# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G01x02.0-SR0 | Start | 2,663 | | | | | | | | | | | | | | 1,458 | 1,749 | | | | | | |
| | Min | 1,203 | | | | | | | | | | | | | | 598 | 759 | | | | | 239.7 | 254.5 |
| | End | 1,898 | | | | | | | | | | | | | | 695 | 985 | | | | | | |
| G01x02.2-SR0 | Start | 2,652 | | | | | | | | | | | 1,575 | 1,978 | | | | | | | | | |
| | Min | 1,199 | | | | | | | | | | | 651 | 871 | | | | | | | | 177.0 | 201.1 |
| | End | 1,888 | | | | | | | | | | | 812 | 1,214 | | | | | | | | | |
| G01x02.5-SR0 | Start | 2,641 | | | | | | | | | 1,626 | 2,157 | | | | | | | | | | | |
| | Min | 1,196 | | | | | | | | | 673 | 960 | | | | | | | | | | 137.0 | 162.9 |
| | End | 1,877 | | | | | | | | | 864 | 1,392 | | | | | | | | | | | |
| G01x03.0-SR0 | Start | 2,620 | | | | | | | 1,987 | | | | | | | | | | | | | | |
| | Min | 1,188 | | | | | | | 862 | | | | | | | | | | | | | 89.9 | 113.1 |
| | End | 1,855 | | | | | | | 1,223 | | | | | | | | | | | | | | |
| G01x03.5-SR0 | Start | 2,598 | | | | | 1,926 | 2,512 | | | | | | | | | | | | | | | |
| | Min | 1,180 | | | | | 829 | 1,141 | | | | | | | | | | | | | | 63.9 | 83.1 |
| | End | 1,834 | | | | | 1,162 | 1,747 | | | | | | | | | | | | | | | |
| G01x01.7-SR1 | Start | 1,999 | | | | | | | | | | | | | | | 872 | 1,072 | 1,272 | 1,473 | 1,675 | | |
| | Min | 949 | | | | | | | | | | | | | | | 383 | 492 | 601 | 710 | 819 | 264.2 | 332.3 |
| | End | 1,572 | | | | | | | | | | | | | | | 448 | 647 | 846 | 1,046 | 1,248 | | |
| G01x02.0-SR1 | Start | 1,987 | | | | | | | | | | | 920 | 1,213 | 1,505 | 1,796 | 2,087 | | | | | | |
| | Min | 945 | | | | | | | | | | | 403 | 563 | 722 | 879 | 1,036 | | | | | 181.7 | 254.5 |
| | End | 1,560 | | | | | | | | | | | 495 | 787 | 1,078 | 1,369 | 1,659 | | | | | | |
| G01x02.2-SR1 | Start | 1,977 | | | | | | | | | 1,102 | 1,509 | 1,914 | 2,317 | | | | | | | | | |
| | Min | 941 | | | | | | | | | 495 | 714 | 931 | 1,147 | | | | | | | | 134.1 | 201.1 |
| | End | 1,550 | | | | | | | | | 677 | 1,082 | 1,486 | 1,888 | | | | | | | | | |
| G01x02.5-SR1 | Start | 1,966 | | | | | | | 897 | 1,433 | 1,965 | 2,496 | | | | | | | | | | | |
| | Min | 937 | | | | | | | 381 | 668 | 952 | 1,234 | | | | | | | | | | 103.8 | 162.9 |
| | End | 1,539 | | | | | | | 472 | 1,006 | 1,537 | 2,066 | | | | | | | | | | | |
| G01x03.0-SR1 | Start | 1,944 | | | | | 1,083 | 1,498 | 2,326 | | | | | | | | | | | | | | |
| | Min | 930 | | | | | 480 | 701 | 1,138 | | | | | | | | | | | | | 68.1 | 113.1 |
| | End | 1,517 | | | | | 657 | 1,072 | 1,897 | | | | | | | | | | | | | | |
| G01x03.5-SR1 | Start | 1,923 | | | 1,086 | 1,676 | 2,264 | 2,851 | | | | | | | | | | | | | | | |
| | Min | 922 | | | 483 | 795 | 1,105 | 1,414 | | | | | | | | | | | | | | 48.4 | 83.1 |
| | End | 1,496 | | | 661 | 1,249 | 1,836 | 2,421 | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G01x01.7-SR2 | Start | 1,662 | | | | | | | | | | | | | 673 | 872 | 1,072 | 1,271 | 1,471 | 1,672 | 1,874 | | 222.1 | 332.3 |
| | Min | 811 | | | | | | | | | | | | | 312 | 421 | 530 | 638 | 746 | 854 | 962 | | | |
| | End | 1,373 | | | | | | | | | | | | | 386 | 585 | 784 | 983 | 1,183 | 1,383 | 1,584 | | | |
| G01x02.0-SR2 | Start | 1,650 | | | | | | | | | | 826 | 1,120 | 1,412 | 1,704 | 1,996 | 2,287 | | | | | | 152.7 | 254.5 |
| | Min | 807 | | | | | | | | | | 391 | 550 | 708 | 865 | 1,022 | 1,179 | | | | | | | |
| | End | 1,361 | | | | | | | | | | 539 | 832 | 1,124 | 1,415 | 1,705 | 1,996 | | | | | | | |
| G01x02.2-SR2 | Start | 1,639 | | | | | | | | 893 | 1,302 | 1,708 | 2,113 | 2,516 | | | | | | | | | 112.8 | 201.1 |
| | Min | 803 | | | | | | | | 422 | 640 | 857 | 1,073 | 1,289 | | | | | | | | | | |
| | End | 1,351 | | | | | | | | 606 | 1,013 | 1,419 | 1,822 | 2,224 | | | | | | | | | | |
| G01x02.5-SR2 | Start | 1,629 | | | | | | | 1,096 | 1,632 | 2,165 | 2,695 | | | | | | | | | | | 87.3 | 162.9 |
| | Min | 799 | | | | | | | 528 | 812 | 1,095 | 1,376 | | | | | | | | | | | | |
| | End | 1,340 | | | | | | | 808 | 1,343 | 1,874 | 2,403 | | | | | | | | | | | | |
| G01x03.0-SR2 | Start | 1,607 | | | | 865 | 1,282 | 1,697 | 2,526 | | | | | | | | | | | | | | 57.3 | 113.1 |
| | Min | 792 | | | | 405 | 625 | 844 | 1,281 | | | | | | | | | | | | | | | |
| | End | 1,319 | | | | 578 | 994 | 1,408 | 2,234 | | | | | | | | | | | | | | | |
| G01x03.5-SR2 | Start | 1,585 | | 694 | 1,286 | 1,875 | 2,464 | 3,051 | | | | | | | | | | | | | | | 40.7 | 83.1 |
| | Min | 784 | | 317 | 629 | 939 | 1,248 | 1,556 | | | | | | | | | | | | | | | | |
| | End | 1,297 | | 408 | 997 | 1,586 | 2,172 | 2,757 | | | | | | | | | | | | | | | | |
| G01x01.7-SR3 | Start | 1,441 | | | | | | | | | | | | 655 | 855 | 1,055 | 1,254 | 1,454 | 1,654 | 1,855 | 2,056 | | 194.5 | 332.3 |
| | Min | 706 | | | | | | | | | | | | 311 | 420 | 528 | 636 | 744 | 852 | 960 | 1,068 | | | |
| | End | 1,191 | | | | | | | | | | | | 407 | 607 | 806 | 1,005 | 1,204 | 1,403 | 1,603 | 1,805 | | | |
| G01x02.0-SR3 | Start | 1,429 | | | | | | | | | 712 | 1,008 | 1,302 | 1,595 | 1,887 | 2,178 | 2,469 | | | | | | 133.7 | 254.5 |
| | Min | 702 | | | | | | | | | 338 | 498 | 656 | 814 | 971 | 1,128 | 1,285 | | | | | | | |
| | End | 1,179 | | | | | | | | | 464 | 759 | 1,052 | 1,344 | 1,635 | 1,926 | 2,216 | | | | | | | |
| G01x02.2-SR3 | Start | 1,418 | | | | | | | 664 | 1,075 | 1,484 | 1,891 | 2,295 | 2,699 | | | | | | | | | 98.7 | 201.1 |
| | Min | 698 | | | | | | | 309 | 529 | 746 | 963 | 1,179 | 1,395 | | | | | | | | | | |
| | End | 1,169 | | | | | | | 416 | 826 | 1,234 | 1,639 | 2,043 | 2,445 | | | | | | | | | | |
| G01x02.5-SR3 | Start | 1,407 | | | | | | 739 | 1,278 | 1,814 | 2,347 | 2,877 | | | | | | | | | | | 76.4 | 162.9 |
| | Min | 694 | | | | | | 348 | 634 | 918 | 1,201 | 1,482 | | | | | | | | | | | | |
| | End | 1,158 | | | | | | 491 | 1,029 | 1,563 | 2,094 | 2,623 | | | | | | | | | | | | |
| G01x03.0-SR3 | Start | 1,386 | | | 629 | 1,047 | 1,464 | 1,880 | 2,708 | | | | | | | | | | | | | | 50.1 | 113.1 |
| | Min | 687 | | | 291 | 512 | 731 | 950 | 1,386 | | | | | | | | | | | | | | | |
| | End | 1,137 | | | 381 | 798 | 1,214 | 1,629 | 2,454 | | | | | | | | | | | | | | | |
| G01x03.5-SR3 | Start | 1,364 | | 877 | 1,468 | 2,058 | 2,646 | 3,233 | | | | | | | | | | | | | | | 35.7 | 83.1 |
| | Min | 679 | | 424 | 735 | 1,045 | 1,353 | 1,661 | | | | | | | | | | | | | | | | |
| | End | 1,115 | | 628 | 1,218 | 1,806 | 2,393 | 2,978 | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G01x01.5-SR4 | Start | 1,229 | | | | | | | | | | | | | 350 | 487 | 624 | 761 | 898 | 1,036 | 1,175 | 1,245 | 230.8 | 344.7 |
| | Min | 610 | | | | | | | | | | | | | 166 | 247 | 323 | 399 | 474 | 550 | 626 | 664 | | |
| | End | 1,043 | | | | | | | | | | | | | 166 | 303 | 439 | 576 | 713 | 850 | 989 | 1,059 | | |
| G01x01.7-SR4 | Start | 1,214 | | | | | | | | | | 417 | 618 | 819 | 1,019 | 1,218 | 1,418 | 1,618 | 1,818 | 2,018 | 2,220 | | 166.2 | 332.3 |
| | Min | 605 | | | | | | | | | | 198 | 307 | 416 | 524 | 632 | 739 | 847 | 955 | 1,063 | 1,171 | | | |
| | End | 1,028 | | | | | | | | | | 233 | 434 | 634 | 833 | 1,032 | 1,231 | 1,430 | 1,630 | 1,830 | 2,031 | | | |
| G01x02.0-SR4 | Start | 1,202 | | | | | | | | 578 | 876 | 1,172 | 1,466 | 1,759 | 2,051 | 2,342 | 2,633 | | | | | | 114.2 | 254.5 |
| | Min | 600 | | | | | | | | 283 | 443 | 601 | 759 | 917 | 1,074 | 1,231 | 1,387 | | | | | | | |
| | End | 1,016 | | | | | | | | 393 | 691 | 986 | 1,279 | 1,571 | 1,862 | 2,152 | 2,443 | | | | | | | |
| G01x02.2-SR4 | Start | 1,191 | | | | | | 413 | 827 | 1,239 | 1,648 | 2,055 | 2,459 | 2,862 | | | | | | | | | 84.4 | 201.1 |
| | Min | 597 | | | | | | 192 | 413 | 632 | 849 | 1,066 | 1,282 | 1,497 | | | | | | | | | | |
| | End | 1,006 | | | | | | 229 | 642 | 1,053 | 1,460 | 1,866 | 2,269 | 2,671 | | | | | | | | | | |
| G01x02.5-SR4 | Start | 1,180 | | | | | 632 | 903 | 1,442 | 1,978 | 2,511 | 3,041 | | | | | | | | | | | 65.3 | 162.9 |
| | Min | 593 | | | | | 309 | 452 | 737 | 1,021 | 1,303 | 1,585 | | | | | | | | | | | | |
| | End | 995 | | | | | 447 | 718 | 1,255 | 1,790 | 2,321 | 2,850 | | | | | | | | | | | | |
| G01x03.0-SR4 | Start | 1,159 | | | 793 | 1,211 | 1,628 | 2,044 | 2,872 | | | | | | | | | | | | | | 42.8 | 113.1 |
| | Min | 586 | | | 395 | 615 | 834 | 1,053 | 1,489 | | | | | | | | | | | | | | | |
| | End | 973 | | | 608 | 1,025 | 1,441 | 1,855 | 2,681 | | | | | | | | | | | | | | | |
| G01x03.5-SR4 | Start | 1,137 | 448 | 1,041 | 1,632 | 2,222 | 2,810 | 3,397 | | | | | | | | | | | | | | | 30.5 | 83.1 |
| | Min | 578 | 216 | 528 | 838 | 1,147 | 1,456 | 1,764 | | | | | | | | | | | | | | | | |
| | End | 952 | 264 | 855 | 1,444 | 2,033 | 2,619 | 3,204 | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G2x02.0-SR1 | Start | 3,459 | | | | | | | | | | | | | | | 1,788 | 2,140 | 2,494 | 2,848 | 3,205 | 3,384 | 256.4 | 339.3 |
| | Min | 1,607 | | | | | | | | | | | | | | | 772 | 966 | 1,158 | 1,350 | 1,542 | 1,638 | | |
| | End | 2,626 | | | | | | | | | | | | | | | 958 | 1,309 | 1,662 | 2,016 | 2,371 | 2,549 | | |
