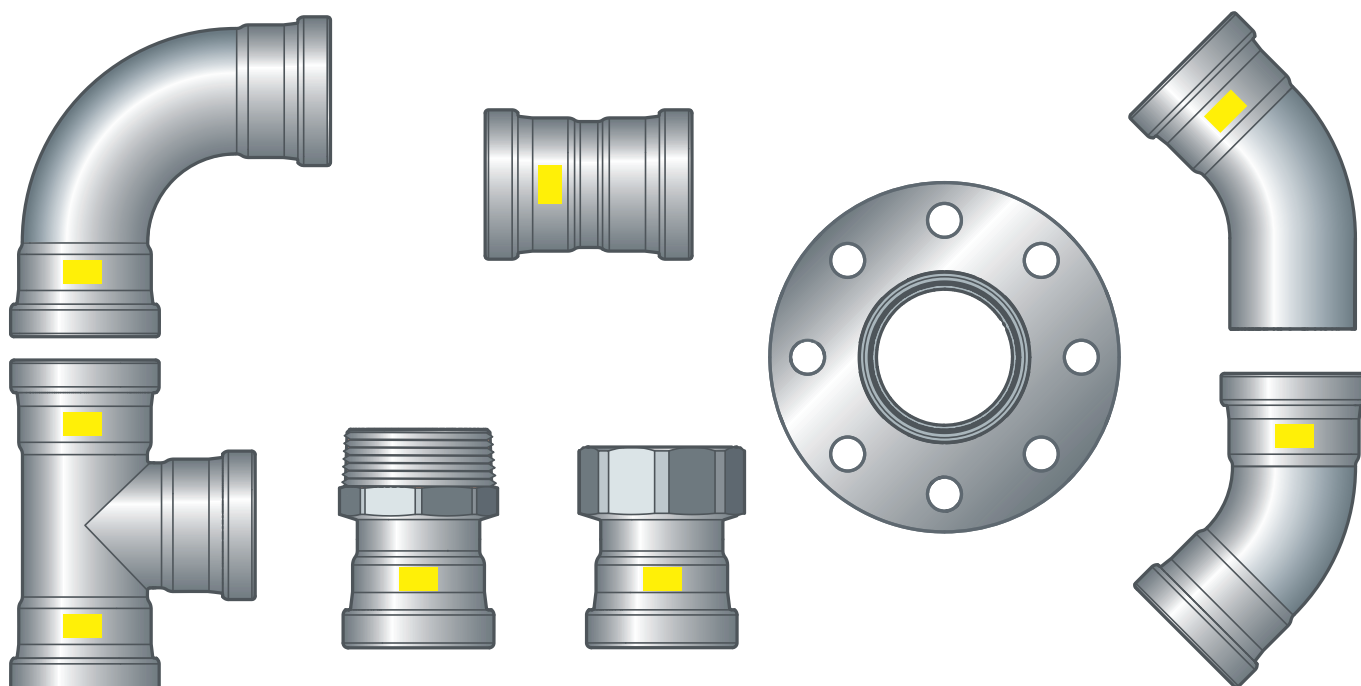


Instructions for Use

Sanpress Inox G XL



Press connector system made of stainless steel with stainless steel pipes

System
Sanpress Inox G XL

Year built (from)
05/2006

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	Space requirements and intervals	16
3.3.3	Required tools	17
3.4	Assembly	18
3.4.1	Shortening the pipes	18
3.4.2	Deburring the pipes	18
3.4.3	Pressing the connection	19
3.4.4	Leakage test	21
3.5	Maintenance	21
3.6	Disposal	22

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 and are provided as a support feature.

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	DVGW-Arbeitsblatt G 260
Liquid gas in the gaseous state	

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.

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.*
- Compressed air systems

Gas installation

For planning, execution, modification and operation of gas installations, observe the applicable regulations, see ⓘ *'Regulations from section: Fields of application' on page 5.*

Use is possible in the gas installations described below:

- Gas installations
 - low pressure range ≤ 100 hPa (100 mbar)
 - Medium pressure range from 100 hPa (100 mbar) up to 0.1 MPa (1 bar)
 - 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) 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

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
- 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.

