Easytop ball valve with SC-Contur

Instructions for Use

Model
2275.4

Year built:
from 07/2017

en_INT

viega

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1 About these instructions for use

Trade mark rights exist for this document; for further information, go to *viega.com/legal*.

1.1 Target groups

The information in this manual is directed at qualified heating and plumbing engineers and trained personnel.

Individuals without the abovementioned training or qualification are not permitted to mount, install and, if required, maintain this product. This restriction does not extend to possible operating instructions.

The installation of Viega products must take place in accordance with the general rules of engineering and the Viega instructions for use.

1.2 Labelling of notes

Warning and advisory texts are set aside from the remainder of the text and are labelled with the relevant pictographs.

DANGER!
This symbol warns of possible life-threatening injury.

WARNING!
This symbol warns of possible serious injury.

CAUTION!
This symbol warns of possible injury.

NOTICE!
This symbol warns of possible damage to property.

This symbol gives additional information and hints.

1.3 About this translated version

This instruction for use contains important information about the choice of product or system, assembly and commissioning as well as intended use and, if required, maintenance measures. The information about the products, their properties and application technology are based on the current standards in Europe (e.g. EN) and/or in Germany (e.g. DIN/DVGW).

Some passages in the text may refer to technical codes in Europe/ Germany. These should serve as recommendations in the absence of corresponding national regulations. The relevant national laws, standards, regulations, directives and other technical provisions take priority over the German/European directives specified in this manual: The information herein is not binding for other countries and regions; as said above, they should be understood as a recommendation.

2 Product information

2.1 Standards and regulations

The following standards and regulations apply to Germany / Europe and are provided as a support feature.

Regulations from section: Fields of application

Scope / Notice	Regulations applicable in Germany
Planning, execution, operation and maintenance of potable water installations	DIN EN 806, part 1
Planning, execution, operation and maintenance of potable water installations	DIN EN 806, part 2
Planning, execution, operation and maintenance of potable water installations	DIN EN 806, part 3
Planning, execution, operation and maintenance of potable water installations	DIN EN 806, part 4
Planning, execution, operation and maintenance of potable water installations	DIN EN 806, part 5
Planning, execution, operation and maintenance of potable water installations	DIN EN 1717
Planning, execution, operation and maintenance of potable water installations	DIN 1988
Planning, execution, operation and maintenance of potable water installations	VDI/DVGW 6023
Planning, execution, operation and maintenance of potable water installations	Trinkwasserverordnung (TrinkwV)

Regulations from section: Media

Scope / Notice	Regulations applicable in Germany
Suitability for drinking water	Trinkwasserverordnung (TrinkwV)
Suitability for heating water for pump hot water heating systems	VDI 2035 Page 1 and page 2

Regulations from section: Product description

Scope / Notice	Regulations applicable in Germany
Suitability for potable water installations	Trinkwasserverordnung (TrinkwV)
Suitability for potable water installations	DIN 50930-6
Requirements in plastic components in potable water installations	DVGW-Arbeitsblatt W270

Regulations from section: Overview

Scope / Notice	Regulations applicable in Germany
Compliance with the inspection requirements (fittings group I)	DIN EN 13828

Regulations from section: Sealing elements

Scope / Notice	Regulations applicable in Germany
Area of use of the EPDM sealing element ■ Heating	DIN EN 12828

Regulations from section: Threaded connection

Scope / Notice	Regulations applicable in Germany
Threaded pair	DIN EN 10226-1
Permitted sealants	DIN 30660
Permitted sealants	DIN EN 751-2

Regulations from section: Marking on components

Scope / Notice	Regulations applicable in Germany
Designation noise class I	DIN EN 13828

Regulations from section: Compatible components

Scope / Notice	Regulations applicable in Germany
Permitted pipe types	DVGW-Arbeitsblatt W 534
Permitted copper pipes	DVGW-Arbeitsblatt GW 392
Permitted copper pipes	DIN EN 1057
Permitted stainless steel pipes	DVGW-Arbeitsblatt GW 541
Permitted stainless steel pipes	DIN EN 10312
Permitted stainless steel pipes	DIN EN 10088

Regulations from section: Technical data

Scope / Notice	Regulations applicable in Germany
Scope	DIN EN 13828

Regulations from section: Corrosion

Scope / Notice	Regulations applicable in Germany
External corrosion protection	DIN EN 806-2
External corrosion protection	DIN 1988-200
External corrosion protection	DKI-Informationsdruck i. 160

Regulations from section: Leakage test

Scope / Notice	Regulations applicable in Germany
Leakage test for potable water installations	DIN EN 806, part 4
Leakage test for potable water installations	ZVSHK-Merkblatt „Dichtheitsprüfungen von Trinkwasserinstallationen mit Druckluft, Inertgas oder Wasser“

Regulations from section: Maintenance

Scope / Notice	Regulations applicable in Germany
Operation and maintenance of potable water installations	DIN EN 806-5

2.2 Intended use

Coordinate the use of the model for areas of use and media other than those described with the Viega Service Center.

