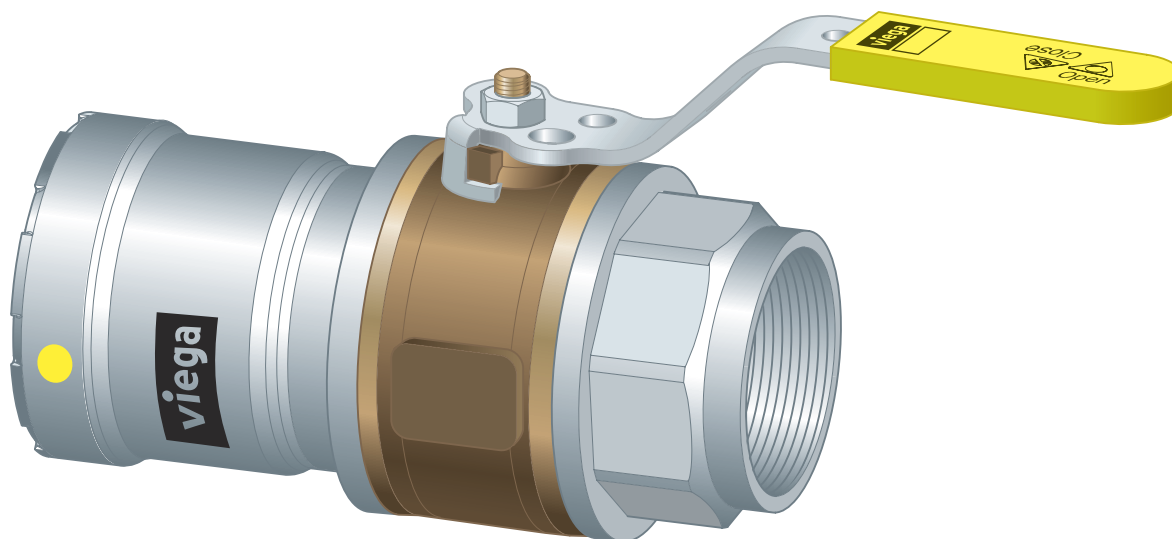


Instructions for Use

Megapress G gas ball valve



Ball valve made of non-alloy steel for thick-walled steel pipes

Model
4675.4

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 application	7
	2.2.2 Media	8
	2.3 Product description	9
	2.3.1 Overview	9
	2.3.2 Pipes	10
	2.3.3 Press connectors	12
	2.3.4 Sealing elements	12
	2.3.5 Marks on components	13
	2.4 Information for use	14
	2.4.1 Corrosion	14
3	Handling	15
	3.1 Transport	15
	3.2 Storage	15
	3.3 Assembly information	15
	3.3.1 Mounting instructions	15
	3.3.2 Potential equalisation	20
	3.3.3 Space requirements and intervals	20
	3.3.4 Required tools	25
	3.4 Assembly	26
	3.4.1 Replacing the sealing element	27
	3.4.2 Cutting pipes to length	28
	3.4.3 Deburring the pipes	29
	3.4.4 Pressing the connection	30
	3.4.5 Leakage test	33
	3.5 Maintenance	33
	3.6 Disposal	34

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 companies specialising in 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



These instructions for use contain videos

Some assembly and action steps are shown using the example of a piping system other than the one described here, but are equally applicable.

2.1 Standards and regulations

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

Regulations from section: Application areas

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 Worksheet G 5614-B1
Gas installations for industrial, commercial and process plants	DVGW Worksheet G 462
Gas installations for industrial, commercial and process plants	DVGW Worksheet G 459-1
Gas installations for industrial, commercial and process plants	DVGW Technical information No. 10
Planning, execution, modification and operation of liquid gas installations	DVFG-TRF 2021

Regulations from section: Media

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

Regulations from section: Pipes

Scope / Notice	Regulations applicable in Germany
Differentiation of pipe types and pipe series	DIN EN 10255
Requirements in steel pipes - Boiler pipe quality	DIN EN 10220
Requirements in steel pipes - Boiler pipe quality	DIN EN 10216-1
Requirements in steel pipes - Boiler pipe quality	DIN EN 10217-1
External protective coatings (galvanisation) for steel pipes	DIN EN 10240
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 2021, 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 2021, Point 7.2.7.1
Corrosion protection for internal pipelines	DVFG-TRF 2021, Point 7.2.7.2

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
The general rules of mounting for gas installations	DVFG-TRF 2021, Point 7.3.6

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 2021, 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 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 volumetric 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 application

Use is possible in the following areas among others:

- Gas installations, see ↗ *'Regulations from section: Application areas' on page 5*
- Liquid gas installations, also see ↗ *'Regulations from section: Application areas' on page 5*
- Heating oil pipelines
- Diesel pipes
- Compressed air systems
- Systems for technical gases (on request)

Gas installation

For planning, execution, modification and operation of gas installations, observe the applicable regulations, see ↗ *'Regulations from section: Application areas' 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) to 0.1 MPa (1 bar)
 - Industrial, commercial and technical processing systems with the corresponding directives and technical regulations up to 0.5 MPa (5 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 pressure container (liquid gas cylinders) < 16 kg downstream of the small bottle pressure regulating valve
 - With liquid gas tank (liquid gas cylinder) ≥ 16 kg downstream of the large bottle pressure regulating device

2.2.2 Media

The ball valve is also 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 (dry)

2.3 Product description

2.3.1 Overview

The model is equipped as follows:

- Valve casing made of silicon bronze
- stainless steel ball
- ball seal made of PTFE
- maintenance-free selector shaft
- Megapress G press connection for thick-walled steel pipes with SC-Contur
- Rp internal thread
- sealing elements made of HNBR
- L-shaped actuating lever made of metal
- Position indication open/closed
- lockable

