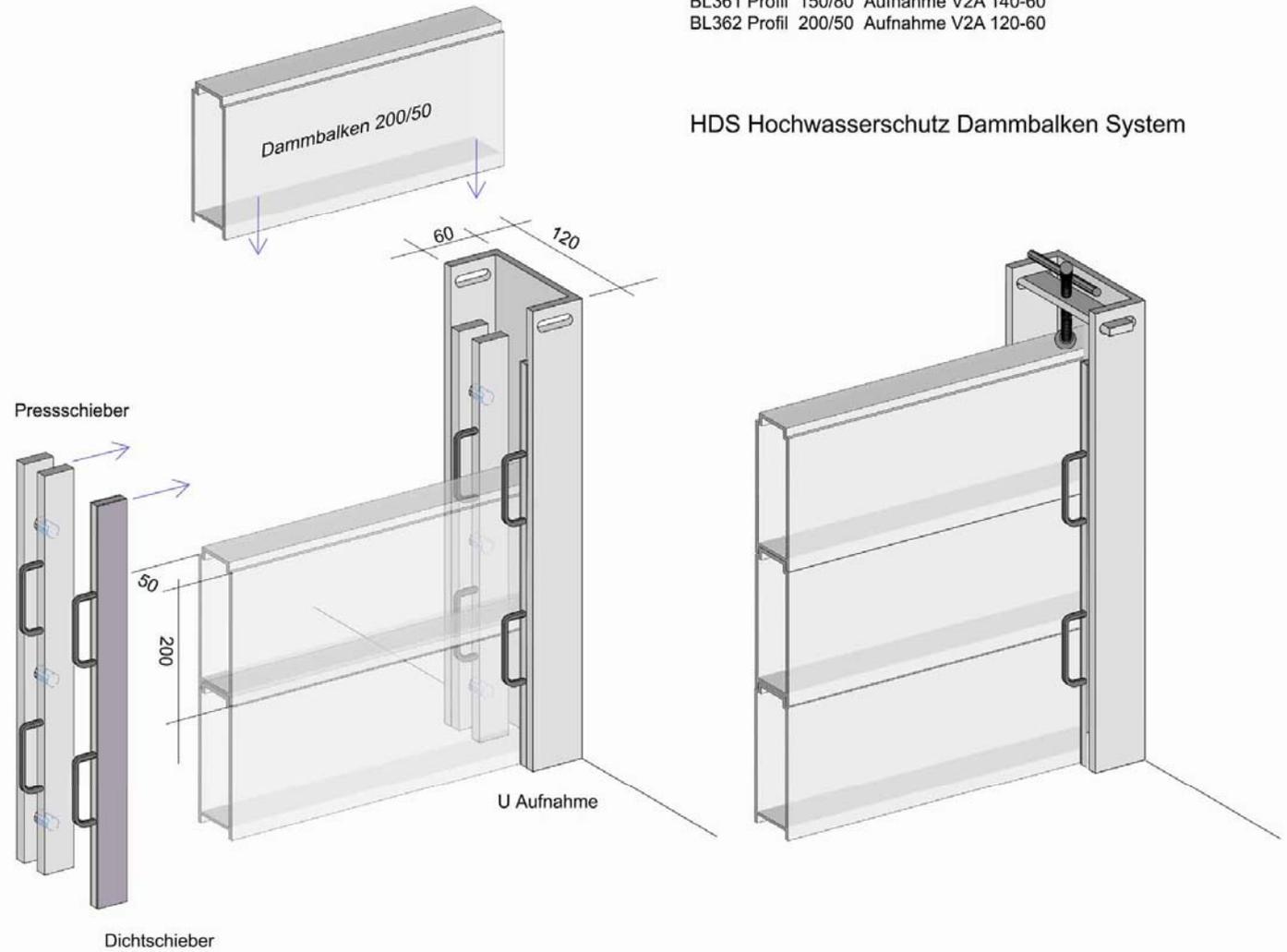


# HIGHWATER DEFENCE SYSTEM

BL360 Profil 150/50 Aufnahme V2A 120-60  
BL361 Profil 150/80 Aufnahme V2A 140-60  
BL362 Profil 200/50 Aufnahme V2A 120-60

