



JSS Series Stainless Steel Rack & Pinion Actuators



ASTM A351 CF8M / 316 Stainless Steel
Dual Piston Design
Spring Return or Double Acting
ISO 5211 / DIN 3337 Mounting Pad
VDI/VDE 3845 Accessory Pad

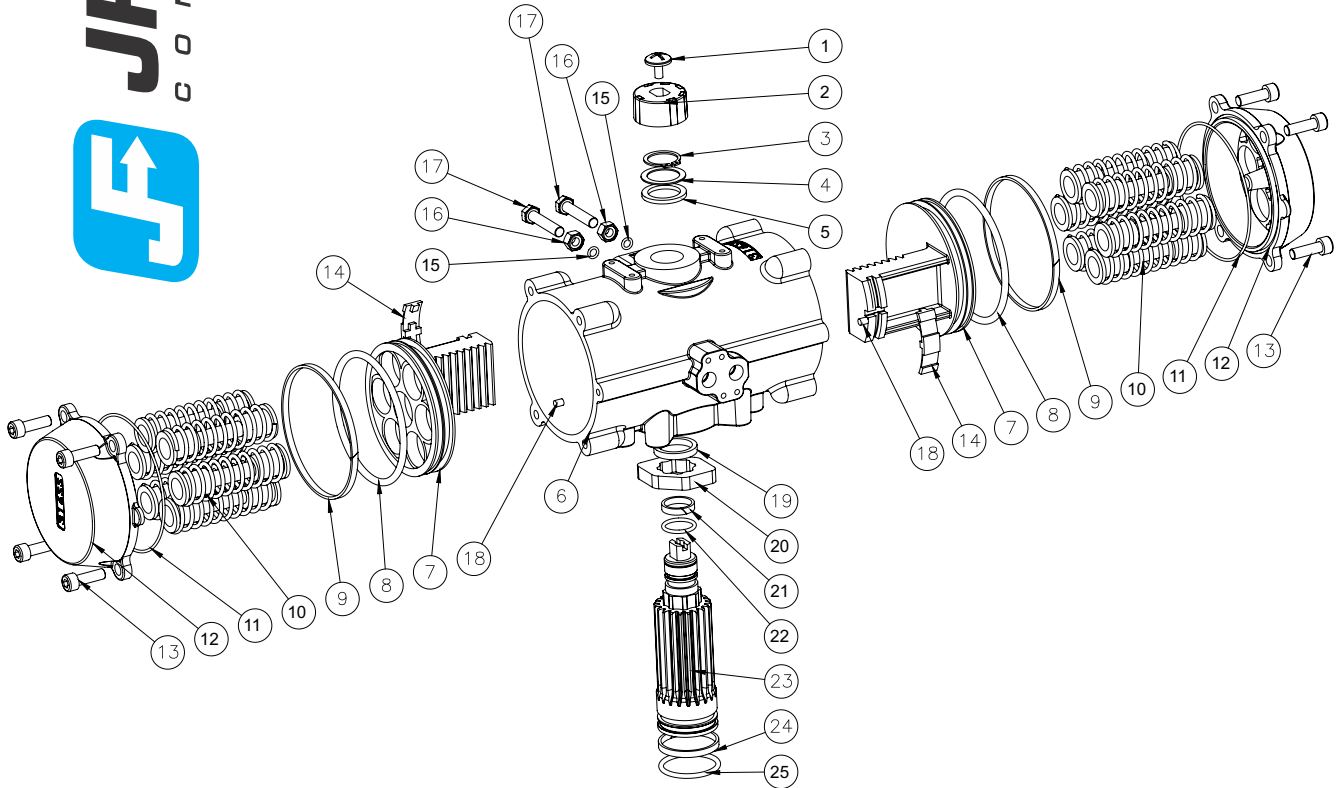


Double Acting Torque (In-Lbs)

