

Product Catalogue

HW-B50H

HW-W50L

HW-W50LU



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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

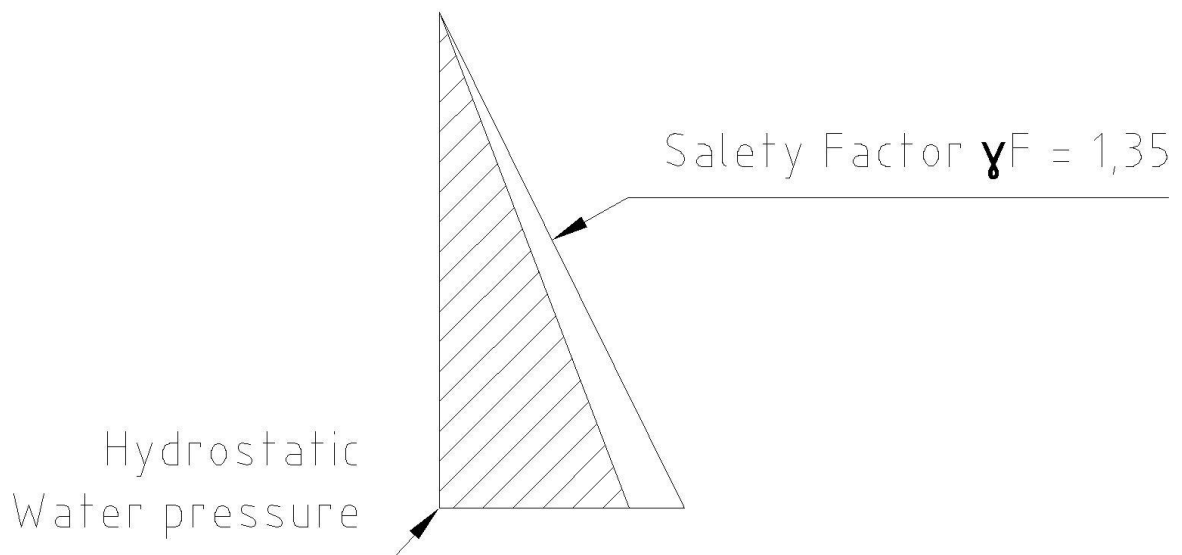
DIN EN1999-1-1: 2010-05: Eurocode 9: Design of aluminium structures Part 1-1: General structural rules

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

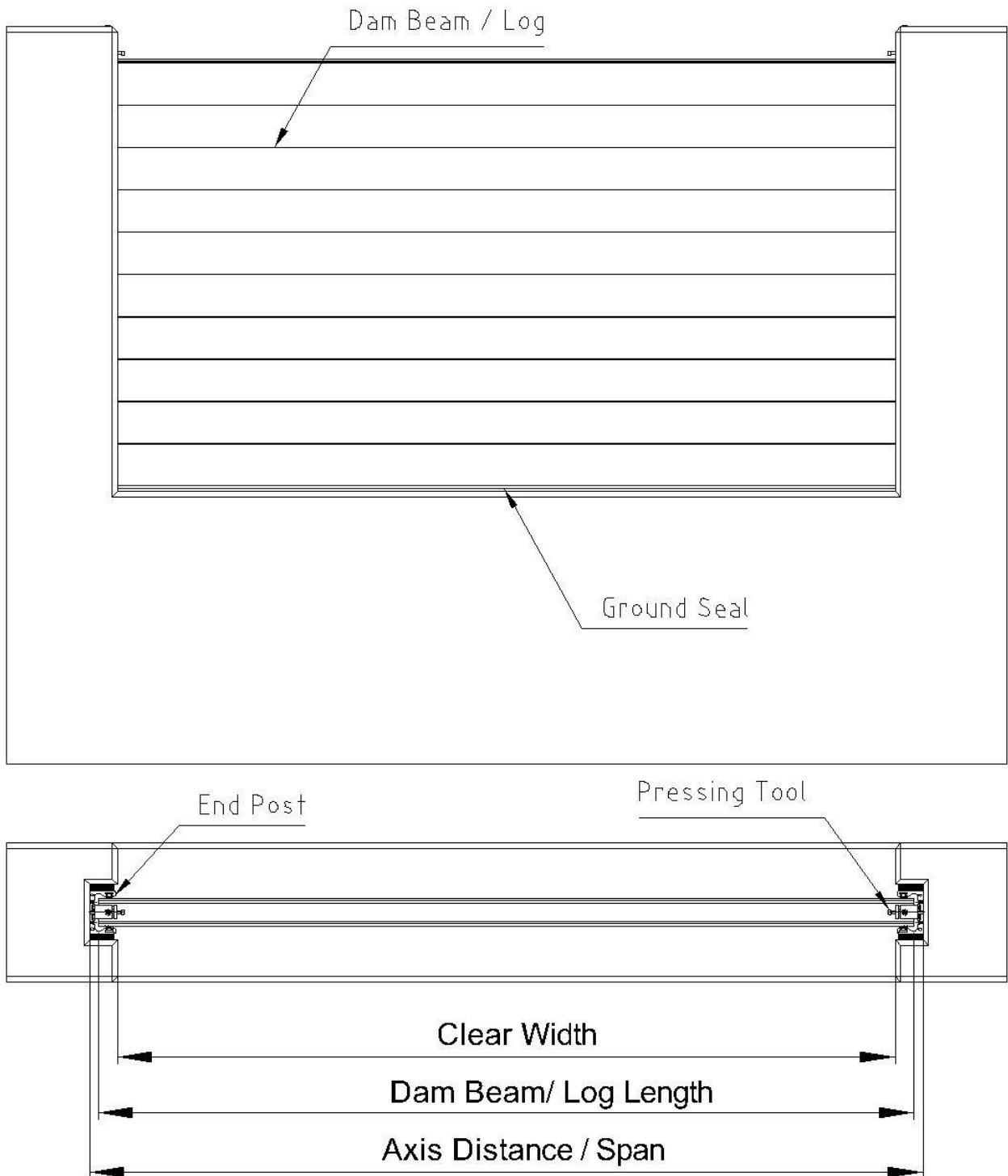
1.2 Load Criteria



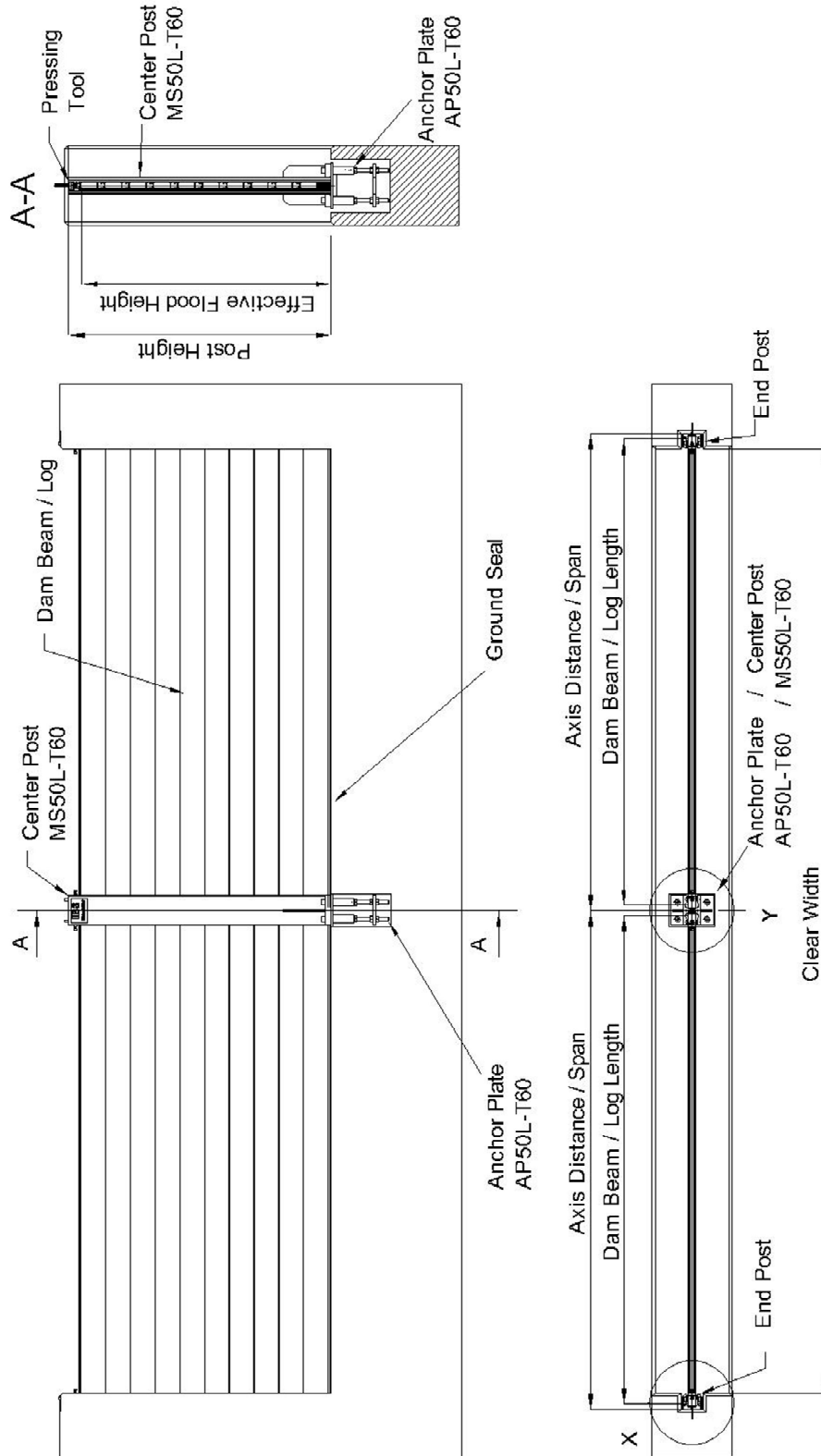
Specific Weight Water: 10kN/m³.

