

1 System Data Sheet

MegaPressG Fittings



Viegga MegaPressG is a carbon steel, cold press fitting system designed for use in fuel gas systems and applications with a high oil content. MegaPressG fittings in sizes from ½" to 4" are offered in numerous configurations.

Components

- Alloy: carbon steel with corrosion-resistant zinc/nickel coating
- HNBR sealing element
- 420 stainless steel grip ring
- 304 stainless steel separator ring for ½" to 2" fittings
- Graphite separator ring for 2½" to 4" fittings

Operating Parameters

- Operating Pressure: 125 psi max for fuel gas applications
200 psi max for other approved applications
- Test Pressure: 600 psi max
- Operating Temperatures: -40 to 180°F

Approved Piping

- Fuel gas applications: ASTM A53 Schedule 10 to Schedule 40 carbon steel pipe
- Non-fuel gas applications: ASTM A53, A106, A135, and A795 Schedule 5 to Schedule 40 carbon steel pipe. Schedule 80 pipe may be used but operating pressures are limited to Viegga Approved Applications guide.



Adopted code versions, standards compliance, and local approvals should be considered for selecting pipe schedule and type.

Listings and Certifications

- ASTM F3226
- ASME B31.1, B31.3, B31.9
- CRN 23019.5 A/B/C
- CSA: ANSI LC 4a/CSA 6.32a
- IAPMO: ANSI LC 4a/CSA 6.32a
- ICC-ES: ANSI LC 4a/CSA 6.32a

Compliant With

- CAN/CSA-B149.1
- IAPMO National Standard Plumbing Code (NSPC)
- IAPMO Uniform Mechanical Code (UMC)
- IAPMO Uniform Plumbing Code (UPC)
- ICC International Fuel Gas Code (IFGC)
- ICC International Residential Code (IRC)
- NFPA 54/Z223: National Fuel Gas Code
- NFPA 58: Liquefied Petroleum Gas Code

Approved Applications

- Natural gas
- Propane gas
- Lubricants/oils
- Compressed air
- Industrial gases
- Vacuum

For more specific information on applications for MegaPressG, contact Viegga Technical Services at 1-800-976-9819.

Viegga MegaPressG systems are approved for underground use and must be protected against corrosion in accordance with NFPA 54 section 404.8, NACE Standard RP0169-2002 section 5, 2009 UPC Chapter 6 section 609.3.1, 2009 UMC Chapter 13 section 1312.1.3, and in accordance with local and national codes.

Recommended Tools

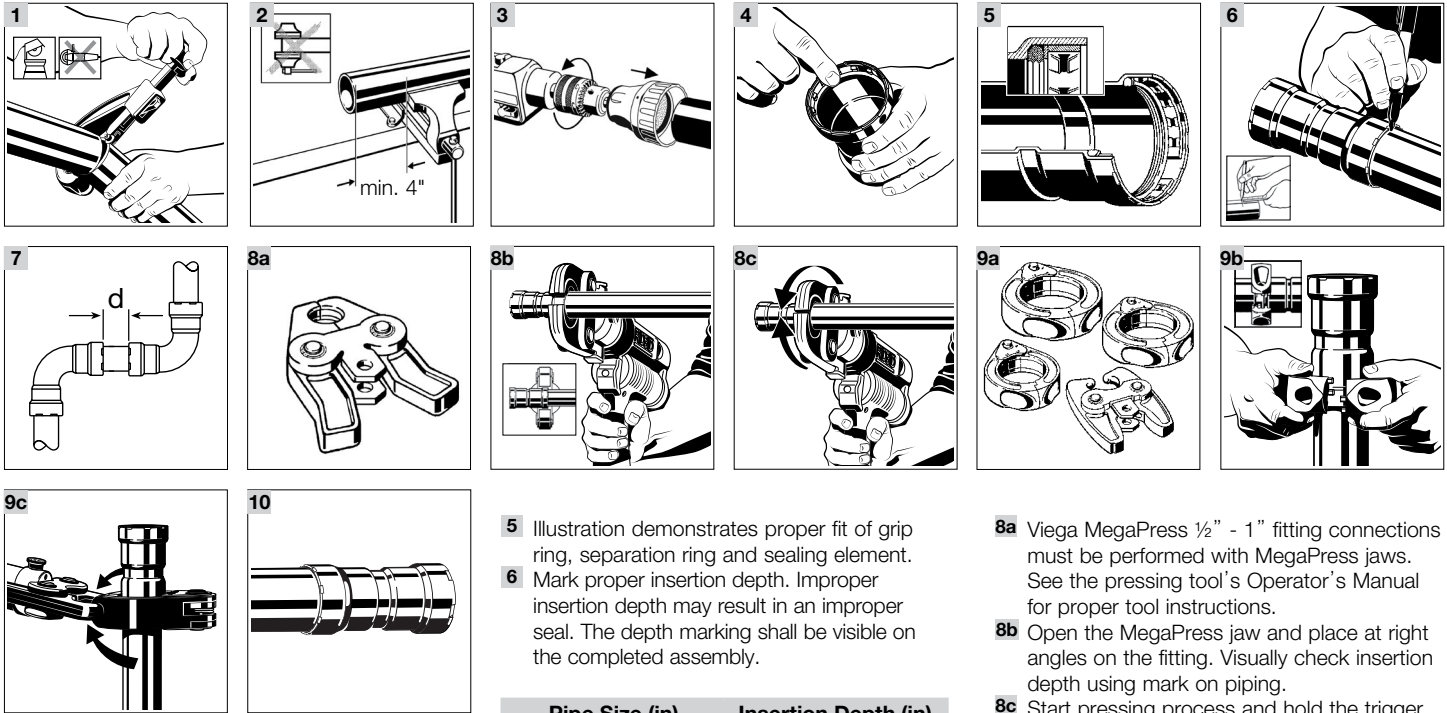
- Standard size press tool (minimum hydraulic ram output of 7200 lbs.)
- #56013 MegaPress jaw/ring kit (½" to 2")
- #26200 MegaPress XL PressBooster with 2½" press ring
- #26201 MegaPress XL 3" and 4" press ring kit
- #57081 Z3 Actuator with 2½" ring (must be used with press gun with minimum 80mm press stroke)

