

Tech Data

Viega ProPress® Stainless Flow Data



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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.**

Dimensional Data

Nominal Pipe Size (in)	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
2	2.18	1.61	3.79
3"	2.60	2.29	4.89
4"	3.46	4.06	7.52

½" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.065
ID = 0.50

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:

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

h = friction loss

L = pipe length

D = pipe ID

V = velocity (ft./sec.)

g = gravity constant (32.174ft./sec.²)

f = pipe friction factor

¾" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.065
ID = 0.75

1" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.065
ID = 1.00

1¼" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.06
ID = 1.26

1½" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.06
ID = 1.50

2" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.06

ID = 2.00

2½" Stainless Steel, Schedule 5 (ASTM A312)

Flow Rate (gpm)	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

Wall Thickness = 0.08

ID = 2.470

3" Stainless Steel, Schedule 5 (ASTM A554)

Flow Rate (gpm)	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

Wall Thickness = 0.08
ID = 2.970

4" Stainless Steel, Schedule 5 (ASTM A554)

Flow Rate (gpm)	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

Wall Thickness = 0.08
ID = 3.970

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-58 or the following maximum spacing and minimum rod size

Nominal Pipe Size (in.)	Stainless Steel Pipe Max. Span (ft.)	Min. Rod Diameter (in.)
Up to ¾	10	⅜
1	10	⅜
1¼	10	⅜
1½	10	⅜
2	10	⅜
2½	11	½
3	12	½
4	14	⅝

V Viega LLC
585 Interlocken Blvd.
Broomfield, CO 80021

Phone (800) 976-9819
www.viega.us

