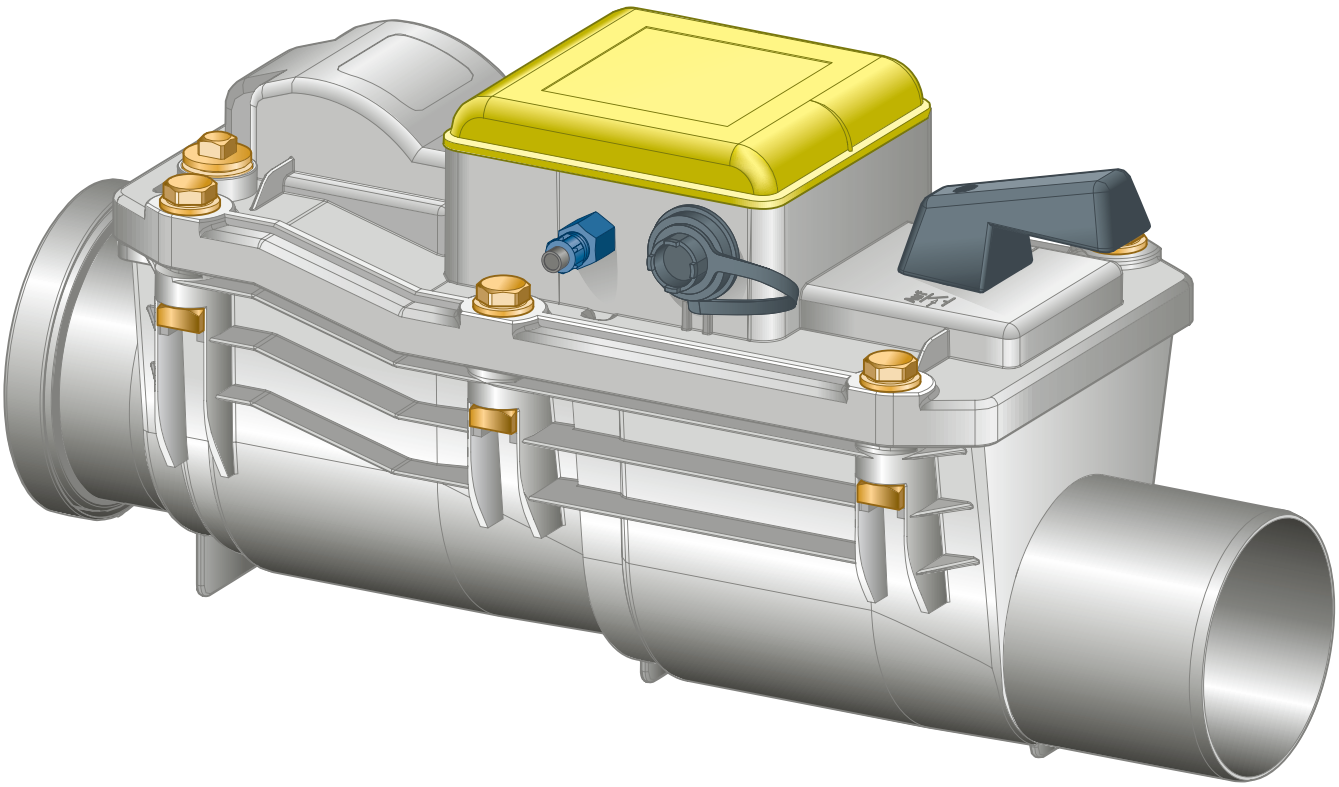
INT

Instructions for Use

Grundfix Plus Control backflow trap type 3



for wastewater pipe containing faeces

Model	Year built (from)
4987.41	01/2010

viega

Table of contents

1 About these instructions for use

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
- Qualified electricians
- Operators

Individuals without the abovementioned training or qualification are not permitted to mount, install and, if required, maintain this product. This restriction does not extend to possible operating instructions.

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

1.2 Labelling of notes

Warning and advisory texts are set aside from the remainder of the text and are labelled with the relevant pictographs.

DANGER!
This symbol warns of possible life-threatening injury.

WARNING!
This symbol warns of possible serious injury.

CAUTION!
This symbol warns of possible injury.

NOTICE!
This symbol warns of possible damage to property.

This symbol gives additional information and hints.

1.3 About this translated version

This instruction for use contains important information about the choice of product or system, assembly and commissioning as well as intended use and, if required, maintenance measures. The information about the products, their properties and application technology are based on the current standards in Europe (e.g. EN) and/or in Germany (e.g. DIN/DVGW).

Some passages in the text may refer to technical codes in Europe/ Germany. These should serve as recommendations in the absence of corresponding national regulations. The relevant national laws, standards, regulations, directives and other technical provisions take priority over the German/European directives specified in this manual: The information herein is not binding for other countries and regions; as said above, they should be understood as a recommendation.

2 Product information

2.1 Standards and regulations

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

Regulations from section: Place of installation and installation conditions

Scope / Notice	Regulations applicable in Germany
Correct place of installation of the backflow trap	EN 12056
Securing of drainage points beneath the backflow level	DIN EN 12056-4
Securing of drainage points beneath the backflow level	DIN 1986-100
Requirements in backflow traps type 3	EN 13564

Regulations from section: Fields of application

Scope / Notice	Regulations applicable in Germany
Grundfix Plus Control meets the requirements as type 3 backflow trap with double backflow protection	EN 13564

Regulations from section: Disposal

Scope / Notice	Regulations applicable in Germany
Disposal of electronic components	WEEE-Richtlinie 2012/19/EU

Regulations from section: Inspection

Scope / Notice	Regulations applicable in Germany
Monthly inspection	DIN 1986-3

2.2 Safety advice

DANGER!
Danger due to electrical current
An electric shock can lead to burns and serious injury and even death.

- Work on the electrics may only be carried out by trained electricians.
- Remove the mains plug before opening the casing.

2.3 Intended use

2.3.1 Areas of use

The Grundfix Plus Control is operated electrically. It is suitable for use in drain pipelines with household-type wastewater carrying faecal matter (up to a temperature of 95 °C with pH values of ≥ 4 or ≤ 10).

The backflow trap is suitable for use in drain pipelines made of HT or sewer pipe DN 100, 125 or 150. When using other pipes such as e.g. clay pipes or cast-iron pipes, the relevant adapters for HT and sewer pipes must be used.

Use in industrial areas or in pipelines, which transport aggressive liquids is not permitted. This includes cleaning agents, which can damage sanitary equipment, drainage equipment and pipe materials.

Viega recommends closing the emergency trap if operation, where no wastewater is produced, is interrupted for a number of days.

2.3.2 Place of installation and installation conditions

According to applicable regulations, drainage points beneath the backflow level should be secured against backflow from the sewer, see *‘Regulations from section: Place of installation and installation conditions’ on page 6*.

A backflow trap can be used if

- there is a downward slope to the sewer;
- the rooms are of lower-ranking significance, i.e. neither the inhabitants' health nor major assets would be damaged in case of flooding of the rooms;
- the system is used by a small number of people, and these people have another WC at their disposal above the back pressure level which they could use in case of a backflow at the drainage point.

