

Spring Return Torque Outputs - Metric Units Nm

| Actuator Model | Position of air OR spring return stroke | Pressure (bar) | | | | | | | | | | | |
|----------------|---|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 1.7 | 2.0 | 2.4 | 2.8 | 3.1 | 3.5 | 3.8 | 4.1 | 4.5 | 4.8 | 5.2 | 5.5 |
| 01-120 | Start | | | | | | 1.5 | | 1.7 | | | | 2.3 |
| | Finish | | | | | | 0.9 | | 1.1 | | 1.5 | | 1.8 |
| 02-120 | Start | | | | | | 3.0 | 3.4 | 3.6 | 3.8 | 4.2 | 4.4 | 4.7 |
| | Finish | | | | | | 1.4 | 1.7 | 2.0 | 2.4 | 2.8 | 3.3 | 3.7 |
| 03-120-5600 | Start | 2.8 | 3.4 | 4.1 | 4.8 | 5.3 | 5.7 | | | | | | |
| | Finish | 2.1 | 2.8 | 3.5 | 4.2 | 4.8 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| 03-120 | Start | | | | | | 6.3 | 6.9 | 7.5 | 8.1 | 8.9 | 9.5 | 10.3 |
| | Finish | | | | | | 4.1 | 4.7 | 5.5 | 6.4 | 7.2 | 7.8 | 8.7 |
| 05-120 | Start | | | | | | 13.0 | 14.1 | 15.3 | 16.4 | 18.1 | 19.2 | 20.9 |
| | Finish | | | | | | 8.5 | 9.6 | 11.3 | 13.0 | 14.7 | 15.8 | 17.5 |
| 07-120-4000 | Start | 9.0 | 11.9 | 15.3 | 18.6 | 22.0 | | | | | | | |
| | Finish | 5.1 | 8.5 | 11.9 | 15.3 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| 07-120 | Start | | | | | | 30.5 | 33.9 | 37.3 | 40.7 | 43.5 | 46.9 | 50.8 |
| | Finish | | | | | | 19.8 | 23.7 | 27.1 | 30.5 | 34.4 | 38.4 | 42.4 |
| 08-120 | Start | | | | | | 52.7 | 57.2 | 61.7 | 67.2 | 72.7 | 77.0 | 81.3 |
| | Finish | | | | | | 36.8 | 41.3 | 45.8 | 51.4 | 56.9 | 61.2 | 65.5 |
| 09-120-4200 | Start | 26.0 | 31.6 | 37.3 | 44.1 | 50.8 | | | | | | | |
| | Finish | 14.7 | 21.5 | 28.2 | 35.0 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 |
| 09-120 | Start | | | | | | 61.0 | 67.8 | 74.6 | 81.9 | 89.3 | 96.6 | 104.0 |
| | Finish | | | | | | 50.3 | 56.5 | 63.8 | 71.2 | 79.1 | 86.4 | 93.8 |
| 10-120-5800 | Start | 56.0 | 65.0 | 77.0 | 89.0 | 97.0 | 108.0 | | | | | | |
| | Finish | 41.8 | 52.0 | 64.0 | 77.2 | 86.9 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 10-120 | Start | | | | | | 107.0 | 115.5 | 124.0 | 136.0 | 145.0 | 155.9 | 164.0 |
| | Finish | | | | | | 78.0 | 90.0 | 102.0 | 114.6 | 124.0 | 134.9 | 143.0 |
| 12-120-4300 | Start | 54.0 | 68.9 | 83.6 | | | | | | | | | |
| | Finish | 42.9 | 57.6 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 |
| 12-120-4400 | Start | | | 89.3 | 103.0 | 117.0 | 132.0 | 147.0 | 161.0 | 176.0 | 191.0 | | |
| | Finish | | | 66.1 | 80.2 | 94.9 | 110.0 | 124.0 | 139.0 | 154.0 | 168.0 | 168.0 | 168.0 |
| 12-120 | Start | | | | | | 145.0 | 160.0 | 176.0 | 191.0 | 206.0 | 221.0 | 238.0 |
| | Finish | | | | | | 111.0 | 127.0 | 142.0 | 158.0 | 174.0 | 189.0 | 204.0 |
| 14-120-4900 | Start | 192.0 | 220.0 | 249.0 | 288.0 | 322.0 | 356.0 | 390.0 | 424.0 | 469.0 | 497.0 | 529.0 | 529.0 |