HDS Hochwasserschutz Dammbalken System



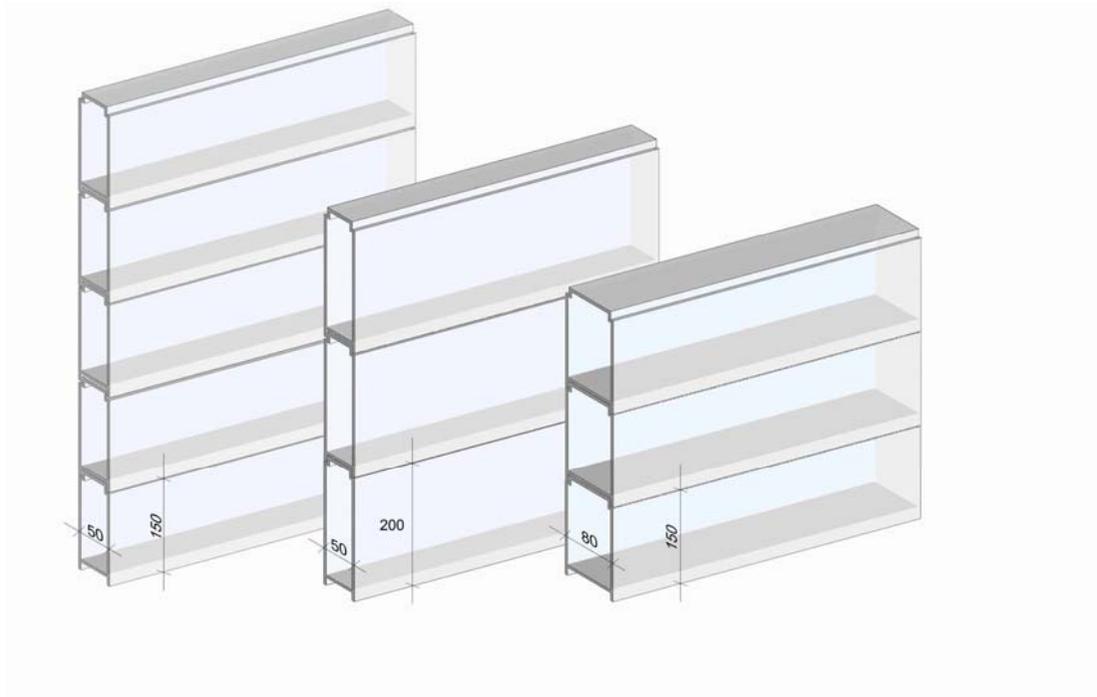
## HDS - HIGHWATER DEFENCE SYSTEM

### Overview

1. HDS 150/50	BL360	Page 3
2. HDS 150/80	BL361	Page 4
3. HDS 200/50	BL362	Page 5

### Details

4. Horizontal details	Page 6
5. Vertical details	Page 7



# 1. HDS 150/50

# BL 360

## Highwater Defence System

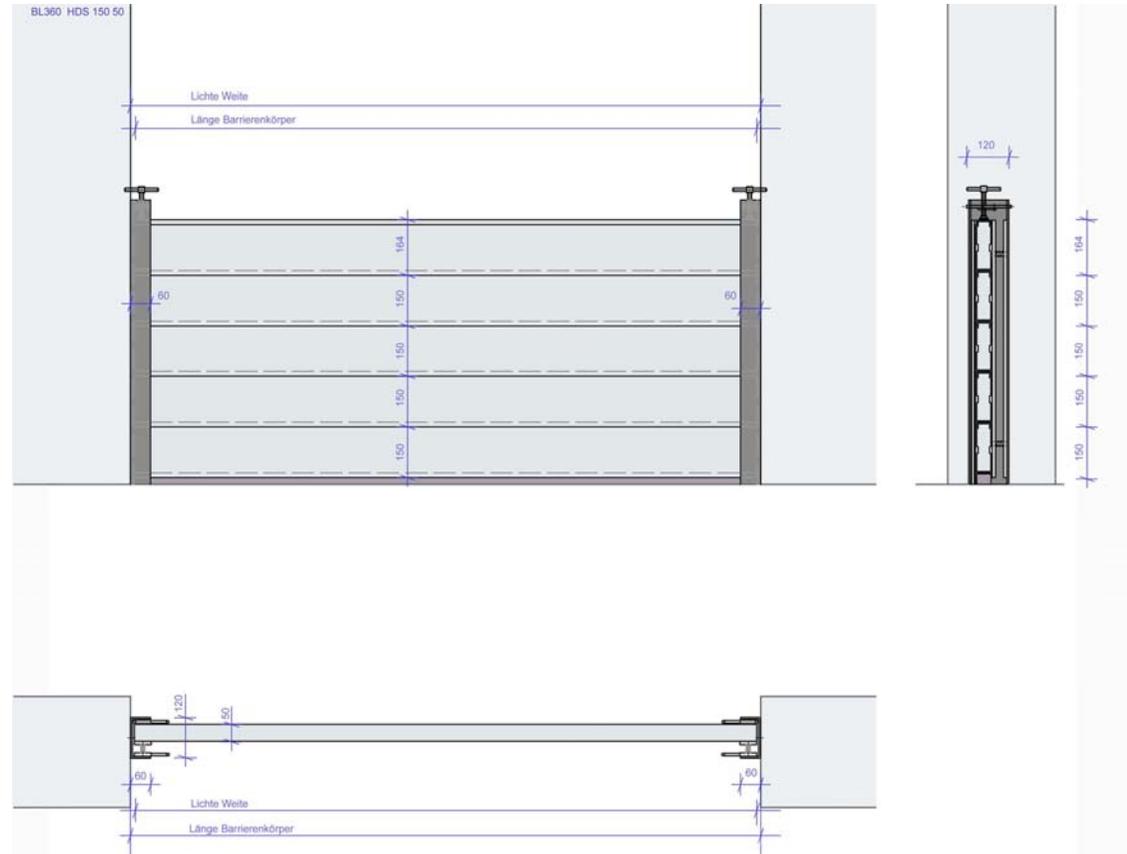
Aluminium Profile 150/50  
Stainless steel U-Post 120/60

