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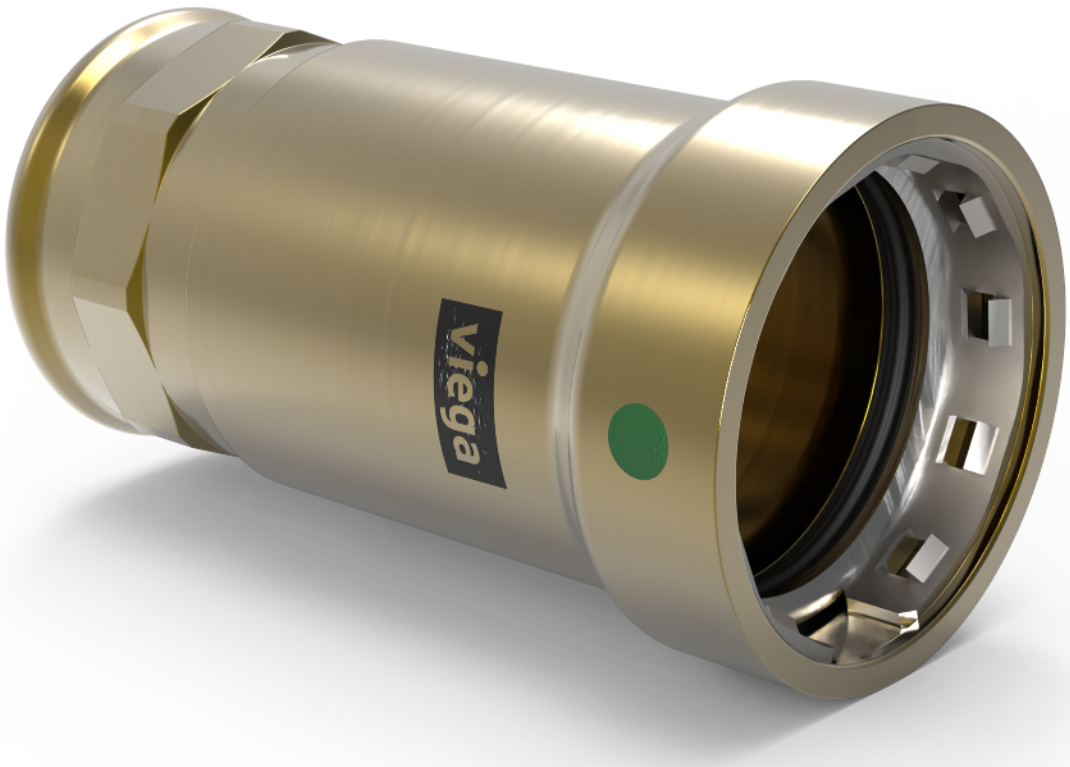
Instructions for Use

Megapress adapter for potable water



Silicon bronze press connector for thick-walled steel and stainless steel pipes

Model
4212.4

viega

Table of contents

1 About these instructions for use

1.1 Target groups

The information in this manual is directed at heating and sanitary professionals and trained personnel.

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: Intended use

Scope / Notice	Regulations applicable in Germany
Creation of potable-water installations	DIN 1988-200
Creation of potable-water installations	EN 806-2
Regulation on material selection	DIN EN 12502
Regulation on material selection	Metall-Bewertungsgrundlage (UBA)

Regulations from section: Application areas

Scope / Notice	Regulations applicable in Germany
Planning, execution, operation and maintenance of potable-water installations	DIN EN 1717
Planning, execution, operation and maintenance of potable-water installations	DIN 1988
Planning, execution, operation and maintenance of potable-water installations	VDI/DVGW 6023
Planning, execution, operation and maintenance of potable-water installations	Trinkwasserverordnung (TrinkwV)

Regulations from section: Media

Scope / Notice	Regulations applicable in Germany
Suitability for potable water	DIN 1988-200
Suitability for potable water	EN 806-2
Suitability for heating water for pump hot water heating systems	VDI-Richtlinie 2035, Sheet 1 and Sheet 2

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
Stainless steel pipes - Dimensions, tolerances and length-related mass	DIN EN ISO 1127
Seamless steel pipes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel pipes	DIN EN 10216-5
Welded steel pipes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel pipes;	DIN EN 10217-7

Regulations from section: Sealing elements

Scope / Notice	Regulations applicable in Germany
Area of application of the EPDM sealing element ■ Heating	DIN EN 12828

Regulations from section: Corrosion

Scope / Notice	Regulations applicable in Germany
Regulations for external corrosion protection	DIN EN 806-2
Regulations for external corrosion protection	DIN 1988-200
Creation of potable-water installations	DIN 1988-200
Creation of potable-water installations	DIN EN 806-2
Regulation on material selection	DIN EN 12502

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
External protective coatings (galvanisation) for steel pipes	DIN EN 10240

Regulations from section: Leakage test

Scope / Notice	Regulations applicable in Germany
Test on a system that is finished but not yet covered	DIN EN 806–4
Leakage test for water installations	ZVSHK-Merkblatt: "Dichtheitsprüfungen von Trinkwasserinstallationen mit Druckluft, Inertgas oder Wasser"
Requirements for filling and top-up water	VDI 2035

Regulations from section: Maintenance

Scope / Notice	Regulations applicable in Germany
Operation and maintenance of potable-water installations	DIN EN 806-5

2.2 Intended use

The press connector system is suitable for the construction of potable-water installations in accordance with applicable directives, taking into account material selection in accordance with applicable directives and the Federal Environment Agency's (UBA) assessment policy for metallic materials in contact with potable water, see linktarget [Normen_Rohrsysteme_Bestimmungsgemäße Verwendung] doesn't exist but @y.link.required='true'. For use in other areas of application and in case of doubt over the correct material selection, contact Viega.

2.2.1 Areas of application

The press connector is designed for a nominal pressure of PN 16.

Use is possible in the following areas among others:

- Potable water installations (in conjunction with galvanised steel pipes only drinking water (cold))
- Industrial and heating installations
- Compressed air systems
- District heat supply systems in secondary circuits
- Cooling water pipelines (closed circuit)
- Cooling water pipes (open circuit with stainless steel pipe only)

For information on areas of application of the sealing elements, see ↳ *further information on page 15*.

Potable water installation

Observe the applicable directives for planning, installation, operation and maintenance of potable water installations, see ↳ *Chapter 2.1 'Standards and regulations' on page 6*.

Maintenance

Inform your customer or the operator of the potable water installation that the system has to be maintained on a regular basis, see ↳ *Chapter 2.1 'Standards and regulations' on page 6*.

Sealing element

Only the EPDM sealing element is approved for potable water installations. Do not use any other sealing elements.

2.2.2 Media

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

For the applicable directives, see *Chapter 2.1 'Standards and regulations' on page 6*.

- Potable water relating to the pipe material, except the components (press connectors, fittings, devices, etc.):
  - with pH values ≥ 7.4
  - with pH values between 7.0 and 7.4 and a TOC value of ≤ 1.5 mg/l
- Heating water for pump hot water heating systems
- Compressed air in compliance with the specification of the sealing elements used
  - EPDM at oil concentration < 25 mg/m³
- Anti-freeze, cooling brines up to a concentration of 50 %

2.3 Product description

2.3.1 Overview

The Megapress adapters made of silicon bronze are available in the following versions.

