

Submittal Package

Viega ProPress® Valves

Project _____ Date _____

Engineer _____ Contractor _____

Submitted by _____

Approved by _____ Date _____ Approved by _____ Date _____

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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.**

1 Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2971.1ZL



Description

The two-piece, zero lead bronze ball valve is equipped with a full port, zero lead bronze body. The ball valve features EPDM sealing elements, EPDM stem seals, and Viega's Smart Connect®

technology for easy identification of unpressed connections during pressure testing. Applications for this valve include commercial and residential potable water.

Features

- 316 stainless steel ball
- Eco Brass® blowout-proof stem
- Reinforced PTFE seats
- Smart Connect technology
- Non-locking metal handle

Ratings

- 300 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Labeled List of Materials

Label No.	Component	Material
1	Body	Zero lead bronze CC246E
2	Press ends	Zero lead bronze CC246E
3	Ball	ASIS 316 stainless steel
4	Seat	Reinforced PTFE
5	Stem	Eco Brass CW724R
6 / 6.1	Sealing element	EPDM
7	Stem seals	EPDM
8	Handle	Zinc-plated steel 1.0980
9	Handle cover	Polyvinyl
10	Nut	Zinc-plated steel 1.0980

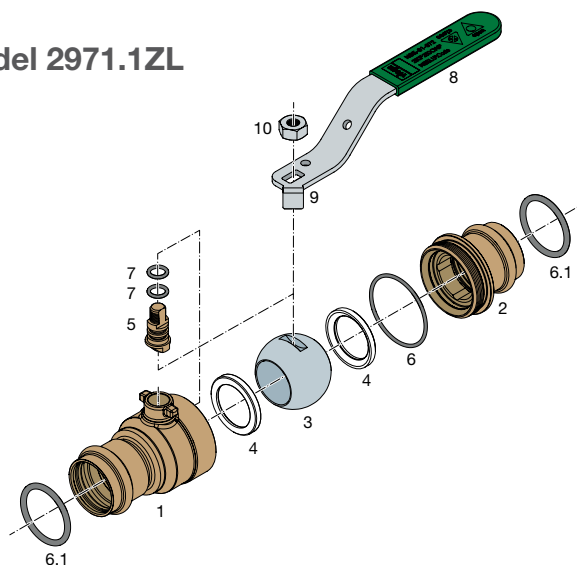
Approvals

- Conforms to MSS SP-110
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Accessories

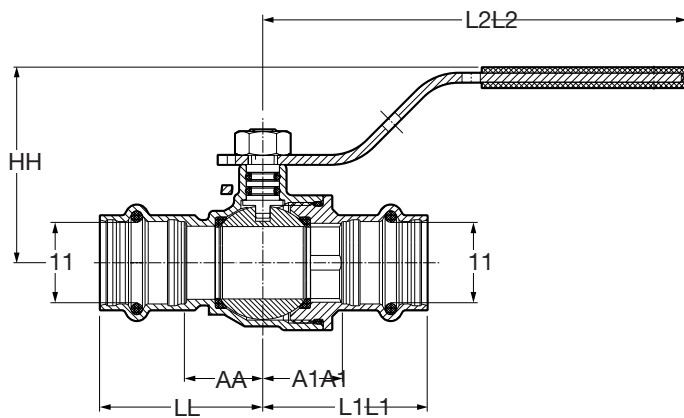
- Ball valve lockable metal handle model 2971.8
- Ball valve stem extension kit model 2971.96
- Bronze lockable stem extension model 2971.66
- 304 stainless steel lockable stem extension model 4070.96
- Replacement handle model 4070.8
- Thermal insulated handle model 2971.46
- Wing-style handle model 2971.26

Model 2971.1ZL



ProPress Zero Lead Ball Valve Model 2971.1ZL

Part No.	Size (in) 1	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)	Cv (US gal/min)
79920	½	0.75	0.75	1.57	1.57	4.57	1.97	14.3
79925	¾	0.85	0.87	1.75	1.77	4.57	2.09	31.9
79930	1	1.02	1.06	1.93	1.96	5.75	2.46	54.3
79935	1¼	1.14	1.12	2.17	2.15	5.75	2.67	91.4
79940	1½	1.46	1.25	2.87	2.67	6.12	3.02	130.5
79950	2	1.73	1.47	3.31	3.05	6.12	3.32	234



ProPress Ball Valve 2971.1ZL Insulation Thickness

Size (in)	Insulation max with no ext (in)	Insulation max with ext (in)	Extension Part No.
½	0.50	2.15	23443
¾	0.55	2.20	23443
1	0.60	2.30	23445
1¼	0.69	2.39	23445
1½	1.25	3.35	23447
2	1.31	3.41	23447

Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2971.3ZL



Description

The two-piece lead-free bronze ball valve is equipped with a full port bronze body. The ball valve features EPDM sealing elements, EPDM stem seals, and Viega's Smart Connect® technology for easy

identification of unpressed connections during pressure testing.

Features

- Two-piece ¼ turn ball valve
- Lead-free bronze body and press ends
- Full port stainless steel ball
- Stainless steel blowout-proof stem
- Lockable metal handle
- EPDM stem and press sealing elements
- PTFE seats
- Smart Connect technology
- Sizes: ½", ¾", 1, 1¼", 1½", 2"

Ratings

- 300 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Labeled List of Materials – ProPress Zero Lead Ball Valve Model 2971.3ZL

Label No.	Component	Material
1	Body	Lead-free bronze CC246E
2	Press ends	Lead-free bronze CC246E
3	Ball	Stainless steel 1.4401
4	Seat	PTFE
5	Sealing element	EPDM
6	Sealing element	EPDM
7	Stem	Stainless steel 1.4404
8	Stem seals	EPDM
9	Handle cover	Polyvinyl
10	Handle	Stainless steel 1.0980
11	Nut	Galvanized steel

Approvals

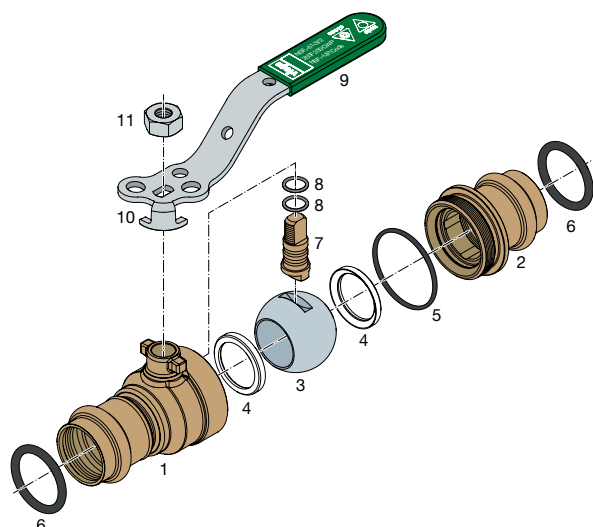
- Conforms to MSS SP-110
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Accessories

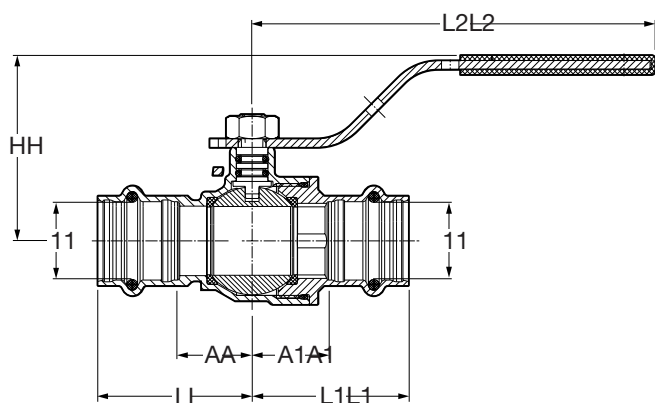
- Ball valve lockable metal handle model 2971.8
- Ball valve stem extension kit model 2971.96
- Bronze lockable stem extension model 2971.66
- 304 stainless steel lockable stem extension model 4070.96
- Replacement handle model 4070.8
- Thermal insulated handle model 2971.46
- Wing-style handle model 2971.26

Common Applications

- Potable water
- Hydronic heating water (up to 50% glycol)
- Chilled water
- Compressed air



Dimensions – ProPress Zero Lead Ball Valve Model 2971.3ZL



Part No.	Size (in)	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)	Cv (US gal/min)
79923	1/2	0.75	0.75	1.57	1.57	4.57	1.97	14.3
79928	3/4	0.85	0.87	1.75	1.77	4.57	2.09	31.9
79933	1	1.02	1.06	1.93	1.96	5.75	2.46	54.3
79938	1 1/4	1.14	1.12	2.17	2.15	5.75	2.67	91.4
79943	1 1/2	1.46	1.25	2.87	2.67	6.12	3.02	130.5
79948	2	1.73	1.47	3.31	3.05	6.12	3.32	234

Insulation Thickness – ProPress Zero Lead Ball Valve Model 2971.3ZL

Size (in)	Max. insulation without extension (in)	Max. insulation with extension (in)	Extension part no.
1/2	0.50	2.15	23443
3/4	0.55	2.20	23443
1	0.60	2.30	23445
1 1/4	0.69	2.39	23445
1 1/2	1.25	3.35	23447
2	1.31	3.41	23447

Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2971.4ZL



Description

The two-piece lead-free bronze ball valve is equipped with a full port, bronze body. The ball valve features EPDM sealing elements, EPDM stem

seals, and Viega's Smart Connect® technology for easy identification of unpressed connections during pressure testing.

Features

- Two-piece ¼ turn ball valve
- Lead-free bronze body and press end
- Full port 316 stainless steel ball
- Eco Brass® blowout-proof stem
- Lockable metal handle
- EPDM stem and press sealing elements
- PTFE seats
- Smart Connect technology
- Sizes: ½", ¾", 1"

Ratings

- 300 CWP
- Temperature range: 0°F-250°F

- Max. operating pressure: 300 psi

Approvals

- Conforms to MSS SP-110
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Accessories

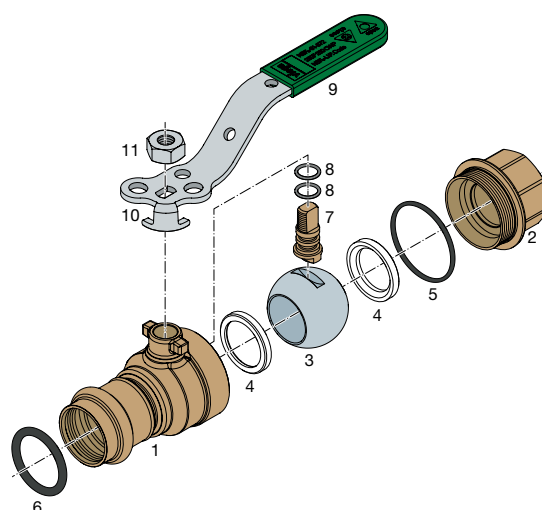
- Ball valve lockable metal handle model 2971.8
- Ball valve stem extension kit model 2971.96
- Bronze lockable stem extension model 2971.66
- 304 stainless steel lockable stem extension model 4070.96
- Replacement handle model 4070.8
- Thermal insulated handle model 2971.46
- Wing-style handle model 2971.26

Common Applications

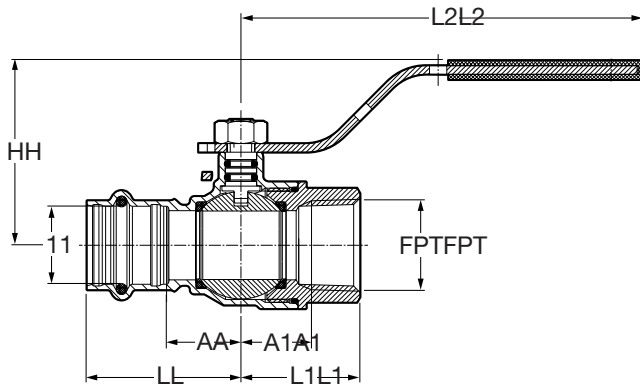
- Potable water
- Hydronic heating water (up to 50% glycol)
- Chilled water
- Compressed air

Labeled List of Materials – ProPress Zero Lead Ball Valve Model 2971.4ZL

Label No.	Component	Material
1	Body/press end	Lead-free bronze CC246E
2	Threaded end	Lead-free bronze CC246E
3	Ball	Stainless steel 1.4401
4	Seat	PTFE
5	Sealing element	EPDM
6	Sealing element	EPDM
7	Stem	Eco Brass CW724R
8	Stem seal	EPDM
9	Handle cover	Polyvinyl
10	Handle	Zinc-plated steel 1.0980
11	Nut	Zinc-plated steel 1.0980



Dimensions – ProPress Zero Lead Ball Valve Model 2971.4ZL



Part No.	Size (in) 1 x FPT	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)	Cv (US gal/min)
79970	1/2 x 1/2	0.73	0.66	1.57	1.20	4.57	1.97	18.4
79975	3/4 x 3/4	0.85	0.79	1.75	1.35	4.57	2.09	33
79980	1 x 1	1.02	0.98	1.93	1.63	5.75	2.46	43.7

Insulation Thickness – ProPress Zero Lead Ball Valve 2971.4ZL

Size (in)	Max. insulation without extension (in)	Max. insulation with extension (in)	Extension part no.
1/2	0.59	2.24	23443
3/4	0.58	2.23	23443
1	0.55	2.25	23445

Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2971.6ZL



Description

The two-piece lead-free bronze ball valve is equipped with a full port, bronze body. The ball valve features EPDM sealing elements, EPDM stem seals, and Viega's Smart

Connect® technology for easy identification of unpressed connections during pressure testing.

Features

- Two-piece ¼ turn ball valves
- Lead-free bronze body, press ends, and hose connections
- Full port 316 stainless steel ball
- Eco Brass® blowout-proof stem
- Lockable metal handle
- EPDM stem and press seal
- PTFE seats
- Smart Connect technology
- Sizes: ½" x ¾", ¾" x ¾"

Ratings

- 300 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Approvals

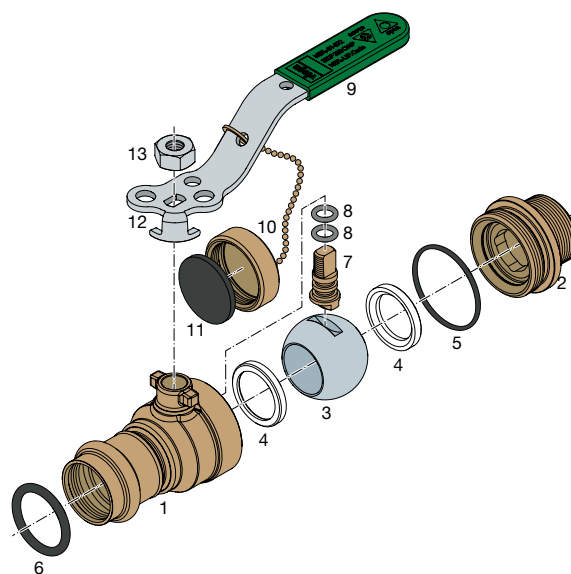
- Conforms to MSS SP-110
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Accessories

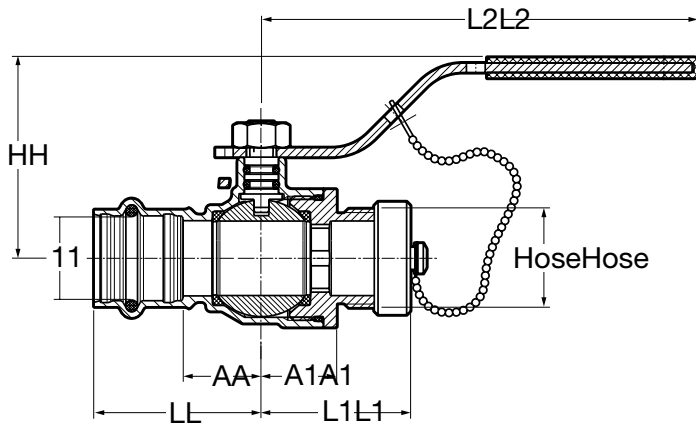
- Ball valve lockable metal handle model 2971.8
- Ball valve stem extension kit model 2971.96
- Bronze lockable stem extension model 2971.66
- 304 stainless steel lockable stem extension model 4070.96
- Replacement handle model 4070.8
- Thermal insulated handle model 2971.46
- Wing-style handle model 2971.26

Labeled List of Materials – ProPress Zero Lead Ball Valve Model 2971.6ZL

Label No.	Component	Material
1	Body	Lead-free bronze CC246E
2	Hose connection	Lead-free bronze CC246E
3	Ball	Stainless steel 1.4401
4	Seat	PTFE
5	Sealing element	EPDM
6	Sealing element	EPDM
7	Stem	Eco Brass CW724R
8	Stem seals	EPDM
9	Handle cover	Polyvinyl
10	Hose cap	Lead-free bronze CC246E
11	Hose cap seal	EPDM
12	Handle	Zinc-plated steel 1.0980
13	Nut	Zinc-plated steel 1.0980



Dimensions – ProPress Zero Lead Ball Valve Model 2971.6ZL



Part No.	Size (in) 1 x Hose	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
79875	1/2 x 3/4	0.75	0.79	1.57	1.56	4.57	1.99
79876	3/4 x 3/4	0.85	0.79	1.75	1.56	4.57	2.10

Insulation Thickness – ProPress Zero Lead Ball Valve Model 2971.6ZL

Size (in)	Max. insulation without extension (in)	Max. insulation with extension (in)	Extension part no.
1/2	0.68	2.33	23443
3/4	0.75	2.40	23443

Common Applications

- Potable water
- Hydronic heating water (up to 50% glycol)
- Chilled water
- Compressed air

Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2971.1XL



Description

The two-piece, lead-free brass ball valve is equipped with a full port, plated ball. The ball valve features EPDM sealing elements, EPDM stem seals, and Viega's Smart Connect® technology for

easy identification of unpressed connections during testing.

