

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.

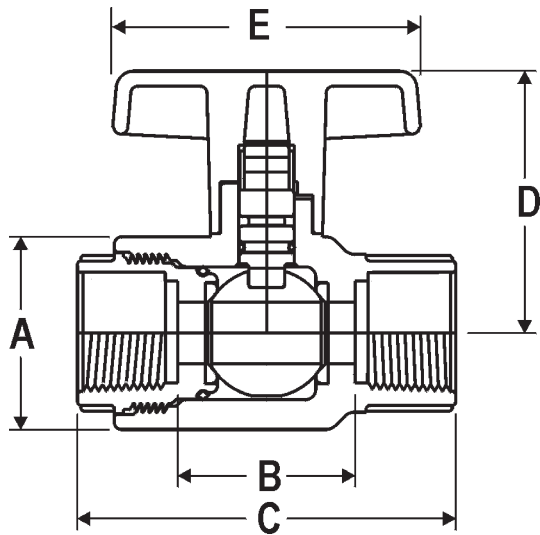
Optional Accessories

- 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. ² Torque (in.-lb.)	C _v ³ Values
	A	B ¹	C	D	E ⁴	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