

# **AquaLOCK®-PORTAL**

## **Inwards Opening**

## **Manual**

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



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# 1 About this Document

This operating manual contains all the necessary information for the proper use of the AquaLOCK®-PORTALS.

Points to note:

- 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 kept accessible near the AquaLOCK® Portal throughout its entire lifespan.
- The operating manual must be passed on to any new operator or owner if the AquaLOCK® Portal changes hands.

## 1.1 Validity

This operating manual applies to the AquaLOCK® Portal designed for protection against flooding and heavy rain. It includes basic information on the topics of installation, operation, maintenance, and cleaning of the product.

## Standardised Illustrations

The illustrations in this operating manual closely match the described product. In some instances, standardized illustrations may vary slightly from the actual product.

## 1.2 Target Audience




This manual is intended for all individuals handling the AquaLOCK® Portal, particularly the end user. Please note the following guidelines:

- All work on the product (e.g., installation and maintenance) should only be performed by appropriately qualified personnel. Relevant rules for accident prevention as well as occupational and environmental safety must be followed.
- Supervise young children when they are using the product.
- In some models, the handles are positioned at a higher level and may not be accessible to children.

## 1.3 Convections

### Warning notices and other information

In this operational manual, notices are given different levels of importance and marked with 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:

 <b>SIGNAL WORD</b>	<b>Indicates the severity of the Danger</b> Consequence. – Escape.
--	--

#### Signal Word

Indicates the severity of the danger.

#### Nature and Source of the Danger

Describes what hazard is being warned against and where it may occur.


#### Consequences

Describes the potential outcomes if the notice is not followed.

#### Escape

Describes how to prevent the danger and provides guidance on safety measures in case the hazard occurs.

#### Caution!

 <b>WARNING</b>	<b>Risk of injury due to improper use</b> Improper use of AquaLOCK®- PORTAL may cause harm to people or property Only use the AquaLOCK®- PORTAL as described below:
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## Action Instructions

Action instructions are numbered to indicate the sequence of individual steps. Results of the actions, if available, are listed directly below the respective step.

### Example:

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

## 1.4 Contact information for the manufacturer

Torbau Schwaben GmbH  
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® Portal, 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 avoid and mitigate dangers and damage to the product.

### 2.1 Proper use

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



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

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

– Only use the AquaLOCK® Portal as described below.

The AquaLOCK® Portal is designed for mechanical protection against flooding and heavy rainfall. The following uses are considered proper:

- Use as a protective element for underground garage entrances, side or basement doors in residential or commercial buildings, and securing property boundaries in combination with protective walls.

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

- The maximum opening angle is typically 95° (up to 180° in custom models).
- The expected lifespan of the AquaLOCK® Portal is approximately 5,000 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® Portal must be ensured through an annual inspection by the manufacturer or an authorized company (annual expert inspection).

<sup>1</sup> Flood resistance resistiveness according to IFT guideline FE-07/1, Water ingress < 30 l / 24 h

## 2.2 Improper Use

Improper use occurs when the product is used for a purpose other than that 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.
- Operation by children.

### **NOTICE**

The manufacturer assumes no liability for damage resulting from improper use. As a result, the company operating the product bears sole responsibility.

## 2.3 General Rules of Conduct

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

- Use the AquaLOCK® Portal only as intended.
- Always ensure the safety of yourself and others.
- Do not use the AquaLOCK® Portal if any damage 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® Portal.

### 2.4.1 Operator

Any adult who is in full possession of their mental and physical abilities may operate the AquaLOCK® Portal.

#### **Operator's Duties:**

- Fully read and follow the operating and safety instructions in this manual.
- Operate the AquaLOCK® Portal only if no damage is visible.
- In case of errors, malfunctions, or visible damage, inform the operator or contact the manufacturer's customer service.
- Keep the AquaLOCK® Portal clean (see section "7 Maintenance and Servicing" on page 23).

#### **Operation by Children:**

Not permitted.



