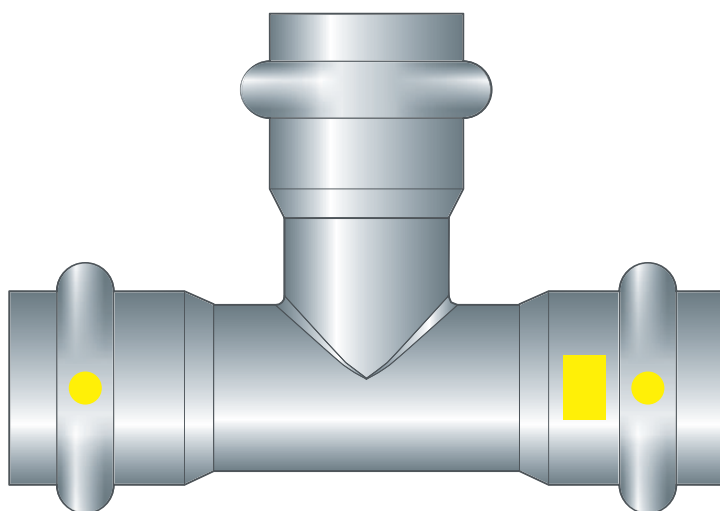
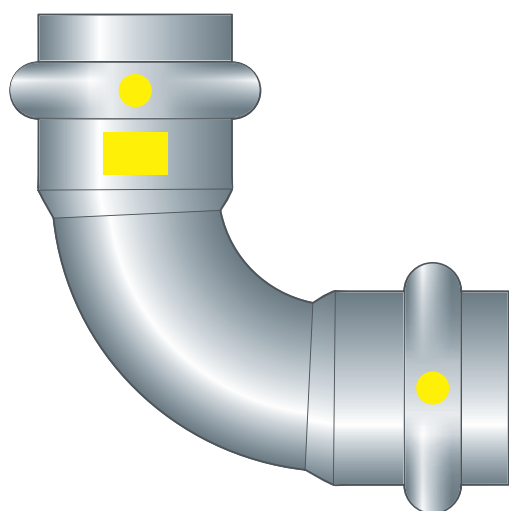
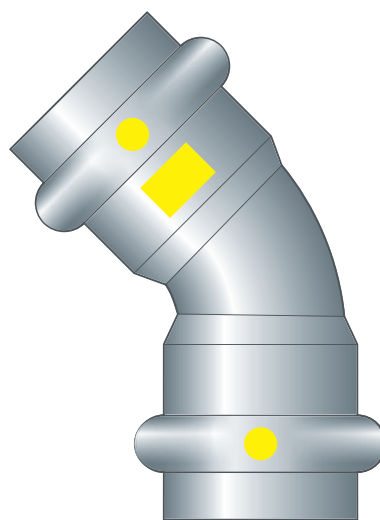
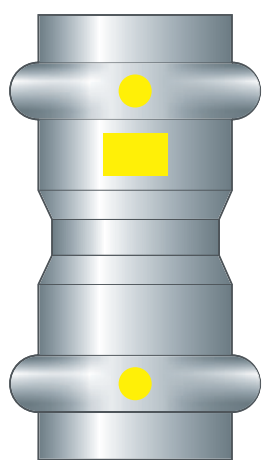


Instructions for Use

Sanpress Inox G



Press connector system made of stainless steel with stainless steel pipes

System
Sanpress Inox G

Year built (from)
02/2004

viega

Table of contents

1	About these instructions for use	3
	1.1 Target groups	3
	1.2 Labelling of notes	3
	1.3 About this translated version	4
2	Product information	5
	2.1 Standards and regulations	5
	2.2 Intended use	7
	2.2.1 Areas of use	7
	2.2.2 Media	8
	2.3 Product description	8
	2.3.1 Overview	8
	2.3.2 Pipes	9
	2.3.3 Press connectors	11
	2.3.4 Sealing elements	11
	2.3.5 Markings on components	12
	2.4 Information for use	13
	2.4.1 Corrosion	13
3	Handling	14
	3.1 Transport	14
	3.2 Storage	14
	3.3 Assembly information	14
	3.3.1 Mounting instructions	14
	3.3.2 Permitted exchange of sealing elements	15
	3.3.3 Space requirements and intervals	16
	3.3.4 Required tools	18
	3.4 Assembly	19
	3.4.1 Replacing the sealing element	19
	3.4.2 Bending pipes	20
	3.4.3 Shortening the pipes	21
	3.4.4 Deburring the pipes	21
	3.4.5 Pressing the connection	22
	3.4.6 Leakage test	23
	3.5 Maintenance	23
	3.6 Disposal	24

