

EWE – Tapping fittings for water systems

User manual



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General information

- Please read this user manual carefully before commissioning the product and pay special attention to the instructions and warnings.
- The current version of this user manual is available at:
www.ewe-armaturen.de
- Check the delivery on receipt, ensuring that it is complete and has not been damaged in transport.
- Keep this user manual for future reference and potential questions.
- Only briefed and qualified personnel may mount, operate and service the fittings and valves.
- If you have any further questions or need any further information, please call our employees during office hours.

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General safety instructions

- The necessary activities must be carried out in accordance with statutory laws, accident prevention regulations and valid standards including generally accepted engineering standards.
- Only tools listed in this user manual may be used to mount, operate and service the fittings and valve.
- Please observe the product safety data sheets (supplied with the products).
- When mounting all the tapping fittings mentioned in this document, ensure to comply with regulations stipulated by the tapping fittings manufactures and the pipe manufacturers.
- Depending on the nature of the task, appropriate protective clothing must be worn (refer accident prevention regulations).
- If further equipment is used, e.g. tapping tools, their operating instructions must always be observed.

- Technical and unauthorized changes to the products are not permitted. The products may only be used in the designated manner.

Disclaimer

- We are unable to monitor adherence to this user manual. We are also unable to monitor the installation, operation and maintenance of the fitting. Improper installation of the product can cause property damage and/or endanger people.
- We do not accept responsibility or liability for any losses, damage or costs that arise from incorrect installation, improper operation and incorrect use and maintenance or are in any way associated therewith.
- Our general terms and conditions of sale apply.

-  Special fittings or fittings produced according to the specifications of the contracting authority are not covered by this user manual!

The user or network/system operator is responsible for the testing, approval and use of the named component parts. As we cannot assess the suitability of our components for use and installation under the respective local conditions, the use of our tapping fittings and component parts falls under the full responsibility of the user.

Packaging

- Individual fittings and valves are packed according to the anticipated transport conditions. Only environmentally friendly materials have been used for the packaging. The packaging should protect the individual components from damage during transport, corrosion, as well as other types of damage, until they are installed. Remove the packaging just before the fitting is installed.

Disposal

- Separate the existing raw materials according to disposal type and material. Raw materials must be disposed of in accordance with the applicable statutory provisions and local regulations. Send recyclable packaging materials for recycling.

Explanation of symbols, warning signs and signal words

General danger area (Danger/Warning/Caution)

DANGER:

Hazard with a high degree of risk which, if not avoided, will result in death or serious injury.

WARNING:

Hazard with a moderate degree of risk which, if not avoided, may result in death or serious injury.

CAUTION:

Hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.



NOTE:

Indicates an instruction that must be observed



INFORMATION:

Provides useful advice and recommendations

Use of abbreviations

DN: Rated diameter

PN: Rated pressure

Si: Silicon

DIN: Deutsches Institut für Normung (German Institute for Standardisation)

DVGW: Deutscher Verein des Gas- und Wasserfaches (German Association for Gas and Water)

GGG: Ductile gray cast iron

PVC: Polyvinyl chloride

PE: Polyethylene

PFA: Admissible component pressure (Pression de Fonctionnement Admissible)

PTFE: Polytetrafluorethylene

PVC-U: Softener-free polyvinylchloride

ZMU: Cement mortar sheath

EPDM: Ethylene propylene diene monomer

Other applicable documents

- The instruction manual of the respective contracting authority and executing company must be followed.
- DVGW- and regulations stipulated by the professional association (Berufsgenossenschaft)

