5.5* | 6    | 6.5* | 7   | 7.5* |  |
| Double Act. CCW  | 0.03 | 0.07 | 0.11 | 0.18 | 0.36 | 0.38 | 0.60 | 0.80 | 1.13 | 1.43 | 1.99 | 3.08 | 4.2  | 6.2 | 7.3  |  |
| Double Act. CW   | 0.03 | 0.05 | 0.10 | 0.15 | 0.25 | 0.34 | 0.54 | 0.70 | 0.94 | 1.25 | 1.80 | 2.41 | 3.8  | 5.5 | 8.2  |  |
| Spr. Return, CCW   | —    | 0.07 | 0.13 | 0.32 | 0.32 | 0.54 | 0.92 | 1.20 | 1.64 | 2.27 | 3.08 | 3.58 | 6.2  | 9.0 | 8.7  |  |
| Spr. Return, CW  | —    | 0.07 | 0.13 | 0.30 | 0.30 | 0.48 | 0.75 | 0.94 | 1.25 | 1.60 | 2.38 | 2.80 | 5.4  | 6.6 | 9.7  |  |

\* New Size

| Approximate Air Consumption - Volume, Cubic Inches Per stroke in Direction Indicated |      |      |      |      |      |      |      |      |     |     |      |     |      |      |      |  |
|--|------|------|------|------|------|------|------|------|-----|-----|------|-----|------|------|------|--|
| Rotation Direction (DA or SR)  | 0A   | 0    | 1    | 2    | 2.5  | 3    | 3.5  | 4    | 4.5 | 5   | 5.5* | 6   | 6.5* | 7    | 7.5* |  |
| CCW (DA & SR)  | 2.32 | 6.10 | 11.6 | 22.0 | 31.1 | 48.2 | 78.7 | 99.5 | 138 | 220 | 283  | 348 | 652  | 915  | 1556 |  |
| CW (DA)  | 1.71 | 7.93 | 14.0 | 26.9 | 39.1 | 61.0 | 104  | 135  | 193 | 306 | 403  | 644 | 918  | 1086 | 2697 |  |

\* New Size

$$\text{Air Consumption, SCFH} = \frac{(\text{Supply Pressure, psig} + \text{Atmosphere Pressure, psig}) \times \text{Volume, in}^3 \times \text{Cycles}}{\text{Atmosphere Pressure, psig} \times \text{Cycle} \times \text{hr.}} \times \frac{1 \text{ ft}^3}{1728 \text{ in.}^3}$$

Note:  
Volume = Volume CCW (DA & SR actuators) + Volume CW (DA actuators), and one cycle means one open-close cycle, consisting of one CCW stroke and one CW stroke.

| Weight (lbs)  |     |     |     |     |      |      |      |      |      |    |      |     |      |     |      |  |
|---------------|-----|-----|-----|-----|------|------|------|------|------|----|------|-----|------|-----|------|--|
| Type          | 0A  | 0   | 1   | 2   | 2.5  | 3    | 3.5  | 4    | 4.5  | 5  | 5.5* | 6   | 6.5* | 7   | 7.5* |  |
| Double Acting | 1.1 | 2.5 | 3.7 | 6.1 | 8.6  | 12.1 | 19.5 | 24   | 36   | 48 | 64   | 82  | 129  | 182 | 381  |  |
| Spring Return | —   | 2.9 | 4.3 | 7.5 | 10.6 | 15.4 | 25.2 | 31.0 | 47.4 | 65 | 88   | 121 | 157  | 221 | 443  |  |

\* New Size

**Air Supply Pressure**

Maximum Pressure: 116 psi (8 bar)  
Maximum Shell Pressure: 150 psi (10,3 bar)

- Temperature Range:
  - NBR: -4°F to +185°F (-20°C to +85°C) standard version
  - Viton: -4°F to +302°F (-20°C to +150°C) high temperature version - optional
  - Silicon: -40°F to +185°F (-40°C to +85°C) low temperature version - optional

Position Adjustment: +/- 5° in CCW and CW direction (double adjustment)

