

# System tk 150

Aluminum flood protection system



thyssenkrupp

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## Flood protection: Urgent need for action.

People have settled near rivers and coasts for thousands of years. Over the past few centuries river courses have been straightened and constricted, flood plains reclaimed and built on, and forests cut down. The consequences of these human interventions are climate change and an increasing number of environmental disasters. Floods, formerly once-in-a-century events, are occurring more and more frequently.

Experts are agreed that urgent action is needed: flood damage already tops the European loss statistics. Some of the losses are foreseeable and can be prevented by flood protection measures matched to local requirements. Flood protection and prevention are therefore among the most urgent tasks facing the local communities concerned.

## End-to-end competence.

thyssenkrupp Infrastructure is a world-renowned supplier of flood protection equipment. We offer a broad spectrum of high-quality products and diverse technical services in hydraulic engineering and water management.

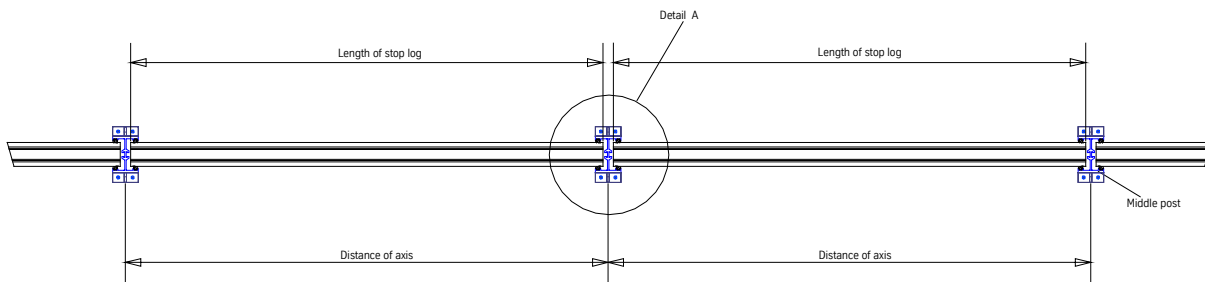
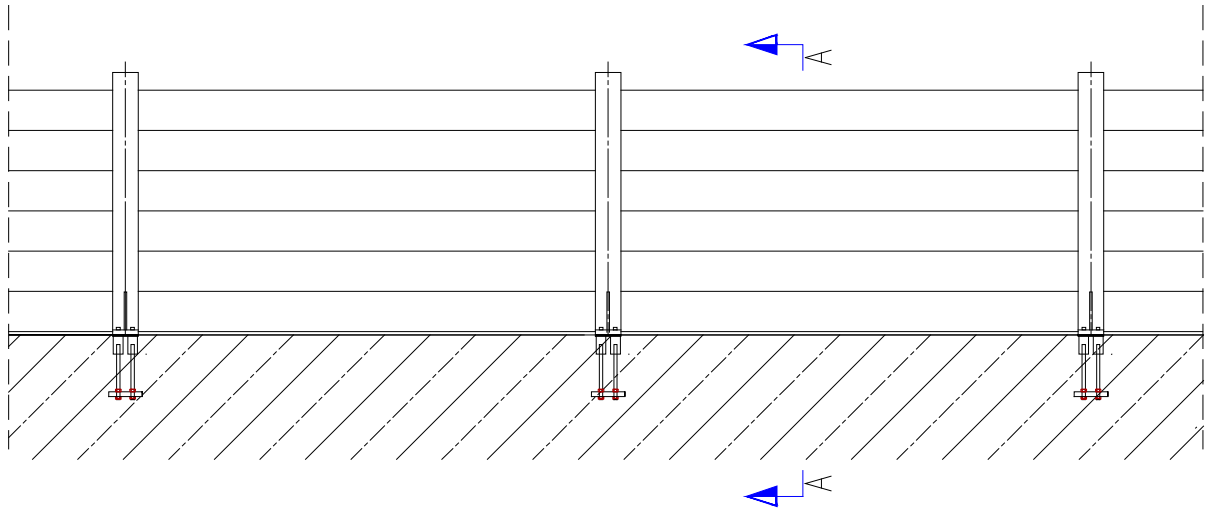
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## Technical handbook for mobile flood protection system tk 150

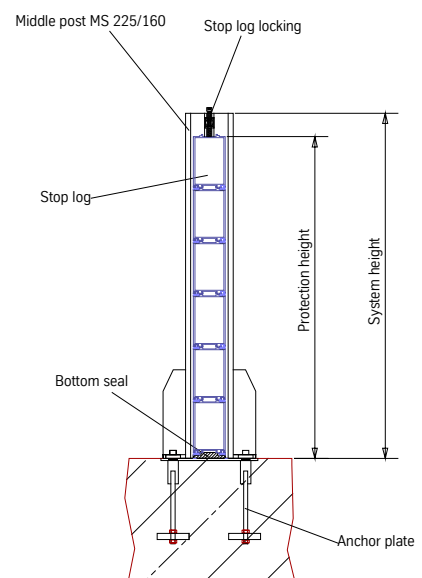
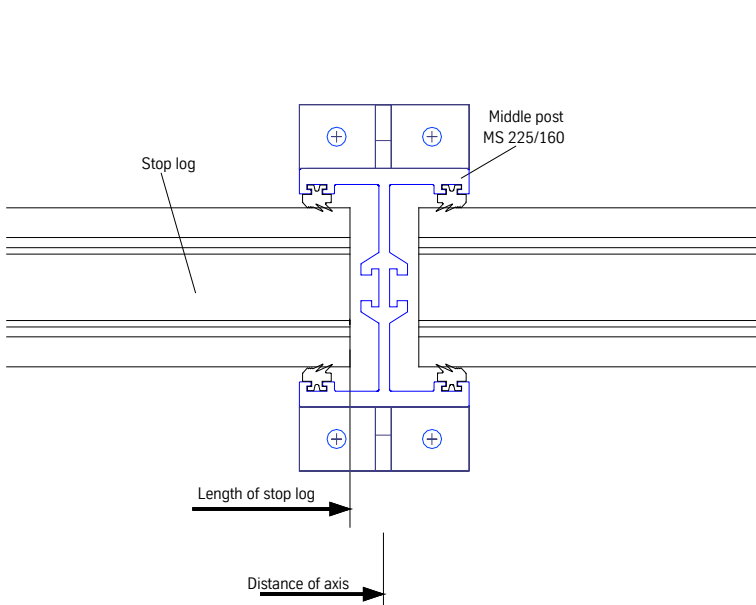
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## Flood protection wall

