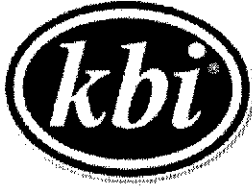


CPVC BALL VALVES

KING BROTHERS INC.

SPEARS MFG.



The Choice of Professionals

King Bros. Industries

29101 The Old Road, Valencia, CA 91355

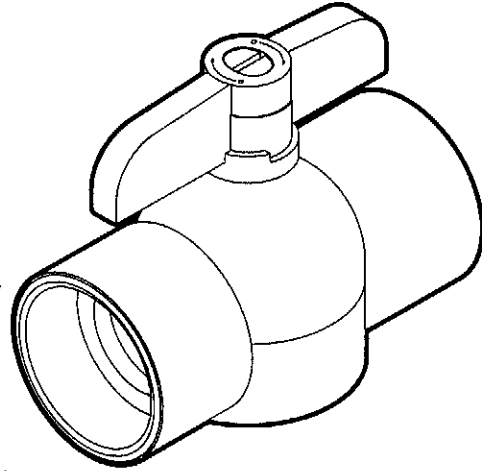
Toll Free: (800) 325-9468 Fax: (661) 257-4320

E-mail: valves@kbico.com Web: www.kbico.com

CPVC Economy Ball Valves

Features:

- EPDM stem seal.
- NSF listed & IAPMO (UPC) listed.
- Patented Cam-lok design #5,308,039.
- Full Port Design.
- Complies with all ASTM & ANSI standards.
- Pressure Rated to 100 psi @ 180°F Nominal operating pressure.
- Made with **PlatinumXCELL**® material.
- Complies with all Low-Lead plumbing laws.
- ASTM D2846 25-50 Flame & Smoke Rated (*water filled*).
- Code approved.
- Molded in the **USA** by KBI.



Model	Size	Case	L	D	H
CBV-0500-S	1/2"	36	2.3"	.85"	2.0"
CBV-0750-S	3/4"	24	3.1"	1.1"	2.4"
CBV-1000-S	1"	18	3.7"	1.7"	2.8"
CBV-1250-S	1 1/4"	6	5.0"	2.9"	4.2"
CBV-1500-S	1 1/2"	6	5.5"	3.0"	4.4"
CBV-2000-S	2"	4	6.8"	4.0"	5.2"

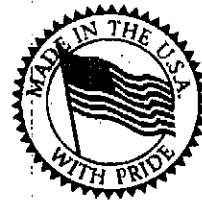
FEATURES COMMON TO KBI CPVC PLUMBING PRODUCTS

- NSF listed *
- IAPMO (UPC) listed *
- Molded in the USA by KBI
- Pressure rated to 100 psi @ 180°F
- Meets/Exceeds all ASTM Standards
- Made with PlatinumXCELL® CPVC
- Limited LIFETIME Warranty





**CPVC
CTS FITTINGS
& VALVES** ←
COPPER-TUBE SIZE



**TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS**

August 1, 2011

SUPERSEDES ALL PREVIOUS EDITIONS



Quality Systems No. 2
Corporate Fee
Assessed fee

Visit our web site

www.spearsmfg.com

2011

Additional Technical Publications

THERMOPLASTIC VALVES • PRODUCT GUIDE & ENGINEERING SPECIFICATIONS.....	V-4
PVC SCHEDULE 40 FITTINGS • WEIGHTS & DIMENSIONS.....	40-4
PVC SCHEDULE 80 FITTINGS • WEIGHTS & DIMENSIONS.....	80-4
THERMOPLASTIC FLANGES • TECHNICAL INFORMATION/WEIGHTS & DIMENSIONS.....	FL-4
PVC INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE • TECHNICAL INFORMATION/WEIGHTS & DIMENSIONS.....	INS-4
ACTUATED VALVES • PRODUCT GUIDE & ENGINEERING SPECIFICATIONS.....	AV-4
PVC MOLDED DWV FITTINGS • TECHNICAL INFORMATION.....	MDWV-4
CPVC LABWASTE™ FITTINGS • TECHNICAL INFORMATION & INSTALLATION GUIDE.....	LW-4
LXT® FITTINGS & VALVES • WEIGHTS & DIMENSIONS.....	LXT-4

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY**, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR TEFLON PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® BLUE 75™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVER TIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variations. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular application or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (578) 985-1263].

