

Product Catalogue

HW-B100L

HW-W100L

HW-W100LU



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1 Coverage and Terminology

1.1 Design Standards

DIN 19704-1: 2012-05 Hydraulic steel structures Part 1: Criteria for design and calculation

DIN EN 1990: 2010-12 Eurocode: Basis of structural design

DIN EN 1991-1-1: 2010-12 Eurocode 1: Actions on structures Part 1-1: General actions – Densities, self-weight, imposed loads for buildings

DIN EN 1993-1-1: 2010-12 Eurocode 3: Design of steel structures Part 1-1: General rules and rules for buildings

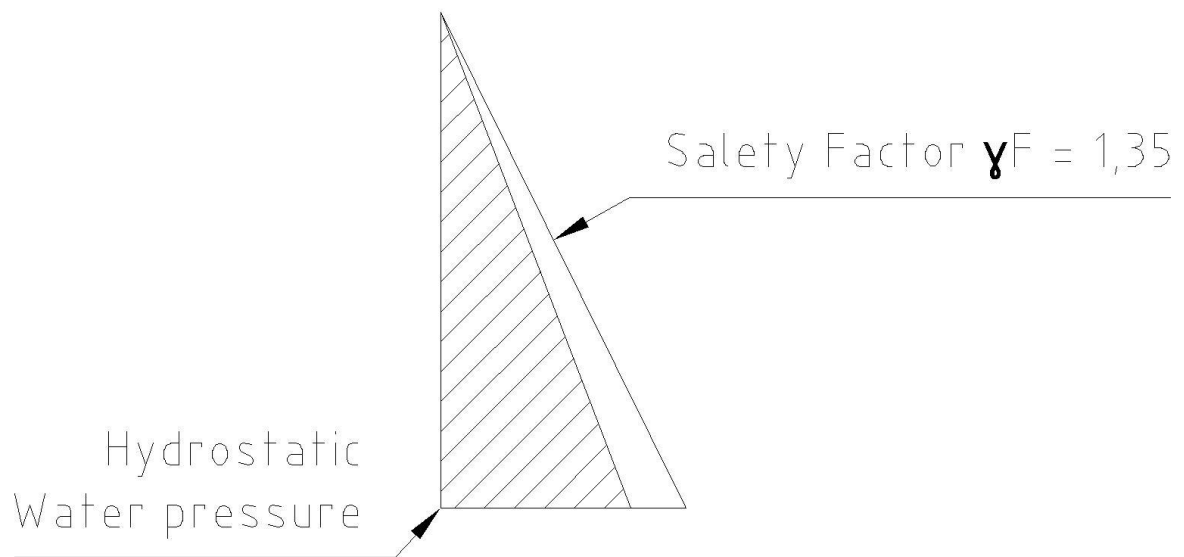
DIN EN1999-1-1: 2010-05: Eurocode 9: Design of aluminium structures Part 1-1: General structural rules

DIN 19569-4: 2000-11: Wastewater treatment plants – Principles for the design of structures and technical equipment

Part 4: Specific principles for shutoff devices as penstocks, sluice gates, stop logs etc.

Table 1 Leakage Rates for Systems out of dam beams / stop logs

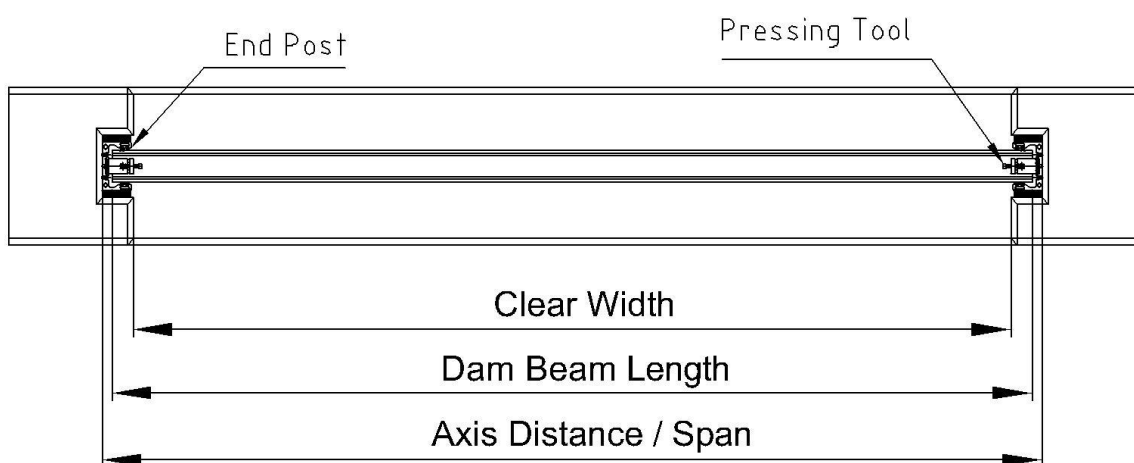
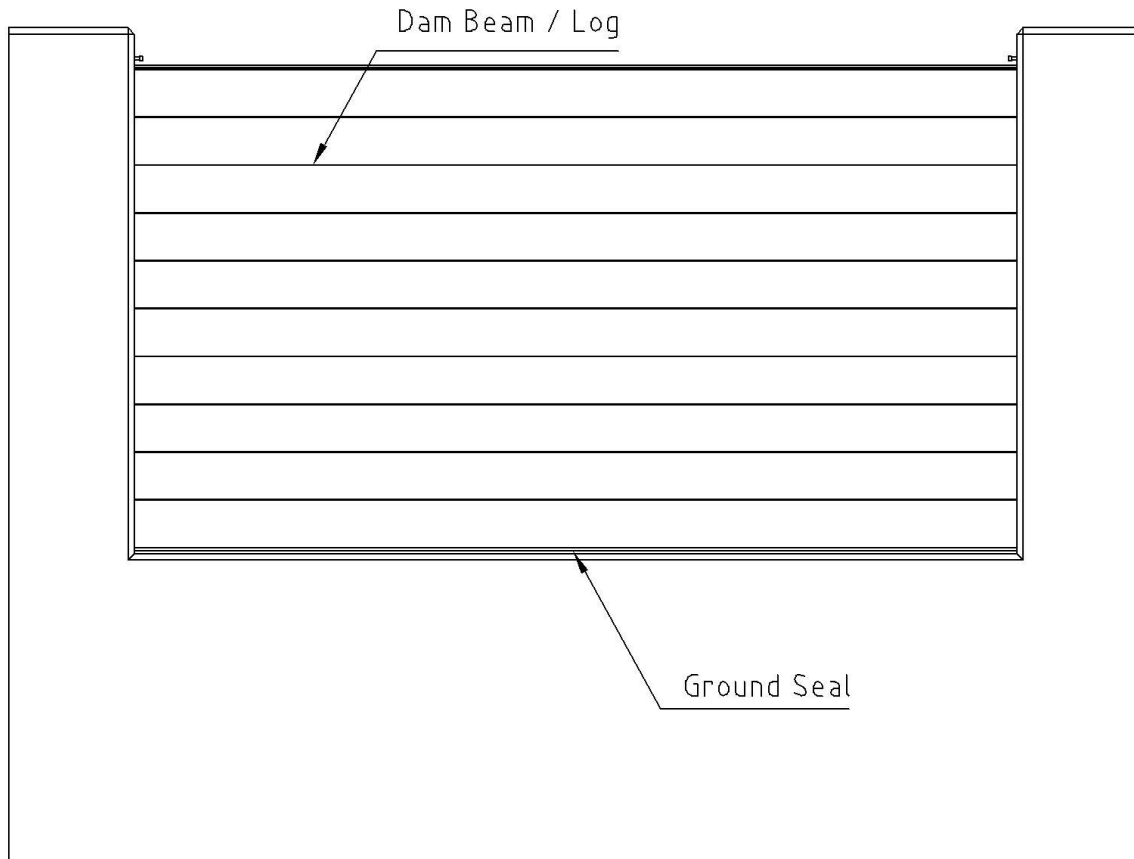
1.2 Load Criteria



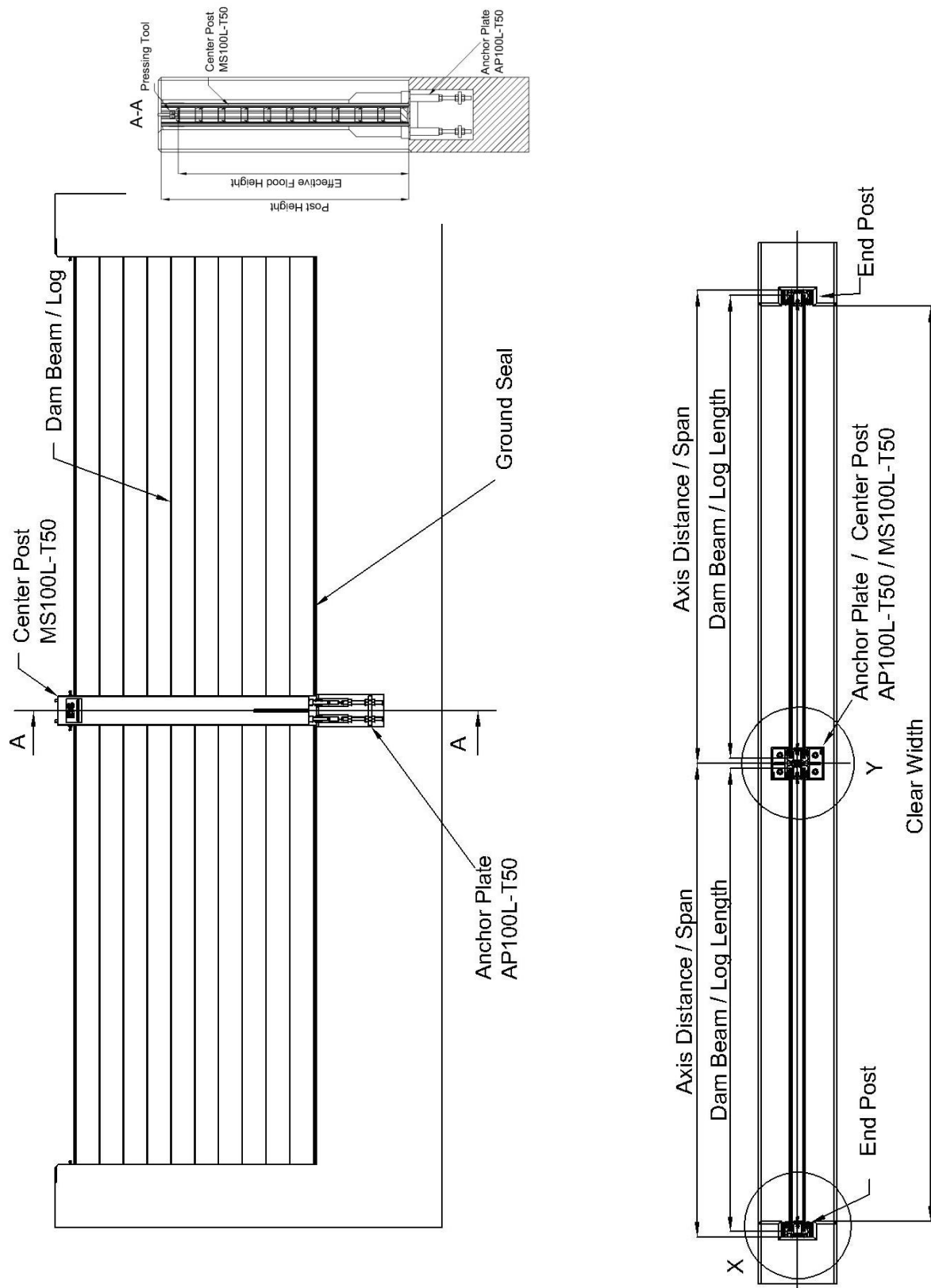
Specific Weight Water: 10kN/m³.

