DNV·GL

Certificate No:
TAP00001M5
Revision No:
1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe System with Couplings

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

Issued to
Viega Technology GmbH & Co. KG
Attendorn, Nordrhein-Westfalen, Germany

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018
DNV GL class programme DNVGL-CP-0185 – Type approval – Mechanical joints

Application :

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

Type:	Temperature range:	Max. pressure:	Design:
Seapress, Seapress XL	**see Certificate page 4**	**1,5 MPa (15 bar): 54 mm;/1,6 MPa (16 bar): OD 15-108 mm**	**Press Type Compression Coupling**
Profipress, Profipress XL, Sanpress, Sanpress XL, Sanpress Inox, Sanpress Inox XL	**see Certificate page 4**	**1,6 MPa (16 bar)**	**Press Type Compression Coupling**

Issued at **Hamburg** on **2019-10-22**

This Certificate is valid until **2024-04-22**.
DNV GL local station: **Essen**

Approval Engineer: **Christian Kaemmer**

for **DNV GL**
Digitally Signed By: Drews, Olaf
Location: DNV GL SE Hamburg, Germany
Signing Date: 2019-10-23

Olaf Drews
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.

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Product description

Pipe system consisting of metallic pipes and fittings assembled by dedicated pressing tools.
The fitting with SC-contour provide a visual indication of a non-pressed fitting.
Pressing tool: in accordance to techn. Catalogue phb7_9_werkzeuge; Chapter 9 „Werkzeugsysteme"

Technical data:

Seapress:	Pipe O.D. 15 mm up to 54 mm
Seapress XL:	Pipe O.D. 76,1 mm up to 108 mm
Sanpress:	Pipe O.D. 12 mm up to 54 mm
Sanpress XL:	Pipe O.D. 64 mm up to 108 mm
Sanpress Inox:	Pipe O.D. 12 mm up to 54 mm
Sanpress Inox XL:	Pipe O.D. 64 mm up to 108 mm
Profipress:	Pipe O.D. 12 mm up to 54 mm
Profipress XL:	Pipe O.D. 64 mm up to 108 mm

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

System	Press-Fittings material	Pipe material
Seapress	CuNi10Fe1,6Mn / WL2.1972.11 acc. to DIN 86019	CuNi10Fe1,6Mn / 2.1972
Sanpress	Gun metal CuSn5Zn5Pb2-C (C499K) Silicon bronze CuSi4Zn9MnP-B (CB246E); CuSi4Zn9MnP-C (CC246E) acc. To DIN EN 1982	1.4401 / 1.4521 acc. to DIN EN 10088
Sanpress Inox	Stainless Steel AISI316 / 1.4401 / 1.4521 acc to DIN EN 10217-7	1.4401 / 1.4521 acc. to DIN EN 10088
Profipress	Copper Cu-DHP acc. to DIN 12449. CuSi4Zn9MnP-C (CC246E) acc. To DIN EN 1982	Copper acc. to DIN EN 1057

Overview pipe diameter and wall-thickness

Pipe Diameter [mm]	12	15	18	22	28	35	42	54	64	76,1	88,9	108
	Pipe Wall Thickness [mm]											
Profipress Profipress XL Copper pipe	1,0	1,0	1,0	1,0	1,5	1,5	1,5	2,0	2,0	2,0	2,0	2,5
Sanpress Sanpress XL Stainless steel pipe	1,0	1,0	1,0	1,2	1,2	1,5	1,5	1,5	2,0	2,0	2,0	2,0
Sanpress Inox Sanpress Inox XL Stainless steel pipe	1,0	1,0	1,0	1,2	1,2	1,5	1,5	1,5	2,0	2,0	2,0	2,0
Seapress Seapress XL CuNiFe pipe	n.a.	1,0	n.a.	1,0	1,5	1,5	1,5	1,5	n.a.	2,0	2,0	2,5

Notes: "n.a." = not available

For special application and in cases where the pipes may be subject to excessive external loads or are inaccessible during service, greater wall thicknesses may be required.

Application

The Seapress, Seapress XL, Sanpress, Sanpress XL, Sanpress Inox, Sanpress Inox XL, Profipress, Profipress XL press fitting systems are type-approved for pipe class III-piping systems.

