

Legendary Poppet Valves

DHA/CDA & CENTURY SERIES

Leaders of Innovative Excellence

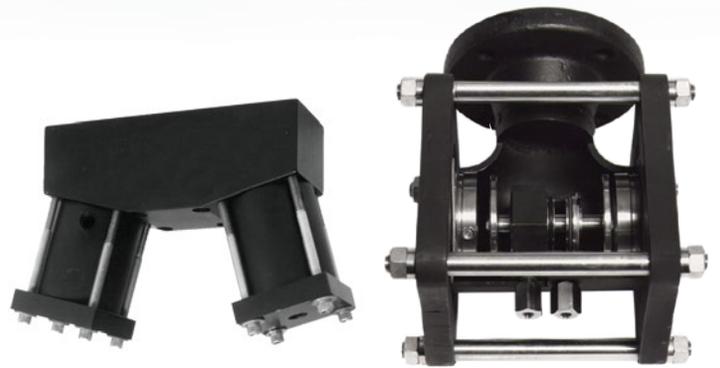
Standard off-the-shelf valves were not good enough for critical applications so we engineered our own. Tested under adverse conditions without failure in excess of 500,000 cycles, our proprietary, full port, air-operated poppet valves feature stainless steel internals. Protected against wear, a friction-free PTFE coating is applied to all wear surfaces. Corrosion resistant and non-lubricated, these valves were engineered to withstand elevated temperatures and resist clogging and erosion from abrasive desiccant dust. These are the best valves in the industry - period.

THE PROBLEM – WEAR AND TEAR

Process control valves on desiccant dryers can be subject to frequent operation. Other medium-flow drying systems tend to use diaphragm or shuttle valves and their large-flow drying systems tend to use diaphragm valves or ordinary butterfly valves coupled to bulky pneumatic/electric actuators. Most competitive valve failures result from high velocity contaminant abrasion to the sealing surface as the valve opens and closes.

- Diaphragm valves are designed for water service, repeat cycling and fine desiccant dust tear diaphragms, as well as wear out seals and packing glands.
- Competitive shuttle valves are sensitive to localized sealing surface abrasion, untreated shuttle cylinder bores are subject to premature wear or binding from abrasive desiccant dust.
- Butterfly valves are subject to localized sealing surface abrasion as desiccant dust accelerates through the narrowing valve port as it opens and closes.

Performance suffers and maintenance costs increase. Efficiency is reduced and dew points are compromised. Pneumatic Products overcame these weaknesses by developing the Legendary Poppet Valves.



THE SOLUTION

Pneumatic Products' Poppet Valves are different. Our legendary self-powered designs are the model of simplicity with but one or two moving parts. Straddle-mounted bearing points provide balance and concentricity to the stainless steel motive shaft. Large diameter pistons smoothly deliver optimal force for sure openings and closings. Self-cleaning shaft and piston design wipes harmful dust away. System complexity and premature sealing failures are eliminated through design simplicity and outstanding durability.

Valve Sectional



Legendary Construction & Design

The most reliable and durable valves are specifically designed and proven for desiccant dryer service and are certified in excess of 500,000 cycles.

Features

Benefits

Friction Free/Poppet Type

Resists wear due to scoring; common in ball valves and plug valves.

Fully Ported

Low differential pressure.

No Lubrication Required

Low maintenance.

Bubble Tight

No cross leakage to affect performance.

Stainless Steel Internals

Resists corrosion and erosion, extended valve life.

Air Operated Inlet/Exhaust

Positive valve actuation & failsafe operation.

Self Cleaning

Continuous removal of contaminants that accelerate wear by scoring.

Purge Adjustment

Easy access & adjustment of regeneration flows.

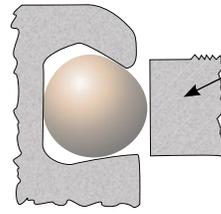
Most Air Piping Eliminated

Allows for easy access and service.

Simplified Valve Removal

No heavy duty or special tools required for service.

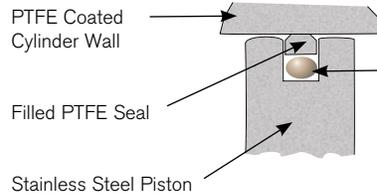
Poppet Valves



All Poppet valves seal against a stainless steel seat. Even the hardest of materials is worn by the abrasive dust common to desiccant dryers.

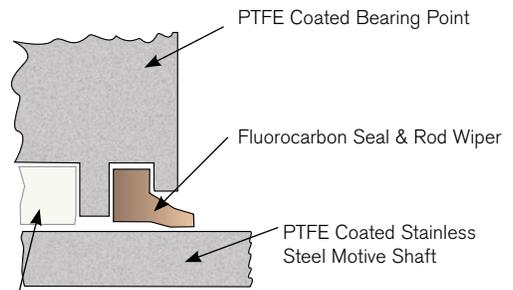
Stainless Steel material is rolled inward to captivate the o-ring seal.

Piston Seal – 2 & 3 Way Operator



O-Ring in compression provides memory and holds PTFE seal against the cylinder wall

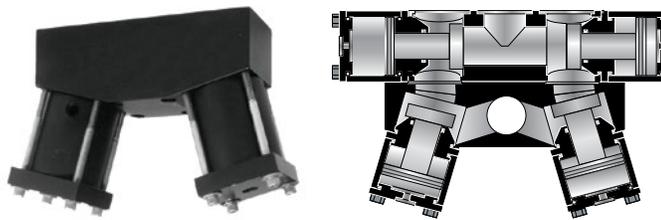
Rod Seal Wiper



Filled PTFE piece holds sliding poppet away from the guide rod.

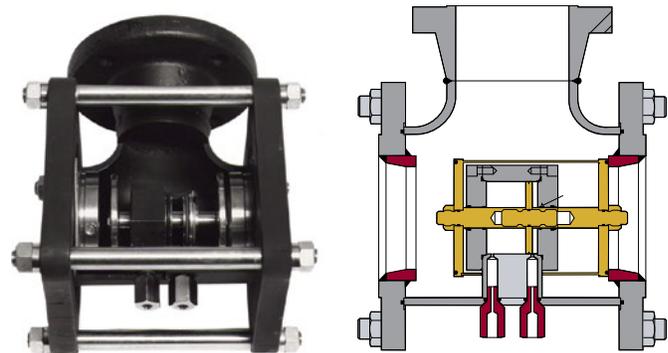
DHA/CDA Poppet Valves – through 1,600 scfm

Inlet & Exhaust Valve



Century Series Poppet Valves – 1,200 through 12,100 scfm

Three – Way Valve



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