



December 18, 2013

Revised Copy

VIEGA LLC
DAVID OVERBY
4240 N COTTONWOOD LANE
PLYMOUTH MN 55441

VIEGA LLC
DAVID OVERBY
301 N MAIN 9TH FLOOR
WICHITA KS 67202

Re: Description: PIPES AND FITTINGS, STAINLESS STEEL
Manufacturer: VIEGA LLC
Product Name: VIEGA PROGRESS STAINLESS 316 PIPE AND FITTINGS
Model Number(s): 1/2 - 4" USING EPDM ELASTOMERIC SEALS
Product File No: 20130363

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an alternate approval to s. SPS 384.40 (15) and Table SPS 384.30-8 based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of December 2018.

This approval supersedes the approval issued on May 17, 2008 under product file number 20080565.

This alternate approval is contingent upon compliance with the following stipulation(s):

- Approval is issued for this product because the design of the product meets the intent of s. SPS 384.40 (15), Wis. Adm. Code that requires mechanical compression type joints for water supply which use flexible elastomeric seals to be suitable for potable water. The intent of the code is met since this product provides an acceptable elastomeric seal.
- This product shall be installed in accordance to manufacture's specifications. Please see attachment or:
http://www.viega.us/cps/rde/xbcr/en-us/SM-PPS_1012.pdf
- The maximum allowable water velocity through this piping system is 8 feet per second (fps).

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,



Glen W. Schlueter
Environmental Engineer - Plumbing Product Reviewer
Department of Safety and Professional Services
Division of Industry Services
Bureau of Technical Services
(608) 267-1401 Phone
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Viega ProPress for Stainless System

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System Data Sheet

System Description

Viega ProPress for stainless systems are safe, reliable and economical stainless steel pipe installation systems that use modern cold press connection technology for a wide assortment of fittings and pipe, in dimensions ranging from ½" to 4".

Operating Parameters

- Operating pressure 200 psi
- Test pressure 600 psi max.
- Low pressure steam 15 psi max
- Vacuum 29.2" mercury max. @ 68°F
- Operating temperature 0°F-250°F
- (FKM max. temp = 320°F)

Approved Applications

Refer to Viega's Tech Bulletins for approved applications and chemical compatibility.

System Benefits

- Flameless, fast and easy to use
- Permanent reliable connections
- Large selection of fittings from ½" to 4"
- Consistent professional appearance
- Less equipment required
- Environmentally friendly connection system
- Versatility of fittings and tools for a variety of applications

Fittings

Viega ProPress for stainless ½" to 4" fittings are offered in over 350 configurations of 304 stainless steel and 316 stainless steel including: Elbows, Couplings, Ball Valves, Reducers, Tees, Reducing Tees, Threaded Adapters, Unions, Caps and Flanges. **Viega ProPress for stainless fittings are designed to be used with only Viega ProPress for stainless steel pipe.**

Fitting Markings

Each fitting is marked with the following:

- Viega
- The fitting dimension
- Production batch code
- Material (304 or 316)

Pipe

Viega ProPress stainless steel pipe is offered in either 304 stainless or 316 stainless to compliment the Viega fittings and offer a complete system solution. Viega ProPress stainless steel pipe meets the requirement of ASTM A312 or ASTM A554 for schedule 5 304 and 316 stainless steel pipe.

Smart Connect (SC feature)

In Viega ProPress for stainless ½" to 4" dimensions the Smart Connect feature allows liquids and/or gases from inside the system to pass the sealing element of an unpressed connection. The function of this feature is to provide the installer quick and easy identification of connections which have not been pressed prior to putting the system into operation.

History

Viega ProPress has been used in Europe since the late 1980s and in the U.S. since the late 1990s for a variety of applications.

Warranty

Viega ProPress for stainless products carry a 2-year warranty against defects in material and workmanship. The RIDGID Lifetime Warranty applies to tools, jaws and press rings from Ridge Tool Company.

Approvals and Certificates for North America (in process)

ABS (American Bureau of Shipping)
<http://www.eagle.org/typeapproval/contents.html> (enter "Viega")

Contact Viega for details on local approvals.

Tools

RIDGID offers press tools for connecting Viega ProPress for stainless and Viega ProPress copper systems.

For more information on RIDGID products contact:

Ridge Tool Company
400 Clark Street, Elyria OH 44036

Demos and Literature:
800-769-7743

Technical Inquiries:
800-519-3456

Availability:
888-743-4333

On the web: www.ridgid.com

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Viega ProPress for Stainless Flow Data

Pipe Dimensional Data

Nominal Pipe Size	Nominal Dimensions			Weight	
	Outside Diameter (OD) Inches	Inside Diameter (ID) Inches	Wall Thickness Inches	lb./ft.	lb./ft/ (pipe stick)
½"	0.63	0.49	0.065	0.41	8.20
¾"	0.88	0.74	0.065	0.59	11.80
1"	1.13	0.99	0.065	0.77	15.40
1¼"	1.38	1.24	0.065	0.95	19.00
1½"	1.63	1.49	0.065	1.13	22.60
2"	2.13	1.99	0.065	1.50	30.00
2½"	2.63	2.47	0.085	2.18	43.60
3"	3.13	2.97	0.085	2.60	52.00
4"	4.13	3.97	0.085	3.46	69.20

Dimensional Data

Nominal Pipe Size	Weight		
	Pipe (lb./ft.)	Water (lb./ft.)	Total (lb./ft.)
½"	0.41	0.06	0.47
¾"	0.59	0.12	0.71
1"	0.77	0.20	0.97
1¼"	0.95	0.31	1.26
1½"	1.13	0.43	1.56
2"	1.50	0.76	2.26
2½"	2.18	1.61	3.79
3"	2.60	2.29	4.89
4"	3.46	4.06	7.52

½" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Wall Thickness = 0.065 ID = 0.50	
	Velocity (ft./sec)	Press Loss (psi/100')
1.00	1.63	0.95
2.00	3.27	3.79
3.00	4.90	8.54
4.00	6.54	15.18
5.00	8.17	23.71
6.00	9.80	34.15
7.00	11.44	46.48
8.00	13.07	60.71
9.00	14.71	76.83
10.00	16.34	94.86
11.00	17.97	114.77
12.00	19.61	136.59
13.00	21.24	160.31
14.00	22.88	185.92
15.00	24.51	213.42
16.00	26.14	242.83
17.00	27.78	274.13
18.00	29.41	307.33

Flow Rate, Velocity and Friction Loss (Water)

Friction loss state within the following tables is based on pipe dimensional data using the Darcy-Weisbach equation:

$$h_f = f \cdot L \cdot \frac{V^2}{D \cdot 2g}$$

- h = friction loss
- L = pipe length
- D = pipe ID
- V = velocity (ft./sec.)
- g = gravity constant (32.174ft./sec.²)
- f = pipe friction factor

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3/4" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Wall Thickness = 0.065 ID = 0.75	
	Velocity (ft./sec.)	Press Loss (psi/100')
1.00	0.73	0.12
2.00	1.45	0.48
3.00	2.18	1.07
4.00	2.90	1.91
5.00	3.63	2.98
6.00	4.36	4.29
7.00	5.08	5.84
8.00	5.81	7.63
9.00	6.54	9.65
10.00	7.26	11.92
11.00	7.99	14.42
12.00	8.71	17.16
13.00	9.44	20.14
14.00	10.17	23.36
15.00	10.89	26.81
16.00	11.62	30.51
17.00	12.35	34.44
18.00	13.07	38.61
19.00	13.80	43.02
20.00	14.52	47.67
21.00	15.25	52.55
22.00	15.98	57.68
23.00	16.70	63.04
24.00	17.43	68.64
25.00	18.16	74.48
26.00	18.88	80.56
27.00	19.61	86.88
28.00	20.33	93.43
29.00	21.06	100.22
30.00	21.79	107.25

1" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Wall Thickness = 0.065 ID = 1.00	
	Velocity (ft./sec.)	Press Loss (psi/100')
2.00	0.82	0.11
4.00	1.63	0.43
6.00	2.45	0.97
8.00	3.27	1.72
10.00	4.08	2.69
12.00	4.90	3.88
14.00	5.72	5.28
16.00	6.54	6.89
18.00	7.35	8.73
20.00	8.17	10.77
22.00	8.99	13.04
24.00	9.80	15.51
26.00	10.62	18.21
28.00	11.44	21.12
30.00	12.25	24.24
32.00	13.07	27.58
34.00	13.89	31.13
36.00	14.71	34.91
38.00	15.52	38.89
40.00	16.34	43.09
42.00	17.16	47.51
44.00	17.97	52.14
46.00	18.79	56.99

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1¼" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Velocity (ft./sec.)	Press Loss (psi/100')
5.00	1.29	0.21
8.00	2.06	0.54
11.00	2.83	1.03
14.00	3.60	1.66
17.00	4.37	2.45
20.00	5.15	3.39
23.00	5.92	4.49
26.00	6.69	5.73
29.00	7.46	7.13
32.00	8.23	8.68
35.00	9.01	10.39
38.00	9.78	12.25
41.00	10.55	14.26
44.00	11.32	16.42
47.00	12.09	18.73
50.00	12.87	21.20
53.00	13.64	23.82
56.00	14.41	26.60
59.00	15.18	29.52
62.00	15.95	32.60
65.00	16.72	35.83
68.00	17.50	39.21
71.00	18.27	42.75
74.00	19.04	46.44
77.00	19.81	50.28

1½" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Velocity (ft./sec.)	Press Loss (psi/100')
10.00	1.82	0.34
13.00	2.36	0.57
16.00	2.90	0.86
19.00	3.45	1.22
22.00	3.99	1.63
25.00	4.54	2.11
28.00	5.08	2.64
31.00	5.63	3.24
34.00	6.17	3.90
37.00	6.72	4.61
40.00	7.26	5.39
43.00	7.81	6.23
46.00	8.35	7.13
49.00	8.90	8.09
52.00	9.44	9.11
55.00	9.99	10.19
58.00	10.53	11.33
61.00	11.07	12.54
64.00	11.62	13.80
67.00	12.16	15.13
70.00	12.71	16.51
73.00	13.25	17.96
76.00	13.80	19.46
79.00	14.34	21.03
82.00	14.89	22.66
85.00	15.43	24.34
88.00	15.98	26.09
91.00	16.52	27.90

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2" Stainless Steel, ASTM A312

Flow Rate (gpm)	Schedule 5	
	Wall Thickness = 0.06 ID = 2.00	
	Velocity (ft./sec.)	Press Loss (psi/100')
20.00	2.04	0.30
25.00	2.55	0.47
30.00	3.06	0.68
35.00	3.57	0.93
40.00	4.08	1.21
45.00	4.60	1.53
50.00	5.11	1.89
55.00	5.62	2.29
60.00	6.13	2.73
65.00	6.64	3.20
70.00	7.15	3.71
75.00	7.66	4.26
80.00	8.17	4.85
85.00	8.68	5.47
90.00	9.19	6.14
95.00	9.70	6.84
100.00	10.21	7.57
105.00	10.72	8.35
110.00	11.23	9.17
115.00	11.74	10.02
120.00	12.25	10.91
125.00	12.77	11.84
130.00	13.28	12.80
135.00	13.79	13.81
140.00	14.30	14.85
145.00	14.81	15.93
150.00	15.32	17.04
155.00	15.83	18.20
160.00	16.34	19.39
165.00	16.85	20.62

2½" Stainless Steel, ASTM A554

Flow Rate (gpm)	Schedule 5	
	Wall Thickness = 0.08 ID = 2.470	
	Velocity (ft./sec.)	Press Loss (psi/100')
50.00	3.35	0.62
55.00	3.68	0.75
60.00	4.02	0.90
65.00	4.35	1.05
70.00	4.69	1.22
75.00	5.02	1.40
80.00	5.36	1.59
85.00	5.69	1.80
90.00	6.03	2.02
95.00	6.36	2.25
100.00	6.70	2.49
105.00	7.03	2.75
110.00	7.37	3.01
115.00	7.70	3.30
120.00	8.03	3.59
125.00	8.37	3.89
130.00	8.70	4.21
135.00	9.04	4.54
140.00	9.37	4.88
145.00	9.71	5.24
150.00	10.04	5.61
155.00	10.38	5.99
160.00	10.71	6.38
165.00	11.05	6.78
170.00	11.38	7.20
175.00	11.72	7.63
180.00	12.05	8.07
185.00	12.39	8.53
190.00	12.72	8.99
195.00	13.06	9.47
200.00	13.39	9.97