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
- 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.au/standards

Regulations from section: Fields of application

Scope / Notice	Regulations applicable in Germany
Planning, execution, modification and operation of gas installations	DVGW-TRGI 2018
Gas installations for industrial, commercial and process plants	DVGW-Arbeitsblatt G 5614
Gas installations for industrial, commercial and process plants	DVGW-Arbeitsblatt G 462
Gas installations for industrial, commercial and process plants	DVGW-Arbeitsblatt G 459-1
Gas installations for industrial, commercial and process plants	DVGW-Fachinformation Nr. 10
Planning, execution, modification and operation of liquid gas installations	DVFG-TRF 2012

Regulations from section: Media

Scope / Notice	Regulations applicable in Germany
Suitability for gasses Liquid gas in the gaseous state	DVGW-Arbeitsblatt G 260
Suitability for fuel oil	DIN 51603-1
Suitability for Diesel fuel	DIN EN 590

Regulations from section: Pipes

Scope / Notice	Regulations applicable in Germany
Stainless steel pipes with material number 1.4401	DIN EN 10088
Stainless steel pipes with material number 1.4401	DVGW-Arbeitsblatt GW 541
Rules of the fixing technology for gas installations	DVGW-TRGI 2018, Point 5.3.7
Rules of the fixing technology for gas installations	DVFG-TRF 2012, Point 7.3.6

Regulations from section: Corrosion

Scope / Notice	Regulations applicable in Germany
(Subsequent) corrosion protection for underground installation	DIN 30672
Corrosion protection for external pipes	DVGW-TRGI 2018, Point 5.2.7.1
Corrosion protection for internal pipelines	DVGW-TRGI 2018, Point 5.2.7.2
Corrosion protection measures for external pipelines	DVFG-TRF 2012, Point 7.2.7.1
Corrosion protection for internal pipelines	DVFG-TRF 2012, Point 7.2.7.2
Overground pipelines in recesses in the bare floor or levelling layer	DVGW-TRGI 2008, Point 5.3.7.8.4

Regulations from section: Storage

Scope / Notice	Regulations applicable in Germany
Requirements for material storage	DIN EN 806-4, Chapter 4.2

Regulations from section: Notes on mounting

Scope / Notice	Regulations applicable in Germany
The general rules of mounting for gas installations	DVGW-TRGI 2018, Point 5.3.7

Regulations from section: Leakage test

Scope / Notice	Regulations applicable in Germany
Leakage test for gas installations	DVGW-TRGI 2018, Point 5.6
Testing and initial commissioning of a liquid gas system	DVFG-TRF 2012, Point 8

Regulations from section: Maintenance

Scope / Notice	Regulations applicable in Germany
Ensuring and maintaining a safe operating condition of gas installations	DVGW-TRGI 2018, Appendix 5c

2.2 Intended use



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



The expression "SC-Contur" appearing in the instructions for use means "Smart Connect Feature".

2.2.1 Areas of use

Use is possible in the following areas among others:

- Gas installations, see ↗ 'Regulations from section: Fields of application' on page 5
- Liquid gas installations, also see ↗ 'Regulations from section: Fields of application' on page 5.
- Heating oil pipelines
- Diesel pipes
- Compressed air systems

Use is possible in the gas installations described below:

- Gas installations
 - Low pressure range ≤ 100 hPa (100 mbar, 10 kPa)
 - Medium pressure range from 100 hPa (100 mbar, 10 kPa) up to 0.1 MPa (1 bar, 100 kPa)
 - industrial, commercial and process technical systems with the corresponding directives and technical regulations
- 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, 10 kPa) up to a permitted operating pressure of 0.5 MPa (5 bar, 500 kPa)
 - With liquid gas tank in the low pressure range ≤ 100 hPa (100 mbar, 10 kPa) 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

