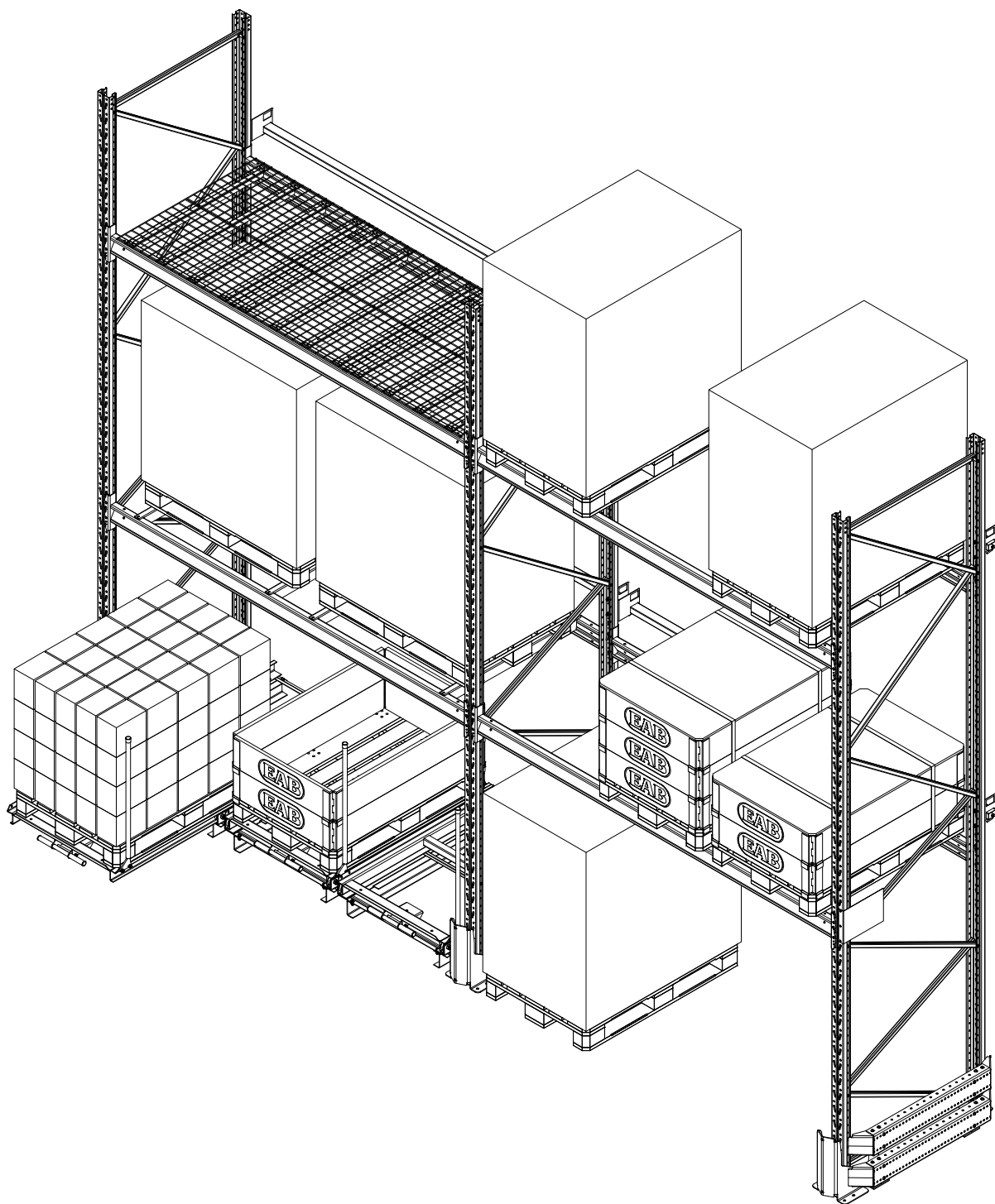




OMEGA PALLET RACKING

Assembly and user manual



Built to last.®

Assembly and user manual | 2025

Omega Pallet Racking

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User Information

For optimal use of our products, carefully follow the instructions presented in this instruction manual. It is important to always consider the your safety and the safety of others during use.

We strive to provide correct and clear instructions. Should any ambiguities or questions arise, you are always welcome to contact us. Despite conducting a thorough review, accidental printing errors or misspellings may occur in the document.

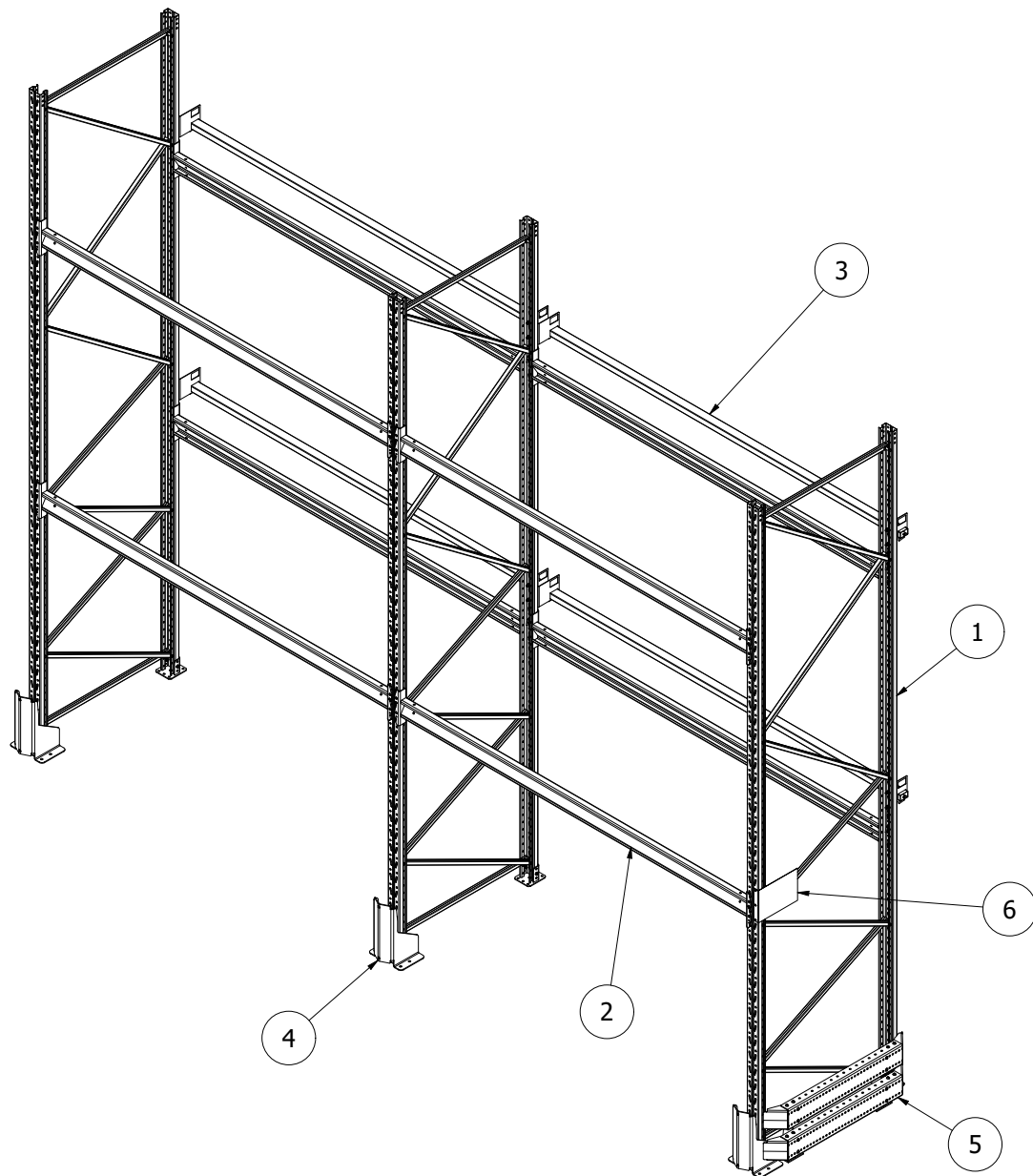
Thank you for choosing a product from EAB!

