

## Engineering Specifications

# Viega SeaPress® Seawater Piping System



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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.**

## Part 1: General

### 1.1 Product Definition

Viega SeaPress is a complete cold press mechanical joint piping system. The SeaPress system includes fittings from 15 mm to 108 mm made of non-corrosive copper nickel wrought alloy. For use in Class III pipe components for transporting sea water in cooling and fire main systems and also fuel applications in shipbuilding and offshore drilling platforms.

### 1.2 Definitions

- A. ASTM: American Society for Testing and Materials
- B. CuNiFe: Copper Nickel Iron
- C. EPDM: Ethylene Propylene Diene Monomer
- D. FKM: Fluoroelastomer
- E. HNBR: Hydrogenated Nitrile Butadiene Rubber

## Part 2: Products

### 2.1 Manufacture

Viega LLC  
 585 Interlocken Blvd.  
 Broomfield CO, 80021  
 Telephone (316) 425-7400  
 Website: [www.viega.us](http://www.viega.us)

## 2.2 Material

- A. Viega SeaPress fittings are made of non corrosive copper nickel CuNiFe 90/10 wrought alloy according to international standards:
- ASTM-B-466 C70600
  - MIL-T-16420K C70600
  - BS 2871 CN 102
  - EEMUA 144 UNS 7060x
  - JIS H3300 C7060T
  - DIN 17664 / 17671 2.0872
  - DIN 86019 2.1972
- B. The Viega SeaPress fittings include a factory installed high performance EPDM (Model-Nr. 2289) sealing element. For special application like Fuel/Lube/Hydraulic Oil Systems, a HNBR (Model-Nr. 2687) or FKM (Model-Nr. 2286) sealing element shall be used. Determination shall be based on the evaluation of the system operating parameters.
- C. Refer to applicable marine approval for design, application, and system limitations.
- D. Viega SeaPress fittings shall be connected with CuNiFe 90/10 pipe regarding the international standards.
- E. Pipe wall thickness shall be:

OD in mm	Wall Thickness
15 mm	1.0 mm
22 mm	1.0 mm
28 mm	1.5 mm
35 mm	1.5 mm
45 mm	1.5 mm
54 mm	1.5 mm
76.1 mm	2.0 mm
88.9 mm	2.0 mm
108.0 mm	2.5 mm

## 2.3 Fitting Markings

Fittings shall be marked with manufacturers name “Viega,” name of the system “SeaPress”, size of the fitting, and a quality trace number.

## 2.4 Fitting Design

The Viega SeaPress fittings from 15 to 54 mm is a double press fitting. Pressed connection is pressed in front of, on top, and behind the seal making a gas-tight and water-tight seal. The Viega SeaPress fittings from 76.1 mm, 88.9 mm, and 108 mm have a sealing element plus an additional stainless steel grip ring. The stainless steel grip ring is pressed on top, forcing the grip ring teeth against the tube, making a high strength connection.

# Part 3: Execution

## 3.1 Installation

Fittings joints shall be made in accordance with the manufacturer’s installation instructions. The pipe shall be fully inserted into the fitting and the pipe marked at the shoulder of the fitting. Refer to product instructions for insertion depth and pipe deburring instructions. The fitting alignment shall be checked against the mark on the pipe to ensure the pipe is fully engaged (inserted) into the fitting.

The joints shall be pressed using a press tool recommended by Viega.

### 3.2 Standards

Viega SeaPress System conforms to the following:

- International Association of Classification Societies
  - Requirements concerning pipes and pressure vessels
- United Coast Guard, U.S. Department of Homeland Security
- The Federal Office of Defense Technology and Procurement (BWB) WTD 71, Germany

### 3.3 Shipbuilding Type Approvals

- ABS American Bureau of Shipping
- LR Lloyd's Register
- BV Bureau Veritas
- DNV-GL Det Norske Veritag Germanischer Lloyd
- NK Nippon Kaiji Kyokai
- RINA Registro Italiano Navale
- RS Russen Maritime Register of Shipping

### 3.4 Oil and Gas Platform New Construction and Repair

Viega SeaPress is a 16 bar system regarding burst pressure for offshore drilling platforms where the piping systems are either empty or full of stagnate water like wet or dry firefighting systems. SeaPress is not applicable for 16 bar and 20 bar systems with constant seawater velocity.