Megapress tool set

Instructions for Use



for Megapress press-in branch connector

Model
4278.5

Year built:
from 03/2016

en_INT

viega

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1 About these instructions for use

Trade mark rights exist for this document, further information can be found at www.viega.com/legal-notices.

1.1 Target groups

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

The installation of Viega products must take place in accordance with the general rules of engineering and the Viega instructions for use.

It is not permitted for individuals without the abovementioned training or qualification to mount, install and, if required, service this product. This restriction does not extend to notes on operation, if provided.

These instructions for use must remain with the tool set.

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 against possible life-threatening injury.



WARNING!
This symbol warns against possible serious injury.



CAUTION!
This symbol warns against possible injury.



NOTICE!
This symbol warns against possible damage to property.



Notes give you additional helpful tips.

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 pertinent national laws, standards, regulations and guidelines, as well as other technical guidelines, have priority over German/European guidelines in this manual: The information is not binding for other countries and territories and should, as mentioned, be considered as support.

2 Product information

2.1 Intended use

The use of the Megapress tool set and the Megapress press-in branch connector for other areas of use and other media than those described herein must be approved by the Viega Service Centre.

2.1.1 Areas of use



The Megapress press-in branch connector is suitable for thick-walled steel pipes. The press-in branch connector generates a threaded connection in pipelines. Particularly suitable for confined spaces, e.g. manifold installations for sensors, thermometers, or drains. The press-in branch connector is not suitable for use in drinking water installations. For this reason, press-in branch connectors are labelled with a black symbol "Not drinking water".

It is not permitted to use the press-in branch connector for fuel gases pursuant to DVGW Worksheet G 260 or in connection with Prestabo system components.

Use is possible in the following areas among others:

- Industrial and heating systems
- Compressed air systems
- Shipbuilding
- Cooling water pipelines (closed circuit)
- Systems for technical gases (on request)

Area of use	Heating	Compressed air	Technical gases
Field of application	Pump hot water heating system	All sections of pipe	All sections of pipe
Operating temperature [$T_{max.}$]	110 °C	60 °C	—
Operating pressure [P_{max}]	1.6 MPa (16 bar)	1.6 MPa (16 bar)	—
Comments	In acc. with DIN EN 12828 T_{max}: 105 °C	dry, oil content < 25 mg / m^3	[1]

[1] Consultation with the Viega Service Centre required.

Compressed air systems

Compressed air systems subject to the Pressure Equipment Directive must not exceed the following operating pressures:

Pipe dimension in inches	Operating pressure p_{max}
1½, 2, 2½, 3, 4	1.6 MPa (16 bar)
5, 6	1 MPa (10 bar)

2.1.2 Media

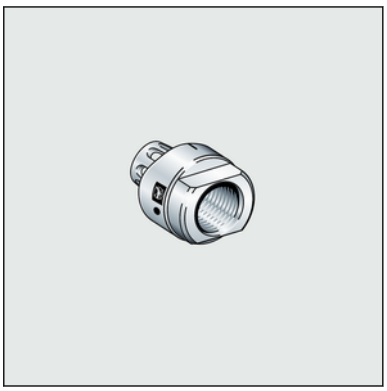
The press-in branch connector is suitable e.g. for the following media:

- Heating water for closed pump hot water heating systems in acc. with VDI 2035 Sheets 1 and 2
- Compressed air
- Anti-freeze, cooling brines up to a concentration of 50 %
- Technical gases (on request)

2.2 Product description

You need various components and tools to produce a press-in branch connector.

2.2.1 Press-in branch connector

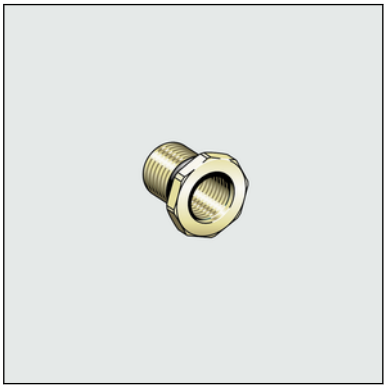


A separate press-in branch connector is available for different pipe dimensions. The press-in branch connector is equipped with an EPDM profile seal ring.

It is not permitted to replace the profile seal ring.

The press-in branch connector is coated on the outside with a zinc-nickel coat; it is suitable for thick-walled steel pipe, see *Chapter 2.2.3 „Compatible pipes“ on page 10*. The press-in branch connector is available with an internal thread Rp ¾ pursuant to DIN EN 10226-1.

Reducer G ¾ x Rp ½



For the installation of thermometers etc., a reducer (internal thread Rp ½) with sealing ring is available.

NOTICE!
Additional sealing of the thread between reducers and press-in branch connector is not permitted.

The use of other sealing rings is not permitted.

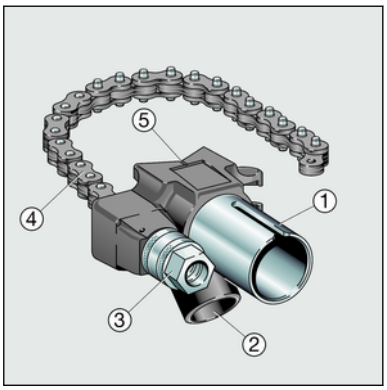
2.2.2 Tool set



1 - positioning devices (D 1½–6 inch)
2 - press-in tool
3 - installer drift for press-in tool
4 - drilling shaft
5 - drilling device for guiding the drilling shaft
6 - instructions for use
7 - marking pen

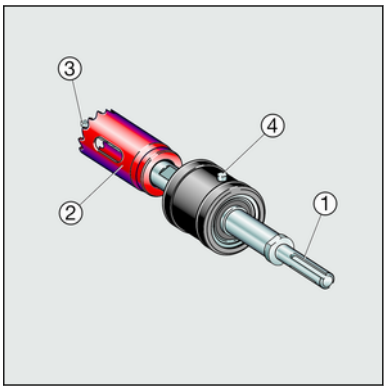
The tool set (article 731 243) for the press-in branch connector comes in a case.

Drilling device with tension chain for guiding the drilling shaft



1 - guide for the drilling shaft
2 - extractor connection 35 mm
3 - tension nut
4 - tension chain
5 - milled slot as mark for subsequent alignment

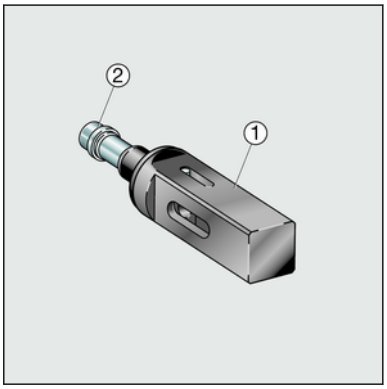
Drilling shaft



1 - drilling shaft with SDS-plus drive
2 - drilling bit 27 mm
3 - centre drill
4 - guide bolt

As an alternative, the SDS-plus drive can be replaced by a hexagonal drive. We recommend to use the hexagonal drive (article 735 753) for this purpose.

Press-in tool



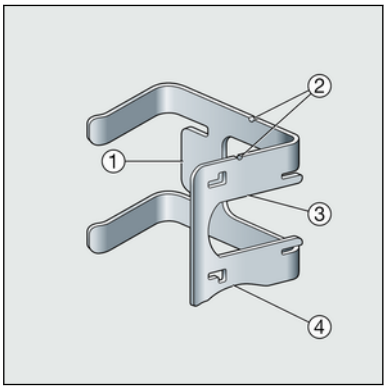
1 - insert for the press machine
2 - installer drift

To prevent loosing the installer drift, we recommend to keep it in assembled state and store it in the case at all times.

Positioning device D 1½–2½ inch and D 3–6 inch

Use the positioning devices to mount the individual press-in branch connectors. A separate positioning device is provided for each pipe dimension.

The positioning device indicates the nominal outside diameter in inch and mm.



1 - handle
2 - the marks are provided as orientation for marking the positions of other press-in branch connectors on the pipe circumference
3 - recess for the key surface of the press-in branch connector
4 - pipe template. Use the positioning device to check the pipe dimension for correctness.

