

Tech Data

Viega MegaPress® 304 FKM 3-Piece Ball Valve Models 4175.8 and 4175.8XL



The MegaPress 304 FKM 3-piece Ball Valve is equipped with a full port, 316 stainless steel 3-piece body and 304 stainless steel press ends. The ball valve features an FKM sealing element, a 420

stainless grip ring, a 304 stainless steel separator ring, PTFE stem seals, a locking metal handle, and Viega's Smart Connect® technology for easy identification of unpressed connections during pressure testing. Recommended applications for these valves include hydronic heating/cooling water, process water, and various industrial chemicals.

Labeled List of Materials

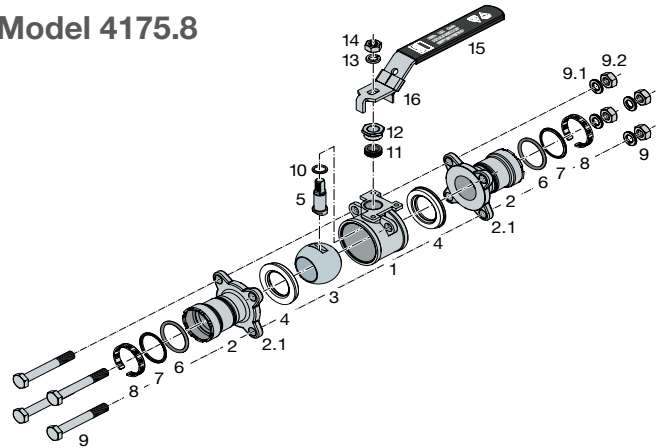
Label No.	Component	Material
1	Body	ASIS 316, ASTM A351 CF8M
2	Press end	AISI 304, UNS 30400
2.1	Flange	AISI 304, ASTM A351 CF8
3	Ball	ASIS 316
4	Seal	PTFE
5	Stem	ASIS 316
6	Sealing element	FKM
7	Separator ring*	AISI 304, UNS 30400
8	Grip ring	AISI 420, UNS S42000
9	Hexagon bolts / threaded rod**	AISI 304, UNS 30400
9.1	Lock washer	AISI 304, UNS 30400
9.2	Bolt nut	AISI 304, UNS 30400
10	Sliding ring	PTFE
11	Stem seal	PTFE
12	Packing nut	AISI 304, UNS 30400
13	Lock washer	AISI 304, UNS 30400
14	Bolt nut	AISI 304, UNS 30400
15	Handle cover	Polyvinyl
16	Handle	AISI 304, UNS 30400
17	Plug**	POM

*Model 4175.8 only. **Model 4175.8XL only.

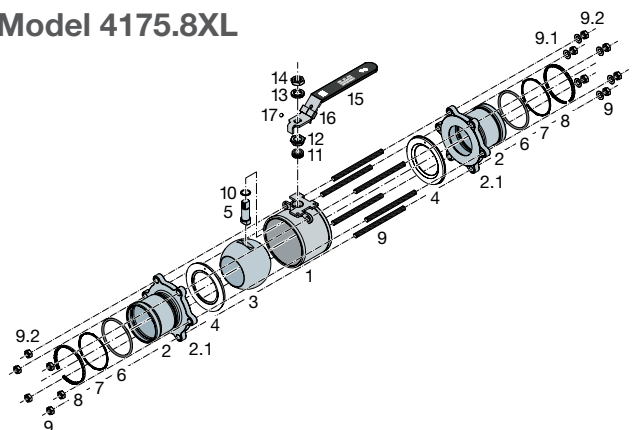
Features and Ratings

- Three-piece ¼ turn ball valve
- 316 stainless steel body and 304 press ends
- Full port 316 stainless steel ball
- FKM sealing element
- ISO 5211 mounting pad
- Smart Connect technology
- Sizes for model 4175.8: ½", ¾", 1", 1 ¼", 1½", 2"
- Sizes for model 4175.8XL: 2½", 3", 4"
- Operating temperatures: 14°F–284°F (with temperature spikes up to 356°F)
- Max. operating pressure ½" to 2": 250 CWP
- Max. operating pressure 2½" to 4": 200 CWP