The HDS Barrier System was developed for optimal integration within new and old facilities. During design, special attention was given to inconspicuousness and protection from vandalism.

In the base version, u-posts are made from stainless steel material (304). The u-posts can be bolted directly to the wall or recessed and contain no seals, pressure rails, nuts, bolts or any other fittings which may be tampered with. The light weight barrier panels are constructed from AlMgSi0,5 aluminium making them easy to use and ensuring fast implementation.

In order to seal the barrier panels against the u-posts, a unique sealing and pressure rail system has been developed. The system simply slides into the u-post and pressure is applied to fix the barrier panels against the sealing rail. The design of the system allows sealing in either direction depending on flood mitigation requirements.

The lowest barrier segment is fitted with a special, highly flexible and durable seal. Ground unevenness of up to 20mm can be accommodated with ease. System specific pressure screws are used to apply downward force and made from stainless steel. Remaining barrier panels are fitted with a seal based on EPDM.



<b>HDS 150/50</b>	
Installation within the opening (iL)	Barrier body length $LB_i = LW - 60\text{mm}$
Installation in front of the opening (aL)	Barrier body length $LB_a = LW + 100\text{mm}$

## 2. HDS 150/80

## BL 361

### Highwater Defence System

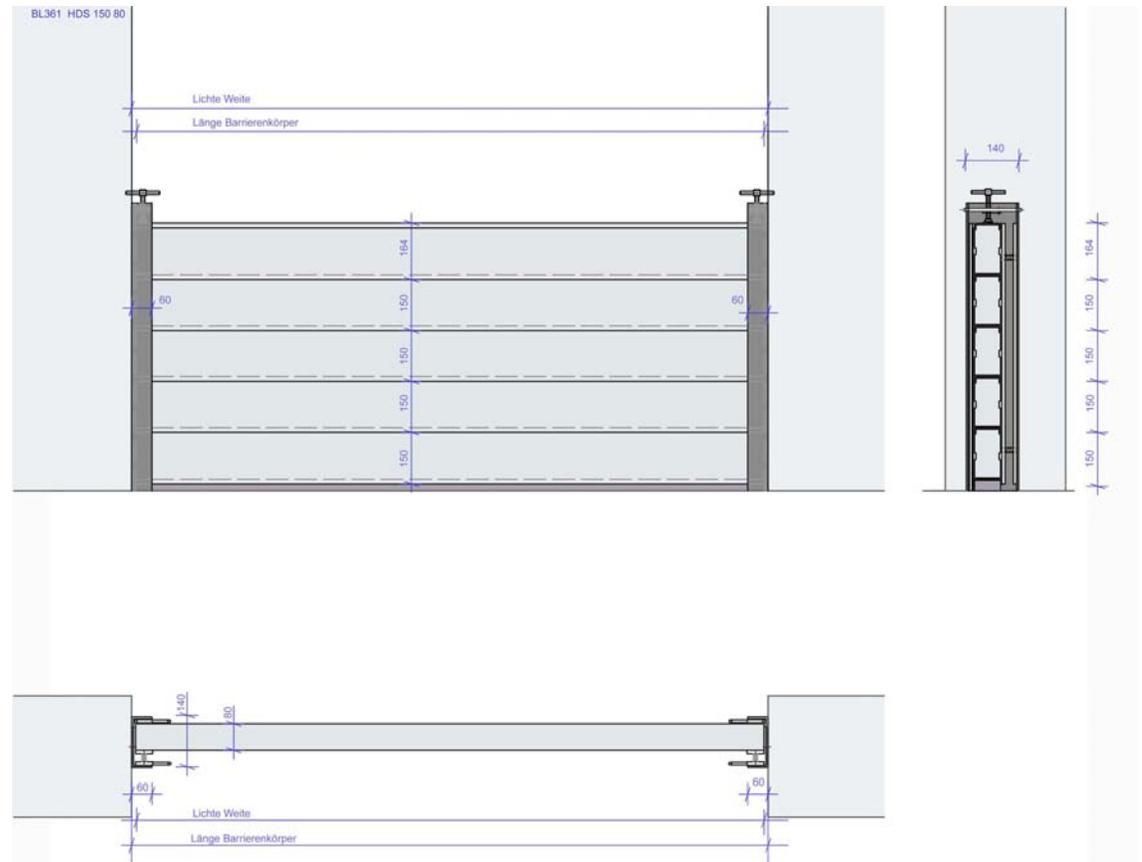
Aluminium Profile 150/80  
Stainless steel U-Post 140/60

The HDS Barrier System was developed for optimal integration within new and old facilities. During design, special attention was given to inconspicuousness and protection from vandalism.