1.3 Definition of Terms

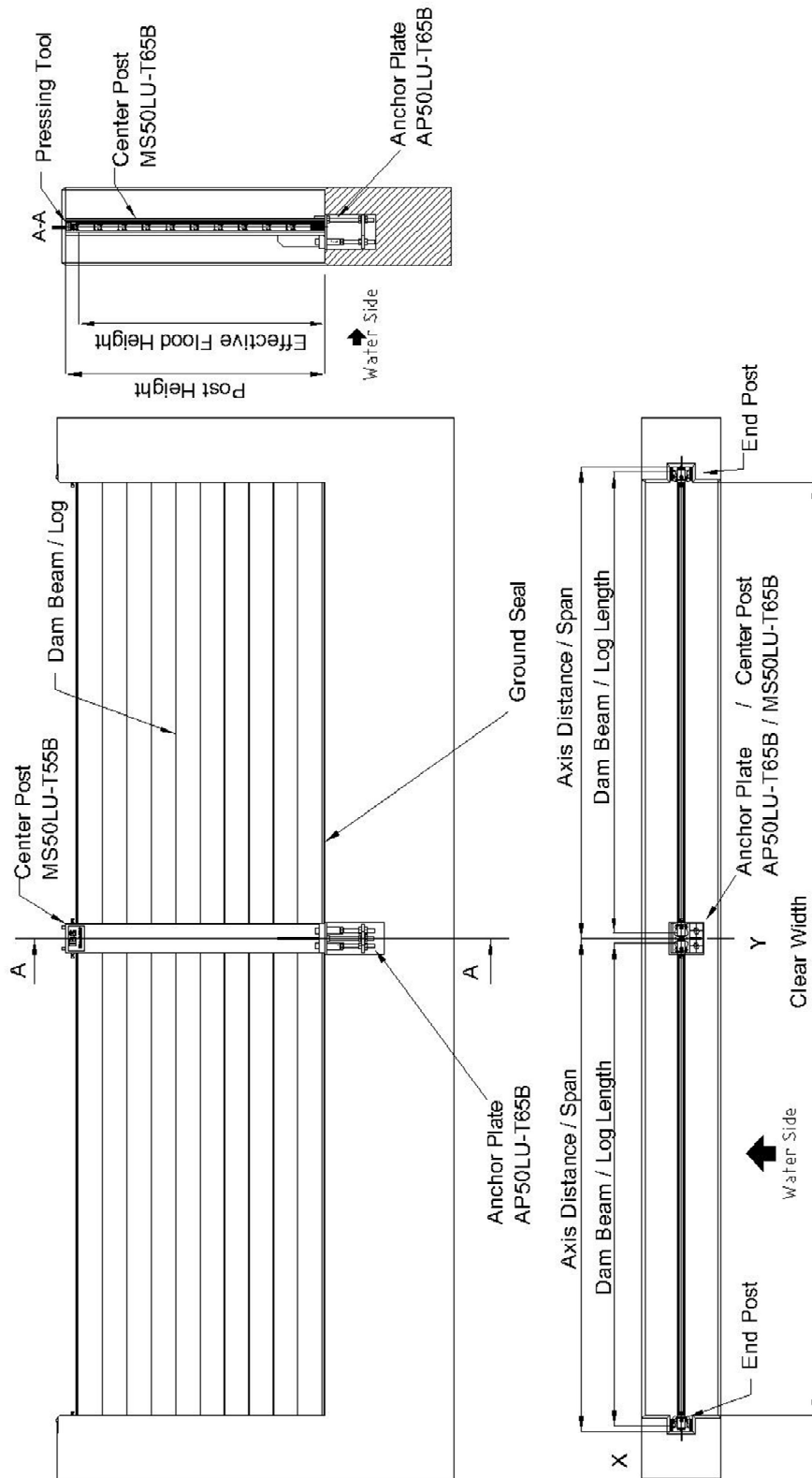
1.3.1 Flood Barrier HW-B50H

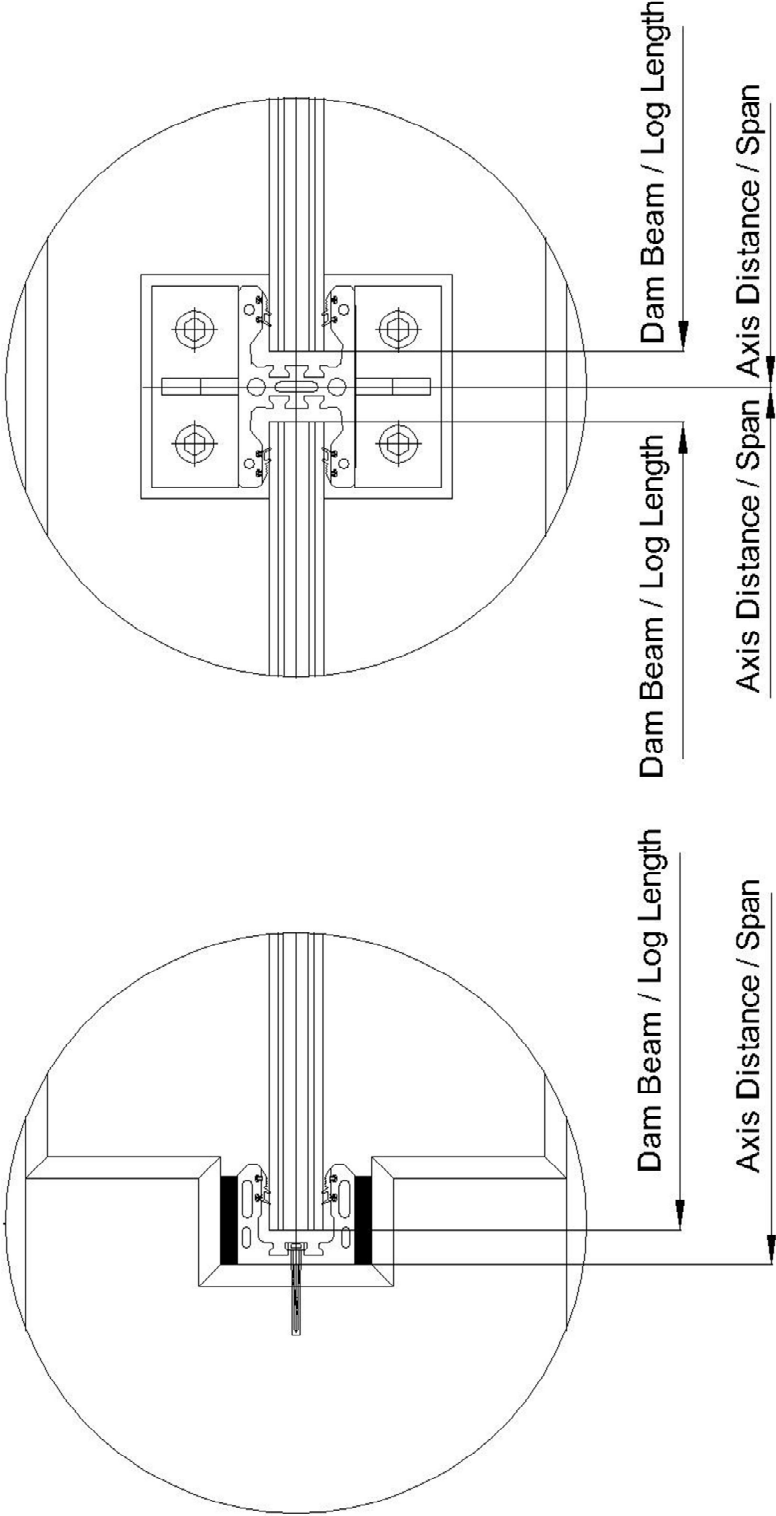


1.3.2 Flood Protection Walls HW-W50L



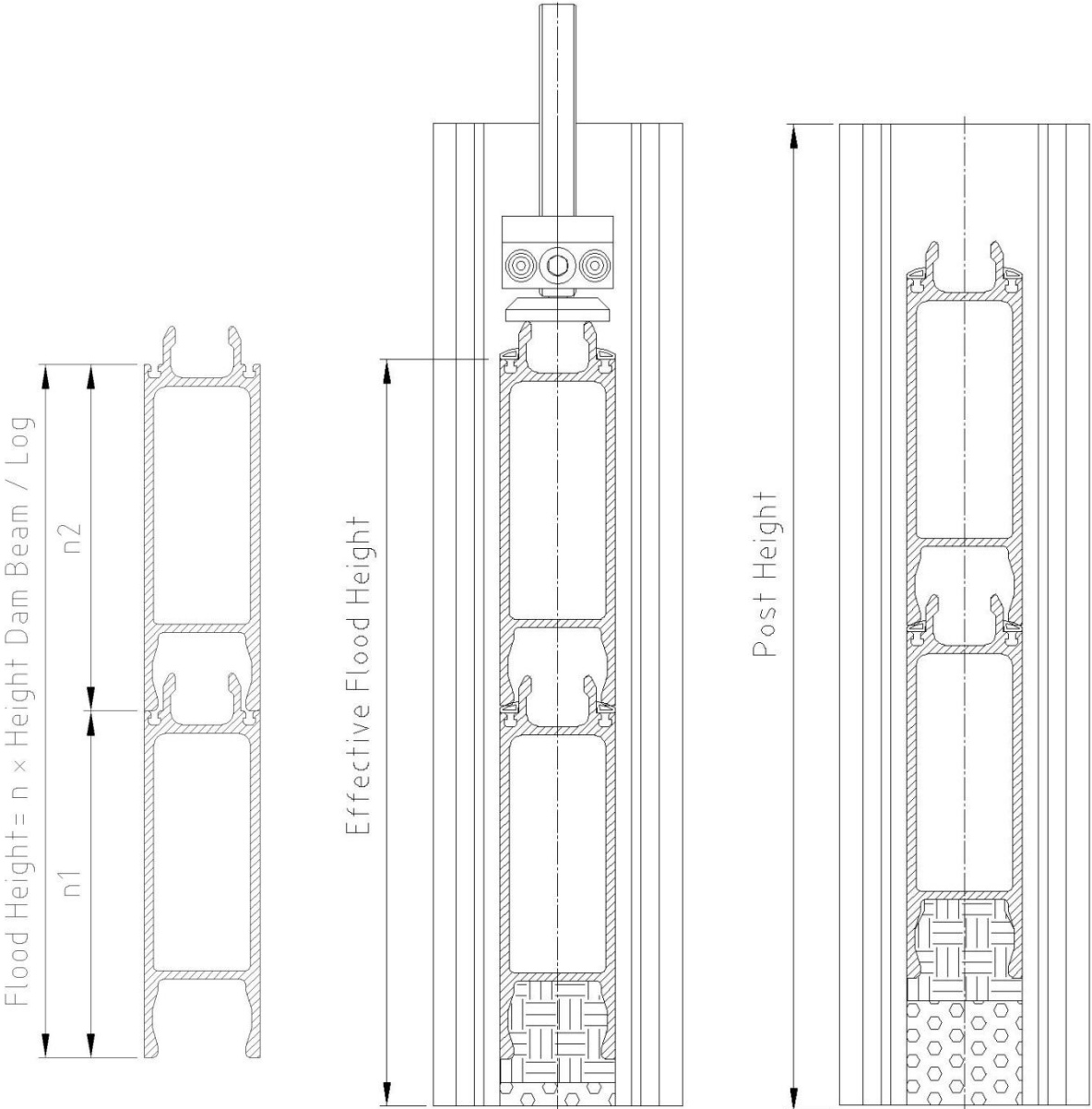
1.3.3 Flood Protection Walls HW-W50LU





1.3.4 Axis Distance and Log Length

1.3.5 Flood Height, effective Flood Height, Post Height



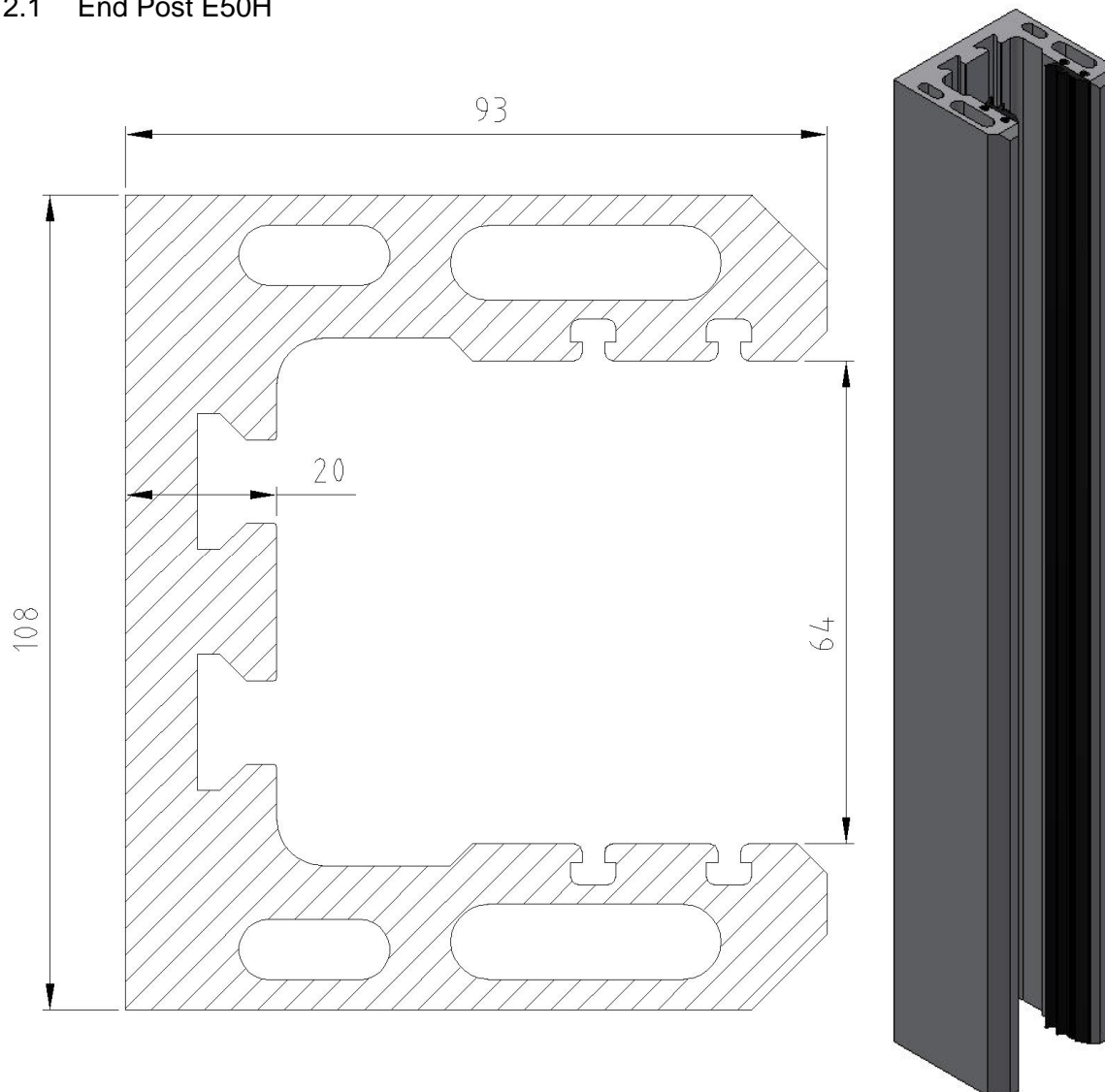
| DBAL50x150-4,0 | | | |
|-----------------------------|----------------------|--------------------------------|---------------------|
| NUMBER OF DAM BEAMS/LOGS | FLOOD HEIGHT [MM] | EFFECTIVE FLOOD HEIGHT [MM] | POST HEIGHT [MM] |
| 1 | 150 | 165 | 280 |
| 2 | 300 | 317 | 425 |
| 3 | 450 | 469 | 580 |
| 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 |

| DBAL50x200-2,0 | | | |
|---------------------------------|--------------------------|------------------------------------|-------------------------|
| 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 | 2150 |
| 11 | 2200 | 2235 | 2355 |
| 12 | 2400 | 2437 | 2570 |
| 13 | 2600 | 2639 | 2760 |
| 14 | 2800 | 2841 | 2965 |
| 15 | 3000 | 3043 | 3180 |

| DBAL50x300-4,0 | | | |
|----------------------------------|--------------------------|------------------------------------|-------------------------|
| NUMBERS OF DAM BEAMS/LOGS | FLOOD HEIGHT [MM] | EFFECTIVE FLOOD HEIGHT [MM] | POST HEIGHT [MM] |
| 1 | 300 | 315 | 425 |
| 2 | 600 | 617 | 735 |
| 3 | 900 | 919 | 1040 |
| 4 | 1200 | 1221 | 1345 |
| 5 | 1500 | 1523 | 1650 |
| 6 | 1800 | 1825 | 1955 |
| 7 | 2100 | 2127 | 2265 |
| 8 | 2400 | 2429 | 2570 |
| 9 | 2700 | 2731 | 2875 |
| 10 | 3000 | 3033 | 3180 |

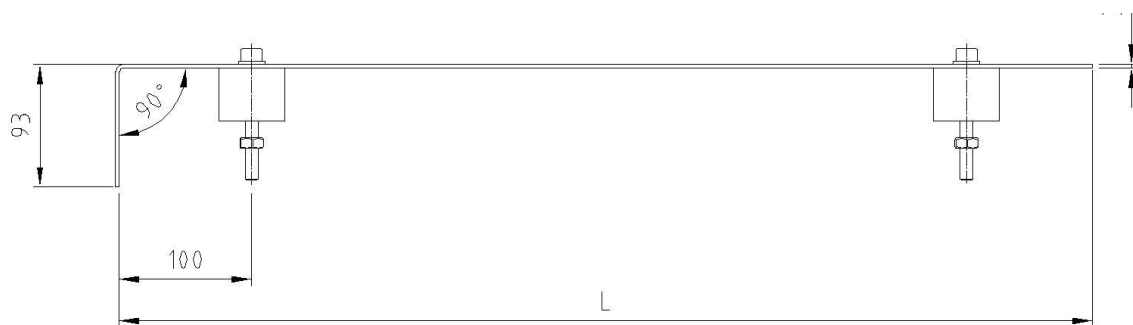
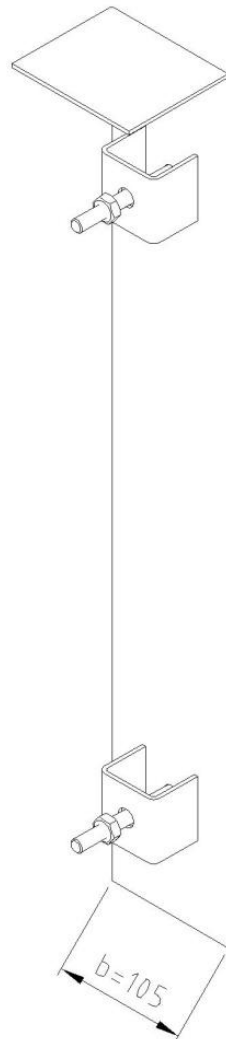
2 System Components

2.1 End Post E50H



| PROFILE CHARACTERISTICS | | |
|-------------------------|-------------------|----------------|
| Height | mm | 108 |
| Width | mm | 93 |
| Thickness | mm | 20 |
| Cross-sectional area | cm ² | 37,7 |
| Weight per linear m | kg/m | 10,5 |
| Material | - | EN AW-6063-T66 |
| Moment of inertia | cm ⁴ | 554 |
| Modulus of elasticity E | N/mm ² | 70.000 |

