



PVC & PP
INSERT FITTINGS
FOR USE WITH POLYETHYLENE PIPE



TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

February 1, 2010
SUPERSEDES ALL PREVIOUS EDITIONS



Quality Systems Certificate No. 293
Corporate Facilities, Sylmar, CA
Assessed to ISO 9001: 2008

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INS-4-0210

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CPVC CTS FITTINGS & VALVES • WEIGHTS & DIMENSIONS	CTS-4
PVC MOLDED DWV FITTINGS • TECHNICAL INFORMATION	MDWV-4
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Spears® Quality Policy

It is the policy and objective of Spears® Manufacturing Company to produce a superior quality product suitable for its intended use, with regard to functionality, structural integrity and conformance to established industry standards and practices. It is the commitment of this Company to do so in a manner which provides consistency of product quality, optimum availability, and superior customer service, while maintaining efficiency of operations and profitability necessary to perpetuate product improvement and customer satisfaction. Furthermore, it is recognized that the attainment of these objectives is the responsibility of all Company operations and personnel according to their respective functions.

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: (717) 938-9006].

Installation 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.**

NOT FOR USE WITH COMPRESSED AIR OR GAS

WARNING: DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY.

Application

Insert Fittings are manufactured to ASTM D 2609 and are designed for use with polyethylene pipe produced to ASTM D 2104 and D 2239.

Insert Fitting configurations with nominal 3/8" spiral barbed inserts are specially designed for use with 1/2" (.490) I.D. flexible poly irrigation pipe.

Conformance Standards

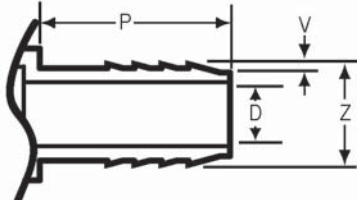
ASTM D 2609, Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Pipe.

Product Certifications

Tested and Certified by the National Sanitation Foundation (NSF International) to ASTM D 2609 and for use with potable water.



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



Dimensions of Insert Ends ASTM D 2609

Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z"		Barb Depth "V" min.	Inside Diameter "D" min.
		max.	min.		
1/2	1-1/4	.665	.635	.015	.406
3/4	1-1/4	.865	.835	.015	.562
1	1-1/4	1.095	1.065	.020	.750
1-1/4	1-1/4	1.425	1.395	.025	.995
1-1/2	1-1/2	1.665	1.630	.030	1.125
2	1-1/2	2.125	2.085	.030	1.656
2-1/2	2	2.520	2.487	.030	2.062
3	2-1/8	3.125	3.086	.030	2.600
4	3	4.090	4.044	.030	3.525

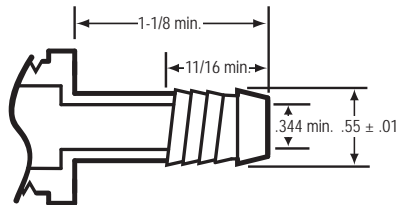
Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+ .010 - .010
3/4	.824	+ .010 - .015
1	1.049	+ .010 - .020
1-1/4	1.380	+ .010 - .020
1-1/2	1.610	+ .015 - .020
2	2.067	+ .015 - .020
2-1/2	2.469	+ .015 - .025
3	3.068	+ .015 - .030
4	4.026	+ .015 - .035

Insert Fittings Dimensions

- G = (LAYING LENGTH) Intersection of center lines to insert bottom or thread bottom; 90° elbows, tees & crosses; ± 1/32 inch.
- H = Intersection of center lines to end of insert or face of fitting; 90° elbows, tees & crosses; ± 1/32 inch.
- L = Overall length of fittings; ± 1/16 inch.
- N = (LAYING LENGTH) Insert bottom to insert bottom or thread bottom; couplings & straight adapters; ± 1/16 inch.

Dimensions of Spiral Barb Ends



STANDARDS & SPECIFICATIONS

• **ASTM D 2609** Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.



National Sanitation Foundation (NSF) Standard 14 Plastic Fittings for Potable Water.

• **Material** Spears® Insert Fittings are produced from PVC Type 1, Cell Classification 12454.

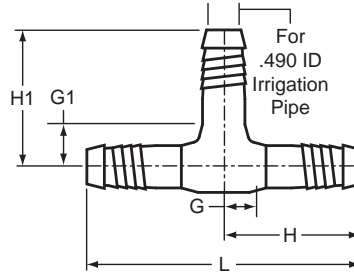
It is the users responsibility to determine the suitability for the intended service application.