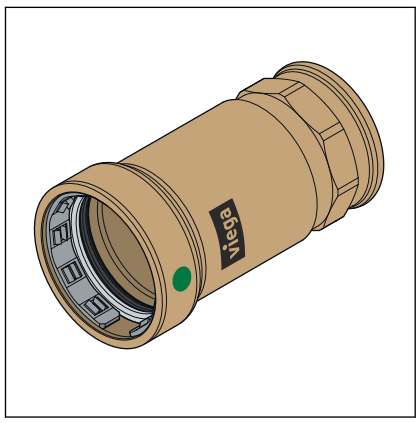


Fig. 1: Megapress adapter to RP-thread (model 4212.4)

The model 4212.4 is available in the following dimensions:

Dimension	Article
½ (DN15/21.3 mm) x Rp ½	837 471
¾ (DN20/26.9 mm) x Rp ½	837 488
¾ (DN20/26.9 mm) x Rp ¾	837 495

Dimension	Article
¾ (DN20/26.9 mm) x Rp 1	837 501
1 (DN25/33.7 mm) x Rp ¾	837 518
1 (DN25/33.7 mm) x Rp 1	837 525
1 (DN25/33.7 mm) x Rp 1 ¼	837 532
1 ¼ (DN32/42.4 mm) x Rp 1	837 549
1 ¼ (DN32/42.4 mm) x Rp 1 ¼	837 556
1 ½ (DN40/48.3 mm) x Rp 1 ½	837 563
2 (DN50/60.3 mm) x Rp 2	837 570

2.3.2 Pipes

The Megapress adapter may be used with seamless (S) or longitudinally welded (W) thick-walled steel and stainless steel pipes.

The pipe material must be approved for the planned area of application.

Thick-walled steel pipes:

- Black
- Galvanised
- Industrially painted
- Powder coated

Thick-walled stainless steel pipes:

- 1.4301
- 1.4306
- 1.4307
- 1.4401
- 1.4404
- 1.4541
- 1.4550
- 1.4571

The pipes must correspond to the applicable regulations, see
↳ *Chapter 2.1 'Standards and regulations' on page 6*

If the pipe has been coated, the maximum external diameter mentioned in the table must not be exceeded.

Thick-walled stainless steel pipes

Seamless and welded stainless steel tubes

Thread size [inch]	Nominal diameter [DN]	Nominal external diameter [mm]	Min. external diameter incl. coating [mm]	Max. external diameter incl. coating [mm]	Min. wall thickness [mm]	Max. wall thickness [mm]
½	15	21.3	20.8	21.8	1.6	4.0
¾	20	26.9	26.4	27.4	1.6	4.0
1	25	33.7	33.2	34.2	1.6	4.5
1¼	32	42.4	41.9	42.9	1.6	5.0
1½	40	48.3	47.8	48.8	1.6	5.0
2	50	60.3	59.7	60.9	1.6	5.6

Thick-walled steel pipes (threaded pipe quality)

Threaded pipe quality – heavy series H and medium series M

Thread size [inch]	Nominal diameter [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

Threaded pipe quality – pipe type L and pipe type L 1

Thread size [inch]	Nominal diameter [DN]	Nominal external diameter [mm]	Min. external diameter incl. coating [mm]	Max. external diameter incl. coating [mm]	Wall thickness [mm]
½	15	21.3	21.0	21.7	2.3
¾	20	26.9	26.4	27.1	2.3
1	25	33.7	33.2	34.0	2.9
1¼	32	42.4	41.9	42.7	2.9
1½	40	48.3	47.8	48.6	2.9
2	50	60.3	59.6	60.7	3.2

Threaded pipe quality – pipe type L 2

Thread size [inch]	Nominal diameter [DN]	Nominal external diameter [mm]	Min. external diameter incl. coating [mm]	Max. external diameter incl. coating [mm]	Wall thickness [mm]
½	15	21.3	21.0	21.4	2.0
¾	20	26.9	26.4	26.9	2.3
1	25	33.7	33.2	33.8	2.6
1¼	32	42.4	41.9	42.5	2.6
1½	40	48.3	47.8	48.4	2.9
2	50	60.3	59.6	60.2	2.9

Thick-walled steel pipes (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 *Chapter 2.1 'Standards and regulations' on page 6*.

Boiler pipe quality – pipe series 1

Thread size [inch]	Nominal diameter [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	2.0–5.0	1.4–4.5
¾	20	26.9	26.4	27.4	2.0–8.0	1.4–5.0
1	25	33.7	33.2	34.2	2.3–8.8	1.4–8.0
1¼	32	42.4	41.9	42.9	2.6–10.0	1.4–8.8
1½	40	48.3	47.8	48.8	2.6–12.5	1.4–8.8
2	50	60.3	59.7	60.9	2.9–16.0	1.4–10.0

[1] see *Chapter 2.1 'Standards and regulations' 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:

- Do not use fixed pipelines as a support for other pipelines and components.
- Do not use pipe hooks.

- Observe distance to press connectors.
- Observe the expansion direction: Plan fixed and gliding points.

Make sure to affix the pipelines in such a way as to de-couple them from the installation body, so that they cannot transfer any structure-borne sound, resulting from thermal expansion or possible pressure surges, onto the installation body or other components.

Observe the following fixing distances:

Distance between the pipe clamps for thick-walled steel and stainless steel pipes

Ø external [mm]	Nominal diameter [inch]	Fixing distance between the pipe clamps [m]
21.3	½	2.75
26.9	¾	3.00
33.7	1	3.50
42.4	1¼	3.75
48.3	1½	4.25
60.3	2	4.75

Length expansion

Pipelines expand with heat. Heat expansion is dependent on the material. Changes in length lead to tension within the installation. These tensions must be compensated for with suitable measures.

The following are effective:

- Fixed and gliding points
- Expansion equalisation joints (expansion bends)
- Compensators

2.3.3 Press connectors

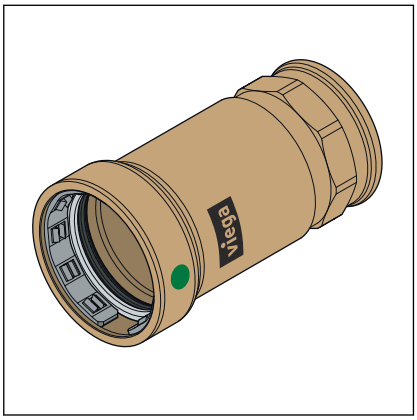


Fig. 2: Megapress adapter (model 4212.4)

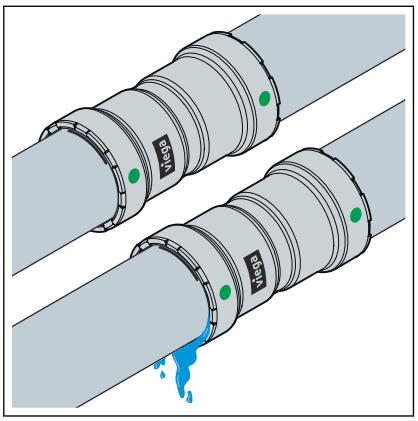
The Megapress adapter is made of silicon bronze. There is a cutting ring, a separator ring and a profile sealing element on one side of the press connector. The cutting ring cuts into the pipe during pressing and ensures a force-fit connection.

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

To facilitate installation in special cases, the insertion depth of the Megapress adapter has been extended.

