

# **AquaLOCK® FLAP**

## **Assembly- and Operating Instructions**

Version 11/2024

Scan this QR Code to access the  
installation video for the  
AquaLOCK® flap.



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# 1. About this Document

This operating manual contains all necessary information for the proper use of the AquaLOCK® FLAP. The following points should be noted:

- The operating manual is an integral part of the product.
- The operating manual must be available to the operator at all times.
- The operating manual must be stored in an accessible location near the AquaLOCK® FLAP for the entire lifespan of the product.
- The operating manual must be handed over to the new operator or owner if the AquaLOCK® FLAP is transferred.

## 1.1 Validity

This operating manual applies to the AquaLOCK® FLAP product range designed for protection against flooding and heavy rainfall. It contains essential information regarding installation, operation, maintenance, and cleaning of the product.

### Standardized Illustrations

The illustrations in this manual correspond closely to the described product. In some cases, standardized illustrations used may slightly differ from the actual product.

## 1.2 Target Groups




This operating manual is intended for all individuals handling the AquaLOCK® KLAPPE, particularly the end user. Please observe the following notes:

- All work on the product (e.g., installation and maintenance) should only be carried out by appropriately qualified personnel. Relevant rules regarding accident prevention, as well as occupational and environmental safety, must be followed.
- Supervise young children when they are using the product.
- Be aware that in some models, the handles are positioned at an elevated height, and may not be easily reachable by children.

## 1.3 Conventions

### Warning Notes and Other Notices

In this operating manual, notices are assigned different levels of importance and marked with a pictogram.

Signal word	Meaning
 <b>DANGER</b>	Imminent danger. Death or very serious injury will result.
 <b>WARNING</b>	Potentially dangerous situation. Death or serious injury may occur.
 <b>CAUTION</b>	Potentially dangerous situation. Minor or moderate injury may occur.
<b>NOTICE</b>	Instructions that must be observed to ensure safe product operation

Structure of Warning Notices:



#### Indicates the severity of the Danger

Consequence.

– Escape.

#### Signal Word

The severity of the danger is indicated.

#### Nature and Source of the Danger

Describes the specific hazard and where it may occur.

#### Consequences

Describes the potential outcomes if the notice is not observed.

#### Escape

Describes how to prevent the danger and includes safety measures to take if the danger occurs.

Example of a warning note:



#### Risk of injury if not used as intended

Unprescribed use of the AquaLOCK® FLAP may cause harm to people or property.

– Use the AquaLOCK® FLAP only as described below.

## Action Instructions

Action instructions are numbered to indicate the order of individual steps. If applicable, the results of the actions are shown directly below the steps.

### Example:

1. This is the first step.
2. This is the second step.  
→ This is the result of the second step.

## 1.4 Contact to the Manufacturer

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Enzianstraße 14  
88436 Oberessendorf  
Tel.: +49 7355 9310 0  
info@torbau-schwaben.de  
www.aqualock.info

## 2. Safety Instructions

This section contains all relevant safety information. Before handling the AquaLOCK® FLAP, thoroughly read all safety instructions and follow them during use.

The safety instructions highlight risks to people, property, and the environment and provide information on how to prevent and mitigate damage and dangers to the product.

### 2.1 Proper Use

To use the AquaLOCK® FLAP properly, it is necessary to be familiar with the operating manual and follow all the provided instructions, maintenance, and inspection regulations.



#### **WARNING**

#### **Risk of injury from inappropriate use**

Improper use of the AquaLOCK® FLAP may cause harm to people or property.

– Use the AquaLOCK® FLAP only as described below.

The AquaLOCK® FLAP is intended to provide mechanical protection against flooding and heavy rainfall. The following uses are considered proper:

Use in residential or commercial buildings to seal appropriate openings.

For the proper use of the AquaLOCK® FLAP, the following additional conditions must be observed:

- The maximum opening angle is up to 180°.
- The expected lifespan of the AquaLOCK® FLAP is approximately 1,000 cycles. After this, a revision by the manufacturer or a specialized company is required.
- Repairs and maintenance on the product may only be carried out by the manufacturer or by companies authorized by the manufacturer.
- The proper functioning of the AquaLOCK® FLAP must be ensured through an annual inspection by the manufacturer or a company authorized by the manufacturer (annual expert inspection).

## 2.2 Improper Use

Improper use occurs when the product is used for a purpose other than described in section **"2.1 Proper Use" on page 7**.