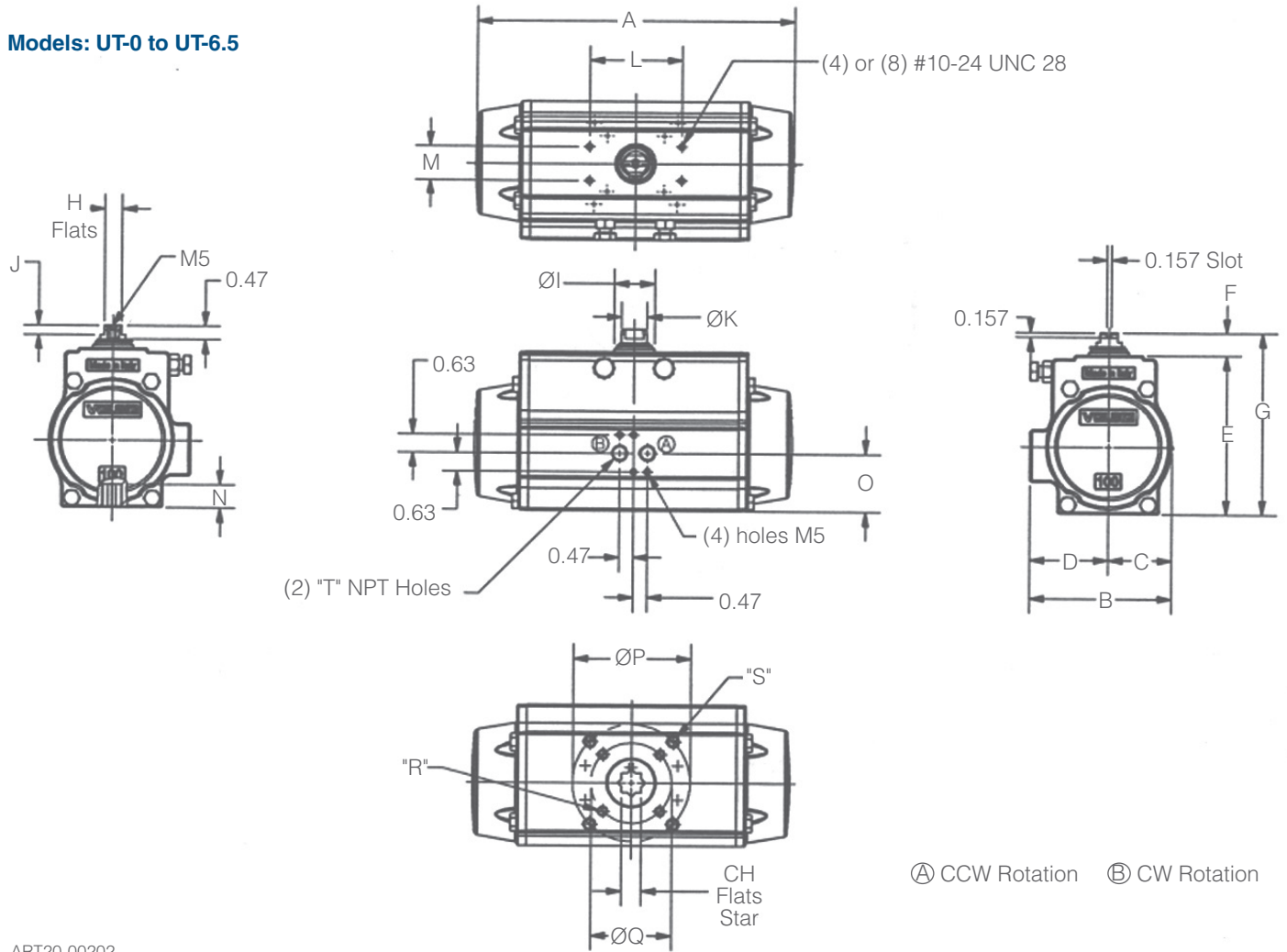
External Connections: See Pages 7-9

Rotation: See Pages 7-9. CCW Port (A), CW Port (B). For spring return, CCW when energized is standard.

**Lubrication:**

Lubricated: for actuator life (1,000,000 cycles under normal working conditions)