In the base version, u-posts are made from stainless steel material (304). The u-posts can be bolted directly to the wall or recessed and contain no seals, pressure rails, nuts, bolts or any other fittings which may be tampered with. The light weight barrier panels are constructed from AlMgSi0,5 aluminium making them easy to use and ensuring fast implementation.

In order to seal the barrier panels against the u-posts, a unique sealing and pressure rail system has been developed. The system simply slides into the u-post and pressure is applied to fix the barrier panels against the sealing rail. The design of the system allows sealing in either direction depending on flood mitigation requirements.

The lowest barrier segment is fitted with a special, highly flexible and durable seal. Ground unevenness of up to 20mm can be accommodated with ease. System specific pressure screws are used to apply downward force and made from stainless steel. Remaining barrier panels are fitted with a seal based on EPDM.



HDS 150/80	
Installation within the opening (iL)	Barrier body length LBi = LW - 60mm
Installation in front of the opening (aL)	Barrier body length LBa = LW + 100mm

### 3. HDS 200/50

### BL 362

#### Highwater Defence System

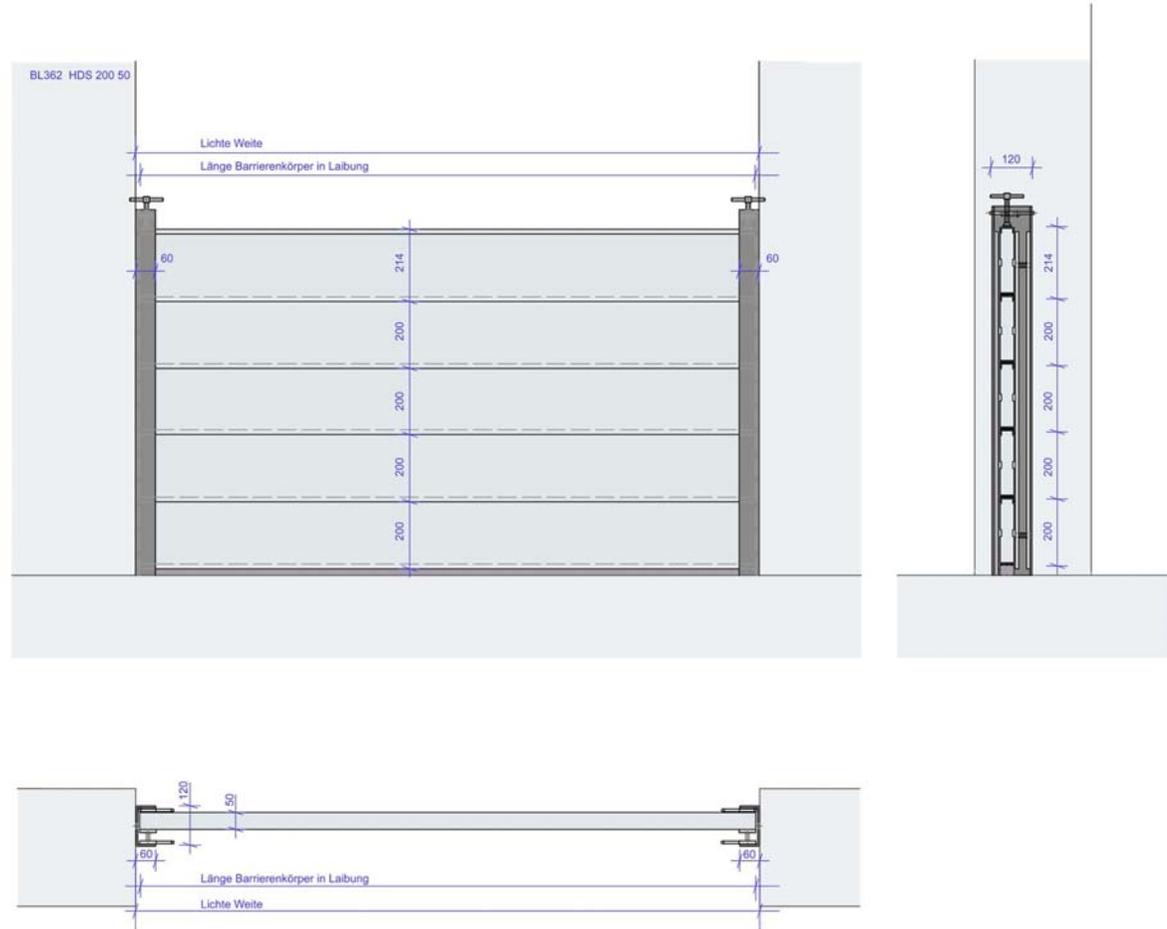
Aluminium Profile 200/50  
Stainless steel U-Post 120/60

