### Right Angle Die Grinders

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<th>Abrasive Size</th>
<th>Model Series</th>
<th>Power Output</th>
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<tr>
<td>22</td>
<td>• Large Bearing &amp; Gears for High Duty Cycle &amp; Longevity • Carbide Burrs • Mounted Stones • Flap Wheels</td>
<td></td>
<td>300RAD</td>
<td>0.7 H.P. (600 W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>410RAD</td>
<td>1.2 H.P. (900 W)</td>
</tr>
<tr>
<td>23</td>
<td>• Large Bearing &amp; Gears for High Duty Cycle &amp; Longevity • Extended Neck • Sanding Abrasives w/Shank Mounted Backing Pad (3/8 Inch Shank Size Max.)</td>
<td></td>
<td>300RAED</td>
<td>0.7 H.P. (600 W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>410RAED</td>
<td>1.2 H.P. (900 W)</td>
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<td>• Small Head for Restricted Applications</td>
<td>• Sanding Abrasives w/Shank Mounted Backing Pad (2 Inch Size Max.)</td>
<td>330RAD</td>
<td>0.7 H.P. (600 W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mounting Stones • Flap Wheels</td>
<td>340RAD</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>• Small Head for Restricted Applications • Extended Neck</td>
<td>• Sanding Abrasives w/Shank Mounted Backing Pad (1/4 Inch Shank Size Max.)</td>
<td>320RAD</td>
<td>0.7 H.P. (600 W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>420RAD</td>
<td>1.2 H.P. (900 W)</td>
</tr>
<tr>
<td>26</td>
<td>• Vertical Motor Design • No Gears</td>
<td>• Carbide Burrs • Mounted Stones • Flap Wheels • Sanding Abrasives w/Shank Mounted Backing Pad (3/8 Inch Shank Size Max.)</td>
<td>300VGE</td>
<td>0.7 H.P. (600 W)</td>
</tr>
</tbody>
</table>

#### LEVER STYLE
- Safety Lever
- Regular Lever

#### EXHAUST DIRECTION
- Side Exhaust
- Rear Exhaust

#### CASE MATERIAL
- Aluminum Case Material
- Steel Case Material

The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.
Right Angle Die Grinders

1/4 Inch (6 mm) - 3/8 Inch (8 mm) Mandrel Size (3/8 Inch Max.)

1/8 Inch (3 mm) - 1/4 Inch (6 mm) Mandrel Size (1/4 Inch Max.)

- 300RAD/300RAED
- 410RAD/410RAED

- 330RAD/340RAD
- 320RAD/420RAD

Inserted Tool Mounting (Carbide Burrs/Mounted)

Overhang - 1/2 Inch Max.

Extended Neck vs Standard

The extended neck option helps in regards to clearance issues when using various types of larger surface finishing abrasives. In these instances, the surface finishing abrasive can interfere with the area around the motor case normally used by the operator to grip the tool. The extended neck option moves the surface finishing abrasive forward which clears the area around the motor case for the operators hand.

Inserted Tool Mounting

Your Abrasive/Mounting Accessory must be rated at higher speeds than the rating on the tools. Please consult the abrasive manufacturer for proper speed ratings.
# Short Right Angle Collet Grinders

**300RAD Series**
- **7.4 Inch (189 mm)**
- **3.1 Inch (79 mm)**
- **1.5 Inch (37 mm)**

**410RAD Series**
- **7.1 Inch (188 mm)**
- **3.1 Inch (79 mm)**
- **1.6 Inch (41 mm)**

## Lever Style
<table>
<thead>
<tr>
<th>Lever Style</th>
<th>300RAD;15000;1/4</th>
<th>410RAD;13000;1/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Lever</td>
<td>300RAD;15000;1/4</td>
<td>410RAD;13000;1/4</td>
</tr>
<tr>
<td>Safety Lever</td>
<td>300RAD;15000;1/4</td>
<td>410RAD;13000;1/4</td>
</tr>
</tbody>
</table>