2.2.2 Media

The system is suitable for the following media, amongst others:

For the applicable directives, see ↗ *'Regulations from section: Media' on page 5.*

- Gases
- Liquid gases, only in the gaseous state for domestic and commercial applications
- Heating oil
- Diesel fuel
- Compressed air

2.3 Product description

2.3.1 Overview

The piping system consists of press connectors in connection with stainless steel pipes and the corresponding press tools.

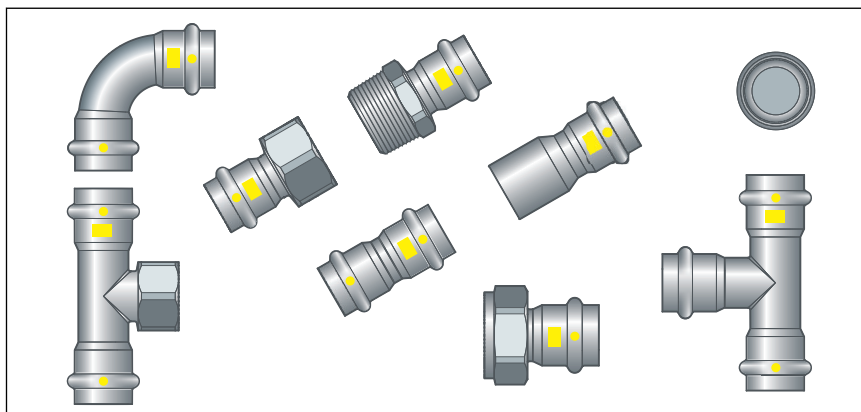


Fig. 1: Sanpress Inox G press connectors

The system components are available in the following dimensions:
d 15 / 18 / 22 / 28 / 35 / 42 / 54.

2.3.2 Pipes

Only 1.4401 Sanpress stainless steel pipes or stainless steel pipes according to the valid regulations with the material number 1.4401 may be used, see ↗ *'Regulations from section: Pipes'* on page 6.

The following pipe is available from the system described:

Type of pipe	Stainless steel pipe 1.4401
d	15 / 18 / 22 / 28 / 35 / 42 / 54
Areas of use	Gas installations
Material No.	1.4401 (X5CrNiMo 17-12-2), with 2.3 % molybdenum for increased durability
PRE value	24.1
Pipe marking	—
Protective cap	yellow

Pipe key data Sanpress pipe (1.4401)


d x s _{min} [mm]	Volume per metre of pipe [l/m]	Pipe weight [kg/m]
15 x 1.0	0.13	0.35
18 x 1.0	0.20	0.43
22 x 1.2	0.30	0.65
28 x 1.2	0.51	0.84
35 x 1.5	0.80	1.26

d x s _{min} [mm]	Volume per metre of pipe [l/m]	Pipe weight [kg/m]
42 x 1.5	1.19	1.52
54 x 1.5	2.04	1.97

Laying and fixing pipes

Only pipe clamps with chloride-free sound insulating inlays should be used to secure the pipes.

Observe the general rules of fixing technology:

- For gas installations, see  'Regulations from section: Pipes' on page 6.
- Only fix on components with sufficient stability.
- Gas supply lines must not be secured to other pipelines nor should they be used as support for other pipelines.
- The system can be secured using commercially available plastic dowels together with non-flammable pipe clamps (e. g. metallic pipe clamps).

For gas supply lines, the following fixing intervals must be observed for pipelines laid horizontally:

Interval between the pipe clamps

d [mm]	Fixing interval between the pipe clamps [m]
15.0	1.25
18.0	1.50
22.0	2.00
28.0	2.25
35.0	2.75
42.0	3.00
54.0	3.50

These distances are manufacturer's specifications. Observe the national regulations for the relevant applications.