In particular

- The Federal Environmental Agency's list of metal material hygienically suitable for use with drinking water („Trinkwasser-hygienisch geeignete metallene Werkstoffe“)
- KTW and elastomer guidelines issued by the Federal Environmental Agency
- DIN EN 805, "Water supply - requirements for systems and components outside buildings"
- DIN/ ÖNORM EN 10226, "Pipe threads where pressure tight joints are made on the threads"
- DIN 30677-2, "External corrosion protection of buried valves; heavy-duty thermoset plastics coatings"
- DIN 50930-6 "Corrosion of metals - Corrosion of metallic materials under corrosion load by water inside of pipes, tanks and apparatus - Part 6: Evaluation process and requirements regarding the hygienic suitability in contact with drinking water"
- DVGW GW 15 "Post-factory coating of pipes, moulded pieces and fittings"
- DVGW GW 309 "Electrical bridging when cutting pipes"
- DVGW W 270 "Growth of microorganisms on materials for use in drinking water systems"
- DVGW W 291 "Cleaning and disinfection of water distribution systems"
- DVGW W 333 "Tap fitting and tapping procedures in the water supply"
- DVWG W 400 "Technical rules for water distribution systems"
- Professional association (Berufsgenossenschaft) rules and regulations (especially DGUV 100-500)
- TRGS 519 "Working with asbestos"
- ÖNORM B 2531 "Specifications relating to drinking water installations"
- ÖNORM B 2538 "Water supply – requirements for water supply systems and their components outside of buildings, supplementary to regulations under ÖNORM EN 805"
- ÖVGW QS – W 501/1 "Fittings in the provision of drinking water, Part 1: Over- and underground fittings"

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for asbestos cement pipes, cast iron pipes and steel pipes

Product codes 1112XXX, 1113XXX, 1114XXX

consisting in:

Connecting piece with O-ring and

Retaining strap with hemispherical shell and nuts



Valve (different types)



Valve tapping fittings



Ball valve tapping fittings



Ball tapping fittings



Ball cock



Piston valve



Ceramic valve (Kera)

1.2 Other applicable documents

- Detailed information can be found on page 7

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- 16 bar – consider the allowed operating pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- Asbestos cement pipes, cast iron pipes and steel pipes for the water supply
- Asbestos cement pipes, ZMU-cast iron pipes and ZMU-steel pipes for water supply, connected to the EWE drill-hole sealing sleeve

Dimensions

- DN 50 – DN 500

1.5.2 Connection on the output side

Dimensions

Internal thread according to DIN EN 10226-1, with O-ring chamber for the EWE-O-ring system

- Valve size DN 32: Rp 1 1/4"
- Valve size DN 40: Rp 1 1/2"
- Valve size DN 50: Rp 2"

Maximum drilling diameter

- Valve size DN 32: 24 mm
- Valve size DN 40: 31 mm
- Valve size DN 50: 36 mm

1.5.3 Shut-off fittings/Operating shut-off and auxiliary shut-off

A detailed description can be found on page 34/35.

1.5.4 Connecting and retaining elements

Materials

- Connecting element from EN-GJS-400-15, EWS-coated
- Retaining element with gusset plate, threaded bolt M 16, semi-conic washers and nuts in slided coating SW 24, fully from A4-stainless steel and with a rubber bandage

Dimensions

- Wide connecting element DN 50 - DN 500: 90 mm
- Wide retaining element DN 80 - DN 500: 90 mm

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE tapping fittings are suitable for EWE tapping devices, EWE drill hole sleeve fitting device and other tapping devices. EWE tapping fittings are used to connect pipes in the streets with pipes to the homes. Tapping fittings are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation.

Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage.
2. Attach the connecting piece to the supply pipe and fasten the clamp.
3. For tapping sleeves with 2 nuts, the nuts should be fastened evenly and in an alternating fashion. The maximum tightening torque of the nuts is 50Nm.
4. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping and sleeve fitting activities must be carried out in accordance with the safety regulations, assembly instructions, and manufacturer's instructions regarding the use of the tapping equipment.

