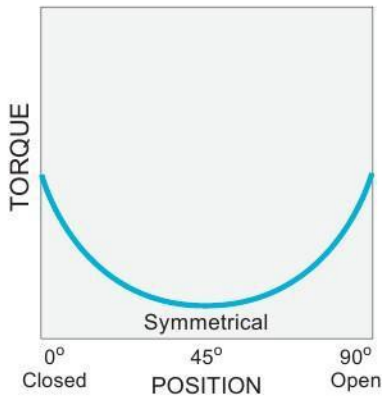


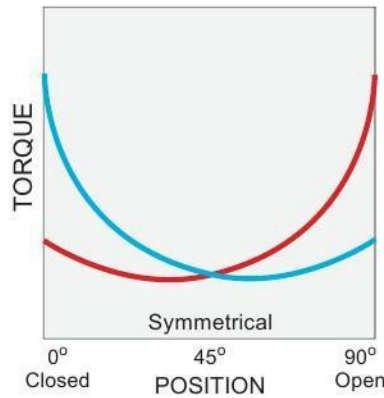
| NO | DESCRIPTION | MATERIAL |
|----|----------------------|--------------|
| 1 | BODY | DUCTILE IRON |
| 2 | LOWER BUSHING | BSC |
| 3 | BUSHING O-RING | NBR |
| 4 | UPPER BUSHING | BSC |
| 5 | STOPPER BOLT | ALLOY STEEL |
| 6 | STOPPER UNT | ALLOY STEEL |
| 7 | BODY COVER | ALLOY STEEL |
| 8 | BODY COVER BOLT | ALLOY STEEL |
| 9 | POSITION INDICATOR | STS |
| 10 | YOKE | ALLOY STEEL |
| 11 | SNAP RING | ALLOY STEEL |
| 12 | SLIDE PIN | ALLOY STEEL |
| 13 | SLIDE ROLLER | ALLOY STEEL |
| 14 | SLIDE BLOCK | ALLOY STEEL |
| 15 | FRONT COVER BOLT | ALLOY STEEL |
| 16 | COVER FIXED PIN | ALLOY STEEL |
| 17 | POSITION NEEDLE | ALLOY STEEL |
| 18 | CYLINDER FRONT COVER | ALLOY STEEL |
| 19 | COVER O-RING | NBR |
| 20 | PISTON ROD | ALLOY STEEL |
| 21 | PISTON | ALLOY STEEL |
| 22 | PISTION GUIDE BAR | ALLOY STEEL |

| NO | DESCRIPTION | MATERIAL |
|----|-----------------------------|---------------------|
| 23 | TIE BOLT | ALLOY STEEL |
| 24 | CYLINDER END COVER | ALLOY STEEL |
| 25 | LIFT PLATE | ALLOY STEEL |
| 26 | TIE BOLT NUT | ALLOY STEEL |
| 27 | FRONT COVER BUSHING | ENGINEERING PLASTIC |
| 28 | O-RING | NBR |
| 29 | BACK-UP RING | PTFE |
| 30 | PISTON O-RING | NBR |
| 31 | PISTON GUIDE BUSHING | ENGINEERING PLASTIC |
| 32 | PISTON GUIDE BUSHING O-RING | NBR |
| 33 | PISTON LOCK BOLT | ALLOY STEEL |
| 34 | PISTON GUIDE BAR NUT | ALLOY STEEL |
| 35 | SPRING CASE FRONT COVER | ALLOY STEEL |
| 36 | SPRING ROD GUIDE BUSHING | ENGINEERING PLASTIC |
| 37 | SPRING ROD | ALLOY STEEL |
| 38 | SPRING | ALLOY STEEL |
| 39 | SPRING RETAINER | ALLOY STEEL |
| 40 | SPRING CASE END COVER | ALLOY STEEL |
| 41 | SPRING ROD LOCK NUT | ALLOY STEEL |
| 42 | COVER | ALLOY STEEL |
| 43 | COVER BOLT | ALLOY STEEL |

