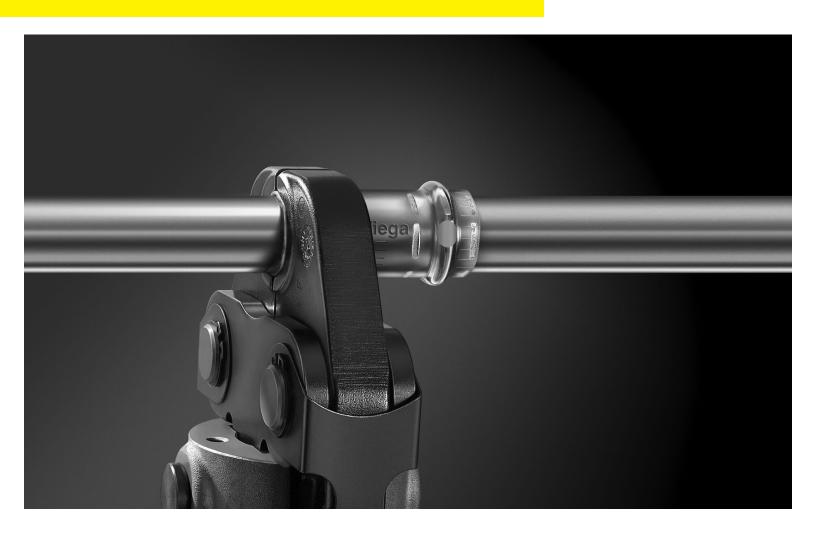


Submittal Package

Viega ProPress® Stainless



Project			Date
Engineer		Contractor	
Submitted by			
Approved by	Date	Approved by	Date

SM-PP 0425 ProPress Stainless 1 of 26



Table of Contents

Chilled Water

Hydronic Heating

Fire Protection

Low-Pressure Steam

Compressed Air

Industrial Gases

Vacuum

1	System Data Sheet	3
-	ProPress 316 Fittings	3
2	Tech Data Sheet	4
	ProPress 316 ECO Tubing	
	ProPress Stainless Tubing	
	ProPress 316 Ball Valve	
3	Product Instructions	7
•	ProPress Stainless ½" to 2" Fittings	
	ProPress Stainless 2½" to 4" Fittings	
4	Engineering Specifications	0
	Engineering Specifications ProPress Stainless	
<i></i>		
\circ	Dimensional Documents	13
	ProPress Stainless Fittings	13
6	Limited Warranty	24
	Viega ProPress Stainless Tubing, Fittings, and Valves	
	Viega Metal Systems for Industrial Applications	
	Viega Marine Applications	26



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.**

SM-PP 0425 ProPress Stainless 2 of 26



1 System Data Sheet

ProPress 316 Fittings



ProPress 316 is a stainless steel system designed to be used with Viega 316 stainless steel tubing to form a complete press system that is ideal for process water and durable enough to handle industrial applications or environments. ProPress

316 fittings feature the same EPDM sealing element found in ProPress copper fittings and provide the same permanent leak-free connections in dimensions from $\frac{1}{2}$ " to $\frac{4}{2}$ ".

ProPress 316 fittings are offered in configurations that include elbows, couplings, reducers, tees, reducing tees, threaded adapters, unions, caps, and flanges. ProPress 316 fittings in 2½" to 4" have a 420 stainless steel grip ring and a PBT separator ring in addition to the EPDM sealing element.

Operating Parameters

- Operating pressure: 200 psi maximum
- Test pressure: 600 psi maximum
- Operating temperature: 0°F-250°F

Listings and Certifications

- ABS
- IAPMO/ANSI/CAN Z1117
- ICC-ES LC1002
- NSF_®-61
- NSF_®-372

International Listings and Certifications

- BV: Bureau Veritas
- DNV GL: Det Norske Veritas Germanischer
- LR: Lloyd's Register
- NKK: Nippon Kaija Kyokai

Listings, certifications, and approvals are shown for reference only and may not cover every item in the product line. They are subject to change, with the most current offical listings located on the appropriate agency's portal.

Compliant With

- ASME B31, B31.1, B31.3, B31.9
- ASTM A312
- ASTM A403
- ASTM A778
- IAPMO Uniform Mechanical Code (UMC)
- ICC International Mechanical Code (IMC)

Approved Applications

- Hot and cold potable water
- Hydronic heating (with glycol)
- Chilled water
- Low-pressure steam (15 psi max with FKM sealing element)
- Residential steam (5 psi max)
- Isopropyl alcohol
- Latex paint
- Phosphoric acid
- Compressed air
- Non-medical gases
- Vacuum (29.2" Hg maximum 68°F)

ProPress 316 systems are approved for underground use. When installed underground, ProPress 316 fittings should have proper corrosion protection in accordance with local and national codes.

For more specific information on applications for ProPress 316, contact Viega Technical Services at 1-800-976-9819.

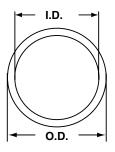
Smart Connect® Technology

ProPress 316 fittings are manufactured with Viega's unique Smart Connect technology. A design of the fitting, Viega Smart Connect technology allows identification of an unpressed fitting during pressure testing.

SM-PP 0425 ProPress Stainless 3 of 26



2 Tech Data Sheet ProPress 316 ECO Tubing



Nominal Tube Size (in)	Part No.
1/2	82150
3/4	82155
1	82160
1¼	82165
1½	82170
2	82175
21/2	82180
3	82185
4	82190

Tube Dimensional Data

Nominal	Outside Diameter (OD)		Inside Diameter (ID)		Wall Thickness		Weight	
Tube Size (in)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb./ft.)	(per 20 ft. length)
1/2	0.63	15.88	0.55	13.88	0.04	1.00	0.25	5.00
3/4	0.88	22.23	0.78	19.83	0.05	1.20	0.43	8.60
1	1.13	28.58	1.03	26.18	0.05	1.20	0.55	11.00
11/4	1.38	35.00	1.26	32.00	0.06	1.50	0.85	17.00
1½	1.63	41.28	1.51	38.28	0.06	1.50	1.01	20.20
2	2.13	54.00	2.01	51.00	0.06	1.50	1.33	26.60
21/2	2.63	66.68	2.47	62.68	0.08	2.00	2.18	43.60
3	3.13	79.38	2.97	75.38	0.08	2.00	2.60	52.00
4	4.13	104.78	3.97	100.78	0.08	2.00	3.46	69.20

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).

Pipe dimensionally (OD) conforms to ASME B88.

Conforms to ASTM A554 and ASTM A778.

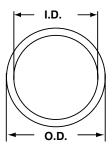
Pipe wall conforms to the requirements of schedule 5S steel pipe per ASME B36.10M.

Wall thickness is the minimum allowable.

4 of 26 SM-PP 0425 ProPress Stainless



Tech Data Sheet ProPress Stainless Tubing



Nominal Tube Size (in)	Part No. ASTM A312 316
1/2	82000
3/4	82005
1	82010
11⁄4	82015
1½	82020
2	82025
21/2	82042
3	82050
4	82055

Tube Dimensional Data

Nominal	Outside Diameter (OD)		Inside Diameter (ID)		Wall Thickness		Weight	
Tube Size (in)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb./ft.)	(per 20 ft. length)
1/2	0.63	15.88	0.50	12.78	0.06	1.55	0.41	8.20
3/4	0.88	22.23	0.75	19.13	0.06	1.55	0.59	11.80
1	1.13	28.58	1.00	25.48	0.06	1.55	0.77	15.40
11⁄4	1.38	35.00	1.26	31.90	0.06	1.55	0.95	19.00
11/2	1.63	41.28	1.50	38.18	0.06	1.55	1.13	22.60
2	2.13	54.00	2.00	50.90	0.06	1.55	1.50	30.00
21/2	2.63	66.68	2.47	62.68	0.08	2.00	2.18	43.60
3	3.13	79.38	2.97	75.38	0.08	2.00	2.60	52.00
4	4.13	104.78	3.97	100.78	0.08	2.00	3.46	69.20

Tube dimensionally (OD) conforms ASME B88.

ASTM A312 denotes welded annealed stainless steel pipe.