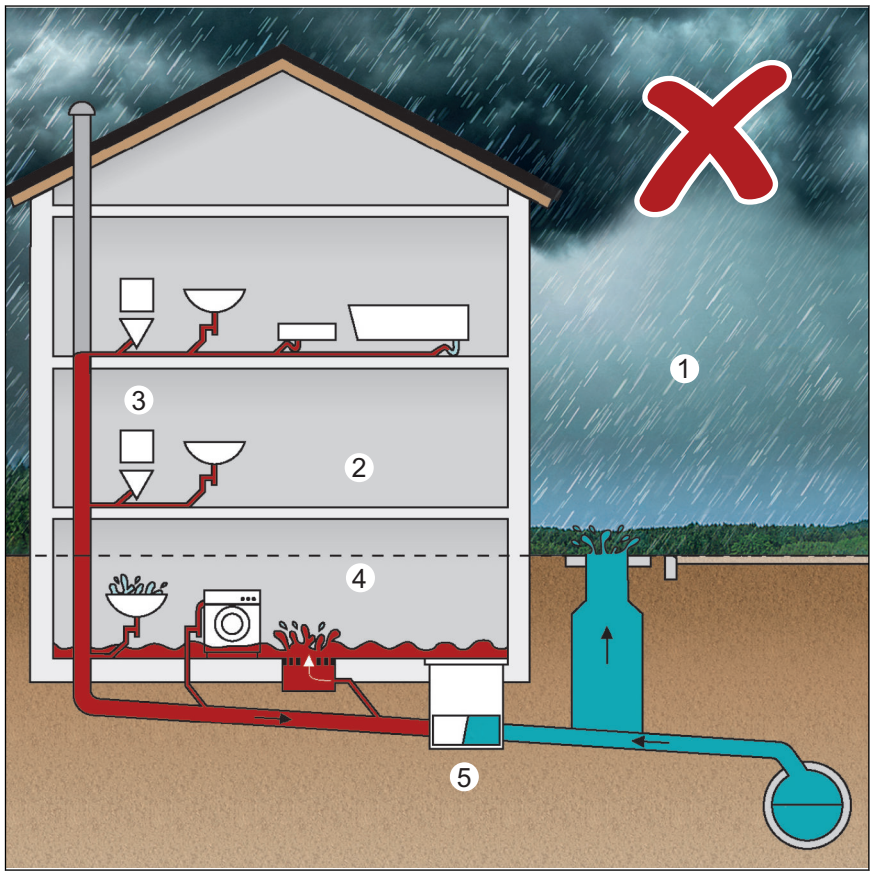


Fig. 1: Wrong place of installation of the backflow trap

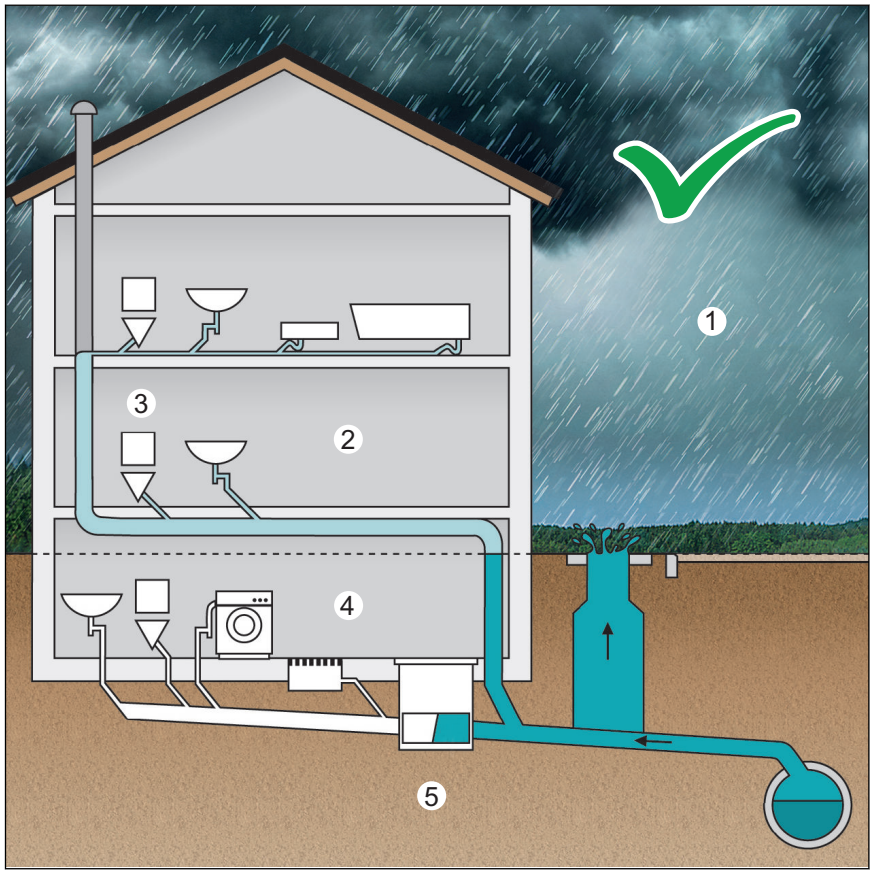


Fig. 2: Correct place of installation of the backflow trap

1 Street = Backflow level
2 Area safe from backflow

3 Connection upper floor
4 Area at risk of backflow
5 Protection against backflow through backflow trap

The connection of the upper floor (3) onto the underground pipe must be made between the backflow trap and sewer within the building (5) – only then is it possible to ensure that the wastewater system can function faultlessly. To ensure that drainage is permanently guaranteed, backflow traps may not be employed as the central safeguard for a building with drainage equipment installed above the backflow level (1) – in the event of backflow, it would lead to flooding in the building due to wastewater being unable to drain away (4).

See *'Regulations from section: Place of installation and installation conditions' on page 6*

Backflow protections and their control units should be installed in such a way that they are always accessible.

The backflow sensor reacts at accumulation heights of 100 mm, measured from the upper edge of the base pipeline.

Therefore, when planning, the installation heights of the existing floor drains, out of which water could flow in the case of backflow, must be taken into account.

If a backflow trap is retro-fitted in a base pipeline, the height difference of 30 mm between connection pipe and sleeve must be taken into account.

2.3.3 Maintenance

A monthly inspection must be carried out to ensure safe operation. See *Chapter 3.6.1 'Inspection' on page 34*

Maintenance must be carried out twice a year to ensure safe operation. See *Chapter 3.6.2 'Maintenance' on page 35*

2.4 Product description

2.4.1 Overview

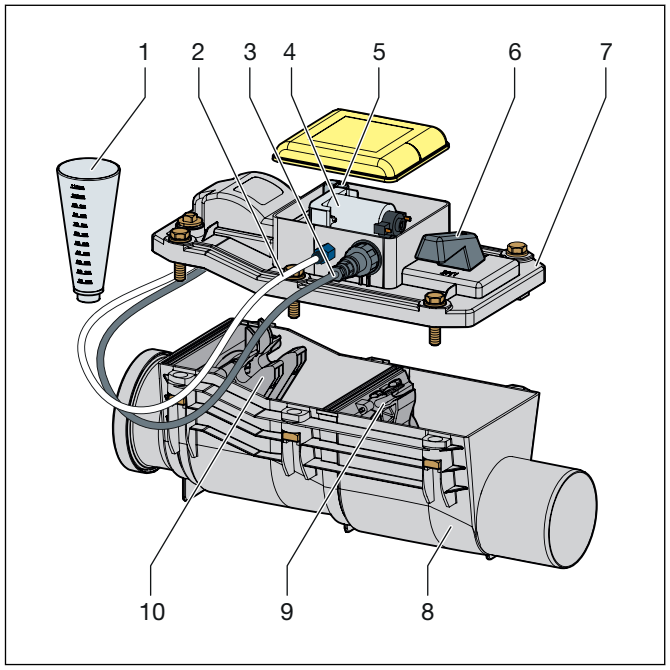


Fig. 3: Components of the backflow trap

1 - Measuring funnel
2 - Pressure hose
3 - connection cable control
4 - Motor
5 - Pressure switch
6 - Emergency lock actuation
7 - Lid
8 - Casing
9 - Emergency lock shutter
10 - Motor-powered flap

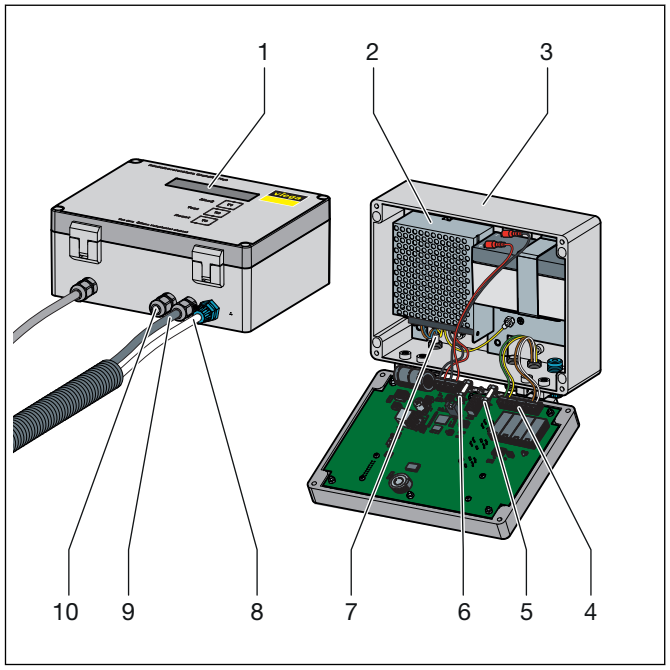


Fig. 4: Components of the control unit

1 - Display
2 - Power pack
3 - Casing
4 - Terminal strip 15 V
5 - Battery fuse
6 - Motor fuse
7 - Mains supply voltage 230 V
8 - Pressure hose
9 - Connection cable
10 - Outlet for potential-free contacts

2.4.2 Technical data

Switching power pack	88–264 VAC 50/60 Hz
LCD	20 x 2 with lighting
RTC real time clock	power reserve 30 days
rechargeable battery	12 V 1.2 Ah integrated charge and test electronics for battery operation for up to 24 hours in the case of power failure
Event memory	512 events
Potential-free relay-outlets	Back flow and fault

Casing	Plastic casing 201 x 151 x 80 mm without hinges and PG screw fitting
Protection class in acc. with VDE 0100	Control casing IP54; Grundfix Plus Control IP67
Battery fuse	4 A – slow
Motor fuse	4 A – slow
Closing time in case of back flow	In mains or battery operation approx. 10 seconds

2.4.3 Operating mode

The motor-powered flap is open during normal operation. If the pressure switch registers the backflow of water, the motor-powered flap is closed, the following display appears [Back pressure] and a signal sounds every 10 seconds. The use of the drainage equipment is not possible during this time. A battery emergency power supply ensures the functionality of the system even when the 230 V mains power supply fails.