## 2.4.2 Installation and Maintenance



### **WARNING**

#### **Risk of injury from improper work**

Improper work on the AquaLOCK® Up-And-Over Door 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 professionals
- Expertise in the installed technology
- Certification by the manufacturer
- Knowledge of relevant occupational 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, care	Yes	
Visual inspection for external damage	yes	
Error and malfunction correction		Yes
Maintenance		Yes
Repair		Yes
Installation, Modification, Transport, Disassembly, Disposal	In consultation with the manufacture	

## 2.5 Residual Risks

The AquaLOCK® Portal 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 portal. For safe transport and installation, a minimum of two people is required.
- Do not stand under suspended loads and maintain a safe distance.
- Secure the portal wings and portal frame during installation to prevent tipping or falling.
- 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® Portal.

Dangers during Use

- When opening and closing the AquaLOCK® Portal, be aware of people, pets, or objects nearby. Ensure that no one and nothing can be trapped.
- Never place your hands between stationary and moving parts.
- Have the AquaLOCK® Portal inspected by the manufacturer or an authorized service provider if external damage is visible or if the locking or sealing mechanism is not functioning properly.
- After any damage event, an expert inspection of the AquaLOCK® Portal must be conducted.

2.6 Personal Protective Equipment

To ensure safe transport, installation, and maintenance of the AquaLOCK® Portal, you and any assisting personnel must wear personal protective equipment. The following table lists the minimum personal protective equipment required for various activities:  
This translation maintains the structure and content. Let me know if you need further assistance!

Personal protective equipment	Required protection class	Activity
Workwear	Long, tight -fitting workwear	All activities
Safety shoes	Slip-resistant safety shoes with toe caps EN ISO 20345	All activities
Protective gloves	As required	When necessary

### 3 Technical Data

#### 3.1 General technical data

Parameter	Details
Flood Resistance	Flood resistance according to IFT FE-07/1 Water ingress < 240l / 24 h
Open angle	95°
Dimension	Width up to 500 cm height up to 120 cm (Special sizes upon request)
Frame Depth	160 mm
Frame (Standard Version) Hinged side	210 x 120 mm
Opposite side	150 x 100 mm
Bottom strike Rail (Standard version)	60 x 140 mm
Possible installation methods	Standard: Between Reveals Customized version: Between reveals flush with the interior wall Behind reveals, or in front of the external wall

## 4 Construction and Function

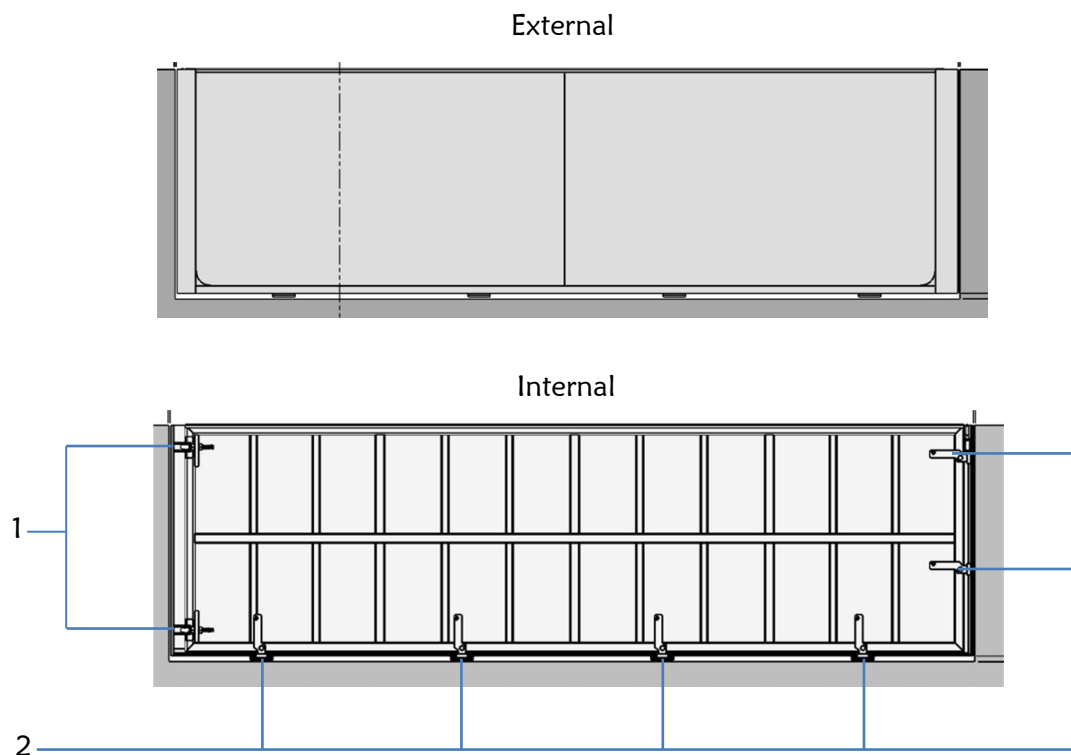
This section explains the construction and function of the AquaLOCK® Portal using two exemplary construction variants.