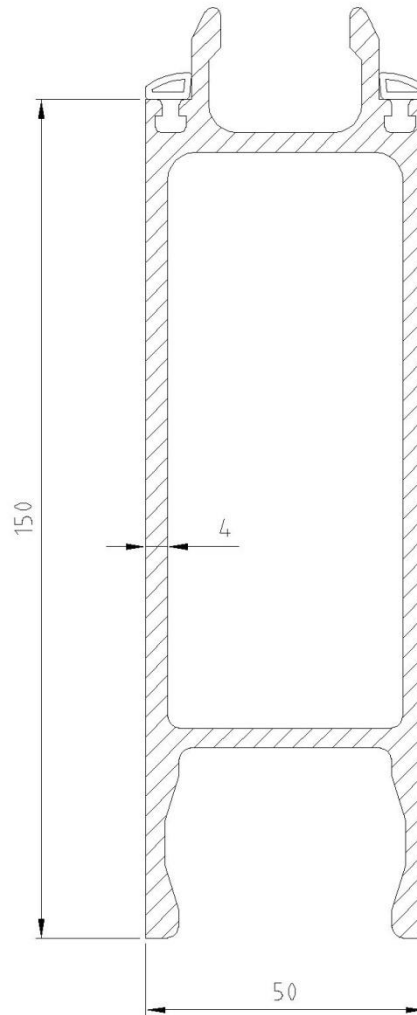
2.2 Cover for End Post AD50H



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

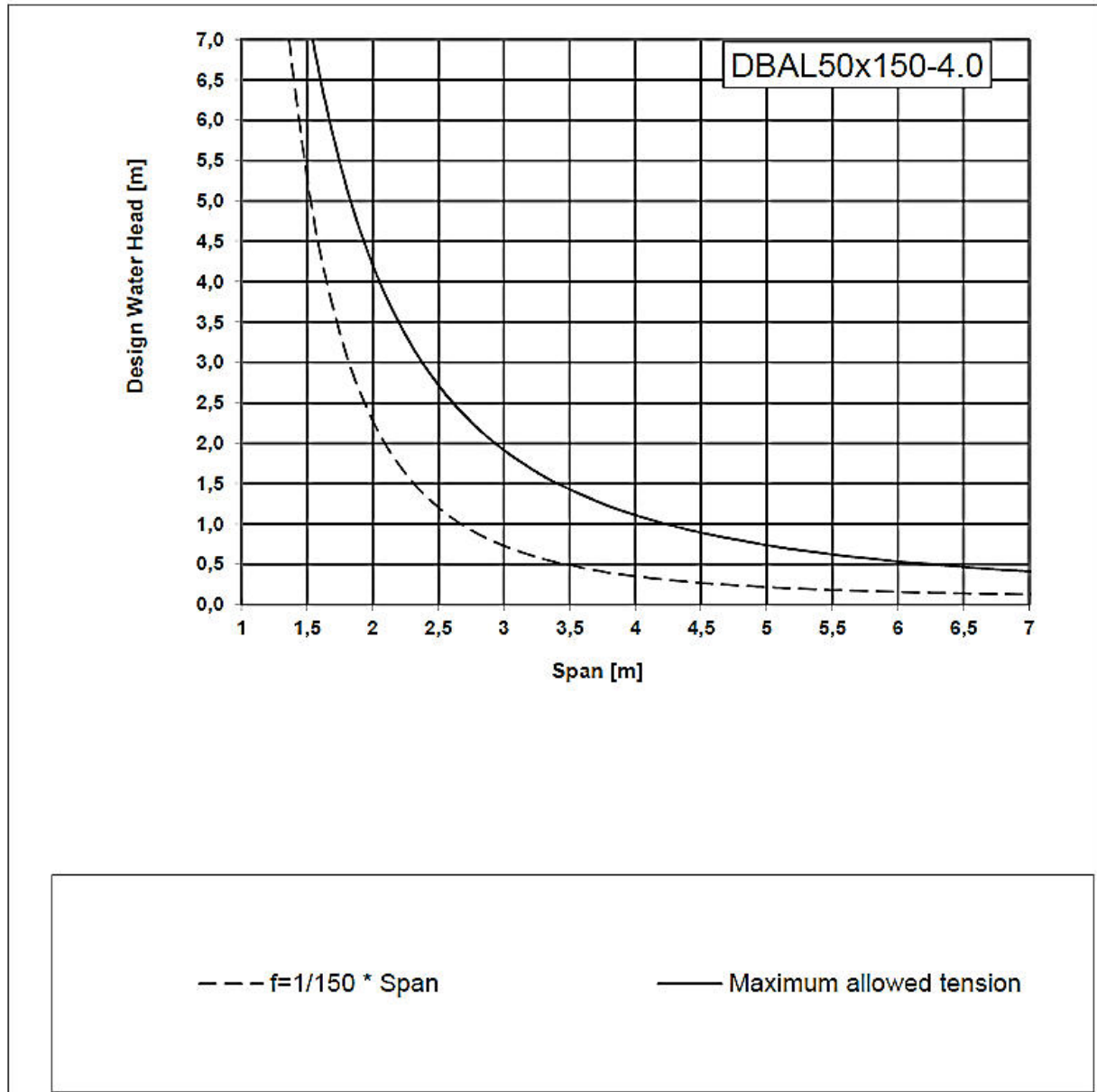
2.3 Dam Beam/Logs

2.3.1 DBAL50x150-4.0

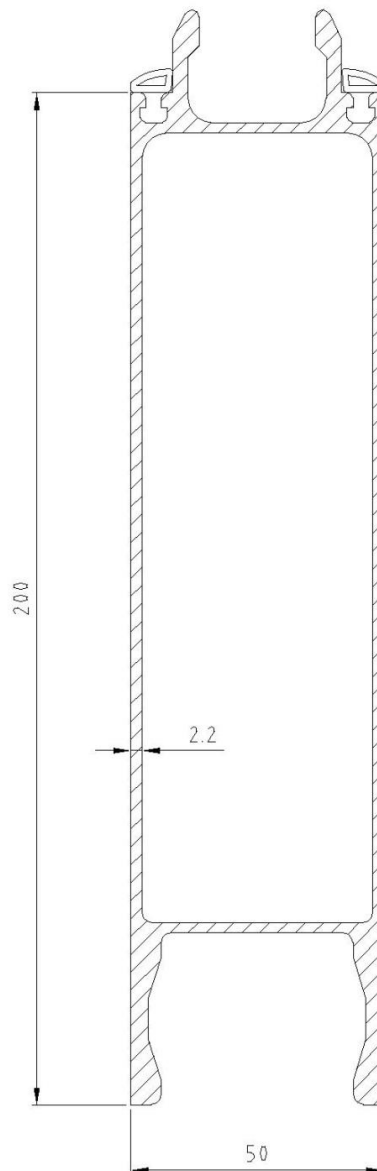


| PROFILE CHARACTERISTICS | | |
|-------------------------|-------------------|----------------|
| Height | mm | 150 |
| Width | mm | 50 |
| Thickness | mm | 4 |
| Cross-sectional area | cm ² | 17,3 |
| Weight per linear m | kg/m | 4,6 |
| Material | - | EN AW-6063-T66 |
| Moment of inertia | cm ⁴ | 73,8 |
| Modulus of elasticity E | N/mm ² | 70.000 |

Deflection Graph DBAL50x150-4.0

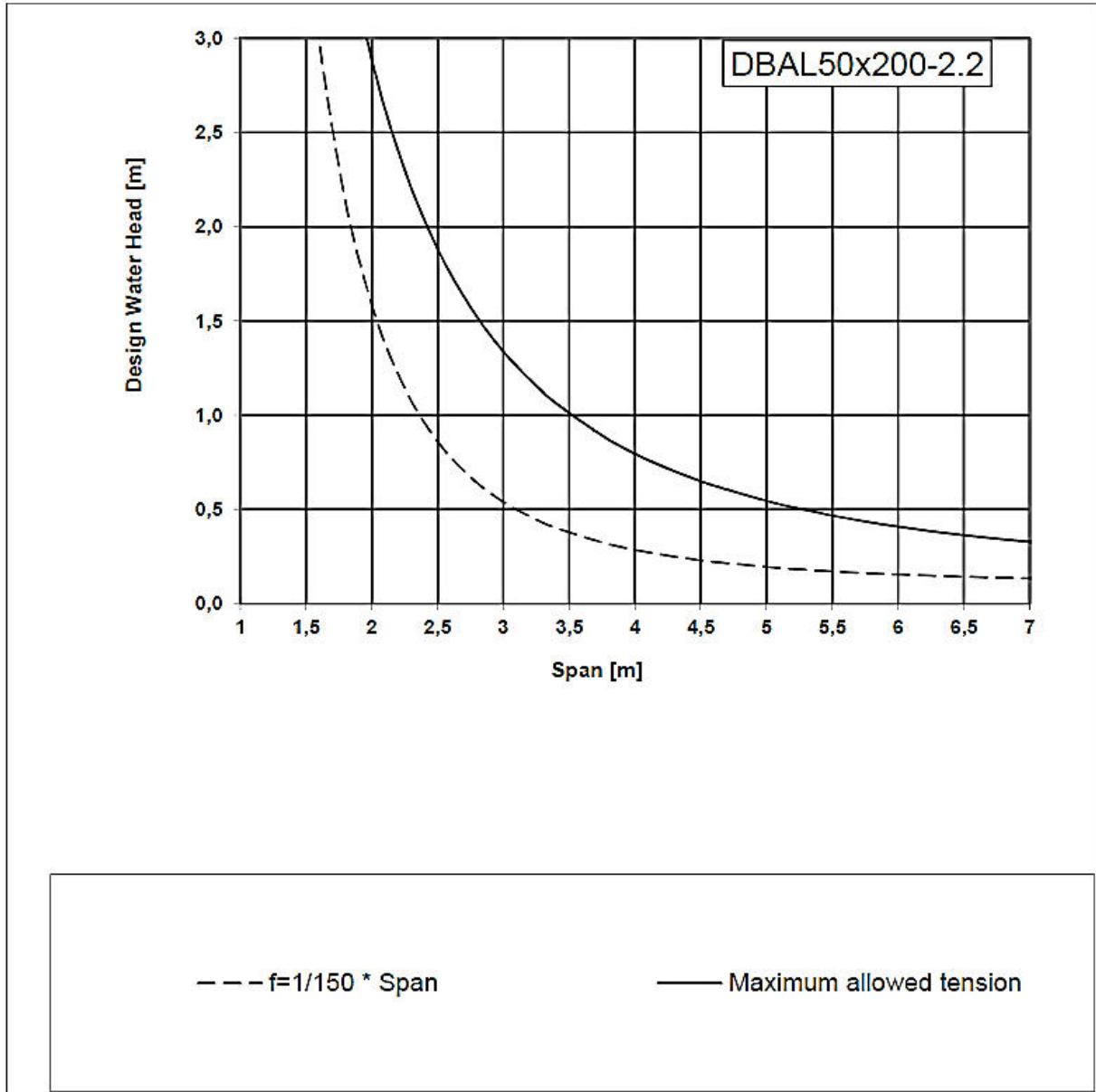


2.3.2 DBAL50x200-2.2

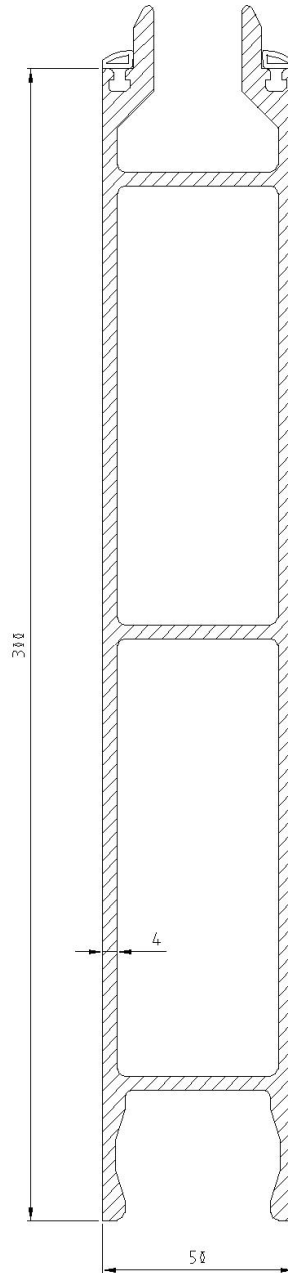


| PROFILE CHARACTERISTICS | | |
|-------------------------|-------------------|----------------|
| Height | mm | 200 |
| Width | mm | 50 |
| Thickness | mm | 2,2 |
| Cross-sectional area | cm ² | 14,4 |
| Weight per linear m | kg/m | 3,9 |
| Material | - | EN AW-6063-T66 |
| Moment of inertia | cm ⁴ | 66,3 |
| Modulus of elasticity E | N/mm ² | 70.000 |

Deflection Graph DBAL50x200-2.2

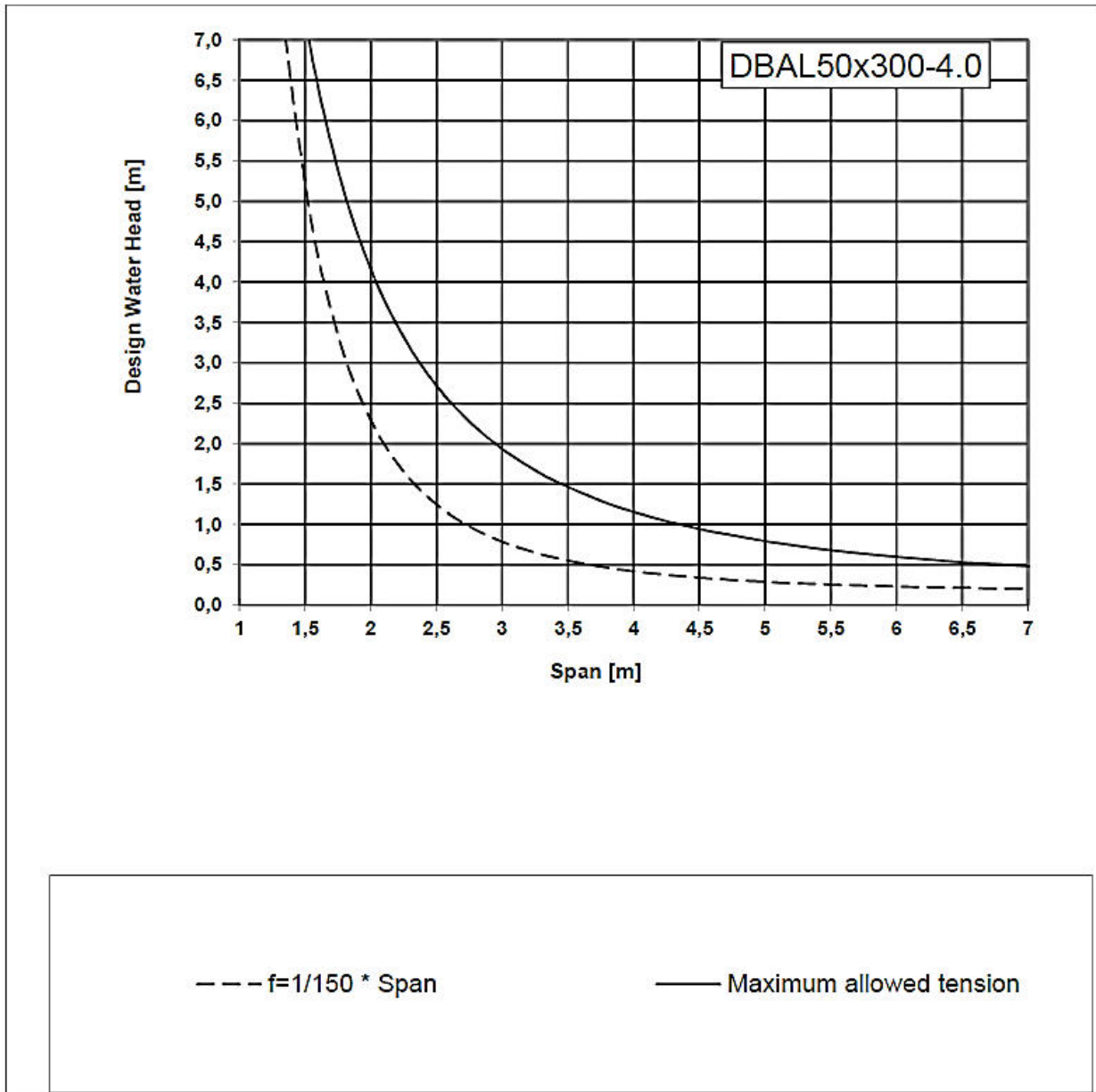


2.3.3 DBAL50x300-4.0



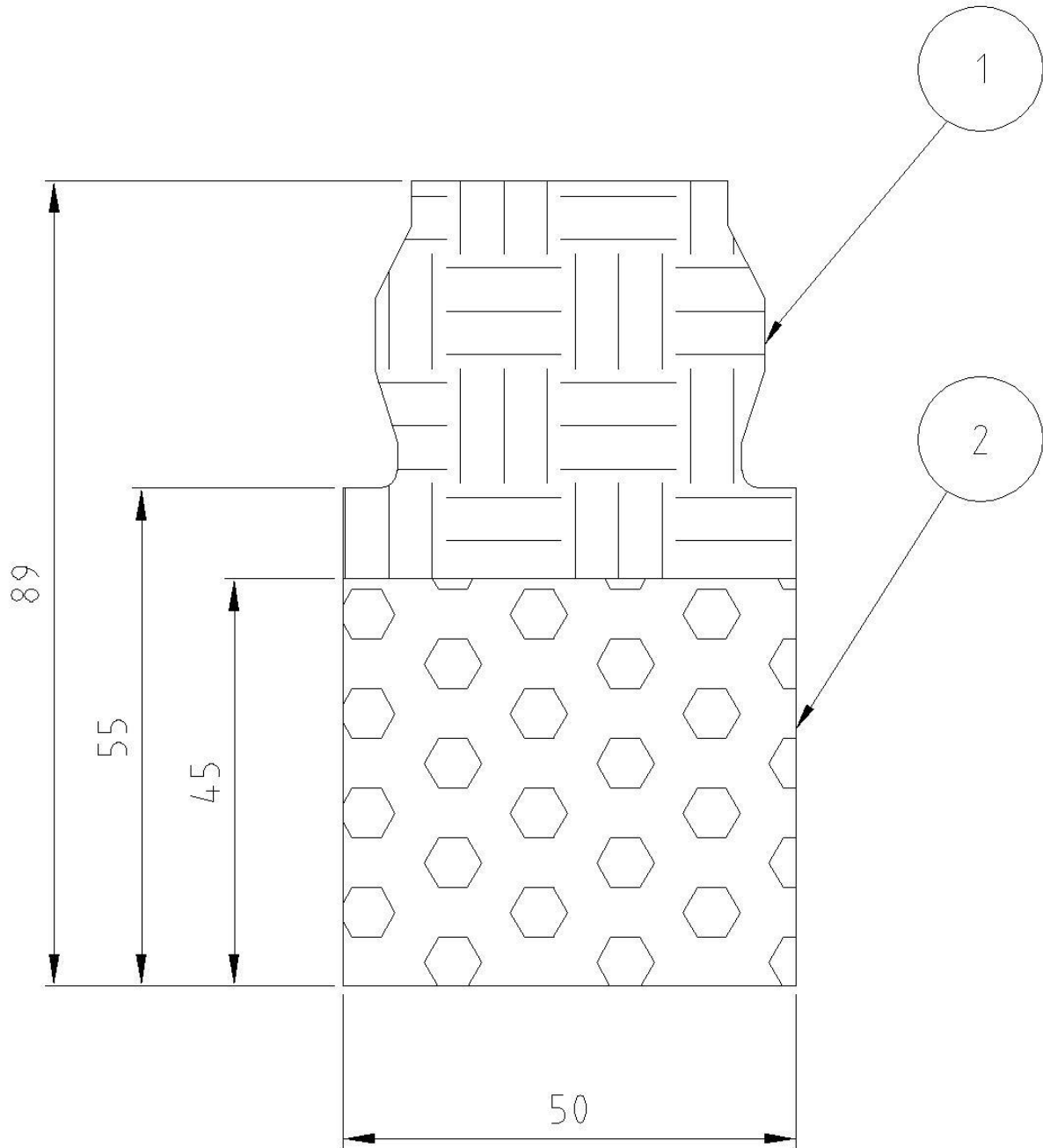
| PROFILE CHARACTERISTICS | | |
|-------------------------|-------------------|----------------|
| Height | mm | 300 |
| Width | mm | 50 |
| Thickness | mm | 4 |
| Cross-sectional area | cm ² | 32,1 |
| Weight per linear m | kg/m | 8,7 |
| Material | - | EN AW-6063-T66 |
| Moment of inertia | cm ⁴ | 143,2 |
| Modulus of elasticity E | N/mm ² | 70.000 |