Model 4175.8



Model 4175.8XL



Recommended Applications

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

Approvals

- Conforms to MSS SP-110
- ASME B31
- IAPMO Z1157

Compatible Accessories

For Model 4175.8

- Viega 3-piece Replacement Handle, Model 4875.80
- Viega MegaPress Lockable Stem Extension, Model 2972.12
- Viega MegaPress Valve Repair Kit, Model 4875.91

For Model 4175.8XL

- Viega MegaPress 3-piece XL Replacement Handle, Model 4875.8XL
- Viega MegaPress XL Lockable Stem Extension, Model 5970.9XL
- Viega MegaPress Valve Repair Kit, Model 4875.9XL

Recommended Tools

For ½" to 2"

- Standard-size press tool (minimum hydraulic ram output of 7,200 lbs.)
- #56013 MegaPress jaw/ring kit (½" to 2")

For 2½" to 4"

- Standard-size press tool (minimum hydraulic ram output of 7,200 lbs.) for use with the PressBooster
- #26200 MegaPress XL PressBooster with 2½" press ring
- #57078 MegaPress XL 3" and 4" press ring kit
- #57081 Z3 Actuator with 2½" press ring (must be used with press gun with minimum 80 mm press stroke)

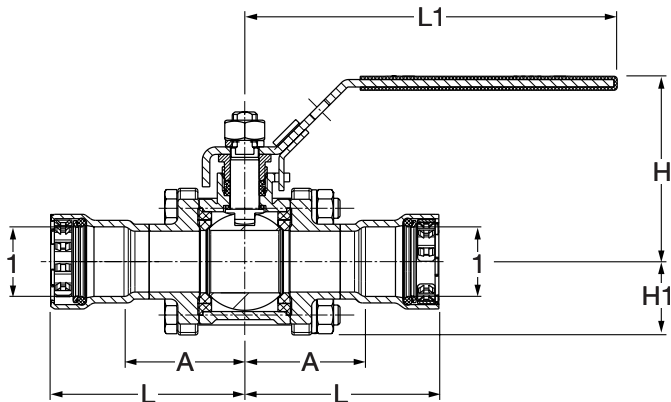


This document is subject to updates. For the most current Viega technical literature, please visit www.viega.us.



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

Dimensions – MegaPress 304 FKM 3-Piece Ball Valve Models 4175.8 / 4175.8XL



Part No. 304 FKM	Size (in)*	A (in)	L (in)	L1 (in)	H (in)	H1 (in)
86500	1/2	1.72	2.80	5.88	2.85	1.04
86505	3/4	1.91	3.06	5.88	2.93	1.16
86510	1	2.19	3.54	7.54	3.33	1.40
86515	1 1/4	2.50	4.31	7.54	3.57	1.57
86520	1 1/2	2.92	4.79	7.54	3.89	1.83
86525	2	3.09	5.07	7.54	3.89	1.83
86650	2 1/2	3.74	5.54	11.06	5.08	2.28
86655	3	4.37	6.67	11.06	5.47	2.68
86660	4	4.88	8.06	13.07	6.89	3.79

*Sizes up to 3" have 4-bolt flanges; size 4" has 6-bolt flanges.

Body Torque Specifications – MegaPress 304 FKM 3-Piece Ball Valve Models 4175.8 / 4175.8XL

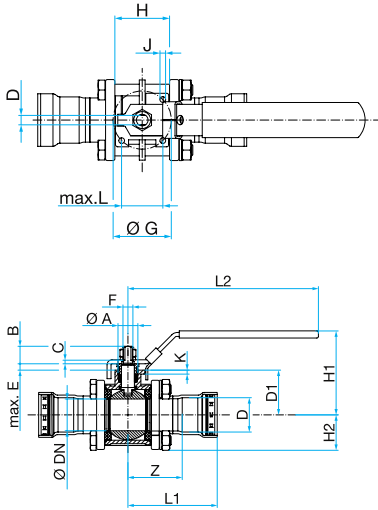
Valve size (in)*	Valve body bolt and nut sizes		Bolt torque +/- 5		Valve stem nut size	Stem nut	
			ft/lbs	(Nm)		ft/lbs	(Nm)
1/2	M8 x 55	M8	7.5	(10)	AF 16 mm	7.5	10
3/4	M8 x 65	M8	15	(20)	AF 18 mm	11	15
1	M10 x 75	M10	15	(20)	AF 21 mm	11	15
1 1/4	M10 x 90	M10	22.5	(30)	AF 22 mm	18.5	25
1 1/2	M10 x 100	M10	22.5	(30)	AF 24 mm	18.5	25
2	M10 x 100	M10	22.5	(30)	AF 24 mm	18.5	25
2 1/2	M12 x 140	M14	45	(60)	AF 30 mm	26	(35)
3	M12 x 140	M14	45	(60)	AF 30 mm	26	(35)
4	M12 x 140	M14	45	(60)	AF 30 mm	26	(35)