2.3.3 Press connectors

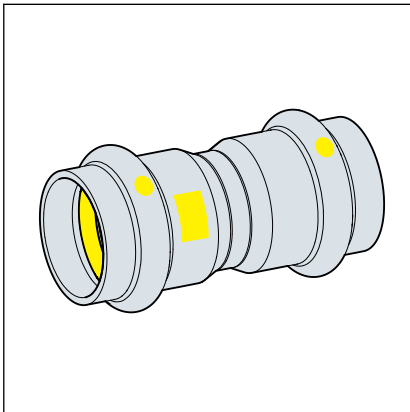


Fig. 2: Press connectors

The press connectors have a circumferential bead in which the sealing element lies. The press 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.

Smart Connect Feature (SC-Contur)

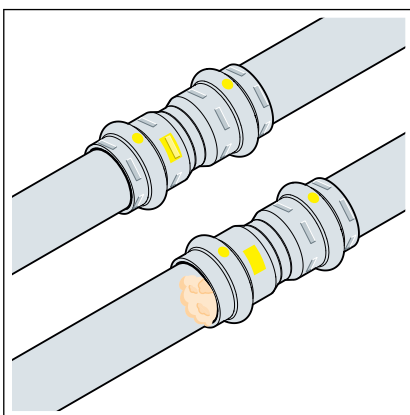


Fig. 3: Smart Connect Feature (SC-Contur)

Viega press connectors are equipped with the Smart Connect Feature (SC-Contur). The Smart Connect Feature (SC-Contur) is a safety technology that is certified by the DVGW and ensures that the press connector is guaranteed to be leaky in an unpressed state. In this way, inadvertently unpressed connections are noticed during a leakage test.

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

- in the case of the dry leakage test, in the pressure range from 2.2–300 kPa (22 mbar–3.0 bar)

2.3.4 Sealing elements

The press connectors are factory-set with yellow HNBR sealing elements.

Use	Gas installation	Liquid gas installation	Heating oil and diesel pipelines
Operating temperature	-20 °C up to +70 °C	-20 °C up to +70 °C	≤ 40 °C
Operating pressure	≤ 0.5 MPa (5 bar, 500 kPa) (MOP 5)	≤ 0.5 MPa (5 bar, 500 kPa) (MOP 5)	≤ 0.5 MPa (5 bar, 500 kPa)
	≤ 0.5 MPa (5 bar, 500 kPa) (HTB / GT5) ¹⁾	≤ 0.5 MPa (5 bar, 500 kPa) (MOP 5)	

¹⁾ Operating pressure at HTR requirement max. 0.5 MPa (5 bar, 500 kPa) (GT5)

2.3.5 Markings on components

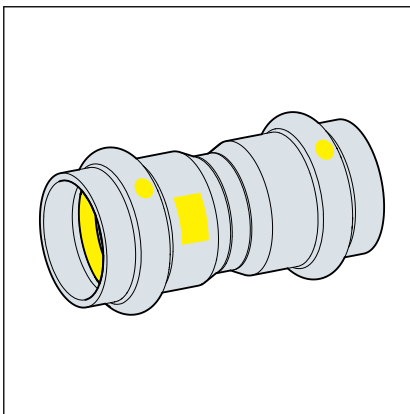
Pipe marking

The pipe markings contain important information regarding the material configuration and manufacture of the pipes. Their meaning is as follows:

- manufacturer
- system name
- pipe material
- certification
- Dimension
- supplier's mark
- date of manufacture
- batch number
- CE mark
- DOP and DOP number
- manufacturing standard

Markings on press connectors

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



The press connectors are marked as follows:

- yellow dot and yellow rectangle for gas
- Gas for gas supply lines
- *MOP5* for maximum operating pressure 0.5 MPa (5 bar, 500 kPa)
- *GT5* for maximum operating pressure with HTR requirement 0.5 MPa (5 bar, 500 kPa)
- *DVGW*
- *SVGW*

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.

