

Advantix bathroom drain R 120

Instructions for Use



for installation in ceilings with fire resistance class F30–F120
with thickness of min. 150 mm

Model
4951.20

Year built:
from 01/2015

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 viega.com/legal.

1.1 Target groups

The information in this instruction manual is directed at the following groups of people:

- Heating and sanitary professionals and trained personnel
- Tilers
- Consumers

It is not permitted for individuals without the abovementioned training or qualification 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 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 relevant national laws, standards, regulations, directives and other technical provisions take priority over the German/European directives specified in this manual: The information herein is not binding for other countries and regions; as said above, they should be understood as a recommendation.

2 Product information

2.1 Standards and regulations

The following standards and regulations apply to Germany / Europe. National regulations can be found on the relevant web site of your country at viega.com/standards.

Regulations from section: Sealing

Scope / Notice	Regulations applicable in Germany
Stress class of the underground, as well as suitable bonded sealing	ZDB-Merkblatt 8/2012
Stress class of the underground, as well as suitable bonded sealing	Leitfaden zur Abdichtung im Verbund (AIV)
Approved bonded sealings with proof of practicability in keeping with building law for stress classes A and AO	ETAG 022 T1
Approved bonded sealings with proof of practicability in keeping with building law for stress classes A, B and C	DIBt-Bauregelliste A, Teil 2 des DIBt und Prüfgrundsätze für Abdichtungen im Verbund (PG AIV-F)
Permitted bonded sealings	EN 14891

Regulations from section: Media

Scope / Notice	Regulations applicable in Germany
Typical domestic wastewater	DIN 1986-3

2.2 Intended use

2.2.1 Areas of use

The drain is designed for small to medium volumes of water, which occur in e. g. residential building.

Technical information, see [🔗 Chapter 2.3.2 „Technical data“ on page 8.](#)


The fire protection drain is mounted in a drill hole or a floor opening.

The following floors are suitable for mounting:

- Concrete floors
- Reinforced concrete floors
- Cellular concrete floors

The fire protection drain can be used in a drill hole, or when using an empty pipe, also in a floor opening. The floor must have a fire resistance class of F30–F120 and be at least 100 mm thick. Prerequisite for this is a minimum total floor thickness, including bonded screed or floor installation panels, of 150 mm.

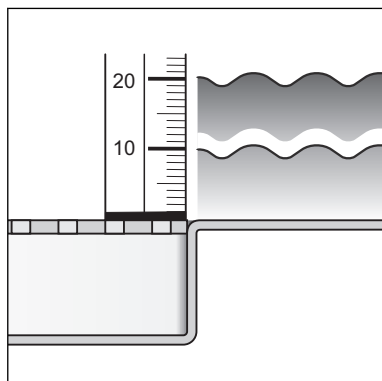
2.2.2 Media

The drain is intended for draining of household-type wastewater in constant operation, see  „Regulations from section: Media“ on page 6.

- The short-term temperature of the wastewater may reach up to 95° C. The temperature must be considerably lower in constant operation.
- The pH value must be higher than 4 but lower than 10.

It is not permitted to introduce wastewater which would damage the product material.

2.2.3 Drainage capacity



	Article 491 659	Article 491 666
Nominal width [DN] (drain socket)	50	70
Drainage capacity at an accumulation height of 10 mm above the grate	0.65 l/s	0.7 l/s
Drainage capacity at an accumulation height of 20 mm above the grate	1.5 l/s	1.6 l/s

The values are dependent on the total height (H) of the drain unit.

2.3 Product description

2.3.1 Overview

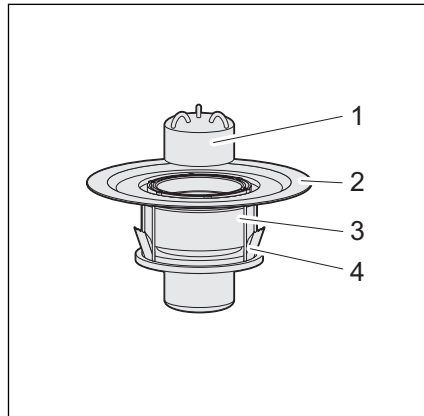


Fig. 1: Fire protection drain, components

- 1 - removable odour trap
- 2 - flange for the application of the conventional sealing
- 3 - base unit
- 4 - mortar anchor

2.3.2 Technical data

	Article 491 659	Article 491 666
Nominal width [DN]	50	70
Material	Polypropylene	Polypropylene
Drainage capacity	↳ Chapter 2.2.3 „Drainage capacity“ on page 7	↳ Chapter 2.2.3 „Drainage capacity“ on page 7
Dimensions and installation height	↳ Further information on page 18	↳ Further information on page 18
Water seal level	50 mm	50 mm
Load class	corresponds with the load class of the top used	corresponds with the load class of the top used

2.3.3 Operating mode

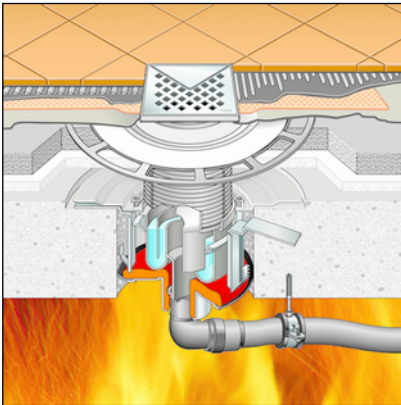
Principle

In the case of fire, a conventional drain and a drainpipe made of plastic will melt and drip away within just a few minutes. Then there is an opening between two storeys, through which fire can spread.

