# Right Angle Index Drives

## Product Overview

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- **RA Right Angle Drives**

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</tr>
</thead>
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<td>Servo Positioner</td>
<td>IN-GTB</td>
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<td>RDM Dial Indexers</td>
<td>IN-RDM</td>
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<td>RD HD Dial Indexers</td>
<td>IN-RD</td>
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<td>E-Series HD Drives</td>
<td>IN-EHD</td>
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<td>MDE/HDE Indexers</td>
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<td>RSD Flexible Servo Drives</td>
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<td>RGS/RGD</td>
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<td>RNG Easy Access Dial Indexers</td>
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<td>Rite-Link Conveyors</td>
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<td>Table-Top Modular Conveyors</td>
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<tr>
<td>LPP Linear Part Handles</td>
<td>IN-LPP</td>
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<tr>
<td>RPP Rotating Part Handlers</td>
<td>IN-RPP</td>
</tr>
<tr>
<td>Overload Clutches</td>
<td>IN-CLU</td>
</tr>
<tr>
<td>Custom Cams</td>
<td>IN-CAM</td>
</tr>
</tbody>
</table>
Features:

**CAMCO Right Angle Index Drives**

are ideal for dial applications or actuation-type applications such as driving a linkage or in-line conveyor.

Fixed center distance between input and output

Hardened, ground barrel cam

Compact design requiring minimum use of floor space.

Preloaded “rib-centered” design with modified-sine motion provides smooth acceleration and deceleration with precision positioning.

Universal mounting available on RA models.

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RA SERIES

Right Angle Index Drive | How to Order

Indexer Ordering Procedure

1. Model
2. Input Shaft Configuration
   • Side 1
   • Side 2
   • Double Input – DI (Standard)
4. Indexer Mounting Position: 1-6
5. Indexer Housing Mounting Holes: Side 1-6
   (more than one side can be selected)

Reducer Ordering Procedure

1. Model
2. Ratio: 5:1, 10:1, 15:1, 20:1, 25:1, 30:1, 40:1,
   50:1, 60:1
3. Motor Adapter
4. Reducer Input Shaft Extension:
   Single Input (SE) or Double Input (DE)
5. Mounting (see diagram below)

Input Shaft Configuration (Top View)

Input Shaft Rotation

Relative Rotation for Right Hand Cam:
CW Input Side 1 CCW Output
CCW Input Side 2 CCW Output
NOTE: Input can be driven in either direction
### RA SERIES

**Right Angle Index Drive | Indexer Mounting Position**

**Dimensions and technical information are subject to change without notice**

<table>
<thead>
<tr>
<th>OVOI</th>
<th>OVUI</th>
<th>OHOI</th>
<th>OHUI</th>
<th>H-S1-UP</th>
<th>H-S2-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>(output vertical, over input)</td>
<td>(output vertical, under input)</td>
<td>(output horizontal, over input)</td>
<td>(output horizontal, under input)</td>
<td>(output horizontal, side 1 up)</td>
<td>(output horizontal, side 2 up)</td>
</tr>
</tbody>
</table>

#### Gear Reducer Mounting Positions

<table>
<thead>
<tr>
<th>Mounting “A”</th>
<th>Mounting “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RH</strong></td>
<td><strong>LH</strong></td>
</tr>
<tr>
<td>SIDE 1</td>
<td>SIDE 2</td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/150" alt="Diagram A" /></td>
<td><img src="https://via.placeholder.com/150" alt="Diagram E" /></td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/150" alt="Diagram B" /></td>
<td><img src="https://via.placeholder.com/150" alt="Diagram F" /></td>
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<tr>
<td><img src="https://via.placeholder.com/150" alt="Diagram C" /></td>
<td><img src="https://via.placeholder.com/150" alt="Diagram G" /></td>
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<tr>
<td><img src="https://via.placeholder.com/150" alt="Diagram D" /></td>
<td><img src="https://via.placeholder.com/150" alt="Diagram H" /></td>
</tr>
</tbody>
</table>

**Mounting Positions**

- **OVOI** (output vertical, over input)
- **OVUI** (output vertical, under input)
- **OHOI** (output horizontal, over input)
- **OHUI** (output horizontal, under input)
- **H-S1-UP** (output horizontal, side 1 up)
- **H-S2-UP** (output horizontal, side 2 up)