Double Acting Actuator



Spring Return Actuator



Symmetric Type



Torque Curve — Air Torque — Spring Torque

Double Acting

Unit : Nm

| MODEL | 2.8 Bar | | | 4.2 Bar | | | 5.6 Bar | | | 5.6 Bar | | |
|------------|---------|--------|--------|---------|--------|--------|---------|--------|--------|---------|--------|--------|
| | 0° | R | 90° | End | R | Stant | 0° | R | 90° | 0° | R | 90° |
| ESSD 02-20 | 1,024 | 635 | 1,003 | 1,537 | 952 | 1,505 | 2,049 | 1,270 | 2,007 | 2,561 | 1,587 | 2,508 |
| ESSD 02-25 | 1,601 | 992 | 1,568 | 2,401 | 1,488 | 2,352 | 3,201 | 1,984 | 3,135 | 4,002 | 2,480 | 3,919 |
| ESSD 02-30 | 2,305 | 1,428 | 2,257 | 3,457 | 2,142 | 3,386 | 4,610 | 2,857 | 4,515 | 5,762 | 3,571 | 5,644 |
| ESSD 02-35 | 2,874 | 1,781 | 2,815 | 4,311 | 2,671 | 4,222 | 5,748 | 3,562 | 5,630 | 7,186 | 4,452 | 7,037 |
| ESSD 03-35 | 3,381 | 2,095 | 3,312 | 5,072 | 3,143 | 4,968 | 6,763 | 4,190 | 6,623 | 8,454 | 5,238 | 8,279 |
| ESSD 03-38 | 4,466 | 2,767 | 4,374 | 6,699 | 4,151 | 6,561 | 8,932 | 5,535 | 8,748 | 11,165 | 6,918 | 10,935 |
| ESSD 03-43 | 5,701 | 3,533 | 5,584 | 8,552 | 5,299 | 8,376 | 11,403 | 7,066 | 11,168 | 14,254 | 8,832 | 13,960 |
| ESSD 04-43 | 7,412 | 4,593 | 7,259 | 11,118 | 6,889 | 10,889 | 14,824 | 9,185 | 14,518 | 18,530 | 11,482 | 18,148 |
| ESSD 04-48 | 9,214 | 5,709 | 9,024 | 13,821 | 8,564 | 13,536 | 18,427 | 11,418 | 18,048 | 23,034 | 14,273 | 22,559 |
| ESSD 04-53 | 11,211 | 6,947 | 10,980 | 16,817 | 10,420 | 16,470 | 22,423 | 13,894 | 21,960 | 28,028 | 17,367 | 27,451 |
| ESSD 05-53 | 13,799 | 8,550 | 13,514 | 20,698 | 12,825 | 20,271 | 27,597 | 17,100 | 27,028 | 34,497 | 21,375 | 33,785 |
| ESSD 05-58 | 16,498 | 10,223 | 16,158 | 24,748 | 15,334 | 24,237 | 32,997 | 20,446 | 32,316 | 41,246 | 25,557 | 40,395 |
| ESSD 05-63 | 19,439 | 12,045 | 19,038 | 29,159 | 18,068 | 28,557 | 38,878 | 24,090 | 38,077 | 48,598 | 30,113 | 47,596 |
| ESSD 06-63 | 24,299 | 15,056 | 23,798 | 36,448 | 22,585 | 35,697 | 48,598 | 30,113 | 47,596 | 60,747 | 37,641 | 59,495 |
| ESSD 06-68 | 28,276 | 17,521 | 27,693 | 42,414 | 26,281 | 41,540 | 56,552 | 35,042 | 55,386 | 70,690 | 43,802 | 69,233 |
| ESSD 06-73 | 32,555 | 20,172 | 31,883 | 48,832 | 30,258 | 47,825 | 65,109 | 40,344 | 63,767 | 81,387 | 50,430 | 79,709 |



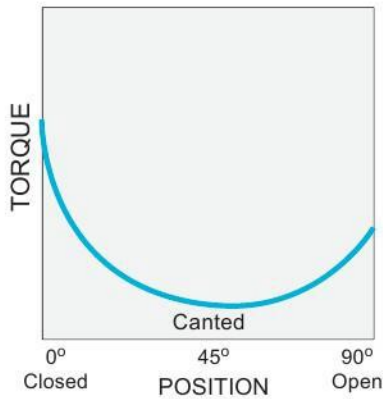
Spring Return (Fail closed or Fail open)