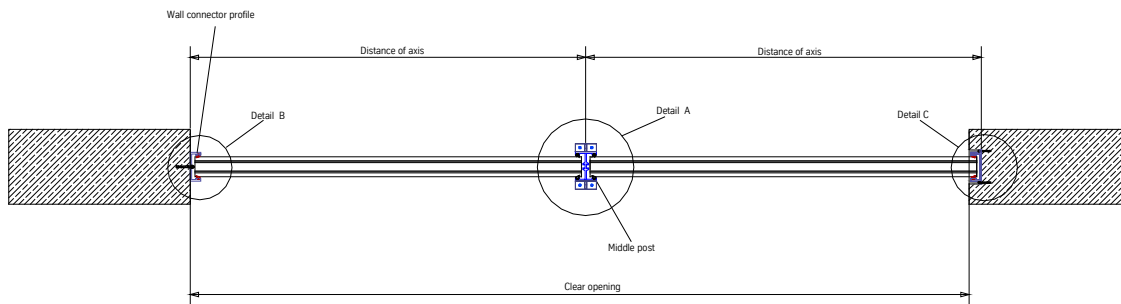
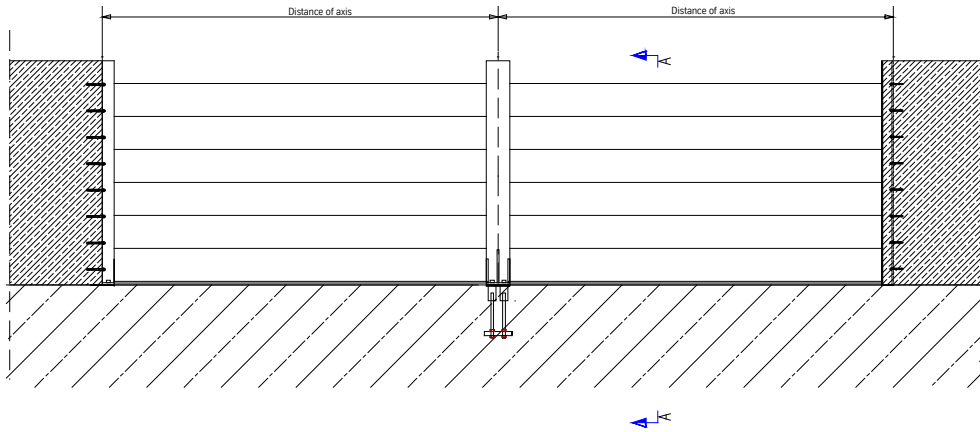