CTS CPVC PRODUCT LIMITED LIFETIME WARRANTY

Except as otherwise specified for certain products, mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

Upon receipt or discovery of any Products that appear questionable or defective each Buyer/End User shall promptly inspect and return any such Product to the Company at 15853 Olden Street, Sylmar, California 91342, accompanied by a letter stating the nature of any problems. If the Products are determined by Company to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective Products, or reimburse applicable Buyer/End User for the cost of such Products. The applicable Buyer/End User shall bear all applicable shipping costs. **THIS SHALL BE BUYERS/END USERS' SOLE REMEDY. EACH BUYER/END USER AGREES THAT COMPANY WILL NOT BE RESPONSIBLE FOR ANY OTHER OBLIGATIONS RELATING TO THE PRODUCTS, INCLUDING ANY OTHER MATERIALS OR LABOR COSTS, LOSS OF USE OR ANY OTHER ITEM OR FOR ANY DELAYS IN COMPLYING WITH THIS WARRANTY BEYOND COMPANY'S REASONABLE CONTROL.**

COMPANY SHALL NOT BE LIABLE FOR, DOES NOT ASSUME, AND EXPRESSLY DISCLAIMS, ANY LIABILITY, RESPONSIBILITY AND DAMAGES: DUE TO ANY BUYER/END USER'S FAILURE TO COMPLY WITH THIS WARRANTY, INCLUDING IMPROPER INSTALLATION, USE OR OPERATION; USE WITH PRODUCTS FROM OTHER MANUFACTURERS THAT DO NOT MEET ASTM OR OTHER APPLICABLE PRODUCT STANDARDS; IMPROPER CONTROL OF SYSTEM HYDRAULICS, IMPROPER WINTERIZATION PROCEDURES, IMPROPER VOLTAGE SUPPLY, CONTACT WITH INCOMPATIBLE MATERIALS OR CHEMICALS, EXCAVATION/DIGGING, EXCESSIVE WEIGHT, AND VANDALISM; DUE TO REASONABLE WEAR AND TEAR AND DUE TO ANY ACTS OF NATURE, INCLUDING LIGHTNING, EARTHQUAKES, GROUND MOVEMENT, FROST HEAVE, OR FLOODS.

COMPANY EXTENDS ONLY THIS WARRANTY AND EXPLICITLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER IMPLIED OR OTHERWISE EXPRESSED, WHETHER ORAL, STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTIES OR AFFIRMATIONS FOR SUITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AFFIRMATION BY COMPANY OR ANY OF ITS REPRESENTATIVES, BY WORDS, CONDUCT OR OTHERWISE, SHALL CONSTITUTE A WARRANTY. THIS WARRANTY MAY NOT BE TRANSFERRED, EXTENDED, ALTERED OR OTHERWISE MODIFIED IN ANY MANNER, EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY.

BY ITS ACCEPTANCE OF THE PRODUCTS, EACH BUYER/END USER EXPRESSLY WAIVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMPANY, INCLUDING LIABILITY PREDICATED UPON CONTRACT, TORT, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE GROUNDS, AND ALL, IF ANY, DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING ALL, IF ANY, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES. WITH RESPECT TO SUCH WAIVERS, EACH BUYER/END USER EXPLICITLY WAIVES CALIFORNIA CIVIL CODE §1542 WHICH STATES "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THIS RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY ADVERSELY AFFECTED HIS SETTLEMENT WITH DEBTOR" AND ALL OTHER SIMILAR STATUTORY, COMMON AND CASE LAW RIGHTS, DEFENSES AND LIMITATIONS.

Having previously independently inspected the Products, or a sample, as fully as desired, or having the opportunity to and having not done so, upon acceptance of delivery of the Products, and except as otherwise herein explicitly provided, each Buyer/End User by acceptance or use of the Products accepts them in their "AS IS" and "WITH ALL FAULTS" condition without any other warranty, expressed, implied or otherwise, and accepts and assumes the entire risk and cost of all servicing, remediation and consequences thereof. This Warranty shall be governed by California law and any unenforceable provisions severed without affecting the remaining provisions. As used herein, "including" includes "without limitation."

