

Submittal Package

Viega PureFlow® Crimp



Project _____

Date _____

Engineer _____

Contractor _____

Submitted by _____

Approved by _____

Date _____

Approved by _____

Date _____

Table of Contents

- ☐ Chilled Water
- ☐ Hydronic Heating
- ☐ Fire Protection
- ☐ Low-Pressure Steam
- ☐ Compressed Air
- ☐ Industrial Gases
- ☐ Vacuum

☐

☐

☐

☐

☐

1	System Data Sheet	3
	PureFlow Crimp	3
2	Product Instructions	4
	PureFlow Crimp Connections	4
3	Engineering Specifications	5
	PureFlow System	5
4	Dimensional Documents	9
	PureFlow Crimp Fittings	9
	PureFlow Crimp PolyAlloy Fittings	15
5	Limited Warranty – Viega Plastic Systems	18



This document is subject to updates. For the most current Viega technical literature, please visit www.viega.us.



Viega products are designed to be installed by licensed and trained plumbing and mechanical professionals who are familiar with Viega products and their installation. **Installation by non-professionals may void Viega LLC's warranty.**



Zero Lead identifies Viega products meeting the lead free requirements of NSF/ANSI/CAN 61 through testing under NSF/ANSI/CAN 372 (0.25% or less maximum weighted average lead content).



Eco Brass® is a high grade, zero-lead alloy with high strength and corrosion resistance.

1 System Data Sheet

PureFlow Crimp



Viega PureFlow Crimp fittings are available in polymer materials with excellent chlorine- and corrosion resistant properties.

PureFlow Crimp fittings are available in sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ " and 1" in elbows, tees, adapters, couplings, PolyAlloy manifolds, and valves.

Components

- Eco Brass adapters use zero-lead alloy
- PolyAlloy fittings use performance-grade polymer (polyphenylsulfone)
- Copper crimp rings

Operating Parameters

- Operating Temperature: 180°F max (potable)
- Operating Pressure: 160 psi max at 73°F
100 psi max at 180°F
- Test Pressure: Recommended: 100 psi
Maximum: 160 psi

Listings and Certifications

- | | |
|-------------------------|------------------------|
| ■ ASTM E84 | ■ HUD MR-1276 |
| ■ ASTM F1807 | ■ ICC-ES PMG 1038/1015 |
| ■ ASTM F2159 | ■ NSF-pw 372 |
| ■ CAN/ULC S101 / S102.2 | |
| ■ CSA B137.5 | |

Compliant With

- International Mechanical Code (IMC)
- International Plumbing Code (IPC)
- International Residential Code (IRC)
- National Fire Protection Association - 13D (NFPA)
- National Standard Plumbing Code (NSPC)
- Uniform Mechanical Code (UMC)
- Uniform Plumbing Code (UPC)
- Housing for Urban Development (HUD)
- Canadian Standards Association (CSA)
- National Plumbing Code of Canada (NPCC)
- National Building Code of Canada (NBCC)

Approved Applications

- Hot and cold potable water
- Rainwater/gray water

For more specific information on applications for PureFlow systems, contact Viega Technical Services at 1-800-976-9819.

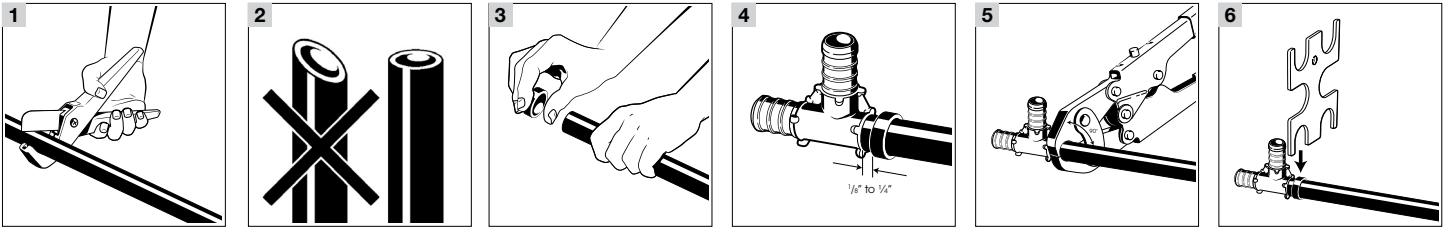
Viega's PureFlow systems meet or exceed all requirements of ASTM F876/877 and are approved for installations above and below ground.

Recommended Tools

- Viega PureFlow Crimp Hand Tools ($\frac{3}{8}$ " to 1")

2 Product Instructions

PureFlow Crimp Connections



Making Viega PureFlow Crimp Connections

- 1 The tubing should be cut squarely and evenly without burrs. Uneven, jagged or irregular cuts will produce unsatisfactory connections.
- 2 The diagram shows a correctly cut tube compared with an incorrectly cut tube.
- 3 Slide the crimp ring onto the tubing and insert the fitting into the tube to the shoulder or tube stop.
- 4 Position the ring $\frac{1}{8}$ " to $\frac{1}{4}$ " from the end of the tubing.
- 5 The ring must be attached straight. Center the crimping tool jaws exactly over the ring. Keep the tool at 90° and close the handles completely.



CAUTION!

Do not crimp twice!

- 6 When checking crimp connections with a caliper (GO/NO GO gauge), push the gauge STRAIGHT DOWN over the crimped ring. NEVER slide the gauge in from the side. Do not attempt to gauge the crimp at the jaw overlap area. The overlap area is indicated by a slight removal of the blackening treatment. A **crimp is acceptable** if the GO gauge fits the ring and the NO GO does not. A **crimp is unacceptable** if the GO gauge does not fit the ring or the NO GO gauge does fit. An incorrect crimp must be cut out of the tubing and replaced. If you check the crimp connections with a micrometer or caliper, use the dimensions shown in the table.



Crimp outside diameters should fall within the dimensions listed in the table below when measured with a micrometer or caliper.

Crimp Diameter Dimensions		
Ring Size (in)	Minimum (in)	Maximum (in)
$\frac{3}{8}$	0.58	0.60
$\frac{1}{2}$	0.70	0.72
$\frac{3}{4}$	0.95	0.96
1	1.18	1.19

3 Engineering Specifications

PureFlow System

Part 1: General

1.1 Summary

This specification covers branch and main, parallel water distribution systems (ManaBloc), cross-linked polyethylene tubing, and fittings using PureFlow press and PureFlow crimp technology for hot and cold water distribution systems. The system is assembled when the fitting barb is inserted fully into the tubing and either a stainless press sleeve or copper crimp ring is pressed/cripped over the tubing and fitting using the appropriate tool to create a leak proof permanent joint.

1.2 References

ANSI/UL 263: Fire test of building construction and materials. Standard methods of fire endurance tests of building construction and materials.