The extended insertion depth makes it possible to ensure the minimum insertion depth of the Megapress press connection when screwing in the thread.

SC-Contur



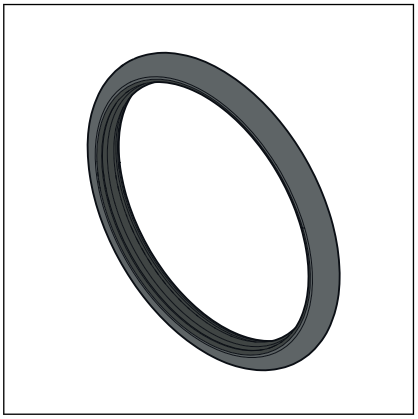
Viega press connectors are equipped with the SC-Contur. SC-Contur is a safety mechanism certified by the DVGW and ensures that the press connector leaks in an unpressed state. In this way, inadvertently unpressed connections are noticed during a leakage test.

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

- with the wet leakage test in the pressure range from 0.1–0.65 MPa (1.0–6.5 bar)
- with dry leakage test in the pressure range from 22 hPa–0.3 MPa (22 mbar–3.0 bar)

Fig. 3: SC-Contur

2.3.4 Sealing elements



The Megapress press connections are pre-assembled with EPDM profile sealing elements. The integrally moulded sealing lips also seal pipe surfaces with slightly uneven surfaces.

Fig. 4: EPDM profile sealing element

Area of use of the EPDM sealing element

Area of application	Potable water	Heating	Solar installations	Compressed air	Technical gases
Area of application	all pipeline sections	Pump hot water heating system	Solar circuit	all pipeline sections	all pipeline sections
Operating temperature [$T_{max.}$]	80 °C	95 °C	—	60 °C	—

[1] see *Chapter 2.1 'Standards and regulations' on page 6*

[2] Consultation with Viega required.

[3] see *Chapter 2.1 'Standards and regulations' on page 6*

[4] See also document *"Areas of application for metal installation systems"* on the Viega website

Area of application	Potable water	Heating	Solar installations	Compressed air	Technical gases
Operating pressure [P_{max}]	—	1.6 MPa (16 bar)	0.6 MPa (6 bar)	1.6 MPa (16 bar)	—
Comments	According to the applicable regulations[3)] p_{max}: 1.0 MPa T_{max}: 95 °C t_{max}: < 60 min	According to the applicable regulations[1)] T_{max}: 105 °C	for flat collectors	dry, oil content < 25 mg / m^3 [4)]	[2)] [4)]

[1)] see *Chapter 2.1 'Standards and regulations' on page 6*

[2)] Consultation with Viega required.

[3)] see *Chapter 2.1 'Standards and regulations' on page 6*

[4)] See also document *"Areas of application for metal installation systems"* on the Viega website

The sealing materials of the press connector system are subject to thermal ageing, which depends on the media temperature and the service life. The higher the media temperature, the faster the thermal ageing of the sealing material progresses. In the case of special operating conditions such as industrial heat recovery systems, it is necessary to compare the specifications of the equipment manufacturer with the specifications of the press connector system.

Before using the press connector system outside the described areas of application or if in doubt about the correct material selection, please contact Viega.

2.3.5 Technical data

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

Operating temperature [$T_{max.}$]	105 °C
Operating pressure [P_{max}]	1.6 MPa (16 bar)

2.3.6 Markings on components

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.

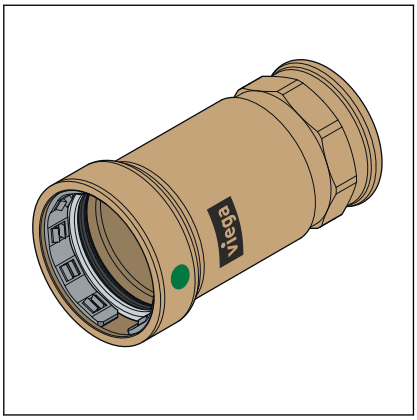


Fig. 5: Green dot and inscription "Viega"

The press connectors are marked as follows:

- Green dot on each press connection
- "Viega" inscription
- "EPDM" for the factory-fitted EPDM sealing element
- Dimension
- Batch
- DVGW

2.3.7 Mixed installations

In potable water installations, piping components from different metals can have a detrimental effect on each other and cause corrosion, for example. For instance, a copper pipe must not be installed directly upstream of a galvanised steel pipe.

	Installation in the flow direction	
System	Before galvanised materials	Behind galvanised materials
Sanpress Inox	✓	✓
Sanpress	✓	✓
Profipress	✗	✓

Please contact Viega for questions on this subject.

The flow rule must be observed in all mixed installations with pipes made of copper and galvanised steel.

2.4 Information for use

2.4.1 Corrosion

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

There are exceptions in the following cases:

- Contact with aggressive building materials such as nitrite or materials containing ammonium
- in aggressive surroundings

Protect the press connector system against excessively high concentrations of chloride generated by both the medium and by external factors.

An excessive chloride concentration can lead to corrosion in stainless steel systems.

Avoid external contact with materials containing chloride

- Insulating materials must not have a water-soluble chloride ion content that exceeds 0.05 %.
- Sound insulating inlays on the pipe clamps must not contain leachable chloride.
- Stainless steel pipes must not come into contact with building materials or mortar containing chloride.

If external corrosion protection is required, observe the relevant regulations, see *Chapter 2.1 'Standards and regulations' on page 6*.

If you are in any doubt over the correct material selection, contact the Viega Service Center.

Pipes and press connectors must be insulated according to the general rules of engineering.

Observe the manufacturer's information.

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 *Chapter 2.1 'Standards and regulations' 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.
- 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

Checking system components

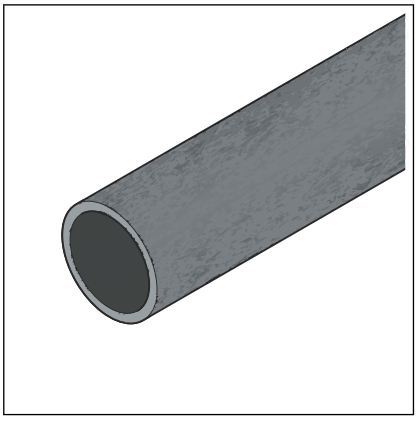
System components may, in some cases, become damaged through transportation and storage.

- 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.
- Pipes and press connectors must be insulated pursuant to the general rules of engineering.

Preparation of the pipes

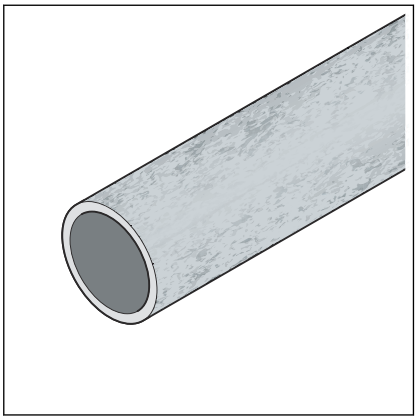
As long as they are free from dirt, smooth, firm, even and undamaged, the following pipe surfaces are suitable for the production of press connections without further treatment:

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.

