

Engineering Specifications

ZERO LEAD* BRONZE CHECK VALVE

Model 2974ZL

PART 1: GENERAL

1.1 SUMMARY

- A. General duty press end type inline check valve

1.2 DEFINITIONS

- A. The following are standard abbreviations for valves:
 - 1. EPDM: Ethylene-propylene-dieneterpolymer rubber
 - 2. POM: Polyoxymethylene
 - 3. Buna-N: Nitrile rubber

1.3 REFERENCES

- A. ASME B16.18 Cast Copper Alloy solder Joint Pressure Fittings
- B. ASME B16.22 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
- C. ASME B31.9 Building Services Piping
- D. ASTM B75 Standard Specification for Seamless Copper Tube
- E. ASTM B88 Standard Specification for Seamless Copper Water Tube
- F. IAPMO Uniform Mechanical Code
- G. IAPMO Uniform Plumbing Code
- H. ICC International Mechanical Code
- I. ICC International Plumbing Code
- J. NSF 61 Annex G Drinking Water System Components-Health Effects

1.4 QUALITY ASSURANCE

- A. The installer shall be a qualified installer, licensed within the jurisdiction and familiar with the installation of copper tubing.
- B. The installation of check valves for hot and cold water distribution systems shall conform to the requirements of the ICC International Plumbing Code or IAPMO Uniform Plumbing Code. The installation of copper tubing in hydronic systems shall conform to the requirements of the ICC International Mechanical Code or the IAPMO Uniform Mechanical Code

*"Zero Lead" identifies Viega products meeting the lead free requirements of California and Vermont law, effective January 1, 2010, as tested and listed against NSF- 61, Annex G

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OR

- C. ASME Compliance: ASME B31.9 for building services piping valves
- D. Press end check valves shall have the Smart Connect feature (SC feature). In ProPress ½" to 4" dimensions the Smart Connect feature assures leakage of liquids and/or gases from inside the system past the sealing element of an unpressed connection. The function of this feature is to provide the installer quick and easy identification of connections which have not been pressed prior to putting the system into operation

1.5 DELIVERY, STORAGE AND HANDLING

- A. Prepare valves for shipping as follows:
 - 1. Protect internal parts against rust and corrosion
 - 2. Protect press ends
- B. Use the following precautions during storage:
 - 1. Maintain valve end protection
 - 2. Store valves indoors and maintain at higher than ambient dew-point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures

1.6 WARRANTY

- A. The manufacturer shall warrant the valve to be free from defects in material or workmanship. The manufacturer shall warrant the functionality of valve for approved applications, installed according to manufacturer's installation instructions.
- B. The manufacturer of the tubing and fittings shall not be responsible for the improper use, handling or installation of the product

PART 2: PRODUCTS

2.1 MANUFACTURES

- A. Check Valves: Viega, 301 N. Main, 9th Floor, Wichita, KS
Telephone: (316) 425-7400, Website: www.viega.com.

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2.2 MATERIAL

- A. Check Valves (Plumbing): Check valves 2 inch or less in diameter for plumbing systems shall conform to MSS SP80
- B. Bronze check valves shall be made with dezincification-resistant, zero lead materials.
Bronze check valves made with copper alloy (brass) shall meet the requirements of NSF 61 Annex G, Vermont ACT 193 and California AB 1953.
- C. Bronze check valves: P.O.M. check insert, bubble tight, .5 psi cracking pressure
- D. Press Fitting: Copper press fitting shall conform to the material and sizing requirements of ASME B16.18 or ASME B16.22. Sealing elements for copper press fittings shall be EPDM

2.3 CHECK VALVES, GENERAL

- A. Check valves shall be bubble tight with a cracking pressure of .5 psi. Valve shall be the size identified on the plans

2.4 SOURCE QUALITY CONTROL

- A. All check valves in contact with drinking water shall be listed by a third party agency to NSF 61 Annex G

PART 3: EXECUTION

3.1 EXAMINATION

- A. Examine piping system for compliance with requirements for installation tolerances, imperfections in pipe and other conditions affecting performance.
Proceed with installation only after unsatisfactory conditions have been corrected
- B. The contractor shall examine valve interior for cleanliness, freedom from foreign matter and corrosion. Remove special packing materials, such as blocks, used to prevent disk movement during shipping and handling
- C. Examine seats and guides to ensure freedom of movement

3.2 PREPARATION

- A. Press connection fitting should be inspected to assure sealing element is in place
- B. Pipes shall be properly reamed and de-burred prior to insertion into press connection type valve to prevent possible damage to sealing element

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3.3 VALVE INSTALLATION

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance and equipment removal without system shutdown
- B. Locate valves for easy access
- C. Check valves that are remotely located shall have a metal tag indicating the section of pipe that it isolates
- D. Press Connections shall be made according to manufacturer's installation instructions
- E. Press Connections shall be made using tooling and equipment as specified by manufacturer

3.4 CHECK VALVE APPLICATIONS

- A. Domestic Water Systems: 2" and smaller
- B. Chilled Water Systems: 2" and smaller
- C. Condenser Water Systems: 2" and smaller
- D. Heating Water Systems: 2" and smaller