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC SPIRAL BARB TEE

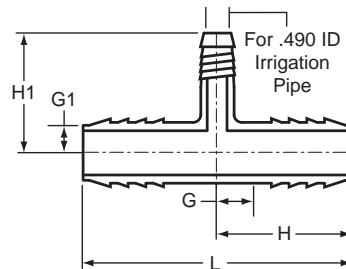
3/8" Spiral Barb x 3/8" Spiral Barb x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-003	3/8	9/16	19/32	1-25/32	1-13/16	3-9/16	.04

PVC SPIRAL BARB TEE

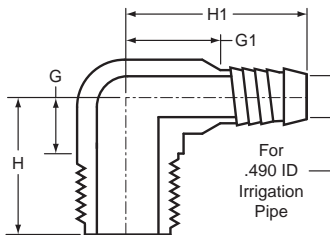
Insert x Insert x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-099	3/4x3/8	17/32	9/16	2-1/32	1-27/32	4-1/32	.05
1401-129	1x3/8	11/16	7/16	2-3/16	1-31/32	4-1/8	.08

PP SPIRAL BARB 90° ELBOW

Mipt x 3/8" Spiral Barb



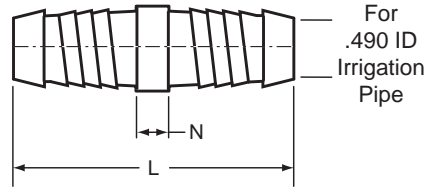
Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-073	1/2x3/8	7/16	5/8	1-1/8	1-13/16	.02
1413-099	3/4x3/8	1/2	3/4	1-3/16	1-29/32	.03



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC SPIRAL BARB COUPLING

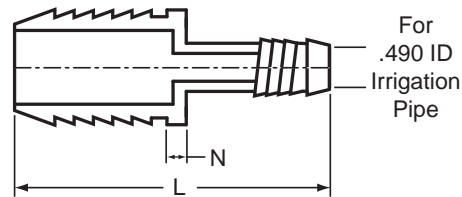
Spiral Barb x Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-003	3/8	2-7/8	5/16	.02

PVC SPIRAL BARB COUPLING

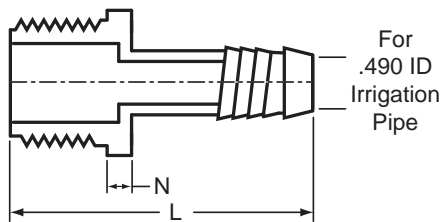
Insert x 3/8" Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-099	3/4x3/8	3	1/16	.02
1429-129	1x3/8	3-3/32	3/16	.04

PP SPIRAL BARB MALE ADAPTER

Mipt x 3/8" Spiral Barb



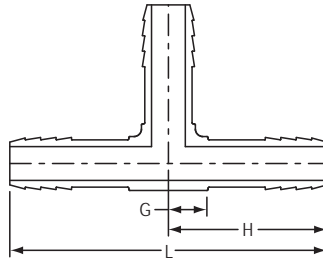
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-073	1/2x3/8	2-11/32	1/4	.02
1436-099	3/4x3/8	2-11/32	1/4	.02

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC TEE

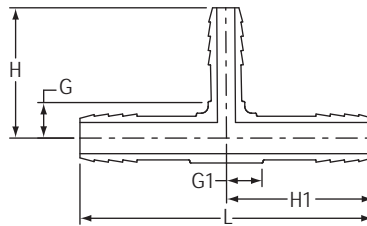
Insert x Insert x Insert



Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1401-005	1/2	7/16	1-15/16	3-13/16	.05
1401-007	3/4	17/32	2-1/32	4-1/16	.06
1401-010	1	11/16	2-3/16	4-13/32	.10
1401-012	1-1/4	31/32	2-15/32	4-15/16	.16
1401-015	1-1/2	1	2-3/4	5-1/2	.22
1401-020	2	1-9/32	3-11/32	6-11/16	.43

PVC REDUCING TEE

Insert x Insert x Insert



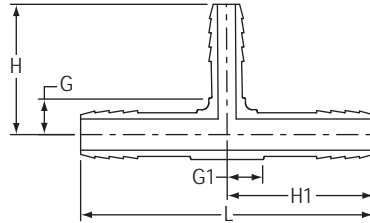
Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-074	1/2x1/2x3/4	21/32	9/16	2-5/32	2-1/16	4-5/16	.05
1401-094	3/4x1/2x1/2	9/16	9/16	2-1/16	2-1/16	4-7/16	.06
1401-101	3/4x3/4x1/2	9/16	9/16	2-1/16	2-1/16	4-1/8	.06
1401-102	3/4x3/4x1	13/16	3/4	2-5/16	2-1/4	4-1/2	.08
1401-124	1x3/4x1/2	9/16	9/16	2-1/16	2-1/16	4-5/32	.07
1401-125	1x3/4x3/4	21/32	9/16	2-1/8	2-1/32	4-3/32	.07
1401-130	1x1x1/2	9/16	7/8	2-1/8	2	4-3/8	.08
1401-131	1x1x3/4	21/32	21/32	2-5/32	2-5/32	4-5/16	.09
1401-132	1x1x1-1/4	21/32	13/16	2-5/16	2-5/16	4-21/32	.12
1401-156	1-1/4x1x1/2	9/16	21/32	2-1/16	2-5/32	4-7/16	.10
1401-157	1-1/4x1x3/4	21/32	21/32	2-5/32	2-5/32	4-3/8	.11
1401-158	1-1/4x1x1	3/4	23/32	2-1/4	2-7/32	4-1/2	.14
1401-166	1-1/4x1-1/4x1/2	9/16	23/32	2-1/16	2-7/32	4-1/8	.09
1401-167	1-1/4x1-1/4x3/4	27/32	29/32	2-11/32	2-13/32	4-11/16	.13
1401-168	1-1/4x1-1/4x1	13/16	11/16	2-5/16	2-3/16	4-5/8	.14
1401-201	1-1/2x1-1/4x3/4	21/32	1-1/16	2-13/32	2-9/16	4-9/16	.15



