Parker Bayside’s Direct Drive Rotary Stages feature a robust construction and high performance in a compact package, providing smooth, near-frictionless motion with zero backlash.
### Performance Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Axial Capacity</th>
<th>Perpendicular Capacity @ Radius</th>
<th>Continuous Output Torque</th>
<th>Peak Output Torque</th>
<th>Maximum Output Speed (RPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kgf)</td>
<td>(lb)</td>
<td>(Nm)</td>
<td>(in lb)</td>
<td></td>
</tr>
<tr>
<td>R100D</td>
<td>75</td>
<td>165.3</td>
<td>20kgf @ 50mm</td>
<td>0.65</td>
<td>1.96</td>
</tr>
<tr>
<td>R150D</td>
<td>150</td>
<td>330.6</td>
<td>75kgf @ 75mm</td>
<td>4.00</td>
<td>12.00</td>
</tr>
<tr>
<td>R200D</td>
<td>250</td>
<td>551.1</td>
<td>150kgf @ 100mm</td>
<td>6.2</td>
<td>18.60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Radial Runout @ øk</th>
<th>Axial Runout of Rotation</th>
<th>Wobble @ Axis (arc sec)</th>
<th>Inertia (gm cm sec²)</th>
<th>Stage Weight (kg)</th>
<th>Stage Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(microns)</td>
<td>(microns)</td>
<td>(arc sec)</td>
<td>(oz in sec²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R100D</td>
<td>20</td>
<td>18</td>
<td>60</td>
<td>14.2</td>
<td>0.197</td>
<td>2.24</td>
</tr>
<tr>
<td>R150D</td>
<td>26</td>
<td>23</td>
<td>45</td>
<td>86.4</td>
<td>1.200</td>
<td>5.8</td>
</tr>
<tr>
<td>R200D</td>
<td>36</td>
<td>30</td>
<td>30</td>
<td>338.0</td>
<td>4.695</td>
<td>10.5</td>
</tr>
</tbody>
</table>

### Encoder Data

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Total Number of counts/rev (2)</th>
<th>Frequency at Max Speed (2) (MHz)</th>
<th>Resolution after x4</th>
<th>Repeatability after x4 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(arc sec)</td>
<td>(arc sec)</td>
</tr>
<tr>
<td>R100D</td>
<td>473,600</td>
<td>5.5</td>
<td>2.73</td>
<td>± 8.4</td>
</tr>
<tr>
<td>R150D</td>
<td>629,760</td>
<td>5.2</td>
<td>2.05</td>
<td>± 6.15</td>
</tr>
<tr>
<td>R200D</td>
<td>944,000</td>
<td>4.7</td>
<td>1.3728</td>
<td>± 4.1</td>
</tr>
</tbody>
</table>

(1) Maximum speed may be limited by input frequency response of controller or drive.
(2) Post quadrature (includes 10x interpolation and 4x of control).
(3) Typical system repeatability that can be achieved by a closed loop control system.

### Motor Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Voltage Constant (K_{E-L}) (V/kRPM)</th>
<th>Torque Constant (K_{E-L}) (Nm/amp)</th>
<th>Resistance (R_{L}) (ohms@ 25°C)</th>
<th>Inductance (L_{L}) (mH)</th>
<th>Thermal Resistance (°C/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R100D</td>
<td>75</td>
<td>0.72</td>
<td>59.9</td>
<td>50</td>
<td>2.0</td>
</tr>
<tr>
<td>R150D</td>
<td>210</td>
<td>2</td>
<td>11.4</td>
<td>14</td>
<td>2.0</td>
</tr>
<tr>
<td>R200D</td>
<td>325</td>
<td>3.1</td>
<td>10.4</td>
<td>21</td>
<td>2.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Rated Voltage (V)</th>
<th>Icont (amps)</th>
<th>Ipeak (amps)</th>
<th>Logic Voltage (V/amp)</th>
<th>Pole Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>R100D</td>
<td>300</td>
<td>0.9</td>
<td>2.72</td>
<td>5V @ 170 ma</td>
<td>12</td>
</tr>
<tr>
<td>R150D</td>
<td>300</td>
<td>2.0</td>
<td>6.0</td>
<td>5V @ 170 ma</td>
<td>20</td>
</tr>
<tr>
<td>R200D</td>
<td>300</td>
<td>2.0</td>
<td>6.0</td>
<td>5V @ 170 ma</td>
<td>32</td>
</tr>
</tbody>
</table>
Direct Drive Precision Stages