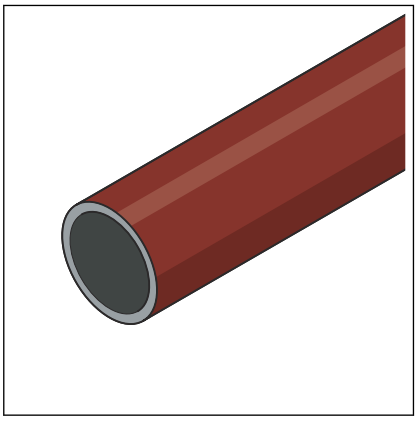


Thick-walled uncoated steel and stainless steel pipes

Do not use uncoated steel pipes for potable water.



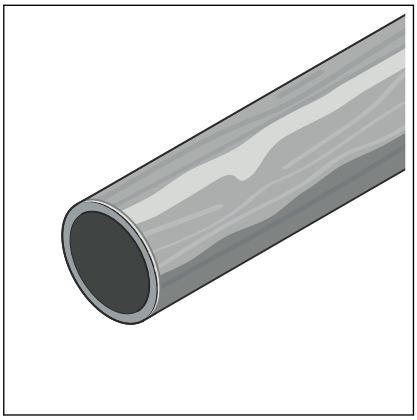
Thick-walled galvanised steel pipes



Industrially painted or powder-coated pipes (maximum external diameter in acc. with *Chapter 2.3.2 'Pipes' on page 11*)

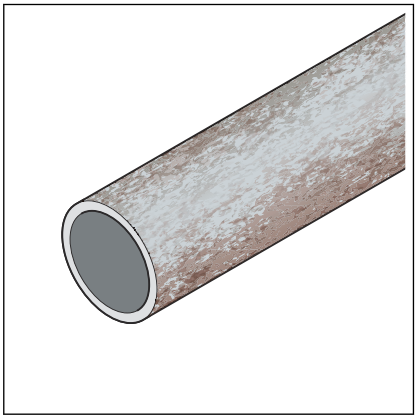
Do not use industrially painted or powder-coated steel pipes for potable water.

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

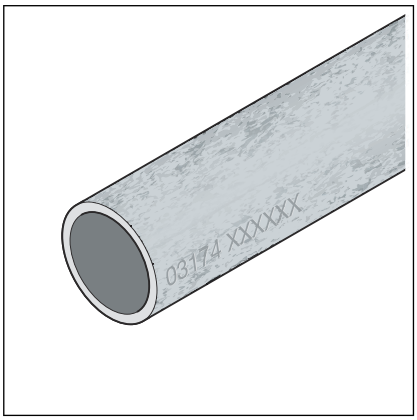


Uneven, manually applied layers of paint

Exceeding the maximum external diameter due to coating that has been applied *Chapter 2.3.2 'Pipes' on page 11*



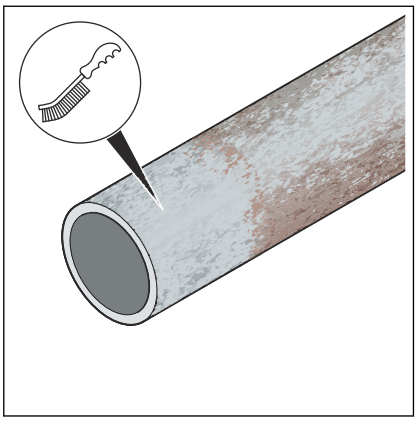
Bumps, damage, grooves, corrosion or loose adhesions



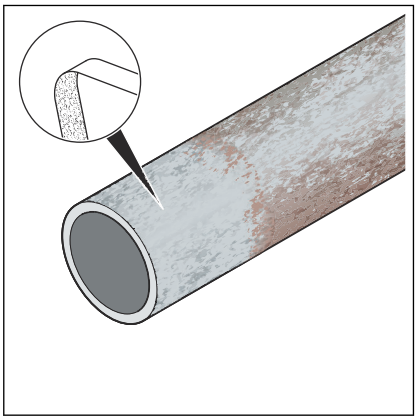
NOTICE!
Leaky press connection
Pressings on the embossed pipe marking may cause leaking.

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

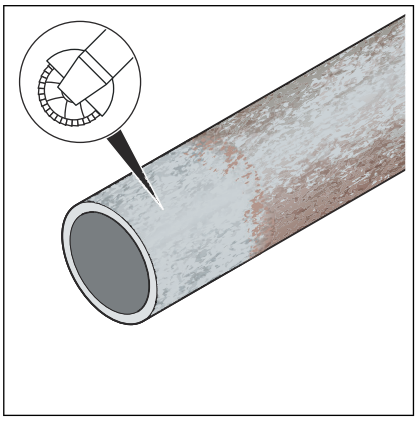
The following are examples of suitable tools for the work:



- Wire brush



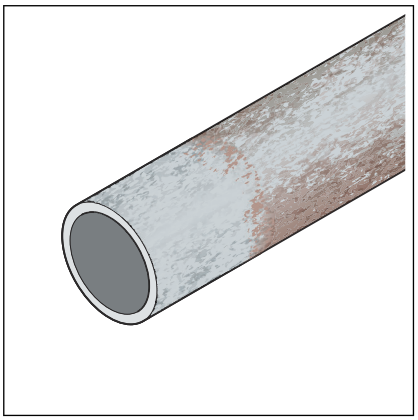
- Cleaning fleece or sanding paper (grain > 80)



- Angle grinder with lamella flap disc

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 11*.

In systems where complete corrosion protection is required (e. g. cooling systems), 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 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.

Exchanging a sealing element is permitted in the following situations:

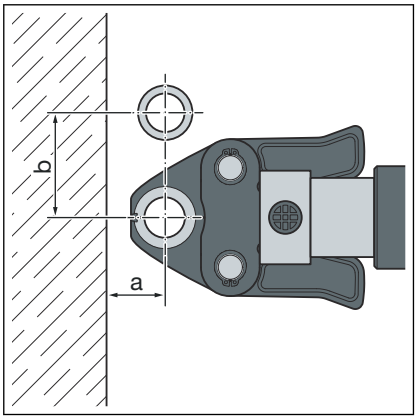
- if the sealing element in the press connector is obviously damaged and should be exchanged for a Viega spare sealing element made of the same material

3.3.4 Space requirements and intervals

Megapress press connection

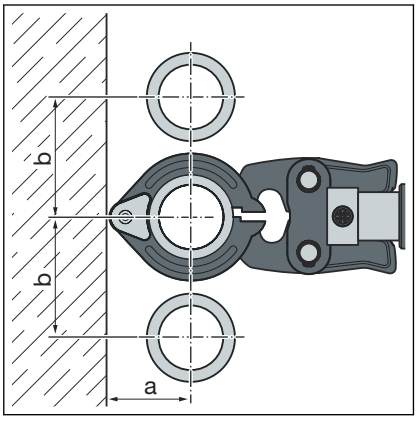
The following content refers to the page with the Megapress press connection.

