

Most plants use pneumatically operated control valves and actuators that require positioners for modulating actuation of these final control elements. Pneumatic positioners constantly use air to position the final control element. This takes place during the up or down travel of the linear control actuator, or during the clockwise and counter clockwise travel of rotary actuators.

During the period that the actuator is stationary--at the process control set point--the positioner no longer needs to use air. However, virtually all positioners bleed a small amount of air during this time. The specification for this value is typically called air consumption at steady state or at stable state. Air consumption of positioners is specified in several engineering units, such as SCFM; SLPM; USGPM;

$$\frac{kg}{h} \text{ or } \frac{Nm^3}{h}$$

The amount of compressed air that the positioner consumes at steady state is important. Low air consumption means the positioner is more economical from an operating standpoint with higher energy savings. In many control loops with correct PID tuning, the control actuator may move only small amounts during the control cycle and the percentage of time at the steady-state position is high.

Air Consumption		
Model	Air Supply (PSIG)	Unit: SCFM
Exact-P3	80	0.23
Exact-XL	80	0.23
VE/VP Series	80	0.25
VX Series	80	0.25

EXACT P3 Pneumatic Positioner



VE/VP Positioner (General Purpose)



EXACT XL Electro-Pneumatic Positioner



VX Positioner (Hazardous Locations)