Using the manual actuator, the backflow trap can be closed manually and independently of the motor-powered flap.

2.4.4 Control elements

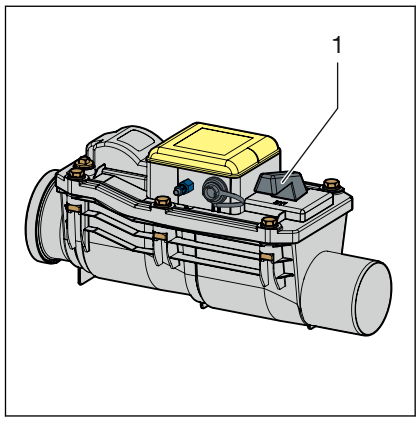


Fig. 5: Control elements backflow trap

1 - Emergency shut-off

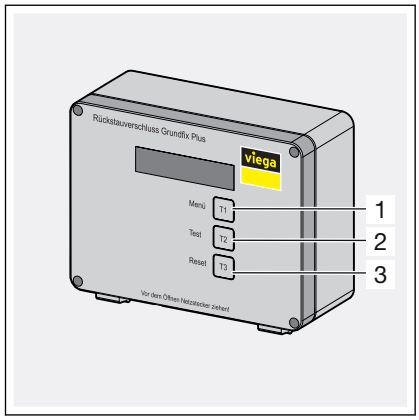


Fig. 6: Control elements control unit

1 - Menu T1
2 - Test T2
3 - Reset T3

3 Handling

3.1 Assembly information

3.1.1 Installation dimensions

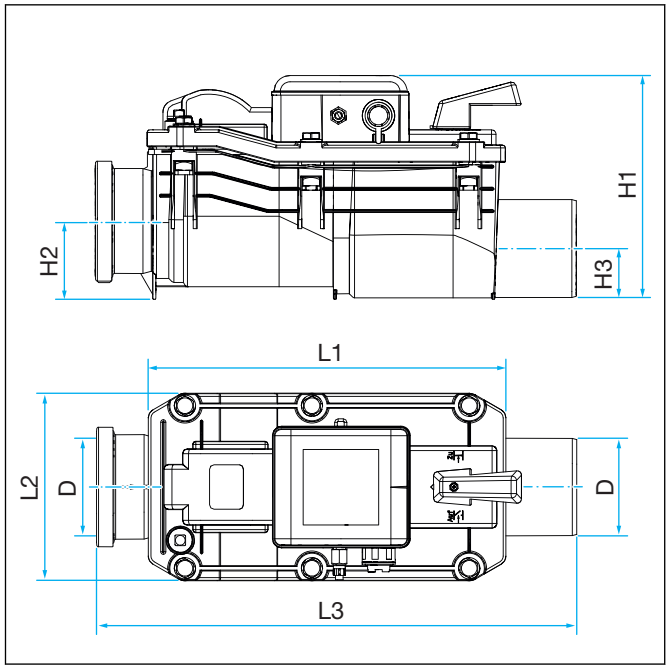


Fig. 7: Installation dimensions

DN	D	H1	H2	H3	L1	L2	L3
110	110	260	100	65	405	215	545
125	125	260	105	75	405	215	550
160	160	295	125	95	470	245	640

The backflow sensor reacts at accumulation heights of 100 mm, measured from the upper edge of the base pipeline.

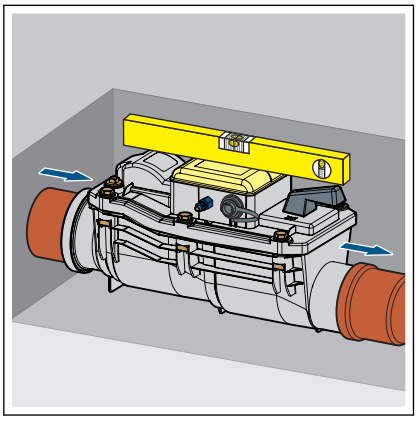
Therefore, when planning, the installation heights of the existing floor drains, out of which water could flow in the case of backflow, must be taken into account.

If a backflow trap is retro-fitted in a base pipeline, the height difference of 30 mm between connection pipe and sleeve must be taken into account.

3.2 Assembly

3.2.1 Mount base unit

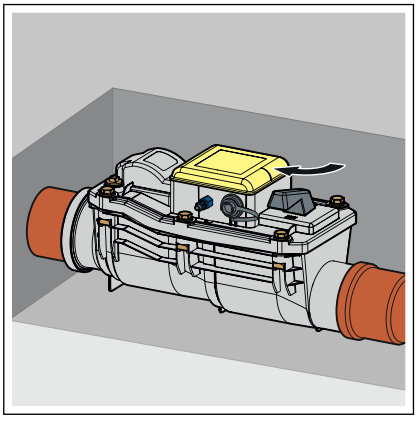
The installation in the drainage pipeline may only be carried out by construction or specialised sanitary companies observing the building regulations and following this instruction for use.



- Install the base unit horizontally into the base pipeline.

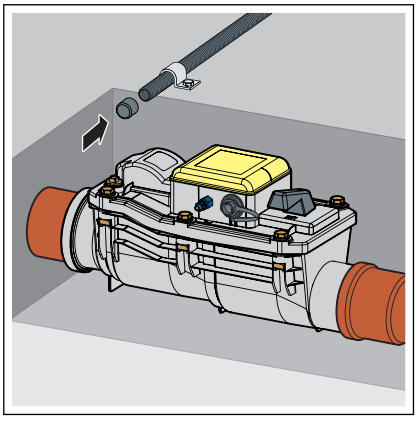
  NOTICE! Observe the flow direction!

- At maximum, line up to the middle of the outlet pipe.



- Close the emergency lock (position "ZU" (OFF)).

  In this way, damage from flooding can be avoided before commissioning.

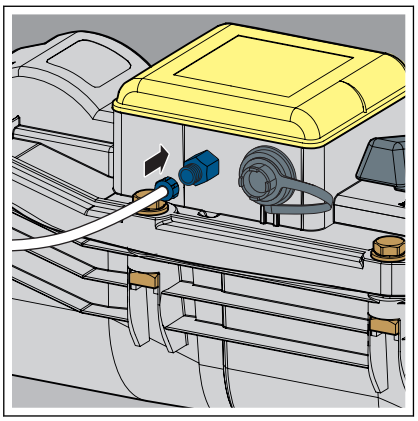


- Lay the empty pipe from the base unit to the mounting position of the control unit.
- Close the empty pipe at both sides using plugs.

3.2.2 Connecting connection cable and pressure hose

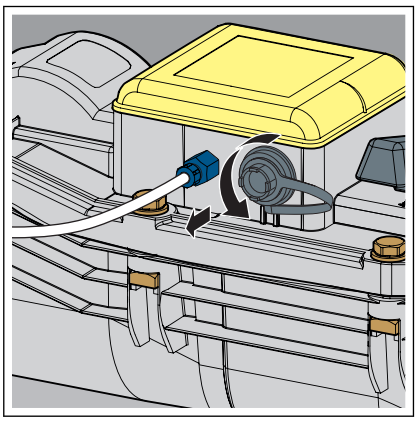
Do not loosen factory-fitted threaded cable and hose screw fittings on the casing. Otherwise, the anti-flooding function cannot be ensured.

Connecting the pressure hose

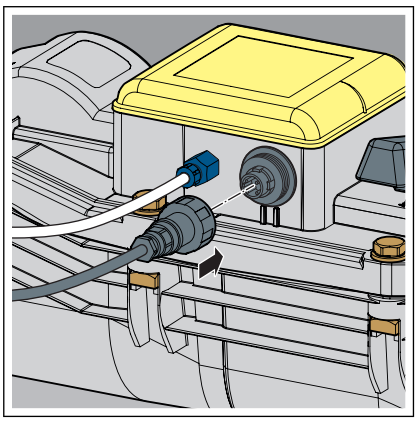


- Loosen the union nut and push it onto the pressure hose.
- Remove the black closing cap.
- Tighten the union nut of the pressure hose slightly using tools.

Connecting connection cable

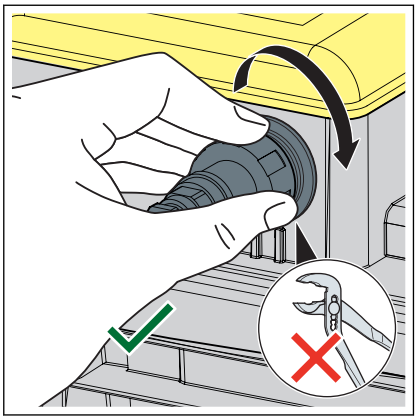


- Remove the closing cap.