1.3 Definition of Terms

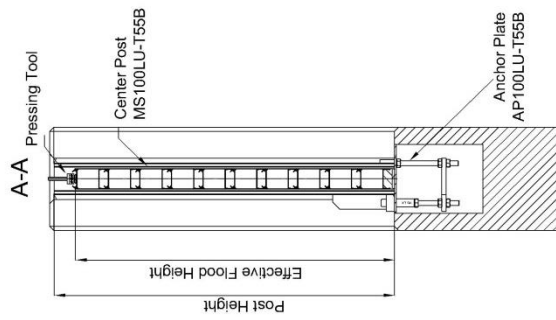
1.3.1 Flood Barrier HW-B100L

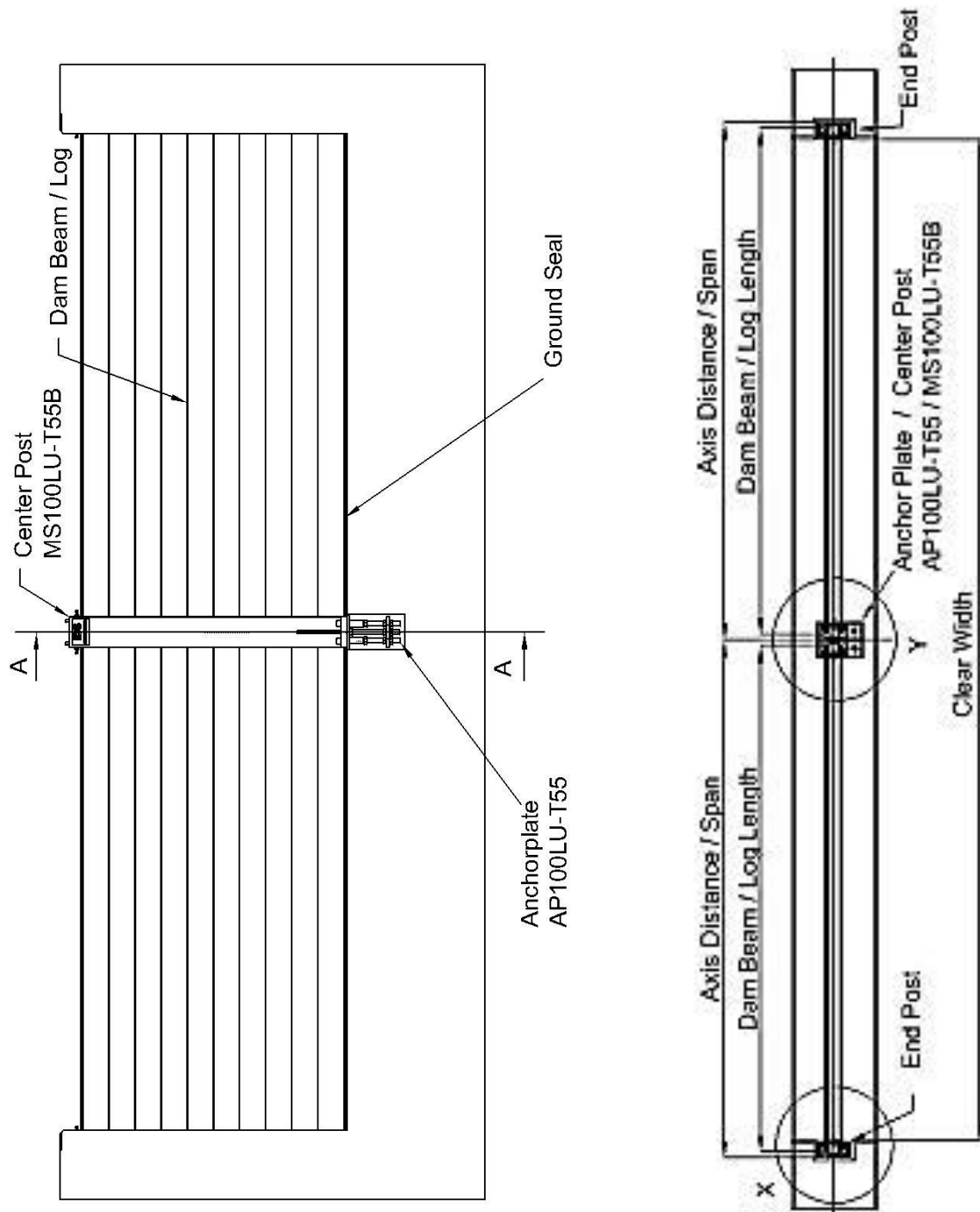


1.3.2 Flood Protection Walls HW-W100L

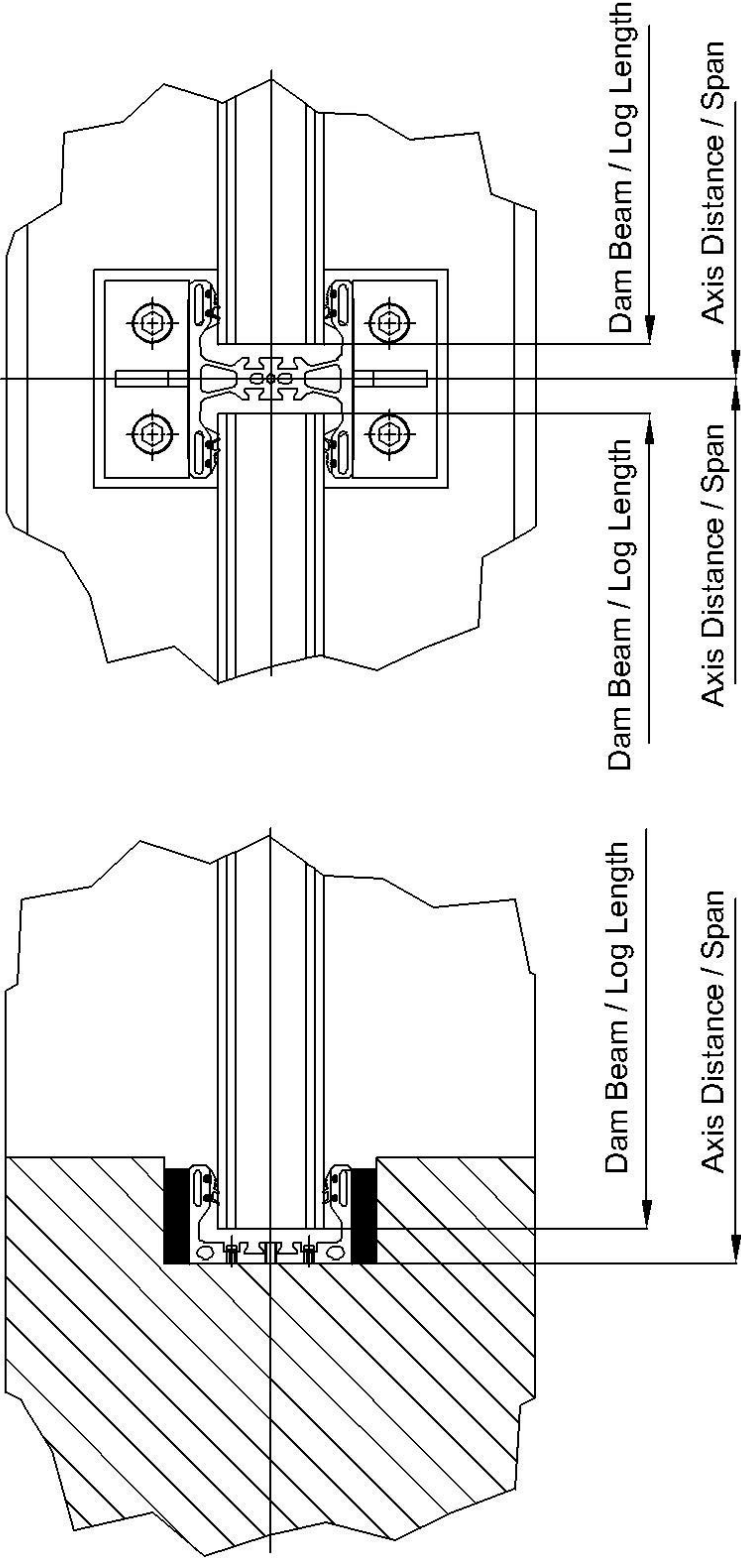


1.3.3 Flood Protection Walls HW-W100LU

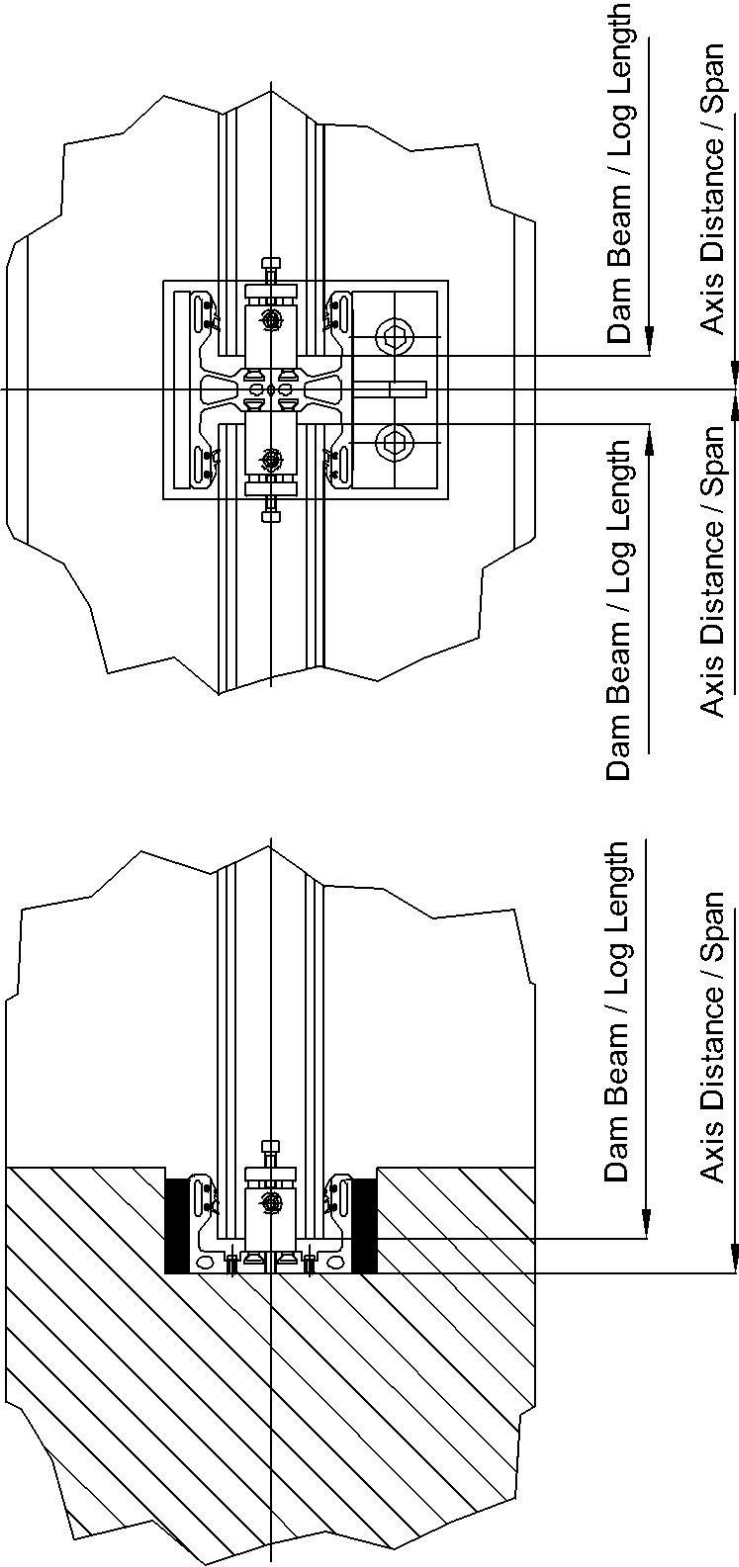




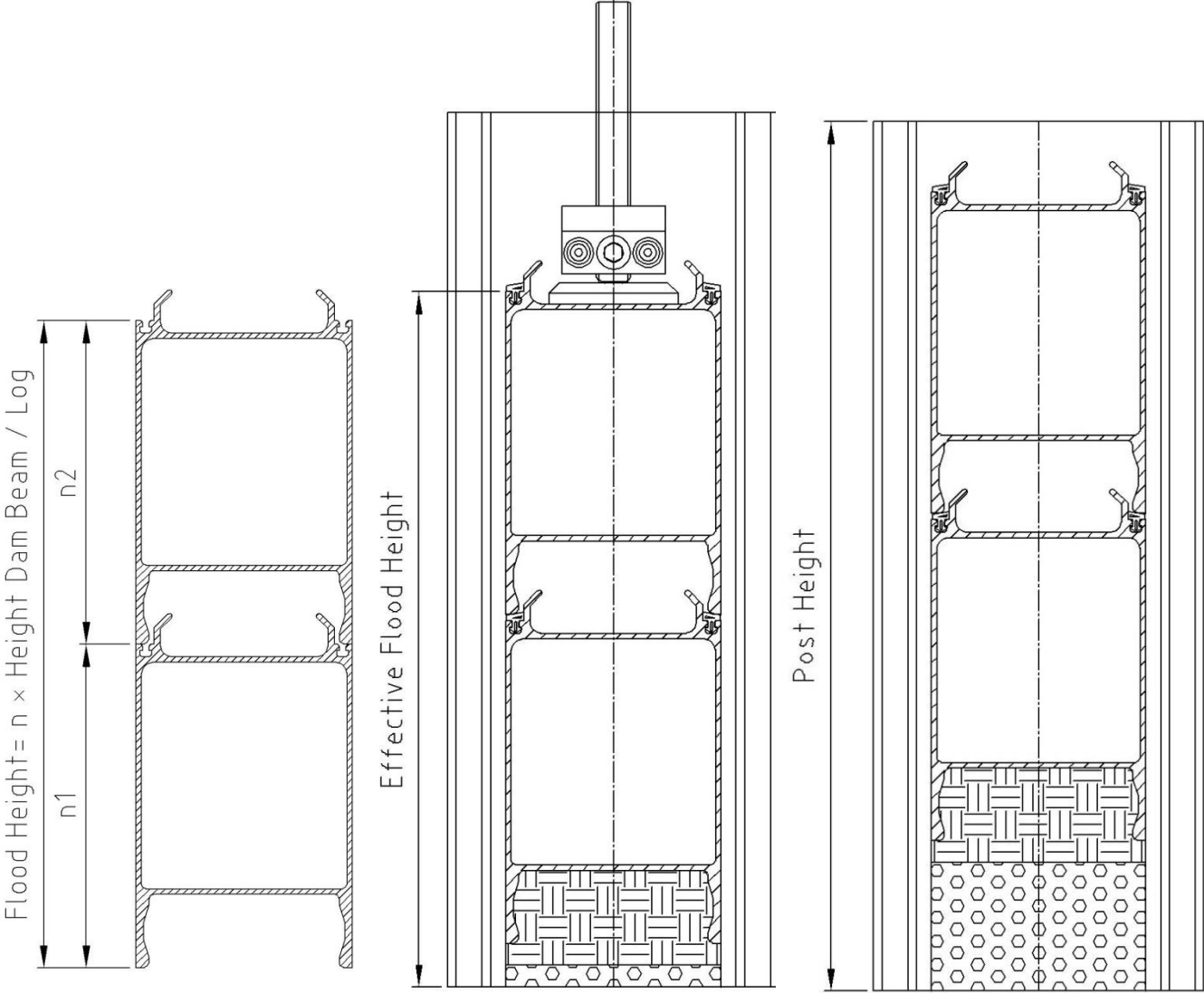
1.3.4 Axis Distance and Log Length
100L



1.3.5 Axis Distance and Log Length
100LU



1.3.6 Flood Height, effective Flood Height, Post Height

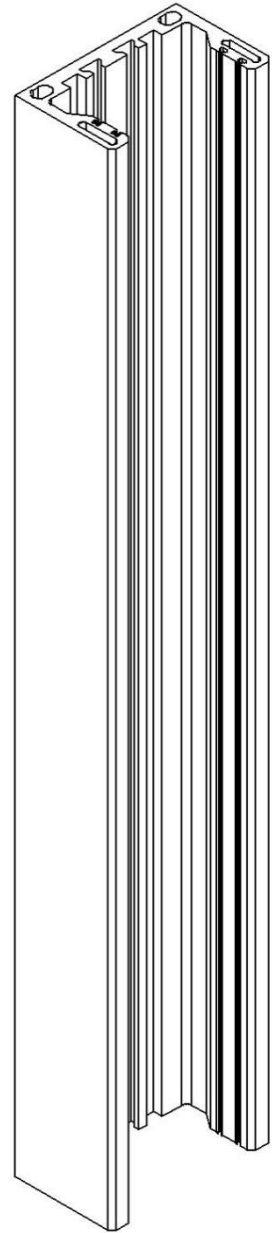
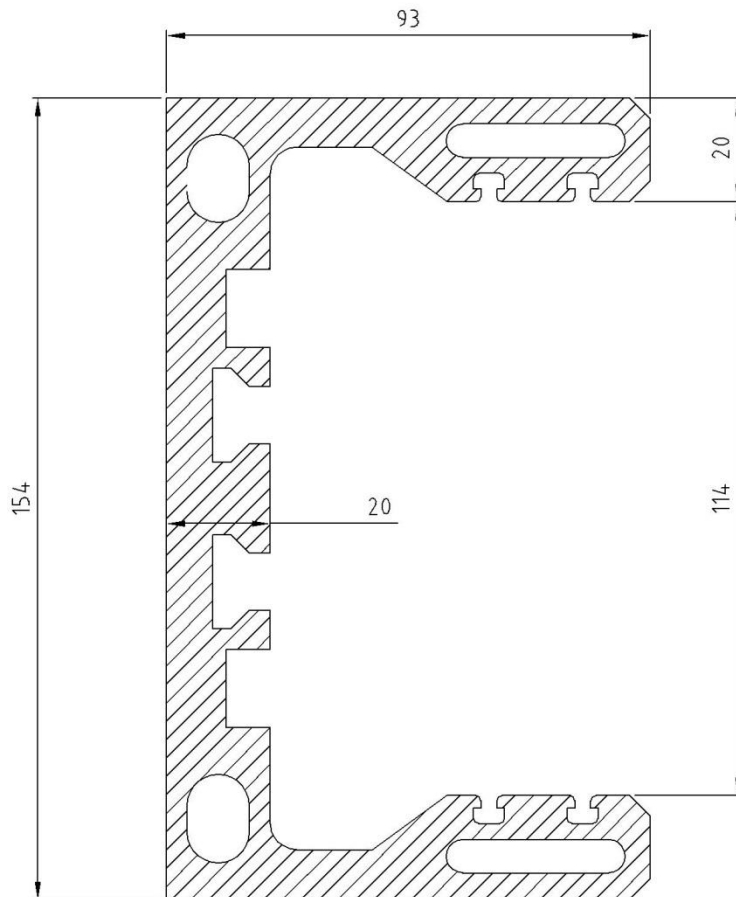


DBAL100x150-2,5 / 100x150-5,0			
NUMBER OF DAM BEAMS/LOGS	FLOOD HEIGHT [MM]	EFFECTIVE FLOOD HEIGHT [MM]	POST HEIGHT [MM]
1	150	165	280
2	300	317	425
3	450	469	580
4	600	621	735
5	750	773	885
6	900	925	1040
7	1050	1077	1190
8	1200	1229	1345
9	1350	1381	1500
10	1500	1533	1650
11	1650	1685	1805
12	1800	1837	1955
13	1950	1989	2110
14	2100	2141	2265
15	2250	2293	2415
16	2400	2445	2570
17	2550	2597	2720
18	2700	2749	2875
19	2850	2901	3030
20	3000	3053	3180

DBAL100x200-2,5 / 100x200-3,7			
NUMBER OF DAM BEAMS/LOGS	FLOOD HEIGHT [MM]	EFFECTIVE FLOOD HEIGHT [MM]	POST HEIGHT [MM]
1	200	225	330
2	400	427	525
3	600	619	735
4	800	821	935
5	1000	1023	1135
6	1200	1225	1345
7	1400	1427	1540
8	1600	1629	1745
9	1800	1831	1955
10	2000	2033	2105
11	2200	2235	2355
12	2400	2437	2570
13	2600	2639	2760
14	2800	2841	2965
15	3000	3043	3180

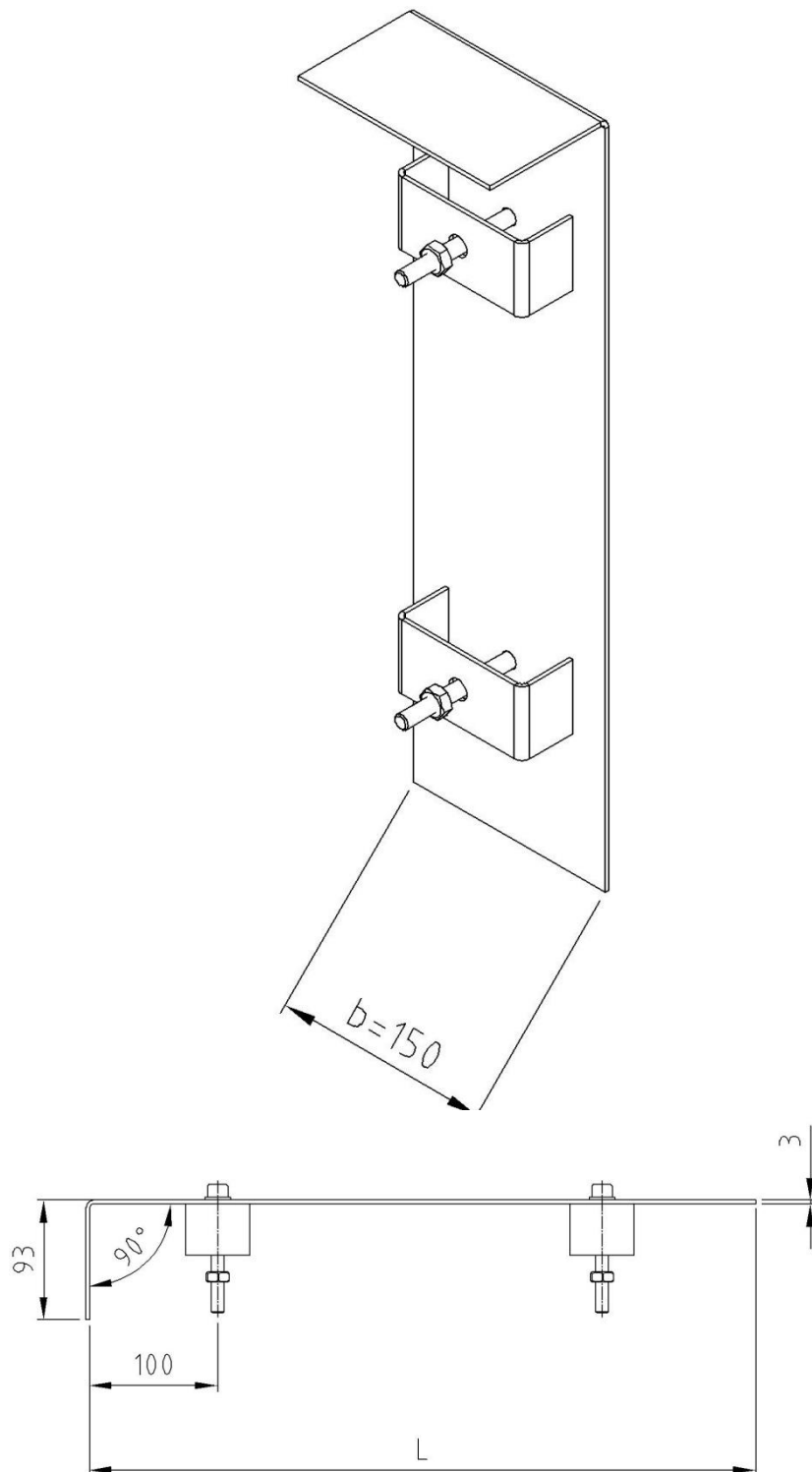
2 System Components

2.1 End Post E100L



PROFILE CHARACTERISTICS		
Height	mm	154
Width	mm	93
Thickness	mm	20
Cross-sectional area	cm ²	39,7
Weight per linear m	kg/m	10,5
Material	-	EN AW-6063-T66
Moment of inertia	cm ⁴	328
Modulus of elasticity E	N/mm ²	70.000

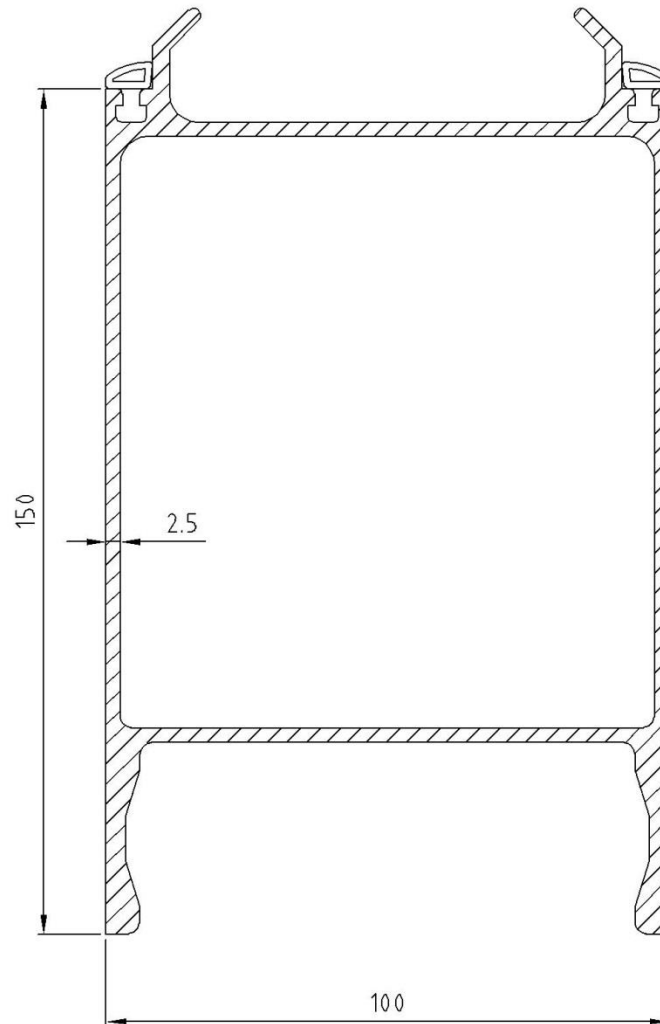
2.2 Cover for End Post AD100L



LEGEND	
L	Cover Length
b	Cover Width [mm]
Material	Stainless Steel, Grade: SS 304

