

The manufacturer is granted the following type test approval mark in virtue of a test report:

Category test approval mark:	valve
Technical inspection and surveillance organisation and test report:	TÜV Rheinland dated 2021-12-16
Manufacturer/Circulator:	Geberit International AG Schachenstrasse 77 8645 Jona SWITZERLAND
Type test approval mark:	TÜV . A . 271 - 22
Design:	non-detachable pipe connection by mechanical pressing of Geberit Mapress pressfitting and Geberit Mapress system pipe
Type:	Mapress
The adjudication is made pursuant to:	<ul style="list-style-type: none">- Betriebssicherheitsverordnung (BetrSichV) – Ordinance on Industrial Safety and Health in the current version- VdTÜV-Merkblatt Armatur 100, edition 2021-01-19, in conjunction with VdTÜV-Merkblatt General 002, edition 2021-05-18- AD 2000 Code- Directive 2014/68/EU dated 15.05.2014 (Pressure Equipment Directive) Based on TRR 100 „Rohrleitungen aus metallischen Werkstoffen (Pipelines made of metallic materials)“, edition 1993-05: <ul style="list-style-type: none">- TRbF 131 Part 1, edition 1981-03 as well as successor TRbF 50, edition 2002-06- TRbF 231 Part 1, edition 1982-12 as well as successor TRbF 50, edition 2002-06
Valid until:	2027-04-30

The adjudication is revocable. The previous certificate is replaced herewith.

Note: The manufacturer or importer is obliged to the competent Authorized Inspector to conduct a random check on the accessories concerning identity to the type once a year. The accessories have to be taken from the current production.

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TÜV-Verband Type Test Leaflet valve
Type tested valve
Type test approval No. 271-22

BP ARMA 0271-englisch:2022-03-16
Replaces BP ARMA 0271-englisch:2012-04

According to test report of TÜV Rheinland dated 2021-12-16

Valid until 2027-04-30

English translation of German edition 2022-03-16

This translation was presented to the TÜV-Verband e. V. TÜV-Verband takes no responsibility for the correctness of the translation. Hints (information) for improvement should be addressed to the TÜV-Verband. In case of doubt or dispute, the German text only is valid.

1 Manufacturer/Circulator

Geberit International AG
Schachenstrasse 77
8645 Jona
SWITZERLAND

Manufacturing plant

- a) Geberit Mapress GmbH
Kronprinzstrasse 40 40764
Langenfeld
GERMANY
- b) Geberit Ozorków Sp. z o.o.
Adamówek 25
90-035 Ozorków
POLAND

2 Typ**Mapress****Model**

Mapress stainless steel or carbon steel as well as copper (see table 1)

3 Type test approval mark

TÜV . A . 271 - 22

4 Range of application

suitable for applications especially for heating, cooling and industrial plants

5 Normative references

- Betriebssicherheitsverordnung (BetrSichV) – Ordinance on Industrial Safety and Health in the current version
- VdTÜV-Merkblatt Armatur 100, edition 2021-01-19, in conjunction with VdTÜV-Merkblatt General 002, edition 2021-05-18
- AD 2000 Code
- Directive 2014/68/EU dated 15.05.2014 (Pressure Equipment Directive)

Based on TRR 100 „Rohrleitungen aus metallischen Werkstoffen (Pipelines made of metallic materials)“, edition 1993-05:

- TRbF 131 Part 1, edition 1981-03 as well as successor TRbF 50, edition 2002-06
- TRbF 231 Part 1, edition 1982-12 as well as successor TRbF 50, edition 2002-06

6 Technical description

6.1 Design

non-detachable pipe connection by mechanical pressing of Geberit Mapress pressfitting and Geberit Mapress system pipe

Pressfitting and system pipe are made of unalloyed or alloyed steel or copper. Special electro-mechanical or electrohydraulic Geberit Mapress pressing tools, which are regularly tested by the manufacturer, are used to produce the connection. Monitoring of the test dates is made possible by means of a sticker.

The tightness of the connection is achieved by means of an O-ring.

Variants

Mapress stainless steel or carbon steel as well as copper (see table 1 and table 2)

6.2 Operating media

1. Fluids:	Stainless steel for fluids of group 1 and group 2 according to Directive 2014/68/EU (Pressure Equipment Directive) only after consultation with or approval by Geberit Mapress
	Carbon steel for fluids of group 2 and oils only after consultation with or approval by Geberit Mapress
	Copper for fluids of group 1 and group 2 according to directive 2014/68/EU (pressure equipment directive) only after consultation with or approval by Geberit Mapress
2. Media compatibility:	The use of carbon steel for aqueous media is restricted to closed circuits. The use of stainless steel, carbon steel as well as copper for other media requires approval of the media by Geberit Mapress.
3. Corrosion protection:	Carbon steel pipes must be protected against external corrosion. For details, please refer to the Geberit International AG product information.