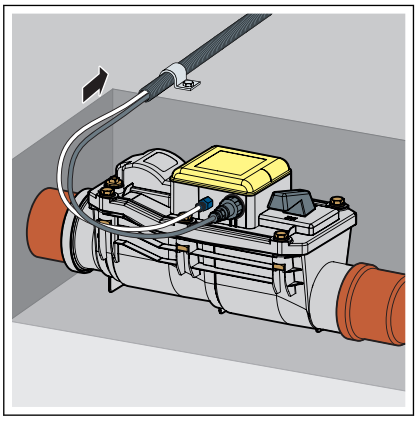
- Plug in the electric plug connection straight.

  NOTICE! Make sure that the plug is plugged in straight.



- Tighten the union nut by hand.

  INFO! The union nut must not be tightened using pliers.

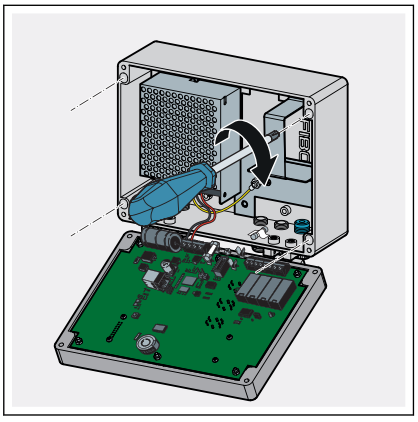


- Lead the connection cable and the pressure hose through the empty pipe to the control. If necessary, use a cable grip device.

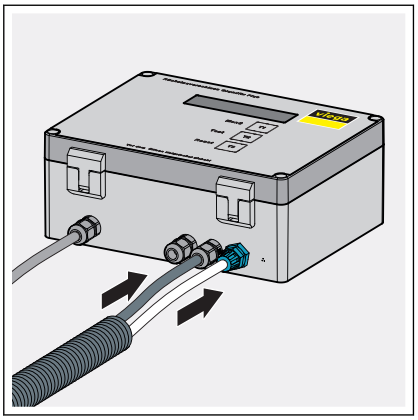
3.2.3 Connecting the control

DANGER!
Danger due to electrical current
An electric shock can lead to burns and serious injury and even death.

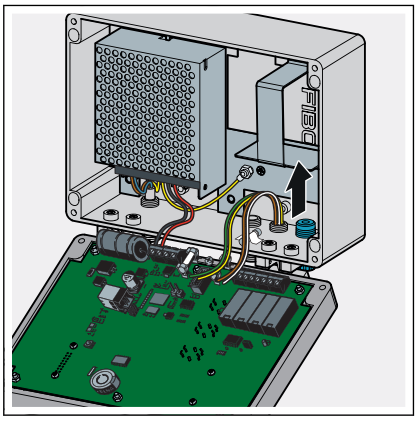
- Only allow electrical work to be carried out by specialist companies.
- Remove mains plug before opening the casing.



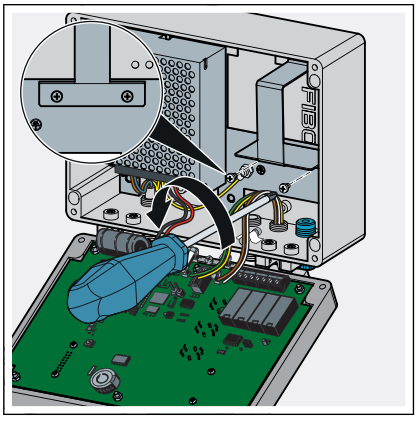
- Attach the control unit onto the wall with 4 screws.



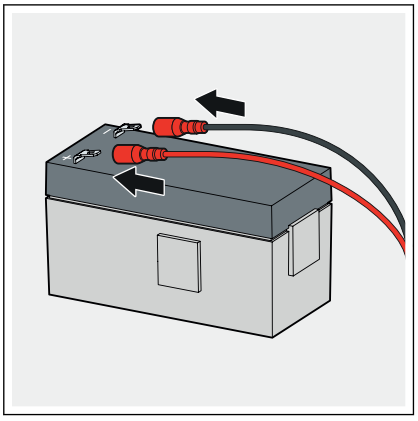
- Connect the pressure hose to the control using the quick connection.



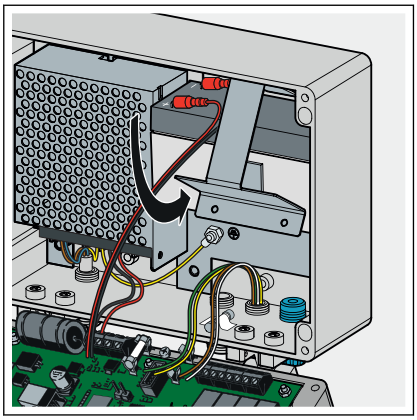
- Lead the connection cable via the PG screw fitting into the internal space of the control.



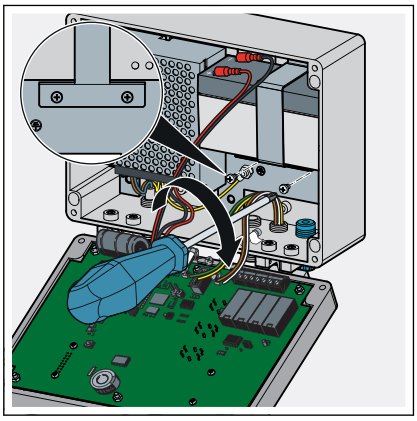
- Remove the battery mounting bracket.



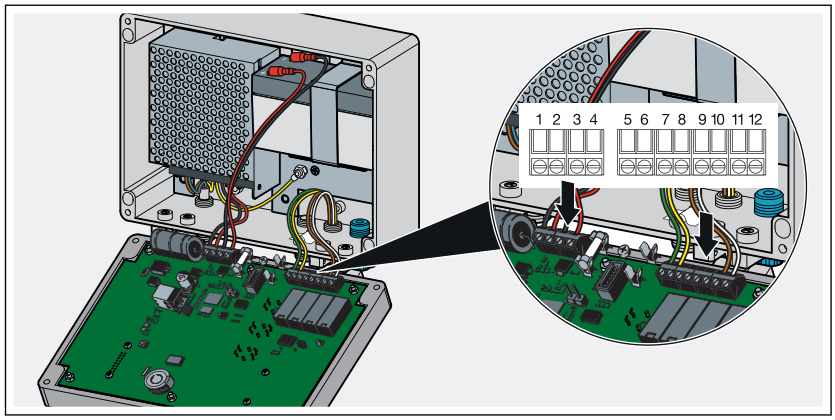
- Attach the cable ends:
  - black: -
  - red: +



- Insert the battery and fasten it with the mounting bracket.



- Tighten the fixing screws of the mounting bracket.



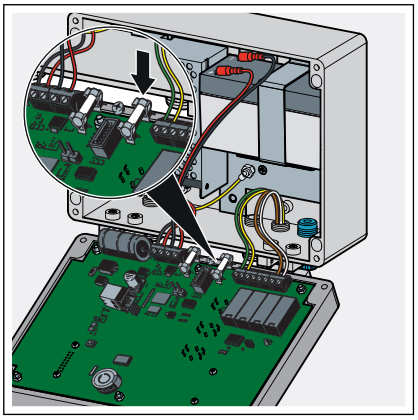
Connect the terminal strip.

Clamping strip configuration

Pos.	cable	Functions	Marking on the connection strip
1	black – factory-fitted	15 V mains connection	GND
2	red – factory-fitted	15 V mains connection	+ 15V
3	black – factory-fitted	rechargeable battery connection	GND
4	red – factory-fitted	rechargeable battery connection	+ AKKU
5	Green	motor connection	motor -
6	yellow	motor connection	motor +
7		signalises back flow	RÜCK (BACK)
8		signalises back flow	RÜCK (BACK)
9		signalises fault	STÖR (FAULT)
10		signalises fault	STÖR (FAULT)
11	brown	Pressure switch	Sensor
12	White	Pressure switch	Sensor

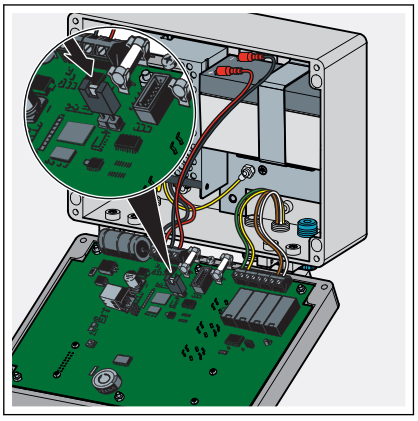
Clamping strip configuration 20 m cable

Pos.	cable	Functions	Marking on the connection strip
5	conductor 3	motor connection	motor -
6	conductor 4	motor connection	motor +
11	conductor 2	Pressure switch	Sensor
12	conductor 1	Pressure switch	Sensor



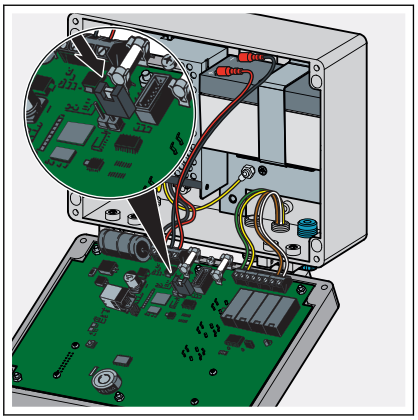
- Insert the battery fuse (right).

