TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP00001M5
Revision No:
2

This is to certify:

that the Pipe System with Couplings

with type designation(s)
Seapress, - XL, Profipress, -XL, Sanpress, - XL, Sanpress Inox, -XL

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.

Type:	Temperature range:	Max. pressure:	Design:
Seapress, - XL	**see page 3**	**1,6 MPa (16 bar): OD 15-108 mm** **1,5 MPa (15 bar): 54 mm**	**Compression Coupling - Press type**
Profipress, -XL,		**1,6 MPa (16 bar)**	
Sanpress, - XL,		**1,6 MPa (16 bar)**	
Sanpress Inox, -XL		**1,6 MPa (16 bar)**	

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

Pipe system consisting of Viega-fittings and metallic pipes assembled by dedicated pressing tools.
The fitting with SC-Contur provides a visual indication of a non-pressed fitting.

The constant compression produces a positive, nondetachable mechanical joint.

The fittings are to be assembled by a pressing tool

- Pressgun 6 and Ridgid RP350
- or according to Viega documentation

Materials and fitting sizes

System	Material designation pipe and fitting		Pipe & Fitting size [mm]	Soft seal
Seapress **Seapress XL**	Pipe	CuNi10Fe1,6Mn / WL 2.1972.11	15 mm up to 108 mm	EPDM FKM HNBR
	Fitting	CuNi10Fe1,6Mn / WL 2.1972.11 acc. to DIN 86019		
Sanpress **Sanpress XL**	Pipe	1.4401 / 1.4521 acc. to DIN EN 10088	12 mm up to 108 mm	EPDM FKM HNBR
	Fitting	Gun metal CuSn5Zn5Pb2-C (C499K) Silicon bronze CuSi4Zn9MnP-B (CB246E) CuSi4Zn9MnP-C (CC246E) acc. to DIN EN 1982		
Sanpress Inox **Sanpress Inox XL**	Pipe	1.4401 / 1.4521 acc. to DIN EN 10088	12 mm up to 108 mm	EPDM FKM HNBR
	Fitting	Stainless Steel AISI 316 / 1.4401 / 1.4521 acc. to DIN EN 10217-7		
Profipress **Profipress XL**	Pipe	Copper acc. to DIN EN 1057	12 mm up to 108 mm	EPDM FKM HNBR
	Fitting	Copper Cu-DHP acc. to DIN 12449. CuSi4Zn9MnP-C (CC246E) acc. to DIN EN 1982		

("**XL**" indicates large sizes 64 mm up to 108 mm)

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

Pipe outer diameter [mm]	12	15	18	22	28	35	42	54	64	76,1	88,9	108
	Pipe Wall Thickness [mm], minimum											
Profipress Profipress XL	--	1.5	1.5	1.5	1,5	1,5	1,5	2,0	2,0	2,0	--	2,5
Sanpress Sanpress XL	1,0	1,0	1,0	--	--	1,5	1,5	--	2,0	2,0	2,0	2,0
Sanpress Inox Sanpress Inox XL	1,0	1,0	1,0	--	--	1,5	1,5	--	2,0	2,0	2,0	2,0
Seapress Seapress XL	--	1,0	--	1.5	1,5	1,5	1,5	1,5	--	2,0	2,0	2,5

Temperature range

Sealing material	EPDM	FKM	HNBR
Temperature range	**-10°C / +110°C**	**-5°C / +140°C**	**-40°C / +82°C**
System	Profipress Sanpress Sanpress Inox Seapress	Profipress Sanpress Sanpress Inox Seapress	Profipress Sanpress Sanpress Inox Seapress

Production place

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

Responsibility

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 Seapress (XL), Profipress (XL), Sanpress (XL), Sanpress Inox (XL) press fitting systems are 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) 10)
14	Water filled fire extinguishing systems (e.g., fire main, sprinkler)	wet	30 min wet	3) 10)
15	Non water filled fire extinguishing systems, e.g., foam, drencher systems	dry/wet	8 min dry+22 min wet	3) 10)
16	Fire main (not permanently filled)	dry/wet	8 min dry+22 min wet	3) 10)
17	Ballast systems	wet	30 min wet	4) 10)
18	Cooling water systems	wet	30 min wet	4) 10)
19	Tank cleaning services	dry	Fire endurance test not required	10)
20	Non-essential systems	wet, dry/wet, dry		10)
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	11)
34	Steam	wet		none
--	Urea solution-based treatment fluid systems as part of exhaust gas cleaning systems for the reduction of NOx	wet	30 min wet	Pt.6, Ch.7, Section 7 Footnote 12)

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.

Footnotes – Product-related:

10) Sea water applications only with Seapress & Seapress XL
11) Brine only with Seapress & Seapress XL
12) Sanpress Inox and Sanpress Inox XL are additionally type approved for **UREA**-(Harnstoff)-applications up to +40°C and 1,0 MPa (10 bar) and a maximum permissible concentration of 40%.

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 4
- Non-essential systems, service air.

Note 1) Minimum pipe wall thicknesses specified in DNV-Rules “Ships” Pt. 4 Ch.6 Sec. 9, Table 1 “pipes of copper and copper alloys” & Table 3 “pipes of stainless 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.

Bulkhead and Deck Penetration

Pipe penetration through watertight bulkheads or decks as well as through fire divisions shall be type approved unless the penetration pipe is welded into the bulkhead/deck.
Refer to DNV Rules “Ships” Pt.4, Ch.6 Section 3 – 1.4 Fittings on watertight bulkheads.

Pipe fittings where pressure-tight joints are made on the threads are limited in the application as follows:
Tapered or parallel 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.

Type Approval documentation

Tests carried out

Marking of product

For traceability to this type approval the products are to be marked with

	Scope	Example
Fittings	Manufacturer	Viega
	Viega Logo	Viega Logo
	Outer diameter O.D. (mm)	15
	Batchnumber	xXXXXX

	Material	Colour
Sealing	EPDM	Shiny black
	FKM	Matt black
	HNBR	Yellow

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.