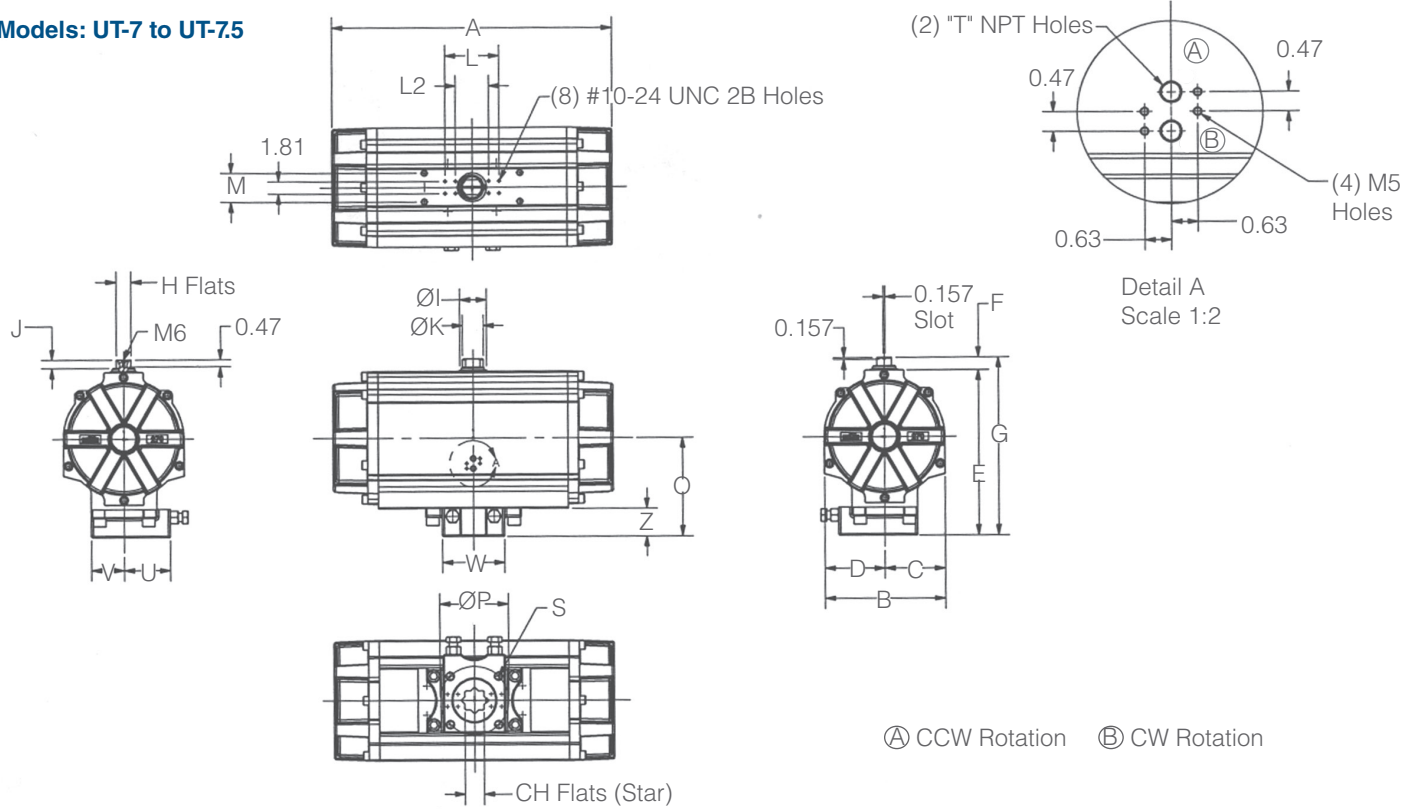
Models: UT-0 to UT-6.5



ART20-00202

| Dimensions, Inches |                  |                   |       |       |      |      |      |       |      |       |      |      |      |      |           |      |      |      |      |      |                      |                      |       |
|--------------------|------------------|-------------------|-------|-------|------|------|------|-------|------|-------|------|------|------|------|-----------|------|------|------|------|------|----------------------|----------------------|-------|
| UT                 | Piston Bore (mm) | Drilling ISO 5211 | CH    | A     | B    | C    | D    | E     | F    | G     | H    | ØI   | J    | ØK   | L         | M    | N    | O    | P    | Q    | R                    | S                    | T NPT |
| 0                  | 52               | F03-F05           | 0.433 | 5.55  | 2.80 | 1.18 | 1.61 | 3.21  | 0.79 | 4.0   | 0.35 | 0.83 | 0.31 | 0.47 | 3.15      | 1.18 | 0.47 | 1.04 | 1.97 | 1.42 | 10-24UNC x 0.29 DP   | 0.25-20UNC x 0.35 DP | 1/8"  |
| 1                  | 63               | F05-F07           | 0.551 | 6.46  | 3.17 | 1.40 | 1.77 | 3.66  | 0.79 | 4.45  | 0.43 | 0.98 | 0.31 | 0.59 | 3.15      | 1.18 | 0.63 | 1.08 | 2.76 | 1.97 | 0.25-20UNC x 0.31 DP | 0.31-18UNC x 0.47 DP | 1/8"  |
| 2                  | 75               | F05-F07           | 0.669 | 8.27  | 3.72 | 1.65 | 2.07 | 4.37  | 0.79 | 5.16  | 0.51 | 1.14 | 0.31 | 0.75 | 3.15      | 1.18 | 0.75 | 1.38 | 2.76 | 1.97 | 0.25-20UNC x 0.31 DP | 0.31-18UNC x 0.47 DP | 1/8"  |
| 2.5                | 85               | F05-F07           | 0.669 | 9.47  | 4.17 | 1.87 | 2.30 | 4.92  | 0.79 | 5.71  | 0.59 | 1.38 | 0.31 | 0.87 | 3.15      | 1.18 | 0.75 | 1.65 | 2.76 | 1.97 | 0.25-20UNC x 0.31 DP | 0.31-18UNC x 0.47 DP | 1/8"  |
| 3                  | 100              | F07-F10           | 0.669 | 10.83 | 4.84 | 2.17 | 2.68 | 5.43  | 0.79 | 6.21  | 0.59 | 1.38 | 0.31 | 0.87 | 3.15      | 1.18 | 0.81 | 1.97 | 4.02 | 2.76 | 0.31-18UNC x 0.31 DP | 0.38-16UNC x 0.55 DP | 1/4"  |
| 3.5                | 115              | F07-F10           | 0.866 | 13.11 | 5.39 | 2.52 | 2.87 | 6.39  | 1.18 | 7.57  | 0.87 | 1.93 | 0.55 | 1.26 | 5.12      | 1.18 | 0.95 | 1.97 | 4.02 | 2.76 | 0.31-18UNC x 0.47 DP | 0.38-16UNC x 0.59 DP | 1/4"  |
| 4                  | 125              | F07-F10           | 0.866 | 14.65 | 5.83 | 2.68 | 3.15 | 6.87  | 1.18 | 8.05  | 0.87 | 1.93 | 0.55 | 1.26 | 5.12      | 1.18 | 0.95 | 2.40 | 4.02 | 2.76 | 0.31-18UNC x 0.47 DP | 0.38-16UNC x 0.59 DP | 1/4"  |
| 4.5                | 140              | F10-F12           | 1.063 | 17.13 | 6.46 | 3.01 | 3.44 | 7.76  | 1.18 | 8.94  | 0.94 | 1.93 | 0.63 | 1.38 | 3.15/5.12 | 1.18 | 1.14 | 2.80 | 4.92 | 4.02 | 0.38-16UNC x 0.59 DP | 0.5-13UNC x 0.71 DP  | 1/4"  |
| 5                  | 160              | F10-F12           | 1.063 | 19.69 | 7.32 | 3.43 | 3.90 | 8.70  | 1.18 | 9.88  | 1.18 | 2.24 | 0.63 | 1.57 | 3.15/5.12 | 1.18 | 1.26 | 3.15 | 4.92 | 4.02 | 0.38-16UNC x 0.55 DP | 0.5-13UNC x 0.71 DP  | 1/4"  |
| 5.5                | 180              | F14               | 1.417 | 19.41 | 8.39 | 3.86 | 4.53 | 9.96  | 1.18 | 11.14 | 1.42 | 2.24 | 0.63 | 1.77 | 3.15/5.12 | 1.18 | 1.69 | 3.90 | 5.51 | -    | -                    | 0.62-11UNC x 0.98 DP | 1/4"  |
| 6                  | 200              | F14               | 1.417 | 22.78 | 8.54 | 4.25 | 4.29 | 10.94 | 1.18 | 12.13 | 1.42 | 2.24 | 0.63 | 1.97 | 3.15/5.12 | 1.18 | 1.46 | 3.07 | 5.51 | -    | -                    | 0.62-11UNC x 0.94 DP | 1/4"  |
| 6.5                | 230              | F16               | 1.811 | 27.17 | 9.78 | 4.88 | 4.90 | 12.80 | 1.18 | 13.97 | 1.42 | 2.64 | 0.63 | 1.97 | 3.15/5.12 | 1.18 | 1.97 | 3.62 | 6.50 | -    | -                    | 0.75-10UNC x 1.14 DP | 1/4"  |

