

APEX Flow Control Module

Introduction:

The APEX flow control module is a device that permits free flow from positioner to actuator (supply) and restricts flow from actuator to positioner (exhaust). The restriction is adjustable, allowing actuator cycle speed adjustment. This option may be factory installed or easily added in the field.

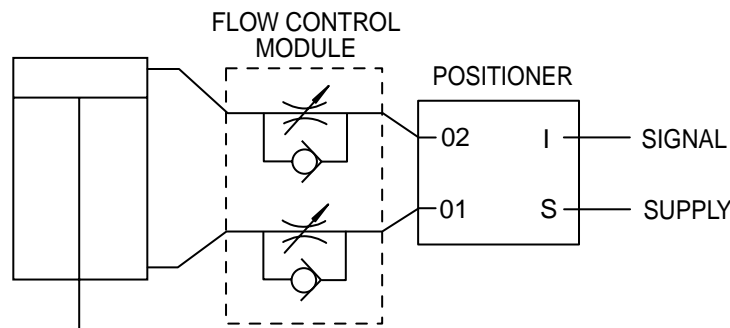


Applications:

The flow control module may only be used on APEX positioners: it will not function properly if mounted to actuators. This module may be specified to slow actuator speed. It may also be used when valve hydrodynamic loading tends to backdrive an actuator, slamming the valve closed. In this case, the flow control module will dampen valve closing.

Principle of Operation:

The flow control module contains two ball check valves and two needle valves as shown below. When flowing in the free direction, the ball check is unseated, allowing flow both around the ball and through the needle valve. When flowing in the restricted direction, the ball seats, directing flow through the needle valve only. By closing the needle valve, actuator speed is decreased. Two pairs of valves are included to allow independent adjustment of actuator speed in both travel directions.



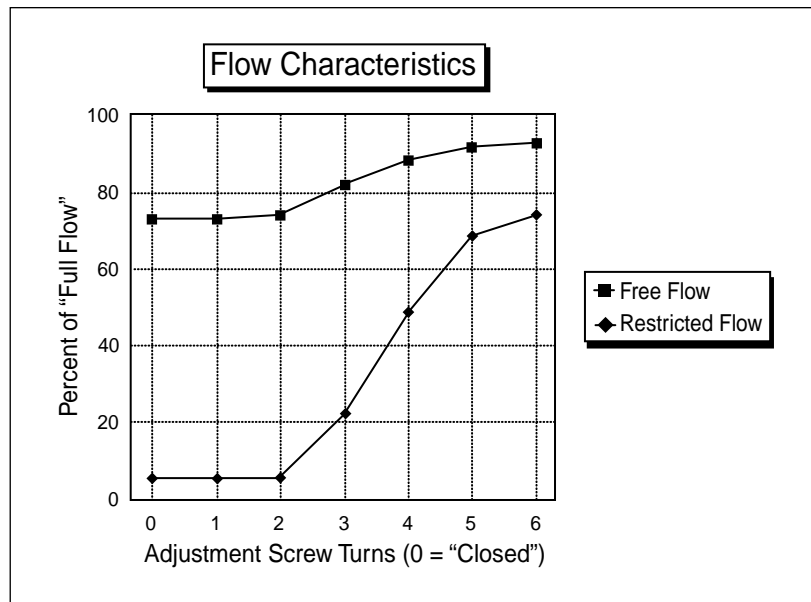
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Features and Specifications:

Our flow control module features stainless steel and anodized aluminum construction for corrosion resistance. Each module comes with a 1/4" NPT block for actuator tubing connections. The following chart gives flow characteristics in both directions.



To determine the flow for a specific application, look up the maximum flow for the spool valve size and supply pressure from Bulletin PS0006-CV. Multiply the valve by the percentage shown in the above graph for the specific adjustment setting. For example, for a high flow spool at 60 psi and 4 turns adjustment, the restrictive flow will be $0.49 \times 17.5 = 8.6$. The free flow will be $0.88 \times 17.5 = 15.4$.

How to Order:

Referring to the table of contents page, simply specify a "Y" for the flow control module. To order a field installation kit, specify the part number shown in the table below.

Option	Field Installation Kit Part Number
Flow control module	KMFC
Flow control module with block and bleed module (see PS0011-CV)	KMBBFC