Information about the area of use, also see ↗ *Chapter 2.2.1 'Areas of use' on page 7.*

The pertinent guidelines must be observed for corrosion protection, see ↗ *'Regulations from section: Corrosion' 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.
- in aggressive surroundings
- In recesses within bare floors or in the compensating layer, they must be treated in the same way as buried external pipelines, see ↗ *'Regulations from section: Corrosion' on page 6.*

3 Handling

3.1 Transport

Observe the following when transporting pipes:

- Do not pull the pipes over the sill. The surface could be damaged.
- Secure pipes during transportation. Pipes may become bent due to shifting.
- Do not damage the protective caps on the pipe ends and do not remove them until immediately before mounting. Damaged pipe ends must not be pressed.

3.2 Storage

For storage, comply with the requirements specified in the applicable regulations, see [↗ 'Regulations from section: Storage' on page 6](#):

- Store components in a clean and dry place.
- Do not store the components directly on the floor.
- Provide at least three points of support for the storage of pipes.
- Where possible, store different sizes separately.
Store small sizes on top of larger sizes if separate storage is not possible.
- Only use stainless steel cleaning agent to clean surfaces.
- Store pipes of different materials separately to prevent contact corrosion.

3.3 Assembly information

3.3.1 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.



NOTICE!

Active and possibly passive protection measures are required to protect a gas installation from tampering by unauthorised persons, see ↗ *'Regulations from section: Notes on mounting'* on page 6.

Active protective measures must always be taken.

Passive protective measures must be selected and employed depending on the installation.

The general rules of mounting for gas supply lines

The following conditions amongst others are valid when laying gas supply lines:

- Lay gas supply lines with clearance from the installation body, concealed without hollow spaces, or in ventilated ducts or shafts.
- Do not install gas supply lines with operating pressures > 100 hPa (100 mbar, 10 kPa) concealed in the wall.
- Arrange gas supply lines in such a way that condense water or water dripping from other pipes and components does not affect them.
- Do not lay gas supply lines in screed.
- Shut-off systems and detachable connections must be easily accessible.

Requirements on concealed installations:

- Lay stress-free.
- Apply corrosion protection.
- Do not use any detachable connections (screw fittings).



Continuous, connection-free gas supply lines may be laid in hollow spaces (pre-wall constructions) to be connected to a gas device or a gas socket.

Ventilation is not required.

3.3.2 Permitted exchange of sealing elements



Important instruction

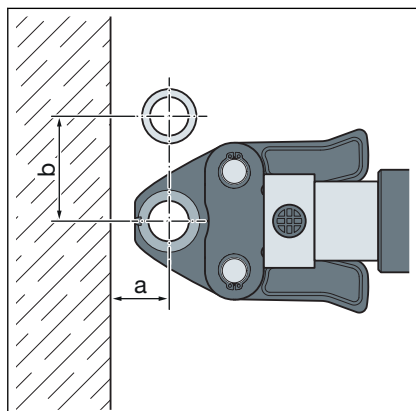
With their material-specific qualities, sealing elements in press connectors are adapted for use with the corresponding media and/or the areas of use of the piping systems and are generally only certified for them.

The exchange of a sealing element is generally permitted. The sealing element must be replaced by a sealing element of the same material ↗ *Chapter 2.3.4 'Sealing elements'* on page 11. The use of other sealing elements is not permitted.

If the sealing element in the press connector is obviously damaged, it should be exchanged for a Viega spare sealing element made of the same material.