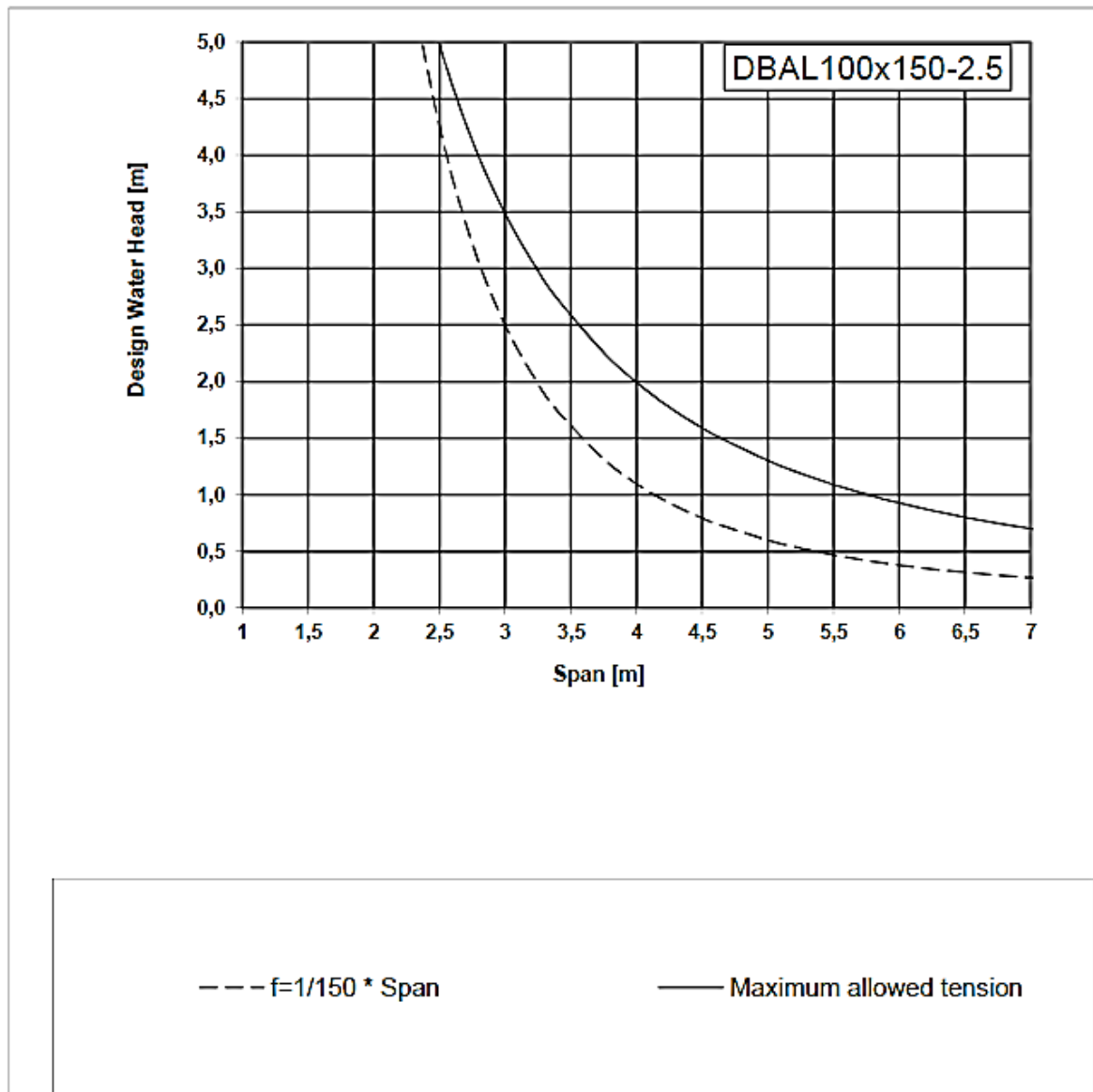
2.3 Dam Beam/Logs

2.3.1 DBAL100x150-2.5

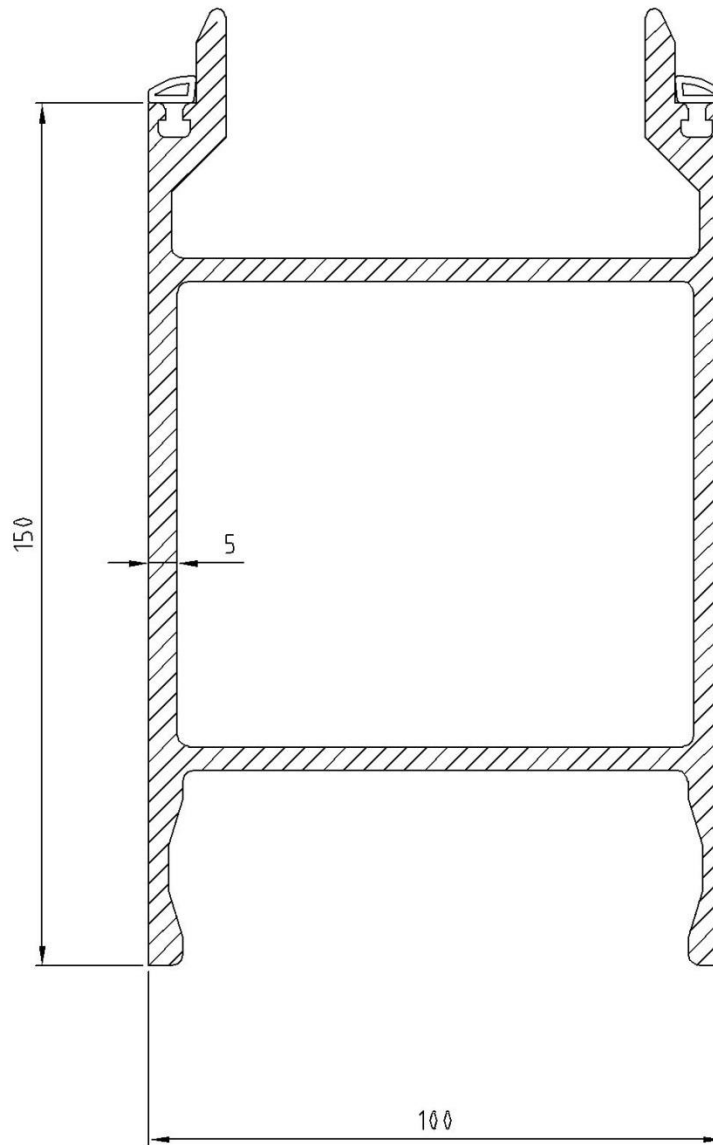


PROFILE CHARACTERISTICS		
Height	mm	150
Width	mm	100
Thickness	mm	2,5
Cross-sectional area	cm ²	15,5
Weight per linear m	kg/m	4,2
Material	-	EN AW-6063-T66
Moment of inertia	cm ⁴	274
Modulus of elasticity E	N/mm ²	70.000

Deflection Graph DBAL100x150-2.5

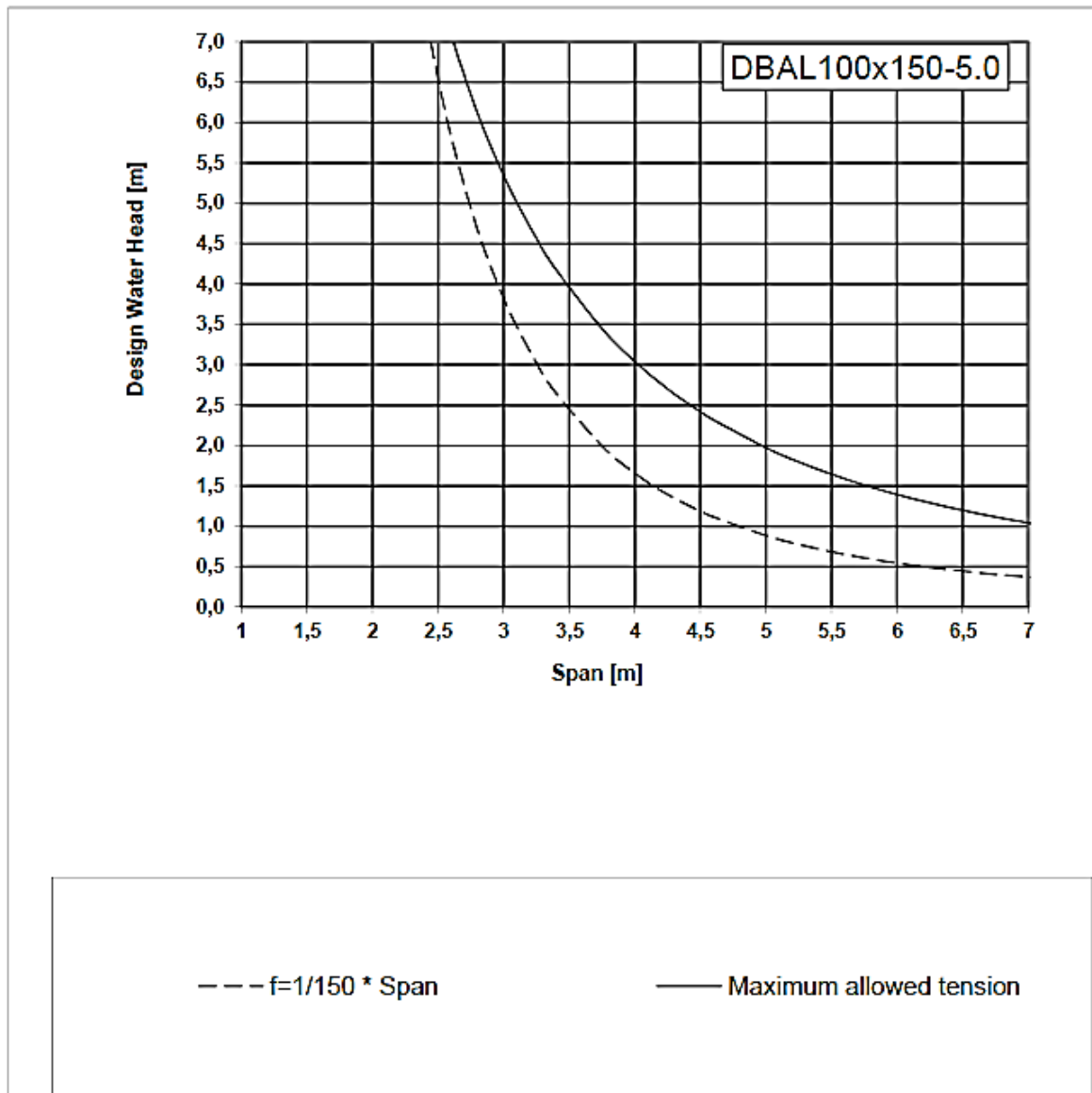


2.3.2 DBAL100x150-5.0

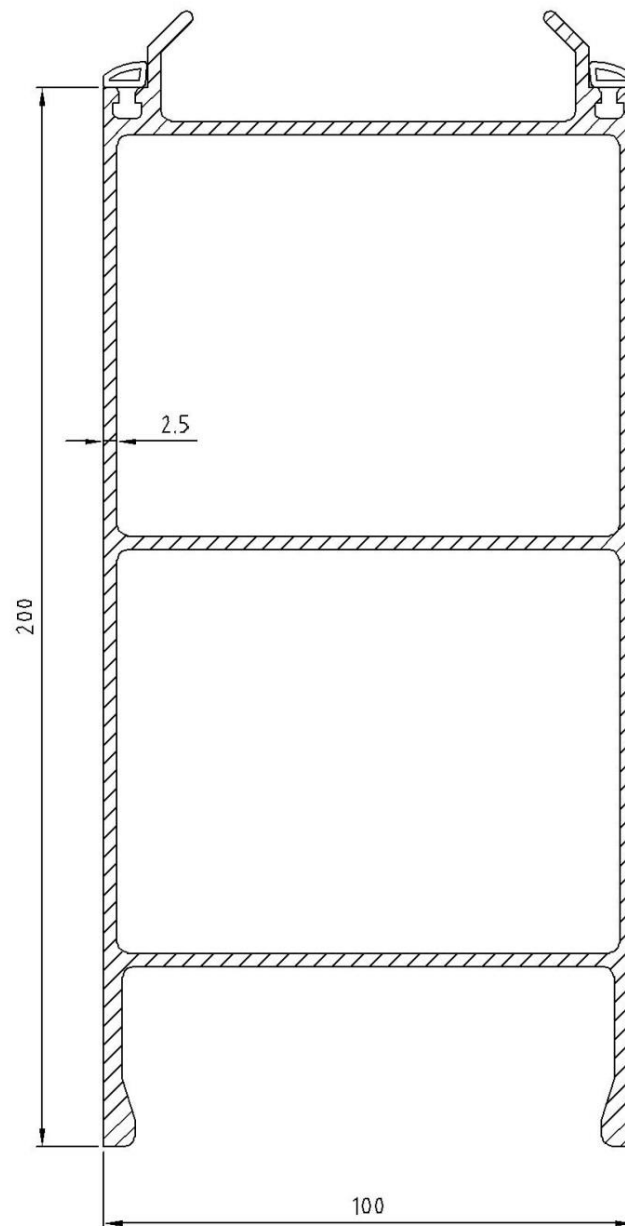


PROFILE CHARACTERISTICS		
Height	mm	150
Width	mm	100
Thickness	mm	5,0
Cross-sectional area	cm ²	24,7
Weight per linear m	kg/m	6,7
Material	-	EN AW-6063-T66
Moment of inertia	cm ⁴	423,5
Modulus of elasticity E	N/mm ²	70.000

Deflection Graph DBAL100x150-5.0

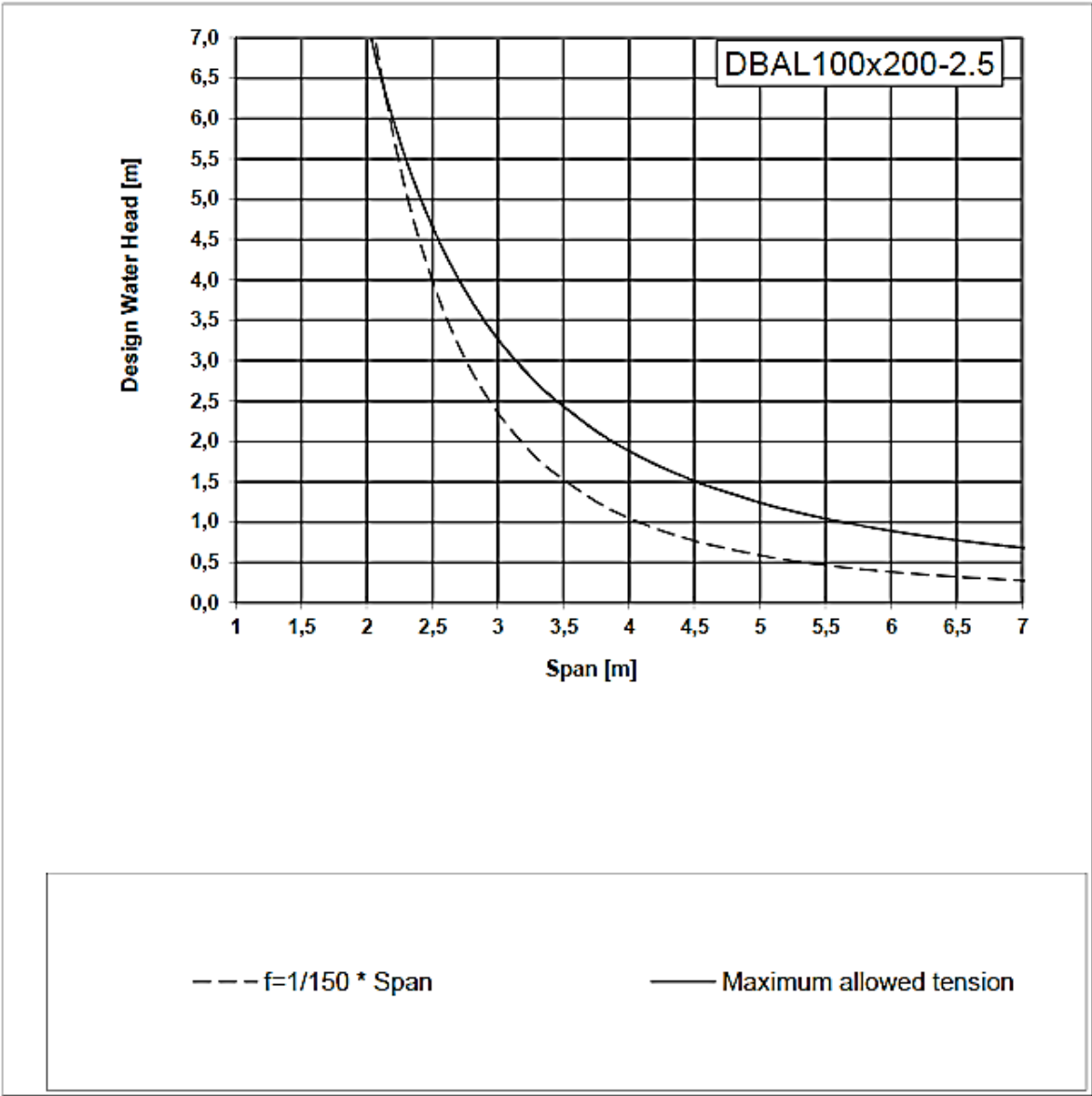


2.3.3 DBAL100x200-2.5

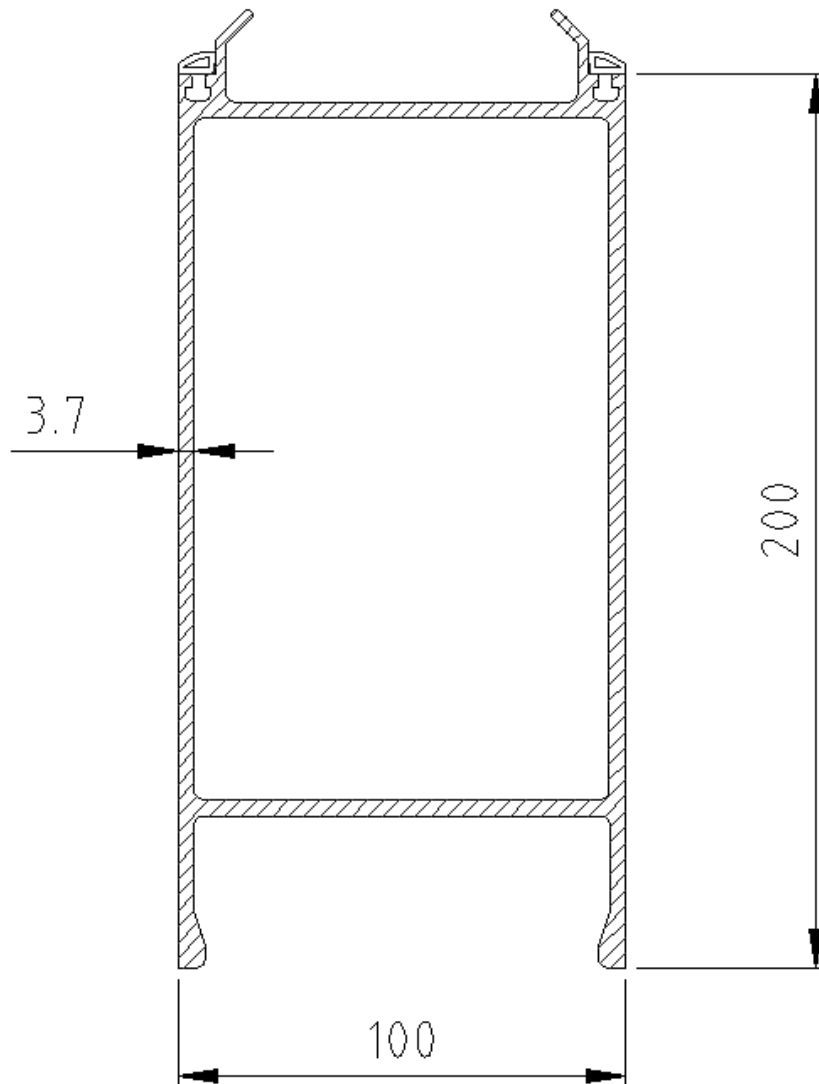


PROFILE CHARACTERISTICS		
Height	mm	200
Width	mm	100
Thickness	mm	2,5
Cross-sectional area	cm ²	19,7
Weight per linear m	kg/m	5,3
Material	-	EN AW-6063-T66
Moment of inertia	cm ⁴	339,5
Modulus of elasticity E	N/mm ²	70.000