Fig. 1: Positioning device D 1½–2½ inch

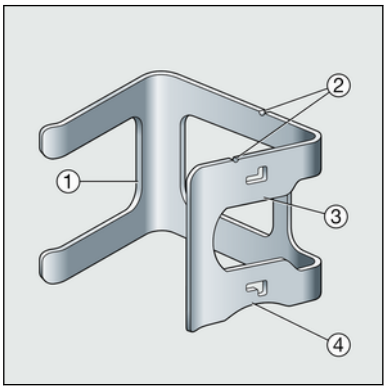


Fig. 2: Positioning device D 3–6 inch

1 - handle
2 - the marks are provided as orientation for marking the positions of other press-in branch connectors on the pipe circumference
3 - recess for the key surface of the press-in branch connector
4 - pipe template. Use the positioning device to check the pipe dimension for correctness.

2.2.3 Compatible pipes

The press-in branch connector can be used with the following seamless (S) or longitudinal welded (W) steel pipes:

- black
- galvanised
- industrially painted
- powder coated

The steel pipes must comply with the following regulations:

- for steel pipe (threaded pipe quality) acc. to DIN EN 10255 or
- for steel pipe (boiler pipe quality) pipe series 1 acc. to DIN EN 10220 / DIN EN 10216-1, DIN EN 10220 / DIN EN 10217-1

For smooth operation, it is imperative that you use the proper press-in branch connector for the given pipe dimension. Non-compliance may result in leaks or failure.

Note the tolerances specified for the pipe wall thicknesses.

DIN EN 10255

DIN EN 10255 differentiates between Heavy pipe series H and Medium pipe series M or between pipe type L, L 1 and L 2.

Press-in branch connector for steel pipe – threaded pipe quality – Heavy series H and Medium series M

Article number press-in branch connector Rp ¾	For pipe dimension	Nominal external diameter	External diameter		Wall thickness Heavy series H	Wall thickness Medium series M
	inch	mm	min. mm	max. mm	mm	mm
731168	1½	48.3	47.9	48.8	4.0	3.2
731175	2	60.3	59.7	60.8	4.5	3.6

Article number press-in branch connector Rp ¾	For pipe dimension	Nominal external diameter	External diameter		Wall thickness Heavy series H	Wall thickness Medium series M
	inch	mm	min. mm	max. mm	mm	mm
731182	2½	76.1	75.3	76.6	4.5	3.6
731199	3	88.9	88.0	89.5	5.0	4.0
731205	4	114.3	113.1	115.0	5.4	4.5
731212	5	139.7	138.5	140.8	5.4	5.0
731229	6	165.1	163.9	166.8	5.4	5.0

Press-in branch connector for steel pipe – threaded pipe quality – pipe type L and pipe type L 1

Article number press-in branch connector Rp ¾	For pipe dimension	Nominal external diameter	External diameter		Wall thickness
	inch	mm	min. mm	max. mm	mm
731168	1½	48.3	47.8	48.6	2.9
731175	2	60.3	59.6	60.7	3.2
731182	2½	76.1	75.2	76.0	3.2
731199	3	88.9	87.9	88.7	3.2
731205	4	114.3	113.0	113.9	3.6
731212	5	139.7	138.5	140.8	4.5
731229	6	165.1	163.9	166.8	4.5

Press-in branch connector for steel pipe – threaded pipe quality – pipe type L 2

Article number press-in branch connector Rp ¾	For pipe dimension	Nominal external diameter	External diameter		Wall thickness
	inch	mm	min. mm	max. mm	mm
731168	1½	48.3	47.8	48.4	2.9
731175	2	60.3	59.6	60.2	2.9
731182	2½	76.1	75.2	76.0	3.2
731199	3	88.9	87.9	88.7	3.2
731205	4	114.3	113.0	113.9	3.6

DIN EN 10220 / 10216-1, DIN EN 10220 / 10217-1

The standards differentiate between pipe series 1, 2 and 3. DIN EN 10220 recommends using pipe series 1 as pipe series 2 and 3 are either not or not always available in practice.

Press-in branch connector for steel pipe (boiler pipe quality) - pipe series 1

Article number press-in branch connector Rp ¾	For pipe dimension	Nominal external diameter	External diameter		Wall thickness	
	inch	mm	min. mm	max. mm	min. mm	max. mm
731168	1½	48.3	47.8	48.8	2.3	4.0
731175	2	60.3	59.7	60.9	2.3	4.5
731182	2½	76.1	75.3	76.9	2.6	4.5
731199	3	88.9	88.0	89.8	2.6	5.0
731205	4	114.3	113.2	115.4	2.6	5.4
731212	5	139.7	138.3	141.1	2.9	5.4
731229	6	168.3	166.6	170.0	2.9	5.4

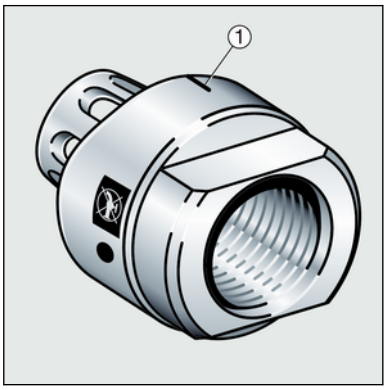
2.2.4 Marks on components

Press-in branch connector

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

The black dot and the black rectangle indicate that the system is not suitable for drinking water and is equipped with the SC-Contur.





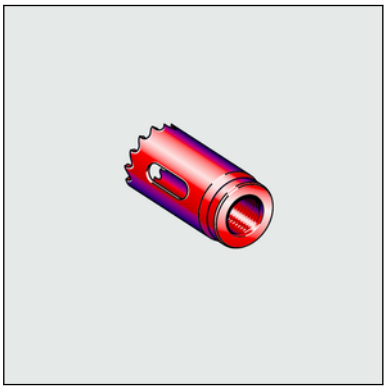
The press-in branch connector has a mark (1). Use this mark to check that the marking line and the press-in branch connector are properly aligned.

The press-in branch connector indicates the nominal outside diameter in inch and mm.

2.3 Accessories and spare parts

Various accessories and spare parts are available in addition to the tool set:

Drilling bit



The outside diameter of the drilling bit is 27 mm.

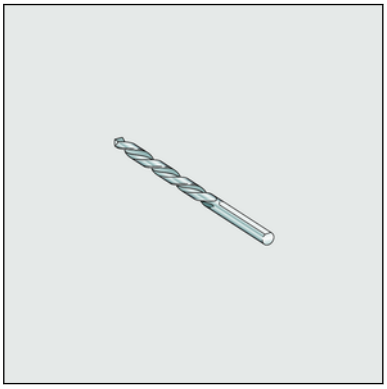
We recommend to use the following spare drilling bits (outside diameter 27 mm):

- Viega article 731 151
- equivalent Ridgid article

Do not use worn drilling bits: The hole drilled with a worn bit will not be perfectly circular or too small, resulting in inability to mount the press-in branch connector.

The drilling bit and drilling device are coordinated. When other drilling bits are used, leak tightness cannot be guaranteed.

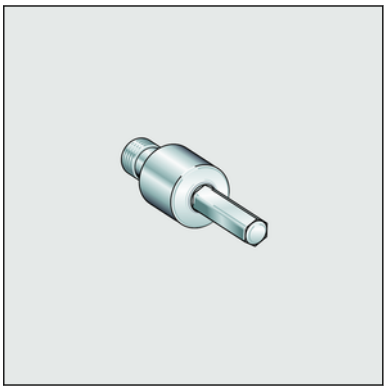
Centre drill



The centre drill has a diameter of 6 mm, a length of 93 mm, and has a flat clamping surface. This flat surface ensures that the centre drill is properly fastened.

We recommend to use the Viega centre drill (article 734 688). As an alternative, HSS drills pursuant to DIN 338 (6 mm x 93 mm) with flat clamping surface can be used.

Hexagonal drive adapter



When power drills without SDS-plus chuck are used, the hexagonal drive adapter (article 735 753) can be used at the drilling shaft instead of the SDS-plus drive. A 13 mm chuck is required for the hexagonal drive.