High Performance in a Compact Package
Parker Bayside’s Direct Drive Rotary Stage, featuring an integral brushless DC servomotor, has several distinct advantages over traditional worm gear-driven stages. The elimination of the worm gearing offers the ability to reduce wear with zero backlash while exhibiting near frictionless motion. Its high positioning accuracy, solely based on the stage’s encoder, provides repeatability within + 2 encoder counts, with resolutions ranging to 1.4 arc seconds. The RD Direct Drive features speeds up to 700 RPM with significant torque capability.

When to Use:
- Precision rotary motion
- ZERO backlash
- Compact
- Rugged

Applications:
- Electronic assembly
- Fiber Optics
- Medical
- Packaging
- Pharmaceutical
- Robotics
- Semiconductor

1. Robust bearing design for high load capacity
2. Rotor / Shaft
   motor rotor and top plate shaft as one piece construction for high stiffness
3 Stainless Steel Top Plate
precision ground for accurate mounting

4 Integrated Brushless Motor
unique design with high copper slot and rare earth magnet for maximum torque efficiency

5 Inline Rotary Encoder for direct position feedback. Also includes once per rev index mark

6 Sub “D” connectors
for “plug & play” operation and easy hook-up.
## Rotary Series

### Direct Drive Precision Stages

### Dimensions

[Diagram of rotary stage with dimensions labeled: H, G, F, B, C, J, O K]

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
</tr>
<tr>
<td>R100D</td>
<td>100</td>
<td>3.94</td>
<td>100</td>
<td>3.94</td>
<td>75</td>
<td>2.95</td>
<td>130</td>
</tr>
<tr>
<td>R150D</td>
<td>150</td>
<td>5.9</td>
<td>150</td>
<td>5.9</td>
<td>78</td>
<td>3.07</td>
<td>180</td>
</tr>
<tr>
<td>R200D</td>
<td>200</td>
<td>7.87</td>
<td>200</td>
<td>7.87</td>
<td>100</td>
<td>3.94</td>
<td>230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>(in)</td>
<td>Tap</td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
</tr>
<tr>
<td>R100D</td>
<td>20</td>
<td>0.787</td>
<td>M5</td>
<td>60</td>
<td>2.36</td>
<td>5.5</td>
<td>0.216</td>
</tr>
<tr>
<td>R150D</td>
<td>20</td>
<td>0.787</td>
<td>M6</td>
<td>95</td>
<td>3.74</td>
<td>6.5</td>
<td>0.255</td>
</tr>
<tr>
<td>R200D</td>
<td>30</td>
<td>1.18</td>
<td>M8</td>
<td>125</td>
<td>4.92</td>
<td>8.5</td>
<td>0.334</td>
</tr>
</tbody>
</table>
### Order Numbering

**Example:**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAGE SERIES</strong></td>
<td><strong>MODEL</strong></td>
<td><strong>DRIVE</strong></td>
</tr>
<tr>
<td>R</td>
<td>100</td>
<td>100 mm</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>150 mm</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>200 mm</td>
</tr>
</tbody>
</table>

### Cable Options:

**Mating Power Cable**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Length</th>
<th>Used With</th>
</tr>
</thead>
<tbody>
<tr>
<td>10963018-3000D</td>
<td>3 meters</td>
<td>Flying Leads</td>
</tr>
<tr>
<td>10963018-8000D</td>
<td>8 meters</td>
<td>Flying Leads</td>
</tr>
</tbody>
</table>

Notes:

- “Only for use with stage versions without LC display and programmable limits/outputs 5v requirement and Y-cable limits branch of previous cable type.”