Pressing between pipelines



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

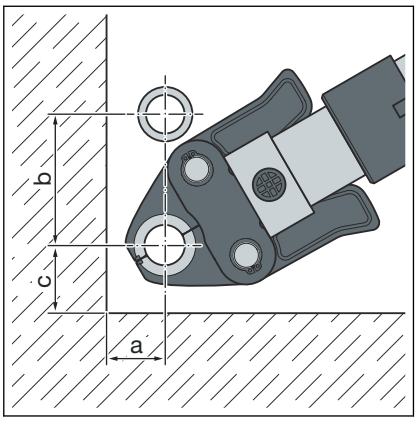
D	½	¾	1
a [mm]	30	35	45
b [mm]	70	80	95



Space requirement press rings D½–2

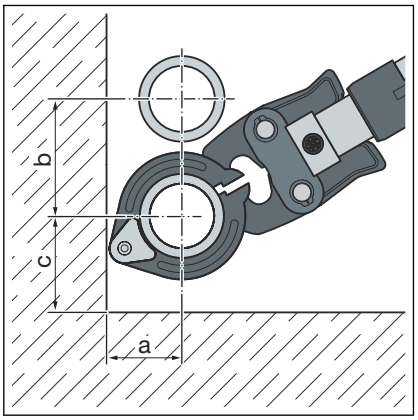
D	½	¾	1	1¼	1½	2
a [mm]	60	75	75	95	105	105
b [mm]	75	85	100	125	135	140

Pressing between pipe and wall



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

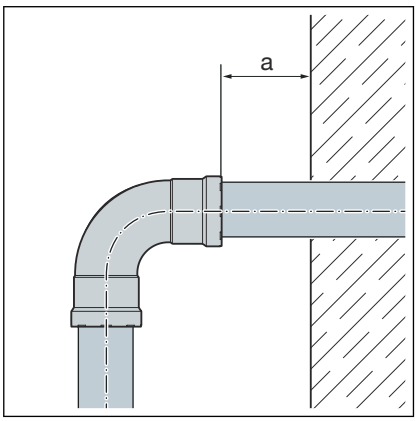
D	½	¾
a [mm]	60	65
b [mm]	75	85
c [mm]	80	80



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
c [mm]	80	80	80	80	80	80

Wall distance

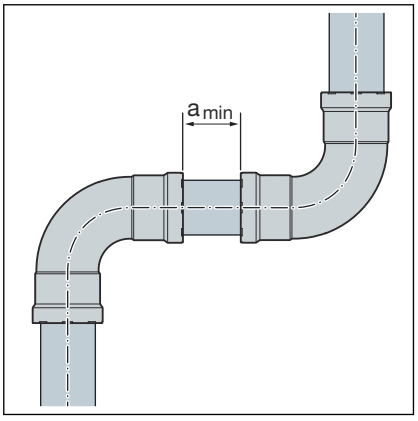


Interval between the pressings

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 connection may become leaky.

With pipes with a diameter of d 12–28, 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 ½–1

D [inch]	a_{min} [mm]
½	5
¾	
1	

Minimum distance with press rings D½–2

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.

3.3.5 Required tools

NOTICE!
Megapress adapters may be pressed at the Megapress press connection with Megapress press rings and press jaws.

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	Press jaws DN15 to DN25, press rings DN32 to DN50, hinged adapter jaw Z2 model 4299.61
		DN32 to DN50 model 4296.1, with hinged adapter jaw Z2 model 2296.2	
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
- Deburrer or half-round file and coloured pen for marking
- Press machine with constant pressing force
- Press jaw (D½–1) or press ring (D½– 2) with corresponding hinged adapter jaw, suitable for the pipe diameter and with suitable profile

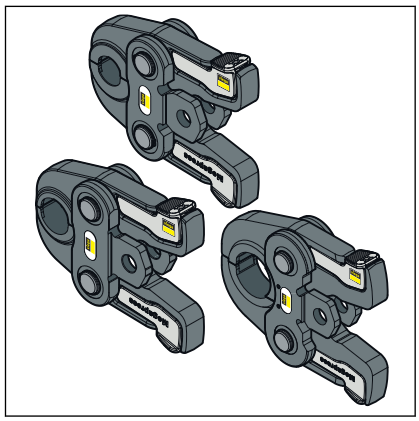


Fig. 6: Megapress press jaws

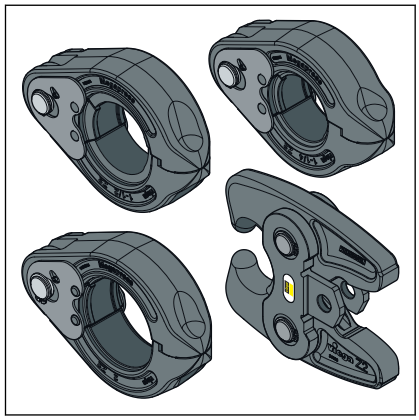


Fig. 7: Megapress press rings with hinged adapter jaw Z2

Viega recommends using Viega system press tools for pressing.

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

3.4 Assembly

Instruction video

Link to the video: *Pressing the press connector system*

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 spare part that is suitable for the intended use *Chapter 2.3.4 'Sealing elements' on page 15*. 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

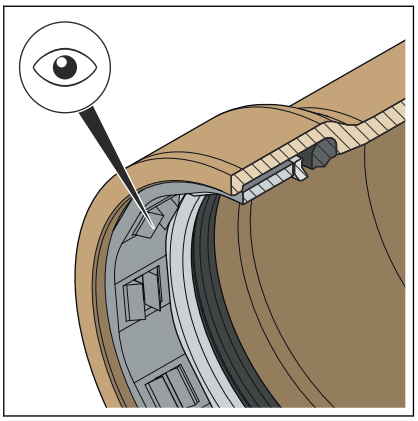


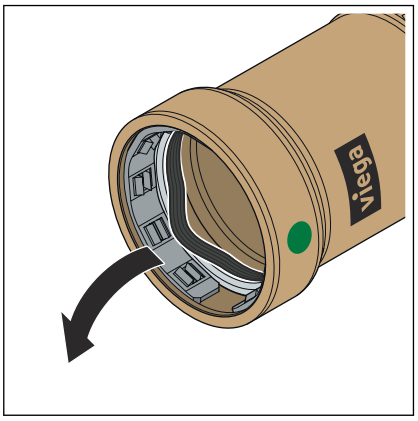
Fig. 8: Cutting ring

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.

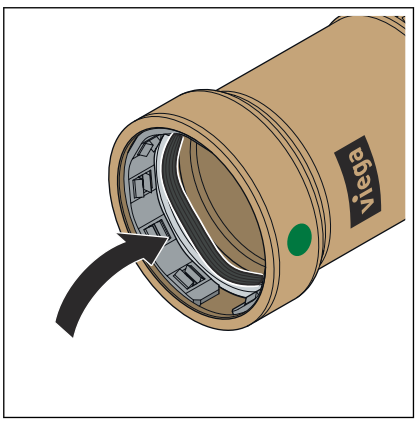
Removing the sealing element

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



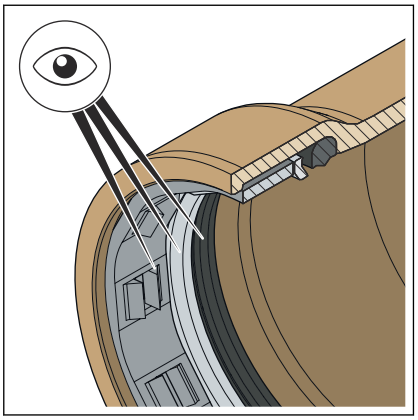
- Remove the sealing element from the bead. Proceed carefully to avoid damaging the sealing element seat.