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC REDUCING TEE (continued)

Insert x Insert x Insert

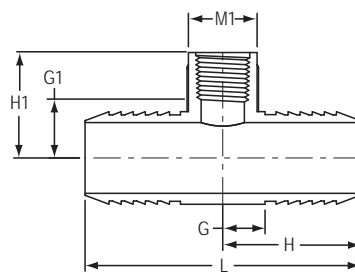


Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-202	1-1/2x1-1/4x1	3/4	1-3/32	2-1/2	2-19/32	4-3/4	.16
1401-203	1-1/2x1-1/4x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-1/8	.18
1401-209	1-1/2x1-1/2x1/2	11/16	9/16	2-5/16	2-5/16	4-5/8	.14
1401-210	1-1/2x1-1/2x3/4	21/32	1-1/16	2-13/32	2-9/16	4-13/16	.17
1401-211	1-1/2x1-1/2x1	3/4	1-1/16	2-1/2	2-9/16	5	.17
1401-212	1-1/2x1-1/2x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-3/8	.20
1401-241	2x1-1/2x1-1/2	1-1/16	1-1/2	2-13/16	3	5-5/8	.27
1401-247	2x2x1/2	1/2	1-5/16	2-1/4	2-7/8	4-9/16	.20
1401-248	2x2x3/4	21/32	1-11/32	2-13/32	2-25/32	4-25/32	.21
1401-249	2x2x1	3/4	1-9/32	2-1/2	2-25/32	5	.22
1401-250	2x2x1-1/4	15/16	1-9/32	2-11/16	2-25/32	5-3/8	.25
1401-251	2x2x1-1/2	1-1/16	13/16	2-13/16	3	5-5/8	.28
1401-338*	3x3x2	3-5/8	3-3/4	5-3/8	6-1/32	12-1/16	2.44

*Assembled

PVC TEE

Insert x Insert x Fipt



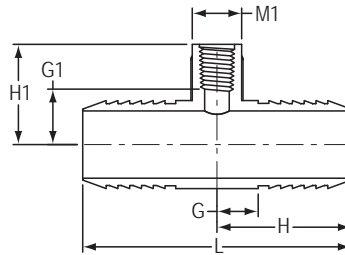
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-005	1/2	17/32	5/8	2-1/32	1-1/32	4-1/16	1	.05
1402-007	3/4	21/32	13/32	2-5/32	1-1/8	4-5/16	1-1/4	.07
1402-010	1	13/16	17/32	2-9/32	1-7/16	4-19/32	1-1/2	.12
1402-012	1-1/4	1-1/8	11/16	2-5/8	1-11/16	5-1/4	2	.21
1402-015	1-1/2	1-1/4	27/32	3	1-27/32	6	2-1/4	.28
1402-020	2	1-3/8	1-1/16	3-1/8	2-1/8	6-1/4	2-3/4	.42