The fire protection drain can resist fire for up to 120 minutes, without fire and smoke spreading through the ceiling. Because it contains a mass, which swells up at 150 °C and closes the empty areas in the lead-in completely.

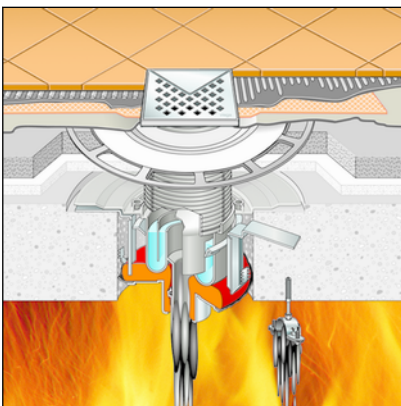
The mortar anchors hold the drain in the ceiling, even if the lower part of the casting compound breaks away.

Time elapsed



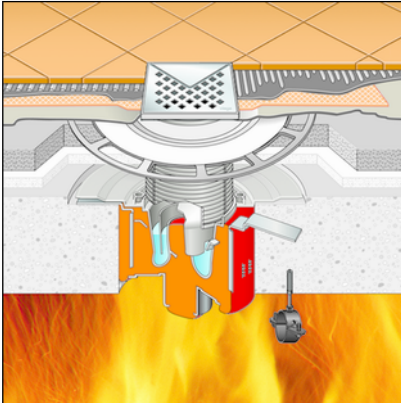
After 4 minutes

approx. 460 °C: The plastic pipe is becoming malleable.



After 8 minutes

approx. 625 °C: The plastic pipe is melted. The mass begins to swell and to fill the entire drill hole.



After 25 minutes
 approx. 800 °C: Drill hole and connection are completely closed. The water trap remains largely in tact.

2.4 Information for use

2.4.1 Installation variations

The drain can be mounted in the following way:

- in a drill hole
- in a floor recess



NOTICE!

The creation of a floor recess must be agreed with the following people:

- a structural engineer
- the on-site fire protection inspector or the specialist engineer for fire protection

If necessary, proof of compliance with building code or an expert's report must exist.

2.4.2 Sealing

The drain can be sealed both conventionally as well as with bonded sealing.

Depending on the type of sealing, you will require the relevant equipment set ↪ *Chapter 2.5 „Required accessories“ on page 14.*

Conventional sealing

The flange of the drain is intended for conventional sealing. To be able to seal the drain conventionally, you require a suitable sealing collar and a clamping ring with which the cuff is secured ↪ *Chapter 2.5 „Required accessories“ on page 14.*

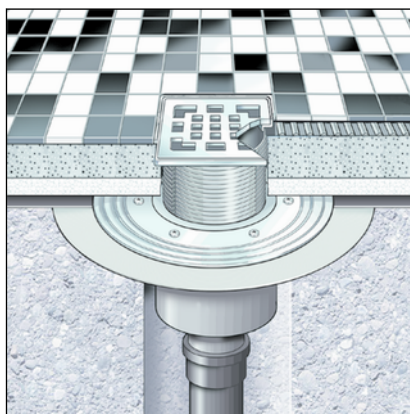


Fig. 2: Construction diagram of a conventional sealing



NOTICE! Not suitable for floor-level showers

Conventional sealing is not recommended with floor-level showers, because dampness can enter the screed and damp proof layer.

The bonded sealing should be used in the case of floor-level showers.

Principle

Traditionally, sealing is made using bitumen or EPDM sealing collars. The sealing collars are laid directly onto the raw concrete or heat insulation. This process has proved itself to be particularly effective for sealing balconies, patios, floor installation panels and cellar floors. In addition, sealing collars are often used as an additional second sealing layer below the bonded seal.

The following components are required for the installation of a drain with conventional sealing:

- Drain
- Clamping ring with sealing collar for EPDM and bitumen sealing lanes

Information for processing

The sealing collar is coated with EPDM on the one side and with bitumen on the other side

Place the sealing collar on the drain and fasten it with the flange. It depends on the sealing collar used which material layer of the sealing collar is placed facing up. You can find more information in the mounting instructions of the sealing flange.

Bonded sealing

To protect against moisture penetration, apply sealing foils, which are to be processed in liquid state, directly below the tiles on screed and walls. The determination of the stress class and the underground as well as the selection of the suitable bonded sealing must be carried out in compliance with the valid standards and regulations, see: ↗ „Regulations from section: Sealing“ on page 6.

Bonded sealing can be carried out with the help of a suitable stacking element. You have the possibility to double seal, using conventional and bonded sealing or only using bonded sealing.

