

# Pneumatic Actuators

## AP Series

For quarter-turn valve automation applications where continuous rapid cycling is required or hazardous conditions exist

### Dual Rack & Pinion Design

DynaQuip Controls AP Series Rack & Pinion Pneumatic Actuators are designed to meet the needs of the quarter-turn valve market. Engineered to be compact, durable, and versatile, these actuators represent the latest technology coupled with economical and long-lasting operation. Our AP Series actuators are available in double-acting and spring return models with torque outputs up to 46,540 inch-pounds with a 100 PSI air supply.

- **Body:** Aluminum, ASTM 6063-T6, Hard Anodized Finish Epoxy Coated
- **Piston:** Aluminum Alloy, ASTM B179
- **End Cap:** Aluminum Alloy, ASTM B179, Black Polyester Paint Finish
- **Drive Shaft:** Forged Steel, ASTM A105 Nickel Plated
- **Seal, O-Rings:** Buna N
- **Bearings:** Delrin 500
- **Fasteners:** SS ASTM A193-B8
- **Nuts:** SS ASTM A194-GR8
- **Loaded Springs:** Steel, High Alloy Epoxy Coated
- **Operating Temperature:** -10° F to 195° F

### Catalog Number and Torque Data

#### Double-Acting Torque Outputs (in lbs)

Model No.	Air Supply Pressure			Model No.	Air Supply Pressure		
	80 PSI	100 PSI	120 PSI		80 PSI	100 PSI	120 PSI
AP10DA	100	125	150	AP295DA	2958	3698	4473
AP20DA	203	254	305	AP470DA	4142	5177	6213
AP30DA	302	378	453	AP586DA	5865	7331	8798
AP52DA	526	658	789	AP900DA	9100	11375	13650
AP73DA	734	918	1101	AP1213DA	12132	15165	18198
AP103DA	1032	1290	1548	AP2366DA	23665	29581	35498
AP148DA	1479	1849	2219	AP2958DA	29581	36976	44371
AP222DA	2218	2773	3327	AP3720DA	37250	46540	55875

#### Spring-Return Torque Outputs (in lbs)

Model No.	Spring Stroke		Air Supply Pressure					
			80 PSI		100 PSI		120 PSI	
	End	Start	End	Start	End	Start	End	Start
AP10SR2	38	56	42	60	67	85	92	110
AP20SR3	57	83	115	142	165	192	215	242
AP20SR4	76	111	86	122	136	172	186	222
AP20SR5	95	139	56	102	106	152	156	182
AP30SR4	111	159	139	187	213	261	288	336
AP34SR4	111	159	139	187	213	261	288	336
AP52SR3	156	232	287	363	417	493	547	623
AP52SR4	208	309	210	311	340	441	469	570
AP73SR4	253	398	326	471	507	652	688	833
AP73SR5	317	498	226	407	407	588	588	769
AP73SR6	380	597	126	343	307	524	488	706

Please Call Customer Service for Additional Size and Spring Configurations.



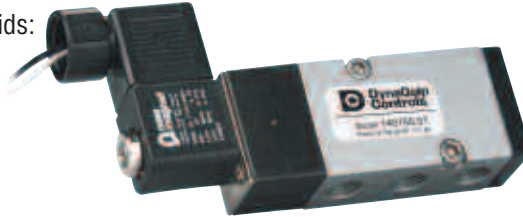
## Options

DynaQuip Controls can provide actuators and hardware to automate existing valves of other brands and manufacturers. Contact DynaQuip Controls Customer Service, or your local Dynaquip distributor, and allow us to help solve your automation problems.

### SOLENOID PILOT VALVES

For efficient operation choose DynaQuip solenoids:

- Standard NEMA 4 Housing (additional NEMA ratings available).
- The solenoid pilot valve pressurizes and exhausts the actuator piston compartments to cause the actuator to move.
- The 4-way solenoid pilot valve mounts directly to the actuator, reducing response time and saving the cost of tubing brackets and labor.
- Mounting pattern follows the NAMUR connection standard.



### VALVE POSITION LIMIT SWITCH

- Provides local or remote indication of valve position
- Contains 2 SPDT switches
- NEMA 4, 4X enclosure
- 1/2" NPT conduit entry

Additional NEMA ratings and voltages are available.

### POSITIONER

Pneumatic and electro-pneumatic positioners are commonly used to control flow, pressure, temperature, or level via an air actuated valve.

The positioner interprets an analog signal (air or electric) and directs compressed air to the air chambers of the pneumatic actuator. The result is a corresponding adjustment to the degree of openness on the valve being operated by that actuator.

Pneumatic positioners commonly receive a 3 - 15 PSI air input signal whereas electro-pneumatic positioners employ integral I/P transducers for converting a 4 - 20 mA electrical input signal to a 3 - 15 PSI air output signal. Positioner housings are NEMA 4 or 4X construction with a stainless steel gauge set as standard in both types of positioners.

### Additional Options Available

- Speed Control Valves
  - Controls opening and/or closing times of the valve.
- Dribble Controls
  - Rapid and slow opening or closing within the same stroke.
  - To prevent water hammer or to slow a fill process.
- Manual Override
  - Handwheel declutchable manual override for double-acting or spring-return pneumatic actuators.

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### Pilot Solenoid Valves

Catalog Number	Description
145750.01	115 VAC
145750.02	24 VAC
145750.03	24 VDC
145750.04	12 VDC

### Valve Position Limit Switch

Catalog Number	Description
145820.01	For use with AP10 thru AP470 Actuators and Old Style AP0503 thru AP1010
145822.01	For use with AP586 thru AP3720 Actuators and Old Style AP1210 and AP1612