Deflection Graph DBAL100x200-2.5

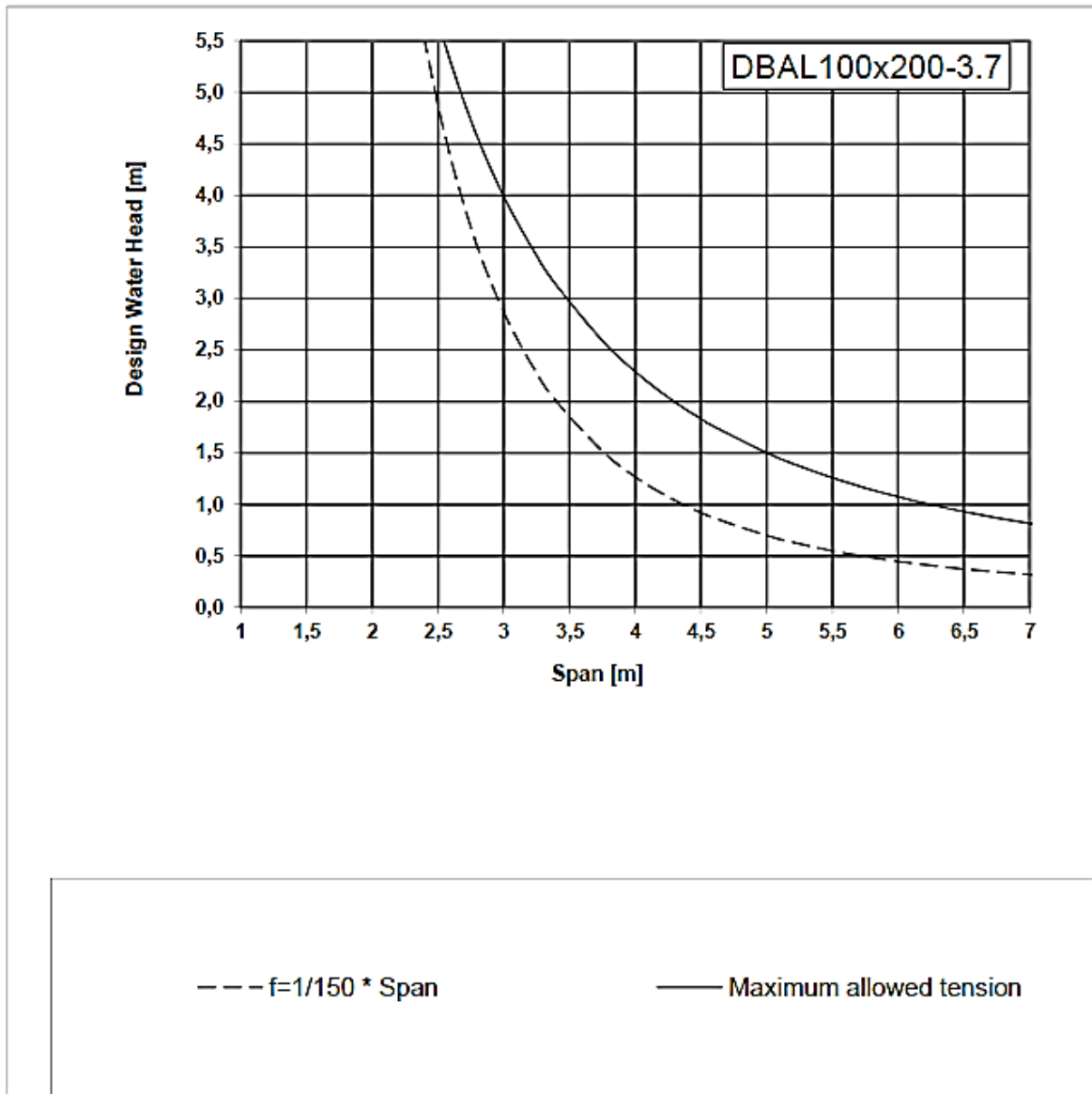


2.3.4 DBAL100x200-3.7



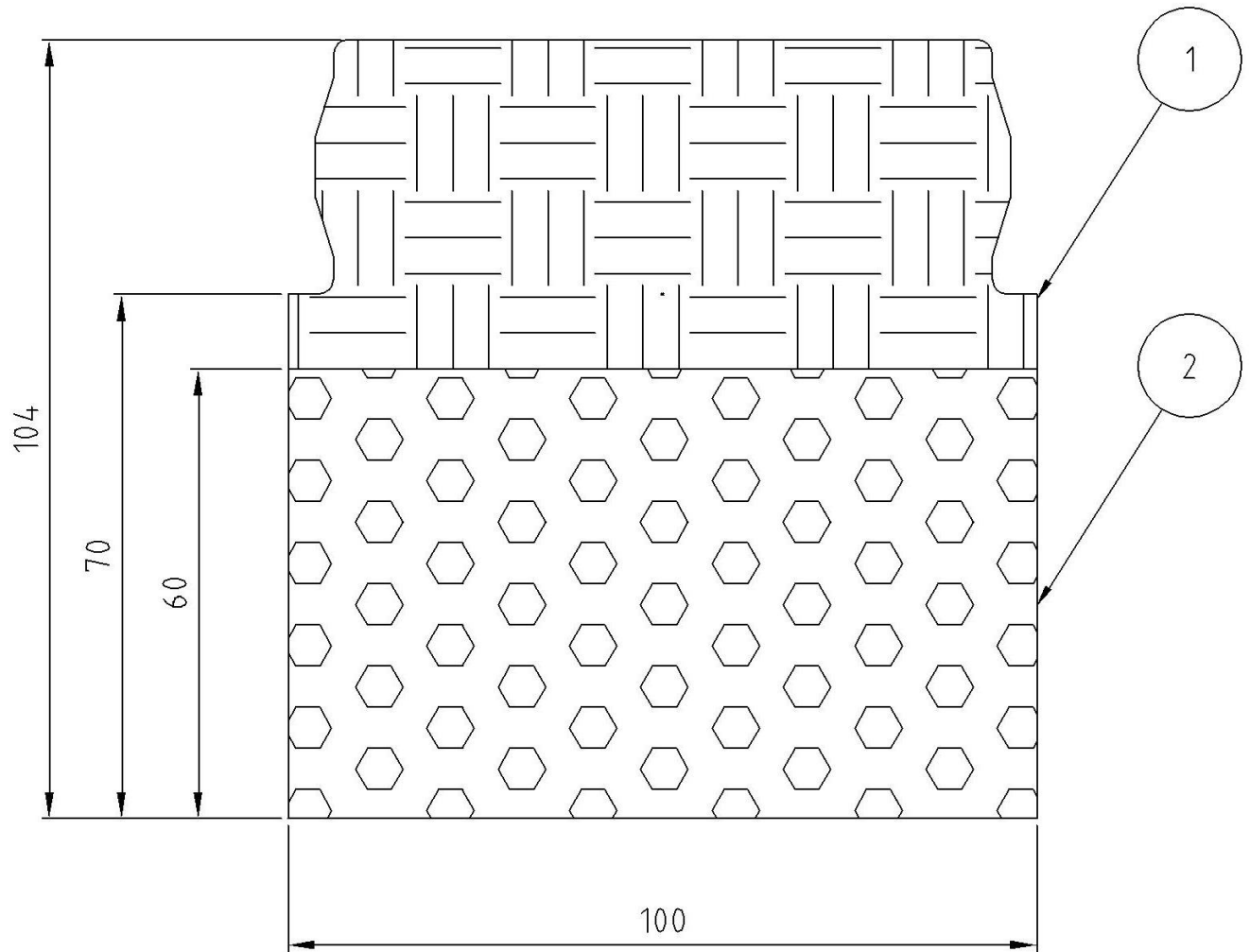
PROFILE CHARACTERISTICS		
Height	mm	200
Width	mm	100
Thickness	mm	3,7
Cross-sectional area	cm ²	23,1
Weight per linear m	kg/m	6,2
Material	-	EN AW-6063-T66
Moment of inertia	cm ⁴	417
Modulus of elasticity E	N/mm ²	70.000

Deflection Graph DBAL100x200-3.7



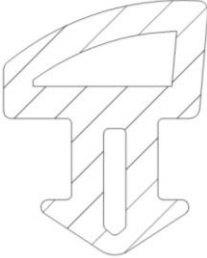
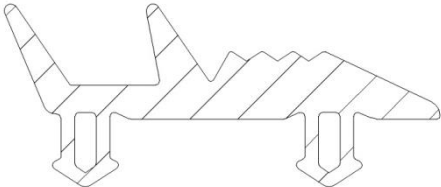
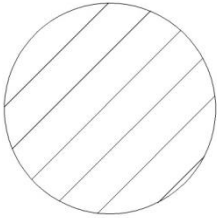
2.4 Seals

2.4.1 Ground Seal BD100_PE/PU



LEGEND	
Material Pos 1	PE (Polyethylene)
Material Pos 2	PU (Polyurethane)
Weight per linear m	1,007kg/m

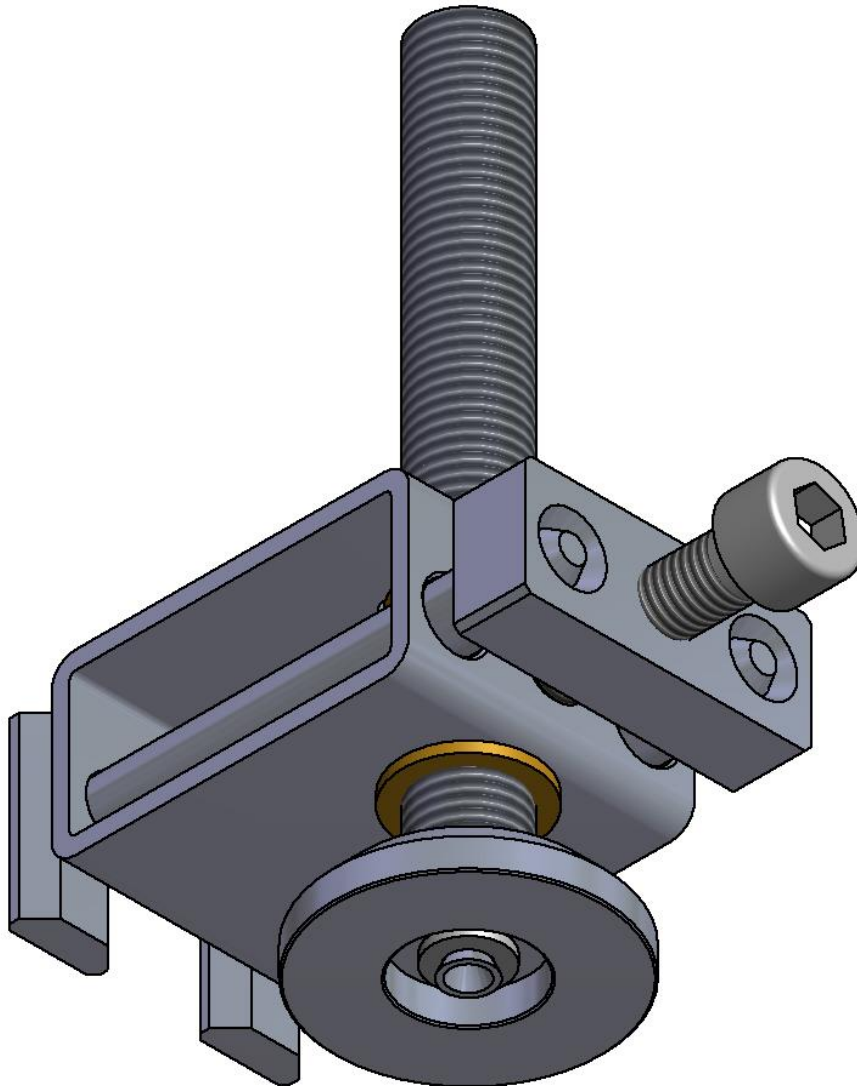
2.4.2 Dam Beams/Logs, End Posts, Center Posts

<p>Dam Beam / Log Clamping Seal</p>	
<p>Post Seal</p>	
<p>Center Post Foot Seal</p>	

<p>LEGEND</p>	
<p>Material</p>	<p>Ethylene Propylene Diene Monomer rubber (EPDM)</p>

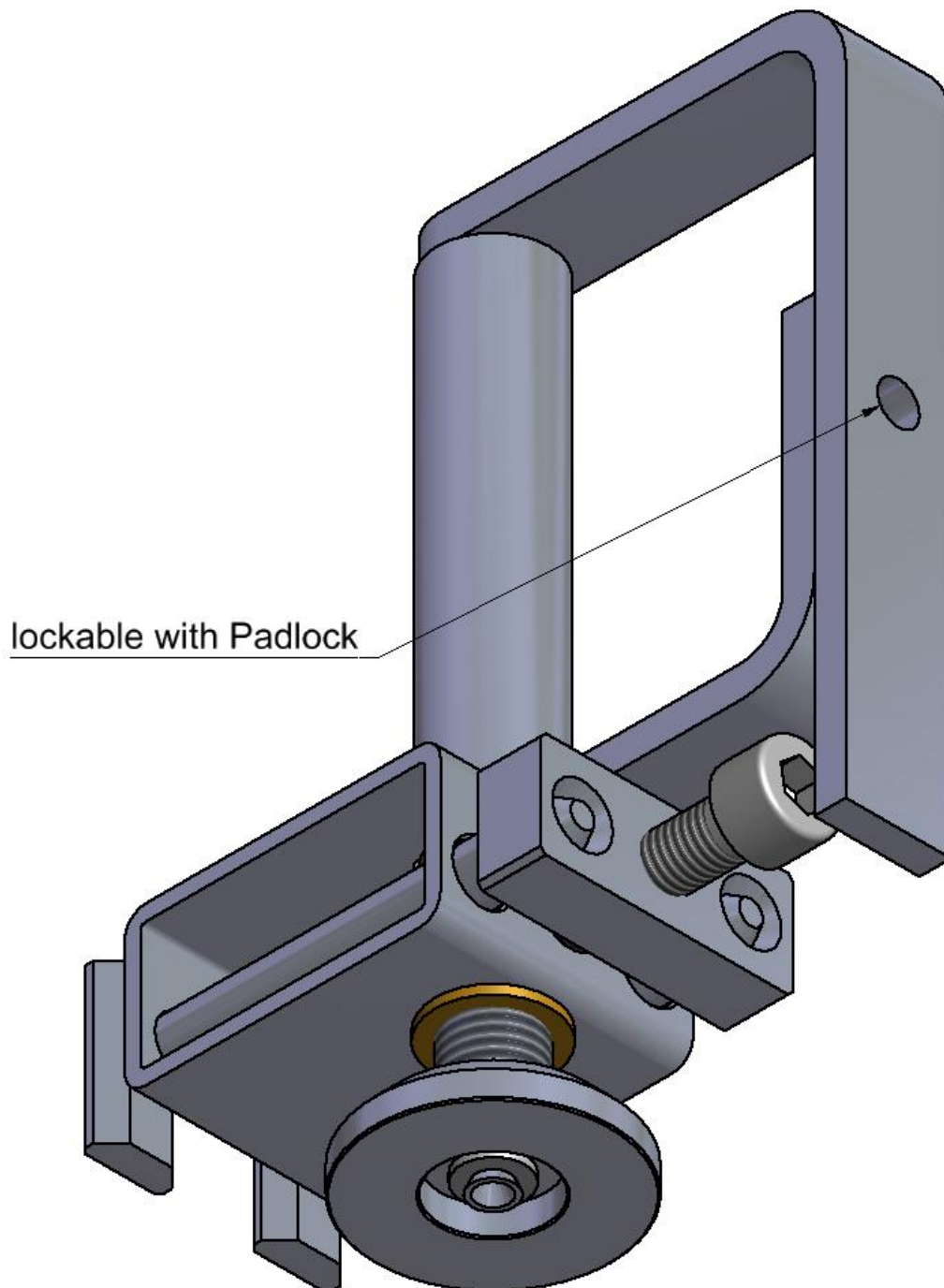
2.5 Pressing Tool

2.5.1 VS100L



LEGEND	
Material	Stainless Steel, Grade.: SS 304
Incl. Brass bush to prevent cold welds at moving parts	

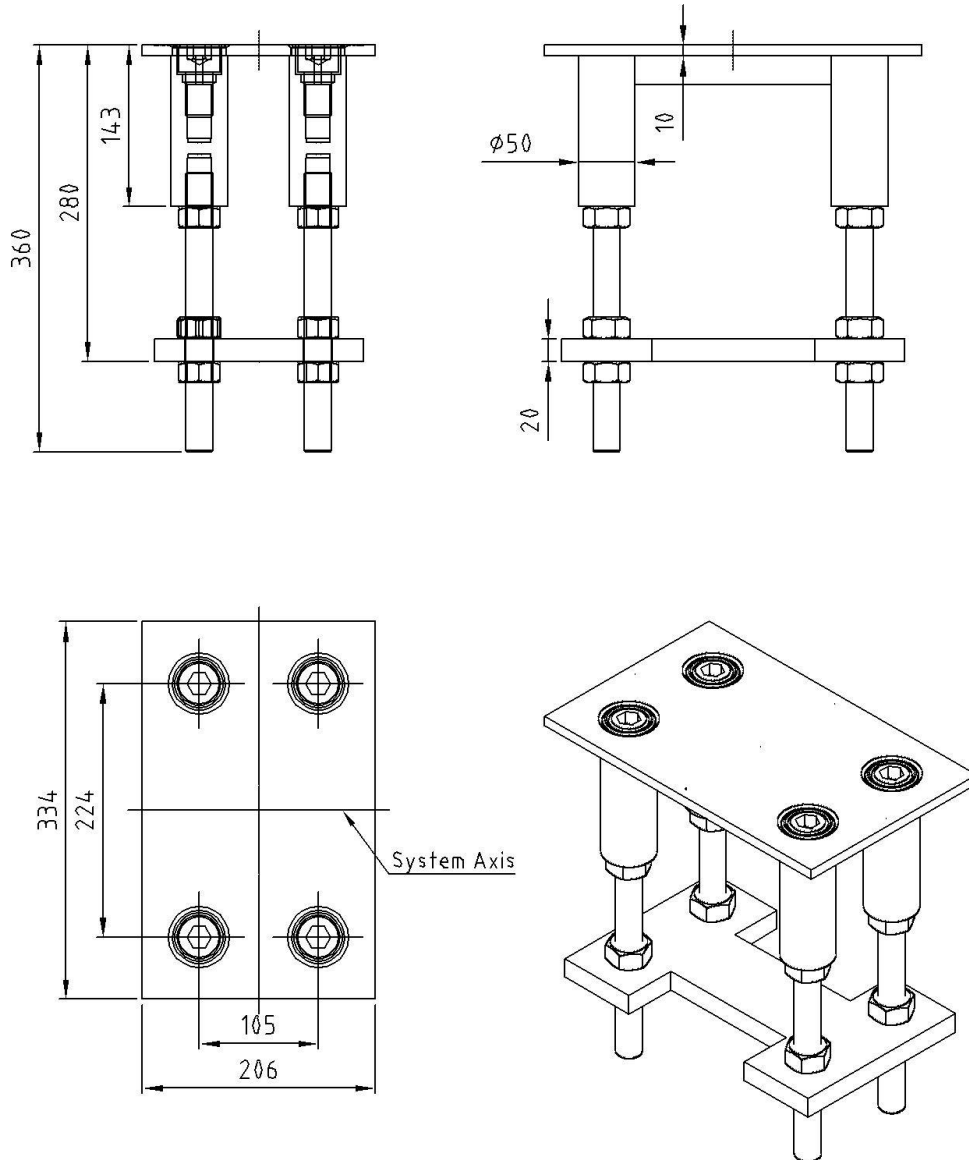
2.5.2 VS100L lockable



LEGEND	
Material	Stainless Steel, Grade.: SS 304
Incl. Brass bush to prevent cold welds at moving parts	