| Model | Air Supply (psi) | | | | |
|---------|------------------|-------|--------|--------|--------|
| | 40 | 60 | 80 | 100 | 120 |
| JSS-052 | 88 | 132 | 176 | 220 | 264 |
| JSS-063 | 171 | 257 | 343 | 428 | 514 |
| JSS-083 | 337 | 505 | 674 | 842 | 1,010 |
| JSS-105 | 719 | 1,078 | 1,437 | 1,797 | 2,156 |
| JSS-125 | 1,120 | 1,680 | 2,241 | 2,801 | 3,361 |
| JSS-140 | 1,916 | 2,875 | 3,833 | 4,791 | 5,749 |
| JSS-160 | 2,920 | 4,380 | 5,840 | 7,300 | 8,760 |
| JSS-210 | 5,974 | 8,947 | 12,078 | 15,018 | 18,033 |

Spring Return Torque (In-Lbs)

| Model | Springs per Side | Air Supply | | | | | | | | | |
|---------|------------------|---------------|-------|--------|-------|--------|-------|--------|-------|---------|--------|
| | | Spring Torque | | 40 psi | | 60 psi | | 80 psi | | 100 psi | |
| | | End | Break | End | Break | End | Break | End | Break | End | Break |
| JSS-052 | 3 | 44 | 65 | 23 | 44 | 67 | 88 | 111 | 132 | 155 | 177 |
| | 4 | 58 | 87 | - | - | 45 | 74 | 89 | 118 | 133 | 162 |
| | 5 | 73 | 109 | - | - | - | - | 67 | 103 | 111 | 147 |
| | 6 | 88 | 131 | - | - | - | - | - | - | 90 | 133 |
| JSS-063 | 3 | 72 | 115 | 56 | 99 | 142 | 185 | 228 | 271 | 313 | 356 |
| | 4 | 96 | 154 | - | - | 103 | 161 | 189 | 247 | 275 | 332 |
| | 5 | 120 | 192 | - | - | - | - | 151 | 223 | 236 | 308 |
| | 6 | 144 | 230 | - | - | - | - | - | - | 198 | 284 |
| JSS-083 | 3 | 171 | 247 | 90 | 166 | 258 | 334 | 427 | 503 | 595 | 671 |
| | 4 | 228 | 329 | - | - | 176 | 277 | 344 | 446 | 513 | 614 |
| | 5 | 285 | 412 | - | - | - | - | 262 | 389 | 430 | 557 |
| | 6 | 342 | 494 | - | - | - | - | - | - | 348 | 500 |
| JSS-105 | 3 | 341 | 469 | 249 | 378 | 609 | 737 | 968 | 1,097 | 1,327 | 1,456 |
| | 4 | 454 | 626 | - | - | 452 | 624 | 812 | 983 | 1,171 | 1,343 |
| | 5 | 568 | 782 | - | - | - | - | 655 | 870 | 1,015 | 1,229 |
| | 6 | 681 | 938 | - | - | - | - | - | - | 858 | 1,116 |
| JSS-125 | 3 | 570 | 826 | 294 | 551 | 855 | 1,111 | 1,415 | 1,671 | 1,975 | 2,231 |
| | 4 | 760 | 1,101 | - | - | 579 | 921 | 1,139 | 1,481 | 1,700 | 2,041 |
| | 5 | 950 | 1,377 | - | - | - | - | 864 | 1,291 | 1,424 | 1,851 |
| | 6 | 1,139 | 1,652 | - | - | - | - | - | - | 1,149 | 1,661 |
| JSS-140 | 3 | 939 | 1,412 | 505 | 977 | 1,463 | 1,936 | 2,421 | 2,894 | 3,379 | 3,852 |
| | 4 | 1,252 | 1,882 | - | - | 993 | 1,623 | 1,951 | 2,581 | 2,909 | 3,539 |
| | 5 | 1,565 | 2,353 | - | - | - | - | 1,480 | 2,268 | 2,438 | 3,226 |
| | 6 | 1,878 | 2,823 | - | - | - | - | - | - | 1,968 | 2,913 |
| JSS-160 | 3 | 1,406 | 2,247 | 673 | 1,514 | 2,133 | 2,974 | 3,593 | 4,434 | 5,053 | 5,894 |
| | 4 | 1,875 | 2,996 | - | - | 1,384 | 2,505 | 2,844 | 3,965 | 4,304 | 5,425 |
| | 5 | 2,344 | 3,745 | - | - | - | - | 2,095 | 3,496 | 3,555 | 4,956 |
| | 6 | 2,813 | 4,494 | - | - | - | - | - | - | 2,806 | 4,488 |
| JSS-210 | 3 | 2,560 | 3,979 | 1,995 | 3,414 | 4,968 | 6,387 | 8,099 | 9,518 | 11,039 | 12,458 |
| | 4 | 3,413 | 5,306 | - | - | 3,641 | 5,534 | 6,772 | 8,665 | 9,712 | 11,605 |
| | 5 | 4,266 | 6,632 | - | - | - | - | 5,446 | 7,812 | 8,386 | 10,752 |
| | 6 | 5,119 | 7,958 | - | - | - | - | - | - | 7,060 | |