### NOTICE

For further information on the different construction variants, please contact the manufacturer (see section "1.4 Contact Information" on page 6).

### 4.1 Overview: Inward-Opening Portal

Illustration 1: Standard inward-opening version with rotary locking handle operation.



1. Hinges
2. Rotary locking system

## 4.2 Functionality

The opening and closing of the AquaLOCK® Portal operate similarly to conventional swing gates. Alternative lock variants are available,

where the opening and closing elements may be accessible only from the inside, ensuring flood resistance across the entire height of the portal.

The AquaLOCK® Portal is equipped with a specialized sealing system to ensure complete sealing. The rotary locking handles must be turned firmly to secure the seal. Turn the handles until they reach their stop at 180°.

Note that the protection height may vary depending on the AquaLOCK® Portal version (e.g., depending on the height of an alternative locking cylinder).

### **NOTICE**

After each damage event, an expert inspection of the AquaLOCK® Portal must be carried out to ensure proper functioning and flood resistance.

## 5 Storage, Transport and Installation

### **WARNING**

#### **Risk of injury due to heavy components**

Transporting and installing the components of the AquaLOCK® Portal may pose risks from heavy and tipping parts.

– Follow the instructions in section "2.5 Residual Risks" on page 9 and section "2.6 Personal Protective Equipment" on page 10.

### 5.1 Storage and Transport

Ensure the following environmental conditions during storage and transport of the AquaLOCK® Portal components:

Parameter	value
Temperature	-10 bis +30 °C
environment	Protected from dust and water splashed

Observe the following guidelines during the transportation of AquaLOCK®-Portals

- Ensure proper load securing during vehicle transport.
- Use appropriate certified lifting equipment to handle heavy components or seek assistance from a second person.
- Do not stand beneath suspended loads and maintain a safe distance.

### 5.2 Installation


Follow these general instructions for installing the AquaLOCK® Portal:

- Perfect installation using a spirit level is not possible. It is a heavy welded construction that may be subject to slight warping. This is entirely normal and not grounds for complaint.
- The top priority is ensuring that the sealing system is in contact with the steel structure.
- During installation, the latch system on the inside of the portal wing must be locked to ensure that the sealing system functions optimally after installation.
- After installation, all mortar splashes, foam residues, and other contaminants must be removed immediately to avoid corrosion damage.

### 5.2.1 Preparing for Installation

Proceed as follows to prepare for the installation of the AquaLOCK® Portal:

1. Check the delivered goods for completeness and damage upon arrival.
2. If damage is detected, note the nature of the damage on the transport documents.

 **WARNING!** There is a risk of personal injury and property damage. Do not install the AquaLOCK® Portal with damaged components. Replace damaged components before starting installation, or contact the manufacturer.

3. Remove the transport packaging and dispose of it in an environmentally friendly manner according to local regulations. The packaging Material is 100% recyclable.
4. Have the required tools, equipment, and fasteners ready:
  - Wooden wedges
  - Hammer
  - Spirit level
  - Screws/anchors appropriate for the wall and floor materials
  - Suitable wrenches/bits
  - Cordless drill
  - Foil to cover the floor
  - Masking tape for sealing joint creation
  - Spacers for aligning the portal
  - Smoothing tool for creating joints
  - Spray bottle for smoothing agent
  - Paper towels
  - Knife for opening the sealing adhesive
  - Press tool for applying sealing adhesive to the joint
  - Drill bits matching the screw/anchor system
  - Vacuum cleaner
  - Trash bags

