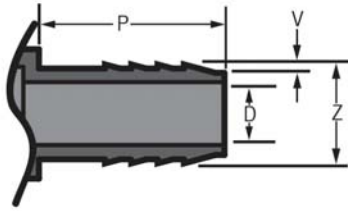




## Barbed Insert Fittings Weights & Dimensions



**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

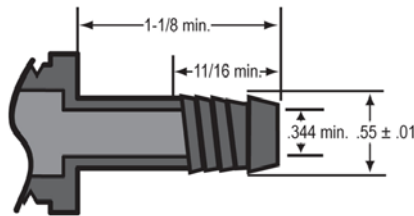
**Dimensions of Polyethylene Pipe  
ASTM D 2104 and D 2239**

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; ± 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; 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, Minimum Cell Classification 12454. CPVC Minimum Cell Classification 23447.

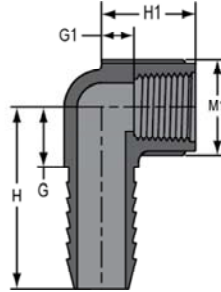
It is the users responsibility to determine the suitability for the intended service application.

**Insert Fittings Technical**  
**Barbed Insert Fittings Weights & Dimensions**



**90° EII - PVC**

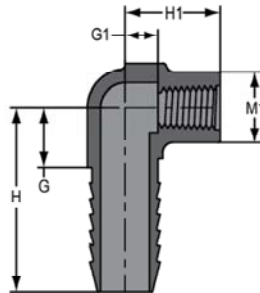
Insert x Fipt  
 Dimensions Also Applicable to 1407-XXXX CPVC Inserts



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	.10
1407-012	1-1/4	1- 3/32	3/4	2-19/32	1- 3/4	2	.17
1407-015	1-1/2	1- 7/32	13/16	2-31/32	1- 7/8	2- 3/8	.23
1407-020	2	1-15/32	1- 1/16	3-1/4	2-5/32	2-27/32	.35

**90° EII, Reducing - PVC**

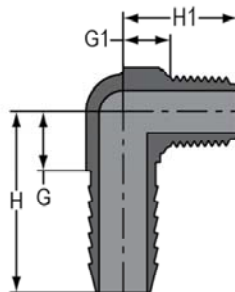
Insert x Fipt  
 Dimensions Also Applicable to 1407-XXXX CPVC Inserts



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	.05
1407-101	3/4X1/2	19/32	7/16	2-3/16	1- 5/32	1-1/8	.05
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	.08
1407-166	1-1/4X1/2	21/32	3/4	2- 5/32	1- 3/8	1- 3/32	.09
1407-167	1-1/4X3/4	25/32	3/4	2- 9/32	1- 1/2	1- 5/16	.10
1407-168	1-1/4X1	29/32	21/32	2-13/32	1-21/32	1-11/16	.13
1407-211	1-1/2X1	29/32	3/4	2-21/32	1- 3/4	1-11/16	.17
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	2-31/32	2- 1/32	2- 5/16	.29

**90° EII - PVC**

Insert x Mipt  
 Dimensions Also Applicable to 1413-XXXX CPVC Inserts



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-005	1/2	1/2	5/8	2	1- 1/4	.02
1413-007	3/4	17/32	21/32	2	1- 9/32	.04