3 Handling

3.1 Safety advice

- *Always comply with the applicable accident prevention regulations.*
- *Wear protective glasses and suitable hand protection.*

Mandatory signs

Pay attention to the mandatory and warning labels on the drilling device:

	**General warning sign**
	**Note the operating instructions** Read the operating instructions comprised in the delivery before using the product.
	**Wear head protection** We recommend that you wear suitable head protection when doing work marked with this symbol.
	**Wear eye protection** We recommend that you wear protective glasses when doing work marked with this symbol.

Transport and storage

- To protect the tools from damage and loss, always transport them in the case provided for this purpose.
- Store the case and the tools in a clean, dry place at all times.

Safety when drilling

- Before each use, check the tool for proper function and smooth running.
  Do not use damaged parts.
  Only use original system parts in perfect condition.
- Dropping the tools or individual parts may cause damage. Do not use machines that have been dropped. Replace them or send them to a service point for inspection.
- Before drilling, completely drain and de-pressurize the pipelines.
- Comply with the minimum distances for the tools, *Chapter 3.2.1 „Space requirements and intervals“ on page 16*.

- Chips will form during the drilling process. Always wear suitable protective glasses.
- Drilling bit, centre drill, and drill core may get very hot.
  Allow the parts to cool after the end of drilling.
  Wear suitable hand protection when removing the parts.
  Do not deposit hot parts on flammable materials.
- Comply with the safety information in the instructions for the power drill and the suction device.

Maintenance

- Comply with the maintenance, servicing and care instructions.
- Have maintenance and service carried out by service providers authorized by Viega only.

3.2 Assembly information

3.2.1 Space requirements and intervals



CAUTION!
Risk of injury due to insufficient distances
Risk of injury to persons and damage to other components if the required minimum distances are not observed when mounting the press-in branch connector.

After mounting the press-in branch connector, avoid thermal loading beyond the maximum permitted operating temperature, e.g. in the course of welding work. If the pipeline needs bending after the press-in branch connector has been mounted, the press-in branch connector must be outside the bending area. Observe a minimum distance of 0.5 x outside pipe diameter to the bending area.

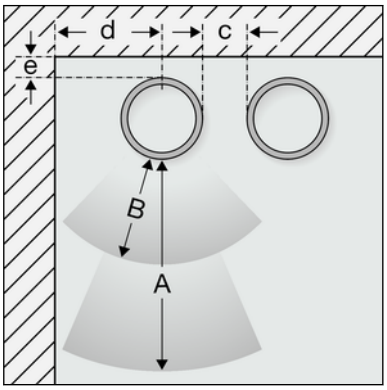
We recommend to check the space situation before every drilling process. There may be no connectors, clamps etc. in the area of the bore hole. Maintain a gap of 50 mm to be able to mount the positioning device and the drilling equipment properly.

For the minimum distances, refer to the table in the respective section.

Minimum distances for power drill, press machine and positioning device

The working area **A** depends on the power drill used. Area **A** is defined by the length of the power drill plus the length of the drilling shaft (170 mm).

Working area **B** is the length of the press machine (incl. 20 mm duty stroke) with press-in tool and press-in branch connector.

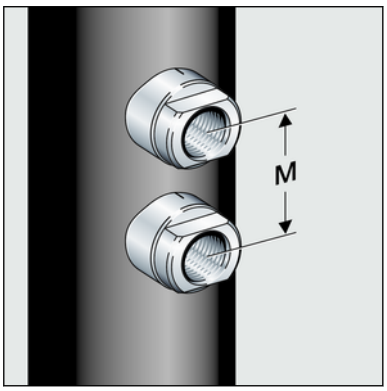


Press machine	Working area B
Type 2	590 mm
PT3 H/EH	620 mm
PT3 AH	500 mm
Pressgun 4B/4E	530 mm
Pressgun 5	480 mm

The minimum distances c, d, and e are mandatory for mounting the drilling device and the positioning device.

Dimension in inch	Minimum distance c in mm	Minimum distance d in mm	Minimum distance e in mm
1½	30 mm	110 mm	30 mm
2	30 mm	110 mm	30 mm
2½	30 mm	110 mm	30 mm
3	35 mm	110 mm	35 mm
4	40 mm	110 mm	40 mm
5	45 mm	120 mm	45 mm
6	55 mm	145 mm	55 mm

Minimum distances between press-in branch connectors longitudinal to the pipe axis



Dimension in inch	M in mm
1½	70
2	
2½	
3	
4	
5	
6	

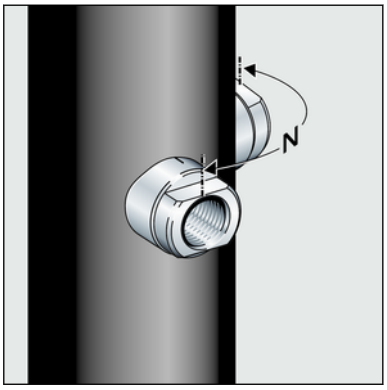
Minimum distances between press-in branch connectors diagonal to the pipe axis

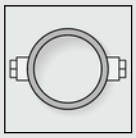
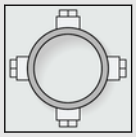
When press-in branch connectors are mounted close to each other, minimum distances must be observed to ensure that the positioning device can be used properly.

It is imperative that you drill all the holes first before mounting the press-in branch connectors. Otherwise, you won't be able to fasten the tension chain properly.

The specified minimum distances must be observed to allow for proper mounting of the press-in branch connectors. If thermometers or similar devices are used, other minimum distances may apply. It is imperative that you check this before starting to work.

The minimum distance **N** relates to the angle of the press-in branch connectors to each other. It is indicated in degrees in the table.



Dimension in inch	N in °	Symbol
1½	180°	
2		
2½		
3	90°	
4		
5		
6		

Z dimensions

The Z dimensions can be found at www.viega.de.

3.2.2 Required tools

For mounting the press-in branch connector, you need the following machines:

- Power drill / hammer drill
- Press machine
- Suction device, e.g. vacuum cleaner
- Marking pen
- Ring or fork spanner, 27 mm
- Ring or fork spanner, 32 mm
- Screwdriver
- Wire brush
- Sanding paper (grade 180)
- If applicable, pipe pliers

Power drill / hammer drill

You can use commercially available power drills / hammer drills for the drilling shaft. We recommend to use powerful machines. Using a cordless screwdriver would result in a significantly longer drilling time.

In the following, power drills and hammer drills are briefly referred to as 'drill'.

The drills must meet the following minimum specifications:

- Rated input: ≥ 600 Watt
- Drilling speed max.: 1200 U/min
- Chuck: SDS-plus or hexagonal drive adapter
- Impact function: Disabling the impact function must be possible
- Friction clutch: The machine must have a friction clutch

NOTICE!
It is imperative that the impact function is switched off.
Only use drills that run smoothly and are in perfect condition.

The proper speed is very important for the useful life of the drilling bit.

Press machine

We recommend to use Viega press tools for mounting the Megapress press-in branch connector.

Recommended Viega press machines:

- Pressgun 5
- Pressgun 4E/4B
- Type PT3-AH
- Type PT3-H/EH
- Type 2

Unsuitable press machines:

- Type 1
- Picco
- Pressgun Picco

When pressing with a Pressgun 5, the machine may terminate the pressing process even though the press-in tool cannot be released yet. In this case, start a second pressing process.

Suction device

Chips are formed during drilling. Connecting a suction device to the drilling device can reduce the contamination of the pipeline by chips to a minimum.

The pipelines must be de-pressurized and drained completely to avoid the extraction of residual fluid.

NOTICE!
Caution: Risk of fire!
Hot chips may damage the suction device or the surroundings. The suction device must not have any flammable components such as a dust bag. Compliance with manufacturer's specifications is mandatory.

The following suction device specifications must be observed to allow for extraction of chips:

- Type: workshop vacuum cleaner
- Rated input: ≥ 1200 Watt
- Air volume: ≥ 50 l/s
- Vacuum: ≥ 200 hPa (200 mbar)
- Nozzle size of connector: 35 mm
- For other connector sizes, use a commercially available 35 mm adapter.