Dimensions and technical information are subject to change without notice
400RA SERIES

Right Angle Index Drive | Product Overview | Technical Specifications

**400RA Series**

**Output Load Capacity** (loads carried during index):
- **Radial** 810 lbs
- **Thrust/Axial** 1,406 lbs
- **Moment** 1,620 in-lb

**Accuracy** ±48 arcsec / ±0.0007” at 3” Radius

**Repeatability** ±12 arcsec / ±0.0002” at 3” Radius

**Features**
- R180 Reducer (ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- Double Extended Camshaft (Input Shaft)
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

**Optional Accessories**
- 1/3 hp DC motor
- R225 Reducer (ratios from 10:1 to 60:1)
  - 1 hp DC Motor
  - 56C Motor Adapter and Coupling
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch Models: 2.3F, 2.3FC, 2.3S, 2.3C, 2.3FC-SD, 2.3S-SD, 2.3C-SD
  - Available Settings (in-lb): 400, 600, 700, 850, 1000, 1300, 1800, 2000, 2300
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

<table>
<thead>
<tr>
<th>Stops</th>
<th>Index Period</th>
<th>Motion</th>
<th>(B_{10}) Capacity at 50 RPM (in-lb)</th>
<th>Internal Inertia (lb-in²)</th>
<th>Model</th>
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<tbody>
<tr>
<td>2</td>
<td>330 ms</td>
<td></td>
<td>595</td>
<td>15</td>
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<td>3</td>
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<td></td>
<td>1591</td>
<td>15</td>
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<tr>
<td>4</td>
<td>270 ms</td>
<td></td>
<td>1858</td>
<td>15</td>
<td>400RA4H24-270</td>
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<td></td>
<td>180 ms</td>
<td></td>
<td>2098</td>
<td>15</td>
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<td>6</td>
<td>270 ms</td>
<td></td>
<td>1711</td>
<td>15</td>
<td>400RA6H24-270</td>
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<td></td>
<td>120 ms</td>
<td></td>
<td>2024</td>
<td>15</td>
<td>400RA6H24-120</td>
</tr>
<tr>
<td>8</td>
<td>270 ms</td>
<td></td>
<td>1987</td>
<td>15</td>
<td>400RA8H24-270</td>
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<tr>
<td></td>
<td>120 ms</td>
<td></td>
<td>2354</td>
<td>15</td>
<td>400RA8H24-120</td>
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<tr>
<td>12</td>
<td>270 ms</td>
<td></td>
<td>1290</td>
<td>15</td>
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<td>120 ms</td>
<td></td>
<td>1568</td>
<td>15</td>
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<td>16</td>
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<td></td>
<td>1426</td>
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<td>400RA16H20-270</td>
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<td></td>
<td>180 ms</td>
<td></td>
<td>2947</td>
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<td>24</td>
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<td>1640</td>
<td>15</td>
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<tr>
<td></td>
<td>180 ms</td>
<td></td>
<td>1894</td>
<td>15</td>
<td>400RA24H20-180</td>
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</table>

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.
512RA SERIES
Right Angle Index Drive | Dimensions

Dimensions and technical information are subject to change without notice.


### Features

- **R225 Reducer** (ratios from 10:1 to 60:1)
  - 56C Motor Adapter and Coupling
- **Double Extended Camshaft** (Input Shaft)
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Optional Accessories

- 1 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- **Output Overload Clutch Models**: 6.0F, 6.0FC, 6.0S and 6.0C, 6.0C-SD, 6.0FC-SD, 6.0S-SD
  - Available Settings (in-lb): 670, 825, 1100, 1400, 1700, 2000, 2300, 2500, 3000, 3800, 4000, 5000, 6000
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

### Output Load Capacity (loads carried during index):

- **Radial**: 1,986 lbs
- **Thrust/Axial**: 2,277 lbs
- **Moment**: 6,951 in-lb

### Accuracy

- ±37 arcsec / ±.0011” at 6” Radius

### Repeatability

- ±9 arcsec / ±.0003” at 6” Radius

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**512RA Indexer Capacities**