Detail A

Section A-A



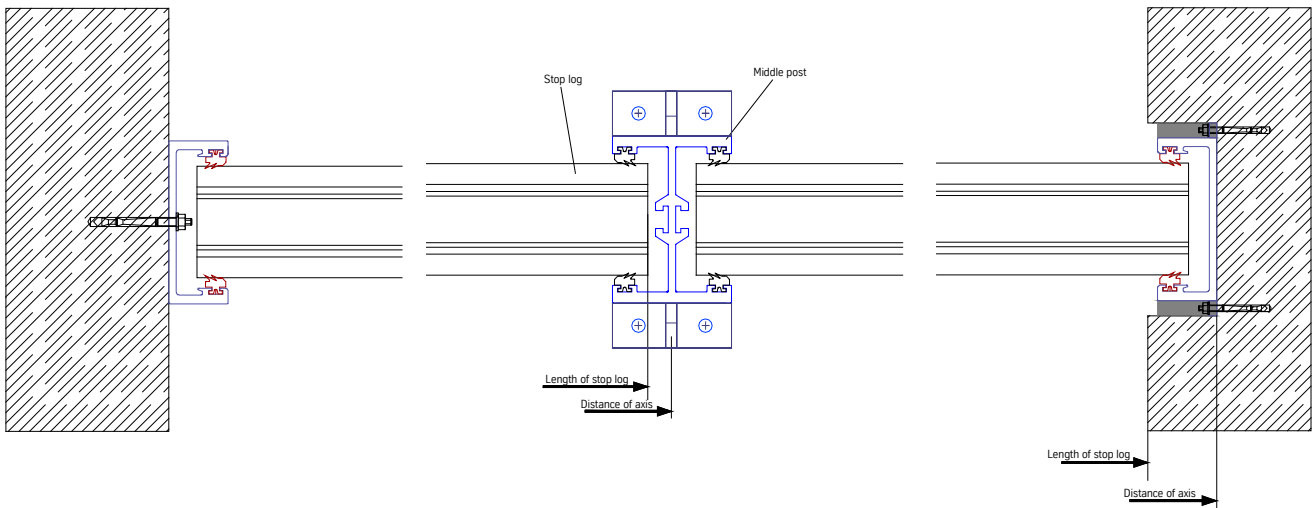
## Flood protection wall



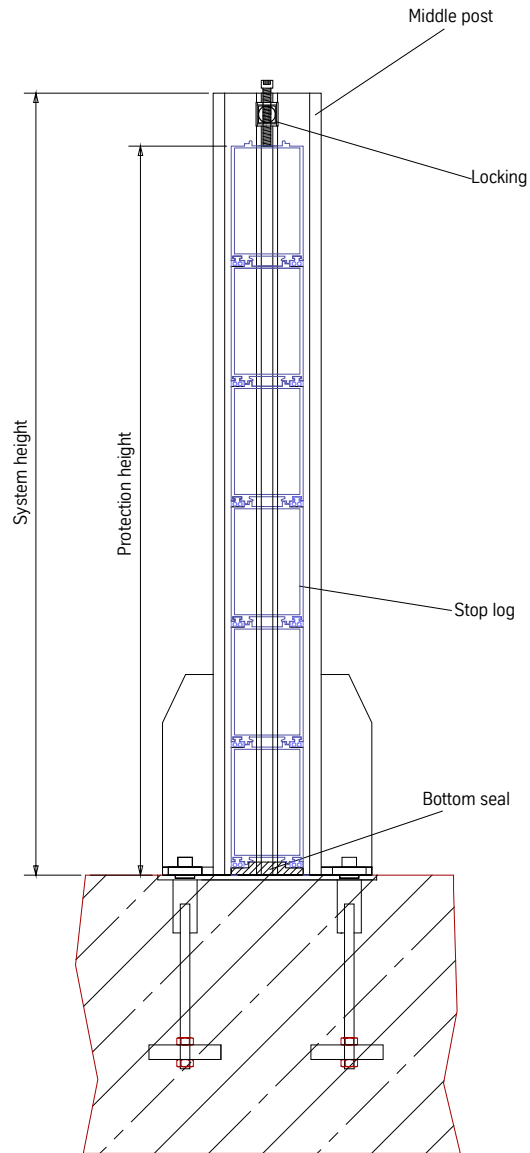
Detail B

Detail A

Detail C

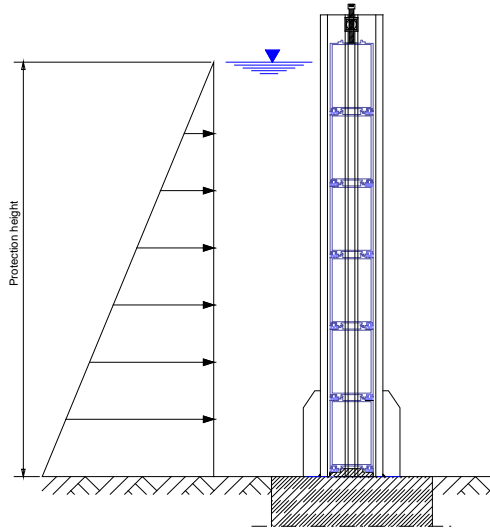


### Cross section A-A



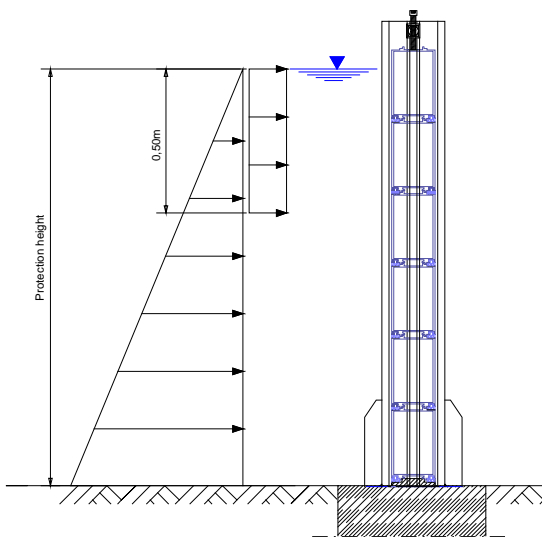
## Two load cases

### Load case 1: water pressure



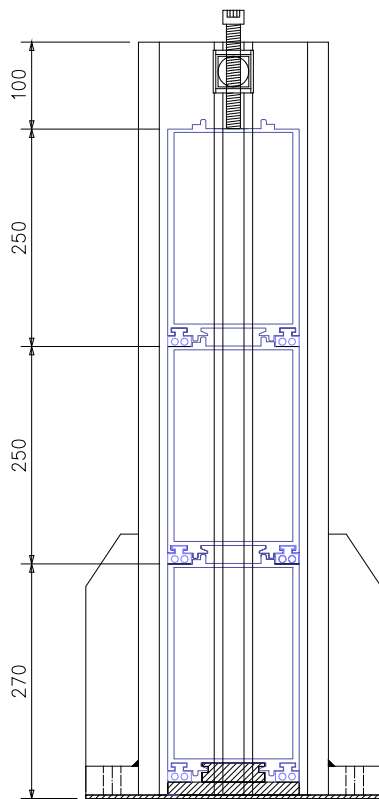
Re 1)  
Hydrostatic water pressure  
with a weight density of  $10 \text{ kN/m}^3$   
and a safety factor of 1.35.

### Load case 2: water pressure and impact



Re 2)  
In addition to the hydrostatic water  
pressure an impact load of 20 kN  
on an area of 50 cm x 50 cm is taken into account.

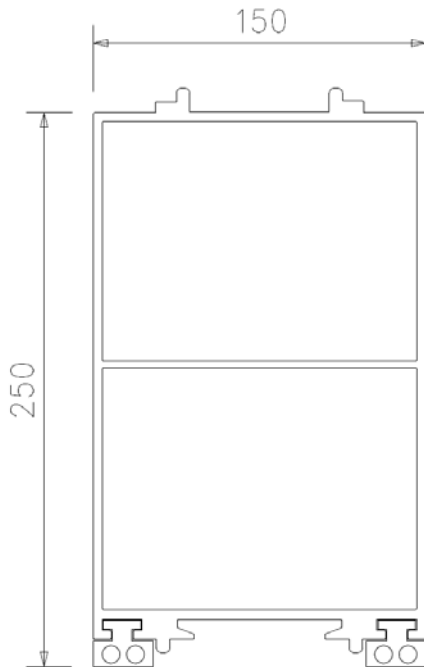
Further loads such as flow pressure, wave impact, ice impact,  
vehicle impact and load of people are not taken into account.



