

EverTUFF[®] TURF[™] FITTINGS



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



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EverTUFF® TURF™ FITTINGS



Spears® **EverTUFF® TURF™** Fittings are specifically engineered to meet the demanding system requirements of today's golf course and sports turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

Design Tested

EverTUFF® TURF™ Fittings have been computer engineered through Finite Element Analysis (FEA) studies for optimum material placement, strength and performance. Spears® Research & Development testing has shown the resulting design to best handle proper solvent cementing and correctly applied cyclic conditions of modern sports turf irrigation systems.

Full Class 315 Pressure Rating

Unlike the varying pressure ratings assigned to PVC Schedule piping, the **EverTUFF® TURF™** Class 315 designation maintains a uniform 315 psi pressure rating for all fittings sizes.

Full Selection of Basic Configurations

EverTUFF® TURF™ Fittings are produced in the basic configurations including Tees, Reducing Tees, 90° and 90° Sweep Elbows, 45° Elbows, Couplings, Reducer Bushings, Male Adapters and Special Reinforced (SR) Female Adapters – in sizes 1" through 4", plus Mechanical Clamp-on Transition Saddles sizes 4", 6" and 8".

Optional CPVC for Higher Temperatures

Where heat and excess temperature can be a major concern, **EverTUFF® TURF™** Fittings are available in higher temperature CPVC gray material.



EverTUFF® TURF™ FITTINGS

NSF® Certified

EverTUFF® TURF™ Fittings are NSF® Certified for use in potable water systems and are naturally lead-free.

The Performance Difference – Patented Design

Spears® EverTUFF® TURF™ Fittings form a class of their own by merging different design parameters for conventional fittings with special PVC material selection to collectively produce a unique, highly surge resistant line of fittings that has been awarded a U.S. Patent.

EverTUFF® TURF™ Proven 2X Stronger Than Competitor Special “surge” Fittings

Independent 3rd party high-stress failure testing was conducted by the Center for Irrigation Technology (CIT) at California State University, Fresno. **Identical test is designed to force fittings to failure demonstrated that Spears® EverTUFF® TURF™ Fittings are over 2X stronger than competitor’s special “surge” fittings.**

Product Test	Average Cycles To Failure
Competitor Special “surge” Tees	6,107.6
Spears® EverTUFF® TURF™ Tees	14,234.4

Performance that is a direct result of Spears® engineering and unparalleled processing capability!

Lifetime Warranty*

We are so confident in this fitting that it carries a Lifetime Warranty!

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	73°F (23°C)	90°F (32°C)	100°F (38°C)	110°F (43°C)	120°F (49°C)	130°F (54°C)	140°F (60°C)	150°F (66°C)	160°F (71°C)	170°F (77°C)	180°F (82°C)	200°F (99°C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

Maximum Service Temperature: PVC = 140°F; CPVC = 200°F

*See Spears® Limited Lifetime Warranty for additional warranty details.

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 variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications 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: (678) 985-1263].

General Information

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

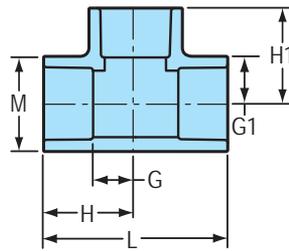
“Lead Free” low lead certification – unless otherwise specified, all Spears® EverTUFF® TURF fittings specified here-in are certified by NSF International to ANSI/ NSF® Standard 61, Annex G and is in compliance with California’s Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

EverTUFF® TURF™ FITTINGS



PVC & CPVC TEE

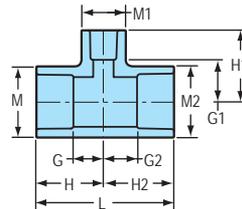
Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M
PVC	CPVC							
401-010T	401-010TC	1	13/16	13/16	1-31/32	1-31/32	3-15/16	1-11/16
401-012T	401-012TC	1-1/4	1	1	2-9/32	2-9/32	4-17/32	2-1/32
401-015T	401-015TC	1-1/2	1-1/8	1-1/8	2-17/32	2-17/32	5-1/32	2-9/32
401-020T	401-020TC	2	1-3/8	1-3/8	2-7/8	2-7/8	5-25/32	2-25/32
401-025T	401-025TC	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	3-3/8
401-030T	401-030TC	3	2-1/32	2-1/32	3-29/32	3-29/32	7-13/16	4-1/16
401-040T	401-040TC	4	2-19/32	2-19/32	4-7/8	4-7/8	9-25/32	5-7/32

PVC & CPVC REDUCING TEE

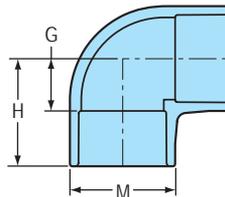
Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2
PVC	CPVC											
401-168T	401-168TC	1-1/4x1-1/4x1	13/16	1	13/16	2-3/32	2-5/32	2-3/32	4-5/32	2-1/32	1-11/16	2-1/32
401-212T	401-212TC	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-13/32	2-3/8	2-13/32	4-25/32	2-9/32	2-1/32	2-9/32
401-251T	401-251TC	2x2x1-1/2	1-3/8	1-3/8	1-3/8	2-21/32	2-3/4	2-21/32	5-5/16	2-25/32	2-5/16	2-25/32
401-292T	401-292TC	2-1/2x2-1/2x2	1-3/8	1-11/16	1-3/8	3-1/8	3-3/16	3-1/8	6-9/32	3-11/32	2-25/32	3-13/32
401-338T	401-338TC	3x3x2	1-3/8	2-1/32	1-3/8	3-1/4	3-17/32	3-1/4	6-17/32	4-1/16	2-25/32	4-1/16
401-422T	401-422TC	4x4x3	2-1/32	2-19/32	2-1/32	4-9/32	4-15/32	4-9/32	8-9/16	5-7/32	4-3/32	5-7/32