Examples of improper use include:

- Using the product in a condition that is not technically safe.
- Unsupervised use by children.

Using the product in unsuitable openings.

### HINWEIS

The manufacturer assumes no liability for damages resulting from improper use. The operator of the product bears sole responsibility.

## 2.3 General Rules of Conduct

When handling the AquaLOCK® FLAP, always observe the following rules:

- Use the AquaLOCK® FLAP only as intended.
- Always ensure the safety of yourself and others.
- Do not use the AquaLOCK® FLAP if any damages or obstacles are visible. If necessary, inform the manufacturer or an authorized service company.

## 2.4 Personnel Qualification – Who does what?

The following chapters explain the various groups of people who handle the AquaLOCK® FLAP.

### 2.4.1 Operator

Anyone who is in full possession of their mental and physical abilities and is over the age of 21 may act as the operator.

#### Duties of the Operator:

- Fully read and follow the operating and safety instructions in this manual.
- Operate the AquaLOCK® FLAP only if no damages are visible.
- In case of errors, malfunctions, or visible damage, inform the operator or contact the manufacturer's customer service.
- Keep the AquaLOCK® FLAP in a clean condition (see section **"6 Maintenance and Servicing" on page 17**).

#### Operation by Children:

- Not permitted.



## 2.4.2 Installation and Maintenance Personnel



### Risk of injury from improper work

Improper work on the AquaLOCK® Flap may result in personal injury and property damage.

- All work in the areas of installation, disassembly, inspection, and maintenance must be performed by the manufacturer or an authorized specialist company.

The installation and maintenance personnel are defined as follows:

- Trained specialists
- Expertise in the installed technology
- Certification by the manufacturer
- Knowledge of relevant work safety and accident prevention regulations

## 2.4.3 Overview – Who does what?

The following table assigns tasks to the respective groups of personnel mentioned above.

Task	Operator	Installation/Maintenance personnel
Operation	yes	
Cleaning and Care	yes	
Visual inspection for external damage	yes	
Error and malfunction correction		yes
Maintenance		yes
Repair		yes
Installation, Modification, Transport, Dismantling, Disposal	in consultation with the manufacturer	

## 2.5 Residual Risks

The AquaLOCK® FLAP consists of moving and heavy components. To avoid personal injury or property damage, please observe the following safety instructions:

### Dangers during transport, installation, and maintenance work:

- Transport, installation, and maintenance tasks must only be performed by authorized personnel or the manufacturer.
- Use only appropriate and certified lifting equipment to handle heavy parts. When choosing lifting equipment, consider the dimensions and weight of the respective flap. For safe transport and installation, a minimum of two people is required.
- Do not stand under suspended loads and maintain a safe distance.
- Wear appropriate personal protective equipment during work (see section **"2.6 Personal Protective Equipment" on page 10**).
- Do not make unauthorized modifications to the AquaLOCK® FLAP.

## Dangers during Use

- When opening and closing the AquaLOCK® FLAP, be aware of people, pets, or objects nearby. Ensure that no one or nothing can be trapped.
- Never place your hands between stationary and moving parts.
- Have the AquaLOCK® FLAP inspected by the manufacturer or an authorized service provider if external damage is visible or if the closing or sealing mechanism is not functioning correctly.
- Only close the flap if no water is already entering through the opening.
- If water has already started to enter, move to safety as quickly as possible.
- After any damage event, an expert inspection of the AquaLOCK® FLAP must be carried out.

## 2.6 Personal Protective Equipment

To ensure safe transport, installation, and maintenance of the AquaLOCK® FLAP, you and any assisting personnel must wear personal protective equipment. The following table lists the minimum personal protective equipment required for various activities:

Personal Protective Equipment	Required Type /Protection Class	Activity
Work clothing	Long, tight-fitting work clothing	All activities
Safety shoes	Slip-resistant safety shoes with toe caps according to EN ISO 20345	All activities
Protective gloves	As needed	As needed

## 3. Technical Data

### 3.1 Flood Resistance

- AquaLOCK sealing system, effective on 4 sides
- Flood resistance in accordance with the IFT guideline FE-07/1 is guaranteed, with an allowable leakage of 240 litres in 24 hours
- Permissible water level height: 2.3 meters from the bottom edge of the flap

### 3.2 Material

Frame construction: Made of steel, designed according to structural requirements, massive galvanized construction, painted

