



Copper Tube Size (CTS) Valves



ENGINEERING GUIDE

Contact Spears® for any Information not found.

CTS Quarter-Turn Angle Supply Stop



Features — CPVC

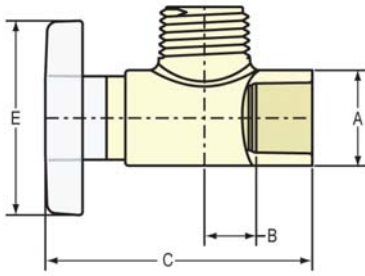
Used at plumbing fixtures to terminate and control hot and cold water, this all-plastic quarter-turn shutoff valve is specially designed for use with CTS (Copper Tube Size) CPVC Hot & Cold Water Distribution Systems. Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" NPT, 1/2" compression, 3/8" compression or 1/4" compression male thread outlet for connection to conventional NPT or compression flexible supply line inlet. (See Selection Chart Below.)

- Easy 1/4-Turn Shutoff
- All Plastic Corrosion Proof Construction
- CTS CPVC Tan Colored Body with High Impact Polypropylene Handle
- High Quality EPDM Seals
- NSF® Certified for potable water and lead-free.
- For use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F

Sample Engineering Specification

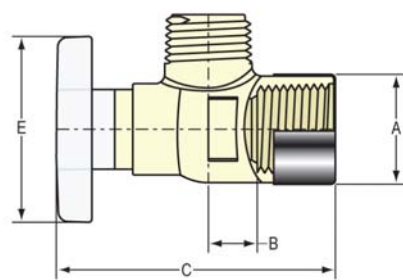
All thermoplastic Angle Supply Stops shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Polypropylene handle. All Angle Supply Stops shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Dimensions



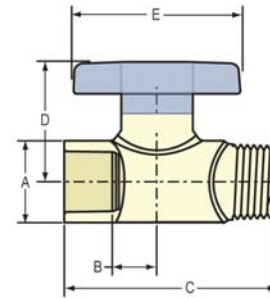
**1/4-Turn Angle Supply Stop
Socket x NPT/Compression**

Nominal Size	A	B	C	E
1/2	7/8	7/16	2-3/8	2
1/2 x 1/4	7/8	1/2	2-5/16	2
1/2 x 3/8	7/8	7/16	2-3/8	2-1/16



**1/4-Turn Angle Supply Stop
SR FiPT x NPT/Compression**

Nominal Size	A	B	C	E
1/2	1-1/32	7/16	2-5/8	2-1/16
1/2 x 3/8	1-1/32	7/16	2-5/8	2-1/16



**1/4-Turn Straight Supply Stop
Socket x NPT/Compression**

Nominal Size	A	B	C	D	E
1/2	7/8	1/2	1-5/32	1-1/4	2
1/2 x 3/8	7/8	1/2	1-1/16	1-1/4	2

Quick-View Valve Selection Chart

Valve Size	Angle Stop Socket x Comp. Thread	Angle Stop Socket x NPT	Angle Stop SR MiPT x Comp. Thread	Angle Stop SR MiPT x NPT	Straight Stop Socket x Comp. Thread	Straight Stop Socket x NPT
1/2 x 1/4	7722CM-072	--	--	--	--	--
1/2 x 3/8	7722-073	--	7721-073SR	--	7422CM-073	--
1/2 x 1/2	7722CM-005	7722-005	--	7721-005SR	7422CM-005	7422-005



Valves Technical CTS Commercial Ball Valves



Features — CPVC

A high quality, quarter-turn shutoff valve designed for line-stop use in Copper Tube Size (CTS) CPVC hot and cold water distribution systems as specified in ASTM D 2846. Approved by national, state and most municipal building codes for use in residential and commercial structures, as well as recreational vehicles, modular homes and mobile home applications. Check local codes for acceptability and restrictions. Available in CTS sizes 1/2" - 2" with socket end connectors.

