

# Humphrey Mechanical Valves

Humphrey mechanical valves are simple, reliable, compact, 2-way and 3-way valves providing high flow rates (full orifice throughout) and requiring no lubrication. A 125 Series valve has a full 0.125-inch orifice; a 250 Series valve has a full 0.250-inch orifice, providing nearly three times the flow of the 125 Series valves.



**125B** 125B-3-10-21  
Model 125B is a 0.125-inch orifice, ball-operated valve that can be actuated from any angle. Its hardened steel ball is captive and free turning. The valve's short-stroke actuation is fully open at 0.031-inch; maximum stroke is 0.062-inch. The 125B can be mounted in-line, on mounting base, with panel mounting nuts, or with body threads.



125B



**125MP** 125MP-3-10-20  
Model 125MP is a 0.125-inch orifice valve actuated by a hardened plunger with spherical radius. The booted plunger may be actuated within  $\pm 20^\circ$  of centerline. The valve's short-stroke actuation is fully open at 0.062-inch; maximum stroke is 0.187-inch. The 125MP can be mounted in-line, on mounting base, with panel mounting nuts, or with body threads.



125MP MC MOC



**125MC** 125MC-3-10-21  
Model 125MC is a 0.125-inch orifice roller cam valve with steel roller. The valve has been dust booted for extra protection. The actuator can be positioned  $360^\circ$  and locked in place by a hex lock nut below boot. The actuator height is adjustable in increments of  $0.18^\circ$ ,  $8^\circ$ , and  $8.18^\circ$  through a  $270^\circ$  range. The 125MC can be mounted in-line, on mounting base, or with body threads.