3.3.3 Space requirements and intervals

Pressing between pipelines

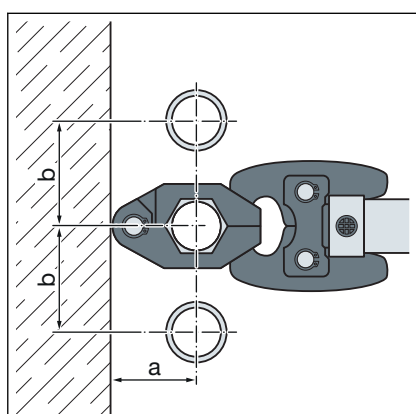


Space requirement PT1, type 2 (PT2), PT3-EH, PT3-AH, Pressgun 4B, 4E, 5

d	15	18	22	28	35	42	54
a [mm]	20	20	25	25	30	45	50
b [mm]	50	55	60	70	85	100	115

Space requirement Picco, Pressgun Picco

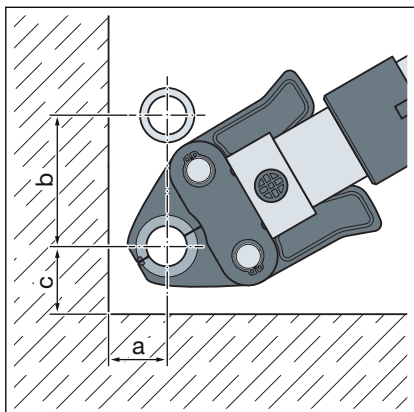
d	15	18	22	28	35
a [mm]	25	25	25	25	25
b [mm]	60	60	65	65	65



Space requirement press ring

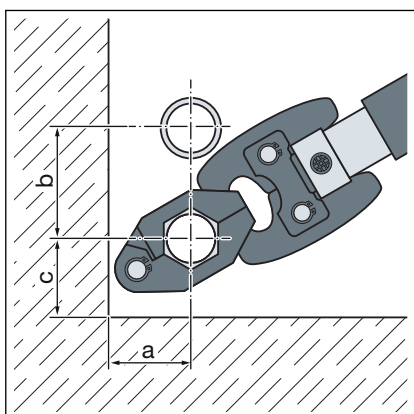
d	15	18	22	28	35	42	54
a [mm]	40	45	45	50	55	60	65
b [mm]	50	55	60	70	75	85	90

Pressing between pipe and wall



Space requirement Picco, Pressgun Picco

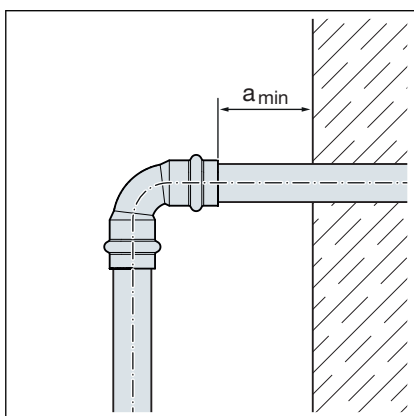
d	15	18	22	28	35
a [mm]	30	30	30	30	30
b [mm]	70	70	75	80	80
c [mm]	40	40	40	40	40



Space requirement press ring

d	15	18	22	28	35	42	54
a [mm]	40	45	45	50	55	60	65
b [mm]	50	55	60	70	75	85	90
c [mm]	35	40	40	45	50	55	65

Wall distance



Minimum distance with d 15–54

Press machine	a_{min} [mm]
PT1	45
Type 2 (PT2)	50
Type PT3-EH	
Type PT3-AH	
Pressgun 4E / 4B	
Pressgun 5	35
Picco / Pressgun Picco	

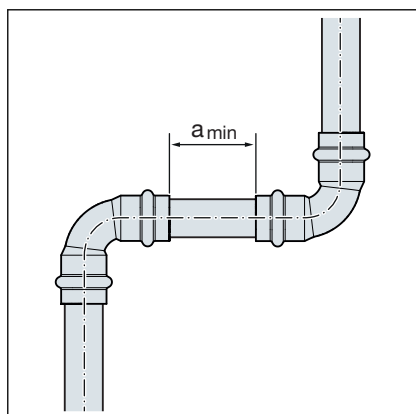
Interval between the pressings



NOTICE! Leaking 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.

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



Minimum distance with press jaws d 15–54

d	a_{\min} [mm]
15	0
18	0
22	0
28	0
35	10
42	15
54	25

Z dimensions

For the Z dimensions, refer to the respective product page in the online catalogue.

3.3.4 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

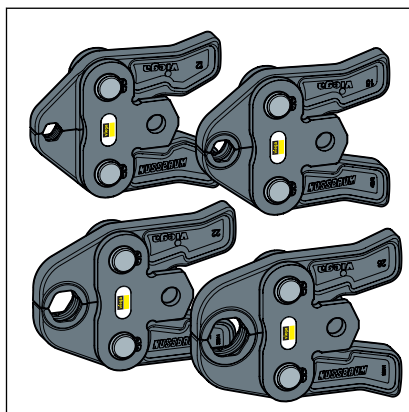


Fig. 4: Press jaws



Viega recommends the use of Viega system tools when installing the press fittings.