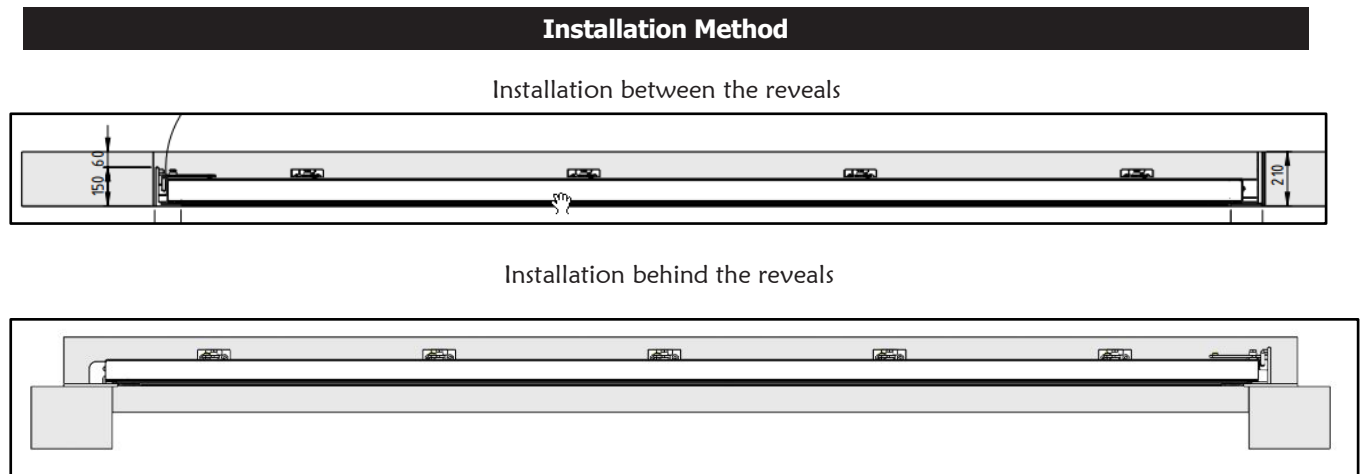
#### **NOTICE**

Ensure that the selected screw/anchor system matches the wall and floor materials.

Check whether the AquaLOCK® Portal dimensions fit the wall opening and the selected installation method before starting the installation process. This information can be found in the purchase documents (order confirmation, invoice, delivery note)

### 5.2.2 Positioning the Portal

Depending on the desired installation method, the AquaLOCK® Portal is positioned in or on the wall opening. The following installation methods are generally possible:



#### NOTICE

This manual cannot cover all installation methods. The installation must be adapted to local conditions.

#### Proceed as follows to position the portal:

1. Align the AquaLOCK® Portal so that, when viewed from the outside, it sits evenly in the wall opening. We recommend securing it using installation supports and/or wooden wedges for spacing.
2. Use a spirit level to align the side where the hinge system is located.
3. Ensure that the frame on the hinge side, the upper wing frame, and the bottom strike rail are horizontal. Deviations are not allowed, as they can cause the portal wing to move unintentionally after unlocking.
4. Maintain a mounting gap of 5mm to 10mm between the AquaLOCK® Portal and the building structure! This allows for proper alignment of the AquaLOCK® Portal and is necessary to ensure standard-compliant sealing at the side jamb frames and the bottom threshold profile. The AquaLOCK® Portal should not come into direct contact with the wall at any point.



### 5.2.3 Aligning the Portal

Follow these general instructions to align the portal:

Proceed as follows to align the door:

1. Align the portal so that the sealing system of the portal wing fits tightly against the entire frame and closes properly.
2. Open the portal wing and check the locking process. The locking system must operate smoothly. The sealing system should be compressed by at least 2mm, and the portal should remain securely closed without play.

#### **NOTICE**

The locking forces can be adjusted by replacing the washers on the rotary latch axis.

### 5.2.4 Securing and Sealing the Portal

Follow these general guidelines to secure the frame:

- The optional installation kit for the AquaLOCK® Portal includes fasteners for concrete walls and concrete floors. Use appropriate fastening systems for other wall materials. If in doubt, contact the manufacturer.
- When drilling, ensure compliance with the required spacing according to the manufacturer's guidelines and standards.
- Only use adhesives and sealing materials that are suitable for the application. Follow the instructions on material compatibility and the processing guidelines from the material manufacturer. Suitable sealing materials are available as an option from the manufacturer of the AquaLOCK® Portal.
- The AquaLOCK® Portal is secured on all four sides with continuous mounting brackets. These are used to firmly connect the portal to the building structure. Minor gaps at the transitions from one mounting bracket to another at the corners are normal and unavoidable due to construction tolerances.
- All drilling holes provided on the supplied mounting bracket must be used to attach it with the respective screws to both the wall and the door frame.
- Burglar-resistant versions require particularly careful installation:
  - The walls must comply with at least the current applicable standards (DIN EN 1627).
  - The frame must be backfilled to ensure it is pressure-resistant.
  - It is essential to ensure that the air gaps are properly maintained, and secure fastening is observed.