3.3 Assembly

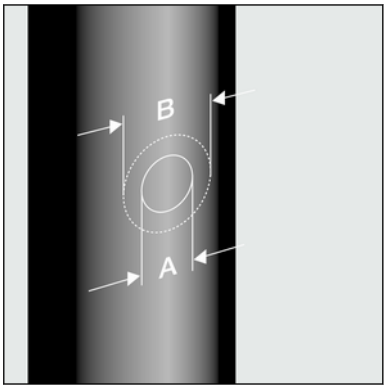
General notes on longitudinal extension of pipelines

Pipelines are subject to extension due to temperature differences. If the press-in branch connector is used for an outgoing pipeline (e.g. radiator connection), select the drilling position in such a way that the longitudinal extension of the outgoing and through-pipes will not put much tension on the press-in branch connector. The maximum permissible longitudinal extension of the through-pipe is ±10 mm.

If you cannot exclude larger longitudinal extensions, use appropriate expansion compensation as well as fixed and floating points according to the recognized standards of good practice.

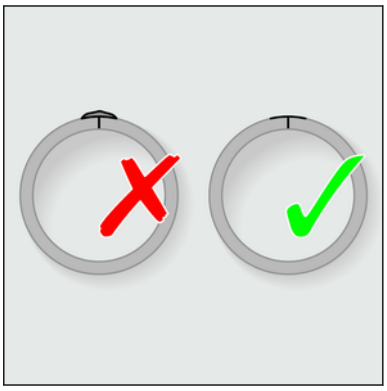
3.3.1 Preparing the pipes

Requirements in the contact area of the profile seal



- The mounting surface of the press-in branch connector is minimum 50 mm (B).
- The bore hole is in the centre of the mounting surface.
- The diameter of the bore hole is 27 mm (A).

Causes for roughness on the pipe



Major roughness on the pipe may cause the press-in branch connector to leak.

Roughness can occur due to for example

- insufficient smoothing of external pipe welding seams
- manual application of paint
- in galvanized pipes:
  projections in the zinc coat

Preferably, the press-in branch connector should not be positioned on the welding seam. If this is unavoidable, align the welding seam to the pipe bend. Pressing on recesses in the welding seam is not permitted.

Preconditions for leak tightness of the press-in branch connector

- The pipe is free of grooves, corrosion, damage, etc.
- The press-in branch connector may not be positioned in the region of the imprinted pipe marking.
- There is no roughness in the pipe surface.
  If roughness is present, treat the area of the sealing surface for the press-in branch connector until the surface is smooth and even. We recommend to first remove coarse dirt such as scaling with a wire brush, followed by smoothing with grade 180 sanding paper.
- For drilling, the pipe must have a minimum wall thickness *Chapter 2.2.3 „Compatible pipes“ on page 10*.
- In the area of the bore hole, the pipe wall must be free of damage or impairment (e.g. due to inside or outside corrosion).
- There may be no connectors, clamps etc. in the area of the bore hole. The drilling device must be able to be properly mounted.
- Use a wire brush to remove paint applied by hand.

3.3.2 Drilling the bore hole

CAUTION!
Risk of injury by metal chips and dropping machines.

– Wear protective glasses.
– Wear safety shoes.

Notes on chips

Chips are formed during drilling. Connecting a suction device to the drilling device can reduce the contamination of the pipeline by chips to a minimum.

Notes on centre drills

- Never drill a hole without using a centre drill.
- Do not use worn centre drills.
- Do not re-sharpen centre drills.

Requirements

It is important that you drill the bore hole properly to ensure correct mounting of the press-in branch connector and smooth operation later on.

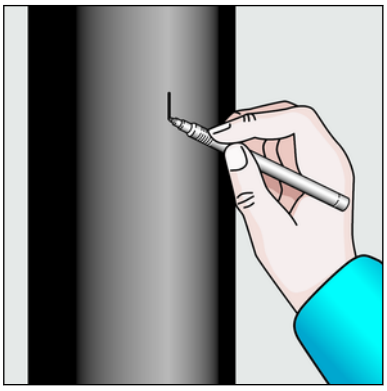
Viega recommends to use the tool set article 731 243.

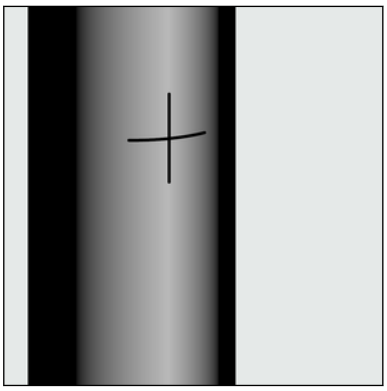
- When drilling the bore hole without using the tool set (e.g. by means of a column drill), the vertical bore hole must have an outside diameter of 27 mm ± 0.75 mm.
- Before drilling the hole, de-pressurize and drain the pipe section.
- Before drilling the bore hole, read the following chapters: *Chapter 3.2.1 „Space requirements and intervals“ on page 16* and *Chapter 3.3.1 „Preparing the pipes“ on page 20*.

Marking the bore hole

Carry out the steps in the sequence described in the following.

- Clean the bore hole area before marking.
- Mark the centre of the bore hole at the desired position.





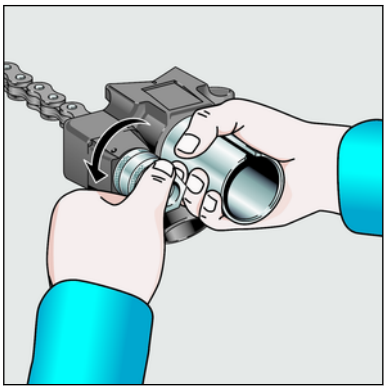
- Draw the marking lines.

  Draw the marking lines in such a way that they are longer than the press-in branch connector. This will make aligning easier.

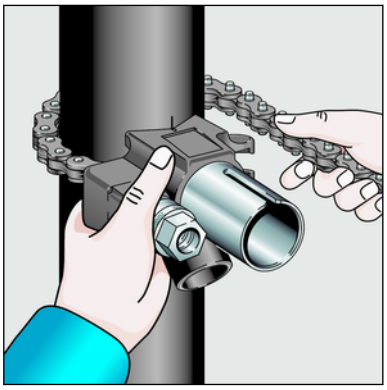
  There are milled slots at the drilling device and at the press-in branch connector. During mounting, the marking line on the pipe must be aligned with the milled slots.

  INFO! If several press-in branch connectors are mounted along the pipe axis (beneath each other and side by side), the marking line must run over the first and last press-in branch connector.

Attaching the drilling device



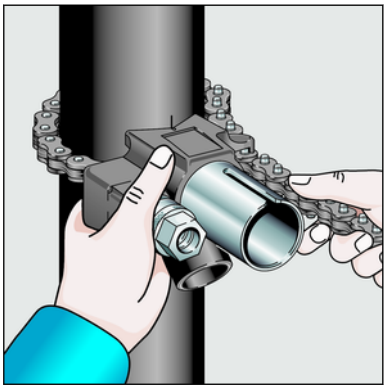
- Turn the tension nut counter-clockwise as far as it will go.



- Place the tension chain directly around the pipe.

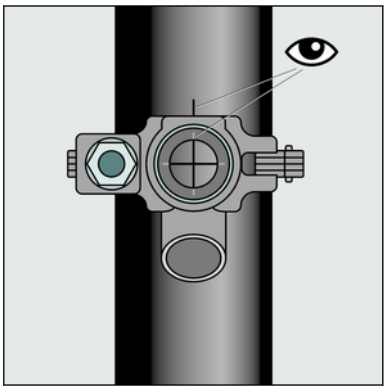
  Mount the drilling device with the suction connection pointing down.

  NOTICE! With horizontal pipelines, guide the tension chain from above over the pipe.



- Insert the bolts of the closest chain link into the bolt receiver of the drilling device.

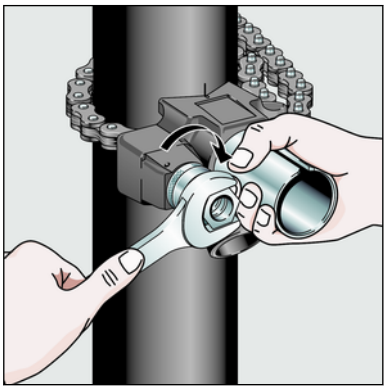
  NOTICE! The bolts must be fully inserted in the bolt receiver. Otherwise, risk of damage and increased wear.