The HDS Barrier System was developed for optimal integration within new and old facilities. During design, special attention was given to inconspicuousness and protection from vandalism.

In the base version, u-posts are made from stainless steel material (304). The u-posts can be bolted directly to the wall or recessed and contain no seals, pressure rails, nuts, bolts or any other fittings which may be tampered with. The light weight barrier panels are constructed from AlMgSi0,5 aluminium making them easy to use and ensuring fast implementation.

In order to seal the barrier panels against the u-posts, a unique sealing and pressure rail system has been developed. The system simply slides into the u-post and pressure is applied to fix the barrier panels against the sealing rail. The design of the system allows sealing in either direction depending on flood mitigation requirements.

The lowest barrier segment is fitted with a special, highly flexible and durable seal. Ground unevenness of up to 20mm can be accommodated with ease. System specific pressure screws are used to apply downward force and made from stainless steel. Remaining barrier panels are fitted with a seal based on EPDM.

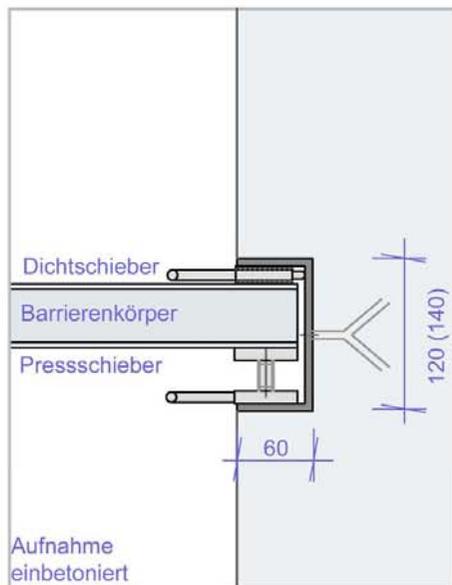


HDS 200/50	
Installation within the opening (iL)	Barrier body length $L_{Bi} = LW - 60\text{mm}$
Installation in front of the opening (aL)	Barrier body length $L_{Ba} = LW + 100\text{mm}$

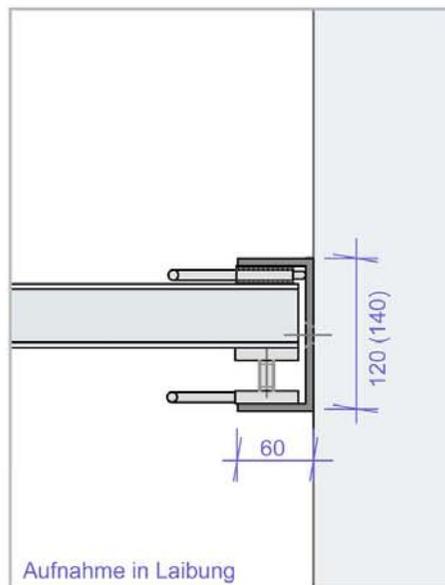
## 4. Horizontal details

Stainless steel U-post installation options:

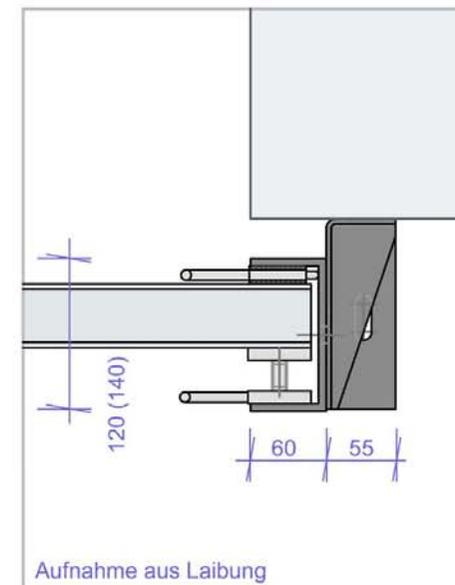
<p><b>1. Recessed</b> Inconspicuous and protected especially with a cover when recessed</p>	<p><b>2. Installation within the opening</b> U-posts are bolted directly onto the doorframe or wall</p>	<p><b>3. Installation in front of the opening</b> U-posts with wall mounting plates are bolted directly on the wall</p>
---	---	---