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC REDUCING TEE

Insert x Insert x Fipt



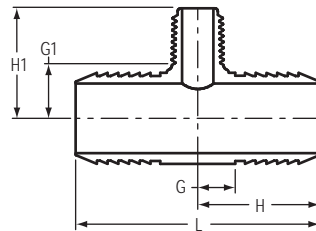
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-094	3/4x1/2x1/2	5/8	13/32	2-1/8	1-5/32	4-5/16	1-3/32	.07
1402-101	3/4x3/4x1/2	3/4	7/16	2-3/16	1-1/4	4-1/8	1-1/16	.06
1402-124	1x3/4x1/2	23/32	17/32	2-7/32	1-9/32	4-7/16	1-3/32	.10
1402-125	1x3/4x3/4	27/32	15/32	2-11/32	1-9/32	4-11/16	1-5/16	.12
1402-130	1x1x1/2	17/32	1/2	2-1/32	1-7/32	4-1/16	1	.08
1402-131	1x1x3/4	21/32	1/2	2-5/32	1-7/32	4-9/32	1-7/32	.09
1402-156	1-1/4x1x1/2	11/16	11/16	2-3/16	1-7/16	4-3/8	1-1/16	.14
1402-157	1-1/4x1x3/4	25/32	21/32	2-9/32	1-15/32	4-17/32	1-5/16	.16
1402-166	1-1/4x1-1/4x1/2	21/32	21/32	2-5/32	1-7/16	4-5/16	1-1/8	.14
1402-167	1-1/4x1-1/4x3/4	21/32	19/32	2-5/32	1-13/32	4-9/16	1-5/16	.15
1402-168	1-1/4x1-1/4x1	15/16	21/32	2-7/16	1-11/16	4-7/8	1-5/8	.18
1402-199	1-1/2x1-1/4x1/2	21/32	3/4	2-9/32	1-1/2	4-9/16	1-3/16	.17
1402-201	1-1/2x1-1/4x3/4	13/16	11/16	2-9/16	1-1/2	4-13/16	1-5/16	.19
1402-202	1-1/2x1-1/4x1	1	25/32	2-3/4	1-25/32	5-3/32	1-5/8	.22
1402-209	1-1/2x1-1/2x1/2	13/16	1-5/16	2-7/16	1-9/16	4-13/16	1-1/16	.17
1402-210	1-1/2x1-1/2x3/4	1-3/32	13/16	2-9/16	1-19/32	5-1/8	1-5/16	.19
1402-211	1-1/2x1-1/2x1	15/16	25/32	2-11/16	1-3/4	5-3/8	1-21/32	.22
1402-212	1-1/2x1-1/2x1-1/4	29/32	5/8	2-21/32	1-5/8	5-23/32	2	.26
1402-247	2x2x1/2	13/16	1-3/16	2-5/16	2-1/16	4-7/8	1-1/16	.24
1402-248	2x2x3/4	11/16	1	2-7/16	1-7/8	5-1/16	1-5/16	.26
1402-249	2x2x1	15/16	1-1/16	2-11/16	2-1/16	5-3/8	1-23/32	.30
1402-251	2x2x1-1/2	1-1/4	31/32	3	2	6	2-1/4	.38



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC TEE

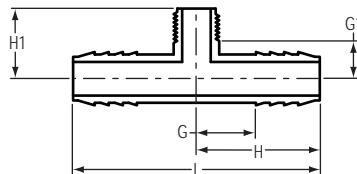
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-005	1/2	9/16	21/32	2-1/16	1-9/32	4-1/8	.04
1403-007	3/4	5/8	25/32	2-1/8	1-7/16	4-1/4	.06
1403-010	1	3/4	7/8	2-1/4	1-7/8	4-3/8	.10
1403-012	1-1/4	15/16	1-1/16	2-7/16	2-1/16	4-7/8	.17
1403-015	1-1/2	1	1-3/16	2-13/16	2-3/16	5-5/8	.22
1403-020	2	1-5/16	1-7/16	3-1/16	2-15/32	6-3/32	.32

PVC REDUCING TEE

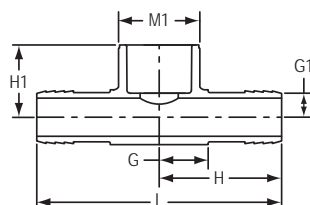
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-130	1x1x1/2	11/16	23/32	2-3/16	1-3/8	4-3/8	.08
1403-131	1x1x3/4	11/16	11/16	2-3/16	1-13/32	4-3/8	.09

PVC TEE

Insert x Insert x Socket



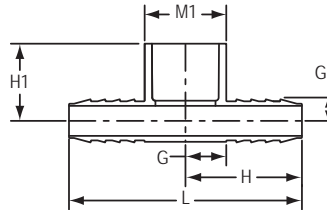
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-010	1	1	15/32	2-1/2	1-15/32	5	1-5/8	.15

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC REDUCING TEE

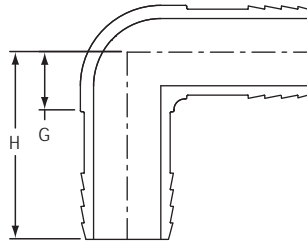
Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-102	3/4x3/4x1	27/32	11/32	2-11/32	1-15/32	4-21/32	1-5/8	.09

PVC 90° ELBOW

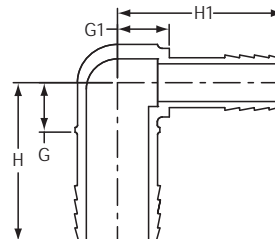
Insert x Insert



Part Number	Size	G	H	Approx. Wt. (Lbs.)
1406-005	1/2	7/16	1-15/16	.03
1406-007	3/4	17/32	2-1/32	.04
1406-010	1	11/16	2-3/16	.07
1406-012	1-1/4	7/8	2-7/16	.12
1406-015	1-1/2	1	2-3/4	.17
1406-020	2	1-11/32	3-19/32	.36
1406-025	2-1/2	1-9/16	3-3/4	.43

PVC 90° REDUCING ELBOW

Insert x Insert



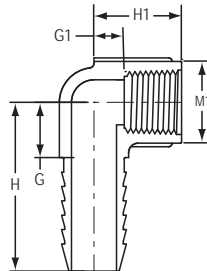
Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1406-101	3/4x1/2	21/32	9/16	2-5/32	2-1/16	.04
1406-131	1x3/4	3/4	5/8	2-1/4	2-1/8	.06
1406-168	1-1/4x1	23/32	21/32	2-1/4	2-1/4	.10
1406-212	1-1/2x1-1/4	15/16	3/4	2-11/16	2-9/32	.14
1406-251	2x1-1/2	1-1/4	31/32	3	2-23/32	.22