Unit : Nm

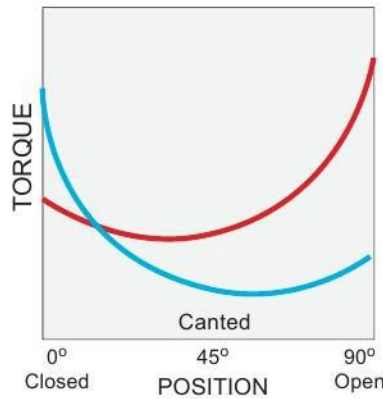
| MODEL | | Spring Torque | | | Air Torque : Air Supply Pressure | | | | | | | | | | | |
|------------|---------|---------------|--------|--------|----------------------------------|-------|-------|---------|--------|--------|---------|--------|--------|--------|--------|--------|
| | | | | | 2.8 Bar | | | 4.2 Bar | | | 5.6 Bar | | | 7 Bar | | |
| | | End | R | Start | Start | R | End | Start | R | End | Start | R | End | Start | R | End |
| ESSR 02-20 | 4.2 Bar | 602 | 495 | 975 | 422 | 140 | 28 | 934 | 457 | 530 | 1,447 | 775 | 1,032 | | | |
| | 5.6 Bar | 790 | 650 | 1,280 | | | | 746 | 302 | 225 | 1,259 | 620 | 727 | 1,771 | 937 | 1,228 |
| ESSR 02-25 | 4.2 Bar | 913 | 751 | 1,479 | 688 | 241 | 89 | 1,488 | 737 | 873 | 2,288 | 1,234 | 1,656 | | | |
| | 5.6 Bar | 1,239 | 1,019 | 2,007 | | | | 1,162 | 469 | 344 | 1,962 | 965 | 1,128 | 2,763 | 1,461 | 1,912 |
| ESSR 02-30 | 4.2 Bar | 1,301 | 1,080 | 2,141 | 1,004 | 348 | 116 | 2,156 | 1,062 | 1,245 | 3,309 | 1,779 | 2,374 | | | |
| | 5.6 Bar | 1,787 | 1,469 | 2,894 | | | | 1,671 | 673 | 492 | 2,823 | 1,388 | 1,621 | 3,976 | 2,102 | 2,750 |
| ESSR 02-35 | 4.2 Bar | 1,628 | 1,352 | 2,679 | 1,246 | 429 | 136 | 2,683 | 1,320 | 1,544 | 4,120 | 2,210 | 2,951 | | | |
| | 5.6 Bar | 2,140 | 1,759 | 3,466 | | | | 2,171 | 912 | 756 | 3,608 | 1,802 | 2,164 | 5,046 | 2,693 | 3,571 |
| ESSR 03-35 | 4.2 Bar | 1,803 | 1,539 | 3,098 | 1,579 | 557 | 213 | 3,269 | 1,604 | 1,869 | 4,960 | 2,652 | 3,525 | | | |
| | 5.6 Bar | 2,566 | 2,120 | 4,189 | | | | 2,506 | 1,023 | 779 | 4,197 | 2,070 | 2,435 | 5,887 | 3,118 | 4,091 |
| ESSR 03-38 | 4.2 Bar | 2,480 | 2,049 | 4,048 | 1,986 | 719 | 326 | 4,220 | 2,102 | 2,513 | 6,453 | 3,486 | 4,701 | | | |
| | 5.6 Bar | 3,303 | 2,729 | 5,391 | | | | 3,397 | 1,422 | 1,170 | 5,630 | 2,806 | 3,357 | 7,863 | 4,190 | 5,544 |
| ESSR 03-43 | 4.2 Bar | 3,049 | 2,519 | 4,977 | 2,653 | 1,014 | 607 | 5,503 | 2,780 | 3,399 | 8,354 | 4,547 | 6,191 | | | |
| | 5.6 Bar | 4,097 | 3,554 | 7,223 | | | | 4,455 | 1,745 | 1,153 | 7,306 | 3,511 | 3,945 | 10,156 | 5,287 | 6,737 |
| ESSR 04-43 | 4.2 Bar | 4,167 | 3,569 | 7,202 | 3,245 | 1,024 | 58 | 6,951 | 3,320 | 3,687 | 10,657 | 5,616 | 7,317 | | | |
