Profipress G gas ball valve with SC-Contur, with test opening

Instructions for Use

Model
2671.3

Year built:
from 11/2007

en_INT

Table of contents

1 About these instructions for use

Trade mark rights exist for this document, further information can be found at *www.viega.com/legal-notices*.

1.1 Target groups

The information in this instruction manual is directed at the following groups of people:

- contract installers registered in the installers' register of a utility company
- professional specialist companies for the construction, maintenance and alteration of a natural or liquid gas system

Liquid gas systems may only be constructed, maintained or altered by companies that have the necessary qualification and experience.

It is not permitted for individuals without the abovementioned training or qualification to mount, install and, if required, service 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 against possible life-threatening injury.

WARNING!
This symbol warns against possible serious injury.

CAUTION!
This symbol warns against possible injury.

NOTICE!
This symbol warns against possible damage to property.

Notes give you additional helpful tips.

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 pertinent national laws, standards, regulations and guidelines, as well as other technical guidelines, have priority over German/European guidelines in this manual: The information is not binding for other countries and territories and should, as mentioned, be considered as support.

2 Product information

2.1 Standards and regulations

The following standards and regulations apply:

	Regulations	Scope / Notice
Areas of use		
	DVGW-TRGI 2008	Gas installations
	DVFG-TRF 2012	Liquid gas systems
	DVGW Worksheet G 5614	Industrial, commercial and process plants
	DVGW Worksheet G 462	Industrial, commercial and process plants
	DVGW Worksheet G 459-1	Industrial, commercial and process plants
	DVGW Technical information No. 1(	Industrial, commercial and process plants
Media		
	DVGW Worksheet G 260	Gas quality
Overview		
	DIN EN 331	Gas fittings
	DIN 3537-1	Leak tightness
Sealing elements		
	DIN EN 331	Scope for the operating temperature
Threaded connection		
	DIN EN 10226-1	Threaded pair
	DIN 30660	Permitted sealants
	DIN EN 751-2	Permitted sealants
Compatible components		

DVGW Worksheet G 5614	Pipes
DVGW worksheet GW 392	Copper pipes
DIN EN 1057	Copper pipes
DVGW worksheet GW 541	Stainless steel pipes
DIN EN 10088	Stainless steel pipes

Technical data

DIN EN 331	Operating temperature

Corrosion

DIN 30672	
DVGW-TRGI 2008, Point 5.2.7.1	Outer pipes
DVGW-TRGI 2008, Point 5.2.7.2	Inner pipes
DVFG-TRF 2012, Point 7.2.7.1	Outer pipes
DVFG-TRF 2012, Point 7.2.7.2	Inner pipes

Mounting instructions

DVGW-TRGI 2008	Exceptions, selection criteria, and arrangement of the components
DVFG-TRF 2012	Exceptions, selection criteria, and arrangement of the components
DVGW-TRGI 2008, Point 5.3.9	Application of active and passive protection measures

Leakage test

DVGW-TRGI 2008, Point 5.6	
DVFG-TRF 2012, Point 8	Testing and initial commissioning of a liquid gas system

Maintenance

DVGW-TRGI 2008 Appendix 5c	Operation and maintenance of gas installations

2.2 Intended use

The use of the model for areas of use and media other than those described must be approved by the Viega Service Center.

2.2.1 Areas of use

Use is possible in the following areas among others:

- Gas installations
- Liquid gas installations
- Compressed air systems

For planning, execution, modification and operation of gas installations, observe the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

Use is possible in the gas installations described in the following:

- Gas installations
  - low pressure range ≤ 100 hPa (100 mbar)
  - medium pressure range from 100 hPa (100 mbar) up to 0.1 MPa (1 bar)
- Liquid gas installations
  - with liquid gas tank in medium pressure range downstream of the pressure regulating device, 1st level on the liquid gas tank > 100 hPa (100 mbar) up to a permitted operating pressure of 0.5 MPa (5 bar)
  - with liquid gas tank in the low pressure range ≤ 100 hPa (100 mbar) behind the pressure regulating device, 2nd level
  - with liquid gas pressurised container (liquid gas bottles) < 16 kg behind the small bottle pressure regulating valve
  - with liquid gas tank (liquid gas bottle) ≥ 16 kg behind the large bottle pressure regulating device

Observe the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

2.2.2 Media

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

- Gases, see *Chapter 2.1 „Standards and regulations“ on page 6*
- Liquid gases, only in the gaseous state for domestic and commercial applications, see *Chapter 2.1 „Standards and regulations“ on page 6*.
- Compressed air

2.3 Product description

2.3.1 Overview

Viega gas fittings conform with the requirements of the applicable regulations. The gas fittings have been tested and certified by the DVGW in accordance with the following criteria, see Chapter 2.1 „Standards and regulations“ on page 6:

- *Leak tightness*
- *Higher thermal resistance (HTR)*

The model is equipped as follows:

- casing made of gunmetal
- inlet side with Rp internal thread
- outlet side with Profipress G press connection with SC-Contur
- test opening < 1 mm
- test screw in the dimension G ⅛
- yellow, powder-coated T handle made of metal, rotatable by 90°

The model is lead-sealable and, in addition, can be locked using a commercially available padlock.