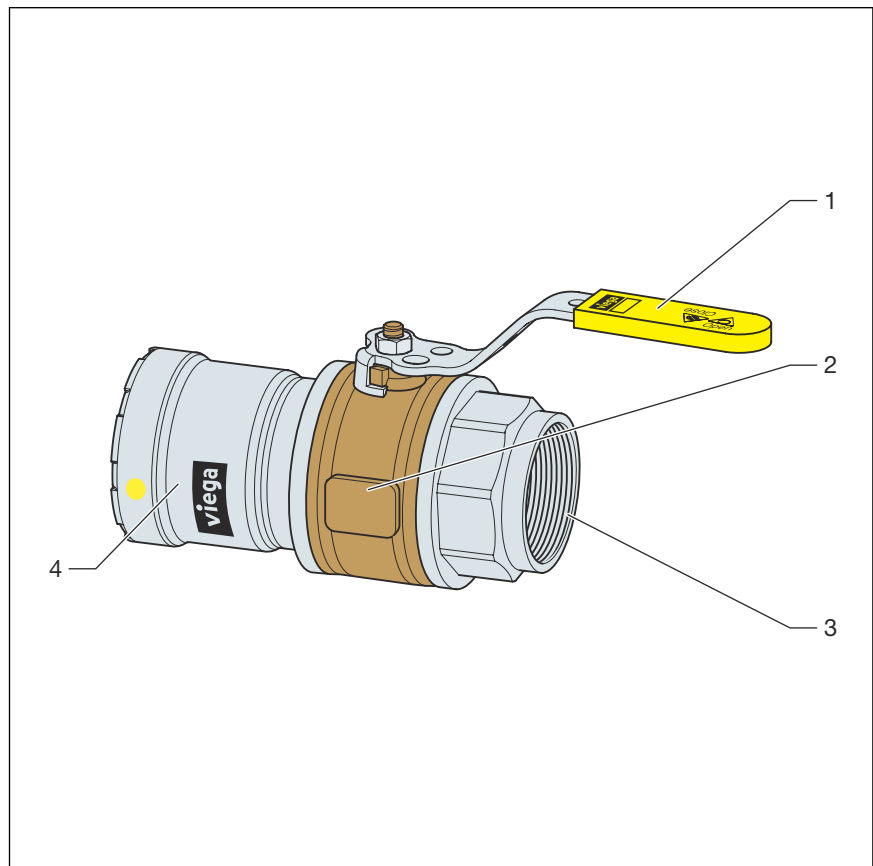


Fig. 1: three-part ball valve

- 1 - L-shaped actuating lever made of metal
- 2 - middle part
- 3 - Rp internal thread
- 4 - Megapress G press connection

The ball valve is available in the following dimensions: D $\frac{1}{2}$ (DN15), D $\frac{3}{4}$ (DN20), D1 (DN25), D1 $\frac{1}{4}$ (DN32), D1 $\frac{1}{2}$ (DN40), D2 (DN50).

2.3.2 Pipes

Megapress G press connectors may be used with the following seamless (S) or longitudinal welded (W) steel pipes:

- Black
- Galvanised

The steel pipes and galvanisation must correspond to the applicable regulations, see [🔗 'Regulations from section: Pipes' on page 6](#)



If there is galvanisation on the pipe, the maximum external diameters indicated in the tables must not be exceeded.

Pipe overview – threaded pipe quality

The standard differentiates between heavy pipe series H and medium pipe series M or between pipe type L, L 1 and L 2. Seamless pipes and pipes welded along the longitudinal seam belong to the different pipe series and pipe types, see [🔗 'Regulations from section: Pipes' on page 6](#).

Only medium pipe series M and the heavy pipe series H may be used with Megapress G components.

Threaded pipe quality – heavy series H and medium series M

Thread size [inch]	Nominal width [DN]	Nominal external diameter [mm]	Min. external diameter incl. coating [mm]	Max. external diameter incl. coating [mm]	Wall thickness heavy series H [mm]	Wall thickness medium series M [mm]
½	15	21.3	21.0	21.8	3.2	2.6
¾	20	26.9	26.5	27.3	3.2	2.6
1	25	33.7	33.3	34.2	4.0	3.2
1¼	32	42.4	42.0	42.9	4.0	3.2
1½	40	48.3	47.9	48.8	4.0	3.2
2	50	60.3	59.7	60.8	4.5	3.6

Pipe overview – boiler pipe quality

The standards differentiate between pipe series 1, 2 and 3. They recommend using installation pipe series 1 as pipe series 2 and 3 are either not or not always available in practice. Pipe series 1 includes seamless pipes and pipes welded along the longitudinal seam, see [🔗 'Regulations from section: Pipes' on page 6](#).

Boiler pipe quality – pipe series 1

Thread size [Inch]	Nominal width [DN]	Nominal external diameter [mm]	Min. external diameter incl. coating [mm]	Max. external diameter incl. coating [mm]	Possible pipe wall thickness for seamless pipes ¹⁾ [mm]	Possible pipe wall thickness for pipes welded along the longitudinal seam ¹⁾ [mm]
½	15	21.3	20.8	21.8	2.0–3.2	2.0–3.2
¾	20	26.9	26.4	27.4	2.3–3.2	2.0–3.2
1	25	33.7	33.2	34.2	2.6–4.0	2.0–4.0
1¼	32	42.4	41.9	42.9	2.6–4.0	2.3–4.0
1½	40	48.3	47.8	48.8	2.6–4.0	2.3–4.0
2	50	60.3	59.7	60.9	2.9–4.5	2.3–4.5

¹⁾ see ↗ 'Regulations from section: Pipes' on page 6

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. I
- 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-combustible pipe clamps (e. g. metal pipe clamps).