The EWE user manual "Tapping and bushing with EWE tools" must be followed.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. The internal thread of the tapping fittings' valve uses the EWE O-ring system. This means that suitable fittings can be used without sealant, due to the self-sealing properties of the O-ring system. Please ensure to follow the user manual of the fitting manufacturer. The O-rings and sealing surface must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

4.4 Overview EWE clamps for EWE tapping fittings for asbestos, cement, cast iron and steel pipes

Order number	Connecting piece	Diameter of pipe	Length	For main pipe				Steel DN	Steel DN	Steel cement coated DN	Asbestos Cement PN 10 DN	Asbestos Cement PN 12,5 DN	Asbestos Cement PN 16 DN
				Cast iron	Cast iron	Cast iron	ZM DN						
Clamp	DN	(outside)		DN	DN	DN	DN	DN	DN	DN	DN	DN	
0108215	50/70	60-66	255	50	50	50	50						
0108216	50/70	77-87	290	60-70	65	65	65						
0108217	80	88-108	325	80	80	80	80	80	80	80	80	80	
0108218	100	109-133	380	100	100	100	100	100	100	100	100	100	
0108219	125	134-159	440	125	125	125	125	125	125	125	125	125	
0108220	150/175	160-189	490	150	150	150	150	150	150	150	150	150	
0108226	150/175	190-205	520	175	175	175	175						
0108221	200/225	219-259	650	200	200	200	200	200	200	200	200	200	
				225	225	225	225						
0108222	250	260-308	780	250	250	250	250	250	250	250	250	250	
				275	275	275	275						
0108223	300	309-368	910	300	300	300	300	300	300	300	300	300	
0108224	350/400	360-382	1050	350	350	350	350	350	350	350	350	350*	

Order number	Connecting piece	Diameter of pipe	Length	For main pipe				Steel DN	Steel cement coated DN	Asbestos Cement PN 10 DN	Asbestos Cement PN 12,5 DN	Asbestos Cement PN 16 DN
				Cast iron	Cast iron ZM	Cast iron DN	Cast iron DN					
0108233	350/400	383-405	1110				350					
0108235	350/400	406-427	1170	400	400	400	400	400	350	350	350	
0108225	350/400	428-449	1230	400	400							
0108237	350/400	450-469	1290	425	425	450	400	400	400	400		
0108227	450/500	475-497	1280	450							400*	
0108239	450/500	498-519	1340			500	450					
0108228	450/500	520-544	1400	500	500				450	450		
0108241	450/500	545-567	1460		500			500			450	
0108243	450/500	568-589	1520						500	500		
0108245	450/500	590-606	1580								500	

All EWE tapping fittings are supplied in the standard design with a connecting piece and clamp for cast iron pipes! From DN 350 onwards, the use of another main type of pipe requires the use of the appropriate clamp (and for items marked with * the use of the appropriate connecting piece is also required). Appropriate clamps and connecting pieces must be chosen according to the table above. All information has been supplied without warranty, express or implied!

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for PVC pipes, with bridge from PVC or with +GF+ wedge bridge made from PVC

Product codes: 1116XXX, 1117XXX, 1118XXX

consisting in:

Connecting piece and clamp from hard PVC, stainless steel screws, firmly attached moulded seal; or from hard PVC, clamping blocks from PVC, without screws, with groove seal



Valve (different types)



Valve tapping fittings



Ball valve tapping fittings



Ball tapping fittings



Ball valve



Piston valve

1.2 Other applicable documents

- Please refer to the list on page 7.

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- 10 bar – consider the allowed operation pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- PVC pipe for the water supply

Dimensions

- Bridge from PVC: DN 50 – DN 500
- +GF+ wedge bridge from PVC: DN 80 – DN 200

1.5.2 Connection on the output side

Dimensions

Internal thread according to DIN EN 10226-1, with O-ring chamber for the EWE-O-ring system

- Valve size DN 32: Rp 1 1/4"
- Valve size DN 40: Rp 1 1/2"
- Valve size DN 50: Rp 2"