## Securing the Portal

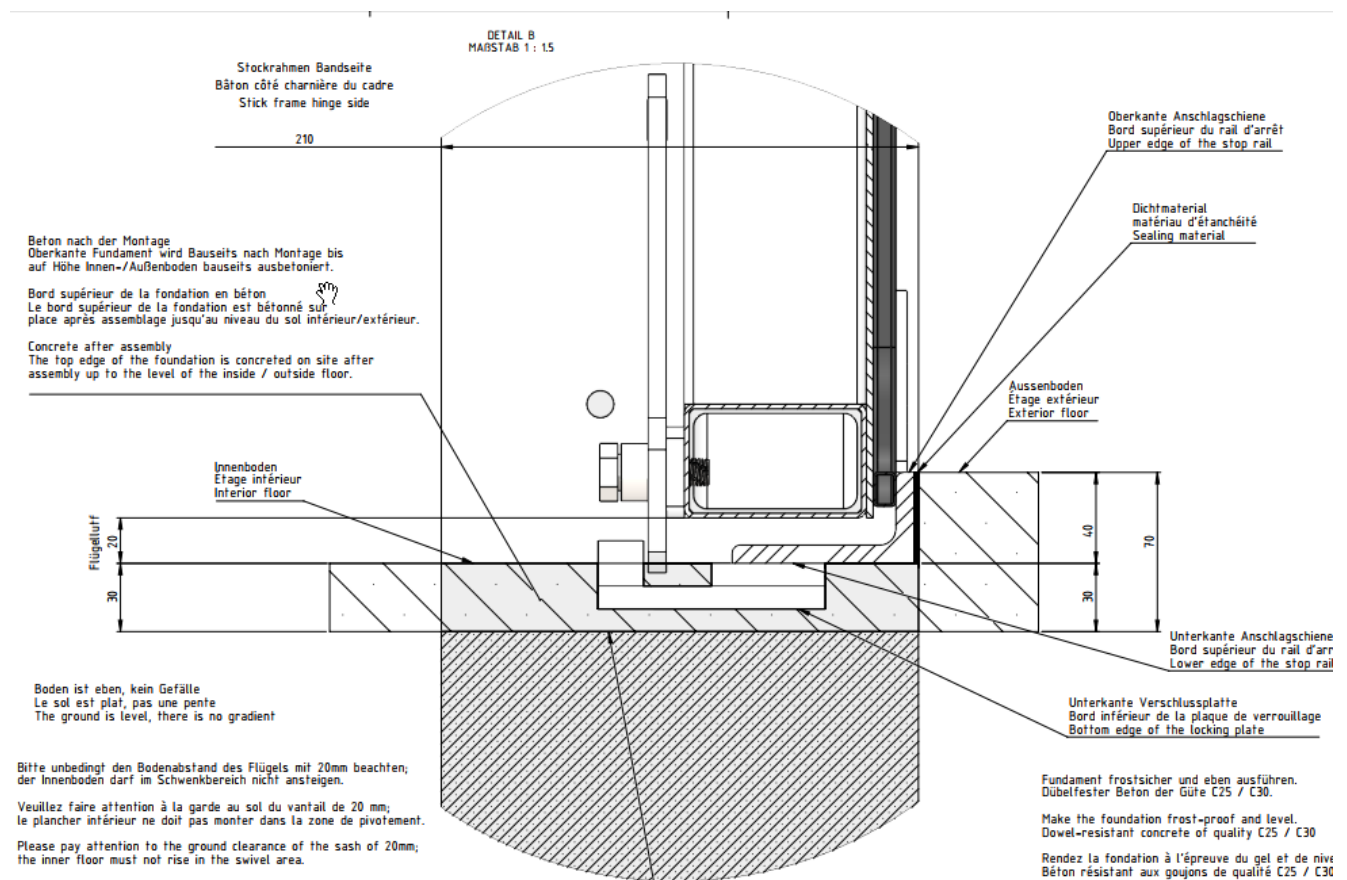
Proceed as follows to secure the portal:

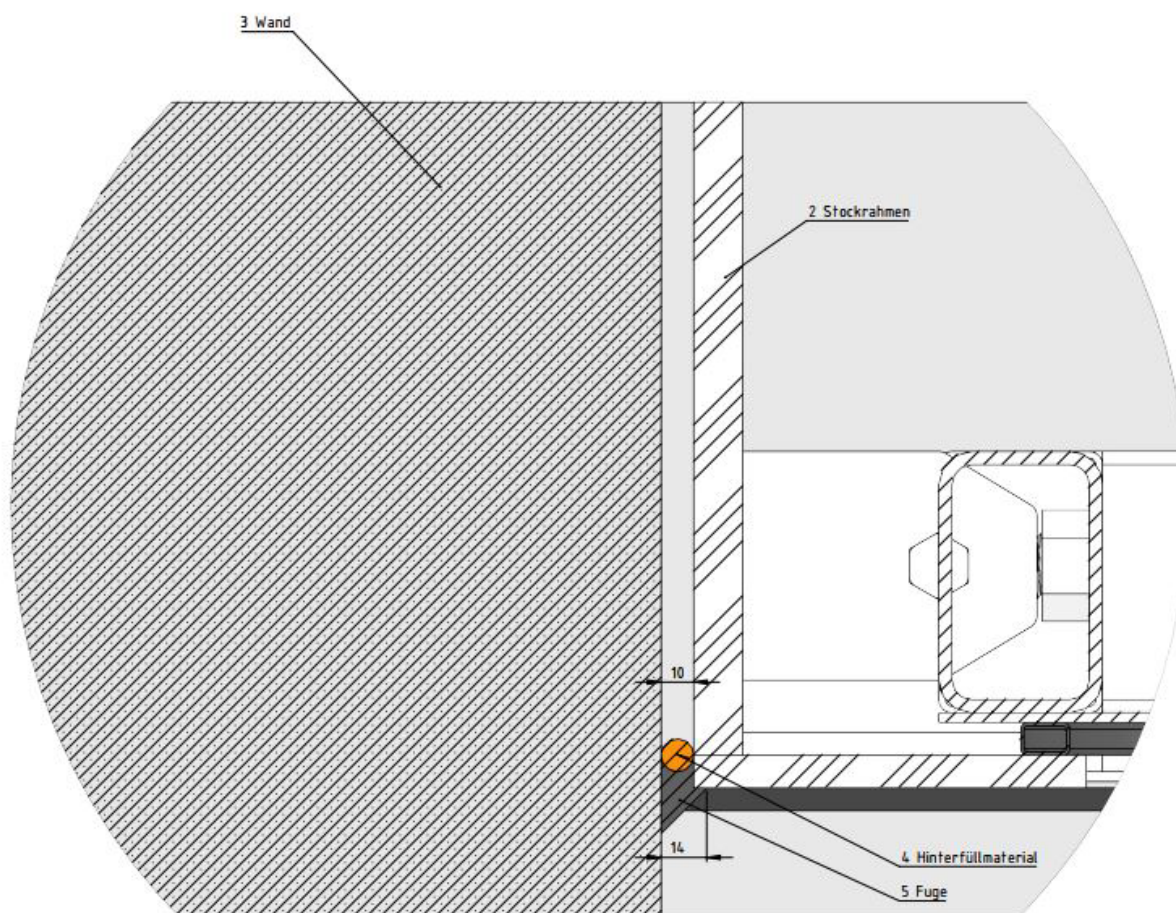
1. Close the internal locking bar.
2. Inspect the external view:
3. Check the gaps between the portal leaf and the fixed frame/threshold profile. The gaps must be evenly aligned throughout.
4.
  - Check again that the portal is evenly aligned within the wall opening.
  - Secure the portal using installation supports (for installation on the inside of the wall) or additionally with wooden wedges (for installation inside the wall opening).
5. Begin with the side where the hinge system is located. Align this side with the spirit level.
6. Drill the holes in the wall to secure the frame mounting bracket to the wall.
7. Attach the frame to the wall using the fastening material suitable for the wall material.
8. Repeat the process for the other frame and the threshold profile, following steps 5 and 6. Here, it is not essential for the frame to be perfectly vertical, but it is crucial that the sealing system fits precisely!