<table>
<thead>
<tr>
<th>Stops</th>
<th>Index Period</th>
<th>Motion</th>
<th>$B_{10}$ Capacity at 50 RPM (in-lb)</th>
<th>Internal Inertia (lb-in²)</th>
<th>Model</th>
<th>A</th>
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<tr>
<td>2</td>
<td>270</td>
<td>msc.33</td>
<td>2061</td>
<td>45</td>
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<td>3</td>
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<td>ms</td>
<td>2360</td>
<td>45</td>
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<td>14.50</td>
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<td></td>
<td>180</td>
<td></td>
<td>2852</td>
<td>45</td>
<td>512RA3H32-180 MSC.33</td>
<td>14.93</td>
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<td>4</td>
<td>270</td>
<td>ms</td>
<td>2710</td>
<td>45</td>
<td>512RA4H32-270 MSC.33</td>
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<tr>
<td></td>
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<td>msc.33</td>
<td>3648</td>
<td>45</td>
<td>512RA4H32-120 MSC.33</td>
<td>14.93</td>
</tr>
<tr>
<td>6</td>
<td>270</td>
<td>ms</td>
<td>2613</td>
<td>45</td>
<td>512RA6H32-270 MSC.33</td>
<td>14.50</td>
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<tr>
<td></td>
<td>120</td>
<td>ms</td>
<td>3179</td>
<td>45</td>
<td>512RA6H32-120 MSC.33</td>
<td>14.50</td>
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<td>8</td>
<td>270</td>
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<td>ms</td>
<td>3802</td>
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<td>12</td>
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<td>ms</td>
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<td>512RA12H28-120 MSC.33</td>
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</table>

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.
662RA SERIES
Right Angle Index Drive | Dimensions

Dimensions and technical information are subject to change without notice.
### 662RA Indexer Capacities

<table>
<thead>
<tr>
<th>Stops</th>
<th>Index Period</th>
<th>Motion</th>
<th>$B_{10}$ Capacity at 50 RPM (in-lb)</th>
<th>Internal Inertia (lb-in²)</th>
<th>Model</th>
<th>A</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>270 ms</td>
<td></td>
<td>6534</td>
<td>172</td>
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<td>3</td>
<td>270 ms</td>
<td></td>
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<td>169</td>
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<td></td>
<td>180 ms</td>
<td></td>
<td>6146</td>
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<td>662RA3H40-180</td>
<td>20.88</td>
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<tr>
<td>4</td>
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<td></td>
<td>6903</td>
<td>172</td>
<td>662RA4H40-270</td>
<td>20.13</td>
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<td></td>
<td>120 ms</td>
<td></td>
<td>7751</td>
<td>172</td>
<td>662RA4H40-120</td>
<td>20.88</td>
</tr>
<tr>
<td>6</td>
<td>270 ms</td>
<td></td>
<td>5734</td>
<td>169</td>
<td>662RA6H40-270</td>
<td>20.13</td>
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<td></td>
<td>120 ms</td>
<td></td>
<td>7551</td>
<td>169</td>
<td>662RA6H40-120</td>
<td>20.13</td>
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<tr>
<td>8</td>
<td>270 ms</td>
<td></td>
<td>7187</td>
<td>172</td>
<td>662RA8H40-270</td>
<td>20.13</td>
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<td></td>
<td>90 ms</td>
<td></td>
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<td>662RA8H40-90</td>
<td>20.88</td>
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<td>12</td>
<td>270 ms</td>
<td></td>
<td>4504</td>
<td>165</td>
<td>662RA12H32-270</td>
<td>20.13</td>
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<td></td>
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<td></td>
<td>5536</td>
<td>165</td>
<td>662RA12H32-90</td>
<td>20.88</td>
</tr>
</tbody>
</table>

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features
- 7300C Reducer (ratios from 5:1 to 60:1)
  - Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 1 or 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Varipak DC Motor Control (up to 30 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Optional Accessories
- 1 hp DC motor
- 7350C Reducer (ratios from 5:1 to 60:1)
  - Motor Adapter and Coupling
- 2 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch Models: 11F, 11FC, 11FC-SD
  - Available Settings (in-lb): 2300, 4000, 6000, 8500, 11,000
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

### Output Load Capacity (loads carried during index):
- **Radial**: 2,842 lbs
- **Thrust/Axial**: 5,239 lbs
- **Moment**: 2,959 in-lb
- **Accuracy**: ±36 arcsec / ±.001” at 6” Radius
- **Repeatability**: ±9 arcsec / ±.0003” at 6” Radius