| | 5.6 Bar | 5,436 | 4,656 | 9,395 | | | | 5,682 | 2,233 | 1,494 | 9,388 | 4,529 | 5,124 | 13,094 | 6,826 | 8,753 |
| ESSR 04-48 | 4.2 Bar | 5,125 | 4,390 | 8,857 | 4,089 | 1,320 | 167 | 8,696 | 4,174 | 4,679 | 13,303 | 7,029 | 9,190 | | | |
| | 5.6 Bar | 6,406 | 5,582 | 11,372 | | | | 7,414 | 2,982 | 2,164 | 12,021 | 5,836 | 6,675 | 16,628 | 8,691 | 11,187 |
| ESSR 04-53 | 4.2 Bar | 6,214 | 5,323 | 10,745 | 4,997 | 1,624 | 240 | 10,603 | 5,098 | 5,730 | 16,208 | 8,571 | 11,220 | | | |
| | 5.6 Bar | 8,236 | 7,054 | 14,234 | | | | 8,581 | 3,366 | 2,236 | 14,187 | 6,840 | 7,726 | 19,793 | 10,313 | 13,217 |
| ESSR 05-53 | 4.2 Bar | 7,651 | 6,505 | 13,070 | 6,147 | 2,045 | 444 | 13,047 | 6,320 | 7,201 | 19,946 | 10,595 | 13,958 | | | |
| | 5.6 Bar | 10,204 | 8,675 | 17,431 | | | | 10,494 | 4,150 | 2,841 | 17,393 | 8,425 | 9,598 | 24,293 | 12,700 | 16,355 |
| ESSR 05-58 | 4.2 Bar | 9,296 | 7,733 | 15,538 | 7,403 | 2,490 | 621 | 15,652 | 7,601 | 8,700 | 23,901 | 12,713 | 16,779 | | | |
| | 5.6 Bar | 12,124 | 10,308 | 20,710 | | | | 12,624 | 5,027 | 3,527 | 20,873 | 10,138 | 11,606 | 29,122 | 15,250 | 19,685 |
| ESSR 05-63 | 4.2 Bar | 10,971 | 9,328 | 18,742 | 8,468 | 2,717 | 297 | 18,187 | 8,740 | 9,816 | 27,907 | 14,762 | 19,335 | | | |
| | 5.6 Bar | 14,127 | 12,010 | 24,132 | | | | 15,032 | 6,057 | 4,426 | 24,752 | 12,080 | 13,945 | 34,471 | 18,102 | 23,464 |
| ESSR 06-63 | 4.2 Bar | 13,456 | 11,608 | 23,515 | 10,842 | 3,449 | 283 | 22,992 | 10,977 | 12,821 | 35,131 | 18,506 | 24,080 | | | |
| | 5.6 Bar | 17,092 | 14,744 | 29,869 | | | | 19,356 | 7,841 | 5,828 | 31,506 | 15,369 | 17,727 | 43,655 | 22,897 | 29,626 |
| ESSR 06-68 | 4.2 Bar | 15,243 | 13,149 | 26,637 | 13,034 | 4,372 | 1,056 | 27,172 | 13,133 | 14,903 | 41,310 | 21,893 | 28,749 | | | |
| | 5.6 Bar | 20,474 | 17,662 | 35,779 | | | | 21,940 | 8,620 | 5,761 | 36,078 | 17,380 | 19,607 | 50,216 | 26,141 | 33,454 |
| ESSR 06-73 | 4.2 Bar | 17,816 | 15,368 | 31,134 | 14,739 | 4,804 | 750 | 31,016 | 14,890 | 16,692 | 47,293 | 24,974 | 32,633 | | | |
| | 5.6 Bar | 23,159 | 19,978 | 40,471 | | | | 25,673 | 10,280 | 7,354 | 41,950 | 20,366 | 23,296 | 58,228 | 30,452 | 39,238 |