PVC & CPVC 90° ELBOW

Socket x Socket



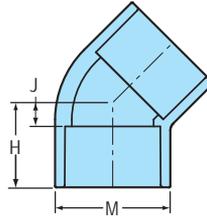
Part Number		Size	G	H	M
PVC	CPVC				
406-010T	406-010TC	1	29/32	2-1/32	1-21/32
406-012T	406-012TC	1-1/4	1-1/32	2-9/32	2-1/32
406-015T	406-015TC	1-1/2	1-5/32	2-17/32	2-9/32
406-020T	406-020TC	2	1-3/8	2-7/8	2-25/32
406-025T	406-025TC	2-1/2	1-23/32	3-15/32	3-3/8
406-030T	406-030TC	3	2	3-7/8	4-1/16
406-040T	406-040TC	4	2-11/16	4-15/16	5-7/32



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PVC & CPVC 45° ELBOW

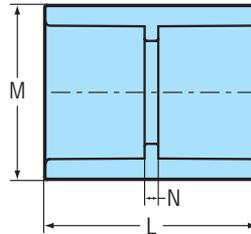
Socket x Socket



Part Number		Size	H	J	M
PVC	CPVC				
417-010T	417-010TC	1	1-5/8	15/32	1-11/16
417-012T	417-012TC	1-1/4	1-13/16	9/16	2-1/32
417-015T	417-015TC	1-1/2	1-31/32	19/32	2-9/32
417-020T	417-020TC	2	2-7/32	23/32	2-25/32
417-025T	417-025TC	2-1/2	2-5/8	7/8	3-3/8
417-030T	417-030TC	3	2-7/8	1	4-1/16
417-040T	417-040TC	4	3-9/16	1-5/16	5-7/32

PVC & CPVC COUPLING

Socket x Socket



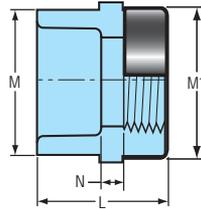
Part Number		Size	L	M	N
PVC	CPVC				
429-010T	429-010TC	1	2-11/32	1-21/32	3/32
429-012T	429-012TC	1-1/4	2-19/32	2-1/32	3/32
429-015T	429-015TC	1-1/2	2-7/8	2-9/32	3/32
429-020T	429-020TC	2	3-1/8	2-25/32	3/32
429-025T	429-025TC	2-1/2	3-11/16	3-3/8	3/16
429-030T	429-030TC	3	3-31/32	4-1/16	3/16
429-040T	429-040TC	4	4-25/32	5-1/4	1/4

EverTUFF® TURF™ FITTINGS



PVC & CPVC SPECIAL REINFORCED FEMALE ADAPTER

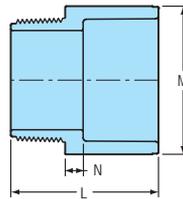
Socket x SR Fipt



Part Number		Size	L	M	M1	N
PVC	CPVC					
435-010SRT	435-010SRTC	1	2-5/32	1-3/16	1-25/32	3/32
435-012SRT	435-012SRTC	1-1/4	2-5/16	2-3/32	2-1/16	3/32
435-015SRT	435-015SRTC	1-1/2	2-7/16	2-13/32	2-7/16	3/16
435-020SRT	435-020SRTC	2	2-11/16	3	3-1/32	9/32
435-025SRT	435-025SRTC	2-1/2	3-9/32	3-9/16	3-19/32	7/32
435-030SRT	435-030SRTC	3	3-1/2	4-1/4	4-9/32	3/16
435-040SRT	435-040SRTC	4	3-31/32	5-7/32	5-7/32	7/32

PVC & CPVC MALE ADAPTER

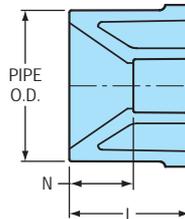
Mipt x Socket



Part Number		Size	L	M	N
PVC	CPVC				
436-010T	436-010TC	1	1-1/8	1-11/16	7/32
436-012T	436-012TC	1-1/4	2-1/2	2-1/16	7/32
436-015T	436-015TC	1-1/2	2-5/8	2-5/16	7/32
436-020T	436-020TC	2	2-25/32	2-25/32	7/32
436-025T	436-025TC	2-1/2	3-19/32	3-3/8	9/32
436-030T	436-030TC	3	3-13/16	4-3/32	5/32
436-040T	436-040TC	4	4-13/32	5-1/4	13/32

PVC & CPVC REDUCER BUSHING (Flush Style)

Spigot x Socket



Part Number		Size	L	N
PVC	CPVC			
437-292	437-292C	2-1/2x2	2-1/16	17/32
437-338	437-338C	3x2	2-7/32	9/16
437-422	437-422C	4x3	2-19/32	11/16