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

Distance between the pipe clamps

Ø external [mm]	Nominal width [inch]	Fixing distance between the pipe clamps [m]
21.3	½	1.50
26.9	¾	2.00
33.7	1	2.25
42.4	1¼	2.75
48.3	1½	3.00
60.3	2	3.50

2.3.3 Press connectors

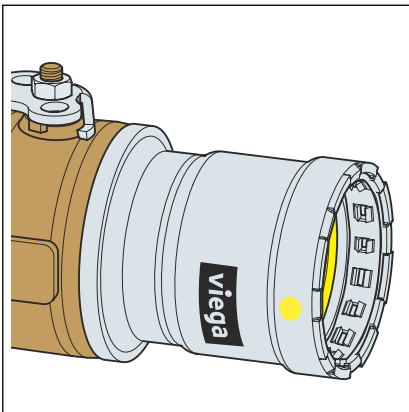


Fig. 2: Megapress G press connection

The Megapress G press connections of the ball valve consist of non-alloy steel (material 1.0308) and have an external 3–5 µm zinc-nickel coating. There is a cutting ring, a separator ring and a profile 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

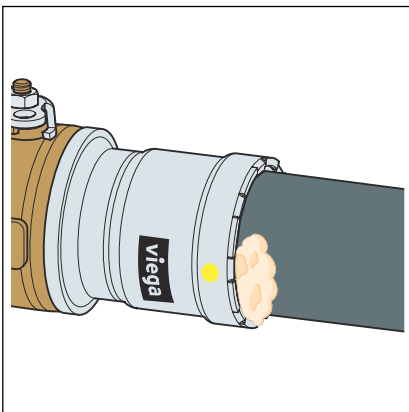


Fig. 3: SC-Contur

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 accidentally 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)
- For leak detection, Viega recommends the specially developed Viega leak detection spray (model 5300). Leaks are immediately recognizable by the formation of bubbles.

2.3.4 Sealing elements

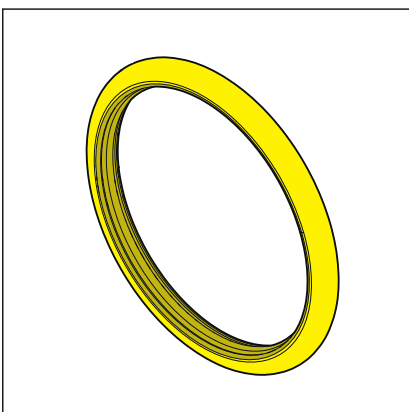


Fig. 4: HNBR profile sealing element

The Megapress G press connectors are factory-fitted with HNBR profile sealing elements. The integrally moulded sealing lips also seal pipe surfaces with slightly uneven surfaces.

Area of application of the HNBR sealing element

Use	Gas installation	Liquid gas installation	Heating oil and diesel pipelines	Compressed air (dry)
Operating temperature [T _{max.}]	-20 °C – +70 °C	-20 °C – +70 °C	≤ 40 °C	≤ 60 °C
Operating pressure [p _{max.}]	≤ 0.5 MPa (5 bar) (MOP 5) (HTR / GT5) ¹⁾	≤ 0.5 MPa (5 bar) (MOP 5) (HTR / GT5) ¹⁾	≤ 0.5 MPa (5 bar)	≤ 1.6 MPa (16 bar)

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

2.3.5 Marks on components

Marking at the ball valve

- Dimension
- Position indicator on the actuating lever

Markings on press connections

The press connections 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.

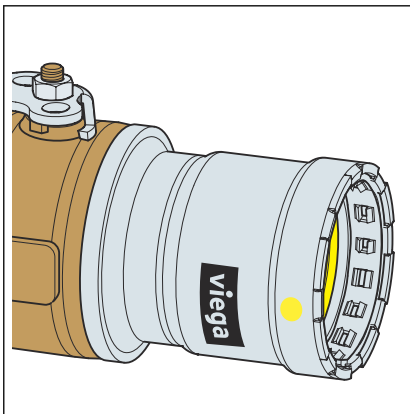


Fig. 5: Marking

The press connections are marked as follows:

- Yellow dot on each press connection ↪ Fig. 5
- Viega ↪ Fig. 5
- Yellow rectangle ↪ Fig. 6
- Gas for gas supply lines
- MOP5 for maximum operating pressure 0.5 MPa (5 bar)
- GT/5 for operating pressure with HTR requirement maximum 0.5 MPa (5 bar)
- HNBR for the factory-fitted HNBR sealing element
- DVGW
- Dimension
- Batch

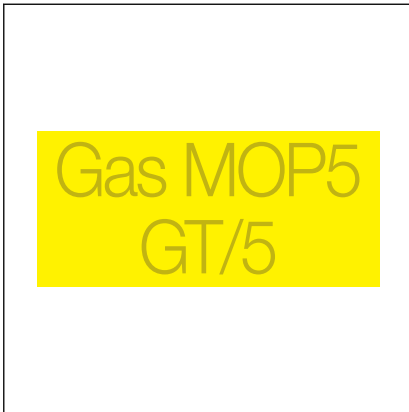


Fig. 6: Marking

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.

The pertinent guidelines must be observed for corrosion protection, 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.



In addition, observe the instructions provided by the pipe manufacturer.

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 the original box until immediately before assembly.
- 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.
- Store pipes of different materials separately to prevent contact corrosion.



In addition, observe the instructions provided by the pipe manufacturer.

3.3 Assembly information


3.3.1 Mounting instructions

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

- Only use original parts in perfect condition.
- Damaged parts must be replaced. Do not attempt to repair them.


- Store products in a clean and dry place.
- Check the installation pipes for suitable surface properties and the min./max. external diameter.
- Do not press on embossed pipe markings.

The system is intended for underground device connection pipelines for gas devices for use outside. Press connectors are not permitted in underground liquid gas pipelines.

o For gas installations, observe the applicable regulations, see  'Regulations from section: Notes on mounting' on page 7.



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 7.

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 for 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.

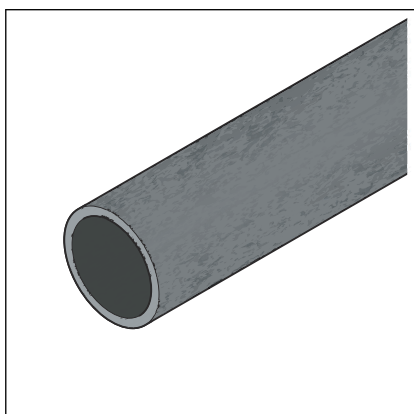
Ventilation is not required.