Smart Connect® Technology

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

2 Product Instructions

MegaPressG ½" to 2" Fittings



Caution!
The fittings are for use with fuel gases and are intended for the operating pressure 0-125 psi.

Caution!
The fuel gas system shall not be used as a grounding electrode for an electrical system.

- 1 Cut piping at right angles using displacement type cutter.
- 2 Keep end of piping a minimum of 4" away from the contact area of the vise to prevent possible damage to the piping in the press area. See the *MegaPress Installation Manual* for minimum clearance required for prep tools.
- 3 Remove burr from inside and outside of piping and prep to proper insertion depth using a preparation tool or fine grit sandpaper.
- 4 Check seal and grip ring for correct fit. Do not use oils or lubricants.

- 5 Illustration demonstrates proper fit of grip ring, separation ring and sealing element.
- 6 Mark proper insertion depth. Improper insertion depth may result in an improper seal. The depth marking shall be visible on the completed assembly.

Pipe Size (in)	Insertion Depth (in)
½	1 1/16
¾	1 3/16
1	1 3/8
1 ¼	1 13/16
1 ½	1 7/8
2	2

- 7 Refer to chart for minimum distance between fittings. To ensure a correct press, a minimum distance between press fittings must be maintained. Failure to provide this distance may result in an improper seal.