6.3 Pressure rating / operating pressure

Table 1: Nominal sizes and operating pressures

Operating pressures according to TÜV component certificate						
Press jaws / slings [Geberit compatibility]	Dimensions		Operating pressures [bar]			
	DN	d [mm]	Stainless steel 1.4401	Stainless steel 1.4301	C-steel	Copper
Pressing jaws [1] / [2] / [3]	10	12	75	75	40	40
	12	15	63	63	40	40
	15	18	63	63	40	25
	20	22	40	40	25	16
	25	28	25	25	25	16
	32	35	16	16	16	16
Pressing slings [2] / [2XL] / [3]	32	35	25	25	25	16
	40	42	25	25	16	16
	50	54	25	25	16	16
	65	76,1	16	16	12	10
	80	88,9	12	12	12	10
	100	108	12	12	12	8
Pressing slings [4]	65	76,1	16	16	16	–
	80	88,9	16	16	16	–
	100	108	16	16	12	–
Pressing slings [HCP] (expiring)	65	76,1	16	16	16	–
	80	88,9	16	16	12	–
	100	108	16	16	12	–

6.4 Allowable temperature range

The compatibility of the sealing ring as well as the suitability of the respective Geberit Mapress pressfitting system for the respective feed medium must be agreed in advance with Geberit Mapress; the proof of suitability of the sealing ring manufacturer must be submitted in writing before commissioning a system.

6.5 Materials

Table 2: Materials of the individual components

Designation	Material
Stainless steel – pipe	1.4401, 1.4301
Stainless steel fitting	1.4401 1)
C-steel pipe	1.0034, 1.0215
C-steel-fitting	1.0034 und 1.0718
Sealing ring	Elastomer (CIIR, FKM, HNBR, FEPM)
Copper-pipe	Copper (CU-DHP)
Copper-fitting	Copper (CU-DHP)

1) For transition connectors, the materials 1.4571 (turned parts) and 1.4581 (cast parts) can also be used.

7 Special specifications

Proof of the quality properties for the stainless steel pipes and copper pipes is provided by an acceptance test certificate 3.1 in accordance with DIN EN 10204. Geberit Mapress C steel pipes are supplied with a works certificate 2.2 according to DIN EN 10204.

The manufacturer has been inspected by TÜV Rheinland with regard to the proper processing of stainless steel pipes, copper pipes and carbon steel pipes for the production of press fittings on the basis of the documentation submitted.

The welding procedures used for the manufacture of press fittings have also been checked and submitted to the expert with the required documentation.

It is recommended to determine additional forces in accordance with TRR 100. Pipe supports must not be used additionally for fixing other installations in order to avoid possible additional loads.

The pressure resistance of the connection was checked by a large number of burst tests. When approving the maximum permissible operating pressures, sufficient safety against component failure was taken into account.

Geberit International AG is certified according to DIN EN ISO 9001:2000.

The assembly is carried out in accordance with the assembly instructions, i.e. in accordance with the respective variant-related application brochures of Geberit International AG.

The pressfitting connections are subjected to random dimensional and leak tests during production. The corresponding specifications are adequately regulated in QM test instructions.

The operating instructions of the respective press tool must always be observed. These devices are able to control the pressing process.

The actual insertion depth of the line pipe in the fitting can and must be checked by means of marking.

In accordance with Directive 2014/68/EU (Pressure Equipment Directive), proof of "Grouting Technology" expertise must be provided by training at Geberit or in a manner recognized by Geberit International AG and must be documented by a training certificate.

In the context of obtaining the component mark, it has been demonstrated that the press fittings have been designed and manufactured in accordance with good engineering practice pursuant to Directive 2014/68/EU (Pressure Equipment Directive). The remarks in section 8 of this VdTÜV component test sheet on manufacture must be observed.

8 Remarks

8.1 Fabrication

The characteristic fitting form is fabricated by cold forming or machining. To demonstrate compliance with the requirements of Directive 2014/68/EU (Pressure Equipment Directive), the manufacturer shall, if necessary, submit an explicit manufacturer's declaration.

In particular, for the use of seamless pipes in Cu-DHP (copper) in the area of application according to Directive 2014/68/EU (Pressure Equipment Directive) in connection with AD 2000 data sheet W 6/2, minimum wall thicknesses of 3 mm must be used for the dimensions 88.9 mm and 108 mm according to the table in section 4.

8.2 Marking

on the system pipe:

- Manufacturer's mark
- dimension
- nominal pressure
- component identification

on the press fittings:

- Manufacturer's mark
- dimension

8.3 Annual tests by the authorized inspector

Within the scope of the annual inspection by the TÜV expert, the results with regard to sufficient dimensioning are checked by means of measurement checks and bursting pressure tests on at least two different nominal sizes.

8.4 Tasks of the authorized inspector prior to commissioning

a) The following must be checked on site

- the suitability of the Geberit Mapress pressfitting system and the compatibility of the sealing ring with the medium to be conveyed on the basis of the documents and evidence provided by Geberit International AG,
- compliance with the installation instructions and the product information supplied,
- existing or conceivable additional forces acting on the installation with regard to admissibility.

b) Performance of a pressure test:

A pressure test must be performed.