- Align the drilling device along the respective pipe axis.

  To do so, align the outer milled slot at the drilling device and the marking lines on the pipe.

- Use the milled slots on the inside to align the bore hole centre marked on the pipe centrally.

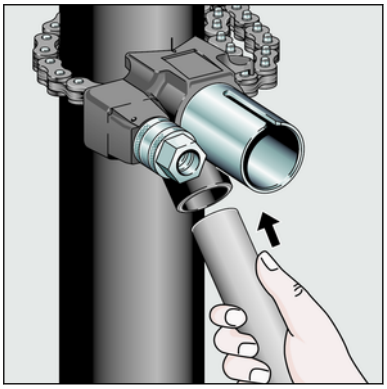


- Hand-tighten the tension nut as far as it will go.

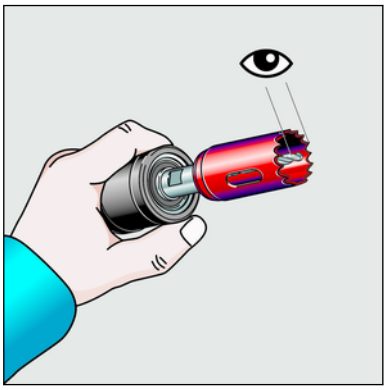
INFO! Do not undertighten or overtighten the tension chain. Otherwise, risk of damage.

- Use a 27 mm ring or fork spanner to tighten the tension nut securely to max. 10 Nm.

Preparing the tools



- Push the vacuum cleaner connection into the drive at the drilling device.



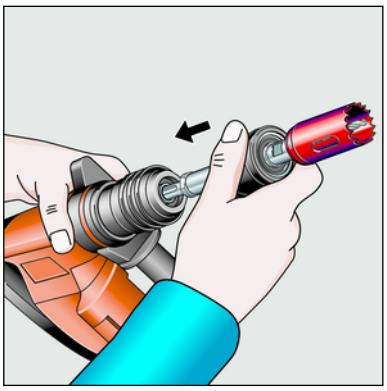
- Check the drilling bit and the centre drill for damage, wear, and proper height clearance between drilling bit and centre drill (2 mm).

  Replace worn parts if applicable.

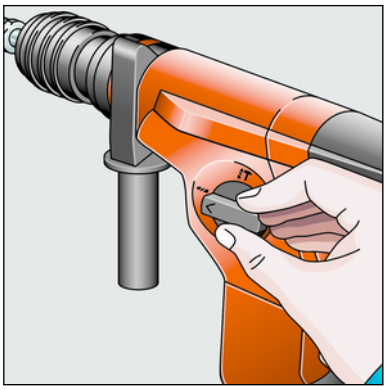
- Check the centre drill is securely fitted tighten, if necessary.

  INFO!

  - **Only use parts in perfect condition.**
  - **Do not use any lubricants and oils (such as cutting oil) during drilling. This may damage the profile seal ring at the press-in branch connector.**

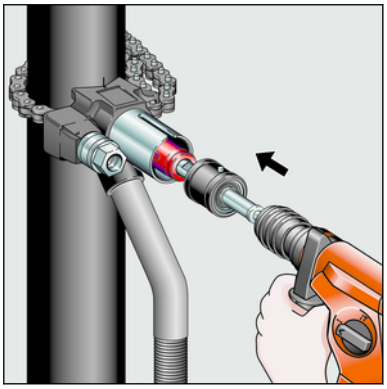


- Insert the drilling shaft into the power drill (SDS-plus) or use the hexagonal adapter to clamp the drilling shaft in the chuck.



- Switch the impact function off.
- Set clockwise rotation.

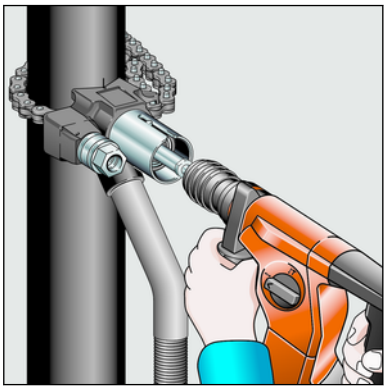
Drilling the bore hole



NOTICE! Do not switch the power drill on yet!

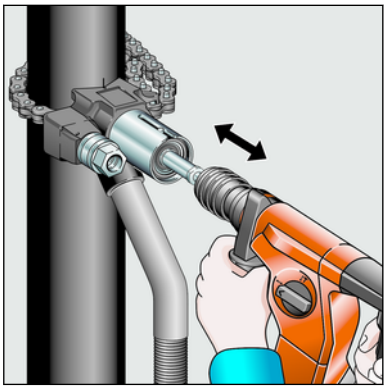
- Push the guide bolt of the drilling shaft in the guide of the drilling device.
- With minimal force, push the drilling shaft in the guide of the drilling device as far as it will go.

  Do not tilt the drilling shaft or drilling bit.



- Switch the suction device on.
- Switch the power drill on.
- Drill the hole completely in one go.

  Applying some pressure in the process.



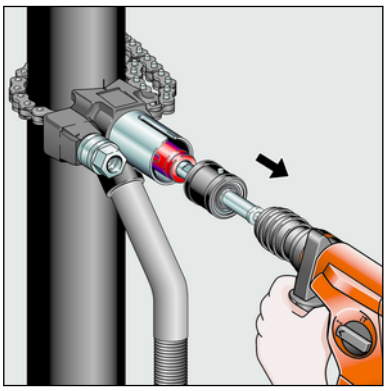
INFO! With a pipe wall thickness of ≥ 3 mm, the chips must be extracted. This increases the useful life of the drilling bit.

- In regular intervals during drilling, pull the power drill out of the bore hole for approx. 3–4 mm.

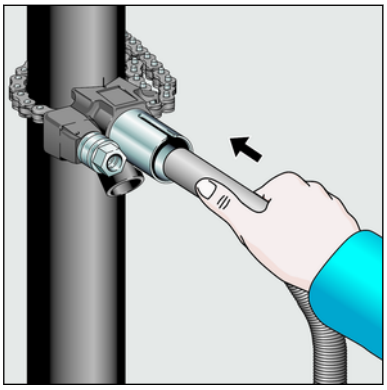
  This extracts the chips and cools the drilling bit.

Terminating the drilling process

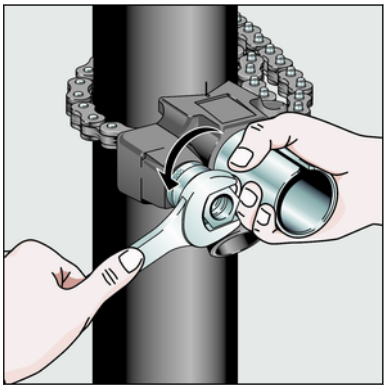
CAUTION!
Risk of injury and combustion of flammable materials due to hot drilling bit or centre drill. Allow the components to cool.



- Do not terminate the drilling process before
  - the pipe wall has been completely perforated, or
  - the drilling device has reached the stop.
- Wait for the rotation of the drilling shaft to stop before removing the power drill with the drilling shaft.



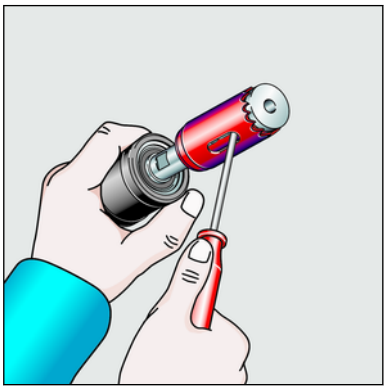
- Pull out the suction hose and vacuum off the drilling device from the front.
- Switch the suction device off and put it aside.



- Remove the drilling device.