| G2x02.2-SR1 | Start | 3,446 | | | | | | | | | | | 1,577 | 2,065 | 2,552 | 3,038 | 3,524 | | | | | | 189.3 | 250.6 |
| | Min | 1,603 | | | | | | | | | | | 641 | 908 | 1,172 | 1,434 | 1,695 | | | | | | | |
| | End | 2,613 | | | | | | | | | | | 748 | 1,234 | 1,720 | 2,205 | 2,689 | | | | | | | |
| G2x02.5-SR1 | Start | 3,433 | | | | | | | | | 1,640 | 2,281 | 2,921 | 3,558 | | | | | | | | | 146.5 | 193.9 |
| | Min | 1,598 | | | | | | | | | 668 | 1,015 | 1,359 | 1,700 | | | | | | | | | | |
| | End | 2,600 | | | | | | | | | 810 | 1,450 | 2,088 | 2,724 | | | | | | | | | | |
| G2x03.0-SR1 | Start | 3,407 | | | | | | | 2,077 | 3,074 | | | | | | | | | | | | | 96.2 | 127.2 |
| | Min | 1,589 | | | | | | | 898 | 1,429 | | | | | | | | | | | | | | |
| | End | 2,574 | | | | | | | 1,246 | 2,241 | | | | | | | | | | | | | | |
| G2x03.5-SR1 | Start | 3,368 | | | | | 1,988 | 2,698 | | | | | | | | | | | | | | | 68.4 | 90.5 |
| | Min | 1,575 | | | | | 852 | 1,230 | | | | | | | | | | | | | | | | |
| | End | 2,535 | | | | | 1,157 | 1,865 | | | | | | | | | | | | | | | | |
| G2x04.0-SR1 | Start | 3,355 | | | 1,752 | 2,705 | 3,656 | | | | | | | | | | | | | | | | 51.3 | 67.8 |
| | Min | 1,571 | | | 725 | 1,232 | 1,734 | | | | | | | | | | | | | | | | | |
| | End | 2,522 | | | 922 | 1,873 | 2,822 | | | | | | | | | | | | | | | | | |
| G2x01.7-SR2 | Start | 2,992 | | | | | | | | | | | | | | | | | | 1,354 | 1,598 | 1,720 | 323.2 | 344.7 |
| | Min | 1,408 | | | | | | | | | | | | | | | | | | 590 | 724 | 790 | | |
| | End | 2,332 | | | | | | | | | | | | | | | | | | 697 | 940 | 1,063 | | |
| G2x02.0-SR2 | Start | 2,977 | | | | | | | | | | | | | 1,392 | 1,745 | 2,097 | 2,450 | 2,803 | 3,158 | 3,514 | 3,693 | 222.2 | 339.3 |
| | Min | 1,403 | | | | | | | | | | | | | 603 | 797 | 988 | 1,180 | 1,371 | 1,562 | 1,753 | 1,849 | | |
| | End | 2,317 | | | | | | | | | | | | | 735 | 1,087 | 1,439 | 1,790 | 2,143 | 2,497 | 2,852 | 3,031 | | |
| G2x02.2-SR2 | Start | 2,964 | | | | | | | | | | 1,397 | 1,887 | 2,375 | 2,862 | 3,348 | 3,834 | | | | | | 164.1 | 250.6 |
| | Min | 1,399 | | | | | | | | | | 594 | 860 | 1,123 | 1,384 | 1,645 | 1,905 | | | | | | | |
| | End | 2,304 | | | | | | | | | | 740 | 1,229 | 1,715 | 2,201 | 2,686 | 3,170 | | | | | | | |
| G2x02.5-SR2 | Start | 2,951 | | | | | | | | 1,305 | 1,950 | 2,591 | 3,231 | 3,868 | | | | | | | | | 127.0 | 193.9 |
| | Min | 1,394 | | | | | | | | 538 | 886 | 1,229 | 1,570 | 1,910 | | | | | | | | | | |
| | End | 2,291 | | | | | | | | 648 | 1,291 | 1,931 | 2,569 | 3,205 | | | | | | | | | | |
| G2x03.0-SR2 | Start | 2,925 | | | | | | 1,384 | 2,387 | 3,384 | | | | | | | | | | | | | 83.3 | 127.2 |
| | Min | 1,385 | | | | | | 578 | 1,112 | 1,641 | | | | | | | | | | | | | | |
| | End | 2,265 | | | | | | 727 | 1,727 | 2,722 | | | | | | | | | | | | | | |
| G2x03.5-SR2 | Start | 2,886 | | | | 1,586 | 2,297 | 3,007 | | | | | | | | | | | | | | | 59.3 | 90.5 |
| | Min | 1,371 | | | | 689 | 1,067 | 1,442 | | | | | | | | | | | | | | | | |
| | End | 2,226 | | | | 928 | 1,638 | 2,346 | | | | | | | | | | | | | | | | |
| G2x04.0-SR2 | Start | 2,873 | | | 2,061 | 3,015 | 3,966 | | | | | | | | | | | | | | | | 44.4 | 67.8 |
| | Min | 1,367 | | | 942 | 1,445 | 1,945 | | | | | | | | | | | | | | | | | |
| | End | 2,213 | | | 1,403 | 2,354 | 3,303 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G2x01.7-SR3 | Start | 2,674 | | | | | | | | | | | | | | | | 1,125 | 1,367 | 1,610 | 1,855 | 1,977 | 290.4 | 344.7 |
| | Min | 1,259 | | | | | | | | | | | | | | | | 479 | 612 | 745 | 878 | 944 | | |
| | End | 2,075 | | | | | | | | | | | | | | | | 529 | 771 | 1,013 | 1,257 | 1,380 | | |
| G2x02.0-SR3 | Start | 2,659 | | | | | | | | | | | | 1,296 | 1,649 | 2,002 | 2,354 | 2,707 | 3,060 | 3,415 | 3,771 | 3,950 | 199.7 | 339.3 |
| | Min | 1,254 | | | | | | | | | | | | 565 | 759 | 950 | 1,141 | 1,332 | 1,522 | 1,713 | 1,905 | 2,000 | | |
| | End | 2,061 | | | | | | | | | | | | 700 | 1,052 | 1,404 | 1,756 | 2,107 | 2,460 | 2,814 | 3,169 | 3,347 | | |
| G2x02.2-SR3 | Start | 2,647 | | | | | | | | | 1,162 | 1,654 | 2,144 | 2,632 | 3,119 | 3,605 | 4,090 | | | | | | 147.4 | 250.6 |
| | Min | 1,249 | | | | | | | | | 482 | 749 | 1,013 | 1,275 | 1,536 | 1,796 | 2,057 | | | | | | | |
| | End | 2,048 | | | | | | | | | 566 | 1,057 | 1,546 | 2,032 | 2,518 | 3,003 | 3,487 | | | | | | | |
| G2x02.5-SR3 | Start | 2,634 | | | | | | | | 1,562 | 2,206 | 2,848 | 3,488 | 4,125 | | | | | | | | | 114.1 | 193.9 |
| | Min | 1,245 | | | | | | | | 694 | 1,039 | 1,381 | 1,722 | 2,061 | | | | | | | | | | |
| | End | 2,035 | | | | | | | | 965 | 1,608 | 2,248 | 2,886 | 3,522 | | | | | | | | | | |
| G2x03.0-SR3 | Start | 2,607 | | | | | | 1,641 | 2,643 | 3,641 | | | | | | | | | | | | | 74.9 | 127.2 |
| | Min | 1,236 | | | | | | 733 | 1,265 | 1,792 | | | | | | | | | | | | | | |
| | End | 2,009 | | | | | | 1,044 | 2,044 | 3,039 | | | | | | | | | | | | | | |
| G2x03.5-SR3 | Start | 2,568 | | | | 1,843 | 2,554 | 3,264 | | | | | | | | | | | | | | | 53.2 | 90.5 |
| | Min | 1,222 | | | | 844 | 1,220 | 1,594 | | | | | | | | | | | | | | | | |
| | End | 1,970 | | | | 1,245 | 1,955 | 2,663 | | | | | | | | | | | | | | | | |
| G2x04.0-SR3 | Start | 2,555 | | 1,363 | 2,318 | 3,272 | 4,223 | | | | | | | | | | | | | | | | 39.9 | 67.8 |
| | Min | 1,217 | | 589 | 1,095 | 1,596 | 2,096 | | | | | | | | | | | | | | | | | |
| | End | 1,957 | | 766 | 1,720 | 2,671 | 3,620 | | | | | | | | | | | | | | | | | |
| G2x01.7-SR4 | Start | 2,379 | | | | | | | | | | | | | | | 1,167 | 1,409 | 1,651 | 1,894 | 2,138 | 2,261 | 260.0 | 344.7 |
| | Min | 1,107 | | | | | | | | | | | | | | | 501 | 634 | 766 | 898 | 1,030 | 1,096 | | |
| | End | 1,793 | | | | | | | | | | | | | | | 583 | 824 | 1,066 | 1,308 | 1,552 | 1,674 | | |
| G2x02.0-SR4 | Start | 2,364 | | | | | | | | | | | 1,225 | 1,580 | 1,933 | 2,285 | 2,638 | 2,990 | 3,344 | 3,698 | 4,055 | 4,234 | 178.8 | 339.3 |
| | Min | 1,102 | | | | | | | | | | | 526 | 720 | 911 | 1,102 | 1,293 | 1,483 | 1,674 | 1,865 | 2,056 | 2,152 | | |
| | End | 1,778 | | | | | | | | | | | 641 | 994 | 1,347 | 1,699 | 2,050 | 2,402 | 2,754 | 3,108 | 3,463 | 3,642 | | |
| G2x02.2-SR4 | Start | 2,352 | | | | | | | | | 1,445 | 1,938 | 2,427 | 2,915 | 3,402 | 3,888 | 4,374 | | | | | | 132.0 | 250.6 |
| | Min | 1,098 | | | | | | | | | 637 | 902 | 1,165 | 1,427 | 1,687 | 1,948 | 2,208 | | | | | | | |
| | End | 1,765 | | | | | | | | | 861 | 1,352 | 1,840 | 2,327 | 2,812 | 3,297 | 3,782 | | | | | | | |
| G2x02.5-SR4 | Start | 2,338 | | | | | | | 1,196 | 1,845 | 2,490 | 3,132 | 3,771 | 4,408 | | | | | | | | | 102.1 | 193.9 |
| | Min | 1,093 | | | | | | | 498 | 847 | 1,191 | 1,533 | 1,873 | 2,213 | | | | | | | | | | |
| | End | 1,752 | | | | | | | 612 | 1,259 | 1,903 | 2,543 | 3,180 | 3,816 | | | | | | | | | | |
| G2x03.0-SR4 | Start | 2,312 | | | | | 1,421 | 1,925 | 2,927 | 3,924 | | | | | | | | | | | | | 67.0 | 127.2 |
| | Min | 1,084 | | | | | 618 | 886 | 1,416 | 1,943 | | | | | | | | | | | | | | |
| | End | 1,726 | | | | | 837 | 1,339 | 2,338 | 3,333 | | | | | | | | | | | | | | |
| G2x03.5-SR4 | Start | 2,273 | | | 1,413 | 2,126 | 2,838 | 3,548 | | | | | | | | | | | | | | | 47.7 | 90.5 |
| | Min | 1,070 | | | 618 | 996 | 1,371 | 1,745 | | | | | | | | | | | | | | | | |
| | End | 1,687 | | | 828 | 1,540 | 2,250 | 2,958 | | | | | | | | | | | | | | | | |
| G2x04.0-SR4 | Start | 2,260 | | 1,646 | 2,602 | 3,555 | 4,507 | | | | | | | | | | | | | | | | 35.7 | 67.8 |
| | Min | 1,066 | | 743 | 1,247 | 1,748 | 2,247 | | | | | | | | | | | | | | | | | |
| | End | 1,674 | | 1,061 | 2,014 | 2,965 | 3,914 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G3x02.2-SR1 | Start | 6,096 | | | | | | | | | | | | | | | | | 2,656 | 3,160 | 3,666 | 3,920 | 315.7 | 344.7 |
| | Min | 2,818 | | | | | | | | | | | | | | | | | 1,079 | 1,358 | 1,635 | 1,773 | | |
| | End | 4,614 | | | | | | | | | | | | | | | | | 1,179 | 1,682 | 2,187 | 2,440 | | |
| G3x02.5-SR1 | Start | 6,080 | | | | | | | | | | | | | | 3,334 | 4,016 | 4,699 | 5,382 | 6,068 | | | 235.7 | 312.1 |
| | Min | 2,813 | | | | | | | | | | | | | | 1,427 | 1,798 | 2,167 | 2,535 | 2,903 | | | | |
| | End | 4,598 | | | | | | | | | | | | | | 1,856 | 2,536 | 3,217 | 3,899 | 4,583 | | | | |
| G3x03.0-SR1 | Start | 6,048 | | | | | | | | | 2,856 | 3,970 | 5,080 | 6,187 | | | | | | | | | 148.6 | 196.7 |
| | Min | 2,801 | | | | | | | | | 1,139 | 1,742 | 2,336 | 2,927 | | | | | | | | | | |
| | End | 4,566 | | | | | | | | | 1,379 | 2,490 | 3,597 | 4,702 | | | | | | | | | | |
| G3x03.5-SR1 | Start | 6,016 | | | | | | | 3,110 | 4,736 | 6,355 | | | | | | | | | | | | 103.4 | 136.9 |
| | Min | 2,790 | | | | | | | 1,268 | 2,139 | 2,998 | | | | | | | | | | | | | |
| | End | 4,534 | | | | | | | 1,632 | 3,254 | 4,870 | | | | | | | | | | | | | |
| G3x04.0-SR1 | Start | 5,985 | | | | | | 3,780 | 5,994 | | | | | | | | | | | | | | 76.5 | 101.4 |
| | Min | 2,779 | | | | | | 1,627 | 2,800 | | | | | | | | | | | | | | | |
