

Actuated Valves Product
Electric & Pneumatic Actuated Valves Overview



Spears® Makes Valve Actuation Simple. . .

Sold in Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Accessory Add-ons Provide Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories purchased separately. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Complete Packages Factory Assembled - Ready for Installation

All actuation packages include valve, actuator mounting, coupling, and precision actuator factory assembled with any purchased accessories, ready for installation.

Easy Steps to Locate Desired Product

This catalog provides both Spears® economical Electro Series Actuated Ball Valves and Spears® full featured Premium Electric and Premium Pneumatic actuated valve packages with optional accessories. Actuated valve packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (electric, pneumatic). Optional accessories are listed and priced separately for assembly with the desired package. A complete listing of content is located at the end of this catalog. See Spears® Actuated Thermoplastic Valves Product Guide & Engineering Specification, for additional technical information on valve packages and accessories.

Step 1: Select and Locate Desired Actuated Valve Type

Section I: Ball Valves
Section II: Butterfly Valves
Section III: Diaphragm Valves

Step 2: Select and Locate Desired Actuation Type within Valve Section

Electric Actuated
Pneumatic Actuated

Step 3: Select and Locate Desired Material Type Table

PVC
CPVC
Polypropylene

Step 4: Select and Locate Specific Part Number According to Listed Options

Individual tables for actuated valve packages are organized by valve Size, Elastomer type (O-ring, seat, etc.), and valve configuration options such as End Connector (Joint) or other specified criteria. Product Code is located in the far right column.

Step 5: Select and Locate Desired Accessories (see important ordering information below)

Electric Actuator Accessories
Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves
Pneumatic Actuator Accessories for Diaphragm Valves





**Ordering Premium Valve Packages with Accessory Add-ons
- IMPORTANT -**

Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. When Accessories are ordered for assembly with an actuated valve package, the suffix "-A" must be added to the actuated valve package part number being ordered. Do not add this suffix if no accessories are being ordered or if ordering Electro Series Ball Valves. Example: Package part number 21101A112-005 would be ordered as 21101A112-005-AREQUIRED ORDER SEQUENCE: Order line items should begin with the actuated valve package part number (with -A suffix) and be immediately followed by the selected accessory part number(s) as the next line item(s). This sequential listing of valve package and applicable accessories on the order assures that selected accessories are properly assembled with the selected package. Failure to follow this simple practice may result in unnecessary delays.



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Actuated Valve Packages Overview

Typical Package Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
	True Union 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		PP	1-1/2 - 24 ¹	EPDM FKM	Flanged	X	X	
	Diaphragm Valves	PVC	1/2 - 4 ²	Buna-N EPDM FKM PTFE	Socket ³ Thread ³ Spigot ⁴ Flanged	X	X	
		CPVC	1/2 - 4 ²	Buna-N EPDM FKM PTFE	Socket Thread Spigot Flanged	X	X	
		PP	1/2 - 4 ²	EPDM FKM	Thread Flanged	X	X	

Notes: 1. Butterfly Valves also available in sizes 30" - 60", quoted and produced to order. Contact Spears®.
 3 - 1/2" - 2" Socket and Thread Diaphragm Valves are True Union style.

2. 2-1/2" to 4" Diaphragm Valves available in Flanged ends only.
 4. Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

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The following table illustrates actuator features for Premium Electric actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this sheet. Features specified as "Accessory" are included as package add-ons in this sheet. Features specified as "Optional" must be special ordered (contact Spears® for MSRP).