Models: UT-7 to UT-75



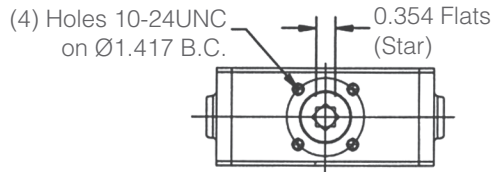
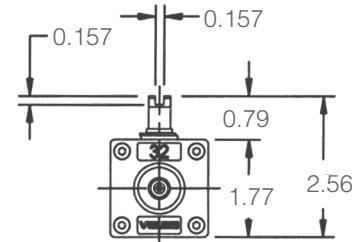
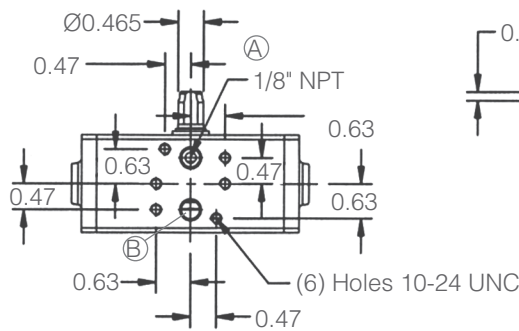
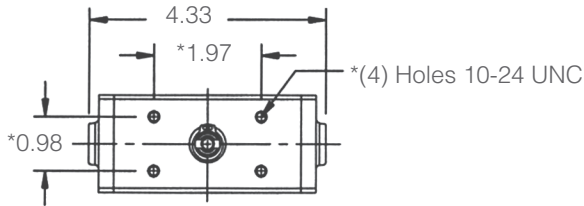
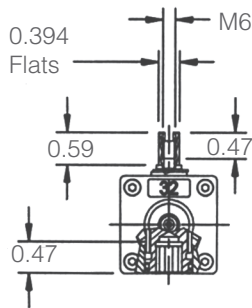
ART20-00203

| Dimensions, Inches |                  |                   |       |       |       |      |      |       |      |       |      |      |      |      |      |      |      |      |       |      |                      |                        |
|--------------------|------------------|-------------------|-------|-------|-------|------|------|-------|------|-------|------|------|------|------|------|------|------|------|-------|------|----------------------|------------------------|
| UT                 | Piston Bore (mm) | Drilling ISO 5211 | CH    | A     | B     | C    | D    | E     | F    | G     | H    | ØI   | J    | ØK   | L    | L2   | M    | N    | O     | P    | R                    | S                      |
| 7                  | 270              | F16               | 1.811 | 26.46 | 11.42 | 5.71 | 5.71 | 15.71 | 1.18 | 16.89 | 1.42 | 2.76 | 0.79 | 1.97 | 5.12 | 3.15 | 1.18 | 1.97 | 7.40  | 6.50 | 0.75-10UNC x 1.18 DP | —                      |
| 7.5                | 330              | F16-F25           | 1.970 | 35.46 | 15.82 | 7.91 | 7.91 | 19.88 | 1.97 | 21.85 | 1.42 | 4.29 | 0.79 | 1.81 | 5.12 | -    | 1.18 | 2.44 | 11.14 | 10.0 | 0.75-10UNC x 1.18 DP | (Ø) 0.62 UNC x 0.91 DP |

| Dimensions, Inches (Con't) |       |      |      |      |      |
|----------------------------|-------|------|------|------|------|
| UT                         | T NPT | U    | V    | W    | Z    |
| 7                          | 1/4"  | 4.37 | 3.11 | 9.06 | 2.68 |
| 7.5                        | 1/2"  | 5.31 | 5.31 | 14.0 | 3.74 |