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.
  EPDM = polished black
- 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

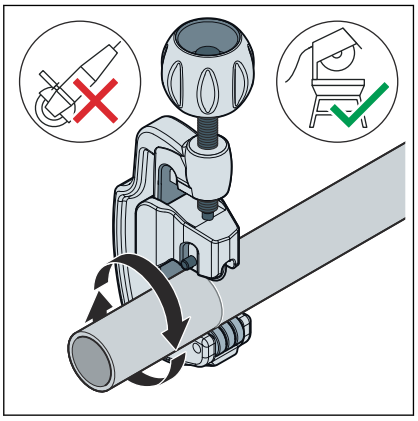
NOTICE!
Leaking press connections due to damaged material!

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 flame cutters when cutting to length.
- Do not use grease or oils (e. g. cutting oil).

For information about tools, also see *Chapter 3.3.5 'Required tools' on page 27*.



- Cut the pipe at a right angle as accurately as possible using a pipe cutter or a fine-toothed hacksaw to ensure correct and even pipe insertion depth.

  Do not use a flame cutter or angle grinder.

  Avoid grooves on the pipe surface.

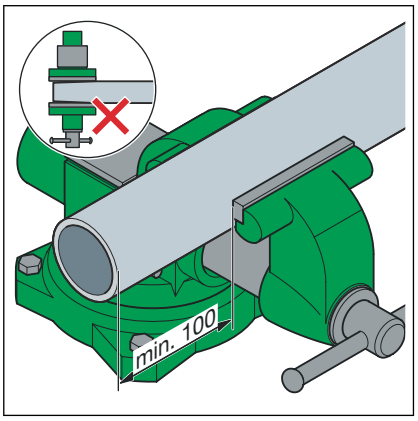
3.4.3 Deburring the pipes

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

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

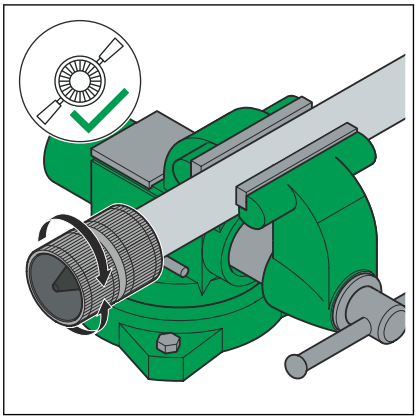
- ≤ D1½ (model 2292.2)
- D2 (model 2292.4XL)

NOTICE!
Damage due to the wrong tool!
Do not use sanding disks or similar tools when deburring. The pipes could be damaged by these.



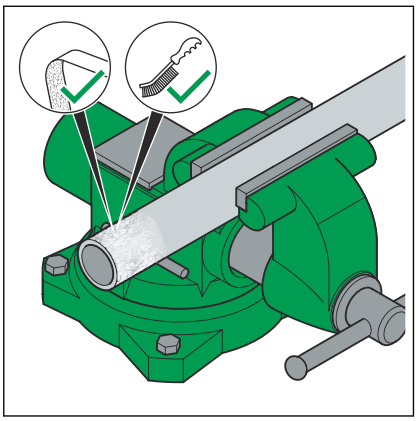
- Secure the pipe in the vice.
- When clamping, leave an interval of at least 100 mm (a) to the pipe end.

  The pipe ends must not be bent or damaged.

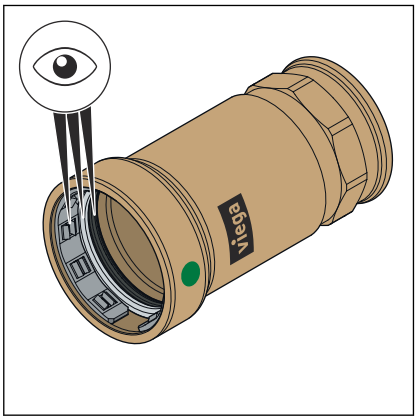


- Deburr the inside and outside of the pipe.

3.4.4 Pressing the connection

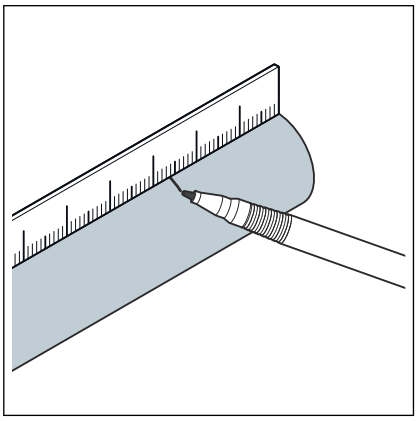


- With the help of a wire brush, cleaning fleece or sanding paper, remove loose dirt and rust particles from the pressing area.



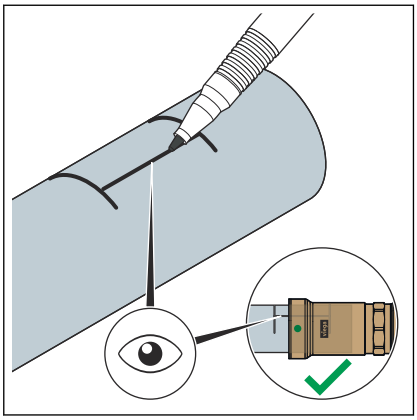
Requirements:

- The pipe end is not bent or damaged.
- The pipe is deburred.
- The correct sealing element is in the press connector.
  EPDM = polished black
- Sealing element, separator ring and cutting ring are undamaged.
- The complete sealing element, separator ring and cutting ring are in the bead.

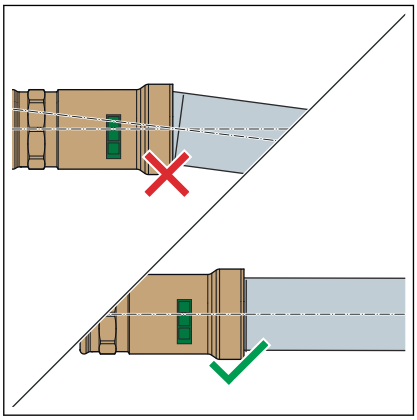


- Mark the minimum and maximum insertion depth on the pipes. Measure both dimensions from the pipe end.

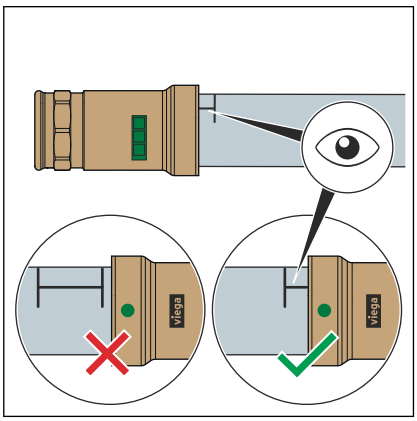
Dimensions			
Dimension D [inch]	R internal thread [inch]	min. insertion depth [mm]	max. insertion depth [mm]
½	½	27	42
¾	½	29	46
¾	¾	29	46
¾	1	29	46
1	¾	34	54
1	1	34	54
1	1¼	34	54
1¼	1	46	68
1¼	1¼	46	68
1½	1½	48	69
2	2	50	76



- To emphasise the possible insertion depth range, connect the lines of the minimum and maximum insertion depth with a straight line.