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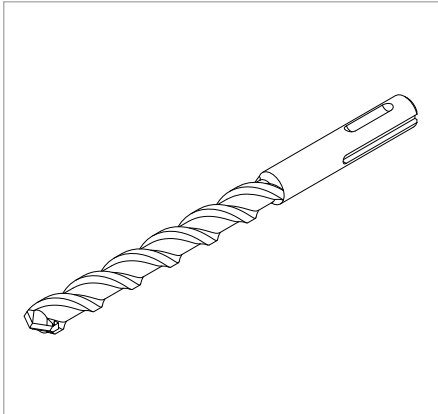
4	Detailed Overview
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DETAILED OVERVIEW

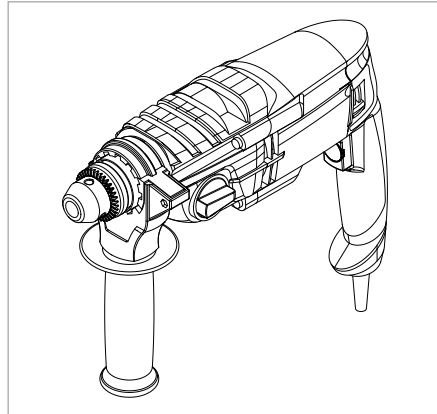
1. Frame
2. Beam
3. Pallet back stop
4. Upright protection
5. Frame protection
6. Load table



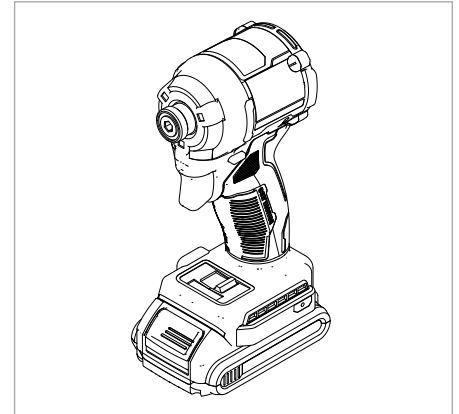
TOOLS FOR ASSEMBLY



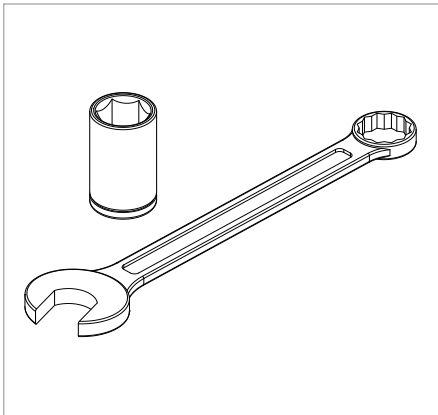
Concrete drill bit
8/10/12/14/16mm



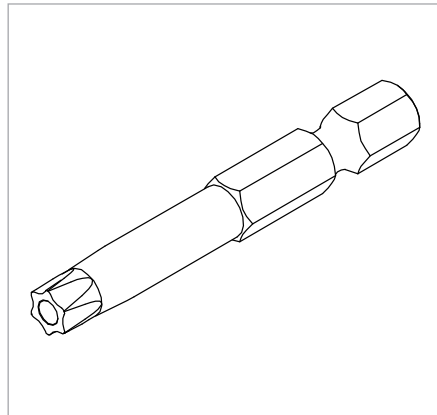
Hammer drill



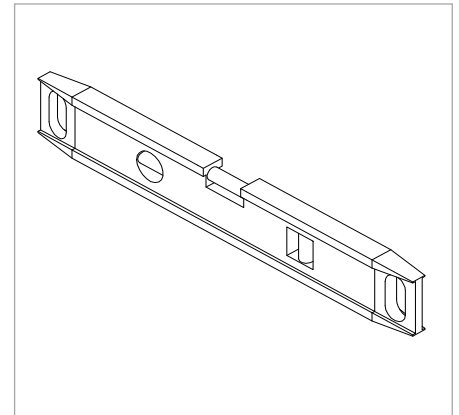
Impact driver/screwdriver



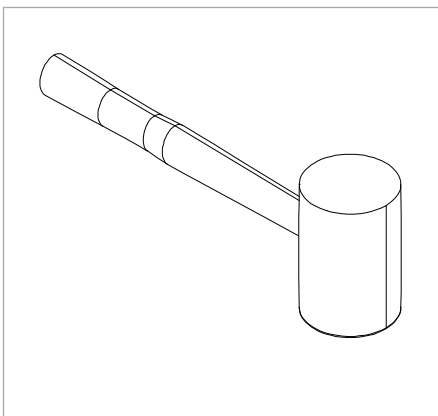
Hex socket/socket wrench
13/15/16/17/18/19 mm



Hex and torx bits
6mm/T25/T30



Spirit level/line laser



Hammer

FLOOR TOLERANCES

Concrete floor

The concrete grade shall be a minimum of C 25/30.

The thickness of the concrete slab must be at least drilling depth +30mm.

Construction joints in concrete floors must not pass through the rack, because a movement in the joint can cause unpredictable forces in the rack.

Construction joints shall be placed at the side of the rack.

Assembly must take place on dry concrete.

Diamond drills may not be used.

The purchaser/user is responsible for ensuring that the floor is dimensioned for the actual loads.

Upon request, EAB can provide information about floor loads from the rack.

Maximum height tolerances permitted

<i>Measurement</i>	<i>Measurement length</i>	<i>Tolerance</i>
Flatness	0.25m	±1.2mm
Flatness	2.0 m	±5mm
Slope		1/600

However, all height deviations, depending on both flatness and slope, shall be within ± 20 mm for the entire rack, calculated from a horizontal reference plane.

If the floor is not made of concrete, then please contact EAB.

Tightening torque, bolt

Bolt M10 8.8	Max. tightening torque 47 Nm
Taptite M6	Max. tightening torque 5 Nm
Taptite M8	Max. tightening torque 15 Nm
Self-drilling screw B31K 5.5x20	Max. tightening torque 5 Nm

Bolts should be tightened for good contact.

For bolts, lock nuts M10 class 8 should be used. However, the maximum tightening torque must not be exceeded.

For assembling of bracing in the frame

Bolt M8x75/12 Max. tightening torque 8-12 Nm

Lock nut M8 class 8

Use screwdrivers with adjustable torque.

Calibrate the screwdriver with a torque wrench.

Tarmac floor

Tarmac plates should always be applied according to the installation instructions.

The maximum load on tarmac plates assumes that the permissible surface pressure on the tarmac is at least 0.8 MPa for long-term loads.

The purchaser/user must approve the surface pressure. Structural strength is calculated on tarmac with a temperature less than 25°C. On warmer days where the tarmac is exposed to sunlight, the structural strength is reduced.

EAB recommends that the tarmac is not exposed to sunlight to ensure the permissible load according to the load table.