Maximum drilling diameter

- Valve size DN 32: 24 mm
- Valve size DN 40: 31 mm*
- Valve size DN 50: 36 mm*

* for tapping bridges DN 50/65 generally maximum 24 mm

1.5.3 Shut-off fittings/Operation shut-off and auxiliary shut-off

A detailed description can be found on pages 34 and 35

1.5.4 Connecting and retaining elements

Dimensions

- Width:
DN 50 - DN 100: 105 mm
DN 125: 114 mm
DN 150 & DN 200: 120 mm

Materials

- PVC-U

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE tapping fittings are suitable for EWE tapping devices, EWE drill hole sleeve fitting device and other tapping devices. EWE tapping fittings are used to connect pipes in the streets with pipes to the homes. Tapping fittings are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation.

Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage.
2. Attach the connecting piece to the supply pipe and fasten the clamp.
3. The screws of the tapping bridges must be fastened equally and diagonally until the stop (connecting piece and clamp).
4. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping and sleeve fitting activities must be carried out in accordance with the safety regulations, assembly instructions, and manufacturer's instructions regarding the use of the tapping equipment.

The EWE user manual "Tapping and bushing with EWE tools" must be followed.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. The internal thread of the tapping fittings' valve uses the EWE O-ring system. This means that suitable fittings can be used without sealant, due to the self-sealing properties of the O-ring system. Please ensure to follow the user manual of the fitting manufacturer. The O-rings and sealing surface must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for PVC pipes

Product code: 1116XXX

consisting in:

Connecting piece and clamp from GGG, with seal and screws



Valve (different types)



Valve tapping fittings



Ball valve tapping fittings



Ball tapping fittings



Ball valve



Piston valve



Ceramic valve (Kera)

1.2 Other applicable documents

- Please refer to the documents listed on page 7.

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- 16 bar – consider the allowed operation pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- PVC pipes for the water supply

Dimensions

- DN 50 - DN 300

1.5.2 Connection on the output side

Dimensions

Internal thread according to DIN EN 10226-1, with O-ring chamber for the EWE-O-ring system

- Valve size DN 32: Rp 1 1/4"
- Valve size DN 40: Rp 1 1/2"
- Valve size DN 50: Rp 2"

Maximum drilling diameter

- Valve size DN 32: 24 mm
- Valve size DN 40: 31 mm*
- Valve size DN 50: 36 mm*

* for tapping bridges DN 50/65 generally maximum 24 mm

1.5.3 Shut-off fittings/Operation shut-off and auxiliary shut-off

A detailed description can be found on pages 34 and 35.

1.5.4 Connecting and retaining elements

Dimensions

- Width: 120 mm

Materials

- From EN-GJS-400-15, EWS-coated, screws from A2 stainless steel

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE tapping fittings are suitable for EWE tapping devices, EWE drill hole sleeve fitting device and other tapping devices. EWE tapping fittings are used to connect pipes in the streets with pipes to the homes. Tapping fittings are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation.

Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage.
2. Attach the connecting piece to the supply pipe and fasten the clamp.
3. The screws of the tapping bridges must be fastened equally and diagonally until the stop (connecting piece and clamp).
4. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping and sleeve fitting activities must be carried out in accordance with the safety regulations, assembly instructions, and manufacturer's instructions regarding the use of the tapping equipment.

The EWE user manual "Tapping and bushing with EWE tools" must be followed.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. The internal thread of the tapping fittings' valve uses the EWE O-ring system. This means that suitable fittings can be used without sealant, due to the self-sealing properties of the O-ring system. Please ensure to follow the user manual of the fitting manufacturer. The O-rings and sealing surface must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for PE pipes, welding system ELGEF Plus or welding system FRIALEN

Product codes: 1118XXX, 1119XXX, 1120XXX, 1122XXX

consisting in:

Connecting piece and clamp from PE 100



Valve (different types)



Valve tapping fittings



Ball valve tapping fittings



Ball tapping fittings



Ball valve



Piston valve



Ceramic valve
(Kera)

1.2 Other applicable documents

- Please refer to the documents listed on page 7.