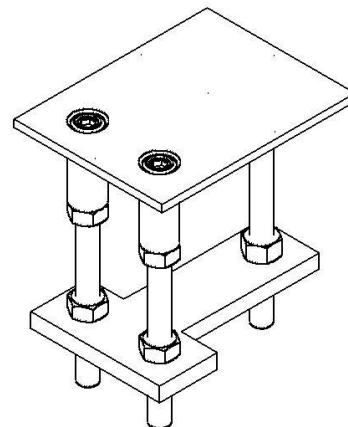
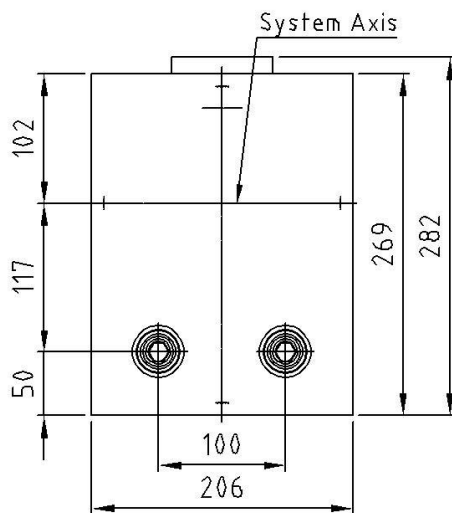
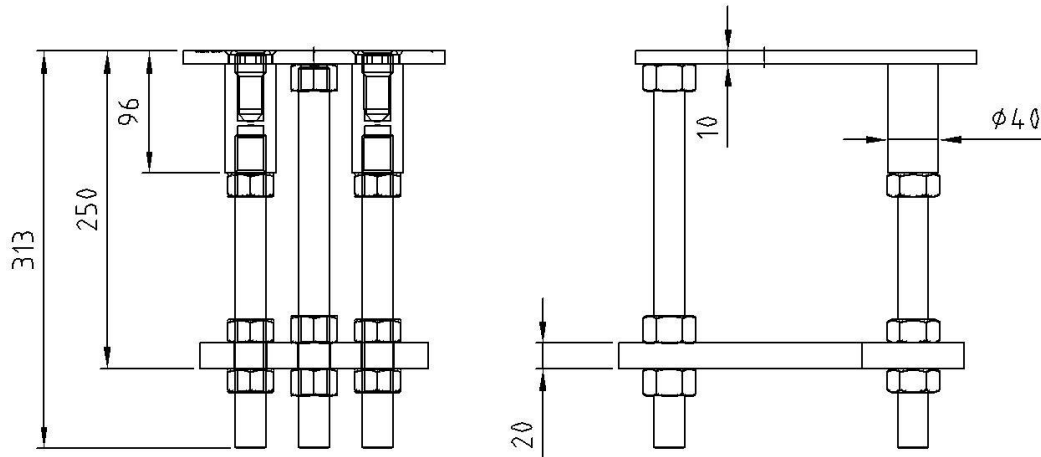
2.6 Anchor Plate

2.6.1 AP100L-T50



Coverplate	Stainless Steel, Grade.: SS 304
Bushes	Stainless Steel, Grade.: SS 304
Reinforcement Spindles	Mild Steel, Grade: S235; 8.8 blanc
Reinforcement Plate	Mild Steel, Grade: S235
Nuts	Mild Steel, Grade: S235; 8.8
Dummy Bolt (cylinder head bolt)	DIN912 M24x40 A4-70

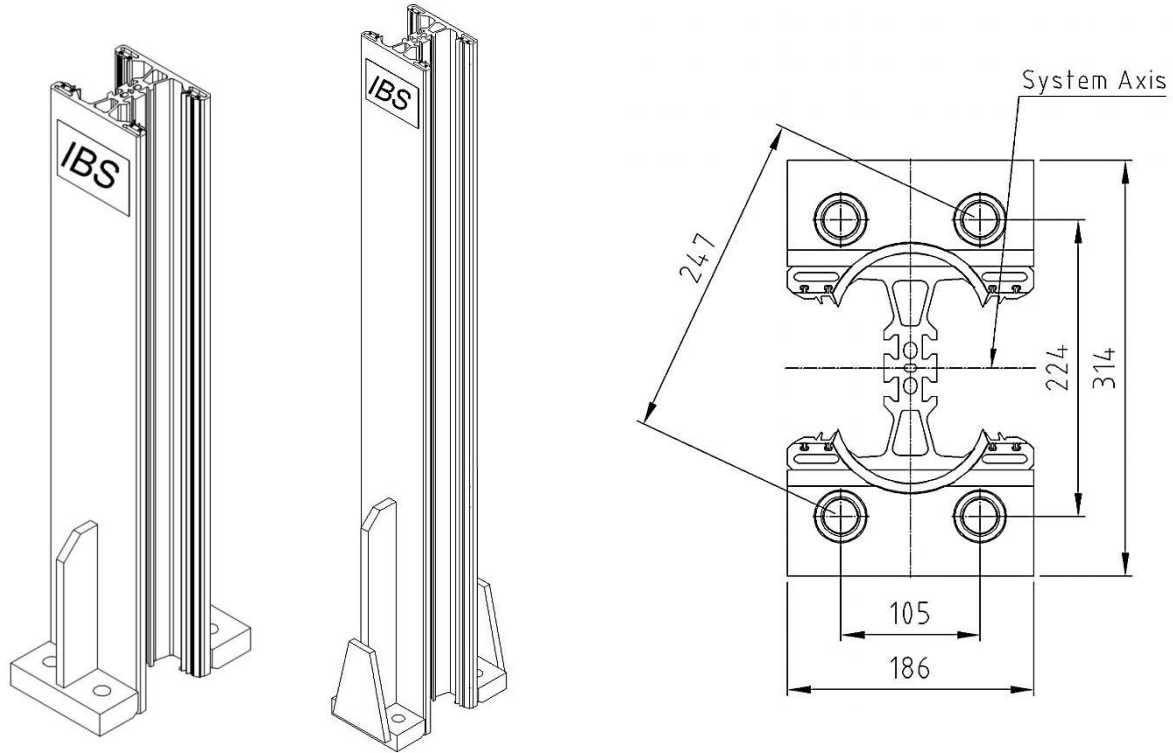
2.6.2 AP100LU-T55



Coverplate	Stainless Steel, Grade.: SS 304
Bushes	Stainless Steel, Grade.: SS 304
Reinforcement Spindles	Mild Steel, Grade: S235; 8.8 blanc
Reinforcement Plate	Mild Steel, Grade: S235
Nuts	Mild Steel, Grade: S235; 8.8
Dummy Bolt (grub screw)	Stainless Steel, Grade.: SS 304

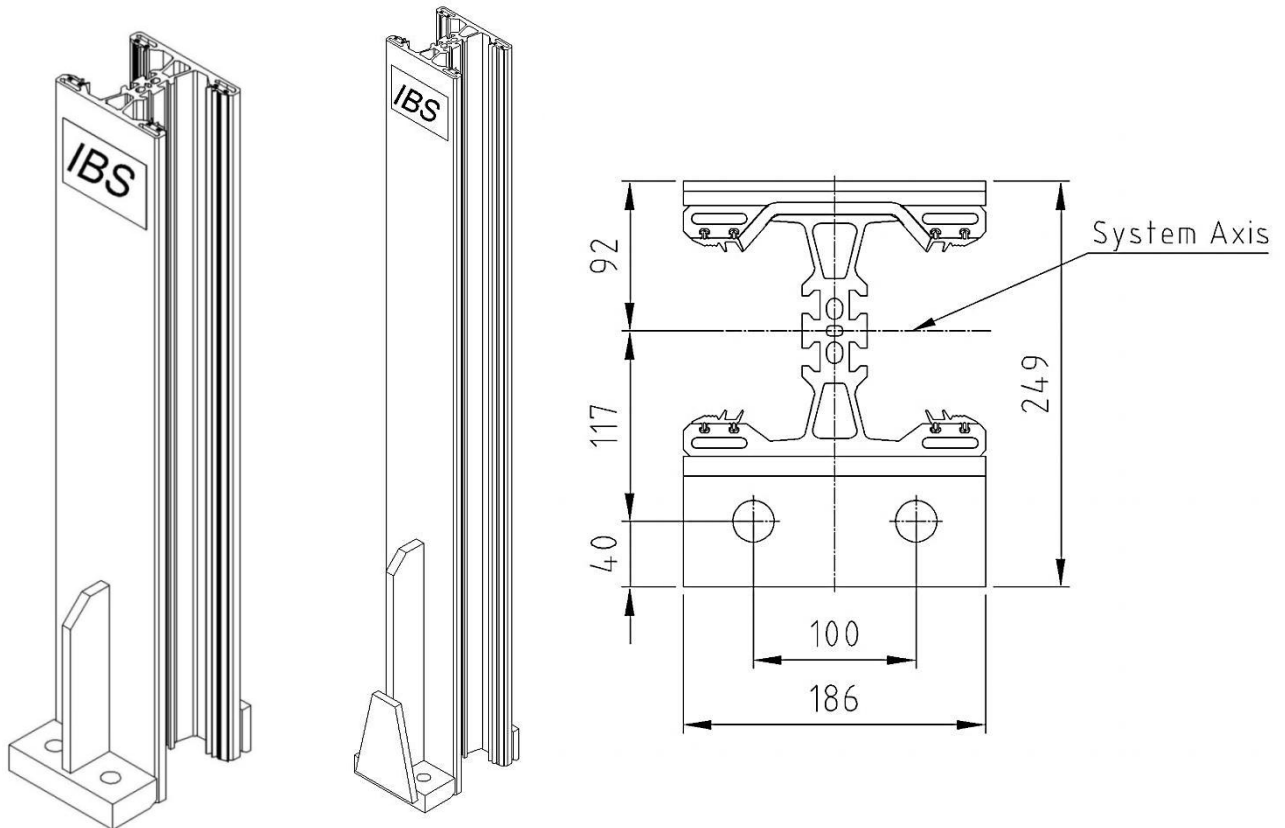
2.7 Center Post

2.7.1 MS100L-T50 / T51



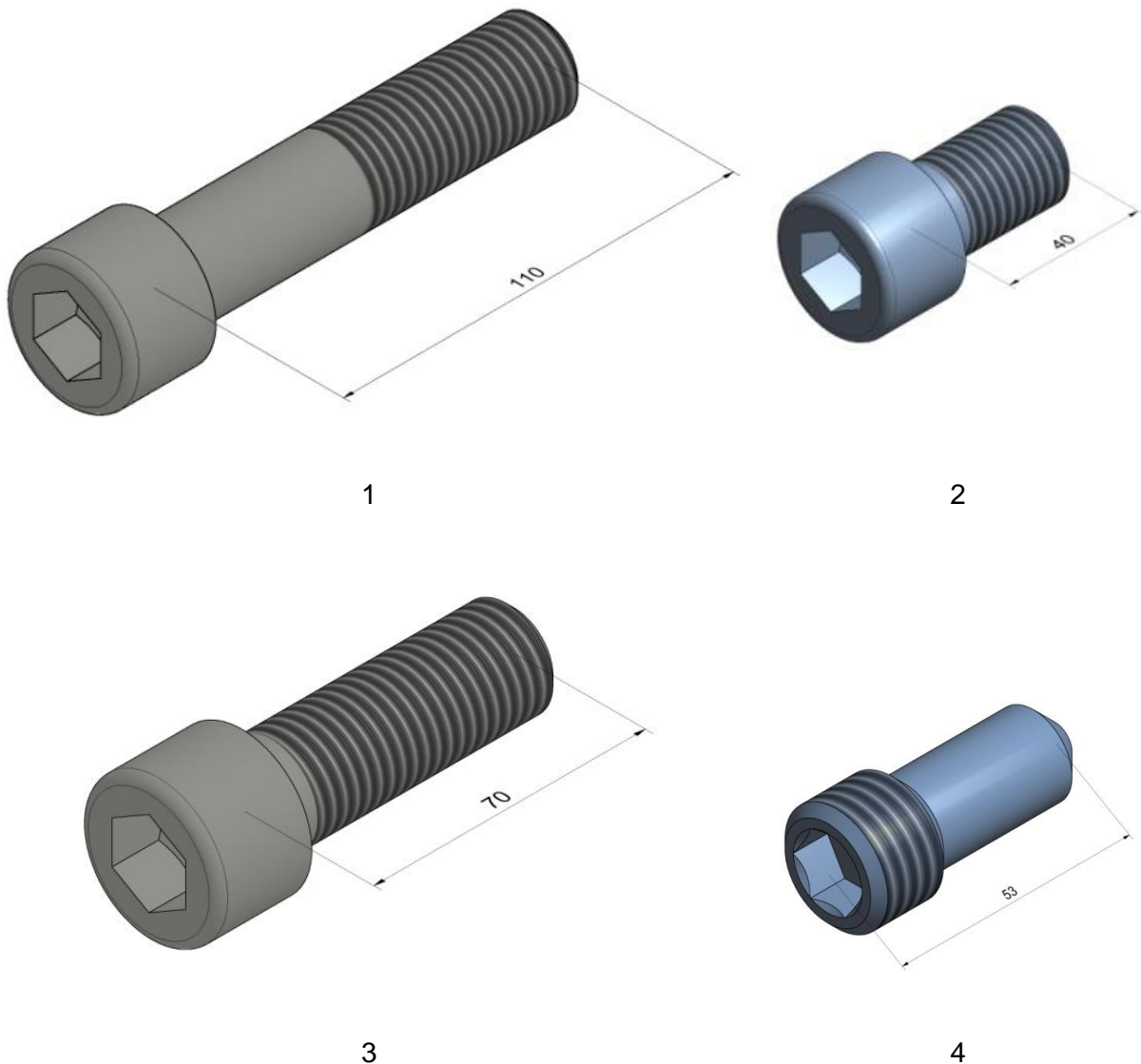
LEGEND				
Description	Flood Height [mm]	Max. Axis Distance/Span a [mm]	Weight [kg]	Material
MS100L-T50-280	150	6000	9,4	En AW 6063 T66
MS100L-T50-330	200	6000	10,3	
MS100L-T50-425	300	6000	12,1	
MS100L-T50-525	400	5500	13,9	
MS100L-T50-580	450	5500	15,5	
MS100L-T50-735	600	5000	18,4	
MS100L-T50-885	750	4500	21,2	
MS100L-T50-935	800	4500	22,1	
MS100L-T50-1040	900	4000	24,0	
MS100L-T50-1135	1000	4000	26,3	
MS100L-T50-1190	1050	4000	27,3	
MS100L-T50-1345	1200	3800	30,2	
MS100L-T50-1500	1350	3700	33,1	
MS100L-T50-1540	1400	3700	33,8	
MS100L-T50-1650	1500	3000	35,8	
MS100L-T51-1745	1600	3000	37,6	
MS100L-T51-1805	1650	3000	42,7	
MS100L-T51-1955	1800	3000	45,5	

2.7.2 MS100LU-T55B / T56B



LEGEND				
Description	Flood Height [mm]	Max. Axis Distance/Span a [mm]	Weight [kg]	Material
MS100LU-T55B-280	150	6000	7,6	En AW 6063 T66
MS100LU-T55B-330	200	6000	8,5	
MS100LU-T55B-425	300	6000	10,3	
MS100LU-T55B-525	400	5500	12,1	
MS100LU-T55B-580	450	5500	13,4	
MS100LU-T55B-735	600	5000	16,3	
MS100LU-T55B-885	750	4500	19,1	
MS100LU-T55B-935	800	4500	20,0	
MS100LU-T55B-1040	900	4000	22,0	
MS100LU-T55B-1135	1000	4000	24,0	
MS100LU-T55B-1190	1050	4000	25,0	
MS100LU-T55B-1345	1200	3800	27,9	
MS100LU-T55B-1500	1350	3700	31,0	
MS100LU-T55B-1540	1400	3700	31,5	
MS100LU-T56B-1650	1500	3000	35,5	
MS100LU-T56B-1745	1600	2500	37,3	
MS100LU-T56B-1805	1650	2250	39,5	
MS100LU-T56B-1955	1800	2000	41,2	

2.7.3 Bolts

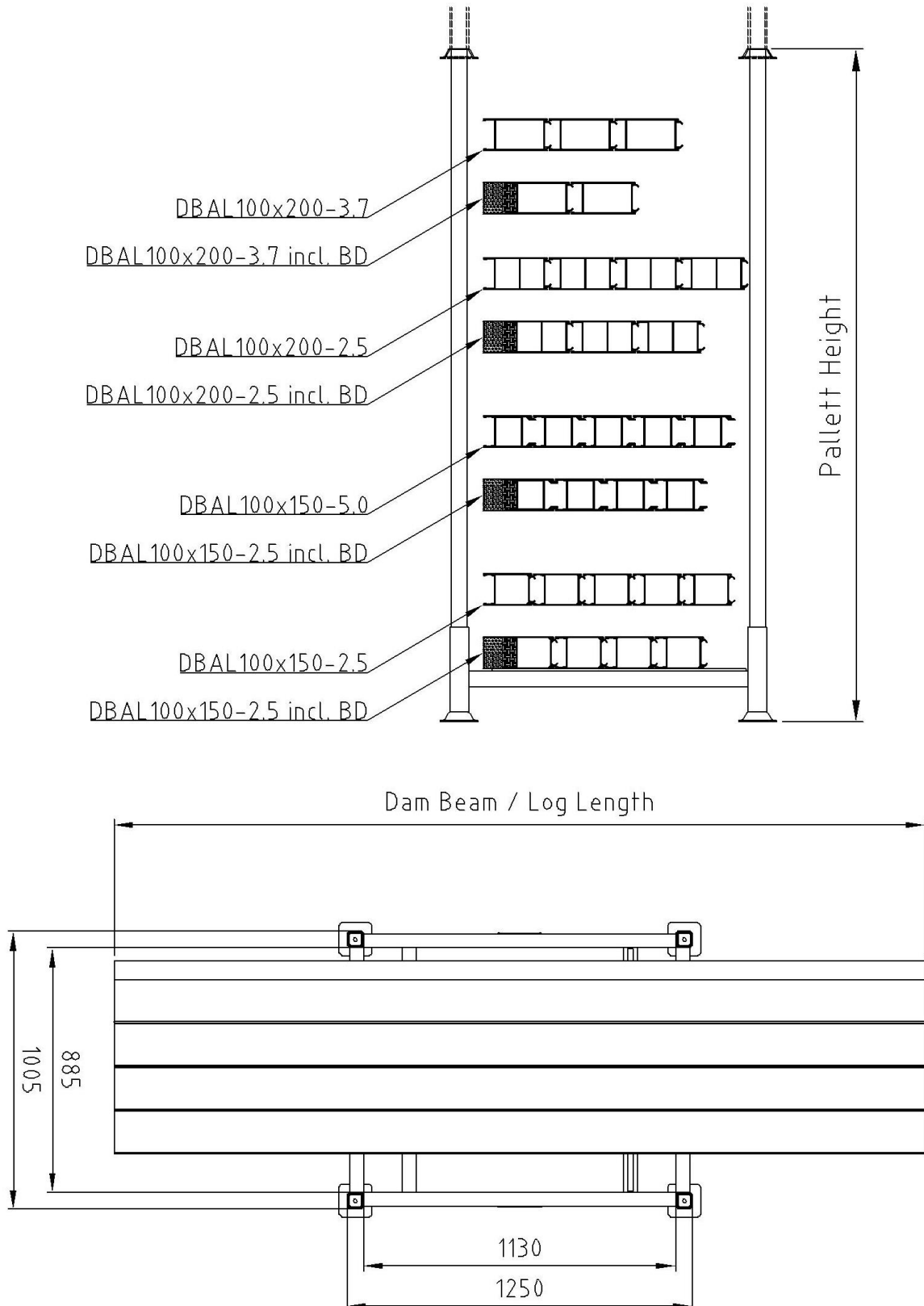


SYSTEM	FOOTNOTE	FUNCTION	DESCRIPTION
HW-W100L	1	Cylinder Head Center Post Bolt	DIN 912 M24x110 8.8 galv. zined
	2	Anchor Plate Dummy Bolt	DIN 912 M24x40 SS 316
HW-W100LU	3	Cylinder Head Center Post Bolt	DIN 912 M24x70 8.8 galv. zined
	4	Cylinder Head Anchor Plate Dummy Bolt	Spindles M24x53 SW 14