Pipe wall conforms to the requirements of schedule 5S steel pipe per ASME B36.10M.

Wall thickness is the minimum allowable.

SM-PP 0425 ProPress Stainless 5 of 26



Tech Data Sheet

ProPress 316 Ball Valve



Description

The ProPress 316 twopiece ball valve can be used in a variety of commercial and industrial applications. The EPDM sealing elements make it the

perfect choice for potable water systems while the durable 316 stainless steel allows it to stand up to some of the harshest environments found in power plants, refineries, utilities, and mills. The double EPDM stem seals prevent leaks without the need for constant adjustment. The 316 stainless steel ball valves are available in sizes ranging from ½" to 2" and are equipped with Viega's unique Smart Connect® technology for easy identification of unpressed connections during pressure testing.

Features

- ProPress press ends
- 316 stainless steel ball and stem
- Full-port, two-piece design
- Blowout-proof stainless steel stem
- Reinforced PTFE seats
- Lockable metal handle

Ratings

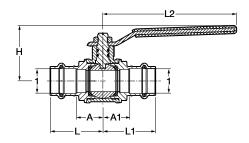
- 250 CWP
- Temperature range: 0°F-250°F
 Max. operating pressure: 200 psi

Approvals

- Conforms to MSS SP-110
- NSF_®-61 Annex G
- NSF_®-372

Component	Material
Body	316 stainless steel
Ball	316 stainless steel
Seat	Reinforced PTFE
Stem	316 stainless steel
Stem seals	EPDM
Nut	Zinc-plated steel
Handle	Zinc-plated steel
Handle cover	Polyvinyl
Sealing element	EPDM

Viega ProPress 316 Ball Valve Model 4070



Part No.	Size (in)	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
81080	1/2	0.89	1.17	1.64	1.92	5.55	2.44
81085	3/4	1.06	1.36	1.97	2.26	5.55	2.52
81090	1	1.18	1.57	2.09	2.48	5.55	2.68
81095	11/4	1.45	1.72	2.48	2.75	6.10	3.09
81100	1½	1.83	1.81	3.26	3.24	6.10	3.34
81105	2	1.97	2.18	3.54	3.78	6.10	3.66

SM-PP 0425 ProPress Stainless 6 of 26



3 Product Instructions

ProPress Stainless 1/2" to 2" Fittings For use only with Viega stainless steel tubing



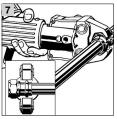






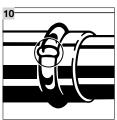












DANGER! Read and understand all instructions for installing Viega ProPress Stainless fittings. Failure to follow all instructions may result in extensive property damage, serious injury, or death.

1 Cut stainless steel tubing only with an approved stainless steel tube cutting tool. Cut the tube square using a displacementtype cutter or fine toothed saw.

Cut tubing a minimum of four inches away from the contact area of the vise to prevent possible damage to the tubing in the press area.

- 2 Deburr inside and outside of the tube to the proper insertion depths to prevent cutting sealing element. Use a wire brush, Scotchbrite pad, sand cloth, or sandpaper to remove loose dirt and rust particles from the pressing area.
- 3 Check the sealing element for correct fit. Do not use oils or lubricants. Use only Viega sealing elements.

For applications requiring a different sealing elements, remove the factory-installed sealing element and replace with the applicable sealing element. See Changing Sealing Elements Product Instructions.

4 Mark the proper insertion depth as indicated by the Viega ProPress Stainless Insertion Depth Chart. Improper insertion depth may result in an improper seal.

Tube Size (in)	Insertion Depth (in)
1/2	3/4
3/4	7/8
1	7/8
11/4	1
1½	17/16
2	19/16

- 5 While turning slightly, slide press fitting onto tubing to the marked depth. End of tubing must contact stop.
- 6 Insert appropriate Viega ProPress jaw into the press tool and push in, holding pin until it locks in place

Warning!

Keep extremities and foreign objects away from press tool during pressing operation to prevent injury or incomplete press.

- 7 Open the jaw and place at right angle on the fitting. Visually check insertion depth using mark on tubing.
- 8 Hold trigger on press tool until press jaws have fully engaged the fitting. Jaws will automatically release after a full press is made.

- 9 After pressing, open the jaw and remove the press tool.
- 10 Pressure testing with Smart Connect®: Unpressed connections are located by pressurizing the system with air or water. When testing with water the proper pressure range is 15 psi to 85 psi. When testing with compressed air the proper pressure range is ½ psi to 45 psi maximum. If testing with compressed air, use an approved leak-detect solution. Following a successful pressure test, the system may be pressure tested up to 200 psi with air or up to 600 psi with water.



Testing for unpressed connections using Smart Connect is not a replacement for pressure testing requirements of local codes and standards.

CAUTION!

It is the responsibility of designers of piping systems to verify the suitability of type 304 and 316 stainless steel pipe for use with the intended fluid media. The fluid's chemical composition, pH level, operation temperature, chloride level, oxygen level, and flow rate and their effect on AISI type 304 or 316 stainless steel must be evaluated by the material specifier to confirm system life will be adequate for the intended service. Failure to do so may cause serious personal injury or property damage. Contact Viega Technical Services for questions and approvals.

SM-PP 0425 ProPress Stainless 7 of 26

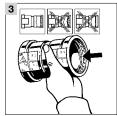


Product Instructions

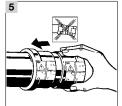
ProPress Stainless 2½" to 4" Fittings For use only with Viega stainless steel tubing







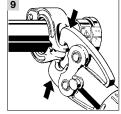














DANGER!
Read and understand all instructions for installing Viega
ProPress Stainless fittings. Failure to follow all instructions may result in extensive property damage, serious injury, or death.

- 1 Cut stainless steel tubing only with an approved stainless steel tube cutting tool.

 Cut the tube square using a displacement-type cutter or fine toothed saw.
- Cut tubing a minimum of four inches away from the contact area of the vise to prevent possible damage to the tubing in the press area.
- 2 Deburr inside and outside of the tube to the proper insertion depths to prevent cutting sealing element. Use a wire brush, Scotchbrite pad, sand cloth, or sandpaper to remove loose dirt and rust particles from the pressing area.
- 3 Check the sealing element, separator ring, and grip ring for correct fit. Do not use oils or lubricants. Use only Viega ProPress shiny black EPDM for 316 or dull black FKM for 304 sealing elements.
- 4 Mark the proper insertion depth as indicated by the Viega ProPress Stainless XL Insertion Depth Chart. Improper insertion depth may result in an improper seal.

Insertion Depth (in)	d (in)
21/2	1 11/16
3	1 ⁵ ⁄ ₁₆
4	2%

- 5 While turning slightly, slide press fitting onto tubing to the marked depth. End of tubing must contact stop.
- 6 Press Viega ProPress Stainless XL fittings with Viega ProPress XL-C rings and V2 ACTUATOR.



Use only rings that are compatible with ProPress XL-C fittings.

Do not use rings intended for 2½" to 4" Bronze fittings.

- 7 Open XL-C ring and place at right angles on the fitting. Ensure that the XL-C ring is engaged on the fitting bead.
- **8** With V2 actuator inserted into the press tool, open the V2 actuator. Connect the V2 actuator to the XL-C ring. Look at insertion depth mark on the tube to make sure that the tube is properly inserted into the fitting.

Warning!

Keep extremities and foreign objects away from press tool during pressing operation to prevent injury or incomplete press.

- 9 Hold the trigger until the actuator has engaged the XL-C ring.
- 10 Upon completion of the press, release the V2 actuator from XL-C ring. Remove the XL-C ring from fitting. Remove product instruction label from fitting to indicate that press has been completed.

Pressure testing with Smart Connect®

Unpressed connections are located by pressurizing the system with air or water. When testing with water the proper pressure range is 15 psi to 85 psi. When testing with compressed air the proper pressure range is ½ psi to 45 psi maximum. If testing with compressed air, use an approved leak-detect solution. Following a successful pressure test, the system may be pressure tested up to 200 psi with air or up to 600 psi with water.



Testing for unpressed connections using Smart Connect is not a replacement for pressure testing requirements of local codes and standards.