**Mating Sensor Cable**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Length</th>
<th>Used With</th>
</tr>
</thead>
<tbody>
<tr>
<td>10963241-3000D</td>
<td>3 meters</td>
<td>Flying Leads</td>
</tr>
</tbody>
</table>

### How to Order

Direct Drive Rotary Stages are supported by a worldwide network of offices and local distributors. Call **1-800-305-4555** for application engineering assistance or for the name of your local distributor. Information can also be obtained at [www.baysidemotion.com](http://www.baysidemotion.com) or [www.parkermotion.com](http://www.parkermotion.com).

Specifications are subject to change without notice.
Rotary Series: Worm Drive Precision Stages

Parker Bayside’s Worm Drive Precision Stages feature a unique self-compensating preload to limit backlash, solid or through-bore construction, and built-in limit switches.
### Performance Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Axial Capacity</th>
<th>Perpendicular Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>@ 25mm</td>
<td>@ 150mm</td>
</tr>
<tr>
<td></td>
<td>(kg)</td>
<td>(lb)</td>
</tr>
<tr>
<td></td>
<td>(kgf)</td>
<td>(lb)</td>
</tr>
<tr>
<td>R100M</td>
<td>100</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>R150M</td>
<td>400</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>194</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>73</td>
</tr>
<tr>
<td>R200M</td>
<td>600</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>440</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>187</td>
</tr>
<tr>
<td>R300M</td>
<td>1,000</td>
<td>325</td>
</tr>
<tr>
<td></td>
<td>715</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>352</td>
</tr>
</tbody>
</table>

### Accuracy Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Main Bearing Runout</th>
<th>Top to Base Parallelism</th>
<th>Position Accuracy</th>
<th>Position Repeatability</th>
<th>Input Torque Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(microns)</td>
<td>(microns)</td>
<td>(arc min)</td>
<td>(arc sec)</td>
<td>(Nm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(in oz)</td>
</tr>
<tr>
<td>R100M</td>
<td>±5</td>
<td>±12</td>
<td>2</td>
<td>12</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>R150M</td>
<td>±5</td>
<td>±12</td>
<td>2</td>
<td>12</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>R200M</td>
<td>±7</td>
<td>±17</td>
<td>2</td>
<td>12</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>R300M</td>
<td>±10</td>
<td>±25</td>
<td>2</td>
<td>12</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

(1) Gearing backlash is uni-directional.
(2) Accuracy is based on stage mounted to a flat granite surface and measured at 25mm above the center of the stage.
(3) Accuracy and repeatability are based on open loop lead accuracy and can be enhanced with encoder feedback.
(4) See 200 RT Series page 90.
Rotary Series

Worm Drive Precision Stages

The Rotary Stage Series offers an unparalleled combination of high accuracy and high-load capacity.

These rotary stages utilize a precision worm gear with the worm “flexed” against the gear to ensure a proper mesh. This feature provides high repeatability with very smooth operation.

Additionally, the rotary stages incorporate an oversized preloaded crossed roller bearing, offering exceptional stiffness and load capacity.

- Unique self-compensating preload to limit backlash
- Solid or thru bore construction
- Robust bearing design for high-load capacity
- Built-in limit switches
- Aluminum construction with stainless steel top plate

When to Use:

- High accuracy
- High loads
- Compact
- High stiffness

Applications:

- Electronic assembly
- Fiber Optics
- Medical
- Packaging
- Pharmaceutical
- Robotics
- Semiconductor

Heavy Duty Stainless Steel Worm with Bronze Gear for smooth operation and high torque and Self-Compensating Preload for zero backlash

Completely Sealed and Lubricated for long life even in harsh environments
1 Motor Mounting and Coupling
for easy installation