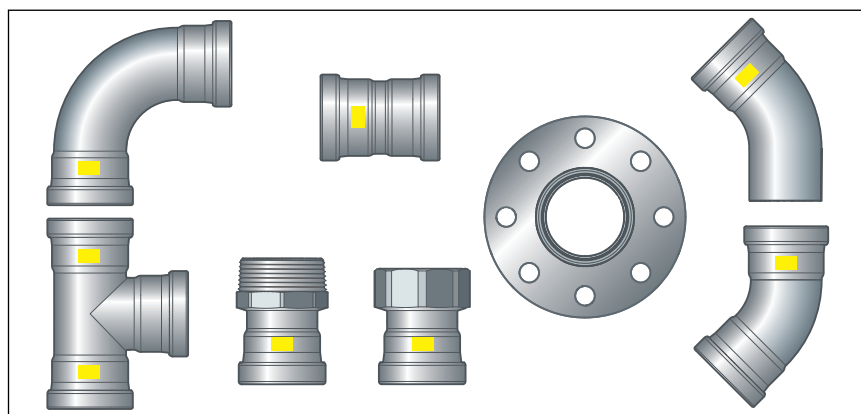


Fig. 1: Sanpress Inox G XL press connectors

The system components are available in the following dimensions:
d 64.0 / 76.1 / 88.9 / 108.0.

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	64.0 / 76.1 / 88.9 / 108.0
Areas of use	Potable water and gas installations ¹⁾
Material No.	1.4401 (X5CrNiMo 17-12-2), with 2.3 % molybdenum for increased durability
PRE value	24.1
Pipe marking	—
Protective cap	yellow

¹⁾ Gas installation only in connection with Sanpress Inox G XL- press connectors

Pipe key data Sanpress XL pipe (1.4401 and 1.4521)


d x s [mm]	Volume per metre of pipe [l/m]	Pipe weight [kg/m]
64.0 x 2.0	2.83	3.04
76.1 x 2.0	4.08	3.70

d x s [mm]	Volume per metre of pipe [l/m]	Pipe weight [kg/m]
88.9 x 2.0	5.66	4.34
108.0 x 2.0	8.49	5.30

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]
64.0	4.00
76.1	4.25
88.9	4.75
108.0	5.00

2.3.3 Press connectors

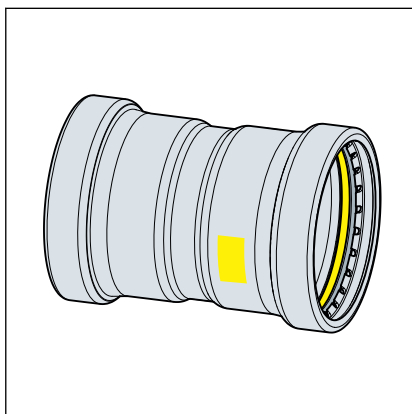


Fig. 2: Press connectors

On Sanpress Inox G XL press connectors, there is a cutting ring, a separator ring and a sealing element in the bead of the press connector. The cutting ring cuts into the pipe during pressing and ensures a force-fit connection.

During installation, and later during the pressing, the separator ring protects the sealing element from damage from the cutting ring.

SC-Contur

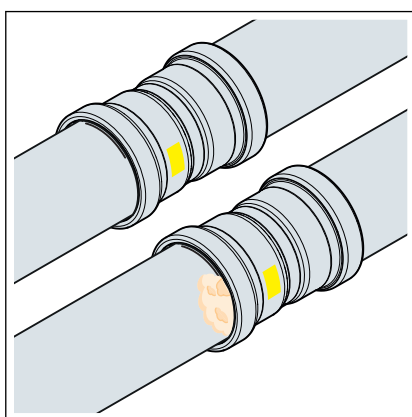


Fig. 3: SC-Contur

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 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:

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

2.3.4 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) (MOP 5)	≤ 0.5 MPa (5 bar) (MOP 5)	≤ 0.5 MPa (5 bar)
	≤ 0.5 MPa (5 bar) (HTR / GT5) ¹⁾	≤ 0.5 MPa (5 bar) (HTR / GT5) ¹⁾	