INFO! On delivery, the battery fuse is attached to the inside of the casing with adhesive tape.



NOTICE! Depending on the length of the connection cable, a jumper may be required to make a connection onto the control. An incorrect jumper position can lead to malfunctions. Back flow protection is no longer ensured.

- When using the cable set (20 m, art.-no. 483 500), place jumpers onto both contacts (see illustration).



- When using cables under 8 m in length, only attach jumper to one contact (see graphic, factory condition).

Alarm and fault indicating contacts (optional)

The control unit is provided with two potential-free outlets, through which acoustic and optical alarm devices can be connected.

Both contacts function as N.O. The alarm contact (clamping strip connection 7/8) at "Rück" (Back) is closed in the event of backflow. The fault indicating contacts (clamping strip connection 9/10) at "Stör" (Fault) closes when an operating fault is reported.

Observe the following when connecting on-site alarm devices:

- When allocating the contacts, ensure that a maximum current of 500 mA / 24 V is not exceeded.
- Allocation of the outlets must only take place using safety low voltage and galvanic separation of the network.
- Only connect purely ohmic loads.
- The use of a safety transformer in accordance with VDE 0551 or DIN EN 60742 is permitted.

3.3 Commissioning

3.3.1 Commissioning the control

As soon as the mains voltage is connected, the control begins the automated commissioning process.

Display: [Commissioning]

There is a self-test of the rechargeable battery, mains connection and motor control components. The motor-powered flap is opened and closed once.

After a successful self-test, the control switches to normal operation - the motor-powered flap is opened.

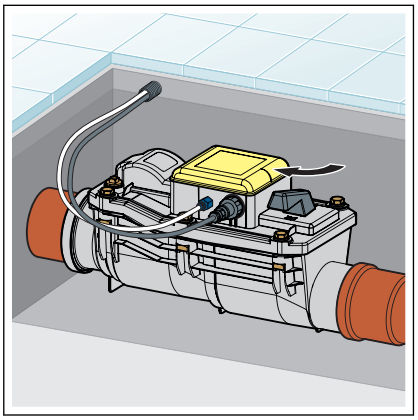
Display: [Normal operation / NRV opened]

Faults detected during the self-test are shown on the screen. *Chapter 3.5 'Errors, faults and remedy' on page 32*

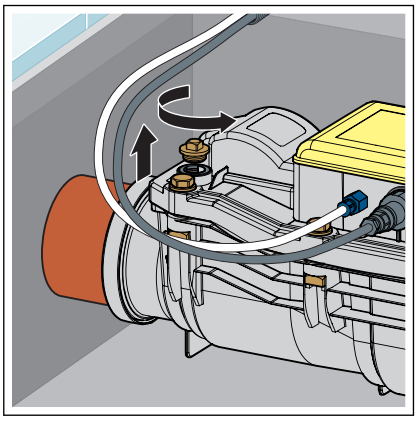
Date and time must be set after the initial commissioning, as a prerequisite that the maintenance reminder, error logging and daily self-test can function. *Chapter 3.4.2 'Operating condition - normal operation' on page 27*

3.3.2 Pressure test

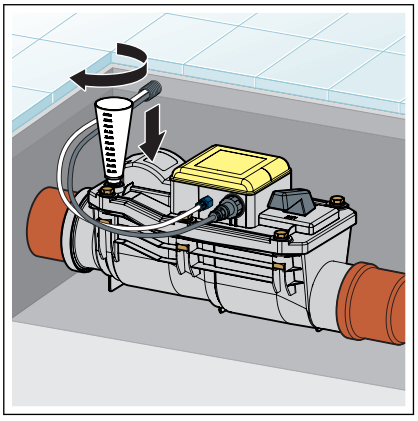
After commissioning of the control, the function of the pressure switch must be tested using the pressure test.



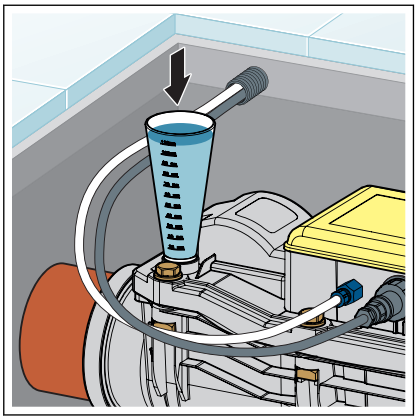
- Set the emergency lock in "ZU" (OFF) position.
- Close the motor-powered flap by pressing the button T2.
  - Display: [Test NRV closed]



- Unscrew the brass plug from the lid.



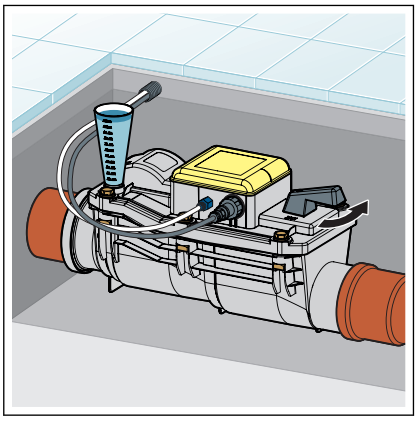
- Screw in the test funnel.



- Fill water to the top marking of the test funnel.
  - When the pressure switch is intact, the control will report a back flow:

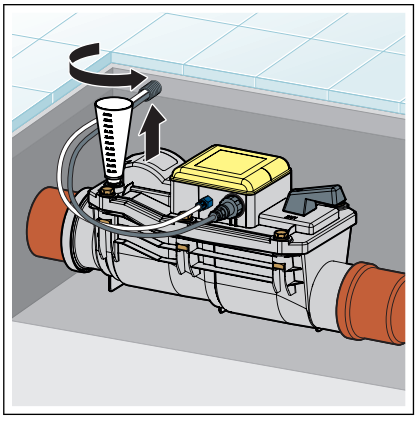
    Display: [Test NRV closed], [Back pressure NRV closed]

    If necessary, a positive opening is possible. Press the button T3 for 5 seconds.
- Keep the water level in the test funnel constant for 10 minutes by replenishing. Observe loss.
  - If the loss is greater than 0.5 l, check and, if required, replace the seals on the flaps.

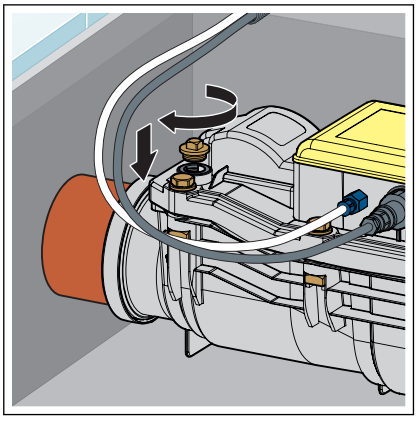


- Set the emergency lock to "AUF" (ON) position.
  - The water drains away.

    Display: [Test NRV closed]
- Open the motor-powered flap by pressing button T2.



- Remove the test funnel.



- Screw in the brass plug.
  - The control automatically changes back to normal operation after a successful procedure.

    Display: [Normal operation / NRV opened]

3.4 Control

3.4.1 Operating conditions

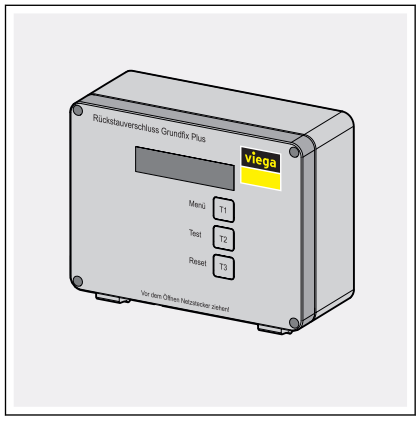


Fig. 8: Control elements control unit

On the front of the control unit the LC display and T1, T2 and T3 buttons are located. The button functions depend on the current operating condition.