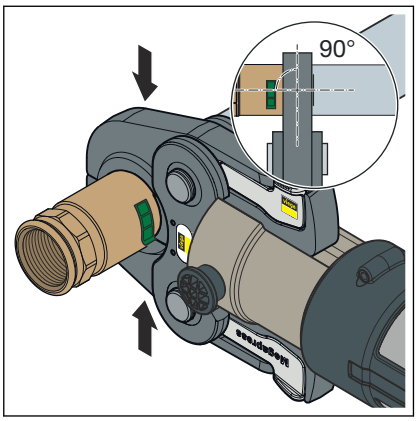


- Push the press connector onto the pipe. Do not twist the press connector.



NOTICE! Ensure that the minimum insertion depth is observed. Failure to comply with the minimum insertion depth can lead to leaks.

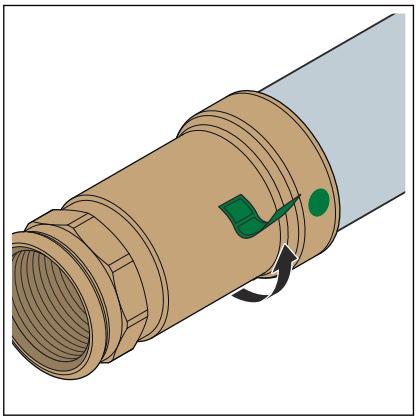
Pressing with the Megapress press jaw D ≤ 1



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

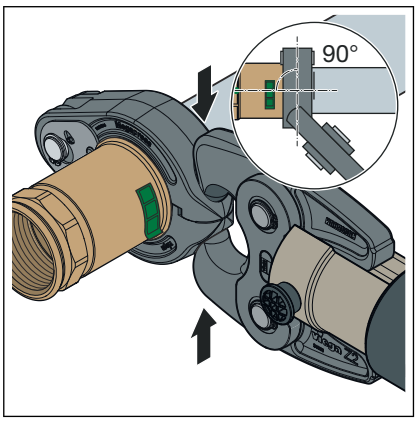
  INFO! Observe the press tool instruction manual!

- 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



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

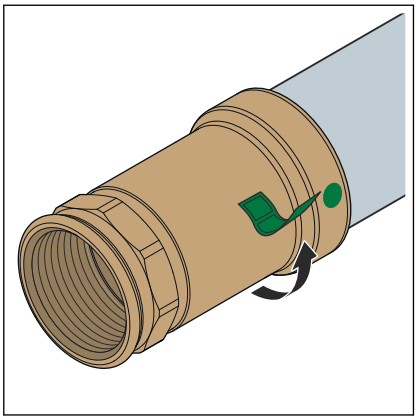
Pressing with press rings with D ½–2



- 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.
- 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.

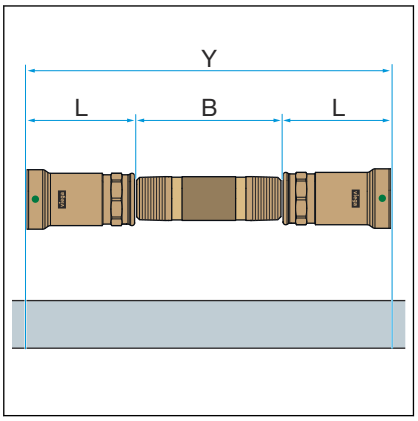


- Remove the check label.
  - The connection is marked as having been pressed.

3.4.5 Use Megapress adapters for replacing or retrofitting fittings

The Megapress adapters with internal thread can be used for retrofitting fittings, for example. An illustrated example of the installation of a double nipple is shown below.

NOTICE!
Double nipples cannot be used as space savers for the subsequent installation of fittings, as the Megapress adapters can no longer be moved after pressing.



- Check whether there is enough space (Y) to install the Megapress adapters and the fitting.

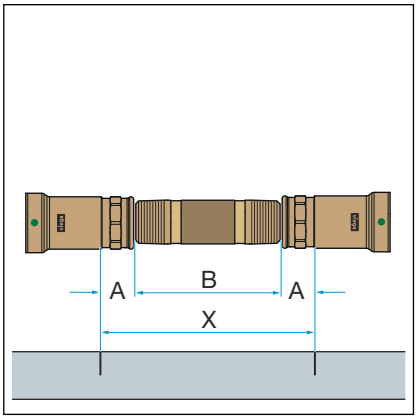
  INFO! To ensure problem-free installation, there must be no moulded pieces, brackets etc. in the entire area Y.

  The dimension Y results from L + B + L + 2 mm

  - Y = required total area (without moulded pieces, brackets, etc.)
  - L = length Megapress adapter (see table)
  - B = total length of the fitting to be installed (picture shows an example of a double nipple)
  - The 2 mm is used to make it easier to install the fitting.

Dimension D [inch]	R internal thread [inch]	L [mm]
½	½	65
¾	½	73
¾	¾	70
¾	1	73
1	¾	83
1	1	82
1	1¼	85
1¼	1	103
1¼	1¼	99

Dimension D [inch]	R internal thread [inch]	L [mm]
1½	1½	100
2	2	111

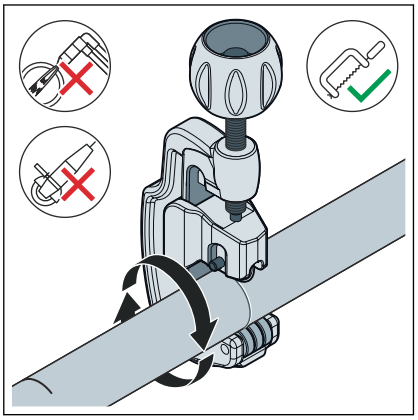


- Determine and mark the required cut-out dimension (X).

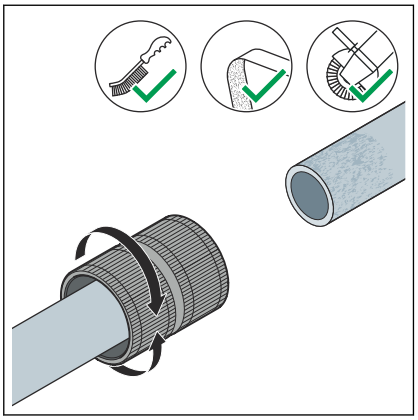
The dimension X results from A + B + A + 2 mm.

- X = Required pipe cut-out
- A = internal thread length incl. key surface to end of max. insertion depth (see table)
- B = total length of the fitting to be installed (picture shows an example of a double nipple)
- The 2 mm is used to make it easier to install the fitting.

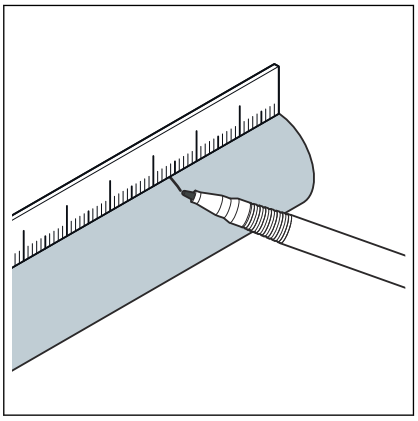
Dimensions		
Dimension D [inch]	R internal thread [inch]	A [mm]
½	½	23
¾	½	27
¾	¾	24
¾	1	27
1	¾	29
1	1	28
1	1¼	31
1¼	1	35
1¼	1¼	31
1½	1½	31
2	2	35



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



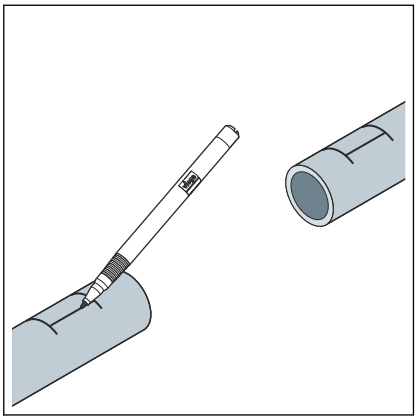
- Deburr both pipe ends on the inside and outside.
- With the help of a wire brush, sanding paper or an angle grinder with a lamella flap disc, remove loose dirt and rust particles along the length of the sliding sleeve from the pipe ends.