ASTM E84: surface burning characteristics of building materials.

ASTM F1807: specification for metal insert fittings utilizing a copper crimp ring for SDR9 cross-linked polyethylene (PEX) tubing.

ASTM F2023: test method for evaluating the oxidative resistance of cross-linked (PEX) tubing and systems to hot chlorinated water.

ASTM F2159: specification for plastic insert fittings utilizing a copper crimp ring for SDR9 cross-linked polyethylene (PEX) tubing.

ASTM F3347: Standard Specification for Metal Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing.

ASTM F3348: Standard Specification for Plastic Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing.

ASTM F876: specification for cross-linked polyethylene (PEX) tubing.

ASTM F877: specification for cross-linked polyethylene (PEX) plastic hot and cold water distribution systems.

AWWA C904: cross-linked polyethylene (PEX) pressure pipe, ½ in. (12 mm) through 3 in. (76 mm), for water service

CAN/ULC S102.2: standard method of testing for surface burning characteristics of flooring, floor covering and miscellaneous materials and assemblies.

CSA CAN/CSA B137.5: cross-linked polyethylene (PEX) tubing systems for pressure applications.

IAPMO Uniform Mechanical Code.

IAPMO Uniform Plumbing Code.

ICC International Mechanical Code.

ICC International Plumbing Code.

NAPHCC National Standard Plumbing Code.

NSF 14: plastic piping component and related materials.

NSF 61: drinking water system components – health effects.

1.3 Quality Assurance

- A. The installer shall be a qualified installer, licensed within the jurisdiction, and familiar with the installation of cross-linked polyethylene (PEX) tubing systems.
- B. The installation of cross-linked polyethylene (PEX) tubing for hot and cold water distribution systems shall conform to the requirements of the ICC International Plumbing Code or IAPMO Uniform Plumbing Code.

1.4 Delivery, Storage And Handling

- A. The cross-linked polyethylene (PEX) tubing shall be shipped to the job site on truck or in such a manner to protect the tubing. The cross-linked polyethylene fittings and manifolds shall not be handled roughly during shipment. The tubing and fittings shall be unloaded with reasonable care.
- B. Cross-linked polyethylene plastic tubing and fittings shall be stored in a flat, dry, well ventilated location, not exposed to direct sunlight. Normal care in handling shall be exercised to avoid abuse of the tubing. The tubing and fittings shall not be thrown or dropped on the ground, walked on, or dragged.

1.5 Project Conditions

- A. The location of a manifold with valves shall be accessible and in an area not subject to freezing. Proper support of the manifold shall be provided.
- B. PEX tubing should not be left exposed in direct sunlight for extended periods of time – short periods not to exceed 6 months are permissible.
- C. Plastic manifolds and fittings should not be left exposed in direct sunlight for extended periods of time — short periods not to exceed 15 days are permissible.

1.6 Warranty

- A. The tubing and fittings manufacturer shall warrant that the tubing and fittings are free from defects and conform to the designated standard. The warranty shall only be applicable to tubing and fittings installed in accordance with the manufacturer's installation instructions.
- B. The manufacturer of the tubing and fittings shall not be responsible for improper use, handling, or installation of the products.

Part 2: Products

2.1 Manufacturer

Viega LLC
 585 Interlocken Blvd.
 Broomfield CO, 80021
 Phone: (800) 976-9819
 www.viega.us

2.2 Material

- A. Tubing Standard: Viega PureFlow PEX high-density cross-linked polyethylene tubing shall be manufactured to the requirements of ASTM F876 and meet the standard grade hydrostatic pressure ratings from Plastic Pipe Institute in accordance with TR-4/03. The following three standard grade ratings are required:
 - 200 degrees F (93 degrees C) at 80 psig (551 kPa)
 - 180 degrees F (82 degrees C) at 100 psig (689 kPa)
 - 73.4 degrees F (23 degrees C) at 160 psig (1102 kPa)
 1. Chlorine testing: According to ASTM F876 shall meet or exceed the following end use condition.
 - a. End use conditions of : 100% @ 140°F. Per PEX 5306 (CL5).
 2. UV testing: According to ASTM F876 PEX tubing products shall meet or exceed the following exposure limits.
 - a. Viega PureFlow PEX 6 months.
- B. Fitting Standard: PureFlow Press fittings shall be manufactured from UNS, C87700, C87710 bronze or polyphenylsulfone, meeting the requirements of ASTM F877 and ASTM F3347 (metallic) or ASTM F3348 (polymer) tested as a system with Viega PureFlow PEX tubing. The PureFlow Press sleeve shall be manufactured out of a 304 grade or better stainless steel and have three view holes (attached sleeve) to ensure proper PEX tubing insertion. The attached sleeve fitting will incorporate a tool locator ring that shall be in place while making a proper press connection. The PureFlow Press connection shall be made with a Viega supplied ratcheting PureFlow Press hand tool or PureFlow Press power tool.
- C. Fitting Standard: PureFlow Crimp fittings for use with copper crimp rings shall be manufactured from UNS C69300 or C87850 Brass / Eco Brass® meeting the requirements of ASTM F1807 and or PolyAlloy polymer meeting the requirements of ASTM F2159. The PureFlow Crimp connection shall be made by use of a full circle crimp tool designed to crimp F1807 copper crimp rings.
- D. Manifolds: Acceptable manifolds shall include:
 - Copper Manifolds: Shall be copper material having a male or female solder, ProPress or PureFlow Crimp inlets. All outlets shall be PureFlow Press, PureFlow Crimp or ProPress fittings. Shall be provided by the Cross-linked Polyethylene system manufacturer.
 - Polymer Manifolds: Shall be plastic material having a male NPSM thread, PureFlow Press or PureFlow Crimp inlets. All outlets shall be PureFlow Press or PureFlow Crimp connections provided by the PEX system manufacturer.

- E. Adapter Fittings: PEX adapter fittings shall conform to one of the following ASTM standards; F877, F1807, F2159, or ASME B1.20.1 and be listed to the CSA B137.5. The adapter fittings shall mate to NPT threads, copper tubing, copper fittings or ProPress fittings.

2.3 Source Quality Control

- A. The PEX tubing and fitting manufacturer shall maintain a third party listing of the tubing and fittings. The tubing and fittings shall be certified in accordance with ANSI/NSF 14/61 to verify suitability to transport potable water. The tubing and fittings shall have the mark “NSF-pw”, “cNSF® us pw-G”, or “NSF 61” permanently marked on the product to verify the material listing.
- B. The manufacturer of the PEX tubing and fittings shall maintain a quality control program in accordance with ISO 9001 or NSF International in the manufacturing plant to assure that the tubing and fittings are continually being produced to the required standard. The tubing and fittings shall be certified as complying with NSF 14.

