

## Barbed Insert Fittings Barbed Insert Fittings



### STANDARDS & SPECIFICATIONS

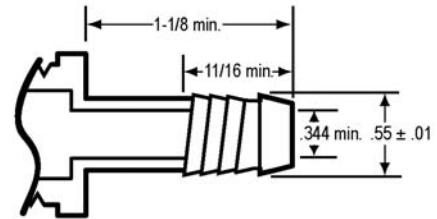


**ASTM D 2609** Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

**Material** Spears® Insert Fittings are produced from PVC Type 1, Cell Classification 12454, CPVC Cell Classification 23447 or Polypropylene (PP).

It is the user's responsibility to determine the suitability for the intended service application.

### Dimensions of Spiral Barb Ends

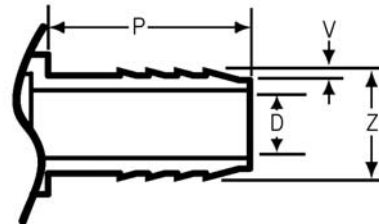


### Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Spears® Manufacturing Company Insert Fittings are designed for use with polyethylene pipe produced with average inside diameter as shown in the chart below.

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	+ .010 - .025
3	3.068	+ .015 - .030
4	4.026	+ .015 - .035

### Dimensions of Insert Ends ASTM D 2609



Nominal Size	Insert Length "P"	Barb O.D. "Z"		Barb Depth "V"	Inside Diameter "D"
in.	min.	max.	min.	min.	min.
1/2	1-1/4	0.665	0.635	0.015	0.406
3/4	1-1/4	0.865	0.835	0.015	0.562
1	1-1/4	1.095	1.065	0.020	0.750
1-1/4	1-1/4	1.425	1.395	0.025	0.995
1-1/2	1-1/2	1.665	1.630	0.030	1.125
2	1-1/2	2.125	2.085	0.030	1.656
2-1/2	2	2.520	2.487	0.030	2.062
3	2-1/8	3.125	3.086	0.030	2.600
4	3	4.090	4.044	0.030	3.525

### INSERT FITTING INSTALLATION

Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. DO NOT use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installed metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

### TWIST LOCK INSERT INSTALLATION

Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter. Twist lock ring back over pipe and barb to seal.

### SPIRAL BARB FITTING INSTALLATION

Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.