Bill of Materials

| No. | Description | Qty | Standards Material |
|-----|-----------------|------|--|
| 1 | INDICATOR SCREW | 1 | ABS PLASTIC |
| 2 | INDICATOR | 1 | ABS PLASTIC |
| 3 | SNAP RING | 1 | AISI 316 |
| 4 | THRUST WASHER | 1 | AISI 316 |
| 5 | OUTSIDE WASHER | 1 | POLYOXYMETHYLENE |
| 6 | BODY | 1 | ASTM A351 GRADE CF8M |
| 7 | PISTON | 2 | AISI 316 |
| 8 | PISTON O-RING | 2 | BUNA-N/FKM |
| 9 | PISTON BEARING | 2 | POLYOXYMETHYLENE |
| 10 | SPRING | 0-12 | SPRING: Epoxy Coated Spring Steel RETAINER: Nylon 66 RETAINER CONNECTOR: Brass |
| 11 | END CAP O-RING | 2 | BUNA-N/FKM |
| 12 | END CAP | 2 | ASTM A351 GRADE CF8M |

| No. | Description | Qty | Standards Material |
|-----|-----------------------|-----|--------------------|
| 13 | END CAP BOLT | 8 | AISI 304 |
| 14 | GUIDE PLATE | 2 | NYLON 66 |
| 15 | TRAVEL STOP O-RING | 2 | BUNA-N/FKM |
| 16 | TRAVEL STOP NUT | 2 | AISI 304 |
| 17 | TRAVEL STOP BOLT | 2 | AISI 304 |
| 18 | PLUG | 2 | BUNA-N |
| 19 | TOP PINION WASHER | 1 | POLYOXYMETHYLENE |
| 20 | TRAVEL CAM STOP | 1 | AISI 316 |
| 21 | TOP PINION BEARING | 1 | POLYOXYMETHYLENE |
| 22 | TOP PINION O-RING | 1 | BUNA-N/FKM |
| 23 | PINION | 1 | AISI 316 |
| 24 | BOTTOM PINION BEARING | 1 | POLYOXYMETHYLENE |
| 25 | BOTTOM PINION O-RING | 1 | BUNA-N/FKM |