Part 3: Execution

3.1 Examination

The installing contractor shall carefully examine the PEX tubing for defects, cuts, abrasions, cracks, fading color, or blemishes. There shall be no cracks or heavy deformations of the tubing. Fittings and manifolds shall be checked for any signs of abuse. Any damaged tubing or fittings shall be rejected.

3.2 Preparation

Viega PureFlow PEX tubing: Cross-linked polyethylene tubing shall be cut with a PEX tubing cutter. The tubing shall be cut squarely and neatly to permit a proper connection between the tubing and fitting.

3.3 Installation General Locations

Plans indicate general location and arrangement of PEX system. Identified locations and arrangements are used to size pipe and calculate friction and loss and other design considerations. Install PEX tubing as indicated, except where deviations to layout are approved on coordination drawings.

3.4 Installation, Pex Tubing

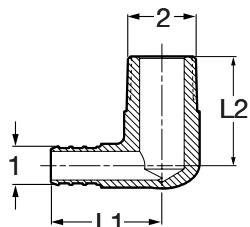
- A. Pressure rating: Install components having a pressure rating equal to or greater than the system operating pressure.
- B. Install PEX tubing that is free of blemishes, cuts, gouges, kinks or noticeable fading of color.
- C. Changes in direction: PEX tubing shall not exceed an eight times the tubing outside diameter (OD) free bend radius or a five times the tubing OD supported bend radius, with use of a Viega approved bend support. Install fittings for changes in direction where any minimum bend radius is exceeded and branch connections.
- D. PureFlow Press connections: PureFlow Press fittings shall be made in accordance with the manufacturer’s installation instructions. The Stainless press sleeve shall be placed over the end of the squared off PureFlow PEX tubing while fully inserting the fitting barb into the tubing. Full tubing insertion shall be verified by a visual confirmation of PEX being present through the view holes before engaging a press connection. Full insertion for an attached sleeve connection means tubing must be completely visible in at least two view holes and partially visible in the final view hole. The PureFlow Press connection shall be made with a Viega supplied ratcheting PureFlow Press hand tool or PureFlow Press power tool.
- E. PureFlow Crimp connections: PureFlow Crimp fittings shall be made in accordance with the manufacturer’s installation instructions. The copper crimp ring shall be placed over the end of the squared off PEX tubing then the PureFlow Crimp fitting fully inserted into the tubing. Position the crimp ring $\frac{1}{8}$ " to $\frac{1}{4}$ " from the end of the tubing before engaging a crimp connection. The PureFlow Crimp connection shall be made with a Viega supplied full circle crimp tool or equivalent.
- F. Threaded joints: Threaded joints shall have a potable water listed joint sealant tape applied to the male threads only. Tighten joint with a wrench and backup wrench as required.
- G. PEX tubing protection: Protect PEX tubing from exposure to direct and indirect sunlight exposure. PEX tubing shall be stored under cover, shielded from direct and indirect sunlight when material is stored for any length of time.

- H. Penetration protection: Provide allowance for thermal expansion and contraction of PEX tubing passing through a wall, floor, ceiling or partition by wrapping with pipe insulation, or by installing through an appropriately sized sleeve. Penetrations of fire resistance rated assemblies shall maintain the rating of the assembly.
- I. Backfill material: Back fill material must be free of large rocks, glass, or other sharp objects which can damage the PEX tubing.
- J. Horizontal support: PEX tubing must be supported every 32" horizontally with Viega approved suspension clips or plastic insulators.
- K. Vertical support: PEX tubing must be supported at each floor or ceiling penetration and every four feet in between.

4 Dimensional Documents

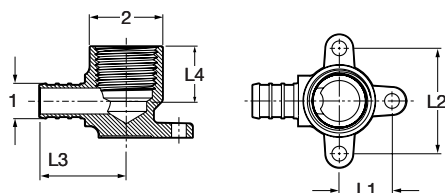
PureFlow Crimp Fittings

Viega PureFlow Crimp 90° Elbow Zero Lead Brass Crimp x MPT - Model V5014ZL



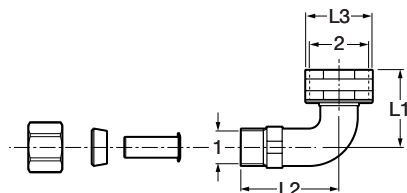
Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
46822	3/8 x 3/8 MPT		1.03	1 1/16	0.96	15/16
46232	1/2 x 3/8 MPT		1.29	1 5/16	0.96	15/16
46821	1/2 x 1/2 MPT		1.11	1 1/8	1.19	1 3/16
46245	3/4 x 3/4 MPT		1.50	1 1/2	1.26	1 1/4

Viega PureFlow Crimp 90° Elbow Drop Ear Zero Lead Brass Crimp x FPT - Model V5027ZL



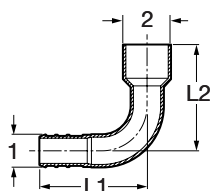
Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)		L4 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
46233	1/2	1/2 FPT	0.79	13/16	1.58	1 1/16	1.39	1 3/8	0.72	3/4
46244	3/4	3/4 FPT	0.99	1	1.98	2	1.46	1 7/16	1.05	1 1/16

Viega PureFlow Compression 90° Elbow For Dishwasher Zero Lead Copper CTS x Hose - Model V5053



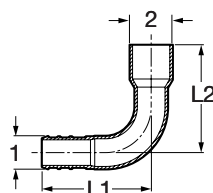
Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac
46743	3/8	CTS (1/2 O.D.) Comp x 3/4 Hose	1.32	1 5/16	1.67	1 11/16	1.14	1 1/8

Viega PureFlow Crimp 90° Elbow Zero Lead Copper Crimp x C - Model V5021



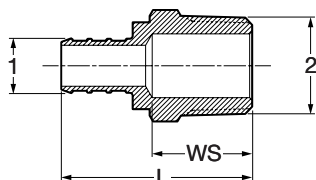
Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
44305	3/8 x 1/2 C		1.68	1 11/16	1.46	1 7/16
44325	1/2 x 1/2 C		1.43	1 7/16	1.58	1 9/16
44345	3/4 x 3/4 C		2.05	2 1/16	2.01	2

Viega PureFlow Crimp 90° Elbow Zero Lead Copper Crimp x FTG - Model V5020



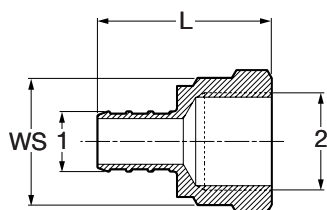
Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
44302	3/8 x 1/2 FTG		1.65	1 5/8	1.56	1 9/16
44320	1/2 x 1/2 FTG		1.44	1 7/16	1.49	1 1/2
44340	3/4 x 3/4 FTG		1.94	1 15/16	1.87	1 7/8

Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x MPT - Model V5011ZL



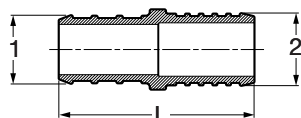
Part No.	Size (in)		L (in)		WS (in)	
	1	2	Dec	Frac	Dec	Frac
46302	3/8	1/2 MPT	1.63	15/8	0.88	7/8
46321	1/2	1/2 MPT	1.65	15/8	0.88	7/8
46324	1/2	3/4 MPT	1.84	1 13/16	1.06	1 1/16
46342	3/4	1/2 MPT	1.68	1 11/16	0.88	7/8
46340	3/4	3/4 MPT	1.84	1 13/16	1.06	1 1/16
46446	3/4	1 MPT	2.07	2 1/16	1.38	1 3/8
46361	1	3/4 MPT	2.02	2	1.06	1 1/16
46366	1	1 MPT	2.25	2 1/4	1.38	1 3/8

Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x FPT - Model V5012ZL



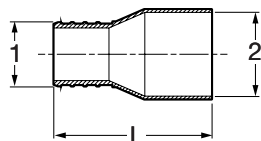
Part No.	Size (in)		L (in)		WS (in)	
	1	2	Dec	Frac	Dec	Frac
46323	3/8	1/2 FPT	1.37	1 3/8	1.00	1
46333	1/2	1/2 FPT	1.37	1 3/8	1.00	1
46334	1/2	3/4 FPT	1.62	1 5/8	1.25	1 1/4
46344	3/4	3/4 FPT	1.45	1 7/16	1.25	1 1/4
46345	3/4	1 FPT	1.63	1 5/8	1.50	1 1/2
46355	1	1 FPT	1.80	2 13/16	1.50	1 1/2

Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x PB - Model V5017ZL



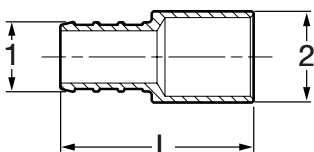
Part No.	Size (in)		L (in)	
	1	2	Dec	Frac
46620	3/8	3/8 PB	1.37	1 3/8
46630	1/2	1/2 PB	1.37	1 3/8
46145	3/4	3/4 PB	1.94	1 15/16
46156	1	1 PB	2.39	2 3/8

Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x C - Model V5045ZL

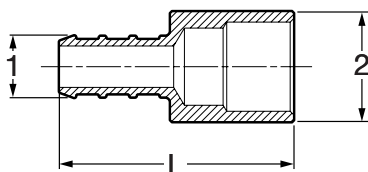


Part No.	Size (in)		L (in)	
	1	2	Dec	Frac
46635	1/2	1/2 C	1.33	1 5/16
46645	3/4	3/4 C	1.57	1 9/16
40655	1	1 C	2.13	2 1/8

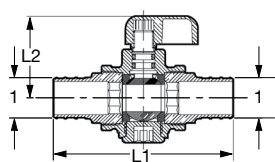
Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x FTG - Model V5046ZL



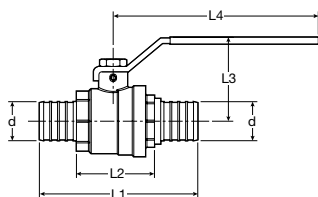
Part No.	Size (in)		L (in)	
	1	2	Dec	Frac
46633	1/2	1/2 FTG	1.33	1 5/16
46644	3/4	3/4 FTG	1.50	1 1/2
60651	1	1 FTG	1.97	2

Viega PureFlow Crimp Adapter Zero Lead Brass Crimp x FTG x C - Model V5024ZL


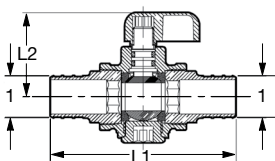
Part No.	Size (in)	L (in)	
	1 2	Dec	Frac
46621	$\frac{3}{8}$ x $\frac{3}{8}$ FTG or $\frac{1}{4}$ C	1.33	$1\frac{5}{16}$
46622	$\frac{3}{8}$ x $\frac{1}{2}$ FTG or $\frac{3}{8}$ C	1.33	$1\frac{5}{16}$
46631	$\frac{1}{2}$ x $\frac{3}{8}$ FTG or $\frac{1}{4}$ C	1.46	$1\frac{7}{16}$
46654	1 x 1 FTG or $\frac{3}{4}$ C	1.92	$1\frac{15}{16}$

Viega PureFlow Crimp Ball Valve Zero Lead Brass $\frac{1}{4}$ Turn - Model V5037ZL


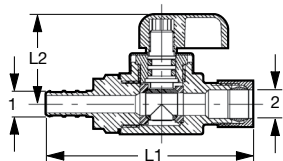
Part No.	Size (in)	L1 (in)		L2 (in)	
	1 1	Dec	Frac	Dec	Frac
46010	$\frac{3}{8}$ x $\frac{3}{8}$	3.09	$3\frac{1}{16}$	1.20	$1\frac{3}{16}$
46031	$\frac{1}{2}$ x $\frac{1}{2}$	2.76	$2\frac{3}{4}$	1.20	$1\frac{3}{16}$
46044	$\frac{3}{4}$ x $\frac{3}{4}$	2.95	$2\frac{15}{16}$	1.30	$1\frac{5}{16}$

Viega PureFlow Crimp Ball Valve Zero Lead Brass $\frac{1}{4}$ Turn - Model V5037ZL


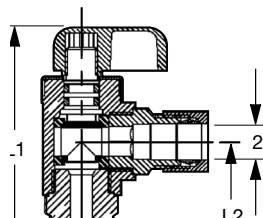
Part No.	Size (in)	L1 (in)		L2 (in)		L3 (in)		L4 (in)	
	1 1	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
46060	1 x 1	3.41	$3\frac{7}{16}$	1.71	$1\frac{11}{16}$	1.84	$1\frac{13}{16}$	4.50	$4\frac{1}{2}$

Viega PureFlow Crimp Ball Valve Zero Lead Chrome Plated Brass $\frac{1}{4}$ Turn - Model V5023ZL


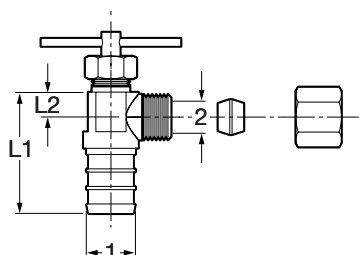
Part No.	Size (in)	L1 (in)		L2 (in)	
	1	Dec	Frac	Dec	Frac
46021	$\frac{1}{2}$	2.76	$2\frac{3}{4}$	1.20	$1\frac{3}{16}$

Viega PureFlow Crimp Stop Valve Straight Zero Lead Chrome Plated Brass Crimp x CTS $\frac{1}{4}$ Turn - Model V5026ZL