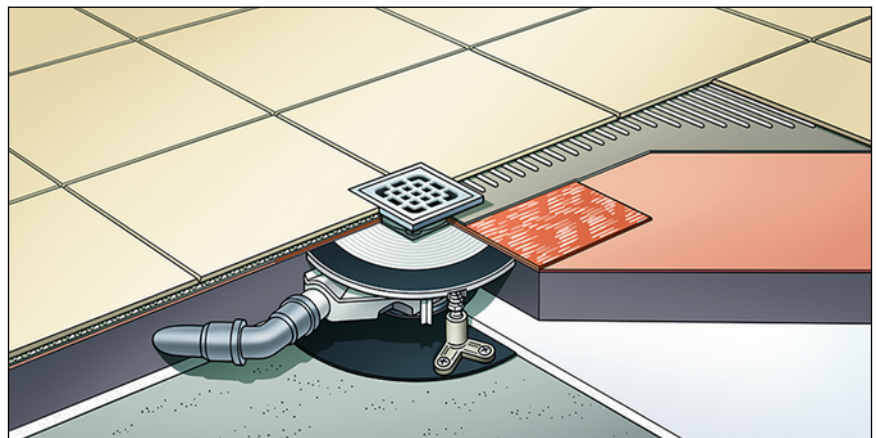


Fig. 3: Diagram of a bonded seal

Important note

Careful planning is required for professional sealing. In addition, depending on the individual dampness wear class and the type of foundation, a suitable BS system with a building regulations certificate of suitability must be chosen.

Furthermore, the following factors should be taken into account:

- Drain or shower channel must be equipped with a special flange, which has an adhesive surface and a width of at least 30 mm.
- For bridging the material change from drain to screed, either a suitable sealing collar or sealing tape designed for overlapping with the BS over a width of at least 50 mm must be used.
- The screed must be laid at a minimum incline of 1–2 %.
- The installation must be carried out properly in acc. with the mounting instructions and the manufacturer's information.

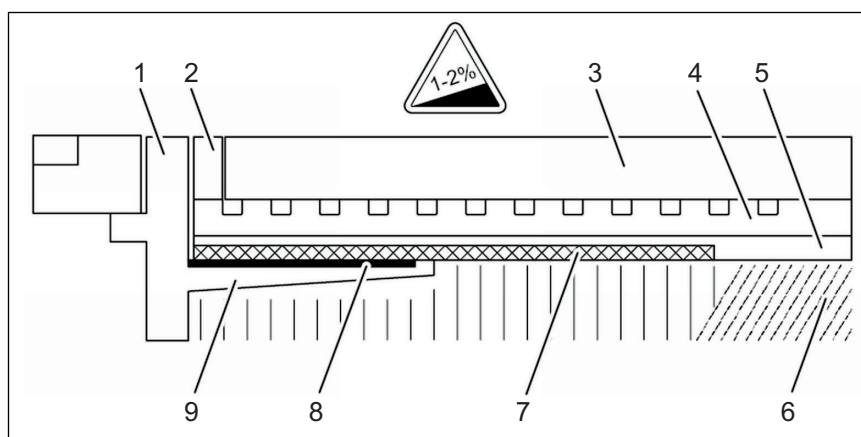


Fig. 4: Construction diagram of the bonded seal - min. screed incline 1–2 %

- 1 - Grate
- 2 - Top piece with adhesive flange
- 3 - Tile
- 4 - Tile cement
- 5 - Bonded sealing
- 6 - Screed
- 7 - Sealing collar
- 8 - Mat
- 9 - Adhesive flange

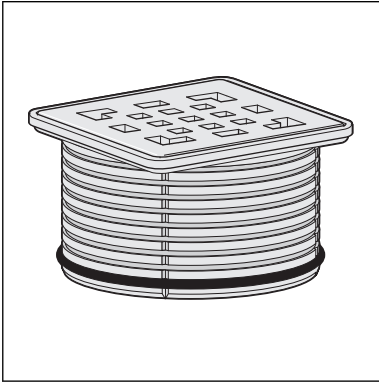
Permitted bonded seals

In connection with suitable drains, only approved bonded sealings with proof of practicability in keeping with building law may be used. See [☞ „Regulations from section: Sealing“ on page 6.](#)

Information regarding the procedure can be found in the instructions for use of the corresponding product.

2.5 Required accessories

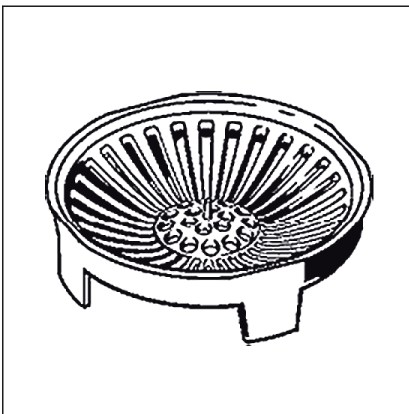
Top



A top must be purchased separately to complete the mounting of the drain.

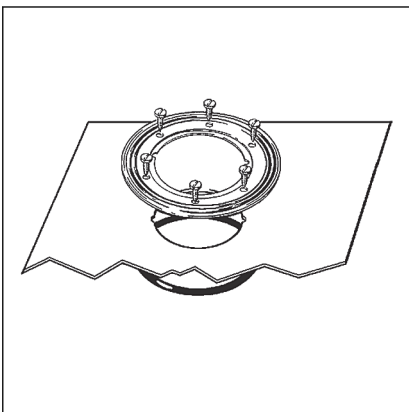
Advantix tops are available in a number of sizes and variations. You can also only buy an Advantix top frame and then purchase a suitable designer grate separately (see catalogue).

Sieve insert



The drain can be fitted with a sieve insert (model 4923.1) to collect dirt.