Preparation of the pipes

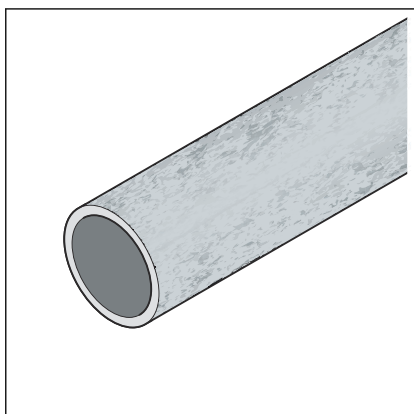
As long as they are free from dirt, smooth, firm, even and undamaged, the following pipe surfaces are suitable for the production of press connections without further treatment:


NOTICE!

Always check the quality of the pipe surface on the complete pipe circumference. For permanently installed existing pipes, for example, Viega recommends the use of a mirror to be able to check the surface quality on the complete pipe circumference.

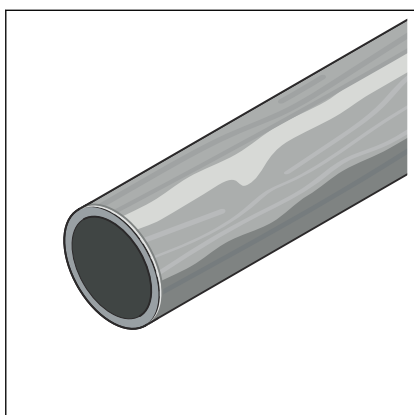


Black uncoated pipes



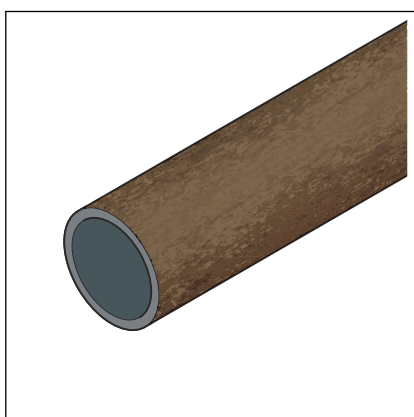
Galvanised pipes, for galvanisation see ↗ *'Regulations from section: Notes on mounting'* on page 7 (maximum external diameter in acc. with ↗ *Chapter 2.3.2 'Pipes'* on page 10)

Pipe surfaces must be treated around the press connection if they exhibit the following characteristics:

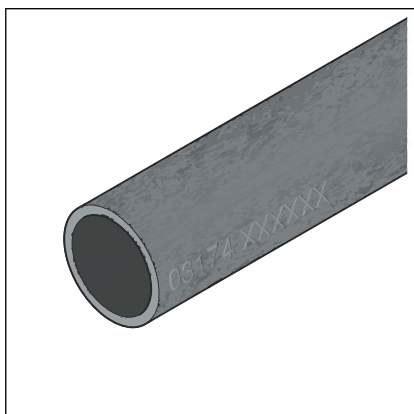


Applied layers of paint (manual and industrial)

Exceeding the maximum external diameter due to coating that has been applied, see [Chapter 2.3.2 'Pipes' on page 10](#).



Bumps, damage, grooves, corrosion or loose adhesions

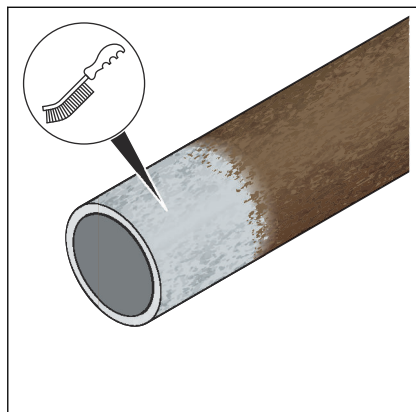


NOTICE!
Leaky press connection

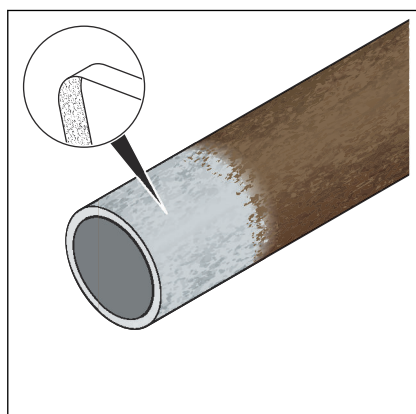
Pressings on the embossed pipe marking may cause leaking.

- Do not carry out pressings on the embossed pipe marking.

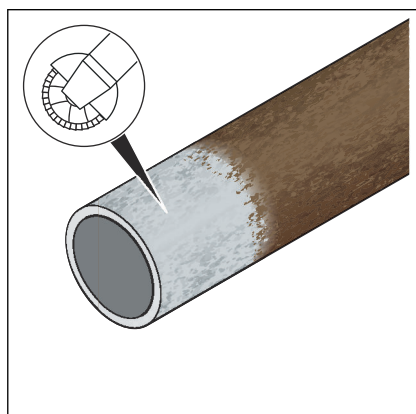
The following are examples of suitable tools for the work:



■ Wire brush



■ Cleaning fleece or sanding paper (grain > 80)



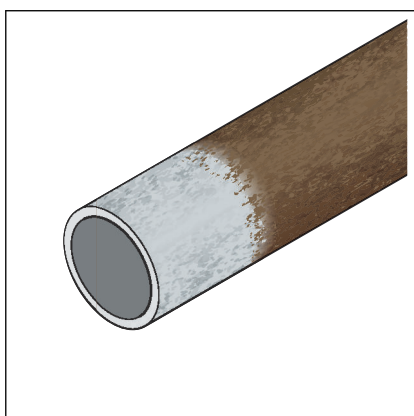
■ Angle grinder with serrated washer

After the treatment, the quality of the pipe surface should be as shown in the following graphic:



NOTICE!

