

Model 9540R Mounted on  
Cashco Ranger QCT Control Valve

# MODEL 9540R

## PNEUMATIC POSITIONER FOR ROTARY VALVES

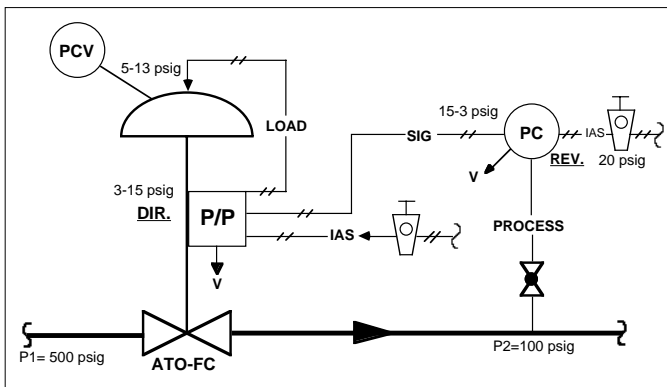
Model 9540R is a single acting, compact, force-balance, 90° rotary positioner. This positioner is utilized to characterize the relationship between valve stem rotational position and the system's control signal, and to precisely position the valve stem. An internal 2-gauge cluster indicating input signal and output loading pressures is standard with this positioner.

### FEATURES

- Adjustable gain.
- Adjustable stroking speed.
- Direct or reverse action with simple field reversibility.
- Easy change to split range operation.
- Two pressure gauges standard.
- High capacity relay.
- Negligible effects from vibration.
- Built-in bypass.
- Multiple characterization cams.
- Totally enclosed linkage.
- Integral travel indicator.

### APPLICATIONS

Cashco Ranger QCT, Premier EZO and Premier rotary stem control valves.



Typical Pressure Reducing Pneumatic Control Loop -  
PCV with P/P Positioner

# MODEL 9540R

## P/P POSITIONER - ROTARY

### SPECIFICATIONS

**Input Signal:** 3-15 psig standard.  
 Split ranges:  
 2-way — 3-9 or 9-15 psig.  
 3-way — 3-7, 7-11 or 11-15 psig.

**Relative Humidity:** ≤100%.

**Vibration Effect:** Immune up to 100 Hz and four g's in any direction.

Supply Pressure:	Max. Supply Pressure (psig)	Bench Set (psig)
	20	5-13
	27	7.5-19.5
	36	10-26
	44	14-30

**NOTE:** Requires oil-free, desiccant-dried, instrument quality compressed air.

**Air Consumption:**

Supply Pressure (psig)	Air Requirement, SCFH	
	Steady State Consumption	Maximum Output @ Maximum Deviation <sup>1</sup>
20	7.1	95
27	8.4	117
36	10.1	141
44	11.4	159

<sup>1</sup> At maximum gain

**Hysteresis:** ≤0.5% of span.

**Stroking Time:** See Technical Bulletin STKSP-TB.

**Linearity:** ≤ ±1.0% of span.

**Materials:**

*Cover* - Impact resistant polyester with clear plastic gauge window.

*Baseplate, Housing, Connection Manifold* - Aluminum with polyurethane paint.

*Position Indicator Lens* - Plastic.

**Sensitivity:** ≤ 0.1% of span.

**Operating Influence (Supply Pressure):** ≤ 0.135% stroke change per one psi change in supply pressure.

**Connections:** 1/4" NPT female.

Open Loop Gain:	Supply Pressure (psig)	Adjustable Range
	20	150:1
	27	140:1
	36	124:1
	44	113:1

**Gauges:**

Two - one input signal, one output load. Internally mounted under cover, viewed thru window. SST case, dual scales in PSIG and BARG.

**Ambient Temperature:** -40 to +175°F

**Valve Stem Rotation:** 90°.

**Temperature Effect:** ≤0.017% stroke change per °F ambient temperature change.

**Characterization Cams:**

Ranger QCT	Premier EZO / Premier
= % Linear	= %