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It is the responsibility of designers of piping systems to verify the suitability of type 304 and 316 stainless steel pipe for use with the intended fluid media. The fluid's chemical composition, pH level, operation temperature, chloride level, oxygen level, and flow rate and their effect on AISI type 304 or 316 stainless steel must be evaluated by the material specifier to confirm system life will be adequate for the intended service. Failure to do so may cause serious personal injury or property damage. Contact Viega Technical Services for questions and approvals.

SM-PP 0425 ProPress Stainless 8 of 26



4 Engineering Specifications

ProPress Stainless

Part 1: General

1.1 Summary

Stainless steel tube and fitting system using cold press connection technology. The system is assembled when the tube is fully inserted into the fitting, then pressed on both sides of the fitting seal, creating a mechanical joint.

1.2 Definitions

ASME: American Society of Mechanical Engineers ASTM: American Society for Testing and Materials AWWA: American Water Works Association EPDM: Ethylene Propylene Diene Monomer

FKM: Fluoroelastomer

IAPMO: International Association of Plumbing & Mechanical Officials

ICC: International Code Council

MSS: Manufacturers Standardization Society

NSF: National Sanitation Foundation

1.3 References

ASME A13.1: Scheme for the Identification of Piping Systems

ASME B1.20 Pipe Threads, General Purpose (Inch)

ASME B31.1 Power Piping

ASME B31.3 Process Piping

ASME B31.9 Building Services Piping

ASTM 1029: Standard Practice for Press-Connect Joints with Seamless Copper and Copper Alloy Tube and Press Fittings ASTM A312 Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes

ASTM A554 Standard Specification For Welded Stainless Steel Mechanical Tubing

ASTM A778 Unannealed Austenitic Stainless Steel Tubular

AWWA C651 Standard for Disinfecting Water Mains

IAPMO: Uniform Mechanical Code (UMC)

IAPMO: Uniform Plumbing Code (UPC) ICC: International Plumbing Code (IPC)

ICC: International Mechanical Code (IMC)

MSS-SP-58 Pipe Hangers and Supports - Materials, Design and Manufacture

NSF_®-61-372 Drinking Water System Components-Health Effects

1.4 Quality Assurance

- A. Installer shall be a qualified installer, licensed within the jurisdiction, and familiar with the installation of stainless steel tube.
- B. The installation of stainless steel tube for hot and cold water distribution systems shall conform to the requirements of the ICC International Plumbing Code or IAPMO Uniform Plumbing Code. The installation of stainless steel tube in hydronic systems shall conform to the requirements of the ICC International Mechanical Code or the IAPMO Uniform Mechanical Code.

1.5 Delivery, Storage, and Handling

- A. Stainless steel tube shall be shipped to the job site on truck or in such a manner to protect the tube. The tube and fittings shall not be roughly handled during shipment. The tube and fittings shall be unloaded with reasonable care.
- B. Protect the stored tube from moisture and dirt. Elevate above grade. When stored inside, do not exceed the structural capacity of the floor.
- C. Protect fittings and piping from moisture and dirt.

SM-PP 0425 ProPress Stainless 9 of 26



1.6 Project Conditions

Verify length of tube required by field measurements.

1.7 Warranty

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

Part 2: Products

2.1 Manufactures

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

2.2 Material

- A. Tube standard: stainless steel tube shall conform to ASTM A312 or ASTM A554.
- B. Fitting standard: stainless steel fittings shall conform to the material requirements of ASTM A312 or ASTM A554.
- C. Press fitting: stainless steel press fittings shall conform to the material and sizing requirements of ASME A312 or ASTM A554. O-rings for stainless steel press fittings shall be EPDM or FKM, depending on the application.
- D. Threaded fittings: tube threads shall conform to ASME B1.20.1.
- E. Hanger standard: hangers and supports shall conform to MSS-SP-58.

2.3 Source Quality Control

All tube, fittings, and joining materials in contact with drinking water shall be listed by a third party agency to NSF 61.

Part 3: Execution

3.1 Examination

The installing contractor shall examine the stainless steel tube and fittings for defects and cracks. There shall be no defects of the tube or fittings. Any damaged tube or fittings shall be rejected.

3.2 Preparation

- A. Stainless steel tube shall be cut with a wheeled tube cutter or approved stainless steel tube cutting tool. The tube shall be cut square to permit proper joining with the fittings.
- B. Remove scale, slag, dirt, and debris from inside and outside of tube and fittings before assembly. The tube end shall be wiped clean and dry. The burrs on the tube shall be reamed with a deburring or reaming tool.

3.3 Installation General Locations

Plans indicate general location and arrangement of piping systems. Identified locations and arrangements are used to size tube and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated, except where deviations to layout are approved on coordination drawings.

3.4 Installation

- A. Pressure rating: install components having a pressure rating equal to or greater than the system operating pressure.
- B. Install piping free of sags, bends, and kinks.
- C. Change in direction: install fittings for changes in direction and branch connections.
- D. Press connections: stainless steel press fittings shall be made in accordance with the manufacturer's installation instructions. The tube shall be fully inserted into the fitting and the tube marked at the shoulder of the fitting. The fitting alignment shall be checked against the mark on the tube to assure the tube is fully engaged (inserted) in

SM-PP 0425 ProPress Stainless 10 of 26



- the fitting. The joints shall be pressed using the tool approved by the manufacturer.
- E. Threaded joints: threaded joints shall have pipe joint compound or teflon tape applied to the male threads only. Tighten joint with a wrench and backup wrench as required.
- F. Tube protection: provide protection against abrasion where stainless steel tube is in contact with other building members by wrapping with an approved tape, pipe insulation, or otherwise suitable method of isolation.
- G. Penetration protection: provide allowance for thermal expansion and contraction of stainless steel tube passing through a wall, floor, ceiling, or partition by wrapping with an approved tape or pipe insulation or by installing through an appropriately sized sleeve. Penetrations for fire resistant rated assemblies shall maintain the rating of the assembly.
- H. Backfill material: backfill material shall not include any ashes, cinders, refuse, stones, boulders, or other materials which can damage or break the tube or promote corrosive action in any trench or excavation in which tube is installed
- I. Horizontal support: install hangers for horizontal piping in accordance with local code or the following maximum spacing and minimum rod sizes.

Nominal Tube Size (in)	Stainless Steel Tube Max. Span (ft)	Min. Rod Diameter (in)
Up to ¾	10	3/8
1	10	3/8
11⁄4	10	3/8
1½	10	3/8
2	10	3/8
2½	11	1/2
3	12	1/2
4	14	5/8

All systems must be installed per local codes and/or standards and requirements. Consult the Viega technical support department before installing the system in other applications or applications with temperatures and/or pressures outside the stated ratings. Refer to Viega's Application Guide for more information.

- J. Vertical support: vertical stainless steel tube shall be supported at each floor or at 10 foot intervals.
- K. Galvanic corrosion: hangers and supports shall be either stainless steel or vinyl coated to prevent galvanic corrosion between the tube and the supporting member.
- L. Restraint: in seismic areas, stainless steel tube shall be installed to withstand all seismic forces.
- M. Identification: stainless steel tube systems shall be identified in accordance with the requirements of ASME A13.1.

3.5 Field Quality Control

- A. Viega ProPress Stainless includes Smart Connect® technology, a quick and easy way of identifying unpressed connections during the pressure testing process. This indentation is removed during the pressing process, creating a leak-free, permanent connection. Smart Connect technology provides identification of connections which have not been pressed prior to putting the system in to operation. Smart Connect technology may be pressure tested with air or water.
 - When testing with air, the pressure range is ½ psi to 45 psi maximum.
 - When testing with water, the pressure range is 15 psi to 85 psi maximum.
- B. The Smart Connect technology pressure test is not a substitute for local code required pressure testing of the piping system. Carry out the final piping system pressure test in accordance with local codes.

3.6 Cleaning (Potable Water Systems)

- A. Disinfection: the stainless steel hot and cold water distribution system shall be disinfected prior to being placed in service. The system shall be disinfected in accordance with AWWA C651 or the following requirements:
 - 1. The piping system shall be flushed with potable water until discolored water does not appear at any of the outlets.

