SHAFT MOUNT ROTARY ACTUATOR
DIRECTCONNECT™

DRG Series

- Designed for Use in Applications Where Low Precision Positioning and Backlash Are Acceptable
- Excellent Choice for Diverter Gates, Escapements and Ejection Stations
- Multiple Body Mount Locations with Top and Bottom Mounting Using DIRECTCONNECT™ Technology
- Rotaries Can Be Mounted and Operated in Any Orientation
- Available in 90 or 180° Units
- Life Cycle of 5 Million Cycles Under Normal Use, Up to 10 Million Cycles with Proper Maintenance
- Requires Air Filtration of 40 Microns or Better
- Gripper Tooling is Customers Responsibility

PRODUCT FEATURES

- **Black Anodized**
  - The body and all Aluminum parts have Black anodize, steel parts are Black oxide

- **Sensor Mounting Slots**
  - Standard mounting slots for Magneto Resistive Sensors. Magnet mounted in piston standard (sensors sold separately)

- **One Piece Body**
  - One piece lightweight aircraft quality aluminum body

- **Dowel Holes**
  - Slip fit dowel pin holes in bottom of body

- **DIRECTCONNECT™ Mounting Patterns**
  - Tapped and dowel mounting on bottom surface

- **Mounting**
  - Tapped and thru hole mounting on top and bottom flanges for base or bulkhead mount

- **Case Hardened**
  - Rack and pinion are case hardened for wear and long life

- **Extremely Rugged Design**
  - Pinion is supported top and bottom with sealed bearings

- **End Stop Cushioning**
  - Urethane bumpers on piston to cushion and stop load standard

- **Piston**
  - Made of Delrin® for extended life

Note: Custom tooling is the customers responsibility.
PRODUCT SPECIFICATIONS

SPECIFICATIONS DRG-075M
Maximum Payload: 0.23 kg (0.5 lb)
Maximum Payload Inertia: 9.0 X 10^-6 Nm-sec^2 (0.0008 inch-lb-sec^2)
Maximum Torque @ 7 bar (100 psi): 9.0 X 10^-5 Nm-sec (8.3 lb-inch 0.9 Nm)
Maximum Rotation: 180°
Pitch Diameter of Pinion: 9.5 mm (0.375")
Weight without Rotational Adjuster: 0.24 kg (0.52 lb)
Weight without Rotational Adjuster (-R Option): 0.33 kg (0.72 lb)
Pressure Range: 3 to 7 bar (40 to 100 psi)
Bore: 19.1 mm (0.750")
Displacement (180°): 5.1 cm^3 (0.31 inch^3)
Actuation Time [180° @ 7 bar (100 psi)]: 0.38 sec
Actuation Time [90° @ 7 bar (100 psi)]: 0.29 sec
Temperature Range, Standard Seals: -35 to 82°C (-30 to 180°F)
Shaft Diameter: 7.9 mm +0/-0.05 (0.311" +0/-0.002")
Dimensions: 68 W x 54 L x 33.4 mm H (2.69 x 2.13 x 1.313")

SPECIFICATIONS DRG-094M
Maximum Payload: 0.68 kg (1.5 lb)
Maximum Payload Inertia: 6.3 X 10^-6 Nm-sec^2 (0.0056 inch-lb-sec^2)
Maximum Torque @ 7 bar (100 psi): 1.9 Nm (17.3 lb-inch)
Maximum Rotation: 180°
Pitch Diameter of Pinion: 12.7 mm (0.500")
Weight without Rotational Adjuster: 0.45 kg (1.0 lb)
Weight without Rotational Adjuster (-R Option): 0.54 kg (1.2 lb)
Pressure Range: 3 to 7 bar (40 to 100 psi)
Bore: 23.8 mm (0.938")
Displacement (180°): 9.0 cm^3 (0.55 inch^3)
Actuation Time [180° @ 7 bar (100 psi)]: 0.38 sec
Actuation Time [90° @ 7 bar (100 psi)]: 0.29 sec
Temperature Range, Standard Seals: -35 to 82°C (-30 to 180°F)
Shaft Diameter: 9.5 mm +0/-0.05 (0.374" +0/-0.002")
Dimensions: 85 W x 71 L x 38.9 mm H (3.38 x 2.78 x 1.531")