Electric Actuator Features Overview

Standard 2-Position Electric Actuator Features	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
Motor Rotation	Unidirectional	Reversing	Reversing	Reversing
NEMA Rating	4X	4	4	4
Enclosure Material	PP	Powder Coated Aluminum	Powder Coated Aluminum	Powder Coated Aluminum
Enclosure Conduit Entry	1/2 NPT	1/2 NPT (1/2" – 3") 3/4 NPT (4" – 6")	1/2 NPT (1-1/2" – 4") or 3/4 (4" – 12")	1/2 NPT
Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Pre Wired to terminal strip	Wired Direct	Standard	Standard	Standard
Thermal Overload Protection	Wired Direct	Standard	Standard	Standard
Basic Manual Override	—	Standard (1/2" – 3")	Standard (1-1/2" – 4")	Optional
Declutchable Manual Override	—	Standard (4" – 6")	Standard (6" – 12")	Standard (2" – 4")
Limit Switches (SPDT)	1	4 (2 sets of 2 ea)	4 (2 sets of 2 ea)	2 (1 set of 2 ea)
Mounting Position	Any	Any	Any	Any
Permanent Lubrication	Standard	Standard	Standard	Standard
Options & Accessories				
Feedback Potentiometer	—	Accessory	Accessory	Accessory
24 VAC	Optional	Optional	Optional	Optional
230 VAC	Optional	Optional	Optional	Optional
230 VAC 3-phase, 60 Hz	—	Optional	Optional	Optional
230 VAC 3-phase, 50 Hz	—	Optional	Optional	Optional
460 VAC 3-phase, 60 Hz	—	Optional	Optional	—
460 VAC 3-phase, 50 Hz	—	Optional	Optional	—
12 VDC	Optional	Optional	Optional	Optional
24 VDC	Optional	Optional	Optional	Optional
NEMA 4X, 7, 9 Rating	(4X Standard)	Optional	Optional	Optional
Basic Manual Override	—	Standard (1/2" – 3")	Standard (1-1/2" – 4")	Optional
Declutchable Manual Override	—	Optional (Standard 4" – 6")	Optional (Standard 6" – 12")	Optional
Duty Cycle Upgrade	Optional	—	—	Optional
Spring Return (Fail Safe)	—	Optional	Optional	—
Positioner Board (Modulating)	—	Accessory	Accessory	Accessory
Additional Limit Switch Sets	—	Accessory	Accessory	Accessory
LED Indicator Lights	—	Accessory	Accessory	Accessory
Position Indicator (visual)	Standard	Standard	Standard	—
Heater	—	Standard	Standard	Accessory
Thermostat	—	Accessory	Accessory	Accessory



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The following table illustrates actuator features for Premium Pneumatic actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this sheet. Features specified as "Accessory" are included as package add-ons in this sheet. Features specified as "Options" must be special ordered (contact Spears® for MSRP).

Please contact Spears® for any desired features or accessories not specified.

Pneumatic Actuator Features Overview

Standard Pneumatic Actuator Features	Premium Pneumatic TU Ball Valves	Premium Pneumatic Butterfly Valves	Premium Pneumatic Diaphragm Valves
Type	Dual Piston, Rack & Pinion	Dual Piston, Rack & Pinion	Linear Piston
Enclosure Material (ends/body)	Epoxy Coated/Hard Anodized Aluminum	Epoxy Coated/Hard Anodized Aluminum	PES-Polyestersulphone PP-Polypropylene
Standard Operation	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed/Open
Standard Operating Pressure	80 psi	80 psi	80 psi
Air Connection Size	1/8"	1/8"	1/8"
Basic Manual Override	Standard	Standard	(Option)
Options & Accessories			
Air-Spring Open	Option	Option	Option
40 psi Operating Pressure	Option	Option	—
60 psi Operating Pressure	Option	Option	Option
Basic Manual Override	(Standard)	(Standard)	Option
Declutchable Manual Override	Option	Option	—
Pneumatic Positioner	Accessory	Accessory	Accessory
Electro-Pneumatic Positioner	Accessory	Accessory	Accessory
Dome Position Indicator	Accessory	Accessory	Accessory
Pointer Indicator	Accessory	Accessory	—
3 & 4-Way Solenoid Valve	Accessory	Accessory	Accessory
Dual Power Solenoid Valve	Accessory	Accessory	—
Limit Switches	Accessory	Accessory	Accessory
Output Signal Limit Switches	Accessory	Accessory	—
3-Way "Dribble" Control Limit Switches	Accessory	Accessory	—
Stainless Steel Pressure Gauge Set	Accessory	Accessory	Accessory
Stem Extension	Accessory	Accessory	Accessory
ID Tag-SS	Accessory	Accessory	Accessory



Additional Actuated Valve Configurations, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this sheet are a few of those available on a special order basis. See the *Accessories* sections for standard configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes
- "No Seat" actuated Butterfly Valves for duct (damper) applications
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" – 4"
- Socket, Thread, Flange End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.