Deflection Graph DBAL50x300-4.0



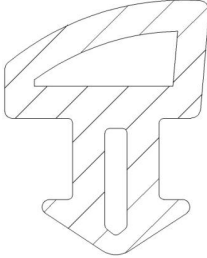
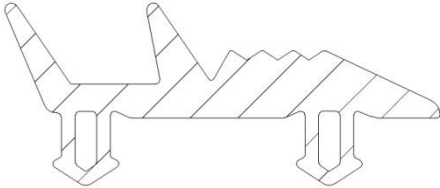
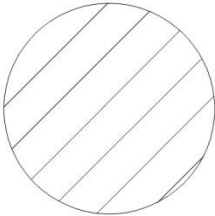
2.4 Seals

2.4.1 Ground Seal BD50_PE/PU



| LEGEND | |
|---------------------|-------------------|
| Material Pos 1 | PE (Polyethylene) |
| Material Pos 2 | PU (Polyurethane) |
| Weight per linear m | 0,412 kg/m |

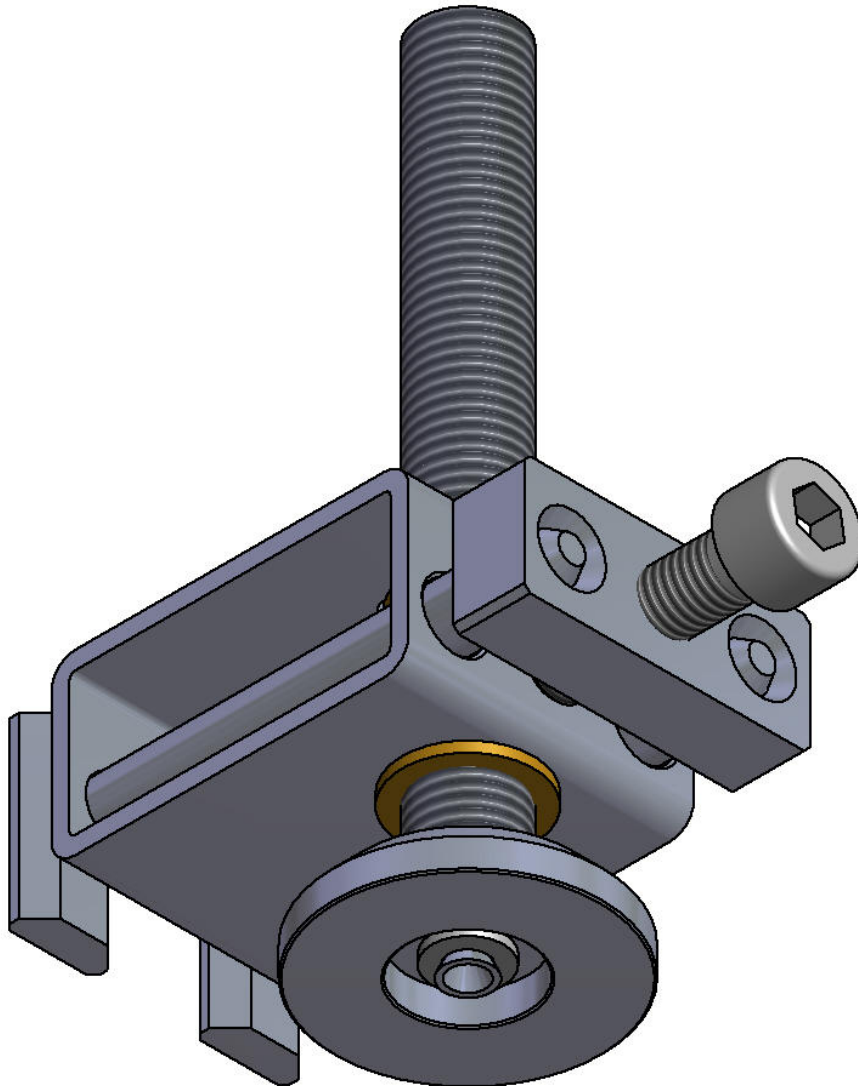
2.4.2 Dam Beams/Logs, End Posts, Center Posts

| | |
|-------------------------------------|--|
| <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> |

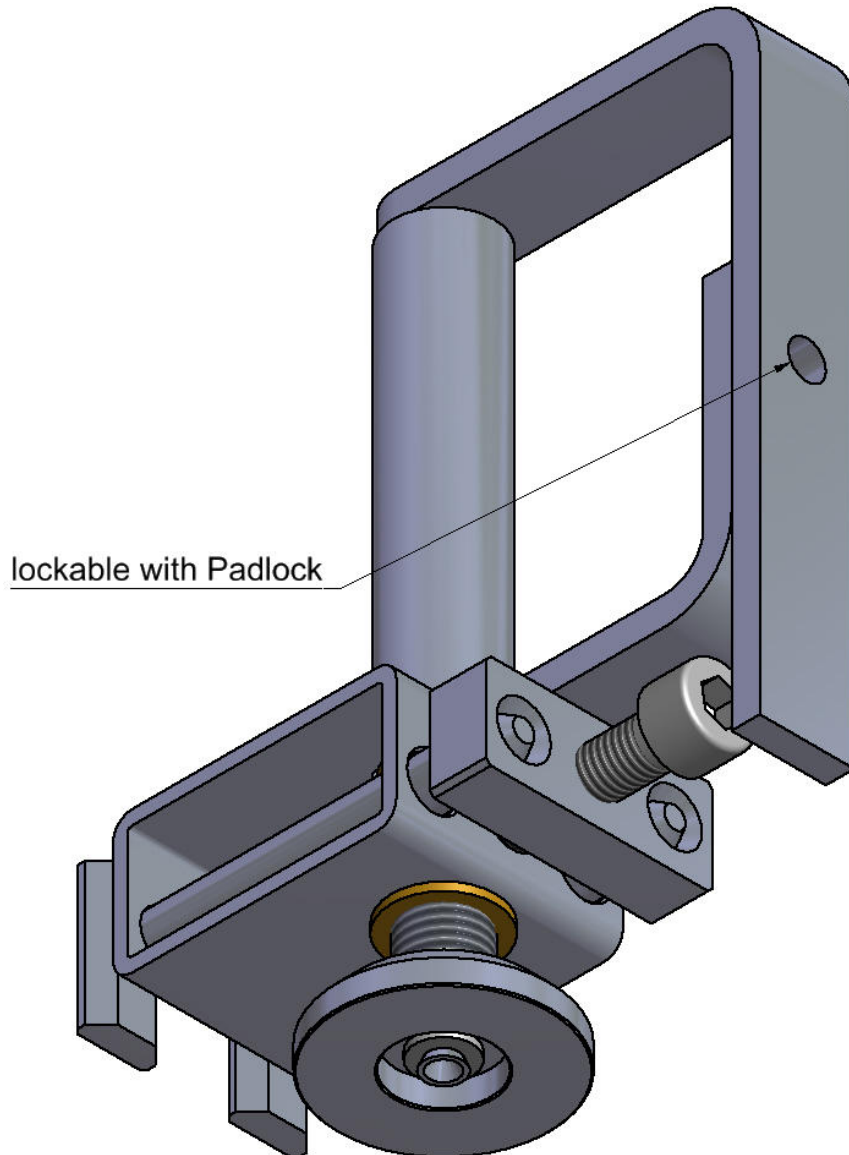
2.5 Pressing Tool

2.5.1 VS100L



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

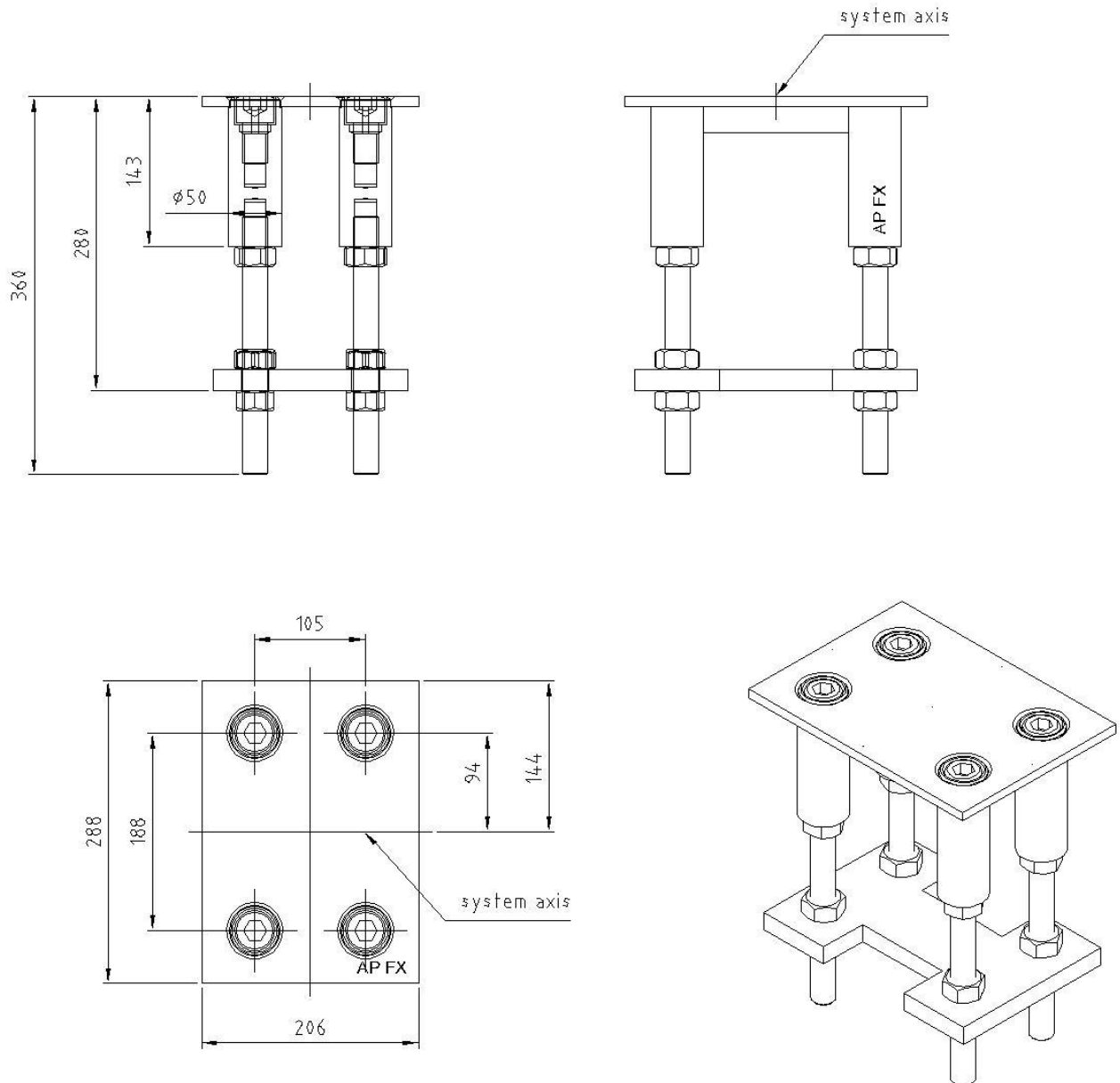
2.5.2 VS100L lockable



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

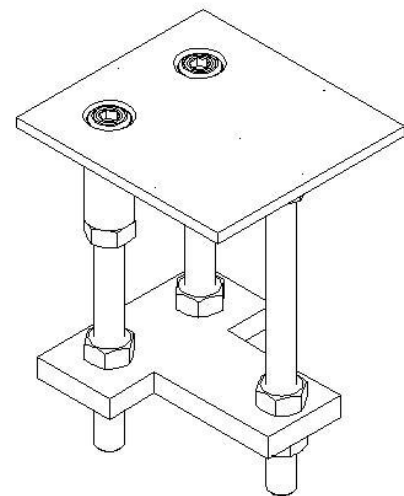
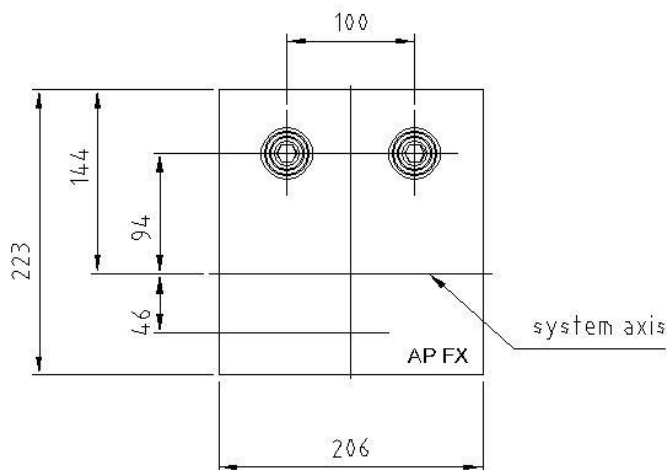
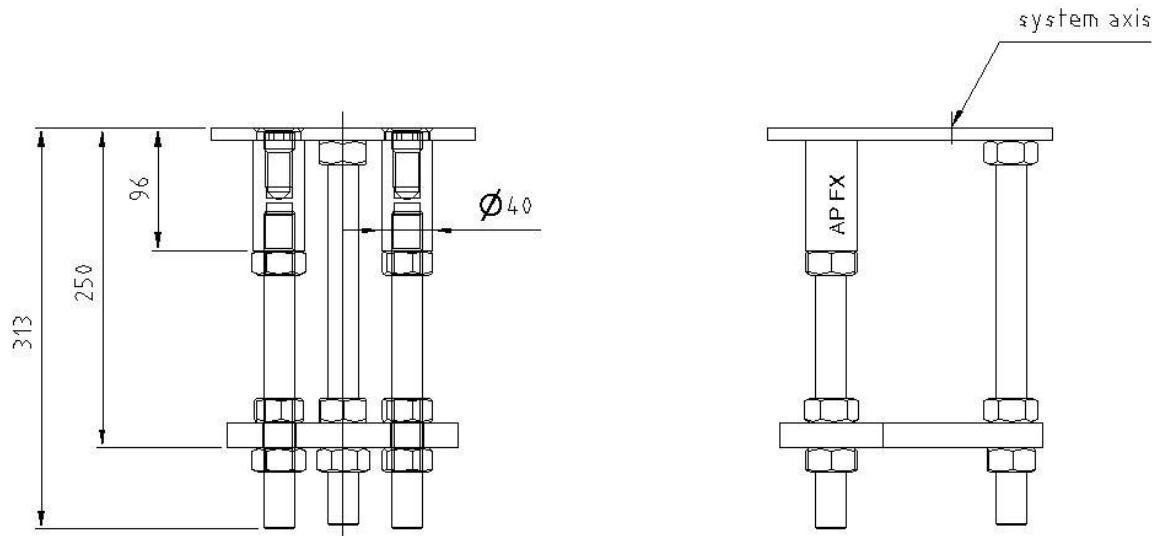
2.6 Anchore Plate