SM-PP 0425 ProPress Stainless 11 of 26



- 2. The system shall be filled with a water chlorine solution containing between 50 and 200 parts per million of chlorine. The system shall be valved in the closed position and allowed to stand for 24 hours.
- 3. Following the standing time, the system shall be flushed with water until the chlorine is purged from the system.

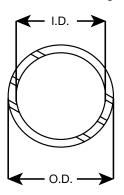
SM-PP 0425 ProPress Stainless 12 of 26



5 Dimensional Documents

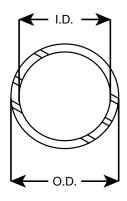
ProPress Stainless Fittings

ProPress Stainless Tubing - Model 4003



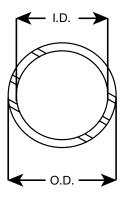
Part No. 316	Size (in)	O.D. (in)	I.D. (in)	Wall Thickness (in)	Length (ft)
82000	1/2	0.63	0.50	0.06	20
82005	3/4	0.88	0.75	0.06	20
82010	1	1.13	1.00	0.06	20
82015	11/4	1.38	1.26	0.06	20
82020	1½	1.63	1.50	0.06	20
82025	2	2.13	2.00	0.06	20

ProPress Stainless Tubing - Model 4007XL



Part No. 316	Size (in)	O.D. (in)	I.D. (in)	Wall Thickness (in)	Length (ft)
82042	21/2	2.63	2.47	0.08	20
82050	3	3.13	2.97	0.08	20
82055	4	4.13	3.97	0.08	20

ProPress 316 ECO Tubing - Models 4008 / 4008XL

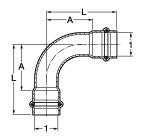


Part No. 316	Size (in)	O.D. (in)	I.D. (in)	Wall Thickness (in)	Length (ft)
386333	1/2	0.63	0.55	0.04	20
386343	3/4	0.88	0.78	0.05	20
386353	1	1.13	1.03	0.05	20
386363	11/4	1.38	1.26	0.06	20
386373	1½	1.63	1.51	0.06	20
386383	2	2.13	2.01	0.06	20
386473	21/2	2.63	2.47	0.08	20
386483	3	3.13	2.97	0.08	20
386493	4	4.13	3.97	0.08	20

SM-PP 0425 ProPress Stainless 13 of 26

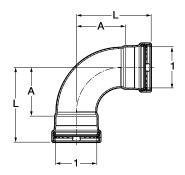


ProPress Stainless 90° Elbow P x P - Model 4016



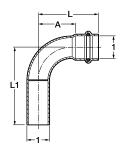
Part No.	Size (in)	A (in)		L (in)
316	1	Dec	Frac	Dec	Frac
80400	1/2	1.12	11/8	1.87	17⁄8
80405	3/4	1.73	1¾	2.64	25/8
80410	1	1.87	17⁄8	2.78	23/4
80415	11⁄4	1.65	1%	2.69	211/16
80420	11/2	1.98	2	3.41	37⁄16
80425	2	2.55	29/16	4.14	41/8

ProPress Stainless 90° Elbow P x P - Model 4016XL



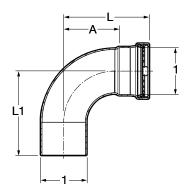
Part No.	Size (in)	Α ((in)	L (in)		
316	1 1	Dec	Frac	Dec	Frac	
80430	2½ x 2½	3.19	33/16	4.88	47⁄8	
80435	3 x 3	3.76	3¾	5.73	5¾	
80440	4 x 4	4.86	47/8	7.22	71/4	

ProPress Stainless 90° Elbow FTG x P - Model 4016.1



Part No.	Size (in)	A	(in)	L (in)	L1 (in)	
316	1	Dec	Frac	Dec	Frac	Dec	Frac
80490	1/2	1.12	11/8	1.87	1%	1.99	2
80495	3/4	1.45	17⁄16	2.35	2¾	3.03	3
80500	1	1.87	1%	2.78	2¾	3.27	31/4
80505	11/4	1.65	1%	2.69	211/16	2.76	2¾
80510	1½	1.98	2	3.41	37⁄16	3.48	31/2
80515	2	2.55	29/16	4.14	41/8	4.20	43/16

ProPress Stainless 90° Street Elbow P x FTG - Model 4016.1XL

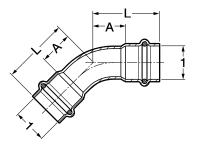


Part No. Size (in)		Α (A (in)		(in)	L1 (in)	
316	1 1	Dec	Frac	Dec	Frac	Dec	Frac
80520	2½ x 2½	3.19	33/16	4.88	47/8	4.80	413/16
80525	3 x 3	3.76	3¾	5.73	53/4	5.63	5%
80530	4 x 4	4.86	47/8	7.22	71/4	7.13	71/8

SM-PP 0425 ProPress Stainless 14 of 26

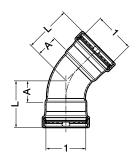


ProPress Stainless 45° Elbow P x P - Model 4026



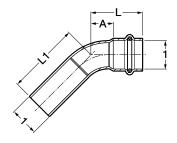
Part No.	Size (in)	Α ((in)	L (in)
316	1	Dec	Frac	Dec	Frac
80445	1/2	0.57	9/16	1.32	15⁄16
80450	3/4	0.87	7/8	1.77	13/4
80455	1	0.89	7/8	1.79	1 ¹³ / ₁₆
80460	11⁄4	0.69	11/16	1.72	13/4
80465	11/2	0.82	¹³ / ₁₆	2.25	21/4
80470	2	1.06	11/16	2.64	25/8

ProPress Stainless 45° Elbow P x P - Model 4026XL



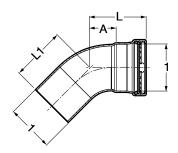
Part No.	Size (in)	Α ((in)	L (in)		
316	1 1	Dec	Frac	Dec	Frac	
80475	2½ x 2½	1.48	11/2	3.18	33/16	
80480	3 x 3	1.73	13/4	3.70	311/16	
80485	4 x 4	2.19	23/16	4.55	49/16	

ProPress Stainless 45° Elbow FTG x P - Model 4026.1



Part No.	Size (in)	(in) A (in)		L (in)	L1 (in)		
316	1	Dec	Frac	Dec	Frac	Dec	Frac	
80535	1/2	0.57	9/16	1.32	1 5⁄16	1.46	17⁄16	
80540	3/4	0.69	11/16	1.59	1%16	2.27	21/4	
80545	1	0.89	7/8	1.79	1 13/16	2.28	21/4	
80550	11/4	0.69	11/16	1.72	13⁄4	1.79	1 13/16	
80555	1½	0.82	13/16	2.25	21/4	2.32	25/16	
80560	2	1.06	11/16	2.64	2%	2.71	211/16	

ProPress Stainless 45° Street Elbow P x FTG - Model 4026.1XL

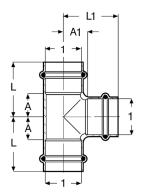


Part No. Size (in)		Α (A (in)		(in)	L1 (in)		
316	1 1	Dec	Frac	Dec	Frac	Dec	Frac	
80565	2½ x 2½	1.48	11/2	3.18	33/16	3.10	31/8	
80570	3 x 3	1.73	13/4	3.70	311/16	3.60	35/8	
80575	4 x 4	2.19	23/16	4.55	47/16	4.45	47/16	

SM-PP 0425 ProPress Stainless 15 of 26

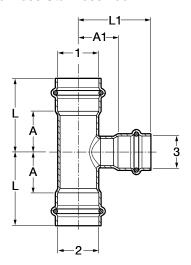


ProPress Stainless Tee P x P x P - Model 4018



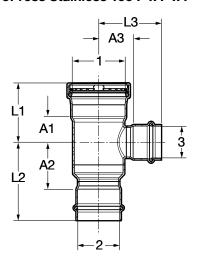
Part No.	Size (in)	Α (in)	A1 (in)		L (in)		L1 (in)	
316	1	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80580	1/2	0.75	3/4	0.87	7/8	1.50	11/2	1.61	1 %
80585	3/4	0.96	¹⁵ / ₁₆	0.96	¹⁵ / ₁₆	1.86	11//8	1.86	11//8
80590	1	1.13	11/8	1.18	1 3⁄16	2.04	21/16	2.09	21/16
80595	11/4	1.04	11/16	1.05	11/16	2.08	21/16	2.07	21/16
80600	11/2	1.26	11/4	1.22	11/4	2.69	211/16	2.65	2%
80605	2	1.54	1 %16	1.53	11/2	3.12	31/8	3.11	31/8