Always check the quality of the pipe surface on the complete pipe circumference. For permanently installed existing pipes, for example, Viega recommends the use of a mirror to be able to check the surface quality on the complete pipe circumference.



The external diameter of the installation pipe must not fall below the minimum value, see ↗ *Chapter 2.3.2 'Pipes' on page 10*.

In systems where complete corrosion protection is required, those parts of the previously processed pipe surface that are uncovered after pressing must subsequently be equipped with suitable corrosion protection.

3.3.2 Potential equalisation



DANGER!

Danger due to electrical current

An electric shock can lead to burns and serious injury and even death.

Because all metallic piping systems conduct electricity, unintentional contact with a live part can lead to the whole piping system and components connected to it (e. g. radiators) becoming energised.

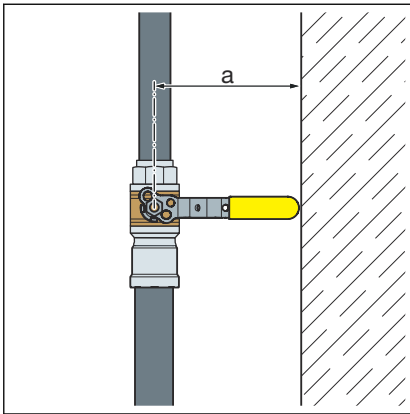
- Only allow electrical work to be carried out by qualified electricians.
- Always integrate the metal piping system into the potential equalisation.



It is the fitter of the electrical system who is responsible for ensuring that the potential equalisation is tested and secured.

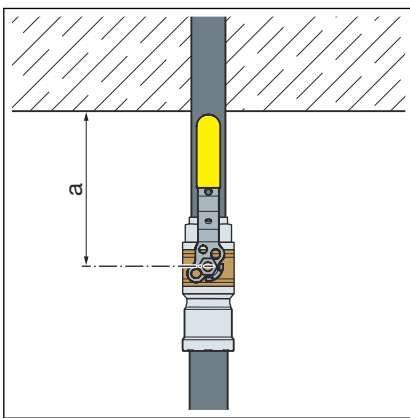
3.3.3 Space requirements and intervals

The minimum distance to welding seams and bending points must be $3 \times D$, however at least 100 mm.



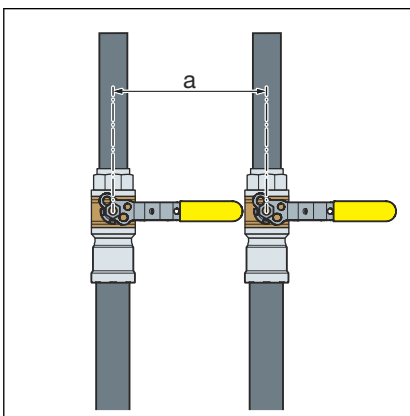
Horizontal space requirement for the actuating lever

Size [inch]	a [mm]
1/2	120
3/4	120
1	150
1 1/4	150
1 1/2	160
2	160



Vertical space requirement for the actuating lever

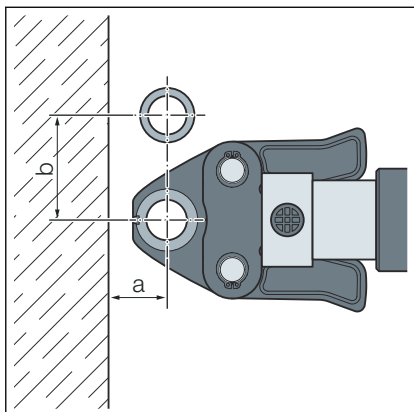
Size [inch]	a [mm]
1/2	120
3/4	120
1	150
1 1/4	150
1 1/2	160
2	160



Minimum distances between two ball valves

Size [inch]	a [mm]
1/2	150
3/4	150
1	185
1 1/4	190
1 1/2	205
2	205

Pressing between pipelines

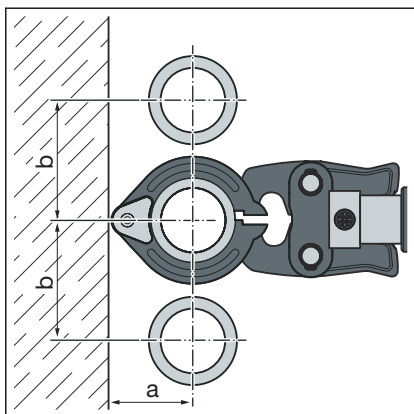


Space requirement type 2 (PT2), PT3-EH, PT3-AH, Pressgun 4B, 4E, 5, 6, 6B, 6 Plus

D	½	¾	1
a [mm]	30	35	45
b [mm]	70	80	95

Space requirement Picco, Pressgun Picco, Pressgun Picco 6, 6 Plus

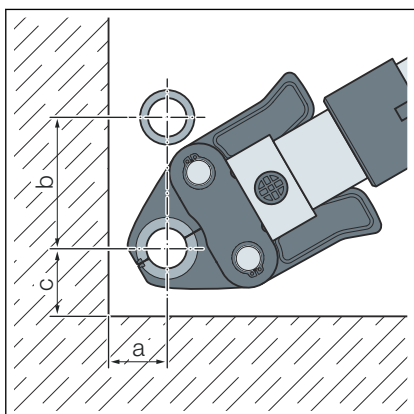
D	½	¾
a [mm]	30	35
b [mm]	70	80



Space requirement press rings D½-2

D	½	¾	1	1¼	1½	2
a [mm]	60	75	75	95	105	105
b [mm]	75	85	100	125	135	140

Pressing between pipe and wall

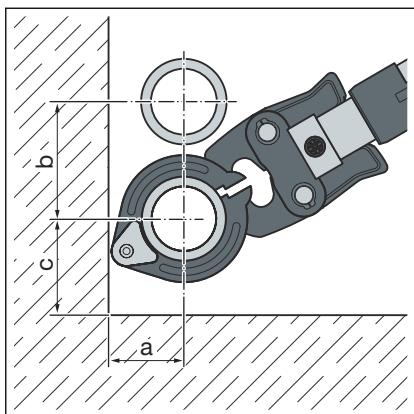


Space requirement PT1, type 2 (PT2), PT3-EH, PT3-AH, Pressgun 4B, 4E, 5, 6, 6B, 6 Plus