SPECIFICATION OF FLOOR ATTACHMENT

Anchoring in concrete

Screw anchor

Hilti HUS4 T-H 8x85

Drill hole Ø8

Drilling depth 90 mm in a cleaned hole

Drilling depth 114 mm in an

uncleaned hole

Min. mounting thickness 5 mm

Max. mounting thickness 15 mm

Hilti HUS4 T-H 8x100

Drill hole Ø8

Drilling depth 105 mm in a cleaned hole

Drilling depth 129 mm in an

uncleaned hole

Min. mounting thickness 5 mm

Max. mounting thickness 30 mm

Hilti HUS4-H 10x80

Drill hole Ø10

Drilling depth 85 mm in a cleaned hole

Drilling depth 105 mm in an

uncleaned hole

Min. mounting thickness 5 mm

Max. mounting thickness 15 mm

Hilti HUS4-H 10x100

Drill hole Ø10

Drilling depth 105 mm in a cleaned hole

Drilling depth 133 mm in an uncleaned

hole

Min. mounting thickness 5 mm

Max. mounting thickness 25 mm

Hilti HUS4-H 14x100

Drill hole Ø14

Drilling depth 105mm in a cleaned hole

Drilling depth 133mm in an

uncleaned hole

Min. mounting thickness 5 mm

Max. mounting thickness 25 mm

Max. 10mm screw adjustability is allowed, however +10mm is added at the drilling depth specified above.

Follow Hilti's instructions on the packaging. Tighten the screw anchor to achieve good contact. If the distance between the screw anchor and concrete edge is less than 65 mm, then please contact EAB.

Expansion anchor

M10x90 Hilti HST3

Drill hole Ø10

Drilling depth 73 mm in cleaned hole

Drilling depth 85 mm in uncleaned hole

Max. mounting thickness 10 mm

Tightening torque 45 Nm

M10x110 Hilti HST3

Drill hole Ø10

Drilling depth 73 mm in cleaned hole

Drilling depth 85 mm in uncleaned hole

Max. mounting thickness 30 mm

Tightening torque 45 Nm

M12x105 Hilti HST3

Drill hole Ø12

Drilling depth 68 mm at cleaned hole

Drilling depth 80 mm in case of

uncleaned hole

Max. mounting thickness 30 mm

Tightening torque 60 Nm

M16x117 Hilti HSA

Drill hole Ø16

Drilling depth 100mm

Max. mounting thickness 5 mm

Drilling depth 85mm

Max. mounting thickness 20 mm

Tightening torque 80 Nm

Follow Hilti's instructions on the packaging. If the distance between screw and concrete edge is less than 9 x screw diameter, then please contact EAB.

	HUS 8	HUS 10	HUS 14
Max. torque impact driver	450 Nm	600 Nm	1000nm
Recommended impact driver	6-22	6-22	6-22
HILTI SIW according to the table on the right or equivalent	22T-A	22T-A	22T-A
		8-22	8-22

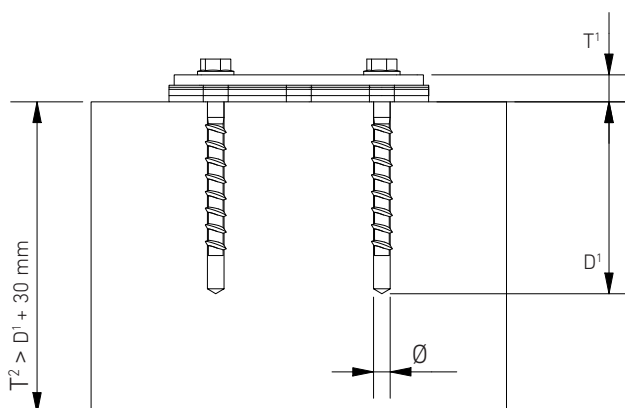
Follow Hilti's instructions on the packaging.

Tighten the screw anchor to achieve good contact.

If the distance between the screw anchor and

concrete edge is less than 65 mm,

then please contact EAB.



T¹ = Mounting thickness
D¹ = Drilling depth
Ø = Drill hole diameter
T² = Thickness of concrete slab

Floor anchoring in tarmac

Screw anchor

Hilti HUS4 T-H 8x85

Drill hole Ø 8

Drilling depth 100 mm

Min. mounting thickness 5 mm

Max. mounting thickness 15 mm

Hilti HUS4 T-H 8x100

Drill hole Ø 8

Drilling depth 115 mm

Min. mounting depth 5 mm

Max. mounting thickness 30mm

Hilti HUS4-H 10x80

Drill hole Ø 10

Drilling depth 95 mm

Min. mounting depth 5 mm

Max. Mounting thickness 15mm

Screw anchor and adhesive primer EP should be used when mounting on tarmac.

Before using adhesive primer EP, read the operating instructions and safety instructions on the packaging.

For complete product data see www.hagmans.se.

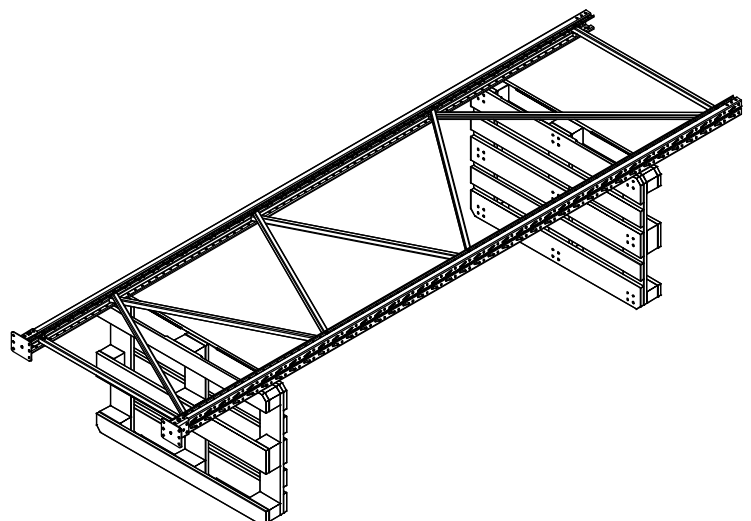
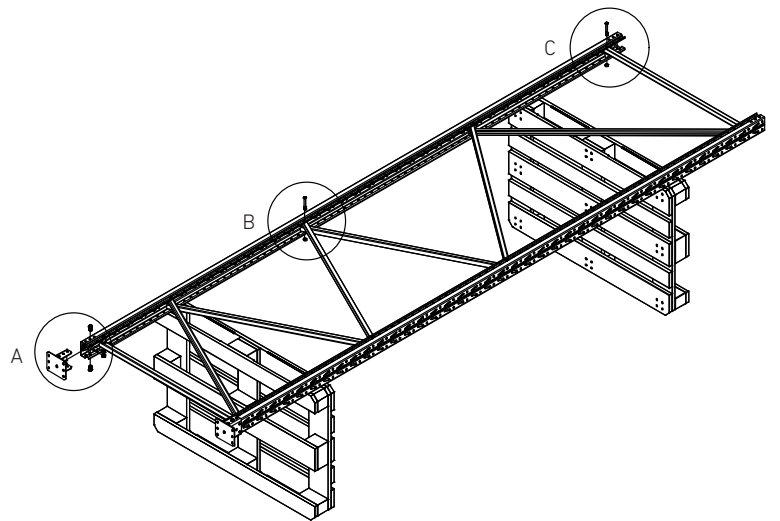
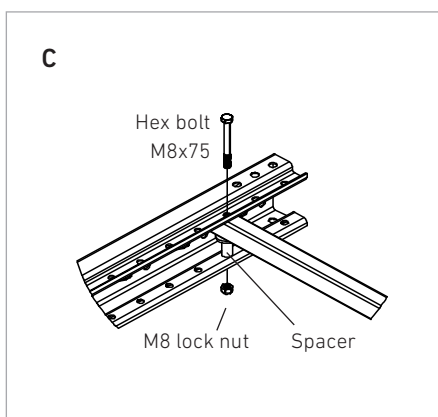
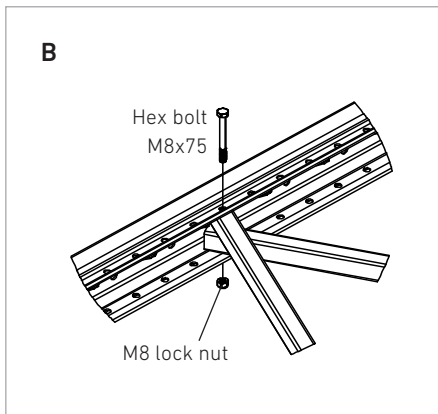
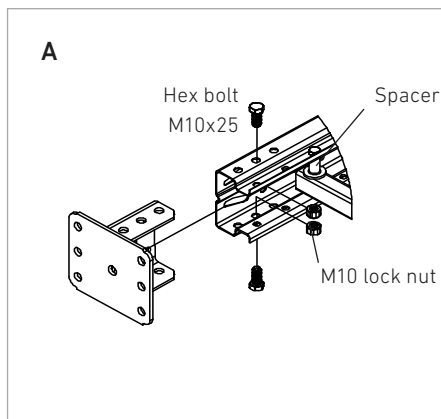
Fill drill hole with adhesive primer EP, let the glue sink and refill.