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3" Stainless Steel, ASTM A554

Flow Rate (gpm)	Schedule 5	
	Velocity (ft./sec.)	Press Loss (psi/100')
50.00	2.32	0.25
60.00	2.78	0.36
70.00	3.24	0.49
80.00	3.70	0.63
90.00	4.17	0.80
100.00	4.63	0.99
110.00	5.09	1.20
120.00	5.56	1.43
130.00	6.02	1.68
140.00	6.48	1.94
150.00	6.95	2.23
160.00	7.41	2.54
170.00	7.87	2.86
180.00	8.34	3.21
190.00	8.80	3.58
200.00	9.26	3.96
210.00	9.73	4.37
220.00	10.19	4.80
230.00	10.65	5.24
240.00	11.11	5.71
250.00	11.58	6.20
260.00	12.04	6.70
270.00	12.50	7.23
280.00	12.97	7.77
290.00	13.43	8.34
300.00	13.89	8.92
310.00	14.36	9.53
320.00	14.82	10.15
330.00	15.28	10.79
340.00	15.75	11.46
350.00	16.21	12.14
360.00	16.67	12.85
370.00	17.13	13.57
380.00	17.60	14.31
390.00	18.06	15.08

4" Stainless Steel, ASTM A554

Flow Rate (gpm)	Schedule 5	
	Velocity (ft./sec.)	Press Loss (psi/100')
200.00	5.18	0.93
220.00	5.70	1.12
240.00	6.22	1.34
260.00	6.74	1.57
280.00	7.26	1.82
300.00	7.78	2.09
320.00	8.29	2.38
340.00	8.81	2.69
360.00	9.33	3.01
380.00	9.85	3.35
400.00	10.37	3.72
420.00	10.89	4.10
440.00	11.40	4.50
460.00	11.92	4.91
480.00	12.44	5.35
500.00	12.96	5.81
520.00	13.48	6.28
540.00	14.00	6.77
560.00	14.51	7.28
580.00	15.03	7.81
600.00	15.55	8.36
620.00	16.07	8.93
640.00	16.59	9.51
660.00	17.11	10.12
680.00	17.62	10.74
700.00	18.14	11.38
720.00	18.66	12.04
740.00	19.18	12.72
760.00	19.70	13.42
780.00	20.22	14.13
800.00	20.73	14.87
820.00	21.25	15.62
840.00	21.77	16.39
860.00	22.29	17.18
880.00	22.81	17.99

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Fitting Friction Loss Equivalent Length of Pipe (ft)

Fitting Type	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"
90° elbow (long radius)	0.66	0.99	1.33	1.65	1.98	2.66	3.30	3.97	5.30
45° elbow	0.66	0.99	1.33	1.65	1.98	2.66	3.30	3.97	5.30
tee (straight flow)	0.82	1.24	1.66	2.06	2.48	3.32	4.12	4.96	6.62
tee (branch outlet)	2.46	3.72	4.98	6.18	7.44	9.96	12.36	14.88	19.86
ball valve (full port)	6.15	9.30	12.45	15.45	18.60	24.90	n/a	n/a	n/a

MSS SP-69 or the following maximum spacing and minimum rod sizes

Nominal Pipe Size (in.)	Stainless Steel Pipe Max. Span (ft.)	Min. Rod Diameter (in.)
Up to ¾	10	¾
1	10	¾
1¼	10	¾
1½	10	¾
2	10	¾
2½	11	½
3	12	½
4	14	¾

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Viega ProPress for Stainless 304 and 316

Viega ProPress for stainless is the total system solution where optimum corrosion protection or chemical resistance is required. Available in two stainless alloys, 304 or 316, all fittings offer Viega's patented Smart Connect feature, the quick and easy way to identify unpressed connections. Exceeding the most rigorous testing in North America, Viega ProPress for stainless is the industry's new standard for stainless steel installations.

Features and Benefits

- Makes connections in for to seven seconds
- Same tool used on all Viega plumbing and heating press systems
- Ensures a consistent, strong, reliable seal for liquids or gases
- Reduces system installation time and job site clean up
- Requires less pipe preparation than other joining methods
- Eliminates costly downtime
- Faster production changeover and repairs for unplanned outages
- Reduced maintenance problems
- Provides superior flow characteristics of press technology
- No hot work, burn permits or fire watches needed

Codes and Standards

- ASTM A312: Standard Specification for Seamless Welded and Heavily Cold Worked Austenitic Stainless Steel Pipe
- ASTM A403: Standard Specification for Austenitic and Stainless Steel Piping Fittings
- ASTM A554: Standard Specification for Welded and Stainless Steel Mechanical Tubing
- ASTM A999: Standard Specification for Alloy and Stainless Steel Pipe
- ASME: B31.1: Power Piping
- ASME B31.3: Process Piping
- ASME B31.9: Building Service Piping
- CRN 13492.5: Canadian Registration Number
- CSA B125.3: Plumbing Fittings (valves) (316 Only)
- NSF/ANSI Standard 61G: Drinking Water System Components (316 Only)
- ABS: America Bureau of Shipping

Zero Lead (316 Only)

Zero Lead identifies Viega products meeting the lead free requirements of California and Virginia law, effective January 1, 2010, as tested and listed against NSF 61, Annex G. For more detailed information on zero lead issues and legislation, visit www.zeroleadfacts.com. For more information on Viega's Zero Lead products, contact Inside Sales.

Abbreviation

- BSP - British Standard Pipe
- FTG - Fitting
- NPT - National Pipe Thread
- P - Viega ProPress Connection

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Engineering Specifications

ART 1 – GENERAL

1.1 SUMMARY

- 1.1.1 Stainless Steel Pipe and Fitting System using cold press connection technology. The system is assembled when the pipe is fully inserted into the fitting, then pressed on both sides of the fitting seal, creating a mechanical joint.

1.2 REFERENCES

- 1.2.1 ASME A13.1 Scheme for the Identification of Piping Systems
- 1.2.2 ASME B1.20 Pipe Threads, General Purpose (Inch)
- 1.2.3 ASME B31.9 Building Services Piping
- 1.2.4 ASTM A312 Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
- 1.2.5 ASTM A554 Standard Specification For Welded Stainless Steel Mechanical Tubing
- 1.2.6 AWWA C651 Standard for Disinfecting Water Mains
- 1.2.7 IAPMO Uniform Mechanical Code
- 1.2.8 IAPMO Uniform Plumbing Code
- 1.2.9 ICC International Plumbing Code
- 1.2.10 ICC International Mechanical Code
- 1.2.11 MSS-SP-58 Pipe Hangers and Supports - Materials, Design and Manufacture
- 1.2.12 MSS-SP-69 Pipe Hangers and Supports - Selection and Application
- 1.2.13 NFPA 13 Standard for the Installation of Sprinkler Systems (Approval Pending)
- 1.2.14 NFPA 13D Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes (Approval Pending)
- 1.2.15 NFPA 13R Standard for the Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height (Approval Pending)
- 1.2.16 NSF 61 Drinking Water System Components – Health Effects
- 1.2.17 ASME B31.1 Power Piping
- 1.2.18 ASME B31.3 Process Piping

1.3 QUALITY ASSURANCE

- 1.3.1 The installer shall be a qualified installer, licensed within the jurisdiction, and familiar with the installation of stainless steel pipe.
- 1.3.2 The installation of stainless steel pipe 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 pipe in hydronic systems shall conform to the requirements of the ICC International Mechanical Code or the IAPMO Uniform Mechanical Code.

1.4 DELIVERY, STORAGE, AND HANDLING

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

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1.5 PROJECT CONDITIONS

- 1.5.1 Verify length of pipe required by field measurements.

1.6 WARRANTY

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 Stainless Steel Press Fittings: Viega North America, 301 N, Main Street, 9th Floor, Wichita, KS 67202, 800-976-9819

2.2 MATERIAL

- 2.2.1 Pipe Standard: Stainless Steel Pipe shall conform to ASTM A312 or ASTM A554.
- 2.2.2 Fitting Standard: Stainless steel fittings shall conform to the material requirements of ASTM A312 or ASTM A554.
- 2.2.3 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.
- 2.2.4 Threaded Fittings: Pipe Threads shall conform to ASME B1.20.1.
- 2.2.5 Hanger Standard: Hangers and supports shall conform to MSS-SP-58.

2.3 SOURCE QUALITY CONTROL

- 2.3.1 All pipe, 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

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

3.2 PREPARATION

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

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3.3 INSTALLATION GENERAL LOCATIONS

3.3.1 Plans indicate general location and arrangement of piping systems. Identified locations and arrangements are used to size pipe 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, STAINLESS STEEL PIPE

- 3.4.1 Pressure Rating: Install components having a pressure rating equal to or greater than the system operating pressure.
- 3.4.2 Install piping free of sags, bends, and kinks.
- 3.4.3 Change in Direction: Install fittings for changes in direction and branch connections.
- 3.4.4 Press Connections: Stainless steel press fittings shall be made in accordance with the manufacturer's installation instructions. The pipe shall be fully inserted into the fitting and the pipe marked at the shoulder of the fitting. The fitting alignment shall be checked against the mark on the pipe to assure the pipe is fully engaged (inserted) in the fitting. The joints shall be pressed using the tool approved by the manufacturer.
- 3.4.5 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.
- 3.4.6 Pipe Protection: Provide protection against abrasion where stainless steel pipe is in contact with other building members by wrapping with an approved tape, pipe insulation or otherwise suitable method of isolation.
- 3.4.7 Penetration Protection: Provide allowance for thermal expansion and contraction of stainless steel pipe 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 of fire resistance rated assemblies shall maintain the rating of the assembly
- 3.4.8 Backfill Material: Backfill material shall not include any ashes, cinders, refuse, stones, boulders or other materials which can damage or break the pipe or promote corrosive action in any trench or excavation in which pipe is installed.
- 3.4.9 Horizontal Support: Install hangers for horizontal piping in accordance with MSS-SP-69 or the following maximum spacing and minimum rod sizes:

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 Area of Application for more information

Nominal Pipe Size (in)	Stainless Steel Pipe Max. Span (ft)	Min. Rod Diameter (in)
Up to ¾	10	3/8
1	10	3/8
1¼	10	3/8
1½	10	3/8
2	10	3/8
2½	11	½
3	12	½
4	14	5/8

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- 3.4.10 Vertical Support: Vertical stainless steel pipe shall be supported at each floor or at 10 foot intervals.
- 3.4.11 Galvanic Corrosion: Hangers and supports shall be either stainless steel or vinyl coated to prevent galvanic corrosion between the pipe and the supporting member.
- 3.4.12 Restraint: In seismic areas, stainless steel pipe shall be installed to withstand all seismic forces.
- 3.4.13 Identification: Stainless steel pipe systems shall be identified in accordance with the requirements of ASME A13.1.

3.5 FIELD QUALITY CONTROL

- 3.5.1 Water Testing: The stainless steel pipe system shall be water tested for joint tightness. The piping system shall be filled with water. The system shall be pressurized to the maximum pressure and length of time required by the code or standard. The system shall have no leaks at the rated pressure.
- 3.5.2 Air Testing: In lieu of a water test, the stainless steel pipe system shall be air tested for joint tightness. The piping system shall be pressurized with air to the maximum pressure of the system or to the code or standard required minimum for the required length of time. The system shall have no leaks at the rated pressure.

3.6 CLEANING (For potable water systems.)

- 3.6.1 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:
 - 3.6.1.1 The piping system shall be flushed with potable water until discolored water does not appear at any of the outlets.
 - 3.6.1.2 The system shall be filled with a water chlorine solution containing at least 50 parts per million of chlorine. The system shall be valved in the closed position and allowed to stand for 24 hours.
 - 3.6.1.3 Following the standing time, the system shall be flushed with water until the chlorine is purged from the system.