And also:

- DVGW GW 330 "Welding pipes and component parts from polyethylene"

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- 16 bar – consider the allowed operation pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- PE pipes for the water supply

Dimensions

- PE 80 /PE 100 pipe, SDR 11/17
- d 63 – d 315

1.5.2 Connection on the output side

Dimensions

Internal thread according to DIN EN 10226-1, with O-ring chamber for the EWE-O-ring system

- Valve size DN 32: Rp 1 1/4"
- Valve size DN 40: Rp 1 1/2"
- Valve size DN 50: Rp 2"

Maximum drilling diameter

- Valve size DN 32: 24 mm
- Valve size DN 40: 31 mm*
- Valve size DN 50: 36 mm*

* for tapping bridges d63/75 generally maximum 24 mm

1.5.3 Shut-off fittings/Operating shut-off and auxiliary shut-off

A detailed description can be found on pages 34 and 35.

1.5.4 Connecting and retaining elements

Materials

- Connecting and retaining elements from welding system +GF+ ELGEF Plus or FRIALEN, Si-Brass connecting piece

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE tapping fittings are suitable for EWE tapping devices, EWE drill hole sleeve fitting device and other tapping devices. EWE tapping fittings are used to connect pipes in the streets with pipes to the homes. Tapping fittings are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation. Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage. Check this before placing the tapping fitting on the pipe.

2. Prepare the welding seam according to the manufacturers' instructions and legislative regulations. Attach the connecting piece to the supply pipe and fasten the clamp.
3. If using the +GF+ ELGEF-Plus version: Place adapter d 64mm in the socket on the connecting piece and fasten the screws.
4. Weld according to manufacturer's instructions and legislative regulations.
5. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping and sleeve fitting activities must be carried out in accordance with the safety regulations, assembly instructions, and manufacturer's instructions regarding the use of the tapping equipment.

The EWE user manual "Tapping and bushing with EWE tools" must be followed.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. The internal thread of the tapping fittings' valve uses the EWE O-ring system. This means that suitable fittings can be used without sealant, due to the self-sealing properties of the O-ring system. Please ensure to follow the user manual of the fitting manufacturer. The O-rings and sealing surface must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for PE pipes, with PE sleeve

Product codes: 1116XXX, 1117XXX, 1118XXX

consisting in:

Connecting piece and clamp from PVC-U or GGG



Valve (different types)



Valve tapping fittings



Ball valve tapping fittings



Ball tapping fittings



Ball valve



Piston valve



Ceramic valve (Kera)

PE clamp from Si-brass



1.2 Other applicable documents

- Please refer to the documents listed on page 7.

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- Bridge from PVC-U: 10 bar
- Bridge from GGG: 16 bar

Consider the allowed operation pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- PE pipes for the water supply

Dimensions

- PE 80 /PE 100 pipe, SDR 11/17

1.5.2 Connection on the output side

Dimensions

Internal thread according to DIN EN 10226-1, with O-ring chamber for the EWE-O-ring system

- Valve size DN 40: Rp 1 1/2"

Maximum drilling diameter

- Valve size DN 40: 31 mm*

* for tapping bridges d63/75 generally maximum 24 mm

1.5.3 Shut-off fittings/Operation shut-off and auxiliary shut-off

A detailed description can be found on pages 34 and 35.

1.5.4 Connecting and retaining elements

Materials

- Connecting and claim from PVC-U or from EN-GJS-400-15, EPS-coated, screws from A2 stainless steel

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE tapping fittings are suitable for EWE tapping devices, EWE drill hole sleeve fitting device and other tapping devices. EWE tapping fittings are used to connect pipes in the streets with pipes to the homes. Tapping fittings are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation.

Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the

supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage. Ensure that this is the case before placing the tapping fitting on the pipe.