A ball valve is a fitting that is able to shut-off and open individual pipeline sections through a 90° movement. The ball valve is not a control fitting and cannot be used for regulating volume flows. The ball must not be in an intermediate position.

NOTICE!
Opening and closing the ball valve quickly can cause pressure shocks in the system.

– Always open and close the ball valve slowly.

2.2.1 Areas of use

Use is possible in the following areas among others:

- Potable water installations
- Industrial and heating systems
- Compressed air systems
- Rainwater systems
- Cooling water pipelines (closed circuit)
- Systems for technical gases (on request)

The general rules of engineering and the applicable regulations must be observed for planning, execution, operation and maintenance of potable water installations, see *„Regulations from section: Fields of application“ on page 6*.

2.2.2 Media

The model is also suitable for the following media, amongst others:

- Potable water without limitations acc. to the applicable directives, see *„Regulations from section: Media“ on page 6*
- maximum chloride concentration 250 mg/l pursuant to applicable regulations, see *„Regulations from section: Media“ on page 6*
- Heating water for pump hot water heating systems, see *„Regulations from section: Media“ on page 6*
- Compressed air in compliance with the specification of the sealing elements being used
  – EPDM at oil concentration < 25 mg/m^3

2.3 Product description

According to the applicable regulations, Easytop system fittings can be used for all types of potable water and are DVGW certified, see *„Regulations from section: Product description“ on page 7*. Their plastic components comply with the KTW recommendation and the requirements pursuant to the applicable regulations.

2.3.1 Overview

The Easytop system fittings comply with the test requirements specified in the applicable regulations, see „Regulations from section: Overview“ on page 7.
Sound protection $L_{ap} \leq 20$ dB(A)

The model is equipped as follows:

- valve casing made of gunmetal/silicon bronze
- press connection with SC-Contur
- RP-thread
- T-shaped actuating lever made of plastic
- protective caps for the actuating lever in the red and green for the identification of the corresponding area of use
- position indication open/closed
- key surface on the casing
- maintenance-free selector shaft
- sealing element made of EPDM
- ball seal made of Teflon®
- stainless steel ball

The model is available in the following dimensions:

d	15	18	22	28	35	42	54
Rp	½	½	¾	1	1¼	1½	2

2.3.2 Press connection with SC-Contur

Fig. 1: Press connection with a press connector as an example

The press connection has a circumferential bead in which the sealing element lies. The connector is deformed upstream and downstream of the bead and permanently connected to the pipe during pressing. The sealing element is not deformed during pressing.

SC-Contur

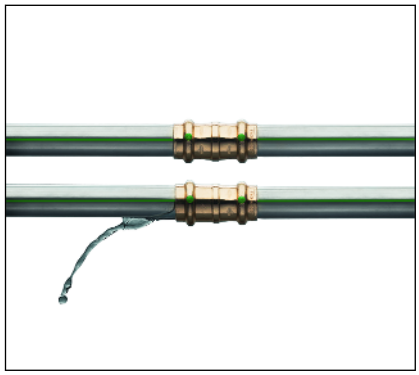


Fig. 2: SC-Contur

Viega press connectors are equipped with the SC-Contur. The SC-Contur is a safety technology that is certified by the DVGW and ensures that the connection is guaranteed to leak in an unpressed state. In this way, unpressed connections are noticed immediately during a leakage test.

Viega guarantees that unpressed connections are visible during a leakage test:

- with wet leakage test in the pressure range from 0.1 hPa–0.65 MPa (1.0 mbar–6.5 bar)
- with dry leakage test in the pressure range from 22 hPa–0.3 MPa (22 mbar–3.0 bar)

2.3.3 Sealing elements

Area of use of the EPDM sealing element

NOTICE!
Only EPDM sealing elements are approved in potable water installations. The use of other sealing elements is not permitted.