| | End | 4,503 | | | | | | 2,301 | 4,510 | | | | | | | | | | | | | | | |
| G3x04.5-SR1 | Start | 5,953 | | | | 3,513 | 4,956 | 6,396 | | | | | | | | | | | | | | | 59.1 | 78.3 |
| | Min | 2,768 | | | | 1,485 | 2,251 | 3,011 | | | | | | | | | | | | | | | | |
| | End | 4,471 | | | | 2,034 | 3,474 | 4,911 | | | | | | | | | | | | | | | | |
| G3x02.2-SR2 | Start | 5,299 | | | | | | | | | | | | | | | 2,265 | 2,766 | 3,268 | 3,771 | 4,277 | 4,531 | 275.9 | 344.7 |
| | Min | 2,453 | | | | | | | | | | | | | | | 912 | 1,190 | 1,465 | 1,739 | 2,013 | 2,150 | | |
| | End | 4,004 | | | | | | | | | | | | | | | 975 | 1,474 | 1,975 | 2,478 | 2,982 | 3,236 | | |
| G3x02.5-SR2 | Start | 5,283 | | | | | | | | | | | | 2,580 | 3,263 | 3,946 | 4,628 | 5,310 | 5,994 | 6,679 | | | 206.0 | 312.1 |
| | Min | 2,447 | | | | | | | | | | | | 1,064 | 1,438 | 1,807 | 2,175 | 2,542 | 2,909 | 3,276 | | | | |
| | End | 3,988 | | | | | | | | | | | | 1,289 | 1,971 | 2,652 | 3,332 | 4,013 | 4,695 | 5,379 | | | | |
| G3x03.0-SR2 | Start | 5,251 | | | | | | | | | 3,468 | 4,581 | 5,691 | 6,798 | | | | | | | | | 129.8 | 196.7 |
| | Min | 2,436 | | | | | | | | | 1,524 | 2,119 | 2,711 | 3,300 | | | | | | | | | | |
| | End | 3,956 | | | | | | | | | 2,175 | 3,286 | 4,393 | 5,498 | | | | | | | | | | |
| G3x03.5-SR2 | Start | 5,219 | | | | | | | 3,721 | 5,347 | 6,967 | | | | | | | | | | | | 90.3 | 136.9 |
| | Min | 2,425 | | | | | | | 1,651 | 2,514 | 3,371 | | | | | | | | | | | | | |
| | End | 3,924 | | | | | | | 2,427 | 4,050 | 5,666 | | | | | | | | | | | | | |
| G3x04.0-SR2 | Start | 5,187 | | | | | 3,281 | 4,391 | 6,606 | | | | | | | | | | | | | | 66.9 | 101.4 |
| | Min | 2,414 | | | | | 1,415 | 2,005 | 3,173 | | | | | | | | | | | | | | | |
| | End | 3,893 | | | | | 1,988 | 3,096 | 5,306 | | | | | | | | | | | | | | | |
| G3x04.5-SR2 | Start | 5,155 | | | 2,678 | 4,124 | 5,567 | 7,007 | | | | | | | | | | | | | | | 51.7 | 78.3 |
| | Min | 2,403 | | | 1,095 | 1,865 | 2,626 | 3,383 | | | | | | | | | | | | | | | | |
| | End | 3,861 | | | 1,387 | 2,830 | 4,269 | 5,707 | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G3x02.2-SR3 | Start | 4,613 | | | | | | | | | | | | | | 2,291 | 2,791 | 3,292 | 3,794 | 4,297 | 4,803 | 5,057 | 241.6 | 344.7 |
| | Min | 2,138 | | | | | | | | | | | | | | 970 | 1,245 | 1,518 | 1,790 | 2,062 | 2,335 | 2,472 | | |
| | End | 3,479 | | | | | | | | | | | | | | 1,160 | 1,659 | 2,159 | 2,659 | 3,162 | 3,667 | 3,920 | | |
| G3x02.5-SR3 | Start | 4,597 | | | | | | | | | | | 2,421 | 3,106 | 3,790 | 4,472 | 5,154 | 5,836 | 6,520 | 7,205 | | | 180.4 | 312.1 |
| | Min | 2,133 | | | | | | | | | | | 1,022 | 1,394 | 1,763 | 2,130 | 2,497 | 2,863 | 3,229 | 3,596 | | | | |
| | End | 3,463 | | | | | | | | | | | 1,290 | 1,973 | 2,655 | 3,336 | 4,017 | 4,697 | 5,380 | 6,064 | | | | |
| G3x03.0-SR3 | Start | 4,565 | | | | | | | | 2,876 | 3,994 | 5,107 | 6,217 | 7,324 | | | | | | | | | 113.7 | 196.7 |
| | Min | 2,122 | | | | | | | | 1,251 | 1,848 | 2,441 | 3,031 | 3,620 | | | | | | | | | | |
| | End | 3,431 | | | | | | | | 1,743 | 2,859 | 3,970 | 5,078 | 6,182 | | | | | | | | | | |
| G3x03.5-SR3 | Start | 4,533 | | | | | | 2,614 | 4,247 | 5,873 | 7,493 | | | | | | | | | | | | 79.1 | 136.9 |
| | Min | 2,110 | | | | | | 1,106 | 1,975 | 2,835 | 3,691 | | | | | | | | | | | | | |
| | End | 3,399 | | | | | | 1,482 | 3,112 | 4,734 | 6,351 | | | | | | | | | | | | | |
| G3x04.0-SR3 | Start | 4,502 | | | | 2,694 | 3,807 | 4,918 | 7,132 | | | | | | | | | | | | | | 58.6 | 101.4 |
| | Min | 2,099 | | | | 1,150 | 1,741 | 2,327 | 3,493 | | | | | | | | | | | | | | | |
| | End | 3,367 | | | | 1,563 | 2,673 | 3,781 | 5,990 | | | | | | | | | | | | | | | |
| G3x04.5-SR3 | Start | 4,470 | | | 3,204 | 4,650 | 6,093 | 7,534 | | | | | | | | | | | | | | | 45.3 | 78.3 |
| | Min | 2,088 | | | 1,424 | 2,187 | 2,946 | 3,703 | | | | | | | | | | | | | | | | |
| | End | 3,336 | | | 2,071 | 3,514 | 4,954 | 6,391 | | | | | | | | | | | | | | | | |
| G3x02.0-SR4 | Start | 4,038 | | | | | | | | | | | | | | | | | 1,810 | 2,151 | 2,494 | 2,667 | 304.7 | 344.7 |
| | Min | 1,873 | | | | | | | | | | | | | | | | | 770 | 960 | 1,149 | 1,244 | | |
| | End | 3,042 | | | | | | | | | | | | | | | | | 817 | 1,158 | 1,500 | 1,672 | | |
| G3x02.2-SR4 | Start | 4,023 | | | | | | | | | | | | 1,741 | 2,242 | 2,743 | 3,243 | 3,744 | 4,246 | 4,750 | 5,256 | 5,510 | 212.1 | 344.7 |
| | Min | 1,868 | | | | | | | | | | | | 701 | 979 | 1,253 | 1,525 | 1,796 | 2,067 | 2,339 | 2,611 | 2,747 | | |
| | End | 3,027 | | | | | | | | | | | | 748 | 1,249 | 1,748 | 2,248 | 2,747 | 3,248 | 3,751 | 4,256 | 4,509 | | |
| G3x02.5-SR4 | Start | 4,007 | | | | | | | | | | 2,186 | 2,873 | 3,558 | 4,242 | 4,924 | 5,606 | 6,288 | 6,972 | 7,657 | | | 158.4 | 312.1 |
| | Min | 1,862 | | | | | | | | | | 931 | 1,304 | 1,673 | 2,040 | 2,406 | 2,772 | 3,138 | 3,503 | 3,870 | | | | |
| | End | 3,011 | | | | | | | | | | 1,192 | 1,878 | 2,562 | 3,244 | 3,925 | 4,605 | 5,286 | 5,968 | 6,652 | | | | |
| G3x03.0-SR4 | Start | 3,975 | | | | | | | 2,204 | 3,328 | 4,446 | 5,560 | 6,669 | 7,776 | | | | | | | | | 99.8 | 196.7 |
| | Min | 1,851 | | | | | | | 929 | 1,530 | 2,125 | 2,716 | 3,306 | 3,894 | | | | | | | | | | |
| | End | 2,980 | | | | | | | 1,211 | 2,332 | 3,448 | 4,559 | 5,666 | 6,771 | | | | | | | | | | |
| G3x03.5-SR4 | Start | 3,944 | | | | | 2,247 | 3,066 | 4,699 | 6,325 | 7,945 | | | | | | | | | | | | 69.5 | 136.9 |
| | Min | 1,840 | | | | | 950 | 1,387 | 2,251 | 3,109 | 3,965 | | | | | | | | | | | | | |
| | End | 2,948 | | | | | 1,253 | 2,071 | 3,701 | 5,323 | 6,939 | | | | | | | | | | | | | |
| G3x04.0-SR4 | Start | 3,912 | | | 2,031 | 3,147 | 4,259 | 5,370 | 7,584 | | | | | | | | | | | | | | 51.4 | 101.4 |
| | Min | 1,829 | | | 837 | 1,431 | 2,018 | 2,603 | 3,768 | | | | | | | | | | | | | | | |
| | End | 2,916 | | | 1,038 | 2,151 | 3,262 | 4,370 | 6,579 | | | | | | | | | | | | | | | |
| G3x04.5-SR4 | Start | 3,880 | | 2,208 | 3,657 | 5,102 | 6,545 | 7,986 | | | | | | | | | | | | | | | 39.7 | 78.3 |
| | Min | 1,818 | | 936 | 1,703 | 2,463 | 3,221 | 3,977 | | | | | | | | | | | | | | | | |
| | End | 2,884 | | 1,214 | 2,660 | 4,103 | 5,543 | 6,980 | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G4x03.0-SR1 | Start | 12,531 | | | | | | | | | | | | | | | 6,194 | 7,392 | 8,591 | 9,793 | 11,000 | 11,606 | 274.5 | 344.7 |
| | Min | 5,645 | | | | | | | | | | | | | | | 2,399 | 3,062 | 3,716 | 4,368 | 5,018 | 5,342 | | |
| | End | 9,036 | | | | | | | | | | | | | | | 2,712 | 3,906 | 5,103 | 6,302 | 7,506 | 8,110 | | |
| G4x03.5-SR1 | Start | 12,492 | | | | | | | | | | | 6,872 | 8,682 | 10,489 | 12,294 | | | | | | | 185.3 | 241.0 |
| | Min | 5,632 | | | | | | | | | | | 2,722 | 3,707 | 4,679 | 5,646 | | | | | | | | |
| | End | 8,998 | | | | | | | | | | | 3,388 | 5,193 | 6,996 | 8,796 | | | | | | | | |
| G4x04.0-SR1 | Start | 12,453 | | | | | | | | | 8,154 | 10,679 | 13,197 | | | | | | | | | | 134.8 | 175.3 |
| | Min | 5,618 | | | | | | | | | 3,393 | 4,746 | 6,088 | | | | | | | | | | | |
| | End | 8,959 | | | | | | | | | 4,667 | 7,185 | 9,697 | | | | | | | | | | | |
| G4x04.5-SR1 | Start | 12,410 | | | | | | | 7,022 | 10,348 | 13,662 | | | | | | | | | | | | 102.9 | 133.9 |
| | Min | 5,603 | | | | | | | 2,776 | 4,563 | 6,325 | | | | | | | | | | | | | |
| | End | 8,915 | | | | | | | 3,537 | 6,855 | 10,161 | | | | | | | | | | | | | |
| G4x05.0-SR1 | Start | 12,370 | | | | | | 7,237 | 11,474 | | | | | | | | | | | | | | 81.4 | 105.9 |
| | Min | 5,589 | | | | | | 2,888 | 5,151 | | | | | | | | | | | | | | | |
| | End | 8,876 | | | | | | 3,752 | 7,978 | | | | | | | | | | | | | | | |
| G4x06.0-SR1 | Start | 12,292 | | | | 9,158 | 12,326 | | | | | | | | | | | | | | | | 54.9 | 71.4 |
| | Min | 5,561 | | | | 3,917 | 5,595 | | | | | | | | | | | | | | | | | |
| | End | 8,798 | | | | 5,668 | 8,829 | | | | | | | | | | | | | | | | | |
| G4x03.0-SR2 | Start | 10,926 | | | | | | | | | | | | | | 6,446 | 7,643 | 8,840 | 10,040 | 11,242 | 12,449 | 13,054 | 240.3 | 344.7 |
| | Min | 4,846 | | | | | | | | | | | | | | 2,573 | 3,231 | 3,881 | 4,530 | 5,177 | 5,825 | 6,149 | | |
| | End | 7,591 | | | | | | | | | | | | | | 3,119 | 4,312 | 5,507 | 6,703 | 7,903 | 9,106 | 9,710 | | |
| G4x03.5-SR2 | Start | 10,888 | | | | | | | | | | 6,506 | 8,321 | 10,131 | 11,937 | 13,742 | | | | | | | 162.2 | 241.0 |
| | Min | 4,833 | | | | | | | | | | 2,560 | 3,547 | 4,520 | 5,488 | 6,452 | | | | | | | | |
| | End | 7,552 | | | | | | | | | | 3,178 | 4,988 | 6,794 | 8,596 | 10,397 | | | | | | | | |
| G4x04.0-SR2 | Start | 10,849 | | | | | | | | 7,070 | 9,603 | 12,127 | 14,646 | | | | | | | | | | 118.0 | 175.3 |
| | Min | 4,819 | | | | | | | | 2,848 | 4,209 | 5,555 | 6,892 | | | | | | | | | | | |
| | End | 7,514 | | | | | | | | 3,741 | 6,267 | 8,786 | 11,298 | | | | | | | | | | | |
| G4x04.5-SR2 | Start | 10,805 | | | | | | | 8,470 | 11,797 | 15,110 | | | | | | | | | | | | 90.1 | 133.9 |
| | Min | 4,804 | | | | | | | 3,600 | 5,372 | 7,130 | | | | | | | | | | | | | |