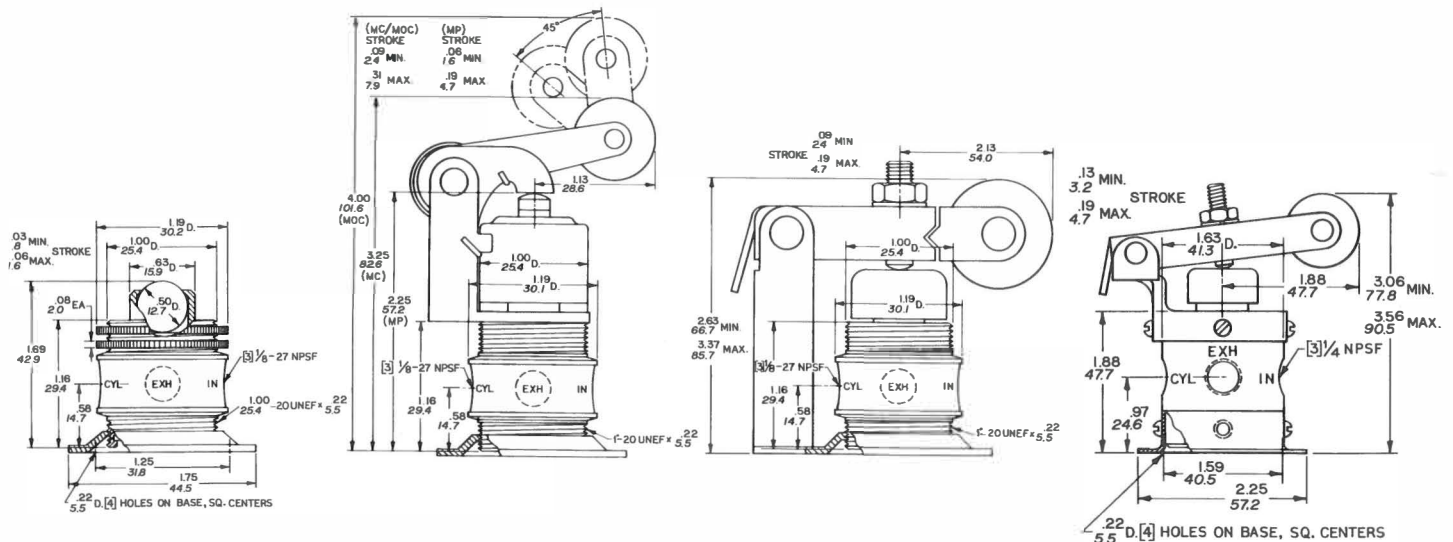
125C

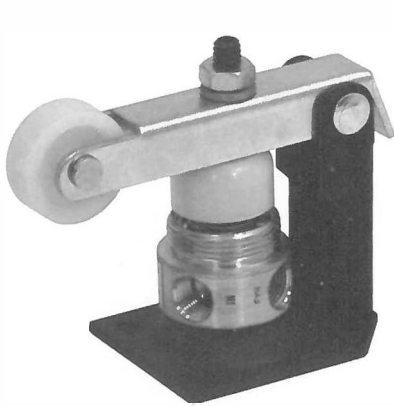


**125MOC** 125MOC-3-10-21  
Model 125MOC is a 0.125-inch orifice valve actuated by a one-way roller cam with steel roller. The valve has been dust booted for extra protection. The actuator can be positioned  $360^\circ$  and locked in place by a hex lock nut below boot. The actuator height is adjustable in increments of  $0.18^\circ$ ,  $8^\circ$ , and  $8.18^\circ$  through a  $180^\circ$  range. The 125MOC can be mounted in-line, on mounting base, or with body threads.



250C

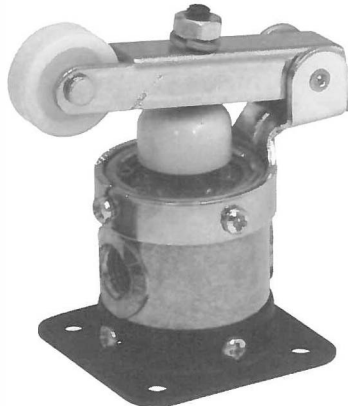




**125C**

125C-3-10-40

Model 125C is an economical 0.125-inch orifice roller cam valve. The roller (1" DIA x 3/8") and actuator button are fabricated of self-lubricating, non-sparking, high-impact nylon. Roller height is adjusted with screw and locknut. Furnished with mounting base. Do not exceed allowable stroke or strike adjusting-screw with cam.



**250C**

250C-3-10-21

Model 250C is an economical 0.250-inch orifice roller cam valve. The roller (1" DIA x 3/8") and actuator button are fabricated of self-lubricating, non-sparking, high-impact nylon. Roller height is adjusted with screw and locknut.

Both the actuator and the valve may be rotated on base in 90° increments. Do not exceed allowable stroke or strike adjusting-screw with cam.



**Options for Humphrey Mechanical Valves**

- Mounting Base, Code 21.
- Brass Body.
- Viton A Diaphragm for resistance to mild chemicals and for sustained temperatures to 400°F (204.4°C) and intermittent temperatures to 600°F (315.5°C).
- Panel Mounting Nuts, Code 22. For 125B and 125MP only.
- Bottom Inlet for normally closed models.

**Specifications**

**MEDIA:**  
Compressed Air (Consult factory for others)

**PRESSURE RANGE:**  
**All 125s:** 0 to 125 psig (0 to 8.6 bars)  
**All 250s:** 0 to 125 psig (0 to 8.6 bars)

**TEMPERATURE RANGE:**  
-20 to 225°F (-28.9 to 107.2°C)

**MATERIALS:**  
**All 125s:** Zinc Die Cast, Zinc Plated Steel, Aluminum, Brass, Stainless Steel, Buna N, Nylon  
**All 250s:** Zinc Die Cast, Zinc Plated Steel, Aluminum, Brass, Stainless Steel, Buna N  
**LUBRICATION** ..... Not required  
**FILTRATION** ..... Not required

**Air Flow to Atmosphere**

MODEL	Air Flow to Atmosphere				Weight	
	25 PSIG CFM	(1.7 BARS) LPM	125 PSIG CFM	(8.6 BARS) LPM	ACTUAL LBS	KGS
125B	4.5	127.3	24.3	679.2	.21	.09
125MP					.28	.13
125MC					.41	.19
125MOC					.43	.20
125C					.43	.20
250C	25.0	707.5	75.0	2122.5	.80	.40

**Fill/Exhaust Times (Seconds)**

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-.7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	FILL	EXHAUST	FILL	EXHAUST
All 125s	0.106	0.238	0.834	1.150	0.124	0.221	0.922	1.260
All 250s	0.032	0.044	0.312	0.433	0.033	0.059	0.324	0.565