

Classic Diaphragm-Poppet Series

Solenoid, Air-Piloted, Manual, Mechanical and Vacuum Valves

Humphrey®

Humphrey's Classic Diaphragm-Poppet Series features valves that **"CANNOT STICK. WILL NOT LEAK."** making them perfect for difficult and critical applications.

Due to a unique design, valves have no sliding seals to stick or wear, even in poor, unstable conditions. Construction is rugged, simple and reliable.

This series offers exceptional multi-purpose functionality and a broad product offering with models and configurations for almost every environment and application.

FEATURES

- Valves seal tight and have no sliding seals. **CANNOT STICK. WILL NOT LEAK.**
- Impervious to air quality; no lubricant required.
- 2-, 3- and 4-Way Types
Port Sizes: 1/8, 1/4, 1/2 and 3/4.
- Solenoid, Air-Piloted, Manual, Mechanical and Vacuum models available.
- Brass and Stainless Steel bodies are options for alternate gases and liquids, and corrosive environments



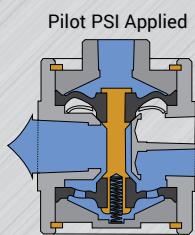
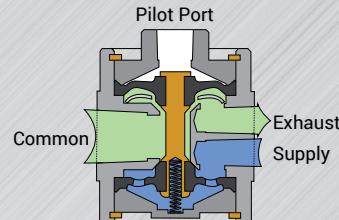
HOW IT WORKS

Compressed air to the SUPPLY port, fills bottom cavity (BLUE), and underside of the bottom diaphragm, causing the poppet to seat and seal. **VALVE WILL NOT LEAK.**

Valve actuation (at top) overcomes force to the underside of the bottom diaphragm, and opens flow to the COMMON port. High flow, no sliding seals. **VALVE CANNOT STICK.**

Releasing the actuation permits bottom diaphragm to begin valve closing. Compressed air assists valve shift. Exhausting pressure under the top diaphragm (GREEN) assists the position change and creates "Quick Dump" feature to EXHAUST.

NOTE: Design provides an excellent, leak free, 2-way function with plugged EXHAUST port.



Scan for additional product details on our online catalog.



Applications

MEDICAL

Inert construction and leak proof. Ideal for clean/alternate media.

TRANSPORTATION

Long history of reliability in extreme conditions and climates.

PETROCHEMICAL

Simple design works well in demanding media and harsh environments.

FOOD AND BEVERAGE

Performs well with moisture laden air. No sticking.

INDUSTRIAL AUTOMATION

Rugged, Reliable. Withstands difficult conditions.

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SPECIFICATIONS	125 SERIES 1/8 PIPE	250 SERIES 1/4 PIPE	500 SERIES 1/2 PIPE	590 SERIES 3/4 PIPE
MEDIA	Compressed Air and Inert Gases (consult factory for others)			
MAXIMUM PRESSURE	125 PSI			
FLOW - SCFM	18	50	160	260
FLOW - CV	0.3	0.8	2.7	3.7
OPERATING SPEEDS	600 CPM			
LUBRICATION	Not Required			
TEMPERATURE RANGE	0-225° F			
WETTED MATERIALS	Zinc Plated Steel, Brass, Buna, SST	Zinc Diecast, Brass, Buna, SST	Brass, Buna, SST	Aluminum, Buna, Brass, SST
STANDARD VOLTAGES (VOLT)	12VDC, 24VDC, 120/50/60, 240/50/60, 24/50/60			



Air Piloted 3- and 4-Way Valves

ORDERING CODE	FUNCTION	TYPE-OPERATOR
125A-3-10-21	3-way, NC	Air Piloted
125A-3-11-21	3-way, NO	Air Piloted
125AA-3-10-21	3-way, NC	Air Piloted - Interlock
250A-3-10-21	3-way, NC	Air Piloted
250A-3-11-21	3-way, NO	Air Piloted
250AA-3-10-21	3-way, NC	Air Piloted - Interlock
SS250A	3-way, NC	Single Pilot, SST Materials
250-4A-21	4-way	Air Piloted
250-4AA-21	4-way	Air Piloted - Interlock
500A-3-10	3-way, NC	Air Piloted
590A-3-10	3-way, NC	Air Piloted

Manual 3- and 4-Way Valves

ORDERING CODE	FUNCTION	TYPE-OPERATOR
125PLG	3-way, NC	Easy Push w/Shroud
125P-3-10-21-40	3-way, NC	Push Button
125P-3-11-21-40	3-way, NO	Push Button
125V-3-10-21	3-way	Toggle - Detent
125HO-3-10-21	3-way	Push Turn - Detent
125T-3-10-21	3-way, NC	Lever
250P-3-10-21	3-way, NC	Push Button
250P-3-11-21	3-way, NO	Palm Button
250PL-3-10-21	3-way, NC	Palm Button
250HO-3-10-21	3-way	Hold On - Detent
250F-3-10	3-way, NC	Foot
250F-3-11	3-way, NO	Foot
250V-3-10-21	3-way	Toggle - Detent
250T-3-10-21	3-way, NC	Lever
250-4F	4-way	Foot
250-4H-21	4-way	3 Position Lever - Detent

Solenoid 3- and 4-Way Valves

BASE MODEL	FUNCTION	TYPE-OPERATOR
250E1-3-10-21-36-(V)	3-way, NC	Single Solenoid
250E2-3-21-(V)	3-way	Double Solenoid - Detent
250AE1-3-10-21-(V)	3-way, NC	Single Solenoid
250AE2-3-21-(V)	3-way	Double Solenoid - Detent
250-4E1-21-(V)	4-way	Single Solenoid
250-4E2-21-(V)	4-way	Double Solenoid - Detent
500E1-3-10-36-(V)	3-way, NC	Single Solenoid
500E2-3-36-(V)	3-way	Double Solenoid - Detent
500AE1-3-10-36-(V)	3-way, NC	Single Solenoid
500AE2-3-36-(V)	3-way	Double Solenoid - Detent
590E1-3-10-36-(V)	3-way, NC	Single Solenoid
590E2-3-36-(V)	3-way	Double Solenoid - Detent
590AE1-3-10-36-(V)	3-way, NC	Single Solenoid
590AE2-3-36-(V)	3-way	Double Solenoid - Detent

Mechanical 3-Way Valves

ORDERING CODE	FUNCTION	TYPE-OPERATOR
125B-3-10-21	NC	Ball - Mechanical
125MP-3-10-21	NC	Plunger - Mechanical
125MC-3-10-21	NC	Cam - Mechanical
250C-3-10-21	NC	Cam - Mechanical
500C-3-10	NC	Cam - Mechanical

Vacuum Service (Consult factory for order codes)

- Diaphragm Poppet valves can be configured at the factory to be outstanding vacuum valves.
- All Air Piloted and Solenoid 3-Way Valves, and some Manual 3-Way valves, can be available as vacuum valves.

Certified: ISO 9001:2015

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