2 Integral Limit Switches
mounted under top plate for safety

3 Preloaded Crossed Roller Bearings
for high loads and spindle stiffness

4 Stainless Steel Top Plate
with solid or through hole construction

5 Optional Inline Rotary Encoder
for direct position feedback
### Rotary Series

#### Dimensions

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
</tr>
<tr>
<td>R100M</td>
<td>98.5</td>
<td>3.88</td>
<td>100</td>
<td>3.94</td>
<td>55</td>
</tr>
<tr>
<td>R150M</td>
<td>147.6</td>
<td>5.81</td>
<td>150</td>
<td>5.90</td>
<td>75</td>
</tr>
<tr>
<td>R200M</td>
<td>197.7</td>
<td>7.78</td>
<td>200</td>
<td>7.87</td>
<td>90</td>
</tr>
<tr>
<td>R300M</td>
<td>297.7</td>
<td>11.72</td>
<td>300</td>
<td>11.81</td>
<td>108</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
</tr>
<tr>
<td>R100M</td>
<td>12</td>
<td>0.47</td>
<td>15</td>
<td>0.59</td>
<td>45</td>
</tr>
<tr>
<td>R150M</td>
<td>25.5</td>
<td>1.00</td>
<td>27</td>
<td>1.06</td>
<td>66</td>
</tr>
<tr>
<td>R200M</td>
<td>38</td>
<td>1.50</td>
<td>27</td>
<td>1.06</td>
<td>66</td>
</tr>
<tr>
<td>R300M</td>
<td>51</td>
<td>2.00</td>
<td>39</td>
<td>1.53</td>
<td>113</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>S</th>
<th>Stage Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
<td>Tap</td>
<td>C'Bore</td>
<td>(mm)</td>
</tr>
<tr>
<td>R100M</td>
<td>21</td>
<td>0.83</td>
<td>45</td>
<td>1.772</td>
<td>75</td>
<td>2.953</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>R150M</td>
<td>30.1</td>
<td>1.18</td>
<td>100</td>
<td>3.937</td>
<td>125</td>
<td>4.921</td>
<td>M6 x 1</td>
</tr>
<tr>
<td>R200M</td>
<td>33.5</td>
<td>1.32</td>
<td>100</td>
<td>3.937</td>
<td>150</td>
<td>5.905</td>
<td>M8 x 1.25</td>
</tr>
<tr>
<td>R300M</td>
<td>44.2</td>
<td>1.74</td>
<td>150</td>
<td>5.995</td>
<td>250</td>
<td>9.843</td>
<td>M8 x 1.25</td>
</tr>
</tbody>
</table>

(1) This dimension is used when the in-line encoder option is selected.
### How to Order

**Order Numbering**

**Example:**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>150</td>
<td>M</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>H</td>
</tr>
</tbody>
</table>

#### Stage Series

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Worm Gear Rotary Series</td>
</tr>
</tbody>
</table>

#### Metric Square Width

<table>
<thead>
<tr>
<th>B</th>
<th>Metric Square Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100mm</td>
</tr>
<tr>
<td>150</td>
<td>150mm</td>
</tr>
<tr>
<td>200</td>
<td>200mm</td>
</tr>
<tr>
<td>300</td>
<td>300mm</td>
</tr>
</tbody>
</table>

#### Drive

<table>
<thead>
<tr>
<th>C</th>
<th>Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Separate Motor</td>
</tr>
</tbody>
</table>

#### Gear Ratio

<table>
<thead>
<tr>
<th>D</th>
<th>Gear Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>60:1 (R100)</td>
</tr>
<tr>
<td>3</td>
<td>72:1 (R150 and R200)</td>
</tr>
<tr>
<td>4</td>
<td>90:1 (R300)</td>
</tr>
</tbody>
</table>

#### Motor Mounting

<table>
<thead>
<tr>
<th>E</th>
<th>Motor Mounting</th>
</tr>
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<tbody>
<tr>
<td>X</td>
<td>See how to order step 2</td>
</tr>
</tbody>
</table>

#### Limit Switches

<table>
<thead>
<tr>
<th>F</th>
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<tbody>
<tr>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>End of Travel</td>
</tr>
<tr>
<td>3</td>
<td>End of Travel and Home</td>
</tr>
</tbody>
</table>

#### Encoder in Line with Top Plate

<table>
<thead>
<tr>
<th>G</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>2000 LPR</td>
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#### Environment

<table>
<thead>
<tr>
<th>H</th>
<th>Environment</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Standard</td>
</tr>
<tr>
<td>2</td>
<td>Clean Room</td>
</tr>
</tbody>
</table>

(1) See page 90 for 200RT series and page 127 for manual driven rotary positioning stages.