Models: UT-0A-DA

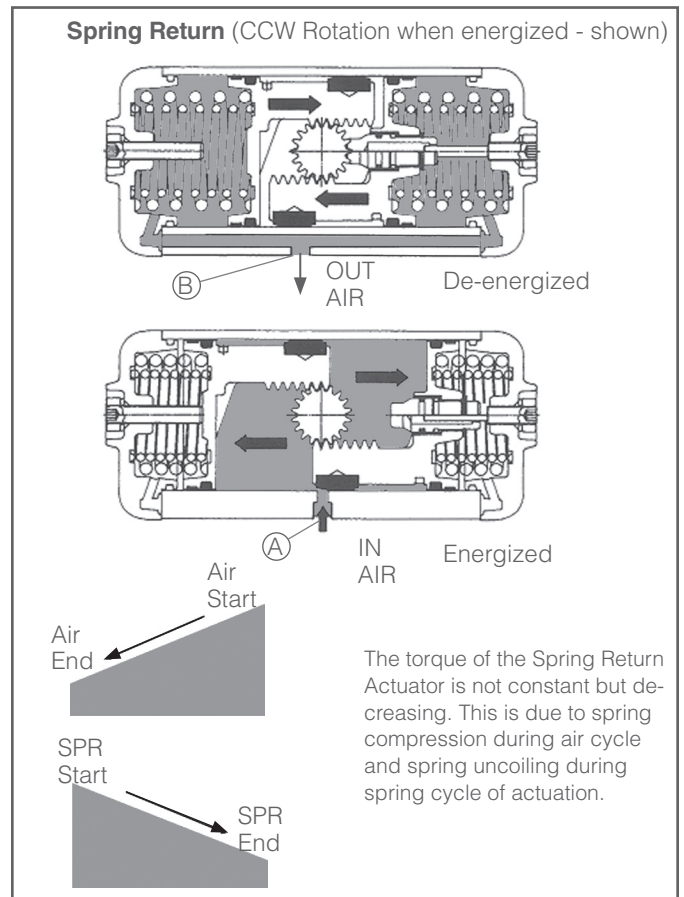
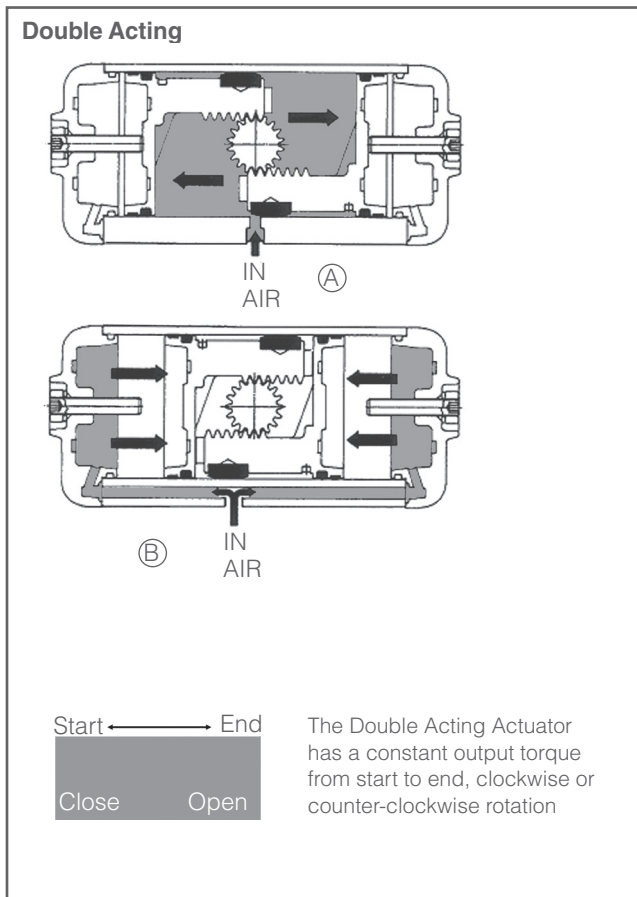


Ⓐ CCW Rotation Ⓑ CW Rotation

\* Bracket not available for top mounted accessories on UT-0A-DA, due to its small size. Use UT-0-DA or -SR instead when top mounted accessories are required.