Features

- Two-piece ¼ turn ball valve
- Lead-free bronze body and press ends
- Full port chrome-plated ball
- EPDM stem and press sealing elements
- Lockable metal handles
- PTFE seats
- Smart Connect technology
- Sizes: 2½", 3", 4"

Accessories

- XL ball valve replacement handle model 2971.1XL

- Brass lockable stem extension model 291.9XL

Ratings

- 300 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Approvals

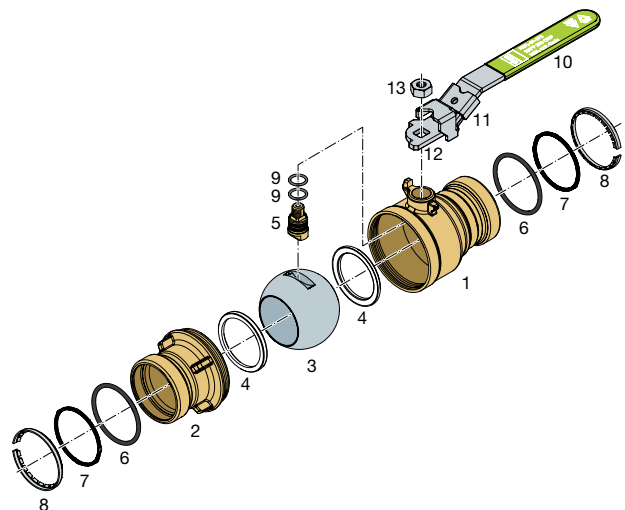
- Conforms to MSS SP-110
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Common Applications

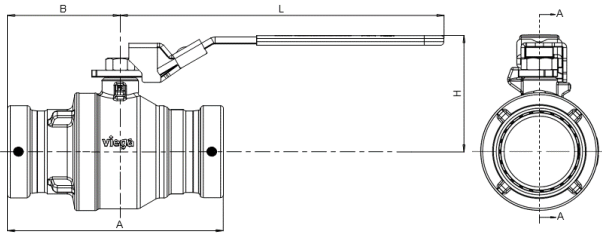
- Potable water
- Hydronic heating water (up to 50% glycol)
- Chilled water
- Compressed air

Labeled List of Materials – ProPress Zero Lead Ball Valve Model 2971.1XL

Label No.	Component	Material
1	Body	Lead-free brass CW511L
2	Press ends	Lead-free brass CW511L
3	Ball	Chrome-plated, low-lead brass
4	Seat	PTFE
5	Stem	Brass C27450
6	Sealing element	EPDM
7	Separator ring	AISI 304, UNS 30400
8	Grip ring	AISI 420, UNS S42000
9	Stem seal	EPDM
10	Handle cover	Polyvinyl
11	Handle lock	Steel 1.0332
12	Handle	Steel 1.0332
13	Nut	Steel 1.0332



Dimensions – ProPress Zero Lead Ball Valve Brass P x P Model 2971.1XL



Part No.	Size (in)	A (in)	B (in)	H (in)	L (in)	Weight (lbs)	Cv (US gal/min)
78300	2½	7.47	3.91	4.02	11.22	7.0	378
78305	3	8.15	4.17	4.37	11.22	9.7	584
78310	4	9.72	4.99	5.12	11.22	17.5	1019

Tech Data Sheet

ProPress Zero Lead Ball Valve Model 2975.3ZL



Description

Viega ProPress Zero Lead ball valve is a full port ball valve with a drain intended for potable applications. The ball valve features EPDM

sealing elements, EPDM stem seals, zero lead brass body, and Viega's Smart Connect® Technology for easy identification of unpressed connections during pressure testing.

Features

- 316 stainless steel ball
- Reinforced PTFE seat
- Brass stem
- Drain option
- Smart Connect technology

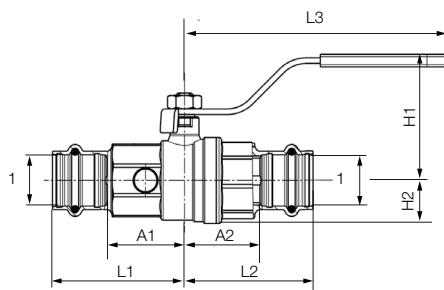
Accessories

- Handle model 2971.8
- T-handle model 2971.26
- Insulated handle model 2971.46
- Stem extension model 2971.66

Approvals

- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- IAPMO/ANSI Z1157
- ASME A112.4.14/CSA B 125.14
- Listed by NSF to Commercial Hot

ProPress Zero Lead Ball Valve Model 2975.3ZL



Ratings

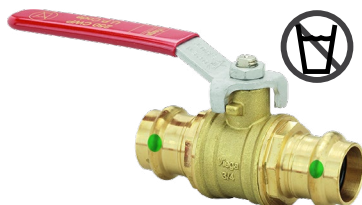
- Temperature range: 0°F–250°F
- Max. operating pressure: 250 psi

Component	Material
Body	Zero lead brass CW511L
Ball	316 stainless steel
Seat	Reinforced PTFE
Stem	Brass
Stem seals	EPDM
Nut	Zinc-plated steel
Sealing element	EPDM

Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2	L3 (in)	A1 (in)	A2 (in)	Cv (US gal/min)
	1								
87845	1/2	2.05	0.63	2.01	1.97	4.61	1.18	1.14	13.5
87850	3/4	2.20	0.75	2.28	2.24	4.61	1.38	1.34	29.9

Tech Data Sheet

ProPress Ball Valve Model 2973



Description

Viega ProPress model 2973 is a two-piece, full-port ball valve intended for hydronic and non-potable applications. The ball valve features EPDM

sealing elements, EPDM stem seals and Viega's Smart Connect technology for easy identification of unpressed connections during pressure testing.

Features

- Chrome-plated brass ball
- Blowout-proof stem
- Reinforced PTFE seats
- Smart Connect technology
- ProPress connections

Ratings

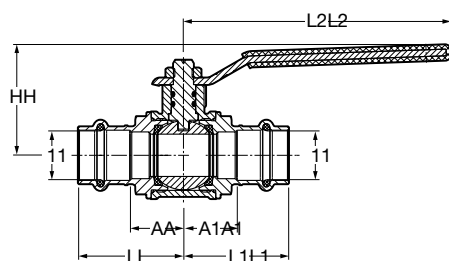
- 300 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Approvals

- Conforms to MSS SP-110
- NSF®-U.P. Code
- IAPMO/ANSI Z1157

Component	Material
Body	Brass C37700
Ball	Chrome-plated Brass
Seat	Reinforced PTFE
Stem	Brass C37700
Stem seals	EPDM
Nut	Zinc-plated steel
Handle	Zinc-plated steel
Handle cover	Polyvinyl
Sealing element	EPDM

ProPress Ball Valve Bronze/Brass P x P Model 2973



Part No.	Size (in)	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
	1						
24000	1/2	0.83	0.83	1.58	1.58	3.94	1.69
24005	3/4	0.95	0.95	1.86	1.86	4.72	1.97
24010	1	1.18	1.18	2.09	2.09	4.72	2.13
24015	1 1/4	1.29	1.29	2.31	2.31	6.22	2.87
24020	1 1/2	1.39	1.39	2.81	2.81	6.22	3.11
24025	2	1.85	1.85	3.43	3.43	6.22	3.46



Model 2973 is for use in non-potable applications. For NSF-61G compliant valves, refer to Viega ProPress Models 2971.1ZL and 2971.3ZL.

Tech Data Sheet

ProPress Ball Valve Model 2973.1



Description

Viega ProPress model 2973.1 is a two-piece, full-port ball valve intended for hydronic and non-potable applications. The ball valve features EPDM

sealing elements, EPDM stem seals and Viega's Smart Connect technology for easy identification of unpressed connections during pressure testing.

Features

- Chrome-plated brass ball
- Blowout-proof stem
- Reinforced PTFE seats
- Smart Connect technology
- Press x FPT connections

Ratings

- 300 CWP
- Temperature range: 0°F–200°F
- Max. operating pressure: 300 psi

Approvals

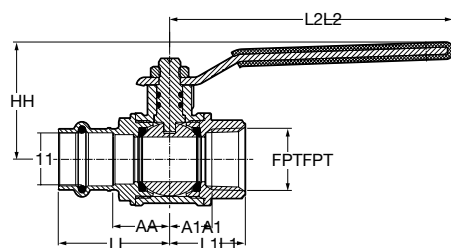
- Conforms to MSS SP-110
- NSF®-U.P. Code
- IAPMO/ANSI Z1157

ProPress Ball Valve 2973.1 Insulation Thickness

Size (in)	Insulation max. without ext. (in)	Insulation max. with ext. (in)	Extension part no.
½	0.59	2.81	23449
¾	0.58	3.04	23451
1	0.55	3.01	23451

Component	Material
Body	Brass C37700
Ball	Chrome-plated brass
Seat	Reinforced PTFE
Stem	Brass C37700
Stem seals	EPDM
Nut	Zinc-plated steel
Handle	Zinc-plated steel
Handle cover	Polyvinyl
Sealing element	EPDM

ProPress Ball Valve Bronze/Brass P x FPT Model 2973.1



Part No.	Size (in) 1 x FPT	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
24030	½ x ½	0.83	0.63	1.58	1.16	3.94	1.69
24035	¾ x ¾	0.95	0.71	1.86	1.26	4.72	1.97
24040	1 x 1	1.18	0.93	2.09	1.59	4.72	2.13



Model 2973.1 is for use in non-potable applications. For NSF-61G compliant valves, refer to Viega ProPress Model 2971.4ZL.

Tech Data Sheet

ProPress Ball Valve Model 2973.3



Description

Viega ProPress model 2973.3 is a two-piece, full-port ball valve intended for hydronic and non-potable applications. The ball valve features

EPDM sealing elements, EPDM stem seals and Viega's Smart Connect technology for easy identification of unpressed connections during pressure testing.

Features

- Chrome-plated brass ball
- Blowout-proof stem
- Reinforced PTFE seats
- Smart Connect feature
- Press x garden hose connections
- Hose cap is full pressure rated
- Sizes: 1/2" x 3/4" and 3/4" x 3/4"

Ratings

- 300 CWP
- Temperature range: 0°F–200°F
- Max. operating pressure: 300 psi

Approvals

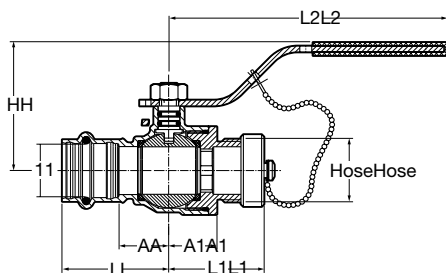
- Conforms to MSS SP-110
- NSF®-U.P. Code
- IAPMO/ANSI Z1157

ProPress Ball Valve 2973.3 Insulation Thickness

Size (in)	Insulation max. without ext. (in)	Insulation max. with ext. (in)	Extension part no.
1/2	0.68	2.90	23449
3/4	0.75	3.21	23451

Component	Material
Body	Brass C37700
Ball	Chrome-plated brass
Seat	Reinforced PTFE
Stem	Brass C37700
Stem seals	EPDM
Nut	Zinc-plated steel
Handle	Zinc-plated steel
Handle cover	Polyvinyl
Sealing element	EPDM

ProPress Ball Valve Bronze/Brass P x Hose Model 2973.3



Part No.	Size (in) 1 x Hose	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
24090	1/2 x 3/4	0.83	0.85	1.58	1.30	3.89	1.67
24095	3/4 x 3/4	0.95	0.94	1.86	1.39	4.72	1.97

Tech Data Sheet

ProPress Zero Lead Threaded Ball Valve Model 2800ZL



Description

The Viega ProPress zero lead threaded ball valve is a full-port ball valve intended for potable water applications, featuring female pipe threads and an EPDM stem seal.

Features

- Two-piece ¼ turn ball valve
- Lead-free bronze body and female pipe threads
- Full port 316 stainless steel ball
- 316 stainless steel stem
- PTFE seats
- Sizes: ½", ¾", 1", 1¼", 1½", 2"

Accessories

- Ball valve lockable metal handle model 2971.8
- Thermal insulated handle model 2971.46
- Wing-style handle model 2971.26

- 304 stainless steel lockable stem extension model 4070.96

Ratings

- Valve design rating: 600 CWP
- Temperature range: 0°F–250°F
- 300 psi max. at 250°F

Approvals

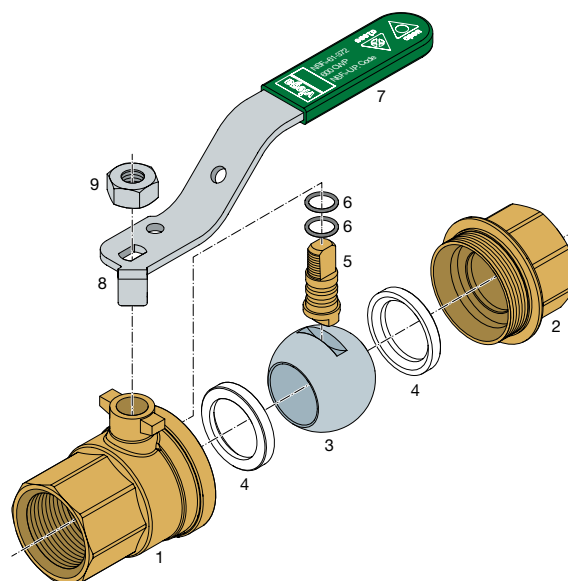
- ASME A112
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Listed by NSF to Commercial Hot

Common Applications

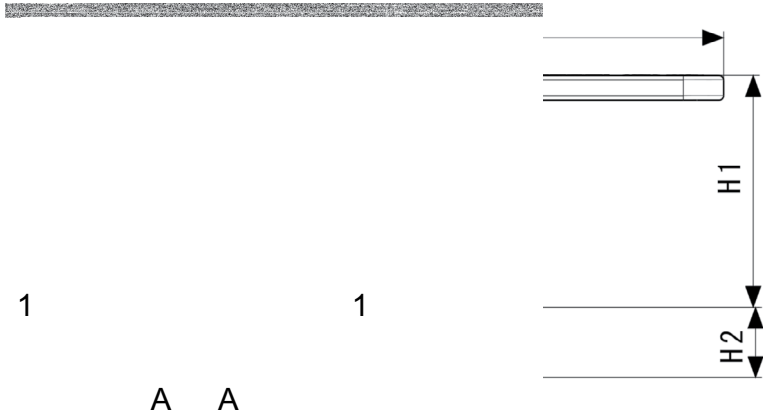
- Potable water
- Hydronic heating water (up to 50% glycol)
- Chilled water
- Compressed air

Labeled List of Materials – ProPress Zero Lead Threaded Ball Valve Model 2800ZL

Label No.	Component	Material
1	Body	Lead-free brass CW511L
2	Retainer cap	Lead-free brass CW511L
3	Ball	316 stainless steel
4	Seat	PTFE
5	Stem	316 stainless steel
6	Stem seal	EPDM
7	Handle sleeve	Polyvinyl
8	Handle	Steel 1.0980
9	Nut	Steel CB4FF



Dimensions – ProPress Zero Lead Threaded Ball Valve Model 2800ZL



Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2 (in)	L3 (in)	A1 (in)	A2 (in)	Cv (US gal/min)
87920	1/2	2.05	0.63	1.14	1.14	4.61	0.59	0.59	16
87925	3/4	2.17	0.75	1.30	1.30	4.61	0.71	0.71	27.1
87930	1	2.60	0.91	1.54	1.54	5.79	0.87	0.87	45.1
87935	1 1/4	2.83	1.18	1.77	1.77	5.79	1.10	1.10	106
87940	1 1/2	3.11	1.42	1.93	1.93	6.14	1.26	1.26	160
87945	2	3.43	1.73	2.17	2.17	6.14	1.46	1.46	255

Tech Data Sheet

ProPress 316 Ball Valve Model 4070



Description

The ProPress 316 two-piece 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

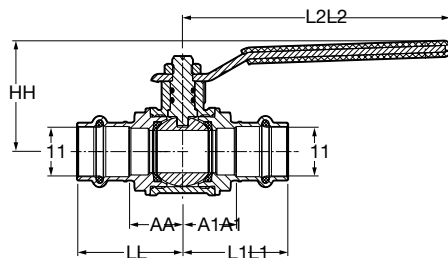
- 250 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 200 psi

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

ProPress 316 Ball Valve Model 4070



Part No.	Size (in)	A (in)	A1 (in)	L (in)	L1 (in)	L2 (in)	H (in)
1							
81080	½	0.89	1.17	1.64	1.92	5.55	2.44
81085	¾	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	1¼	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

Tech Data Sheet

ProPress 316 Ball Valve Model 4075



Description

The ProPress 316 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

- Smart Connect® ProPress press ends
- EPDM sealing elements
- 316 stainless steel ball and stem
- Full-port design
- Blowout-proof stainless steel stem
- Reinforced PTFE seats
- Lockable, 316 stainless steel handle

Ratings

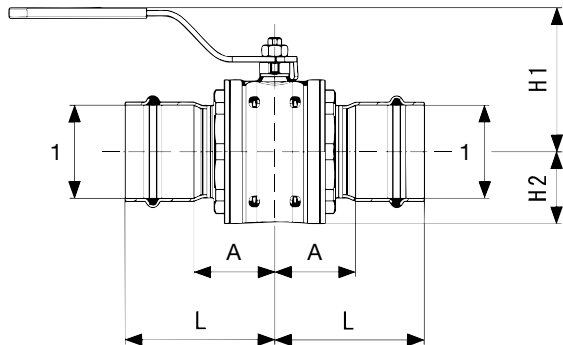
- 250 CWP
- Temperature range: 0°F–250°F
- Max. operating pressure: 250 psi

Approvals

- Conforms to MSS SP-110
- ASME A112.4.14/CSA B125.14
- IAPMO/ANSI Z1157
- NSF®-61
- NSF®-372
- NSF®-U.P. Code

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

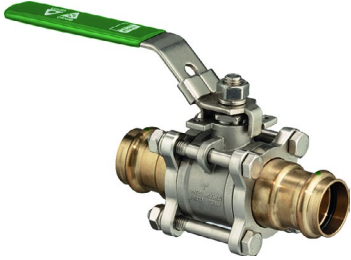
ProPress 316 Ball Valve Model 4075



Part No.	Size (in)	A (in)	L (in)	H1 (in)	H2 (in)	Cv (US gal/min)
81081	1/2	1.10	1.85	2.01	0.59	10.4
81086	3/4	1.22	2.13	2.09	0.71	23.6
81096	1	1.38	2.68	2.48	0.87	46.2
81097	1 1/4	1.46	2.48	2.68	1.14	96.2
81106	1 1/2	1.61	3.03	3.03	1.38	143
81107	2	1.85	3.46	3.31	1.65	252

Tech Data Sheet

ProPress Bronze 3-Piece Ball Valve Model 2972.1ZL



The ProPress Bronze 3-Piece Ball valve is equipped with a full port, stainless-steel 3-piece body. The ball valve features an EPDM sealing element and Viega's Smart Connect® Technology

for easy identification of unpressed connections during pressure testing.