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC 90° ELBOW

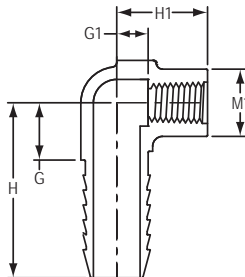
Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-005	1/2	11/16	5/16	2-1/8	1	1-1/16	.04
1407-007	3/4	27/32	13/32	2-1/4	1-3/32	1-9/32	.06
1407-010	1	15/16	3/8	2-3/8	1-3/8	1-19/32	.11
1407-012	1-1/4	1-3/32	3/4	2-19/32	1-3/4	2	.18
1407-015	1-1/2	1-1/4	7/8	3	1-7/8	2-1/4	.24
1407-020	2	1-15/32	1-1/16	3-7/32	2-1/8	2-27/32	.35

PVC 90° REDUCING ELBOW

Insert x Fipt



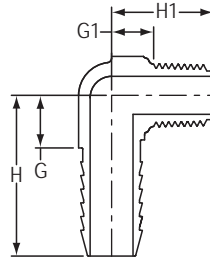
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-074	1/2x3/4	13/16	3/8	2-5/16	1-1/8	1-11/32	.06
1407-101	3/4x1/2	23/32	15/32	2-7/32	1-5/32	1-3/32	.06
1407-130	1x1/2	11/16	17/32	2-3/16	1-1/4	1-1/8	.07
1407-131	1x3/4	27/32	9/16	2-11/32	1-5/16	1-5/16	.09
1407-166	1-1/4x1/2	21/32	3/4	2-5/32	1-3/8	1-3/32	.10
1407-167	1-1/4x3/4	25/32	3/4	2-9/32	1-1/2	1-5/16	.11
1407-168	1-1/4x1	15/16	11/16	2-7/16	1-21/32	1-11/16	.14
1407-211	1-1/2x1	15/16	3/4	2-11/16	1-3/4	1-5/8	.18
1407-212	1-1/2x1-1/4	1-1/8	13/16	2-7/8	1-13/16	2	.20
1407-251	2x1-1/2	1-7/32	1-3/32	2-31/32	2-3/32	2-1/4	.28

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC 90° ELBOW

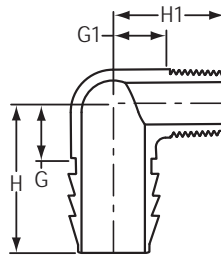
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-005	1/2	1/2	5/8	2	1-1/4	.03
1413-007	3/4	1/2	11/16	2	1-5/16	.05
1413-010	1	21/32	27/32	2-5/32	1-19/32	.07
1413-012	1-1/4	3/4	1	2-1/4	1-7/8	.12
1413-015	1-1/2	1-1/16	1-1/16	2-13/16	2-3/16	.17
1413-020	2	1-1/4	1-3/8	3	2-7/16	.24

PVC 90° REDUCING ELBOW

Insert x Mipt



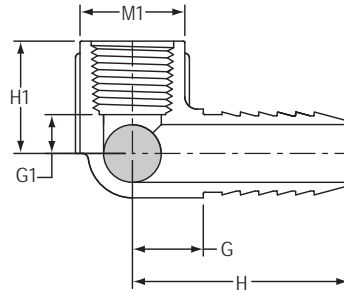
Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-055	3/8x3/4	7/16	3/4	1-1/4	1-1/2	.03
1413-101	3/4x1/2	1/2	1/2	2-1/16	1-7/32	.04
1413-130	1x1/2	23/32	3/4	2-3/16	1-11/32	.06
1413-131	1x3/4	11/16	23/32	2-5/32	1-13/32	.06



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC SIDE OUTLET ELBOW

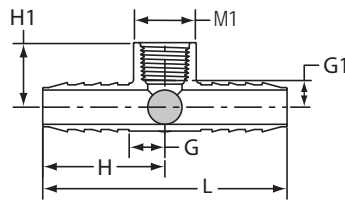
Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1414-101	3/4x3/4x1/2	5/8	13/32	2-1/8	1-1/8	1-3/32	.07
1414-130	1x1x1/2	11/16	9/16	2-3/16	1-1/4	1-5/16	.10
1414-131	1x3/4	15/16	15/32	2-9/32	1-3/16	1-5/16	.11

PVC SIDE OUTLET TEE

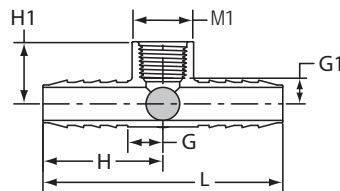
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-007	3/4x3/4	23/32	27/32	2-7/32	1-1/8	4-7/16	1-3/32	.08