U-post recessed



U-post within the opening



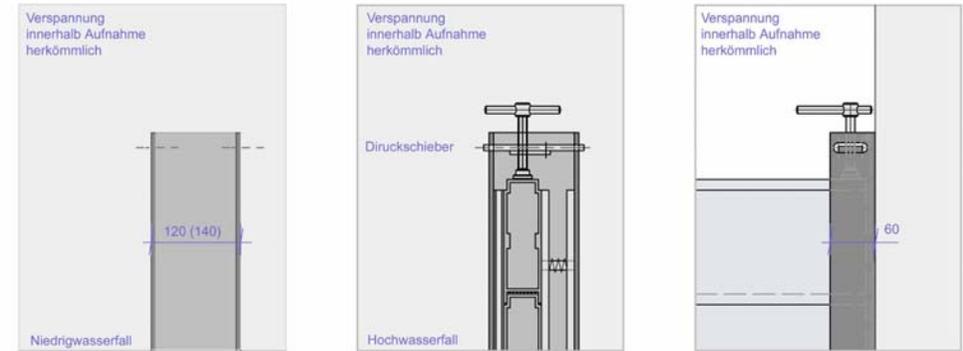
U-post in front the opening

## 5. Vertical details

Downward pressure screw options:

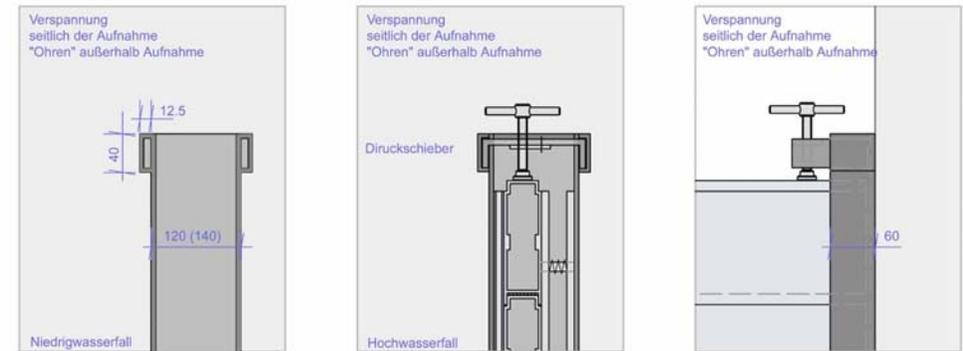
### 1. Tightening within the U-Post

The pressure screw slides into elongated hole



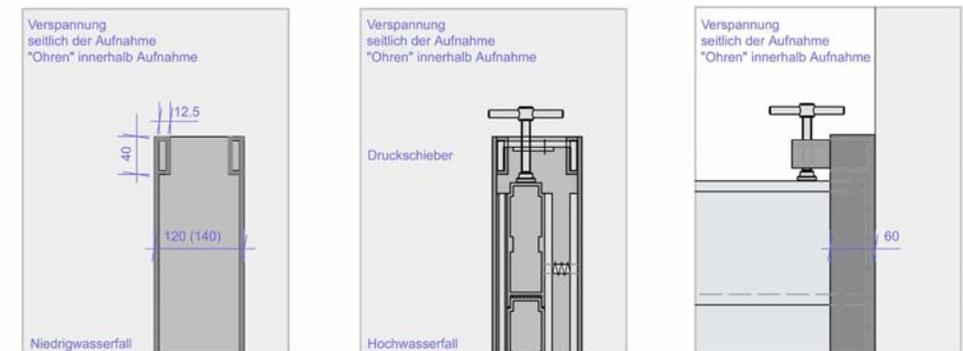
### 2. Outside on the U-Post surface

The pressure screw slides into “eyelets” allowing for tightening and applying downward force outside the u-post



### 3. Inside the U-Post - when recessed

The pressure screw slides into “eyelets” allowing for tightening and applying downward force within the u-post



## 6. Larger openings

### In a flood situation - closed

The overall length of a mobile aluminium profile may be restricted through:

1. A maximal extrusion length of = 6000mm
2. A maximal permissible deflection in relation to the profile length and retention height.
3. Restrictions on site, storage area, ease of use and distances to carry