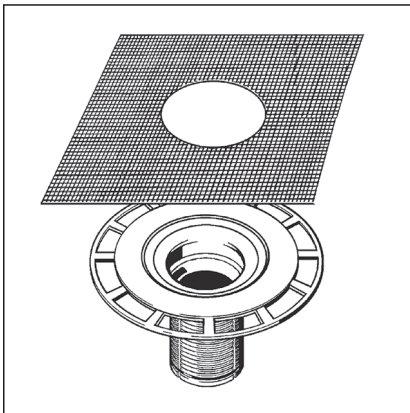
Accessories for the conventional sealing



If a conventional sealing is to be made, a suitable sealing collar and a clamping ring will be required.

You will find a corresponding set in the catalogue (model 4998.3).

Accessories for the bonded sealing



If a bonded sealing is to be applied, a suitable stacking element with sealing collar is required.

You will find a corresponding set in the catalogue (model 4994).

3 Handling

3.1 Assembly information

3.1.1 Important note

Before assembly:

- Check if the drainage capacity of the drain is sufficient for the arising water volume ↪ *Chapter 2.2.3 „Drainage capacity“ on page 7.*
- Check if the installation height of the drain corresponds with the planned floor construction.
- Ensure that the required connection line is installed with the necessary incline to the planned installation location.
- If necessary, supply the required accessories ↪ *Chapter 2.5 „Required accessories“ on page 14.*
- For assembly in floor openings, supply empty pipe \varnothing 200 mm made of plastic.

During assembly:

- Observe installation dimensions.
- Decide whether or not a backflow seal is required in the insertion part of the top.

Assembly with small floor thickness

The fire protection drain can be employed in floors at least 100 mm thick through drill holes, if the total floor thickness including bonding screed or floor installation panels is at least 150 mm.

Thinner floor thicknesses can be increased to a thickness of 150 mm by adding mortar strengthened with non-combustible floor installation panel (e. g. made of calcium silicate).

Notes on the use of floor installation panels

- Mounting is allowed *on* or *under* the floor. Fastening must be carried out using end-to-end threaded rods \geq M8.
- If floor installation panels or concrete bases are to be used to reach the required fire resistance class, they must be at least 100 mm around the drill hole and laid at least 30 mm thick.

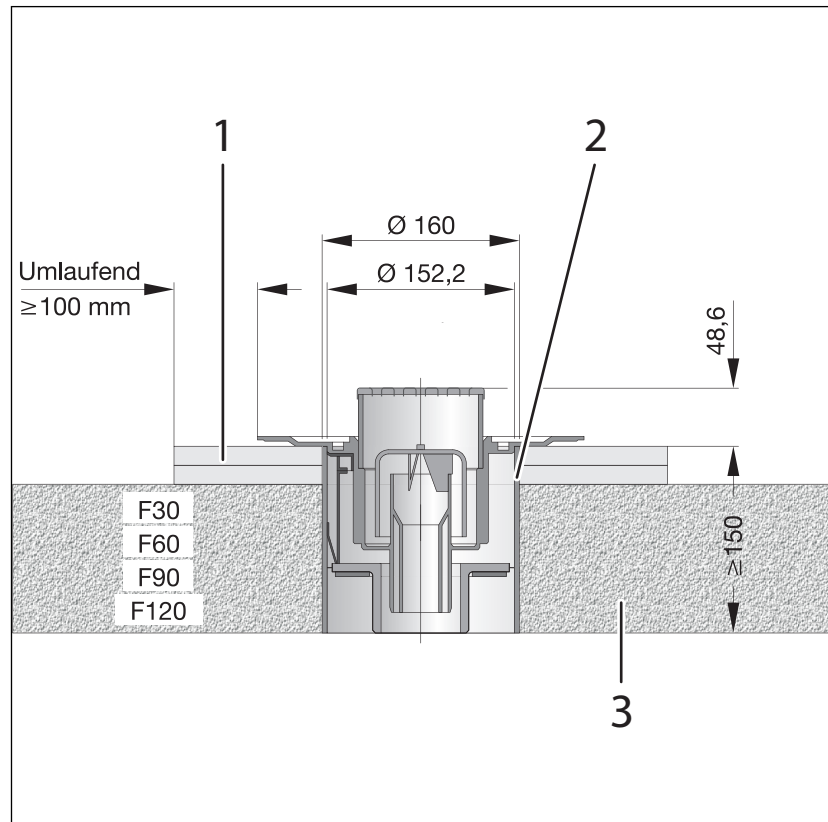


Fig. 5: Example: Floor drain with a drill hole with floor installation panels on the floor

- 1 - floor installation panels
- 2 - PP pipe
- 3 - bare floor

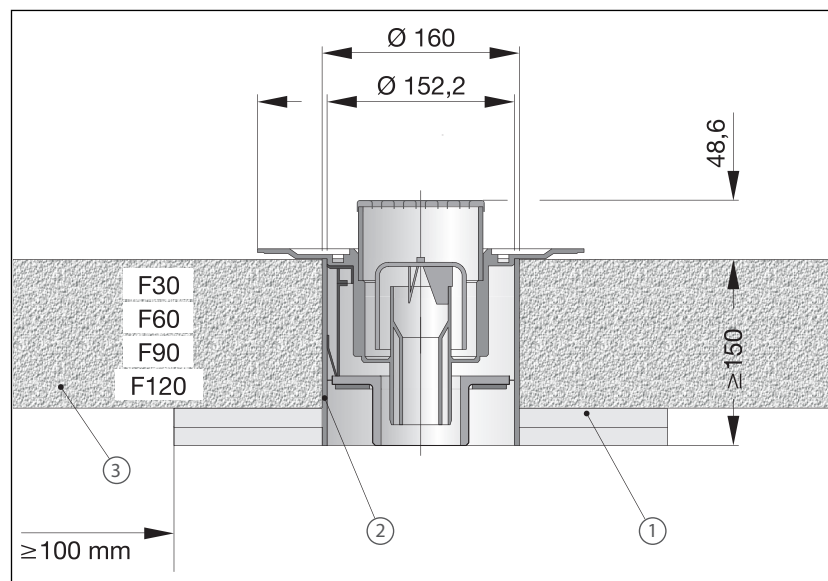


Fig. 6: Example: Floor drain with a drill hole with floor installation panels under the floor

