

# PVC & CPVC COMPACT BALL VALVES

CB-2-1001

## Industrial Grade Sealed Unit



This heavy bodied, quarter-turn shut off valve is popular where maintenance-free installations are desired for a variety of chemical, industrial and OEM applications. Factory-adjusted sealed units are available in IPS sizes 1/2" through 6", with choice of either socket or threaded end connectors.

### Heavy Bodied PVC or CPVC

Construction, Silicone Free Assembly Spears® Compact Ball Valves never rust, scale, or pit, providing exceptional chemical and corrosion resistance. Assembled with water soluble, silicone free lubricant.

### PTFE Ball Seats

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

### EPDM or Genuine Viton® O-ring Options

Choice of high grade, abrasion resistant EPDM or genuine Viton® elastomer 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.

### Sample Engineering Specifications

All thermoplastic ball valves shall be Compact sealed unit type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or genuine Viton®. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valves shall be listed for potable water use by the National Sanitation Foundation (NSF). All 1/2" - 2" valves shall be pressure rated at 235 psi, all 3" - 6" to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

### 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 replacement can be made.

### Full Service Pressure Rating for Demanding Applications

1/2" - 2" valves pressure rated to 235 psi at 73°F. 3" - 6" valves pressure rated to 150 psi at 73°F.

### Suitable For Vacuum Service

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

### NSF Listed for Potable Water

All Compact Ball Valves are NSF Listed for potable water use.

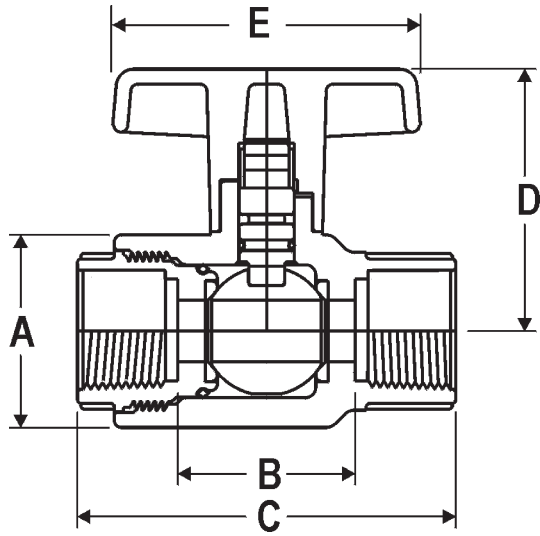
### Optional Accessories

- 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 and THERMOPLASTIC VALVES & ACCESSORIES Price Schedule V-1.



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### Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		Oper. <sup>2</sup> Torque (in.-lb.)	C <sub>v</sub> <sup>3</sup> Values
	A	B <sup>1</sup>	C	D	E <sup>4</sup>	PVC	CPVC		
1/2	1-11/16	1-5/8	3-3/8	2-5/16	2-3/4	.31	.32	20	36
3/4	2-1/8	2	4-1/16	2-11/16	3-1/4	.49	.52	30	74
1	2-7/16	2-1/8	4-7/16	2-7/8	3-3/4	.64	.69	40	141
1-1/4	2-13/16	2-7/16	4-15/16	3-5/16	4-1/8	.93	.98	60	284
1-1/2	3-1/4	2-13/16	5-5/8	3-11/16	4-1/2	1.39	1.45	80	402
2	4-1/16	3-1/2	6-1/2	4-3/8	5-1/4	2.33	2.45	90	706
3	6	5-1/8	8-5/8	5-3/4	9-7/8	5.92	6.45	300	1660
4	7-3/8	6-5/32	10-5/32	6-5/8	10-27/32	9.50	10.24	400	3104
6	9-29/32	8-3/32	14-3/16	6-15/32	14-3/8	21.48	23.41	900	7942

1: Value Lay Length

2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.

3: Gallons per minute at 1 psi pressure loss. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

4: 6" valve has lever handle, dimension is from valve centerline (not illustrated).

### Temperature Pressure Rating

System Operating Temperature °F (°C)			100	110	120	130	140	150	160	170	180	190	200	210
			(38)	(43)	(49)	(54)	(60)	(66)	(71)	(77)	(82)	(88)	(93)	(99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	3" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

**NOT FOR USE WITH COMPRESSED AIR OR GASES**