AGR-3 Rotary Actuator
Low Profile, Zero Backlash, Optional Rotary Manifold

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: 8 lbs central to axis of rotation [3.6 Kg]
Torque: @80 psi [5.5 BAR] 50 in/lb [5.6 Nm]
Bearing Load: Dynamic 360 lbs [1600 N]
Static 940 lbs [4180 N]
Rotation Time: No load .35 second
Pressure Range: Low/High 30-120 PSI [2-8 BAR]
Temperature Range: Low/High -20°F/-28°C/180°F/80°C
Backlash: Zero
Accuracy: .001 concentric and perpendicular to axis of rotation
Material: High Strength, Hard Coated Aluminum Alloys, Steel
Weight: 3.0 lb [1.4 kg]
Piston Diameter: (2x) 1.0 in [25.4 mm]

January 2009 - PATENTED Made in the USA

LOADING INFORMATION

WARNING! Do not exceed tooling jaw length.

Max Tensile X 100 lbs [444 N]
Max Compressive Y 500 lbs [2224 N]
Max Moment Mx 300 in/lb [33.8 Nm]
Max Moment My 75 in/lb [8.5 Nm]

SENSOR OPTIONS

1 = CLOSED
2 = OPEN
3 = BOTH

SENSOR CONNECTOR

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

DESIGN/MODEL

AGR-3
AGR-4
AGR-5

DEGREE OF ROTATION

180°
90°

SENSOR TYPE*

1 = NPN
2 = PNP

MID-STOP

1
1
S
M

ROTARY MANIFOLD

M
1
3
1
S
M

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

Sensor Part # SPC05, SPQ05, SNC05, SNQ05

HOW TO ORDER
When ordering, please specify:
Design/Model Number and Options.

American Grippers, Inc. 171 Spring Hill Road, Trumbull, CT 06611 Tel: 203-459-8345 Fax: 203-452-5943
info@AGI-Automation.com www.AGI-Automation.com
AGR-3 Rotary Actuator
Low Profile, Zero Backlash, Optional Rotary Manifold

Unless noted, all tolerances are as indicated here:

- All Dowel Holes are SF (Slip Fit) Locational Tolerance ± .0005" [.013mm]
- Metric Threads Course Pitch

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- M option
Rotary Manifold shown shaded

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  - Course Pitch
  - Inch: 0.00 = ±.01  0.000 = ±.005
  - Metric: [0.] = ±.25  [0.0] = ±.13  [0.00] = ±.013

1/8” NPT
(3) AIR PORTS

1/4” S.F. X 3/8” DEEP
(M6 S.F. X 10MM DEEP)
(2) HOLES

1/2” X 7/16” DEEP
(M6 X 11MM DEEP)
(4) HOLES

MID STOP OPTION

1/4” S.F. X 3/8” DEEP
(M6 S.F. X 10MM DEEP)
(2) HOLES

1/4”-20 X 3/8” DEEP
[6MM X 10MM DEEP]
(4) HOLES

STROKE ADJUSTMENT
LOCKING SCREWS
(2) PLACES

SENSORS
(OPTIONAL)

OUTPUT FLANGE

FLANGE SIDE

BASE SIDE

- S option
Mid-Stop shown shaded

Download 2D & 3D CAD Files @ www.AGI-Automation.com