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Seals And Gasket Materials Information

FKM Sealing Element

Operating temperature:

0°F to 284°F (-18°C to 140°C)

Resistant to thermal spikes to 356°F (thermal spikes are temperature increases above maximum defined operating temperature for a duration of 24 hours or less).

FKM, is a fluoroelastomer or synthetic fluorinated rubber, specialty purpose elastomer.

FKM sealing elements are white in color, and possess excellent resistance to chemicals, higher temperatures, aging, ozone, sunlight, weathering, environmental influences, oils, and petroleum-based additives.

FKM's resistance to aggressive chemicals and higher operating temperatures makes it ideal for seals and gaskets in industrial process applications.

All sealing elements are installed using an H-1 food grade silicone oil lubricant registered with NSF, USDA and approved for use under FDA 21 CFR.

Refer to product line application guides or chemical compatibility matrix for general information.

HNBR Sealing Element

Operating temperature:

-40°F to 180°F (-40°C to 82°C)

[sliding scale range]

HNBR, or Hydrinatet butadiene-acrylic rubber, is a specialty purpose compound used where resistance to petroleum-based additives are required.

HNBR sealing elements are yellow in color, and possess excellent physical strength and retention properties after long-term exposure to heat, oil, and chemicals.

HNBR sealing elements are used for applications of natural, propane, mixed, and manufactured gases.

HNBR's unique properties have resulted in wide adoption in automotive, industrial, and assorted high performance applications.

Product line application guides and chemical compatibility matrix are not all inclusive.

EPDM Sealing Element

Operating temperature:

0°F to 250°F (-18°C to 120°C)

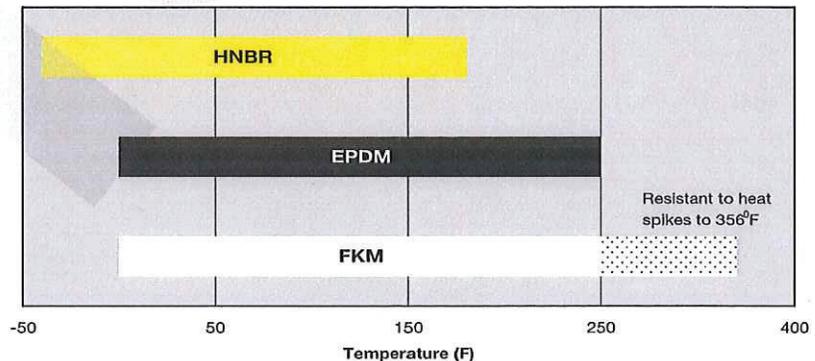
EPDM, or ethylene-propylene-diene rubber, is a synthetically manufactured and peroxidically cured all-purpose elastomer.

EPDM sealing elements are black in color and possess excellent resistance to aging, ozone, sunlight, weathering, environmental influences, alkalis and most alkaline solutions along with chemicals used in a broad range of applications, including ketones.

Viega Press Systems are manufactured with a high quality EPDM sealing elements standard, installed at the factory.

EPDM has particularly good resistance to hot water, making it ideal for seals and gaskets.

Sealing Elements Temperature Range

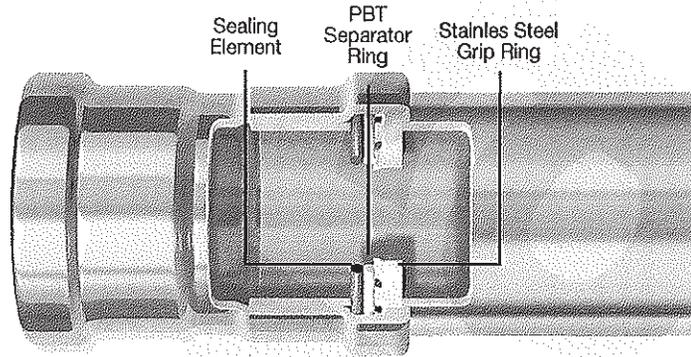


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Exclusive Grip and Separator Ring

The grip ring is made of 420 (1.4021) stainless steel. The grip ring ensures the XL and XLC fittings create a positive cold press mechanical joint. The PBT (Polybutylene Terephthalate) separator ring ensures that sealing element and grip ring perform at maximum capacity by providing a positive physical separation. For specific applications, call Viega at 1-877-843-4262.



Viega Flange Gasket

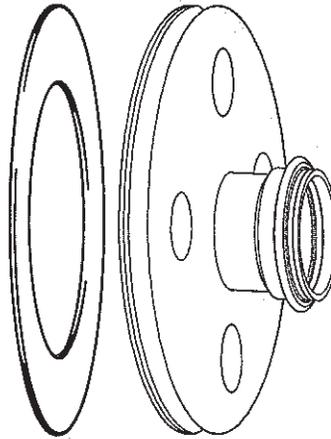
Viega Flange gaskets are an asbestos-free gasket material composed of aramide fibers, inorganic fillers and other asbestos substitutes which are resistant to high temperatures.

These are firmly bonded to high grade elastomers under elevated pressure and temperature. The gaskets do not contain any color pigments.

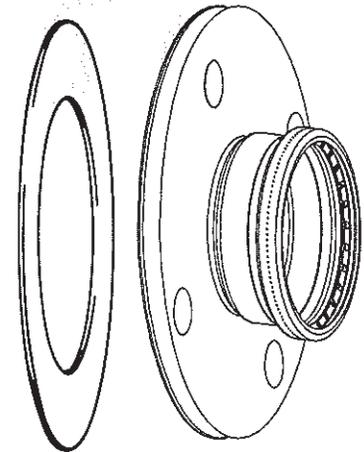
The material exhibits high tensile strength, stress as well as shearing resistance. Other characteristic properties of the material are excellent temperature resistance, stress resistance under high operating pressure and ease of handling.

The gasket material has a non-stick top and bottom layer with a high coefficient of friction. This aids in dismantling. Additional surface treatment is not needed in most cases. Please review your specific product line for specific details.

1/2" - 2"



2 1/2" - 4"

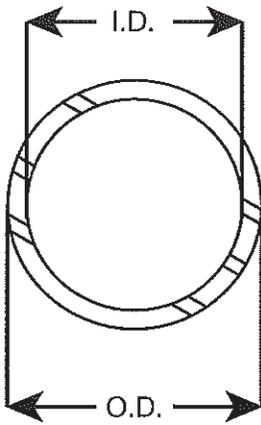


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Viega ProPress for Stainless 1/2" - 2"

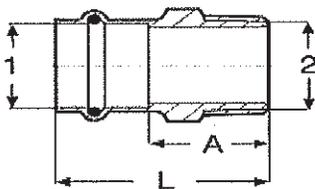
Viega ProPress for Stainless Steel 304 ECO-Pipe ASTM A554 Model - 0108



Stock Code	Size	O.D. (in)	I.D. (in)	Wall Thickness	Length (ft)
87050	1/2"	0.63	0.55	0.04	20
87055	3/4"	0.88	0.78	0.05	20
87060	1"	1.13	1.03	0.05	20
87065	1 1/4"	1.38	1.26	0.06	20
87070	1 1/2"	1.63	1.51	0.06	20
87075	2"	2.13	2.01	0.06	20

Viega ProPress for Stainless Steel 304 & 316 Pipe ASTM A312 Model - 0103 / 4003

S/S 304	S/S 316	Size	O.D. (in)	I.D. (in)	Wall Thickness	Length (ft)
87000	82000	1/2"	0.63	0.50	0.06	20
87005	82005	3/4"	0.88	0.75	0.06	20
87010	82010	1"	1.13	1.00	0.06	20
87015	82015	1 1/4"	1.38	1.26	0.06	20
87020	82020	1 1/2"	1.63	1.50	0.06	20
87025	82025	2"	2.13	2.00	0.06	20



Adapter P x M NPT w/ EPDM Seals Model - 0111 / 4011

Stock Code		Size	A (in)	L (in)
S/S 304	S/S 316	1 2		
85010	80010	1/2" x 1/2" NPT	1.260	2.010
85015	80015	1/2" x 3/4" NPT	1.339	2.090
85020	80020	3/4" x 1/2" NPT	1.398	2.300
85025	80025	3/4" x 3/4" NPT	1.437	2.340
85030	80030	3/4" x 1" NPT	1.693	2.600
85035	80035	1" x 3/4" NPT	1.457	2.360
85040	80040	1" x 1" NPT	1.732	2.640
85045	80045	1 1/4" x 1 1/4" NPT	1.880	2.910
85050	80050	1 1/2" x 1 1/2" NPT	1.949	3.370
85055	80055	2" x 2" NPT	2.106	3.680

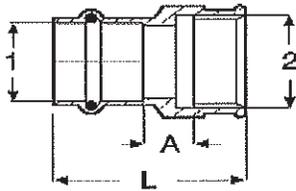
Viega LLC, 100 N. Broadway, 6th Floor • Wichita, KS 67202 • Ph: 800-976-9819 • Fax: 316-425-7618

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Adapter P x M NPT w/ FKM Seals Model - 6011

Stock Code	Size		A (in)	L (in)
	S/S 304	1 2		
85012		½" x ½" NPT	1.260	2.010
85017		½" x ¾" NPT	1.339	2.090
85022		¾" x ½" NPT	1.398	2.300
85027		¾" x ¾" NPT	1.437	2.340
85032		¾" x 1" NPT	1.693	2.600
85037		1" x ¾" NPT	1.457	2.360
85042		1" x 1" NPT	1.732	2.640
85047		1¼" x 1¼" NPT	1.880	2.910
85052		1½" x 1½" NPT	1.949	3.370
85054		2" x 2" NPT	2.106	3.680



Adapter P x F NPT w/ EPDM Seals Model - 0112 / 4012

Stock Code	S/S 304	S/S 316	Size		A (in)	L (in)
			1	2		
85080		80080		½" x ½" NPT	1.024	1.772
85085		80085		¾" x ½" NPT	1.240	2.146
85090		80090		¾" x ¾" NPT	1.181	2.087
85092		80092		1" x ½" NPT	1.161	2.067
85095		80095		1" x ¾" NPT	1.240	2.146
85100		80100		1" x 1" NPT	1.299	2.205
85105		80105		1¼" x 1¼" NPT	1.329	2.362
85110		80110		1½" x 1¼" NPT	1.407	2.835
85115		80115		1½" x 1½" NPT	1.407	2.835
85075		80075		2" x 1" NPT	1.604	3.189
85120		80120		2" x 1½" NPT	1.447	3.031
85125		80125		2" x 2" NPT	1.489	3.071

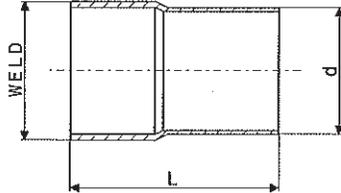
Adapter P x F NPT w/ FKM Seals Model - 6012

Stock Code	Size		A (in)	L (in)
	S/S 304	1 2		
85082		½" x ½" NPT	1.024	1.772
85087		¾" x ½" NPT	1.240	2.146
85096		¾" x ¾" NPT	1.181	2.087
85094		1" x ½" NPT	1.161	2.067
85097		1" x ¾" NPT	1.240	2.146
85128		1" x 1" NPT	1.299	2.205
85107		1¼" x 1¼" NPT	1.329	2.362
85117		1½" x 1½" NPT	1.407	2.835
85077		2" x 1" NPT	1.604	3.189
85122		2" x 1½" NPT	1.447	3.031
85127		2" x 2" NPT	1.489	3.071

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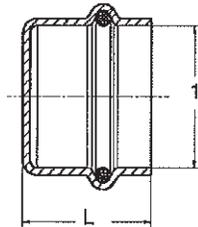


Weld Adapter w/ EPDM Seals Model - 0113.1/ 4013.1



Stock Code		Size	L
S/S 304	S/S 316	Weld d	(in)
85135	80081	2½" x 2½"	4.370
85145	80082	3" x 3"	4.567
85155	80083	4" x 4"	5.157