---

1. Pick features and options above.
2. Specify motor, make and model for mounting kit.

Parker Bayside’s Rotary Series is supported by a worldwide network of offices and local distributors. Call 1-800-305-4555 for application engineering assistance and the name of the local distributor or Parker Bayside office nearest you. Visit us online at [www.baysidemotion.com](http://www.baysidemotion.com) or [www.parkermotion.com](http://www.parkermotion.com) for product information.

Specifications are subject to change without notice.
200 RT Series: Rotary Tables

- High repeatable indexing (12 arc sec.)
- Load capacities to 200 lbs
- 360 degrees travel
- Performance tested worm gear drive
- Selectable table sizes and drive ratio
- Dual race angular contact support bearing
The 200RT Series Rotary Tables are designed for precise motor-driven rotary positioning and indexing. These tables are designed to function independently or in conjunction with linear tables used in high precision and precision automation applications. Their low-profile design minimizes stack height in multi-axis configurations and enables them to fit in many places where other motorized rotary devices cannot.

Models are available in 5, 6, 8, 10, or 12 inch diameters and are offered with four gear ratios making it convenient to match size, speed, and load requirements. They can be selected in either English or Metric mounting. They are found in virtually all industries where intermittent part indexing, part scanning, skew adjustment, or precise angular alignment is required.

At the heart of these tables is a rugged main support bearing which is comprised of two preloaded angular contact bearing races. It is designed for high load capacity and smooth, flat rotary motion. The drive is a precision worm gear assembly that is preloaded to remove backlash. The top and base are constructed of high quality aluminum with an attractive black anodized finish. The top and bottom mounting surfaces are precision ground to assure flatness.

### 200RT Series Characteristics

#### Common Characteristics

<table>
<thead>
<tr>
<th>Performance</th>
<th>Units</th>
<th>Precision</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positional Repeatability</td>
<td>arc min</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>%</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Table Runout (Max.)</td>
<td>in (µm)</td>
<td>±0.001 (±25)</td>
<td>±0.003 (±75)</td>
</tr>
<tr>
<td>Concentricity</td>
<td>in (µm)</td>
<td>±0.001 (±25)</td>
<td>±0.005 (±127)</td>
</tr>
<tr>
<td>Wobble</td>
<td>arc sec</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Input Velocity (Max.)</td>
<td>revs/sec</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