D	½	¾	1
a [mm]	35	40	50
b [mm]	80	90	105
c [mm]	50	55	65

Space requirement Picco, Pressgun Picco, Pressgun Picco 6, 6 Plus

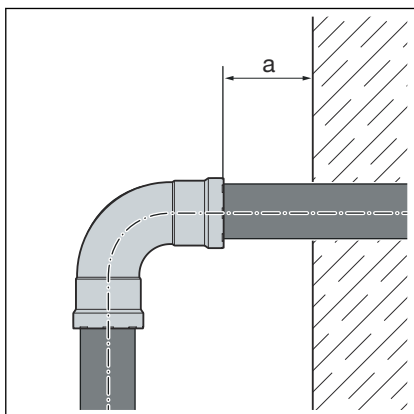
D	½	¾
a [mm]	60	65
b [mm]	75	85
c [mm]	80	80



Space requirement press rings D $\frac{1}{2}$ -2

D	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
a [mm]	60	75	75	95	105	105
b [mm]	75	85	100	125	135	140
c [mm]	80	80	80	80	80	80

Wall distance



Minimum distance with press jaws D $\frac{1}{2}$ -1

Press machine	a_{min} [mm]
Type 2 (PT2)	50
Type PT3-EH	
Type PT3-AH	
Pressgun 4E / 4B	
Pressgun 5	
Pressgun 6 / 6B / 6 Plus	50
Picco / Pressgun Picco	
Pressgun Picco 6, 6Plus	

Minimum distance with press rings D $\frac{1}{2}$ -2

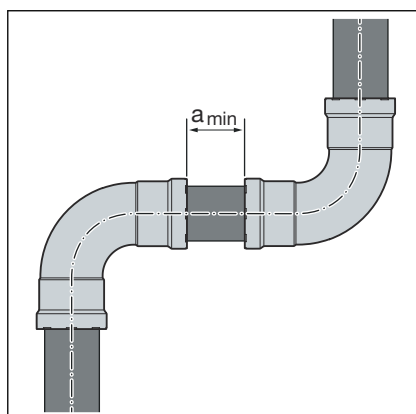
Press machine	a_{min} [mm]
Type 2 (PT2)	20
Type PT3-EH	
Type PT3-AH	
Pressgun 4E / 4B	
Pressgun 5	
Pressgun 6 / 6B / 6 Plus	20
Picco / Pressgun Picco	
Pressgun Picco 6, 6Plus	

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 at a short distance apart, 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 press connection may leak.



Minimum distance with press jaws D ½–1

D [inch]	a _{min} [mm]
½	5
¾	
1	

Minimum distance with press rings D ½–2

D [inch]	a _{min} [mm]
½	15
¾	
1	
1¼	
1½	
2	

Z dimensions

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

3.3.4 Required tools



NOTICE!

Megapress G press connectors may be pressed only with Megapress press rings and press jaws. Press rings and press jaws of the metal Viega press connector systems Profipress, Sanpress, Sanpress Inox and Prestabo cannot be used.

Possible combinations of press machines and press jaws

Press machines	Press jaws	Press rings	Set
Type 2 (PT2) PT3 EH/AH Pressgun 4E / 4B Pressgun 5 Pressgun 6 / 6 B / 6 Plus	DN10 to DN25 model 4299.9	DN15 model 4296.1, with hinged adapter jaw Z1 model 2296.2 DN32 to DN50 model 4296.1, with hinged adapter jaw Z2 model 2296.2	Press jaws DN15 to DN25, press rings DN32 to DN50, hinged adapter jaw Z2 model 4299.61
Type 2 (PT2) PT3 EH Pressgun 4E / 4B Pressgun 5 Pressgun 6 Plus	—	DN65 to DN100 model 4296.1XL, with Pressgun Press Booster model 4296.4XL	Press ring DN65 and Pressgun Press Booster model 4296.2XL Press rings DN80 and DN100 model 4296.5XL
Picco Pressgun Picco Pressgun Picco 6 / 6 Plus	DN10 and DN15 model 4284.9	DN15 model 4296.1, with hinged adapter jaw P1 model 2496.1	—

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

- Pipe cutter or a fine-toothed hacksaw
Or angle-grinder
Or chapsaw with low cutting speed
- Deburrer or half-round file and coloured pen for marking
- Press machine with constant pressing force
- Press jaw (D $\frac{1}{2}$ -1) or press ring (D $\frac{1}{2}$ - 2) with corresponding hinged adapter jaw, suitable for the pipe diameter and with suitable profile

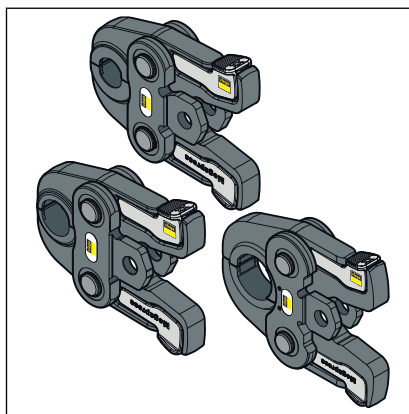


Fig. 7: Megapress press jaws

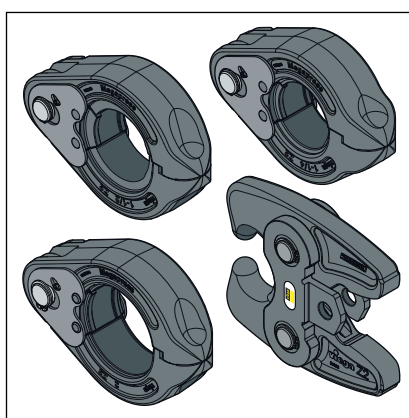


Fig. 8: Megapress press rings with hinged adapter jaw



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

Permitted exchange of sealing elements



NOTICE!

