

# RSX

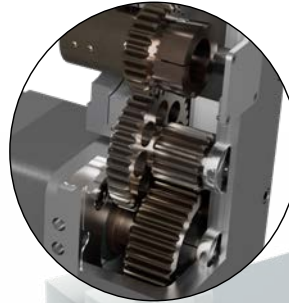
## Extreme Force Actuator

**Tolomatic**<sup>TM</sup>

Powerful.

Precise.

Efficient.



### RSX50 Optional Geared Motor Reduction

4:1 and 6:1 Ratio geared reduction available

### High Power Timing Belt

Carbon fiber tensile reinforced synchronous belt to ensure smooth transmission of high torques in a compact design.

### High Force Angular Contact Bearings

Four ball bearings to support high axial loads & forces for long life

### High Positional Accuracy

Precision ground planetary roller screws provide the highest force and life ratings available



| SCREW ACCURACY |               |                  |
|----------------|---------------|------------------|
| Roller Screw   | ± 0.0004"/ft. | ± 0.0102mm/300mm |
| Ball Screw     | ± 0.004"/ft.  | ± 0.102mm/300mm  |

Ball screw option also available

### Thrust Tube

Salt bath nitride treatment provides excellent corrosion resistance, surface hardness and is very resistant to adherence of potential contaminants

### Field Replaceable Cartridge

Durable seal design prevents contaminants from entering the housing for extended life of the actuator

Additional rod scraper available with IP67 option for high contaminate environments

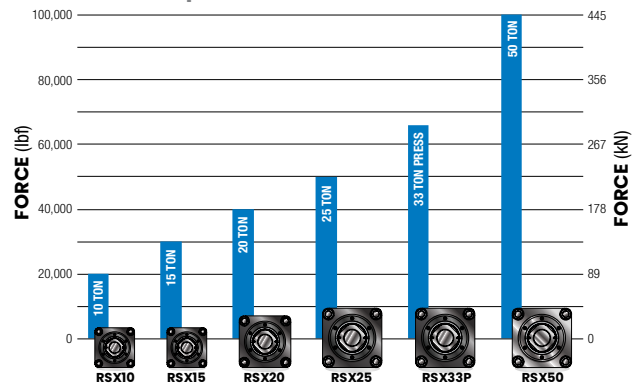
### Internal Anti-Rotate

Composite bearings prevent rotation of the thrust tube

See RSX catalog for additional features and RSX50 features

RSX actuators are an ideal choice for replacing hydraulic cylinders. These high force electric actuators with planetary roller screws are available for forces up to 100,000 lbf (445 kN). Designed for 100% duty cycle, rugged service and long life.