Insert the screw and tighten.

In exposed environments, EAB recommends the use of screws with better corrosion protection, screw anchor HUS4-HF or alternatively expansion anchor FZV.

ASSEMBLING OF FRAMES

1. Fasten sleeve footplates to the uprights
2. Place braces according to the frame view on page 10
3. Place spacers at free side of horizontal brace in both frame ends



BRACING OF FRAMES

Dimension table - frame depth 800

Brace type	Rise per brace	Brace length (90 upright)	Brace length (110 upright)
0	0	747	733
1	500	906	895
2	750	1071	1061
3	1000	1265	1257

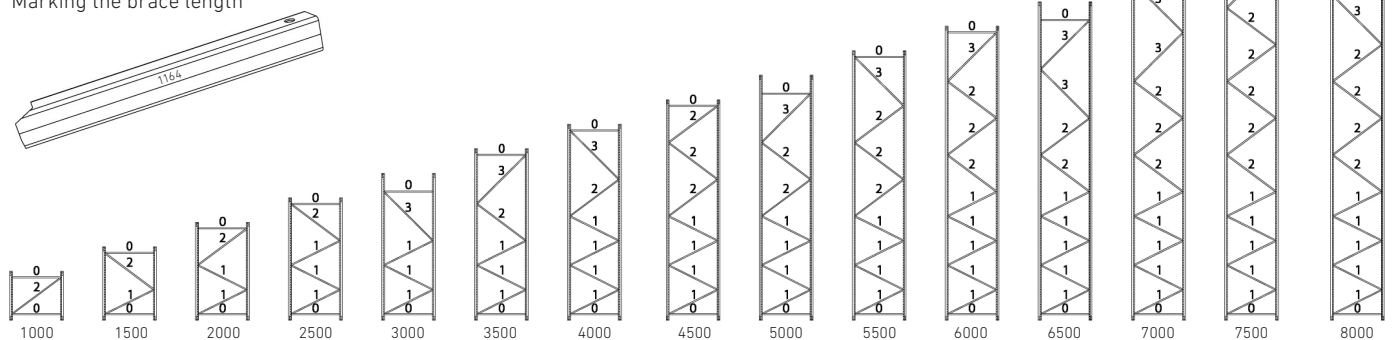
Dimension table - frame depth 900

Brace type	Rise per brace	Brace length (90 upright)	Brace length (110 upright)
0	0	847	833
1	500	989	977
2	750	1142	1131
3	1000	1325	1316

Dimension table - frame depth 1100

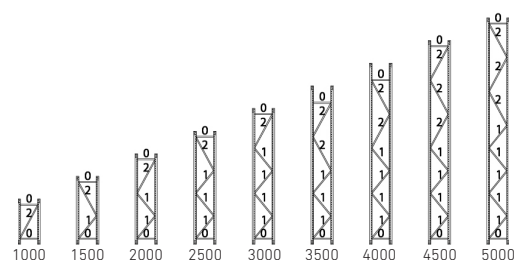
Brace type	Rise per brace	Brace length (90 upright)	Brace length (110 upright)
0	0	1047	1033
1	500	1164	1152
2	750	1296	1284
3	1000	1459	1449

Marking the brace length



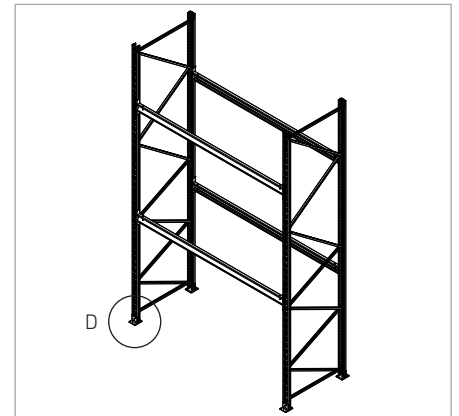
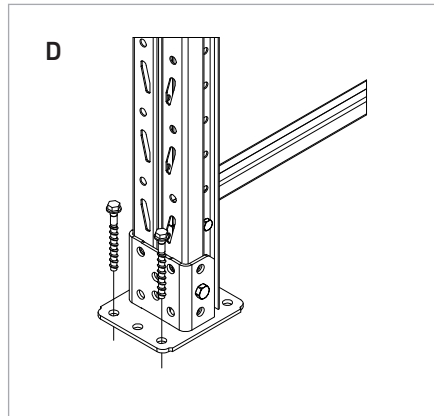
Dimension table - frame depth 500

Brace type	Rise per brace	Brace length (90 upright)	Brace length (110 upright)
0	0	447	433
1	500	685	676
2	750	893	887

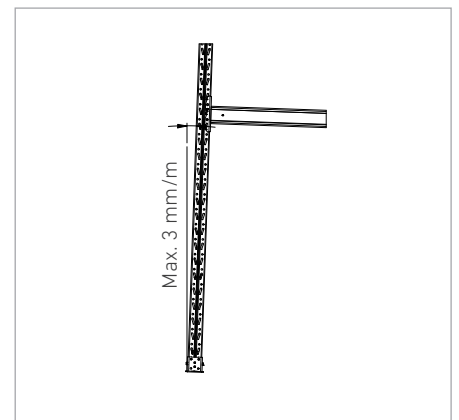
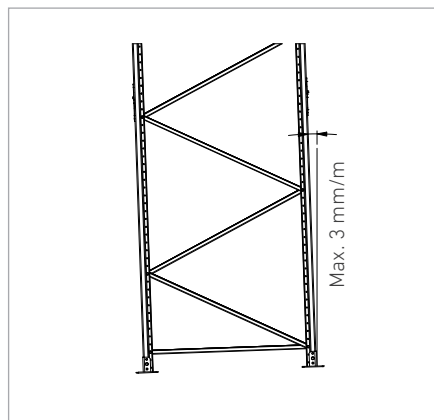


ASSEMBLING OF SECTIONS

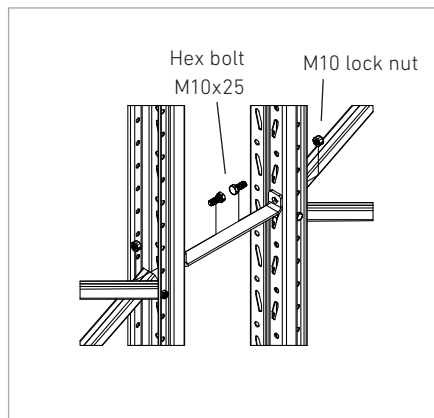
1. Level the floor to find the highest point. Start from the highest point and then adjust any irregularities with the help of shim plates. Max. thickness of shim plates: 25mm.
2. Erect one starting bay and secure the beams with safety pins.