| | Finish | 119.0 | 158.0 | 186.0 | 220.0 | 254.0 | 288.0 | 322.0 | 356.0 | 390.0 | 418.0 | 447.0 | 447.0 |
| 14-120 | Start | | | | | | 374.0 | 408.0 | 442.0 | 479.0 | 517.0 | 554.0 | 588.0 |
| | Finish | | | | | | 249.0 | 290.0 | 330.0 | 367.0 | 406.0 | 443.0 | 478.0 |
| 14-120-5000 | Start | 172.0 | 208.0 | 237.0 | | | | | | | | | |
| | Finish | 140.0 | 174.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 |
| 15-120 | Start | | | | | | 614.0 | 680.0 | 752.0 | 801.0 | 848.0 | 914.0 | 962.0 |
| | Finish | | | | | | 392.0 | 392.0 | 522.0 | 590.0 | 656.0 | 723.0 | 790.0 |
| 16-120-6100 | Start | 359.0 | 428.0 | 497.0 | | | | | | | | | |
| | Finish | 245.0 | 333.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 | 421.0 |
| 16-120-6000 | Start | | | 514.0 | 583.0 | 652.0 | 722.0 | | | | | | |
| | Finish | | | 404.0 | 492.0 | 580.0 | 668.0 | 668.0 | 668.0 | 668.0 | 668.0 | 668.0 | 668.0 |
| 16-120 | Start | | | | | | 864.0 | 939.0 | 1004.0 | 1097.0 | 1165.0 | 1256.0 | 1321.0 |
| | Finish | | | | | | 576.0 | 660.0 | 742.0 | 832.0 | 906.0 | 1002.0 | 1081.0 |
| 18-120-7000 | Start | 807.0 | 970.0 | 1182.0 | 1260.0 | | | | | | | | |
| | Finish | 484.0 | 736.0 | 967.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 | 1040.0 |
| 18-120 | Start | | | | 1457.0 | 1637.0 | 1875.0 | 2053.0 | 2206.0 | 2426.0 | 2585.0 | 2800.0 | 2954.0 |
| | Finish | | | | 874.0 | 1036.0 | 1250.0 | 1441.0 | 1630.0 | 1840.0 | 2011.0 | 2234.0 | 2417.0 |
| 20-120-7200 | Start | 1621.0 | 1940.0 | 2325.0 | 2692.0 | | | | | | | | |
| | Finish | 1025.0 | 1362.0 | 1763.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 | 2203.0 |
| 20-120-7300 | Start | | | | 2788.0 | 3072.0 | 3471.0 | 3739.0 | 4023.0 | | | | |
| | Finish | | | | 1958.0 | 2271.0 | 2632.0 | 2983.0 | 3291.0 | 3291.0 | 3291.0 | 3291.0 | 3291.0 |
| 20-120 | Start | | | | | | | | 4121.0 | 4514.0 | 4798.0 | 5181.0 | 5456.0 |
| | Finish | | | | | | | | 3046.0 | 3423.0 | 3732.0 | 4133.0 | 4464.0 |
| 30-120-7600 | Start | 2433.0 | 2878.0 | 3466.0 | 4038.0 | | | | | | | | |
| | Finish | 1622.0 | 2127.0 | 2696.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 | 3304.0 |
| 30-120-7700 | Start | | | | 4112.0 | 4554.0 | 5113.0 | | | | | | |
| | Finish | | | | 3118.0 | 3542.0 | 4183.0 | 4183.0 | 4183.0 | 4183.0 | 4183.0 | 4183.0 | 4183.0 |
| 30-120-7800 | Start | | | | | | 5237.0 | 5676.0 | 6072.0 | 6648.0 | | | |
| | Finish | | | | | | 3871.0 | 4304.0 | 4844.0 | 5440.0 | 5440.0 | 5440.0 | 5440.0 |
| 30-120 | Start | | | | | | | | | 6771.0 | 7179.0 | 7772.0 | 8184.0 |
| | Finish | | | | | | | | | 5134.0 | 5598.0 | 6200.0 | 6696.0 |

Torque outputs identical for counter-clockwise models. *Italic* figures apply to spring end torque only - air end torque will be greater.