#### Implementation of H-type centre posts:

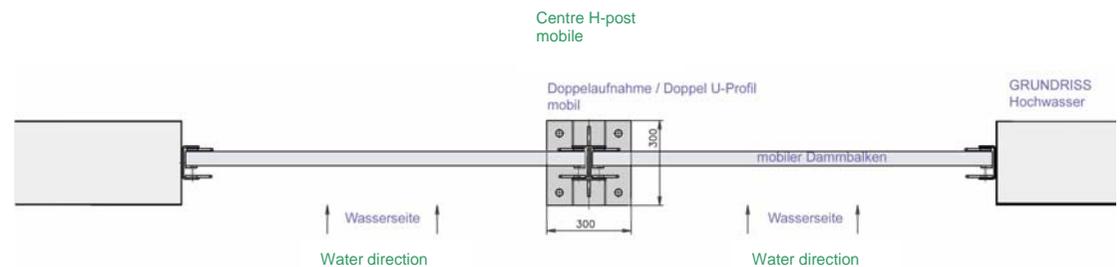
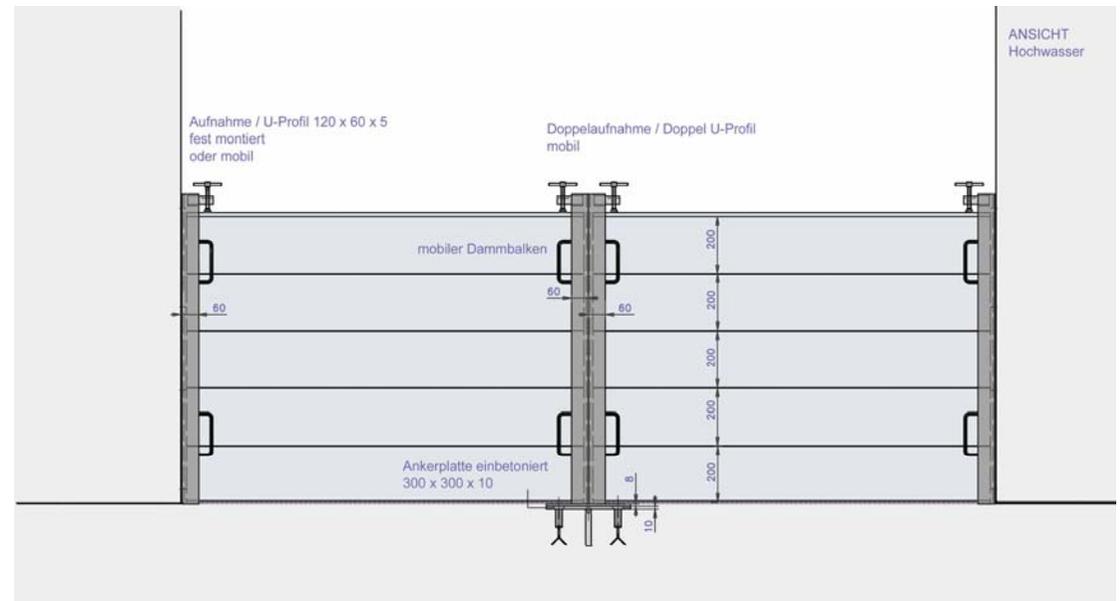
To seal larger openings and to cover longer distances, mobile and removable posts can be used.

The H-type posts are mounted on anchor plates, which are set in a concrete footing.

#### Anchor plates:

Depending on the opening width and distances to cover, steel or stainless steel anchor plates are set in a concrete footing. Preferably the anchor plates should be set in even distances. With M20 bolts the H-type posts are mounted on top.

The H-type post is comprised of two, back to back welded U-profiles and a 300mm x 300mm x 8mm foot.