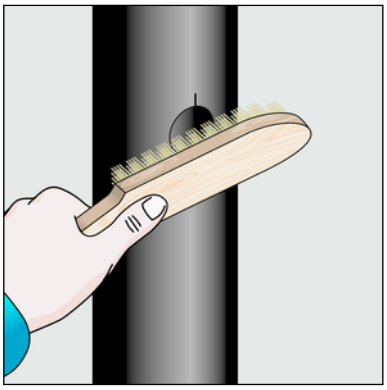
Final tasks

The drilling bit with the centre drill is designed in such a way that the drill core ideally remains inside the drilling bit.



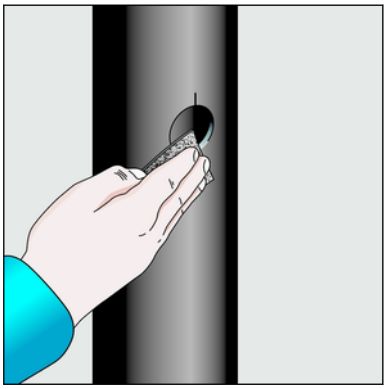
CAUTION! Risk of injury due to slipping or hot drill core. Allow the components to cool.

- Use a screwdriver and multigrip pliers to remove the drill core from the drilling bit.



CAUTION! Risk of injury! Do not reach into the bore hole.

- Use a wire brush to remove coarse dirt such as scaling from the pipe surface around the bore hole.



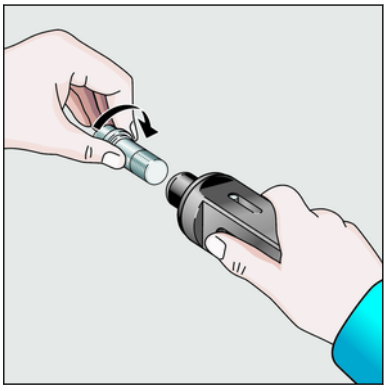
- Use sanding paper (grade 180) to remove or smoothen any remaining burrs.

  Make sure not to scratch the contact surface for the profile seal of the press-in branch connector.

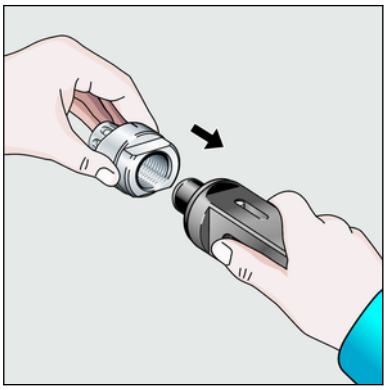
  INFO! Do not attempt to true up the bore hole. If there are any projecting burrs, the press-in branch connector cannot be pushed into the pipe deeply enough, or the profile seal ring will be damaged. If oil has been applied, remove it completely.

- If (cooling) lubricants have been applied, remove them.

3.3.3 Mounting the press-in branch connector by means of the press-in tool



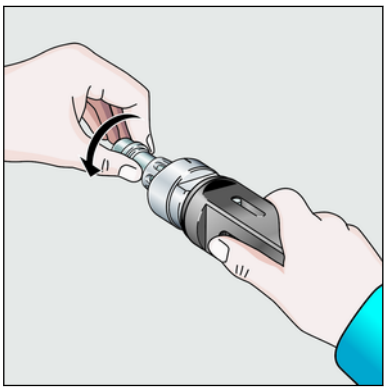
- Unscrew the installer drift from the press-in tool.



INFO! It is imperative that you use the appropriate press-in branch connector for the existing pipe dimension. Note the marks on the press-in branch connector!

- Put the press-in branch connector on the press-in tool.

  The key surface must touch the press-in tool: The profile seal ring of the press-in branch connector must face the pipe.



- Using little force, manually screw the installer drift into the press-in tool as far as it will go.

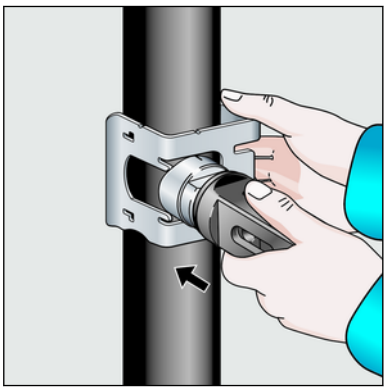
  NOTICE! Otherwise, the installer drift may tear off, or the pressing will not be performed correctly.

- Check the profile seal ring for proper seat, cleanliness and perfect condition.

Mounting the positioning device

CAUTION!
Risk of crushing!

Hold the positioning device in such a way that your fingers will not get crushed.



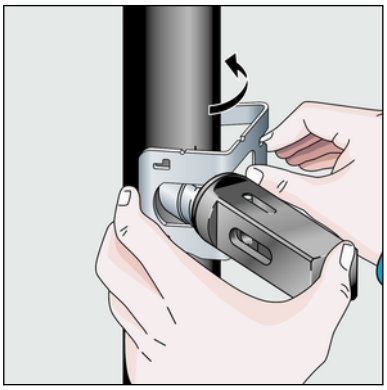
- Place the positioning device around the pipe.

  NOTICE! For mounting the press-in branch connector to the side of the installation pipe, the closed side of the positioning device, when mounted, must not face the wall so that it will not get jammed when you remove it later on.

- Insert the press-in branch connector in the bore hole.

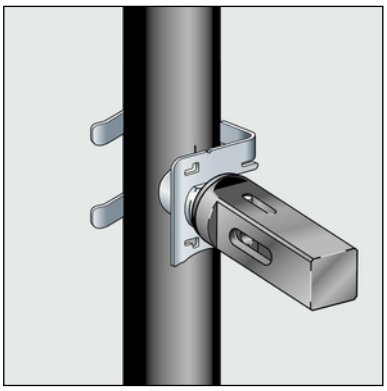
  For better orientation, align the marks on the press-in branch connector with the marking line on the pipe.

  NOTICE! It is imperative that you use the appropriate positioning device and press-in branch connector for the existing pipe dimension. Note the marks on the positioning device and on the press-in branch connector!



- Make a sliding movement to move the recess for the key surface to the press-in branch connector.

  NOTICE! If you have problems mounting the positioning device, you can also rotate it by 180°.

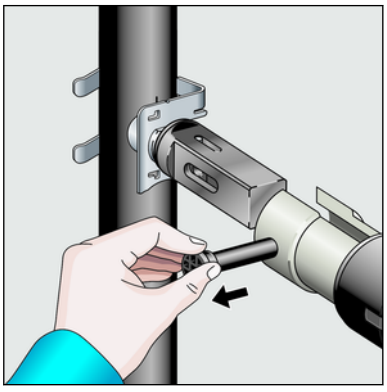


- Turn the positioning device until it has full contact with the press-in branch connector and the pipe.

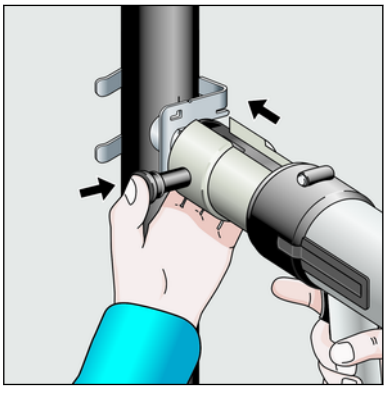
  The press-in branch connector is in its proper position if the following conditions are met:

  - The entire surface of the press-in branch connector touches the pipe.
  - The press-in branch connector is in the limit position of the recess (as far as it will go) of the positioning device.
  - The position mark of the press-in branch connector and the marking line on the pipe are aligned. To achieve this, the positioning device must touch the pipe.

Pressing the press-in branch connector in

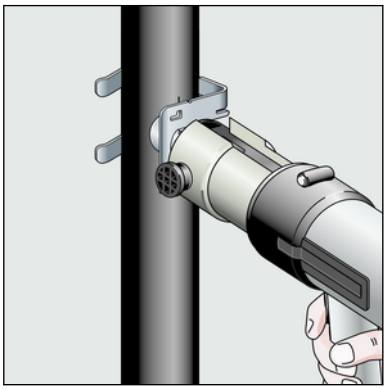


- Remove the retaining bolt of the press machine.



- Push the press machine over the press-in tool as far as it will go.
- Slide the retaining bolt in.