PVC REDUCING SIDE OUTLET TEE

Insert x Insert x Insert x Fipt



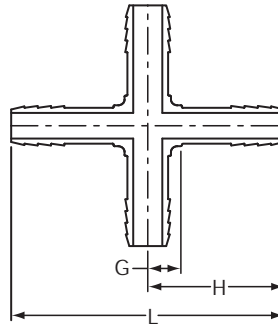
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-101	3/4x1/2	5/8	23/32	2-1/8	2-7/32	4-1/4	1-3/32	.08
1416-130	1x1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-5/16	.11
1416-131	1x3/4	23/32	27/32	2-7/32	2-11/32	4-7/16	1-5/16	.12

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC CROSS

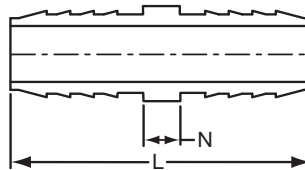
Insert



Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1420-005	1/2	13/32	1-29/32	3-13/16	.05
1420-007	3/4	1/2	2-7/16	4-27/32	.09
1420-010	1	11/16	2-1/2	5	.15

PVC COUPLING

Insert x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-005	1/2	3-1/8	1/8	.02
1429-007	3/4	3-1/8	1/4	.03
1429-010	1	3-3/16	3/16	.05
1429-012	1-1/4	3-3/16	3/16	.08
1429-015	1-1/2	3-19/32	3/32	.11
1429-020	2	3-17/32	1/16	.13
1429-025	2-1/2	4-19/32	7/32	.23
1429-030	3	4-13/16	5/16	.34
1429-040	4	6-7/16	3/16	.62
1429-060	6	7-27/32	13/32	1.65
1429-080*	8	9-7/8	3/16	3.55

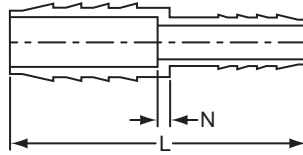
*Fabricated



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC REDUCER COUPLING

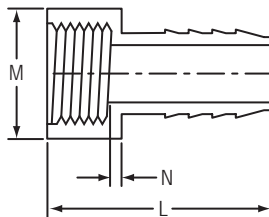
Insert x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-101	3/4x1/2	3-1/8	1/8	.03
1429-130	1x1/2	3-1/8	1/8	.04
1429-131	1x3/4	3-3/16	3/16	.04
1429-1315	1x7/8	3-1/4	1/4	.05
1429-167	1-1/4x3/4	3-1/8	1/8	.06
1429-168	1-1/4x1	3-1/16	1/16	.06
1429-210	1-1/2x3/4	3-3/8	1/8	.09
1429-211	1-1/2x1	3-3/8	1/8	.09
1429-212	1-1/2x1-1/4	3-3/8	1/8	.09
1429-249	2x1	3-3/8	1/8	.12
1429-250	2x1-1/4	3-3/8	1/8	.13
1429-251	2x1-1/2	3-5/8	1/8	.14
1429-291	2-1/2x1-1/2	4	1/8	.17
1429-422	4x3	5-9/16	5/16	.50
1429-532	6x4	8-15/32	2-3/16	1.52

PVC FEMALE ADAPTER

Fipt x Insert



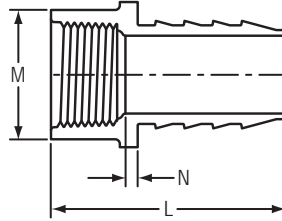
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-005	1/2	2-3/8	1-3/32	1/8	.03
1435-007	3/4	2-7/16	1-13/32	1/4	.05
1435-010	1	2-21/32	1-5/8	7/32	.08
1435-012	1-1/4	2-11/16	2	3/16	.11
1435-015	1-1/2	3-3/32	2-1/4	7/32	.15
1435-020	2	3	2-23/32	1/4	.19

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC REDUCING FEMALE ADAPTER

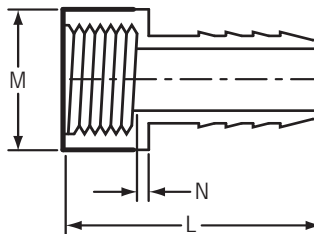
Fipt x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-102	3/4x1	2-3/8	1-5/16	5/32	.05

PVC SPECIAL REINFORCED FEMALE ADAPTER

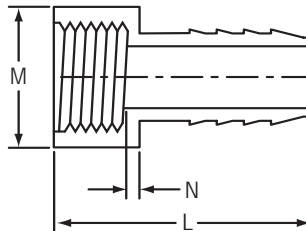
SR Fipt x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-005SR	1/2	2-7/16	1-3/32	9/32	.03
1435-007SR	3/4	2-7/16	1-13/32	1/4	.05
1435-010SR	1	2-5/8	1-23/32	1/4	.08

PVC FEMALE HOSE ADAPTER

Female Hose Thread x Insert



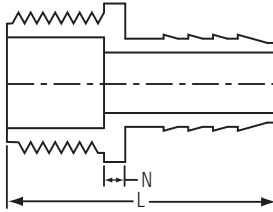
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-007FHT	3/4	2-7/16	1-13/32	7/16	.05