The Viega system press tools have been developed and tailored specifically for the installation of Viega press connector systems.

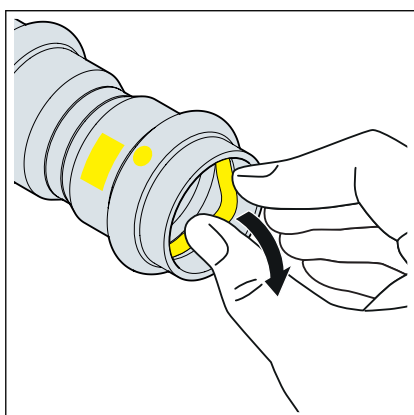
3.4 Assembly

3.4.1 Replacing the sealing element

Removing the sealing element

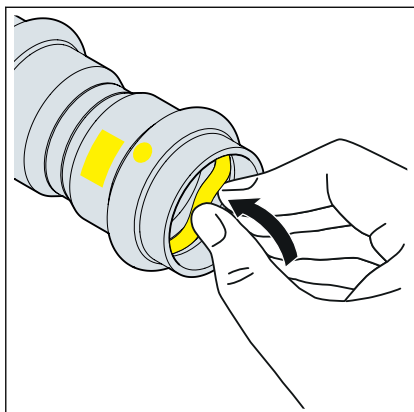


Do not use pointed or sharp-edged objects to remove the sealing element. They may damage the sealing element or the bead.

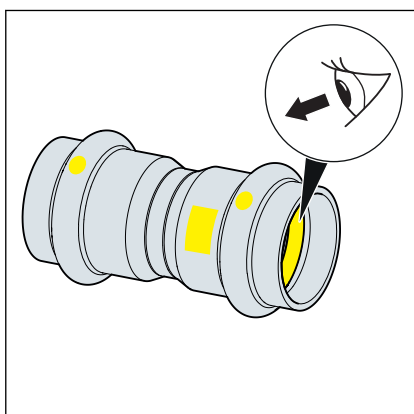


➤ Remove the sealing element from the bead.

Inserting the sealing element

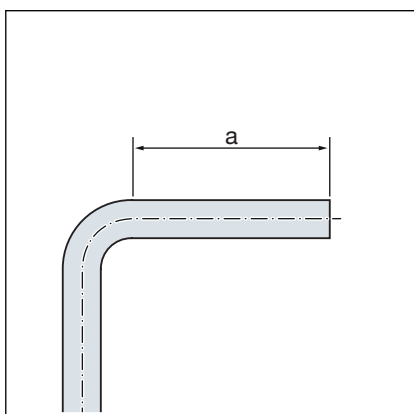


► Insert a new, undamaged sealing element into the bead.



► Ensure that the complete sealing element is in the bead.

3.4.2 Bending pipes



Pipes in the sizes d 15, 18, 22 and 28 can be bent cold with commercially available bending equipment (radius at least $3.5 \times d$).

The pipe ends (a) must be at least 50 mm long so that the press connectors can be mounted properly.

3.4.3 Shortening the pipes



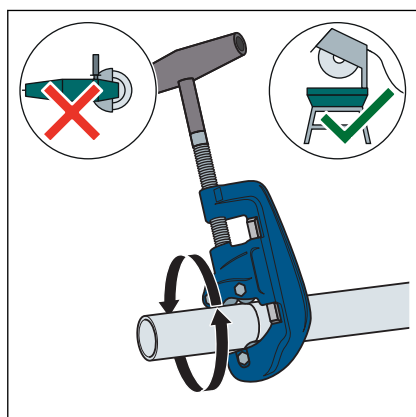
NOTICE! **Leaking press connections due to damaged material!**

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 3.3.4 'Required tools'](#) on page 18.