3 Storage

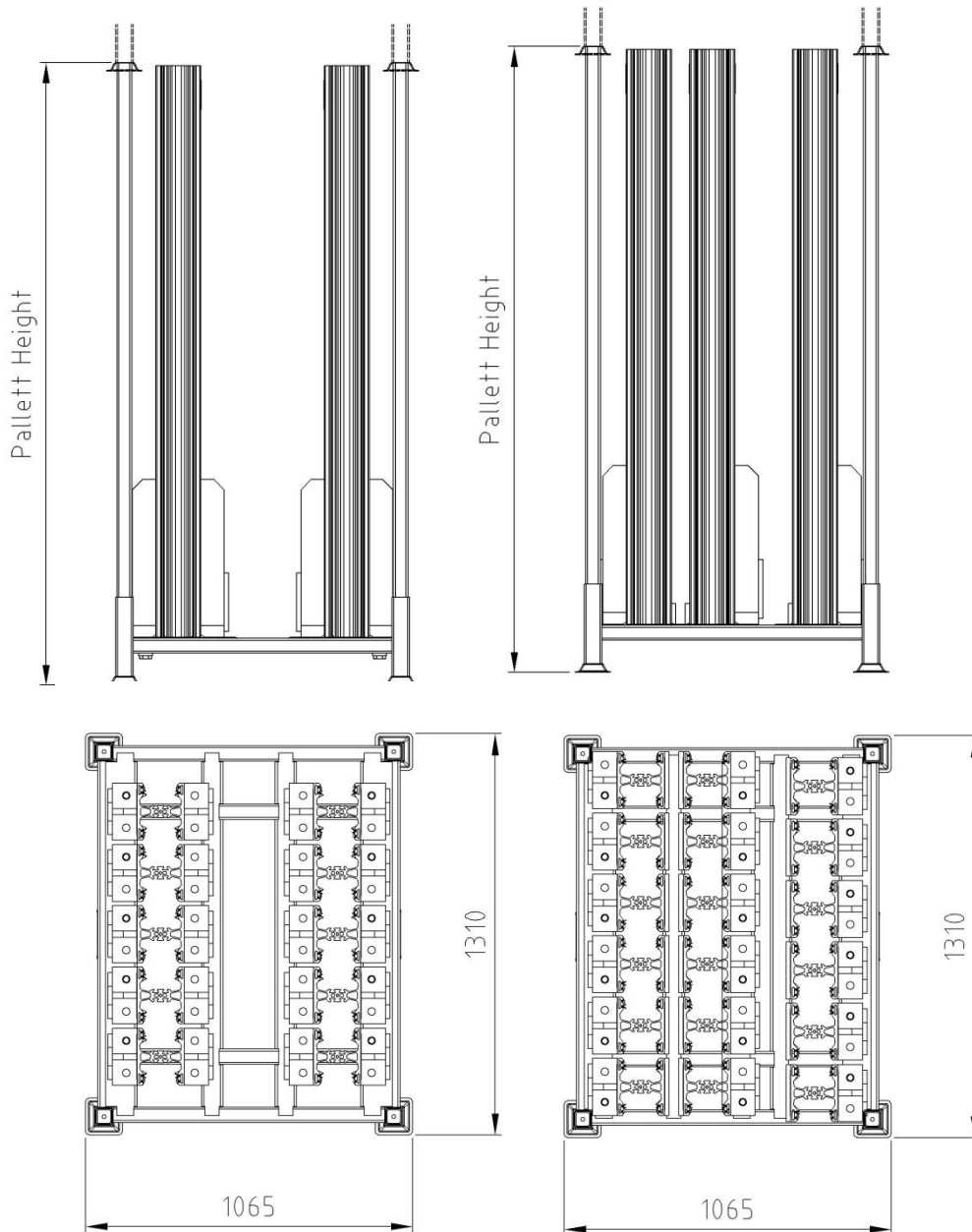
3.1 Dam Beam/Log Pallet

3.1.1 Dam Beams/Logs



Description	Pallet Height [mm]	Dam Beam	Max. Number of Layers	Number DB/Layer	
				Without BD100L	With BD100L
LT-P02-DB-800	830	DBAL100x150-2.5	5	5	4
LT-P02-DB-800	830	DBAL100x150-5.0	5	5	4
LT-P02-DB-800	830	DBAL100x200-2.5	5	4	3
LT-P02-DB-800	830	DBAL100x200-3.7	5	4	3
LT-P02-DB-1400	1430	DBAL100x150-2.5	10	5	4
LT-P02-DB-1400	1430	DBAL100x150-5.0	10	5	4
LT-P02-DB-1400	1430	DBAL100x200-2.5	10	4	3
LT-P02-DB-1400	1430	DBAL100x200-3.7	10	4	3
LT-P02-DB-2100	2130	DBAL100x150-2.5	17	5	4
LT-P02-DB-2100	2130	DBAL100x150-5.0	17	5	4
LT-P02-DB-2100	2130	DBAL100x200-2.5	17	4	3
LT-P02-DB-2100	2130	DBAL100x200-3.7	17	4	3

3.1.2 Center Post Pallets

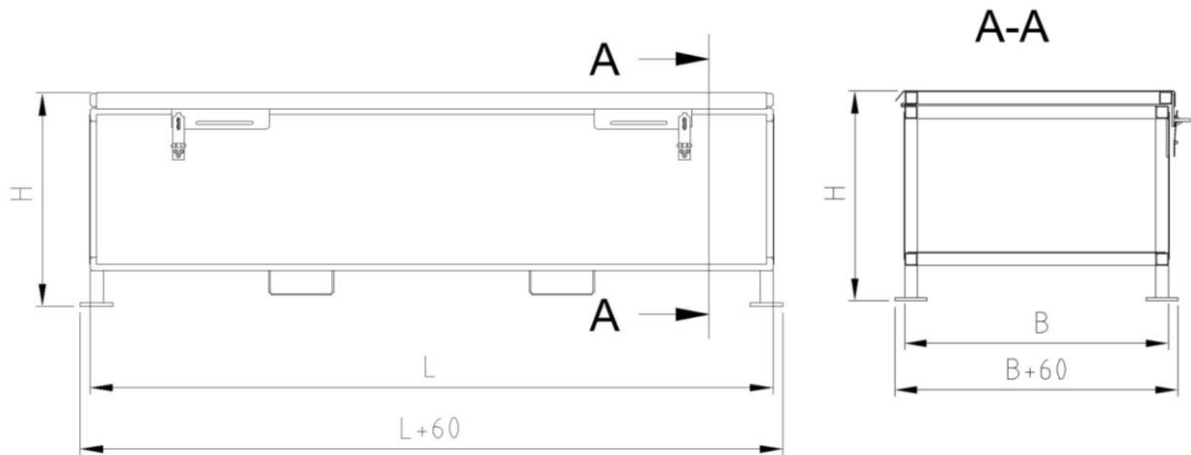


MS 100 L
MS 100 LU

Description	Pallet Height [mm]	Center Post MS100	Max. Number MS100/Pallet [Stück]	Flood Height MS100	
				from [mm]	till [mm]
LT-P02-MS100L-T50-V (800)	830	MS100L	10	150	750
LT-P02-MS100LU-T55-V (800)	830	MS100LU	18	150	750
LT-P02-MS100L-T50-V (1400)	1430	MS100L	10	800	1200

LT-P02-MS100LU-T55-V (1400)	1430	MS100LU	18	800	1200
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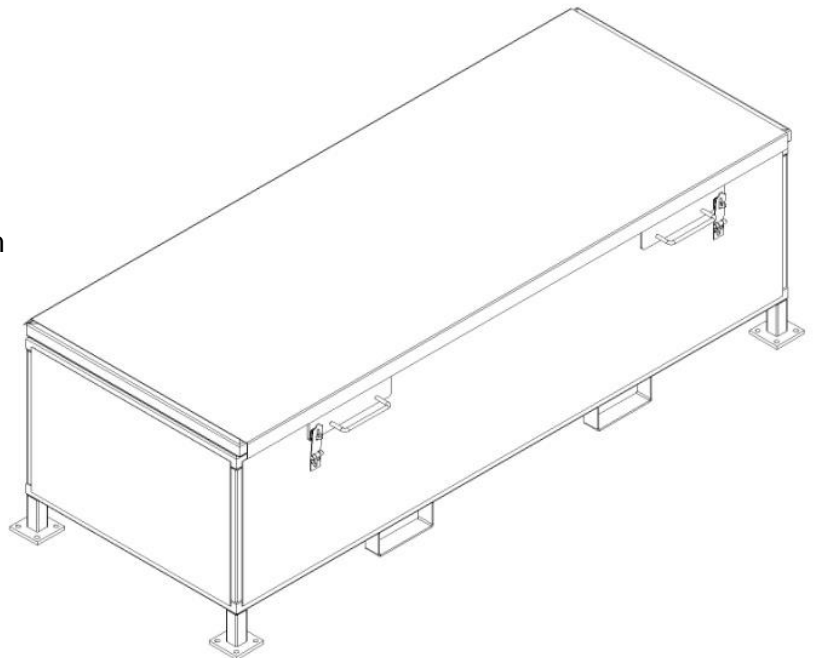
3.2 Storage Box-LK



Standard Dimensions
B x H: 830mm x 660mm

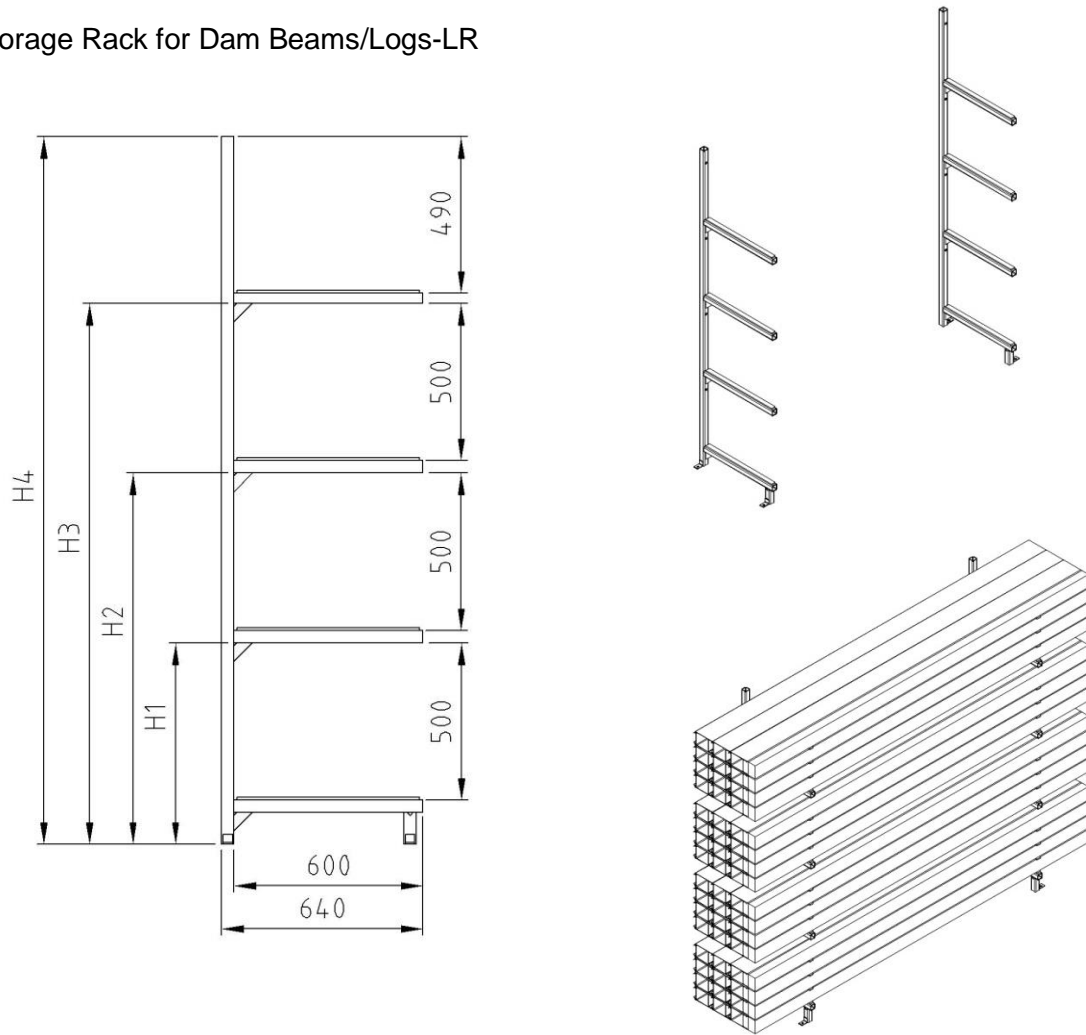
in three different lengths
L: 2.500mm / 3.000mm / 4.000mm

Material:
Subconstruction S235 fv
Planking aluminium sheet d=2mm



Dam Beam	Max. Number Layer	Number DB/Layer	
		Without BD100L	With BD100L
DBAL100x150-2.5	4	5	4
DBAL100x150-5.0	4	5	4
DBAL100x200-2.5	4	4	3
DBAL100x200-3.7	4	4	3

3.3 Storage Rack for Dam Beams/Logs-LR



Standard Dimensions: H1: 640mm; H2: 1180mm; H3: 1720mm; H4: 2250mm

Material: tubular construction S235 hot galvanized

Capacity per shelf (600mm x 500mm):

Dam Beam	Max. Number Layer	Number DB/Layer	
		Without BD100L	With BD100L
DBAL100x150-2,5	4	4	3
DBAL100x150-5,0	4	4	3
DBAL200x150-2,5	4	3	2
DBAL200x150-3,7	4	3	2

3.4 Storage Box

3.4.1 Alu-Box 47 Liters



Description:

- Material thickness 1,0 mm.
- Reinforced edge profile.
- High stability
- Low dead weight.
- Safe and space-saving storage through four stacking edges possible.
- Revolving rubber seal protects against environmental influences like splashing water, dust and unpleasant smells.
- Synthetically covered self fold up safety handles.
- Integrated wrist strap.
- Stainless, weatherproof and temperature-resistant.

Dimensions	
Width outside	582 mm
Height outside	277 mm
Depth outside	385 mm
Width inside	550 mm
Height inside	245 mm
Depth inside	350 mm
Weight	4,5 kg
Volume	47 l

3.4.2 Alu-Box 76 Liter



Description:

- Material thickness 1,0 mm.
- Reinforced edge profile.
- High stability
- Low dead weight.
- Safe and space-saving storage through four stacking edges possible.
- Revolving rubber seal protects against environmental influences like splashing water, dust and unpleasant smells.
- Synthetically covered self fold up safety handles.
- Integrated wrist strap.
- Stainless, weatherproof and temperature-resistant.

Dimensions	
Width outside	592 mm
Height outside	409 mm
Depth outside	388 mm
Width inside	560 mm
Height inside	380 mm
Depth inside	353 mm
Weight	5,3 kg
Volume	76 l

3.4.3 Alu-Box 91 Liter



Description:

- Material thickness 1,0 mm.
- Reinforced edge profile.
- High stability
- Low dead weight.
- Safe and space-saving storage through four stacking edges possible.
- Revolving rubber seal protects against environmental influences like splashing water, dust and unpleasant smells.
- Synthetically covered self fold up safety handles.
- Integrated wrist strap.
- Stainless, weatherproof and temperature-resistant.

Dimensions	
Width outside	782 mm
Height outside	379 mm
Depth outside	385 mm
Width inside	750 mm
Height inside	350 mm
Depth inside	350 mm
Weight	6,1 kg
Volume	91 l

3.5 Equipment

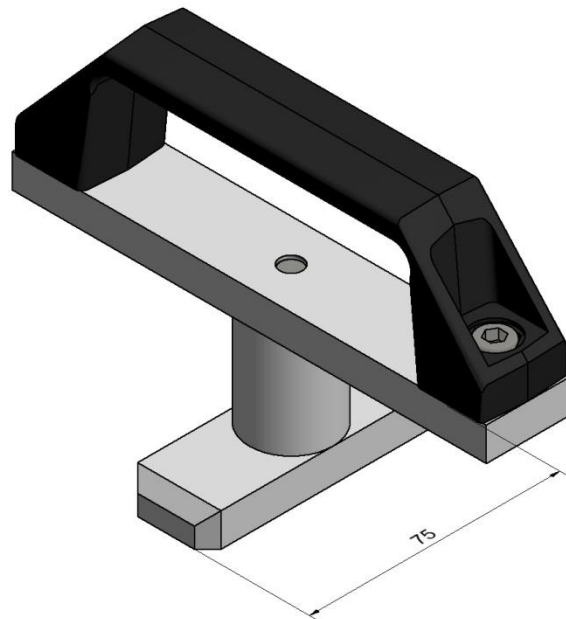
3.5.1 Tools



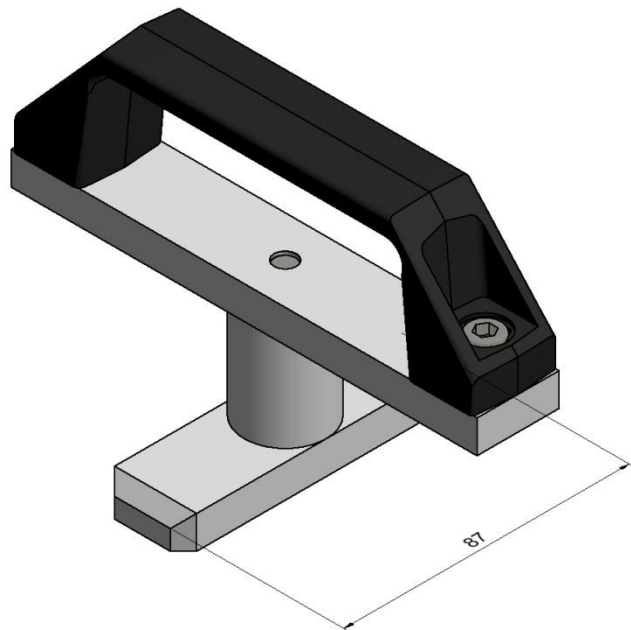
System	Usage	Tool	
HW-W100L/LU	Pressing Tool	Ratchet ½"	Hexagon Socket SW 8mm
HW-W100L/LU	Cover	Ratchet ½"	Hexagon Socket SW 8mm
HW-W100L	Cylinder Head Center Post Bolt	Ratchet ½"	Hexagon Socket SW 19mm
HW-W100L	Anchor Plate Dummy Bolt	Ratchet ½"	Hexagon Socket SW 19mm
HW-W100LU	Cylinder Head Center Post Bolt	Ratchet ½"	Hexagon Socket SW 19mm
HW-W100LU	Anchor Plate Dummy Bolt	Ratchet ½"	Hexagon Socket SW 14mm

3.5.2 Extracting Tool

AW100-75



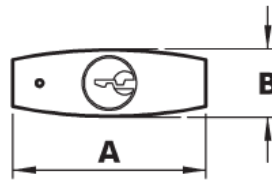
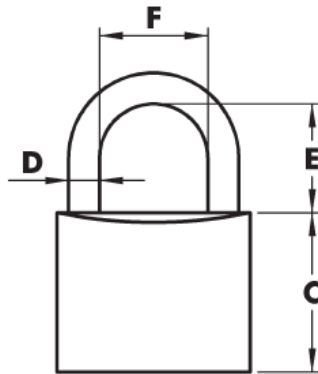
AW100-87