#### Panelling

Aluminium on both the exterior and interior sides

#### Surface

Both sides of the construction and panelling are painted

#### Closure

Massive quick-release system with crank handles, optionally prepared for a padlock on the inside

### 3.3 Versions

The AquaLOCK Flap is a compact water protection solution for all types of openings, both indoor and outdoor. Installation can be performed vertically or horizontally. Typical application examples include:

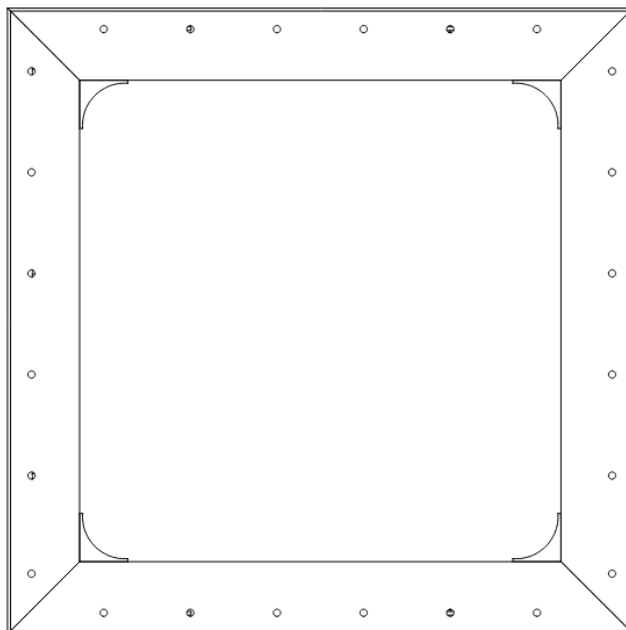
Basement windows, workshop windows, silo openings, machinery openings, shaft covers, ceiling openings, suitable for all wall openings up to a size of 1100 x 1100 mm.

### 3.4 Construction

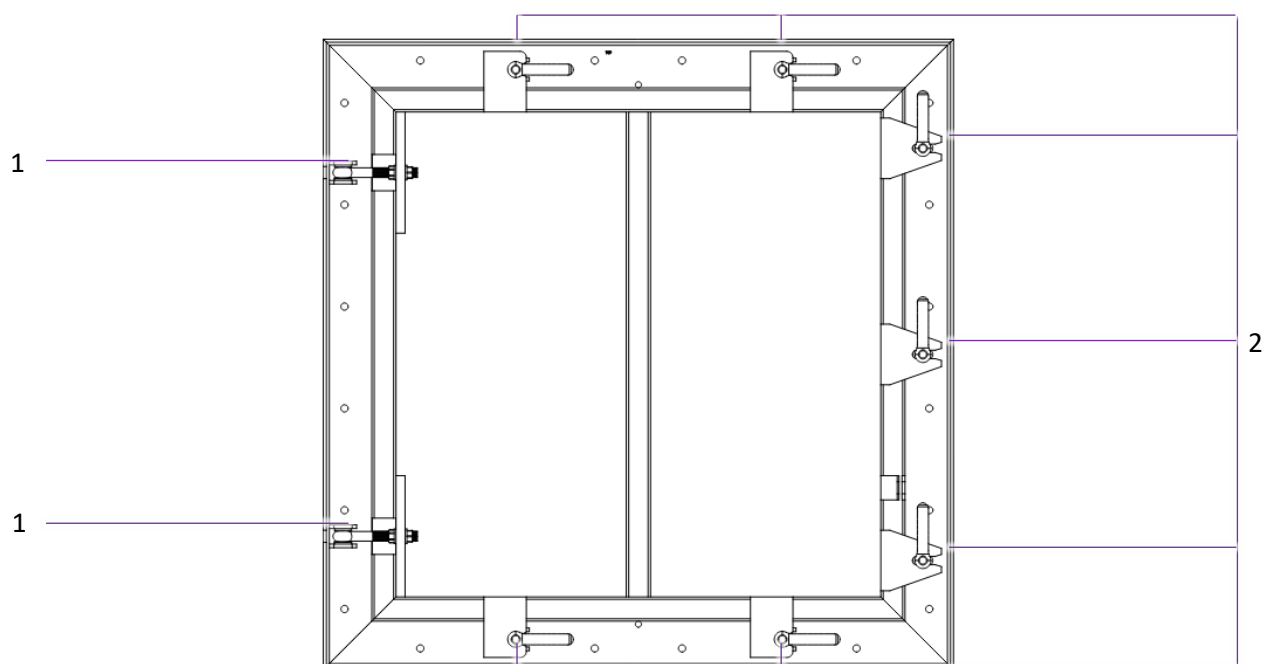
This section explains the construction and function of the AquaLOCK® Flap using 2 exemplary construction variants.