ProPress Stainless Tee P x P x P - Model 4018



Part No.	Size (in)	Α	(in)	A1	(in)	L (in)	L1 (in)	
316	1 2 3	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80630	34 x 34 x 1/2	0.96	¹⁵ / ₁₆	0.98	1	1.86	1%	1.73	1¾
80640	1 x 1 x ½	1.13	11/8	1.13	11/8	2.04	21/16	1.88	11//8
80650	1 x 1 x ¾	1.13	11/8	1.10	11/8	2.04	21/16	2.01	2
80660	1¼ x 1¼ x ½	0.75	3/4	1.28	11/4	1.78	13/4	2.03	2
80670	11/4 x 11/4 x 3/4	0.83	¹³ / ₁₆	1.25	11/4	1.86	11//8	2.16	23/16
80680	1¼ x 1¼ x 1	1.04	11/16	1.33	1 5⁄16	2.08	21/16	2.24	21/4
80690	1½ x 1½ x ½	1.26	11/4	1.39	1%	2.69	211/16	2.14	21/8
80700	1½ x 1½ x ¾	1.26	11/4	1.37	1%	2.69	211/16	2.27	21/4
80710	1½ x 1½ x 1	1.26	11/4	1.44	1 ½16	2.69	211/16	2.35	2%
80720	2 x 2 x ½	0.71	11/16	1.65	1%	2.30	25/16	2.40	2%
80730	2 x 2 x ¾	0.71	11/16	1.63	1%	2.30	25/16	2.53	21/2
80740	2 x 2 x 1	0.83	¹³ / ₁₆	1.70	1 ¹¹ / ₁₆	2.41	21/16	2.61	25%
80750	2 x 2 x 1½	1.15	11/8	1.49	1½	2.73	23/4	2.91	215/16

ProPress Stainless Tee P x P x P - Model 4018XL

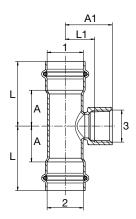


Part No.	Size (in)	A 1	(in)	A2	(in)	А3	(in)	L1	(in)	L2	(in)	L3	(in)
316	1 2 3	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80753	2½ x 2 x 1½	1.30	15/16	2.37	23/8	1.74	1¾	2.99	3	3.96	315/16	3.17	33/16
80752	2½ x 2 x 2	1.54	19⁄16	2.69	211/16	1.78	1¾	3.23	31/4	4.27	41/4	3.37	3%
80751	2½ x 2½ x 1½	1.30	15/16	1.30	15/16	1.74	1¾	2.99	3	2.99	3	3.17	33/16
80760	2½ x 2½ x 2	1.54	19⁄16	1.54	19⁄16	1.78	13/4	3.23	31/4	3.23	31/4	3.37	3%
80610	2½ x 2½ x 2½	1.83	1 13/16	1.83	1 13/16	1.87	11//8	3.52	31/2	3.52	31/2	3.56	39/16
80782	3 x 3 x 11/4	1.24	11/4	1.24	11/4	1.96	115/16	3.21	33/16	3.21	33/16	2.99	3
80781	3 x 3 x 1½	1.32	15/16	1.32	15/16	2.00	2	3.29	35/16	3.29	35/16	3.43	37⁄16
80770	3 x 3 x 2	1.56	19⁄16	1.56	19⁄16	2.04	21/16	3.52	31/2	3.52	31/2	3.62	35/8
80780	3 x 3 x 2½	1.85	11//8	1.85	11//8	2.13	21/8	3.82	313/16	3.82	313/16	3.82	313/16
80615	3 x 3 x 3	2.07	21/16	2.07	21/16	2.15	21/8	4.04	41/16	4.04	41/16	4.11	41/8
80791	4 x 4 x 1½	1.36	1%	1.36	1%	2.51	21/2	3.72	3¾	3.72	3¾	3.94	315/16
80790	4 x 4 x 2	1.59	19⁄16	1.59	19⁄16	2.55	29/16	3.96	315/16	3.96	315/16	4.13	41/8
80800	4 x 4 x 2½	1.89	11//8	1.89	11//8	2.64	25/8	4.25	41/4	4.25	41/4	4.33	45/16
80810	4 x 4 x 3	2.11	21/8	2.11	21/8	2.66	211/16	4.47	41/2	4.47	41/2	4.63	4%
80620	4 x 4 x 4	2.60	25/8	2.60	25/8	2.66	211/16	4.96	415/16	4.96	415/16	5.02	5

SM-PP 0425 ProPress Stainless 16 of 26

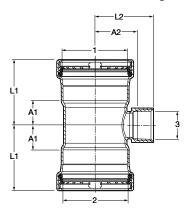


ProPress Stainless Reducing Tee P x P x FPT – Model 4017.2



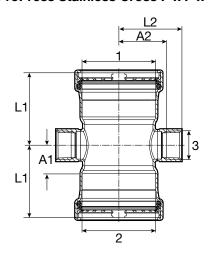
Part No.	Size (in)	Α ((in)	A1	(in)	L(in)	L1 (in)	
316	1 2 3	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80820	34 x 34 x 1/2 FPT	0.96	¹⁵ / ₁₆	1.26	11/4	1.86	11//8	0.76	3/4
80830	34 x 34 x 34 FPT	0.96	¹⁵ / ₁₆	1.34	15/16	1.86	11//8	0.78	3/4
80840	1 x 1 x ½ FPT	1.13	11/8	1.41	17/16	2.04	21/16	0.87	7/8
80850	1 x 1 x ¾ FPT	1.13	11/8	1.48	11/2	2.04	21/16	0.93	¹⁵ /16
80860	1¼ x 1¼ x ½ FPT	0.75	3/4	1.56	19/16	1.78	13/4	1.02	1
80870	1¼ x 1¼ x ¾ FPT	0.83	¹³ / ₁₆	1.63	1 5⁄8	1.86	11//8	1.08	11/16
80880	1¼ x 1¼ x 1 FPT	1.04	11/16	1.75	13/4	2.08	21/16	1.09	11/16
80890	1½ x 1½ x ½ FPT	1.26	11/4	1.67	111/16	2.69	211/16	1.13	11/8
80900	1½ x 1½ x ¾ FPT	1.26	11/4	1.75	13/4	2.69	211/16	1.19	13/16
80910	1½ x 1½ x 1 FPT	1.26	11/4	1.87	1 1//8	2.69	211/16	1.20	1 3⁄16
80920	2 x 2 x ½ FPT	0.71	11/16	1.93	1 15/16	2.30	25/16	1.39	1%
80930	2 x 2 x ¾ FPT	0.71	11/16	2.01	2	2.30	25/16	1.45	17⁄16
80940	2 x 2 x 1 FPT	0.83	¹³ / ₁₆	2.13	21/8	2.41	27/16	1.50	1½

ProPress Stainless Reducing Tee P x P x FPT - Model 4017.2XL



Part No.	Size (in)		A 1	(in)	A2	(in)	L1	(in)	L2 (in)		
316	1	2	3	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80950	2½ x	21/2	x ¾	1.02	1	1.73	13/4	2.72	23/4	2.28	21/4
80960	21/2 >	< 2½	x 1	1.02	1	1.74	13/4	2.72	23/4	2.38	23/8
80970	3 x	3 x	3/4	1.04	11/16	1.98	2	3.01	3	2.54	29/16
80980	3 >	(3 x	1	1.04	11/16	1.98	2	3.01	3	2.64	2%
80990	4 x	4 x	3/4	1.08	11/16	2.50	21/2	3.44	37⁄16	3.05	31/16
81000	4 >	(4 x	1	1.08	11/16	2.49	21/2	3.44	37⁄16	3.15	31/8