Features

- 316 stainless steel ball
- Blowout-proof 316 stainless steel stem
- Adjustable packing nut
- Reinforced PTFE seats
- ProPress connection
- Smart Connect® technology

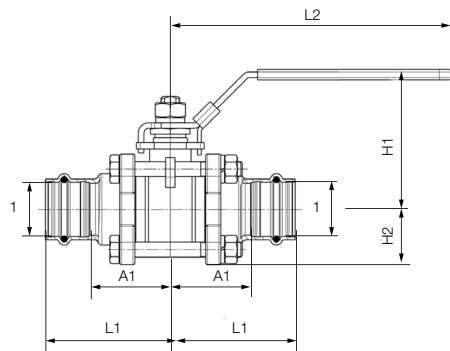
Accessories

- Handle model 4875.80
- Stem extension model 2972.12

Approvals

- Conforms to MSS SP-110
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- IAPMO/ANSI Z1157
- Listed by NSF to Commercial Hot

ProPress Bronze 3-Piece Ball Valve Model 2972.1ZL



Ratings

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

Component	Material
Body	316 stainless steel
Ball	316 stainless steel
Seat	Reinforced PTFE
Stem	316 stainless steel
Nut	316 stainless steel
Sealing element	EPDM

Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2 (in)	A1 (in)	Cv (US gal/min)	Bolt Torque (ft/lbs)
87275	1/2	2.28	0.91	1.93	3.98	1.10	10.9	7.5
87280	3/4	2.83	1.06	2.52	5.87	1.61	23.9	15
87285	1	2.91	1.14	2.60	5.87	1.70	47.3	15
87290	1 1/4	3.35	1.38	3.27	7.56	2.24	76.4	22.5
87295	1 1/2	3.58	1.54	3.78	7.56	2.36	113	22.5
87300	2	3.90	1.81	4.06	7.56	2.48	210	22.5

Tech Data Sheet

ProPress Butterfly Valve Model 2979.8ZL



Description

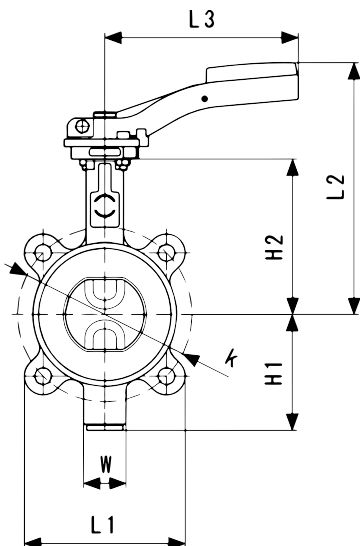
The Viega ProPress Epoxy Powder-coated Ductile Iron Butterfly Valve provides reliable flow isolation and control in a compact, lightweight design that is often more cost-effective than other valve types. Its durable epoxy powder-coated body and 316 stainless steel disc ensure long-lasting performance.

The EPDM seal creates a tight seal while reducing noise and vibration. Designed for compatibility with Viega ProPress and MegaPress® flange adapters, it offers a dependable solution for various piping systems.

Features

- Lug-style body of epoxy powder-coated ductile iron
- 316 stainless steel disc, screw plug, and grub screw
- Bidirectional design allows installation in several positions
- Anti-blowout, stainless steel shaft
- Multi-position locking aluminum hand lever
- EPDM seal
- Sizes: 2 ½", 3", 4"
- Lighter than most ¼-turn isolation valves
- Lugged-style bolt pattern
- ISO 5211 F05 flathead actuation-ready mounting
- Class 150 – ASME B16.5 compatible
- Suitable for use with Viega ProPress and MegaPress flange adapters

ProPress Butterfly Valve Model 2979.8ZL



Part No.	Size (in)	L1 (in)	L2 (in)	L3 (in)	B (in)	k (in)	H1 (in)	H2 (in)
87660	2½	5.24	8.15	6.50	1.34	5.51	3.66	5.31
87665	3	5.51	9.41	7.68	1.42	5.98	4.09	6.18
87670	4	8.11	9.80	7.68	1.57	7.52	4.53	6.61

Ratings

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

Approvals

- NSF®-61
- NSF®-372
- Conforms to MSS SP-67
- Conforms to MSS SP-25

Gear Operator Accessory

- 2979.88
- *All models sold separately.*

Viega Flange Adapter Compatibility

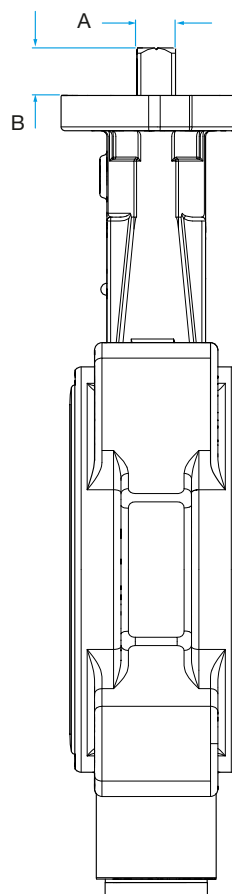
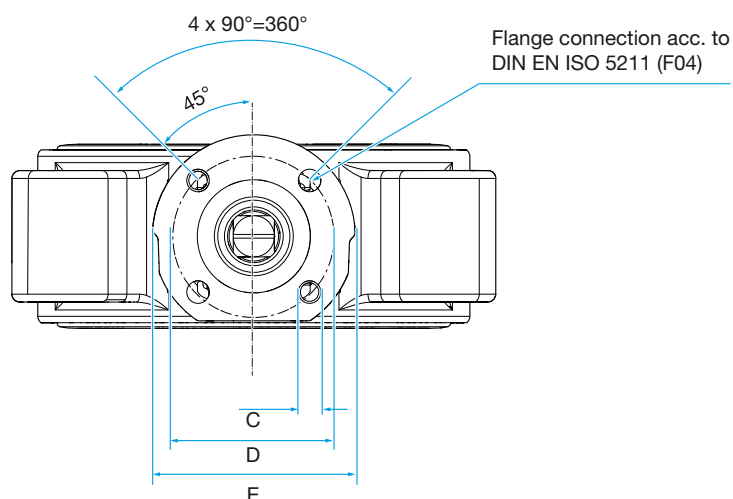
- 0959.5XL (ProPress)
- 4059XL (ProPress 316SST)
- 5159XL (MegaPress 316SST)
- *All models sold separately.*

Component	Material
Body	Epoxy powder-coated ductile iron
Seal	EPDM
Disc	316 stainless steel CF8M
Screw plug	316 stainless steel CF8M
Grub screw	316 stainless steel CF8M
Upper shaft	QT650 stainless steel
Lower shaft	QT650 stainless steel
Hand lever	Cast aluminum
Locking disc	Nylon
Joint washer	Copper

Actuating Torque Values

The table below shows torque values to be used as a guide for actuator selection. Increased breakaway and actuating torques may occur during operation. This can happen due to contamination or irregular use. When designing an actuator, a safety factor of at least 1.5 should be selected depending on variables such as media characteristics and number of cycles. Temperature may require an extra safety factor.

IPS	Breakaway Actuating															
(MP	Material	Part	Ø DN		torque	torque	□ A		B		Ø C		Ø D		E	
System)	No.	No.	(in)	(mm)	(Nm)	(Nm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
2½	888133	87660	2.559	65	25	18	0.443	11	0.531	13.5	0.236	6	1.653	42(F04)	2.215	54
3	888143	87665	3.149	80	38	24	0.551	14	0.669	17	0.255	6.5	1.968	50(F05)	2.559	65
4	888153	87670	3.937	100	56	37	0.551	14	0.669	17	0.255	6.5	1.968	50(F05)	2.559	65



Tech Data Sheet

ProPress Butterfly Valve Model 2873.81



Description

- Ductile iron body
- Lug body is polyurethane coated
- Anti-blowout stainless steel shaft
- Downstream dismantling allowed
- EPDM liner
- Sizes 2½" and 3" for 4 bolt pattern flanges
- Size 4" for 8 bolt pattern flanges
- Class 150

Features

- Spheroidal graphite cast iron body
- Lug body is polyurethane coated
- 316 stainless steel disc
- Anti-blowout stainless steel shaft
- Downstream dismantling allowed
- Bidirectional, can be mounted in all positions
- ISO 5211 flange type F05 flat head
- Conforms to MSS-SP67 and MSS-SP25

Ratings

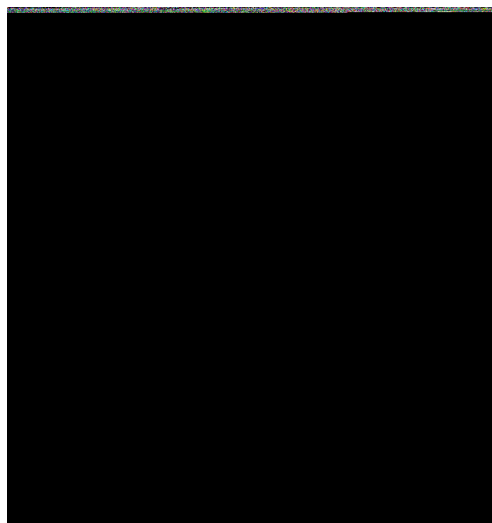
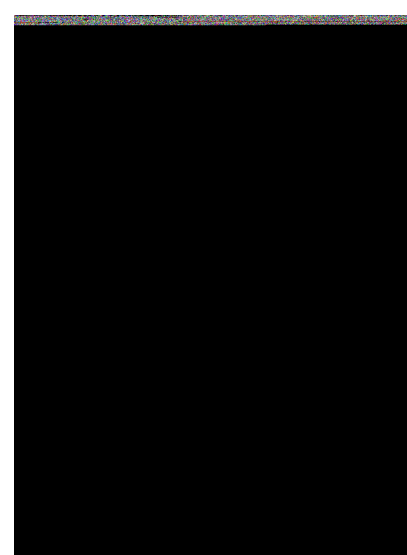
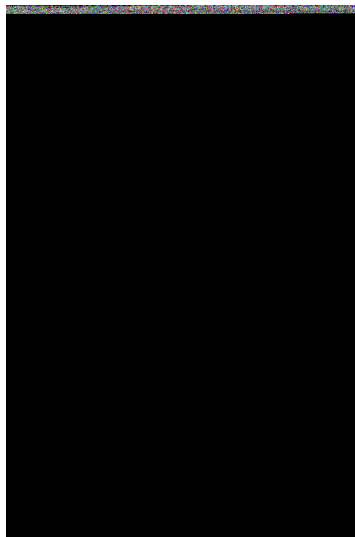
- Temperature range: 0°–250°F
- Max. operating pressure: 200 psi

Standard Variants

- Pneumatic actuator: Actair / Dynactair
- Electric actuator: Various manufacturers
- Limit switches: Monitor
- Positioner: Siemens

Size (in)	Weight	
		lbs.
2½		7.78
3		8.46
4		12.79

Weights include the unit valve plus the handle.

Sizes 2½" and 3"

Size 4"


Butterfly Valve Dimensions										
Part No.	Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)
22074	2½	6.50	7.40	2.17	0.43	1.81	2.64	5.35	5.20	5.51
22075	3	6.50	7.64	2.80	0.67	1.81	2.82	5.59	7.01	5.98
22076	4	9.06	8.47	3.54	0.91	2.05	3.62	6.42	8.27	7.48

Operating Torque Data	
Size (in)	ft./lbs.
2½	22.12
3	29.50
4	44.25

Lubricated

The safety coefficient to define the adapted actuator is included in the torque value.

Bolt and Washer Grade 5 Zinc-plated Blue Chromated	
Part No.	Size (in)
19768	⅝" x 1½
19773	⅝" x 1⅝
19778	⅝" x 1¾

ASME B18.2.1 -- 1996

Hydraulic Characteristics	
Size (in)	Cvo
2½	280
3	475
4	760

Bolt Tightening	
Part No.	Recommended Max. Bolt Torque (ft/lbs)
19768	75
19773	
19778	

Tech Data Sheet

Gear Operator Handwheel Model 2979.88



Description

The Viega Gear Operator Handwheel is designed for use with Viega Butterfly Valves. This handwheel, equipped with a gear operator, provides precise flow control by

allowing for gradual and accurate valve positioning. The gear mechanism reduces the operating torque, minimizing the force needed to open or close the valve. This makes handwheels ideal for higher pressure applications, where a traditional lever handle operation may otherwise require more effort.

Features

- Removable stem drive inserts
- 2 keyways to cater to 45° and 90° positions
- Clockwise closing motion
- High-performance gears to increase torque
- Flange connection in accordance with ISO 5211
- IP 65 protection class
- Stainless steel shaft
- Self-locking

Ratings

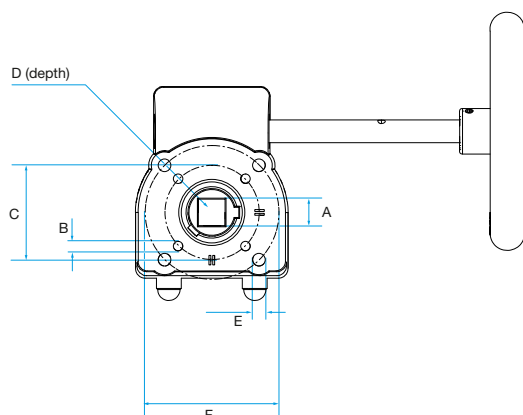
- Temperature range: -4°F–250°F

Butterfly Valve Compatibility

- Model 2979.8ZL
- Model 5179.8
- All models sold separately.

Component	Material
Set screw	Steel
Needle bearings	AXK-AS/LS
Worm screw	Steel
Worm	Carbon steel
Plain bearing	Permaglide
Oil seal	Nitrile
Shaft	Protected steel
Renolit CLX2	Calcium soap
Body	Aluminum
Cover plate	Aluminum
Quadrant	Ductile iron
Position indicator	Scanblend FS7
Nut cap	Polyethylene
Inserts	Sintered steel

Gear Operator Handwheel Model 2979.88



Part No.	Size (in)	A (in)	B	C (in)	D (in)	E	F (in)	Torque (Nm)		Weight (lbs)
								Output	Input	
87690	2½	0.433	M5	1.65	0.945	M8	2.76	0.124	12.4	1.8
87695	3	0.551	M6	1.97	0.945	M8	2.76	0.124	12.4	1.8
87695	4	0.551	M6	1.97	0.945	M8	2.76	0.124	12.4	1.8

Tech Data Sheet

ProPress Zero Lead Bronze Check Valve Model 2974ZL



Description

- Zero Lead Bronze body
- ProPress ends
- Spring check
- EPDM seals
- 0.5 psi cracking pressure

Features

- Low pressure loss
- Silent operation
- Stainless steel spring
- Smart Connect technology

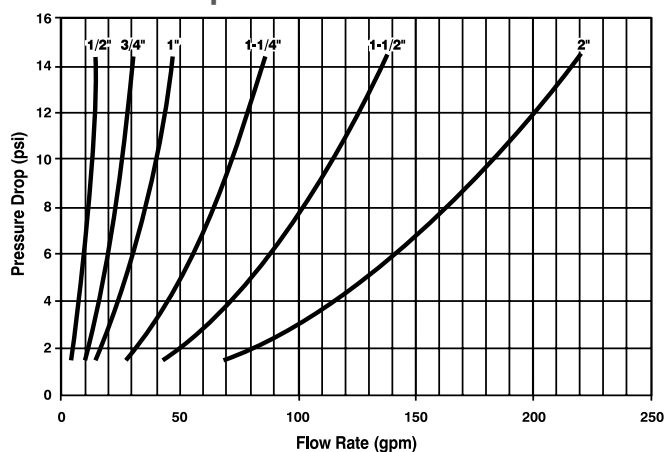
Ratings

- 400 WOG
- Max. operating pressure: 200 psi
- Temperature range: 0°F–200°F

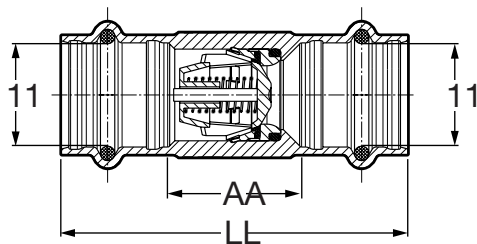
Approvals

- Conforms to MSS SP-80
- NSF-61 Annex G

Pressure Drop



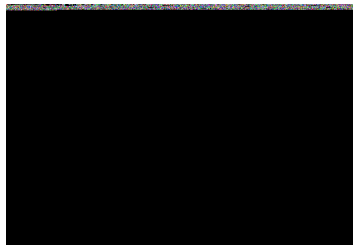
ProPress Check Valve Zero Lead Bronze P x P Model 2974ZL



Part No.	Size	A (in)	L (in)
	1		
79035	1/2	0.87	2.52
79040	3/4	1.14	2.95
79045	1	1.34	3.15
79050	1 1/4	1.69	3.74
79055	1 1/2	2.09	4.92
79060	2	2.56	5.71

Tech Data Sheet

ProPress Zero Lead Swing Check Valve Model 2974.2ZL



Description

Viega ProPress Swing Check valve is a swing-style check valve with a zero lead brass body and ProPress press ends. The valve features EPDM sealing elements and

Viega's Smart Connect® technology for easy identification of unpressed connections during pressure testing.

Features

- PTFE gasket
- Swing-style check
- EPDM sealing element
- ProPress connections
- Smart Connect technology

Ratings

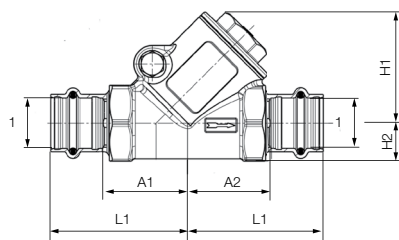
- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Approvals

- ESL-1443
- NSF®-61
- NSF®-372
- NSF®-U.P. Code
- Conforms to MSS SP-139

Component	Material
Body	Zero Lead brass CB770S
Cap	Brass CW511L
Hanger	Brass CW511L
Pin	Brass CW509L
Seat shutter	PTFE
Seat cap	PTFE
Nut	316 stainless steel
Screw-in piece	CC246E
Sealing element	EPDM

ProPress Swing Check Valve Zero Lead Model 2974.2ZL



Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	A1 (in)	A2 (in)	Cv (US gal/min)
	1						
87170	1/2	1.65	0.55	2.05	0.47	1.22	5.6
87175	3/4	1.97	0.67	2.40	0.55	1.50	9.6
87180	1	2.24	0.83	2.72	0.75	1.81	17
87185	1 1/4	2.72	0.98	3.03	0.91	2.01	28.2
87190	1 1/2	3.15	1.14	3.62	1.02	2.20	44
87195	2	3.86	1.38	4.21	1.30	2.64	82.3

Tech Data Sheet

ProPress Wafer Check Valve Model 2974.3XL



Description

The Viega ProPress Epoxy Powder-Coated Ductile Iron Wafer Check Valve prevents reverse flow with a compact, lightweight design that is more efficient than traditional full-body check valves. Constructed with a durable epoxy powder-coated body, stainless steel shaft, and spring-

loaded stainless steel double disc, it ensures long-lasting performance. The EPDM seal provides a tight seal while reducing noise and vibration. Designed for compatibility with Viega ProPress and MegaPress flange adapters, it offers a reliable solution for various piping systems.