#### NOTICE

Further information on the various construction variants can be obtained from the manufacturer (see section **"1.4 Contact to the Manufacturer" on page 6**).

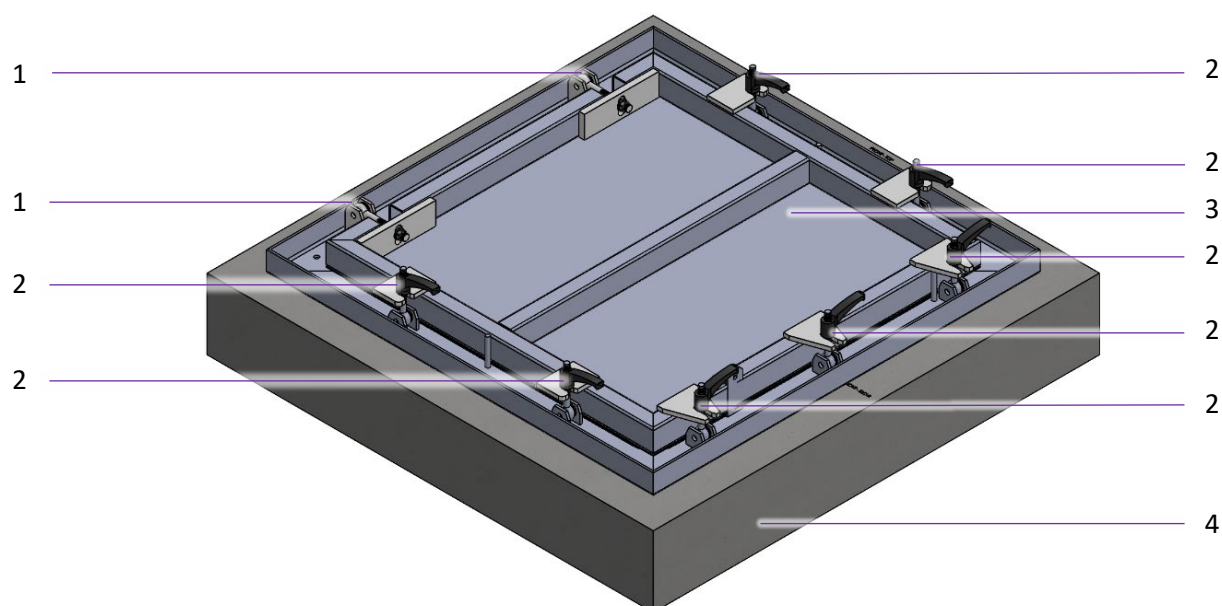


**Fig. 1: AquaLOCK® Flap, from outside**



**Abb. 2: AquaLOCK® Flap, from inside**

- 1. Hinges
- 2. Locking system



**Fig. 3: AquaLOCK® Flap, 3D view from the inside**

1. Hinges
2. Locking system
3. Flap
4. Frame

## 4. Installation Instructions

### 4.1 Positioning the Flap

The AquaLOCK® Flap is positioned from the inside onto the wall opening, with installation only possible by mounting it on the interior wall. To position the flap, proceed as follows:

1. Align the AquaLOCK® Flap so that it sits evenly in front of the wall opening when viewed from the inside. We recommend securing it with installation supports and clamps.
2. Ensure that the top frame is positioned horizontally. Minor deviations are allowed to adjust the flap to fit the wall opening.
3. Maintain a mounting gap of 5 mm to 10 mm between the AquaLOCK® Flap frame and the building structure! This allows for proper alignment and is necessary to ensure standard-compliant grouting. The flap should not directly touch the wall at any point. Use suitable spacers if needed.