- 1 - floor installation panels
- 2 - PP pipe
- 3 - bare floor

3.1.2 Installation dimensions

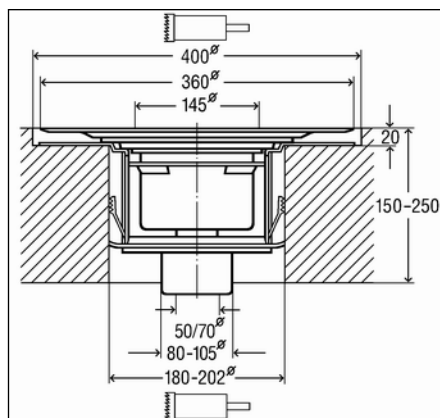


Fig. 7: Dimensional drawing for model 4951.20

3.1.3 Tools and materials

Special tools

- For drill hole
Drill with drill bit \varnothing 180–202 mm and \varnothing 400 mm
- if necessary, stacking element for bonded sealing model 4994

Material

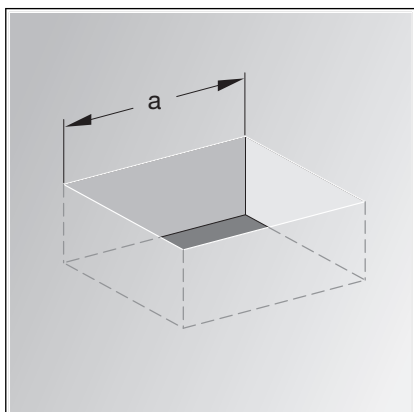
- For floor openings:
control panel or similar for closing the floor opening from below
- Empty pipe made of plastic, d 160
- Mortar (MG II, IIa or III)

3.2 Assembly

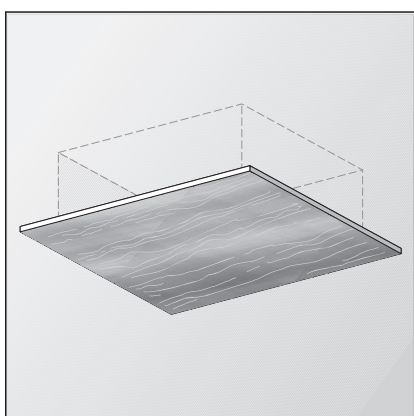
3.2.1 Mounting the drain

The model can be installed in a ceiling recess or a drill hole.

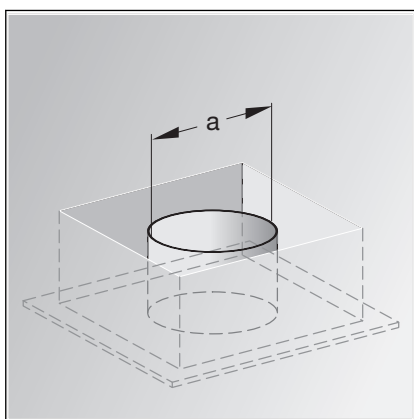
Installation in a ceiling recess



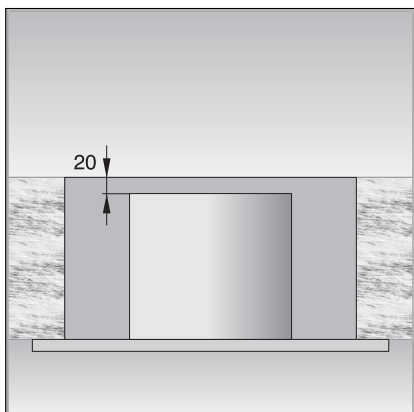
- Create ceiling recess.
a = approx. 380 mm



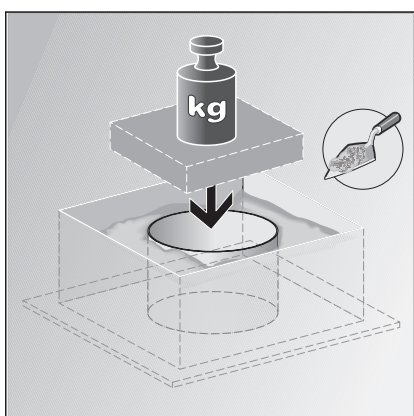
- Close ceiling recess from below (e. g. with a switch panel).



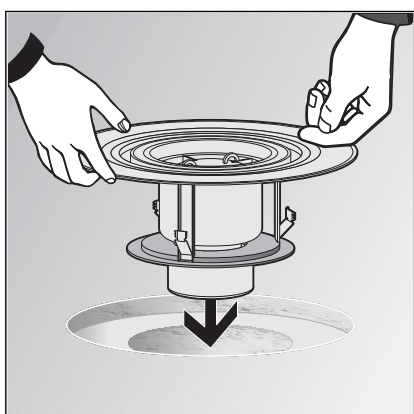
- Place a plastic pipe in the middle of the recess.
a = d 200



- Ensure that the interval between the upper edge of the empty pipe up to the upper edge of the floor must be 20 mm.