3. Check to ensure that the frames do not exceed the specified tolerances with respect to incline. Max. 3 mm/m.

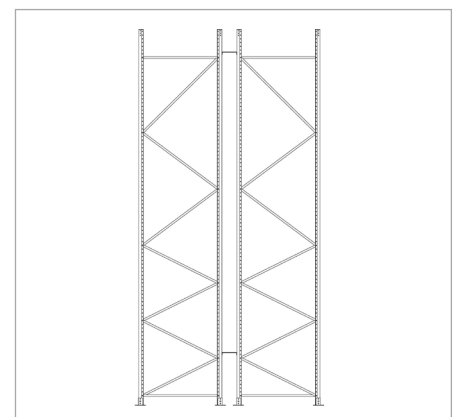
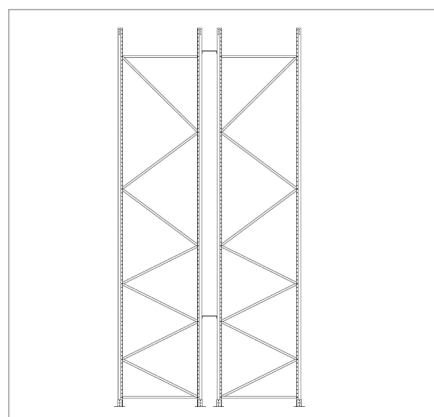


4. Fit 2 spacers between each frame pair. Frame spacers are only fitted on double racks.



5. Anchor footplates using 2 screw anchors HUS4 T-H 8x85 or alternatively 2 expansion anchors HST3 M10x90.

If the shim thickness exceeds 10 mm, then use screw anchor HUS4 T-H 8x100 or alternatively expansion anchor HST3 M10x110.



Frame setup

Alternative frame setup

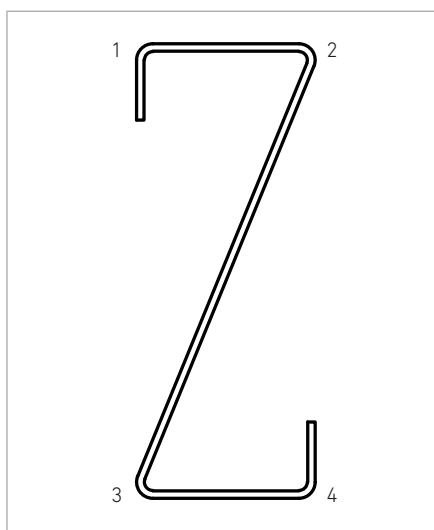
BEAM PROFILES

Beams shall be fixed to uprights by bolts or safety pins, according to the table below.

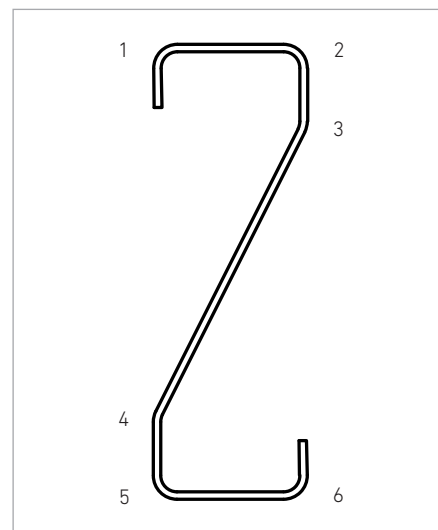
Beam profile Z4 142x2.95 and Z4 160x2.95 must only be mounted on frame types 90-2, 110-1 or alternatively 110-2.

The table for beam profiles applies unless otherwise stated on project drawings.

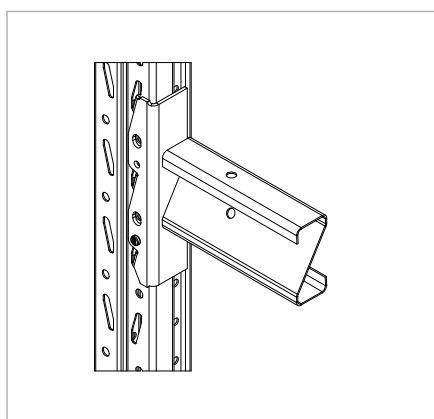
Beam profile	Safety pin	Bolt
Z4 100x1.85	X	
Z4 100x2.35	X	
Z4 115x2.35	X	
Z4 140x2.35		X
Z4 142x2.95		X
Z4 160x2.95		X
Z6 100x1.85	X	
Z6 100x1.85	X	
Z6 115x2.35	X	
Z6 140x2.35	X	



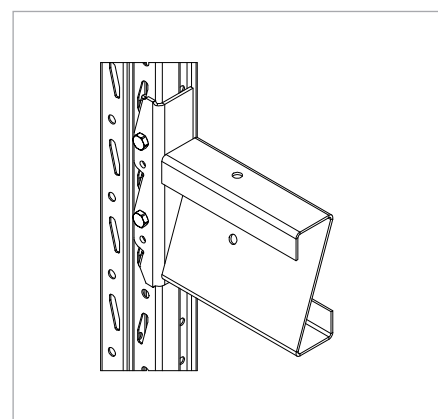
Beam profile Z4



Beam profile Z6

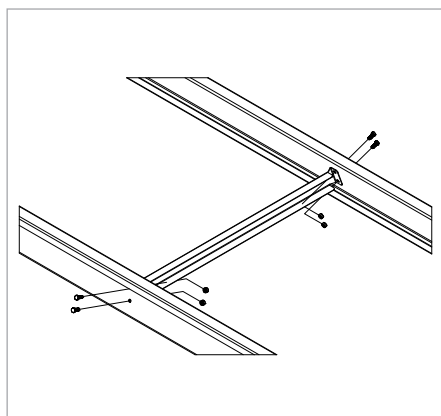


Beam secured by safety pin
2 safety pins/beam.



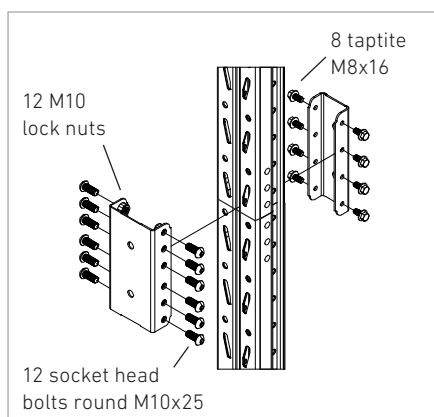
Bolted beam.
4 hex bolts M10x25+M10 lock nut/beam.