ProPress Stainless Cross P x P x FPT x FPT - Model 4044.2XL

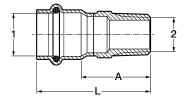


Part No.	Size (in)		Size (in) A1 (in)		A2	(in)	L1	(in)	L2 (in)		
316	1	2	3	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
80067	21/2 2	x 2½	x ¾	1.02	1	1.73	13/4	2.62	25/8	2.28	21/4
80069	3 :	x 3 x	3/4	1.04	11/16	1.98	2	3.01	3	2.54	29/16
80068	4 :	x 4 x	3/4	1.08	11/16	2.50	21/2	3.44	37/16	3.05	31/16

SM-PP 0425 ProPress Stainless 17 of 26

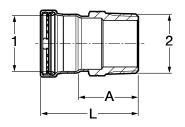


ProPress Stainless Adapter P x MPT - Model 4011



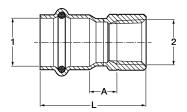
Part No.	Size (in)	A ((in)	L (L (in)		
316	1 2	Dec	Frac	Dec	Frac		
80010	½ x ½ MPT	1.37	1%	2.11	21/8		
80015	½ x ¾ MPT	1.44	17⁄16	2.19	23/16		
80020	34 x 1/2 MPT	1.42	17⁄16	2.32	25/16		
80025	34 x 34 MPT	1.46	17⁄16	2.36	23/8		
80030	34 x 1 MPT	1.71	1 ¹¹ ⁄ ₁₆	2.62	25/8		
80035	1 x ¾ MPT	1.47	11/2	2.37	23/8		
80040	1 x 1 MPT	1.74	1¾	2.65	25/8		
80045	1¼ x 1¼ MPT	1.89	17⁄8	2.92	215/16		
80050	1½ x 1½ MPT	1.94	1 15/16	3.37	3%		
80055	2 x 2 MPT	2.10	21/8	3.68	311/16		

ProPress Stainless Adapter P x MPT - Model 4011XL



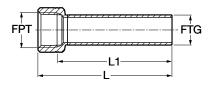
Part No.	Size (in)	Α	(in)	L (in)				
316	1 2	Dec	Frac	Dec	Frac			
80060	2½ x 2½ MP	T 2.99	3	4.69	411/16			
80065	3 x 3 MPT	3.09	31/16	5.06	51/16			
80070	4 x 4 MPT	3.13	31/8	5.49	51/2			

ProPress Stainless Adapter P x FPT - Model 4012



Part No.	Size (in)	A ((in)	L (in)
316	1 2	Dec	Frac	Dec	Frac
80080	½ x ½ FPT	0.54	9⁄16	1.82	1 13/16
80085	34 x 1/2 FPT	0.51	1/2	1.95	1 15/16
80090	34 x 34 FPT	0.57	9⁄16	2.03	2
80092	1 x ½ FPT	0.62	5/8	2.06	21/16
80095	1 x ¾ FPT	0.62	5/8	2.08	21/16
80100	1 x 1 FPT	0.61	5/8	2.18	23/16
80105	1¼ x 1¼ FPT	0.62	5/8	2.33	25/16
80110	1½ x 1¼ FPT	0.69	11/16	2.80	213/16
80115	1½ x 1½ FPT	0.69	11/16	2.80	213/16
80075	2 x 1 FPT	0.75	3/4	2.99	3
80120	2 x 1½ FPT	0.73	3/4	2.99	3
80125	2 x 2 FPT	0.71	11/16	2.99	3

ProPress 316 Instrument Adapter - Model 4012.5

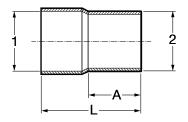


Part No.	Size (in)	L ((in)	L1 (in)				
316	FPT x FTG	Dec	Frac	Dec	Frac			
80126	½ x ½	4.06	41/16	3.52	31/2			
80127	3⁄4 x 3⁄4	3.94	315/16	3.38	3%			

SM-PP 0425 ProPress Stainless 18 of 26

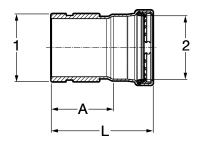


ProPress Stainless Adapter BW (IPS) x FTG - Model 4013.1XL



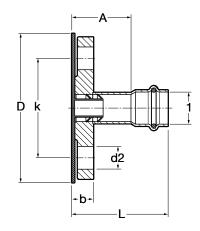
Part No.	Size	e (in)	Α ((in)	L (in)			
316	1 (IPS)	2 (CTS)	Dec	Frac	Dec	Frac		
80081	21/2 ID	2½ OD	2.32	25/16	4.37	43/8		
80082	3 ID	3 OD	2.60	25/8	4.57	49/16		
80083	4 ID	4 OD	2.99	3	5.16	53/16		

ProPress Stainless Adapter Groove x P - Model 4013.2XL



Part No.	Size (ir	1)	A	(in)	L (in)			
316	1 G (IPS)	2	Dec	Frac	Dec	Frac		
80064	21/2	21/2	2.64	25/8	4.33	45/16		
80061	3	3	2.66	211/16	4.63	4%		
80063	4	4	2.66	211/16	5.02	5		

ProPress Stainless Adapter Flange P x Flange - Model 4059

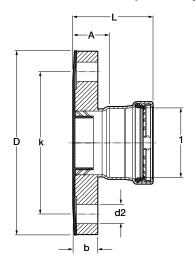


Part	Size	b		A L			k		D		d2		
No.	(in)	(i	n)	(in)		(in)		(in)		(in)		(in)	
316	1	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
81035	1/2	0.46	7/16	1.72	1¾	2.46	21/16	2.36	23/8	3.54	3%16	0.63	5/8
81040	3/4	0.52	1/2	1.66	111/16	2.57	29/16	2.76	23/4	3.94	315/16	0.63	5/8
81045	1	0.58	9/16	1.60	1%	2.51	21/2	3.11	31/8	4.33	45/16	0.63	5/8
81050	11/4	0.64	5/8	1.66	111/16	2.69	211/16	3.50	31/2	4.53	41/2	0.63	5/8
81055	11/2	0.70	11/16	1.41	17⁄16	2.83	213/16	3.86	31/8	4.92	415/16	0.63	5/8
81060	2	0.77	3/4	2.30	25/16	3.86	3%	4.76	43/4	5.91	515/16	0.75	3/4

SM-PP 0425 ProPress Stainless 19 of 26

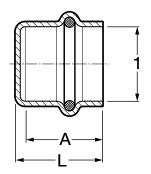


ProPress Stainless Adapter Flange P x Flange - Model 4059XL



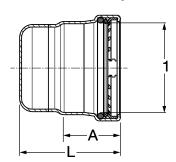
Part	Size	b		о А		L		k		D		d2	
No.	(in)	(in)		(in)		(in)		(in)		(in)		(in)	
316	1	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
81065	2½	0.89	7/8	1.35	1%	3.04	31/16	5.51	51/2	7.09	71/16	0.75	3/4
81070	3	0.96	¹⁵ / ₁₆	1.39	1%	3.40	3%	5.98	6	7.48	71/2	0.75	3/4
81075	4	0.96	¹⁵ / ₁₆	1.40	1%	3.77	3¾	7.52	71/2	9.06	91/16	0.75	3/4

ProPress Stainless Cap P - Model 4056



Part No.	Size (in)	Α ((in)	L (in)		
316	1	Dec	Frac	Dec	Frac	
80355	1/2	0.70	11/16	0.82	¹³ ⁄ ₁₆	
80360	3⁄4	0.93	¹⁵ /16	1.04	11/16	
80365	1	0.94	¹⁵ /16	1.06	11/16	
80370	11⁄4	1.04	11/16	1.20	13/16	
80375	1½	1.44	17⁄16	1.59	1%16	
80380	2	1.59	19⁄16	1.74	13/4	

ProPress Stainless Cap P - Model 4056.1XL

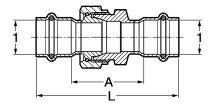


Part No.	Size (in)	A ((in)	L (in)		
316	1	Dec	Frac	Dec	Frac	
80385	21/2	1.69	111/16	3.01	3	
80390	3	1.97	2	3.33	35/16	
80395	4	2.36	2%	3.72	3¾	