Features

- Epoxy powder-coated ductile iron body
- 316 stainless steel shaft and spring-loaded double disc
- EPDM seal
- Sizes: 2 1/2", 3", 4"
- Compact inline design
- Lighter than traditional full-body check valves
- Low cracking pressure
- Class 150 – ASME B16.5 compatible
- Suitable for use with Viega ProPress and MegaPress flange adapters

Ratings

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

Approvals

- NSF® 61
- NSF® 372
- Conforms to MSS SP-25
- Conforms to MSS SP-139 with Viega flange adapters
- Conforms to API-598

Viega Flange Adapter Compatibility

- 0959.5XL (ProPress)
- 4059XL (ProPress 316SST)
- 5159XL (MegaPress 316SST)
- *All sold separately.*



Cracking pressures for the wafer check valves:

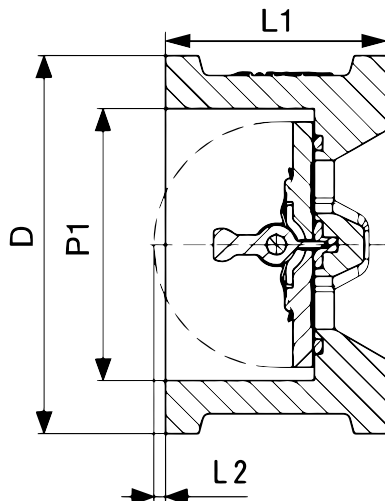
2 1/2 – 0.032 psi

3 – 0.030 psi

4 – 0.026 psi

Component	Material
Body	Epoxy powder-coated ductile iron
Disc	A351 CF8M 316 stainless steel
Shaft	316L stainless steel
Spring	316 stainless steel
Washer	316 stainless steel
Seal	EPDM

ProPress Wafer Check Valve Model 2974.3XL



Part No.	Size (in) P1	L1 (in)	L2 (in)	D (in)
86975	2 1/2	2.64	0.20	4.49
86980	3	2.87	0.35	5.28
86985	4	2.87	0.79	6.65

Tech Data Sheet

ProPress Strainer Valve Model 2981.1ZL



Description

Viega ProPress strainer valve has a zero lead brass body, stainless-steel mesh, and ProPress press ends. The valve features an EPDM sealing element and Viega's

Smart Connect® Technology for easy identification of unpressed connections during pressure testing.

Component

Material

Body	Zero Lead brass CW511L
Cap gasket	PTFE
Mesh	Stainless steel
Cap	316 stainless steel
Screw-in piece	CC246E
Sealing element	EPDM

Features

- PTFE gasket
- EPDM sealing element
- ProPress connections
- Smart Connect technology

Accessories

- Replacement 100 mesh Model 2981.11

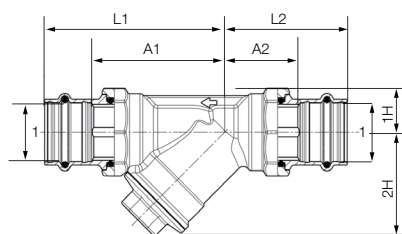
Ratings

- Temperature range: 0°F–250°F
- Max. operating pressure: 300 psi

Approvals

- NSF®-61
- NSF®-372

ProPress Strainer Valve Model 2981.1ZL



Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2 (in)	A1 (in)	A2 (in)	Cv (US gal/min)
	1							
87230	1/2	0.59	1.58	2.76	1.73	1.93	0.91	3.1
87235	3/4	0.71	1.73	3.07	2.24	2.17	1.34	5.1
87240	1	0.87	2.01	3.50	2.40	2.60	1.50	7.9
87245	1 1/4	1.02	2.48	4.06	2.36	3.03	1.34	20.5
87250	1 1/2	1.18	2.84	4.84	2.76	3.43	1.34	29.2
87255	2	1.42	3.11	5.51	3.15	3.94	1.58	40

Tech Data Sheet

ProPress Strainer Valve Model 2981.1XL



Description

Viega ProPress strainer valve has a zero lead brass body, stainless-steel mesh, and ProPress press ends. The valve features an EPDM sealing element and Viega's

Smart Connect® Technology for easy identification of unpressed connections during pressure testing.

Component	Material
Body	Zero lead brass CB770S
Cap gasket	EPDM
Mesh	Stainless steel
Cap	316 stainless steel
Screw-in piece	CW511L
Sealing element	EPDM

Features

- EPDM gasket
- EPDM sealing element
- ProPress connections
- Smart Connect technology

Accessories

- Replacement 100 mesh Model 2981.11

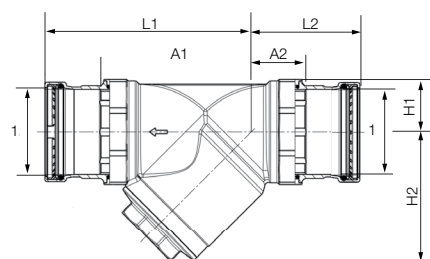
Ratings

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

Approvals

- NSF®-61
- NSF®-372

ProPress Strainer Valve Model 2981.1XL



Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2 (in)	A1 (in)	A2 (in)	Cv (US gal/min)
87260	2½	4.09	1.69	6.89	3.82	5.00	1.93	88.9
87265	3	4.80	1.97	7.68	4.09	5.63	2.05	126
87270	4	6.06	2.48	9.13	4.53	6.89	2.29	212.7

Tech Data Sheet

ProPress Manual Balancing Valve Model 2980ZL



Description

Viega's ProPress Manual Balancing Valve is a fixed orifice style valve with a venturi insert. The valve features high accuracy with the multi-turn functionality, a positive shut off with memory stop, and Viega's Smart

Connect technology for easy identification of unpressed connection during testing.

Features

- DZR lead-free brass
- PT ports
- ProPress press-ends with Smart Connect technology
- Positive shut-off with memory stop
- Tolerance on nominal Cvs $\pm 3\%$

Operating Parameters

- 300 WOG
- Temperature range, water:
 - 15°F–250°F
 - Below 32°F only for water with added antifreeze fluids
- Max. operating pressure: 250 psi

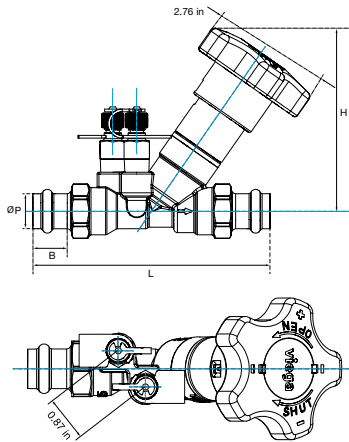
Listings and Certifications

- ASTM B927 C27453
- NSF®-61
- NSF®-372
- UNS C35330
- UL 2043 classification

Approved Applications

- HVAC
- Potable water

ProPress Manual Balancing Valve Model 2980ZL



Part No.	Size (in)	ΦC ¹ (in)	H (in)	L (in)	B (in)	Weight (lbs)	Flow Range (GPM)
82100	U-½	0.627-0.631	4.06	5.157	0.827	1.23/1.16	0.27-0.71
82105	L-½	0.627-0.631	4.06	5.157	0.827	1.23/1.16	0.49-1.17
82110	½	0.627-0.631	4.06	5.157	0.827	1.23/1.16	0.98-2.35
82115	¾	0.877-0.881	4.06	5.846	0.905	1.43/1.34	2.19-5.15
82120	1	1.128-1.131	4.06	6.181	0.906	1.73/1.55	4.09-9.56
82125	1¼	1.378-1.381	4.85	6.996	1.024	2.78/2.53	8.56-19.81
82130	1½	1.628-1.632	4.94	7.921	1.417	3.50/3.16	12.84-29.80
82135	2	2.128-2.132	5.34	6.138	1.575	4.80/4.46	24.09-55.63

¹ Tolerance field

Components

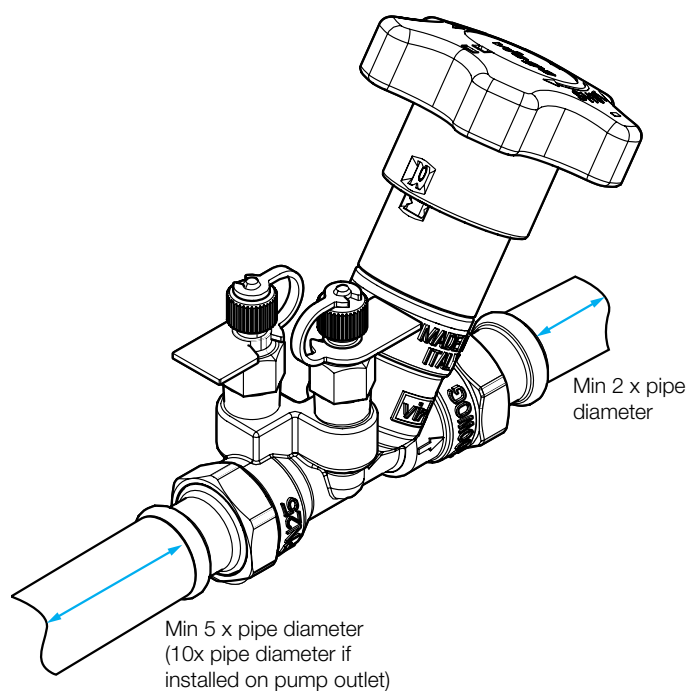
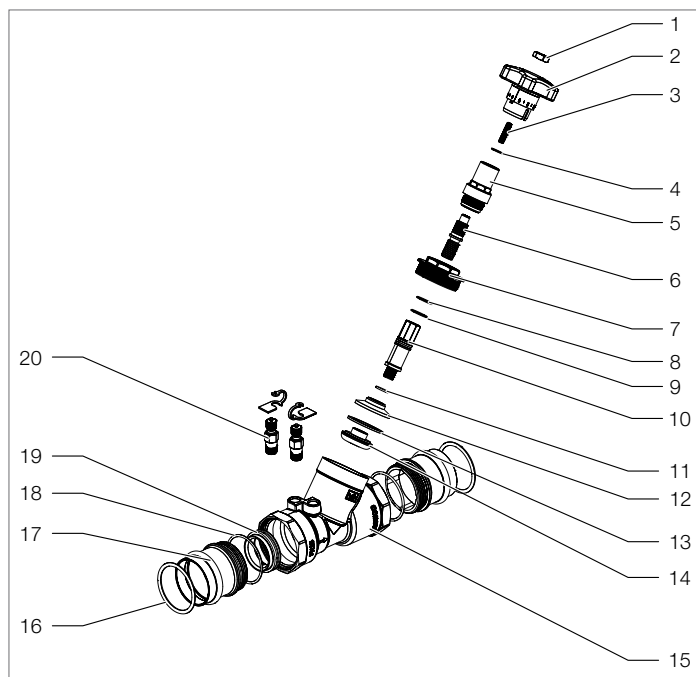
#	Component	Material
1	Nut	Steel / Zn plated
2	Handwheel	ABS (grey)
3	Screw	Steel
4	Stop spring ring	Spring steel
5	Bonnet	DZR lead-free brass
6	Stem	Brass
7	Union ¹	DZR lead-free brass
8-9	Stem O-ring	EPDM Perox
10	Shutter	DZR lead-free brass
11	Disco O-ring ¹	EPDM Perox
12	Disc ¹	DZR lead-free brass
13	Gasket disc	PTFE
14	Balance cone	DZR lead-free brass
15	Body	DZR lead-free brass
16-19	Venturi insert	DZR lead-free brass
20	Test point	DZR brass ²

¹ Only on 1¼", 1½", and 2"

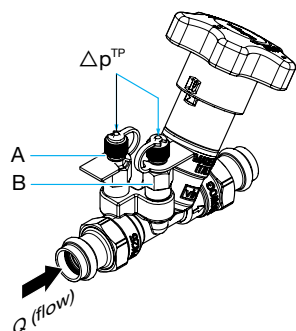
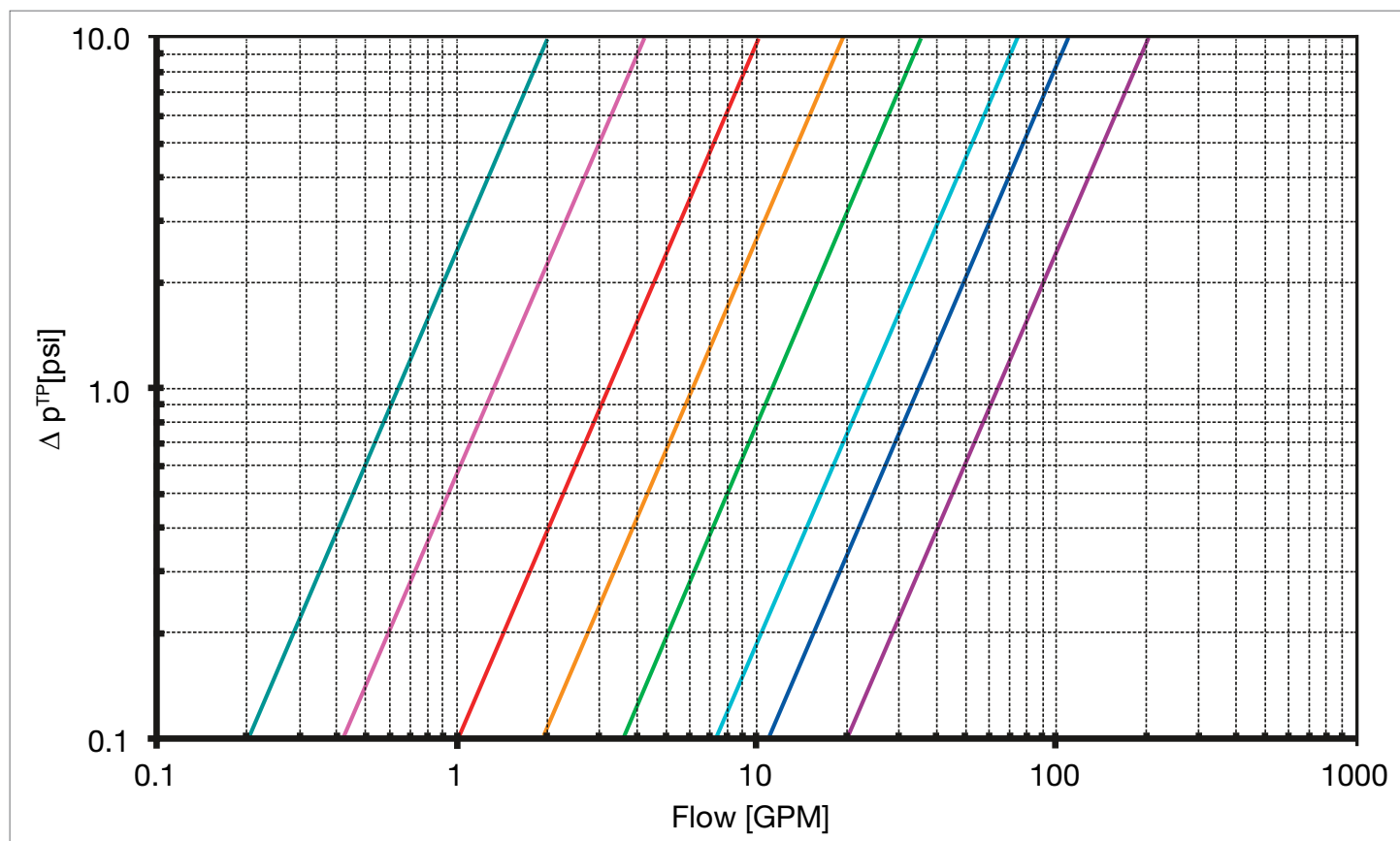
² Test points with EPDM Perox gaskets and polypropylene ties

Performance

To obtain the best performance, valve must be installed on a pipe followed by straight pipe lengths as per figure indications.