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC & CPVC MALE ADAPTER

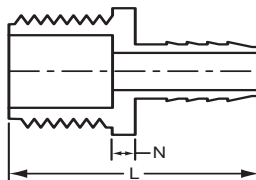
Mipt x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)	
1436-005	1/2	2-13/16	1/4	.02	.03
1436-007	3/4	2-1/2	1/4	.04	.05
1436-010	1	2-5/8	1/4	.06	.07
1436-012	1-1/4	2-9/16	3/16	.04	.06
1436-015	1-1/2	3-1/16	11/32	.13	.14
1436-020	2	2-13/16	1/8	.16	.18
1436-025	2-1/2	4-3/16	7/16	.33	---
1436-030	3	4-9/32	13/32	.47	.48
1436-040	4	5-1/4	3/8	.76	.84

PVC REDUCING MALE ADAPTER

Mipt x Insert



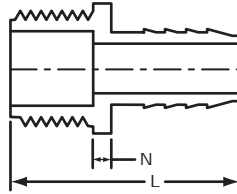
Part Number	Size	L	N	Approx. Wt. (Lbs.)	
1436-074	1/2x3/4	2-5/16	1/8	.03	
1436-075	1/2x1	2-5/8	7/16	.05	
1436-101	3/4x1/2	2-5/16	3/16	.04	
1436-102	3/4x1	2-9/16	1/4	.04	
1436-131	1x3/4	2-9/16	3/16	.06	
1436-132	1x1-1/4	2-5/8	1/4	.07	
1436-133	1x1-1/2	3-1/16	5/16	.11	
1436-167	1-1/4x3/4	2-25/32	9/32	.08	
1436-168	1-1/4x1	2-25/32	9/32	.09	
1436-169	1-1/4x1-1/2	3-1/16	5/16	.11	
1436-211	1-1/2x1	2-13/16	5/16	.11	
1436-212	1-1/2x1-1/4	2-27/32	11/32	.12	
1436-213	1-1/2x2	3-3/32	11/32	.13	
1436-251	2x1-1/2	3-7/32	13/32	.18	

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC HOSE ADAPTER

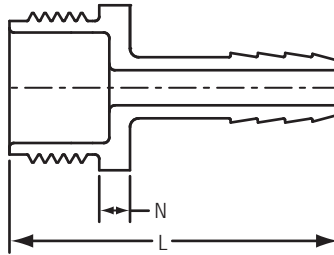
Male Hose Thread x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-007MHT	3/4	2-3/8	7/32	.03

PVC REDUCING HOSE ADAPTER

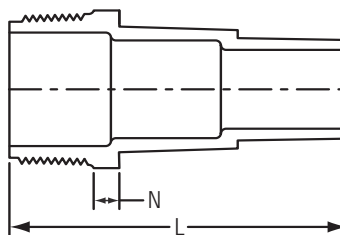
Male Hose Thread x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-101MHT	3/4x1/2	2-3/8	7/32	.03
1436-102MHT	3/4x1	2-3/8	7/32	.04

PVC POOL ADAPTER

Mipt x Hose ID



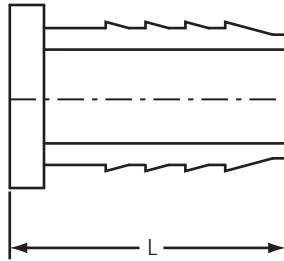
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-204	1-1/2x1-1/2x1-1/4	4	1/8	.09



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC PLUG

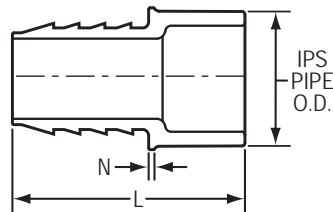
Insert



Part Number	Size	L	Approx. Wt. (Lbs.)
1449-005	1/2	1-5/8	.01
1449-007	3/4	1-19/32	.02
1449-010	1	1-11/16	.03
1449-012	1-1/4	1-5/8	.05
1449-015	1-1/2	1-7/8	.07
1449-020	2	1-7/8	.10

SPIGOT ADAPTER (PVC WHITE)

Insert x I.P.S. Spigot



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-3/4	1/4	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-012N	1-1/4	3	9/32	.11
460-015	1-1/2	3-5/16	5/16	.14
460-020	2	3-1/2	3/8	.20
460-030	3	4-11/16	7/16	.58
460-040	4	5-25/32	13/32	.96

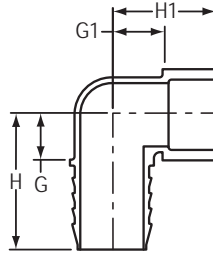
N = Nested

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



INSERT ADAPTER 90° ELBOW (PVC WHITE)

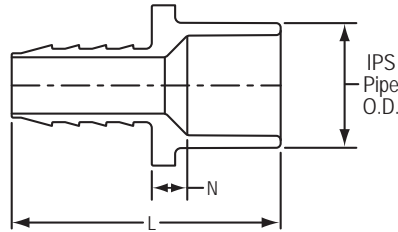
Insert x Spigot



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
460A-015	1-1/2	1	1	2-5/32	2-3/16	.18