SM-PP 0425 ProPress Stainless 20 of 26

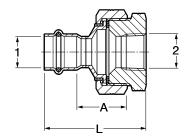


ProPress Stainless Union P x P - Model 4060



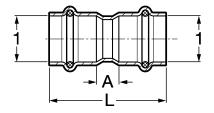
Part No.	Size (in)	Α ((in)	L ((in)
316	1	Dec	Frac	Dec	Frac
81005	1/2	1.87	11/8	3.37	3%
81010	3⁄4	1.89	17⁄8	3.70	311/16
81015	1	2.25	21/4	4.06	41/16
81020	11⁄4	2.25	21/4	4.31	45/16
81025	11/2	2.68	211/16	5.53	51/2
81030	2	2.95	2 ¹⁵ / ₁₆	6.12	61/8

ProPress 316 Dielectric Union P x FPT - Model 4067



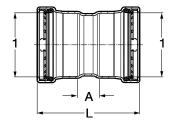
Part No.	Size (in)	A (in)		L (in)		
316	1 2	Dec	Frac	Dec	Frac	
80071	½ x ½ FPT	1.28	11/4	2.57	29/16	
80078	34 x 34 FPT	1.39	1%	2.85	27/8	
80073	1 x 1 FPT	1.25	11⁄4	2.81	213/16	
80074	1¼ x 1¼ FPT	1.33	1 5⁄16	3.04	31/16	
80076	1½ x 1½ FPT	1.54	19⁄16	3.64	35%	
80077	2 x 2 FPT	1.72	13⁄4	4.00	4	

ProPress Stainless Coupling with Stop P x P - Model 4015



Part No.	Size (in)	A (in)		L (in)		
316	1	Dec	Frac	Dec	Frac	
80265	1/2	0.35	3/8	1.85	17⁄8	
80270	3/4	0.43	7⁄16	2.24	21/4	
80275	1	0.39	3/8	2.20	23/16	
80280	11⁄4	0.47	1/2	2.54	29/16	
80285	11/2	0.36	3/8	3.21	33/16	
80290	2	0.47	1/2	3.64	35/8	

ProPress Stainless Coupling with Stop P x P - Model 4015XL

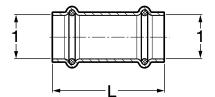


Part No.	Size (in)	A (in)		L ((in)
316	1 1	Dec	Frac	Dec	Frac
80295	2½ x 2½	0.95	¹⁵ / ₁₆	4.33	45/16
80300	3 x 3	0.98	1	4.92	415/16
80305	4 x 4	1.06	11/16	5.79	5 ¹³ / ₁₆

SM-PP 0425 ProPress Stainless 21 of 26

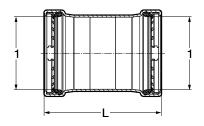


ProPress Stainless Coupling No Stop P x P - Model 4015.5



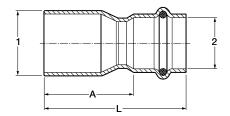
Part No.	Size (in)	L (in)
316	1	Dec	Frac
80310	1/2	1.87	1%
80315	3⁄4	2.27	21/4
80320	1	2.19	23/16
80325	1¼	2.54	29/16
80330	1½	3.27	31/4
80335	2	3.66	311/16

ProPress Stainless Coupling No Stop P x P - Model 4015.5XL



Part No.	Size (in)	L ((in)
316	1 1	Dec	Frac
80340	2½ x 2½	4.33	45/16
80345	3 x 3	4.92	415/16
80350	4 x 4	5.79	5 ¹³ / ₁₆

ProPress Stainless Reducer FTG x P - Model 4015.1

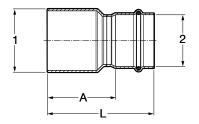


Part No.	Size (in)	A	(in)	L ((in)
316	1 2	Dec	Frac	Dec	Frac
80160	¾ x ½	1.54	19⁄16	2.28	21/4
80165	1 x ½	1.84	1 ¹³ ⁄ ₁₆	2.59	29/16
80170	1 x ¾	1.56	1%16	2.46	27/16
80175	1¼ x ½	2.25	21/4	3.00	3
80180	1¼ x ¾	1.93	1 15/16	2.83	213/16
80185	1¼ x 1	1.81	1 ¹³ ⁄ ₁₆	2.72	23/4
80190	1½ x ½	3.03	3	3.78	3¾
80195	1½ x ¾	2.64	2%	3.54	39/16
80200	1½ x 1	2.50	21/2	3.41	37⁄16
80205	1½ x 1¼	2.26	21/4	3.29	35/16
80210	2 x ½	3.75	3¾	4.50	41/2
80215	2 x 3/4	3.48	31/2	4.39	43/8
80220	2 x 1	3.08	31/16	3.99	4
80225	2 x 11/4	2.94	2 ¹⁵ / ₁₆	3.97	4
80230	2 x 1½	2.59	29/16	4.02	4

SM-PP 0425 ProPress Stainless 22 of 26

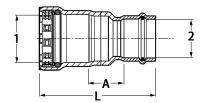


ProPress Stainless Reducer FTG x P - Model 4015.1XL



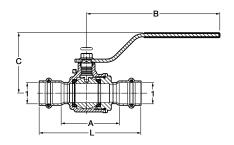
Part No.	Size (in)	A (in)		L (in)
316	1 2	Dec	Frac	Dec	Frac
80235	2½ x 2	2.85	27/8	4.43	47⁄16
80240	3 x 2	3.38	3%	4.96	415/16
80245	3 x 2½	3.21	33/16	4.90	47/8
80250	4 x 2	4.26	41/4	5.85	57/8
80255	4 x 2½	4.09	41/16	5.79	5 ¹³ / ₁₆
80260	4 x 3	3.88	37⁄8	5.85	57⁄8

ProPress to MegaPress Transition Coupling, Stainless Steel, P x P - Model 5113



Part No.	Size (in)	Α	(in)	L (in)		
316	1 (IPS) 2 (CTS)	Dec	Frac	Dec	Frac	
90465	½ x ½	1.07	11/16	2.93	215/16	
90470	3/4 X 3/4	1.07	11/16	3.17	33/16	
90475	1 x 1	1.11	11/8	3.40	33/8	
90890	1¼ x 1¼	1.11	11/8	4.00	4	
90485	1½ x 1½	1.21	13/16	4.55	49/16	
90490	2 x 2	1.23	11⁄4	4.82	413/16	

ProPress 316 Ball Valve P x P - Model 4070



Part No.	Size (in)	Α ((in)	L ((in)	В	(in)	C	(in)
316	1	Dec	Frac	Dec	Frac	Dec	Frac	Dec	Frac
81080	1/2	2.06	21/16	3.56	39/16	5.55	59/16	2.44	21/16
81085	3/4	2.42	21/16	4.23	41/4	5.55	59/16	2.52	21/2
81090	1	2.76	23/4	4.59	49/16	5.55	59/16	2.68	211/16
81095	11/4	3.17	33/16	5.23	51/4	6.10	61/8	3.09	31/16
81100	1½	3.65	35/8	6.50	61/2	6.10	61/8	3.34	35/16
81105	2	4.15	41/8	7.32	75/16	6.10	61/8	3.66	311/16

SM-PP 0425 ProPress Stainless 23 of 26



6 Limited Warranty

Viega ProPress Stainless Tubing, Fittings, and Valves

Subject to the conditions and limitations in this Limited Warranty, Viega LLC (VIEGA) warrants to end users, installers, and distribution houses in the United States and Canada, that its ProPress Stainless tubing and fittings with application appropriate sealing element and when properly installed in non-industrial and non-marine applications and under specified operating conditions of use, will be free of failure caused by manufacturing defect for a period of ten (10) years from date of installation and that its ProPress Stainless valves, when properly installed in non-industrial and non-marine applications and under normal conditions of use, will be free of failure caused by manufacturing defect for a period of five (5) years from date of installation.