Pipe Diameter (in)	d (in)	d (mm)
½	¼	6
¾	¼	6
1	¼	6
1 ¼	½	13
1 ½	½	13
2	½	13

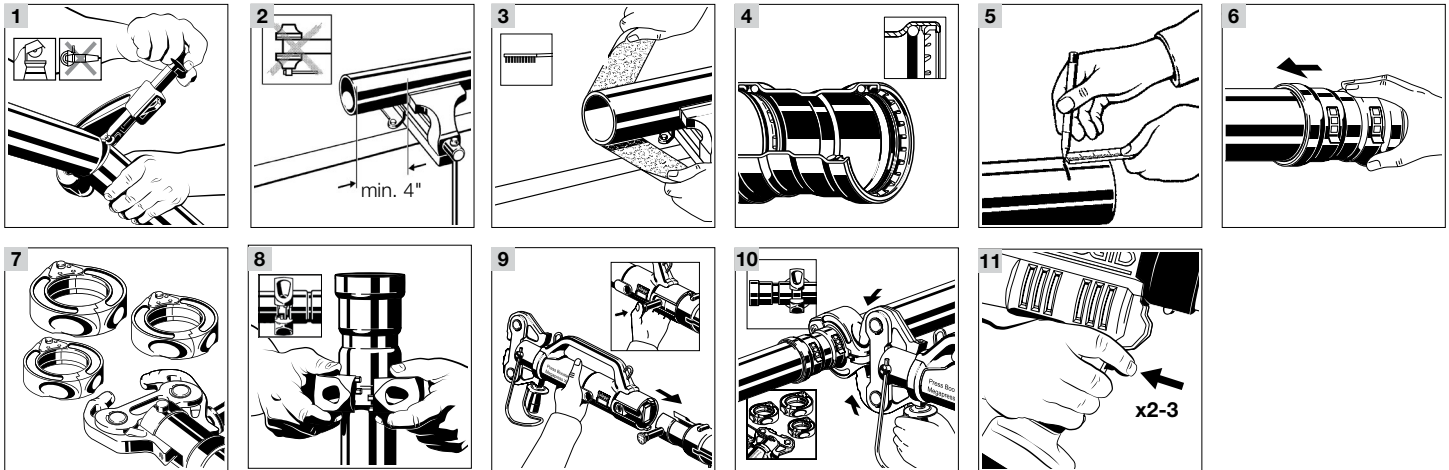
Warning!
Keep extremities and foreign objects away from press tool during pressing operation to prevent injury or incomplete press.

- 8a Viega MegaPress ½" - 1" fitting connections must be performed with MegaPress jaws. See the pressing tool's Operator's Manual for proper tool instructions.
- 8b Open the MegaPress jaw and place at right angles on the fitting. Visually check insertion depth using mark on piping.
- 8c Start pressing process and hold the trigger until the jaw has engaged the fitting.
- 9a Vieg MegaPress 1 ¼" - 2" fitting connections must be performed with MegaPress rings and V2 actuator. See the pressing tool's Operator's Manual for proper tool instructions.
- 9b Open MegaPress ring and place at right angles on the fitting. MegaPress ring must be engaged on the fitting bead. Check insertion depth.
- 9c Place V2 actuator onto MegaPress ring and start pressing process. Hold the trigger until the actuator has engaged the MegaPress ring.
- 10 Remove MegaPress jaw from fitting or release V2 actuator from the MegaPress ring and then remove the MegaPress ring from the fitting on completion of press. Remove control label to indicate press has been completed.

i The installation, inspection, testing and purging of the fuel gas system shall be in accordance with local codes or, in the absence of local codes, in accordance with the International Fuel Gas Code, NFPA 54/National Fuel Gas Code z223.1, the Uniform Plumbing Code, NFPA 58 or CSA B 149.1 as applicable.

Product Instructions

MegaPressG 2½" to 4" Fittings



Caution!
The fittings are for use with fuel gases and are intended for the operating pressure 0-125 psi.

Caution!
The fuel gas system shall not be used as a grounding electrode for an electrical system.

- 1 Cut piping at right angles using displacement type cutter.
- 2 Keep end of piping a minimum of 4" away from the contact area of the vise to prevent possible damage to the piping in the press area. See *MegaPress Installation Manual* for minimum clearance required for prep tools.
- 3 Remove burr from inside and outside of piping and prep to proper insertion depth using a preparation tool or fine grit sandpaper.
- 4 Illustration demonstrates proper fit of grip ring, separation ring and sealing element.

Caution!
Due to the brittle nature of the graphite separator ring, extra care must be taken when sliding the fitting onto the pipe so as not to damage the separator ring.

- 5 Mark proper insertion depth. Improper insertion depth may result in an improper seal. The depth marking shall be visible on the completed assembly.

Insertion Depth (in)	d (in)	d (mm)
2½	1 ¹³ / ₁₆	46
3	2 ⁵ / ₁₆	59
4	3 ¹ / ₈	80

- 6 While turning slightly, slide fitting onto tubing to the marked depth. End of tubing must contact stop.

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

- 7 Viega MegaPressG 2½" to 4" fitting connections must be made using MegaPress XL rings and a PressBooster/Z3 actuator. See Operator's Manual for proper tool instructions.
- 8 Open MegaPress ring and place at right angles on the fitting. MegaPress ring must be engaged on the fitting bead. Check insertion depth.

- 9 Remove the retaining bolt of the press machine. Slide the PressBooster in via the press jaw fixture.
- 10 Place PressBooster/Z3 actuator onto MegaPress XL rings and start pressing process. Hold the trigger until the actuator has engaged the MegaPress ring.
- 11 The PressBooster requires two presses of the trigger to execute a complete press. A third press may be needed to initiate a release cycle to reset the rollers back to the original position.

i Info: The installation, inspection, testing and purging of the fuel gas system shall be in accordance with local codes or, in the absence of local codes, in accordance with the International Fuel Gas Code, NFPA 54/National Fuel Gas Code z223.1, the Uniform Plumbing Code, NFPA 58 or CSA B 149.1 as applicable.