## Exhaust Direction
- **Side**
- **Rear**

### STANDARD EQUIPMENT
- **Tool**
- **Operating Instructions and Service Manual**
- **Wrenches** (sizes based on options)

### 300RAD Alternate Options
- **Case Material**
- **Lever Style**
  - Aluminum Case
  - Steel Case
  - Safety Lever
  - Standard Lever

### 410RAD Alternate Options
- **Case Material**
- **Exhaust Direction**
  - Aluminum Case
  - Steel Case
  - Rear Exhaust
  - Side Exhaust

### Abrasive Mounting
- *APPLIES TO BOTH TOOL SERIES*

**WARNING:** Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

**300RAED Series**
- Standard Lever
- Side Exhaust
- Exhaust Direction: Side
- Lever Style: Standard Lever
- Model Number: 300RAED;15000;1/4

**410RAED Series**
- Rear Exhaust
- Safety Lever
- Exhaust Direction: Rear
- Lever Style: Standard Lever
- Model Number: 410RAEDS;13000;1/4

**Extended Neck Right Angle Collet Grinders**

<table>
<thead>
<tr>
<th>Exhaust Direction</th>
<th>Lever Style</th>
<th>MODEL NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side</td>
<td>Standard Lever</td>
<td>300RAED;15000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300RAEDK;15000;1/4</td>
</tr>
<tr>
<td>Rear</td>
<td>Standard Lever</td>
<td>300RAEDR;15000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300RAEDRK;15000;1/4</td>
</tr>
</tbody>
</table>

**STANDARD EQUIPMENT**
- Tool
- Operating Instructions and Service Manual
- Wrenches (sizes based on options)

**300RAED Alternate Options**
- Case Material: Aluminum Case, Steel Case
- Lever Style: Safety Lever, Standard Lever

**410RAED Alternate Options**
- Case Material: Aluminum Case, Steel Case
- Exhaust Direction: Rear Exhaust, Side Exhaust

**Abrasive Mounting**
- Mounted Stones
- Carbide Burrs
- Flap Wheels

**Mandrel Sizes:**
- 1/4 Inch (6 mm)
- 3/8 Inch (8 mm)

**Power Specifications**
- 0.7 H.P. (600 W)
- 2.7 Lbs. (1.2 Kg) Aluminum
- 3.1 Lbs. (1.4 Kg) Steel

- 1/4" NPT Inlet
- 3/8" (10 mm) Hose Size

- 1.2 H.P. (900 W)
- 3.2 Lbs. (1.2 Kg) Aluminum
- 3.8 Lbs. (1.4 Kg) Steel

- 3/8" NPT Inlet
- 1/2" (13 mm) Hose Size

The ER Heavy Duty Collet is Standard Equipment on 300RAED & 410RAED Series.
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

**Short Right Angle Collet Grinders**

**330RAD/340RAD Series**

<table>
<thead>
<tr>
<th>Maximum Rated Operating Speed</th>
<th>Lever Style</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000 RPM</td>
<td>Standard Lever</td>
<td>330RAD;12000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>330RADK;12000;1/4</td>
</tr>
<tr>
<td>20,000 RPM</td>
<td>Standard Lever</td>
<td>340RAD;20000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>340RADK;20000;1/4</td>
</tr>
</tbody>
</table>

**Mandrel Sizes:** 1/8 Inch • 1/4 Inch (3 mm • 6 mm)

**STANDARD EQUIPMENT**

- Tool
- Operating Instructions and Service Manual
- Wrenches (sizes based on options)

The ER Heavy Duty Collet is Standard Equipment on 330RAD & 340RAD Series.