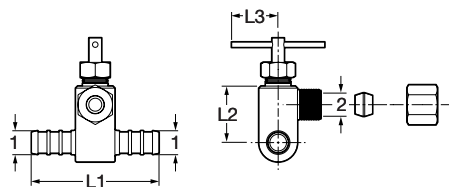
Part No.	Size (in)	L1 (in)		L2 (in)	
	1 2	Dec	Frac	Dec	Frac
46001	$\frac{3}{8}$ x $\frac{1}{4}$ CTS ($\frac{3}{8}$ OD) Comp	2.78	$2\frac{3}{4}$	1.20	$1\frac{3}{16}$
46022	$\frac{1}{2}$ x $\frac{1}{4}$ CTS ($\frac{3}{8}$ OD) Comp	2.78	$2\frac{3}{4}$	1.20	$1\frac{3}{16}$

Viega PureFlow Crimp Stop Valve Angled Zero Lead Chrome Plated Brass Crimp x CTS ¼ Turn - Model V5064ZL


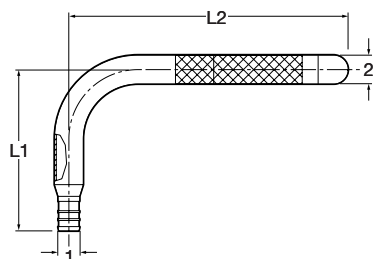
Part No.	Size (in) 1 2	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
46002	3/8 x 1/4 CTS (3/8 OD) Comp	2.70	2 11/16	1.03	1
46025	1/2 x 1/4 CTS (3/8 OD) Comp	2.80	2 13/16	1.03	1

Viega PureFlow Crimp Adapter Straight Zero Lead Brass For Ice Maker Crimp x CTS - Model V5051ZL


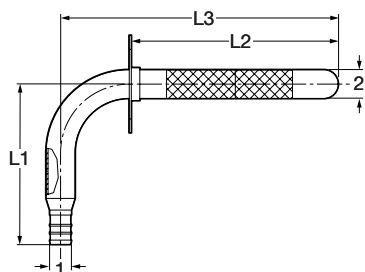
Part No.	Size (in) 1 2	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
46301	3/8 x 1/8 CTS (1/4 OD) Comp	1.48	1 1/2	0.55	9/16
46322	1/2 x 1/8 CTS (1/4 OD) Comp	1.48	1 1/2	0.55	9/16

Viega PureFlow Crimp Tee Zero Lead Brass For Ice Maker Crimp x Crimp x CTS - Model V5062ZL


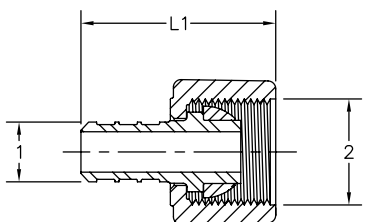
Part No.	Size (in) 1 2	L1 (in)		L2 (in)		L3 (in)	
		Dec	Frac	Dec	Frac	Dec	Frac
46503	3/8 x 1/8 CTS (1/4 OD) Comp	1.83	1 13/16	1.03	1	0.59	9/16
46521	1/2 x 1/8 CTS (1/4 OD) Comp	1.83	1 13/16	1.03	1	0.59	9/16

Viega PureFlow Crimp Stub-Out 90° Elbow Zero Lead Copper Crimp x Street - Model V5070


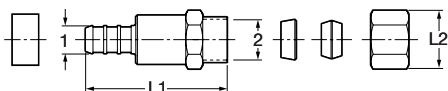
Part No.	Size (in) 1 2	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
44208	3/8 x 1/2 FTG	3.50	3 1/2	7.75	7 3/4
44226	1/2 x 1/2 FTG	3.50	3 1/2	5.75	5 3/4
44228	1/2 x 1/2 FTG	3.50	3 1/2	7.75	6 3/4
44240	3/4 x 3/4 FTG	4.50	4 1/2	8.00	8

Viega PureFlow Crimp Stub-Out 90° Elbow Zero Lead Copper Crimp x Street with Wall Plate - Model V5070.1


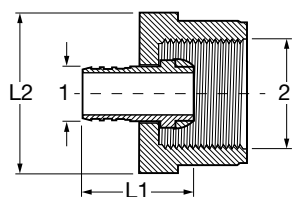
Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac
44209	3/8 x 1/2 FTG		3.50	3 1/2	7.75	7 3/4	6.00	6
44227	1/2 x 1/2 FTG		3.50	3 1/2	5.75	5 3/4	4.00	4
44229	1/2 x 1/2 FTG		3.50	3 1/2	7.75	7 3/4	6.00	6

Viega PureFlow Crimp Lav Adapter Zero Lead Brass Crimp x Lav - Model V5075ZL


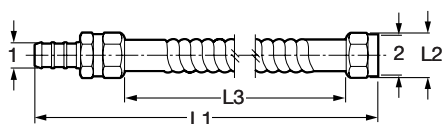
Part No.	Size (in)		L (in)	
	1	2	Dec	Frac
46023	3/8 x 1/2 Lav (plastic nut)		1.65	1 5/8
46033	1/2 x 1/2 Lav (plastic nut)		1.65	1 5/8
46024	3/8 x 1/2 Lav (brass nut)		1.65	1 5/8
46034	1/2 x 1/2 Lav (brass nut)		1.65	1 5/8
46040	3/4 x 3/4 Lav (brass nut)		1.70	1 11/16

Viega PureFlow Crimp Lav Adapter Zero Lead Brass Crimp x CTS - Model V5077ZL


Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
46032	3/8 x 1/4 CTS (3/8 OD) Comp		1.76	1 3/4	0.63	5/8
46331	1/2 x 1/4 CTS (3/8 OD) Comp		1.76	1 3/4	0.63	5/8

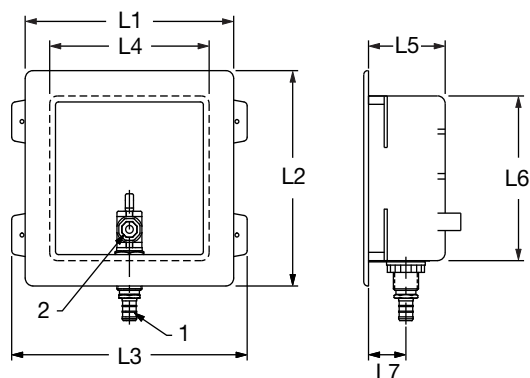
Viega PureFlow Crimp Closet Adapter Zero Lead Brass Crimp x Closet - Model V5072ZL


Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
46223	3/8 x 1/2 Closet (plastic nut)		1.36	1 3/8	1.16	1 3/16
46234	1/2 x 1/2 Closet (plastic nut)		1.36	1 3/8	1.16	1 3/16