Double Acting Actuator



Spring Return Actuator



Canted Type



Torque Curve — Air Torque — Spring Torque

Double Acting

Unit : Nm

| MODEL | 2.8 Bar | | | 4.2 Bar | | | 5.6 Bar | | | 5.6 Bar | | |
|------------|---------|--------|--------|---------|--------|--------|---------|--------|--------|---------|--------|--------|
| | 0° | R | 90° | End | R | Stant | 0° | R | 90° | 0° | R | 90° |
| ESCD 02-20 | 1,284 | 635 | 895 | 1,926 | 952 | 1,342 | 2,568 | 1,270 | 1,790 | 3,210 | 1,587 | 2,237 |
| ESCD 02-25 | 2,006 | 992 | 1,398 | 3,009 | 1,488 | 2,098 | 4,013 | 1,984 | 2,797 | 5,016 | 2,480 | 3,496 |
| ESCD 02-30 | 2,889 | 1,428 | 2,014 | 4,334 | 2,142 | 3,020 | 5,778 | 2,857 | 4,027 | 7,223 | 3,571 | 5,034 |
| ESCD 02-35 | 3,602 | 1,781 | 2,511 | 5,404 | 2,671 | 3,766 | 7,205 | 3,562 | 5,022 | 9,006 | 4,452 | 6,277 |
| ESCD 03-35 | 4,238 | 2,095 | 2,954 | 6,357 | 3,143 | 4,431 | 8,476 | 4,190 | 5,908 | 10,595 | 5,238 | 7,385 |
| ESCD 03-38 | 5,598 | 2,767 | 3,902 | 8,397 | 4,151 | 5,852 | 11,195 | 5,535 | 7,803 | 13,994 | 6,918 | 9,754 |
| ESCD 03-43 | 7,146 | 3,533 | 4,981 | 10,719 | 5,299 | 7,471 | 14,292 | 7,066 | 9,961 | 17,865 | 8,832 | 12,452 |
| ESCD 04-43 | 9,290 | 4,593 | 6,475 | 13,935 | 6,889 | 9,712 | 18,580 | 9,185 | 12,950 | 23,225 | 11,482 | 16,187 |
| ESCD 04-48 | 11,548 | 5,709 | 8,049 | 17,322 | 8,564 | 12,073 | 23,097 | 11,418 | 16,098 | 28,871 | 14,273 | 20,122 |
| ESCD 04-53 | 14,052 | 6,947 | 9,794 | 21,078 | 10,420 | 14,691 | 28,104 | 13,894 | 19,588 | 35,130 | 17,367 | 24,485 |
| ESCD 05-53 | 17,295 | 8,550 | 12,054 | 25,942 | 12,825 | 18,081 | 34,590 | 17,100 | 24,109 | 43,237 | 21,375 | 30,136 |
| ESCD 05-58 | 20,679 | 10,223 | 14,413 | 31,018 | 15,334 | 21,619 | 41,357 | 20,446 | 28,825 | 51,697 | 25,557 | 36,032 |
| ESCD 05-63 | 24,365 | 12,045 | 16,982 | 36,547 | 18,068 | 25,473 | 48,729 | 24,090 | 33,963 | 60,911 | 30,113 | 42,454 |
| ESCD 06-63 | 30,456 | 15,056 | 21,227 | 45,684 | 22,585 | 31,841 | 60,911 | 30,113 | 42,454 | 76,139 | 37,641 | 53,068 |
| ESCD 06-68 | 35,441 | 17,521 | 24,702 | 53,161 | 26,281 | 37,052 | 70,881 | 35,042 | 49,403 | 88,602 | 43,802 | 61,754 |
| ESCD 06-73 | 40,803 | 20,172 | 28,439 | 61,205 | 30,258 | 42,659 | 81,607 | 40,344 | 56,878 | 102,008 | 50,430 | 71,098 |



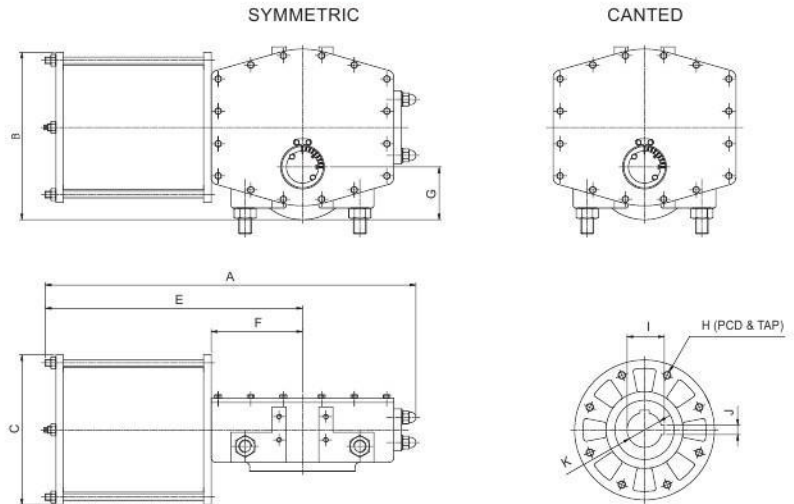
Spring Return (Fail closed or Fail open)