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

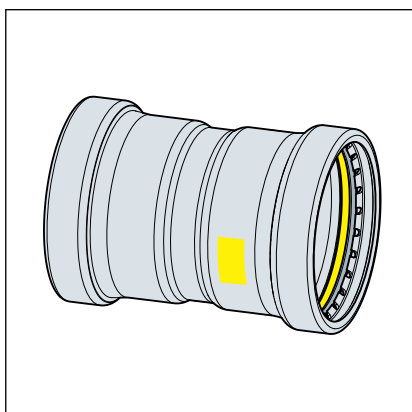
2.3.5 Markings on components

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 as follows:

- yellow rectangle for gas
- Gas for gas supply lines
- MOP5 for maximum operating pressure 0.5 MPa (5 bar)
- GT5 for maximum operating pressure with HTR requirement 0.5 MPa (5 bar)
- 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 (e. g. gas flow monitor) must always be taken.

Passive protective measures (e.g. gas safety plugs and caps) 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) 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).

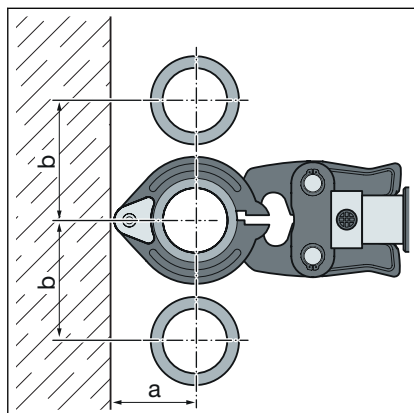


Continuous, connection-free gas supply lines may be laid in hollow spaces (pre-wall constructions) to be connected to a gas device or a gas socket.

Ventilation is not required.

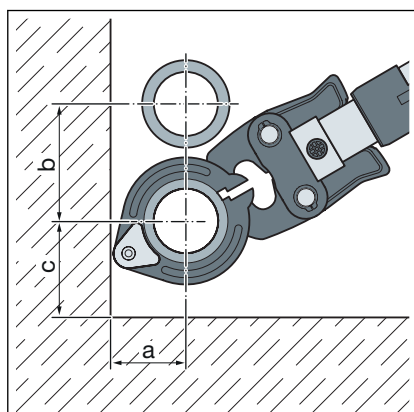
3.3.2 Space requirements and intervals

Pressing between pipelines



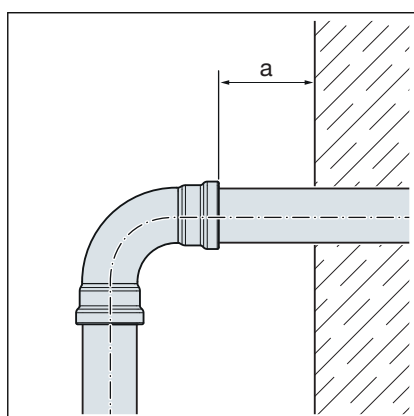
d	64.0	76.1	88.9	108.0
a [mm]	110	110	120	135
b [mm]	185	185	200	215

Pressing between pipe and wall



d	64.0	76.1	88.9	108.0
a [mm]	110	110	120	135
b [mm]	185	185	200	215
c [mm]	130	130	140	155

Wall distance



d	64.0–108.0
Minimum interval a_{min} [mm]	20

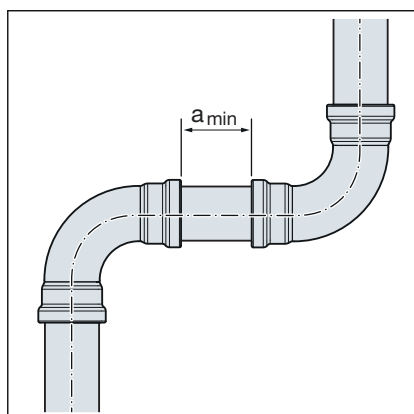
Interval between the pressings



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.



d	64.0–108.0
Minimum distance a [mm]	15

Z dimensions

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

3.3.3 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 of 32 kN
- Press ring with corresponding hinged adapter jaw, suitable for the pipe diameter and suitable profile