### System 250x150

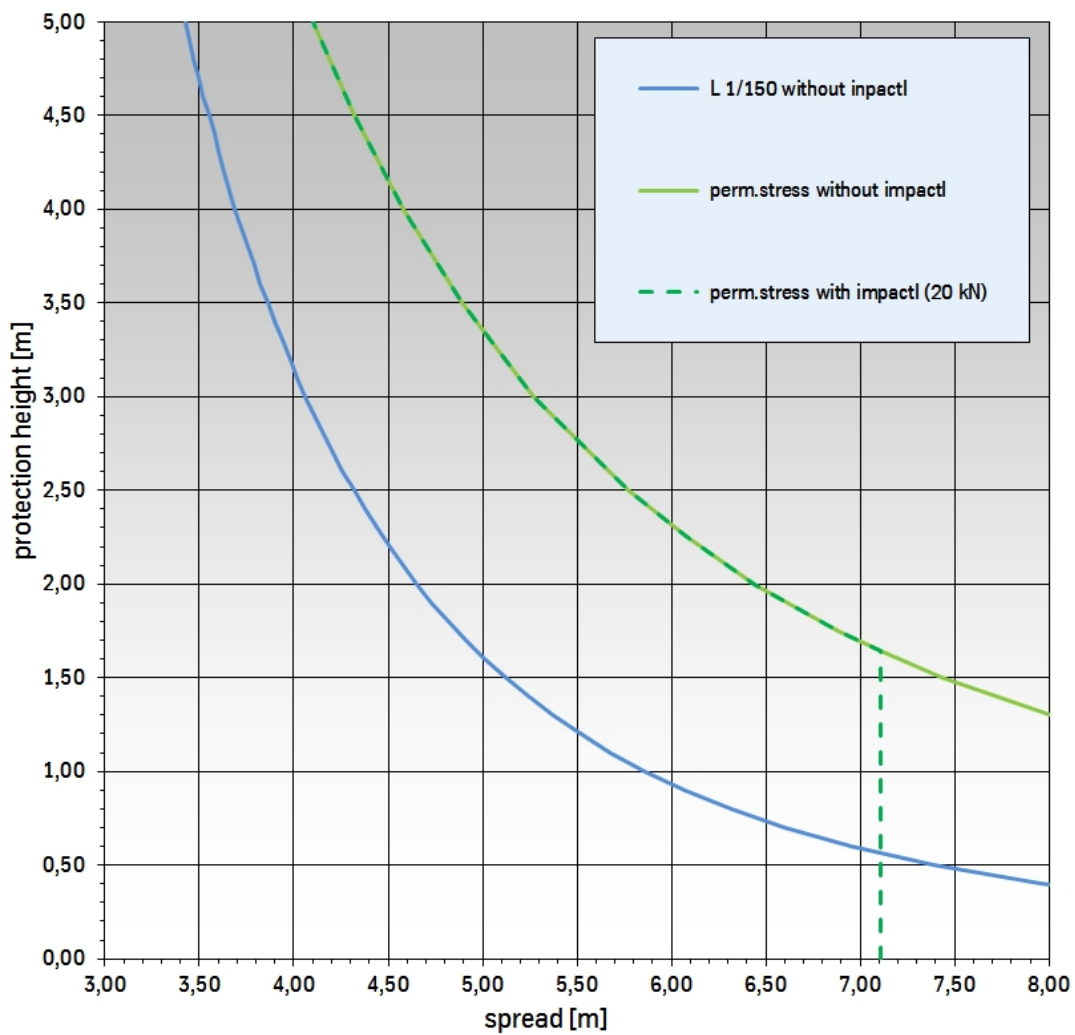
Stop log numbers	Protection height mm	Post height mm
1	270	370
2	520	620
3	770	870
4	1.020	1.120
5	1.270	1.370
6	1.520	1.620
7	1.770	1.870
8	2.020	2.120
9	2.270	2.370
10	2.520	2.620

## Aluminum stop log DB 250 x 150



### Technical data

Moment of inertia	I	1.410 cm <sup>4</sup>
Section modulus	W	188 cm <sup>3</sup>
Cross sectional area	A	42.20 cm <sup>2</sup>
Weight		11.4 kg/m
Material		EN AW-6063 [AlMg0.7Si] T66