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

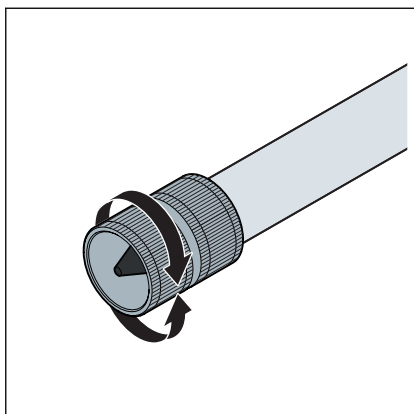
3.4.4 Deburring the pipes

The pipe ends must be thoroughly deburred internally and externally after shortening.



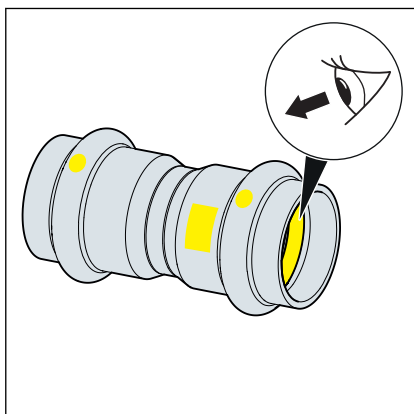
NOTICE! **Damage due to the wrong tool!**

Do not use sanding disks or similar tools when deburring. The pipes could be damaged by these.



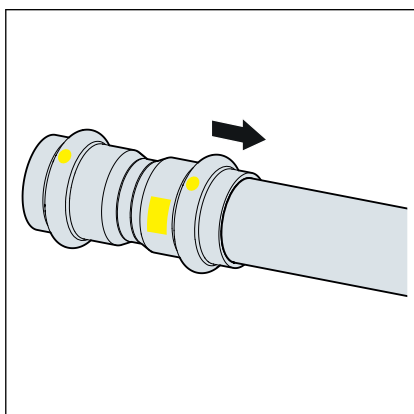
► Deburr the inside and outside of the pipe.

3.4.5 Pressing the connection

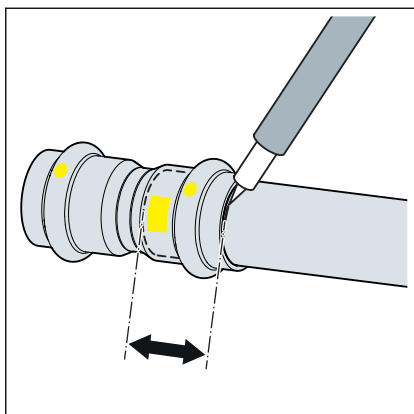


Requirements:

- 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.

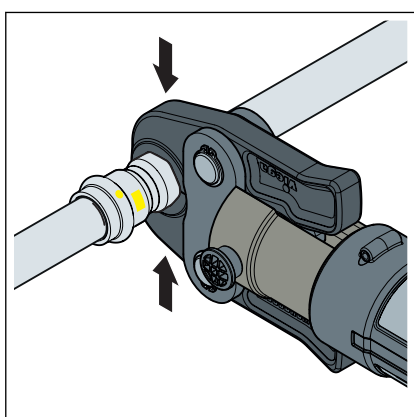


► Push the press connector onto the pipe as far as it will go.

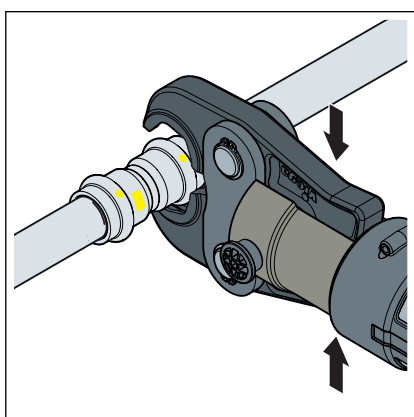


- Mark the insertion depth.
- Place the press jaw onto the press machine and push the retaining bolt in until it clicks into place.

INFO! Observe the press tool instruction manual.



- Open the press jaw and place it at a right-angle onto the press 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.

3.4.6 Leakage test

The installer must perform a leakage test before commissioning.

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

Observe the applicable regulations, see [🔗 'Regulations from section: Leakage test' on page 7.](#)

Document the result.

3.5 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, see ↗ *'Regulations from section: Maintenance' on page 7.*

3.6 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.



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