Unit : Nm

| MODEL | | Spring Torque | | | Air Torque : Air Supply Pressure | | | | | | | | | | | |
|------------|---------|---------------|--------|--------|----------------------------------|-------|-------|---------|--------|--------|---------|--------|--------|--------|--------|--------|
| | | | | | 2.8 Bar | | | 4.2 Bar | | | 5.6 Bar | | | 7 Bar | | |
| | | End | R | Start | Start | R | End | Start | R | End | Start | R | End | Start | R | End |
| ESCR 02-20 | 4.2 Bar | 670 | 452 | 808 | 614 | 182 | 87 | 1,256 | 500 | 534 | 1,898 | 817 | 981 | | | |
| | 5.6 Bar | 876 | 591 | 1,056 | | | | 1,051 | 361 | 286 | 1,692 | 678 | 733 | 2,334 | 996 | 1,181 |
| ESCR 02-25 | 4.2 Bar | 1,063 | 717 | 1,282 | 943 | 275 | 117 | 1,946 | 770 | 816 | 2,949 | 1,266 | 1,515 | | | |
| | 5.6 Bar | 1,396 | 942 | 1,683 | | | | 1,614 | 546 | 415 | 2,617 | 1,042 | 1,114 | 3,620 | 1,538 | 1,813 |
| ESCR 02-30 | 4.2 Bar | 1,496 | 1,020 | 1,834 | 1,393 | 408 | 189 | 2,838 | 1,122 | 1,186 | 4,282 | 1,836 | 2,193 | | | |
| | 5.6 Bar | 2,059 | 1,404 | 2,524 | | | | 2,275 | 765 | 559 | 3,719 | 1,452 | 1,503 | 5,164 | 2,167 | 2,510 |
| ESCR 02-35 | 4.2 Bar | 1,807 | 1,262 | 2,299 | 1,795 | 519 | 212 | 3,596 | 1,409 | 1,467 | 5,397 | 2,300 | 2,723 | | | |
| | 5.6 Bar | 2,543 | 1,735 | 3,118 | | | | 2,860 | 937 | 648 | 4,662 | 1,827 | 1,904 | 6,463 | 2,718 | 3,159 |
| ESCR 03-35 | 4.2 Bar | 2,047 | 1,464 | 2,700 | 2,192 | 632 | 254 | 4,311 | 1,679 | 1,731 | 6,430 | 2,727 | 3,208 | | | |
| | 5.6 Bar | 3,093 | 2,098 | 3,759 | | | | 3,265 | 1,045 | 671 | 5,384 | 2,093 | 2,148 | 7,503 | 3,140 | 3,625 |
| ESCR 03-38 | 4.2 Bar | 2,759 | 1,973 | 3,641 | 2,838 | 794 | 261 | 5,637 | 2,178 | 2,212 | 8,436 | 3,561 | 4,162 | | | |
| | 5.6 Bar | 3,913 | 2,654 | 4,757 | | | | 4,484 | 1,497 | 1,095 | 7,282 | 2,880 | 3,046 | 10,081 | 4,264 | 4,997 |
| ESCR 03-43 | 4.2 Bar | 3,637 | 2,467 | 4,421 | 3,509 | 1,066 | 559 | 7,082 | 2,832 | 3,050 | 10,655 | 4,599 | 5,540 | | | |
| | 5.6 Bar | 5,017 | 3,403 | 6,099 | | | | 5,702 | 1,896 | 1,372 | 9,275 | 3,663 | 3,863 | 12,848 | 5,429 | 6,353 |
| ESCR 04-43 | 4.2 Bar | 4,735 | 3,340 | 6,118 | 4,555 | 1,253 | 357 | 9,200 | 3,549 | 3,595 | 13,844 | 5,845 | 6,832 | | | |