## Post MS 225 x 160

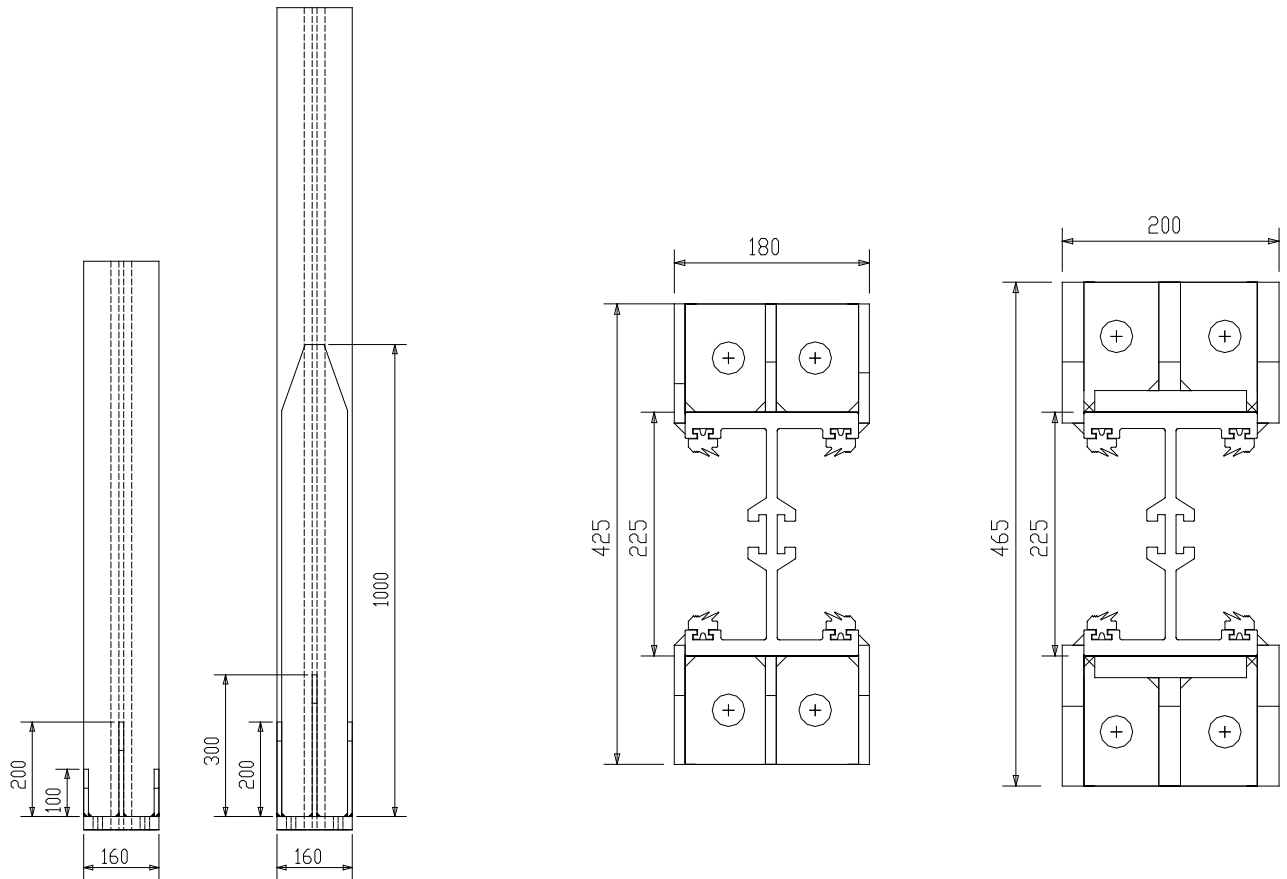
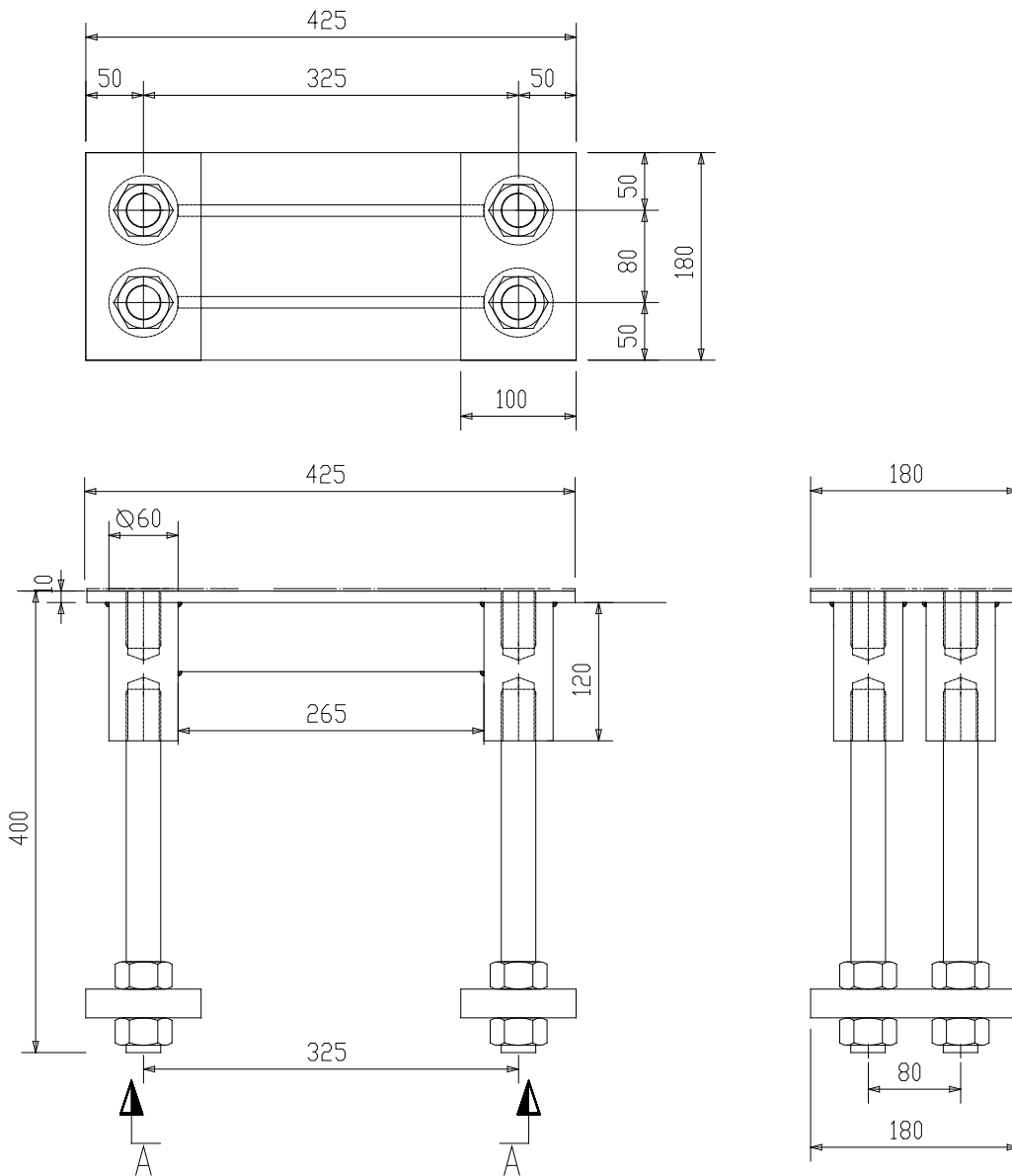


Table				Technical data		
	Height (mm)	max. width (mm)	Weight (kg)	Anchor plate		
MS 225x160 S	1.000	8.000	29.0	425x180	Moment of inertia I	1.253 cm <sup>4</sup>
	1.250	7.000	34.6		Section modulus W	573 cm <sup>3</sup>
	1.500	6.000	40.1		Cross sectional area A	81.93 cm <sup>2</sup>
	1.750	5.000	45.6		Weight	22.10 kg/m
	2.000	4.000	51.1		Material	EN AW-6082 [AlMgSi1] T6
	2.250	3.500	56.7			
	2.500	3.000	62.2			
	2.750	2.750	67.7			
MS 225x160 L	3.000	2.500	73.2	465x200		
	3.250	2.250	100.9			
	3.500	2.000	106.5			
	3.750	1.750	112.0			
	4.000	1.500	117.5			



