



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAP0000122**  
Revision No:  
**4**

## This is to certify:

### That the Press fittings

with type designation(s)  
**MEGAPRESS**

Issued to

**Viega GmbH & Co. KG**  
**Attendorn, Germany**

is found to comply with

**DNV rules for classification – Ships Pt.4 Ch.6 Piping systems**  
**DNV class programme DNV-CP-0185 – Type approval – Mechanical joints**

## Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

**Temperature range:** depending on sealing quality, see page 2  
**Max. working press.:** 1,6 Mpa (232 psi)  
**Sizes:** 3/8" up to 4"

Issued at **Hamburg** on **2023-06-29**

for **DNV**

This Certificate is valid until **2028-05-14**.

DNV local unit: **Essen**

Approval Engineer: **Hagen Markus**

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**Sven Klinger**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

Press fitting for joining of carbon steel pipes.

The Megapress fittings consist of a press end with multiple components including a sleeve (basic component), grip ring, separator ring, sealing element.

The grip ring with teeth grip / bite the outer surface of the pipe and locks the fitting to the pipe. The constant compression produces a positive, nondetachable mechanical joint.

The fittings are to be assembled by a pressing tool.

## Standard sizes

Pipe Outer Diameter [mm]	Pipe Outer Diameter [inch]	Min. Wall thickness of pipe [mm]
17,2	3/8"	1,8
21,3	1/2"	2,0
26,9	3/4"	2,0
33,7	1"	2,0
38,0	---	2,3
42,4	1 1/4"	2,0
44,5	---	2,3
48,3	1 1/2"	2,3
57,0	---	2,3
60,3	2"	2,3

## XL sizes

73,0/76,1	2 1/2"	2,6
88,9	3"	2,9
114,3	4"	3,2

## Technical data

Nominal pressure: PN: 16 (1,6 MPa / 232 psi)

## Materials

Pipes: Steel pipes as per	ASTM A53/A53M-18 Schedule 10 to 40 DIN EN 10255, DIN EN 10216-1 or DIN EN 10217-1
Sleeve (basic component):	Carbon steel 1.0308/ St 35 with exterior zinc nickel coating and with O-ring-sealing-element
Grip-ring:	Stainless Steel AISI 420 / 1.4021
Separator ring:	Stainless Steel AISI 304 / 1.4301 for 3/8" up to 2" PBT for 2 1/2" up to 4"
Sealing:	EPDM, HNBR, FKM

## Pressing tools

Reference: Document "VIEGA Instructions for use Megapress", Section 3.3.4 Required tools.  
 Valid edition at installation to be used.

## Production sites and size range

Viega Supply Chain GmbH & Co KG; Viegastrasse 1; Großheringen, Germany	O.D.17,2mm / 3/8" up to O.D 114,3 up to 4"
Viega LLC, 2211 Viega Ave Mc Pershon, Kansas, USA	O.D.17,2mm / 3/8" up to O.D 48,3mm / 1 1/2"

### Temperature range

The applicable temperature range depends on the selected material combination of piping and sealing material.

Piping material	Temperature range <sup>1</sup>	
	Minimum	Maximum
Carbon steel	- 10°C	Acc. to max. temperature of sealing material
Stainless steel	Acc. to min. temperature of sealing material	

Sealing materials	EPDM	HNBR	FKM
Size range	3/8" up to 2"	1/2" up to 4"	3/8" up to 4"
Temperature range	-10°C / +110°C	-40°C / +82°C	-5°C / +140°C
	14°F / 230°F	-40°F / 180°F	23°F / 284°F

**Notes**

<sup>1</sup> Pressure reduction factors for elevated service temperatures to be observed. Refer to DNVGL CP-0185.

**Example**

Stainless steel piping with FKM seal: -5°C up to +140°C  
 Carbon steel piping with HNBR seal : -10°C up to + 82°C

Pressure and temperature limits depending on applicable fluid acc. to pipe class III are to be observed

### Application/ Limitation

The Megapress fittings, classified as "Compression couplings, Press type", are type approved for application in pressurized piping systems of pipe class III.  
 Range of application according to Table 9 Application of mechanical joints and Fire endurance test condition "wet" or "fire endurance test not required".

Piping systems	Notes
<b>Inert gas</b>	
4   Water seal effluent lines	none
5   Scrubber effluent lines	none
<b>Flammable fluids (flash point &gt; 60 °C)</b>	
9   Fuel oil lines	2), 3)
10   Lubricating oil lines	2), 3)
11   Hydraulic oil	2), 3)
12   Thermal oil	2), 3)
<b>Sea water</b>	
14   Water filled fire extinguishing systems (e.g. sprinkler)	3)
17   Ballast systems	4)
18   Cooling water systems	4)
19   Tank cleaning services	none
20   Non-essential systems	none
<b>Fresh water</b>	
21   Cooling water systems	4)
22   Condensate return systems	4)
23   Non-essential piping systems / Domestic heating & cooling, Vacuum lines	none
<b>Sanitary/drains/scuppers</b>	
24   Deck drains (internal)	5)
<b>Sounding/vent</b>	
27   Water tanks/dry spaces	5)
28   Oil tanks (flash point > 60 °C)	2), 3)
<b>Miscellaneous</b>	
30   Service air / Compressed air piping systems (non-essential)	none

**Notes - Fire resistance capability**

- 2) Not inside machinery spaces of category A or accommodation spaces.  
May be accepted in other machinery spaces provided the joints are located in easily visible & accessible positions.
- 3) Approved fire resistant types except in cases where such mechanical joints are installed on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10) and not used for fuel oil lines.
- 4) Fire endurance test shall be applied when mechanical joints are installed in machinery spaces of category A.

**Notes - General**

- 5) Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.

## Type Approval documentation

### TAP0000122 rev 3:

Type Approval Assessment Report Viega Attendorf dated 2023-04-23

Type Approval Assessment Report & Burst pressure tests Attachment Viega McPershon; USA dated 2023-05-12

### TAP0000122 rev 2:

MPA Test Report 120003993, dated: 2012-07-30

MPA Test Report 122000076, dated: 2019-08-29

IHA Fire Resistance Test 006-12, 007-12, dated: 2012-07-04

Fire Resistance Test 0086-12, dated: 2012-07-05

Operating and Installation Guidelines, Technical Documentation

MPA NRW Report-No.: 130002758, dated: 2012-11-23

IACS-Test-Report, System Megapress 3/8", dated: 2015-10-06

MPA NRW Report-No.: 120004876, dated: 2016-10-25

Megapress Gebrauchsanleitung G; GA9; S XL

MPA Test Report 120005114, dated: 2017-12-04

MPA Test Report 122000070, dated: 2019-08-08

MPA Test Report 122000040, dated: 2019-04-09

Fire Resistance Tests No: 126-19; 129-19; 130-19/131-19; 133-19 dated 06-08-2019

Fire Resistance Tests No: 051-17 & 052-17 dated 27-09-2017.

Prüfplan Megapress Gas XL /HNBR 2 ½" – 4"

Prüfplan Megapress FKM ½" – 2"

## Tests carried out

Tightness test, Burst pressure test, Pull-out test, Fire resistance test (**wet** condition), Vibration (endurance) test, Pressure Impulse-test, Vacuum-test.

## Marking of product

Scope	Example
Manufacturer's Mark	viega
Dimension	¾" x ¾"
Charge number	W/SPA
Sealing type	EPDM
International sign	Indicates "not for potable water"

## Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the DNV Class Programme CP-0338, Sec.4.

To check the validity of this certificate, please look it u in <https://approvalfinder.dnv.com>