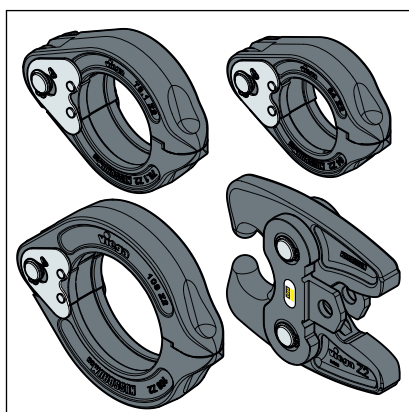


Fig. 4: Press rings and hinged adapter jaw



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 Shortening the pipes



NOTICE!

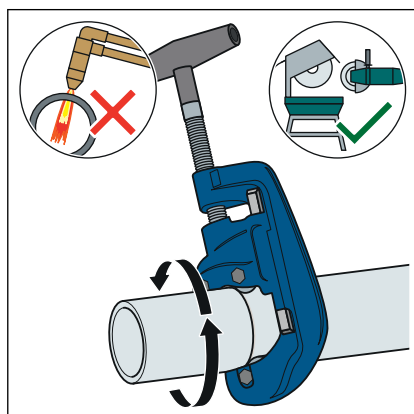
Leaking press connections due to damaged material!

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 3.3.3 'Required tools'](#) on page 17.



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

3.4.2 Deburring the pipes

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

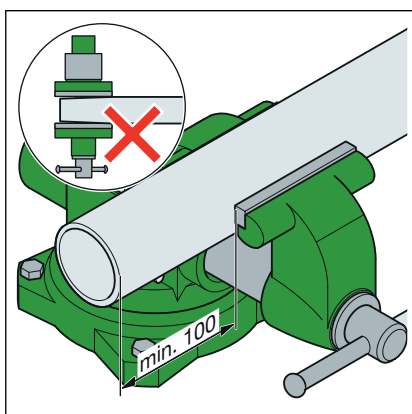
Deburring prevents the sealing element being damaged or the that the press connector cants when mounted. Viega recommends using a deburrer (model 2292.4XL).



NOTICE!

Damage due to the wrong tool!

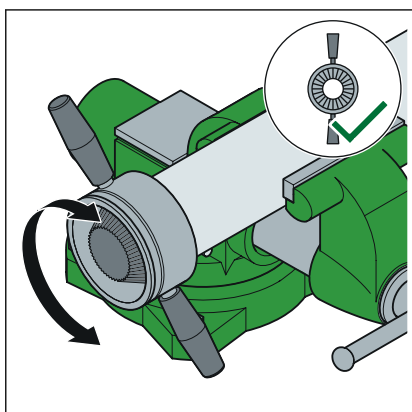
Do not use sanding disks or similar tools when deburring.
The pipes could be damaged by these.



➤ Secure the pipe in the vice.

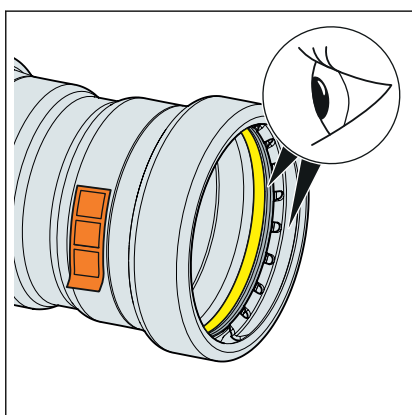
➤ When clamping, leave an interval of at least 100 mm (a) to the pipe end.

The pipe ends must not be bent or damaged.



➤ Deburr the inside and outside of the pipe.