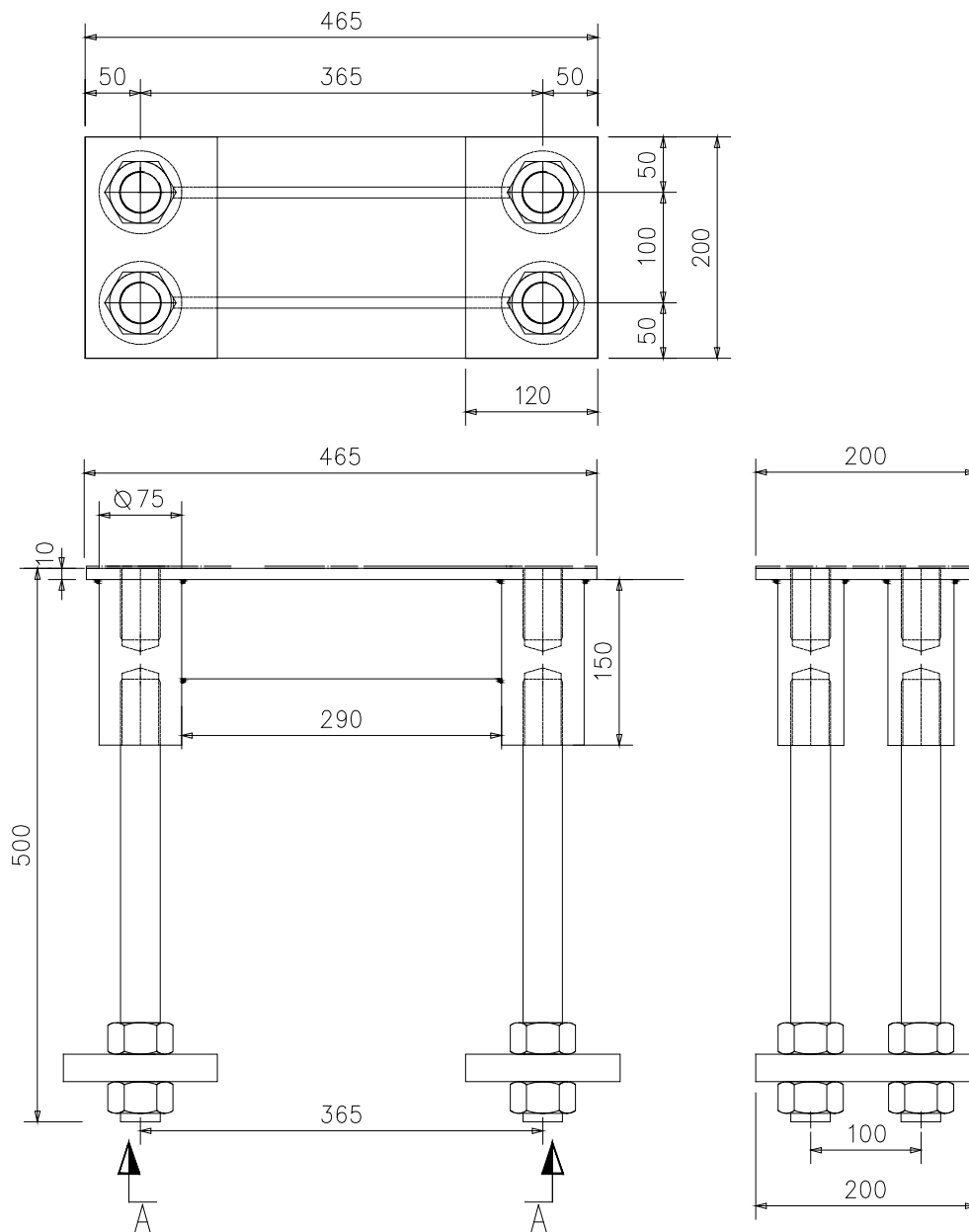
# Anchor plate: AP150 T1

Steel grades		
Stainless steel	1.4301	Top plate and sleeves
Steel	S 355	Retaining plates
Steel	8.8	Threaded rod and nut



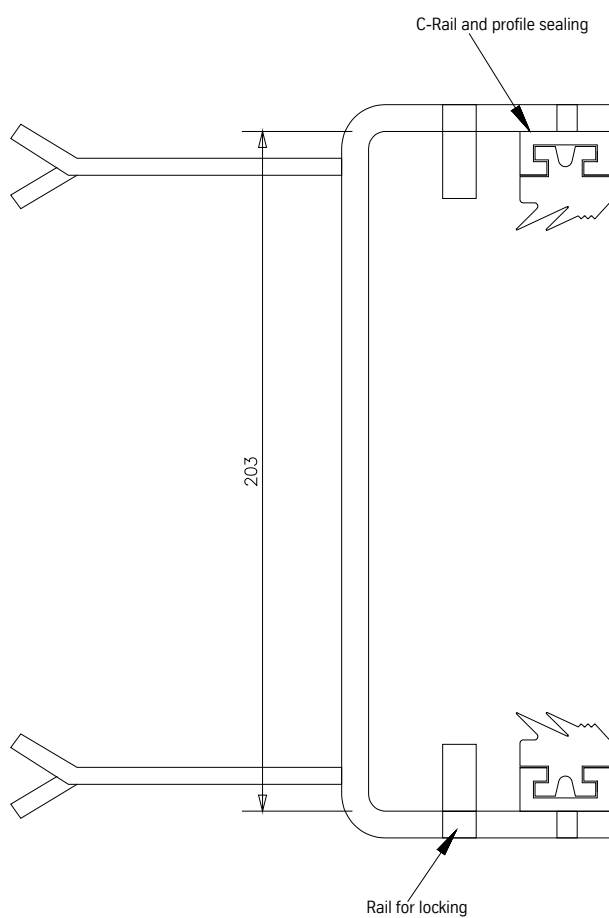
## Anchor plate: AP150 T2

Steel grades		
Stainless steel	1.4301	Top plate and sleeves
Steel	S 355	Retaining plates
Steel	8.8	Threaded rod and nut