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 designated spare part for the intended application ↪ *Chapter 2.3.4 'Sealing elements' on page 12*. The use of other sealing elements is not permitted.

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

3.4.1 Replacing the sealing element

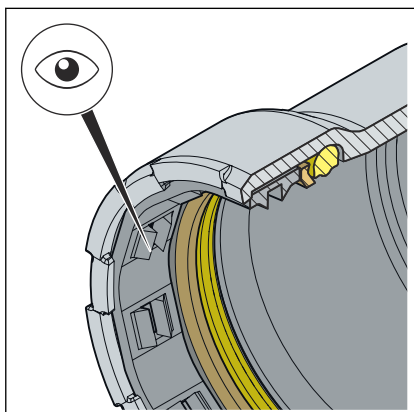


Fig. 9: Cutting ring

Removing the sealing element



CAUTION! Risk of injury due to sharp edges

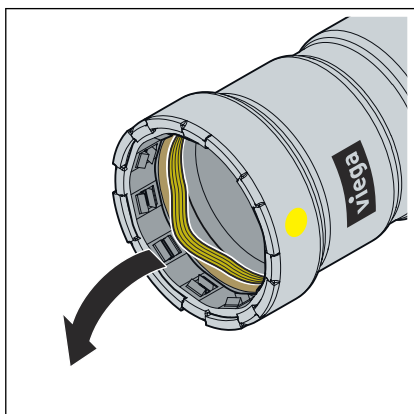
There is a sharp-edged cutting ring above the sealing element (see arrow). There is a risk of injury (cutting) when replacing the sealing element.

- Do not reach into the press connector with your bare hands.

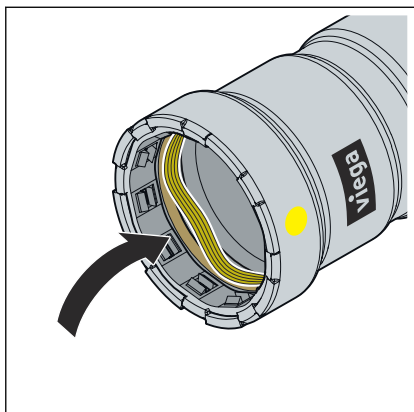


Do not use pointed or sharp-edged objects to remove the sealing element. They may damage the sealing element or the bead.

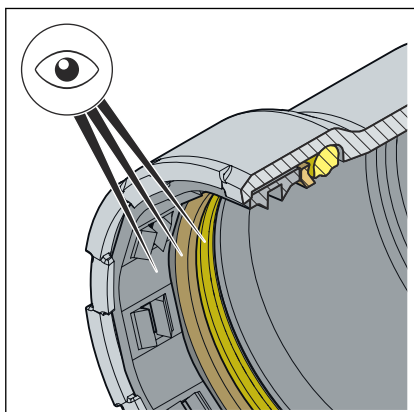
- Remove the sealing element from the bead. Proceed carefully to avoid damaging the sealing element seat.



Inserting the sealing element



- Insert a new, undamaged sealing element into the bead.
Make sure that the sealing element is not damaged by the cutting ring.
- Ensure that the complete sealing element is in the bead.



- 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.

3.4.2 Cutting pipes to length



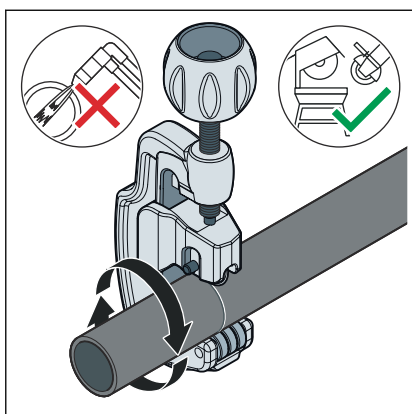
NOTICE! **Leaky press connections due to damaged material**

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 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 25.



- Cut the pipe at a right angle as accurately as possible using a pipe cutter, an angle grinder or a fine-toothed hacksaw to ensure a complete and even pipe insertion depth. Do not use a flame cutter.
- Avoid grooves on the pipe surface.

3.4.3 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.

- $\leq D1\frac{1}{2}$ (model 2292.2)
- D2 (model 2292.4XL)

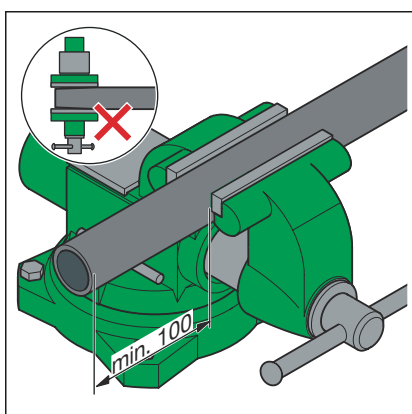


NOTICE! **Damage due to the wrong tool!**

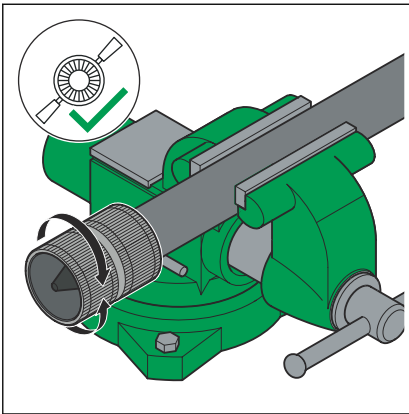
Do not use sanding disks or similar tools when deburring. The pipes could be damaged by these.

Link to the video:

Deburring the pipes



- 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.

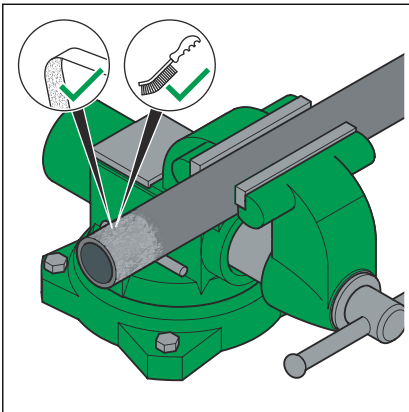


- Deburr the inside and outside of the pipe.