3 Engineering Specifications

MegaPressG Natural Fuel Gas Systems

Part 1: General

1.1 Summary

MegaPressG is a cold press mechanical joint fitting system made for use with ASTM A53 carbon steel pipe in natural gas applications.

1.2 Definitions

ASME: American Society of Mechanical Engineers

ASTM: American Society for Testing and Materials

CSA: Canadian Standards Association

HNBR: Hydrogenated Nitrile Butadiene Rubber

FM: Factory Mutual

IACS: International Association of Classification Societies

IAPMO: International Association of Plumbing & Mechanical Officials

ICC: International Code Council

MSS: Manufacturers Standardization Society

NACE International: National Association of Corrosion Engineers

NFPA: National Fire Protection Association

UL: Underwriters Laboratory

1.3 References

ANSI LC-4/CSA 6.32 Press-connect Metallic Fittings for use in Fuel Gas Distribution Systems

ASME A13.1 Scheme for the Identification of Piping Systems

ASME B1.20.1 Pipe Threads, General Purpose (inch)

ASME B16.3 Malleable Iron Threaded Fittings

ASME B16.9 Factory Made Wrought Steel Butt-welding Fittings

ASME B31.1 Power Piping

ASME B31.3 Process Piping

ASME B31.9 Building Piping Systems

ASME B36.10 Welded and Seamless Wrought Steel Pipe

ASTM A135 Specification for Electric-Resistance-Welded Steel Pipe

ASTM A420 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low Temperature Service

ASTM A53 Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless Pipe

ASTM D2000 Classification System for Rubber Products in Automotive Applications

ASTM F1476 Performance of Gasketed Mechanical Couplings for Use in Piping Applications

ASTM F3226 Standard Specification for Metallic Press-Connect Fittings for Piping and Tubing Systems

IAPMO Uniform Mechanical Code

IAPMO Uniform Plumbing Code

ICC International Plumbing Code

NACE RP 0169 control of External Corrosion on Underground or Submerged Metallic Piping Systems

NFPA 54 National Fuel Gas Code

MSS-SP58 Pipe Hangers and Supports Materials, Design and Manufacturer

1.4 Quality Assurance

A. Installer shall be qualified, licensed within the jurisdiction, and familiar with the installation of cold press mechanical joint systems.

B. MegaPressG press fittings shall be installed using the proper tool, actuator, jaws and rings as instructed by the press fitting manufacturer.

- C. The installation of carbon steel pipe in natural gas systems shall conform to the requirements of the IAPMO Uniform Plumbing Code or National Fuel Gas Code.
- D. Compliance to ASME B31.9 for building services piping valves.

1.5 Delivery, Storage and Handling

- A. Carbon steel pipe shall be shipped to the jobsite in such a manner to protect the pipe. The pipe and fittings shall not be roughly handled during shipment. Pipe and fittings shall be unloaded with reasonable care.
- B. Protect the stored product from moisture and dirt. Elevate above grade. When stored inside, do not exceed the structural capacity of the floor.
- C. Protect fittings and piping specialties from moisture and dirt.

1.6 Project Conditions

Verify length of pipe required by field measurements.

1.7 Warranty

- A. Viega LLC (Viega) warrants to end users, installers and distribution houses that its Viega metal press products (MegaPressG) when properly installed shall be free from failure caused by manufacturing defects. Refer to Viega warranties for specific information.
- B. Viega LLC (Viega) manufacturer of the fittings shall not be responsible for the improper use, handling or installation of the product.