2.6.1 AP50L-T60



| | |
|---------------------------------|------------------------------------|
| 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 |

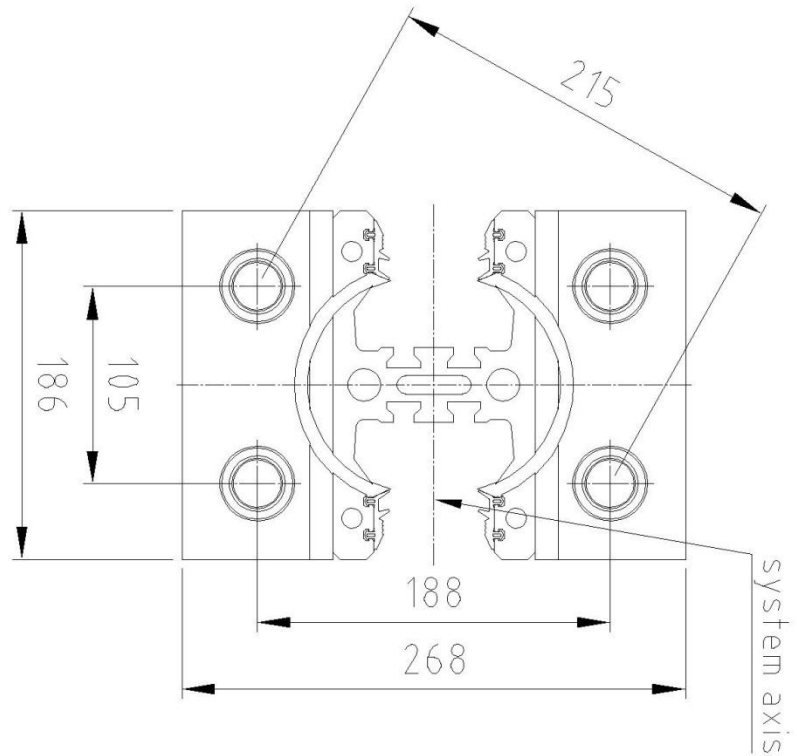
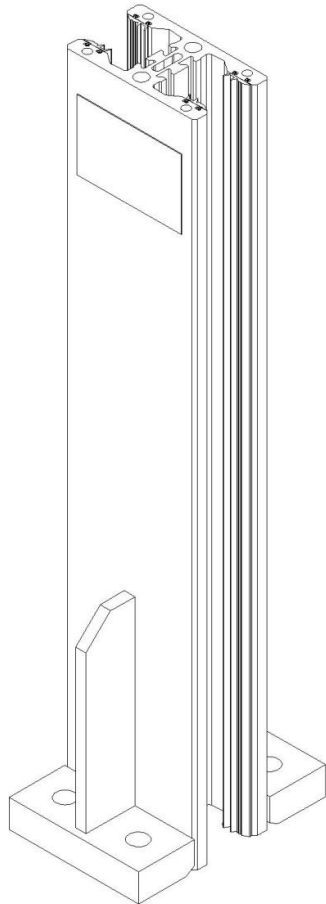
2.6.2 AP50LU-T65



| | |
|-------------------------|------------------------------------|
| 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 |

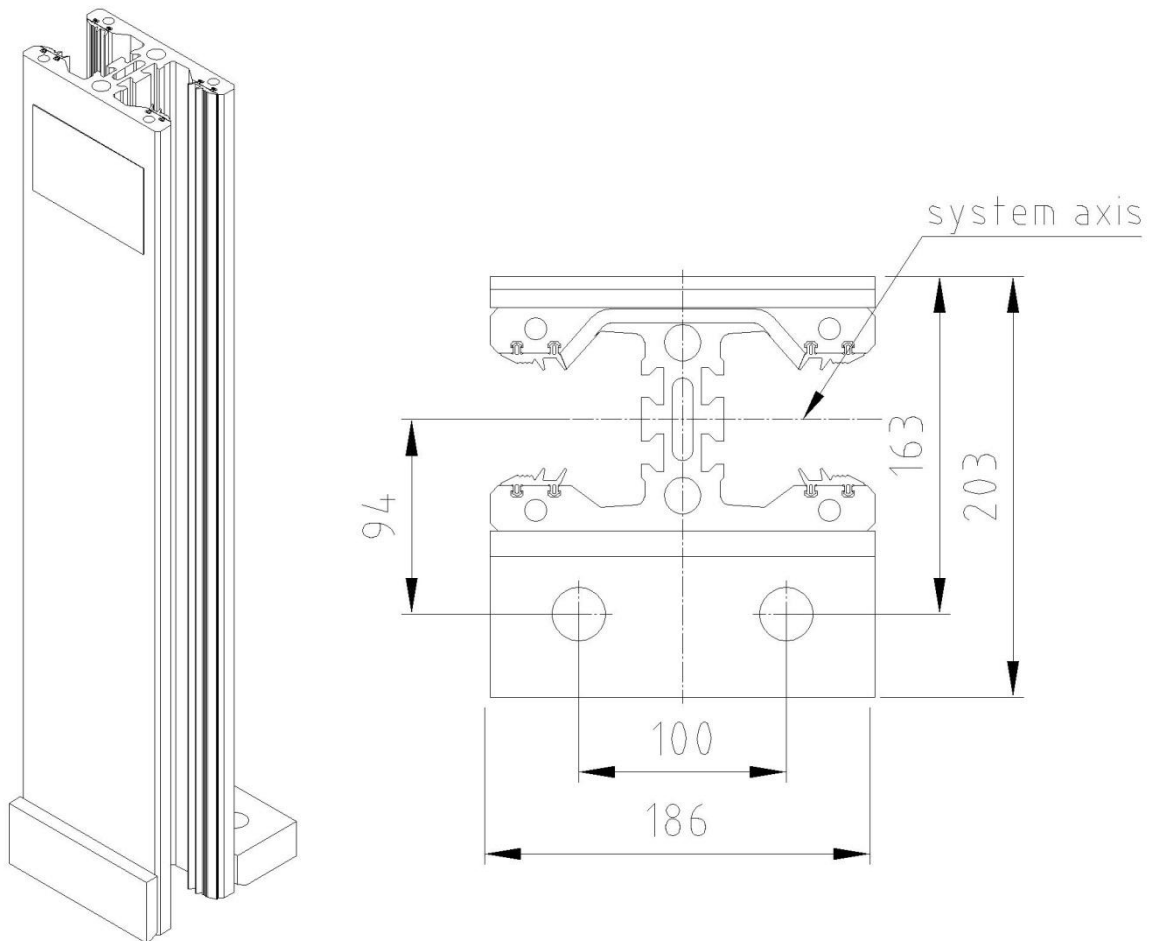
2.7 Center Post

2.7.1 MS50L-T60



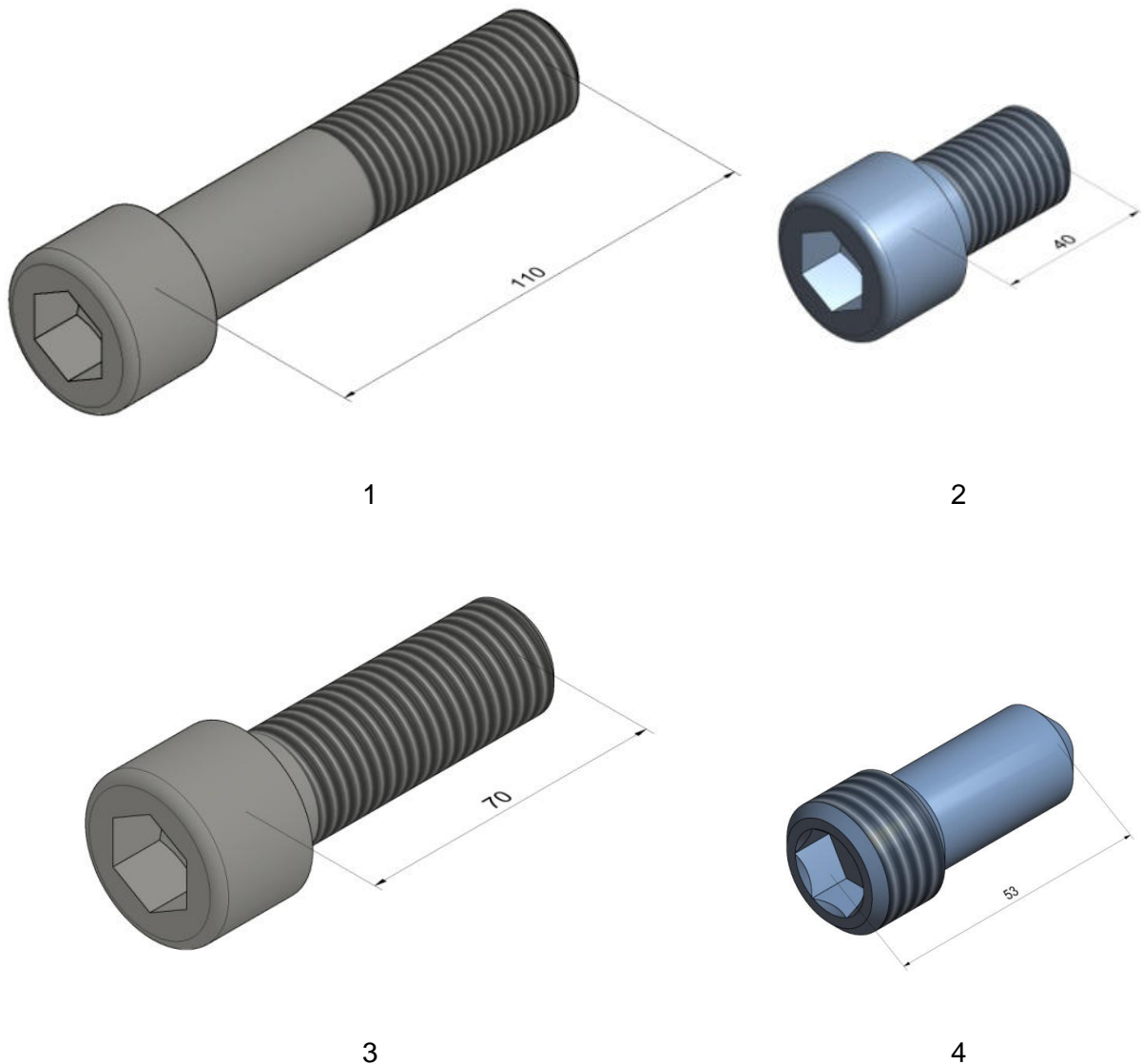
| LEGEND | | | | |
|----------------|-------------------|--------------------------------|-------------|-------------------|
| Description | Flood Height [mm] | Max. Axis Distance/Span a [mm] | Weight [kg] | Material |
| MS50L-T60-280 | 150 | 6000 | 9,9 | En AW 6063 T66 |
| MS50L-T60-330 | 200 | 6000 | 10,9 | |
| MS50L-T60-425 | 300 | 6000 | 12,8 | |
| MS50L-T60-525 | 400 | 5000 | 14,9 | |
| MS50L-T60-580 | 450 | 4500 | 16,5 | |
| MS50L-T60-735 | 600 | 4000 | 19,6 | |
| MS50L-T60-885 | 750 | 3500 | 22,7 | |
| MS50L-T60-935 | 800 | 3000 | 23,7 | |
| MS50L-T60-1040 | 900 | 3000 | 25,8 | |
| MS50L-T60-1135 | 1000 | 3000 | 28,2 | |
| MS50L-T60-1190 | 1050 | 3000 | 29,3 | |
| MS50L-T60-1345 | 1200 | 3000 | 32,5 | |

2.7.2 MS50LU-T65B



| LEGEND | | | | |
|-----------------|-------------------|--------------------------------|-------------|-------------------|
| Description | Flood Height [mm] | Max. Axis Distance/Span a [mm] | Weight [kg] | Material |
| MS50L-T65B-280 | 150 | 6000 | 8,1 | En AW 6063 T66 |
| MS50L-T65B-330 | 200 | 6000 | 9,1 | |
| MS50L-T65B-425 | 300 | 6000 | 11,1 | |
| MS50L-T65B-525 | 400 | 5000 | 13,1 | |
| MS50L-T65B-580 | 450 | 4500 | 14,4 | |
| MS50L-T65B-735 | 600 | 4000 | 17,6 | |
| MS50L-T65B-885 | 750 | 3500 | 20,6 | |
| MS50L-T65B-935 | 800 | 3000 | 21,6 | |
| MS50L-T65B-1040 | 900 | 3000 | 23,7 | |
| MS50L-T65B-1135 | 1000 | 3000 | 25,9 | |
| MS50L-T65B-1190 | 1050 | 3000 | 27,0 | |
| MS50L-T65B-1345 | 1200 | 3000 | 30,1 | |

2.7.3 Bolts

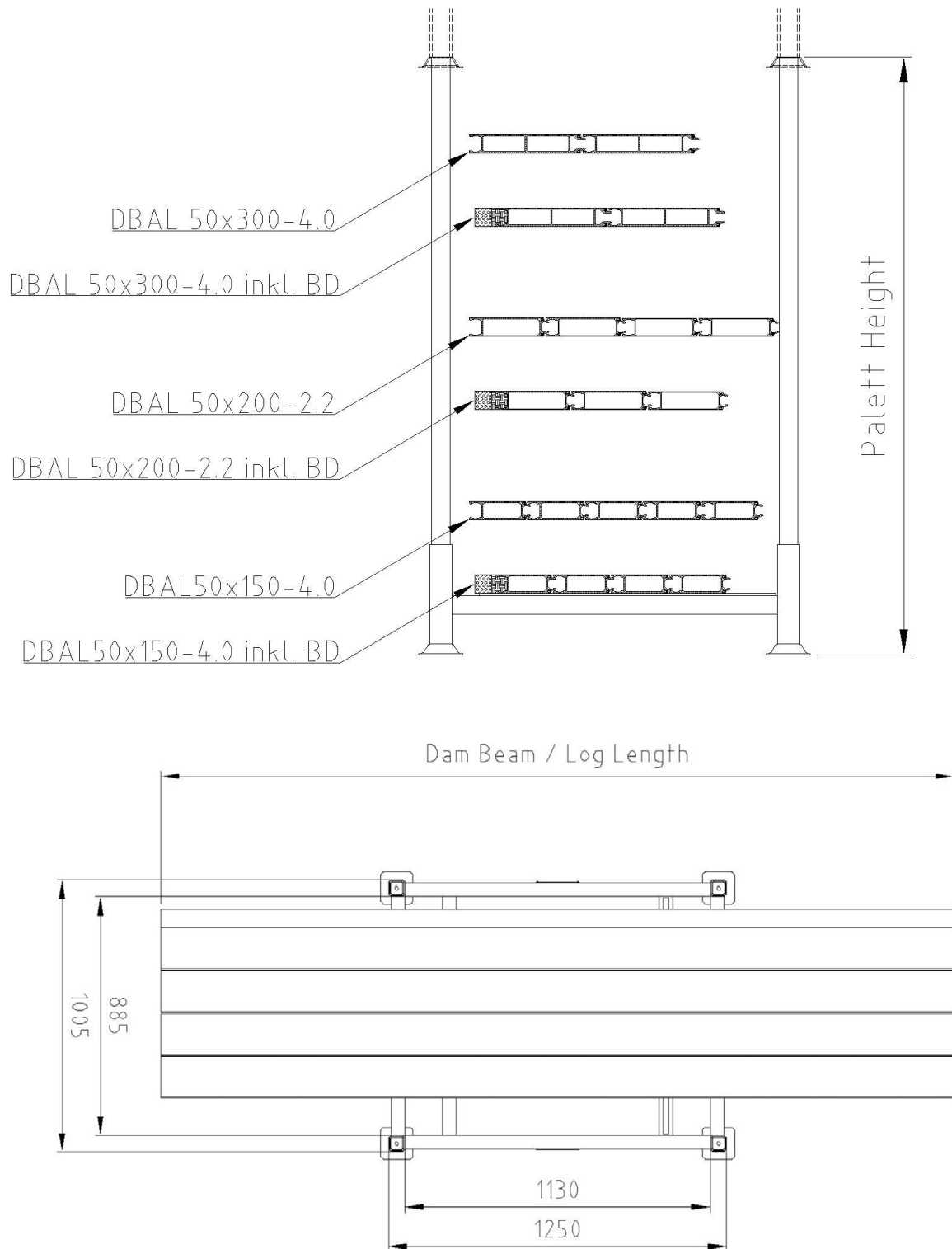


| SYSTEM | FOOTNOTE | FUNCTION | DESCRIPTION |
|----------|----------|---------------------------------------|---------------------------------|
| HW-W50L | 1 | Cylinder Head Center Post Bolt | DIN 912 M24x110 8.8 galv. zined |
| | 2 | Anchor Plate Dummy Bolt | DIN 912 M24x40 SS 316 |
| HW-W50LU | 3 | 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