  NOTICE! The press-in branch connector and the positioning device must completely touch the pipe wall over their entire surface.

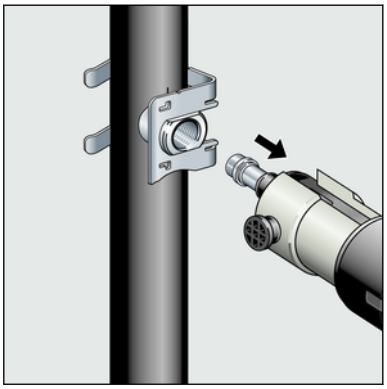


CAUTION! Risk of crushing! Only hold the press machine at its handle.

INFO! Do not obstruct the machine because it will retract by 20 mm. See ↳ *Chapter 3.2.1 „Space requirements and intervals“ on page 16***!**

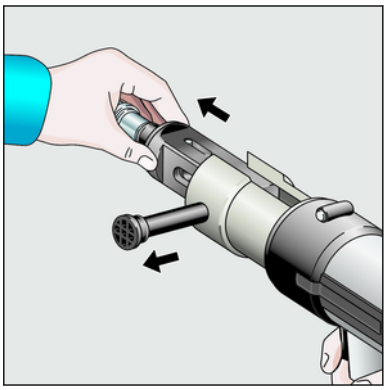
- Switch the press machine on.
- Hold the press machine perpendicular at a right angle to the pipe axis.
  Pay attention to the spring-back of the positioning device. It will give you noticeable feedback if the press machine is not in the area of the perpendicular point.
  Do not leave the press machine hanging from the positioning device.
- Carry out the pressing process completely in one go.

  NOTICE! When pressing with a Pressgun 5, the machine may terminate the pressing process even though the press-in tool cannot be released yet. In this case, start a second pressing process.

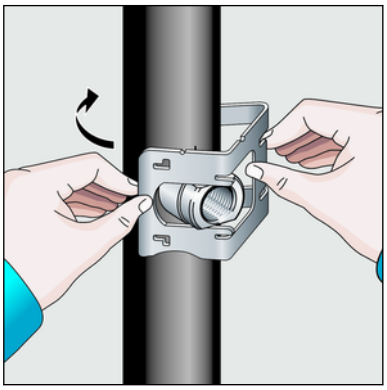


- After pressing, remove the press machine with the press-in tool.

  CAUTION! Risk of crushing or tool breakage! Do not carry out empty pressings without press-in branch connector. Pressing the press-in branch connector is permissible in the pipe only.

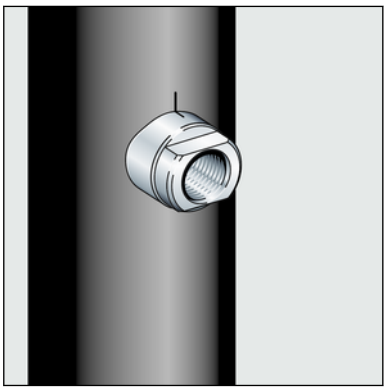


- Pull the press-in tool out of the machine.



CAUTION! Risk of crushing! Hold the positioning device in such a way that your fingers will not get crushed.

- Remove the positioning device from the pipe. By lightly pulling at the handle.



⇨ The press-in branch connector has been professionally mounted and is ready for use.

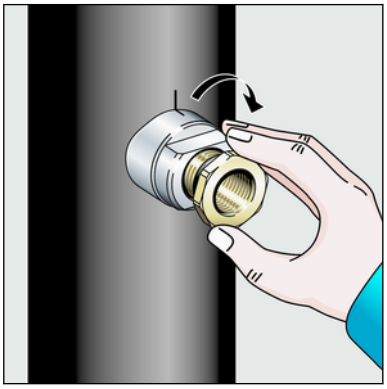
Subsequent alignment is not permitted!

To screw an external thread into the press-in branch connector, use a suitable tool (e.g. a 32 mm fork spanner or pipe pliers) to hold the press-in branch connector up at the key surface.

Perform a leakage test after completion of the installation, *↳ Chapter 3.4.1 „Leakage test“ on page 32.*

3.3.4 Mounting a reducer

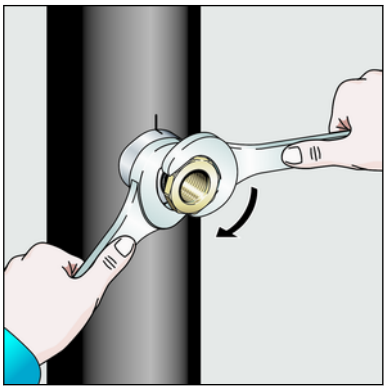
Use the reducer (article 731 236) to reduce the internal thread to an Rp ½.



- Check the sealing area of press-in branch connector and reducer for damage and dirt.

  Do not use additional sealants!

- Screw the reducer in by hand.



- Screw the reducer tight.

  Use a suitable tool (e.g. a 32 mm fork spanner or pipe pliers) to hold it up at the press-in branch connector.

  Take care not to twist the press-in branch connector.
  The marks on the pipe and the press-in branch connector must be aligned.

3.3.5 Other uses of the press-in branch connector

The Rp-thread can be used for installing thermometers, temperature sensors, manometers or drains. It furthermore offers the option to connect pipelines, e.g. for subsequent connection of radiators. We recommend to use Viega piping systems for this purpose.

NOTICE!
If the connected pipeline needs subsequent alignment, only align the pipeline. Any temporary or permanent mechanical stress on the press-in branch connector caused by the alignment must be avoided.

3.4 Commissioning

3.4.1 Leakage test

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

This test is carried out on a system that is finished but not yet covered.

The general rules of engineering must be observed.

Based on the regulations for drinking water installations, for example the following rules and standards are applicable:

- DIN EN 806–4
- ZVSHK Data sheet *"Leakage tests of drinking water installations with compressed air, inert gas or water"*

Leakage test pursuant to these rules should be carried out also for non-drinking water installations.

The result must be documented.

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

Observe the requirements on filling and top-up water in acc. with VDI 2035.

Flushing the system

After the leakage test, the system must be flushed according to the recognized standards of good practice.

For example the following regulations apply:

- DIN EN 14336

3.5 Care and maintenance

3.5.1 Cleaning

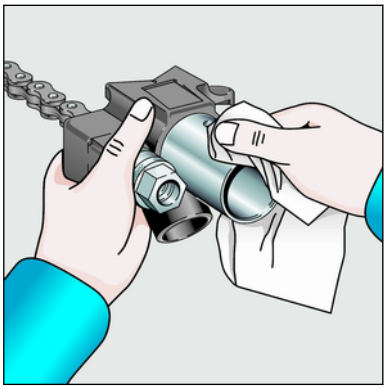
To ensure smooth operation over a long time, the tool must be cleaned regularly.

Cleaning agent

- clean cotton cloth
- Metal oil (article 667 924 or WD 40)

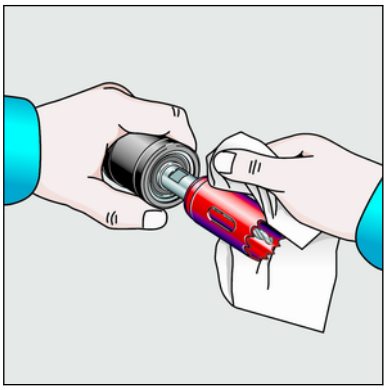
Do not use silicone oil!

Drilling device with tension chain



Drilling shaft with drilling bit

➥ Use the cloth to apply metal oil to the inside and outside of the drilling device.



- Use the cloth to apply metal oil from the outside to the bearing and the drilling bit.

3.5.2 Maintenance intervals

The functional safety primarily depends on the operational safety of the individual tools. The tools are subject to normal wear and tear. For this reason, the tools must be serviced regularly.

Drilling bit and centre drill

Immediately replace the drilling bit and centre drill if the first signs of wear appear. If used properly, Viega components can be used for the following number of bores:

Drilling bit	If used primarily at pipes with a **minimum** wall thickness of 2.3 mm	approx. 100 bores
Drilling bit	If used primarily at pipes with a **maximum** wall thickness of 5.4 mm	approx. 30 bores
centre drill		approx. 80 bores

Drilling device, drilling shaft, press-in tool

Only service points authorized by Viega are permitted to maintain and service the tools.