ART1108L

Torque Characteristics



| Torque Outputs - Spring Return |            |                |      |                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------------|------------|----------------|------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Model                          |            | Spring         |      | Air Pressure (psig) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Size                           | Spring Set |                |      | 40                  |      | 50   |      | 60   |      | 70   |      | *80  |      | 90   |      | 100  |      | 115  |      |
|                                |            | Open, Deg      |      | Open, Deg           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                |            | 0              | 90   | 0                   | 90   | 0    | 90   | 0    | 90   | 0    | 90   | 0    | 90   | 0    | 90   | 0    | 90   | 0    | 90   |
| Torque, in-lbs                 |            | Torque, in-lbs |      |                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| UT-0                           | 1          | 32             | 43   | 49                  | 23   | 72   | 46   | 95   | 70   |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 42             | 59   |                     |      | 61   | 31   | 84   | 54   | 107  | 77   |      |      |      |      |      |      |      |      |
|                                | 3          | 46             | 66   |                     |      |      |      | 81   | 47   | 104  | 70   | 127  | 94   | 150  | 117  |      |      |      |      |
|                                | 4          | 58             | 82   |                     |      |      |      | 69   | 31   | 93   | 54   | 117  | 78   | 140  | 101  | 163  | 125  |      |      |
|                                | 5          | 72             | 105  |                     |      |      |      |      |      | 78   | 32   | 101  | 55   | 125  | 79   | 148  | 102  | 183  | 137  |
| UT-1                           | 1          | 44             | 85   | 92                  | 39   | 134  | 80   | 176  | 122  |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 58             | 109  |                     |      | 120  | 56   | 162  | 98   | 204  | 140  |      |      |      |      |      |      |      |      |
|                                | 3          | 71             | 137  |                     |      |      |      | 149  | 78   | 191  | 120  | 233  | 162  | 275  | 205  |      |      |      |      |
|                                | 4          | 85             | 152  |                     |      |      |      | 136  | 54   | 177  | 96   | 219  | 138  | 261  | 180  | 303  | 222  |      |      |
|                                | 5          | 111            | 196  |                     |      |      |      |      |      | 151  | 52   | 193  | 95   | 235  | 137  | 276  | 179  | 339  | 241  |
| UT-2                           | 1          | 89             | 173  | 168                 | 63   | 244  | 139  | 320  | 214  |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 118            | 227  |                     |      | 216  | 85   | 291  | 160  | 366  | 235  |      |      |      |      |      |      |      |      |
|                                | 3          | 134            | 250  |                     |      |      |      | 275  | 137  | 351  | 212  | 427  | 288  | 502  | 363  |      |      |      |      |
|                                | 4          | 162            | 304  |                     |      |      |      | 247  | 83   | 323  | 158  | 398  | 234  | 473  | 309  | 549  | 385  |      |      |
|                                | 5          | 205            | 381  |                     |      |      |      |      |      | 279  | 81   | 354  | 157  | 430  | 232  | 505  | 308  | 618  | 421  |
| UT-2.5                         | 1          | 142            | 242  | 238                 | 108  | 349  | 219  | 460  | 330  |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 176            | 298  |                     |      | 316  | 163  | 427  | 274  | 538  | 385  |      |      |      |      |      |      |      |      |
|                                | 3          | 215            | 361  |                     |      |      |      | 388  | 211  | 498  | 322  | 609  | 433  | 720  | 543  |      |      |      |      |
|                                | 4          | 249            | 417  |                     |      |      |      | 354  | 155  | 465  | 265  | 576  | 376  | 687  | 487  | 798  | 598  |      |      |
|                                | 5          | 321            | 536  |                     |      |      |      |      |      | 393  | 146  | 504  | 257  | 614  | 368  | 725  | 478  | 891  | 645  |
| UT-3                           | 1          | 218            | 395  | 384                 | 154  | 556  | 326  | 728  | 499  |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 289            | 521  |                     |      | 486  | 200  | 658  | 372  | 831  | 545  |      |      |      |      |      |      |      |      |
|                                | 3          | 318            | 564  |                     |      |      |      | 628  | 329  | 801  | 502  | 973  | 674  | 1146 | 847  |      |      |      |      |
|                                | 4          | 389            | 690  |                     |      |      |      | 558  | 203  | 730  | 375  | 903  | 548  | 1076 | 720  | 1248 | 893  |      |      |
|                                | 5          | 497            | 860  |                     |      |      |      |      |      | 630  | 206  | 803  | 379  | 975  | 551  | 1148 | 724  | 1406 | 982  |
| UT-3.5                         | 1          | 363            | 658  | 650                 | 270  | 935  | 555  | 1220 | 840  |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 449            | 836  |                     |      | 848  | 378  | 1133 | 663  | 1418 | 948  |      |      |      |      |      |      |      |      |
|                                | 3          | 538            | 957  |                     |      |      |      | 1045 | 541  | 1330 | 827  | 1614 | 1112 | 1900 | 1397 |      |      |      |      |
|                                | 4          | 625            | 1134 |                     |      |      |      | 958  | 365  | 1243 | 650  | 1529 | 936  | 1813 | 1220 | 2098 | 1505 |      |      |
|                                | 5          | 800            | 1430 |                     |      |      |      |      |      | 1068 | 352  | 1352 | 636  | 1638 | 922  | 1923 | 1207 | 2351 | 1635 |
| UT-4                           | 1          | 470            | 877  | 850                 | 328  | 1225 | 703  | 1599 | 1077 |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 560            | 1040 |                     |      | 1135 | 540  | 1510 | 914  | 1884 | 1288 |      |      |      |      |      |      |      |      |
|                                | 3          | 718            | 1313 |                     |      |      |      | 1351 | 640  | 1725 | 1015 | 2100 | 1389 | 2474 | 1763 |      |      |      |      |
|                                | 4          | 808            | 1477 |                     |      |      |      | 1262 | 478  | 1636 | 852  | 2010 | 1226 | 2384 | 1600 | 2758 | 1974 |      |      |
|                                | 5          | 1055           | 1914 |                     |      |      |      |      |      | 1388 | 415  | 1763 | 789  | 2137 | 1164 | 2511 | 1538 | 3073 | 2099 |
| UT-4.5                         | 1          | 726            | 1345 | 1241                | 506  | 1741 | 1007 | 2242 | 1507 |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 814            | 1522 |                     |      | 1644 | 821  | 2145 | 1322 | 2645 | 1822 |      |      |      |      |      |      |      |      |
|                                | 3          | 1036           | 1956 |                     |      |      |      | 1915 | 861  | 2415 | 1362 | 2916 | 1862 | 3416 | 1755 |      |      |      |      |
|                                | 4          | 1133           | 2124 |                     |      |      |      | 1808 | 667  | 2309 | 1167 | 2810 | 1668 | 3319 | 2177 | 3819 | 2678 |      |      |
|                                | 5          | 1452           | 2726 |                     |      |      |      |      |      | 1981 | 513  | 2482 | 1021 | 2982 | 1522 | 3483 | 2023 | 4234 | 2773 |
| UT-5                           | 1          | 735            | 1159 | 2022                | 1571 | 2718 | 2267 |      |      |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 1053           | 1664 |                     |      | 2382 | 1736 | 3078 | 2432 |      |      |      |      |      |      |      |      |      |      |
|                                | 3          | 1266           | 1991 |                     |      | 2160 | 1382 | 2858 | 2079 | 3560 | 2781 |      |      |      |      |      |      |      |      |
|                                | 4          | 1637           | 2584 |                     |      |      |      | 2459 | 1450 | 3161 | 2152 | 3859 | 2850 |      |      |      |      |      |      |
|                                | 5          | 1788           | 2823 |                     |      |      |      |      |      | 2993 | 1904 | 3691 | 2602 | 4397 | 3308 |      |      |      |      |
|                                | 6          | 2372           | 3744 |                     |      |      |      |      |      |      |      | 3080 | 1620 | 3784 | 2324 | 4480 | 3020 | 5532 | 4072 |
| UT-5.5                         | 1          | 903            | 1487 | 2902                | 2282 | 3866 | 3247 |      |      |      |      |      |      |      |      |      |      |      |      |
|                                | 2          | 1416           | 2230 |                     |      | 3318 | 2450 | 4282 | 3415 |      |      |      |      |      |      |      |      |      |      |
|                                | 3          | 1611           | 2602 |                     |      | 3114 | 2061 | 4077 | 3024 | 5035 | 3982 |      |      |      |      |      |      |      |      |
|                                | 4          | 2319           | 3664 |                     |      |      |      | 3325 | 1926 | 4283 | 2885 | 5246 | 3847 |      |      |      |      |      |      |
|                                | 5          | 2319           | 3717 |                     |      |      |      |      |      | 4282 | 2795 | 5246 | 3759 | 6210 | 4724 |      |      |      |      |
|                                | 6          | 3222           | 5151 |                     |      |      |      |      |      |      |      | 4290 | 2272 | 5255 | 3237 | 6219 | 4201 | 7666 | 5648 |