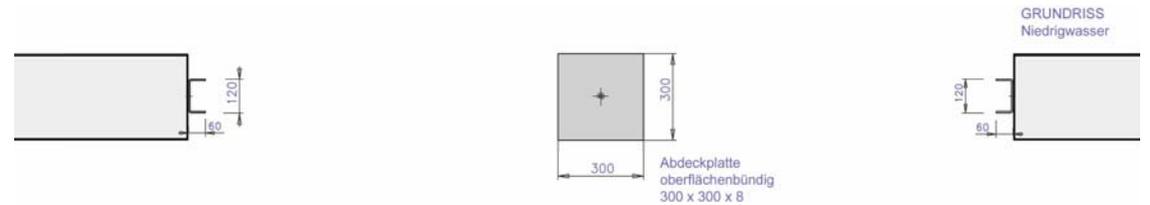
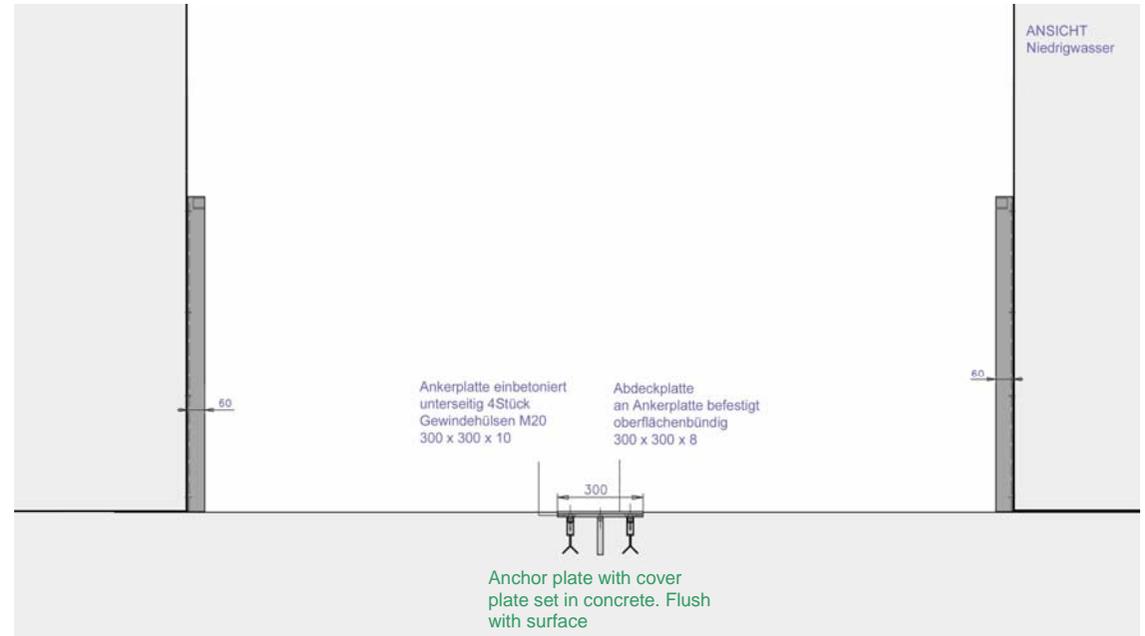
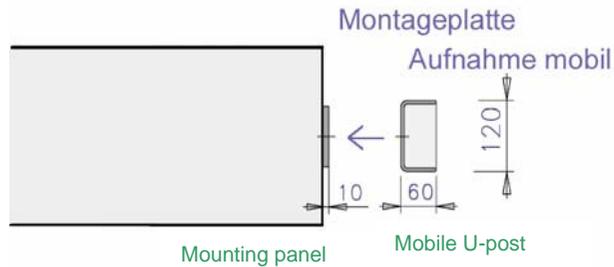
### Stand by

During stand by the anchor plate is fitted with a cover plate. The cover plate is made from corrugated sheet metal to avoid any slipping. To comply with OHS and to eliminate any trip hazard, the unit is flush with the surface.

### Mobile corner posts

If recessed posts are not desired or not possible due to the facility design, mobile corner posts can be provided.

A 10mm thick mounting panel is fitted on the concrete or brick wall. The U-post is simply mounted on the panel.



## 7. General setup instructions

The following instructions are based on permanent installed corner posts. Systems specific setup instructions are provided with each HDS Flood Barrier System supplied.

### Setup - closing

- If available, mount centre H-type post with 4 M20x50 bolts on the anchor plate
- Implement lowest flood barrier panel between the U-posts (= Panel with the largest seal)
- Slide in pressure rail (opposite the water side)
- Depending on retention height, implement remaining barrier panels – simply stack on top of each other
- Slide in pressure rail
- Apply downward pressure screws in U-posts – pressure screws slide into eyelets
- Compress lowest barrier seal to about 10-20%
- Extend pressure rail to compress seal in U-posts – pressure rail is fitted with screws and expands

### Opening - demount

- Loosen downward pressure from vertical pressure screw
- Loosen screws at pressure rail
- Remove pressure rail from U-post
- Remove sealing rail from U-Post
- Remove all barrier panels
- Dismount relevant H-posts and apply cover plates
- If necessary clean and hose down post and flood barrier panels
- Store for easy access

Notes:

*Europe*

***Blobel Umwelttechnik GmbH***

Ziegeleistraße 5  
86368 Gersthofen, Germany

Telephone: +49 (0)821 498190-0  
Telefax: +49 (0)821 498190-30

email: [info@blobel.de](mailto:info@blobel.de)  
Web: [www.blobel.de](http://www.blobel.de)

*North America / Canada*

***BLOBEL Environmental Engineering LLC***

270 Presidential Drive  
Wilmington, Delaware 19807, USA

Telephone: +1 302-353-1555  
Telefax: +1 302-288-3753

email: [info@blobel.us](mailto:info@blobel.us)  
Web: [www.blobel.com](http://www.blobel.com)

*Asia / Pacific / South America*

***Blobel Environmental Engineering***

6/41 Belgrave Street  
Sydney NSW 2024, Australia

Telephone: +61 (0)2/93 69 35 04  
Mobile: +61 (0) 4 19 27 94 81

email: [mail@blobel.com](mailto:mail@blobel.com)  
Web: [www.blobel.com](http://www.blobel.com)