| | 5.6 Bar | 6,098 | 4,301 | 7,878 | | | | 7,837 | 2,588 | 1,835 | 12,482 | 4,884 | 5,072 | 17,127 | 7,181 | 8,310 |
| ESCR 04-48 | 4.2 Bar | 5,887 | 4,152 | 7,605 | 5,662 | 1,557 | 444 | 11,436 | 4,412 | 4,468 | 17,210 | 7,266 | 8,493 | | | |
| | 5.6 Bar | 7,754 | 5,469 | 10,017 | | | | 9,579 | 3,095 | 2,056 | 15,343 | 5,949 | 6,081 | 21,117 | 8,804 | 10,105 |
| ESCR 04-53 | 4.2 Bar | 7,035 | 4,962 | 9,088 | 6,958 | 1,943 | 630 | 14,043 | 5,458 | 5,603 | 21,011 | 8,890 | 10,424 | | | |
| | 5.6 Bar | 9,217 | 6,502 | 11,908 | | | | 11,861 | 3,919 | 2,783 | 18,887 | 7,392 | 7,680 | 25,913 | 10,866 | 12,577 |
| ESCR 05-53 | 4.2 Bar | 8,854 | 6,189 | 11,286 | 8,416 | 2,337 | 725 | 17,097 | 6,636 | 6,795 | 25,711 | 10,887 | 12,779 | | | |
| | 5.6 Bar | 11,770 | 8,235 | 15,018 | | | | 14,173 | 4,59 | 3,064 | 22,820 | 8,865 | 9,091 | 31,467 | 13,140 | 15,118 |
| ESCR 05-58 | 4.2 Bar | 10,195 | 7,133 | 13,008 | 10,484 | 3,089 | 1,404 | 20,823 | 8,201 | 8,611 | 31,162 | 13,312 | 15,817 | | | |
| | 5.6 Bar | 14,355 | 10,044 | 18,316 | | | | 16,663 | 5,290 | 3,303 | 27,003 | 10,402 | 10,510 | 34,342 | 15,513 | 17,716 |
| ESCR 05-63 | 4.2 Bar | 12,292 | 8,601 | 15,684 | 12,034 | 3,417 | 1,248 | 24,255 | 9,467 | 9,789 | 36,398 | 15,462 | 18,230 | | | |
| | 5.6 Bar | 16,158 | 11,306 | 20,617 | | | | 20,389 | 6,762 | 4,856 | 32,571 | 12,784 | 13,347 | 44,753 | 18,807 | 21,837 |
| ESCR 06-63 | 4.2 Bar | 14,480 | 10,292 | 18,928 | 15,976 | 4,764 | 2,299 | 31,204 | 12,293 | 12,913 | 46,431 | 19,821 | 23,526 | | | |
| | 5.6 Bar | 18,967 | 14,028 | 26,335 | | | | 26,717 | 8,556 | 5,505 | 41,945 | 16,085 | 16,119 | 57,173 | 23,613 | 26,732 |
| ESCR 06-68 | 4.2 Bar | 17,715 | 12,591 | 23,156 | 17,726 | 4,930 | 1,545 | 35,446 | 13,690 | 13,896 | 53,167 | 22,451 | 26,247 | | | |
| | 5.6 Bar | 22,115 | 16,357 | 30,708 | | | | 31,046 | 9,924 | 6,345 | 48,766 | 18,685 | 18,695 | 66,486 | 27,445 | 31,046 |
| ESCR 06-73 | 4.2 Bar | 19,992 | 14,209 | 26,132 | 20,812 | 5,963 | 2,307 | 41,214 | 16,049 | 16,527 | 61,615 | 26,135 | 30,746 | | | |
| | 5.6 Bar | 25,029 | 18,512 | 34,753 | | | | 36,176 | 11,746 | 7,905 | 56,578 | 21,832 | 22,125 | 76,979 | 31,918 | 36,345 |

