

Actuated Valves Technical
Pneumatic Actuated Butterfly Valves



Spears® Butterfly Valve Premium Pneumatic Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel stems with optional PTFE coated stems available for extra assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.



Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2" - 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" = 150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Special Valve Options & Accessories

- "True-Lug" style factory installed lugs (PVC & CPVC valves only)
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30" - 60" Polypropylene valves (contact Spears® for details)

Standard 2-Position Actuator Specifications

Type	Dual piston <ul style="list-style-type: none"> • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8"

Note: Contact Spears® for information on valve sizes 14" and larger.

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valve
12VDC, 24VDC, 24VAC, 115VAC, 230VAC
NEMA 4/4x & 7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a nonliner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem and hardware. Valves shall be pressure rated at [select from specifications] for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.