SPECIFICATIONS DRG-106M
Maximum Payload: 1.8 kg (4 lb)
Maximum Payload Inertia: 2.3 X 10^-5 Nm-sec^2 (0.0207 inch-lb-sec^2)
Maximum Torque @ 7 bar (100 psi): 3.8 Nm (33.2 lb-inch)
Maximum Rotation: 180°
Pitch Diameter of Pinion: 19.1 mm (0.750")
Weight without Rotational Adjuster: 1.1 kg (2.5 lb)
Weight without Rotational Adjuster (-R Option): 1.2 kg (2.7 lb)
Pressure Range: 3 to 7 bar (40 to 100 psi)
Bore: 27.0 mm (1.063")
Displacement (180°): 19.0 cm^3 (1.16 inch^3)
Actuation Time [180° @ 7 bar (100 psi)]: 0.60 sec
Actuation Time [90° @ 7 bar (100 psi)]: 0.45 sec
Temperature Range, Standard Seals: -35 to 82°C (-30 to 180°F)
Shaft Diameter: 12.7 mm +0/-0.05 (0.499" +0/-0.002")
Dimensions: 102 W x 100 L x 49.2 mm H (4.54 x 3.94 x 1.938")
Flow Controls
- Flow Controls for Adjusting Rotational Speed

Sensor and Pneumatic Accessories
- Magneto Resistive Sensors with Quick Disconnect (NPN or PNP Versions)
- Magneto Resistive Sensors with 90° Barrel (NPN or PNP Versions)
- Quick Disconnect Cables 2 or 5 m (6.6 or 16’) Length
- Flow Control Valve for Speed Adjustment Sensors are Slot Mounted, No Mounting Kits Required
- Simple Adjustments with Slotted Screw Driver
- Built-In LED for Easy Positioning and Troubleshooting

Sensors
- PNP and NPN Magneto Resistive Available
- Sensors Are Slot Mounted, No Mounting Kits Required
- Simple Adjustment with Slotted Screw Driver
- Built-In LED for Ease of Positioning and Troubleshooting
- Low Profile Underflush Sensor Version or 90° Wire Exit Sensor Version
- Sensor Magnet Standard

To Order

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>DESCRIPTION*</th>
<th>OVER TRAVEL (EACH END)</th>
<th>MAX PAYLOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRG-075M-90</td>
<td>90° rotation</td>
<td>1 to 3°</td>
<td>0.23 kg (0.5 lbs)</td>
</tr>
<tr>
<td>DRG-075M-180</td>
<td>180° rotation</td>
<td>1 to 3°</td>
<td>0.23 kg (0.5 lbs)</td>
</tr>
<tr>
<td>DRG-094M-90</td>
<td>90° rotation</td>
<td>1 to 3°</td>
<td>0.68 kg (1.5 lbs)</td>
</tr>
<tr>
<td>DRG-094M-180</td>
<td>180° rotation</td>
<td>1 to 3°</td>
<td>0.68 kg (1.5 lbs)</td>
</tr>
<tr>
<td>DRG-106M-90</td>
<td>90° rotation</td>
<td>1 to 3°</td>
<td>1.8 kg (4 lbs)</td>
</tr>
<tr>
<td>DRG-106M-180</td>
<td>180° rotation</td>
<td>1 to 3°</td>
<td>1.8 kg (4 lbs)</td>
</tr>
</tbody>
</table>

* Sensors and cables sold separately.

ACCESSORIES

<table>
<thead>
<tr>
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<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHSP-011</td>
<td>1 or 2</td>
<td>PNP magneto resistive sensor (90°) with quick disconnect</td>
</tr>
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<td>OHSN-011</td>
<td>1 or 2</td>
<td>NPN magneto resistive sensor (90°) with quick disconnect</td>
</tr>
<tr>
<td>OHSP-017</td>
<td>1 or 2</td>
<td>PNP magneto resistive sensor with quick disconnect</td>
</tr>
<tr>
<td>OHSN-017</td>
<td>1 or 2</td>
<td>NPN magneto resistive sensor with quick disconnect</td>
</tr>
<tr>
<td>CABL-010</td>
<td>1 or 2</td>
<td>Quick disconnect cable, 2 m (6.6’) long</td>
</tr>
<tr>
<td>CABL-013</td>
<td>1 or 2</td>
<td>Quick disconnect cable, 5 m (16’) long</td>
</tr>
</tbody>
</table>

Ordering Example: DRG-094M-180, DRG rotary actuator, size 23.8 mm (0.938”), 180° of rotation, 2 OHSP-017, PNP sensors with quick disconnect and 2 CABL-013, two quick disconnect cables, 5 m (16’) long.