Cap P w/ EPDM Seals Model - 0156 / 4056

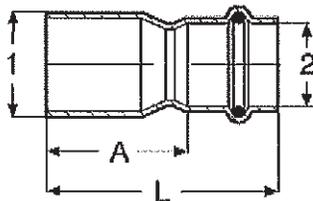


Stock Code		Size	L	D
S/S 304	S/S 316	1	(in)	(in)
85355	80355	½"	0.819	0.693
85360	80360	¾"	1.043	0.925
85365	80365	1"	1.063	0.945
85370	80370	1¼"	1.200	1.043
85375	80375	1½"	1.594	1.435
85380	80380	2"	1.744	1.585

Cap P w/ FKM Seals Model - 6056

Stock Code		Size	L	D
S/S 304	S/S 316	1	(in)	(in)
85357	80357	½"	0.819	0.693
85362	80362	¾"	1.043	0.925
86367	80367	1"	1.063	0.945
86372	80372	1¼"	1.200	1.043
86377	80377	1½"	1.594	1.435
86382	80382	2"	1.744	1.585

Reducer FTG x P w/ EPDM Seals Model - 0115.1 / 4015.1



Stock Code		Size	A	L
S/S 304	S/S 316	1 2	(in)	(in)
85160	80160	¾" x ½"	1.535	2.283
85165	80165	1" x ½"	1.831	2.579
85170	80170	1" x ¾"	1.555	2.461
85175	80175	1¼" x ½"	2.244	2.992
85180	80180	1¼" x ¾"	1.929	2.835
85185	80185	1¼" x 1"	1.811	2.717
85190	80190	1½" x ½"	3.051	3.799
85195	80195	1½" x ¾"	2.618	3.524
85200	80200	1½" x 1"	2.500	3.406
85205	80205	1½" x 1¼"	2.256	3.287
85210	80210	2" x ½"	3.740	4.488
85215	80215	2" x ¾"	3.465	4.370
85220	80220	2" x 1"	3.091	3.996
85225	80225	2" x 1¼"	2.827	3.858
85230	80230	2" x 1½"	2.598	4.016

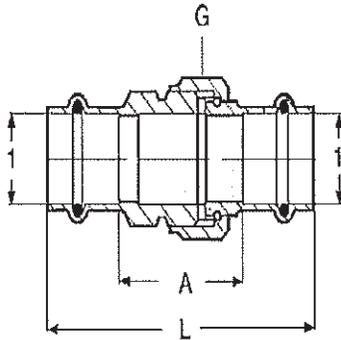
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Reducer FTG x P w/ FKM Seals Model - 6015.1

Stock Code	Size	A	L
S/S 304	1 x 2	(in)	(in)
85162	¾" x ½"	1.535	2.283
85167	1" x ½"	1.831	2.579
85172	1" x ¾"	1.555	2.461
85173	1¼" x ½"	2.244	2.992
85182	1¼" x ¾"	1.929	2.835
85187	1¼" x 1"	1.811	2.717
85192	1½" x ½"	3.051	3.799
85197	1½" x ¾"	2.618	3.524
85202	1½" x 1"	2.500	3.406
85212	2" x ½"	3.740	4.488
85217	2" x ¾"	3.465	4.370
85222	2" x 1"	3.091	3.996
85232	2" x 1½"	2.598	4.016

Union P x P w/ EPDM Seals Model - 0160 / 4060

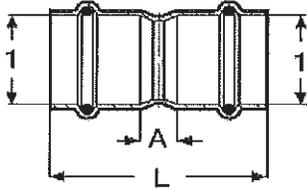


Stock Code	Size	A	L	G
S/S 304	S/S 316	1	(in)	(in)
86005	81005	½"	1.858	3.354
86010	81010	¾"	1.850	3.661
86015	81015	1"	2.224	4.035
86020	81020	1¼"	2.224	4.291
86025	81025	1½"	2.677	5.531
86030	81030	2"	2.953	6.122

Union P x P w/ FKM Seals Model - 6060

Stock Code	Size	A	L	G
S/S 304	1	(in)	(in)	
86007	½"	1.858	3.354	¾"
86012	¾"	1.850	3.661	1"
86017	1"	2.224	4.035	1¼"
86022	1¼"	2.224	4.291	1½"
86027	1½"	2.677	5.531	2"
86032	2"	2.953	6.122	2½"

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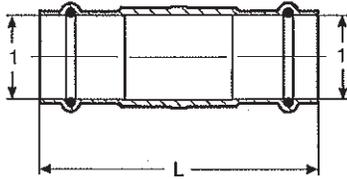


Coupling P x P w/ Stop w/ EPDM Seals Model - 0115 / 4015

Stock Code		Size	A	L
S/S 304	S/S 316		(in)	(in)
85265	80265	1/2"	0.354	1.850
85270	80270	3/4"	0.433	2.244
85275	80275	1"	0.374	2.185
85280	80280	1 1/4"	0.461	2.528
85285	80285	1 1/2"	0.335	3.189
85290	80290	2"	0.453	3.642

Coupling P x P w/ Stop w/ FKM Seals Model - 6015

Stock Code		Size	A	L
S/S 304			(in)	(in)
85267		1/2"	0.354	1.850
85272		3/4"	0.433	2.244
85277		1"	0.374	2.185
85282		1 1/4"	0.461	2.528
85287		1 1/2"	0.335	3.189
85292		2"	0.453	3.642



Slip Coupling P x P w/ EPDM Seals Model - 0115.5 / 4015.5

Stock Code		Size	L
S/S 304	S/S 316		(in)
85310	80310	1/2"	1.850
85315	80315	3/4"	2.272
85320	80320	1"	2.185
85325	80325	1 1/4"	2.520
85330	80330	1 1/2"	3.189
85335	80335	2"	3.642

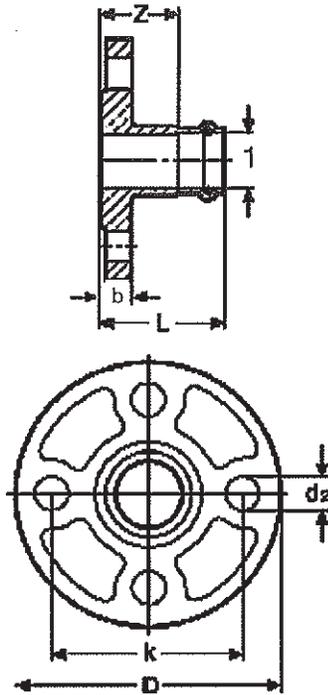
Slip Coupling P x P w/ FKM Seals Model - 6015.5

Stock Code		Size	L
S/S 304			(in)
85312		1/2"	1.850
85317		3/4"	2.272
85322		1"	2.185
85327		1 1/4"	2.520
85332		1 1/2"	3.189
85337		2"	3.642

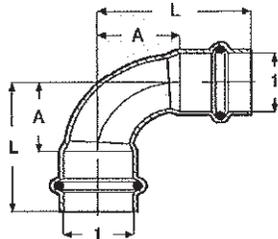
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Flange P x Flange w/ EPDM Seals Model - 0159 / 4059



Stock Code		Size	L	Z	b	d2	D	k
S/S 304	S/S 316		(in)	(in)	(in)	(in)	(in)	(in)
86035	81035	½"	2.465	1.717	0.457	0.630	3.543	2.348
86040	81040	¾"	2.587	1.681	0.520	0.630	3.937	2.756
86045	81045	1"	2.528	1.622	0.579	0.630	4.331	3.110
86050	81050	1¼"	2.709	1.675	0.642	0.630	4.528	3.504
86055	81055	1½"	2.850	1.423	0.705	0.630	4.921	3.858
86060	81060	2"	3.878	2.293	0.768	0.748	5.906	4.764



Elbow 90° P x P w/ EPDM Seals Model - 0116 / 4016

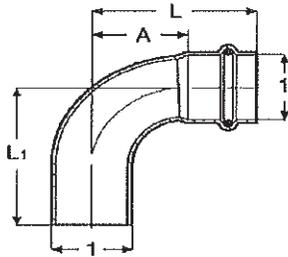
Stock Code		Size	A	L
S/S 304	S/S 316		(in)	(in)
85400	80400	½"	1.122	1.870
85405	80405	¾"	1.732	2.638
85410	80410	1"	1.323	2.228
85415	80415	1¼"	1.654	2.687
85420	80420	1½"	1.984	3.413
85425	80425	2"	2.551	4.138

Elbow 90° P x P w/ FKM Seals Model - 6016

Stock Code		Size	A	L
S/S 304			(in)	(in)
85402		½"	1.122	1.870
85407		¾"	1.732	2.638
85412		1"	1.323	2.228
85417		1¼"	1.654	2.687
85422		1½"	1.984	3.413
85427		2"	2.551	4.138

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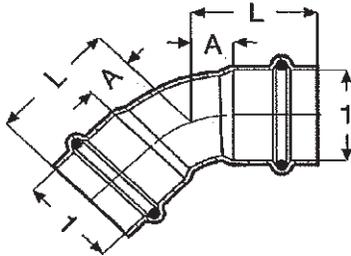


Elbow 90° FTG x P w/ EPDM Seals Model - 0116.1 / 4016.1

Stock Code		Size	A	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85490	80490	½"	1.122	1.870	1.988
85495	80495	¾"	1.449	2.354	3.031
85500	80500	1"	1.323	2.228	2.268
85505	80505	1¼"	1.654	2.689	2.756
85510	80510	1½"	1.984	3.413	3.480
85515	80515	2"	2.551	4.138	4.205

Elbow 90° FTG x P w/ FKM Seals Model - 6016.1

Stock Code		Size	A	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85492	80492	½"	1.122	1.870	1.988
85497	80497	¾"	1.449	2.354	3.031
85502	80502	1"	1.323	2.228	2.268
85512	80512	1½"	1.984	3.413	3.480
85517	80517	2"	2.551	4.138	4.205



Elbow 45° P x P w/ EPDM Seals Model - 0126 / 4026

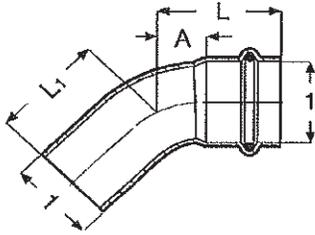
Stock Code		Size	A	L
S/S 304	S/S 316	1	(in)	(in)
85445	80445	½"	0.571	1.319
85450	80450	¾"	0.866	1.772
85455	80455	1"	0.547	1.453
85460	80460	1¼"	0.685	1.717
85465	80465	1½"	0.823	2.248
85470	80470	2"	1.055	2.642

Elbow 45° P x P w/ FKM Seals Model - 6026

Stock Code		Size	A	L
S/S 304	S/S 316	1	(in)	(in)
85447	80447	½"	0.571	1.319
85452	80452	¾"	0.866	1.772
85457	80457	1"	0.547	1.453
85462	80462	1¼"	0.685	1.717
85467	80467	1½"	0.823	2.248
85472	80472	2"	1.055	2.642

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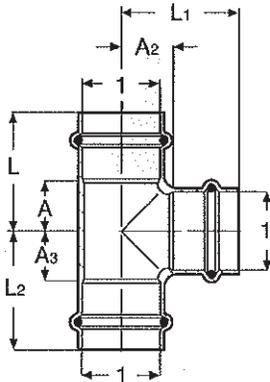


Elbow 45° FTG x P w/ EPDM Seals Model - 0126.1 / 4026.1

Stock Code		Size	A	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85535	80535	½"	0.571	1.319	1.457
85540	80540	¾"	0.685	1.591	2.272
85545	80545	1"	0.547	1.453	1.492
85550	80550	1¼"	0.685	1.717	1.787
85555	80555	1½"	0.822	2.248	2.319
85560	80560	2"	1.055	2.642	2.709

Elbow 45° FTG x P w/ FKM Seals Model - 6026.1

Stock Code		Size	A	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85537	80537	½"	0.571	1.319	1.457
85542	80542	¾"	0.685	1.591	2.272
85547	80547	1"	0.547	1.453	1.492
85557	80557	1½"	0.822	2.248	2.319
85562	80562	2"	1.055	2.642	2.709



