

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-A REQUIRED 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 <sup>1</sup>	EPDM FKM	Flanged	X	X	
	Diaphragm Valves	PVC	1/2 - 4 <sup>2</sup>	Buna-N EPDM FKM PTFE	Socket <sup>3</sup> Thread <sup>3</sup> Spigot <sup>4</sup> Flanged	X	X	
		CPVC	1/2 - 4 <sup>2</sup>	Buna-N EPDM FKM PTFE	Socket Thread Spigot Flanged	X	X	
		PP	1/2 - 4 <sup>2</sup>	EPDM FKM	Thread Flanged	X	X	

Notes: 1. Butterfly Valves also available in sizes 30" - 60", quoted and produced to order. Contact Spears®.  
 2. 2-1/2" to 4" Diaphragm Valves available in Flanged ends only.  
 3. 1/2" - 2" Socket and Thread Diaphragm Valves are True Union style.  
 4. Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

**Actuated Valves Product**  
**Electric & Pneumatic Actuated Valves Overview**



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**

<b>Standard 2-Position Electric Actuator Features</b>	<b>Electro Series Ball Valves</b>	<b>Premium Electric TU Ball Valves</b>	<b>Premium Electric Butterfly Valves</b>	<b>Premium Electric Diaphragm Valves</b>
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
<b>Options &amp; Accessories</b>				
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



**Actuated Valves Product**  
**Electric & Pneumatic Actuated Valves Overview**

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)
<b>Options &amp; Accessories</b>			
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.



**Actuated Valves Product**  
**Electro Actuated Compact 2000 Ball Valve & Electro Actuated True Union 2000 Standard Ball Valve**



General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.

- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

**PVC Electro Actuated Compact 2000 Ball Valve**

O-ring Joint	EPDM			FKM			Prod Code
	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	
1/2	E1404-005 501.51	E1406-005 501.51	E1408-005 617.64	E1405-005 552.69	E1407-005 552.69	E1409-005 651.34	496
3/4	E1404-007 513.81	E1406-007 513.81	E1408-007 649.48	E1405-007 571.03	E1407-007 571.03	E1409-007 683.35	496
1	E1404-010 523.02	E1406-010 523.02	E1408-010 669.52	E1405-010 580.09	E1407-010 580.09	E1409-010 703.91	496
1-1/4	E1504-012 541.48	E1506-012 541.48	E1508-012 705.25	E1505-012 611.93	E1507-012 611.93	E1509-012 742.46	496
1-1/2	E1504-015 556.91	E1506-015 556.91	E1508-015 718.47	E1505-015 623.83	E1507-015 623.83	E1509-015 760.58	496
2	E1504-020 581.47	E1506-020 581.47	E1508-020 781.76	E1505-020 648.56	E1507-020 648.56	E1509-020 825.21	496

**CPVC**

O-ring Joint	EPDM			FKM			Prod Code
	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	
1/2	E1404-005C 510.73	E1406-005C 510.73	E1408-005C 637.82	E1405-005C 570.52	E1407-005C 570.52	E1409-005C 672.80	498
3/4	E1404-007C 529.19	E1406-007C 529.19	E1408-007C 674.66	E1405-007C 593.78	E1407-007C 593.78	E1409-007C 705.85	498
1	E1404-010C 553.80	E1406-010C 553.80	E1408-010C 691.59	E1405-010C 603.28	E1407-010C 603.28	E1409-010C 727.19	498
1-1/4	E1504-012C 587.64	E1506-012C 587.64	E1508-012C 744.54	E1505-012C 636.21	E1507-012C 636.21	E1509-012C 771.57	498
1-1/2	E1504-015C 599.93	E1506-015C 599.93	E1508-015C 753.82	E1505-015C 644.25	E1507-015C 644.25	E1509-015C 785.85	498
2	E1504-020C 652.25	E1506-020C 652.25	E1508-020C 812.24	E1505-020C 669.28	E1507-020C 669.28	E1509-020C 852.94	498



General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

**PVC Electro Actuated True Union 2000 Standard Ball Valve**

O-ring Joint	EPDM			FKM			Prod Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	Part # MSRP	
1/2	E1453-005 520.47	E1451-005SR 521.43	E1457-005 640.35	E1454-005 573.49	E1452-005SR 574.57	E1458-005 705.53	500
3/4	E1453-007 531.83	E1451-007SR 533.99	E1457-007 671.71	E1454-007 594.05	E1452-007SR 596.22	E1458-007 748.54	500