TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP00001N1
Revision No:
1

This is to certify:

that the Tube Fittings

with type designation(s)
MegaPress Press-in Branch Connector for Schedule 10 & Schedule 40

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-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
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:	**+14°F up to +230°F for EPDM**
	+23°F up to +284°F for FKM
Max. working press.:	**1,4 MPa (203 psi)**
Sizes:	**¾" for pipes diameter 1 ½" up to 6"**

Issued at **Hamburg** on **2024-05-13**
This Certificate is valid until **2029-05-12**.
DNV local unit: **Essen**

for **DNV**

Approval Engineer: **Christian Kaemmer**

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.

Product description

MegaPress Press-in branch connector:
Press-in branch connector consisting of a housing with a sealing element made of EPDM or FKM.
It has an ¾" internal NPT-thread acc. to ASME B1.20.1 and is assembled perpendicular to the pipe axis.
Assembling by means of a tool set, drilling device and drilling shaft.
Pressing tool: Pressgun 5, Pressgun 6, Ridgid RP350 and other respective pressing machines & Viega tool set.

Type approved for pipes as per ASTM A53 with wall thickness schedule 10 & schedule 40.

Type-approved minimum-pipe-wall-thickness & pipe outer diameter:

Pipe outer diameter [inch]	1 ½"	2"	2 ½"	3"	4"	6"
Press-in branch connector Diameter [inch]	¾"	¾"	¾"	¾"	¾"	¾"
Pipe Wall Thickness [inch], minimum as per ASTM A53 Schedule **10**	0.109	0.109	0.120	0.120	0.120	0.134
Pipe Wall Thickness [inch], minimum as per ASTM A53 Schedule **40**	0.145	0.154	0.203	0.216	0.237	0.280

Temperature range:

Sealing material	**EPDM**	**FKM**
Temperature range	14°F / 230°F	23°F / 284°F
Limited Temperature for compressed air	14°F / 140°F	23°F / 140°F

Production place
Viega Supply Chain GmbH & Co. KG, Viega Str. 1, 99518 Großheringen, Germany

Responsibility
The company Viega GmbH & Co. KG Attendorn takes the responsibility for the design and the production procedures with relation to ensuring continued consistent production of the type approved products.
Reference DNV CP-0338 Type approval scheme, Section 4.

Application / Limitation
The Viega Mega Press-in Branch Connector is type approved for installation in piping systems of pipe class III. Fire resistance type.

Approved fire endurance test condition is: "30 min wet" or "Fire endurance test not required".
Appropriate Notes 1) to 5) – Fire resistance capability are to be observed.

Reference DNV-Rules "Ships" Pt.4 Ch.6 Section 9 – 5.2 "Pipe couplings other than flanges"
Compression coupling – Press type; Table 8, 9 and 10.

Approved applications:

Piping systems		Classification of pipe system	Fire endurance test condition	Notes
Flammable fluids (flash point ≤ 60°C)				
1	Cargo oil lines	dry	30 min /dry	1)
2	Crude oil washing lines	dry		1)
3	Vent lines	dry	30 min /dry	3)
Inert gas				
4	Water seal effluent lines	wet	30 min wet	none
5	Scrubber effluent lines	wet		none
6	Main lines	dry	30 min dry	1)
7	Distribution lines	dry		1)
Flammable fluids (flash point > 60 °C)				
8	Cargo oil lines	dry	30 min dry	1)
9	Fuel oil lines	wet	30 min wet	3)
10	Lubricating oil lines	wet		3)
11	Hydraulic oil	wet		3)
12	Thermal oil	wet		3)
Seawater				
13	Bilge lines	dry/wet	8 min dry+22 min wet	4)
14	Water filled fire extinguishing systems (e.g., fire main, sprinkler)	wet	30 min wet	3)
15	Non water filled fire extinguishing systems, e.g., foam, drencher systems	dry/wet	8 min dry+22 min wet	3)
16	Fire main (not permanently filled)	dry/wet	8 min dry+22 min wet	3)
17	Ballast systems	wet	30 min wet	4)
18	Cooling water systems	wet	30 min wet	4)
19	Tank cleaning services	dry	Fire endurance test not required	none
20	Non-essential systems	wet, dry/wet, dry		none
Fresh water				
21	Cooling water systems (ensuring main function)	wet	30 min wet	4)
22	Condensate return systems	wet	30 min wet	4)
23	Non-essential piping systems, e.g. cooling water for air condition, sanitary, technical water systems.	wet, dry/wet, dry	Fire endurance test not required	none
Sanitary/drains/scuppers				
24	Deck drains (internal)	dry	Fire endurance test not required	5)
25	Sanitary drains	dry		none
26	Scuppers and discharge (overboard)	dry		none
Sounding/vent				
27	Water tanks/dry spaces	dry/wet	Fire endurance test not required	none
28	Oil tanks (flash point > 60 °C)	dry		3)
Miscellaneous				
30	Service air piping systems (non-essential), e.g., breathable sounding system	dry	Fire endurance test not required	none
31	Brine	wet	Fire endurance test not required	none
34	Steam	wet		none

Footnotes - Fire resistance capability

1) Fire endurance test shall be applied when mechanical joints are installed in pump rooms and open decks.

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.

Footnotes - General:

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

Pipes with lower pipe wall thickness than minimum pipe wall thickness[1] may be used for the following applications:

- Sanitary piping systems such as potable water supply (hot and cold), grey and black water
- Heating systems, non-essential
- Drainage piping systems (not related to main function, i.e. ensuring stability)
- Technical water systems, service air (not related to main function, i.e. ensuring propulsion)
- Cooling water for air conditioning of accommodation spaces
- Fire extinguishing systems listed in table on page 3
- Non-essential systems
- Vacuum lines

Note 1) Minimum pipe wall thicknesses specified in DNV-Rules “Ships” Pt. 4 Ch.6 Sec. 9, Table 2 “pipes of carbon steel”

Selection of materials

It shall be noted that the selection of the materials considers the intended service condition and installation area of the piping system. In particular, the resistance to corrosion, erosion, oxidation and other deterioration during intended service life. Reference is made to DNV Rules “Ships” Pt.4, Ch.6 – Section 2 – Materials.

Megapress Press-in Branch Connectors with NPT-Thread (= pressure-tight joints are made on the threads) are limited in the application as follows:
Tapered thread is not approved for toxic or flammable media or services where fatigue, severe erosion or crevice corrosion is expected to occur. Refer to DNV Rules “Ships” Pt.4 Ch.6 – Section 9 – 5.2.6.

Not approved for potable water.
Schedule 40 only to be used with pipes made of carbon steel.
Max. working pressure 145 psi for compressed air @ diameter 6”.

Type Approval documentation

Tests carried out

Marking of product

For traceability to this type approval the product is to be marked with

	Scope	Example
MegaPress Press-in Branch Connector	Manufacturer	Viega
	Outer diameter O.D. (mm)	1/2
	Batchnumber	xXXXXX
	Sealing Element	EPDM or FKM

	Material	Colour
Sealing	EPDM	Shiny black
	FKM	Matt black

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with.
Refer to the Class Programme DNV-CP-0338, Sec.4.