Profipress G gas meter corner ball valve with SC-Contur

Instructions for Use



for single-pipe gas meters

Model
G2111

Year built:
from 01/1990

en_INT

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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 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.

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. National regulations can be found on the relevant web site of your country at *viega.com/standards*.

Regulations from section: Fields of application

Scope / Notice	Regulations applicable in Germany
Planning, execution, modification and operation of gas installations	DVGW-TRGI 2008
Planning, execution, modification and operation of liquid gas installations	DVFG-TRF 2012
Gas installations in industrial, commercial, and process engineering systems	DVGW-Arbeitsblatt G 5614
Gas installations in industrial, commercial, and process engineering systems	DVGW-Arbeitsblatt G 462
Gas installations in industrial, commercial, and process engineering systems	DVGW-Arbeitsblatt G 459-1
Gas installations in industrial, commercial, and process engineering systems	DVGW Fachinformation Nr. 10

Regulations from section: Media

Scope / Notice	Regulations applicable in Germany
Gas characteristics	DVGW-Arbeitsblatt G 260

Regulations from section: Overview

Scope / Notice	Regulations applicable in Germany
Requirements in gas fittings	DIN EN 331
Criteria for leak tightness	DIN 3537-1

Regulations from section: Sealing elements

Scope / Notice	Regulations applicable in Germany
Scope for the operating temperature	DIN EN 331

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: Compatible components

Scope / Notice	Regulations applicable in Germany
Permitted pipe types	DVGW-Arbeitsblatt G 5614
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 10088

Regulations from section: Technical data

Scope / Notice	Regulations applicable in Germany
Scope for the operating temperature	DIN EN 331

Regulations from section: Corrosion

Scope / Notice	Regulations applicable in Germany
Corrosion protection	DIN 30672
Corrosion protection for external pipes	DVGW-TRGI 2008, Point 5.2.7.1
Corrosion protection for internal pipelines	DVGW-TRGI 2008,, Point 5.2.7.2
Corrosion protection for external pipes	DVFG-TRF 2012,, Point 7.2.7.1
Corrosion protection for internal pipelines	DVFG-TRF 2012,, Point 7.2.7.2

Regulations from section: Notes on mounting

Scope / Notice	Regulations applicable in Germany
Gas installations	DVGW-TRGI 2008
Liquid gas installations	DVFG-TRF 2012
Application of active and passive protection measures	DVGW-TRGI 2008, Point 5.3.9
Use of sealing elements	DIN 3376-2

Regulations from section: Leakage test

Scope / Notice	Regulations applicable in Germany
Leakage test for gas installations	DVGW-TRGI 2008, Point 5.6
Leakage test for liquid gas installations	DVFG-TRF 2012, Point 8

Regulations from section: Maintenance

Scope / Notice	Regulations applicable in Germany
Ensuring and maintaining a safe operating condition	DVGW-TRGI 2008 Appendix 5c

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.

2.2.1 Areas of use

Use is possible in the following areas among others:

- Gas installations
- Liquid gas installations

For planning, execution, modification and operation of gas installations, observe the applicable regulations, see *„Regulations from section: Fields of application“ 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 valve, 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 valve, 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 *„Regulations from section: Fields of application“ on page 6*.

2.2.2 Media

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

- Gases, see *„Regulations from section: Media“ on page 6*
- Liquid gases, only in the gaseous state for domestic and commercial applications, see *„Regulations from section: Media“ on page 6*.

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 brass
- inlet side with R external thread
- outlet side with Profipress G press connection screw fitting with SC-Contur
- test opening < 1 mm
- test screw in the dimension G ⅛

In addition, the model is equipped with a G 2 thread, onto which the gas meter is connected.

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

The yellow protective sleeve on the actuating lever shows the medium to be gas.

The model is available in the following dimension: R 1 x d 22.

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 upstream and downstream of the bead and permanently connected to the pipe during pressing. The sealing element is not deformed during pressing.

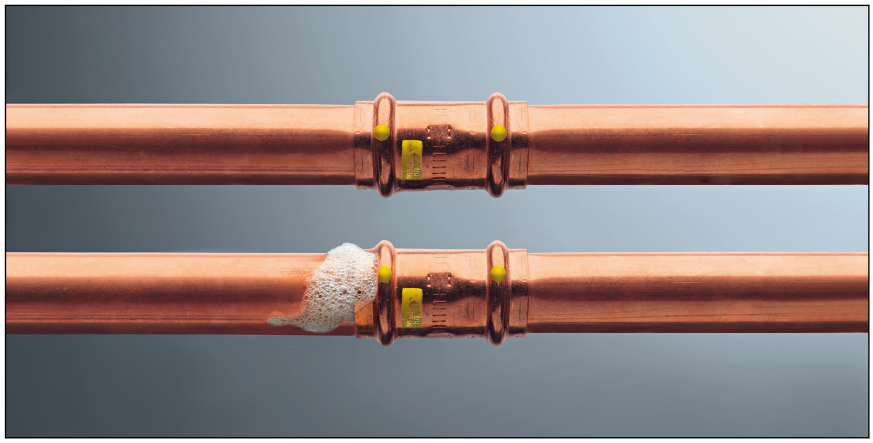


Fig. 2: SC-Contur

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 to the pick-up pressure of the SSV in the pressure regulating valve.