2. Attach the connecting piece to the supply pipe and fasten the clamp.
3. For tapping bridges, diagonally opposite screws must be fastened evenly the nuts should be fastened evenly until they touch the connecting piece and clamp.
4. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping and sleeve fitting activities must be carried out in accordance with the safety regulations, assembly instructions, and manufacturer's instructions regarding the use of the tapping equipment.

The EWE user manual "Tapping and bushing with EWE tools" must be followed.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. The internal thread of the tapping fittings' valve uses the EWE O-ring system. This means that suitable fittings can be used without sealant, due to the self-sealing properties of the O-ring system. Please ensure to follow the user manual of the fitting manufacturer. The O-rings and sealing surface must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

1. Information about the product

1.1 Scope of this user manual

This user manual is valid for

EWE tapping fittings for PE pipes, with welding system ELGEF Plus or welding system FRIALEN

Product codes: 1123XXX

consisting in:

Connecting piece and clamp from PE 100

Multi-drill valve supplied with welding system ELGEF Plus

OR multi-drill valve attached to welding system FRIALEN



1.2 Other applicable documents

- The relevant documents are listed on page 7.

And also:

- DVGW GW 330 "Welding pipes and component parts from polyethylene"

1.3 Scope and mode of application, depending on the type of valve

- Drinking water in accordance with DIN 2000



Consider the labels on the fittings!

Drinking water fittings are not resistant to gas!

1.4 Admissible component operating pressure (PFA)

- 16 bar- Consider the allowed operation pressure of the supplying pipe!

1.5 Material/dimensions/output

1.5.1 Supply pipe

Materials

- PE pipes for the water supply

Dimensions

- PE 80 /PE 100 pipe, SDR 11/17
- d 63 – d 315

1.5.2 Connection on the output side

Materials

- Connecting pieces from PE 100, optional with PE-welding socket

Dimensions

- d 32 mm, d 40 mm

Maximum drilling diameter

- 31 mm

1.5.3 Shut-off fittings/Operation shut-off and auxiliary shut-off

Materials

- Brass material in the valve body from lead-free, dezincification resistant (DR) EWE-Silicon-Brass or classical brass in accordance with the Federal Environmental Agency's list of metal material hygienically suitable for use with drinking water. With compact PE 100 sheathing
- Operating spindle from austenitic stainless steel (min. 17% chrome content)
- Operation shutoff with non-turning valve plug, conically sealing with PTFE-seal with integrated rotating boring cutter with serrated edge from A4 duplex steel

1.5.4 Connecting and retaining elements

Materials

- Connecting element and clamp with welding system +GF+ ELGEF Plus or FRIALEN

1.5.5 Seals

Materials

- EPDM

1.6 Storage

- Store the fittings in the original packaging in a weather-proof and dry location. Fittings must be checked for damage or contamination before and after use.

1.7 Description of functionality

EWE multi-drill valves can be used without any additional tapping devices. They are used to connect pipes in the streets with pipes to the homes and are drilled into the pipes under pressure.

2. Assembly instructions

2.1 Preparatory information



Tapping fittings must be checked for damage and contamination before and after their installation.

Damaged tapping fittings must not be installed or used. Read the instructions and information on the fittings. Water fittings are not resistant to gas.

2.2 Advice regarding the installation site



The location of the drilling site must be at least 5 x DN or 0.5 m (whichever is larger) away from connecting pipes and other fittings.

3. Installation



Care must be taken to ensure that tapping fittings are installed without exerting pressure on the supplying pipe. The tapping fittings may only be installed onto pipes that are under operating pressure.

1. To ensure the secure sealing, areas of contact between the supply pipe and the tapping fittings must be free from contamination, scratch marks, grooves and other types of damage.

2. Prepare the welding seam according to the manufacturers' instructions and legislative regulations. Attach the connecting piece to the supply pipe and fasten the clamp.
3. If using the +GF+ ELGEF-Plus version: Place the multi-drill valve in the socket on the connecting piece and fasten the screws.
4. Weld according to manufacturer's instructions and legislative regulations.
5. Test for any leaks of the fitted tapping fittings as specified in the DVGW regulations.