Part 2: Products

2.1 Manufacturer

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

2.2 Pipe and Fittings

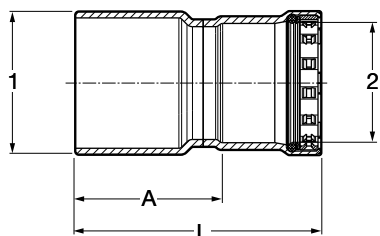
- A. Pipe: Carbon steel pipe shall conform to ASTM A53. Pipe schedule (pipe wall thickness) shall conform to the standard referenced dimensions for Schedule 10 or Schedule 40. Adopted code versions, standards compliance, and local approvals should be considered.
- B. Fittings: Cold Press Mechanical Joint Fitting shall conform to material requirements of ASTM A420 or ASME B16.3 and performance criteria ANSI LC-4/CSA 6.32. Sealing elements for press fittings shall be HNBR. Sealing elements shall be factory installed or an alternative supplied by fitting manufacturer. Press ends shall have SC (Smart Connect™) technology design (leakage path). MegaPress fittings with Smart Connect technology assure leakage of liquids and/or gases from inside the system past the sealing element of an un-pressed connection. The function of this feature is to provide the installer quick and easy identification of connections which have not been pressed prior to putting the system into operation.
- C. Note: Verify pipe and fittings with applicable codes.
- D. Piping and fittings shall comply with ANSI LC-4/CSA 6.32 and the latest edition of NFPA-54.
- E. Fittings shall comply to the requirements of ASTM F3226.

2.3 Valves

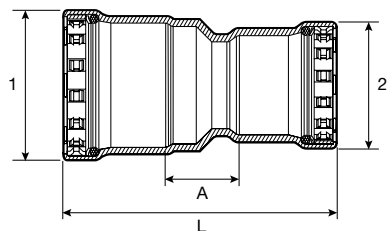
- A. Valves shall conform to the performance criteria ANSI LC-4/CSA 6.32.
- B. Metallic Valves, shall comply with ASME B16.33.

2.4 Gas Safety Shut-Off Valves

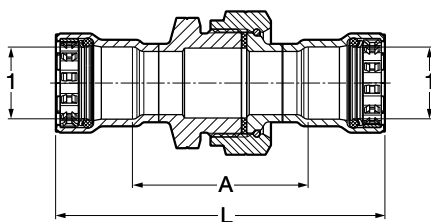
Gas safety shut-off valves shall be FM & UL listed, with a visual indicator to note the position of the valve whether "OPEN" or "SHUT"

Viega MegaPress Reducer FTG x P - Models 4815.1XL / 6615.1XL


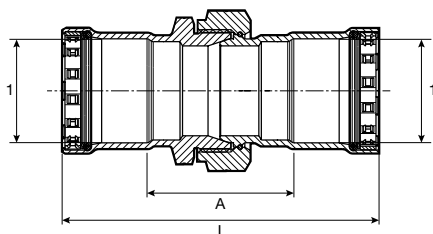
Part No.		Size (in)		A (in)	L (in)
FKM	HNBR	1	2		
26700	28800	2½	x 1	3.49	4.83
26705	28805	2½	x 1¼	3.37	5.19
26710	28810	2½	x 1½	3.30	5.17
26715	28815	2½	x 2	2.97	4.96
26720	28820	3	x 1¼	4.16	5.98
26725	28825	3	x 1½	4.08	5.95
26730	28830	3	x 2	3.76	5.75
26735	28835	3	x 2½	3.75	5.55
26740	28840	4	x 1½	5.60	7.47
26745	28845	4	x 2	5.28	7.27
26750	28850	4	x 2½	5.27	7.06
26755	28855	4	x 3	5.03	7.33

MegaPress Reducer, Carbon Steel, P x P - Models 4815.2 / 6615.2


Part No.		Size (in)		A (in)	L (in)
EPDM	HNBR	1	2		
25930	25931	¾	x ½	1.20	3.43
25935	25936	1	x ½	1.37	3.79
25940	25941	1	x ¾	1.24	3.74
25945	25946	1¼	x ¾	1.40	4.37
25950	25951	1¼	x 1	1.23	4.39
25955	25956	1½	x 1¼	1.21	4.90
25960	25961	2	x 1¼	1.45	5.27
25965	25966	2	x 1½	1.43	5.26

MegaPress Union, Carbon Steel, P x P - Model 4860 / 5960


Part No.		Size (in)		A (in)	L (in)
EPDM	FKM	1			
25700	84815	½		2.35	4.50
25705	84820	¾		2.67	4.99
25710	84825	1		2.65	5.34
25715	84830	1¼		2.84	6.48
25720	84835	1½		2.89	6.63
25725	84840	2		3.92	7.89

MegaPress Union, Carbon Steel, P x P - Model 6660


Part No.	Size (in)		A (in)	L (in)
HNBR	1			
25701	½		2.33	4.47
25706	¾		2.67	4.98
25711	1		2.60	5.29
25716	1¼		2.85	6.49
25721	1½		2.90	6.64
25726	2		3.41	7.35