Flow Measurement



A = High pressure test point (red)
 B = Low pressure test point (blue)
 Q = Flow rate in GPM
 Δp = Differential pressure signal generated through pressure test points
 C_{vs} = Flow coefficient across valve seat

$$Q = C_{vs}^{venturi} \cdot \sqrt{\Delta p^{TP}}$$

(see chart above)

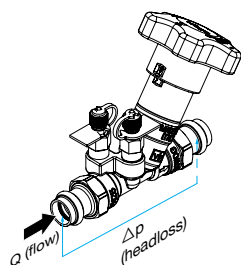
U-1/2"	C_{vs}	venturi	0.64
L-1/2"	C_{vs}	venturi	1.33
1/2"	C_{vs}	venturi	3.24
3/4"	C_{vs}	venturi	6.16
1"	C_{vs}	venturi	11.24
1 1/4"	C_{vs}	venturi	23.41
1 1/2"	C_{vs}	venturi	34.95
2"	C_{vs}	venturi	63.66

Headloss Calculation

Handwheel Position	Cv Values							
	U-1/2"	L-1/2"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
0.5	0.177	0.160	0.474	0.47	1.70	2.96	3.14	6.20
0.7	0.206	0.186	0.474	0.54	2.00	3.38	3.61	7.56
1.0	0.283	0.287	0.613	0.67	2.42	3.95	4.27	9.65
1.3	0.331	0.394	0.717	0.81	2.82	4.49	4.96	12.19
1.5	0.355	0.440	0.809	0.90	3.12	4.83	5.57	14.30
1.7	0.387	0.501	0.902	0.99	3.48	5.25	6.60	16.64
2.0	0.445	0.586	0.99	1.12	4.13	6.27	8.99	20.17
2.3	0.511	0.67	1.10	1.25	4.83	7.82	12.08	23.35
2.5	0.517	0.70	1.18	1.39	5.28	9.16	14.21	25.12
2.7	0.527	0.74	1.32	1.62	5.63	10.46	16.34	26.66
3.0	0.563	0.83	1.60	2.24	6.09	12.21	18.89	28.72
3.3	0.578	0.86	1.88	2.94	6.49	13.39	20.67	30.57
3.5	0.594	0.89	2.03	3.39	6.64	13.94	21.54	31.72
3.7	0.595	0.92	2.12	3.75	6.80	14.34	22.16	32.86
4.0	0.603	0.95	2.19	4.06	7.10	14.50	22.65	34.36
4.4	0.605	0.98	2.22	4.24	7.21	—	—	—

Formula linking flow Q (in GPM) and theoretical valve headloss Δp (in psi). Cv depends on handwheel position as indicated in table.

$$\Delta p = \left(\frac{Q}{C_v} \right)^2$$

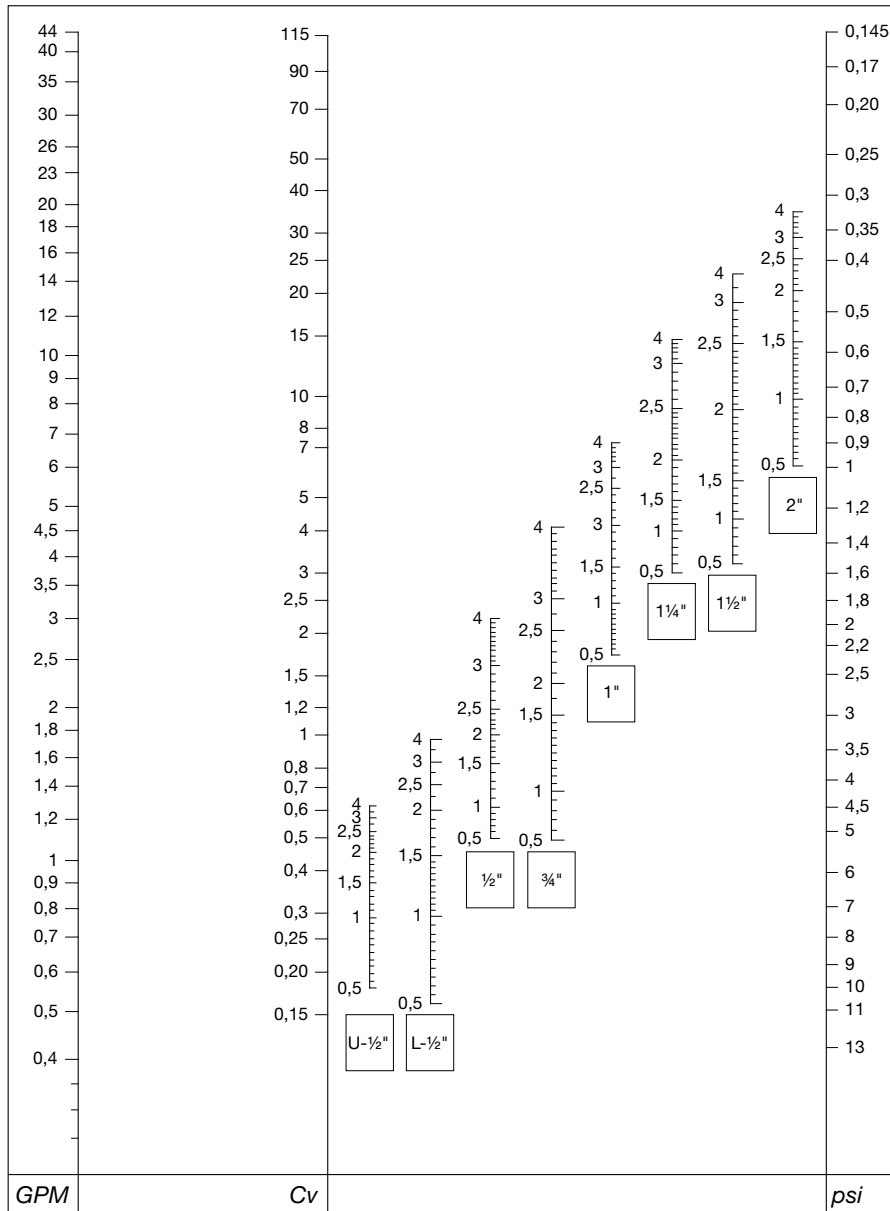


Q = Flow rate in GPM

Δp = Differential pressure across test points

C_{vs} = Flow coefficient across valve seat

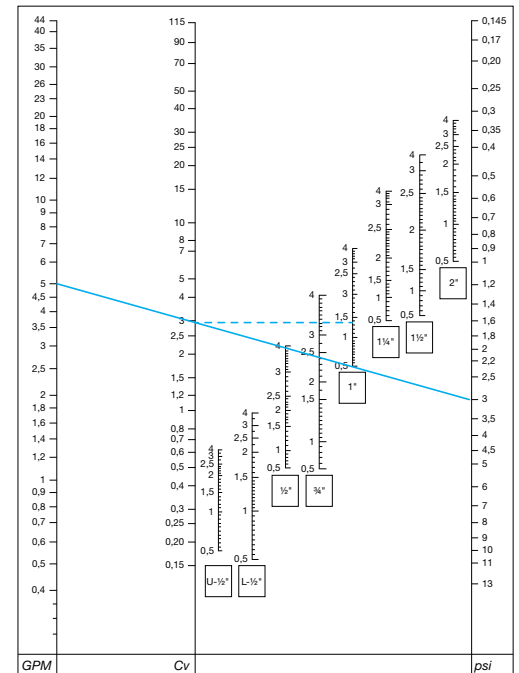
Presetting



The diagram to the left can be used to determine the presetting position of the valve with the given design flowrate and headloss:

1. Draw a straight line joining design flowrate and design headloss;
2. Determine design Cv value as intersection of drawn line and Cv axis;
3. Draw a straight horizontal line from intersection previously identified and the specific valve size Axis
4. Intersection determines handwheel position to use for presetting.

In the example below, for a design flowrate of 5 GPM and design Δp 3psi, a handwheel position of 1.35 is determined for a 1" valve.



Tech Data Sheet

ProPress Dynamic Automatic Balancing Valve Model 2981.7



Description

The Viega ProPress Dynamic Automatic Balancing Valve is an externally adjustable dynamic balancing valve that replaces traditional double-regulating valves by combining simple hand-wheel flow setting,

full shut-off capability, and built-in differential-pressure control to maintain the chosen flow even as system pressures fluctuate. These features make the valve a precise, energy-saving solution for both variable and constant flow heating or cooling circuits.

Component	Material
Body	DZR brass CW602N (½" to 1¼"), ductile iron (1½" to 2")
Spring	Stainless steel
Diaphragm	HNBR
Sealing element	EPDM

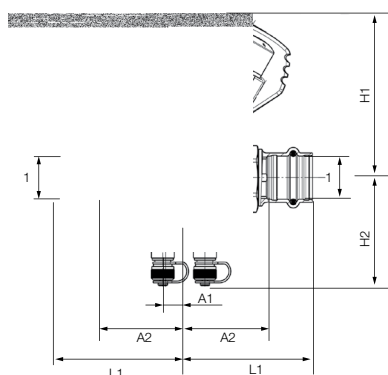
Features

- Max. flow memory stop
- External adjustment for flow rate
- Isolation function
- Built in PT ports
- No minimum pipe length required prior to the valve
- EPDM sealing elements
- ProPress connections
- Smart Connect® technology

Ratings

- Temperature range: 14°F–250°F
- Max. pressure differential: 58 psid
- Max. operating pressure: 300 psi

ProPress Dynamic Automatic Balancing Valve Model 2981.7



Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	A1 (in)	A2 (in)	Flow Range (GPM)	Cv (US gal/min)
87305	½	3.47	2.32	2.40	0.39	1.58	0.26–4.75	3.02
87310	¾	3.47	2.32	2.68	0.39	1.77	0.45–8.50	4.62
87315	1	3.58	2.44	2.84	0.39	1.93	0.60–10.57	4.87
87320	1¼	4.37	2.76	3.31	0.55	2.28	0.88–22.01	12.65
87325	1½	5.20	2.87	4.25	0.83	2.84	3.17–32.58	20.88
87330	2	5.20	3.11	4.53	0.83	2.95	3.96–45.57	23.55

Operations

The valve can be set to the required position by using the hand wheel to limit the flow rate in certain parts of a system, eliminating overflows and wasted energy.

The internal differential pressure control function of the valve ensures that the set flow rate is limited irrespective of pressure fluctuations in the system.

Once the valve has been pre-set to the desired flow rate, the hand wheel can be locked in position. From this position, the valve can be fully closed for isolation purposes and easily reopened back to the required set point.

Function

The ProPress Dynamic Balancing Valve reacts to pressure fluctuations in a system in order to keep fluctuations to the differential pressure across the unit to a minimum. By achieving this, a maximum flow limit is ensured in accordance with the design.

The following applies:

$$Q = C_v \sqrt{\Delta p}$$

Q = Flow (GPM)

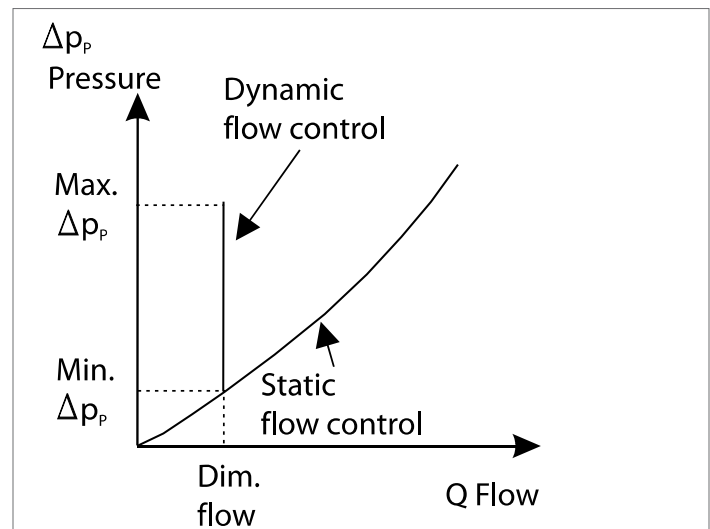
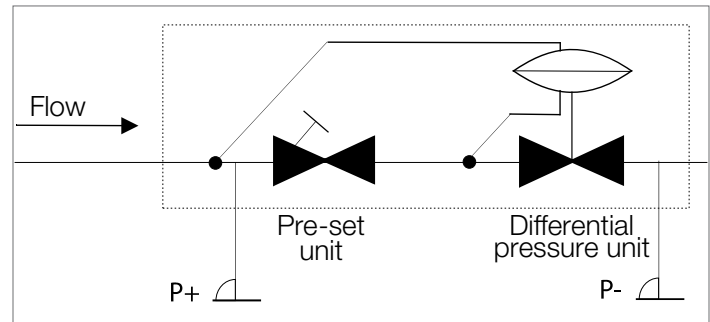
Cv = Opening area

Δp = Differential pressure (psi)

Flow Characteristics

The illustration to the right shows how the flow in the valve reacts in accordance to the pump pressure. For comparison a typical flow characteristic for a static balancing valve is also shown.

The differential pressure function of the valve will work when the differential pressure provided by the pump is sufficient to meet the required minimum differential pressure (which is dependent upon the required flow rate). Once the minimum differential pressure is satisfied, the set flow rate is maintained regardless of any pressure fluctuations in the system.



Setting the Valve

The valve is easily set using the pre-setting scale located on the hand wheel. The set point of the valve can be determined by using the flow graphs or tables on the following pages.

The scale on the hand wheel is for the adjustment of flow and is interpreted using the associated setting and flow chart.

Pre-setting desired flow position:

- Set the valve handle to the desired flow
- Remove cap marked Viega, and tighten (turn clockwise) with 2mm hexagonal key
- The valve can then be reopened to the pre-set flow after the valve has been used for isolation

To set the valve to another flow position, loosen the valve pre-setting with the 2mm hexagonal key (turn anti-clockwise) and set the valve handle to the new flow position and tighten.

Isolation

To use the valve for isolation, turn the handle clockwise to the fully closed position. The valve will be closed ensuring leakage tightness according to EN1349 Class IV.

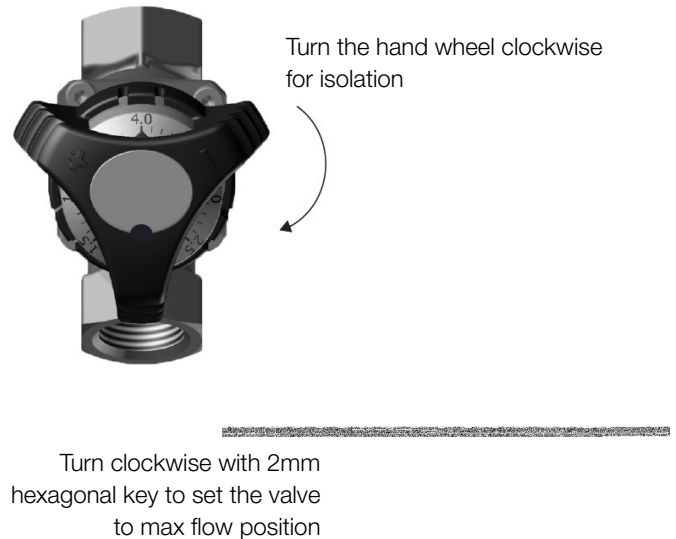
Verification of Dynamic Systems

The flow rate in a system can be verified in two ways:

- Direct flow rate verification in a circuit
- Measurement of the differential pressure across the balancing valve or metering station

Direct Flow Rate Verification

This can, for example, be carried out by ultrasonic equipment. On the basis of the measured velocity of the flow and the pipe dimension the software will compute a flow rate. The use of ultrasonic verification requires free access to the pipes as the sensors are fitted directly to the pipe.



Measurement of the Differential Pressure

This is the main method of flow verification.

Once the design flow rate is known, the valve can be set using the flow graphs. Either of these tools will show the required set point and the required minimum differential pressure for the set flow rate.

Once the differential pressure has been verified, the flow rate can be recorded according to the flow rate graphs provided.

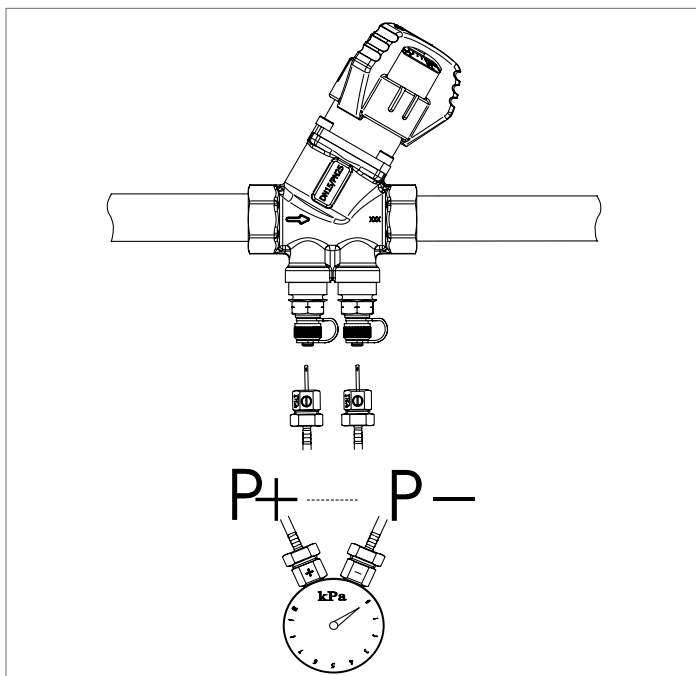
If the measured differential pressure is below the minimum Δp required for that set point, the flow can be found by using the formulas below.

Flow Calculations

$$Q = C_v \cdot \sqrt{\Delta p}$$

$$Q = \text{gallons/minutes}$$

$$\Delta p = \text{psi}$$



Measurement of the differential pressure (Δp) across the valve

ProPress Dynamic Automatic Balancing Valve ½–1"

Valve Size	½"					¾"					1"				
Preset	Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure	
	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi
0.5	60	0.017	0.26	14.0	2.03	102	0.028	0.45	16.0	2.32	137	0.038	0.60	14.0	2.03
0.6	103	0.029	0.45	14.0	2.03	200	0.056	0.88	16.0	2.32	230	0.064	1.01	14.0	2.03
0.7	144	0.040	0.63	14.0	2.03	292	0.081	1.29	16.0	2.32	317	0.088	1.39	14.0	2.03
0.8	181	0.050	0.80	14.0	2.03	380	0.105	1.67	16.0	2.32	399	0.111	1.75	14.0	2.03
0.9	217	0.060	0.95	14.0	2.03	462	0.128	2.03	16.0	2.32	476	0.132	2.10	14.0	2.03
1	250	0.069	1.10	14.0	2.03	540	0.150	2.38	16.0	2.32	550	0.153	2.42	14.1	2.05
1.1	282	0.078	1.24	14.0	2.03	614	0.171	2.70	16.0	2.32	621	0.173	2.73	14.1	2.04
1.2	313	0.087	1.38	14.0	2.03	684	0.190	3.01	16.0	2.32	690	0.192	3.04	14.1	2.04
1.3	342	0.095	1.51	14.1	2.04	751	0.209	3.31	16.0	2.32	758	0.210	3.34	14.1	2.04
1.4	371	0.103	1.63	14.1	2.04	815	0.226	3.59	16.0	2.32	824	0.229	3.63	14.1	2.05
1.5	399	0.111	1.76	14.1	2.05	876	0.243	3.86	16.0	2.32	890	0.247	3.92	14.2	2.05
1.6	428	0.119	1.88	14.2	2.05	935	0.260	4.12	16.0	2.32	955	0.265	4.20	14.3	2.07
1.7	456	0.127	2.01	14.2	2.06	991	0.275	4.36	16.0	2.32	1020	0.283	4.49	14.4	2.09
1.8	483	0.134	2.13	14.3	2.07	1046	0.291	4.61	16.0	2.32	1086	0.302	4.78	14.6	2.12
1.9	512	0.142	2.25	14.3	2.08	1099	0.305	4.84	16.0	2.32	1153	0.320	5.08	14.9	2.16
2	540	0.150	2.38	14.4	2.09	1150	0.319	5.06	16.0	2.32	1220	0.339	5.37	15.2	2.20
2.1	569	0.158	2.50	14.5	2.10	1200	0.333	5.28	16.2	2.35	1288	0.358	5.67	15.6	2.26
2.2	598	0.166	2.63	14.6	2.11	1248	0.347	5.50	16.4	2.38	1357	0.377	5.97	16.0	2.32
2.3	627	0.174	2.76	14.6	2.12	1296	0.360	5.70	16.7	2.42	1426	0.396	6.28	16.5	2.40
2.4	657	0.182	2.89	14.7	2.14	1342	0.373	5.91	17.0	2.46	1497	0.416	6.59	17.1	2.48
2.5	687	0.191	3.02	14.8	2.15	1387	0.385	6.11	17.3	2.51	1568	0.435	6.90	17.7	2.57
2.6	717	0.199	3.16	14.9	2.17	1432	0.398	6.30	17.6	2.55	1639	0.455	7.21	18.5	2.68
2.7	748	0.208	3.29	15.0	2.18	1475	0.410	6.49	18.0	2.61	1710	0.475	7.53	19.2	2.79
2.8	779	0.216	3.43	15.2	2.20	1518	0.422	6.68	18.4	2.66	1781	0.495	7.84	20.1	2.91
2.9	809	0.225	3.56	15.3	2.22	1559	0.433	6.87	18.8	2.72	1851	0.514	8.15	21.0	3.04
3	840	0.233	3.70	15.4	2.23	1600	0.444	7.04	19.2	2.78	1920	0.533	8.45	21.9	3.18
3.1	870	0.242	3.83	15.5	2.25	1640	0.455	7.22	19.7	2.85	1987	0.552	8.75	22.9	3.32
3.2	900	0.250	3.96	15.7	2.27	1678	0.466	7.39	20.2	2.92	2052	0.570	9.04	24.0	3.47
3.3	928	0.258	4.09	15.8	2.29	1716	0.477	7.55	20.7	3.00	2114	0.587	9.31	25.0	3.63
3.4	956	0.265	4.21	16.0	2.32	1752	0.487	7.71	21.2	3.08	2173	0.604	9.57	26.2	3.79
3.5	982	0.273	4.32	16.1	2.34	1786	0.496	7.86	21.8	3.16	2227	0.619	9.80	27.3	3.96
3.6	1006	0.280	4.43	16.3	2.36	1819	0.505	8.01	22.4	3.24	2276	0.632	10.02	28.5	4.13
3.7	1029	0.286	4.53	16.5	2.39	1850	0.514	8.15	23.0	3.33	2319	0.644	10.21	29.7	4.30
3.8	1049	0.291	4.62	16.6	2.41	1879	0.522	8.27	23.6	3.43	2354	0.654	10.36	30.9	4.48
3.9	1066	0.296	4.69	16.8	2.44	1906	0.529	8.39	24.3	3.52	2382	0.662	10.49	32.0	4.65
4	1080	0.300	4.75	17.0	2.47	1930	0.536	8.50	25.0	3.63	2400	0.667	10.57	33.2	4.82