4. Operation and usage

Before commissioning of the tapping fittings, the tapping fittings and entire installation must be inspected.

4.1 Checking for functionality



The functionality of the entire installation should be checked.

4.2 Tapping and sleeve fitting

Tapping with integrated boring cutter. Tapping must be performed in the open pipe trench. Thoroughly rinsing the pipes with water helps to avoid that drilling and milling residues remain in the supply pipe. Tapping the supply pipe is achieved by tightening the tapping fitting to the stop.

4.3 Connecting the tapping fittings

1. To connect the home pipeline to the supply pipeline a suitable fitting must be used.
2. Please ensure to follow the user manual of the fitting manufacturer. Potential O-rings and sealing surfaces must be kept free from contamination and damage.
3. Test for any leaks of the fitted tapping fittings as specified in DVGW regulations.

Shut-off fittings/Operating shut-off and auxiliary shut-off

Materials

- Brass material in the valve body from lead free, dezincing resistant (DR) EWE-Silicon-Brass in accordance with the Federal Environmental Agency's list of metal material hygienically suitable for use with drinking water
- Operating spindle from austenitic stainless steel (min. 17% chrome content)

Valve tapping fittings

- Operation shutoff through top part with left-hand thread and bayonet bar for the dirt disc of the EWE installation set, with non-turning valve-cone, conically sealing through PTFE-seal
- Without auxiliary shut-off
- Sizes: DN 32, 40, 50



Ball valve tapping fittings

- Operation shutoff through top part with left-hand thread and bayonet bar for the dirt disc of the EWE installation set, with non-turning valve cone, conically sealing through PTFE-seal
- With auxiliary shutoff: integrated ball valve shut-off from A4 steel
- Sizes: DN 40



Ball tapping fittings

- Without operation shut-off
- With auxiliary shut-off: integrated ball valve shut-off from A4 steel
- Sizes: DN 20



Ball valve

- Operation and auxiliary shut-off through integrated ball valve shut-off from A4 steel with PTFE-seal
- Bayonet bar for the dirt disk of the EWE installation set
- Sizes: DN 40



Piston valve

- Operation and auxiliary shut-off through the soft-sealed EPDM piston
- Bayonet bar for the dirt disk of the EWE installation set
- Sizes: DN 40



Ceramic valve (Kera)

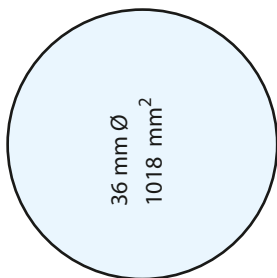
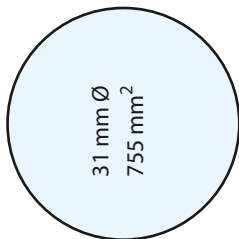
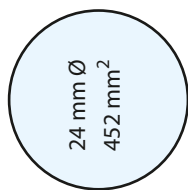
- Operation and auxiliary shut-off through ceramic shut-off slides from Al₂O₃
- Bayonet bar for the dirt disk of the EWE installation set
- Sizes: DN 40