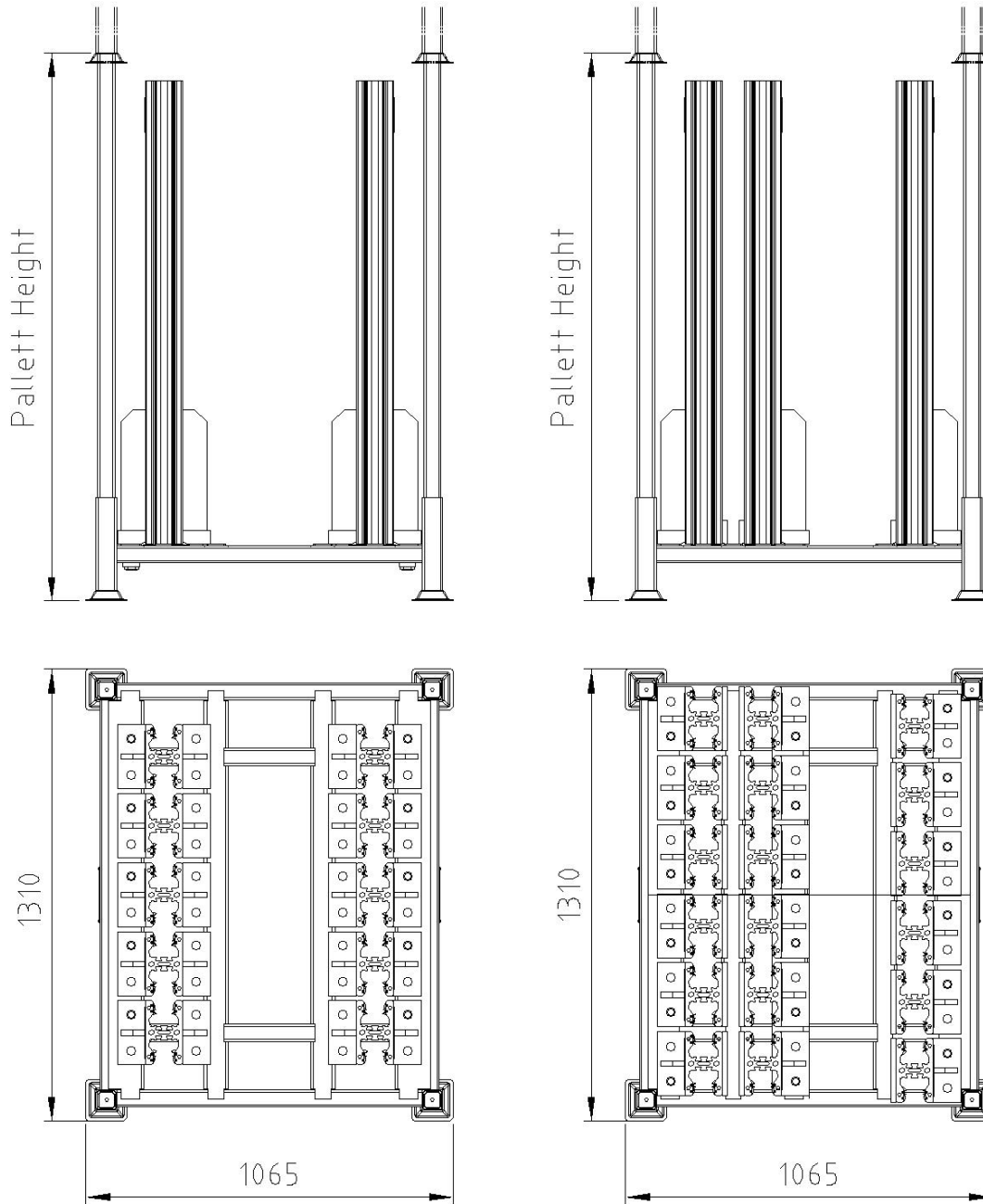
3.1 Dam Beam/Log Pallet

3.1.1 Dam Beams/Logs



| Description | Pallet Height [mm] | Dam Beam | Max. Number of Layers | Number DB/Layer | |
|----------------|--------------------|----------------|-----------------------|-----------------|------------|
| | | | | Without BD50H | With BD50H |
| LT-P02-DB-800 | 830 | DBAL50x150-4,0 | 10 | 5 | 4 |
| LT-P02-DB-800 | 830 | DBAL50x200-2,2 | 10 | 4 | 3 |
| LT-P02-DB-800 | 830 | DBAL50x300-4,0 | 10 | 2 | 2 |
| LT-P02-DB-1400 | 1430 | DBAL50x150-4,0 | 21 | 5 | 4 |
| LT-P02-DB-1400 | 1430 | DBAL50x200-2,2 | 21 | 4 | 3 |
| LT-P02-DB-1400 | 1430 | DBAL50x300-4,0 | 21 | 2 | 2 |
| LT-P02-DB-2100 | 2130 | DBAL50x150-4,0 | 33 | 5 | 4 |
| LT-P02-DB-2100 | 2130 | DBAL50x200-2,2 | 33 | 4 | 3 |
| LT-P02-DB-2100 | 2130 | DBAL50x300-4,0 | 33 | 3 | 3 |

3.1.2 Center Post Pallets

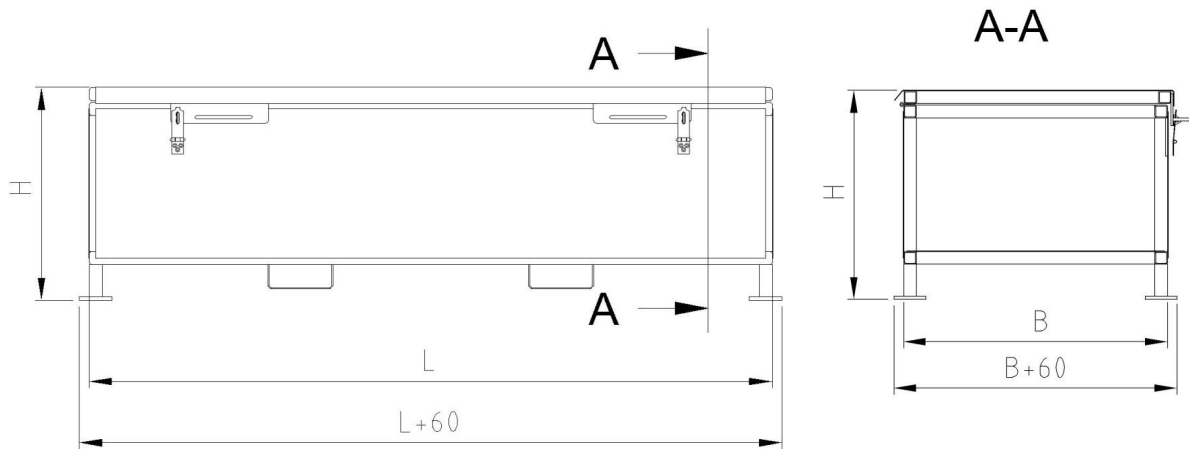


MS 50 L

MS 50 LU

| Description | Pallet Height [mm] | Center Post MS50 | Max. Number MS50/Pallet [Piece] | Flood Height MS50 | |
|----------------------------|--------------------|------------------|---------------------------------|-------------------|-----------|
| | | | | from [mm] | till [mm] |
| LT-P02-MS50L-T60-V (800) | 830 | MS50L | 10 | 150 | 750 |
| LT-P02-MS50LU-T65-V (800) | 830 | MS50LU | 18 | 150 | 750 |
| LT-P02-MS50L-T60-V (1400) | 1430 | MS50L | 10 | 800 | 1200 |
| LT-P02-MS50LU-T65-V (1400) | 1430 | MS50LU | 18 | 800 | 1200 |

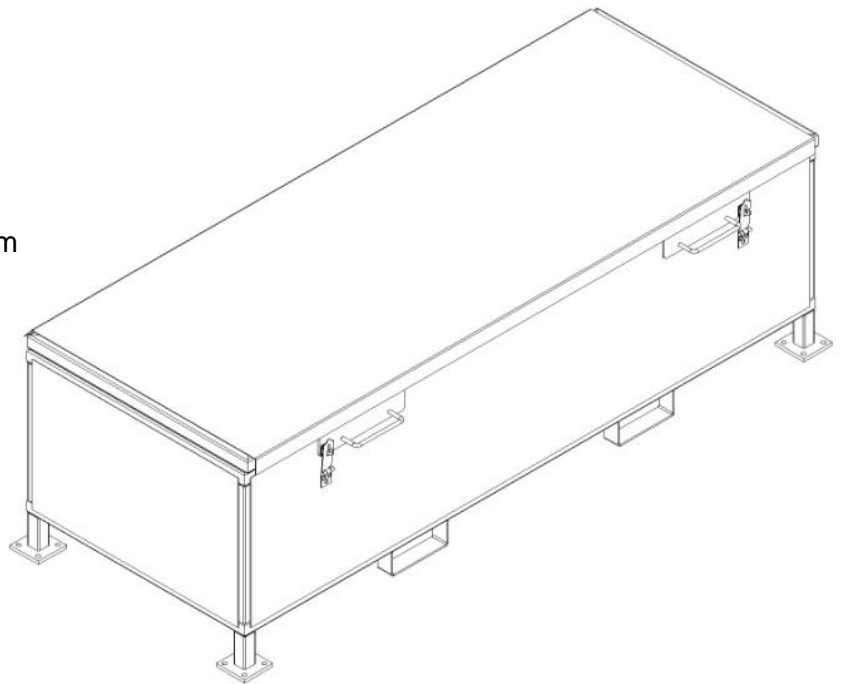
3.2 Storage Box-LB



Standard Dimensions
B x H: 830mm x 660mm

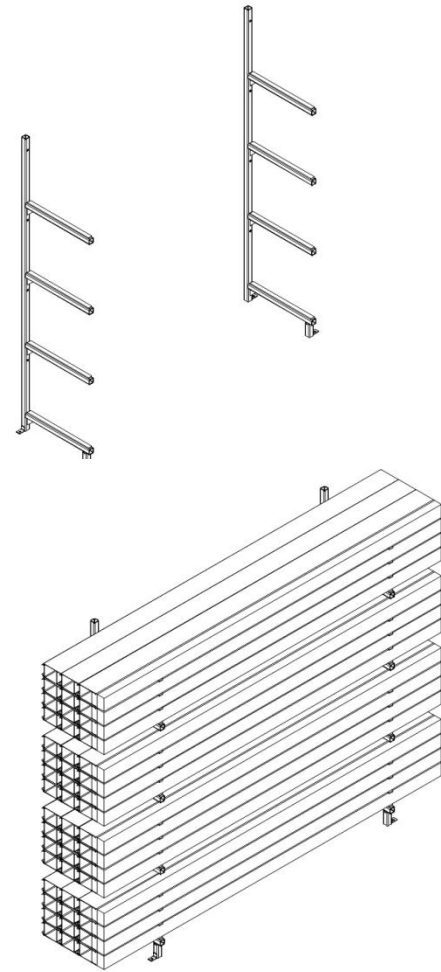
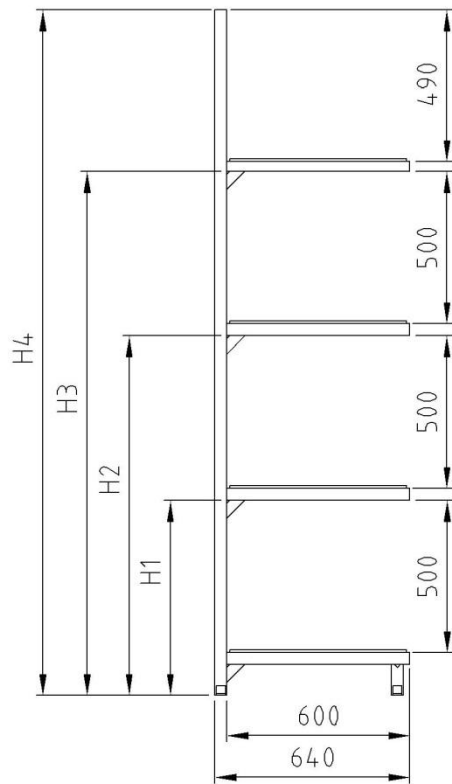
in three different lengths
L: 2.500mm / 3.000mm / 4.000mm

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



| Dam Beam | Max. Number Layer | Number DB/Layer | |
|----------------|-------------------|-----------------|-------------|
| | | Without BD 50H | With BD 50H |
| DBAL50x150-4.0 | 8 | 5 | 4 |
| DBAL50x200-2.2 | 8 | 4 | 3 |
| DBAL50x300-4.0 | 8 | 2 | 2 |

3.3 Storage Rack for Dam Beams/Logs-LR



| Storage Rack Type | Number Layers | Height [mm] | Dam Beam | Max. Number Layer | Number DB/Layer | |
|-------------------|---------------|-------------|----------------|-------------------|-----------------|------------|
| | | | | | Without BD50H | With BD50H |
| H1 | 1 | 640 | DBAL50x150-4,0 | 8 | 4 | 3 |
| H1 | 1 | 640 | DBAL50x200-2,2 | 8 | 3 | 2 |
| H1 | 1 | 640 | DBAL50x300-4,0 | 8 | 2 | 2 |
| H2 | 2 | 1180 | DBAL50x150-4,0 | 16 | 4 | 3 |
| H2 | 2 | 1180 | DBAL50x200-2,2 | 16 | 3 | 2 |
| H2 | 2 | 1180 | DBAL50x300-4,0 | 16 | 2 | 2 |
| H3 | 3 | 1720 | DBAL50x150-4,0 | 24 | 4 | 3 |
| H3 | 3 | 1720 | DBAL50x200-2,2 | 24 | 3 | 2 |
| H3 | 3 | 1720 | DBAL50x300-4,0 | 24 | 2 | 2 |
| H4 | 4 | 2250 | DBAL50x150-4,0 | 32 | 4 | 3 |
| H4 | 4 | 2250 | DBAL50x200-2,2 | 32 | 3 | 2 |
| H4 | 4 | 2250 | DBAL50x300-4,0 | 32 | 2 | 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 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 | 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 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 | 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