Crossbar for beam Z4 160x2.95

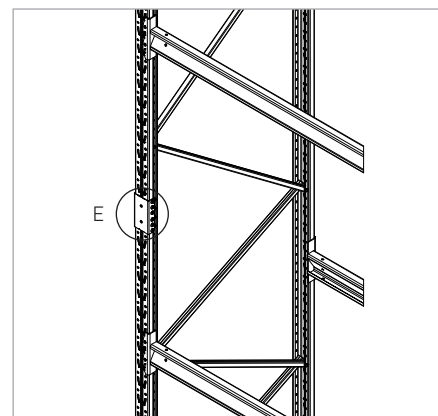


4 hex screws M10x25 + M10 lock nut/
crossbar. Beam Z4 160x2.95-3600 mounted
with crossbar, gets an increased capacity
from 4x800kg to 4x1000kg.

Splicing tubes

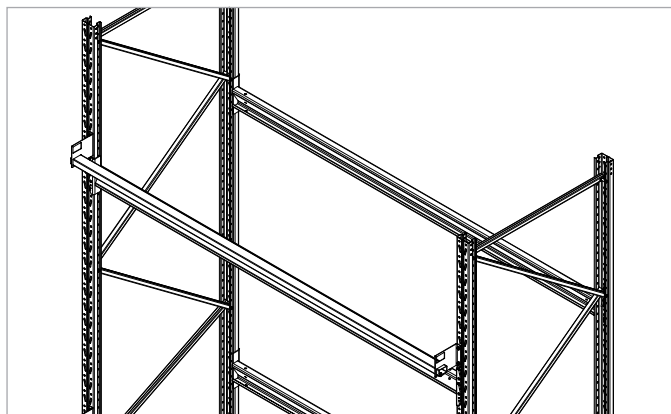
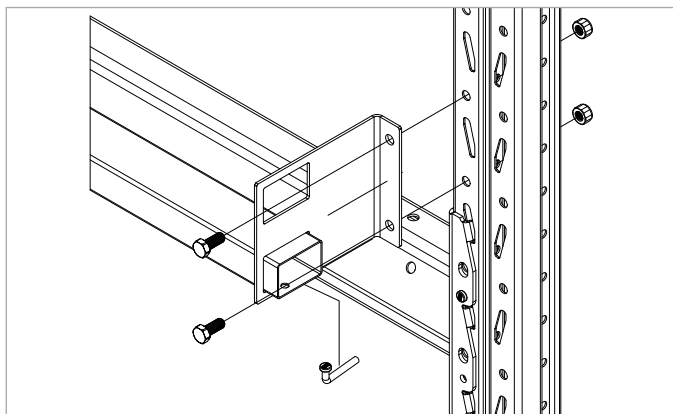


Uprights must always be spliced above the
first beam level.



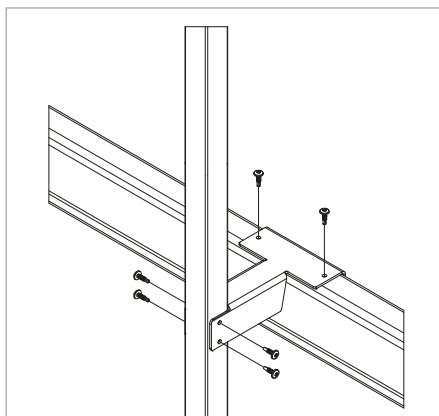
PALLET BACK STOPS

Horizontal back stop

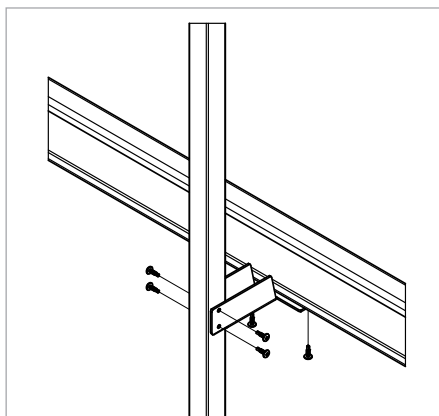


2 hex bolts M10x25+M10 lock nut, 1 safety pin.

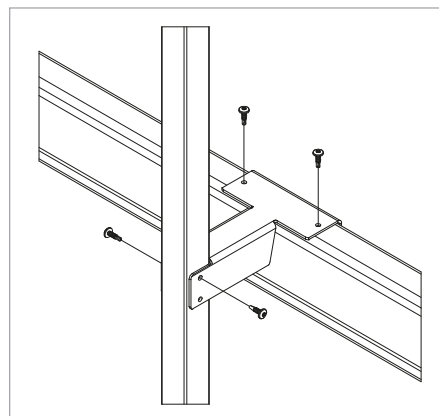
Vertical back stop



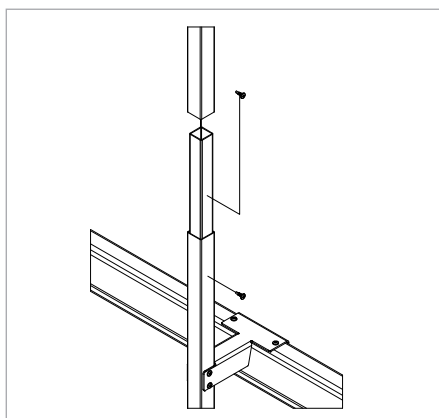
Bracket screwed to the lowest beam level without floor bracket. 6 screws B31K 5.5x20.



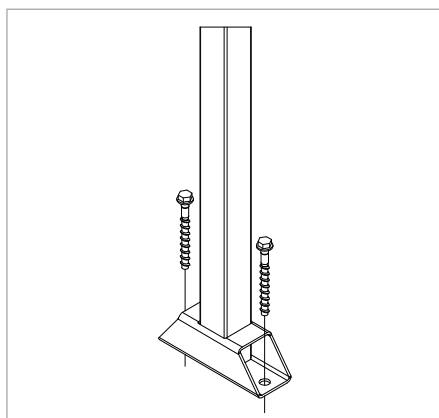
Bracket screwed to underside of the beam. 6 screws B31K 5.5x20.



Bracket on other beam levels. 4 screws B31K 5.5x20.



Splicing of tubes, 2 screws B31K 5.5x20.

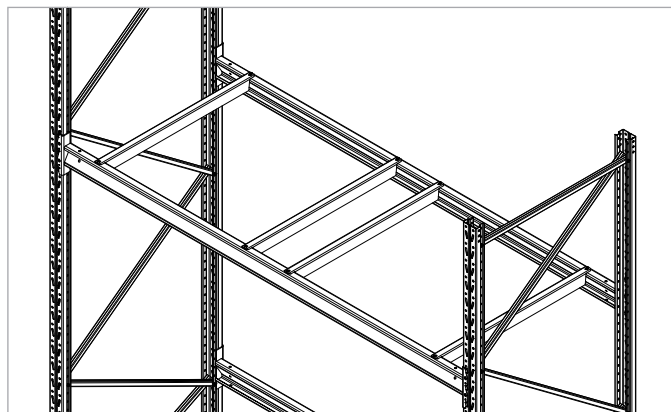
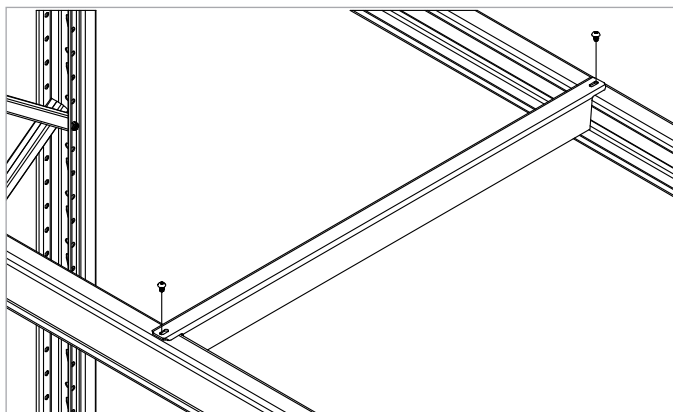


Floor bracket, 2 screw anchors HUS4 T-H 8x85 or alternatively 2 Expansion anchors HST3 M10x90.