[2)] Operating pressure at HTR requirement is 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 *„Regulations from section: Sealing elements“ on page 7*.

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 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
- position indicator
- batch number

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.

Observe the pertinent guidelines for corrosion protection, see *„Regulations from section: Corrosion“ on page 8*.

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.
- Observe required space for the gas meters according to the manufacturer's information.
- 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.

NOTICE!
Use sealing element once only
Each time you removed the connection screw fitting, replace the sealing element by a new one; also refer to *„Regulations from section: Notes on mounting“ on page 8*.

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

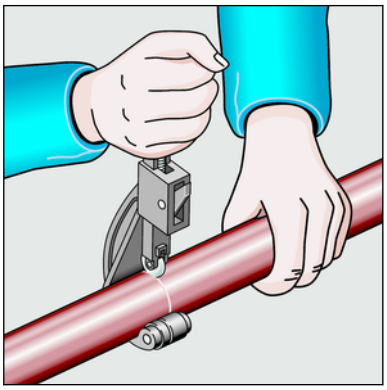
3.2.1 Shortening the pipes

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.

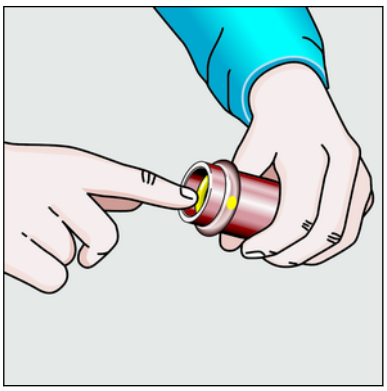
Therefore, the pipe length must be exactly equal to the total insertion depth of the two press connectors.

For information about tools, also see *Chapter 3.1.2 „Required tools“ on page 16*.



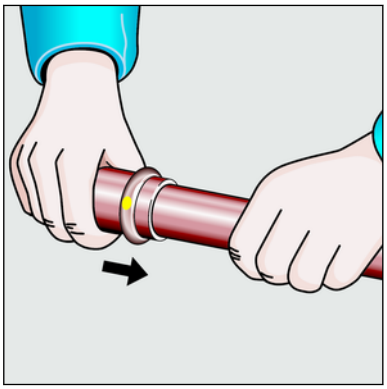
- Cut the pipe properly using a pipe cutter or fine-toothed hacksaw.
  Avoid grooves on the pipe surface.

3.2.2 Pressing the connection

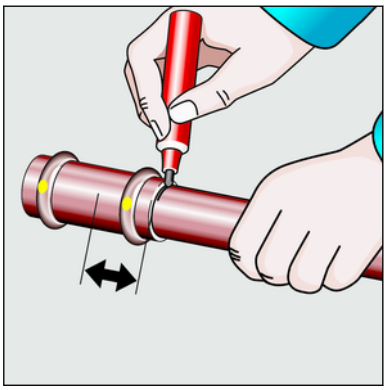


Requirements:

- 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.



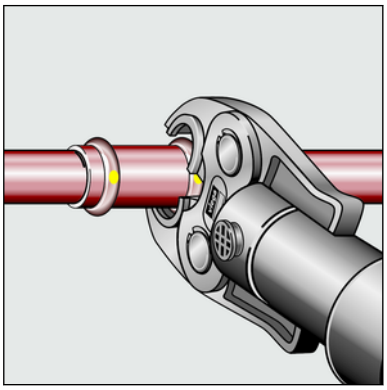
▶ Push the press connector onto the pipe as far as it will go.



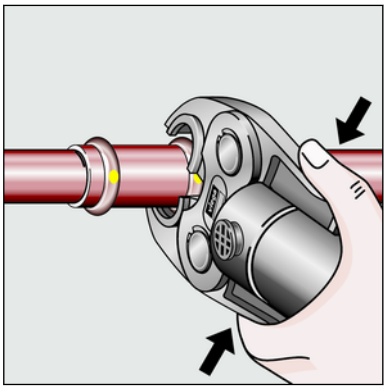
▶ Mark the insertion depth.

▶ 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.

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

Document the result.

By employing an overflow cap (model G2360), you can also test the continuous gas installation without mounted gas meters.

3.3 Maintenance

The gas installation 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 *„Regulations from section: Maintenance“ on page 8*.

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.