

# MACHINE SCREW JACKS SPECIFICATIONS

| Model     | Capacity   | Screw Diameter (Inches) | Thread Pitch/Lead                    | Worm Gear Ratio | Worm Shaft Turns for 1" Travel     | Tare Torque (Inch Lbs.) | Starting Torque (Inch Lbs.) | Operating Torque (Inch Lbs.) | Efficiency Rating % Approx. | Screw Torque (Inch Lbs.) | Basic Jack Weight (Lbs.) | Jack Weight per Inch Travel (Lbs.) |                     |      |        |    |     |
|-----------|------------|-------------------------|--------------------------------------|-----------------|------------------------------------|-------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------|--------------------------|------------------------------------|---------------------|------|--------|----|-----|
| WJ250     | 250 lbs.   | 1/2                     | .125 pitch<br>STUB ACME              | 5:1             | 40                                 | 1                       | .025W*                      | .018W*<br>@ 500 RPM          | 23.0                        | .050W*                   | 1.2                      | 0.1                                |                     |      |        |    |     |
| WJ500     | 500 lbs.   | 5/8                     | .125 pitch<br>.250 lead<br>STUB ACME | 5:1             | 20                                 | 1                       | .041W*                      | .030W*<br>@ 500 RPM          | 27.2                        | .079W*                   | 1.3                      | 0.1                                |                     |      |        |    |     |
| WJ1000    | 1,000 lbs. | 5/8                     | .125 pitch<br>STUB ACME              | 5:1             | 40                                 | 1                       | .030W*                      | .021W*<br>@ 500 RPM          | 19.9                        | .059W*                   | 1.3                      | 0.1                                |                     |      |        |    |     |
| WJ51      | 1 ton      | 3/4                     | .200 pitch<br>ACME 2C                | 5:1             | 25                                 | 3                       | .038W*                      | .026W*<br>@ 500 RPM          | 25.0                        | .075W*                   | 6                        | 0.3                                |                     |      |        |    |     |
| WJ201     |            |                         |                                      | 20:1            | 100                                |                         | .017W*                      | .009W*<br>@ 500 RPM          | 15.9                        |                          |                          |                                    |                     |      |        |    |     |
| (R)WJT62  | 2 ton      | 1                       | .250 pitch<br>ACME 2C                | 6:1             | 24                                 | 4                       | .041W*                      | .028W*<br>@ 500 RPM          | 24.2                        | .098W*                   | 15                       | 0.3                                |                     |      |        |    |     |
| (R)WJT122 |            |                         |                                      | 12:1            | 48                                 |                         | .025W*                      | .015W*<br>@ 500 RPM          | 22.0                        |                          |                          |                                    |                     |      |        |    |     |
| (R)WJT242 |            |                         |                                      | 24:1            | 96                                 |                         | .018W*                      | .009W*<br>@ 500 RPM          | 18.3                        |                          |                          |                                    |                     |      |        |    |     |
| (R)WJT252 |            |                         |                                      | 25:1            | 100                                |                         | .015W*                      | .0085W*<br>@ 500 RPM         | 17.0                        |                          |                          |                                    |                     |      |        |    |     |
| D(R)WJ62  |            |                         | 6:1                                  | 12              | .250 pitch<br>.500 lead<br>ACME 2C |                         | 12:1                        | 24                           | 4                           | .057W*                   |                          |                                    | .039W*<br>@ 500 RPM | 33.7 | .139W* | 15 | 0.3 |
| D(R)WJ122 |            |                         | 12:1                                 | 24              |                                    |                         |                             |                              |                             | .035W*                   |                          |                                    | .022W*<br>@ 500 RPM | 30.5 |        |    |     |
| D(R)WJ242 |            |                         | 24:1                                 | 48              |                                    |                         |                             |                              |                             | .025W*                   |                          |                                    | .013W*<br>@ 500 RPM | 25.4 |        |    |     |
|           |            |                         |                                      |                 |                                    |                         |                             |                              |                             |                          |                          |                                    |                     |      |        |    |     |
| WJ63      | 3 ton      | 1                       | .250 pitch<br>ACME 2C                | 6:1             | 24                                 | 6                       | .040W*                      | .029W*<br>@ 500 RPM          | 24.3                        | .098W*                   | 17                       | 0.4                                |                     |      |        |    |     |
| WJ123     |            |                         |                                      | 12:1            | 48                                 |                         | .025W*                      | .016W*<br>@ 500 RPM          | 22.2                        |                          |                          |                                    |                     |      |        |    |     |
| WJ243     |            |                         |                                      | 24:1            | 96                                 |                         | .017W*                      | .009W*<br>@ 500 RPM          | 18.5                        |                          |                          |                                    |                     |      |        |    |     |