| | End | 7,470 | | | | | | | 5,138 | 8,456 | 11,761 | | | | | | | | | | | | | |
| G4x05.0-SR2 | Start | 10,766 | | | | | 6,561 | 8,686 | 12,922 | | | | | | | | | | | | | | 71.3 | 105.9 |
| | Min | 4,790 | | | | | 2,568 | 3,710 | 5,958 | | | | | | | | | | | | | | | |
| | End | 7,431 | | | | | 3,233 | 5,353 | 9,579 | | | | | | | | | | | | | | | |
| G4x06.0-SR2 | Start | 10,688 | | | 7,431 | 10,606 | 13,775 | | | | | | | | | | | | | | | | 48.1 | 71.4 |
| | Min | 4,762 | | | 3,041 | 4,730 | 6,401 | | | | | | | | | | | | | | | | | |
| | End | 7,353 | | | 4,101 | 7,268 | 10,429 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G4x03.0-SR3 | Start | 9,169 | | | | | | | | | | | | 5,273 | 6,471 | 7,669 | 8,865 | 10,063 | 11,262 | 12,464 | 13,671 | 14,277 | 202.9 | 344.7 |
| | Min | 4,077 | | | | | | | | | | | | 2,084 | 2,742 | 3,393 | 4,040 | 4,684 | 5,328 | 5,973 | 6,618 | 6,941 | | |
| | End | 6,372 | | | | | | | | | | | | 2,482 | 3,678 | 4,872 | 6,066 | 7,260 | 8,457 | 9,656 | 10,860 | 11,464 | | |
| G4x03.5-SR3 | Start | 9,130 | | | | | | | | | 5,907 | 7,728 | 9,543 | 11,353 | 13,160 | 14,964 | | | | | | | 136.9 | 241.0 |
| | Min | 4,064 | | | | | | | | | 2,398 | 3,381 | 4,352 | 5,319 | 6,282 | 7,244 | | | | | | | | |
| | End | 6,333 | | | | | | | | | 3,115 | 4,932 | 6,742 | 8,547 | 10,350 | 12,150 | | | | | | | | |
| G4x04.0-SR3 | Start | 9,092 | | | | | | | 5,749 | 8,292 | 10,825 | 13,350 | 15,868 | | | | | | | | | | 99.6 | 175.3 |
| | Min | 4,050 | | | | | | | 2,298 | 3,663 | 5,010 | 6,349 | 7,683 | | | | | | | | | | | |
| | End | 6,295 | | | | | | | 2,958 | 5,494 | 8,021 | 10,539 | 13,051 | | | | | | | | | | | |
| G4x04.5-SR3 | Start | 9,048 | | | | | | 6,351 | 9,692 | 13,019 | 16,333 | | | | | | | | | | | | 76.1 | 133.9 |
| | Min | 4,035 | | | | | | 2,624 | 4,405 | 6,167 | 7,920 | | | | | | | | | | | | | |
| | End | 6,251 | | | | | | 3,558 | 6,891 | 10,209 | 13,515 | | | | | | | | | | | | | |
| G4x05.0-SR3 | Start | 9,009 | | | | 5,653 | 7,783 | 9,908 | 14,145 | | | | | | | | | | | | | | 60.2 | 105.9 |
| | Min | 4,021 | | | | 2,247 | 3,387 | 4,514 | 6,750 | | | | | | | | | | | | | | | |
| | End | 6,212 | | | | 2,862 | 4,987 | 7,106 | 11,332 | | | | | | | | | | | | | | | |
| G4x06.0-SR3 | Start | 8,930 | | 5,472 | 8,654 | 11,828 | 14,997 | | | | | | | | | | | | | | | | 40.6 | 71.4 |
| | Min | 3,993 | | 2,156 | 3,853 | 5,527 | 7,193 | | | | | | | | | | | | | | | | | |
| | End | 6,133 | | 2,681 | 5,855 | 9,022 | 12,183 | | | | | | | | | | | | | | | | | |
| G4x02.5-SR4 | Start | 7,573 | | | | | | | | | | | | | | | | 3,942 | 4,628 | 5,318 | 6,011 | 6,360 | 283.5 | 344.7 |
| | Min | 3,398 | | | | | | | | | | | | | | | | 1,591 | 1,974 | 2,354 | 2,733 | 2,923 | | |
| | End | 5,356 | | | | | | | | | | | | | | | | 1,731 | 2,416 | 3,104 | 3,796 | 4,143 | | |
| G4x03.0-SR4 | Start | 7,534 | | | | | | | | | | 3,922 | 5,128 | 6,330 | 7,529 | 8,726 | 9,922 | 11,120 | 12,319 | 13,521 | 14,728 | 15,334 | 168.0 | 344.7 |
| | Min | 3,385 | | | | | | | | | | 1,514 | 2,177 | 2,829 | 3,475 | 4,119 | 4,761 | 5,403 | 6,045 | 6,688 | 7,332 | 7,654 | | |
| | End | 5,317 | | | | | | | | | | 1,712 | 2,915 | 4,113 | 5,309 | 6,504 | 7,697 | 8,892 | 10,088 | 11,287 | 12,491 | 13,095 | | |
| G4x03.5-SR4 | Start | 7,496 | | | | | | | | 5,136 | 6,965 | 8,785 | 10,600 | 12,410 | 14,217 | 16,022 | | | | | | | 113.4 | 241.0 |
| | Min | 3,371 | | | | | | | | 2,155 | 3,136 | 4,107 | 5,073 | 6,036 | 6,997 | 7,956 | | | | | | | | |
| | End | 5,279 | | | | | | | | 2,923 | 4,747 | 6,563 | 8,373 | 10,179 | 11,981 | 13,781 | | | | | | | | |
| G4x04.0-SR4 | Start | 7,457 | | | | | | 4,253 | 6,807 | 9,349 | 11,882 | 14,407 | 16,925 | | | | | | | | | | 82.5 | 175.3 |
| | Min | 3,358 | | | | | | 1,669 | 3,038 | 4,387 | 5,727 | 7,063 | 8,395 | | | | | | | | | | | |
| | End | 5,240 | | | | | | 2,042 | 4,589 | 7,125 | 9,652 | 12,170 | 14,682 | | | | | | | | | | | |
| G4x04.5-SR4 | Start | 7,413 | | | | 4,050 | 5,731 | 7,408 | 10,750 | 14,076 | 17,390 | | | | | | | | | | | | 63.0 | 133.9 |
| | Min | 3,342 | | | | 1,561 | 2,467 | 3,358 | 5,125 | 6,882 | 8,632 | | | | | | | | | | | | | |
| | End | 5,196 | | | | 1,839 | 3,516 | 5,189 | 8,522 | 11,841 | 15,146 | | | | | | | | | | | | | |
| G4x05.0-SR4 | Start | 7,374 | | | 4,576 | 6,711 | 8,840 | 10,965 | 15,202 | | | | | | | | | | | | | | 49.8 | 105.9 |
| | Min | 3,329 | | | 1,849 | 2,988 | 4,113 | 5,233 | 7,464 | | | | | | | | | | | | | | | |
| | End | 5,157 | | | 2,364 | 4,493 | 6,618 | 8,738 | 12,963 | | | | | | | | | | | | | | | |
| G4x06.0-SR4 | Start | 7,295 | | 6,530 | 9,711 | 12,886 | 16,055 | | | | | | | | | | | | | | | | 33.6 | 71.4 |
| | Min | 3,301 | | 2,899 | 4,576 | 6,243 | 7,906 | | | | | | | | | | | | | | | | | |
| | End | 5,079 | | 4,313 | 7,486 | 10,653 | 13,814 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G5x04.0-SR1 | Start | 28,500 | | | | | | | | | | | | | | | 17,676 | 20,427 | 23,184 | 25,947 | 28,721 | 30,113 | | |
| | Min | 11,971 | | | | | | | | | | | | | | | 6,420 | 7,966 | 9,487 | 10,995 | 12,499 | 13,251 | 270.0 | 344.7 |
| | End | 17,726 | | | | | | | | | | | | | | | 6,913 | 9,659 | 12,409 | 15,167 | 17,936 | 19,324 | | |
| G5x04.5-SR1 | Start | 28,449 | | | | | | | | | | | | 19,708 | 23,491 | 27,269 | 31,046 | | | | | | | |
| | Min | 11,953 | | | | | | | | | | | | 7,460 | 9,542 | 11,595 | 13,634 | | | | | | 199.4 | 261.9 |
| | End | 17,676 | | | | | | | | | | | | 8,941 | 12,716 | 16,486 | 20,255 | | | | | | | |
| G5x05.0-SR1 | Start | 28,398 | | | | | | | | | | 21,332 | 26,283 | 31,223 | | | | | | | | | | |
| | Min | 11,935 | | | | | | | | | | 8,293 | 10,983 | 13,642 | | | | | | | | | 154.3 | 201.3 |
| | End | 17,625 | | | | | | | | | | 10,561 | 15,502 | 20,432 | | | | | | | | | | |
| G5x06.0-SR1 | Start | 28,297 | | | | | | | 19,728 | 27,411 | | | | | | | | | | | | | | |
| | Min | 11,899 | | | | | | | 7,355 | 11,515 | | | | | | | | | | | | | 101.3 | 133.0 |
| | End | 17,523 | | | | | | | 8,961 | 16,628 | | | | | | | | | | | | | | |
| G5x07.0-SR1 | Start | 28,195 | | | | | 19,193 | 24,648 | | | | | | | | | | | | | | | | |
| | Min | 11,863 | | | | | 7,047 | 10,009 | | | | | | | | | | | | | | | 72.0 | 94.6 |
| | End | 17,422 | | | | | 8,427 | 13,870 | | | | | | | | | | | | | | | | |
| G5x08.0-SR1 | Start | 28,070 | | | | 24,588 | 31,863 | | | | | | | | | | | | | | | | | |
| | Min | 11,819 | | | | 9,988 | 13,867 | | | | | | | | | | | | | | | | 54.0 | 70.9 |
| | End | 17,297 | | | | 13,811 | 21,071 | | | | | | | | | | | | | | | | | |
| G5x04.0-SR2 | Start | 25,514 | | | | | | | | | | | | | | 17,732 | 20,482 | 23,234 | 25,990 | 28,754 | 31,528 | 32,919 | | |
| | Min | 10,438 | | | | | | | | | | | | | | 6,479 | 8,020 | 9,537 | 11,042 | 12,541 | 14,037 | 14,786 | 242.3 | 344.7 |
| | End | 14,925 | | | | | | | | | | | | | | 7,148 | 9,893 | 12,639 | 15,390 | 18,148 | 20,916 | 22,305 | | |
| G5x04.5-SR2 | Start | 25,464 | | | | | | | | | | | 18,725 | 22,515 | 26,297 | 30,075 | 33,852 | | | | | | | |
| | Min | 10,420 | | | | | | | | | | | 6,946 | 9,038 | 11,096 | 13,137 | 15,169 | | | | | | 178.9 | 261.9 |
| | End | 14,875 | | | | | | | | | | | 8,139 | 11,922 | 15,696 | 19,467 | 23,236 | | | | | | | |
| G5x05.0-SR2 | Start | 25,413 | | | | | | | | | 19,172 | 24,138 | 29,089 | 34,029 | | | | | | | | | | |
| | Min | 10,402 | | | | | | | | | 7,143 | 9,859 | 12,529 | 15,177 | | | | | | | | | 138.5 | 201.3 |
| | End | 14,824 | | | | | | | | | 8,586 | 13,542 | 18,483 | 23,413 | | | | | | | | | | |
| G5x06.0-SR2 | Start | 25,311 | | | | | | | 22,534 | 30,217 | | | | | | | | | | | | | | |
| | Min | 10,366 | | | | | | | 8,935 | 13,058 | | | | | | | | | | | | | 90.9 | 133.0 |
| | End | 14,722 | | | | | | | 11,941 | 19,608 | | | | | | | | | | | | | | |
| G5x07.0-SR2 | Start | 25,210 | | | | | 21,999 | 27,454 | | | | | | | | | | | | | | | | |
| | Min | 10,330 | | | | | 8,633 | 11,561 | | | | | | | | | | | | | | | 64.6 | 94.6 |
| | End | 14,621 | | | | | 11,407 | 16,851 | | | | | | | | | | | | | | | | |
| G5x08.0-SR2 | Start | 25,085 | | | 20,104 | 27,395 | 34,670 | | | | | | | | | | | | | | | | | |
| | Min | 10,285 | | | 7,617 | 11,540 | 15,402 | | | | | | | | | | | | | | | | 48.5 | 70.9 |
| | End | 14,496 | | | 9,516 | 16,791 | 24,052 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G5x03.5-SR3 | Start | 20,497 | | | | | | | | | | | | | | | | 12,978 | 14,830 | 16,689 | 18,556 | 19,495 | 284.1 | 344.7 |
| | Min | 8,573 | | | | | | | | | | | | | | | | 4,812 | 5,859 | 6,892 | 7,919 | 8,432 | | |
| | End | 12,559 | | | | | | | | | | | | | | | | 5,047 | 6,895 | 8,750 | 10,614 | 11,550 | | |
| G5x04.0-SR3 | Start | 20,446 | | | | | | | | | | | | 14,647 | 17,403 | 20,154 | 22,904 | 25,656 | 28,412 | 31,176 | 33,950 | 35,341 | 195.3 | 344.7 |
| | Min | 8,555 | | | | | | | | | | | | 5,626 | 7,147 | 8,649 | 10,140 | 11,626 | 13,110 | 14,594 | 16,080 | 16,824 | | |
| | End | 12,508 | | | | | | | | | | | | 6,713 | 9,462 | 12,208 | 14,953 | 17,699 | 20,450 | 23,208 | 25,976 | 27,364 | | |