Application

Spears® Copper Tube Size (CTS) Pipe and Fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR 11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

Conformance Standards

Spears® CPVC CTS Pipe and Fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Working Pressure

Spears® CPVC CTS Pipe and Fittings have a continuous working pressure rating of 100 psi at 180° F (400 psi at 73° F).

Product Certification

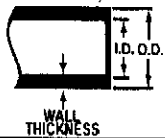
Spears® CPVC CTS Pipe, Fittings and Special Reinforced (SR) Threaded transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

All Spears® CPVC CTS Pipe and Fittings for CPVC Plastic Hot and Cold Water Distribution Systems in this manual are certified Lead-Free by NSF® International under NSF® Standard 61, Annex G. The annex certifies compliance to California California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193. Lead free is defined by these requirements as containing no more than a weighted average lead content of <=0.25%.

Testing

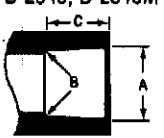
Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the effected product must be cut and discarded. A new section can be installed using couplings or other approved means.

CPVC 41, SDR 11 PIPE DIMENSIONS (CTS)
ASTM D 2846, D 2846M



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/2	0.625	± 0.003	0.068
3/4	0.875	± 0.003	0.080
1	1.125	± 0.003	0.102
1-1/4	1.375	± 0.003	0.125
1-1/2	1.625	± 0.004	0.148
2	2.125	± 0.004	0.193

CPVC 41, SDR 11 PIPE DIMENSIONS (CTS) ASTM
D 2846, D 2846M



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance In.	
1/2	0.633	0.619	± 0.003	0.500
3/4	0.884	0.870	± 0.003	0.700
1	1.135	1.121	± 0.003	0.900
1-1/4	1.386	1.372	± 0.003	1.100
1-1/2	1.640	1.622	± 0.004	1.300
2	2.141	2.123	± 0.004	1.700

Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch.

L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch.

COPPER TUBE SIZE (CTS) CPVC PIPE

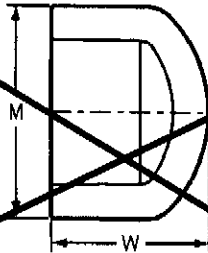
Nominal Pipe Size In.	AVG. O.D.	AVG. I.D.	MIN. Wall	MAX. W.P. P.S.L.*	LBS./FT.	Lgths./Carton
1/2	0.625	0.469	0.068	400	.090	50
3/4	0.875	0.695	0.080	400	.149	25
1	1.125	0.901	0.102	400	.240	15
1-1/4	1.375	1.105	0.125	400	.353	10
1-1/2	1.625	1.309	0.148	400	.489	6
2	2.125	1.716	0.193	400	.829	4

Standard Length - 10 Feet • All pipe is packed in boxes sold in carton quantities only.
Pipe has UL 94 V-O rating • For water, non shock, at 73.4° F with solvent welded joints.



CPVC CTS-FITTINGS & VALVES

CAP
Socket

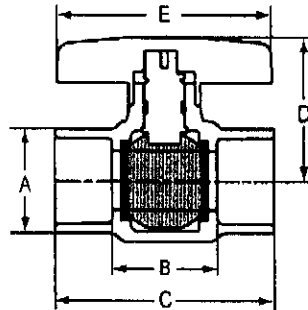


Part Number	Size	M	W	Approx. Wt. (Lbs.)
4147-005	1/2	27/32	25/32	.01
4147-007	3/4	1-1/16	1-3/32	.02
4147-010	1	1-3/8	1-9/32	.04
4147-012	1-1/4	1-21/32	1-19/32	.06
4147-015	1-1/2	1-31/32	1-29/32	.10
4147-020	2	2-9/16	2-13/32	.21

CTS BALL VALVES

w/EPDM O-ring Seals
Socket x Socket

100 psi Maximum
Internal Pressure @ 180° F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)	Cv Values
1922-005	1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
1922-007	3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1922-010	1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1922-012	1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1922-015	1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
1922-020	2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598