SUPPORT BARS

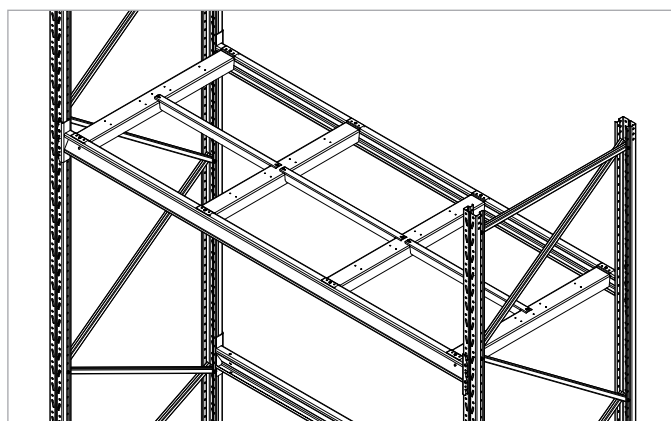
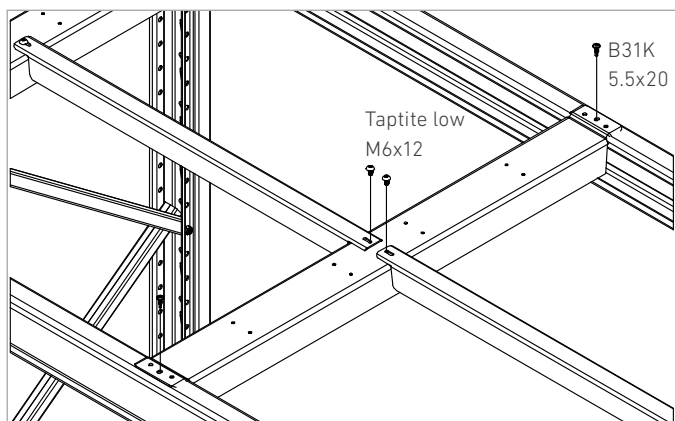
Support bar U42x69 | For long side handled pallet



2 taptite low M6x12/support bar or alternatively 2 screws B31K 5.5x20/
support bar.

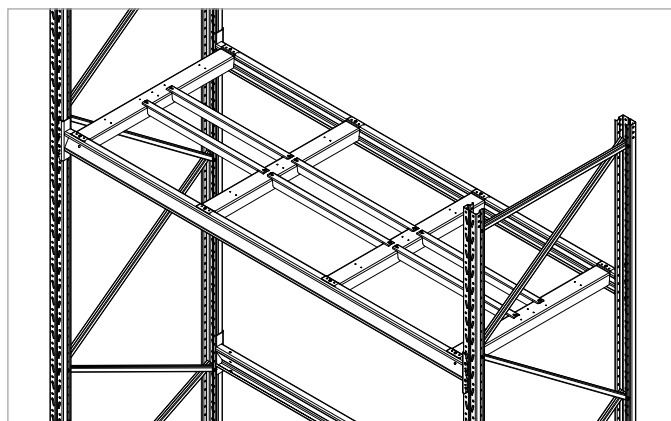
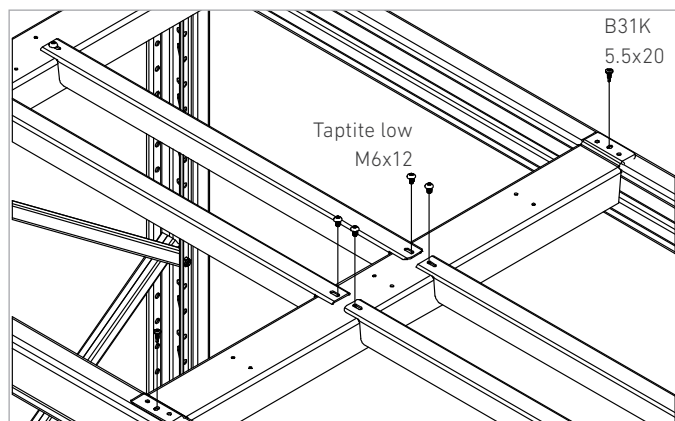
*Used when the beam is not pre-drilled with holes Ø5.5 mm.

Support bar B=100 | Cross bar U42x48



2 taptite low M6x12/insert, 2 screws B31K 5.5x20/bar.

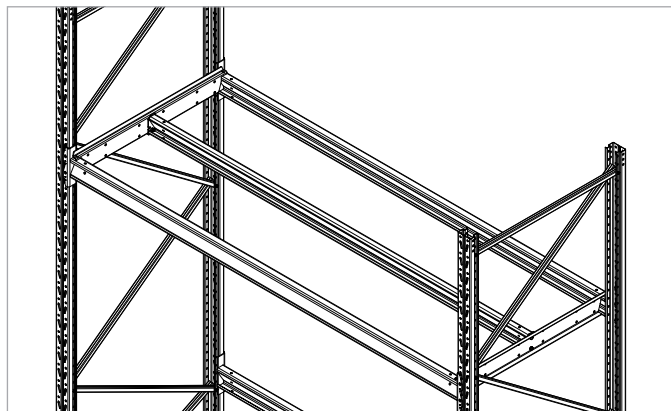
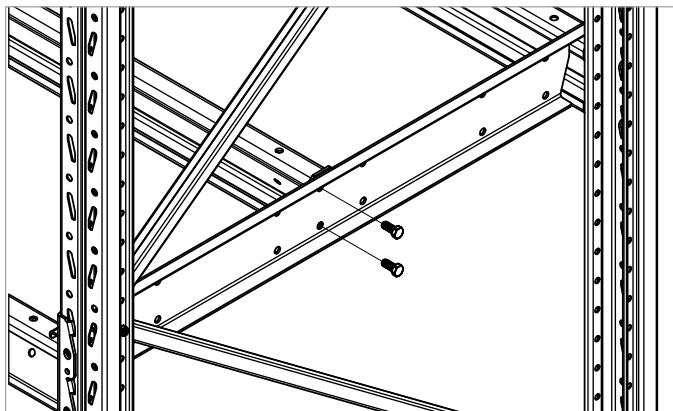
Support bar B=100 for half pallets | Cross bar U42x48



2 taptite low M6x12/insert, 2 screws B31K 5.5x20/bar.