**Abrasive Mounting**

**330RAD/340RAD Alternate Options**

<table>
<thead>
<tr>
<th>Lever Style</th>
<th>Case Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Lever</td>
<td>Aluminum Case</td>
</tr>
<tr>
<td>Standard Lever</td>
<td>Steel Case</td>
</tr>
</tbody>
</table>
**Extended Right Angle Collet Grinders**

### 320RAD Series

- **Exhaust Direction**: Side
- **Lever Style**: Standard Lever
- **Model Number**: 320RAD;20000;1/4
- **Exhaust Direction**: Side
- **Lever Style**: Standard Lever
- **Model Number**: 320RADR;20000;1/4

### 420RAD Series

- **Exhaust Direction**: Rear
- **Lever Style**: Standard Lever
- **Model Number**: 420RADSK;13000;1/4
- **Exhaust Direction**: Rear
- **Lever Style**: Safety Lever
- **Model Number**: 420RADRSK;13000;1/4

### Specifications

- **320RAD;20000;1/4**
  - 10.1 Inch (257 mm)
  - 4.3 Inch (110 mm)
  - 1.5 Inch (37 mm)
  - 2.0 Inch (51 mm)
  - 0.7 H.P. (600 W)
  - 2.2 Lbs. (1.0 Kg) Aluminum
  - 2.6 Lbs. (1.2 Kg) Steel
  - 25 cfm (11.8 L/s) Max
  - 1/4" NPT Inlet 3/8" (10 mm) Hose Size

- **420RADSK;13000;1/4**
  - 9.8 Inch (249 mm)
  - 4.5 Inch (113 mm)
  - 1.6 Inch (41 mm)
  - 2.0 Inch (51 mm)
  - 1.2 H.P. (900 W)
  - 2.5 Lbs. (1.1 Kg) Aluminum
  - 2.9 Lbs. (1.3 Kg) Steel
  - 35 cfm (16.5 L/s) Max
  - 3/8" NPT Inlet 1/2" (13 mm) Hose Size

### Extended Right Angle Collet Grinders

- **Mandrel Sizes**: 1/8 Inch • 1/4 Inch (3 mm • 6 mm)

### Abrasive Mounting

- **Case Material**: Aluminum Case, Steel Case
- **Lever Style**: Safety Lever, Standard Lever
- **Exhaust Direction**: Rear Exhaust, Side Exhaust

### Standard Equipment

- **Tool**
- **Operating Instructions and Service Manual**
- **Wrenches** (sizes based on options)

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**WARNING:** Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.
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Vertical Collet Grinders

300VGE Series

<table>
<thead>
<tr>
<th>Maximum Rated Operating Speed</th>
<th>Lever Style</th>
<th>MODEL NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000 RPM</td>
<td>Standard Lever</td>
<td>300VGE:30000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300VGEK:30000;1/4</td>
</tr>
<tr>
<td>25,000 RPM</td>
<td>Standard Lever</td>
<td>300VGE:25000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300VGEK:25000;1/4</td>
</tr>
<tr>
<td>20,000 RPM</td>
<td>Standard Lever</td>
<td>300VGE:20000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300VGEK:20000;1/4</td>
</tr>
<tr>
<td>18,000 RPM</td>
<td>Standard Lever</td>
<td>300VGE:18000;1/4</td>
</tr>
<tr>
<td></td>
<td>Safety Lever</td>
<td>300VGEK:18000;1/4</td>
</tr>
</tbody>
</table>

Mandrel Sizes: 1/8 Inch • 3/8 Inch (3 mm • 8 mm)

300VGE:25000:1/4

STANDARD EQUIPMENT

• Tool
• Operating Instructions and Service Manual
• Wrenches (sizes based on options)

The ER Heavy Duty Collet is Standard Equipment on 300VGE Series.

300VGE Alternate Options

Lever Style

Safety Lever

Standard Lever

Abrasice Mounting

0.7 H.P. (600 W)
25 cfm (11.8 L/s) Max
2.1 Lbs. (1.0 Kg)
1/4" NPT Inlet
3/8" (10 mm) Hose Size

1/4" Shown Other Sizes Available

6.9 Inch (175 mm)
5.6 Inch (142 mm)
1.5 Inch (37 mm)