The model is available in the following dimensions:

DN	Rp	d
20	¾	22
25	¾	28
25	1	22
25	1	28

2.3.2 Press connection with SC-Contur

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

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

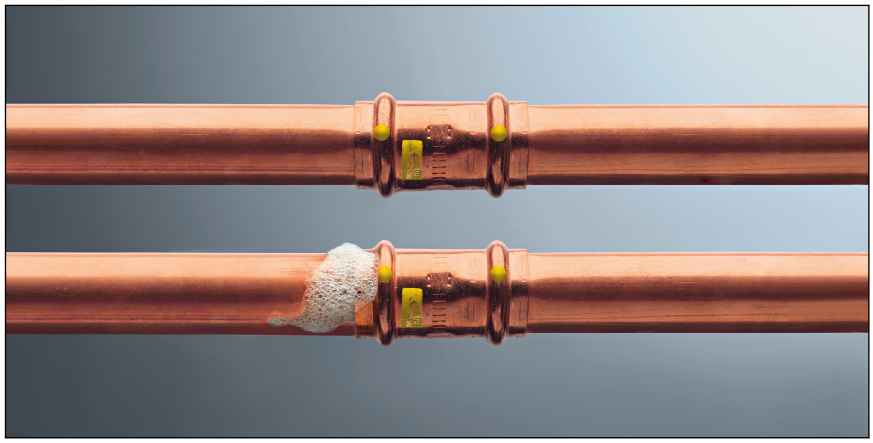


Fig. 2: SC-Contur

SC-Contur

Viega press connections 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 be leaky 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 dry leakage test in the pressure range from 22 hPa–0.3 MPa (22 mbar–3.0 bar)

2.3.3 Sealing elements

The press connection is factory-fitted with a yellow HNBR sealing element.

Use	Gas installation	Liquid gas installation
Operating temperature	-20 °C up to +70 °C	-20 °C up to +70 °C
Operating pressure	≤ 0.5 MPa (5 bar) (MOP 5) ≤ 0.1 MPa (1 bar) (HTR / GT1)[2)]	≤ 0.5 MPa (5 bar) (MOP 5)[1)] ≤ 0.1 MPa (1 bar) (HTR / GT1)[2)]

[1)]The maximum pressure equates the pick-up pressure of the SSV in the pressure regulating valve.

[2)] Operating pressure at HTR requirement max. 0.1 MPa (1 bar) (GT1).

In accordance with the valid regulations, the scope of the operating temperature is between -20 °C and +60 °C, see *Chapter 2.1 „Standards and regulations“ on page 6*.

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 *Chapter 2.1 „Standards and regulations“ on page 6*. 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 *Chapter 2.1 „Standards and regulations“ on page 6*.

Establish the threaded connection first and the press connection next.

2.3.5 Markings on components

The press connections are 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:

- *MOP5* for maximum operating pressure 0.5 MPa (5 bar)
- *GT1* for maximum operating pressure with HTR requirement 0.1 MPa (1 bar)
- Flow direction indicator
- DVGW writing
- HTR marking
- yellow dot and yellow rectangle for gas

2.3.6 Compatible components

The model is compatible with the following systems:

- Profipress G
- Sanpress Inox G

Profipress G gas fittings are equipped with press connections.

The press connections are tested and certified in accordance with applicable regulations with the following types of pipe, see *Chapter 2.1 „Standards and regulations“ on page 6*.

- Copper pipes
- Stainless steel pipes (material 1.4401)

Profipress G gas fittings may only be connected to the Sanpress Inox stainless steel pipe (material 1.4401) up to dimension d 28.

Please contact the Viega Service Center for questions on this subject.

2.3.7 Technical data

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

Use	Gas installation	Liquid gas installation
Operating temperature	-20° C up to +70° C	-20° C up to +70° C
Operating pressure	≤ 0.5 MPa (5 bar) (MOP 5) ≤ 0.1 MPa (1 bar) (HTR / GT1)[2)]	≤ 0.5 MPa (5 bar) (MOP5)[1)] ≤ 0.1 MPa (1 bar) (HTR / GT1)[2)]

[1)] Maximum pressure – equates to the pick-up pressure of the SSV in the pressure regulating valve

[2)] Operating pressure at HTR requirement max. 0.1 MPa (1 bar) (GT1)

In accordance with the applicable regulations, the scope of the operating temperature is between -20 °C and +60 °C, see *Chapter 2.1 „Standards and regulations“ on page 6*.

2.4 Information for use

2.4.1 Corrosion

Depending on the area of use, corrosion protection measures may have to be taken into account.

One differentiates between external pipelines (underground and overground external pipelines), as well as internal pipelines.

For corrosion protection, comply with the applicable directives, see *Chapter 2.1 „Standards and regulations“ on page 6*.

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

There are exceptions in the following cases:

- There is external contact with materials containing chloride.
- Stainless steel pipes must not come into contact with building materials or mortar containing chloride.
- There is contact with aggressive building materials such as materials containing nitrite or ammonium.
- in aggressive surroundings

3 Handling

3.1 Assembly information

3.1.1 Mounting instructions

Checking system components

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.