### 4.2 Securing the Flap

**Follow these general guidelines for securing the frame:**

- The standard AquaLOCK® Flap package includes mounting materials for concrete walls. For other wall materials, use appropriate mounting systems. If unsure, contact the manufacturer.
- When drilling or using anchors, the required distances must be observed as per DIN EN 1992-4. Follow the anchor or screw manufacturer's guidelines and processing instructions.
- Only use adhesives and sealing materials suitable for the application. Refer to the material manufacturer's instructions for material compatibility and processing requirements. Suitable sealing materials are optionally available from the AquaLOCK® Flap manufacturer.
- The AquaLOCK® Flap must be secured on all four sides to ensure a solid connection with the building structure.
- All designated drilling holes must be used for securing.
- The walls must comply with the relevant standards (DIN EN 1627).
- The frame must be backfilled to ensure pressure resistance.
- Ensure that the air gaps are maintained correctly and that secure fastening is achieved.

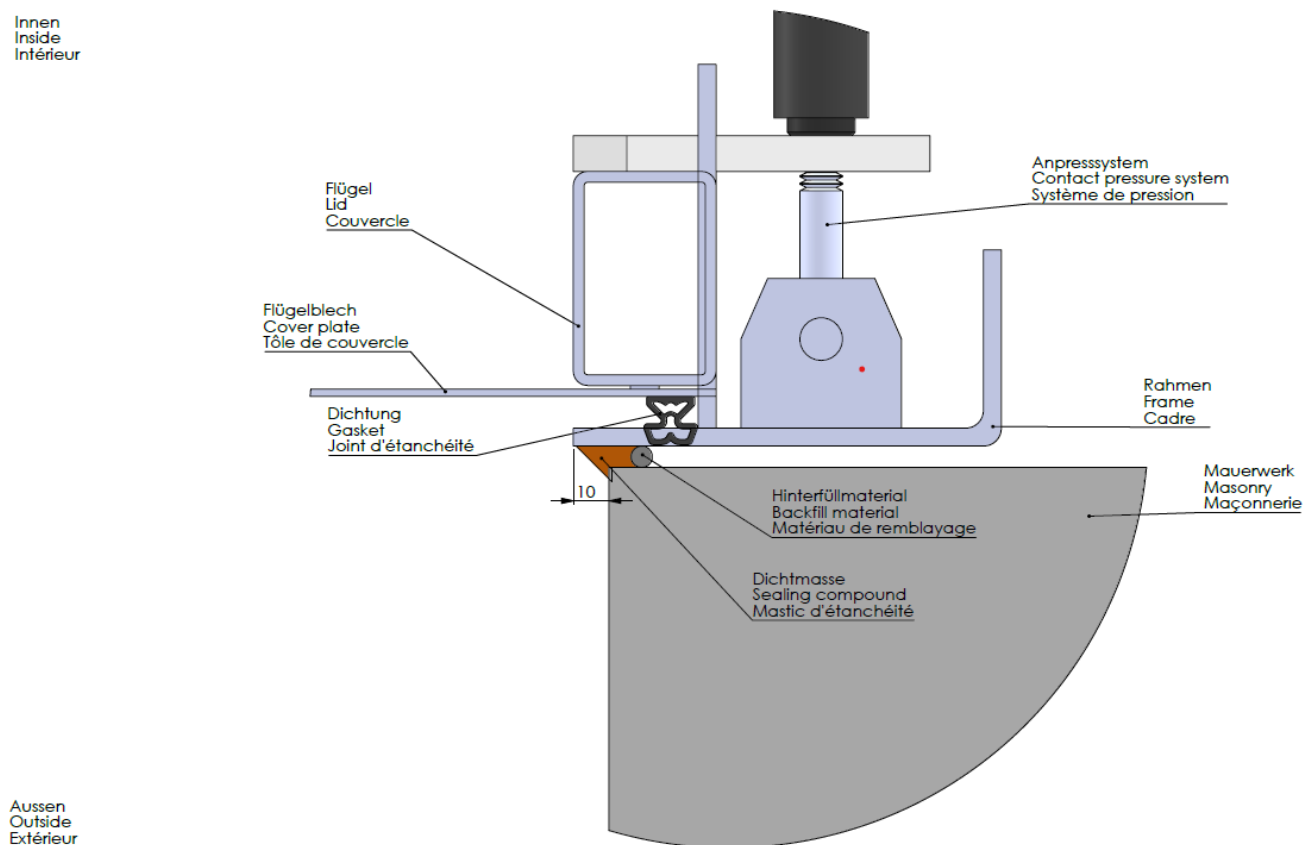
### Securing the Flap

Proceed as follows for securing:

1. Close the internal locking bars.
2. Check both the external and internal views:
  - The frame should be evenly aligned with the wall opening.
  - Drill the holes in the wall to secure the frame to the wall.
3. Secure the flap to the wall using screws/anchors appropriate for the wall material.