The model is factory-fitted with an EPDM sealing element.

Area of use	Potable water	Heating	Compressed air	Technical gases
Use	all pipeline sections	Pump hot water heating system	all pipeline sections	all pipeline sections
Operating temperature [$T_{max.}$]	110 °C	110 °C	60 °C	—
Operating pressure [P_{max}]	1.6 MPa (16 bar)	1.6 MPa (16 bar)	1.6 MPa (16 bar)	—
Comments	see notes *Chapter 2.2.2 „Media“ on page 9*	pursuant to the applicable regulations[1)] T_{max}: 105 °C 95 °C with radiator connection	dry, oil content < 25 mg / m^3	[2)]

[1)] see *„Regulations from section: Sealing elements“ on page 7*

[2)] Consultation with the Viega Service Center required.

2.3.4 Threaded connection

Prerequisite for a threaded connection, which seals via a thread, is a threaded pair in accordance with applicable regulations, see *„Regulations from section: Threaded connection“ on page 7*. Pursuant to these regulations, a permitted threaded pair comprises a conical external thread and a cylindrical internal thread, e.g. R ¾ and Rp ¾.

Only use commercially available and chloride-free, DVGW approved sealant in accordance with the applicable regulations to seal threads, see *„Regulations from section: Threaded connection“ on page 7*.

Establish the threaded connection first and the press connection next.

2.3.5 Markings on components

The press connection is marked with a coloured dot. This identifies the SC-Contur, where the test medium would escape in the case of an inadvertently unpressed connection.

The model is marked as follows:

- noise class I pursuant to applicable regulations, see „*Regulations from section: Marking on components*“ *on page 7*
- Dimension
- DVGW writing
- green dot for potable water
- Position indicator on the actuating lever

2.3.6 Compatible components

The model is equipped with a press connection and compatible with the Prestabo, Profipress, Sanpress and Sanpress Inox system.

Pipes

The press connections are tested and approved according to the applicable regulations with the following pipe types:

- Copper pipes
  - see „*Regulations from section: Compatible components*“ *on page 8*
- Stainless steel pipes (material 1.4401 / 1.4521)
  - see „*Regulations from section: Compatible components*“ *on page 8*

2.3.7 Technical data

Observe the following operating conditions for the installation of the model:

Operating temperature [T_{max}]	110 °C
Operating pressure [P_{max}]	1.6 MPa (16 bar)

Scope according to applicable regulations, see „*Regulations from section: Technical data*“ *on page 8*

- Operating temperature: 90 °C
- Operating pressure: PN 10 (10 bar)

2.4 Information for use

2.4.1 Corrosion

Overground pipelines and fittings in rooms do not normally require external corrosion protection.

There are exceptions in the following cases:

- Contact with aggressive building materials such as nitrite or materials containing ammonium
- In aggressive surroundings

If external corrosion protection is required, observe the pertinent guidelines, see *„Regulations from section: Corrosion“ on page 8*.

Easytop fittings made of gunmetal/silicon bronze are suitable for all types of potable water.

The chloride concentration in the medium must not exceed a maximum value of 250 mg/l.

This chloride is not a disinfectant, but in fact pertains to the content in sea and table salt (sodium chloride).

2.5 Optional accessories

The following optional accessories are available:

- actuating lever made of metal
- Easytop thermometer
- Easytop media marking
- Protective caps for the actuating lever made of plastic in red and green for the identification of the corresponding area of use
- Insulating shells

Fig. 3: Model 2275.93 Easytop L-shaped actuating lever

Fig. 4: Model 2275.92 Easytop T-shaped actuating lever

Fig. 5: Model 2275.94 Easytop thermometer

Fig. 6: Model 2275.97 Easytop media marking

Fig. 7: Model 2275.96 Easytop protective cap green

Insulating shells

EPS insulating shells are available for all sizes of ball valves. The two-piece shells are self-supporting and are mounted without tools and holding grips. They connect seamlessly to the front surfaces of the pipeline insulation.

Fig. 8: Model 2275.90 Easytop insulating shell

3 Handling

3.1 Assembly information

3.1.1 Permitted exchange of sealing elements

Important instruction

With their material-specific qualities, sealing elements in press connectors are adapted for use with the corresponding media and/or the areas of use of the piping systems and are generally only certified for them.

The exchange of a sealing element is generally permitted. The sealing element must be exchanged for a spare part designed for the intended application ↬ Chapter 2.3.3 „Sealing elements“ on page 12. The use of other sealing elements is not permitted.