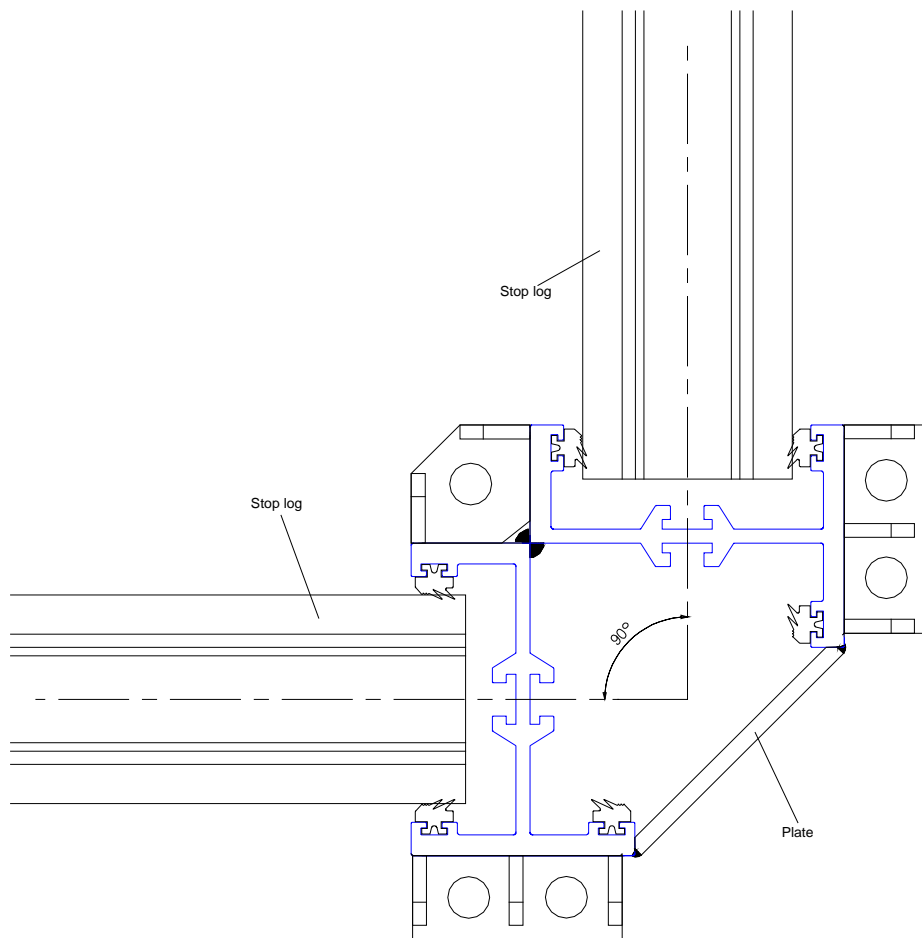
## Wall connection – post

(connection with concrete anchor)