Tee P x P x P w/ EPDM Seals Model - 0118 / 4018

Stock Code		Size	A	A2	A3	L	L1	L2
S/S 304	S/S 316	1	(in)	(in)	(in)	(in)	(in)	(in)
85580	80580	½"	0.748	0.748	0.748	1.496	1.496	1.496
85585	80585	¾"	0.965	0.965	0.965	1.870	1.870	1.870
85590	80590	1"	1.122	1.122	1.122	2.028	2.028	2.028
85595	80595	1¼"	1.033	1.033	1.033	2.067	2.067	2.067
85600	80600	1½"	1.250	1.250	1.250	2.677	2.677	2.677
85605	80605	2"	1.528	1.528	1.528	3.110	3.110	3.110

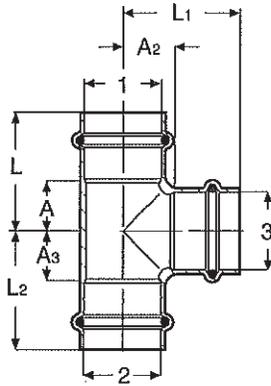
Tee P x P x P w/ FKM Seals Model - 6018

Stock Code		Size	A	A2	A3	L	L1	L2
S/S 304	S/S 316	1	(in)	(in)	(in)	(in)	(in)	(in)
85582	80582	½"	0.748	0.748	0.748	1.496	1.496	1.496
85587	80587	¾"	0.965	0.965	0.965	1.870	1.870	1.870
85592	80592	1"	1.122	1.122	1.122	2.028	2.028	2.028
85597	80597	1¼"	1.033	1.033	1.033	2.067	2.067	2.067
85598	80598	1½"	1.250	1.250	1.250	2.677	2.677	2.677
85607	80607	2"	1.528	1.528	1.528	3.110	3.110	3.110

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Reducing Tee P x P x P w/ EPDM Seals Model - 0118 / 4018

Stock Code	Size	A	A2	A3	L	L1	L2	
S/S 304 S/S 316	1 2 3	(in)	(in)	(in)	(in)	(in)	(in)	
85630	80630	¾" x ¾" x ½"	0.965	0.925	0.965	1.870	1.673	1.870
85640	80640	1" x 1" x ½"	1.122	1.046	1.122	2.028	1.780	2.028
85650	80650	1" x 1" x ¾"	1.122	1.070	1.122	2.028	1.976	2.028
85660	80660	1¼" x 1¼" x ½"	1.033	1.161	1.033	2.067	1.909	2.067
85670	80670	1¼" x 1¼" x ¾"	1.033	1.220	1.033	2.067	2.126	2.067
85680	80680	1¼" x 1¼" x 1"	1.033	1.272	1.033	2.067	2.177	2.067
85690	80690	1½" x 1½" x ½"	1.250	1.315	1.250	2.677	2.063	2.677
85700	80700	1½" x 1½" x ¾"	1.250	1.374	1.250	2.677	2.280	2.677
85710	80710	1½" x 1½" x 1"	1.250	1.425	1.250	2.677	2.330	2.677
85720	80720	2" x 2" x ½"	1.528	1.535	1.528	3.110	2.283	3.110
85730	80730	2" x 2" x ¾"	1.528	1.614	1.528	3.110	2.519	3.110
85740	80740	2" x 2" x 1"	1.528	1.665	1.528	3.110	2.571	3.110
85750	80750	2" x 2" x 1½"	1.528	1.488	1.528	3.110	2.913	3.110

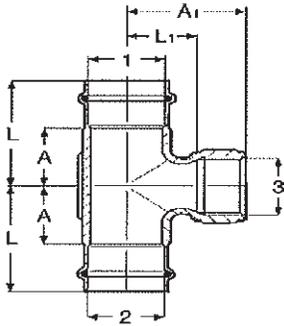
Reducing Tee P x P x P w/ FKM Seals Model - 6018

Stock Code	Size	A	A2	A3	L	L1	L2	
S/S 304	1 2 3	(in)	(in)	(in)	(in)	(in)	(in)	
85632	80632	¾" x ¾" x ½"	0.965	0.925	0.965	1.870	1.673	1.870
85642	80642	1" x 1" x ½"	1.122	1.046	1.122	2.028	1.780	2.028
85652	80652	1" x 1" x ¾"	1.122	1.070	1.122	2.028	1.976	2.028
85662	80662	1¼" x 1¼" x ½"	1.033	1.161	1.033	2.067	1.909	2.067
85672	80672	1¼" x 1¼" x ¾"	1.033	1.220	1.033	2.067	2.126	2.067
85682	80682	1¼" x 1¼" x 1"	1.033	1.272	1.033	2.067	2.177	2.067
85692	80692	1½" x 1½" x ½"	1.250	1.315	1.250	2.677	2.063	2.677
85702	80702	1½" x 1½" x ¾"	1.250	1.374	1.250	2.677	2.280	2.677
85712	80712	1½" x 1½" x 1"	1.250	1.425	1.250	2.677	2.330	2.677
85722	80722	2" x 2" x ½"	1.528	1.535	1.528	3.110	2.283	3.110
85732	80732	2" x 2" x ¾"	1.528	1.614	1.528	3.110	2.519	3.110
85742	80742	2" x 2" x 1"	1.528	1.665	1.528	3.110	2.571	3.110
85752	80752	2" x 2" x 1½"	1.528	1.488	1.528	3.110	2.913	3.110

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Reducing Tee P x P x F NPT w/ EPDM Seals Model - 0117.2 / 4017.2

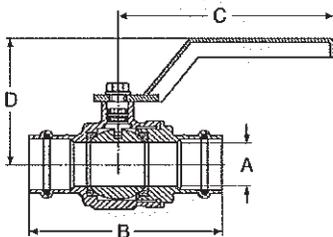


Stock Code		Size			A	A1	L	L1
S/S 304	S/S 316	1	2	3	(in)	(in)	(in)	(in)
85820	80820	¾" x ¾" x ½" NPT			0.963	0.980	1.868	1.546
85830	80830	¾" x ¾" x ¾" NPT			0.963	0.902	1.868	1.457
85840	80840	1" x 1" x ½" NPT			1.122	10.870	2.028	1.622
85850	80850	1" x 1" x ¾" NPT			1.122	1.008	2.028	1.563
85860	80860	1¼" x 1¼" x ½" NPT			1.033	1.236	2.067	1.772
85870	80870	1¼" x 1¼" x ¾" NPT			1.033	1.157	2.067	1.713
85880	80880	1¼" x 1¼" x 1" NPT			1.033	1.130	2.067	1.791
85890	80890	1½" x 1½" x ½" NPT			1.250	1.388	2.677	1.924
85900	80900	1½" x 1½" x ¾" NPT			1.250	1.309	2.677	1.865
85910	80910	1½" x 1½" x 1" NPT			1.250	1.282	2.677	1.943
85920	80920	2" x 2" x ½" NPT			1.528	1.610	3.110	2.146
85930	80930	2" x 2" x ¾" NPT			1.528	1.531	3.110	2.087
85940	80940	2" x 2" x 1" NPT			1.528	1.504	3.110	2.165

Reducing Tee P x P x F NPT w/ FKM Seals Model - 6017.2

Stock Code		Size			A	A1	L	L1
S/S 304		1	2	3	(in)	(in)	(in)	(in)
85822		¾" x ¾" x ½" NPT			0.963	0.980	1.868	1.546
85832		¾" x ¾" x ¾" NPT			0.963	0.902	1.868	1.457
85842		1" x 1" x ½" NPT			1.122	10.870	2.028	1.622
85852		1" x 1" x ¾" NPT			1.122	1.008	2.028	1.563
85862		1¼" x 1¼" x ½" NPT			1.033	1.236	2.067	1.772
85872		1¼" x 1¼" x ¾" NPT			1.033	1.157	2.067	1.713
85882		1¼" x 1¼" x 1" NPT			1.033	1.130	2.067	1.791
85892		1½" x 1½" x ½" NPT			1.250	1.388	2.677	1.924
85902		1½" x 1½" x ¾" NPT			1.250	1.309	2.677	1.865
85912		1½" x 1½" x 1" NPT			1.250	1.282	2.677	1.943
85922		2" x 2" x ½" NPT			1.528	1.610	3.110	2.146
85932		2" x 2" x ¾" NPT			1.528	1.531	3.110	2.087
85942		2" x 2" x 1" NPT			1.528	1.504	3.110	2.165

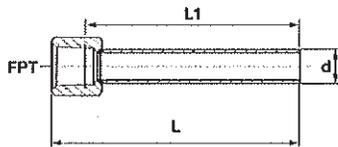
Ball Valve P x P w/ EPDM Seals Model - 4070



Stock Code	Size	A	B	C	D
S/S 316		(in)	(in)	(in)	(in)
81080	½"	0.650	3.543	4.331	2.382
81085	¾"	0.787	4.193	4.331	2.461
81090	1"	0.984	4.567	4.823	2.795
81095	1¼"	1.260	5.217	4.823	3.228
81100	1½"	1.575	6.496	5.315	3.661
81105	2"	1.969	7.323	5.315	3.976

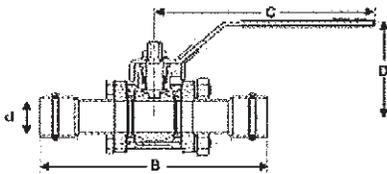
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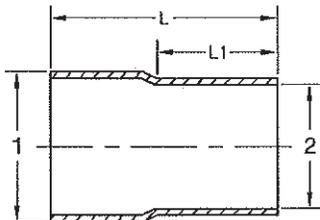
Instrument Adapter Model - 40125

Stock Code	Size	L	d
S/S 316	NPT	(in)	(in)
80126	½"	4.000	1.870
80127	¾"	4.000	2.354



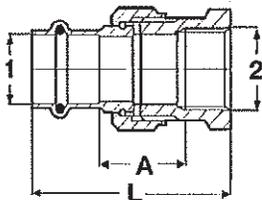
3-Piece Stainless Steel Ball Valve P x P w/ EPDM Seals - Model 4370.8

Stock Code	Size	B	C	D
S/S 316	NPT	(in)	(in)	(in)
85132	½"	5.413	3.988	2.441
85133	¾"	5.787	3.984	2.677
85134	1"	6.004	5.866	2.984
85136	1¼"	6.614	5.862	3.409
85137	1½"	7.264	7.661	3.803
85138	2"	9.665	7.543	4.118



Transition FTG x Weld - Model - 0113.3 / 4013.3XL

Stock Code		Size		L	L1
S/S 304	S/S 316	1	2	(in)	(in)
86003	81138	½" ID	½" OD	2.402	0.866
86008	81143	¾" ID	¾" OD	2.744	1.024
86013	81148	1" ID	1" OD	2.776	1.063
86023	81158	1½" ID	1½" OD	4.122	1.575
86028	81163	2" ID	2" OD	4.272	1.732



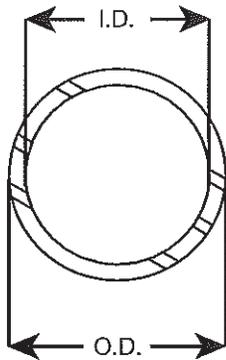
Di-electric Union P x FNPT w/ EPDM Model 4067

Stock Code	Size	A	L	G
S/S 316	1	2	(in)	(in)
80071	½" x ½" NPT	1.283	2.567	1¼
80078	¾" x ¾" NPT	1.394	2.854	1½
80073	1" x 1" NPT	1.248	2.815	1½
80074	1¼" x 1¼" NPT	1.327	3.039	2
80076	1½" x 1½" NPT	1.535	3.642	2¼
80077	2" x 2" NPT	1.724	3.996	2¾

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Viega ProPress for Stainless XL-S