Under this Limited Warranty, you only have a right to a remedy if the failure or leak resulted from a manufacturing defect in the Viega product covered by this warranty and the failure or leak occurred during the warranty period. You do not have a remedy under this warranty and the warranty does not apply if the failure or any resulting damage is caused by (1) components other than those manufactured or sold by Viega; (2) not designing, installing, inspecting, testing, or maintaining the Viega product in accordance with Viega's installation instructions and other specifications in effect at the time of the installation; applicable code requirements: and accepted industry practice; (3) use of the Viega product under non-recommended system operating conditions; improper handling and protection of the Viega product prior to, during, and after installation; inadequate freeze protection; and exposure to environmental conditions, water pressures, temperatures, or applications outside acceptable operating conditions; (4) acts of nature, such as, but not limited to, earthquakes, fire, flood, lightning, or weather damage, or (5) external environmental causes, such as water quality variations, aggressive water, or other external chemical or physical conditions.

In the event of a leak or other failure of the parts covered by this warranty, it is the responsibility of the end user to take appropriate measures to mitigate any damage, to include making timely repairs. Only if the warranty applies will Viega be responsible for the remedy under this warranty. The part or parts which you claim failed should be kept and Viega contacted by writing to the address below or telephoning 1-800-976-9819 within thirty (30) days after the leak or other failure and identifying yourself as having a warranty claim. You should be prepared to ship, at your expense, the product which you claim failed due to a manufacturing defect, and document the date of installation and the amount of the repair or replacement if performed by you. Within a reasonable time after receiving the product, Viega will investigate the reasons for the failure, which includes the right to inspect the product at a Viega location and reasonable access to the site of damage. Viega will notify you in writing of the results of its review.

In the event that Viega determines that the failure or leak was the result of a manufacturing defect in the Viega product covered by this warranty and that this warranty applies, the EXCLUSIVE AND ONLY REMEDY under this warranty shall be the reimbursement for reasonable charges for repair or replacement of the Viega product itself. VIEGA SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR OTHER DAMAGE (FOR EXAMPLE, ECONOMIC LOSS, WATER OR PROPERTY OR MOLD REMEDIATION) UNDER ANY LEGAL THEORY AND WHETHER ASSERTED BY DIRECT ACTION, FOR CONTRIBUTION OR INDEMNITY OR OTHERWISE.

THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Other than this Limited Warranty, Viega does not authorize any person or firm to create for it any other obligation or liability in connection with its products.

This Limited 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.

SM-PP 0425 ProPress Stainless 24 of 26



Limited Warranty

Viega Metal Systems for Industrial Applications

Industrial applications are defined as non-residential and non-commercial applications not normally accessible to the general public, including manufacturing, mining, process or fabrication environments.

Subject to the terms and conditions of this Limited Warranty, Viega LLC (Viega) warrants to end users, installers and distribution houses that its Viega metal press products (Viega product) when properly installed in industrial applications shall be free from failure caused by manufacturing defects for a period of two (2) years from date of installation.

Under this Limited Warranty, you only have a right to a remedy if the failure or leak resulted from a manufacturing defect in the Viega product and the failure or leak occurs during the warranty period. You do not have a remedy under this warranty and the warranty remedy does not apply if the failure or any resulting damage is caused by (1) components other than those sold by Viega; (2) not designing, installing, inspecting, testing, or maintaining the Viega product in accordance with Viega's installation and product instructions in effect at the time of installation and other specifications and approvals applicable to the installation; (3) improper handling and protection of the Viega product prior to, during and after installation, inadequate freeze protection, or exposure to environmental or operating conditions not recommended for the application; or (4) acts of nature, such as, but not limited to earthquakes, fire, or weather damage. Final approval as to use compatibility to a specific process or fluid application is the responsibility of the engineer of record or responsible design/facilities personnel and this Limited Warranty only applies to manufacturing defects in the Viega Product.

In the event of a leak or other failure in the Viega product covered by this warranty, it is the responsibility of the end user to take appropriate measures to diminish any damage, to include making timely repairs. Only if the warranty applies will Viega be responsible for the remedy under this warranty. The part or parts which you claim failed should be kept and Viega contacted by writing to the address below or telephoning 1-800-976-9819 within

thirty (30) calendar days after the leak or other failure and identifying yourself as having a warranty claim. You should be prepared to ship, at your expense, the product which you claim failed due to a manufacturing defect, document the date of installation, and the amount of the repair or replacement if performed by you. Within a reasonable time after receiving the product, Viega will investigate the reasons for the failure, which includes the right to inspect the product at a Viega location and reasonable access to the site of damage. Viega will notify you in writing as to the results of its review.

In the event that Viega determines that the failure or leak was the result of a manufacturing defect in the Viega Product covered by this warranty and to which this warranty applies, the EXCLUSIVE AND ONLY REMEDY under this warranty shall be the reimbursement for reasonable charges for repair or replacement of the Viega Product itself. VIEGA SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR OTHER DAMAGE (FOR EXAMPLE, ECONOMIC LOSS, WATER OR PROPERTY OR MOLD REMEDIATION) UNDER ANY LEGAL THEORY AND WHETHER ASSERTED BY DIRECT ACTION, FOR CONTRIBUTION OR INDEMNITY OR OTHERWISE.

THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR ANY STATUTE OF LIMITATIONS RELATING TO SUCH WARRANTIES. Other than this Limited Warranty, Viega does not authorize any person or firm to create for it any other obligation or liability in connection with its products.

This Limited 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.

SM-PP 0425 ProPress Stainless 25 of 26

Limited Warranty

Viega Marine Applications

Marine applications are defined as mobile structures used to navigate water or stationary structures in water.

Subject to the terms and conditions of this Limited Warranty, Viega LLC (Viega) warrants to end users, installers and distribution houses that its Viega metal press products (Viega product) when properly installed in approved marine applications and other products sold by Viega LLC when properly installed in marine applications in accordance with our listings shall be free from failure caused by manufacturing defects for a period of two (2) years from date of installation. This warranty applies only to approved applications. Installations that are not approved shall not be covered by this warranty and shall not be the responsibility of Viega LLC.

Under this Limited Warranty, you only have a right to a remedy if the failure or leak resulted from a manufacturing defect in the Viega product and the failure or leak occurs during the warranty period. You do not have a remedy under this warranty and the warranty remedy does not apply if the failure or any resulting damage is caused by (1) components other than those sold by Viega; (2) not designing, installing, inspecting, testing, or maintaining the Viega product in accordance with Viega's installation and product instructions in effect at the time of installation and other specifications and approvals applicable to the installation; (3) improper handling and protection of the Viega product prior to, during and after installation, inadequate freeze protection, or exposure to environmental or operating conditions not recommended for the application; or (4) acts of nature, such as, but not limited to earthquakes, fire, or weather damage. Final approval as to use compatibility to a specific process or fluid application is the responsibility of the engineer of record or responsible design/facilities personnel and this Limited Warranty only applies to manufacturing defects in the Viega Product.

In the event of a leak or other failure in the Viega product covered by this warranty, it is the responsibility of the end user to take appropriate measures to diminish any damage, to include making timely repairs. Only if the warranty applies will Viega be responsible for the remedy

under this warranty. The part or parts which you claim failed should be kept and Viega contacted by writing to the address below or telephoning 1-800-976-9819 within thirty (30) calendar days after the leak or other failure and identifying yourself as having a warranty claim. You should be prepared to ship, at your expense, the product which you claim failed due to a manufacturing defect, document the date of installation, and the amount of the repair or replacement if performed by you. Within a reasonable time after receiving the product, Viega will investigate the reasons for the failure, which includes the right to inspect the product at a Viega location and reasonable access to the site of damage. Viega will notify you in writing as to the results of its review.

In the event that Viega determines that the failure or leak was the result of a manufacturing defect in the Viega Product covered by this warranty and to which this warranty applies, the EXCLUSIVE AND ONLY REMEDY under this warranty shall be the reimbursement for reasonable charges for repair or replacement of the Viega Product itself. VIEGA SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR OTHER DAMAGE (FOR EXAMPLE, ECONOMIC LOSS, WATER OR PROPERTY OR MOLD REMEDIATION) UNDER ANY LEGAL THEORY AND WHETHER ASSERTED BY DIRECT ACTION, FOR CONTRIBUTION OR INDEMNITY OR OTHERWISE.

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This Limited 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.

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