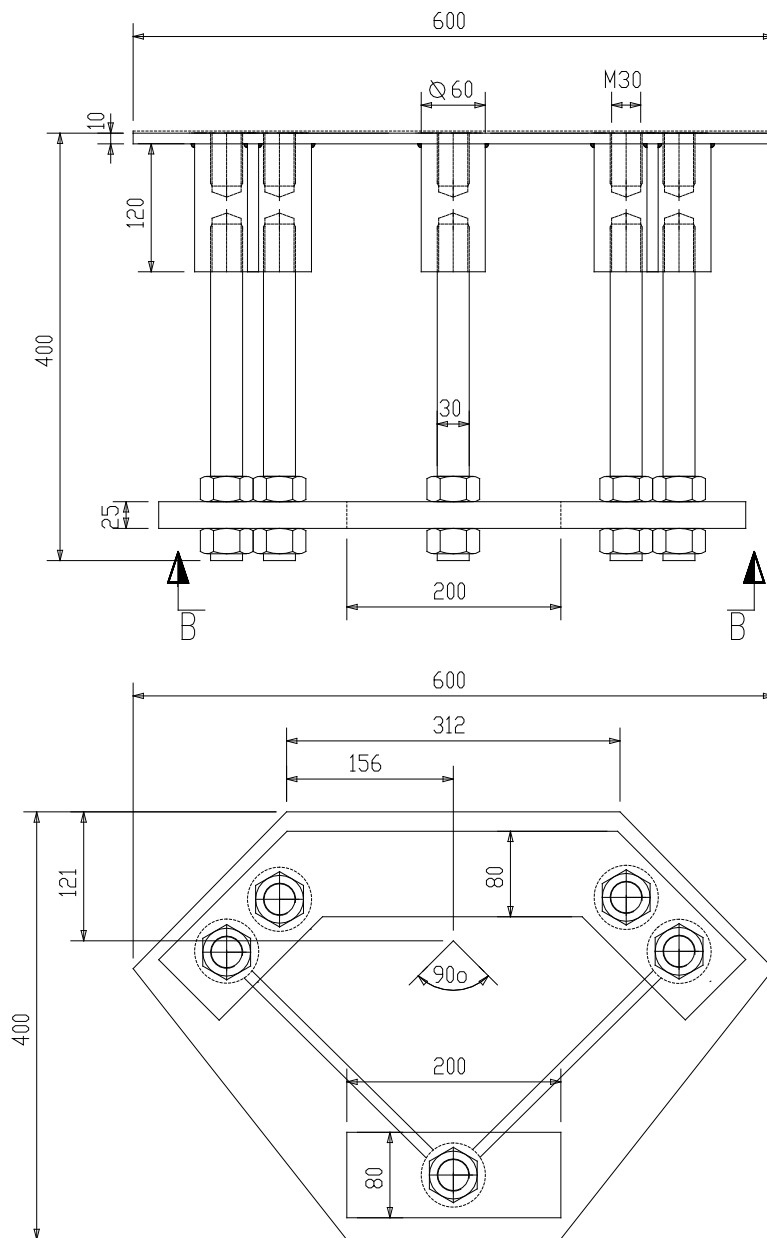


Material: stainless steel 1.4301

## Corner post 90° with post MS 225/160



Anchor plate: 90° post

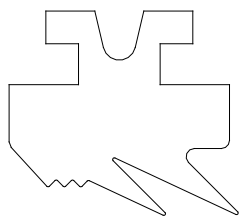


## Sealing systems

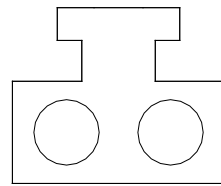
### Base seal



### Post seal

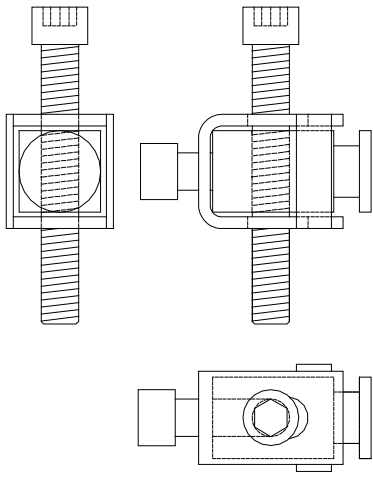


### Stop log seal

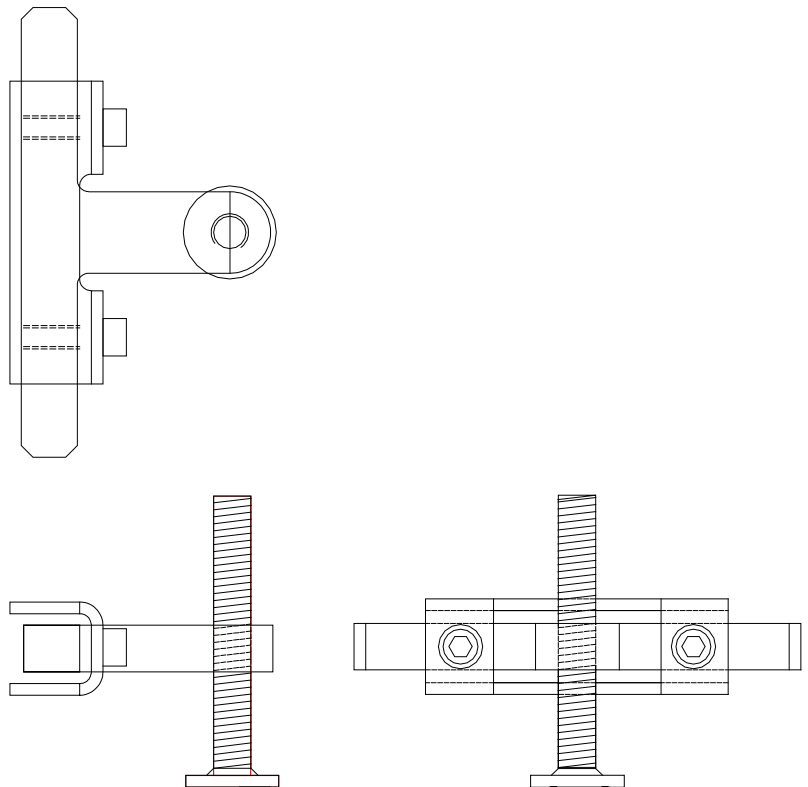


## Locking system

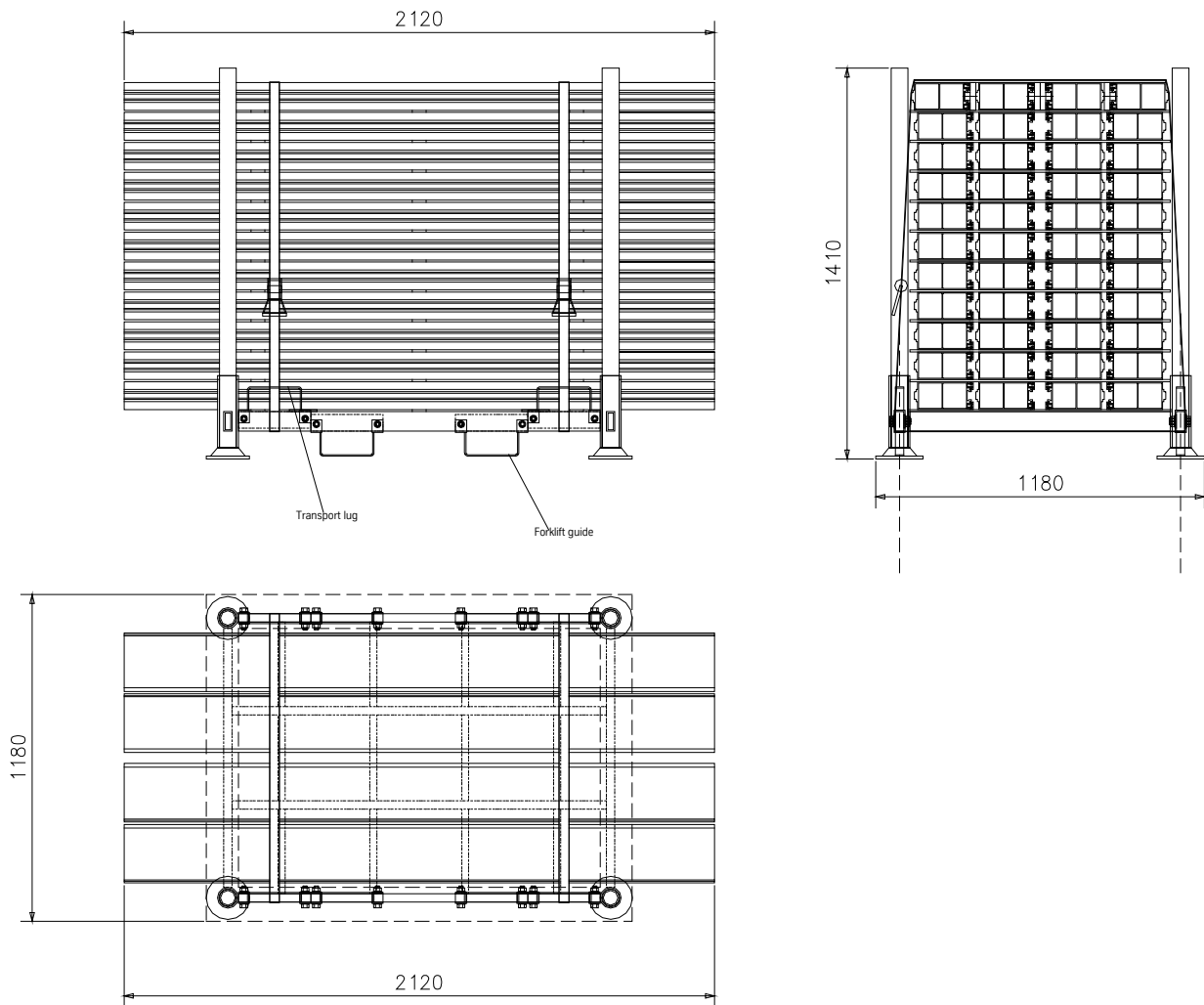
Lock for post



Lock for wall connection



## Storage systems



Prevent part contact using plastic profiles.

Secure parts in pallet with lashing straps.



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