

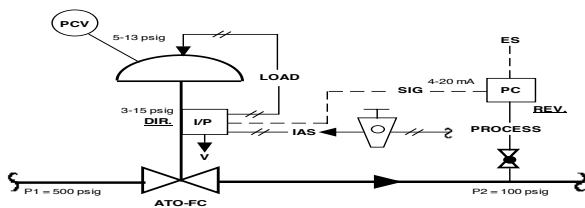
Model 9520L Mounted on  
Cashco Model 987

## MODEL 9520L ELECTRO-PNEUMATIC POSITIONER FOR LINEAR VALVES

Model 9520L is a single acting, compact, force-balance positioner with an integral I/P transducer. Unit receives a 4-20 mA analog input and outputs a pneumatic loading pressure. The positioner linearizes the relationship between valve stem position and the system's control signal, and precisely positions the valve stem. An external 2-gauge cluster indicates instrument air supply and output loading pressures.

### FEATURES

- Intrinsically safe.
- Adjustable gain.
- Adjustable stroking speed.
- Direct or reverse action with simple field reversibility.
- Easy change to split range operation.
- Corrosion resistant SST hardware.
- Two pressure gauges standard.
- High capacity relay.
- Negligible effects from vibration.



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

### APPLICATIONS

Cashco Chemical Valve, Model 520 TFE, Model 521 TFE, Model 964 and 2" size Model 2266 linear travelling stem control valves.

# MODEL 9520L I/P POSITIONER - LINEAR

## SPECIFICATIONS

**Input Signal:** 4-20 mA standard.  
Split ranges:  
2-way — 4-12 or 12-20 mA;  
3-way — 4-9.3, 9.3-14.7,  
14.7-20 mA.  
18-36 VDC external power supply.  
Internal resistance - 200 Ohms  
@ 68°F.

<b>Supply Pressure:</b>	Max. Supply Pressure (psig)	Bench Set Maximum Value
	20	Up to 15 psig
	35	From 16 to 30 psig

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

**Hysteresis:** ≤0.5% of span.  
**Linearity:** ≤ ±1.0% of span.  
**Sensitivity:** ≤ 0.1% of span.  
**Operating Influence (Supply Pressure):** ≤ 0.203% stroke change per one psi change in supply pressure.

<b>Open Loop Gain:</b>	Supply Pressure (psig)	Adjustable Range
	20	150:1
	35	125:1

**Ambient Temperature:** -40 to +175°F.  
**Temperature Effect:** ≤0.01% stroke change per °F ambient temperature change.  
**Relative Humidity:** ≤100%.  
**Vibration Effect:** Immune up to 100 Hz and four g's in any direction.

**Air Consumption:**

Supply Pressure (psig)	Air Requirement, SCFH	
	Steady State Consumption	Maximum Output @ Maximum Deviation <sup>1</sup>
	20	95
35	9.8	137

<sup>1</sup> At maximum gain

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

**Valve Stem Travel:** 7/16" to 1-1/8".

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

**Electrical Classification:** Enclosure: Designed to NEMA 3; per IEC IP54 protection class.  
Explosion Protection: Intrinsically safe.  
Approvals: USA - FM Class 1, Div 1, Groups A,B,C,D.  
Europe - PTB (Ex) is G5, LCIE EEx ib II C T6 Type BIB 633.  
Canada - CSA, Class 1, Div. 2, Groups A, B, C and D.

**Materials:** Baseplate, Cover, Housing and Gauge Block/Connection Manifold - Aluminum with polyurethane paint.  
External Linkage and Bolting - SST.

**Gauges:** Two - one air supply, one output load. Externally mounted on gauge block/connection manifold. Gauges enclosed in weatherproof, clear plastic cover. SST gauge case, dual scales in PSIG and BARG.

**Wire Size:** Nos. 16-22 AWG; 6-12 mm diameter.

**Conduit Connection Size:** 1/2" NPT.

**Required Barriers:** See schematics below.

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