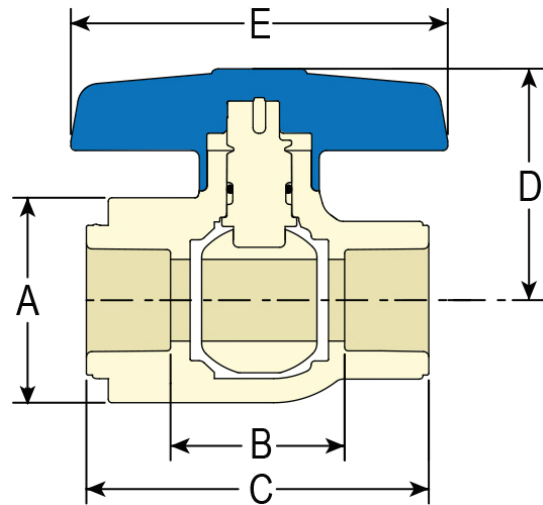
- Chemical & Corrosion Resistant CPVC Construction
- Maintenance-Free Sealed Unit
- CTS Full-Port Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Suitable for Commercial Hot Water Systems
- Sizes 1/2" - 2" Pressure Rated to 100 psi @ 180°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have double stop Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be manufactured to ASTM F 1970 and pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number Socket	Pressure Rating
1/2	EPDM	1922-005	100 psi Non-Shock Water @ 180°F
3/4	EPDM	1922-007	
1	EPDM	1922-010	
1-1/4	EPDM	1922-012	
1-1/2	EPDM	1922-015	
2	EPDM	1922-020	



Dimensions, Weights & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)	C _v ² Values
	A	B ¹	C	D	E		
1/2	1-7/16	1-3/16	2-5/8	1-11/16	2-3/4	.18	37
3/4	1-3/4	1-7/16	2-15/16	2	3-1/4	.26	84
1	2-1/16	1-9/16	3-3/8	2-3/8	3-1/2	.39	151
1-1/4	2-9/16	2	3-7/8	2-13/16	3-3/4	.66	229
1-1/2	2-15/16	2-7/16	4-11/16	3-1/8	4-1/4	.99	330
2	3-9/16	2-13/16	5-1/8	3-7/8	4-31/32	1.50	598

1: Valve Lay Length

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



Features — CPVC

A high quality, quarter-turn shutoff valve designed for line-stop use in Copper Tube Size (CTS) CPVC hot and cold water distribution systems as specified in ASTM D 2846. Approved by national, state and most municipal building codes for use in residential structures, as well as recreational vehicles, modular homes and mobile home applications. Check local codes for acceptability and restrictions. Available in CTS sizes 1/2" - 2" with socket end connectors.

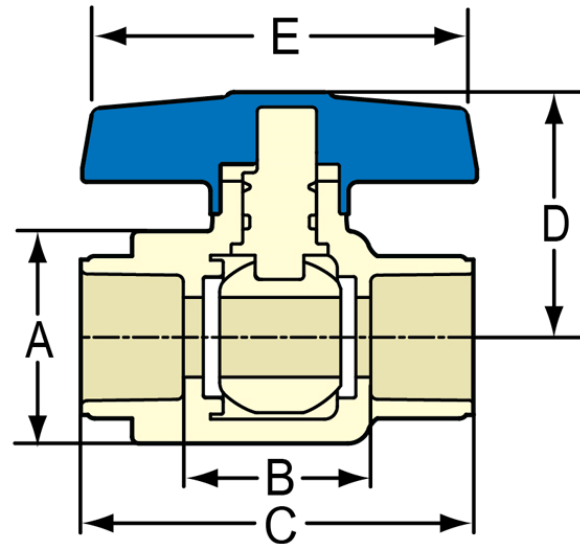
- Chemical & Corrosion Resistant CPVC Construction
- Maintenance-Free Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Sizes 1/2" - 2" Pressure Rated to 100 psi @ 180°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant

Sample Engineering Specification

All thermoplastic ball valves shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have double stop Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number Socket	Pressure Rating
1/2	EPDM	1922R-005	100 psi Non-Shock Water @ 180°F
3/4	EPDM	1922R-007	
1	EPDM	1922R-010	
1-1/4	EPDM	1922R-012	
1-1/2	EPDM	1922R-015	
2	EPDM	1922R-020	



Dimensions, Weights

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)
	A	B ¹	C	D	E	
1/2	1-1/8	1	2-1/32	1-9/32	2-1/32	.09
3/4	1-1/2	1-9/32	2-3/4	1-23/32	2-3/4	.16
1	1-25/32	1-9/16	3-3/8	2-5/16	3-1/2	.27
1-1/4	1-29/32	1-9/16	3-13/16	2-3/8	3-1/2	.47
1-1/2	2-7/16	1-15/16	4-9/16	2-13/16	3-25/32	.53
2	2-7/8	2-3/8	5-13/16	3-5/32	4-9/32	1.38

1: Valve Lay Length



Valves Technical CTS Stop Valves



Features — CPVC

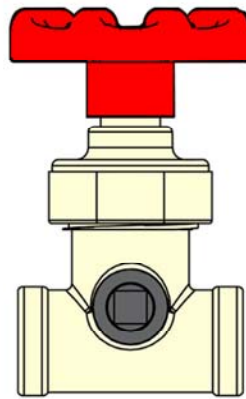
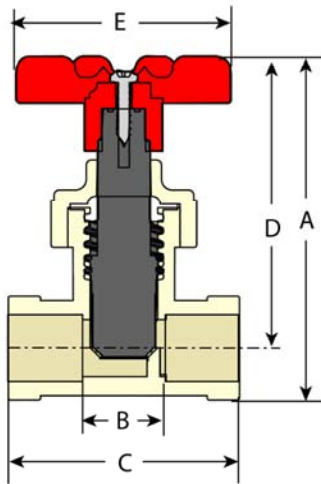
Used at plumbing fixtures to terminate and control hot and cold water, this all-plastic Stop Valves are specially designed for use with CTS (Copper Tube Size) CPVC Hot & Cold Water Distribution Systems. Available in 1/2" and 3/4" socket. (See Selection Chart Below.)

- All Plastic Corrosion Proof Construction
- CTS CPVC Tan Colored Body with High Impact Polypropylene Handle
- High Quality Santoprene™ Seals
- NSF® Certified for potable water and lead-free.
- For use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F

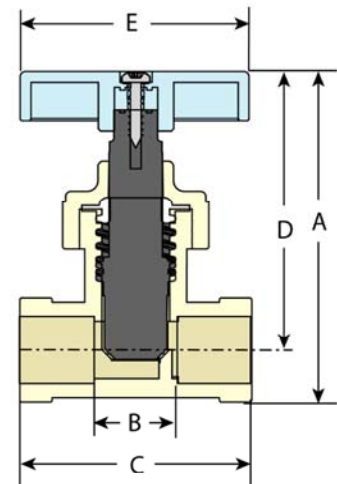
Sample Engineering Specification

All thermoplastic Stop Valves shall be Copper Tube Size (CTS) constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All Seals shall be Santoprene™. All valves shall have Polypropylene handle. All Stop Valves shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Dimensions



Stop Waste Valve



Stop Valve & Stop Waste Valve

Nominal Size	A	B	C	D	E	Approx. Wt. (Lbs.)
1/2	3-3/16	31/32	2-5/32	2-23/32	2	.19
3/4	3-11/32	31/32	2-1/2	2-23/32	2	.20

Stop Valve - Clear Handle

Nominal Size	A	B	C	D	E	Approx. Wt. (Lbs.)
1/2	2-27/32	3/4	2-5/32	2-3/8	2	.13
3/4	3	3/4	2-1/2	2-3/8	2	.15

Quick-View Valve Selection Chart

Valve Size	Stop Valve - Red Handle Socket x Socket	Stop & Waste Valve Socket x Socket	Stop Valve - Clear Handle Socket x Socket
1/2	8422-005	8422W-005	8422CH-005
3/4	8422-007	8422W-007	8422CH-007