| WJ253     |            |                         |                                      | 25:1            | 100                                |                         | .0155W*                     | .009W*<br>@ 500 RPM          | 17.8                        |                          |                          |                                    |                     |      |        |    |     |
| DWJ63     |            |                         | 6:1                                  | 12              | .250 pitch<br>.500 lead<br>ACME 2C |                         | 12:1                        | 24                           | 6                           | .055W*                   |                          |                                    | .041W*<br>@ 500 RPM | 33.8 | .139W* | 17 | 0.4 |
| DWJ123    |            |                         | 12:1                                 | 24              |                                    |                         |                             |                              |                             | .034W*                   |                          |                                    | .022W*<br>@ 500 RPM | 30.7 |        |    |     |
| DWJ243    |            |                         | 24:1                                 | 48              |                                    |                         |                             |                              |                             | .024W*                   |                          |                                    | .013W*<br>@ 500 RPM | 25.6 |        |    |     |
|           |            |                         |                                      |                 |                                    |                         |                             |                              |                             |                          |                          |                                    |                     |      |        |    |     |
| WJT65     | 5 ton      | 1 1/2                   | .375 pitch<br>STUB ACME              | 6:1             | 16                                 | 10                      | .065W*                      | .044W*<br>@ 300 RPM          | 23.0                        | .151W*                   | 32                       | 0.7                                |                     |      |        |    |     |
| WJT125    |            |                         |                                      | 12:1            | 32                                 |                         | .041W*                      | .025W*<br>@ 300 RPM          | 20.6                        |                          |                          |                                    |                     |      |        |    |     |
| WJT245    |            |                         |                                      | 24:1            | 64                                 |                         | .029W*                      | .015W*<br>@ 300 RPM          | 16.7                        |                          |                          |                                    |                     |      |        |    |     |
| WJT255    |            |                         | 25:1                                 | 100             | .250 pitch<br>ACME 2C              |                         | 12:1                        | 24                           | 10                          | .022W*                   |                          |                                    | .011W*<br>@ 300 RPM | 13.4 | .131W* | 32 | 0.7 |
| DWJ65     |            |                         | 6:1                                  | 12              |                                    |                         |                             |                              |                             | .072W*                   |                          |                                    | .050W*<br>@ 300 RPM | 26.8 |        |    |     |
| DWJ125    |            |                         | 12:1                                 | 24              |                                    |                         |                             |                              |                             | .045W*                   |                          |                                    | .028W*<br>@ 300 RPM | 23.9 |        |    |     |
| DWJ245    |            |                         | 24:1                                 | 48              |                                    |                         |                             |                              |                             | .033W*                   |                          |                                    | .017W*<br>@ 300 RPM | 19.6 |        |    |     |
|           |            |                         |                                      |                 |                                    |                         |                             |                              |                             |                          |                          |                                    |                     |      |        |    |     |
| WJ810     | 10 ton     | 2                       | .500 pitch<br>ACME 2C                | 8:1             | 16                                 | 20                      | .061W*                      | .043W*<br>@ 200 RPM          | 23.1                        | .195W*                   | 43                       | 1.3                                |                     |      |        |    |     |
| WJ2410    |            |                         |                                      | 24:1            | 48                                 |                         | .030W*                      | .018W*<br>@ 200 RPM          | 18.8                        |                          |                          |                                    |                     |      |        |    |     |
| WJ2510    |            |                         | 25:1                                 | 100             | .250 pitch<br>ACME 2C              |                         | 8:1                         | 12                           | 20                          | .024W*                   |                          |                                    | .014W*<br>@ 200 RPM | 11.3 | .161W* | 43 | 1.3 |
| DWJ810    |            |                         | 8:1                                  | 12              |                                    |                         |                             |                              |                             | .070W*                   |                          |                                    | .062W*<br>@ 200 RPM | 31.9 |        |    |     |
| DWJ2410   |            |                         | 24:1                                 | 36              |                                    |                         |                             |                              |                             | .035W*                   |                          |                                    | .026W*<br>@ 200 RPM | 25.9 |        |    |     |

**Important Note:** Series DWJ double lead screw jacks and WJ500 screw jacks are not self-locking. Brake motors or external locking systems are recommended.