| G5x04.5-SR3 | Start | 20,395 | | | | | | | | | 13,533 | 17,347 | 21,147 | 24,937 | 28,719 | 32,497 | 36,274 | | | | | | 144.2 | 261.9 |
| | Min | 8,537 | | | | | | | | | 4,937 | 7,040 | 9,097 | 11,136 | 13,164 | 15,185 | 17,204 | | | | | | | |
| | End | 12,457 | | | | | | | | | 5,601 | 9,407 | 13,199 | 16,981 | 20,756 | 24,527 | 28,296 | | | | | | | |
| G5x05.0-SR3 | Start | 20,344 | | | | | | | | 16,611 | 21,594 | 26,560 | 31,512 | 36,451 | | | | | | | | | 111.6 | 201.3 |
| | Min | 8,519 | | | | | | | | 6,600 | 9,288 | 11,943 | 14,582 | 17,212 | | | | | | | | | | |
| | End | 12,407 | | | | | | | | 8,672 | 13,646 | 18,601 | 23,543 | 28,472 | | | | | | | | | | |
| G5x06.0-SR3 | Start | 20,243 | | | | | 13,378 | 17,245 | 24,956 | 32,639 | | | | | | | | | | | | | 73.2 | 133.0 |
| | Min | 8,483 | | | | | 4,800 | 6,916 | 11,035 | 15,106 | | | | | | | | | | | | | | |
| | End | 12,305 | | | | | 5,446 | 9,305 | 17,001 | 24,668 | | | | | | | | | | | | | | |
| G5x07.0-SR3 | Start | 20,141 | | | 13,483 | 18,957 | 24,421 | 29,876 | | | | | | | | | | | | | | | 52.1 | 94.6 |
| | Min | 8,447 | | | 4,862 | 7,832 | 10,739 | 13,623 | | | | | | | | | | | | | | | | |
| | End | 12,204 | | | 5,551 | 11,014 | 16,467 | 21,910 | | | | | | | | | | | | | | | | |
| G5x08.0-SR3 | Start | 20,016 | | 15,220 | 22,526 | 29,817 | 37,092 | | | | | | | | | | | | | | | | 39.1 | 70.9 |
| | Min | 8,402 | | 5,834 | 9,747 | 13,603 | 17,436 | | | | | | | | | | | | | | | | | |
| | End | 12,079 | | 7,284 | 14,576 | 21,851 | 29,111 | | | | | | | | | | | | | | | | | |
| G5x03.5-SR4 | Start | 17,040 | | | | | | | | | | | | | | 11,276 | 13,122 | 14,970 | 16,822 | 18,681 | 20,549 | 21,487 | 237.4 | 344.7 |
| | Min | 7,183 | | | | | | | | | | | | | | 4,318 | 5,352 | 6,374 | 7,389 | 8,402 | 9,415 | 9,922 | | |
| | End | 10,570 | | | | | | | | | | | | | | 4,811 | 6,654 | 8,498 | 10,346 | 12,201 | 14,065 | 15,001 | | |
| G5x04.0-SR4 | Start | 16,989 | | | | | | | | | | 11,105 | 13,877 | 16,640 | 19,395 | 22,146 | 24,896 | 27,648 | 30,405 | 33,168 | 35,942 | 37,333 | 163.2 | 344.7 |
| | Min | 7,165 | | | | | | | | | | 4,120 | 5,656 | 7,161 | 8,653 | 10,137 | 11,617 | 13,096 | 14,574 | 16,053 | 17,536 | 18,279 | | |
| | End | 10,519 | | | | | | | | | | 4,641 | 7,407 | 10,164 | 12,913 | 15,659 | 18,404 | 21,150 | 23,901 | 26,659 | 29,427 | 30,815 | | |
| G5x04.5-SR4 | Start | 16,938 | | | | | | | | 11,695 | 15,525 | 19,339 | 23,139 | 26,929 | 30,712 | 34,490 | 38,267 | | | | | | 120.5 | 261.9 |
| | Min | 7,147 | | | | | | | | 4,403 | 6,494 | 8,547 | 10,583 | 12,608 | 14,628 | 16,643 | 18,658 | | | | | | | |
| | End | 10,469 | | | | | | | | 5,229 | 9,052 | 12,858 | 16,650 | 20,432 | 24,207 | 27,978 | 31,747 | | | | | | | |
| G5x05.0-SR4 | Start | 16,888 | | | | | | | 13,598 | 18,603 | 23,587 | 28,553 | 33,504 | 38,444 | | | | | | | | | 93.3 | 201.3 |
| | Min | 7,129 | | | | | | | 5,423 | 8,115 | 10,772 | 13,412 | 16,041 | 18,666 | | | | | | | | | | |
| | End | 10,418 | | | | | | | 7,128 | 12,123 | 17,097 | 22,052 | 26,994 | 31,923 | | | | | | | | | | |
| G5x06.0-SR4 | Start | 16,786 | | | | 11,495 | 15,370 | 19,238 | 26,949 | 34,632 | | | | | | | | | | | | | 61.2 | 133.0 |
| | Min | 7,094 | | | | 4,263 | 6,363 | 8,425 | 12,507 | 16,564 | | | | | | | | | | | | | | |
| | End | 10,317 | | | | 5,029 | 8,897 | 12,756 | 20,452 | 28,119 | | | | | | | | | | | | | | |
| G5x07.0-SR4 | Start | 16,684 | | | 15,475 | 20,950 | 26,414 | 31,868 | | | | | | | | | | | | | | | 43.5 | 94.6 |
| | Min | 7,058 | | | 6,422 | 9,330 | 12,213 | 15,085 | | | | | | | | | | | | | | | | |
| | End | 10,215 | | | 9,002 | 14,465 | 19,918 | 25,361 | | | | | | | | | | | | | | | | |
| G5x08.0-SR4 | Start | 16,559 | | 17,212 | 24,519 | 31,809 | 39,084 | | | | | | | | | | | | | | | | 32.6 | 70.9 |
| | Min | 7,013 | | 7,364 | 11,227 | 15,064 | 18,889 | | | | | | | | | | | | | | | | | |
| | End | 10,090 | | 10,735 | 18,027 | 25,302 | 32,562 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G7x04.5-SR1 | Start | 56,592 | | | | | | | | | | | | | | | | | | | 39,255 | 41,432 | 342.6 | 344.7 |
| | Min | 23,211 | | | | | | | | | | | | | | | | | | | 14,417 | 15,636 | | |
| | End | 33,566 | | | | | | | | | | | | | | | | | | | 16,242 | 18,415 | | |
| G7x05.0-SR1 | Start | 56,529 | | | | | | | | | | | | | | | 40,341 | 46,065 | 51,796 | 57,538 | 63,294 | 66,179 | 261.0 | 337.0 |
| | Min | 23,189 | | | | | | | | | | | | | | | 14,874 | 18,047 | 21,179 | 24,290 | 27,391 | 28,941 | | |
| | End | 33,503 | | | | | | | | | | | | | | | 17,326 | 23,038 | 28,757 | 34,486 | 40,231 | 43,110 | | |
| G7x06.0-SR1 | Start | 56,404 | | | | | | | | | | 37,932 | 46,966 | 55,984 | 64,990 | | | | | | | | 168.2 | 217.2 |
| | Min | 23,144 | | | | | | | | | | 13,329 | 18,334 | 23,223 | 28,063 | | | | | | | | | |
| | End | 33,379 | | | | | | | | | | 14,922 | 23,937 | 32,936 | 41,924 | | | | | | | | | |
| G7x07.0-SR1 | Start | 56,280 | | | | | | | | 43,103 | 56,073 | 69,014 | | | | | | | | | | | 118.4 | 152.9 |
| | Min | 23,100 | | | | | | | | 16,127 | 23,158 | 30,076 | | | | | | | | | | | | |
| | End | 33,254 | | | | | | | | 20,082 | 33,025 | 45,939 | | | | | | | | | | | | |
| G7x08.0-SR1 | Start | 56,126 | | | | | | | 52,304 | | | | | | | | | | | | | | 88.3 | 114.0 |
| | Min | 23,046 | | | | | | | 21,124 | | | | | | | | | | | | | | | |
| | End | 33,101 | | | | | | | 29,264 | | | | | | | | | | | | | | | |
| G7x09.0-SR1 | Start | 55,997 | | | | | 43,854 | 55,160 | | | | | | | | | | | | | | | 68.5 | 88.5 |
| | Min | 23,000 | | | | | 16,518 | 22,630 | | | | | | | | | | | | | | | | |
| | End | 32,972 | | | | | 20,831 | 32,114 | | | | | | | | | | | | | | | | |
| G7x10.0-SR1 | Start | 55,869 | | | | 49,558 | 63,737 | | | | | | | | | | | | | | | | 54.8 | 70.8 |
| | Min | 22,954 | | | | 19,610 | 27,192 | | | | | | | | | | | | | | | | | |
| | End | 32,844 | | | | 26,523 | 40,672 | | | | | | | | | | | | | | | | | |
| G7x04.5-SR2 | Start | 49,920 | | | | | | | | | | | | | | | | | 34,416 | 38,744 | 43,086 | 45,264 | 302.8 | 344.7 |
| | Min | 20,533 | | | | | | | | | | | | | | | | | 12,647 | 15,063 | 17,449 | 18,636 | | |
| | End | 29,742 | | | | | | | | | | | | | | | | | 14,249 | 18,568 | 22,901 | 25,074 | | |
| G7x05.0-SR2 | Start | 49,858 | | | | | | | | | | | | | 32,728 | 38,451 | 44,173 | 49,897 | 55,628 | 61,369 | 67,126 | 70,011 | 230.7 | 337.0 |
| | Min | 20,511 | | | | | | | | | | | | | 11,545 | 14,752 | 17,893 | 21,000 | 24,093 | 27,177 | 30,258 | 31,799 | | |
| | End | 29,679 | | | | | | | | | | | | | 12,565 | 18,276 | 23,986 | 29,698 | 35,417 | 41,146 | 46,891 | 49,770 | | |
| G7x06.0-SR2 | Start | 49,733 | | | | | | | | | 32,708 | 41,764 | 50,798 | 59,816 | 68,822 | | | | | | | | 148.7 | 217.2 |
| | Min | 20,467 | | | | | | | | | 11,382 | 16,397 | 21,283 | 26,118 | 30,926 | | | | | | | | | |
| | End | 29,555 | | | | | | | | | 12,545 | 21,581 | 30,597 | 39,596 | 48,583 | | | | | | | | | |
| G7x07.0-SR2 | Start | 49,608 | | | | | | | 33,930 | 46,934 | 59,904 | 72,846 | | | | | | | | | | | 104.7 | 152.9 |
| | Min | 20,423 | | | | | | | 12,013 | 19,116 | 26,053 | 32,931 | | | | | | | | | | | | |
| | End | 29,430 | | | | | | | 13,764 | 26,741 | 39,684 | 52,599 | | | | | | | | | | | | |
| G7x08.0-SR2 | Start | 49,455 | | | | | | 38,670 | 56,135 | | | | | | | | | | | | | | 78.0 | 114.0 |
| | Min | 20,368 | | | | | | 14,640 | 24,039 | | | | | | | | | | | | | | | |
| | End | 29,277 | | | | | | 18,494 | 35,923 | | | | | | | | | | | | | | | |
| G7x09.0-SR2 | Start | 49,326 | | | | 36,359 | 47,685 | 58,992 | | | | | | | | | | | | | | | 60.6 | 88.5 |
| | Min | 20,322 | | | | 13,361 | 19,500 | 25,530 | | | | | | | | | | | | | | | | |
| | End | 29,148 | | | | 16,188 | 27,491 | 38,773 | | | | | | | | | | | | | | | | |
| G7x10.0-SR2 | Start | 49,197 | | | 39,188 | 53,390 | 67,568 | | | | | | | | | | | | | | | | 48.4 | 70.8 |
| | Min | 20,277 | | | 14,915 | 22,542 | 30,061 | | | | | | | | | | | | | | | | | |
| | End | 29,020 | | | 19,011 | 33,183 | 47,332 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G7x04.5-SR3 | Start | 41,051 | | | | | | | | | | | | | | 26,576 | 30,885 | 35,197 | 39,515 | 43,843 | 48,186 | 50,363 | 249.9 | 344.7 |
| | Min | 16,972 | | | | | | | | | | | | | | 9,481 | 11,905 | 14,283 | 16,637 | 18,982 | 21,322 | 22,492 | | |
| | End | 24,653 | | | | | | | | | | | | | | 10,191 | 14,491 | 18,794 | 23,103 | 27,422 | 31,755 | 33,928 | | |
| G7x05.0-SR3 | Start | 40,989 | | | | | | | | | | | 26,358 | 32,098 | 37,827 | 43,551 | 49,272 | 54,996 | 60,727 | 66,468 | 72,225 | 75,110 | 190.4 | 337.0 |
| | Min | 16,950 | | | | | | | | | | | 9,241 | 12,450 | 15,582 | 18,679 | 21,759 | 24,829 | 27,895 | 30,958 | 34,026 | 35,561 | | |
| | End | 24,590 | | | | | | | | | | | 9,974 | 15,701 | 21,419 | 27,130 | 32,840 | 38,552 | 44,271 | 50,000 | 55,745 | 58,624 | | |
| G7x06.0-SR3 | Start | 40,864 | | | | | | | | 28,726 | 37,807 | 46,863 | 55,897 | 64,915 | 73,921 | | | | | | | | 122.7 | 217.2 |
| | Min | 16,906 | | | | | | | | 10,466 | 15,427 | 20,289 | 25,108 | 29,906 | 34,692 | | | | | | | | | |