ProPress Dynamic Automatic Balancing Valve 1¼-2"

Valve Size	1¼"					1½"					2"				
Preset	Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure	
	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi
0.5	200	0.055	0.88	15.0	2.18	719	0.200	3.17	10.0	1.45	900	0.250	3.96	10.0	1.45
0.6	350	0.097	1.54	15.1	2.18	900	0.250	3.96	10.0	1.45	1086	0.302	4.78	10.0	1.45
0.7	500	0.139	2.20	15.1	2.20	1078	0.299	4.75	10.0	1.45	1280	0.356	5.63	10.0	1.45
0.8	651	0.181	2.86	15.2	2.21	1254	0.348	5.52	10.0	1.45	1481	0.411	6.52	10.0	1.45
0.9	801	0.222	3.52	15.3	2.22	1427	0.396	6.28	10.0	1.45	1688	0.469	7.43	10.0	1.45
1	950	0.264	4.18	15.4	2.24	1600	0.444	7.04	10.0	1.45	1900	0.528	8.37	10.0	1.45
1.1	1099	0.305	4.84	15.5	2.25	1772	0.492	7.80	10.0	1.45	2117	0.588	9.32	10.0	1.45
1.2	1247	0.346	5.49	15.6	2.27	1943	0.540	8.56	10.0	1.45	2338	0.649	10.29	10.0	1.45
1.3	1395	0.387	6.14	15.7	2.28	2115	0.588	9.31	10.0	1.45	2562	0.712	11.28	10.0	1.45
1.4	1541	0.428	6.79	15.9	2.30	2287	0.635	10.07	10.0	1.45	2789	0.775	12.28	10.0	1.45
1.5	1687	0.469	7.43	16.0	2.32	2461	0.684	10.83	10.0	1.45	3019	0.839	13.29	10.0	1.45
1.6	1832	0.509	8.06	16.1	2.34	2635	0.732	11.60	10.0	1.45	3251	0.903	14.31	10.0	1.45
1.7	1976	0.549	8.70	16.3	2.36	2811	0.781	12.38	10.0	1.45	3485	0.968	15.34	10.0	1.45
1.8	2118	0.588	9.33	16.4	2.38	2989	0.830	13.16	10.0	1.45	3721	1.034	16.38	10.0	1.45
1.9	2260	0.628	9.95	16.6	2.40	3168	0.880	13.95	10.0	1.45	3960	1.100	17.43	10.0	1.45
2	2400	0.667	10.57	16.7	2.42	3350	0.931	14.75	10.0	1.45	4200	1.167	18.49	11.1	1.61
2.1	2539	0.705	11.18	16.9	2.45	3534	0.982	15.56	10.3	1.49	4443	1.234	19.56	11.4	1.66
2.2	2677	0.744	11.79	17.0	2.47	3720	1.033	16.38	10.4	1.52	4688	1.302	20.64	11.8	1.71
2.3	2814	0.782	12.39	17.2	2.50	3909	1.086	17.21	10.7	1.54	4936	1.371	21.73	12.2	1.77
2.4	2950	0.819	12.99	17.4	2.52	4101	1.139	18.06	10.9	1.58	5187	1.441	22.84	12.7	1.84
2.5	3084	0.857	13.58	17.6	2.55	4295	1.193	18.91	11.1	1.61	5442	1.512	23.96	13.2	1.92
2.6	3217	0.894	14.17	17.8	2.58	4491	1.248	19.77	11.4	1.65	5702	1.584	25.10	13.8	2.00
2.7	3350	0.930	14.75	18.0	2.60	4690	1.303	20.65	11.7	1.69	5967	1.657	26.27	14.4	2.09
2.8	3481	0.967	15.32	18.2	2.63	4891	1.359	21.54	11.9	1.73	6237	1.733	27.46	15.1	2.19
2.9	3611	1.003	15.90	18.4	2.66	5095	1.415	22.43	12.3	1.78	6515	1.810	28.68	15.8	2.30
3	3740	1.039	16.47	18.6	2.69	5300	1.472	23.33	12.6	1.83	6800	1.889	29.94	16.6	2.41
3.1	3868	1.075	17.03	18.8	2.73	5507	1.530	24.25	13.0	1.88	7094	1.971	31.23	17.4	2.53
3.2	3996	1.110	17.59	19.0	2.76	5716	1.588	25.17	13.3	1.93	7398	2.055	32.57	18.3	2.65
3.3	4123	1.145	18.15	19.2	2.79	5926	1.646	26.09	13.7	1.99	7713	2.142	33.96	19.2	2.78
3.4	4249	1.180	18.71	19.5	2.83	6137	1.705	27.02	14.1	2.05	8040	2.233	35.40	20.1	2.91
3.5	4375	1.215	19.26	19.7	2.86	6348	1.763	27.95	14.6	2.11	8381	2.328	36.90	21.0	3.05
3.6	4500	1.250	19.81	20.0	2.90	6560	1.822	28.88	15.0	2.18	8738	2.427	38.47	22.0	3.19
3.7	4625	1.285	20.36	20.2	2.93	6771	1.881	29.81	15.5	2.25	9111	2.531	40.12	23.0	3.33
3.8	4750	1.319	20.91	20.5	2.97	6982	1.940	30.74	16.0	2.32	9503	2.640	41.84	24.0	3.48
3.9	4875	1.354	21.46	20.7	3.01	7192	1.998	31.66	16.5	2.39	9916	2.754	43.66	25.0	3.63
4	5000	1.389	22.01	21.0	3.05	7400	2.056	32.58	17.0	2.47	10350	2.875	45.57	26.0	3.77

Tech Data Sheet

ProPress Pressure Independent Balancing and Control Valve (PIBCV) Models 2981.71 / 2987.72



Description

The Viega ProPress Pressure-Independent Balancing and Control Valve (PIBCV) (Model 2981.71 with actuator & Model 2987.72 without) combines the functions of an externally

adjustable automatic balancing valve with an integrated differential pressure controller and a full authority modulating control valve in one single, compact valve housing. The valve keeps flow and temperature on set point despite pressure swings, delivering comfort while lowering pump energy use. In addition, the Viega PIBCV offers Smart Connect®, providing quick and easy identification of unpressed connections during a pressure test.

Component	Material
Body	DZR brass CW602N (½" to 1¼"), ductile iron (1½" to 2")
Spring	Stainless steel
Diaphragm	HNBR
Sealing element	EPDM

Features

- Full-stroke modulation
- Built in PT ports
- No minimum pipe length required prior to the valve
- EPDM sealing elements
- ProPress connections
- Smart Connect technology

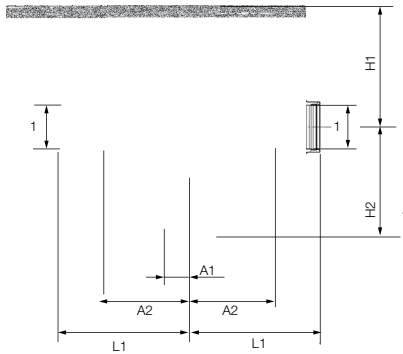
Ratings

- Temperature range: 14°F–250°F
- Max. pressure differential: 116 psid
- Max. operating pressure: 300 psi

Actuators

Model No.	Description	Control Signal	Supply Voltage	Actuating Force	Power Consumption
2877.10	Modulating control	0–10 V or 4–20 mA	AC/DC 24 V	120 N	2.5 VA
2877.11	3-position or modulating control	0–10 V, 2–10 V, 4–20 mA, or 3-position	AC/DC 24 V	400 N	6 VA

ProPress PIBCV Models 2981.71 / 2987.72



Part No.		Size (in)	H1 (in)	H2 (in)	L1 (in)	A1 (in)	A2 (in)	Flow Range (GPM)	Cv
2981.71	2987.72								
87365	89925	½	2.44	2.24	2.40	0.39	1.58	0.44–2.53	1.5
87370	89930	¾	2.64	2.24	2.68	0.39	1.77	0.97–5.85	3.1
87375	89935	1	2.76	2.32	2.84	0.39	1.93	1.23–7.93	3.3
87380	89940	1¼	3.35	2.68	3.31	0.55	2.28	2.42–17.62	8.7
87385	89945	1½	5.63	2.80	4.25	0.83	2.84	6.03–41.83	22.1
87390	89950	2	5.63	3.03	4.53	0.83	2.95	6.16–50.63	22.1

Operations

The design of the valve features a modulating control component that retains the highest possible authority at all times. There are two independent movements for the presetting and the modulating function. During presetting, the inlet area moves radially without interfering with the length of the stroke. During modulating, the inlet area moves axial taking advantage of the full stroke.

Whilst the control component provides proportional modulation irrespective of the preset flow, the automatic balancing guarantees that the flow will never exceed the maximum preset flow. Regardless of pressure fluctuations in the system, the maximum flow is kept constant up to a maximum differential pressure of 116 psi.

Function

The ProPress Balancing and Control Valve can be flushed and commissioned before the actuator is installed.

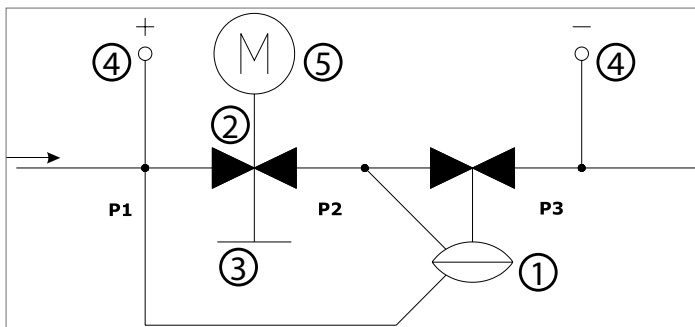
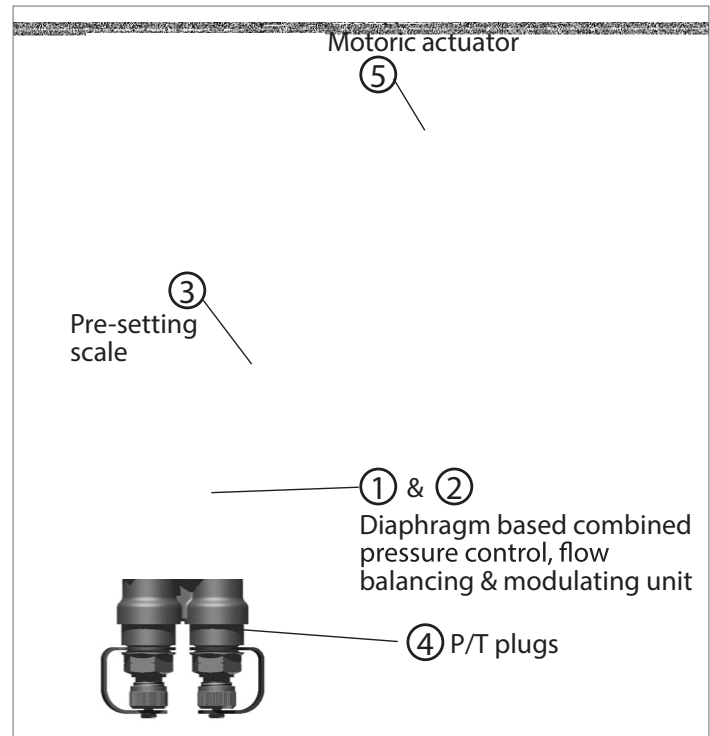
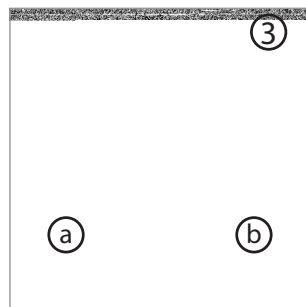
The presetting of the dial is user-friendly requiring only a simple flow vs. presetting graph. Once the flow is set, the actuator can be mounted and the valve ready to operate.

For lowest energy consumption, check the differential pressure at the index valve to set the pump at minimum speed.

Design

The design of the valve combines high performance with small size and compact construction. The main components of the valve are:

1. Differential pressure control
2. Modulating control component
3. Presetting scale (not accessible when actuator is mounted):
 - a. Flow range: Low-High
 - b. Stroke: 2.5–5.0–5.5 mm
4. P/T plugs
5. Motoric actuator



Actuator Requirements ½" to 2"

Dimension "X" in closed position:

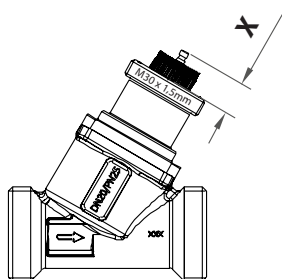
2.5 mm stroke = 11.4 mm

5.0 mm stroke = 9.3 mm

5.5 mm stroke = 8.8 mm

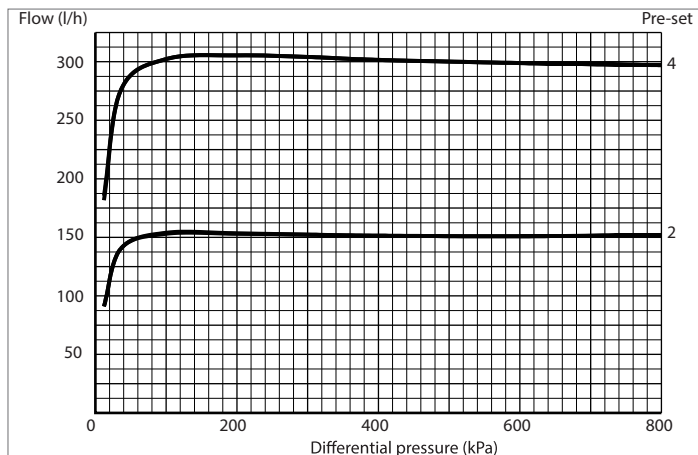
Actuator minimum force: 100N

Actuator connection: M30 x 1.5 mm



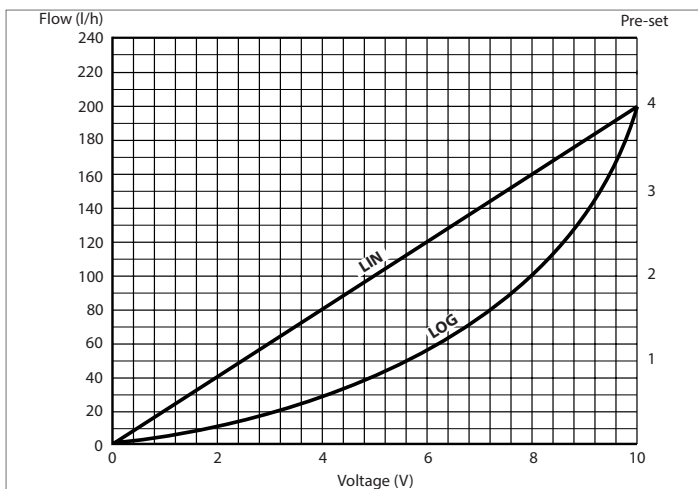
Flow Rate vs. Differential Pressure

Preset flow: 300 l/h, 150 l/h



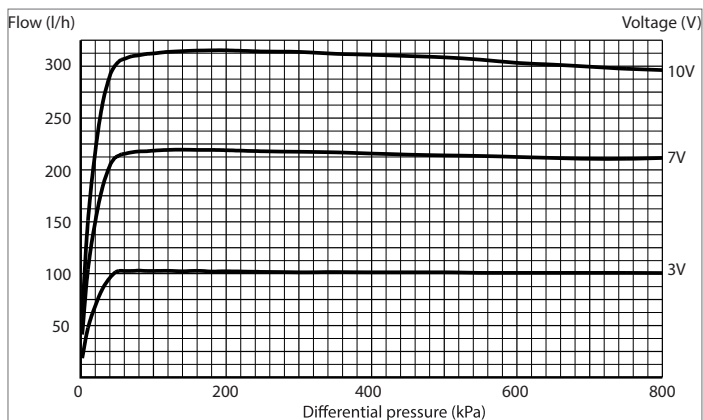
Flow Rate vs. Voltage

Preset flow: 200 l/h



Flow Rate vs. Differential Pressure

Voltage: 10V, 7V, 3V



ProPress PIBCV ½–1", 2.5–5.5 mm Stroke

Valve Size	½", 2.5 mm Stroke					¾", 5.0 mm Stroke					1", 5.5 mm Stroke				
Preset	Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure	
	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi
0.6	100	0.028	0.44	15	2.16	220	0.061	0.97	16	2.32	280	0.078	1.23	15	2.22
0.8	128	0.036	0.56	15	2.20	285	0.079	1.26	17	2.39	356	0.099	1.57	16	2.29
1	156	0.043	0.69	15	2.24	351	0.097	1.54	17	2.47	430	0.119	1.89	16	2.34
1.2	184	0.051	0.81	16	2.27	416	0.116	1.83	17	2.54	502	0.139	2.21	16	2.38
1.4	212	0.059	0.93	16	2.31	481	0.134	2.12	18	2.60	574	0.159	2.53	17	2.42
1.6	240	0.067	1.06	16	2.34	546	0.152	2.41	18	2.67	647	0.180	2.85	17	2.47
1.8	268	0.074	1.18	16	2.37	612	0.170	2.69	19	2.73	722	0.201	3.18	17	2.53
2	296	0.082	1.30	17	2.41	677	0.188	2.98	19	2.78	800	0.222	3.52	18	2.61
2.2	324	0.090	1.42	17	2.44	742	0.206	3.27	20	2.83	881	0.245	3.88	19	2.72
2.4	351	0.098	1.55	17	2.47	808	0.224	3.56	20	2.88	967	0.269	4.26	20	2.85
2.6	379	0.105	1.67	17	2.50	873	0.242	3.84	20	2.92	1057	0.294	4.65	21	3.02
2.8	407	0.113	1.79	17	2.53	938	0.261	4.13	20	2.96	1151	0.320	5.07	22	3.24
3	435	0.121	1.92	18	2.56	1004	0.279	4.42	21	3.00	1250	0.347	5.50	24	3.50
3.2	463	0.129	2.04	18	2.59	1069	0.297	4.71	21	3.03	1353	0.376	5.96	26	3.82
3.4	491	0.136	2.16	18	2.61	1134	0.315	4.99	21	3.06	1460	0.406	6.43	29	4.20
3.6	519	0.144	2.29	18	2.64	1199	0.333	5.28	21	3.09	1571	0.436	6.92	32	4.64
3.8	547	0.152	2.41	18	2.67	1265	0.351	5.57	21	3.11	1685	0.468	7.42	35	5.14
4	575	0.160	2.53	19	2.69	1330	0.369	5.85	22	3.13	1800	0.500	7.93	39	5.71