Spring Return Torque Outputs - English Units lbf ins

| Actuator Model | Position of air OR spring return stroke | Pressure (psi) | | | | | | | | | | | |
|----------------|---|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| 01-120 | Start | | | | | | 13 | | 15 | | 17 | | 20 |
| | Finish | | | | | | 8 | | 10 | | 13 | | 16 |
| 02-120 | Start | | | | | | 27 | 30 | 32 | 34 | 37 | 39 | 42 |
| | Finish | | | | | | 12 | 15 | 18 | 21 | 25 | 29 | 33 |
| 03-120-5600 | Start | 25 | 30 | 36 | 42 | 47 | 50 | | | | | | |
| | Finish | 19 | 25 | 31 | 37 | 42 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| 03-120 | Start | | | | | | 56 | 61 | 66 | 71 | 79 | 84 | 91 |
| | Finish | | | | | | 37 | 41 | 49 | 56 | 64 | 69 | 77 |
| 05-120 | Start | | | | | | 115 | 125 | 135 | 145 | 160 | 170 | 185 |
| | Finish | | | | | | 75 | 85 | 100 | 115 | 130 | 140 | 155 |
| 07-120-4000 | Start | 80 | 105 | 135 | 165 | 195 | | | | | | | |
| | Finish | 45 | 75 | 105 | 135 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 |
| 07-120 | Start | | | | | | 270 | 300 | 330 | 360 | 385 | 415 | 450 |
| | Finish | | | | | | 175 | 210 | 240 | 270 | 305 | 340 | 375 |
| 08-120 | Start | | | | | | 466 | 506 | 546 | 595 | 644 | 682 | 720 |
| | Finish | | | | | | 326 | 366 | 406 | 455 | 504 | 542 | 580 |
| 09-120-4200 | Start | 230 | 280 | 330 | 390 | 450 | | | | | | | |
| | Finish | 130 | 190 | 250 | 310 | 370 | 370 | 370 | 370 | 370 | 370 | 370 | 370 |
| 09-120 | Start | | | | | | 540 | 600 | 660 | 725 | 790 | 855 | 925 |
| | Finish | | | | | | 445 | 500 | 565 | 630 | 700 | 765 | 830 |
| 10-120-5800 | Start | 500 | 587 | 683 | 760 | 886 | 953 | | | | | | |
| | Finish | 366 | 472 | 568 | 645 | 780 | 847 | 847 | 847 | 847 | 847 | 847 | 847 |
| 10-120 | Start | | | | | | 950 | 1025 | 1100 | 1190 | 1280 | 1365 | 1450 |
| | Finish | | | | | | 690 | 795 | 900 | 1000 | 1100 | 1185 | 1270 |
| 12-120-4300 | Start | 480 | 610 | 740 | | | | | | | | | |
| | Finish | 380 | 510 | 640 | 640 | 640 | 640 | 640 | 640 | 640 | 640 | 640 | 640 |
| 12-120-4400 | Start | | | 790 | 910 | 1040 | 1170 | 1300 | 1430 | 1560 | 1690 | | |
| | Finish | | | 585 | 710 | 840 | 970 | 1100 | 1230 | 1360 | 1490 | 1490 | 1490 |
| 12-120 | Start | | | | | | 1280 | 1415 | 1555 | 1690 | 1825 | 1960 | 2110 |
| | Finish | | | | | | 985 | 1125 | 1260 | 1400 | 1540 | 1670 | 1810 |
| 14-120-4900 | Start | 1700 | 1950 | 2200 | 2550 | 2850 | 3150 | 3450 | 3750 | 4150 | 4400 | 4680 | 4680 |
| | Finish | 1050 | 1400 | 1650 | 1950 | 2250 | 2550 | 2850 | 3150 | 3450 | 3700 | 3960 | 3960 |
