



PVC SINGLE ENTRY BALL VALVES

SE-2-0399



Economical Industrial Grade Valve

This quarter-turn shut off valve is widely chosen for heavy duty use in industrial & chemical, turf & irrigation, and pool & spa applications. Available in IPS sizes 1/2" through 4" with choice of socket or threaded end connectors.

Heavy Bodied PVC White or Gray Construction

Spears Single Entry Ball Valves never rust, scale or pit, providing exceptional chemical and corrosion resistance.

Buttress Threaded External Adjustment Nut

Strong buttress type threads on adjustment nut allow higher pressure handling capability and quick external adjustment for seat wear compensation.

Teflon® Ball Seats

Spears PTFE floating seat design reduces seat wear for extended valve life, smooth operation, and bubble-tight shut-off. 100% factory tested.

Buna-N, EPDM or Viton® O-Ring Options

Choice of high grade, abrasion resistant Buna-N, EPDM or Viton® o-rings allows application specific selection for optimum chemical resistance.

High Impact Polypropylene Handle

Features double stop engagement and exhibits excellent resistance to most chemical environments.

Full Schedule 80 Bore

In full open position, full bore virtually eliminates pressure drop, providing optimum flow.

Safe-T-Shear® Stem

Developed to help prevent line fluids from leaking out in the event of ball valve stem damage. Engineered for high strength, the stem incorporates a special shear point to control accidental breakage. Over torquing breaks occur above the stem o-ring leaving the seal intact until repair or replacement can be made.

Full 235 psi Pressure Rating

Maximum Internal Pressure at 73°F for the most demanding applications for 1/2" - 2" valves, 150 psi for 3" & 4" valves.

Suitable For Vacuum Service

Spears Single Entry Ball Valves are tested at 26 in. Hg vacuum for one hour with less than 1 in. Hg loss.

NSF Certified for Potable Water

All Single Entry Ball Valves are NSF Certified for potable water use.

Fully Repairable, Non-Blocked Valve

Convenient Seat & O-ring Replacement Kits, for easy ordering, servicing and extended valve life. Requires system shutdown for service.

Optional Accessories

- Round Safety Handle
- Stem Extension Kit
- Mini-Mount Actuation Mounting Kit
- 2" Square/T-Style Operator Nut

For additional information, please refer to Spears' THERMOPLASTIC VALVES & ACCESSORIES PRODUCT GUIDE & ENGINEERING SPECIFICATIONS, V-4, or THERMOPLASTIC VALVES & ACCESSORIES Price Schedule V-1.



Quality Systems Certificate No. 293
Corporate Facilities, Sylmar, CA
Assessed to ISO 9001

Sample Engineering Specification

All thermoplastic ball valves shall be Single Entry type constructed from PVC Type I Cell Classification 12454. All o-rings shall be Buna-N, EPDM or Viton®. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All valves shall be certified for potable water use by the National Sanitation Foundation (NSF). All 1/2" through 2" valves shall be pressure rated at 235 psi and all 3" and 4" valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears Manufacturing Company.

Teflon® and Viton® are Registered Trademarks of Dupont Dow Elastomers.

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Quick-View Valve Selection Chart

Valve Size	O-Ring Material	PVC Part Number ¹		Pressure Rating	Accessory Available						
		Threaded	Socket								
1/2	Buna-N	2411-005G	2412-005G	235 psi Non-Shock Water @ 73°F	Round Safety Handle						
	EPDM	2421-005G	2422-005G								
	Viton®	2431-005G	2432-005G								
3/4	Buna-N	2411-007G	2412-007G			235 psi Non-Shock Water @ 73°F	Round Safety Handle				
	EPDM	2421-007G	2422-007G								
	Viton®	2431-007G	2432-007G								
1	Buna-N	2411-010G	2412-010G					235 psi Non-Shock Water @ 73°F	Round Safety Handle		
	EPDM	2421-010G	2422-010G								
	Viton®	2431-010G	2432-010G								
1-1/4	Buna-N	2411-012G	2412-012G							235 psi Non-Shock Water @ 73°F	Round Safety Handle
	EPDM	2421-012G	2422-012G								
	Viton®	2431-012G	2432-012G								
1-1/2	Buna-N	2411-015G	2412-015G	235 psi Non-Shock Water @ 73°F	Round Safety Handle						
	EPDM	2421-015G	2422-015G								
	Viton®	2431-015G	2432-015G								
2	Buna-N	2411-020G	2412-020G			235 psi Non-Shock Water @ 73°F	Round Safety Handle				
	EPDM	2421-020G	2422-020G								
	Viton®	2431-020G	2432-020G								
3	Buna-N	2411-030G	2412-030G					150 psi Non-Shock Water @ 73°F	Stem Extension Kit		
	EPDM	2421-030G	2422-030G								
	Viton®	2431-030G	2432-030G								
4	Buna-N	2411-040G	2412-040G							150 psi Non-Shock Water @ 73°F	Stem Extension Kit
	EPDM	2421-040G	2422-040G								
	Viton®	2431-040G	2432-040G								

1: For PVC White valves, replace the letter "G" with the letter "W" at the end of the part number listed (e.g., 2421-005W)

C_v Values

Valve Size	C _v
1/2	38
3/4	76
1	146
1-1/4	292
1-1/2	412
2	742
3	1660
4	3104

Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

NOT FOR USE WITH COMPRESSED AIR OR GASES

Spears Manufacturing Company DOES NOT RECOMMEND the use of thermoplastic piping products for systems to transport or store compressed air or gases, or the testing of thermoplastic piping systems with compressed air or gases in above and below ground locations. The use of our product in compressed air or gas systems automatically voids any warranty for such products, and its use against our recommendation is entirely the responsibility and liability of the installer.

WARNING: DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)
Valve Pressure Rating psi (MPa)	1/2" - 2"	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)
	3" - 4"	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)



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