ProPress PIBCV 1¼–2", 5.5–15.0 mm Stroke

Valve Size	1¼", 5.5 mm Stroke					1½", 15.0 mm Stroke					2", 15.0 mm Stroke				
Preset	Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure		Flow			Minimum Differential Pressure	
	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi	l/h	l/s	gpm	kPa	psi
0.6	550	0.153	2.42	17.9	2.59	1370	0.381	6.03	10	1.45	1400	0.389	6.16	10	1.49
0.8	753	0.209	3.32	18.0	2.61	1681	0.467	7.40	10	1.45	1724	0.479	7.59	10	1.51
1	956	0.266	4.21	18.1	2.63	2000	0.556	8.81	10	1.45	2050	0.569	9.03	11	1.53
1.2	1159	0.322	5.10	18.2	2.65	2333	0.648	10.27	10	1.45	2393	0.665	10.54	11	1.57
1.4	1362	0.378	6.00	18.4	2.66	2686	0.746	11.83	10	1.47	2766	0.768	12.18	11	1.62
1.6	1565	0.435	6.89	18.5	2.69	3063	0.851	13.48	10	1.49	3178	0.883	13.99	12	1.69
1.8	1768	0.491	7.79	18.7	2.71	3467	0.963	15.26	11	1.53	3638	1.011	16.02	12	1.79
2	1971	0.548	8.68	19.0	2.75	3900	1.083	17.17	11	1.59	4150	1.153	18.27	13	1.92
2.2	2174	0.604	9.57	19.3	2.80	4364	1.212	19.21	12	1.69	4717	1.310	20.77	14	2.08
2.4	2377	0.660	10.47	19.7	2.86	4857	1.349	21.39	13	1.82	5339	1.483	23.51	16	2.29
2.6	2580	0.717	11.36	20.2	2.93	5380	1.494	23.69	14	1.99	6014	1.671	26.48	18	2.54
2.8	2783	0.773	12.26	20.9	3.02	5928	1.647	26.10	15	2.20	6737	1.871	29.66	20	2.84
3	2986	0.829	13.15	21.6	3.14	6500	1.806	28.62	17	2.45	7500	2.083	33.02	22	3.18
3.2	3189	0.886	14.04	22.5	3.27	7090	1.969	31.22	19	2.72	8295	2.304	36.52	25	3.56
3.4	3392	0.942	14.94	23.6	3.42	7692	2.137	33.87	21	3.00	9108	2.530	40.10	27	3.97
3.6	3595	0.999	15.83	24.9	3.61	8300	2.306	36.54	22	3.25	9925	2.757	43.70	30	4.39
3.8	3798	1.055	16.73	26.3	3.82	8906	2.474	39.21	24	3.45	10729	2.980	47.24	33	4.81
4	4001	1.111	17.62	28.0	4.06	9500	2.639	41.83	25	3.56	11500	3.194	50.63	36	5.22

Tech Data Sheet

ProPress Automatic Recirculation Regulating Valve Model 2981.3ZL



Description

The ProPress automatic recirculation regulating valve provides automatic balancing of domestic hot water recirculation return lines. Balancing based on hot water return temperature allows the recirculation system to run more efficiently with smaller pipes and circulators.

The integrated bypass ensures that the thermal element is always sensing representative water and throttles flow accordingly. With low (I) and high (II) bypass settings, the same valve can balance hot water riser returns or hot water returns from smaller fixture groups.

Features

- Automatic, thermostatic balancing
- Zero lead body
- Integrated isolation (ball) valve
- Adjustable bypass.
- Adjustable temperature setpoint

Operating Parameters

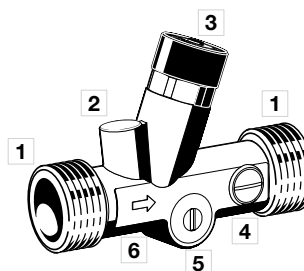
- 150 CWP
- Setting range: 105°F–150°F
- Factory setting: 135°F
- Maximum operating temperature: 180°F
- Maximum operating pressure: 150 psi

Listings and Certifications

- NSF®-61
- NSF®-372
- Listed by NSF to Commercial Hot

Wetted Components

Component	Material
Body	Zero Lead bronze C65680
Bonnet	Zero Lead brass C69300
Disc	316 stainless steel
Springs	316 stainless steel
Plug	Zero Lead brass C69300
Bypass plug	PTFE-coated Zero Lead bronze C65680
Ball	316 stainless steel
Ball seats	POM
Sealing elements	EPDM



1. 1" male BSP connections
2. Threaded temperature port with threaded plug
3. Temperature setpoint adjustment
4. Integrated isolation ball valve
5. Adjustable bypass
6. Flow direction arrow

Setting the Bypass Flow Control

Temperature setting [°F]							Cv (Δp 1 psi) [gpm]		
Incoming temperature [°F]	150	140	135	130	120	110	100	I	II
	150	140	135	130	120	110	100	0.049	0.069
	141.5	135.5	130.5	125.5	115.5	105.5	95.5	0.298	0.319
	136.5	131	126	121	111	101	91	0.47	0.491
	132	126.5	121.5	116.5	106.5	96.5	86.5	0.714	0.735
	127.5	122	117	112	102	92	82	0.928	0.949
	123	117.5	112.5	107.5	97.5	87.5	77.5	1.221	1.242
	118.5	113	108	103	93	83	73	1.362	1.383
	114	108.5	103.5	98.5	88.5	78.5	68.5	1.498	1.519
	109.5	104	99	94	84	74	-	1.532	1.618
	105	99.5	94.5	89.5	79.5	69.5	-	1.71	1.731
	100.5	95	90	85	75	-	-	1.72	1.741
96	90.5	85.5	80.5	70.5	-	-	1.741	1.762	
							1.783	1.803	
							t. D.		
Thermal disinfection 158°F							0.832		

I Cv of bypass only (valve closed) 0.049 gpm

II Cv of bypass only (valve closed) 0.069 gpm

t. D. Thermal disinfection 0.832 gpm

Tech Data Sheet

ProPress 3-Way Diverting and Mixing Valve Model 2976.3



Description

Viega ProPress 3-Way Valve is a 3-port valve which can be used as a diverting or a mixing valve. When used as a diverting valve, the valve has one inlet (AB) and two outlets (A and B). When used as a mixing valve, the valve has two inlets (A and B) and one outlet (AB).

The valve helps regulate system fluid temperatures by mixing fluids from two sources. It is ideal for controlling temperatures in heating, cooling, and radiant application. The valve can be controlled both manually or through the use of an actuator (Model #2877.10).

Component

Material

Body	Bronze
Stem	Stainless steel
Insert	Brass
Seal	EPDM
Cap	Plastic

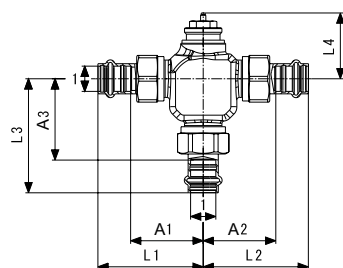
Features

- Female BSP threads
- Delivered with 3 ProPress tailpieces with EPDM sealing elements
- EPDM flat gasket

Ratings

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

ProPress 3-Way Valve Model 2976.3



Part No.	Size (in)	A1 (in)	A2 (in)	A3 (in)	L1 (in)	L2 (in)	L3 (in)	L4 (in)	Cv (US gal/min)
87420	1/2	1.85	1.85	2.56	2.68	2.68	2.87	1.65	2.89
87425	3/4	2.28	2.28	2.72	3.19	3.19	3.47	2.09	5.09
87430	1	2.52	2.52	2.87	3.43	3.43	3.62	2.09	6.59
87435	1 1/4	2.68	2.68	2.99	3.70	3.70	3.86	2.09	8.32
87440	1 1/2	3.07	3.07	3.07	4.49	4.49	4.65	2.13	9.83
87445	2	3.07	3.07	3.31	4.65	4.65	4.72	2.32	11.56

Tech Data Sheet

Flash Shower Valve Models 2842.5 and 2842.6



Description

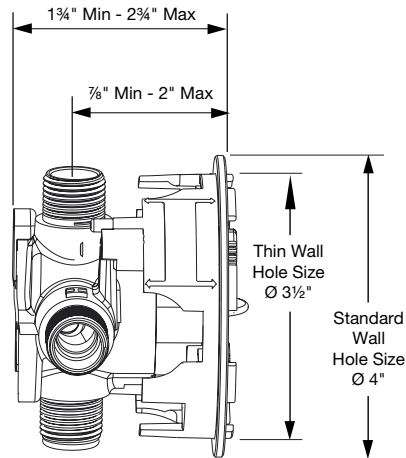
The Flash Shower Valve body features cast DZR brass construction with a pre-installed flush plug with stainless steel retaining ring with flats, back-to-back capability, and ½" copper

stub-out connections. Available with screwdriver stops. It has a plaster guard designed as a rough-in guide and for use as a thin wall mounting support.

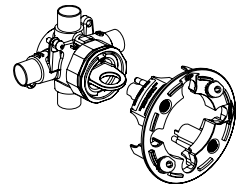
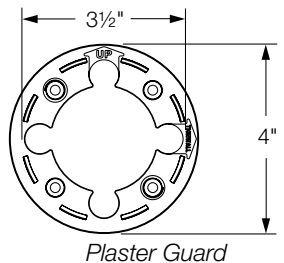
Features

- Choice of connections: copper stub-outs can accommodate ProPress® and PureFlow® connections.
- Cast DZR brass valve body: durable, ideal material for prolonged contact with water. Resists corrosion due to high chloride and pH levels in water.
- Flat back: allows valve to be mounted flush against cross brace for easy and solid installation.
- Flush plug: allows valve body to be tested and flushed without the presence of the valve cartridge. Can be tested using Flush Plug with air (100 psi) or water (300 psi).
- Stainless steel retaining ring with flats: secures test cap/cartridge in place and eliminates need for screws. Flats make it simple to loosen ring for quick, easy insertion/removal of test cap/cartridge.
- Back-to-back capability: hot and cold can be reversed quickly and easily.
- Exclusive plaster guard: plaster guard is designed to protect valve and act as a guide during installation. It can serve as mounting support for thin-wall installations.
- Wide rough-in range: from 1 ¾" to 2 ¾" from finished wall to the back of the valve.

Side View



Front View



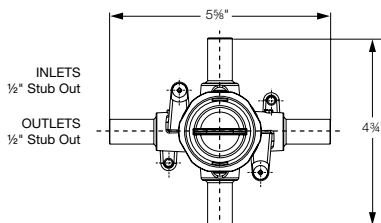
Codes and Standards

This product meets or exceeds the following codes and standards:

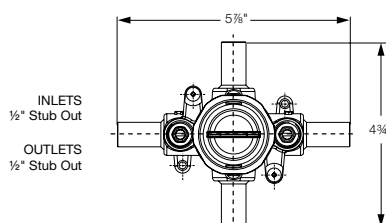
- ASSE 1016
- ASME A112.18.1016
- CSA B125.16
- ASME A112.18.1
- CSA B125.1

i Compatible only with American Standard pressure balance tub/shower, shower only, and valve only trims. Visit www.americanstandard-us.com for more information.

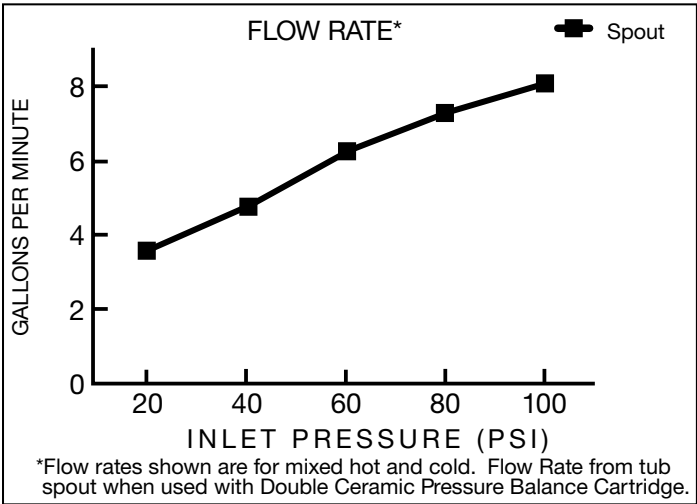
Shower Valves With Stub-outs for Press Connection Fittings

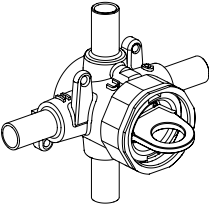
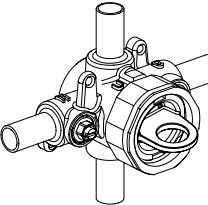


Model 2842.5



Model 2842.6



STUB-OUT FOR PRESS-CONNECT FITTINGS	
RU102	RU102SS
	
1/2" Stub-Out Inlets/ Outlets	1/2" Stub-Out Inlets/ Outlets
	Screwdriver Stops

Tech Data Sheet

ProPress Supply Stop Valve Models 2942.3ZL / 2942.4ZL



Description

Viega ProPress stop valves are available in straight and angled

configurations. The valves are intended for potable water applications, and are manufactured from nickel-plated brass, featuring EPDM sealing elements and Viega's Smart Connect® Technology for easy identification of unpressed connections during pressure testing.