*Sizes up to 3" have 4-bolt flanges; size 4" has 6-bolt flanges.

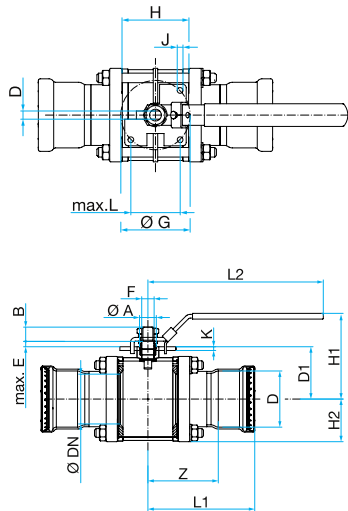
Torque Values – MegaPress 304 FKM 3-Piece Ball Valve Models 4175.8 / 4175.8XL

These valve models feature an ISO 5211-compliant mounting pad for actuator installation and automation compatibility. Reference the below drawings and table values.

Model 4175.8



Model 4175.8XL



IPS (MP System)	Material No.	Part No.	ØDN	Breakaway Torque (in/lbs)	Actuating Torque (in/lbs)	ØA	B	C	D	E	F	ØG (ISO)	ØH	I	J	K	ØL
½	440613	86500	0.7874	132.76	70.81	0.3701	0.5709	0.1181	0.2559	0.2953	M8	1,417 (F03)	1.4173	0.1969	M5	0.1378	0.8661
¾	440613	86505	0.9843	177.01	88.51	0.4291	0.6693	0.1181	0.315	0.2953	M10	1,417 (F03)	1.4173	0.1969	M5	0.1378	0.9843
1	440623	86510	1.2598	238.97	115.06	0.4882	0.6693	0.1181	0.315	0.2559	M10	1,969 (F05)	1.9685	0.1969	M6	0.1575	1.063
1¼	440633	86515	1.5748	292.07	150.46	0.6063	0.8071	0.1378	0.3346	0.2756	M12	1,969 (F05)	1.9685	0.1969	M6	0.1575	1.1811
1½	440643	86520	1.9685	371.73	177.01	0.6063	0.8071	0.1378	0.3346	0.2756	M12	1,969 (F05)	1.9685	0.1969	M6	0.1969	1.1811
2	440653	86525	1.9685	371.73	177.01	0.6063	0.8071	0.1378	0.3346	0.2756	M12	1,969 (F05)	1.9685	0.1969	M6	0.1969	1.1811
2½	440403	86650	2.5591	442.5–774.4	309.8	0.7874	0.8268	0.1181	0.4724	0.3543	M20	2,795 (F07)	2.5591	0.2362	M8	0.2362	1.4173
3	440413	86655	3.1496	708–996	398.3	0.7874	0.8268	0.1181	0.4724	0.3543	M20	4,016 (F10)	3.5433	0.2362	M10	0.2362	1.4173
4	440423	86660	3.937	973.6–1,438.2	575.3	0.9449	0.9449	0.1181	0.6299	0.315	M24	4,016 (F10)	3.5433	0.4134	M10	0.2362	1.8898

Note: The torque requirements of these valves in the above chart are subject to variation based on several operating conditions, including but not limited to cycling frequency, process medium and lubrication, maximum operating pressure, operating temperature, temperature fluctuations, or cleaning cycles. Increased breakaway and actuating torque may also occur during service due to contamination, irregular use, or other process conditions. When specifying or designing actuator equipment for use with these valves, a minimum safety factor of 1.5 times should be applied. Failure to apply this safety factor may result in improper operation, reduced service life, or damage to the valve and may void the warranty.

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