| Torque Outputs - Spring Return (Continued) |            |                |       |                     |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--|------------|----------------|-------|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Model                                      |            | Spring         |       | Air Pressure (psig) |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Size                                       | Spring Set |                |       | 40                  |      | 50    |       | 60    |       | 70    |       | *80   |       | 90    |       | 100   |       | 115   |       |
|  |            | Open, Deg      |       | Open, Deg           |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|  |            | 0              | 90    | 0                   | 90   | 0     | 90    | 0     | 90    | 0     | 90    | 0     | 90    | 0     | 90    | 0     | 90    | 0     | 90    |
|  |            | Torque, in-lbs |       | Torque, in-lbs      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| UT-6                                       | 1          | 1496           | 2222  | 3610                | 2866 | 4904  | 4160  |       |       |       |       |       |       |       |       |       |       |       |       |
|  | 2          | 2098           | 3124  |                     |      | 4217  | 3164  | 5517  | 4464  |       |       |       |       |       |       |       |       |       |       |
|  | 3          | 2549           | 3788  |                     |      | 3766  | 2509  | 5065  | 3808  | 6359  | 5102  |       |       |       |       |       |       |       |       |
|  | 4          | 2992           | 4620  |                     |      |       |       | 4534  | 2870  | 5828  | 4164  | 6854  | 5247  |       |       |       |       |       |       |
|  | 5          | 3593           | 5346  |                     |      |       |       |       |       | 5216  | 3437  | 6520  | 4741  | 7816  | 6037  |       |       |       |       |
|  | 6          | 4487           | 6842  |                     |      |       |       |       |       |       |       | 5538  | 3148  | 6833  | 4444  | 8134  | 5744  | 10076 | 7686  |
| UT-6.5                                     | 1          | 3443           | 5895  | 4930                | 2328 | 7075  | 4473  | 9217  | 6615  |       |       |       |       |       |       |       |       |       |       |
|  | 2          | 4124           | 7072  | 4207                | 1073 | 6349  | 3216  | 8492  | 5358  |       |       |       |       |       |       |       |       |       |       |
|  | 3          | 4815           | 8258  |                     |      |       |       | 7758  | 4112  | 9907  | 6260  |       |       |       |       |       |       |       |       |
|  | 4          | 5505           | 9435  |                     |      |       |       | 7032  | 2855  | 9181  | 5003  | 11330 | 7152  |       |       |       |       |       |       |
|  | 5          | 6196           | 10612 |                     |      |       |       | 6069  | 1607  | 8401  | 3755  | 10595 | 5904  | 12733 | 8042  |       |       |       |       |
|  | 6          | 6877           | 11789 |                     |      |       |       |       |       | 7722  | 2500  | 9869  | 4647  | 12009 | 6787  | 14158 | 8936  | 17372 | 12150 |
| UT-7                                       | 1          | 4478           | 7001  | 8112                | 5545 | 11335 | 8768  | 14558 | 11991 |       |       |       |       |       |       |       |       |       |       |
|  | 2          | 5372           | 8399  | 7156                | 4076 | 10379 | 7299  | 13602 | 10522 |       |       |       |       |       |       |       |       |       |       |
|  | 3          | 6266           | 9798  | 6200                | 2607 | 9423  | 5830  | 12646 | 9053  | 15869 | 12276 |       |       |       |       |       |       |       |       |
|  | 4          | 7169           | 11196 |                     |      | 8476  | 4370  | 11699 | 7592  | 14922 | 10815 | 18145 | 14038 |       |       |       |       |       |       |
|  | 5          | 8063           | 12595 |                     |      |       |       | 10743 | 6123  | 13966 | 9346  | 17189 | 12569 | 20412 | 15792 |       |       |       |       |
|  | 6          | 8957           | 13993 |                     |      |       |       | 9787  | 4654  | 13010 | 7877  | 16233 | 11100 | 19456 | 14323 |       |       |       |       |
|  | 7          | 9851           | 15400 |                     |      |       |       | 8832  | 3185  | 12054 | 6408  | 15277 | 9631  | 18498 | 12852 | 21715 | 16068 |       |       |
|  | 8          | 10745          | 16799 |                     |      |       |       | 7876  | 1716  | 11099 | 4938  | 14321 | 8161  | 17542 | 11382 | 20759 | 25593 | 19433 |       |
| UT-7.5                                     | 1          | 7824           | 12143 | 14152               | 9558 | 19767 | 15174 | 25383 | 20789 |       |       |       |       |       |       |       |       |       |       |
|  | 2          | 9382           | 14577 | 12488               | 6974 | 18103 | 12589 | 23719 | 18205 |       |       |       |       |       |       |       |       |       |       |
|  | 3          | 10948          | 17002 | 10824               | 4398 | 16440 | 10014 | 22055 | 15630 | 27671 | 21245 |       |       |       |       |       |       |       |       |
|  | 4          | 12515          | 19436 |                     |      | 14784 | 7429  | 20400 | 13045 | 26016 | 18661 | 31631 | 24276 |       |       |       |       |       |       |
|  | 5          | 14082          | 21861 |                     |      |       |       | 18736 | 10470 | 24352 | 16085 | 29967 | 21701 | 35583 | 27316 |       |       |       |       |
|  | 6          | 15639          | 24295 |                     |      |       |       | 17072 | 7885  | 22688 | 13501 | 28303 | 19116 | 33919 | 24732 |       |       |       |       |
|  | 7          | 17206          | 26720 |                     |      |       |       | 15417 | 5310  | 21033 | 10925 | 26648 | 16541 | 32262 | 22155 | 37872 | 27764 |       |       |
|  | 8          | 18772          | 29154 |                     |      |       |       |       |       | 19370 | 8342  | 24984 | 13956 | 30598 | 19570 | 36208 | 25180 | 44630 | 33602 |