| 14-120 | Start | | | | | | 3310 | 3610 | 3915 | 4240 | 4580 | 4900 | 5200 |
| | Finish | | | | | | 2205 | 2570 | 2920 | 3250 | 3595 | 3920 | 4230 |
| 14-120-5000 | Start | 1520 | 1840 | 2100 | | | | | | | | | |
| | Finish | 1240 | 1540 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| 15-120 | Start | | | | | | 5434 | 6018 | 6656 | 7089 | 7505 | 8090 | 8514 |
| | Finish | | | | | | 3469 | 4098 | 4620 | 5222 | 5806 | 6399 | 6992 |
| 16-120-6100 | Start | 3178 | 3790 | 4401 | | | | | | | | | |
| | Finish | 2172 | 2950 | 3729 | 3729 | 3729 | 3729 | 3729 | 3729 | 3729 | 3729 | 3729 | 3729 |
| 16-120-6000 | Start | | | 4551 | 5163 | 5774 | 6386 | | | | | | |
| | Finish | | | 3579 | 4357 | 5136 | 5914 | 5914 | 5914 | 5914 | 5914 | 5914 | 5914 |
| 16-120 | Start | | | | | | 7646 | 8310 | 8885 | 9708 | 10310 | 11116 | 11691 |
| | Finish | | | | | | 5098 | 5841 | 6567 | 7363 | 8018 | 8868 | 9567 |
| 18-120-7000 | Start | 7142 | 8585 | 10461 | 11151 | | | | | | | | |
| | Finish | 4283 | 6514 | 8558 | 9204 | 9204 | 9204 | 9204 | 9204 | 9204 | 9204 | 9204 | 9204 |
| 18-120 | Start | | | | 12894 | 14487 | 16594 | 18169 | 19523 | 21470 | 22877 | 24780 | 26143 |
| | Finish | | | | 7735 | 9169 | 11063 | 12753 | 14426 | 16284 | 17797 | 19771 | 21390 |
| 20-120-7200 | Start | 14346 | 17169 | 20576 | 23824 | | | | | | | | |
| | Finish | 9071 | 12054 | 15603 | 19497 | 19497 | 19497 | 19497 | 19497 | 19497 | 19497 | 19497 | 19497 |
| 20-120-7300 | Start | | | | 24674 | 27187 | 30718 | 33090 | 35604 | | | | |
| | Finish | | | | 17328 | 20098 | 23293 | 26400 | 29125 | 29125 | 29125 | 29125 | 29125 |
| 20-120 | Start | | | | | | | | 36471 | 39949 | 42462 | 45852 | 48286 |
| | Finish | | | | | | | | 26957 | 30294 | 33028 | 36577 | 39506 |
| 30-120-7600 | Start | 16797 | 25470 | 30674 | 35736 | | | | | | | | |
| | Finish | 9394 | 18824 | 23860 | 29240 | 29240 | 29240 | 29240 | 29240 | 29240 | 29240 | 29240 | 29240 |
| 30-120-7700 | Start | | | | 36391 | 40303 | 45250 | | | | | | |
| | Finish | | | | 27594 | 31347 | 37020 | 37020 | 37020 | 37020 | 37020 | 37020 | 37020 |
| 30-120-7800 | Start | | | | | | 46347 | 50233 | 53737 | 58835 | | | |
| | Finish | | | | | | 34258 | 38090 | 42869 | 48144 | 48144 | 48144 | 48144 |
| 30-120 | Start | | | | | | | | | 59923 | 63693 | 68782 | 72428 |
| | Finish | | | | | | | | | 45436 | 49542 | 54870 | 59260 |

Torque outputs identical for counter-clockwise models. *Italic* figures apply to spring end torque only - air end torque will be greater.