(R): Reverse Base Jack.

\*W: Load in pounds.

**Tare Torque:** Initial torque to overcome seal and normal assembly drag. This value must be added to starting torque or operating torque values.

**Starting Torque:** Torque value required to start moving the rated load (dissipates to operating torque values once the load begins moving).

**Operating Torque:** Torque required to continuously raise a given load at the input RPM listed.

**Note:** If your actual input RPM is 20% higher or lower than the listed RPM, please refer to JAX® Online to determine actual torque values at your RPM.

**Screw Torque:** Torque required to resist screw rotation (Translating Design Jacks) and traveling nut rotation (Keyed for Traveling Nut Design Jacks).

**Lead:** The distance traveled axially in one rotation of the lifting screw.

**Pitch:** The distance from a point on a screw thread to a corresponding point on the next thread, measured axially.

**Note:** This chart is provided for reference only. For specific information such as column loading, allowable continuous travel and other performance factors please refer to JAX® Online software or contact Joyce.

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|------------|----------|-------------------------|--------------------------------------|------------------------------------|--------------------------------|-------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|--------------------------|------------------------------------|
| WJ815      | 15 ton   | 2 1/4                   | .500 pitch<br>ACME 2C                | 8:1                                | 16                             | 30                      | .069W*                      | .047W*<br>@ 200 RPM          | 21.1                       | .210W*                   | 59                       | 1.4                                |
| WJ2415     |          |                         |                                      | 24:1                               | 48                             |                         | .036W*                      | .020W*<br>@ 200 RPM          | 16.6                       |                          |                          |                                    |
| WJ2515     |          |                         | .250 pitch<br>ACME 2C                | 25:1                               | 100                            |                         | .026W*                      | .015W*<br>@ 200 RPM          | 10.2                       |                          |                          |                                    |
| DWJ815     |          | 2 1/4                   |                                      | .333 pitch<br>.666 lead<br>ACME 2C | 8:1                            |                         | 12                          | .079W*                       | .058W*<br>@ 200 RPM        | 34.4                     |                          |                                    |
| DWJ2415    |          |                         | 24:1                                 |                                    | 36                             |                         | .041W*                      | .025W*<br>@ 200 RPM          | 27.0                       |                          |                          |                                    |
| WJ820      | 20 ton   | 2 1/2                   | .500 pitch<br>ACME 2C                | 8:1                                | 16                             | 40                      | .075W*                      | .051W*<br>@ 200 RPM          | 19.6                       | .227W*                   | 77                       | 1.9                                |
| WJ2420     |          |                         |                                      | 24:1                               | 48                             |                         | .039W*                      | .022W*<br>@ 200 RPM          | 15.4                       |                          |                          |                                    |
| WJ2520     |          |                         | .250 pitch<br>ACME 2C                | 25:1                               | 100                            |                         | .029W*                      | .016W*<br>@ 200 RPM          | 9.4                        |                          |                          |                                    |
| DWJ820     |          | 2 1/2                   |                                      | .375 pitch<br>.750 lead<br>ACME 2C | 8:1                            |                         | 10.67                       | .088W*                       | .061W*<br>@ 200 RPM        | 24.5                     |                          |                                    |
| DWJ2420    |          |                         | 24:1                                 |                                    | 32                             |                         | .046W*                      | .026W*<br>@ 200 RPM          | 19.3                       |                          |                          |                                    |
| WJ1125     | 25 ton   | 3 3/8                   | .666 pitch<br>Stub<br>ACME           | 11:1                               | 16                             | 50                      | .088W*                      | .055W*<br>@ 200 RPM          | 18.3                       | .313W*                   | 164                      | 3.1                                |
| WJ3225     |          |                         |                                      | 32:1                               | 48                             |                         | .053W*                      | .025W*<br>@ 200 RPM          | 13.5                       |                          |                          |                                    |
| DWJ1125    |          | 3 3/8                   | .562 pitch<br>1.125 lead<br>ACME 2C  | 11:1                               | 9.5                            |                         | .106W*                      | .067W*<br>@ 200 RPM          | 25.1                       |                          |                          |                                    |