3.4.3 Pressing the connection



Requirements:

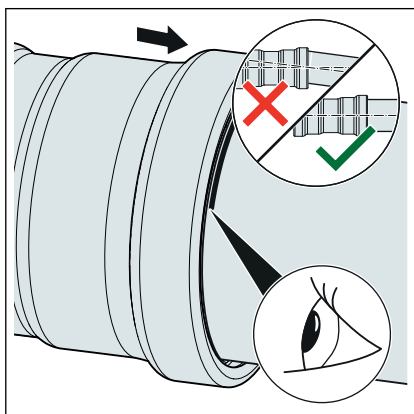
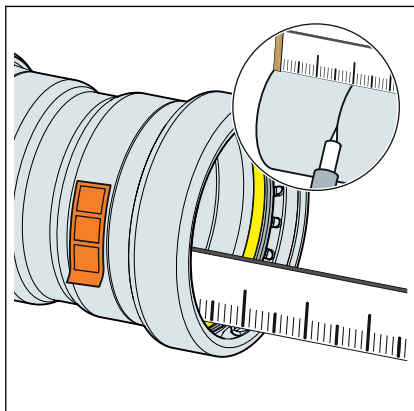
- The pipe end is not bent or damaged.
- The pipe is deburred.
- The correct sealing element is in the press connector.
HNBR = yellow

- Sealing element, separator ring and cutting ring are undamaged.
- The complete sealing element, separator ring and cutting ring are in the bead.

- Measure insertion depth in the connector.

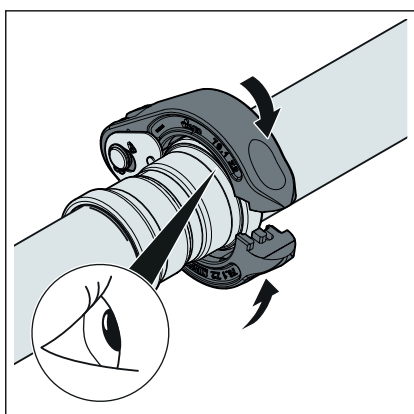
d [mm]	Insertion depth [mm]
64.0	43
76.1	50
88.9	50
108.0	65

- Mark the insertion depth on the pipe

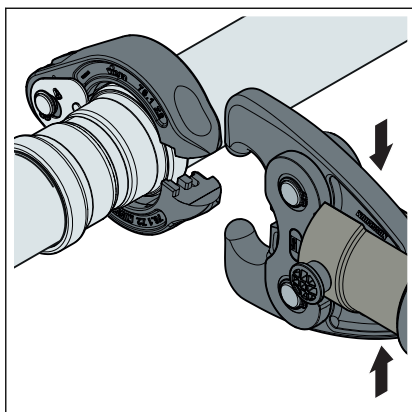


- Push the press connector up to the marked insertion depth on the pipe. Do not twist the press connector.
- Place the hinged adapter jaw onto the press machine and push the retaining bolt in until it clicks into place.

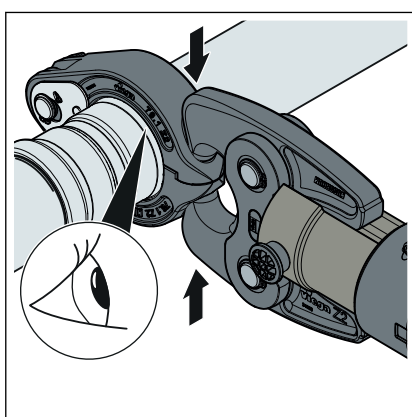
INFO! Observe the press tool instruction manual.



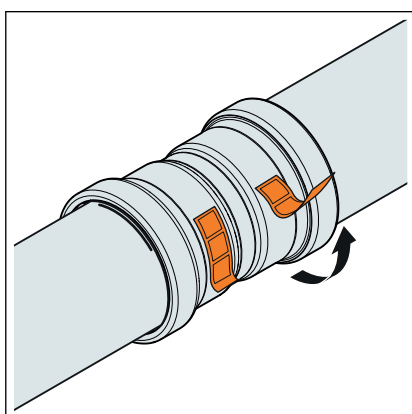
- Place the press ring onto the press connector. The press ring must completely cover the outside ring of the press connector.



- Open the hinged adapter jaw.



- Position the hinged adapter jaw into the seat of the press ring.
- Carry out the pressing process.
- Open the hinged adapter jaw and remove the press ring.




- Remove the checking strip.
- ◻ The connection is marked as having been pressed.

3.4.4 Leakage test

The installer must perform a leakage test before commissioning.

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

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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