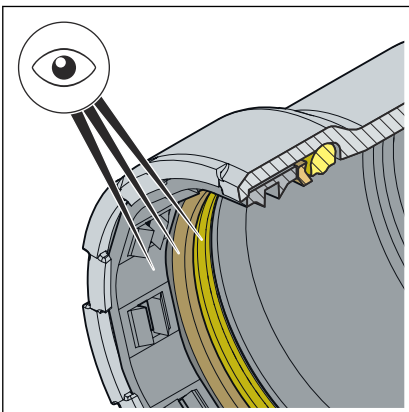
3.4.4 Pressing the connection

▶ Link to the video:

Pressing the connection



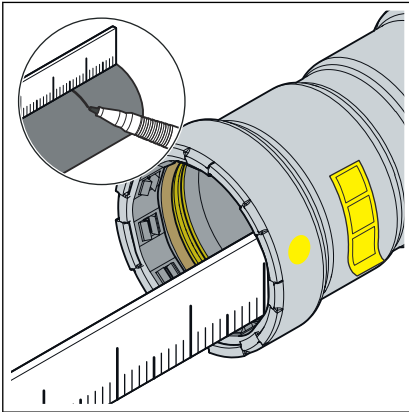
- With the help of a wire brush, cleaning fleece or sanding paper, remove loose dirt and rust particles from the pressing area.



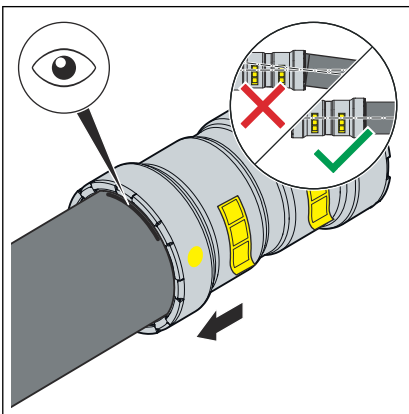
Requirements:

- 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 and mark the insertion depth.

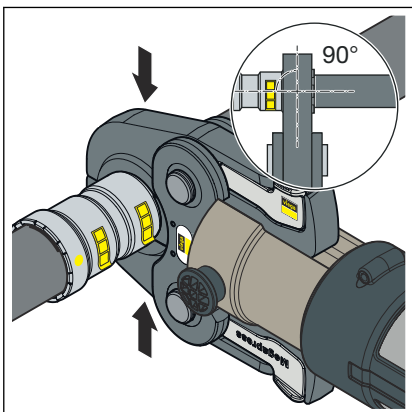


D [inch]	Insertion depth [mm]
1/2	27
3/4	29
1	34
1 1/4	46
1 1/2	48
2	50



- Push the press connector up to the marked insertion depth on the pipe. Do not twist the press connector.

Pressing with press jaw at $D \leq 1$

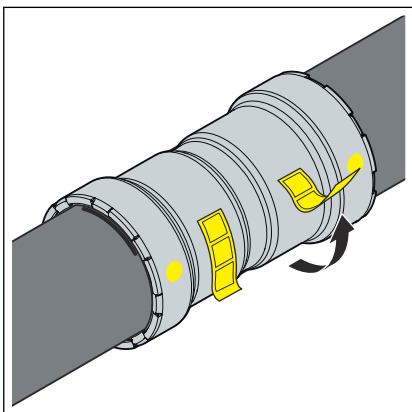


- Insert the press jaw ($\leq D 1$) into the press machine and push the retaining bolt in as far as it will go.

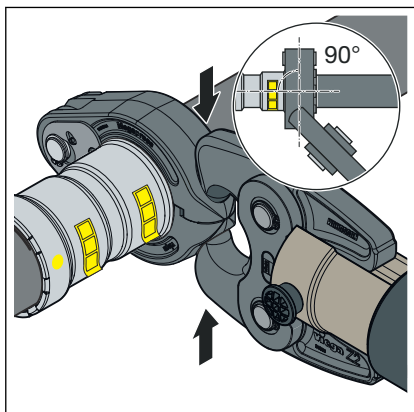
NOTICE! Do not press the press connections under forced position or tension. If available, always mount the threaded, flanged or screwed connection firmly before the pressing process.

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.
 - Remove the check label.
- The connection is marked as having been pressed.



Pressing with press rings with D 3/2

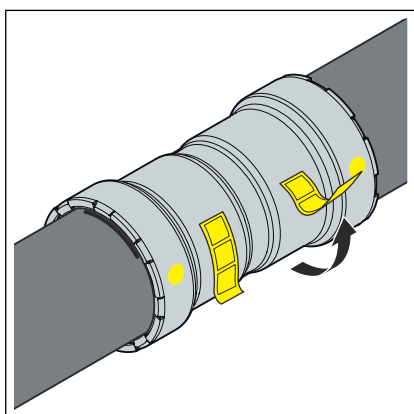


- Place the hinged adapter jaw onto the press machine and push the retaining bolt in until it clicks into place.

NOTICE! Do not press the press connections under forced position or tension. If available, always mount the threaded, flanged or screwed connection firmly before the pressing process.

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.
 - Position the hinged adapter jaw into the seat of the press ring.
 - Check the insertion depth using the marking.
 - Ensure that the press ring is placed centrally on the bead of the press connector.
 - Carry out the pressing process.
 - Open the hinged adapter jaw and remove the press ring.
 - Remove the check label.
- ☐ The connection is marked as having been pressed.



3.4.5 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. Only carry out this test with suitable, tested and approved equipment. Observe the applicable regulations, see ↗ 'Regulations from section: Leakage test' on page 7.

Document the result.



NOTICE!

Multiple pressing or re-pressing of a leaking press connection is not permitted.

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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