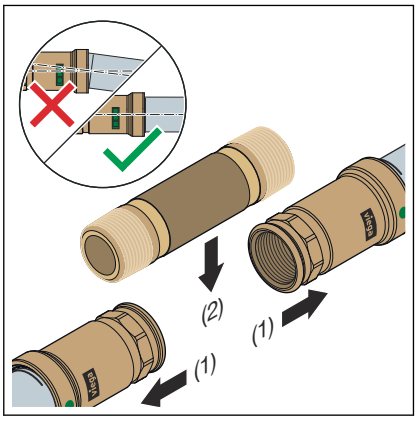
- Mark the minimum and maximum insertion depth on the pipes. Measure both dimensions from the pipe end.

INFO! Megapress adapters are equipped with a sliding function that bypasses the screwing in of the thread. Refer to the table for the minimum and maximum insertion depth.

Dimensions			
Dimension D [inch]	R internal thread [inch]	min. insertion depth [mm]	max. insertion depth [mm]
½	½	27	42
¾	½	29	46
¾	¾	29	46
¾	1	29	46
1	¾	34	54
1	1	34	54
1	1¼	34	54
1¼	1	46	68
1¼	1¼	46	68
1½	1½	48	69
2	2	50	76

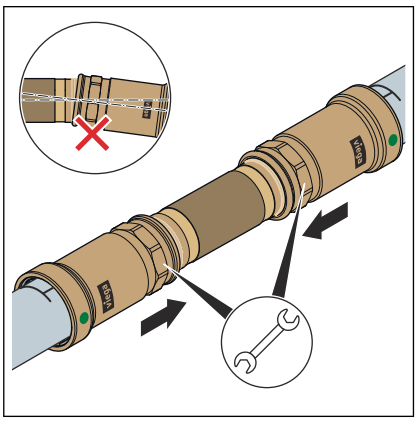


- To emphasise the possible insertion depth range, connect the lines of the minimum and maximum insertion depth with a straight line.



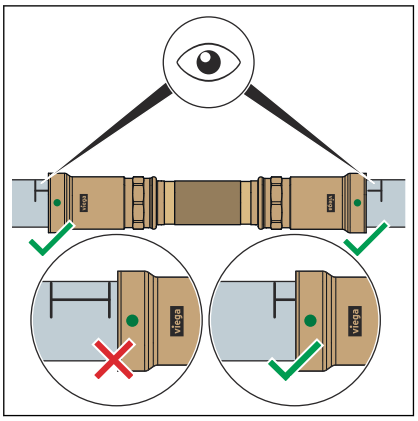
- Push the Megapress adapters unpressed and without tilting onto the pipe up to the stop (max. insertion depth) (1).
- Then insert the fitting (the picture shows an example of a double nipple) with sealed threads (2) that are approved for potable water installations.

NOTICE! Ensure the correct mounting direction.



- Screw the Megapress adapters onto the double nipple.

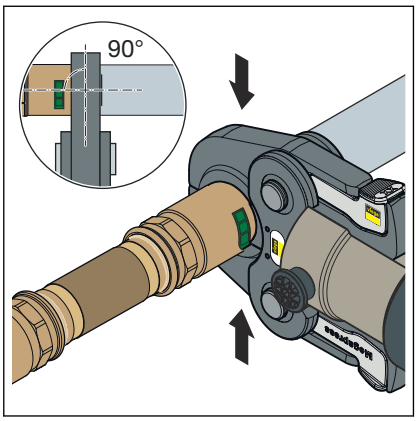
NOTICE! To ensure secure screwing in, use the key surface of the Megapress adapter and the fitting.



- Align the assembly before pressing (free of tension and tilting) so that the visible insertion depth range is the same on both sides.

NOTICE! Ensure that the minimum insertion depth is maintained on both sides. Alignment on one side can lead to leaks.

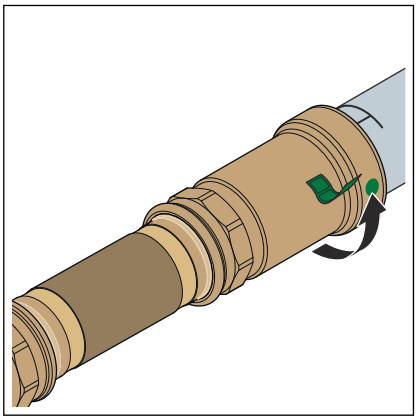
Pressing with Megapress press jaw D ≤ 1



- 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!

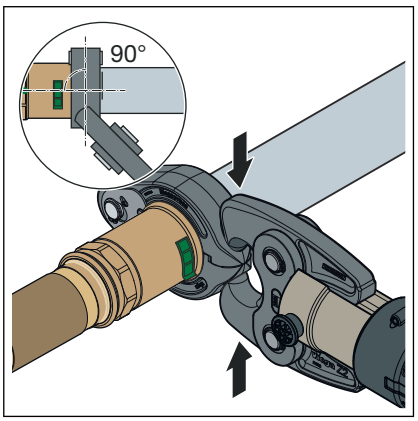
- Open the press jaw and place it at a right-angle onto the press connector.
- Check the insertion depth using the marking.
- Ensure that the press jaw is placed centrally on the bead of the press connector.
- Carry out the pressing process.
- Open and remove the press jaw.



- Remove the check label.

  ▷ The connection is marked as having been pressed.

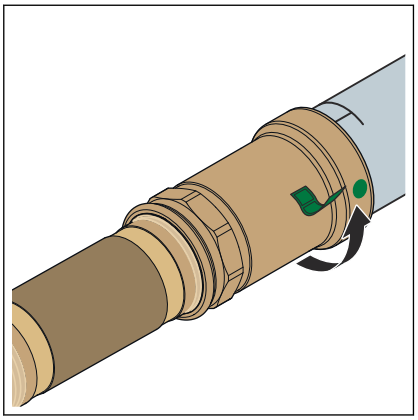
Pressing with press rings with D ½–2



- 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.
- 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.

3.4.6 Leakage test

The installer must perform a leakage test before commissioning.

The installer must perform a leakage test (load and leakage test) before commissioning.

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

Observe the applicable directives, see *Chapter 2.1 'Standards and regulations' on page 6*.

Also carry out the leakage test for non-potable water installations in accordance with the applicable directives, see *Chapter 2.1 'Standards and regulations' on page 6*.

Document the result.

To prevent corrosion after the leakage test has been performed with water, the system must remain full.

For the filling and top-up water, comply with the requirements specified in the applicable directives, see *Chapter 2.1 'Standards and regulations' on page 6*.

3.5 Maintenance

Observe the applicable regulations for the operation and maintenance of potable water installations, see *Chapter 2.1 'Standards and regulations' on page 6*.

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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