Mounting conditions

Observe the following when mounting:

- Observe flow direction indicator.
- Do not cover or paint the model.
- Do not install the model in heat zones (e. g. with hot emissions or strong heat radiation.
- Use suitable tools.

Exceptions, selection criteria and the arrangement of the components are described in the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

NOTICE!
Use active and possibly passive protection measures to protect a gas installation from tampering by unauthorised persons.

Generally use active protective measures.

Choose passive protective measures matching the installation, and use them.

The use of active and passive protection measures is specified in the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

3.1.2 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 adapter jaw, suitable for the pipe diameter and suitable profile

Fig. 3: Press jaws

Recommended Viega press machines:

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

3.2 Mounting

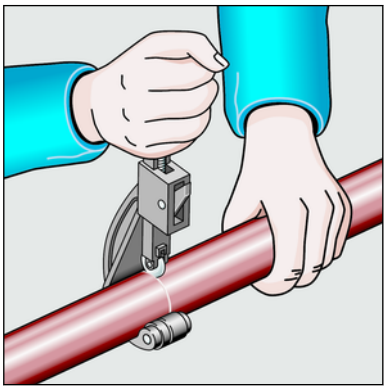
3.2.1 Shortening the pipes

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.

Therefore, the pipe length must be exactly equal to the total insertion depth of the two press connectors.

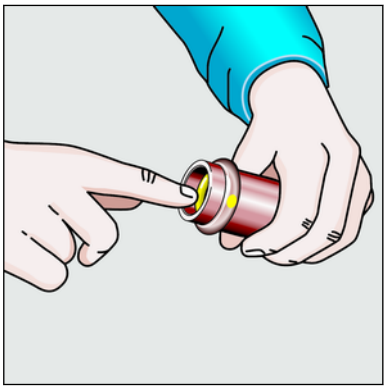
For information about tools, also see *Chapter 3.1.2 „Required tools“ on page 14*.



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

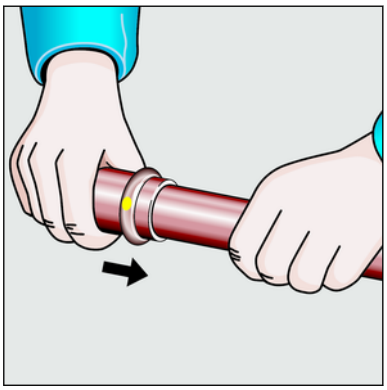
  Avoid grooves on the pipe surface.

3.2.2 Pressing the connection

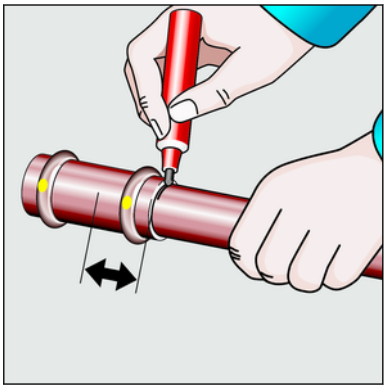


Requirements:

- The pipe end is not bent or damaged.
- The pipe is deburred.
- The correct sealing element is in the press connector.
  HNBR = yellow
- The sealing element is undamaged.
- The complete sealing element is in the bead.



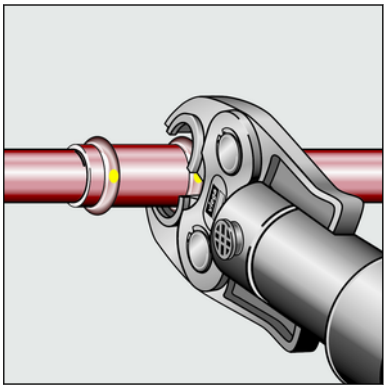
- Push the press connector onto the pipe as far as it will go.



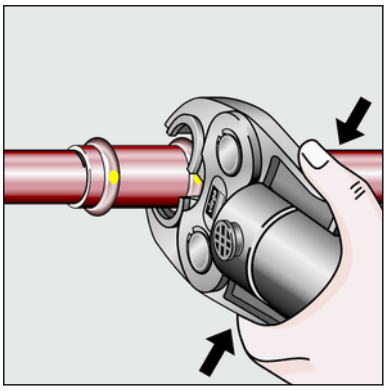
- Mark the insertion depth.

- Place the press jaw onto 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 at a right-angle onto the connector.
- 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.

3.2.3 Leakage test

The installer must perform a leakage test before commissioning.

This test is carried out on a system that is finished but not yet covered.

Observe the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

Document the result.

3.3 Maintenance

Gas installations must be given a visual inspection, e. g. by the owner, once a year.

Serviceability and leak tightness must be checked every twelve years by an installation contractor.

To be covered by the warranty and to ensure the safe operation of the gas installations, operate and maintain them as intended. For more detailed information, refer to the applicable regulations, see *Chapter 2.1 „Standards and regulations“ on page 6*.

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.