Bettis G-Series
Pneumatic Double-Acting and Spring-Return Actuator Torque Chart Imperial
## Torque - Pneumatic
### Double-Acting Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Start/Min/End</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>MOP (psig)</th>
<th>Torque @ MinOP (lb-in)</th>
<th>Torque @ MOP (lb-in)</th>
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<tbody>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic Double-Acting Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lb-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lb-in)</th>
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</thead>
<tbody>
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<td>40,015 44,015 48,015 52,015 56,015</td>
<td>40,415 44,415 48,415 52,415 56,415</td>
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<td>65,628 70,851 76,074 81,297 86,520 91,743 96,966 102,189 107,412 112,635 117,858</td>
<td>65,628 70,851 76,074 81,297 86,520 91,743 96,966 102,189 107,412 112,635 117,858</td>
<td>65,628 70,851 76,074 81,297 86,520 91,743 96,966 102,189 107,412 112,635 117,858</td>
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<td>Min Outboard</td>
<td>Exceeds MOP</td>
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<td>58,821</td>
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<td>65,628 70,851 76,074 81,297 86,520 91,743 96,966 102,189 107,412 112,635 117,858</td>
<td>65,628 70,851 76,074 81,297 86,520 91,743 96,966 102,189 107,412 112,635 117,858</td>
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<td>Min Outboard</td>
<td>Exceeds MOP</td>
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<td>End Inboard</td>
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<td>58,556</td>
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<td>75,141 82,486 90,831 99,176 107,521 115,866 124,211</td>
<td>75,141 82,486 90,831 99,176 107,521 115,866 124,211</td>
<td>75,141 82,486 90,831 99,176 107,521 115,866 124,211</td>
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<td>Min Outboard</td>
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<td>End Inboard</td>
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<td>75,141 82,486 90,831 99,176 107,521 115,866 124,211</td>
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<td>Exceeds MOP</td>
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# Torque - Pneumatic Double-Acting Actuator

## Operating Pressure, (psig)

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Start/Min./End</th>
<th>Operating Pressure, (psig)</th>
<th>Torque (lbf-in)</th>
<th>MOP (lbf-in)</th>
<th>Torque @ MOP (lbf-in)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
# Torque - Pneumatic Double-Acting Actuator

## Operating Pressure, (psig)

### Pressure Torque Output: Start/Min./End (lbf-in)

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<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP</th>
<th>Torque @ MOP (lbf-in)</th>
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<td>Start Outboard</td>
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<tr>
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<td>Min End Inboard</td>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic
### Double-Acting Actuator

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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic

### Double-Acting Actuator

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<th>Actuator Model</th>
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<th>Operating Pressure, (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>Torque @ MOP (lbf-in)</th>
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# Torque - Pneumatic

## Double-Acting Actuator

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<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min./End (lbf-in)</th>
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<th>Torque @ MinOP (lb-in)</th>
<th>MOP (psig)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial
## Torque - Pneumatic

### Double-Acting Actuator

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<th>Torque - Pneumatic (psi)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic Double-Acting Actuator

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### Operating Pressure, (psig)

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### Min OP (psig)

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### Torque @ Min OP (lbf-in)

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### MOP (psig)

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### Torque @ MOP (lbf-in)

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Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic
### Double-Acting Actuator

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<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Start/Min./End</th>
<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min./End (lbf-in)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial
## Torque - Pneumatic
### Double-Acting Actuator

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<thead>
<tr>
<th>Actuator Model</th>
<th>Stroke Direction Start</th>
<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min./End (lb-in)</th>
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### Torque - Pneumatic

**Double-Acting Actuator**

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<th>Actuator Model</th>
<th>Stroke Direction</th>
<th>Start/Min./End</th>
<th>Pressure Torque Output: Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial
## Torque - Pneumatic Double-Acting Actuator

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<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min./End (lbf-in)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lbf-in)</th>
<th>Exceeds MOP</th>
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<tr>
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<td>Start Inboard</td>
<td>40</td>
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<td>1,167,330</td>
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### Torque - Pneumatic

#### Double-Acting Actuator

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<th>Min.</th>
<th>End</th>
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<td>1,865,150</td>
<td>2,177,670</td>
<td>2,490,197</td>
<td>2,802,731</td>
<td>3,115,272</td>
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<tr>
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<td>2,942,935</td>
<td>3,539,105</td>
<td>4,135,303</td>
<td>4,731,528</td>
<td>5,327,782</td>
<td>5,927,903</td>
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<tr>
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Exceeds MOP

Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial
### Torque - Pneumatic

#### Spring-Return Actuator

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<th>Spring Torque Start/Min./End (lbf-in)</th>
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**Pressure Torque Output: Start/Min./End (lbf-in)**

- Please consult factory
- Exceeds MOP

**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial
## Torque - Pneumatic Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>Torque Output: Start/Min./End (lbf-in)</th>
<th>MinOP @ Torque @ MinOP (psig)</th>
<th>Torque @ MOP (psig)</th>
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Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial.
# Torque - Pneumatic Spring-Return Actuator