The current operating condition is shown on the display as follows:

Operating conditions

Display	Operating status	Warning signals	Operation in accordance with chapter
[Normal operation] [NRV opened]	Motor-powered flap open, main supply 230 V Backflow protection is assured	–	**Operating condition - normal operation** *Chapter 3.4.2 'Operating condition - normal operation' on page 27*
[Back pressure] [NRV closed]	Motor-powered flap closed Backflow protection is assured	Warning signal every 10 seconds	**Operating condition – back pressure** *Chapter 3.4.3 'Operating condition – back pressure' on page 30*
[Back pressure] [Close emergency lock]	Suggestion to close emergency lock **Risk of flooding!**	Continuous signal	**Operating condition – back pressure** *Chapter 3.4.3 'Operating condition – back pressure' on page 30*

Display	Operating status	Warning signals	Operation in accordance with chapter
[Error motor fault] [NRV opened]	Pressure switch detects backflow, the motor-powered flap cannot be closed, it is blocked or the motor is defective **Risk of flooding!** Prompt to use the manual emergency lock.	Continuous signal	**Operating condition – malfunction** *Chapter 3.4.4 'Operating condition – malfunction' on page 30*
[Battery operation] [NRV opened]	Mains voltage 230 V failed Rechargeable battery has taken over the power supply Backflow protection is assured four the next 24 hours	Warning signal every 10 seconds	**Operating condition – battery-powered emergency operation** *Chapter 3.4.5 'Operating condition – battery-powered emergency operation' on page 31*

3.4.2 Operating condition - normal operation

Button functions in normal operation

In normal operation, control parameters can be entered and information can be called up with the T1, T2 and T3 buttons. The button functions are combined as follows:

Button	Function
T1 – Menu	Scroll through menus with repeated pressing / Display ascending values in the sub-menu
T2 – Test	Display descending values in the sub-menu
T3 – Reset	first press = enter menu second press = exit menu and save selected value

The available menus to set the control parameters are displayed by pressing the menu T1 button repeated on the display.

With the T3 button, you can access a menu and save and exit the menu after selected a suitable value.

Within the menus, you can scroll up and down through the values with the T1 and T2 buttons.

Menu order in normal operation

Press T1	Display	Press T3	Press T1	Press T2	Press T3	Result
	[Normal operation] [NRV opened]					
1x	[Maintenance]	Option		Motor-powered flap open/close	Return to normal operation after maintenance	Maintenance successfully completed
2x	[Self-test On / Off]		On / Off	On / Off	Save and return to normal operation	Self-test active/inactive
3x	[Time self-test adjust]		up	down	Call up one after another: Hours/ Minutes	Clock set
4x	[Date / time adjust]		up	down	Call up one after another: Date/ Time	Current date/ time (for log display and self-test) Note: The adjustment from daylight saving time is carried out manually.
5x	[Event memory]		Back to event memory		Call up events one after another	Log display
6x	[Software vers.]				Back to software version	Display of current software version
7x	[Operating hours]				Back to operating hours	Display operating hours
8x	[Language adjust]		Select languages forward	Select languages backward	Save and return to select language	Display in selected language
9x	[Normal operation] [NRV opened]					Menu display starts at the beginning
	[Normal operation]			Press once Test backflow trap closes		Test NRV closed

Press T1	Display	Press T3	Press T1	Press T2	Press T3	Result
	[NRV opened]			Press once Test backflow trap opens		Normal operation NRV opened
	[Normal operation] [NRV opened]				Press once Commissioning Backflow trap closes / Backflow trap opens	Normal operation NRV opened

Example The unit is in normal operation and the self-test should be switched **on**

- Press T1 button until the following appears on the display: [Self-test on / off]
- Press T3 button – Display: [Off]
- Press T2 button – Display: [On]
- Press T3 button.
  - The setting [On] is saved.

    The menu is exited. Display: [Normal operation]

    The self-test is switched **on**and takes place at the predefined time.

Special functions in normal operation

Acoustic signals in case of backflow or error are switched off by pressing T1 button once and confirmed with button T3.

During normal operation, the motor-powered flap can be opened and closed by pressing the T2 button.

If no entry is made for more than one minute after pressing T1 button, the display switches to [Normal operation].

Reading of the event memory

The [Event memory] menu enables the display of 512 control unit-relevant events with date and time. When the memory is full, the oldest event is overwritten. The following events are displayed:

Display	Meaning
[Re-init]	Reset or initialisation of the control unit
[Motor fault]	Motor fault
[Maintenance completed]	Successful maintenance
[Date adjustment]	Changing of the date

Display	Meaning
[Positive opening]	Forced opening of the motor-powered flap in case of backflow
[NRV closes]	Motor-powered flap has been closed because the battery power is less than 11.8 V in battery operation
[Cut-off of rechargeable battery]	Shut-down because the battery power is less than 10.5 V in battery operation

3.4.3 Operating condition – back pressure

In case of a backflow, the motor-powered flap closes.

Display: [Back pressure NRV closed] with signal every 10 seconds.

If the backflow ends, the motor-powered flap opens and the control unit switches back to [Normal operation].

During the backflow, the buttons have the following functions:

Function	Button
Switch off signal	Call up [Sound off] with T1 button and confirm with T3 button
Forces motor-powered flap to open	Keep T3 button pressed for five seconds Display: [Positive opening NRV opened"]

If the backflow sensor is defective, the motor-powered flap will remain closed even after the backflow situation has ended. In this case, the motor-powered flap must be forced opened.

The control goes to [Back pressure], if the backflow still exists. If no backflow exists, the control reverts to [Normal operation].

3.4.4 Operating condition – malfunction

Mechanical faults or errors around the control are shown on the display and an acoustic alarm sounds.

During an error, the following functions can be carried out:

Function	Button
Switch off signal	Call up [Sound off] with T1 button and confirm with T3 button
Remove possible blockage	An initialisation is triggered with T3 button – the motor-powered flap will open and close three times – if the error is not removed, the display will show [Fault 1 / Motor error during commissioning].

For the procedure in case of errors, see *Chapter 3.5 'Errors, faults and remedy' on page 32*.

3.4.5 Operating condition – battery-powered emergency operation

If the power supply fails, the battery automatically takes over the main supply to the control.

Display: [Battery operation NRV opened]

Acoustic signal: every 10 seconds (can be switched off using T1 button).

If the rechargeable battery is fully charged (12 V), backflow is ensured for:

- maximum 24 hours when using the 8 m connection cable
- maximum 10 hours when using the 20 m connection cable

When the rechargeable battery charge is failing, the control unit behaves as follows:

- Rechargeable battery charge falls below 11.8 V – motor-powered flap closes
- Rechargeable battery charge falls below 10.5 V – control and display switch off (deep discharge protection). The backflow function is no longer active.

The following functions can be performed during emergency battery operation:

Button	Function
T1	Menu display
T3	Reset with opening and closing of the motor-powered flap

Maintenance works are not possible during battery operation.

3.5 Errors, faults and remedy

Mechanical faults or errors are shown on the display and an acoustic alarm sounds. The error search is supported by displays and limited to a few components.

- Power pack, rechargeable battery
- Control unit
- Motor, motor-powered flap with mechanism
- Pressure switch

If the control unit registers a defect – during the daily self-test or due to failure of the mains or battery power – the relevant error messages are shown on the display.

NOTICE!
To avoid damage to the mechanism, button functions should only be used if the cover is firmly screwed to the Grundfix Plus-Control.

- In the event of back flow, set the emergency lock to the "ZU (OFF)" position.
- Repair or have faults repaired in accordance with this table:

NOTICE! If the control does not automatically switch back to [Normal operation] after attempted troubleshooting, seek help from a trade professional.

Display	Possible cause	Troubleshooting by	Troubleshooting measures
[Battery operation] [NRV opened]	Power failure, circuit breaker has activated	Operators	The power supply is automatically taken over by the battery (approx. 24 hours) until the mains voltage is restored. Safety against back flow is guaranteed. ■ Check mains cable connection ■ Check mains circuit breakers
[Battery error / Insert battery]	Rechargeable battery is missing or rechargeable battery fuse or cabling is defective	Trade professionals	■ Check rechargeable battery / Rechargeable battery fuse ■ Check cabling
[Battery error / Replace battery]	Motor fuse and / or rechargeable battery fuse defective	Operators	Battery voltage has not achieved 13.9 V after 10 hours of charging or is less than 5 V. No safeguarding against back flow in case of power outage. Replace rechargeable battery
[Error motor fault] [NRV opened] [Back pressure] [Close emergency lock]	This error is displayed if a back flow is recognised in normal operation and the motor-powered flap cannot be closed due to an motor defect or foreign body blocking it. ■ Motor defective ■ Motor spindle broken ■ Motor-powered flap blocked	Operators	**Note:** In case of back flow, there is a risk of flooding - Set the emergency lock to "ZU" (OFF) position. Trigger the self-test with T3 button:

[1] The components integrated into the cover cannot be replaced individually.