Tool	Usage/Log
AW100-75	Dam Beam DBAL 100x150-2.5
AW100-75	Dam Beam DBAL 100x200-2.5
AW100-75	Dam Beam DBAL 100x200-3.7
AW100-87	Dam Beam DBAL 100x150-5.0

3.5.3 Padlock

Mango 30GS W1-30, corresponding with IBS Pressing Tool lockable, Alu-Box, Storage Box



Dimensions:

A	30	mm
B	12,8	mm
C	28,5	mm
D	5	mm
E	17,0	mm
F	16,0	mm



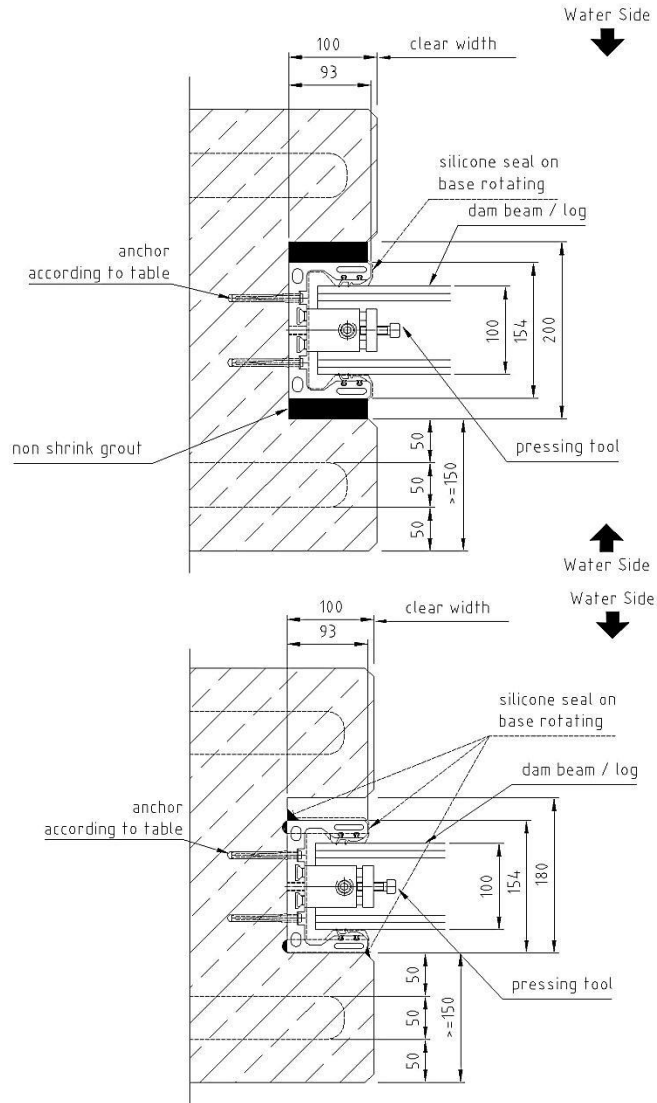
Description:

- Keyed alike
- Material: Casing: brass massive, Inside stainless
Bail: steel hardened, chromed
Key: brass nickel plated
- Scope of Supply: 2 keys per lock

4 End Post – Mounting Types

4.1 Mounting Types in Recess and First Concrete

4.1.1 Type 1 in Rebate – E100L T01-Post Height



Mounting Tolerance:

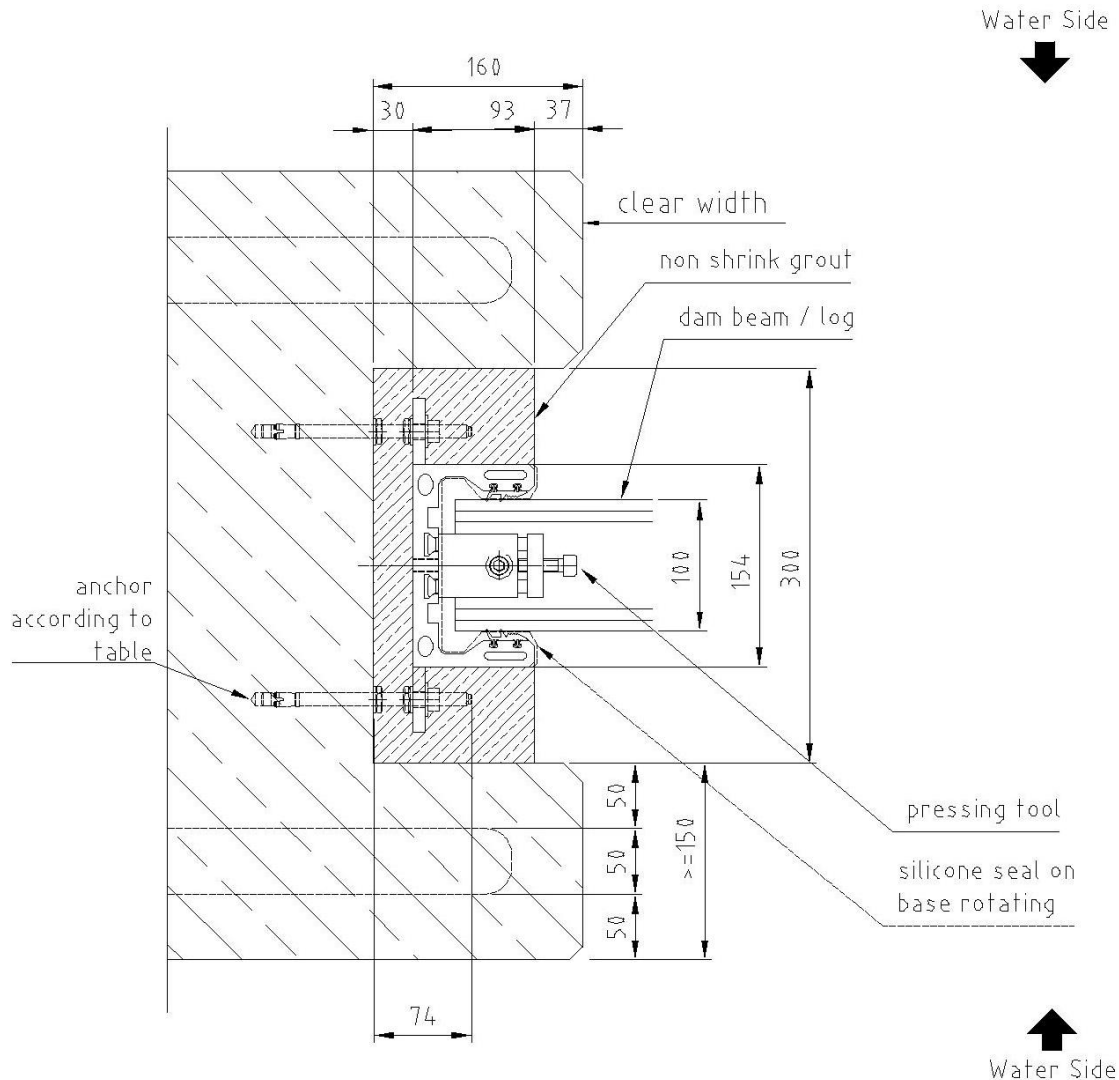
Frame Assembly

- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning

Wall	Area	Height	Width	Anchorage
Concrete	As per Dam Beam/Log Deflection Graph			Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, washer DIN 9021 5.3 SS 304

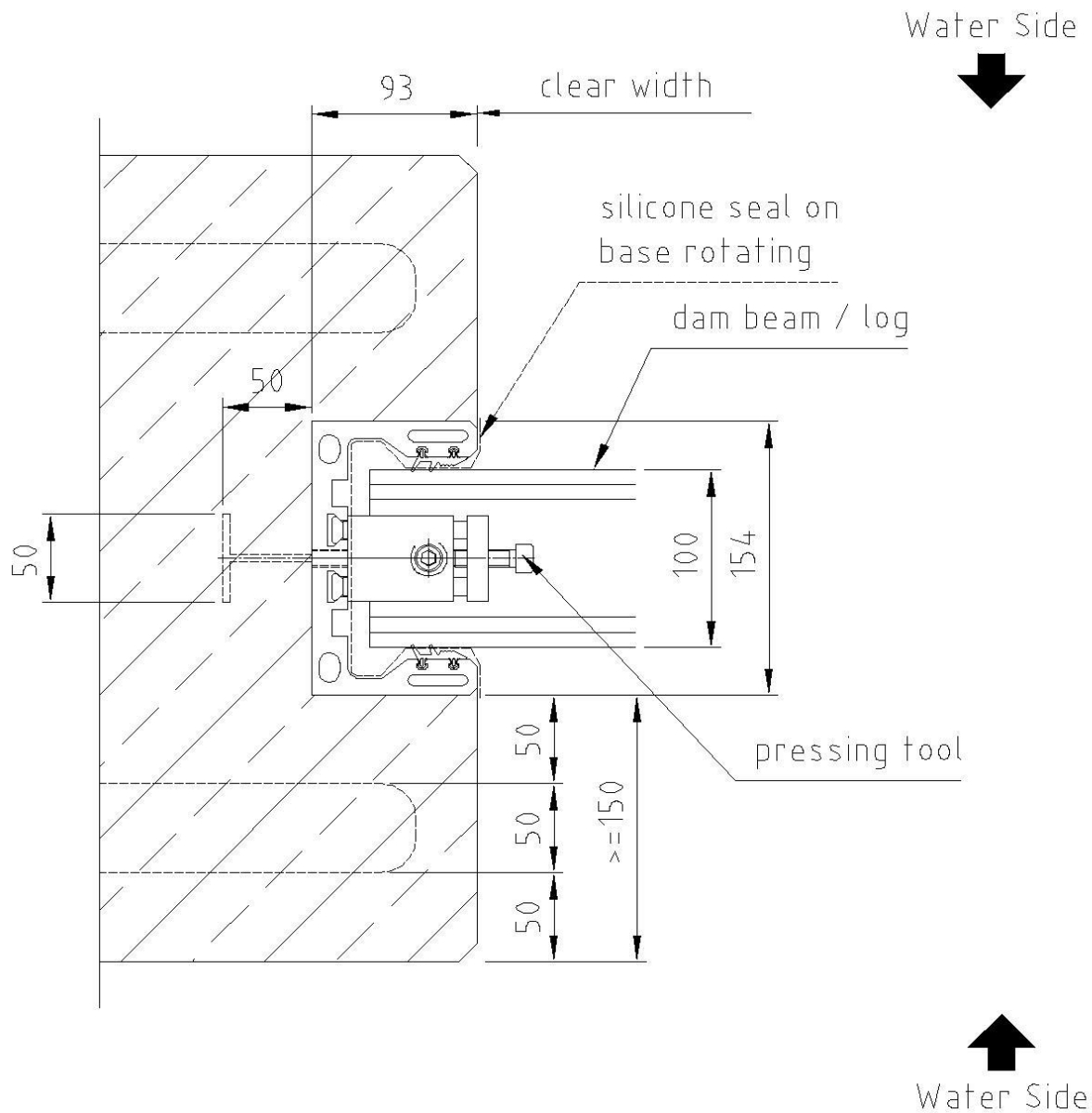
4.1.2 Type 4 in Rebate (End Post > 2,5m) – E100L T04-Post Height



Mounting Tolerance:
Frame Assembly
- In Axis +/- 3mm
- Vertically +/- 3mm
- Total max. 6mm

Dimensioning				
Wall	Area	Height	Width	Anchorage
Concrete	As per Dam Beam/Log Deflection Graph			HST M10x160/80
Full Brick				HIT-V M10x190, fast curing mortar HFX, nut DIN 439 M10 8.8 g.v.. washer DIN 125 A10.5 g.v.
Perforated Brick				HIT-V M10x190, fast curing mortar HFX, nut DIN 439 M10 8.8 g.v., hexagon nut DIN 439 M10 8.8 g.v., washer DIN 125 A10.5 g.v.

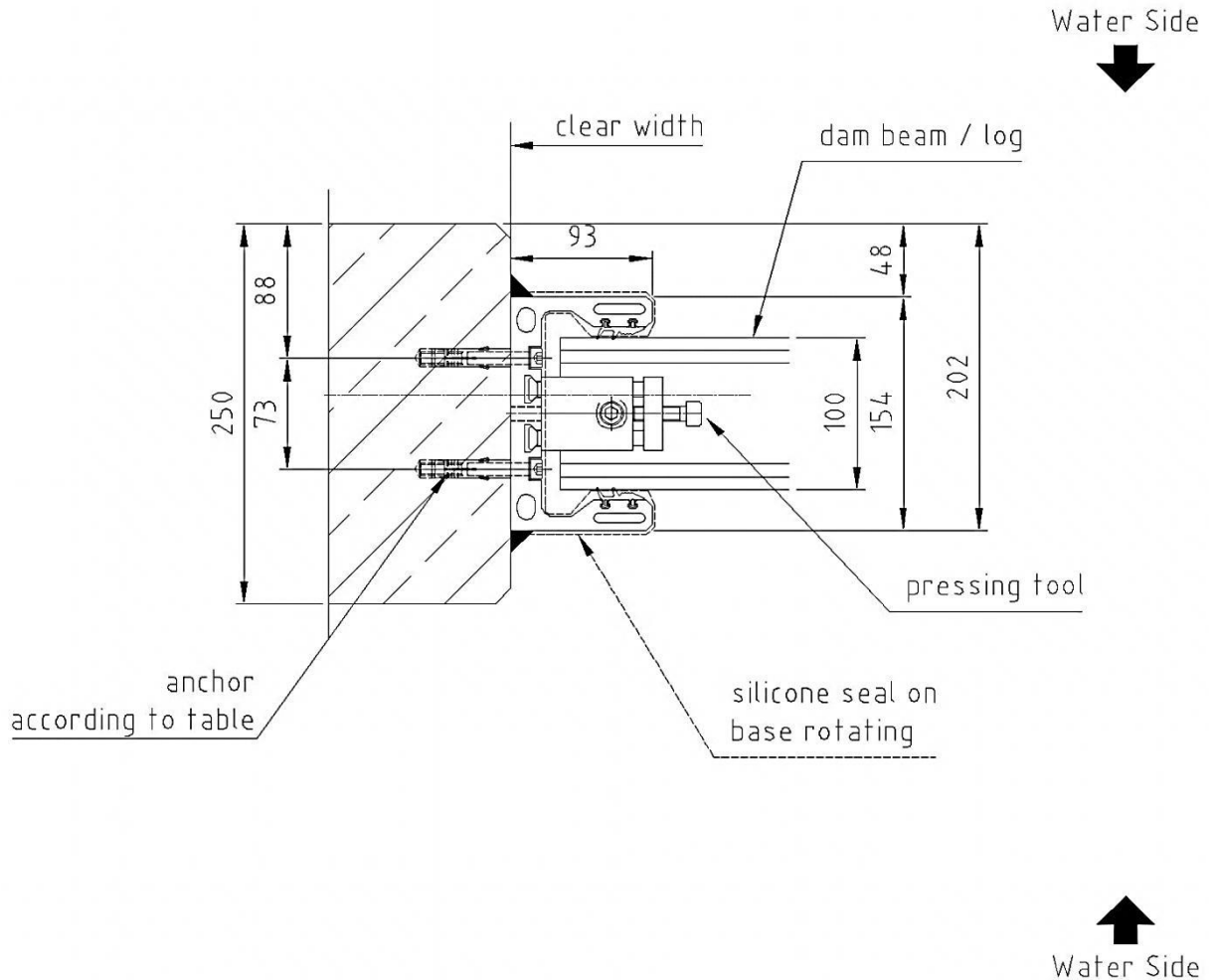
4.1.3 Type 6 in Concrete – E100L T06-Post Height



Mounting Tolerance:	Dimensioning			
Frame Assembly	Wall	Area	Height	Width
- In Axis + / - 3mm	Concrete	As per Dam Beam/Log Deflection Graph		
- Vertically + / - 3mm				
- Total max. 6mm				

4.2 Mounting Types – Side Wall Mounted

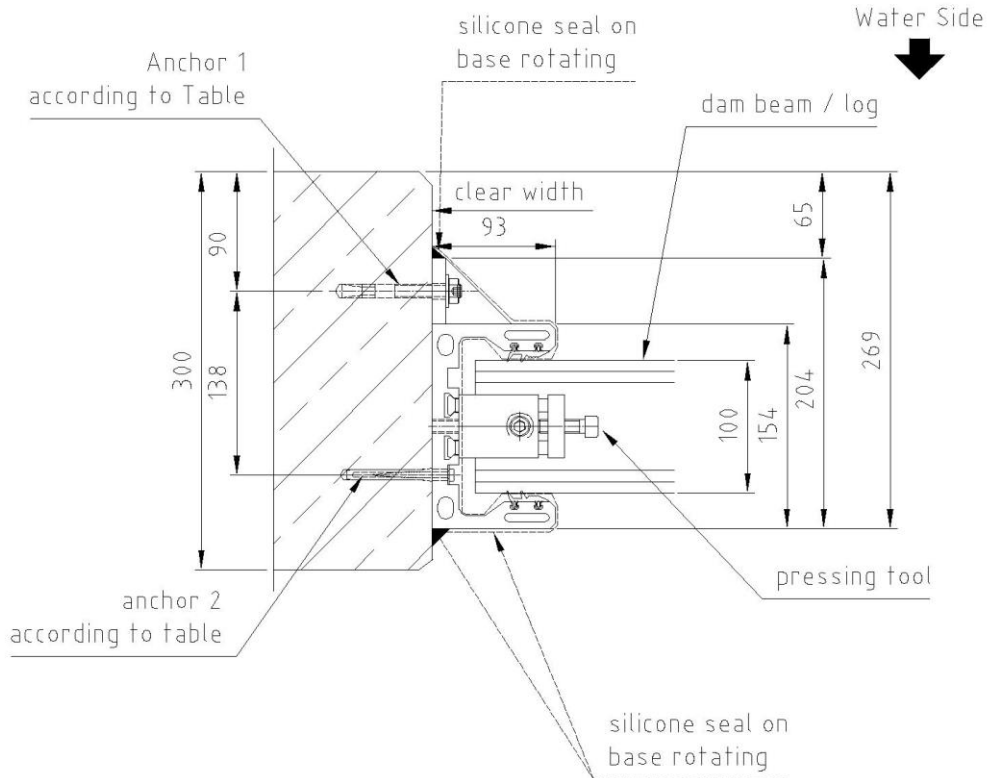
4.2.1 Type 8 side wall mounted – E100L T08-Post Height



Mounting Tolerance:
Frame Assembly
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning				
Wall	Area	Height	Width	Anchorage
Concrete	0-4 m ²	Max 1m	Max 4m	Fischer SLM 8N SS 316, Screw DIN 912 M8x70 SS 304
Full Brick	0-3 m ²			Insert HIS RN M8x90, fast curing mortar HFX, Screw DIN 912 M8x35 SS 304
Perforated Brick	0-2 m ²			Insert HIS RN M8x90, fast curing mortar HFX, Screen tube HIT S16x85, Screw DIN 912 M8x35 SS 304