| | End | 24,466 | | | | | | | | 12,337 | 21,399 | 30,435 | 39,451 | 48,450 | 57,437 | | | | | | | | | |
| G7x07.0-SR3 | Start | 40,739 | | | | | | | 39,029 | 52,033 | 65,004 | 77,945 | | | | | | | | | | | 86.4 | 152.9 |
| | Min | 16,861 | | | | | | | 16,030 | 22,966 | 29,842 | 36,687 | | | | | | | | | | | | |
| | End | 24,341 | | | | | | | 22,618 | 35,595 | 48,538 | 61,453 | | | | | | | | | | | | |
| G7x08.0-SR3 | Start | 40,585 | | | | | 35,012 | 43,769 | 61,235 | | | | | | | | | | | | | | 64.4 | 114.0 |
| | Min | 16,807 | | | | | 13,873 | 18,570 | 27,842 | | | | | | | | | | | | | | | |
| | End | 24,188 | | | | | 18,609 | 27,348 | 44,777 | | | | | | | | | | | | | | | |
| G7x09.0-SR3 | Start | 40,457 | | | 30,110 | 41,458 | 52,784 | 64,091 | | | | | | | | | | | | | | | 50.0 | 88.5 |
| | Min | 16,761 | | | 11,207 | 17,327 | 23,345 | 29,321 | | | | | | | | | | | | | | | | |
| | End | 24,059 | | | 13,718 | 25,042 | 36,345 | 47,627 | | | | | | | | | | | | | | | | |
| G7x10.0-SR3 | Start | 40,328 | | 30,061 | 44,287 | 58,489 | 72,667 | | | | | | | | | | | | | | | | 40.0 | 70.8 |
| | Min | 16,715 | | 11,190 | 18,838 | 26,356 | 33,829 | | | | | | | | | | | | | | | | | |
| | End | 23,931 | | 13,669 | 27,865 | 42,037 | 56,186 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G7x04.0-SR4 | Start | 34,442 | | | | | | | | | | | | | | | | 21,342 | 24,398 | 27,463 | 30,542 | 32,087 | 291.8 | 344.7 |
| | Min | 14,317 | | | | | | | | | | | | | | | | 7,632 | 9,369 | 11,074 | 12,765 | 13,609 | | |
| | End | 20,891 | | | | | | | | | | | | | | | | 7,804 | 10,853 | 13,912 | 16,984 | 18,527 | | |
| G7x04.5-SR4 | Start | 34,380 | | | | | | | | | | | | 21,780 | 26,096 | 30,408 | 34,717 | 39,029 | 43,347 | 47,675 | 52,017 | 54,195 | 210.1 | 344.7 |
| | Min | 14,295 | | | | | | | | | | | | 7,726 | 10,150 | 12,519 | 14,865 | 17,197 | 19,524 | 21,847 | 24,172 | 25,335 | | |
| | End | 20,829 | | | | | | | | | | | | 8,241 | 12,548 | 16,851 | 21,151 | 25,454 | 29,763 | 34,082 | 38,415 | 40,588 | | |
| G7x05.0-SR4 | Start | 34,317 | | | | | | | | | | 24,436 | 30,190 | 35,929 | 41,659 | 47,382 | 53,104 | 58,828 | 64,558 | 70,300 | 76,057 | 78,942 | 160.1 | 337.0 |
| | Min | 14,273 | | | | | | | | | | 9,132 | 12,291 | 15,397 | 18,478 | 21,546 | 24,606 | 27,662 | 30,716 | 33,772 | 36,833 | 38,366 | | |
| | End | 20,766 | | | | | | | | | | 10,891 | 16,633 | 22,361 | 28,078 | 33,790 | 39,499 | 45,212 | 50,930 | 56,660 | 62,404 | 65,284 | | |
| G7x06.0-SR4 | Start | 34,193 | | | | | | | 23,446 | 32,558 | 41,639 | 50,694 | 59,729 | 68,746 | 77,753 | | | | | | | | 103.1 | 217.2 |
| | Min | 14,228 | | | | | | | 8,502 | 13,467 | 18,325 | 23,145 | 27,941 | 32,722 | 37,497 | | | | | | | | | |
| | End | 20,642 | | | | | | | 9,903 | 18,996 | 28,059 | 37,095 | 46,110 | 55,109 | 64,097 | | | | | | | | | |
| G7x07.0-SR4 | Start | 34,068 | | | | | 23,277 | 29,816 | 42,860 | 55,865 | 68,835 | 81,776 | | | | | | | | | | | 72.6 | 152.9 |
| | Min | 14,184 | | | | | 8,389 | 11,959 | 18,921 | 25,806 | 32,658 | 39,490 | | | | | | | | | | | | |
| | End | 20,517 | | | | | 9,735 | 16,260 | 29,277 | 42,255 | 55,198 | 68,112 | | | | | | | | | | | | |
| G7x08.0-SR4 | Start | 33,914 | | | | 30,067 | 38,843 | 47,601 | 65,066 | | | | | | | | | | | | | | 54.1 | 114.0 |
| | Min | 14,129 | | | | 12,106 | 16,795 | 21,437 | 30,663 | | | | | | | | | | | | | | | |
| | End | 20,364 | | | | 16,511 | 25,269 | 34,008 | 51,437 | | | | | | | | | | | | | | | |
| G7x09.0-SR4 | Start | 33,786 | | 22,572 | 33,942 | 45,290 | 56,616 | 67,922 | | | | | | | | | | | | | | | 42.0 | 88.5 |
| | Min | 14,084 | | 8,021 | 14,184 | 20,206 | 26,183 | 32,138 | | | | | | | | | | | | | | | | |
| | End | 20,235 | | 9,032 | 20,378 | 31,701 | 43,004 | 54,287 | | | | | | | | | | | | | | | | |
| G7x10.0-SR4 | Start | 33,657 | | 33,893 | 48,119 | 62,320 | 76,499 | | | | | | | | | | | | | | | | 33.6 | 70.8 |
| | Min | 14,038 | | 14,168 | 21,703 | 29,184 | 36,637 | | | | | | | | | | | | | | | | | |
| | End | 20,107 | | 20,329 | 34,525 | 48,697 | 62,846 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G8x06.0-SR1 | Start | 83,489 | | | | | | | | | | | | | 50,380 | 60,124 | 69,865 | 79,610 | 89,365 | 99,135 | | | 228.0 | 321.6 |
| | Min | 36,219 | | | | | | | | | | | | | 18,976 | 24,321 | 29,594 | 34,832 | 40,053 | 45,265 | | | | |
| | End | 56,003 | | | | | | | | | | | | | 22,921 | 32,647 | 42,370 | 52,096 | 61,832 | 71,583 | | | | |
| G8x07.0-SR1 | Start | 83,341 | | | | | | | | | | 57,889 | 72,276 | 86,641 | 100,989 | | | | | | | | 156.5 | 220.7 |
| | Min | 36,167 | | | | | | | | | | 22,895 | 30,652 | 38,329 | 45,966 | | | | | | | | | |
| | End | 55,856 | | | | | | | | | | 30,416 | 44,776 | 59,113 | 73,434 | | | | | | | | | |
| G8x08.0-SR1 | Start | 83,159 | | | | | | | | 60,534 | 80,180 | 99,771 | | | | | | | | | | | 114.9 | 162.0 |
| | Min | 36,103 | | | | | | | | 24,300 | 34,839 | 45,269 | | | | | | | | | | | | |
| | End | 55,674 | | | | | | | | 33,056 | 52,664 | 72,219 | | | | | | | | | | | | |
| G8x09.0-SR1 | Start | 83,007 | | | | | | | 70,927 | 96,661 | | | | | | | | | | | | | 88.3 | 124.5 |
| | Min | 36,049 | | | | | | | 29,812 | 43,495 | | | | | | | | | | | | | | |
| | End | 55,522 | | | | | | | 43,430 | 69,114 | | | | | | | | | | | | | | |
| G8x10.0-SR1 | Start | 82,854 | | | | | 55,722 | 72,039 | 104,599 | | | | | | | | | | | | | | 70.2 | 98.9 |
| | Min | 35,995 | | | | | 21,604 | 30,367 | 47,632 | | | | | | | | | | | | | | | |
| | End | 55,370 | | | | | 28,253 | 44,539 | 77,037 | | | | | | | | | | | | | | | |
| G8x12.0-SR1 | Start | 82,498 | | | 61,839 | 86,002 | 110,123 | | | | | | | | | | | | | | | | 47.5 | 67.0 |
| | Min | 35,870 | | | 24,923 | 37,786 | 50,525 | | | | | | | | | | | | | | | | | |
| | End | 55,014 | | | 34,359 | 58,476 | 82,551 | | | | | | | | | | | | | | | | | |
| G8x05.0-SR2 | Start | 67,189 | | | | | | | | | | | | | | | | | 39,740 | 45,626 | 51,531 | | 299.8 | 328.5 |
| | Min | 29,885 | | | | | | | | | | | | | | | | | 15,962 | 19,180 | 22,378 | | | |
| | End | 47,508 | | | | | | | | | | | | | | | | | 20,082 | 25,957 | 31,851 | | | |
| G8x06.0-SR2 | Start | 67,041 | | | | | | | | | | | 39,518 | 49,286 | 59,038 | 68,782 | 78,524 | 88,269 | 98,023 | 107,793 | | | 183.8 | 321.6 |
| | Min | 29,833 | | | | | | | | | | | 15,521 | 20,821 | 26,059 | 31,269 | 36,463 | 41,653 | 46,834 | 52,021 | | | | |
| | End | 47,360 | | | | | | | | | | | 19,861 | 29,610 | 39,344 | 49,069 | 58,792 | 68,519 | 78,254 | 88,006 | | | | |
| G8x07.0-SR2 | Start | 66,893 | | | | | | | | 37,677 | 52,130 | 66,547 | 80,935 | 95,299 | 109,648 | | | | | | | | 126.1 | 220.7 |
| | Min | 29,781 | | | | | | | | 14,384 | 22,187 | 29,873 | 37,510 | 45,122 | 52,719 | | | | | | | | | |
| | End | 47,213 | | | | | | | | 18,023 | 32,449 | 46,838 | 61,198 | 75,536 | 89,856 | | | | | | | | | |
| G8x08.0-SR2 | Start | 66,711 | | | | | | | 49,484 | 69,193 | 88,838 | 108,430 | | | | | | | | | | | 92.6 | 162.0 |
| | Min | 29,718 | | | | | | | 20,752 | 31,248 | 41,660 | 52,025 | | | | | | | | | | | | |
| | End | 47,031 | | | | | | | 29,807 | 49,479 | 69,087 | 88,641 | | | | | | | | | | | | |
| G8x09.0-SR2 | Start | 66,559 | | | | | 40,831 | 53,772 | 79,586 | 105,319 | | | | | | | | | | | | | 71.2 | 124.5 |
| | Min | 29,664 | | | | | 16,064 | 23,001 | 36,679 | 50,260 | | | | | | | | | | | | | | |
| | End | 46,879 | | | | | 21,171 | 34,087 | 59,852 | 85,536 | | | | | | | | | | | | | | |
| G8x10.0-SR2 | Start | 66,406 | | | | 48,037 | 64,381 | 80,698 | 113,257 | | | | | | | | | | | | | | 56.5 | 98.9 |
| | Min | 29,611 | | | | 19,929 | 28,613 | 37,228 | 54,378 | | | | | | | | | | | | | | | |
| | End | 46,726 | | | | 28,363 | 44,676 | 60,962 | 93,459 | | | | | | | | | | | | | | | |
| G8x12.0-SR2 | Start | 66,050 | | 46,291 | 70,498 | 94,661 | 118,782 | | | | | | | | | | | | | | | | 38.3 | 67.0 |
| | Min | 29,485 | | 19,028 | 31,861 | 44,584 | 57,262 | | | | | | | | | | | | | | | | | |
| | End | 46,371 | | 26,620 | 50,781 | 74,898 | 98,973 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G8x05.0-SR3 | Start | 56,882 | | | | | | | | | | | | | | 29,419 | 35,280 | 41,144 | 47,017 | 52,903 | 58,808 | | 254.5 | 328.5 |
| | Min | 25,339 | | | | | | | | | | | | | | 11,166 | 14,409 | 17,606 | 20,783 | 23,952 | 27,118 | | | |
| | End | 40,244 | | | | | | | | | | | | | | 12,810 | 18,659 | 24,512 | 30,373 | 36,248 | 42,142 | | | |
| G8x06.0-SR3 | Start | 56,734 | | | | | | | | | | 37,007 | 46,795 | 56,562 | 66,315 | 76,059 | 85,800 | 95,545 | 105,300 | 115,070 | | | 156.1 | 321.6 |
| | Min | 25,287 | | | | | | | | | | 15,078 | 20,351 | 25,575 | 30,774 | 35,962 | 41,139 | 46,317 | 51,490 | 56,668 | | | | |
| | End | 40,097 | | | | | | | | | | 20,383 | 30,152 | 39,900 | 49,634 | 59,360 | 69,083 | 78,809 | 88,545 | 98,297 | | | | |
| G8x07.0-SR3 | Start | 56,586 | | | | | | | | 44,953 | 59,407 | 73,824 | 88,211 | 102,576 | 116,924 | | | | | | | | 107.1 | 220.7 |
