



# Spears® Engineering Sourcebook

**Your One-Stop Source For Plastic Fittings, Valves, Pipe & Cement**

## Welcome to...

**Spears® ENGINEERING SOURCEBOOK** for Plastic Fittings, Valves, Pipe & Cement - a listing of Technical Information for Spears® & Cement product for all your plastic piping needs.

**Cataloged Product Offering** can be found in supplemental Spears® **PRODUCT SOURCEBOOK**, publication SPS-1 or on Spears® website @ [www.spearsmfg.com](http://www.spearsmfg.com).

**Product Pricing** can be found in the supplemented **MANUFACTURER'S SUGGESTED RETAIL PRICE** Sheet publication, MSRP-1 or on Spears® on-line "Spears® current catalog price update daily" at [www.spearsmfg.com](http://www.spearsmfg.com).

## Product TAB Sections

Each TAB section groups common categories of products and accessories technical information. Periodic references are given for location of other related products for convenient use and versatility in finding the products you need. Take a few minutes to peruse the Table of Content for an overview of organization and content.

## TAB Locators

"**TAB Locator**" pages let you quickly thumb to each product technical information category by matching shaded tabs in the outer margin of each page.

## Part Number Index

**Spears® Part Number Index** allows quick page number location of Spears® standard catalogued parts. Simply look up known part number in the numerical index to find designated page on which the part can be found.

## Alphabetical Index

**Spears® Alphabetical Index** allows quick page number location within each TAB section by product type. Such as Caps, Couplings, Crosses, Female Adapters, etc.

## On-line Catalog Resources

Also see **Spears® On-line Catalog** for *Current Catalog Updated Daily* on the Spears® website. These can be accessed to verify pricing and check for any changes or adjustments that may occur between catalog publications. **Spears® On-line Catalog** can be downloaded to your personal computer for added convenience at [www.spearsmfg.com](http://www.spearsmfg.com)

### In-House Technical Service Department

Professional Problem Solving Assistance for Product Use and Application

### Product Seminars/Training/Certification

Conveniently Arranged for Distributors • Contractors • Engineers

### Specification Aids

Product Data Sheets • Engineering Specifications • Dimensional Data

### Piping System Layout Software

Autocad Program for System Layout and Product Selection

Visit our website at: [www.spearsmfg.com](http://www.spearsmfg.com)

All Products in this Catalog are Made by Spears® Manufacturing Company in the U.S.A.

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**See Spears® Regional Distribution Centers on back cover**



## Spears® Engineering Sourcebook

Spears® Engineering Sourcebook contains Weight & Dimensions, Technical Specifications, Installation Instructions and System Overview for a variety of Spears® products. Visit [Parts.Spearsmfg.com](http://Parts.Spearsmfg.com) Website for Weights & Dimensions updated daily. Contact Spears® for any information not found.

### Understanding Configuration Information

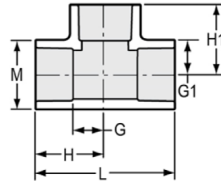
**Fitting Configuration Illustrations** are accompanied by the product's name and a configuration description of the fitting outlet connections. Illustrations are general representations of the fittings in the group, but may not be an exact depiction of all configurations listed. As with the nominal size designations, only one description is given when all outlets are the same. Reducing sizes list run configuration x branch configuration.



Product Name — Tee  
Configuration — Socket x Socket x Socket

#### Tee

Socket x Socket x Socket



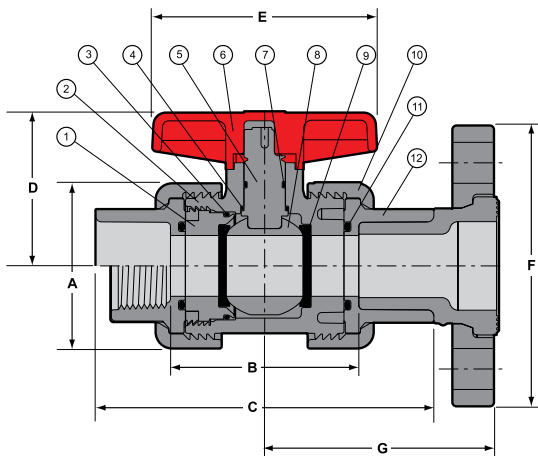
Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-007	3/4	9/16	9/16	1- 9/16	1- 9/16	3- 1/8	1- 5/16	.09
401-010	1	11/16	11/16	1- 3/4	1- 3/4	3- 1/2	1- 5/8	.15

#### Injection Molded Dimension References:

- G** = (LAYING LENGTH) Intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses;  $\pm 1/32$  inch.  
**H** = Intersection of center lines to face of fitting; 90° elbows tees, crosses;  $\pm 1/32$  inch.  
**J** = Intersection of center lines to bottom of socket/thread; 45° elbows;  $\pm 1/32$  inch

- L** = Overall length of fittings;  $\pm 1/16$  inch.  
**M** = Outside diameter of socket/thread hub;  $\pm 1/16$  inch.  
**N** = Socket bottom to socket bottom; couplings;  $\pm 1/16$  inch.  
**W** = Height of cap;  $\pm 1/16$  inch.

**Valve Configuration Illustrations** are accompanied by the product's size and a configuration description of the Valve outlet connections, approx weight, operational torque and Cv values. Note: Valve Illustrations depict all configurations.



### Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Body	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Stem Bearing <sup>1,2</sup>	1	PP
5	Stem	1	PVC/CPVC
6	Handle	1	PP
7	Stem O-ring	1	EPDM/FKM
8	Ball	1	PVC/CPVC
9	Seat	2	PTFE/HDPE
10	Union Nut	2	PVC/CPVC
11	End Connector O-ring	2	EPDM/FKM
12	End Connector	2	PVC/CPVC

1: O-Ring up to 2"

2: PTFE Thrust Bearing: 2-1/2", 3" & 4"

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

Nominal Size	A	B <sup>1</sup>		C			D	E	F	G	Approx. Wt. (Lbs.)		Oper. <sup>2</sup> Torque (in. lbs.)	Cv Values <sup>3</sup>	
		Soc/Thd	Spigot	Socket	Thread	Spigot					PVC	CPVC		Soc/Thd/Spig	Flanged
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	1-5/8	2-1/2	3-1/2	2-31/32	.33	.35	12	29	18
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2	3	3-7/8	3-5/16	.51	.54	20	63	39
1	2-5/8	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	2-5/16	3-3/8	4-1/4	3-5/8	.71	.75	25	120	73
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	2-13/16	3-9/16	4-5/8	3-31/32	1.12	1.17	35	243	151
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	3-1/16	3-7/8	5	4-3/8	1.47	1.53	45	357	223
2	4-1/4	4-3/4	5-13/16	7-3/4	6-3/4	8-1/4	3-3/4	5	6	5-1/4	2.62	2.75	94	599	395
2-1/2	6-3/16	7	7-13/16	10-1/2	8-1/2	11-3/8	5-7/8	7-5/8	7	6	7.42	7.70	120	856	579
3	6-3/16	7	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	120	1416	974
4	7-5/8	7-1/2	8-1/4	12-1/16	10-1/4	12-3/4	6-3/4	6-3/4	9-1/16	7-1/2	12.35	12.48	336	2865	1952