### Travel Dependent Characteristics

<table>
<thead>
<tr>
<th>Table Diameter</th>
<th>Drive Ratio</th>
<th>Load Capacity lbs (kgf)</th>
<th>Prec.</th>
<th>Accuracy arc min</th>
<th>Std.</th>
<th>Output Torque in-lb (N-m)</th>
<th>Inertia 10^-3 oz-in-sec² (10^-6 kg-m-sec²)</th>
<th>Breakaway Torque (max) oz-in (N-m)</th>
<th>Running Torque (max) oz-in (N-m)</th>
<th>Std. Top lb (kgf)</th>
<th>Weight Total lb (kgf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>180:1</td>
<td>25 (11)</td>
<td>3</td>
<td>10</td>
<td>25 (2.8)</td>
<td>0.14 (0.102)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.67 (0.3)</td>
<td>6.0 (2.7)</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>90:1</td>
<td>25 (11)</td>
<td>3</td>
<td>10</td>
<td>25 (2.8)</td>
<td>0.15 (0.112)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.67 (0.3)</td>
<td>6.0 (2.7)</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>36:1</td>
<td>70 (32)</td>
<td>5</td>
<td>12</td>
<td>25 (2.8)</td>
<td>0.24 (0.173)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.67 (0.3)</td>
<td>6.0 (3.6)</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>180:1</td>
<td>150 (68)</td>
<td>3</td>
<td>10</td>
<td>40 (4.5)</td>
<td>0.16 (0.112)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.91 (0.42)</td>
<td>8.0 (2.7)</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>90:1</td>
<td>150 (68)</td>
<td>3</td>
<td>10</td>
<td>40 (4.5)</td>
<td>0.20 (0.152)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.91 (0.42)</td>
<td>8.0 (3.6)</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>45:1</td>
<td>150 (68)</td>
<td>5</td>
<td>12</td>
<td>40 (4.5)</td>
<td>0.29 (0.204)</td>
<td>22 (0.16)</td>
<td>20 (0.13)</td>
<td>0.91 (0.42)</td>
<td>8.0 (3.6)</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>180:1</td>
<td>150 (68)</td>
<td>3</td>
<td>10</td>
<td>40 (4.5)</td>
<td>0.24 (0.163)</td>
<td>28 (0.19)</td>
<td>25 (0.18)</td>
<td>2.23 (1.01)</td>
<td>15.0 (6.8)</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>90:1</td>
<td>150 (68)</td>
<td>3</td>
<td>10</td>
<td>40 (4.5)</td>
<td>0.66 (0.459)</td>
<td>28 (0.19)</td>
<td>25 (0.18)</td>
<td>2.23 (1.01)</td>
<td>15.0 (6.8)</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>36:1</td>
<td>150 (68)</td>
<td>5</td>
<td>12</td>
<td>40 (4.5)</td>
<td>0.98 (0.642)</td>
<td>28 (0.19)</td>
<td>25 (0.18)</td>
<td>2.30 (1.05)</td>
<td>15.0 (6.8)</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>180:1</td>
<td>200 (90)</td>
<td>3</td>
<td>10</td>
<td>190 (21.5)</td>
<td>0.74 (0.530)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>5.26 (2.30)</td>
<td>29.0 (13.1)</td>
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</tr>
<tr>
<td>10.0</td>
<td>90:1</td>
<td>200 (90)</td>
<td>3</td>
<td>10</td>
<td>190 (21.5)</td>
<td>1.02 (0.734)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>5.26 (2.30)</td>
<td>29.0 (13.1)</td>
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</tr>
<tr>
<td>10.0</td>
<td>45:1</td>
<td>200 (90)</td>
<td>5</td>
<td>12</td>
<td>190 (21.5)</td>
<td>2.13 (1.53)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>5.26 (2.30)</td>
<td>29.0 (13.1)</td>
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</tr>
<tr>
<td>12.0</td>
<td>180:1</td>
<td>200 (90)</td>
<td>3</td>
<td>10</td>
<td>190 (21.5)</td>
<td>0.99 (0.713)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>7.67 (3.49)</td>
<td>32.0 (14.5)</td>
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<tr>
<td>12.0</td>
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<td>200 (90)</td>
<td>3</td>
<td>10</td>
<td>190 (21.5)</td>
<td>1.59 (1.22)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>7.67 (3.49)</td>
<td>32.0 (14.5)</td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td>45:1</td>
<td>200 (90)</td>
<td>5</td>
<td>12</td>
<td>190 (21.5)</td>
<td>3.83 (2.75)</td>
<td>33 (0.22)</td>
<td>30 (0.21)</td>
<td>7.67 (3.49)</td>
<td>32.0 (14.5)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** For moment load calculations, refer to the technical section of Parker’s web site www.parkermotion.com

### Rotary Encoder Option:

High resolution, high accuracy ring encoders can be mounted to the base of the rotary table. The encoder is coupled directly to the rotary table top, providing positional feedback with no drive train errors. 314,880 or 3,148,800 post quadrature counts per revolution are available, and an encoder housing is included to enclose and protect the encoder.
Rotary Series