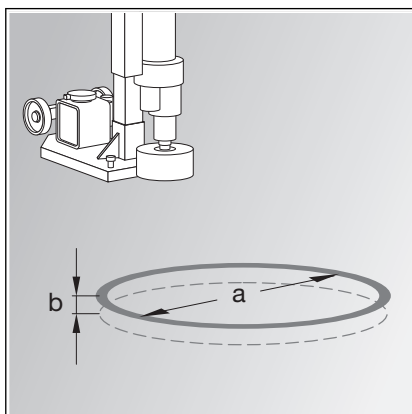


- Secure protective pipe.
- Encase protective pipe up to the upper edge with MG II, IIa or III and allow to set.



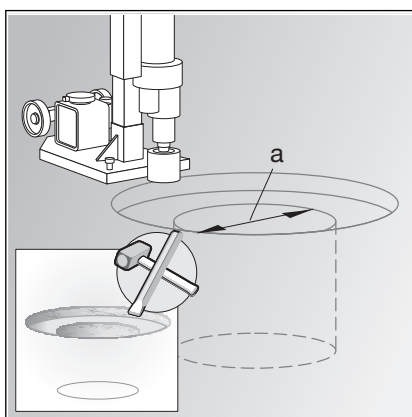
- Remove the casing after hardening.
- Place the drain into the protective pipe.

Installation in drill hole



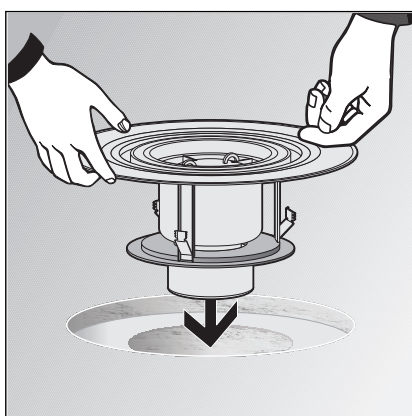
- Create drill hole.

a = d 400
b = 25 mm



- Drill through using a smaller drill bit:

a = d 180–202



- Chip off the concrete rim.

- Insert drain.

The mortar anchors secure the drain, for that reason, mortaring in is not required.

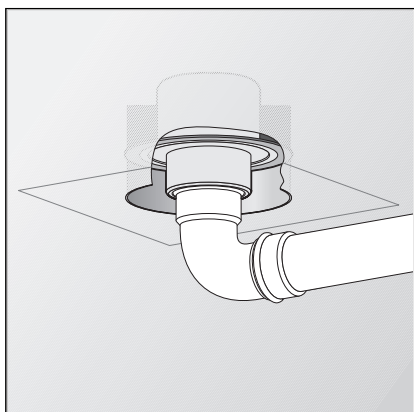
3.2.2 Connecting the drain

Connecting to the wastewater system

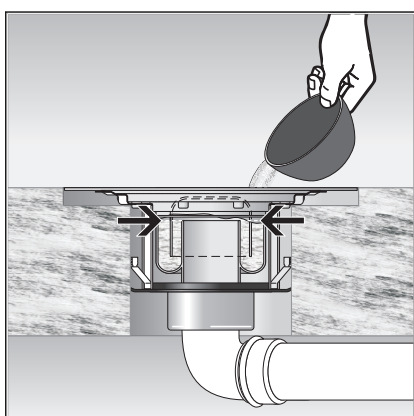
The connection to the wastewater system must be completed before the drain can be installed in the floor construction. Proceed as follows:

Requirements:

- A pipe to the planned drainage position is already in place for the connection to the wastewater system.
- The drainpipe has an internal sealing lip.



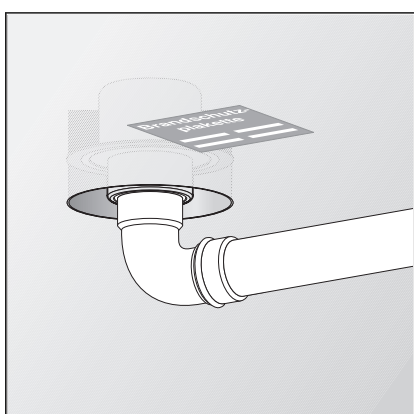
- Connect drain to wastewater line. A suitable adapter must be used to connect to a pipe made of cast iron.



- Fill the odour trap completely with water. Only then is the flawless functioning in case of fire guaranteed.



- Close the drain with protective plug.



- Fill-in and attach the sticker applied.
 - ⇒ The drain has been mounted.
 - The sealing can now take place.

3.2.3 Prepare for subsequent work

A few points must be observed to integrate the drain into the floor construction properly. For this reason, proceed as follows to prepare the drain for subsequent work:

Requirements:

- The drain is connected.
- Depending on planning, the drain can be integrated into concrete, screed or a heat insulation layer, for example. It is important that the upper edge of the drain flange is flush with the upper edge of the floor construction layer, with which the drain has to be sealed.
- Align drain horizontally using a spirit level.
- Secure the drain in such a way that it cannot shift when the subsequent works are applied.

Most importantly, it must be ensured that the drain does not float when the concrete or screed is poured in.