3.1.2 Mounting instructions

Checking system components

Do not remove the model from the packaging until immediately before use.

System components may, in some cases, become damaged through transportation and storage.

- Check all parts.
- Replace damaged components.
- Do not repair damaged components.
- Contaminated components may not be installed.

During assembly

Observe the following when mounting:

- Use suitable tools.
- Installation is not dependent on the direction of flow.

Choose the place of installation so that the fitting is easily accessible, simple to operate and the insulating shell can be mounted without any problems.

Laying and fixing pipes

For information, refer to the instructions for use of the Viega system of the product you are using.

Length expansion

For information, refer to the instructions for use of the Viega system of the product you are using.

3.1.3 Required tools

The following tools are required for production of a press connection:

- pipe cutter or a fine-toothed hacksaw
- deburrer and coloured pen for marking
- press machine with constant pressing force
- Press jaw or press ring with corresponding hinged adapter jaw, suitable for the pipe diameter and suitable profile

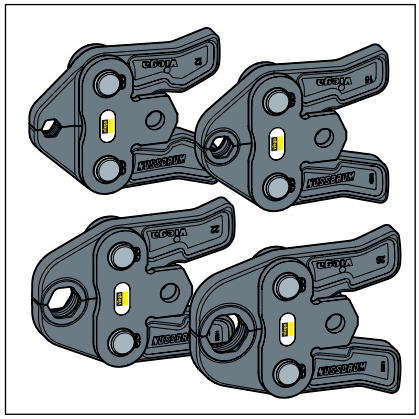


Fig. 9: Press jaws

Recommended Viega press machines:

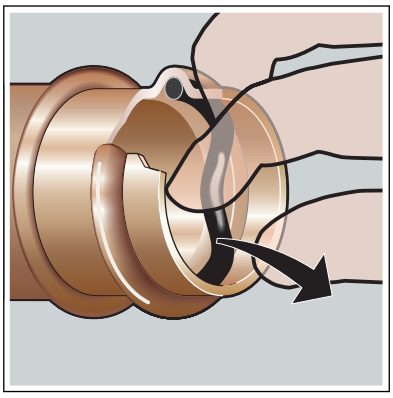
- Pressgun 5
- Pressgun 4E / 4B
- Type PT3-AH
- Type PT3-H / EH
- Type 2 (PT2)
- Pressgun Picco
- Picco

3.2 Assembly

3.2.1 Replacing the sealing element

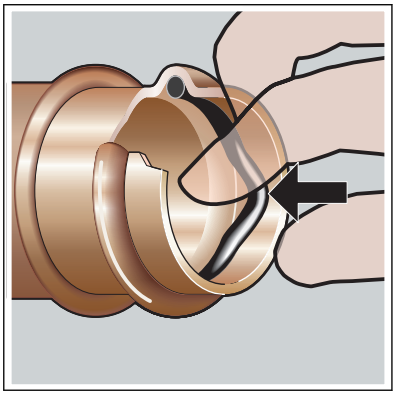
Removing the sealing element

Do not use pointed or sharp-edged objects to remove the sealing element. They may damage the sealing element or the bead.



- Remove the sealing element from the bead.

Inserting the sealing element



- Insert a new, undamaged sealing element into the bead.
- Ensure that the sealing element is completely in the bead.

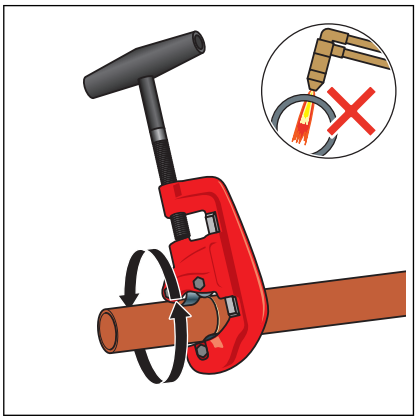
3.2.2 Shortening the pipes

NOTICE!
Leaky press connections due to damaged material!
Press connections can become leaky due to damaged pipes or sealing elements.

Observe the following instructions to avoid damage to pipes and sealing elements:

- Do not use cutting discs (angle grinders) or flame cutters when cutting to length.
- Do not use grease or oils (e.g. cutting oil).

For information about tools, also see *Chapter 3.1.3 „Required tools“ on page 18*.



- Cut the pipe properly using a pipe cutter or fine-toothed hacksaw.