Dimensions inch (mm)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>Std. (T2)</th>
<th>Option (T3)</th>
<th>F</th>
<th>Std. (T2)</th>
<th>Option (T3)</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
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<td>5.0</td>
<td>4.0</td>
<td>1.8</td>
<td>2.42</td>
<td>0.38</td>
<td>1.00</td>
<td>1.11</td>
<td>1.66</td>
<td>3.0</td>
<td>4.0</td>
<td>1.38</td>
<td>0.188</td>
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<td></td>
</tr>
<tr>
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<td>6.0</td>
<td>5.0</td>
<td>2.0</td>
<td>2.62</td>
<td>0.38</td>
<td>1.00</td>
<td>1.23</td>
<td>2.04</td>
<td>4.0</td>
<td>5.0</td>
<td>1.38</td>
<td>0.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>1.75*</td>
<td>8.0</td>
<td>6.0</td>
<td>2.5</td>
<td>3.00</td>
<td>0.50</td>
<td>1.00</td>
<td>1.57</td>
<td>2.04</td>
<td>4.0</td>
<td>8.0</td>
<td>1.38</td>
<td>0.250</td>
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<td></td>
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<tr>
<td>10.0</td>
<td>2.0</td>
<td>10.0</td>
<td>9.0</td>
<td>3.0</td>
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<td>0.75</td>
<td>1.00</td>
<td>1.81</td>
<td>3.03</td>
<td>6.0</td>
<td>8.0</td>
<td>1.38</td>
<td>0.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td>2.0</td>
<td>10.0</td>
<td>9.0</td>
<td>3.0</td>
<td>3.25</td>
<td>0.75</td>
<td>1.00</td>
<td>1.81</td>
<td>3.03</td>
<td>8.0</td>
<td>10.0</td>
<td>2.38</td>
<td>0.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.0</td>
<td>25.4</td>
<td>127.0</td>
<td>100</td>
<td>46.0</td>
<td>61.5</td>
<td>9.6</td>
<td>25.4</td>
<td>26.1</td>
<td>42.1</td>
<td>75</td>
<td>100</td>
<td>35</td>
<td>4.76</td>
<td></td>
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</tr>
<tr>
<td>152.4</td>
<td>44.5</td>
<td>152.4</td>
<td>125</td>
<td>50.8</td>
<td>66.5</td>
<td>9.6</td>
<td>25.4</td>
<td>31.4</td>
<td>51.8</td>
<td>100</td>
<td>125</td>
<td>35</td>
<td>6.35</td>
<td></td>
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</tr>
<tr>
<td>202.4</td>
<td>44.5*</td>
<td>203.2</td>
<td>175</td>
<td>63.5</td>
<td>76.2</td>
<td>12.7</td>
<td>25.4</td>
<td>39.8</td>
<td>51.8</td>
<td>100</td>
<td>150</td>
<td>35</td>
<td>6.35</td>
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<td></td>
</tr>
<tr>
<td>254.0</td>
<td>50.8</td>
<td>254.0</td>
<td>225</td>
<td>76.2</td>
<td>82.6</td>
<td>19.0</td>
<td>25.4</td>
<td>45.9</td>
<td>76.9</td>
<td>150</td>
<td>200</td>
<td>35</td>
<td>6.35</td>
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<td></td>
</tr>
<tr>
<td>304.8</td>
<td>50.8</td>
<td>254.0</td>
<td>225</td>
<td>76.2</td>
<td>82.6</td>
<td>19.0</td>
<td>25.4</td>
<td>45.9</td>
<td>76.9</td>
<td>200</td>
<td>250</td>
<td>60.4</td>
<td>6.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*On the 8.0” (203.2) diameter table with 36:1 ratio, this dimension is 1.0” (25.4).

Options:

Motor Couplings
A wide range of coupling styles and bores are available to match motor requirements. Bellows-style couplings, offering the lowest windup are required for all precision grade tables, while the aluminum and stainless steel helix couplers offer good windup characteristics and high durability at a lower cost.

Motor Mounts
The motor mount is designed for an industry standard NEMA 23 motor flange and a maximum shaft length of 0.85”.

Home Sensor
The Home sensor provides a fixed reference point to which the table can always return. This is a mechanical reed switch which is mounted on the body of the rotary table and is activated by a magnet imbedded on the table top.

Rotary Encoders
High accuracy rotary encoders can be added for direct positional feedback of the table top position.