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<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial
# Torque - Pneumatic

## Spring-Return Actuator

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<th>Actuator Model</th>
<th>Spring Torque Start/Min/End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min/End (lbf-in)</th>
<th>MinOP</th>
<th>Torque @ MinOP (lbf-in)</th>
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## Torque - Pneumatic
### Spring-Return Actuator

<table>
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<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lbf-in)</th>
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Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial
### Torque - Pneumatic

#### Spring-Return Actuator

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<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min/End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
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# Torque - Pneumatic

## Spring-Return Actuator

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<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP</th>
<th>Torque @ MinOP (lbf-in)</th>
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### Torque - Pneumatic

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<th>Actuator Model</th>
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<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
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</table>

**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
# Torque - Pneumatic

## Spring-Return Actuator

| Actuator Model | Spring Torque Start/Min./End (lbf-in) | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | MinOP (psig) | Torque @ MinOP (lbf-in) | MOP (psig) | Torque @ MOP (lbf-in) |
|----------------|--------------------------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|------------------------|-----------|---------------------|
| G4x20-SR1      | Start 111,621                        |    |    |    |    |    |    | 89 | 330 | 111,165 |    |    |    |    |    |    |    |    |    | 69,680 | 92 | 115,532          |
|                | Min 50,497                           |    |    |    |    |    |    | 38 | 912 | 50,464   |    |    |    |    |    |    |    |    |    | 28,432 | 92 | 52,769           |
|                | End 80,856                           |    |    |    |    |    |    | 58 | 581 | 80,400   |    |    |    |    |    |    |    |    |    | 38,944 | 84 | 76,440           |
| G4x20-SR2      | Start 97,445                         |    |    |    |    |    |    | 58 | 464 | 80,296   | 102 | 130 | 123 | 965 |    |    |    |    |    | 58,464 | 92 | 128,332          |
|                | Min 43,422                           |    |    |    |    |    |    | 22 | 806 | 34,513   | 46 | 079 | 57,593 |    |    |    |    |    | 22,806 | 92 | 59,894           |
|                | End 68,065                           |    |    |    |    |    |    | 29 | 112 | 50,929   | 72 | 747 | 94,566 |    |    |    |    |    | 29,112 | 98 | 98,930           |
| G4x20-SR3      | Start 81,914                         |    |    |    |    |    |    | 60 | 262 | 91,694   | 112 | 927 | 134 | 762 |    |    |    |    |    | 51,797 | 92 | 139,129          |
|                | Min 36,611                           |    |    |    |    |    |    | 30 | 063 | 41,615   | 53 | 115 | 64,595 |    |    |    |    |    | 20,722 | 92 | 66,890           |
|                | End 57,275                           |    |    |    |    |    |    | 44 | 631 | 66,448   | 88 | 266 | 110,085 |    |    |    |    |    | 27,179 | 114 | 114,449          |
| G4x24-SR1      | Start 111,323                        |    |    |    |    |    |    | 73 | 392 | 105,194 |    |    |    |    |    |    |    |    |    | 70,211 | 92 | 114,735          |
|                | Min 50,419                           |    |    |    |    |    |    | 30 | 462 | 47,342   |    |    |    |    |    |    |    |    |    | 28,758 | 63 | 52,379           |
|                | End 80,558                           |    |    |    |    |    |    | 42 | 654 | 74,433   |    |    |    |    |    |    |    |    |    | 39,476 | 83 | 83,967           |
| G4x24-SR2      | Start 97,147                         |    |    |    |    |    |    | 86 | 191 | 117,993 |    |    |    |    |    |    |    |    |    | 63,931 | 63 | 127,534          |
|                | Min 43,344                           |    |    |    |    |    |    | 37 | 683 | 54,479   |    |    |    |    |    |    |    |    |    | 28,009 | 63 | 59,504           |
|                | End 67,767                           |    |    |    |    |    |    | 56 | 819 | 88,599   |    |    |    |    |    |    |    |    |    | 34,575 | 98 | 98,133           |
| G4x24-SR3      | Start 81,616                         |    |    |    |    |    |    | 65 | 188 | 96,989   | 128 | 791 |    |    |    |    |    |    |    | 52,468 | 63 | 128,332          |
|                | Min 36,532                           |    |    |    |    |    |    | 44 | 761 | 61,488   |    |    |    |    |    |    |    |    |    | 21,135 | 66 | 66,502           |
|                | End 56,977                           |    |    |    |    |    |    | 40 | 561 | 72,339   | 104 | 118 |    |    |    |    |    |    |    | 27,850 | 113 | 113,652          |
| G4x24-SR4      | Start 67,168                         |    |    |    |    |    |    | 74 | 528 | 106,329 | 138 | 131 |    |    |    |    |    |    |    | 42,729 | 63 | 147,672          |
|                | Min 30,401                           |    |    |    |    |    |    | 34 | 383 | 51,110   | 67,798 |    |    |    |    |    |    |    |    | 17,512 | 72 | 82,803           |
|                | End 47,644                           |    |    |    |    |    |    | 54 | 999 | 86,777   | 118,556 |    |    |    |    |    |    |    |    | 23,222 | 128,090         |
| G4x28-SR1      | Start 110,048                        |    |    |    |    |    |    | 92 | 701 |    |    |    |    |    |    |    |    |    |    | 65,762 | 45 | 115,151          |
|                | Min 50,083                           |    |    |    |    |    |    | 41 | 119 |    |    |    |    |    |    |    |    |    |    | 26,750 | 45 | 52,986           |
|                | End 79,284                           |    |    |    |    |    |    | 61 | 949 |    |    |    |    |    |    |    |    |    |    | 35,030 | 84 | 83,383           |
| G4x28-SR2      | Start 95,872                         |    |    |    |    |    |    | 105 | 501 |    |    |    |    |    |    |    |    |    |    | 60,603 | 45 | 127,950          |
|                | Min 43,007                           |    |    |    |    |    |    | 48 | 278 |    |    |    |    |    |    |    |    |    |    | 24,393 | 45 | 60,112           |
|                | End 66,493                           |    |    |    |    |    |    | 76 | 115 |    |    |    |    |    |    |    |    |    |    | 31,250 | 98 | 98,549           |
| G4x28-SR3      | Start 80,341                         |    |    |    |    |    |    | 116 | 298 |    |    |    |    |    |    |    |    |    |    | 48,953 | 45 | 138,784          |
|                | Min 36,196                           |    |    |    |    |    |    | 55 | 304 |    |    |    |    |    |    |    |    |    |    | 19,610 | 45 | 67,107           |
|                | End 55,703                           |    |    |    |    |    |    | 91 | 634 |    |    |    |    |    |    |    |    |    |    | 24,338 | 114,068         |

Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial
# Torque - Pneumatic

## Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Operating Pressure, (psig)</th>
<th>Min OP (psig)</th>
<th>Torque ( \leq ) Min OP (lb-in)</th>
<th>MOP (psig)</th>
<th>Torque ( \leq ) MOP (lb-in)</th>
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<tr>
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**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
# Torque - Pneumatic

## Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>Torque @ MOP (lbf-in)</th>
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# Torque - Pneumatic

## Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min/End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lbf-in)</th>
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## Torque - Pneumatic

### Spring-Return Actuator

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<th>Actuator Model</th>
<th>Spring Torque Start</th>
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**Notes:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
### Torque - Pneumatic

#### Spring-Return Actuator

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<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min/End (lbf-in)</th>
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**Torque - Pneumatic**

**Spring-Return Actuator**

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## Torque - Pneumatic

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### Torque - Pneumatic

#### Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lbf-in)</th>
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<td>G10x40-SR1</td>
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# Torque - Pneumatic

## Spring-Return Actuator

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<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
<th>Operating Pressure, (psig)</th>
<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
<th>Torque @ MOP (lbf-in)</th>
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</table>

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## Torque - Pneumatic

### Spring-Return Actuator

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<tr>
<th>Actuator Model</th>
<th>Spring Torque Start</th>
<th>Spring Torque Min.</th>
<th>Spring Torque End</th>
<th>Operating Pressure, (psig)</th>
<th>Pressure Torque Output: Start/Min./End (lbf-in)</th>
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# Torque - Pneumatic

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<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque Start/Min./End (lbf-in)</th>
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<th>MinOP (psig)</th>
<th>Torque @ MinOP (lbf-in)</th>
<th>MOP (psig)</th>
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<td>Min. 870,504</td>
<td></td>
<td>936,334</td>
<td>2,544,855</td>
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<td>End 1,183,225</td>
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<td>1,812,921</td>
<td>4,185,815</td>
<td>659,695</td>
<td>2,109,869</td>
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<tr>
<td></td>
<td>Min. 869,568</td>
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<td>1,791,256</td>
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<td>End 1,179,756</td>
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<td>790,683</td>
<td>2,109,869</td>
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Note: All Published Torques are Guaranteed Minimum Values. Units are Imperial.
## Torque - Pneumatic

### Spring-Return Actuator

<table>
<thead>
<tr>
<th>Actuator Model</th>
<th>Spring Torque Start (Min., End)</th>
<th>Operating Pressure, (psig)</th>
<th>Min. OP</th>
<th>Torque @ Min. OP</th>
<th>MOP</th>
<th>Torque @ MOP</th>
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<tbody>
<tr>
<td>G13xT48-SR1</td>
<td>Start 3,793,563</td>
<td>Please consult factory</td>
<td>2,902,742</td>
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<td>638,772</td>
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</tbody>
</table>

**Note:** All Published Torques are Guaranteed Minimum Values. Units are Imperial.
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