

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Tube Fittings

with type designation(s)
Mapress Copper

Issued to

Geberit International AG
Jona, SG, Switzerland

is found to comply with

Det Norske Veritas' Rules for Classification of Ships Pt.4, Ch.6 "Piping Systems"
DNV GL class programme DNVGL-CP-0185 – Type approval – Mechanical joints

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature range: Refer to certificate.

Max. working press.: Up to 16bar. Refer to certificate.

Sizes: Up to 108mm. Refer to certificate.

Issued at **Hamburg** on **2018-08-29**

This Certificate is valid until **2023-08-28**.

DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Hagen Markus**

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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.



Job Id: **262.1-000263-5**
Certificate No: **TAP00001FF**

Product description

Materials, Size range

Material designation	Fitting sizes	Soft seal	Pipe dimension standard
Cu-DHP EN CW024A UN SC1220	Tube fittings: 12, 15, 18, 22, 28, 35, 42, 54, 76.1, 88.9, 108	FKM, CIIR (Butyl) EPDM (Sizes 76.1, 88.9, 108)	DVGW GW392
Gunmetal EN CC499K	Adapter fittings ¹ : Tube to threaded connections		
Brass EN CW617N UNS C38000			

Note

¹ Geberit Product Catalogue. Sizes same as for tube fittings

Production places

Geberit Mapress GmbH, 40764 Langenfeld, Germany
Geberit Ozorkow Sp. Z o.o. , Poland.

Responsibility

The company Geberit International AG takes the responsibility that both the design and the production is in compliance with the Rules, Standards and/or Regulations listed on page 1 of this certificate.

Nominal pressures and Pressing equipment

			Pressing equipment ¹		
O.D. mm	DN	PN	Machine		Tool
15	12	16	Compatibility [2]	Compatibility [3]	Geberit Jaws
22	20				
28	25				
35	32				
42	40				
54	50	13	Compatibility [2XL]	Compatibility [3]	Geberit Collars
76.1	65				
88.9	80				
108	100	10			

Notes

¹ according to the Geberit "Technical Information Compatible Pressing Tools", valid at the date of installation.

Temperature range

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Sealing Material	Temperature range ¹
FKM	-25°C up to +180°C
EPDM	0°C up to +100°C
CIIR (Butyl)	-30°C up to +120°C

Notes

¹ Temperature limits acc. to pipe class III are to be observed

Application/Limitation

The tube fittings of type Mapress Copper are type approved for application in piping systems of pipe class III.

Type of mechanical joint: Compression coupling – press type -none fire resistant.

Refer to DNV GL Rules Pt.4, Ch.6, Section 9 – Table 10

Application overview

Non-essential systems

- Sanitary piping systems, e.g. potable water supply (hot and cold), grey and black water
- 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

Limitations

Press fitting systems are not approved for:

- installation in ballast tanks or fuel oil tanks
- air overflow and sounding pipes of structural tanks
- penetrating enclosed spaces below the freeboard deck (e.g. watertight - or fire bulkheads)

With respect to installation and application limitation for press-fittings refer to DNV GL Rules Pt.4, Ch. 6, Section 9, 5.2 Pipe couplings other than flanges.

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.

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Type Approval documentation

Tests carried out

Marking of product

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

Fittings	The pressing indicator indicates unpressed connections.	White pressing indicator (Cu)
	Approval mark	DVGW
	Geberit Mapress Logo	
	Outer diameter O.D.(mm)	28
	Production code	F
Sealing	Material	Colour
	FKM	blue
	CIIR	black
	EPDM	black

Periodical assessment

For retention of the type approval certificate periodical assessments shall be carried out at production places by DNV GL surveyor.
The objective of the periodical assessment is to verify that the design and production conditions for the type approval have not been altered.

Main scope of the assessment:

- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking

In addition to the above at renewal assessment burst pressure tests on selected sizes are to be carried out.

Periodical assessment is to be performed after 2 years and after 3.5 years. Prior to renewal of the certificate a renewal assessment will be performed.

End of certificate