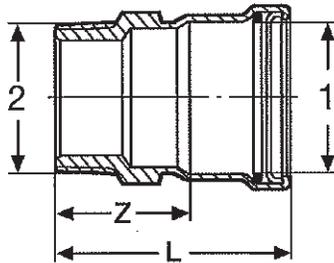


Viega ProPress for Stainless Steel 304 ECO-PipeXL ASTM A554 Model - 0108XL

Stock Code	Size	O.D. (in)	I.D. (in)	Wall Thickness	Length (ft)
87080	2½"	2.63	2.47	0.08	20
87085	3"	3.13	2.97	0.08	20
87090	4"	4.13	3.97	0.08	20

Viega ProPress for Stainless Steel 304 & 316 PipeXL ASTM A312 Model - 0103XL / 4003XL

Stock Code	Size	O.D. (in)	I.D. (in)	Wall Thickness	Length (ft)
87095	2½"	2.63	2.47	0.08	20
87100	3"	3.13	2.97	0.08	20
87105	4"	4.13	3.97	0.08	20

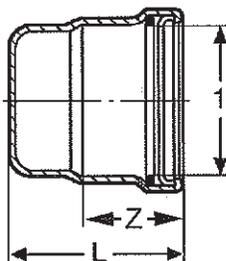


Adapter P x M NPT w/ EPDM seals Model - 0111XL / 4011XL

Stock Code	Size	Z (in)	L (in)
85060	2½" x 2½" NPT	2.992	4.685
85065	3" x 3" NPT	3.091	5.059
85070	4" x 4" NPT	3.130	5.492

Adapter P x M NPT w/ FKM seal Model - 6011XL / 4311XL

Stock Code	Size	Z (in)	L (in)
85062	2½" x 2½" NPT	2.992	4.685
85067	3" x 3" NPT	3.091	5.059
85072	4" x 4" NPT	3.130	5.492



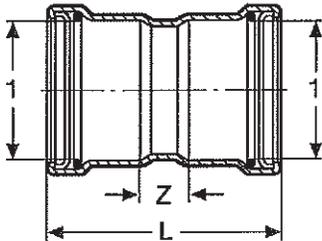
Cap x P w/ EPDM Seals Model - 0156.1XL / 4056.1XL

Stock Code	Size	Z (in)	L (in)
85385	2½"	1.319	3.012
85390	3"	1.358	3.327
85395	4"	1.358	3.720

Cap x P w/ FKM Seal Model - 6056.1XL / 4356.1XL

Stock Code	Size	Z (in)	L (in)
85387	2½"	1.319	3.012
85392	3"	1.358	3.327
85397	4"	1.358	3.720

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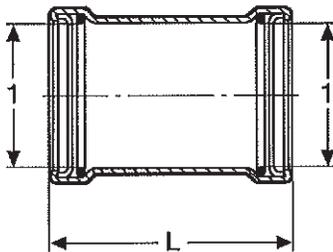


Coupling P x P w/ Stop w/ EPDM Seals Model - 0115XL / 4015XL

Stock Code		Size	Z	L
S/S 304	S/S 316		(in)	(in)
85295	80295	2½"	0.945	4.331
85300	80300	3"	0.984	4.921
85305	80305	4"	1.063	5.787

Coupling P x P w/ Stop w/ FKM Seals Model - 6015XL / 4315XL

Stock Code		Size	Z	L
S/S 304	S/S 316		(in)	(in)
85297	80297	2½"	0.945	4.331
85302	80302	3"	0.984	4.921
85307	80307	4"	1.063	5.787

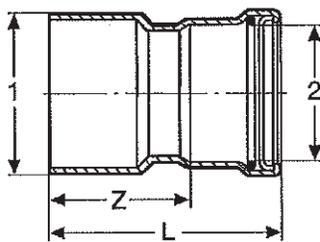


Slip Coupling P x P w/ EPDM Seals Model - 0115.5XL / 4015.5XL

Stock Code		Size	L
S/S 304	S/S 316		(in)
85340	80340	2½"	4.331
85345	80345	3"	4.921
85350	80350	4"	5.787

Slip Coupling P x P w/ FKM Seals Model - 6015.5XL / 4315.5XL

Stock Code		Size	L
S/S 304	S/S 316		(in)
85342	80342	2½"	4.331
85347	80347	3"	4.921
85352	80352	4"	5.787



Reducer FTG x P w/ EPDM Seals Model - 0115.1XL / 4015.1XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1 2	(in)	(in)
85235	80235	2½" x 2"	2.835	4.409
85240	80240	3" x 2"	3.386	4.961
85245	80245	3" x 2½"	3.209	4.902
85250	80250	4" x 2"	4.272	5.846
85255	80255	4" x 2½"	4.094	5.787
85260	80260	4" x 3"	3.878	5.846

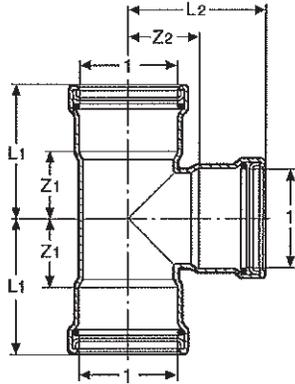
Reducer FTG x P w/ FKM Seals Model - 6015.1XL / 4315.1XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1 2	(in)	(in)
85237	80237	2½" x 2"	2.835	4.409
85242	80242	3" x 2"	3.386	4.961
85247	80247	3" x 2½"	3.209	4.902
85252	80252	4" x 2"	4.272	5.846
85257	80257	4" x 2½"	4.094	5.787
85262	80262	4" x 3"	3.878	5.846

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Tee P x P x P w/ EPDM Seals Model - 0118XL / 4018XL

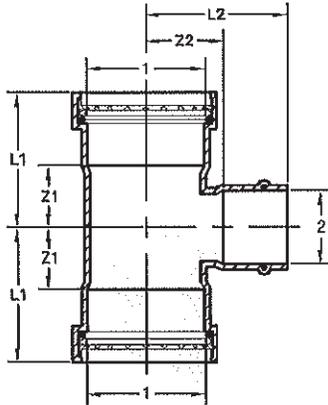


Stock Code	Size	Z 1	Z 2	L1	L2
S/S 304 S/S 316	1	(in)	(in)	(in)	(in)
85610 80610	2½"	1.831	1.870	3.524	3.563
85615 80615	3"	2.067	2.146	4.035	4.114
85620 80620	4"	2.598	2.657	4.961	5.020

Tee P x P x P w/ FKM Seals Model - 6018XL / 4318XL

Stock Code	Size	Z 1	Z 2	L1	L2
S/S 304 S/S 316	1	(in)	(in)	(in)	(in)
85612 80612	2½"	1.831	1.870	3.524	3.563
85617 80617	3"	2.067	2.146	4.035	4.114
85622 80622	4"	2.598	2.657	4.961	5.020

Reducing Tee P x P x P w/ EPDM Seals Model - 0118XL / 4018XL



Stock Code	Size	Z 1	Z 2	L1	L2
S/S 304 S/S 316	1 2	(in)	(in)	(in)	(in)
85761 80751	2½" x 1½"	1.299	1.744	2.992	3.169
85760 80760	2½" x 2"	1.535	1.772	3.228	3.346
85772 80782	3" x 1¼"	1.240	1.929	3.209	2.953
85771 80781	3" x 1½"	1.319	2.008	3.287	3.425
85770 80770	3" x 2"	1.555	2.008	3.524	3.583
85780 80780	3" x 2½"	1.850	2.126	3.819	3.819
85791 80791	4" x 1½"	1.358	2.520	3.720	3.937
85790 80790	4" x 2"	1.594	2.520	3.957	4.094
85800 80800	4" x 2½"	1.890	2.638	4.252	4.331
85810 80810	4" x 3"	2.067	2.657	4.469	4.626

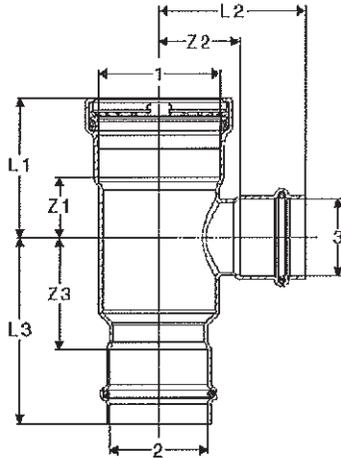
Reducing Tee P x P x P w/ FKM Seals Model - 6018XL / 4318XL

Stock Code	Size	Z 1	Z 2	L1	L2
S/S 304 S/S 316	1 2	(in)	(in)	(in)	(in)
85934 80934	2½" x 1½"	1.299	1.744	2.992	3.169
85904 80904	2½" x 2"	1.535	1.772	3.228	3.346
85944 80944	3" x 1¼"	1.240	1.929	3.209	2.953
85935 80955	3" x 1½"	1.319	2.008	3.287	3.425
85905 80905	3" x 2"	1.555	2.008	3.524	3.583
85914 80914	3" x 2½"	1.850	2.126	3.819	3.819
85945 80945	4" x 1½"	1.358	2.520	3.720	3.937
85915 80915	4" x 2"	1.594	2.520	3.957	4.094
85924 80924	4" x 2½"	1.890	2.638	4.252	4.331
85925 80925	4" x 3"	2.067	2.657	4.469	4.626

Submittal Package



Reducing Tee P x P x P w/ EPDM Seals Model - 0118XL / 4018XL

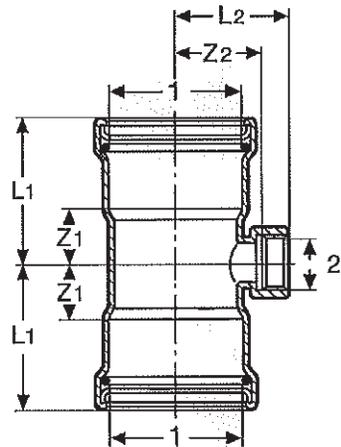


Stock Code		Size			Z 1	Z 2	Z 3	L 1	L 2	L 3
S/S 304	S/S 316	1	2	3	(in)	(in)	(in)	(in)	(in)	(in)
85763	80753	2½" x 2" x 1½"			1.299	1.744	2.386	2.992	3.169	3.961
85762	80752	2½" x 2" x 2"			1.535	1.791	2.697	3.228	3.366	4.272

Reducing Tee P x P x P w/ FKM Seals Model - 6018XL / 4318XL

Stock Code		Size			Z 1	Z 2	Z 3	L 1	L 2	L 3
S/S 304	S/S 316	1	2	3	(in)	(in)	(in)	(in)	(in)	(in)
85955	80594	2½" x 2" x 1½"			1.299	1.744	2.386	2.992	3.169	3.961
85954	80935	2½" x 2" x 2"			1.535	1.791	2.697	3.228	3.366	4.272

Reducing Tee P x P x F NPT w/ EPDM Seals Model - 0117.2XL / 4017.2XL

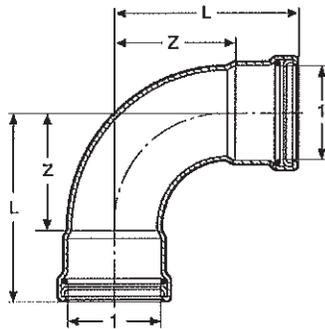


Stock Code		Size		Z 1	Z 2	L 1	L 2
S/S 304	S/S 316	1	2	(in)	(in)	(in)	(in)
85950	80950	2½" x ¾"		1.024	1.807	2.717	2.362
85960	80960	2½" x 1"		1.024	1.740	2.717	2.402
85970	80970	3" x ¾"		1.043	2.004	3.012	2.559
85980	80980	3" x 1"		1.043	1.976	3.012	2.638
85990	80990	4" x ¾"		1.083	2.516	3.445	3.071
86000	81000	4" x 1"		1.083	2.488	3.445	3.150

Reducing Tee P x P x F NPT w/ FKM Seals Model - 6017.2XL / 4317.2XL

Stock Code		Size		Z 1	Z 2	L 1	L 2
S/S 304	S/S 316	1	2	(in)	(in)	(in)	(in)
85952	80952	2½" x ¾"		1.024	1.807	2.717	2.362
85962	80962	2½" x 1"		1.024	1.740	2.717	2.402
85972	80972	3" x ¾"		1.043	2.004	3.012	2.559
85982	80982	3" x 1"		1.043	1.976	3.012	2.638
85992	80992	4" x ¾"		1.083	2.516	3.445	3.071
86002	81002	4" x 1"		1.083	2.488	3.445	3.150