Viega PureFlow Crimp Swivel Connector Zero Lead Copper For Water Heater Crimp x FPT - Model V5048ZL


Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac
46764	3/4 x 3/4 FPT		19.00	19	1.13	1 1/8	18.00	18

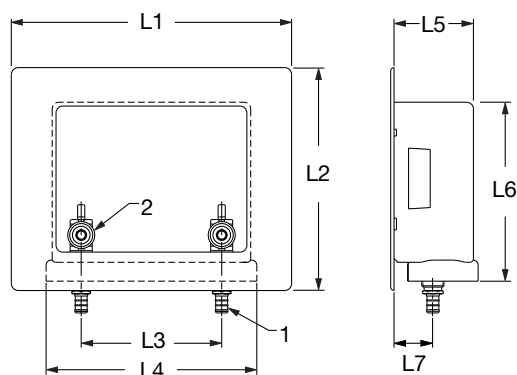
Viega PureFlow Crimp Outlet Box Zero Lead Brass For Ice Maker ¼ Turn - Model 2872ZL



Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)		L4 (in)		L5 (in)		L6 (in)		L7 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
46710*	3/8 x 1/8 CTS	(1/4 O.D.)	6.80	6 13/16	6.80	6 13/16	7.68	7 11/16	5.20	5 3/16	2.50	2 1/2	5.20	5 3/16	1.22	1 1/4
46720*	1/2 x 1/8 CTS	(1/4 O.D.)	6.80	6 13/16	6.80	6 13/16	7.68	7 11/16	5.20	5 3/16	2.50	2 1/2	5.20	5 3/16	1.22	1 1/4
43700	3/8 x 1/8 CTS	(1/4 O.D.)	6.80	6 13/16	6.80	6 13/16	7.68	7 11/16	5.20	5 3/16	2.50	2 1/2	5.20	5 3/16	1.22	1 1/4
43722	1/2 x 1/8 CTS	(1/4 O.D.)	6.80	6 13/16	6.80	6 13/16	7.68	7 11/16	5.20	5 3/16	2.50	2 1/2	5.20	5 3/16	1.22	1 1/4

* with hammer arrestor

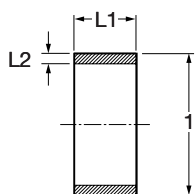
Viega PureFlow Crimp Outlet Box Zero Lead Brass For Washing Machine ¼ Turn - Model 2872.9ZL



Part No.	Size (in)		L1 (in)		L2 (in)		L3 (in)		L4 (in)		L5 (in)		L6 (in)		L7 (in)	
	1	2	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
46730*	1/2 x 3/4 Hose		10.40	10 3/8	8.30	8 5/16	5.20	5 3/16	7.40	7 3/8	2.90	2 7/8	6.60	6 5/8	1.43	1 7/16
43720	1/2 x 3/4 Hose		10.40	10 3/8	8.30	8 5/16	5.20	5 3/16	7.40	7 3/8	2.90	2 7/8	6.60	6 5/8	1.43	1 7/16

* with hammer arrestor

Viega PureFlow Crimp Ring Copper - Model V5019.9

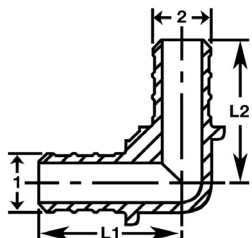


Part No.	Size (in)	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
43600	3/8	0.32	5/16	0.05	1/16
43620	1/2	0.32	5/16	0.05	1/16
43640	3/4	0.32	5/16	0.05	1/16
43660	1	0.36	3/8	0.04	1/16

Dimensional Documents

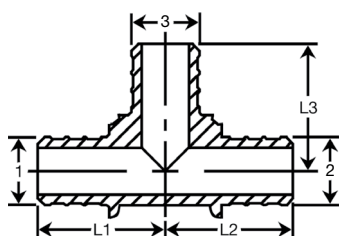
PureFlow Crimp PolyAlloy Fittings

Viega PureFlow Crimp 90° Elbow Zero Lead PolyAlloy - Model V5216



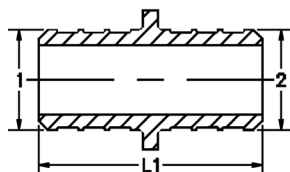
Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
43210	3/8	x 3/8	1.15	1 1/8	1.15	1 1/8
43220	1/2	x 1/2	1.15	1 1/8	1.15	1 1/8
43240	3/4	x 3/4	1.25	1 1/4	1.25	1 1/4
43242	3/4	x 1/2	1.25	1 1/4	1.25	1 1/4
43260	1	x 1	1.53	1 1/2	1.53	1 1/2

Viega PureFlow Crimp Tee Zero Lead PolyAlloy - Model V5218

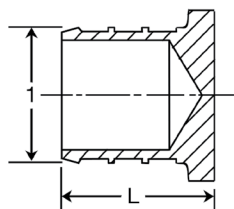


Part No.	Size (in)			L1 (in)		L2 (in)		L3 (in)	
	1	2	3	Dec	Frac	Dec	Frac	Dec	Frac
43500	3/8	x 3/8	x 3/8	1.16	1 3/16	1.16	1 3/16	1.16	1 3/16
43520	1/2	x 1/2	x 1/2	1.15	1 1/8	1.15	1 1/8	1.15	1 1/8
43334	1/2	x 1/2	x 3/4	1.25	1 1/4	1.25	1 1/4	1.15	1 1/8
43540	3/4	x 3/4	x 3/4	1.25	1 1/4	1.25	1 1/4	1.25	1 1/4
43433	3/4	x 1/2	x 1/2	1.25	1 1/4	1.15	1 1/8	1.25	1 1/4
43434	3/4	x 1/2	x 3/4	1.25	1 1/4	1.25	1 1/4	1.25	1 1/4
43443	3/4	x 3/4	x 1/2	1.15	1 1/8	1.15	1 1/8	1.25	1 1/4
43445	3/4	x 3/4	x 1	1.30	1 5/16	1.30	1 5/16	1.34	1 5/16
43544	1	x 3/4	x 3/4	1.37	1 3/8	1.36	1 3/8	1.36	1 3/8
43545	1	x 3/4	x 1	1.54	1 9/16	1.39	1 3/8	1.54	1 9/16
43553	1	x 1	x 1/2	1.33	1 5/16	1.33	1 5/16	1.32	1 5/16
43554	1	x 1	x 3/4	1.33	1 5/16	1.33	1 5/16	1.26	1 1/4
43560	1	x 1	x 1	1.53	1 1/2	1.53	1 1/2	1.53	1 1/2

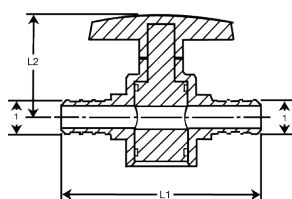
Viega PureFlow Crimp Zero Lead Coupling PolyAlloy - Model V5215