The components must be maintained **every 2 years**.

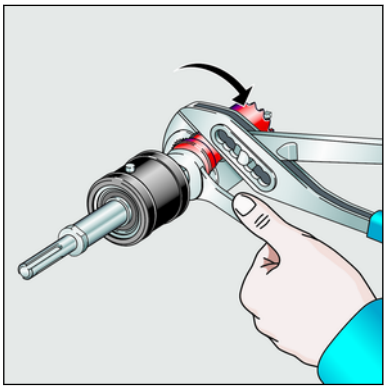
Positioning device

The positioning device does not require maintenance. Replace it when worn or not operative.

3.5.3 Replacing the drilling bit

The drilling bit must be replaced when you observe the following:

- a deterioration of the drilling efficiency (e.g. you need to apply more force when drilling a hole)
- damage or heavy wear of the teeth



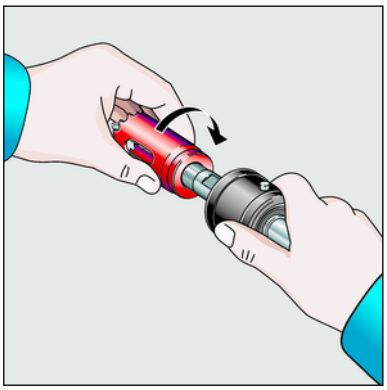
CAUTION!

Risk of injury due to hot and sharp drilling bit

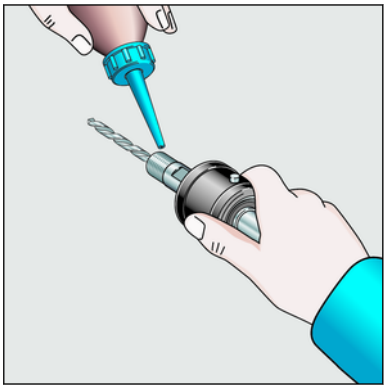
– **If applicable, wear suitable hand protection.**
– **Allow the drilling bit to cool before proceeding.**

▶ Use pipe pliers to loosen the drilling bit from the drilling shaft and remove it.

Hold up with a 14 mm fork spanner to avoid damage to the drilling shaft.

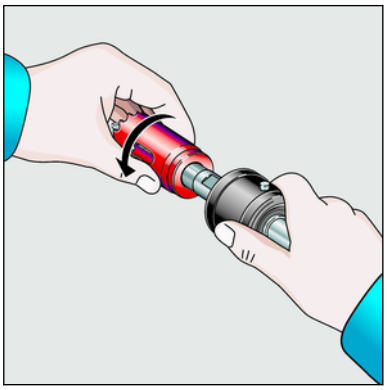


▶ Remove the drilling bit.



▶ Lubricate the fine thread of the drilling shaft every time you replace it. This makes removing the drilling shaft easier.

MoS2 or graphite lubricants may be used. Do not continue using drilling shafts or drilling bits when the thread is damaged.



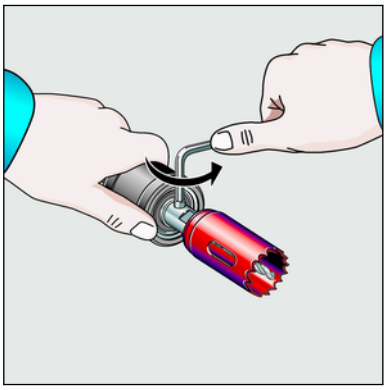
- Mount the new drilling bit and hand-tighten it as far as it will go.

  Do not place the drilling bit **askew**!

  ⇨ With the next drilling process, the adapter automatically screws itself tight.

3.5.4 Replacing the centre drill

Replace the centre drill at first signs of wear.

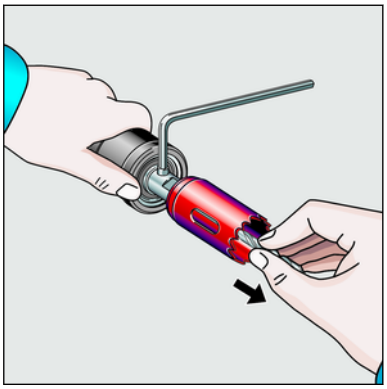


CAUTION!

Risk of injury due to hot and sharp drilling bit

- **If applicable, wear suitable hand protection.**
- **Allow the drilling bit to cool before proceeding.**

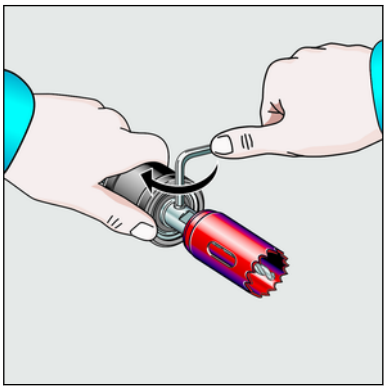
- Use an Allen key (4 mm) to loosen the fixing screw of the centre drill.



- Removing the centre drill

- Push the new centre drill into the drilling shaft until it projects 2 mm from the drilling bit.

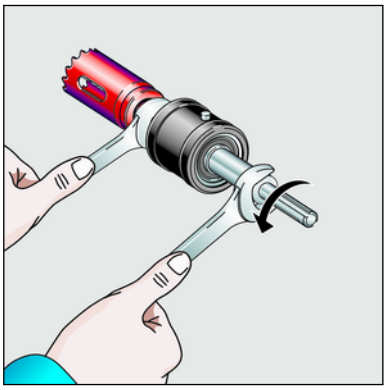
  Rotate the centre drill around its own axis until the flat area lies directly at the fixing screw.



- Use an Allen key to tighten the fixing screw so that the centre drill will not co-rotate during the drilling process.

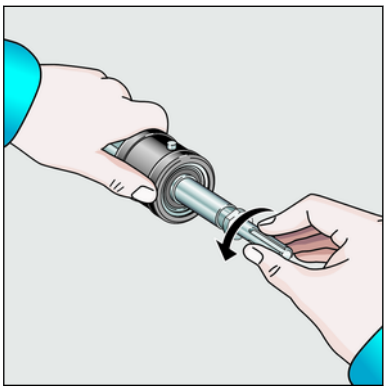
3.5.5 Replacing the drive for the power drill

The drilling shaft is equipped with an SDS-plus drive. For power drills without an SDS-plus drive, the SDS-plus drive can be replaced by a hexagonal drive (article 735 753).

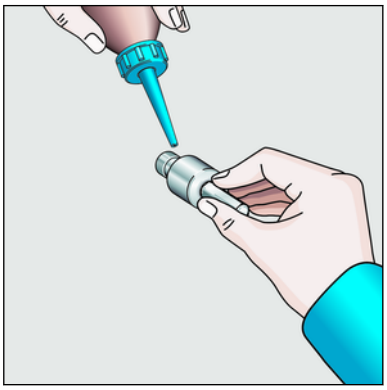


- Use a 17 mm fork spanner to loosen the adapter at the drilling shaft.

  Hold up with a 14 mm fork spanner to avoid damage to the drilling shaft.

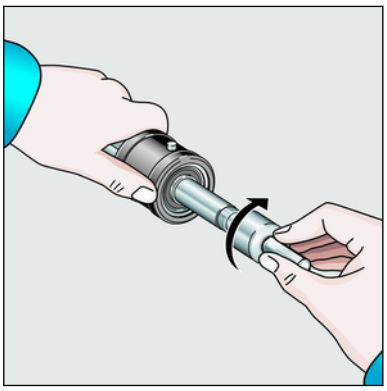


- Remove the adapter.



- Lubricate the fine thread of the adapter each time you replace it. This makes removing the adapter easier.

  MoS2 or graphite lubricants may be used. Do not continue using the adapter when the thread is damaged.



- Screw the adapter in and hand-tighten it as far as it will go. When screwing the adapter in, make sure not to place it **askew**. With the next drilling process, the adapter will automatically screw itself tight.

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.