3.2.4 Sealing the drain



NOTICE!
Product damage due to improper installation

If hollow spaces occur during the lining of the drain, leaks may occur when pressure is applied.

Check the proper completion of the subsequent work.

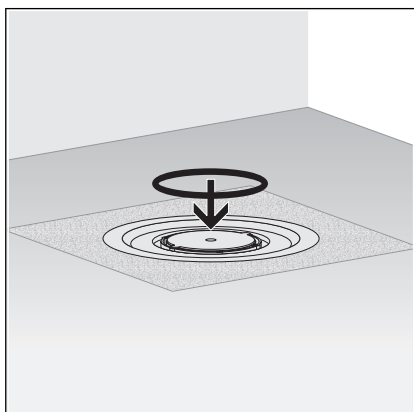


Screed and floor tiles must be laid at an incline of 1–2 % in the direction of the drain.

Conventional sealing

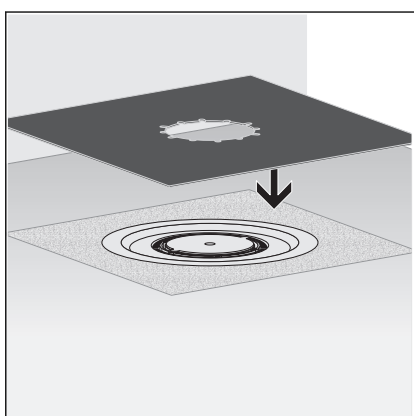
Requirements:

- A suitable sealing collar and a clamping ring are available.
- The flange is free of heavy soil.
- The complete surface of the flange is lined with material and undamaged.
- If required, clean the flange of coarse soil (e. g. from screed).



- Insert sealing ring.

The sealing ring must lie in the groove between the flange and the screw holes.



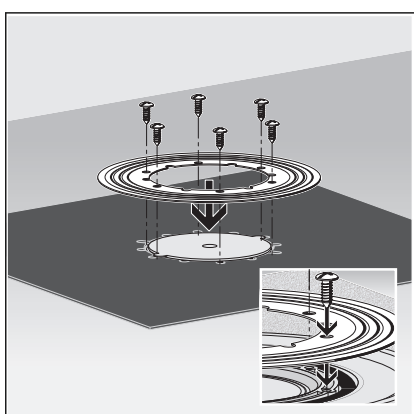
- INFO!** The Viega sealing collar has two differently coated sides. One side is coated with bitumen and the other side with EPDM. If the additional sealing takes place with bitumen sealing lanes, the sealing collar must be used with the bitumen side facing upwards. If EPDM sealing lanes are used, the EPDM side must face upwards.

- Position the sealing collar on the drain.

The screw holes must be visible through the recesses.



- Position the sealing flange on the sealing collar in such a way that the screw holes are visible.



- Screw the sealing flange together tightly with the drain.

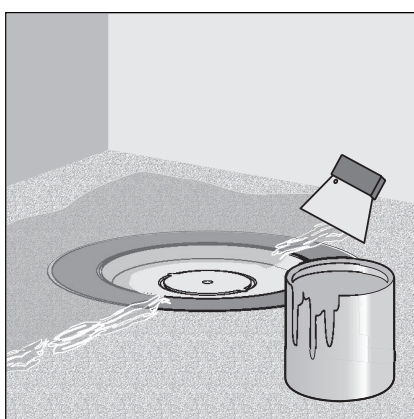
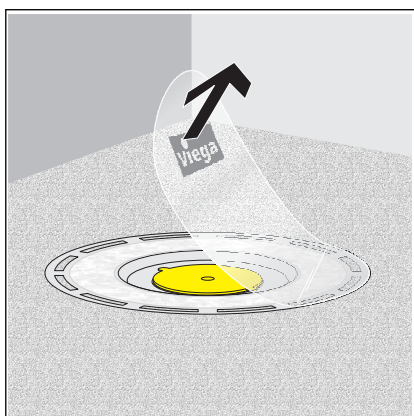
The fixing screws of the clamping ring may only be screwed into the screw holes of the drain.

- ⇒ The drain is sealed and the remaining sealing collars can be laid.

Bonded sealing

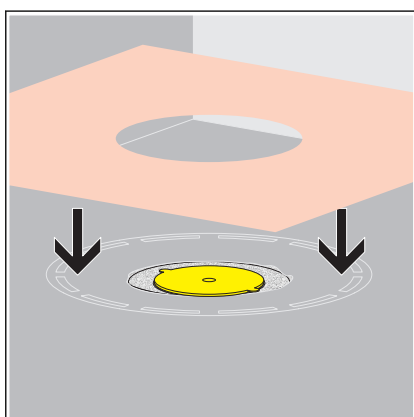
Requirements:

- The flange is free of heavy soil.
- The complete surface of the flange is lined with material and undamaged.
- Remove protective foil.

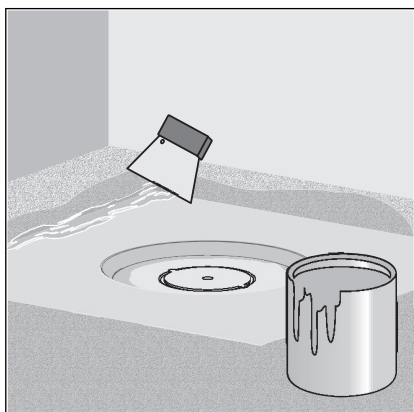


- Apply the bonded sealing on the dry screed and spread to the inner edge of the flange fleece.

