AGR-1 Rotary Actuator
Low Profile, Zero Backlash

FEATURES AND BENEFITS
- Built in adjustable hardstops on output flange stops against a dowel pin imbedded in the body to prevent pinion breakage, and give accurate specific rotation requirements.
- Two large bearings, one on either side of the pinion, provides for steady output flange with high loading capacity.
- Ultra high torque to weight ratio for faster cycle times.
- Compact body design to fit into tight space applications.
- Units are permanently lubricated for non-lube air operation, allowing compliance with OSHA regulations.
- All rotary units have zero backlash at either end of rotation, this keeps the output flange against the hard stop.
- Built in adjustable flow controls allow for maximum cycle times and smooth deceleration.
- Proximity switches are available to monitor end of rotation.
- The AGR unit is fully repairable for cost savings and minimum down time.

SPECIFICATIONS

Design: Rack and Pinion with Flange Hard Stop

Rotation Range: 0°-180° (Adj. +/- 5°)
 Payload: 1 lb central to axis of rotation [.44 Kg]
 Torque: @80 psi [5.5 BAR] 5 in/lb [.56 Nm]
 Bearing Load: Dynamic 198 lbs [880 N]
 Static 385 lbs [1620 N]
 Rotation Time: No load .1 second
 Pressure Range: Low/High 30-120 PSI [2-8 BAR]
 Temperature Range: Low/High -20˚/180˚F [-28˚/80˚C]
 Backlash: Zero
 Accuracy: .001 concentric and perpendicular to axis of rotation
 Material: High Strength, Hard Coated Aluminum Alloys, Steel
 Weight: 7 oz [198 g]
 Piston Diameter: (2x) .5 in [12.7 mm]

January 2009 - PATENTED Made in the USA

LOADING CAPACITY

<table>
<thead>
<tr>
<th></th>
<th>Static</th>
<th>Dynamic</th>
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<tbody>
<tr>
<td>Max Tensile T</td>
<td>50 lbs [222 N]</td>
<td>12 lbs [53 N]</td>
</tr>
<tr>
<td>Max Compressive C</td>
<td>250 lbs [1110 N]</td>
<td>50 lbs [222 N]</td>
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LOADING INFORMATION

Max Moment M_x = 100 in/lb [11.3 Nm] 25 in/lb [2.8 Nm]
Max Moment M_y = 100 in/lb [11.3 Nm] 25 in/lb [2.8 Nm]

TYPE
M = METRIC
= IMPERIAL

SENSOR OPTIONS
1 = CLOSED
2 = OPEN
3 = BOTH

SENSOR CONNECTOR
1 = POTTED
2 = QUICK DISCONNECT
3 = QUICK DISCONNECT WITH RIGHT ANGLE

DESIGN/MODEL
AGR-1
AGR-2

DEGREE OF ROTATION
180°
90°

SENSOR PART #
SPC05, SPQ05, SNC05, SNQ05

* NOTE: Proximity 4mm dia., 5-24 VDC, 22 mA and comes with 2 meter cable.

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Unless noted, all tolerances are as indicated here:

All Dowel Holes are SF (Slip Fit) Locational Tolerance ± .0005" [.013mm]

Metric Threads
Course Pitch

Imperial: 0.00 = ±.01
0.0000 = ±.005

Metric: [0.] = ±.25
[0.0] = ±.13
[0.00] = ±.013