| | Min | 25,235 | | | | | | | | 19,239 | 26,929 | 34,571 | 42,183 | 49,781 | 57,365 | | | | | | | | | |
| | End | 39,949 | | | | | | | | 28,314 | 42,740 | 57,129 | 71,489 | 85,826 | 100,147 | | | | | | | | | |
| G8x08.0-SR3 | Start | 56,404 | | | | | | 36,977 | 56,760 | 76,469 | 96,115 | 115,707 | | | | | | | | | | | 78.6 | 162.0 |
| | Min | 25,171 | | | | | | 14,956 | 25,507 | 35,941 | 46,324 | 56,672 | | | | | | | | | | | | |
| | End | 39,768 | | | | | | 20,353 | 40,098 | 59,770 | 79,378 | 98,932 | | | | | | | | | | | | |
| G8x09.0-SR3 | Start | 56,252 | | | | 35,142 | 48,107 | 61,048 | 86,863 | 112,596 | | | | | | | | | | | | | 60.4 | 124.5 |
| | Min | 25,118 | | | | 13,951 | 20,883 | 27,737 | 41,354 | 54,910 | | | | | | | | | | | | | | |
| | End | 39,615 | | | | 18,521 | 31,462 | 44,378 | 70,143 | 95,827 | | | | | | | | | | | | | | |
| G8x10.0-SR3 | Start | 56,100 | | | 38,942 | 55,314 | 71,657 | 87,974 | 120,534 | | | | | | | | | | | | | | 48.0 | 98.9 |
| | Min | 25,064 | | | 15,997 | 24,693 | 33,314 | 41,902 | 59,021 | | | | | | | | | | | | | | | |
| | End | 39,463 | | | 22,314 | 38,654 | 54,967 | 71,252 | 103,750 | | | | | | | | | | | | | | | |
| G8x12.0-SR3 | Start | 55,743 | | 53,567 | 77,774 | 101,937 | 126,058 | | | | | | | | | | | | | | | | 32.5 | 67.0 |
| | Min | 24,939 | | 23,802 | 36,551 | 49,243 | 61,904 | | | | | | | | | | | | | | | | | |
| | End | 39,107 | | 36,911 | 61,072 | 85,189 | 109,264 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | |
| G10x07.0-SR1 | Start | 193,489 | | | | | | | | | | | | | | | | 129,593 | 147,007 | 164,445 | 181,916 | 190,666 | |
| | Min | 78,575 | | | | | | | | | | | | | | | | 44,841 | 54,627 | 64,221 | 73,716 | 78,447 | 296.1 | 344.7 |
| | End | 112,687 | | | | | | | | | | | | | | | | 48,840 | 66,221 | 83,625 | 101,062 | 109,796 | |
| G10x08.0-SR1 | Start | 193,251 | | | | | | | | | | | | | 152,718 | 176,864 | 201,005 | | | | | | |
| | Min | 78,489 | | | | | | | | | | | | | 57,670 | 70,892 | 83,954 | | | | | | 213.0 | 260.8 |
| | End | 112,448 | | | | | | | | | | | | | 71,921 | 96,020 | 120,114 | | | | | | |
| G10x09.0-SR1 | Start | 193,050 | | | | | | | | | | 143,363 | 175,498 | 207,582 | | | | | | | | | |
| | Min | 78,418 | | | | | | | | | | 52,170 | 69,785 | 87,096 | | | | | | | | | 161.6 | 195.8 |
| | End | 112,248 | | | | | | | | | | 62,584 | 94,656 | 126,678 | | | | | | | | | |
| G10x10.0-SR1 | Start | 192,850 | | | | | | | | 131,967 | 173,090 | 214,126 | | | | | | | | | | | |
| | Min | 78,346 | | | | | | | | 45,600 | 68,259 | 90,336 | | | | | | | | | | | 127.3 | 155.8 |
| | End | 112,048 | | | | | | | | 51,210 | 92,254 | 133,210 | | | | | | | | | | | |
| G10x12.0-SR1 | Start | 192,382 | | | | | | | 192,753 | | | | | | | | | | | | | | |
| | Min | 78,179 | | | | | | | 78,733 | | | | | | | | | | | | | | 85.3 | 104.5 |
| | End | 111,581 | | | | | | | 111,878 | | | | | | | | | | | | | | |
| G10x14.0-SR1 | Start | 191,969 | | | | 141,816 | 184,938 | | | | | | | | | | | | | | | | |
| | Min | 78,032 | | | | 50,977 | 74,425 | | | | | | | | | | | | | | | | 61.4 | 75.2 |
| | End | 111,169 | | | | 61,039 | 104,079 | | | | | | | | | | | | | | | | |
| G10x07.0-SR2 | Start | 155,732 | | | | | | | | | | | | | | 113,104 | 130,497 | 147,897 | 165,311 | 182,748 | 200,219 | 208,970 | |
| | Min | 64,460 | | | | | | | | | | | | | | 42,341 | 51,881 | 61,311 | 70,679 | 80,016 | 89,342 | 93,997 | 238.9 | 344.7 |
| | End | 94,417 | | | | | | | | | | | | | | 51,812 | 69,172 | 86,538 | 103,918 | 121,322 | 138,759 | 147,493 | |
| G10x08.0-SR2 | Start | 155,493 | | | | | | | | | | | 122,658 | 146,856 | 171,021 | 195,168 | 219,308 | | | | | | |
| | Min | 64,375 | | | | | | | | | | | 47,479 | 60,629 | 73,631 | 86,560 | 99,441 | | | | | | 171.9 | 260.8 |
| | End | 94,179 | | | | | | | | | | | 61,348 | 85,499 | 109,618 | 133,717 | 157,811 | | | | | | |
| G10x09.0-SR2 | Start | 155,292 | | | | | | | | | 129,467 | 161,667 | 193,801 | 225,885 | | | | | | | | | |
| | Min | 64,304 | | | | | | | | | 50,953 | 68,307 | 85,474 | 102,547 | | | | | | | | | 130.4 | 195.8 |
| | End | 93,979 | | | | | | | | | 68,143 | 100,281 | 132,354 | 164,376 | | | | | | | | | |
| G10x10.0-SR2 | Start | 155,092 | | | | | | | 109,044 | 150,271 | 191,394 | 232,429 | | | | | | | | | | | |
| | Min | 64,233 | | | | | | | 39,648 | 62,029 | 83,975 | 105,760 | | | | | | | | | | | 102.7 | 155.8 |
| | End | 93,779 | | | | | | | 47,760 | 88,907 | 129,951 | 170,907 | | | | | | | | | | | |
| G10x12.0-SR2 | Start | 154,624 | | | | | 118,436 | 149,358 | 211,056 | | | | | | | | | | | | | | |
| | Min | 64,067 | | | | | 44,772 | 61,465 | 94,279 | | | | | | | | | | | | | | 68.8 | 104.5 |
| | End | 93,311 | | | | | 57,133 | 87,997 | 149,575 | | | | | | | | | | | | | | |
| G10x14.0-SR2 | Start | 154,212 | | | 116,932 | 160,119 | 203,242 | | | | | | | | | | | | | | | | |
| | Min | 63,920 | | | 43,932 | 67,164 | 90,040 | | | | | | | | | | | | | | | | 49.5 | 75.2 |
| | End | 92,899 | | | 55,633 | 98,737 | 141,776 | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G10x07.0-SR3 | Start | 141,935 | | | | | | | | | | | | | 111,146 | 128,544 | 145,937 | 163,337 | 180,750 | 198,188 | 215,659 | 224,410 | 218.0 | 344.7 |
| | Min | 56,580 | | | | | | | | | | | | | 40,588 | 50,186 | 59,642 | 69,028 | 78,371 | 87,689 | 96,997 | 101,652 | | |
| | End | 79,005 | | | | | | | | | | | | | 48,222 | 65,586 | 82,947 | 100,312 | 117,693 | 135,097 | 152,534 | 161,267 | | |
| G10x08.0-SR3 | Start | 141,696 | | | | | | | | | | 113,854 | 138,098 | 162,296 | 186,461 | 210,608 | 234,748 | | | | | | 156.8 | 260.8 |
| | Min | 56,495 | | | | | | | | | | 41,983 | 55,274 | 68,348 | 81,312 | 94,220 | 107,096 | | | | | | | |
| | End | 78,767 | | | | | | | | | | 50,925 | 75,122 | 99,274 | 123,392 | 147,492 | 171,586 | | | | | | | |
| G10x09.0-SR3 | Start | 141,496 | | | | | | | | 112,626 | 144,907 | 177,107 | 209,241 | 241,325 | | | | | | | | | 119.0 | 195.8 |
| | Min | 56,423 | | | | | | | | 41,114 | 58,719 | 76,000 | 93,137 | 110,196 | | | | | | | | | | |
| | End | 78,567 | | | | | | | | 49,700 | 81,918 | 114,056 | 146,128 | 178,150 | | | | | | | | | | |
| G10x10.0-SR3 | Start | 141,295 | | | | | | | 124,484 | 165,711 | 206,834 | 247,869 | | | | | | | | | | | 93.7 | 155.8 |
| | Min | 56,352 | | | | | | | 47,530 | 69,743 | 91,644 | 113,402 | | | | | | | | | | | | |
| | End | 78,367 | | | | | | | 61,535 | 102,682 | 143,726 | 184,682 | | | | | | | | | | | | |
| G10x12.0-SR3 | Start | 140,827 | | | | 102,900 | 133,876 | 164,798 | 226,496 | | | | | | | | | | | | | | 62.8 | 104.5 |
| | Min | 56,185 | | | | 35,568 | 52,589 | 69,182 | 101,934 | | | | | | | | | | | | | | | |
| | End | 77,900 | | | | 39,992 | 70,908 | 101,771 | 163,350 | | | | | | | | | | | | | | | |
| G10x14.0-SR3 | Start | 140,415 | | | 132,372 | 175,559 | 218,682 | | | | | | | | | | | | | | | | 45.2 | 75.2 |
| | Min | 56,037 | | | 51,760 | 74,857 | 97,695 | | | | | | | | | | | | | | | | | |
| | End | 77,488 | | | 69,408 | 112,511 | 155,550 | | | | | | | | | | | | | | | | | |
| G10x06.0-SR4 | Start | 113,762 | | | | | | | | | | | | | | | 80,197 | 91,561 | 102,937 | 114,336 | 125,764 | 131,491 | 264.5 | 344.7 |
| | Min | 46,358 | | | | | | | | | | | | | | | 29,021 | 35,357 | 41,597 | 47,785 | 53,952 | 57,032 | | |
| | End | 66,412 | | | | | | | | | | | | | | | 32,869 | 44,210 | 55,565 | 66,941 | 78,347 | 84,064 | | |
| G10x07.0-SR4 | Start | 113,568 | | | | | | | | | | | 89,113 | 106,546 | 123,957 | 141,355 | 158,748 | 176,148 | 193,562 | 210,999 | 228,470 | 237,221 | 175.0 | 344.7 |
| | Min | 46,289 | | | | | | | | | | | 33,600 | 43,120 | 52,514 | 61,841 | 71,134 | 80,408 | 89,664 | 98,927 | 108,186 | 112,818 | | |
| | End | 66,218 | | | | | | | | | | | 41,767 | 59,167 | 76,544 | 93,908 | 111,268 | 128,634 | 146,014 | 163,418 | 180,855 | 189,589 | | |
| G10x08.0-SR4 | Start | 113,329 | | | | | | | | 77,985 | 102,361 | 126,665 | 150,909 | 175,107 | 199,272 | 223,419 | 247,559 | | | | | | 125.9 | 260.8 |
| | Min | 46,204 | | | | | | | | 27,320 | 40,758 | 53,861 | 66,833 | 79,734 | 92,588 | 105,422 | 118,236 | | | | | | | |
| | End | 65,979 | | | | | | | | 30,661 | 54,990 | 79,247 | 103,444 | 127,595 | 151,714 | 175,814 | 199,908 | | | | | | | |
| G10x09.0-SR4 | Start | 113,128 | | | | | | | 93,062 | 125,437 | 157,718 | 189,918 | 222,052 | 254,136 | | | | | | | | | 95.5 | 195.8 |
| | Min | 46,133 | | | | | | | 35,564 | 53,022 | 70,225 | 87,315 | 104,344 | 121,327 | | | | | | | | | | |
| | End | 65,779 | | | | | | | 45,708 | 78,021 | 110,240 | 142,377 | 174,450 | 206,472 | | | | | | | | | | |
| G10x10.0-SR4 | Start | 112,928 | | | | | | 95,948 | 137,295 | 178,522 | 219,645 | 260,680 | | | | | | | | | | | 75.2 | 155.8 |
| | Min | 46,062 | | | | | | 37,078 | 59,249 | 81,118 | 102,858 | 124,526 | | | | | | | | | | | | |
| | End | 65,580 | | | | | | 48,590 | 89,857 | 131,004 | 172,047 | 213,003 | | | | | | | | | | | | |
| G10x12.0-SR4 | Start | 112,460 | | | 84,678 | 115,711 | 146,687 | 177,609 | 239,307 | | | | | | | | | | | | | | 50.4 | 104.5 |