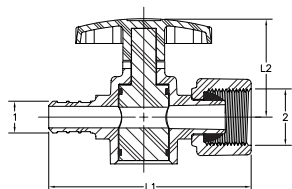
Part No.	Size (in)		L (in)	
	1	2	Dec	Frac
43402	3/8	x 3/8	1.52	1 1/2
43403	1/2	x 1/2	1.50	1 1/2
43332	1/2	x 3/8	1.52	1 1/2
43343	3/4	x 1/2	1.50	1 1/2
43353	1	x 1/2	1.70	1 11/16
43404	3/4	x 3/4	1.50	1 1/2
43354	1	x 3/4	1.70	1 11/16
43355	1	x 1	1.82	1 13/16

Viega PureFlow Crimp Test Plug Zero Lead PolyAlloy - Model V5058


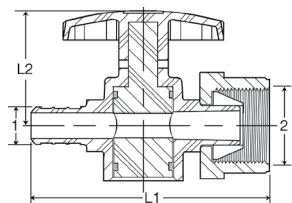
Part No.	Size (in) 1	L (in)	
		Dec	Frac
43702	$\frac{3}{8}$	0.76	$\frac{3}{4}$
43723	$\frac{1}{2}$	0.76	$\frac{3}{4}$
43744	$\frac{3}{4}$	0.95	$\frac{15}{16}$
43765	1	1.13	$1\frac{1}{8}$

Viega PureFlow Crimp Valve Zero Lead PolyAlloy $\frac{1}{4}$ Turn - Model V5236


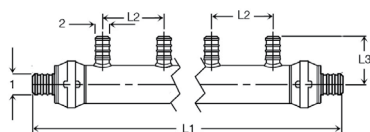
Part No.	Size (in) 1	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
43030	$\frac{1}{2}$	2.83	$2\frac{13}{16}$	1.45	$1\frac{7}{16}$
43040	$\frac{3}{4}$	3.00	3	1.45	$1\frac{7}{16}$

Viega PureFlow Crimp Stop Valve Straight Zero Lead PolyAlloy Crimp x Lav $\frac{1}{4}$ Turn - Model V5036.30


Part No.	Size (in) 1 2	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
43023	$\frac{3}{8}$ x $\frac{1}{2}$ Lav	3.00	3	1.45	$1\frac{7}{16}$

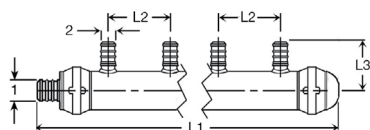
Viega PureFlow Crimp Stop Valve Straight Zero Lead PolyAlloy Crimp x Closet $\frac{1}{4}$ Turn - Model V5036.31


Part No.	Size (in) 1 2	L1 (in)		L2 (in)	
		Dec	Frac	Dec	Frac
43002	$\frac{3}{8}$ x $\frac{1}{2}$ Closet	3.00	3	1.45	$1\frac{7}{16}$
43003	$\frac{1}{2}$ x $\frac{1}{2}$ Closet	3.00	3	1.45	$1\frac{7}{16}$

Viega PureFlow Crimp Multi-port Tee Zero Lead PolyAlloy Flow Through - Model V5031.2


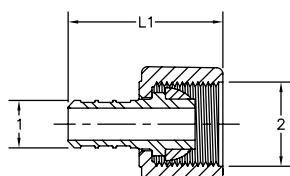
Part No.	Size (in) 1 2	Outlets	L1 (in)		L2 (in)		L3 (in)	
			Dec	Frac	Dec	Frac	Dec	Frac
65152	$\frac{3}{4}$ x $\frac{1}{2}$	2	6.50	$6\frac{1}{2}$	2.00	2	1.55	$1\frac{1}{16}$
65153	$\frac{3}{4}$ x $\frac{1}{2}$	3	8.50	$8\frac{1}{2}$	2.00	2	1.55	$1\frac{1}{16}$
65154	$\frac{3}{4}$ x $\frac{1}{2}$	4	10.50	$10\frac{1}{2}$	2.00	2	1.55	$1\frac{1}{16}$
65254	1 x $\frac{3}{4}$ x $\frac{1}{2}$	4	10.60	$10\frac{5}{8}$	2.00	2	1.55	$1\frac{1}{16}$
65256	1 x $\frac{1}{2}$	6	14.80	$14\frac{13}{16}$	2.00	2	1.55	$1\frac{1}{16}$
65258	1 x $\frac{1}{2}$	8	18.80	$18\frac{13}{16}$	2.00	2	1.55	$1\frac{1}{16}$

Viega PureFlow Crimp Multi-port Tee Zero Lead PolyAlloy Closed - Model V5031.22



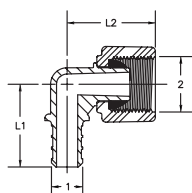
Part No.	Size (in)		Outlets	L1 (in)		L2 (in)		L3 (in)	
	1	2		Dec	Frac	Dec	Frac	Dec	Frac
65104	3/4	x 1/2	4	10.10	10 1/8	2.00	2	1.55	1 5/16
65206	1	x 1/2	6	14.30	14 5/16	2.00	2	1.55	1 5/16

Viega PureFlow Crimp Lav Adapter Zero Lead PolyAlloy Crimp x Lav - Model V5263



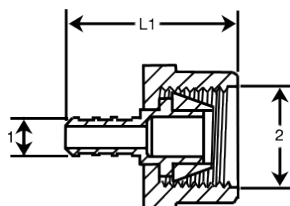
Part No.	Size (in)		L1 (in)	
	1	2	Dec	Frac
43323	3/8	x 1/2 Lav	1.52	1 1/2
43333	1/2	x 1/2 Lav	1.46	1 7/16
43344	3/4	x 3/4 Lav	1.62	1 5/8

Viega PureFlow Crimp Lav Adapter 90° Elbow Zero Lead PolyAlloy Crimp x Lav - Model V5255



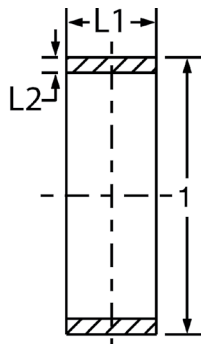
Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
43232	3/8	x 1/2 Lav	1.35	1 3/8	1.15	1 1/8
43233	1/2	x 1/2 Lav	1.35	1 3/8	1.15	1 1/8
43244	3/4	x 3/4 Lav	1.42	1 7/16	1.25	1 1/4

Viega PureFlow Crimp Closet Adapter Zero Lead PolyAlloy Crimp x Closet - Model V5257



Part No.	Size (in)		L1 (in)	
	1	2	Dec	Frac
43300	3/8	x 1/2 Closet	1.60	1 5/8
43320	1/2	x 1/2 Closet	1.60	1 5/8

Viega PureFlow Crimp Ring Copper - Model V5019.9



Part No.	Size (in)		L1 (in)		L2 (in)	
	1	2	Dec	Frac	Dec	Frac
43600	3/8	SDR9	0.32	5/16	0.05	1/16
43620	1/2	SDR9	0.32	5/16	0.05	1/16
43640	3/4	SDR9	0.32	5/16	0.05	1/16
43660	1	SDR9	0.36	3/8	0.04	1/16

5 Limited Warranty – Viega Plastic Systems

Subject to the conditions and limitations in this Limited Warranty (“Warranty”), Viega LLC (“Viega”) warrants to end users, installers, and distributors in the United States and Canada that the following products (“Viega Products”) will be free of failure caused by a manufacturing defect from the date of installation for the time periods specified in the tables included in this Warranty.