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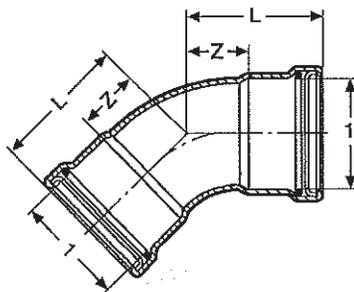


EII 90° P x P w/ EPDM Seals Model - 0116XL / 4016XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1	(in)	(in)
85430	80430	2½"	3.189	4.882
85435	80435	3"	3.760	5.728
85440	80440	4"	4.862	7.224

EII 90° P x P w/ FKM Seals Model - 6016XL / 4316XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1	(in)	(in)
85432	80432	2½"	3.189	4.882
85437	80437	3"	3.760	5.728
85442	80442	4"	4.862	7.224

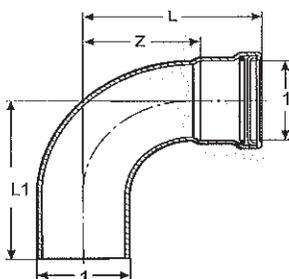


EII 45° P x P w/ EPDM Seals Model - 0126XL / 4026XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1	(in)	(in)
85475	80475	2½"	1.484	3.177
85480	80480	3"	1.732	3.701
85485	80485	4"	2.189	4.551

EII 45° P x P w/ FKM Seals Model - 6026XL / 4326XL

Stock Code		Size	Z	L
S/S 304	S/S 316	1	(in)	(in)
85477	80477	2½"	1.484	3.177
85482	80482	3"	1.732	3.701
85487	80487	4"	2.189	4.551



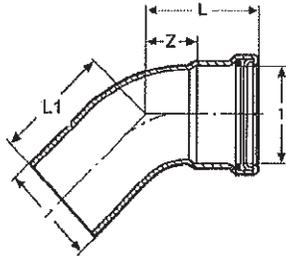
EII 90° FTG x P w/ EPDM Seals Model - 0116.1XL / 4016.1XL

Stock Code		Size	Z	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85520	80520	2½"	3.189	4.882	4.803
85525	80525	3"	3.760	5.728	5.630
85530	80530	4"	4.862	7.224	7.126

EII 90° FTG x P w/ FKM Seals Model - 6016.1XL / 4316.1XL

Stock Code		Size	Z	L	L1
S/S 304	S/S 316	1	(in)	(in)	(in)
85522	80522	2½"	3.189	4.882	4.803
85527	80532	3"	3.760	5.728	5.630
85532	80433	4"	4.862	7.224	7.126

Submittal Package

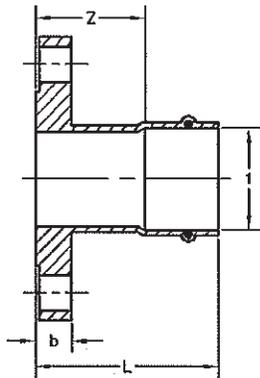


EII 45° FTG x P w/ EPDM Seals Model - 0126.1XL / 4026.1XL

Stock Code		Size	Z	L	L1
S/S 304	S/S 316		(in)	(in)	(in)
85565	80565	2½"	1.484	3.177	3.098
85570	80570	3"	1.732	3.701	3.602
85575	80575	4"	2.189	4.551	4.453

EII 45° FTG x P w/ FKM Seals Model - 6026.1XL / 4326.1XL

Stock Code		Size	Z	L	L1
S/S 304	S/S 316		(in)	(in)	(in)
85567	80567	2½"	1.484	3.177	3.098
85572	80572	3"	1.732	3.701	3.602
85577	80577	4"	2.189	4.551	4.453

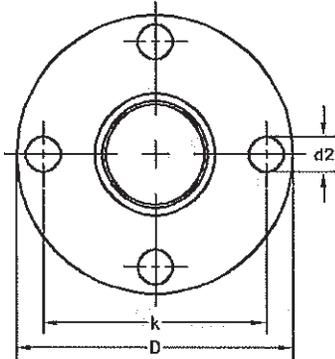


Flange P x Flange w/ EPDM Seals Model - 0159XL / 4059XL

Stock Code		Size	Z	L	b	D	k	d2
S/S 304	S/S 316		(in)	(in)	(in)	(in)	(in)	(in)
86065	81065	2½"	1.346	3.039	0.894	7.087	5.512	0.748
86070	81070	3"	1.429	3.398	0.957	7.480	5.984	0.748
86075	81075	4"	1.429	3.791	0.957	9.055	7.520	0.748

Flange P x Flange w/ FKM Seals Model - 6059XL / 4359XL

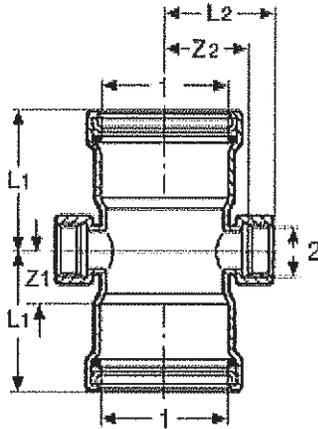
Stock Code		Size	Z	L	b	D	k	d2
S/S 304	S/S 316		(in)	(in)	(in)	(in)	(in)	(in)
86067	81067	2½"	1.346	3.039	0.894	7.087	5.512	0.748
86072	81072	3"	1.429	3.398	0.957	7.480	5.984	0.748
86077	81077	4"	1.429	3.791	0.957	9.055	7.520	0.748



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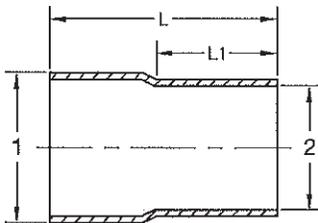


Cross P x P x F NPT x F NPT w/ EPDM Seals Model - 4044.1XL



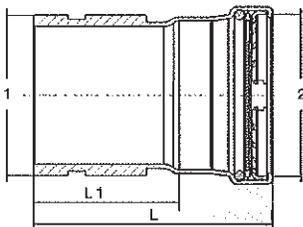
S/S 316	Size	Z 1	Z 2	L 1	L 2
	1 2	(in)	(in)	(in)	(in)
80067	2½" x ¾"	1.024	1.087	2.717	2.362
80069	3" x ¾"	1.043	2.004	3.012	2.559
80068	4" x ¾"	1.083	2.516	3.445	3.071

Transition P X Weld - w/out Seal Model - 0113.1XL & 4013.1XL



Stock Code		Size		L	L1
S/S 304	S/S 316	1	2	(in)	(in)
85135	80081	2½" ID	2½" OD	4.370	2.323
85145	80082	3" ID	3" OD	4.567	2.598
85155	80083	4" ID	4" OD	5.157	2.992

Transition P X Groove - EPDM Seals Model - 0113.2XL & 4013.2XL



Stock Code		Size	L	L1
S/S 304	S/S 316	1	(in)	(in)
85166	80064	2½"	4.331	2.638
85177	80061	3"	4.626	4.528
85188	80063	4"	5.020	5.315

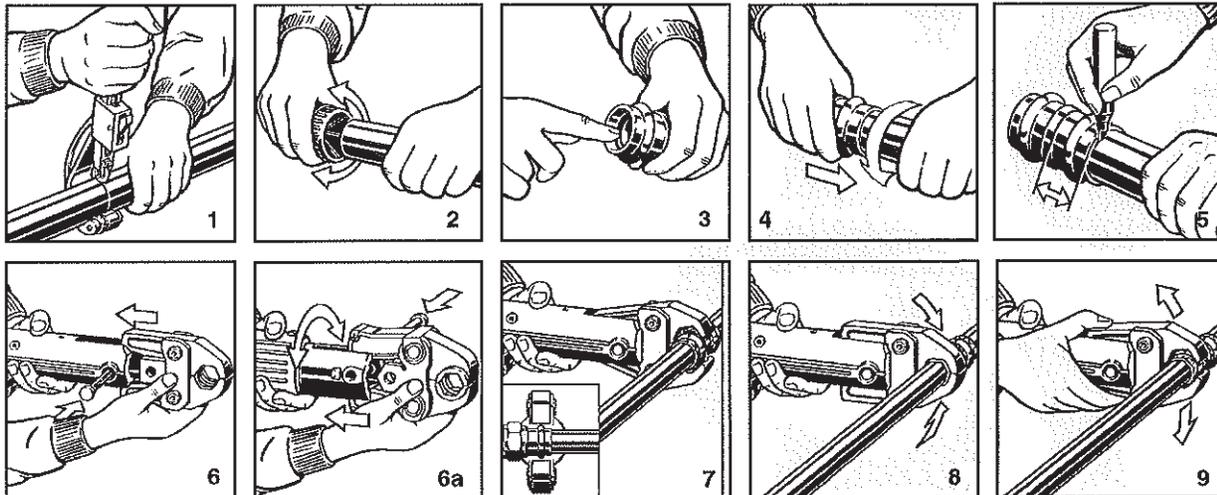
Submittal Package

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Viega ProPress for Stainless Product Instructions 1/2" to 2"

⚠ WARNING

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



Viega ProPress for Stainless Insertion Depth Chart

Pipe Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Insertion Depth	3/4"	7/8"	7/8"	1"	17/16"	19/16"

1. Cut stainless steel pipe only with an approved stainless steel pipe cutting tool. Cut pipe to permit proper joining with the fitting.
2. Remove burrs, scale, slag, dirt and debris from inside and outside of the pipe and fittings before assembly. Wipe pipe ends clean and dry.
3. Check fitting to ensure sealing element is properly seated.
4. Fitting insertion: insert pipe in fitting until stop is encountered.
5. Mark pipe to verify insertion depth.
6. Insert the appropriate fitting jaw into the press tool, lock into place.
- 6a. Tool head rotates, allowing jaws to be placed in desired position.
7. Open press jaws and place at right angles on the fitting. Visually check insertion depth using mark on pipe.
8. Start pressing procedure by holding the press tool trigger until jaws have engaged.
Note: Once press tool is operating, jaws will not open.
9. Once press process is complete, jaws can be released.

Smart Connect Feature



For Viega ProPress 1/2" to 2" dimension, the Smart Connect feature is a special indentation in the inside surface of the fitting near the sealing element. This indentation is removed during the pressing process, creating a leak-free permanent connection. The function of the feature is to provide identification of connections which have not been pressed prior to putting the system in to operation. The function of the Smart Connect feature is carried out by pressurizing the piping system. The Smart Connect feature may be pressure

tested with air or water. When testing with air, the pressure range is 1/2 psi to 85 psi maximum. When testing with water, the pressure range is 15 psi to 85 psi maximum. The Smart Connect feature 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.

⚠ WARNING Read this instruction sheet carefully before starting the pressing procedure. Failure to understand and follow the contents of this sheet may result in extensive property damage or injury.

⚠ 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 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.

