

APPLICATION:

Corrosion resistant injection molded PVC insert fittings for use with polyethylene pipe, sizes 1/2" through 4", at temperatures up to and including 140°F. Pressure rating varies with pipe size and temperature. Chemical resistance data must be referenced by the design authority for proper material selection prior to use. Typical applications include irrigation, well service, and potable water applications.

SCOPE:

This specification establishes minimum manufacturing requirements for Poly (Vinyl Chloride) (PVC) insert fittings. These fittings are intended for use in cold water pressure applications where the temperature of the fluid conveyed does not exceed 140°F. These fittings meet or exceed the industry standards set forth by the American Society for Testing and Materials (ASTM) and NSF International ANSI/NSF Standard 14.

MATERIALS:

The materials used in the manufacture of the fittings shall be a Rigid (Unplasticized) Poly (Vinyl Chloride) (PVC) Type I PVC compound having a Cell Classification of 12454 per ASTM D1784 (also formerly known as Type I, Grade I PVC; PVC 1120.) Materials used in the manufacture of these fittings shall meet the health and safety requirements of ANSI/NSF Standard 61 as being safe for use with potable water.

DIMENSIONS AND PROPERTIES:

All sizes of PVC injection molded insert fittings shall be manufactured in strict accordance to the requirements of ASTM D2609 for physical dimensions and tolerances. All PVC injection molded insert fittings shall consistently meet and/or exceed the quality assurance and other requirements of ASTM D2609 regarding material, workmanship, burst pressure, dimensions and product marking. All PVC insert fittings must also be certified to meet the requirements of ANSI/NSF Standard 14 for use with potable water and shall bear the mark of the Listing agency. These products shall also be certified to NSF/ ANSI 372 conforming to the lead content requirements for "lead free" plumbing as defined by the U.S. Safe Drinking Water act and the state laws of California, Vermont, Maryland, and Louisiana.

MARKING:

All sizes of PVC insert fittings shall meet the marking requirements of ASTM D2609 that includes as a minimum the manufacturer's name and/or trademark, the material designation PVC 1, the NSF mark of approval for use with potable water, fitting size, and the designation D2609.

LASCO Fittings Inc. PVC Insert Fittings Conform to the Following Standards and Specifications as applicable:

ASTM D1784 (Material)	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds. Cell Classification 12454 Type I PVC (formerly known as Type I, Grade I PVC) PVC 1120
ASTM D2609	Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
NSF Standard 61	Drinking Water System Components – Health Effects (Third Party Certification materials are suitable for potable water applications)
NSF Standard 14	Plastics Piping System Components and Related Materials (Third Party Certification products meet applicable ASTM performance requirements and are suitable for potable water applications per NSF Std 61)
USA	Pipe fittings manufactured by LASCO Fittings Inc. are manufactured in the United States of America

PVC INSERT FITTINGS SAMPLE SPECIFICATION:

All PVC insert fittings shall be supplied by LASCO Fittings, Inc. from a rigid Polyvinyl Chloride (PVC) compound with a cell classification of 12454 per ASTM D1784. Insert style fittings supplied by LASCO shall be injection molded in the USA in strict compliance to ASTM D2609, Standard Specification for Plastic Insert Fittings for use in polyethylene pipe produced to ASTM D2239. All PVC insert fittings shall consistently meet and/or exceed the Quality Assurance and requirements regarding material, workmanship, burst pressure, dimensions and product marking required by ASTM D2609. All PVC insert fittings shall bear the NSF International mark as being certified for use with potable water.



RECOMMENDED INSTALLATION PROCEDURES

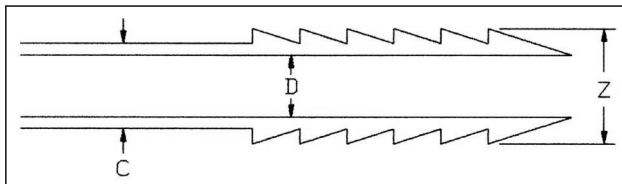
INSERT (BARBED) CONNECTIONS:

Sizes 1/2, 3/4 and 1 inch - one clamp directly over barbs.

Sizes 1 1/4 inch and greater - one clamp directly over barbs plus one additional clamp.

**Do not heat insert fittings or polyethylene pipe during installation. Use plain water or soapy water as lubricant on fitting.*

INSERT DIAMETER DIMENSIONS



MAXIMUM DIAMETERS			
Size	C MAX	D MIN	Z MAX
1/2	0.635	0.406	0.665
3/4	0.835	0.562	0.865
1	1.055	0.750	1.095
1 1/4	1.375	0.995	1.425
1 1/2	1.605	1.125	1.665
2	2.065	1.656	2.125
2 1/2	2.460	2.062	2.520
3	3.065	2.600	3.125
4	4.030	3.525	4.090

Burst Pressure Requirements for Plastic Insert Fittings for PE Pipes (Water @ 73°F)	
Nominal Size (in)	Minimum Burst Strength (psi)
1/2	750
3/4	630
1	630
1-1/4	630
1-1/2	500
2	500
2-1/2	400
3	400
4	400
3"	260
4"	220

Maximum Pressure Rating (PR) for SDR-PR PE Pipe for Use with Water			
Minimum Burst Pressure (BP) psi			
SIDR	PE1404	PE2708, PE3608, PE4608	PE4710
5.3	125	250	315
7	100	200	250
9	80	160	200
11.5	-	130	160
15	-	100	125
19	-	80	100

Dimensions of Polyethylene Pipe per ASTM D2239									
Nominal Size, in	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
Average I.D., in	0.622	0.824	1.049	1.380	1.310	2.067	2.469	3.068	4.026
Tolerance, in	+0.010	+0.010	+0.010	+0.010	+0.015	+0.015	+0.015	+0.015	+0.015
	-0.010	-0.015	-0.020	-0.020	-0.020	-0.020	-0.025	-0.030	-0.035

NOTE: Do not use PVC insert fittings conforming to this specification for PEX (cross-linked polyethylene) pipe or for micro-drip tubing.

Contact LASCO Technical Services for additional information.
Customer Service: 800-776-2756 • www.lascofittings.com