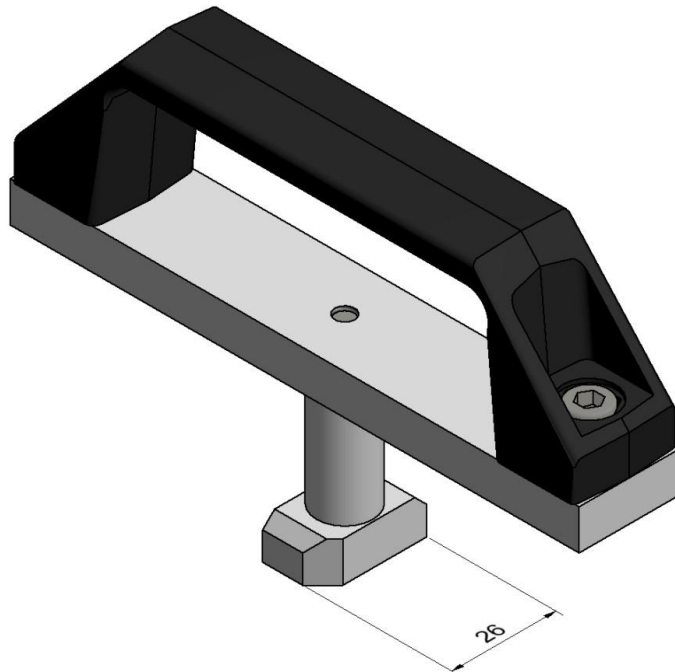
3.5.1 Tools



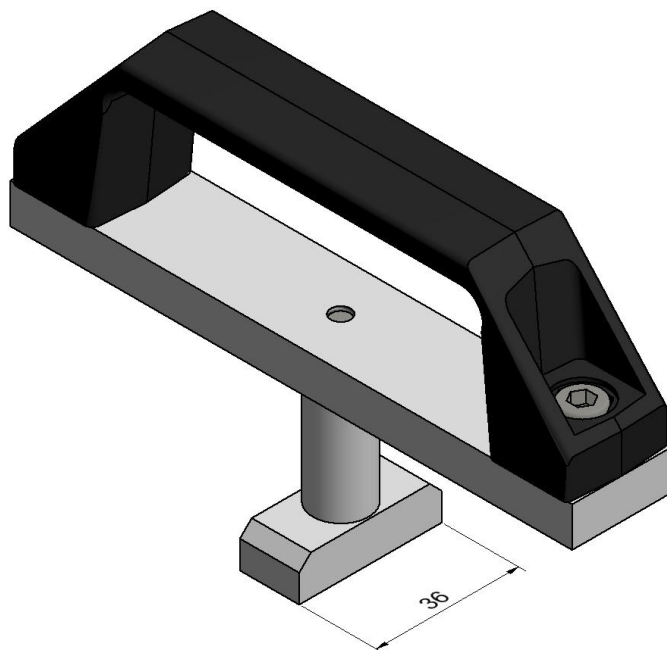
| System | Usage | Tool | |
|------------|--------------------------------|------------|------------------------|
| HW-W50L/LU | Pressing Tool | Ratchet ½" | Hexagon Socket SW 8mm |
| HW-W50L/LU | Cover | Ratchet ½" | Hexagon Socket SW 8mm |
| HW-W50L | Cylinder Head Center Post Bolt | Ratchet ½" | Hexagon Socket SW 19mm |
| HW-W50L | Anchor Plate Dummy Bolt | Ratchet ½" | Hexagon Socket SW 19mm |
| HW-W50LU | Cylinder Head Center Post Bolt | Ratchet ½" | Hexagon Socket SW 19mm |
| HW-W50LU | Anchor Plate Dummy Bolt | Ratchet ½" | Hexagon Socket SW 14mm |

3.5.2 Extracting Tool

AW50-26



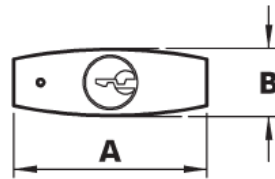
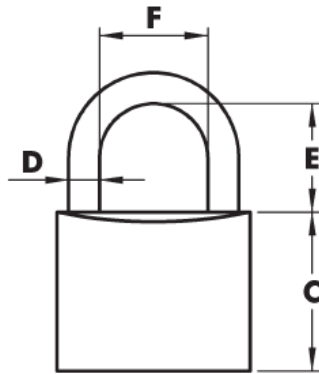
AW50-36



| Tool | Usage/Log |
|---------|--------------------------|
| AW50-26 | Dam Beam DBAL 50x150-4.0 |
| AW50-26 | Dam Beam DBAL 50x200-2.2 |
| AW50-36 | Dam Beam DBAL 50x300-4.0 |

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 |



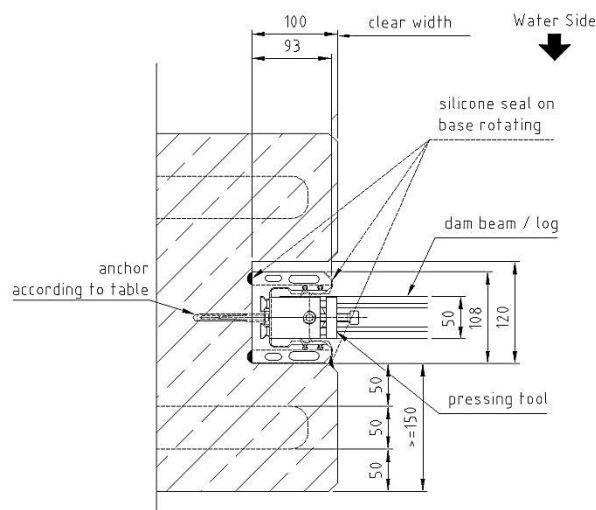
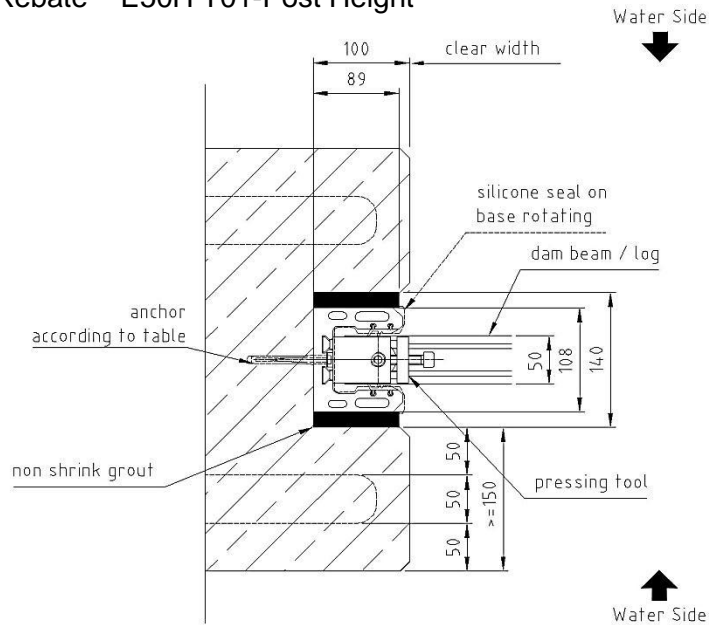
Description:

- 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 – E50H T01-Post Height



Mounting Tolerance:

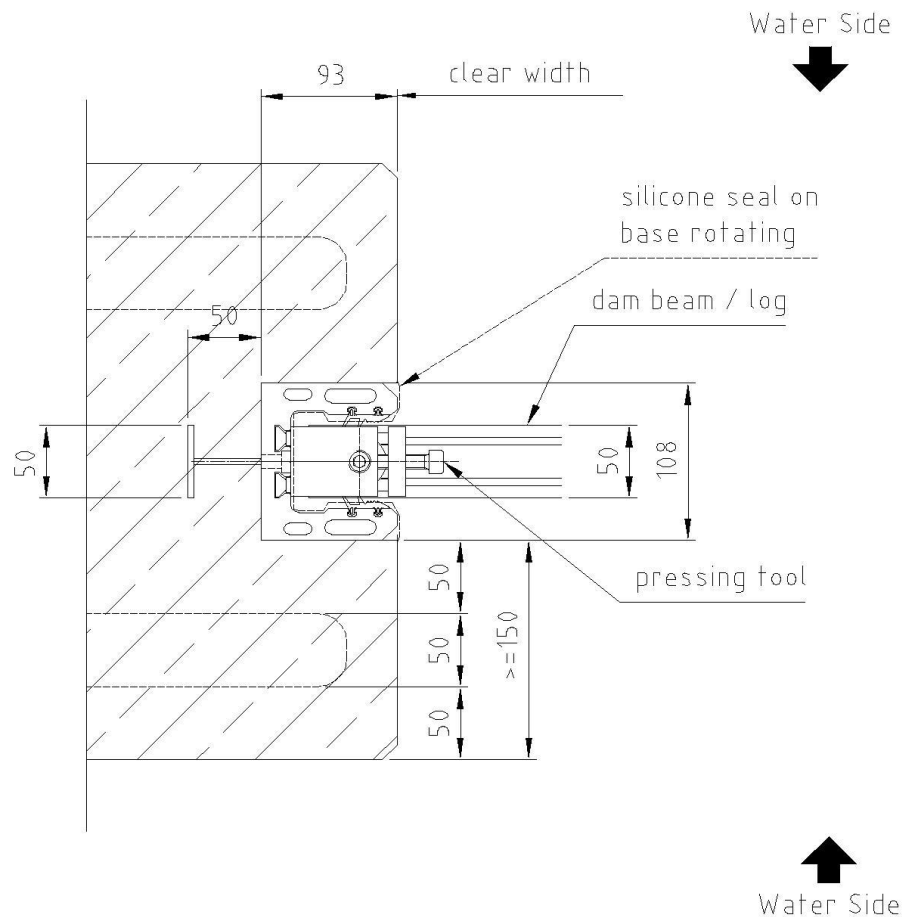
Frame Assembly

- 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 |

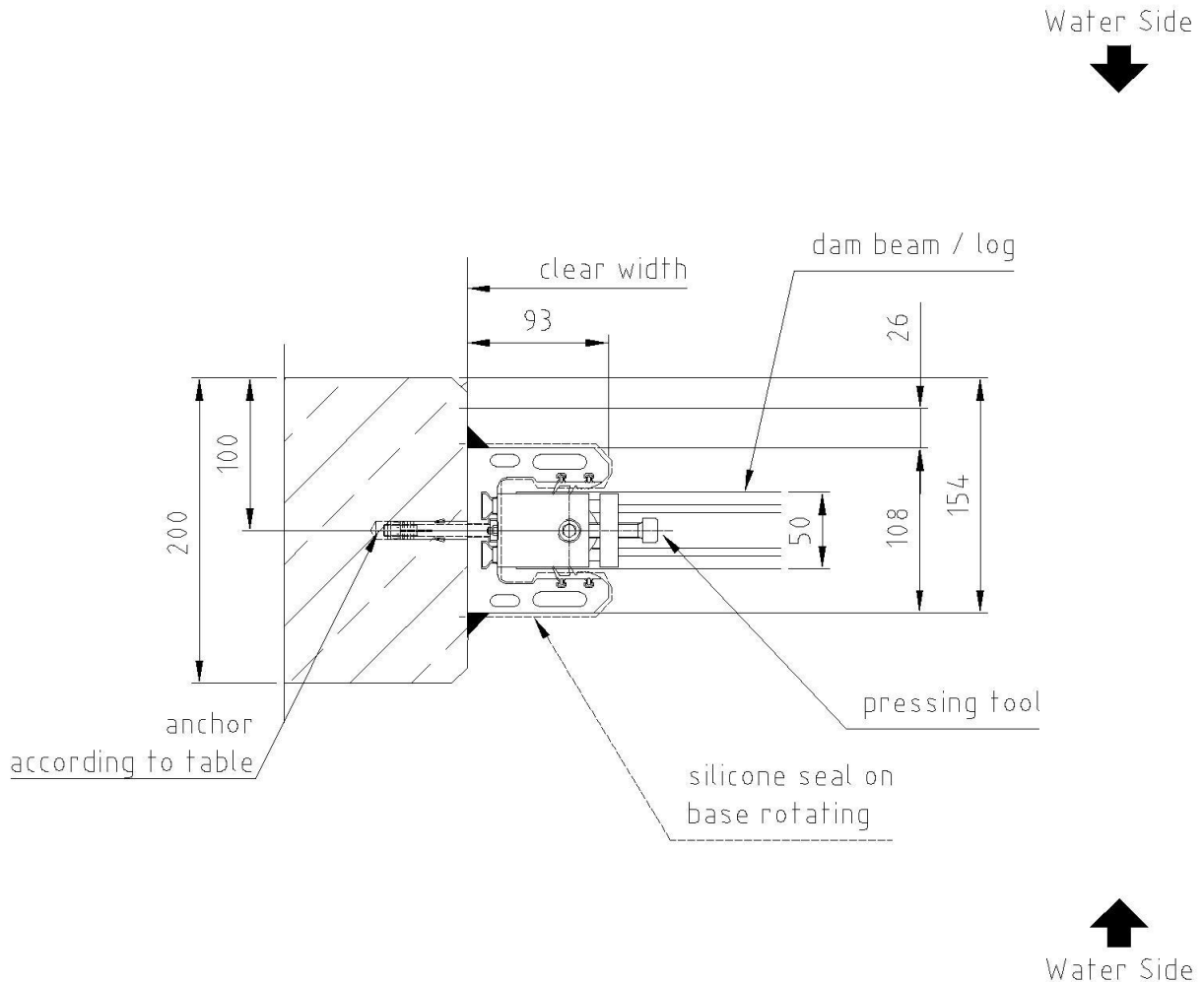
4.1.2 Type 6 in First Concrete – E50H T06-Post Height



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

4.2 Mounting Types – Side Wall Mounted

4.2.1 Type 8 side wall mounted – E50H T08-Post Height



Mounting Tolerance:

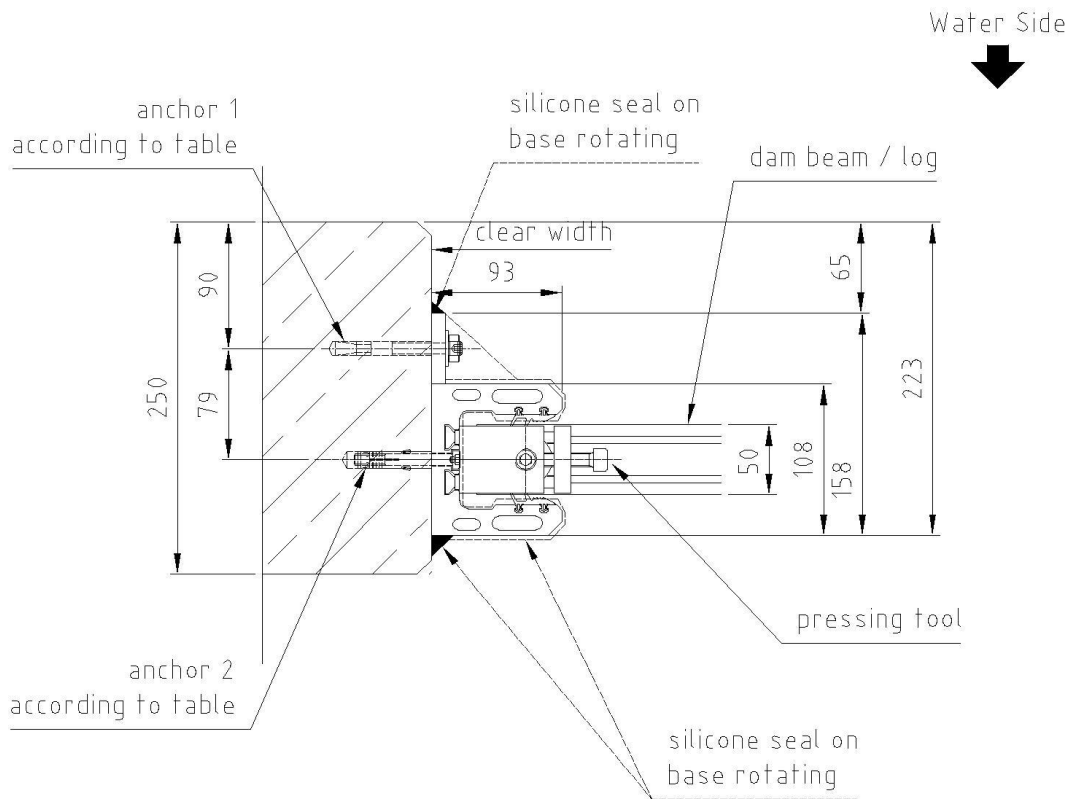
Frame Assembly

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

Dimensioning

| Wall | Area | Height | Width | Anchorage |
|------------------|----------------------|-------------|-----------|---|
| Concrete | 0-2,1 m ² | Max 0,6m | Max 3m | Fischer SLM 8N SS 316, Screw DIN 912 M8x70 SS 304 |
| Full Brick | 0-1,5 m ² | | | Insert HIS RN M8x90, fast curing mortar HFX, Screw DIN 912 M8x35 SS 304 |
| Perforated Brick | 0-1,2 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 – E50H T09-R / L - Post Height



Mounting Tolerance:

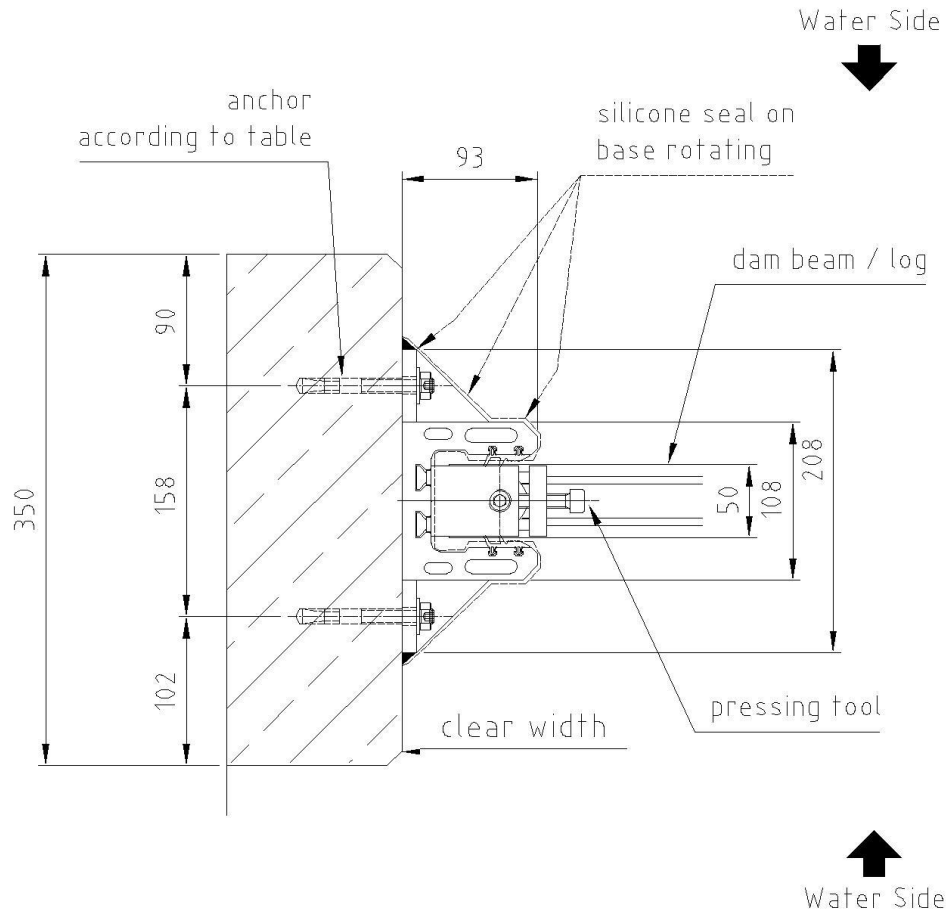
Frame Assembly

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

Dimensioning

| Wall | Area | Height | Width | Anchorage 1 |
|------------------|--|-----------|--------|--|
| Concrete | 2,1-2,5 m ² | Max 0,85m | Max 3m | HILTI HST-R M10x90/10 |
| Full Brick | 1,5-2,0 m ² | | | Anchor HIT-VR M10x95, fast curing mortar HFX, |
| Perforated Brick | 1,2-1,5 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 – E50H T03-Post Height



Mounting Tolerance:

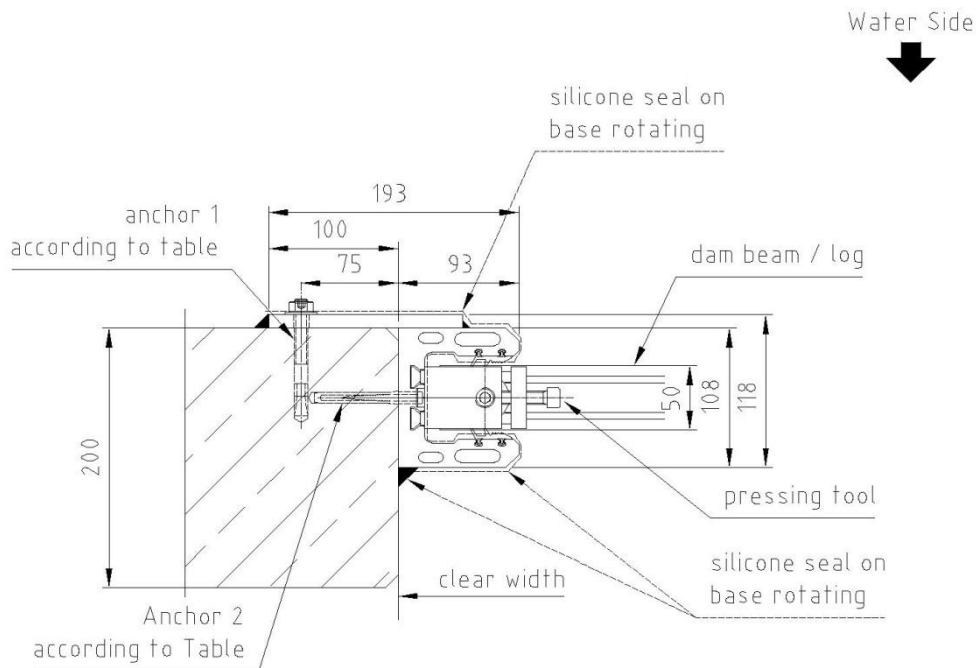
Frame Assembly

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

Dimensioning

| Wall | Area | Height | Width | Anchorage |
|---------------------|---------------------------|--------------|-----------|---|
| Concrete | 2,5-3 m ² | Max 1,05m | Max 3m | HILTI HST-R M10x90/10 |
| Full Brick | 1,9-2,5m ² | | | Anchor HIT-VR M10x95, Fast curing mortar HFX, |
| Perforated Brick | 1,6-2,0 m ² | | | Anchor HIT-VR M10x95, Fast curing mortar HFX, Screen tube HIT-SC 16x85 |

4.2.4 Type 13 side wall mounted – E50H T13-R / L – Post Height



Mounting Tolerance:

Frame Assembly

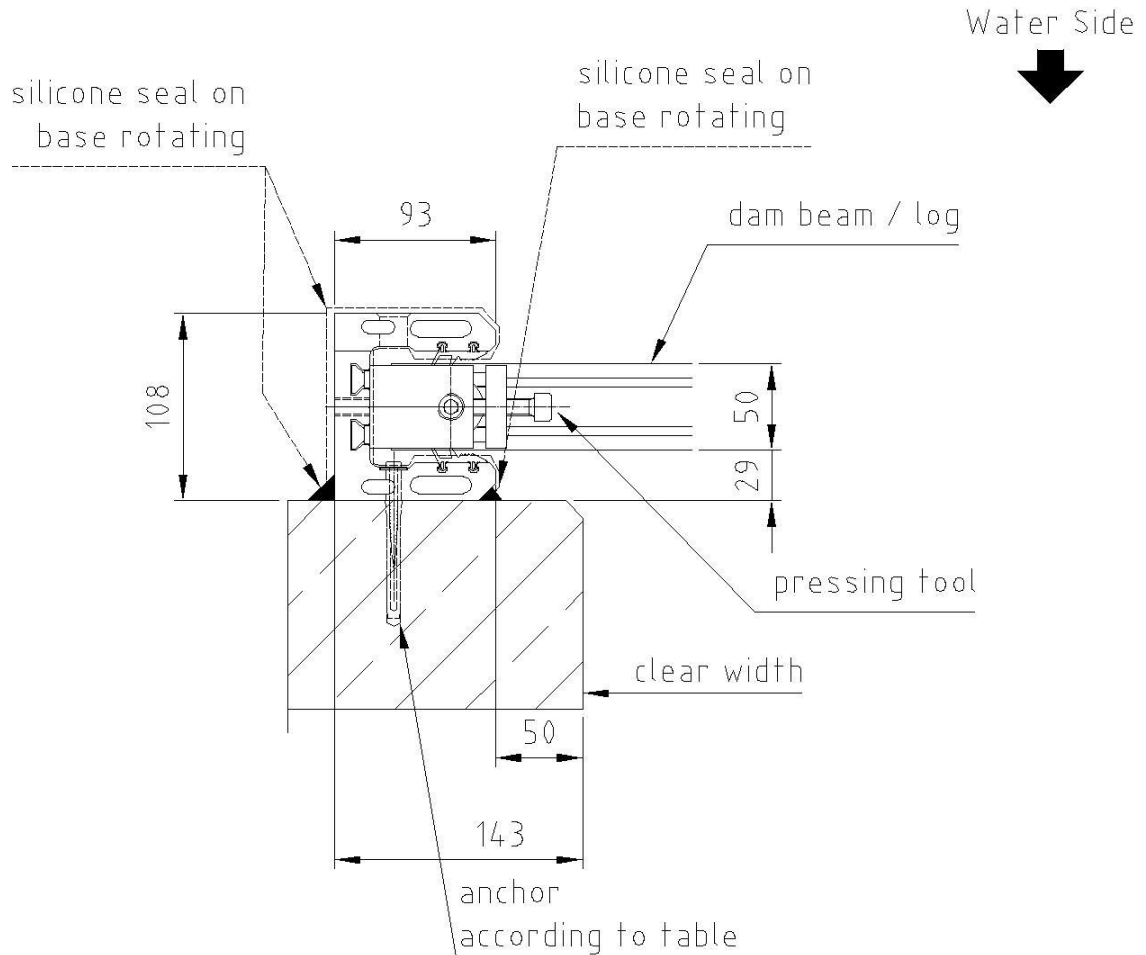
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning

| Wall | Area | Height | Width | Anchorage 1 |
|--------------------|---|--------------|-----------|---|
| Concrete | 0-2,5 m ² | Max 1,05m | Max 3m | HILTI HST-R M10x90/10 |
| Full Brick | 0-2 m ² | | | Anchor HIT-VR M10x95, Fast curing mortar HFX |
| Perforated Brick | 0-1,5 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 90215.3 SS304 | | | |
| Full Brick | Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 90215.3 SS304 | | | |
| Perforated Brick | Fischer SX 8 x65, Screw DIN 571 M5 x 60 SS 304, Washer DIN 90215.3 SS304 | | | |

4.3 **Mounting Types Wall mounted on-seating**

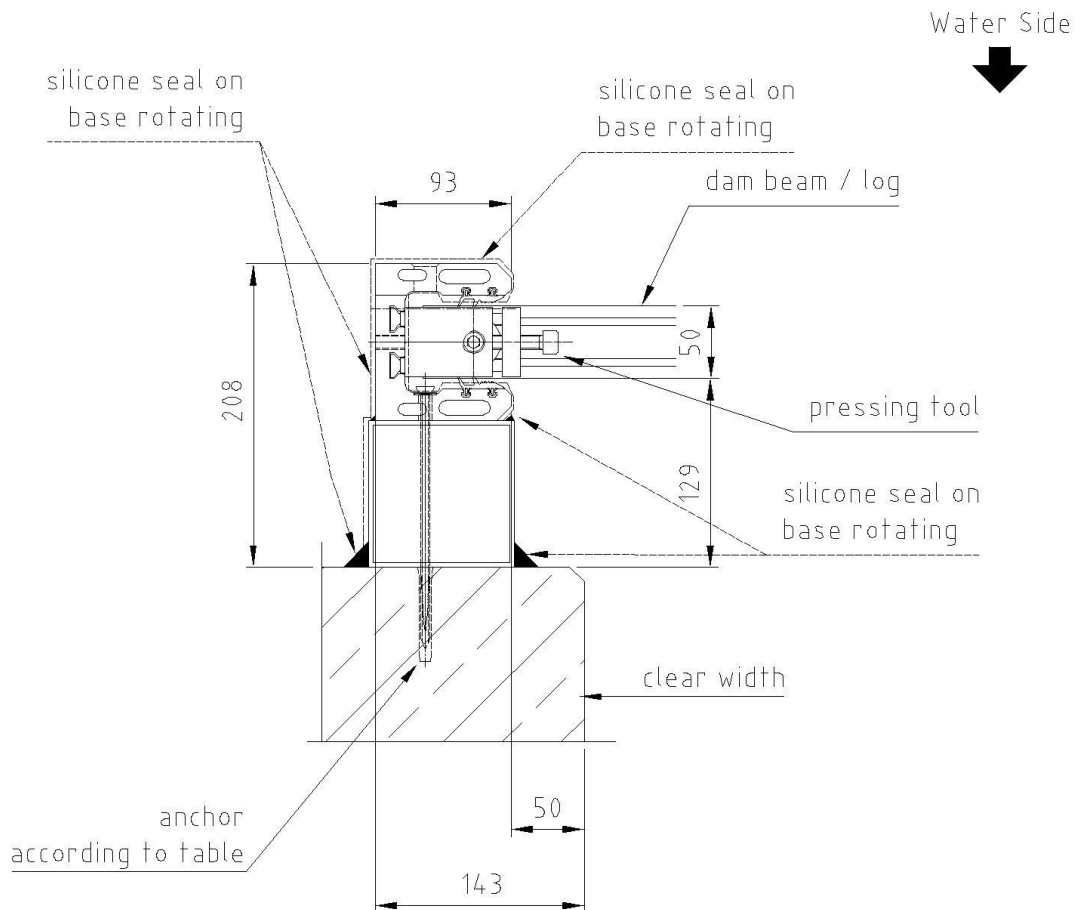
4.3.1 Type 16 wall mounted on-seating – E50H T16-R / L – Post Height



| |
|----------------------------|
| 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) – E50H T24-R / L - Post Height



Mounting Tolerance:

Frame Assembly

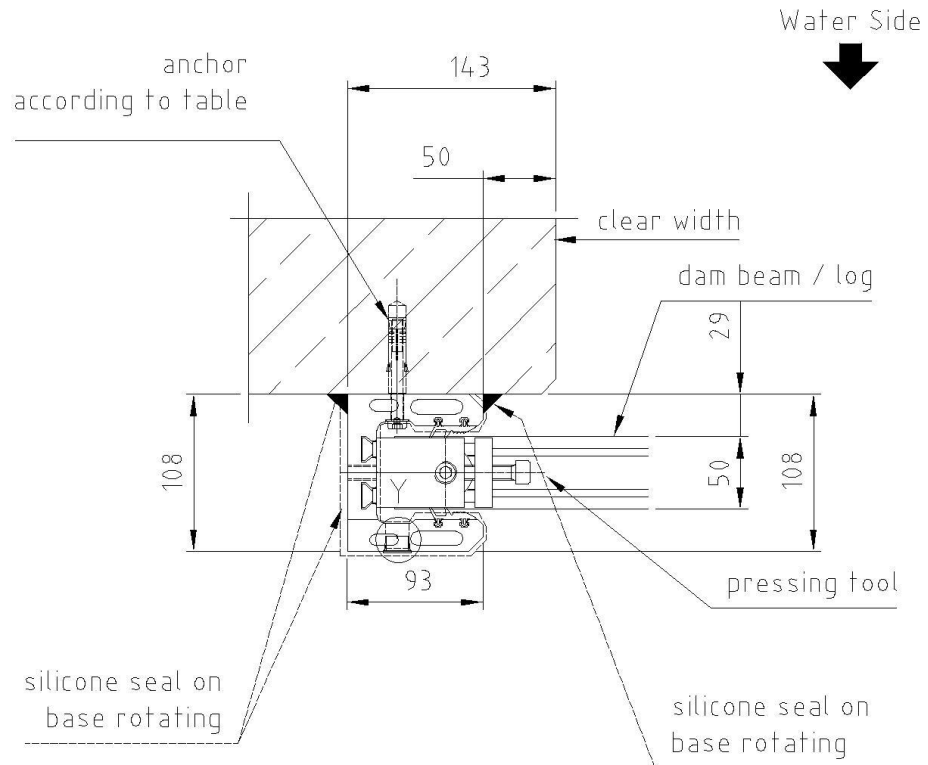
- In Axis + / - 3mm
- Vertically + / - 3mm
- Total max. 6mm

Dimensioning

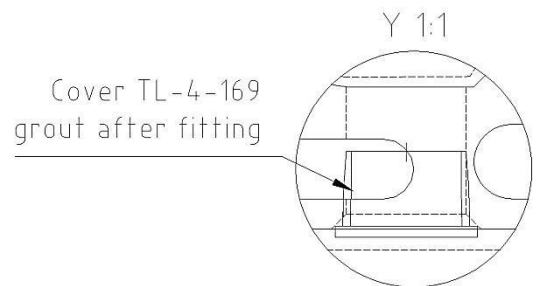
| Wall | Area | Height | Width | Anchorage |
|------------------|--------------------------------------|--------|-------|--|
| Concrete | As per Dam Beam/Log Deflection Graph | | | Screw Assy 3.0 countersunk head AW30 6x180 SS304, washer DIN 125-1A 8.4 SS304, Fischer SX 8x65 |
| Full Brick | | | | Screw 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 – E50H T05-R / L - Post Height



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



| Dimensioning | | | | |
|---------------------|----------------------|--------------|-----------|---|
| Wall | Area | Height | Width | Anchorage |
| Concrete | 0-2 m ² | Max 0,85m | Max 2m | 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 |

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