Features

- Plated brass stem
- 1/4-turn handle
- EPDM sealing element
- ProPress connections
- Smart Connect technology

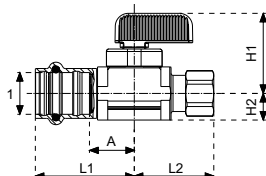
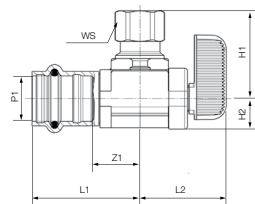
Ratings

- Temperature range: 0°F–180°F
- Max. operating pressure: 160 psi

Approvals

- ASME A112
- cCSAus
- NSF®-61
- NSF®-372
- NSF®-U.P. Code

ProPress Supply Stop Valve Models 2942.3ZL / 2942.4ZL



Component	Material
Body	Nickel-plated brass
Ball	Plated brass ball
Stem	Nickel-plated brass
Sealing element	EPDM

Part No.	Size (in)	H1 (in)	H2 (in)	L1 (in)	L2 (in)	A (in)	Cv (US gal/min)
2942.3ZL 2942.4ZL	1						
89995	1/2" CTS x 3/8" OD	1.22	0.47	1.50	1.22	0.67	1.50
90000	1/2" CTS x 3/8" OD	1.22	0.39	1.50	1.22	0.67	2.20

Tech Data Sheet

ProPress Valves and Accessories by Model

Zero Lead Bronze Ball Valve - P x P Model 2971.1ZL



Part No.	Size (in)
79920	1/2
79925	3/4
79930	1
79935	1 1/4
79940	1 1/2
79950	2

- Smart Connect technology
- 300 CWP
- Body: Two-piece Zero Lead Bronze
- Ball: Full-port 316 stainless steel
- Stem: Blowout-proof Eco Brass
- Sealing element: EPDM
- Listings: APMO/ANSI Z1157, NSF®-61-372, NSF®-U.P. Code, Listed by NSF to Commercial Hot
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–250°F operating temperature

Zero Lead Brass Ball Valve - P x P Model 2971.1XL



Part No.	Size (in)
78300	2 1/2
78305	3
78310	4

- Smart Connect technology
- 300 CWP
- Body: Two-piece Zero Lead Brass
- Ball: Chromium-plated Brass
- Locking handle
- Sealing element: EPDM
- Listings: APMO/ANSI Z1157, NSF®-61-372, NSF®-U.P. Code, Listed by NSF to Commercial Hot
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–250°F operating temperature

Zero Lead Bronze Ball Valve - P x P Model 2971.3ZL



Part No.	Size (in)
79923	1/2
79928	3/4
79933	1
79938	1 1/4
79943	1 1/2
79948	2

- Smart Connect technology
- 300 CWP
- Body: Two-piece Zero Lead Bronze
- Ball: Full-port 316 stainless steel
- Stem: Blowout-proof 316 stainless steel
- Sealing element: EPDM
- Listings: APMO/ANSI Z1157, NSF®-61-372, NSF®-U.P. Code, Listed by NSF to Commercial Hot
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–250°F operating temperature

Zero Lead Bronze Ball Valve - P x FPT Model 2971.4ZL



Part No.	Size (in)
79970	1/2
79975	3/4
79980	1

- Smart Connect technology
- 300 CWP
- Body: Two-piece Zero Lead Bronze
- Ball: Full-port 316 stainless steel
- Stem: Blowout-proof Eco Brass
- Sealing element: EPDM
- Listings: APMO/ANSI Z1157, NSF®-61-372, NSF®-U.P. Code, Listed by NSF to Commercial Hot
- Conforms to: MSS SP-110
- Parameters: 300 psi max. operating pressure
0°F–250°F operating temperature

Zero Lead Bronze Ball Valve - P x Hose Model 2971.6ZL



Part No.	Size (in)
79875	1/2
79876	3/4

- Smart Connect technology
- 300 CWP
- Body: Two-piece Zero Lead Bronze
- Ball: Full-port 316 stainless steel
- Stem: Blowout-proof Eco Brass
- Sealing element: EPDM
- Listings: APMO/ANSI Z1157, NSF®-61-372, NSF®-U.P. Code, Listed by NSF to Commercial Hot
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–250°F operating temperature

Bronze Ball Valve - P x Hose Model 2973.3



Part No.	Size (in)
24090	1/2
24095	3/4

- Smart Connect technology
- 300 CWP
- Body: Brass body with bronze connections
- Ball: Full-port chrome plated brass
- Stem: Blowout-proof Brass
- Sealing element: EPDM
- Listings: NSF®-U.P. Code, IAPMO/ANSI Z1157
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–200°F operating temperature

Bronze Ball Valve - P x FPT Model 2973.1



Part No.	Size (in)
24030	1/2
24035	3/4
24040	1

- Smart Connect technology
- 300 CWP
- Body: Brass body with bronze connections
- Ball: Full-port chrome plated brass
- Stem: Blowout-proof Brass
- Sealing element: EPDM
- Listings: NSF®-U.P. Code, IAPMO/ANSI Z1157
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–200°F operating temperature

Bronze Ball Valve - P x P – Model 2973



Part No.	Size (in)
24000	1/2
24005	3/4
24010	1
24015	1 1/4
24020	1 1/2
24025	2

- Smart Connect technology
- 300 CWP
- Body: Brass body with bronze connections
- Ball: Full-port chrome plated brass
- Stem: Blowout-proof brass
- Sealing element: EPDM
- Listings: NSF®-U.P. Code, IAPMO/ANSI Z1157
- Conforms to: MSS SP-110
- Parameters:
300 psi max. operating pressure
0°F–200°F operating temperature

316 Stainless Steel Ball Valve - P x P Model 4070



Part No.	Size (in)
81080	1/2
81085	3/4
81090	1
81095	1 1/4
81100	1 1/2
81105	2

- Smart Connect technology
- Body: 316 stainless steel
- Ball: 316 stainless steel full port
- Stem: Blowout-proof 316 stainless steel
- Sealing element: EPDM
- Listings: NSF®-61-372
- Conforms to: MSS SP-110
- Parameters:
200 psi max. operating pressure
0°F–250°F operating temperature

316 Stainless Steel Ball Valve Model 4075



Part No.	Size (in)
81081	1/2
81086	3/4
81096	1
81097	1 1/4
81106	1 1/2
81107	2

- Smart Connect technology
- Body: 316 stainless steel
- Ball: 316 stainless steel
- Stem: 316 stainless steel
- Sealing element: EPDM
- Lockable, 316 stainless steel handle
- Listings: NSF®-61-372, NSF®-U.P. Code, ASME A112.4.14/CSA B125.14, IAPMO/ANSI Z1157
- Conforms to: MSS SP-110
- Parameters:
250 psi max. operating pressure
0°F–250°F operating temperature

316 Stainless Steel Three Piece Ball Valve P x P – Model 4370.8



Part No.	Size (in)
85132	1/2
85133	3/4
85134	1
85136	1 1/4
85137	1 1/2
85138	2

- Smart Connect technology
- Body: Three Piece 316 stainless steel
- Ball: 316 stainless steel full port
- Stem: Blowout-proof 316 stainless steel
- Sealing element: FKM
- Conforms to: MSS SP-110
- Parameters:
200 psi max. operating pressure
0°F–250°F operating temperature

Automatic Recirculation Regulating Valve Zero Lead – Model 2981.3ZL



Part No.	Size (in)
79901	1 x 1

- Automatic, thermostatic balancing
- Zero lead body
- Integrated isolation (ball) valve
- Adjustable temperature setpoint
- 1" BSP male threads
- NSF®-61-372

Shower Valve – Model 2842.5



Part No.	Size (in)
93516	1/2

- 1/2" copper stub outs
- DZR brass construction
- Pre-installed flush plug
- Plaster guard
- Can test and flush without valve cartridge
- Flat back for flush mounting
- Back-to-back capability so hot and cold can be reversed easily

Shower Valve – Model 2842.6



Part No.	Size (in)
93517	1/2

- 1/2" copper stub outs
- DZR brass construction
- Pre-installed flush plug
- Plaster guard
- Can test and flush without valve cartridge
- Flat back for flush mounting
- Back-to-back capability so hot and cold can be reversed easily
- With screwdriver stops

Semi Lug Butterfly Valve – Model 2873.81



Part No.	Size (in)
22074	2 1/2
22075	3
22076	4

- Body: Semi-lug spheroidal cast iron
- Disc: 316 stainless steel
- Stem: 316 stainless steel
- Handle: 10-position spring locking handle
- Mounting flange: ISO 5211
- Liner: EPDM
- Conforms to: MSS SP 67, AWWA C504-6
- Parameters:
250 psi max. operating pressure
0°F–200°F operating temperature

Inline Check Valve – Model 2974ZL



Part No.	Size (in)
79035	1/2
79040	3/4
79045	1
79050	1 1/4
79055	1 1/2
79060	2

- Smart Connect technology
- Body: Zero Lead Bronze
- Check valve insert: POM bubble tight
- Cracking pressure: 0.5 psiG
- Sealing element: EPDM
- Listings: NSF®-61-372, NSF®-U.P. Code
- Parameters:
200 psi max. operating pressure
0°F–180°F operating temperature

ProPress Butterfly Valve Model 2979.8ZL



Part No.	Size (in)
87660	2½
87665	3
87670	4

- Body: Epoxy powder-coated ductile iron
- Disc, screw plug, and grub screw: 316 stainless steel CF8M
- Upper and lower shafts: QT650 stainless steel
- Hand lever: Cast aluminum
- Locking disc: Nylon
- Joint washer: Copper
- Sealing element: EPDM
- Listing: NSF®-61-372
- Conforms to: MSS SP-67, MSS SP-25
- Parameters:
250 psi max. operating pressure
0°F–250°F operating temperature

ProPress Wafer Check Valve Model 2974.3XL



Part No.	Size (in)
86975	2½
86980	3
86985	4

- Body: Epoxy powder-coated ductile iron
- Disc: A351 CF8M 316 stainless steel
- Shaft, spring, and washer: 316 stainless steel
- Seal: EPDM
- Approval: NSF®-61-372
- Conforms to: MSS SP-25, MSS SP-139 with Viega flange adapters, API-598
- Parameters:
250 psi max. operating pressure
0°F–250°F operating temperature

Zero Lead Manual Balancing Valve – Model 2980ZL



Part No.	Size (in)
82100	U-½
82105	L-½
82110	½
82115	¾
82120	1
82125	1¼
82130	1½
82135	2

- DZR lead-free brass
- PT ports
- ProPress press-ends with Smart Connect technology
- Positive shut-off with memory stop
- NSF®-61-372

Ball Valve Lockable Metal Handle – Model 2970.8

*Use with Model 4070



Part No.	Size (in)
22143	½, ¾, 1
22163	1¼, 1½, 2

Ball Valve Lockable Metal Handle – Model 2971.8

*Use with Models 2971.1ZL, 2971.3ZL, 2971.4ZL and 2971.6ZL



Part No.	Size (in)
22170	½ and ¾
22172	1 and 1¼
22174	1½ and 2

Ball Valve Metal Handle – Model 2973.8

*Use with Models 2973, 2973.1, and 2973.3



Part No.	Size (in)
22176	½
22178	¾ and 1
22180	1¼, 1½, 2

Gear Operator Handwheel – Model 2979.88

*Use with Models 2979.8ZL and 5179.8



Part No.	Size (in)
87690	2½
87695	3
87695	4

Flange Bolt Set – Model 2959.7

*Use with Model 2873.81



Part No.	Size (in)
19748	1, 1¼, 1½
19758	2, 2½, 3
19763	4

Ball Valve Stem Extension Kit – Model 2970.96

*Use with Model 4070



Part No.	Size (in)
23442	½, ¾, 1
23444	1¼, 1½, 2

Ball Valve Stem Extension Kit – Model 2971.96

**Use with ProPress Models 2971.1ZL, 2971.3ZL, 2971.4ZL and 2971.6ZL and PureFlow® Model 2870ZL*



Part No.	Size (in)
23443	½ and ¾
23445	1 and 1¼
23447	1½ and 2

Ball Valve Stem Extension Kit – Model 2973.96

**Use with Models 2973, 2973.1, and 2973.3*

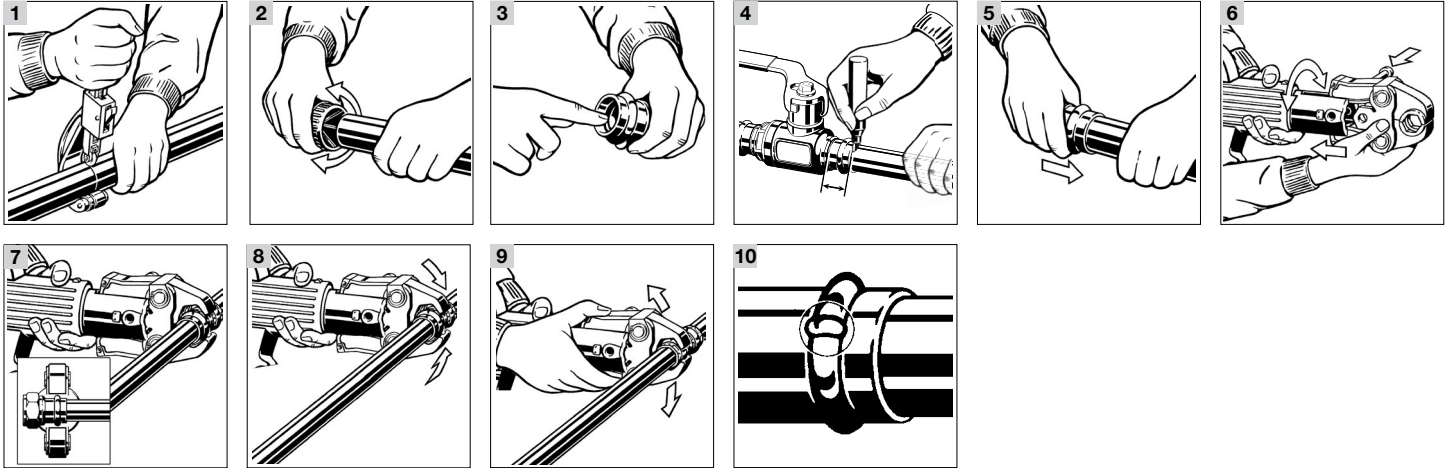


Part No.	Size (in)
23449	½
23451	¾ and 1
23453	1¼ to 2

2 Product Instructions

ProPress Ball Valves ½" to 2"

For Hard Copper Tubing in ½" to 2" and Soft Copper Tubing in ½" to 1¼"



DANGER!

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

- 1 Cut the tube square using a displacement-type cutter or fine toothed saw.



Cut tubing a minimum of 4" away from the contact area of the vise to prevent possible damage to the tubing in the press area.

- 2 Remove burr from inside and outside of tubing to prevent cutting the sealing element.



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](#) on the [viega.us](#) website.

- 3 Check the sealing element for correct fit. Do not use oils or lubricants. Use only Viega ProPress sealing elements.
- 4 Mark the proper insertion depth as indicated by the ProPress Insertion Depth Chart. Improper insertion depth may result in an improper seal.

ProPress Insertion Depth Chart

Tube Size (in)	Insertion Depth (in)
½	¾
¾	7/8
1	7/8
1¼	1
1½	1 1/16
2	1 9/16



Copper tubing must be free of surface imperfections, including metal stamped print lines, before a ProPress fitting is installed.

- 5 While turning slightly, slide ball valve 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.
- 7 Open the jaw and place at right angle on the valve. Visually check insertion depth using mark on tubing.



Warning!

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

- 8 Hold trigger on press tool until press jaws have fully engaged the valve. Jaws will automatically release after a full press is made.
- 9 After pressing, open the jaw and remove the press tool.



Only ball valves marked with NSF-61 and NSF 372 are allowed for use in potable water systems.

- 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.

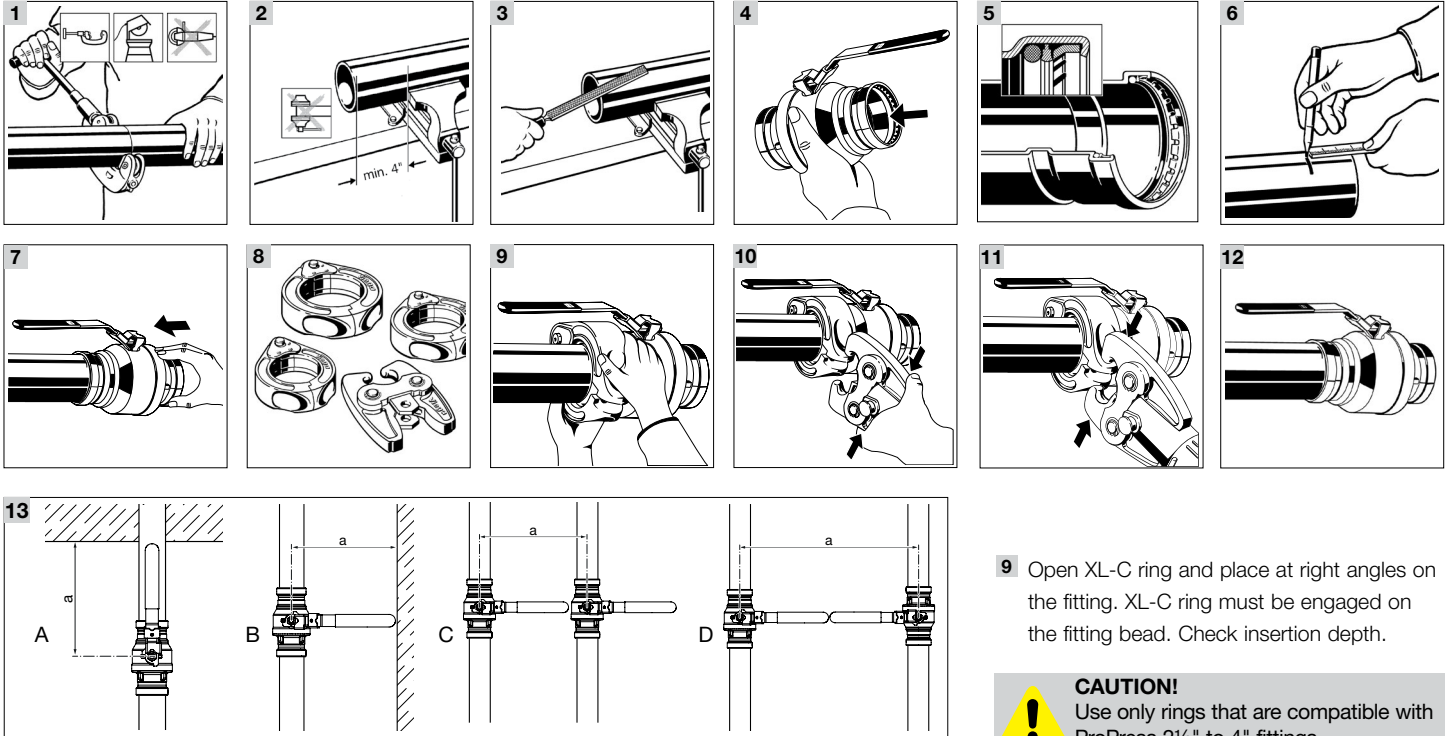


Testing for unpressed connections using Smart Connect is not a replacement for pressure testing requirements of local codes and standards.

Product Instructions

ProPress Ball Valves 2½" to 4"

For Hard Copper Tubing



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

- 1 Cut copper tubing at right angles using displacement-type cutter or fine-toothed steel saw.
- 2 Keep end of tubing a minimum of 4" away from the contact area of the vise to prevent possible damage to the tubing in the press area.
- 3 Remove burr from inside and outside of tubing to prevent cutting sealing element.



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](#) on the viega.us website.

- 4 Check seal and grip ring for correct fit. Ensure sealing element is free of cuts and damage. Do not use oils or lubricants.
- 5 Illustration demonstrates proper fit of grip ring, separation ring and sealing element.

ProPress 2½" to 4" Insertion Depth Chart

Tube Size	2½"	3"	4"
Insertion Depth	1 11/16"	1 15/16"	2 3/8"



Copper tubing must be free of surface imperfections, including metal stamped print lines, before a ProPress fitting is installed.

- 6 Mark proper insertion depth as indicated by the ProPress 2½" to 4" Insertion Depth Chart. Improper insertion depth may result in an improper seal.
- 7 While turning slightly, slide press fitting onto tubing to the marked depth. End of tubing must contact stop.
- 8 ProPress 2½" to 4" fitting connections must be performed with rings that are compatible with fittings. See 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.



CAUTION!

Use only rings that are compatible with ProPress 2½" to 4" fittings.

- Use of incompatible rings will result in an improper connection.
- Do not mix actuators and rings from different manufacturers.
- Do not use rings intended for 2½" to 4" Bronze fittings.

- 10 With V2 actuator inserted into the tool, open the V2 actuator as shown and connect V2 actuator to the XL-C ring.

- 11 Place V2 actuator onto XL-C ring and start pressing process. Hold the trigger until the actuator has engaged the XL-C ring. Keep extremities and foreign objects away from XL-C ring and V2 actuator during pressing operation to prevent injury or incomplete press.



WARNING!

Keep extremities and foreign objects away from press tool 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 performed.