\* Actuators sized for 80 psi air supply unless otherwise specified. See spring chart for corresponding spring set.

| Torque Outputs – Double Acting Actuators (in-lbs) |       | Air Supply Pressure (psig) |       |       |       |       |       |       |       |
|---|-------|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| Actuator Size                                     |       | 40                         | 50    | 60    | 70    | 80    | 90    | 100   | 115   |
| UT-0A   | DA32  | 36                         | 44    | 53    | 62    | 71    | 80    | 89    | 102   |
| UT-0  | DA52  | 88                         | 111   | 134   | 157   | 180   | 203   | 226   | 261   |
| UT-1  | DA63  | 153                        | 195   | 237   | 279   | 321   | 364   | 406   | 469   |
| UT-2  | DA75  | 287                        | 363   | 438   | 514   | 589   | 665   | 740   | 853   |
| UT-2.5  | DA85  | 409                        | 519   | 630   | 741   | 851   | 962   | 1072  | 1238  |
| UT-3  | DA100 | 647                        | 819   | 991   | 1163  | 1335  | 1508  | 1680  | 1938  |
| UT-3.5  | DA115 | 1070                       | 1356  | 1641  | 1926  | 2211  | 2496  | 2781  | 3209  |
| UT-4  | DA125 | 1409                       | 1783  | 2158  | 2532  | 2906  | 3281  | 3655  | 4217  |
| UT-4.5  | DA140 | 2001                       | 2503  | 3005  | 3506  | 4008  | 4510  | 5012  | 5765  |
| UT-5  | DA160 | 2799                       | 3499  | 4198  | 4897  | 5596  | 6296  | 6995  | 8044  |
| UT-5.5  | DA180 | 3857                       | 4820  | 5783  | 6746  | 7709  | 8672  | 9635  | 11080 |
| UT-6  | DA200 | 5194                       | 6492  | 7790  | 9088  | 10386 | 11683 | 12981 | 14928 |
| UT-6.5  | DA230 | 8585                       | 10731 | 12876 | 15022 | 17167 | 19312 | 21458 | 24676 |
| UT-7  | DA270 | 12617                      | 15771 | 18925 | 22080 | 25234 | 28388 | 31542 | 36273 |
| UT-7.5  | DA330 | 22461                      | 28075 | 33690 | 39304 | 44919 | 50533 | 56148 | 64569 |

| How to Order    |      |  |   |                        |                                     |
|-----------------|------|--|---|------------------------|-------------------------------------|
| Actuator Series | Size | Type   | Rotation  | Air Supply to Actuator | Options                             |
| UT              | 0A   | SR = Spring Return<br>(Range: UT-0 - UT-7.5) | *CCW = Counter-clockwise<br>Rotation (Standard) | 40 = 40 psi            | B = Standard                        |
|                 | 0    | DA = Double Acting<br>(Range: UT-0A- UT7.5)  | CW = Clockwise Rotation                         | 50 = 50 psi            | H = High Temperature                |
|                 | 1    |  |   | 60 = 60 psi            | L = Low Temperature                 |
|                 | 2    |  |   | 70 = 70 psi            | E3 = Std Temp,<br>Nickel plated     |
|                 | 2.5  |  |   | **80 = 80 psi          | E6 = Std. Temp,<br>Polyester Coated |
|                 | 3    |  |   | 90 = 90 psi            |                                     |
|                 | 3.5  |  |   | 100 = 100 psi          |                                     |
|                 | 4    |  |   | 115 = 115 psi          |                                     |
|                 | 4.5  |  |   |                        |                                     |
|                 | 5    |  |   |                        |                                     |
|                 | 5.5  |  |   |                        |                                     |
|                 | 6.0  |  |   |                        |                                     |
|                 | 6.5  |  |   |                        |                                     |
|                 | 7    |  |   |                        |                                     |
|                 | 7.5  |  |   |                        |                                     |

Sample Ordering Schematic

|    |   |    |     |    |   |
|----|---|----|-----|----|---|
| UT | 1 | SR | CCW | 80 | B |
|----|---|----|-----|----|---|

\* Counter-clockwise (CCW) rotation when energized is standard

\*\* Actuators sized and spring sets selected for 80 psi air supply unless otherwise specified. See Torque Output and Spring Chart tables.



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