

Single-Acting Hydraulic Piston



Master Flo's single-acting hydraulic piston actuators provide reliable mechanical failure on loss of hydraulic supply. Each actuator size is designed to interface with a range of choke valve sizes and pressure classes.

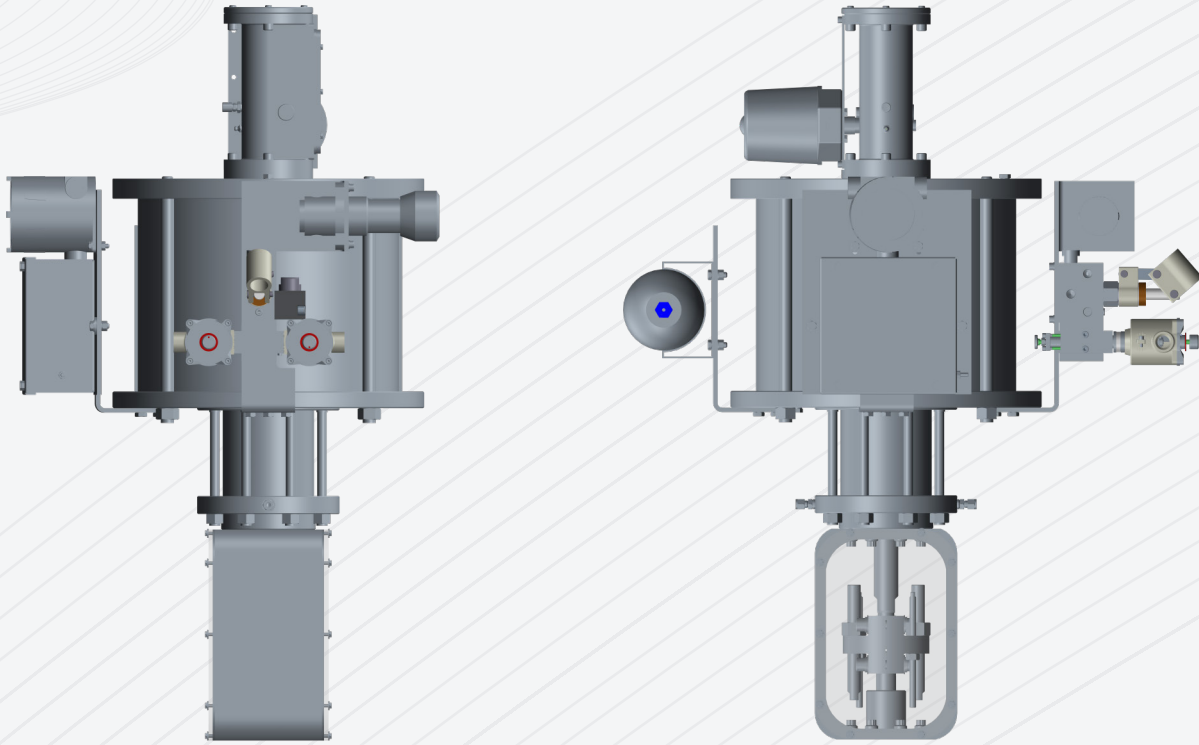
An independent spring canister provides ease of maintenance through isolation of the spring package from the hydraulic system envelope. Springs can be replaced or upgraded without breaking into the hydraulic circuit, and hydraulic seals can be replaced without opening the spring canister.

This actuator can be provided with 4-20 mA and HART-based positional feedback. Also available is a positioning system that will drive the actuator to a position received from analogue 4-20 mA, HART, or Fieldbus source.

Hydraulic Spring Return Specifications

Construction Materials	Carbon or low alloy steel, composite spring housing, aluminum	
Piston Area	13.4 square inches (86 square cm)	
Input Signal	4-20 mA, HART, or Fieldbus options	
Feedback Signal	4-20 mA, HART, or Fieldbus options	
Supply Pressure	1500 - 3000 PSIG	104.4 - 207.9 bar
Accuracy	± 1% of full scale (with control system)	
Certification	CSA/FM/UL: explosion proof or ATEX: intrinsically safe or flameproof	
Operating fluids	Mineral oil based hydraulic fluid (Brayco Micronic SV/3)	
Temperature Range	-20°F to 150°F	-28°C to 66°C
Cleanliness Requirements	Minimum NAS 1638 Class 9 (with control system)	
Fail Action	Mechanical fail close. Other modes available on request	

Currently available thrust configurations per choke size appear in the table below. All units can be supplied to meet CSA, UL or ATEX certification and can be equipped with an optional manual override (hand pump) feature. Default configuration is fail closed. Consult Master Flo for fail open or fail freeze options.



SPRING COMPARISON

Choke Size	Fail Close Spring Force (lbf)	Available Opening Thrust (lbf)
P1	7975	24931
P2	7280	25626
P25	7061	25845
P3	5929	26977
P35	4942	27964
P4	3681	29225
P5	2804	30102