| | Min | 45,895 | | | 30,923 | 47,716 | 64,197 | 80,561 | 113,099 | | | | | | | | | | | | | | | |
| | End | 65,112 | | | 37,341 | 68,314 | 99,230 | 130,093 | 191,672 | | | | | | | | | | | | | | | |
| G10x14.0-SR4 | Start | 112,047 | | 101,928 | 145,183 | 188,370 | 231,493 | | | | | | | | | | | | | | | | 36.3 | 75.2 |
| | Min | 45,747 | | 40,334 | 63,383 | 86,183 | 108,880 | | | | | | | | | | | | | | | | | |
| | End | 64,700 | | 54,558 | 97,729 | 140,833 | 183,872 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G13x09.0-SR1 | Start | 430,729 | | | | | | | | | | | | | | | | | 336,422 | 374,205 | 412,069 | 431,039 | 302.2 | 333.5 |
| | Min | 167,685 | | | | | | | | | | | | | | | | | 119,003 | 140,130 | 160,942 | 171,275 | | |
| | End | 228,786 | | | | | | | | | | | | | | | | | 134,565 | 172,263 | 210,041 | 228,968 | | |
| G13x10.0-SR1 | Start | 430,472 | | | | | | | | | | | | | 310,752 | 359,785 | 408,807 | | | | | | 233.8 | 258.1 |
| | Min | 167,592 | | | | | | | | | | | | | 103,516 | 131,321 | 158,347 | | | | | | | |
| | End | 228,529 | | | | | | | | | | | | | 108,954 | 157,875 | 206,786 | | | | | | | |
| G13x12.0-SR1 | Start | 429,869 | | | | | | | | | | 372,761 | | | | | | | | | | | 153.5 | 169.3 |
| | Min | 167,376 | | | | | | | | | | 137,839 | | | | | | | | | | | | |
| | End | 227,928 | | | | | | | | | | 170,821 | | | | | | | | | | | | |
| G13x14.0-SR1 | Start | 429,338 | | | | | | | | 409,073 | | | | | | | | | | | | | 109.1 | 120.5 |
| | Min | 167,185 | | | | | | | | 157,137 | | | | | | | | | | | | | | |
| | End | 227,398 | | | | | | | | 207,052 | | | | | | | | | | | | | | |
| G13x16.0-SR1 | Start | 428,807 | | | | | | 339,052 | | | | | | | | | | | | | | | 81.8 | 90.3 |
| | Min | 166,995 | | | | | | 118,297 | | | | | | | | | | | | | | | | |
| | End | 226,868 | | | | | | 137,189 | | | | | | | | | | | | | | | | |
| G13x18.0-SR1 | Start | 428,276 | | | | 317,927 | 410,223 | | | | | | | | | | | | | | | | 63.8 | 70.4 |
| | Min | 166,804 | | | | 106,260 | 157,334 | | | | | | | | | | | | | | | | | |
| | End | 226,338 | | | | 116,112 | 208,199 | | | | | | | | | | | | | | | | | |
| G13x09.0-SR2 | Start | 371,580 | | | | | | | | | | | | | | | 290,591 | 328,280 | 366,004 | 403,787 | 441,651 | 460,621 | 261.0 | 333.5 |
| | Min | 145,352 | | | | | | | | | | | | | | | 103,479 | 124,486 | 145,165 | 165,680 | 186,097 | 196,276 | | |
| | End | 199,269 | | | | | | | | | | | | | | | 118,353 | 155,956 | 193,596 | 231,293 | 269,071 | 287,998 | | |
| G13x10.0-SR2 | Start | 371,323 | | | | | | | | | | | | 291,267 | 340,334 | 389,367 | 438,389 | | | | | | 202.0 | 258.1 |
| | Min | 145,260 | | | | | | | | | | | | 103,168 | 130,384 | 157,088 | 183,545 | | | | | | | |
| | End | 199,012 | | | | | | | | | | | | 119,028 | 167,984 | 216,905 | 265,817 | | | | | | | |
| G13x12.0-SR2 | Start | 370,720 | | | | | | | | | 327,031 | 402,343 | | | | | | | | | | | 132.5 | 169.3 |
| | Min | 145,044 | | | | | | | | | 122,497 | 163,442 | | | | | | | | | | | | |
| | End | 198,411 | | | | | | | | | 154,711 | 229,852 | | | | | | | | | | | | |
| G13x14.0-SR2 | Start | 370,189 | | | | | | | 331,764 | 438,655 | | | | | | | | | | | | | 94.3 | 120.5 |
| | Min | 144,853 | | | | | | | 124,655 | 182,355 | | | | | | | | | | | | | | |
| | End | 197,881 | | | | | | | 159,433 | 266,082 | | | | | | | | | | | | | | |
| G13x16.0-SR2 | Start | 369,658 | | | | | 296,891 | 368,634 | | | | | | | | | | | | | | | 70.7 | 90.3 |
| | Min | 144,663 | | | | | 105,258 | 144,485 | | | | | | | | | | | | | | | | |
| | End | 197,351 | | | | | 124,639 | 196,219 | | | | | | | | | | | | | | | | |
| G13x18.0-SR2 | Start | 369,127 | | | | 347,509 | 439,805 | | | | | | | | | | | | | | | | 55.1 | 70.4 |
| | Min | 144,472 | | | | 132,974 | 182,548 | | | | | | | | | | | | | | | | | |
| | End | 196,821 | | | | 175,142 | 267,229 | | | | | | | | | | | | | | | | | |

# Torque - Hydraulic

## Spring Return Actuator

| Actuator Model | Metric Unit | Spring Torque Nm | Operating Pressure, barg | | | | | | | | | | | | | | | | | | | | MinOP barg | MOP barg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 350 | | |
| | | | Air Torque Output, Nm | | | | | | | | | | | | | | | | | | | | | |
| G13x08.0-SR3 | Start | 309,723 | | | | | | | | | | | | | | | | 221,392 | 248,973 | 276,608 | 304,317 | 318,207 | 294.9 | 344.7 |
| | Min | 120,609 | | | | | | | | | | | | | | | | 74,337 | 90,133 | 105,543 | 120,766 | 128,346 | | |
| | End | 164,234 | | | | | | | | | | | | | | | | 76,011 | 103,530 | 131,102 | 158,749 | 172,606 | | |
| G13x09.0-SR3 | Start | 309,465 | | | | | | | | | | | | | 250,599 | 288,284 | 325,960 | 363,649 | 401,374 | 439,157 | 477,021 | 495,990 | 217.8 | 333.5 |
| | Min | 120,517 | | | | | | | | | | | | | 90,176 | 111,081 | 131,651 | 152,045 | 172,342 | 192,586 | 212,817 | 222,918 | | |
| | End | 163,976 | | | | | | | | | | | | | 105,152 | 142,752 | 180,343 | 217,946 | 255,586 | 293,283 | 331,061 | 349,988 | | |
| G13x10.0-SR3 | Start | 309,208 | | | | | | | | | | 228,302 | 277,511 | 326,637 | 375,704 | 424,737 | 473,759 | | | | | | 168.5 | 258.1 |
| | Min | 120,424 | | | | | | | | | | 76,976 | 104,555 | 131,354 | 157,824 | 184,106 | 210,293 | | | | | | | |
| | End | 163,719 | | | | | | | | | | 82,905 | 132,003 | 181,018 | 229,974 | 278,895 | 327,807 | | | | | | | |
| G13x12.0-SR3 | Start | 308,605 | | | | | | | | 286,904 | 362,401 | 437,712 | | | | | | | | | | | 110.6 | 169.3 |
| | Min | 120,208 | | | | | | | | 109,276 | 150,102 | 190,377 | | | | | | | | | | | | |
| | End | 163,118 | | | | | | | | 141,374 | 216,701 | 291,842 | | | | | | | | | | | | |
| G13x14.0-SR3 | Start | 308,074 | | | | | | 259,954 | 367,134 | 474,025 | | | | | | | | | | | | | 78.6 | 120.5 |
| | Min | 120,018 | | | | | | 94,183 | 152,211 | 209,116 | | | | | | | | | | | | | | |
| | End | 162,588 | | | | | | 114,486 | 221,423 | 328,072 | | | | | | | | | | | | | | |
| G13x16.0-SR3 | Start | 307,543 | | | | 260,421 | 332,261 | 404,004 | | | | | | | | | | | | | | | 59.0 | 90.3 |
| | Min | 119,827 | | | | 94,354 | 133,361 | 171,672 | | | | | | | | | | | | | | | | |
| | End | 162,058 | | | | 114,952 | 186,629 | 258,209 | | | | | | | | | | | | | | | | |
| G13x18.0-SR3 | Start | 307,012 | | | 290,469 | 382,878 | 475,175 | | | | | | | | | | | | | | | | 46.0 | 70.4 |
| | Min | 119,636 | | | 110,781 | 160,364 | 209,308 | | | | | | | | | | | | | | | | | |
| | End | 161,528 | | | 144,932 | 237,132 | 329,219 | | | | | | | | | | | | | | | | | |
| G13x08.0-SR4 | Start | 250,574 | | | | | | | | | | | | | | 195,890 | 223,426 | 250,974 | 278,555 | 306,190 | 333,899 | 347,789 | 239.1 | 344.7 |
| | Min | 98,277 | | | | | | | | | | | | | | 70,352 | 85,727 | 100,854 | 115,853 | 130,787 | 145,695 | 153,136 | | |
| | End | 134,716 | | | | | | | | | | | | | | 80,082 | 107,556 | 135,041 | 162,560 | 190,132 | 217,779 | 231,637 | | |
| G13x09.0-SR4 | Start | 250,316 | | | | | | | | | | | 204,691 | 242,463 | 280,181 | 317,866 | 355,542 | 393,231 | 430,956 | 468,739 | 506,603 | 525,572 | 176.6 | 333.5 |
| | Min | 98,184 | | | | | | | | | | | 74,602 | 95,419 | 115,895 | 136,195 | 156,399 | 176,547 | 196,675 | 216,776 | 236,898 | 246,973 | | |
| | End | 134,459 | | | | | | | | | | | 88,863 | 126,550 | 164,182 | 201,782 | 239,373 | 276,977 | 314,616 | 352,313 | 390,092 | 409,018 | | |
| G13x10.0-SR4 | Start | 250,058 | | | | | | | | | 208,567 | 257,884 | 307,093 | 356,219 | 405,286 | 454,319 | 503,341 | | | | | | 136.6 | 258.1 |
| | Min | 98,092 | | | | | | | | | 76,354 | 103,325 | 129,826 | 156,105 | 182,261 | 208,346 | 234,382 | | | | | | | |
| | End | 134,202 | | | | | | | | | 92,730 | 141,935 | 191,033 | 240,048 | 289,004 | 337,926 | 386,837 | | | | | | | |
| G13x12.0-SR4 | Start | 249,456 | | | | | | | 240,769 | 316,486 | 391,983 | 467,294 | | | | | | | | | | | 89.7 | 169.3 |
| | Min | 97,876 | | | | | | | 93,728 | 134,427 | 174,626 | 214,580 | | | | | | | | | | | | |
| | End | 133,601 | | | | | | | 124,859 | 200,405 | 275,731 | 350,872 | | | | | | | | | | | | |
| G13x14.0-SR4 | Start | 248,925 | | | | 182,029 | 235,826 | 289,536 | 396,716 | 503,607 | | | | | | | | | | | | | 63.8 | 120.5 |
| | Min | 97,685 | | | | 61,077 | 90,858 | 119,752 | 176,711 | 233,209 | | | | | | | | | | | | | | |
| | End | 133,071 | | | | 66,252 | 119,927 | 173,516 | 280,453 | 387,103 | | | | | | | | | | | | | | |
| G13x16.0-SR4 | Start | 248,394 | | | 218,061 | 290,003 | 361,843 | 433,586 | | | | | | | | | | | | | | | 47.8 | 90.3 |
| | Min | 97,495 | | | 81,146 | 119,918 | 158,087 | 196,010 | | | | | | | | | | | | | | | | |
| | End | 132,541 | | | 102,203 | 173,982 | 245,659 | 317,239 | | | | | | | | | | | | | | | | |
| G13x18.0-SR4 | Start | 247,863 | | 227,522 | 320,051 | 412,460 | 504,757 | | | | | | | | | | | | | | | | 37.3 | 70.4 |
| | Min | 97,304 | | 86,336 | 135,901 | 184,780 | 233,400 | | | | | | | | | | | | | | | | | |
| | End | 132,011 | | 111,642 | 203,962 | 296,162 | 388,249 | | | | | | | | | | | | | | | | | |