REDUCING SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot (Socket)

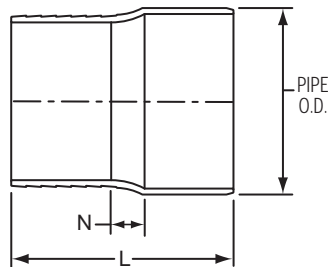


Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-131N	3/4x1x3/4	2-7/8	5/8	.07
460-132N	1x1-1/4x1	3	5/16	.10

N = Nested

SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-7/8	3-1/4	1.69
1432-080*	8	9-7/8	5/8	5.23

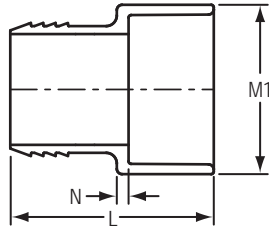
*Fabricated



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

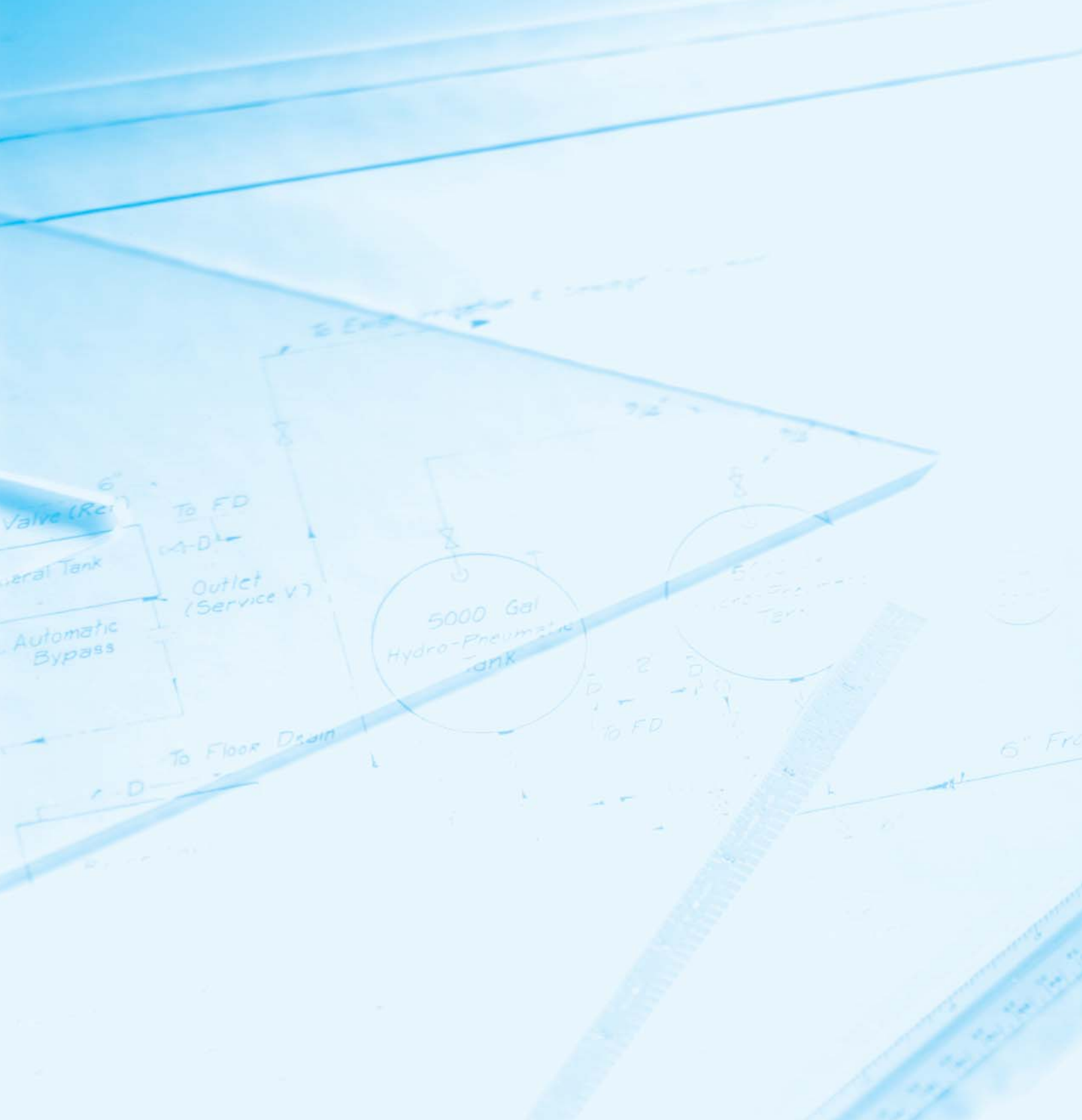
SOCKET ADAPTER (PVC WHITE)

Insert x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81

NOTES



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