| DWJ3225    |          |                         |                                      | 32:1                               | 28.5                           |                         | .063W*                      | .030W*<br>@ 200 RPM          | 18.6                       |                          |                          |                                    |
| WJ1130     | 30 ton   | 3 1/2                   | .666 pitch<br>ACME 2C                | 11:1                               | 16                             | 60                      | .088W*                      | .055W*<br>@ 200 RPM          | 18.3                       | .313W*                   | 164                      | 3.0                                |
| WJ3230     |          |                         |                                      | 32:1                               | 48                             |                         | .052W*                      | .025W*<br>@ 200 RPM          | 13.5                       |                          |                          |                                    |
| DWJ1130    |          | 3 1/2                   | .5625 pitch<br>1.125 lead<br>ACME 2C | 11:1                               | 9.5                            |                         | .107W*                      | .067W*<br>@ 200 RPM          | 25.1                       |                          |                          |                                    |
| DWJ3230    |          |                         |                                      | 32:1                               | 28.5                           |                         | .064W*                      | .030W*<br>@ 200 RPM          | 18.6                       |                          |                          |                                    |
| WJ1135     | 35 ton   | 3 3/4                   | .666 pitch<br>ACME 2C                | 11:1                               | 16                             | 70                      | .093W*                      | .057W*<br>@ 200 RPM          | 17.4                       | .328W*                   | 240                      | 3.4                                |
| WJ3235     |          |                         |                                      | 32:1                               | 48                             |                         | .055W*                      | .026W*<br>@ 200 RPM          | 12.9                       |                          |                          |                                    |
| (R)WJT1150 | 50 ton   | 4 1/2                   | .666 pitch<br>ACME 2C                | 11:1                               | 16                             | 100                     | .095W*                      | .063W*<br>@ 150 RPM          | 15.8                       | .378W*                   | 387                      | 6.1                                |
| (R)WJT3250 |          |                         |                                      | 32:1                               | 48                             |                         | .050W*                      | .027W*<br>@ 150 RPM          | 12.4                       |                          |                          |                                    |
| WJ1175     | 75 ton   | 5                       | .666 pitch<br>ACME 2C                | 11:1                               | 16                             | 155                     | .107W*                      | .067W*<br>@ 150 RPM          | 14.8                       | .418W*                   | 610                      | 6.5                                |
| WJ3275     |          |                         |                                      | 32:1                               | 48                             |                         | .056W*                      | .028W*<br>@ 150 RPM          | 11.7                       |                          |                          |                                    |
| WJ12100    | 100 ton  | 6                       | .750 pitch<br>ACME 2C                | 12:1                               | 16                             | 205                     | .112W*                      | .072W*<br>@ 90 RPM           | 13.9                       | .495W*                   | 1010                     | 10.0                               |
| WJ36100    |          |                         |                                      | 36:1                               | 48                             |                         | .059W*                      | .031W*<br>@ 90 RPM           | 10.8                       |                          |                          |                                    |
| WJ12150    | 150 ton  | 7                       | 1.00 pitch<br>ACME 2C                | 12:1                               | 12                             | 300                     | .134W*                      | .084W*<br>@ 90 RPM           | 15.7                       | .595W*                   | 1350                     | 12.2                               |
| WJ36150    |          |                         |                                      | 36:1                               | 36                             |                         | .070W*                      | .037W*<br>@ 90 RPM           | 12.1                       |                          |                          |                                    |
| WJ50250    | 250 ton  | 9                       | 1.00 pitch<br>ACME 2C                | 50:1                               | 50                             | 500                     |                             | .036W*<br>@ 60 RPM           | 8.8                        | .711W*                   | 3415                     | 21.0                               |

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