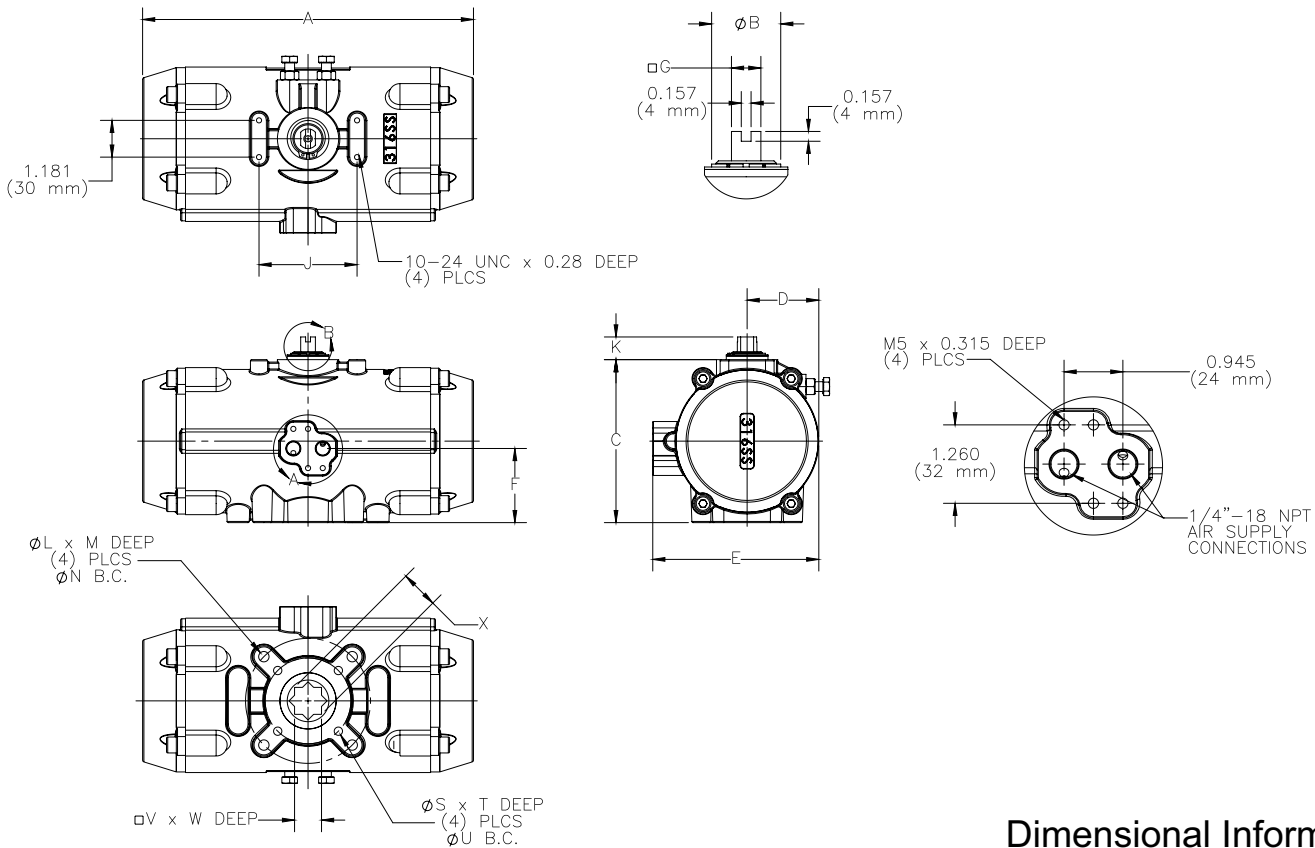
JSS Series Actuators (weight)

| Actuator Size | Double Acting (Lbs) | Spring Return (Lbs) |
|---------------|---------------------|---------------------|
| JSS-052 | 4 | 4.5 |
| JSS-063 | 5.5 | 6 |
| JSS-083 | 14 | 15 |
| JSS-105 | 22 | 24 |
| JSS-125 | 30 | 32 |
| JSS-140 | 34 | 39 |
| JSS-160 | 62 | 68 |
| JSS-210 | 160 | |