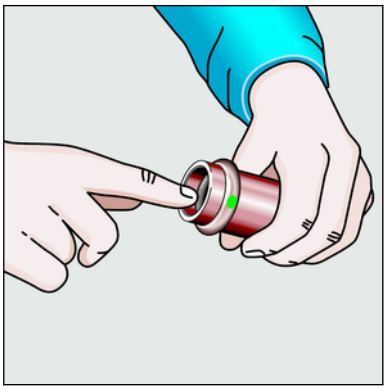
  Avoid grooves on the pipe surface.

3.2.3 Pressing the connection

NOTICE!
Leaky press connections due to pipes being too short

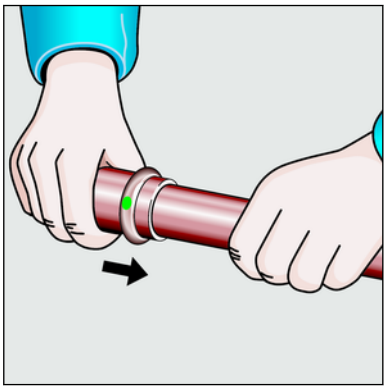
If two press connectors are to be mounted onto a pipe without an interval, the pipe must not be too short. If the pipe is not inserted up to the prescribed insertion depth in the press connector during pressing, the connection may become leaky.

In the case of pipes with a diameter of d 15–28 mm, the pipe must be at least as long as the total insertion depth of both press connectors.

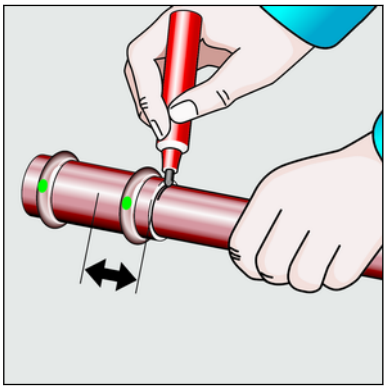


Requirements:

- The pipe end is not bent or damaged.
- The pipe is deburred.
- The correct sealing element is in the press connector.
  EPDM = polished black
- The sealing element is undamaged.
- The sealing element is completely in the bead.



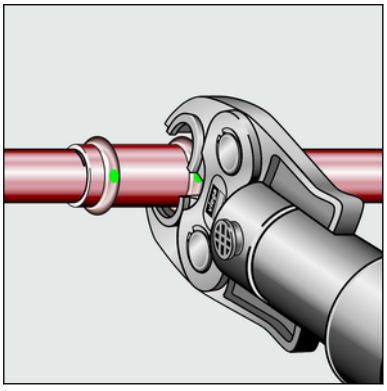
- Push the press connector onto the pipe as far as it will go.



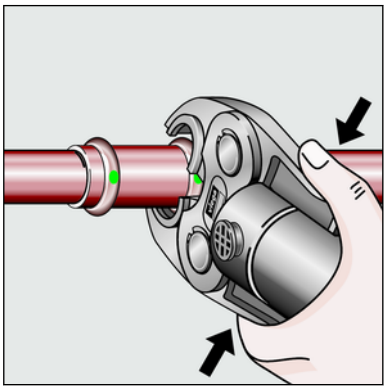
- Mark the insertion depth.

- Place the press jaw on the press machine and push the retaining bolt in until it clicks into place.

  INFO! Observe the press tool instruction manual.



- Open the press jaw and place on the press connector at right angles.
- Check the insertion depth using the marking.
- Ensure that the press jaw is placed centrally on the bead of the press connector.



- Carry out the pressing process.

- Open and remove the press jaw.
  - ⇨ Connection is pressed.

3.2.4 Leakage test

The installer must perform a leakage test before commissioning.

Carry out this test on a system that is finished but not covered yet.

Comply with the general rules of engineering and the applicable directives, see *„Regulations from section: Leakage test“ on page 8*.

Perform leakage test should in acc. with the general rules of engineering for non-potable water installations.

Document the result.

3.3 Maintenance

NOTICE!
Inform your customer or the operator of the potable water installation that the system has to be maintained on a regular basis.

Observe the applicable regulations for the operation and maintenance of potable water installations, see *„Regulations from section: Maintenance“ on page 8*.

Viega recommends actuating the fitting regularly and checking its function.

3.4 Disposal

Separate the product and packaging materials (e. g. paper, metal, plastic or non-ferrous metals) and dispose of in accordance with valid national legal requirements.