Volume flow rate from tapping

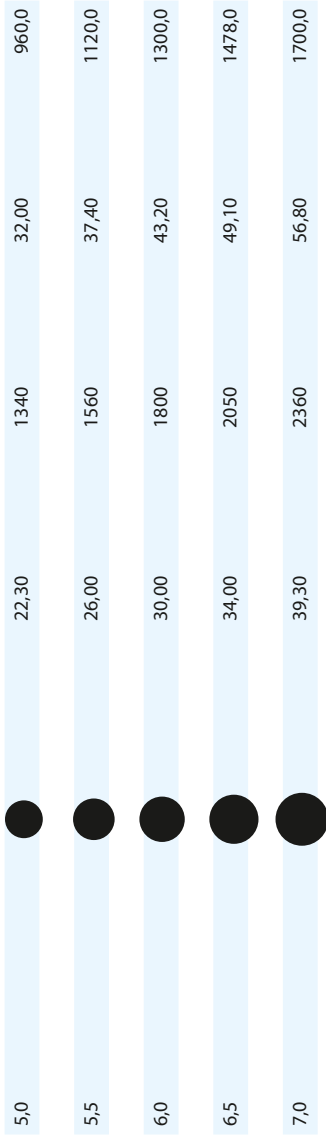
Volume of discharge for a tapping diameter of										
bar	m	24 mm			31 mm			36 mm		
		WS	l/min	m ³ /h	l/min	m ³ /h	l/min	m ³ /h	l/min	m ³ /h
1,0	10	340,2	340,2	20,4	553,1	33,2	566,8	46,0		
1,5	15	416,7	416,7	25,0	697,5	41,9	939,6	56,4		
2,0	20	481,5	481,5	28,9	805,1	48,3	1084,5	65,1		
2,5	25	538,2	538,2	32,3	900,0	54,0	1213,2	72,8		
3,0	30	589,5	589,5	35,4	986,4	59,2	1329,3	79,8		
3,5	35	637,2	637,2	38,2	1065,2	63,9	1434,6	86,1		
4,0	40	681,3	681,3	40,9	1138,9	68,3	1535,4	92,1		
4,5	45	722,7	722,7	43,4	1208,3	72,5	1628,1	97,7		
5,0	50	761,4	761,4	45,7	1273,5	76,4	1717,2	103,0		
5,5	55	799,2	799,2	47,9	1335,2	80,1	1799,1	107,9		
6,0	60	834,3	834,3	50,0	1350,0	83,0	1880,1	112,8		
6,5	65	868,5	868,5	52,1	1451,7	87,1	1956,6	117,4		
7,0	70	900,9	900,9	54,0	1506,5	90,4	2030,4	121,8		
7,5	75	933,3	933,3	56,0	1559,7	93,6	2101,5	126,1		

8,0	80	963,9	57,8	1611,0	96,6	2169,9	130,2
8,5	85	993,6	59,6	1660,5	99,6	2235,6	134,1
9,0	90	1022,4	61,3	1709,1	102,5	2302,2	138,1
9,5	95	1050,3	63,0	1755,5	105,3	2365,2	141,9
10,0	100	1077,3	64,6	1800,9	108,1	2466,1	147,9
11,0	110	1130,4	67,8	1889,1	113,3	2545,2	152,7
12,0	120	1180,8	70,8	1972,8	118,4	2658,6	159,5
13,0	130	1228,5	73,7	2282,0	126,9	2767,5	166,1
14,0	140	1274,4	76,5	2130,7	127,8	2871,0	172,3
15,0	150	1319,4	79,2	2205,9	132,4	2971,8	178,3
16,0	160	1362,6	81,8	2277,9	136,7	3069,9	184,2



Water discharge for openings of different sizes

mm	Litres per			Cubic meters per		
	minute	hour	month	day	day	month
0,5	0,33	20	14,4	0,48	0,48	14,4
1,0	0,97	58	41,6	1,39	1,39	41,6
1,5	1,82	110	79,0	2,64	2,64	79,0
2,0	3,16	190	136,0	4,56	4,56	136,0
2,5	5,09	305	218,0	7,30	7,30	218,0
3,0	8,15	490	351,0	11,75	11,75	351,0
3,5	11,30	680	490,0	16,30	16,30	490,0
4,0	14,80	890	640,0	21,40	21,40	640,0
4,5	18,20	1100	790,0	26,40	26,40	790,0



The abovementioned values are

- 100% accurate for an operating pressure of 5 bar
- 89% accurate for an operating pressure of 4 bar
- 77% accurate for an operating pressure of 3 bar
- 63% accurate for an operating pressure of 2 bar
- 45% accurate for an operating pressure of 1 bar

All information has been included without warranty, express or implied!



Tried and tested.

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