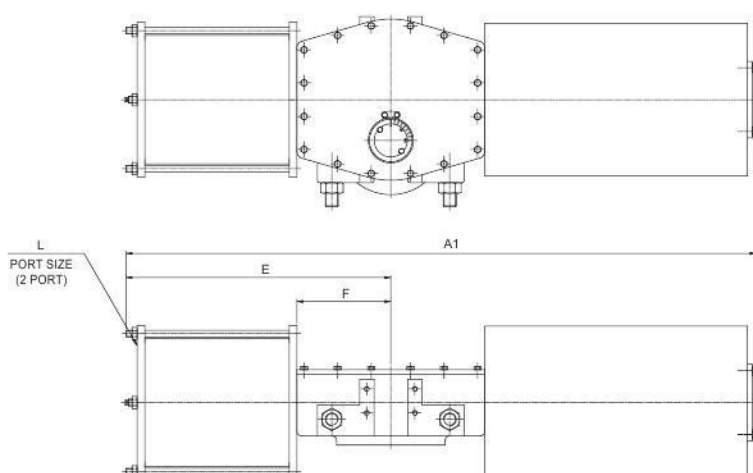


< DOUBLE ACTING >



| MODEL | A | A1 | | B | C | D | E |
|------------------|------|---------|---------|-----|-----|-----|------|
| | | 4.2 Bar | 5.6 Bar | | | | |
| ESSD02-20 (ESSR) | 755 | 1280 | 1280 | 370 | 272 | 48 | 516 |
| ESSD02-25 (ESSR) | 755 | 1280 | 1280 | 395 | 322 | 73 | 516 |
| ESSD02-30 (ESSR) | 755 | 1280 | 1280 | 420 | 373 | 98 | 516 |
| ESSD02-35 (ESSR) | 755 | 1280 | 1280 | 445 | 410 | 117 | 516 |
| ESSD03-35 (ESSR) | 935 | 1475 | 1475 | 490 | 410 | 92 | 653 |
| ESSD03-38 (ESSR) | 935 | 1475 | 1475 | 505 | 461 | 118 | 653 |
| ESSD03-43 (ESSR) | 935 | 1475 | 1475 | 530 | 512 | 143 | 653 |
| ESSD04-43 (ESSR) | 1105 | 1860 | 1860 | 640 | 514 | 128 | 763 |
| ESSD04-48 (ESSR) | 1105 | 1860 | 1860 | 657 | 564 | 153 | 763 |
| ESSD04-53 (ESSR) | 1105 | 1860 | 1860 | 682 | 625 | 184 | 763 |
| ESSD05-53 (ESSR) | 1310 | 2240 | 2240 | 710 | 625 | 157 | 904 |
| ESSD05-58 (ESSR) | 1310 | 2240 | 2240 | 732 | 675 | 183 | 904 |
| ESSD05-63 (ESSR) | 1310 | 2240 | 2240 | 760 | 730 | 210 | 904 |
| ESSD06-63 (ESSR) | 1610 | 2695 | 2695 | 830 | 745 | 192 | 1124 |
| ESSD06-68 (ESSR) | 1610 | 2695 | 2695 | 850 | 795 | 217 | 1124 |
| ESSD06-73 (ESSR) | 1610 | 2695 | 2695 | 875 | 847 | 243 | 1124 |

| MODEL | A | A1 | | B | C | D | E |
|------------------|------|---------|---------|-----|-----|-----|------|
| | | 4.2 Bar | 5.6 Bar | | | | |
| ESCD02-20 (ESCR) | 800 | 1325 | 1325 | 370 | 272 | 48 | 516 |
| ESCD02-25 (ESCR) | 800 | 1325 | 1325 | 395 | 322 | 73 | 516 |
| ESCD02-30 (ESCR) | 800 | 1325 | 1325 | 420 | 373 | 98 | 516 |
| ESCD02-35 (ESCR) | 800 | 1325 | 1325 | 445 | 410 | 117 | 516 |
| ESCD03-35 (ESCR) | 985 | 1510 | 1510 | 490 | 410 | 92 | 653 |
| ESCD03-38 (ESCR) | 985 | 1510 | 1510 | 505 | 461 | 118 | 653 |
| ESCD03-43 (ESCR) | 985 | 1510 | 1510 | 530 | 512 | 143 | 653 |
| ESCD04-43 (ESCR) | 1215 | 1935 | 1935 | 640 | 514 | 128 | 763 |
| ESCD04-48 (ESCR) | 1215 | 1935 | 1935 | 657 | 564 | 153 | 763 |
| ESCD04-53 (ESCR) | 1215 | 1935 | 1935 | 682 | 625 | 184 | 763 |
| ESCD05-53 (ESCR) | 1435 | 2320 | 2320 | 710 | 625 | 157 | 904 |
| ESCD05-58 (ESCR) | 1435 | 2320 | 2320 | 732 | 675 | 183 | 904 |
| ESCD05-63 (ESCR) | 1435 | 2320 | 2320 | 760 | 730 | 210 | 904 |
| ESCD06-63 (ESCR) | 1710 | 2750 | 2750 | 830 | 745 | 192 | 1124 |
| ESCD06-68 (ESCR) | 1710 | 2750 | 2750 | 850 | 795 | 217 | 1124 |
| ESCD06-73 (ESCR) | 1710 | 2750 | 2750 | 875 | 847 | 243 | 1124 |



< SPRING RETURN >



| F | G | H | | I | J | K | | L |
|-----|-----|-----|--------|-------|----|-------------|-----|----------|
| | | PCD | TAP/DP | | | DIA | DP | |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 287 | 190 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 287 | 190 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 287 | 190 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 343 | 230 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 343 | 230 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 343 | 230 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |

| F | G | H | | I | J | K | | L |
|-----|-----|-----|--------|-------|----|-------------|-----|----------|
| | | PCD | TAP/DP | | | DIA | DP | |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 196 | 145 | 165 | M20/25 | 54 | 14 | 50 | 156 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 236 | 175 | 254 | M16/27 | 80 | 20 | 75/80 | 204 | 1/2" NPT |
| 295 | 205 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 295 | 205 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 295 | 205 | 298 | M20/34 | 95.4 | 22 | 90/100 | 234 | 3/4" NPT |
| 345 | 240 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 345 | 240 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 345 | 240 | 356 | M30/43 | 117.4 | 32 | 120/110/130 | 279 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |
| 415 | 260 | 406 | M36/53 | 137.4 | 32 | 140/130/150 | 326 | 3/4" NPT |