Seals
Custom designed sealed units are offered to prevent excessive wear or internal damage resulting from dust and contaminates.

Motors, Drives & Controls
Micro-step motors with drives are available for direct mounting to the rotary tables. Motion controllers can also be added to provide systems with seamless connectivity.

NOTE: Refer to www.parkermotion.com or contact a Parker applications engineer for additional detailed information pertaining to any of these options or accessories.

NOTE: Refer to www.parkermotion.com or contact a Parker applications engineer for additional detailed information pertaining to any of these options or accessories.
# How to Order

## Model Series

<table>
<thead>
<tr>
<th>Table Diameter</th>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 in</td>
<td>127 mm</td>
<td>05</td>
</tr>
<tr>
<td>6 in</td>
<td>152.4 mm</td>
<td>06</td>
</tr>
<tr>
<td>8 in</td>
<td>202.4 mm</td>
<td>08</td>
</tr>
<tr>
<td>10 in</td>
<td>254 mm</td>
<td>10</td>
</tr>
<tr>
<td>12 in</td>
<td>304.8 mm</td>
<td>12</td>
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</tbody>
</table>

## Gear Ratio

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>180:1</td>
<td>All dia.</td>
</tr>
<tr>
<td>90:1</td>
<td>All dia.</td>
</tr>
<tr>
<td>45:1</td>
<td>6&quot;, 10&quot;, 12&quot; dia.</td>
</tr>
<tr>
<td>36:1</td>
<td>5&quot;, 8&quot; dia.</td>
</tr>
<tr>
<td>36:1</td>
<td>5&quot;, 8&quot; dia.</td>
</tr>
</tbody>
</table>

## Table Diameter

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>02</td>
</tr>
<tr>
<td>2</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>04</td>
</tr>
<tr>
<td>4</td>
<td>05</td>
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</tbody>
</table>

## Table Style

## Mounting

<table>
<thead>
<tr>
<th>Mounting</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>E</td>
</tr>
<tr>
<td>Metric</td>
<td>M</td>
</tr>
</tbody>
</table>

## Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Grade</td>
<td>S</td>
</tr>
<tr>
<td>Precision Grade</td>
<td>P</td>
</tr>
</tbody>
</table>

## Home

<table>
<thead>
<tr>
<th>Home</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Home Switch</td>
<td>H1</td>
</tr>
<tr>
<td>Magnetic Home Switch</td>
<td>H2</td>
</tr>
</tbody>
</table>

## Motor Coupling

<table>
<thead>
<tr>
<th>Coupling</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Coupling</td>
<td>C1</td>
</tr>
<tr>
<td>0.25 in Bore, Helix, Aluminum</td>
<td>C2</td>
</tr>
<tr>
<td>0.25 in Bore, Helix, Stainless Steel</td>
<td>C3</td>
</tr>
<tr>
<td>0.25 in Bore, Bellows, required for precision grade</td>
<td>C4</td>
</tr>
<tr>
<td>0.375 in Bore, Helix, Aluminum</td>
<td>C5</td>
</tr>
<tr>
<td>0.375 in Bore, Helix, Stainless Steel</td>
<td>C6</td>
</tr>
<tr>
<td>0.375 in Bore, Bellows, required for precision grade</td>
<td>C7</td>
</tr>
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</table>

## Motor Mount

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>M1</td>
</tr>
</tbody>
</table>

## Encoder

<table>
<thead>
<tr>
<th>Encoder</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Encoder</td>
<td>E0</td>
</tr>
<tr>
<td>Ring Encoder - 314,880 post quad. counts/rev</td>
<td>E8</td>
</tr>
<tr>
<td>Ring Encoder - 3,148,800 post quad. counts/rev</td>
<td>E9</td>
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</tbody>
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## Table Top

<table>
<thead>
<tr>
<th>Top</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Top</td>
<td>T1</td>
</tr>
<tr>
<td>Standard Top</td>
<td>T2</td>
</tr>
<tr>
<td>Oversized Top (Raises height to clear NEMA 23 Motor)</td>
<td>T3</td>
</tr>
</tbody>
</table>