Display	Possible cause	Troubleshooting by	Troubleshooting measures
[Commissioning error 1 / motor fault]	This error is displayed if a defect is recognised during a self-test. ■ Motor / Mechanism defective ■ Motor-powered flap blocked	Operators	■ If the motor doesn't begin immediately, check the cable connections in the control unit. If the error message remains, replace cover (model 4987.418)[1]. ■ The motor is turning and trying to close the motor-powered flap but the error message continues: Open and clean the cover, see *Chapter 3.6.2 'Maintenance' on page 35*. If the error message remains, replace cover.
[Back pressure] [NRV closed] (Display although there is no back flow occurring)	Pressure switch defective	Operators	Positive opening with T3 button – keep pressed down for 5 seconds. Replace cover.

[1] The components integrated into the cover cannot be replaced individually.

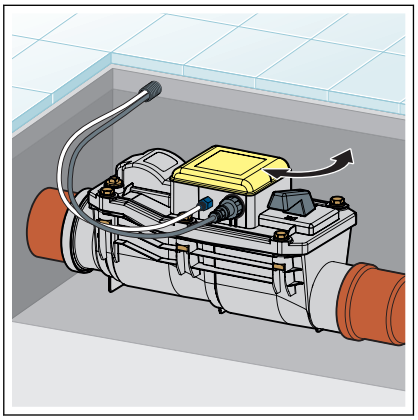
3.6 Care and maintenance

3.6.1 Inspection

To ensure safe operation, a monthly inspection must be carried out by a professional, see *'Regulations from section: Inspection' on page 6*.

Check the functions of the Grundfix Plus-Control:

- Close and re-open the motor-powered flap by pressing the button T2.
- Actuate the emergency lock and check it for smooth function.



3.6.2 Maintenance

NOTICE!
To ensure safe operation, carry out maintenance of the system twice a year.

Requirements:

- Maintenance work is not possible in battery operation as the power loss is too great.
- Maintenance must be carried out by a professional.
- Only use original parts for repairs, maintenance and extensions.
- Replace defective components, do not repair.
- When using cameras and cleaning devices (cleaning spiral, high-pressure cleaner), protect the backflow trap against mechanical damage.
- Only begin maintenance work when is certain that there is no back flow situation and the drainage fittings upstream from the Backflow trap are not being used.

In normal operation, the control shows that maintenance is due every 4320 operating hours (=180 operating days).

Display: [Perform maintenance]

The acoustic signal can be switched off by pressing the buttons T1 [Sound off] and T3. The display screen goes blank after maintenance has been carried out.

There is a pressure switch in the lid of the Grundfix Plus Control which issues the signal to close the motor-powered flap in case of back pressure. During cleaning work, the cover must not be cleaned with a high-pressure cleaner, abrasive cleaning agents, blades or similar cleaning equipment.

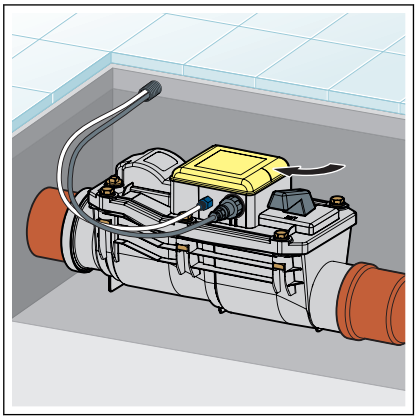
To avoid damage, only clean casing, flap mechanisms and seals with soft brushes under running water.

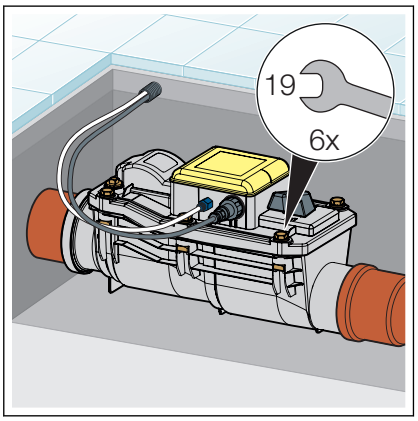
The buttons should only be used if the lid is firmly screwed onto the Grundfix Plus Control.

- Choose the menu [Maintenance] by pressing button T1 and confirming with button T3.

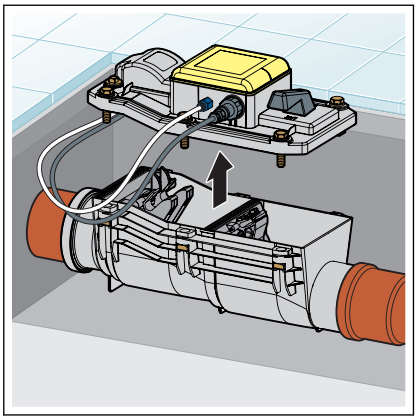
  INFO! The display remains unchanged when calling up the menu [Maintenance].

- Close the motor-powered flap by pressing the button T2.
- Set the emergency lock in "ZU" (OFF) position.

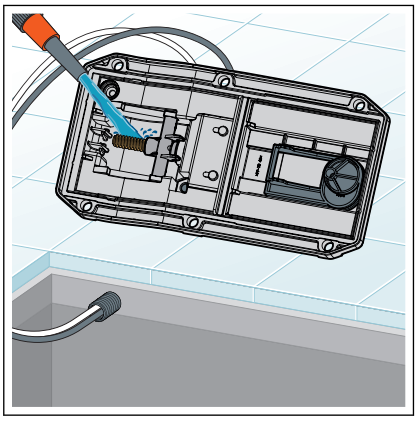




- Loosen the screws on the lid.

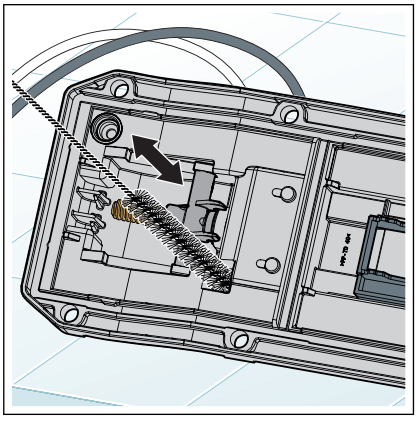


- Carefully remove the lid.

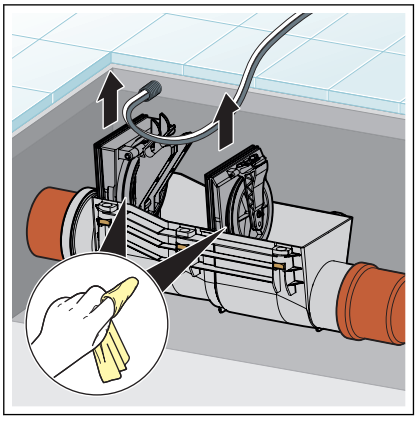


- Clean the spindle on the underside of the lid.

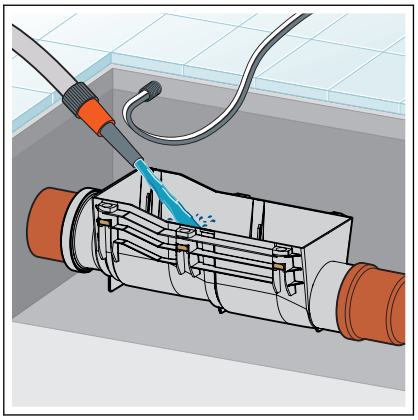
  Do **not** grease the spindle!



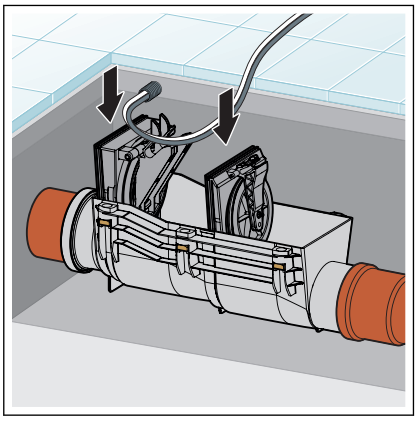
- Carefully clean the opening for the pressure switch on the lower side of the cover with a small brush.



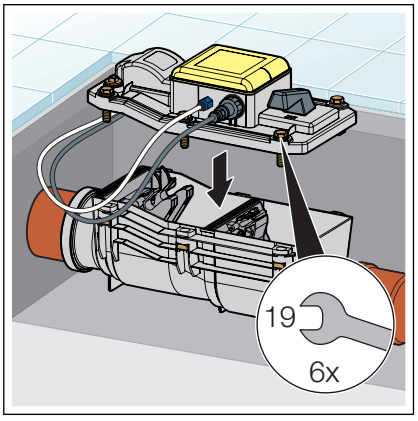
- Remove and clean the flaps.
- Check seals, if necessary, replace them.