Speed and Volume

| Actuator | JSS-052 | JSS-063 | JSS-083 | JSS-105 | JSS-125 | JSS-140 | JSS-160 | JSS-210 |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Volume (cubic inches per 90°) | | | | | | | | |
| CW | 9 | 17 | 39 | 83 | 168 | 218 | 355 | 681 |
| CCW | 8 | 13 | 27 | 60 | 93 | 159 | 240 | 439 |
| Cycle Time (seconds per 90°) | | | | | | | | |
| DA CW | 0.10 | 0.20 | 0.30 | 0.60 | 0.90 | 1.20 | 1.70 | 2.50 |
| DA CCW | 0.10 | 0.20 | 0.30 | 0.70 | 0.95 | 1.45 | 2.10 | 2.75 |
| SR CW | 0.10 | 0.15 | 0.25 | 0.45 | 0.65 | 0.75 | 1.60 | 1.70 |
| SR CCW | 0.20 | 0.30 | 0.50 | 1.10 | 1.60 | 2.10 | 2.15 | 4.70 |

$$\text{Air Consumption (scf per 90°)} = \frac{\text{Volume (cubic inches)}}{1,728} \times \frac{\text{Supply Pressure (psi)} + 14.7}{14.7}$$



Dimensional Information

| Actuator Model | A | ϕB | C | D | E | F | $\square G$ | J | K | ϕL | M | ϕN | ϕS | T | ϕU | $\square V$ | W | X | ISO 5211 |
|----------------|-------|----------|-------|-------|-------|------|-------------|------|-------|----------|------|----------|----------|------|----------|-------------|------|------|----------|
| JSS-052 | 5.75 | 0.87 | 2.83 | 3.62 | 3.07 | 1.22 | 0.47 | 3.15 | 0.787 | M6 | 0.39 | 1.969 | M5 | 0.28 | 1.417 | 0.433 | 0.58 | 0.58 | F03/F05 |
| JSS-063 | 6.81 | 1.06 | 3.46 | 4.25 | 3.58 | 1.55 | 0.47 | 3.15 | 0.787 | M8 | 0.47 | 2.756 | M6 | 0.39 | 1.969 | 0.551 | 0.59 | 0.74 | F05/F07 |
| JSS-083 | 8.03 | 1.06 | 4.25 | 5.04 | 4.42 | 1.89 | 0.47 | 3.15 | 0.787 | M8 | 0.47 | 2.756 | M6 | 0.39 | 1.969 | 0.749 | 0.66 | 0.96 | F05/F0 |
| JSS-105 | 10.63 | 1.11 | 5.24 | 6.02 | 5.31 | 2.38 | 0.47 | 3.15 | 0.787 | M10 | 0.63 | 4.016 | M8 | 0.47 | 2.756 | 0.866 | 0.97 | 1.15 | F07/F10 |
| JSS-125 | 11.89 | 1.37 | 6.10 | 6.89 | 6.12 | 2.81 | 0.79 | 5.12 | 1.181 | M10 | 0.63 | 4.016 | M8 | 0.47 | 2.756 | 0.866 | 0.97 | 1.15 | F07/F10 |
| JSS-140 | 15.51 | 1.56 | 6.77 | 7.56 | 6.75 | 3.15 | 0.79 | 5.12 | 1.181 | M12 | 0.79 | 4.921 | M10 | 0.63 | 4.016 | 1.063 | 1.18 | 1.46 | F10/F12 |
| JSS-160 | 17.95 | 1.56 | 7.80 | 8.58 | 7.58 | 3.66 | 0.79 | 5.12 | 1.181 | M12 | 0.79 | 4.921 | M10 | 0.63 | 4.016 | 1.063 | 1.18 | 1.46 | F10/F12 |
| JSS-210 | 22.36 | 2.76 | 10.12 | 11.30 | 10.00 | 4.78 | 1.18 | 5.12 | 1.181 | M16 | 0.87 | 5.512 | - | - | - | 1.417 | 1.58 | 1.97 | F14 |

***Additional
Jflow Controls Products***



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