NOTICE! Observe the bonded sealing manufacturer's instructions for use.



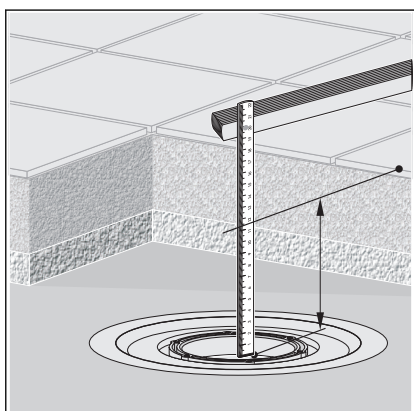
- Lay the sealing collar into the bonded sealing.



- Apply a second layer of bonded sealing onto the sealing collar and, if necessary, onto the floor.

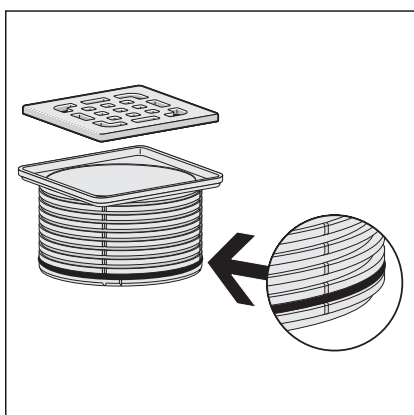
3.2.5 Mounting the top

The top with the grate must still be mounted to finish off the mounting of the drain. Proceed as follows:



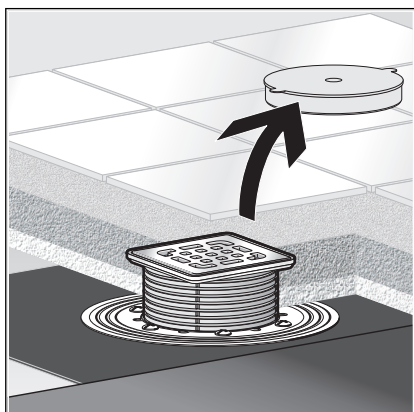
- Calculate the height of the floor construction from the edge in the inside of the drain up to the upper edge of the tiles.

- Starting with the upper edge, transfer the measured height onto the top.
- Cut the top to the marked height.
- If necessary, insert backflow seal in the lowest notch of the top.



INFO! The backflow seal be must employed when no dampness is supposed to flow into the drain from outside of the top but water may seep in from below. Normally, no backflow seal is mounted so that water that occurs around the frame (e. g. due to a leaky silicone joint) can flow away. A backflow seal is mounted in the following cases:

- In the case of the risk of a build-up of water that can soak through the screed.
- During the mounting of a stacking element for the bonded sealing (see instructions for use of the stacking element).



- Remove yellow protective plug.

- Place the top into the drain and align according to the tiles.
- Work the top into the screed or the floor covering.

3.3 Care

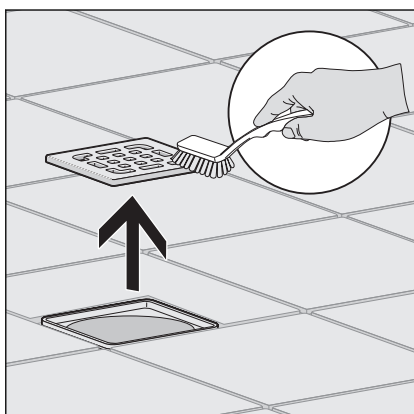
3.3.1 Care tips

Normal soap or a mild cleaning agent can be used for regular care and prevention of lime scale on the grate and frame. Under no circumstances should scouring agent or scratching objects be used.

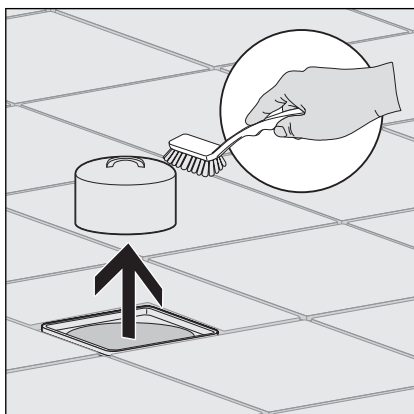
Strong stains, even around the drain unit and the siphon, can be removed using typical household cleaner. It should be noted that the cleaning agent should be rinsed off after the prescribed soaking time. There should be no residue on the components.

3.3.2 Cleaning the drain

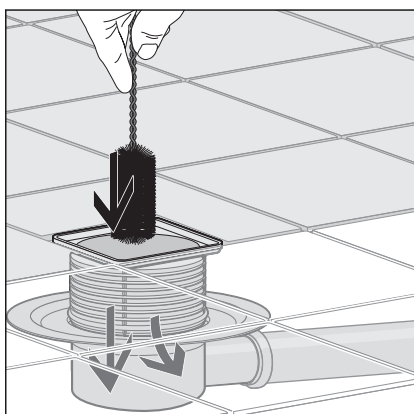
We recommend using a mild cleaning agent and a washing-up brush for cleaning.



- Remove and clean grate.



- Remove and clean odour trap.



- Clean drain.

- Replace odour trap.
- Re-insert grate.

3.4 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.

Disposal after fire

If fire protection material is involved in a fire, there may be residues which need to be specially treated. After a fire, secure the services of a company specialising in disposal of fire-damaged materials.