## Sealing

The following illustration provides an overview of the correct sealing of the side jamb frame to the wall.



**Fig. 4: AquaLOCK® Flap, Sealing of the side jamb frames**

Follow these steps to create the sealing joint:

1. Press the supplied backer rod into the gap between the frame of the AquaLOCK® Flap and the wall. The front edge should be positioned about 5–8 mm deep (preferably corresponding to the width of the joint).
2. To create a straight joint edge, apply masking tape about 6–8 mm away from the jamb frames onto the walls.
3. Also, apply masking tape to the frame.
4. If the wall surface (plaster, concrete, etc.) is sandy or porous: Apply a primer (not included in the standard package, but available optionally from the manufacturer).
5. Now apply the sealing adhesive and create the joint with a size of about 6 mm using a smoothing tool.
6. Finish the joint and remove the masking tape.
7. Let the joint cure. The curing time for the sealing adhesive is approximately 24 hours at 20°C. During this time, the joint must not be subjected to any load.

## 5. Operation

This section provides information on the operation of the AquaLOCK® Flap.

### 5.1 Opening and Closing the Flap

The AquaLOCK® Flap can be opened and closed as described below:

1. Ensure that no people or objects can be trapped.
2. Close the flap using the crank handles.
3. If necessary, lock the padlock.
4. To open the flap, reverse the steps in order.

### 5.2 Establishing Flood Resistance

To ensure the flood resistance of the AquaLOCK® Flap, proceed as follows:

1. Ensure that no people or objects can be trapped.
2. Close the flap as described in section "**5.1 Opening and Closing the Flap**" on page 16.  
→ The flood resistance of the AquaLOCK® Flap is now established.

#### **HINWEIS**

Please note that flood resistance is ensured even without the use of the padlock, as long as the AquaLOCK® Flap is properly closed using the crank handles.



## 6. Maintenance and Servicing

This section provides information regarding the maintenance and servicing of the AquaLOCK® Flap



### **Risk of personal injury and property damage due to improper maintenance.**

Improper maintenance of the AquaLOCK® Flap can lead to hazards for people and property.

- Maintenance and repair work should only be carried out by trained and manufacturer-certified personnel.
- Wear appropriate personal protective equipment.

### 6.1 Cleaning and Care

Regular cleaning significantly extends the lifespan of the AquaLOCK® Flap. Please follow these instructions for cleaning and care:

- Use warm water and a mild detergent for cleaning.
- Wipe the surface of the flap with a clean, soft cloth.
- Treat all metal surfaces with appropriate care products.
- Never use aggressive cleaning agents such as alkalis, acids, or abrasives.
- Do not use mechanical tools such as scrapers, spatulas, etc., and avoid using high-pressure cleaners.

### 6.2 Regular Maintenance Work

#### Locking Elements

The locking elements are maintenance-free. If functional issues arise, contact trained personnel or the manufacturer.

#### Hinges

If necessary, you can lubricate the hinges. Follow these steps:

1. Open the flap. → The top hinge elements are flattened and, in this position, they expose the lubrication hole.
2. Apply a few drops of suitable oil into the hinge.

## Seals

Maintain the seals with a suitable care product for silicone seals.

## Annual Expert Inspection

To ensure flood resistance, an annual expert inspection is required. If these inspections are not properly conducted and documented, the manufacturer's warranty will be void.

## 6.3 Spare Parts and Accessories

Only use original spare parts and accessories from the manufacturer. The manufacturer is not liable for damages caused by the use of non-original spare parts.

## 7. Disassembly and Disposal

This section provides information on the safe disassembly and disposal of the AquaLOCK® FLAP. Proceed as follows:



### **WARNING**

#### **Risk of injury due to improper disassembly**

Improper disassembly may lead to injuries, for example, from heavy parts tipping over.

- Disassembly work should only be carried out by trained personnel.
- Wear appropriate personal protective equipment.

1. Disassemble the product properly and in an environmentally friendly manner, using appropriate tools, into its individual parts.
2. Dispose of the components responsibly and in an eco-friendly way. Be sure to follow all legal regulations. Recycle disassembled parts or dispose of the components, ensuring they are sorted as much as possible for recycling.

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