This Warranty will be valid only in the event the following conditions have been met: The Viega Products have been properly installed (1) by a licensed contractor in compliance with applicable building, permit, and inspection codes; (2) in potable water systems; (3) under normal conditions of use; (4) under applications approved by Viega; (5) under Viega-specified system operating conditions; (6) using tools compatible with Viega systems; and (7) in alignment with Viega’s listings.

Further, you have a right to a remedy under this Warranty only if the Viega Product failure resulted from a manufacturing defect in the Viega Product and if the failure occurred during the applicable warranty period. You do not have a remedy under this Warranty if the failure was caused by (1) components other than those manufactured and/or sold by Viega; (2) failure to design, install, inspect, test, or maintain the Viega Product in accordance with Viega’s installation and product instructions in effect at the time of installation; (3) use of Viega Products under non-recommended system operating conditions (e.g., water pressures, temperatures, or other external chemical or physical conditions); (4) improper handling or protection of the Viega Product prior to, during, or after installation (e.g., inadequate freeze protection or exposure to environmental conditions not recommended for the application); (5) chemically corrosive or aggressive water conditions (e.g., unauthorized solvents or chemicals; antifreeze, rust inhibitor, or other treatment fluids); or (6) acts of nature, including, without limitation, earthquakes, fire, or weather damage.

In the event of a failure of a Viega Product covered by this Warranty, it is the duty and responsibility of the end user to take appropriate measures to mitigate all potential damage, including making timely repairs to the system in which the Viega Product has been installed. The part or parts which you claim failed must be kept and returned to Viega for testing. Viega may be contacted at the phone number or mailing address below. All warranty claims must be made within 30 calendar days after the failure has (or should reasonably have) been discovered. You should be prepared to ship, at your expense, the Viega Product which you claim failed due to a manufacturing defect, with documentation of

the installation date and the amount spent on any repair or replacement if performed by you. Within a reasonable time after receiving the Viega Product, Viega will investigate the cause of the failure, which includes the right to inspect the Viega Product at a Viega location and reasonable access to the site of any alleged damage. Viega will notify you in writing of the results of its review.

For products with warranty periods of 10 years or more: If Viega determines that the failure or any resulting damages were the result of a manufacturing defect in the Viega Product covered by this Warranty and occurred during the first 10 years covered by this Warranty, Viega will reimburse the property owner for reasonable repair or replacement charges for drywall, flooring, paint, or personal property damage resulting from the failure. After the first 10 years, the Warranty will cover only material costs for pipe and fittings sold by Viega, excluding any labor or installation costs.

Termination connections to non-Viega end-use devices or equipment such as filtration, water softeners, shower valves, faucets, stops, and other such devices, when utilizing Viega PureFlow PEX, does not void the system warranty as described.

VIEGA SHALL NOT BE LIABLE FOR CONSEQUENTIAL ECONOMIC LOSS DAMAGES (E.G., ECONOMIC LOSS, WATER OR PROPERTY DAMAGE, OR MOLD REMEDIATION) UNDER ANY LEGAL THEORY AND WHETHER ASSERTED BY DIRECT ACTION, FOR CONTRIBUTION, INDEMNITY, OR OTHERWISE.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR ANY STATUTE OF LIMITATIONS RELATING TO SUCH WARRANTIES. Viega will be responsible for remedies only if all conditions of this Warranty have been met. Other than this Warranty, Viega does not authorize any person, company, contractor, or distributor to create any additional warranty, obligation, or liability in connection with the Viega Product.

This Warranty gives you specific legal rights, and you also may have other rights which may vary from state to state. This Warranty shall be interpreted and applied under the law of the state in which the product is installed and is intended as a COMMERCIAL WARRANTY.

Continues on next page.

Viega Tubing		
Tubing	Connected Fitting	Warranty Term
Viega PureFlow PEX (ASTM F876)	PureFlow Press polymer fittings (ASTM F3348)	30 years
	PureFlow Press alloy fittings (ASTM F3347)	25 years
	PureFlow Crimp polymer fittings (ASTM F2159)	25 years
	PureFlow Crimp alloy fittings (ASTM F1807)	25 years
	Non-Viega crimp polymer fittings (ASTM F2159)	10 years
	Non-Viega crimp alloy fittings (ASTM F1807)	10 years
Viega PureFlow Barrier PEX (ASTM F3253)	PureFlow Press polymer fittings (ASTM F3348)	30 years
	PureFlow Press alloy fittings (ASTM F3347)	30 years
	PureFlow Crimp polymer fittings (ASTM F2159)	5 years
	PureFlow Crimp alloy fittings (ASTM F1807)	5 years

Non-Viega Tubing		
Tubing	Connected Fitting	Warranty Term
Non-Viega PEX (ASTM F877)	PureFlow Press polymer fittings (ASTM F3348)	10 years
	PureFlow Press alloy fittings (ASTM F3347)	10 years
	PureFlow Crimp polymer fittings (ASTM F2159)	5 years
	PureFlow Crimp alloy fittings (ASTM F1807)	5 years

Other Plastic Viega Products	
Product	Warranty Term
ManaBloc® / MiniBloc	10 years
PureFlow valves	5 years
Accessible metal compression or metal/polyalloy crimp fittings, manifolds, and panels	5 years
PureFlow Press hand tools and tubing cutters ¹	2 years
Lav, closet risers, and riser accessories ²	2 years
Controls, mixing stations, or electrical components	2 years
¹ Power tools and jaws used with PureFlow Press fittings are warranted by the manufacturer, and Viega extends no separate warranty on those tools or jaws. ² Connection to non-Viega plumbing products intended for riser and/or water service applications does not void the system warranty provided all pipe, fittings, valves, and manifolds are sold by Viega after the transition location.	



Manufactured housing and recreational vehicle manufacturers in the United States are subject to a separate warranty available [here](#). Please reference the applicable limited warranty in effect during the time of installation.