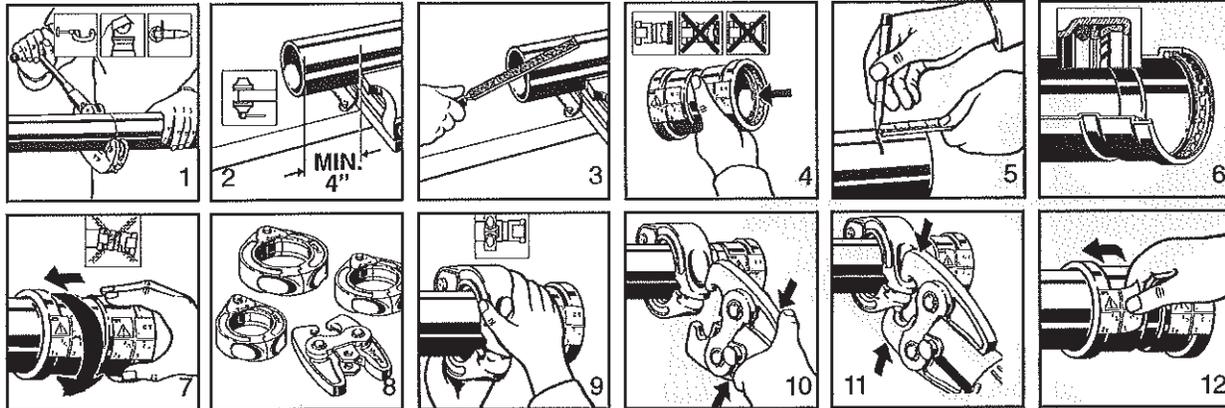
Submittal Package

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Viega ProPress for Stainless Product Instructions 2½" to 4"

⚠ WARNING

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



Viega ProPress for Stainless Insertion Depth Chart

Pipe Size	2½"	3"	4"
Insertion Depth	1¾"	17/8"	2¾"

1. Cut stainless steel pipe only with an approved stainless steel pipe cutting tool. Cut pipe to permit proper joining with the fitting.
2. Keep end of piping a minimum of 4" away from the contact area of the vise to prevent possible damage to the piping in the press area.
3. Remove burrs from inside and outside of tubing to prevent damage of the sealing element.
4. Check seal and grip ring for correct fit. Do not use oils or lubricants. Use only Viega ProPress for stainless XL sealing elements.
5. Mark proper insertion depth as indicated by Viega ProPress for stainless XL-S insertion depth chart. Improper insertion depth may result in an improper seal.
6. Illustration demonstrates proper fit of grip ring, separation ring and sealing element.
7. While turning slightly, slide press fitting onto pipe to the marked depth. **End of pipe must contact stop.**
8. Press Viega ProPress for stainless XL fitting connections with Viega ProPress XL-C rings and V2 ACTUATOR. **Use of Viega ProPress XL rings and/or Actuator (for Bronze Fittings) will result in an improper connection.** See Ridge Tool operator's manual for proper tool instructions.
9. Open XL-C Ring and place at right angles on the fitting. XL-C Ring must be engaged on the fitting bead. Check insertion depth.
10. With V2 ACTUATOR inserted in the tool, open the V2 ACTUATOR as shown and connect the V2 ACTUATOR to the XL-C Ring.
11. Place the V2 ACTUATOR onto the XL-C Ring. Hold the trigger until the Actuator has engaged the XL-C Ring. Keep extremities and foreign objects away from the XL-C Ring and V2 ACTUATOR during pressing operation to prevent injury or incomplete press.
12. Release V2 ACTUATOR from XL-C Ring and then remove the XL-C Ring from the fitting on completion of press. Remove tag from fitting indicating press has been completed.

Pressure testing: Carry out pressure testing in accordance with local codes.

Viega ProPress for stainless includes the Smart connect (SC) feature, quick and easy identification of unpressed connections during the pressure testing process. This indentation is removed during the pressing process, creating a leak-free permanent connection. The function of the feature is to provide identification of connections which have not been pressed prior to putting the system in to operation. The function of the Smart Connect feature is carried out by pressurizing the piping system. The Smart Connect feature may be pressure tested with air or water. When testing with air, the pressure range is ½ psi to 85 psi maximum. When testing with water, the pressure range is 15 psi to 85 psi maximum. The Smart Connect feature 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.

⚠ WARNING Read this instruction sheet carefully before starting the pressing procedure. Failure to understand and follow the contents of this sheet may result in extensive property damage or injury.

⚠ 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 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.

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Pipe Marking Guide

Guide to the ANSI A13.1 Standard for the Identification of Pipes

Usage	Material Properties	Type of Application (typical)	Color Scheme
Hazardous Materials	<ul style="list-style-type: none"> • Flammable or Explosive • Chemically Active or Toxic • Radioactive • Extreme Temperature/Pressure 	<ul style="list-style-type: none"> • Process Piping • High Pressure Steam • Acids/Corrosives 	YELLOW ON BLACK
Low Hazard Materials (Liquid)	<ul style="list-style-type: none"> • Liquid • Liquid Admixture 	<ul style="list-style-type: none"> • Cooling Water • Grey Water • Chilled Water 	WHITE ON GREEN
Low Hazard Materials (Gas)	<ul style="list-style-type: none"> • Gas • Gas Admixture 	<ul style="list-style-type: none"> • Compression Air • Nitrogen (N2) • Argon (Ar) 	WHITE ON BLUE
Fire Suppression	<ul style="list-style-type: none"> • Liquid • Gas • Foam 	<ul style="list-style-type: none"> • Sprinklers (Wet/Dry) • CO2 • Foam (AFFF) 	WHITE ON RED

Pipe O.D. Including Covering	Minimum Length of Label Field	Color	Minimum Height of Letters		
¾" to 1¼"	19 mm to 32 mm	8"	203 mm	½"	13 mm
1½" to 2"	38 mm to 51 mm	8"	203 mm	¾"	19 mm
2½" to 4"	64 mm to 108 mm	12"	305 mm	1¼"	32 mm

Marker Placement

- At all changes in directions
- At both sides of any penetrations (valves, flanges, tees, etc.)
- At frequent intervals on straight run (50 ft is typical)
- Locate pipe markers so they are readily visible
- Provide arrows indicating direction of flow

Note: This guide is for general information purposes only
Pipe markings shall be in accordance with local code requirements

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Frequently Asked Questions

Q: What is the Smart Connect feature?

A: The Smart Connect feature provides a quick and easy way to identify unpressed connections during the pressure testing process. Unpressed connections are located by pressurizing the system with air or water. When testing with air, the pressure range is ½ psi to 85 psi maximum. The Smart Connect feature is removed during the pressing process, creating a leak-proof, permanent connection. Guaranteed.

Q: Why is the Smart Connect feature so valuable?

A: The Smart Connect feature provides the user with a strong peace of mind. It allows for faster testing procedures since you do not have to shut down and drain the system. Costly damages and possible insurance claims and premiums can be avoided because it identifies unpressed connections before they can become a problem. Because of the time savings, projects stay on track.

Q: Do I need additional equipment to install Viega ProPress for stainless?

A: No. Viega designed Viega ProPress for Stainless to be compatible with the same jaws and press tools that are used for Viega ProPress and Viega ProPress XL-C.

Q: If a leak is discovered, is it necessary to drain the system prior to pressing the connection?

A: No. It is not necessary to drain the system when making a repair.

Q: How would an inspector know they are looking at a good connection?

A: Good connections can be proven by performing a pressure test, using the same procedure for a fitting system.

Q: What is the lubrication used on the sealing elements?

A: The sealing elements are lubricated with an USDA Approved H1 lubricant, meeting the requirement of FDA 21CFR. If it is necessary to lubricate the seals in the field, use water only. Do not use petroleum-based lubricants. Petroleum and EPDM are incompatible.

Q: How long will the EPDM seal last?

A: When properly installed, the EPDM seal and connection will last as long as the piping system.

Q: How do I fabricate a system in tight places when using Viega ProPress?

A: If necessary pre-fabricate connections that are in tight places and then install.

Q: What is the warranty for Viega ProPress for stainless?

A: Viega ProPress for stainless fittings carry a 2 year warranty against defects in material and workmanship from Viega.

Q: How do Viega ProPress connections hold up to freezing temperatures?

A: Precautions should be taken for any piping system to protect the system from below freezing temperatures.

Q: What level of turbulence occurs in Viega ProPress for stainless steel fittings and will it cause premature wear in the piping?

A: The long radius of Viega ProPress elbows reduce turbulence typically experienced with traditional short radius fittings. Not reaming the ID of the pipe is the largest contributing factor to turbulence and premature wear of any piping system.

Q: What are the flow rates through Viega ProPress for stainless steel fittings?

A: Because of the long radius fittings, flow rates are better than standard short radius fittings. The friction loss allowance table can be found in Technical Bulletin 426 (see pages 8-13).

Submittal Package

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Q: Why use FKM or HNBR sealing elements for compressed air systems with more than 25 mg/m³ of oil content?

A: FKM and HNBR sealing elements are better suited for high oil content due to their high resistance to hydrocarbon substances.

Q: What should a user do if a Viega ProPress for stainless system leaks?

A: In general, Viega ProPress fittings only leak due to one of three reasons; the fitting was never pressed, the fitting was not properly inserted or the pressing jaws were not properly aligned. If the fitting was never pressed, confirm that the tubing is properly installed and proceed with pressing. If the piping was not properly inserted, cut out the fitting and reinstalled properly. If the pressing jaws were not properly aligned, cut out the fitting and reinstall properly. If problems persist, be sure to contact Viega immediately.

Q: Is Viega ProPress compatible with the cleaning agents used to disinfect a new plumbing system?

A: Yes, however, it is recommended to contact your local District Manager or the Viega Technical Support Department for consultation.

Q: What should be done if a user accidentally cuts the fitting seal?

A: Any damaged seal must be replaced. Please note that the tolerances of the fitting socket ensure that the piping is inserted at the appropriate angle.

Q: Is Viega ProPress for stainless approved for underground use?

A: Yes. Viega ProPress can be installed underground, however, users must obtain approval from the local jurisdiction. Approval of this application is based upon performance testing conducted by NSF, which includes withstanding pressure, temperature, water hammer, bending forces, torsion, temperature variation, vibration and vacuum.

Q: How should Viega ProPress for stainless steel pipe be prepared for installation?

A: Stainless steel pipe shall be cut with a wheeled pipe cutter or approved stainless steel pipe cutting tool. The pipe shall be cut square to permit proper joining with the fittings. Then, remove scale, slag, dirt and debris from inside and outside of pipe and fittings before assembly. The pipe end should be wiped clean and dry and any burrs should be removed.

Q: Can I mix 304 stainless with 316 stainless components?

A: Viega does NOT recommend the mixing of stainless components. However, Viega offers ball valve in 316, which is acceptable to use on a 304 system. Use of 304 stainless or 316 stainless is determined by YOUR SYSTEM SPECIFIC CHARACTERISTICS.

Q: At what temperature will the EPDM seals begin to distort?

A: there is no detractor or distortion of the EPDM seal within the stated temperature rating of 0°F to 250°F

Q: Does the ProPress for stainless system require the use of special valves?

A: No. Users can continue with their favorite valve line by using the threaded adapters or flange adapters. However, Viega ProPress for stainless offers press connection ball valves in sizes ½"-2".

Q: What level of turbulence is caused by Viega ProPress for stainless steel fittings?

A: The long radius of Viega ProPress for stainless fittings reduces the turbulence typically experienced with traditional short radius fittings.

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Viiega Limited Warranty for Industrial and Marine Applications

Subject to the terms and conditions of this Limited Warranty, Viiega LLC (Viiega) warrants to end users, installers and distribution houses that its Viiega metal press products (Viiega product) when properly installed in industrial and marine applications shall be free from failure caused by manufacturing defects for a period of two (2) years from date of installation. For purposes of this warranty, industrial applications are defined as non residential and non commercial applications not normally accessible to the general public. Marine applications are defined as mobile structures used to navigate water or stationary structures in water.

Under this Limited Warranty, you only have a right to a remedy if the failure or leak resulted from a manufacturing defect in the Viiega 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 reply if the failure or any resulting damage is caused by (1) components other than those sold by Viiega; (2) not designing, installing, inspecting, testing, or maintaining the Viiega product in accordance with Viiega'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 Viiega 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 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 Viiega Product.

In the event of a leak or other failure in the Viiega 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 Viiega be responsible for the remedy under this warranty. The part or parts which you claim failed should be kept and Viiega contacted by writing to the address below or telephoning 1-877-843-4362 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 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, Viiega will investigate the reasons for the failure, which includes the right to inspect the product at a Viiega location and reasonable access to the site of damage. Viiega will notify you in writing as to the results of its review.

In the event that Viiega determines that the failure or leak was the result of a manufacturing defect in the Viiega 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 Viiega Product itself. VIEGA SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR 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, Viiega 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.

This document subject to updates. For the most current Viiega technical literature please visit www.vieiga.us.
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