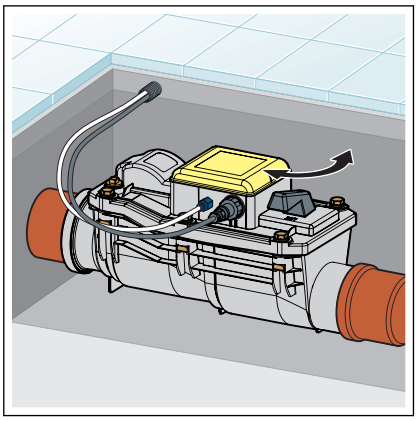
- Clean the casing.
- The seals of the partition walls must be greased with silicon grease.



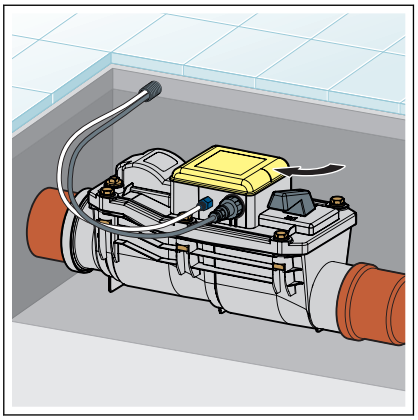
- Install the flaps.



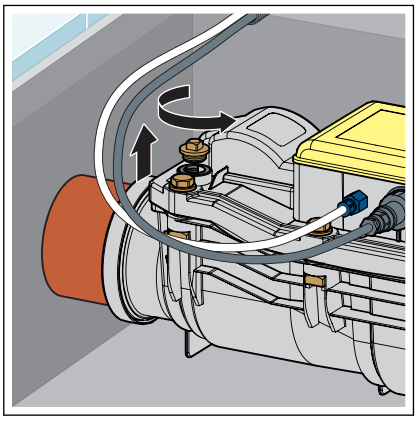
- Place the lid on and screw it down.
- Open the motor-powered flap by pressing button T2.



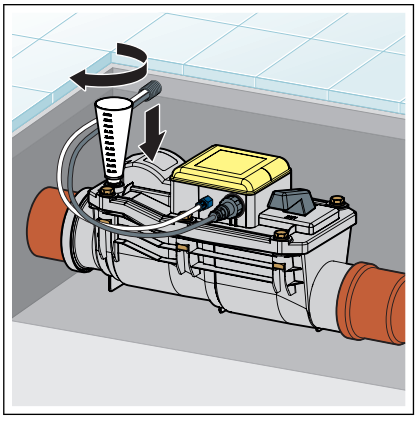
- Actuate the emergency lock and check it for smooth function.



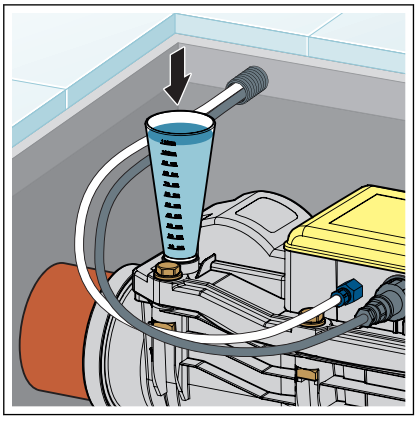
- Set the emergency lock in "ZU" (OFF) position.
- Close the motor-powered flap by pressing the button T2.
  - The motor-powered flap and the emergency lock flap are closed.



- Unscrew the brass plug from the lid.



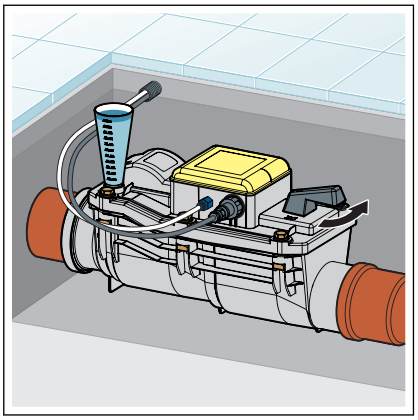
- Screw in the test funnel.



- Fill water to the top marking of the test funnel.
  - When the pressure switch is intact, the control will report a back flow:

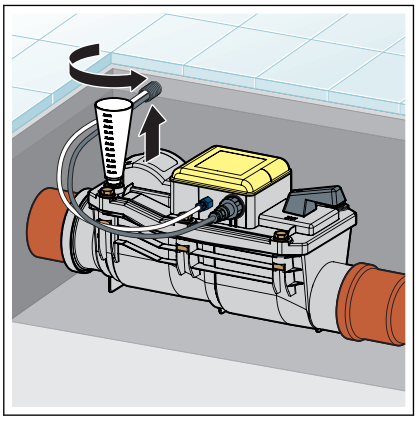
    Display [Test NRV closed], [back pressure NRV closed]

    If necessary, a positive opening is possible. Press the button T3 for 5 seconds.
- Keep the water level in the test funnel constant for 10 minutes by replenishing. Observe loss.
  - If the loss is greater than 0.5 l, check and, if required, replace the seals on the flaps.

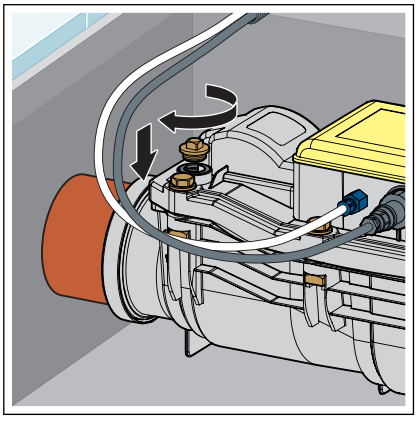


- Set the emergency lock to "AUF" (ON) position.
  - The water drains away.

    Display: [Test NRV closed]
- Open the motor-powered flap by pressing button T2.



- Remove the test funnel.



- Screw in the brass plug.
  - The following message appears on the display after the successful procedure [Maintenance / Correctly performed].

    The control returns to [Normal operation] after approx. 60 seconds.

Alternatively, normal operation can be activated using buttons T1 and T3.

3.6.3 Replacing the rechargeable battery

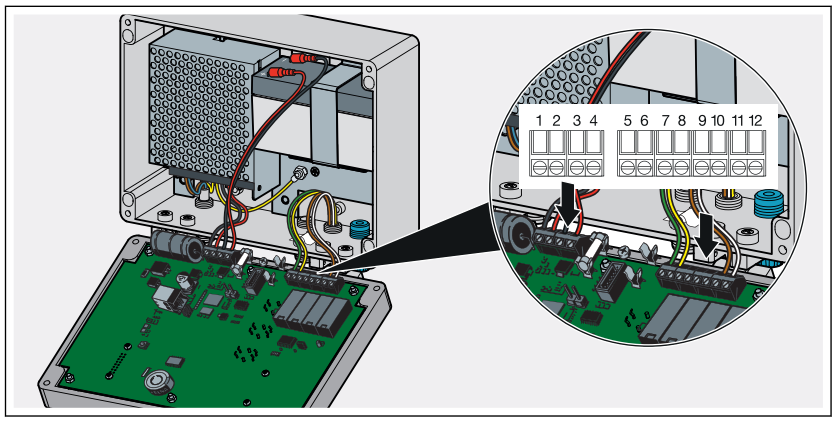
DANGER!
Risk of electric shock!
Replacement of the rechargeable battery should only be carried out by specialist companies.

Remove mains plug before opening the casing.

Replacement of the rechargeable battery is required if the rechargeable battery is defective or if after a charging time of 10 hours a level of 13.9 Volt has not been reached. This will be shown on the display using the notice [Battery fault / Replace battery].

The rechargeable battery may only be replaced with an original spare part (art. no. 471 088).

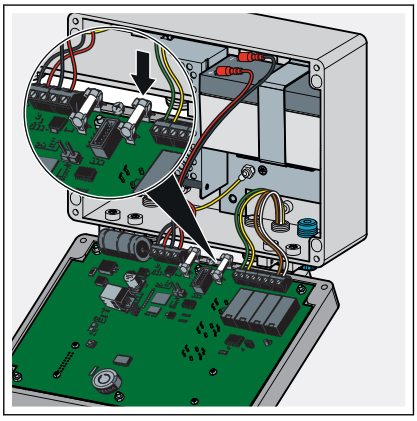
- Open the control unit.
- Remove the defective rechargeable battery.



- Connect the new rechargeable battery.

Clamping strip configuration

Pos.	cable	Functions	Marking on the connection strip
3	black – factory-fitted	rechargeable battery connection	GND
4	red – factory-fitted	rechargeable battery connection	+ AKKU



- Insert the replacement battery fuse (right) comprised in the delivery.
  - The charging time begins approx. 30 seconds after the rechargeable battery fuse has been inserted.

    The green LED on the inside of the lid is lit

    Display: [Battery charging]

3.7 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.

Electronic components and batteries must not be put in the domestic waste but must be disposed of appropriately in conformity with the applicable directives, see *'Regulations from section: Disposal' on page 6*.

Viega Supply Chain GmbH & Co. KG
service-technik@viega.de
viega.com

INT • 2020-11 • VPN190037