Type of mechanical joint: Compression coupling – press type – fire resistant.
Refer to DNV GL Rules Pt.4, Ch.6, Sec. 9 – Table 8.

For application in piping systems as listed in DNVGL-Rules "Ships" Part 4 Chapter 6 Section 1 Table 2 the following pipe dimensions are approved:

Approved pipe sizes and minimum wall thicknesses

Pipe Diameter [mm]	12	15	18	22	28	35	42	54	64	76,1	88,9	108
	Pipe Wall Thickness [mm]											
Profipress Profipress XL	--	--	--	--	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	--
Sanpress Inox Sanpress Inox XL	1,0	1,0	1,0	--	--	1,5	1,5	--	2,0	2,0	2,0	--
Seapress Seapress XL	n.a	1,0	n.a	--	1,5	1,5	1,5	1,5	n.a	2,0	2,0	2,5

Notes: "--" pipes with undersized wall thickness; "n.a" = not available

Sanpress Inox and Sanpress Inox XL are type approved for **UREA**-(Harnstoff)-applications up to +40°C and 1,0 MPa (10 bar) and a maximum permissible concentration of 40%.

Pipe sizes with undersized pipe wall thickness may be used for the following applications:

- Domestic warm & cold water (potable water), sanitary drains
- Heating systems
- Service Air
- Non essential systems

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 DNVGL Rules Pt.4, Ch.6 – Section 2 – Materials.

Penetration of fire divisions and water tight bulkheads and decks

For penetration of pipes through fire divisions and watertight bulkhead and decks type approved penetrations are to be used.
Penetration of pipes with undersized wall thickness shall be approved in each separate case.

Limitations

- Restrictions for above mentioned applications for compression couplings "press type" acc. to DNVGL-Rules Part 4 Chapter 6 Section 9 Table 11 and Viega-manufacturers restrictions according to Viega application-list are to be observed.
- Sea water applications only with Seapress & Seapress XL.
- Steam and flammable fluids 7 bar maximum working pressure.
- Brine only with Seapress & Seapress XL

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

Type Approval documentation

Seapress / Seapress XL:
Test Certificate 805312; 805313;805314;805315 "Fire Resistance "by Phoenix Compound Technology dated 29-10-2008
MPA Test Report 120003724-5e dated 04-02-2011
MPA Test Report 120001518-11 dated 01-08-2002
MPA Test Report 120002536 dated 09-01-2006
MPA Test Report 120003163 dated 28-08-2008

Profipress / Profipress XL:
Test Certificate 805300; 805301; 805302; 805303; "Fire Resistance "by Phoenix Compound Technology dated 29-10-2008
MPA Test Report 120003724-4(e) dated 04-02-2011

Sanpress Inox / Sanpress Inox XL:
MPA Test Report 120003724-2e dated 04-02-2011
MPA Test Report 120003724-1e dated 04-02-2011
MPA Test Report 120002578-2 dated 17-02-2006
Burst Pressure Test dated 12-12-2018 witnessed by Surveyor
Test Certificate 804693; 804694;804695; 804696;804697; "Fire Resistance "by Phoenix Compound Technology dated 25-09-2008
Test Certificate 805308; 805309; 805310; 805311 "Fire Resistance "by Phoenix Compound Technology dated 29-10-2008
Test Report 029-14; 030-14; 034-14; 035-14; 001-12 "Fire Resistance" by IHA Dresden

Techn. Datasheet Pressing tool "Pressgun 5"
Corrosion Tables Urea, Dechema material-tables "Urea"
Type Approval Assessment Report dated 2018-12-12.
Techn. Data-Sheets Profipress, Sanpress, Sanpress Inox, Seapress
Techn. Catalogue phb7_9_werkzeuge; Chapter 9 „Werkzeugsysteme"
Test Report „Urea change" B1-4771; B5-5751; B3-3785 dated 2019-05-23.
Freigabesbrief "Harnstofflösung" dated 2019-08-06.

Tests carried out

Tightness, Burst, Pressure-Pulsation, Vibration, Pull-out Vacuum- and Fire Resistance Test.

Production place

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

Marking of product

Marking	Example
Manufacturer´s name	Viega
Nominal Diameter	15x1/2

Periodical assessment

For retention of the Type Approval, a DNV GL 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 DNVGL-CP-0338, Sec.4.