

APEX Spool Valve Options

Automax offers three different spool valves for the Apex positioner family. Spool valves affect positioner flow capacity. Large valves permit higher flow rates than smaller valves. It is very important to match spool valve size to the application. Undersized valves cause sluggish and insensitive response. Oversized valves cause “nervous” operation, overshooting, and even hunting or oscillation.

The table below provides technical data on positioner performance with the three spool valve options. To choose a valve, obtain the actuator swept volume and pick the corresponding spool valve. For cases where the actuator size is marginal, consider the application. If faster speed and higher sensitivity is required, choose the larger spool valve. Keep in mind that this choice may cause overshoot. In cases where overshoot is not desired, choose the smaller valve. Of course, speed and sensitivity will be less with this choice.

Spool Valve	Actuator Swept Volume (Cubic Inches)	Maximum Flow (SCFM) into Empty Cylinder			Air Consumption @60 PSI (SCFM)
		40 PSI	60 PSI	80 PSI	
Low Flow	0-100	8.5	11.5	14.5	0.15
High Flow	100-850	13.0	17.5	22.5	0.25
Max Flow	850 & up	15.0	20.0	25.5	0.33

How to Order:

All Apex Figure numbers have a meaningful character for spool valves. Referring to the Table of Contents page, simply specify the character corresponding to the proper valve size (characters are also shown below). To order a replacement spool valve, simply specify the part number shown in the table below.

Spool Valve	Meaningful Character	Replacement Spool Valve Part Number
Low Flow	6	XA0091
High Flow	7	XA0089
Max Flow	8	XA0103