### RSX Force Comparison



## Extreme Force Actuator

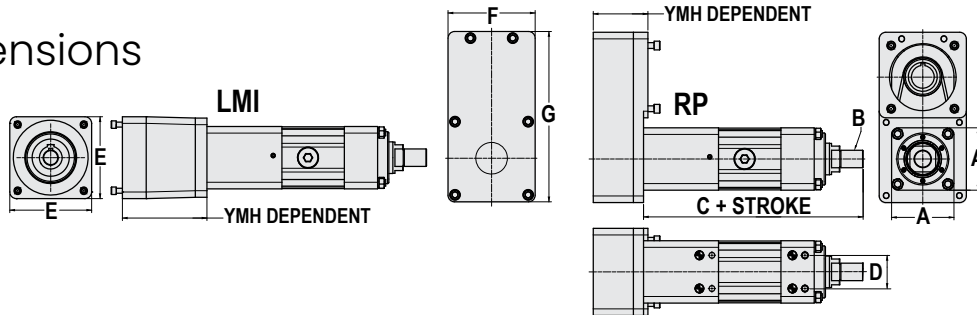
### Specifications

| RSX SIZE<br>(Tonnage<br>Rating) | MAX<br>STROKE** | SCREW<br>TYPE | SCREW<br>LEAD | MAX<br>THRUST | DYNAMIC<br>LOAD<br>RATING | LEAD<br>ACCURACY | BACKLASH | SCREW<br>DIAMETER | BASE<br>ACTUATOR<br>INERTIA | INERTIA<br>PER in OF<br>STROKE |
|---------------------------------|-----------------|---------------|---------------|---------------|---------------------------|------------------|----------|-------------------|-----------------------------|--------------------------------|
|                                 | in              |               | turns/in      | lbf           | lbf                       | in/ft            | in       | in                | lb-in <sup>2</sup>          | lb-in <sup>2</sup>             |
| 10                              | 59.1            | BN01          | 1.00          | 20,000        | 22,500                    | 0.0040           | 0.0150   | 2.00              | 19.968                      | 0.405                          |
|                                 | 59.1            | BN02          | 2.00          | 20,000        | 37,420                    | 0.0040           | 0.0150   | 2.25              | 21.852                      | 0.599                          |
|                                 | 50.0            | RN12          | 2.12          | 20,000        | 58,921                    | 0.0004           | 0.0012   | 1.89              | 19.105                      | 0.345                          |
| 15                              | 59.1            | BN01          | 1.00          | 30,000        | 22,500                    | 0.0040           | 0.0150   | 2.00              | 19.968                      | 0.405                          |
|                                 | 59.1            | BN02          | 2.00          | 30,000        | 37,420                    | 0.0040           | 0.0150   | 2.25              | 21.852                      | 0.599                          |
|                                 | 50.0            | RN12          | 2.12          | 30,000        | 60,541                    | 0.0004           | 0.0012   | 1.89              | 19.105                      | 0.345                          |
| 20                              | 50.0            | RN12          | 2.12          | 40,000        | 60,541                    | 0.0004           | 0.0012   | 1.89              | 19.105                      | 0.345                          |
| 25                              | 26.0            | RN10          | 2.54          | 50,000        | 99,519                    | 0.0004           | 0.0012   | 2.48              | 105.883                     | 1.026                          |
| 33P*                            | 26.0            | RN10          | 2.54          | 66,000        | 99,519                    | 0.0004           | 0.0012   | 2.48              | 105.883                     | 1.026                          |
| 50                              | 24.8            | RN10          | 2.54          | 100,000       | 113,529                   | 0.0009           | 0.0012   | 2.95              | 301.906                     | 2.086                          |
|                                 | 24.8            | RN15          | 1.69          | 100,000       | 187,940                   | 0.0009           | 0.0012   | 2.95              | 302.809                     | 2.098                          |
|                                 | mm              |               | mm/rev        | kN            | kN                        | mm/300mm         | mm       | mm                | kg-cm <sup>2</sup>          | kg-cm <sup>2</sup>             |
| 10                              | 1500            | BN01          | 25.4          | 88.96         | 100.08                    | 0.103            | 0.381    | 50.80             | 58.434                      | 0.047                          |
|                                 | 1500            | BN02          | 12.7          | 88.96         | 166.45                    | 0.103            | 0.381    | 57.15             | 63.948                      | 0.069                          |
|                                 | 1270            | RN12          | 12.0          | 88.96         | 262.09                    | 0.010            | 0.030    | 48.00             | 55.909                      | 0.040                          |
| 15                              | 1500            | BN01          | 25.4          | 133.45        | 100.08                    | 0.103            | 0.381    | 50.80             | 58.434                      | 0.047                          |
|                                 | 1500            | BN02          | 12.7          | 133.45        | 166.45                    | 0.103            | 0.381    | 57.15             | 63.948                      | 0.069                          |
|                                 | 1270            | RN12          | 12.0          | 133.45        | 269.30                    | 0.010            | 0.030    | 48.00             | 55.909                      | 0.040                          |
| 20                              | 1270            | RN12          | 12.0          | 177.93        | 269.30                    | 0.010            | 0.030    | 48.00             | 55.909                      | 0.040                          |
| 25                              | 660             | RN10          | 10.0          | 222.41        | 442.68                    | 0.010            | 0.030    | 63.00             | 309.856                     | 0.118                          |
| 33P*                            | 660             | RN10          | 10.0          | 293.58        | 442.68                    | 0.010            | 0.030    | 63.00             | 309.856                     | 0.118                          |
| 50                              | 630             | RN10          | 10.0          | 444.82        | 505.00                    | 0.023            | 0.030    | 75.00             | 883.497                     | 0.240                          |
|                                 | 630             | RN15          | 15.0          | 444.82        | 836.00                    | 0.023            | 0.030    | 75.00             | 886.139                     | 0.242                          |

\*Call Tolomatic for availability

\*\*Max. force only in extend

### Dimensions



See [RSX catalog \(2171-4001\)](#) for complete dimensions

†RSX50 has different drawing than other sizes, mounting holes on side, not bottom, see [RSX catalog \(2171-4001\)](#)

|                     | A    | B              | C min | C max | D    | E    | F    | G    |
|---------------------|------|----------------|-------|-------|------|------|------|------|
| <b>10 &amp; 15</b>  | 5.9  | 1 7/8-12 UN-2A | 23.2  | 27.7  | 3.1  | 7.8  | 8.3  | 16.8 |
| <b>20</b>           | 7.5  | 2 1/2-12 UN-2A | 24.5  | 24.9  | 3.1  | 7.8  | 8.3  | 16.8 |
| <b>25 &amp; 33P</b> | 8.7  | 2 1/2-8 UN-2A  | 31.7  | 31.7  | 4.5  | 11.3 | 11.3 | 23.0 |
| <b>50†</b>          | 9.25 | M72 x 3.0-6g   | -     | 35.0  | 4.7† | 11.6 | 11.9 | 23.0 |

Dimensions in inches (in)

|                     | A   | B            | C min | C max | D    | E   | F   | G   |
|---------------------|-----|--------------|-------|-------|------|-----|-----|-----|
| <b>10 &amp; 15</b>  | 150 | M42 x 4.5-6g | 588   | 703   | 80   | 197 | 210 | 426 |
| <b>20</b>           | 190 | M64 x 3.0-6g | 622   | 632   | 80   | 197 | 210 | 426 |
| <b>25 &amp; 33P</b> | 220 | M64 x 3.0-6g | 806   | 806   | 115  | 288 | 286 | 584 |
| <b>50†</b>          | 235 | M72 x 3.0-6g | -     | 889   | 120† | 295 | 295 | 583 |

Dimensions in millimeters (mm)

Date: 202606171350