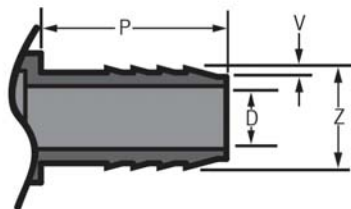


**Barbed Insert Fittings Weights & Dimensions****Dimensions of Insert Ends
ASTM D 2609**

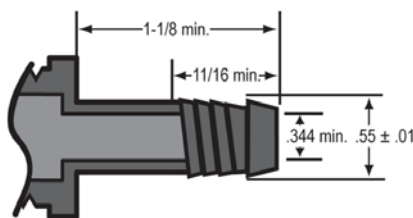
Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max. min.		Barb Depth "V" min.	Inside Diameter "D" min.
1/2	1-1/4	.665	.635	.015	.406
3/4	1-1/4	.865	.835	.015	.562
1	1-1/4	1.095	1.065	.020	.750
1-1/4	1-1/4	1.425	1.395	.025	.995
1-1/2	1-1/2	1.665	1.630	.030	1.125
2	1-1/2	2.125	2.085	.030	1.656
2-1/2	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; $\pm 1/32$ inch.
- H** = Intersection of center lines to end of insert or face of fitting; 90° elbows, tees & crosses; $\pm 1/32$ inch.
- L** = Overall length of fittings; $\pm 1/16$ inch.
- N** = (LAYING LENGTH) Insert bottom to thread bottom; couplings & straight adapters; $\pm 1/16$ 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, Minimum Cell Classification 12454. CPVC Minimum Cell Classification 23447.

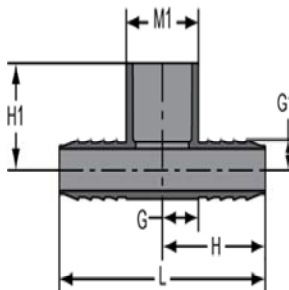
It is the users responsibility to determine the suitability for the intended service application.



Barbed Insert Fittings Weights & Dimensions

Tee, Reducing - PVC

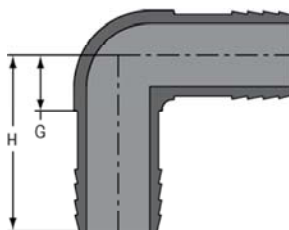
Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-101	3/4X1/2	5/8	7/16	2-1/8	1-5/32	4-1/4	1-3/32	.06
1404-102	3/4X3/4X1	27/32	11/32	2-11/32	1-15/32	4-21/32	1- 5/8	.10

90° EII - PVC

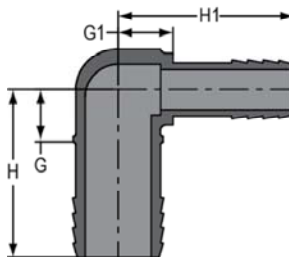
Insert x Insert



Part Number	Size	G	H	Approx. Wt. (Lbs.)
1406-005	1/2	7/16	1-15/16	.02
1406-007	3/4	17/32	2-1/8	.04
1406-010	1	11/16	2- 3/16	.07
1406-012	1-1/4	27/32	2-1/4	.11
1406-015	1-1/2	1	2- 3/4	.16
1406-020	2	1- 3/16	2-15/16	.23
1406-025	2-1/2	1- 9/16	3- 3/4	.46

90° EII, Reducing - PVC

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	.03
1406-131	1X3/4	21/32	5/8	2-3/16	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	.20