## Sealing

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

### Illustrion 4 : Sealing the bottom threshold by embedding in concrete.



**Illustration 4a : Sealing the side jamb frames.**

- 2. Jamb frames
- 3. Wall
- 4. Back Fill material
- 5. joint

**NOTICE**

The joint width should correspond to the joint depth.

Follow these steps to create the sealing joint:

1. Press the supplied backer rod into the gap between the AquaLOCK® Portal jamb frame and the wall, so that the front edge is approximately 5 mm to 8 mm deep.
2. To create a straight joint edge, apply masking tape about 6–8 mm away from the jamb frame onto the walls.
3. Also apply masking tape to the jamb frame.
4. If the wall surface (plaster, concrete, etc.) is sandy or porous: Apply a primer (not included in the standard delivery, available as an option from the manufacturer).
5. Now apply the sealing adhesive and form the joint with a size of approximately 6 mm using a smoothing tool.
6. Complete the joint and remove the masking tape.
7. Allow the joint to cure. The curing time for the sealing adhesive is approximately 24 hours at 20°C. During this time, the joint must not be stressed.

Once completed, create the sealing joint at the threshold profile (strike rail) by following these steps:

#### Sealing with Expanding Grout or Epoxy Resin

1. Seal the threshold profile using an appropriate expanding grout or epoxy resin product.
2. Allow the joint to cure. Follow the manufacturer's instructions for curing time. During this period, the joint must not be stressed.
3. Ensure that the openings for the rotary latches are not sealed.

#### NOTICE

Sealing with expanding grout or epoxy resin is the best method for securely and permanently sealing the threshold profile and safely absorbing any forces that occur.

## 6 Operation

This section provides information on how to operate the AquaLOCK® Portal.

### 6.1 Opening and Closing the Portal

The AquaLOCK® Portal operates much like a conventional portal. Follow these steps:

1. Ensure that no people or objects can be trapped.
2. If applicable, unlock the optional lock using the appropriate key.
3. Open the rotary latches by turning them.
4. Open the portal by swinging the portal wing.
5. Close the portal in reverse order.

### 6.2 Establishing Flood Resistance

Follow these steps to establish the flood resistance of the AquaLOCK® Portal:

1. Ensure that no people or objects can be trapped.
2. Close the portal as described in section "6.1 Opening and Closing the Portal" on page 22.
3. Secure the rotary latches by turning them firmly into the locking slots.  
→ The flood resistance of the AquaLOCK® Portal is now established.

#### **NOTICE**

Please note that for versions of the AquaLOCK® Portal with optional panic locks, their function (opening the portal by pressing the door handle even when locked) is no longer available if the rotary latches are locked.

## 7 Maintenance and Servicing

This section provides information on the maintenance and servicing of the AquaLOCK® Portal.



### **WARNING**

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

Improper maintenance of the AquaLOCK® Portal may pose risks to people and property.

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

### 7.1 Cleaning and Care

Regular cleaning significantly extends the lifespan of the AquaLOCK® Portal. Please follow the cleaning and care instructions below:

- Use warm water and a mild detergent for cleaning.
- Wipe the surfaces of the door 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

### **NOTICE**

The wear of the aluminum rotary latches must be checked regularly to ensure consistent sealing.

### 7.2 Regular Maintenance Work

#### **Locking Elements**

The locking elements (rotary latches) should be lubricated every 3 months. You can use commercially available grease for this purpose. If malfunctions occur, contact trained personnel or the manufacturer.

#### **Hinges**

If necessary, you can lubricate the hinges. Use commercially available grease.

#### **Seals**

Maintain the seals with an appropriate care product designed for silicone seals.

### **Annual Expert Inspection**

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

## **7.3 Spare Parts and Accessories**

Only use original spare parts and accessories from the manufacturer. The manufacturer is not liable for any damage caused by third-party spare parts.



## 8 Disassembly and Disposal

This section provides information on the safe disassembly and disposal of the AquaLOCK® Portal. 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.
- Use only suitable and approved lifting equipment.
- Keep transport routes clear.

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 the disassembled components as follows:
  - Scrap metallic residual parts.
  - Send plastic parts for recycling.
  - Dispose of remaining components according to their material composition (e.g., electronic waste) and sort them by type as much as possible.





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