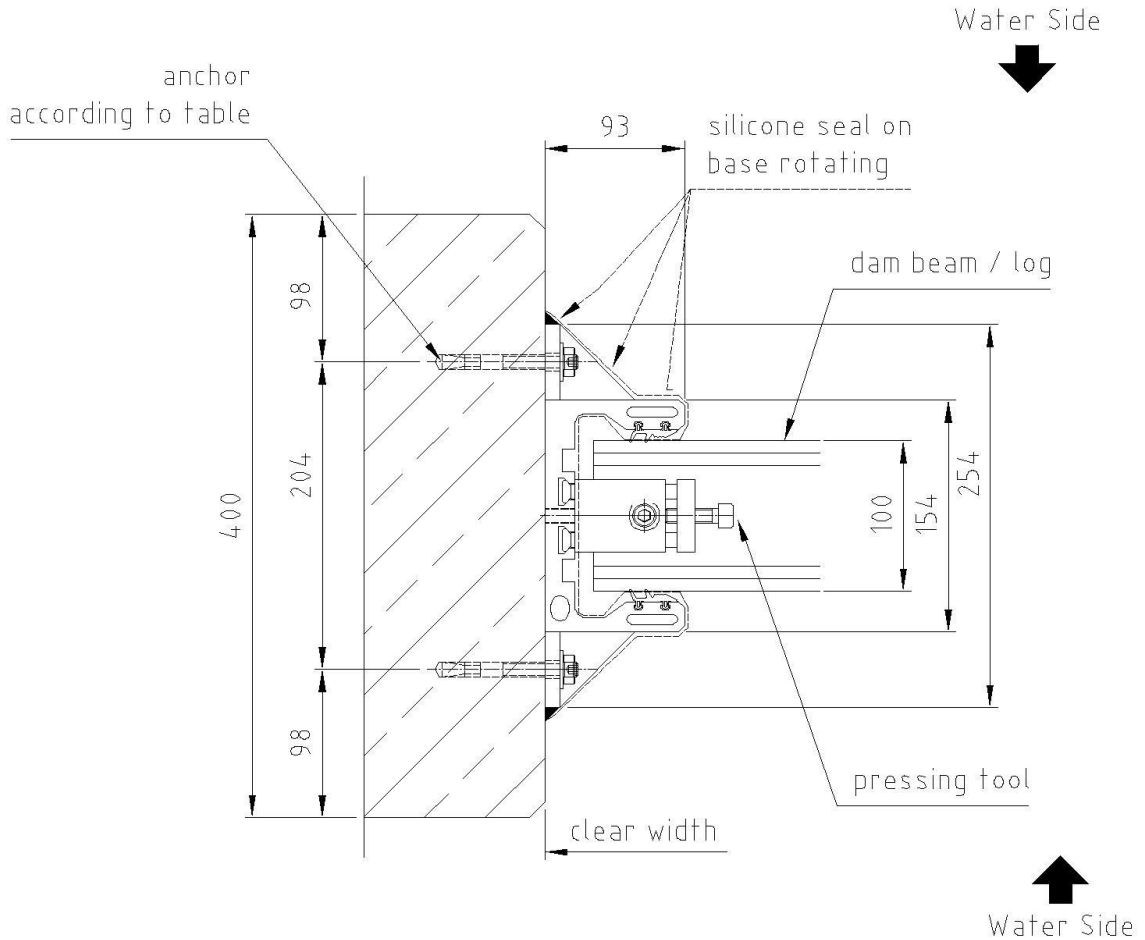
4.2.2 Type 9 side wall mounted – E100L T09-R / L - Post Height



Mounting Tolerance:
Frame Assembly
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning				
Wall	Area	Height	Width	Anchorage 1
Concrete	4-5 m ²	Max 1,5m	Max 4m	HILTI HST-R M10x90/10
Full Brick	3-4 m ²			Anchor HIT-VR M10x95, fast curing mortar HFX,
Perforated Brick	2-3 m ²			Anchor HIT-VR M10x95, fast curing mortar HFX, screen tube HIT-SC 16x85
Anchorage 2				
Concrete	Fischer SX M 8x65, Screw DIN 571 M5x60 SS304, washer DIN 90215.3 SS304			
Full Brick	Fischer SX M 8x65, Screw DIN 571 M5x60 SS304, washer DIN 90215.3 SS304			
Perforated Brick	Fischer SX M 8x65, Screw DIN 571 M5x60 SS304, washer DIN 90215.3 SS304			

4.2.3 Type 3 side wall mounted – E100L T03-Post Height



Mounting Tolerance:

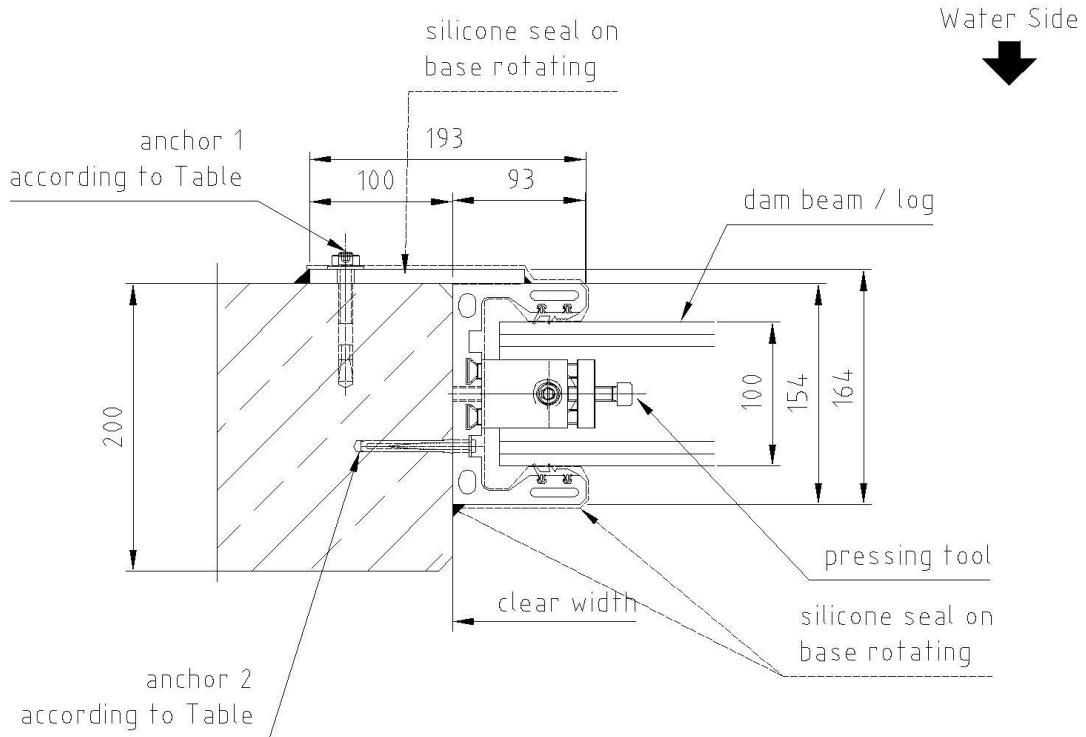
Frame Assembly

- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning

Wall	Area	Height	Width	Anchorage
Concrete	5-6 m ²	Max 2m	Max 4m	HILTI HST-R M10x90/10
Full Brick	4-5 m ²			Anchor HIT-VR M10x95, Fast curing mortar HFX,
Perforated Brick	3-4 m ²			Anchor HIT-VR M10x95, Fast curing mortar HFX, Screen tube HIT-SC 16x85

4.2.4 Type 13 side wall mounted – E100L T13-R / L – Post Height



Mounting Tolerance:

Frame Assembly

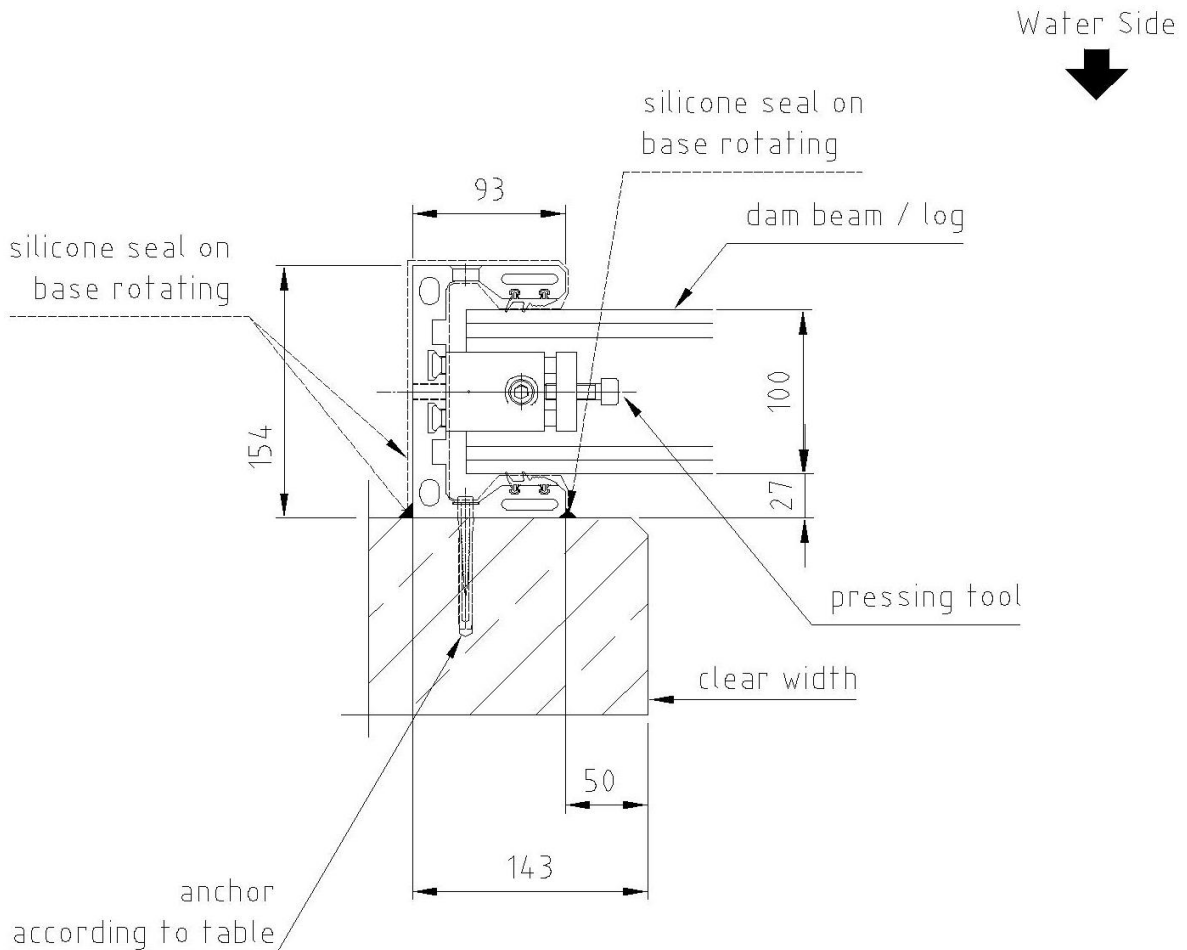
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning

Wall	Area	Height	Width	Anchorage 1
Concrete	4-5 m ²	Max 1,15m	Max 4m	HILTI HST-R M10x90/10
Full Brick	3-4 m ²			Anchor HIT-VR M10x95, Fast curing mortar HFX
Perforated Brick	2-3 m ²			Anchor HIT-VR M10x95, Fast curing mortar HFX, Screen tube HIT-SC 16x85
Anchorage 2				
Concrete	Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304			
Full Brick	Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304			
Perforated Brick	Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304			

4.3 Mounting Types Wall mounted on-seating

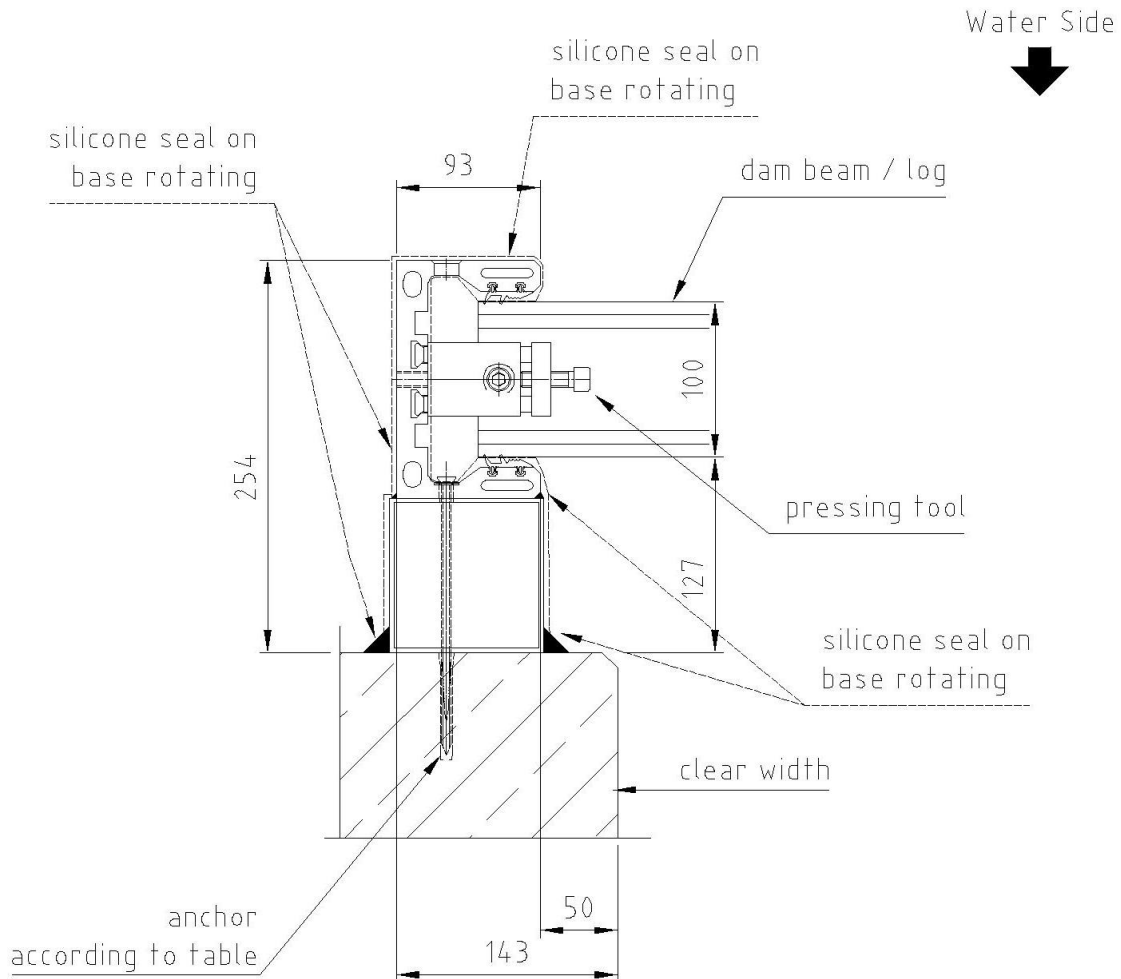
4.3.1 Type 16 wall mounted on-seating – E100L T16-R / L – Post Height



Mounting Tolerance:
Frame Assembly
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning				
Wall	Area	Height	Width	Anchorage
Concrete	As per Dam Beam/Log Deflection Graph			Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304
Full Brick				Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304
Perforated Brick				Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 9021 5.3 SS304

4.3.2 Type 24 wall mounted on-seating (clearance 100mm) – E100L T24-R / L - Post Height

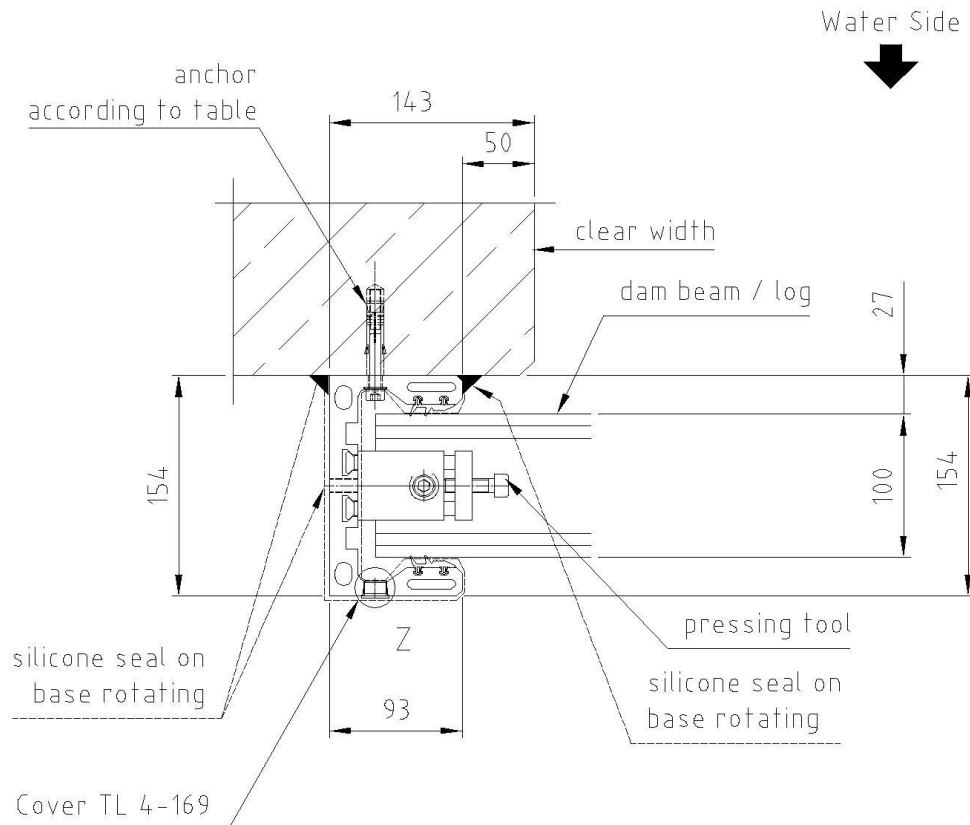


Mounting Tolerance:
Frame Assembly
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

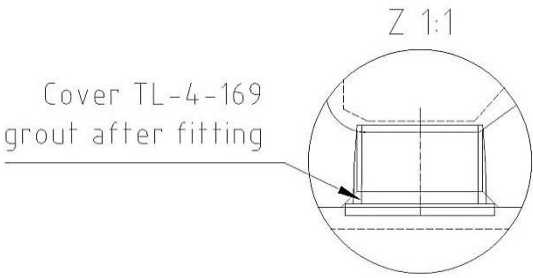
Dimensioning				
Wall	Area	Height	Width	Anchorage
Concrete	As per Dam Beam/Log Deflection Graph			Screw Assy 3.0 countersunk head AW30 6x180 SS304, washer DIN 125-1A 8.4 SS304, Fischer SX 8x65
Full Brick				Screw Assy 3.0 countersunk head AW30 6x180 SS304, washer DIN 125-1A 8.4 SS304, Fischer SX 8x65
Perforated Brick				Screw Assy 3.0 countersunk head AW30 6x180 SS304, washer DIN 125-1A 8.4 SS304, Fischer SX 8x65

4.4 Mounting Types wall mounted off-seating

4.4.1 Type 5 wall mounted off-seating – E100L T05-R / L - Post Height



Mounting Tolerance:
Frame Assembly
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm



Dimensioning				
Wall	Area	Height	Width	Anchorage
Concrete	0-3 m ²	Max 1m	Max 3m	Fischer SLM 8N SS316, screw DIN 912 M8x70 SS304
Full Brick	0-1,5 m ²			Insert HIS RN M8x90, Fast curing mortar HFX, screw DIN 912 M8x70 SS304
Perforated Brick	0-1 m ²			Insert HIS RN M8x90, Fast curing mortar HFX, Screen tube HIT SC16x85, Screw DIN 912 M8x35 SS 304

Contact:

IBS Industriehallen und Brandschutztechnik
Planungs- und Vertriebsgesellschaft mbH
Am Gemeindewald 4-6
86672 Thierhaupten
Germany

Tel: +49 8271 – 8176-0

Fax: +49 8271 – 8176-76

www.ibs-technik.de

info@ibs-technik.de