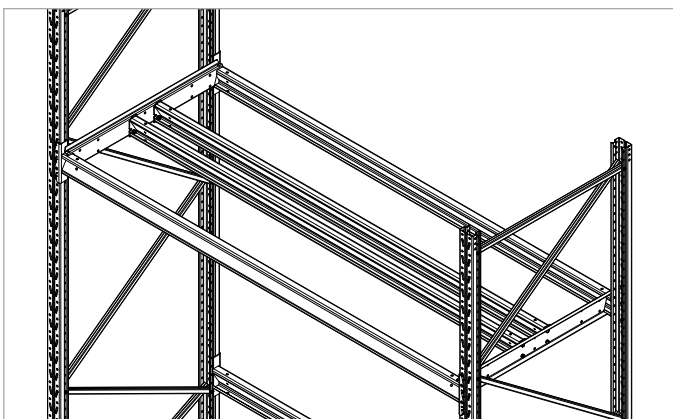
SUPPORT BARS

Support beam | Single cross beam

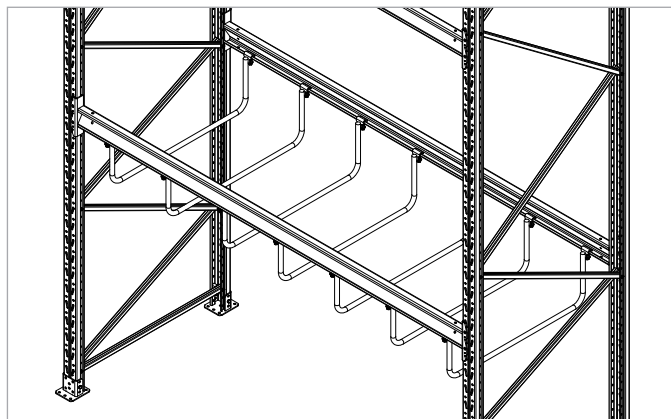
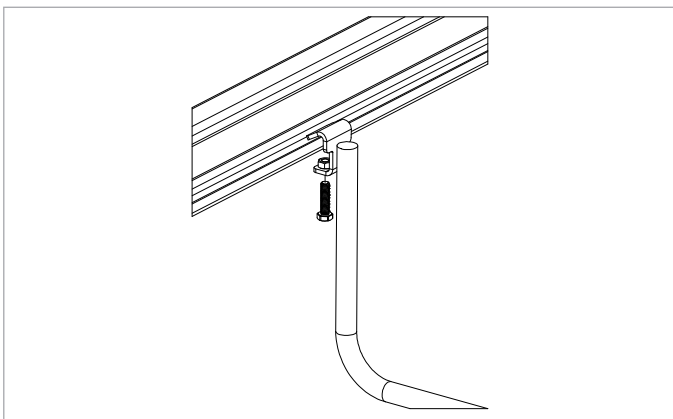


4 hex screws M10x25+M10 lock nut/beam.

Support beam for half pallets | Double cross beam



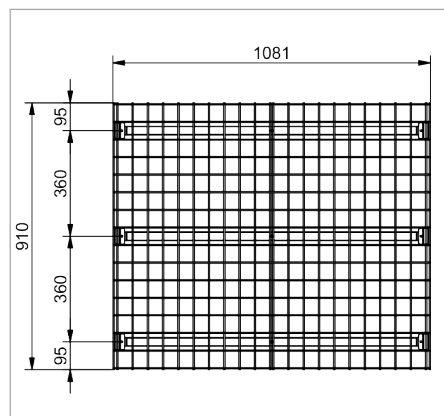
Divider



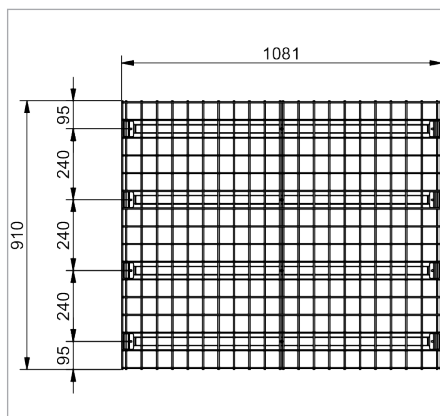
2 hex screws M10x40/divider bracket.

MESH PANEL

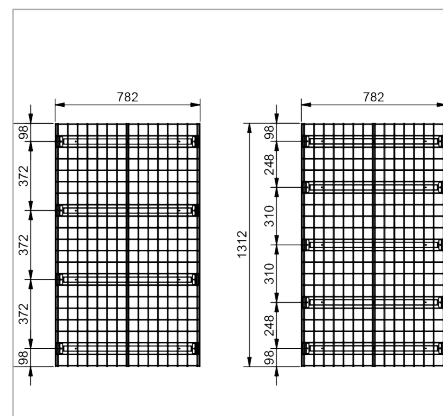
Placement of net supports



1081x910mm, 500kg/m²



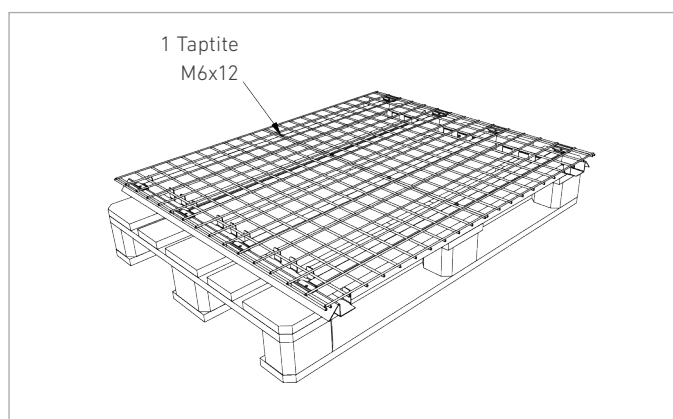
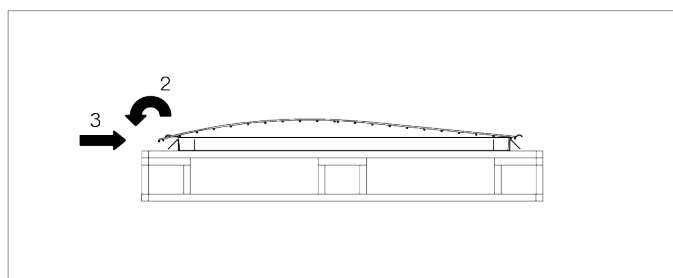
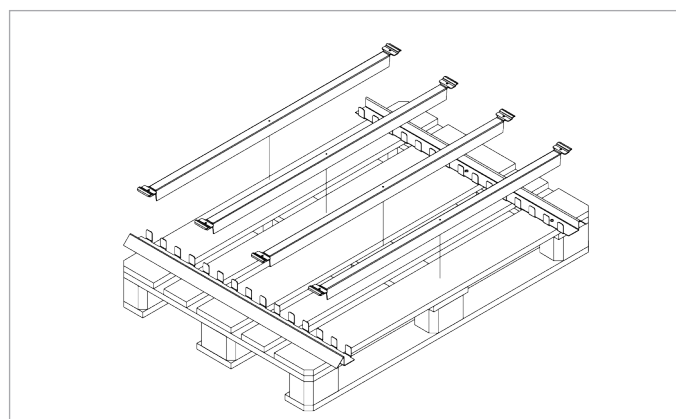
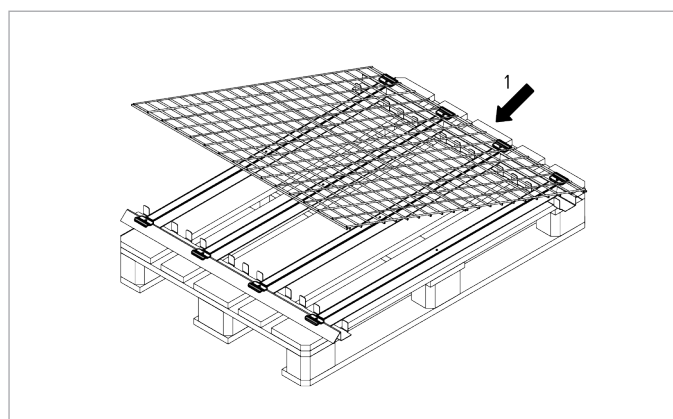
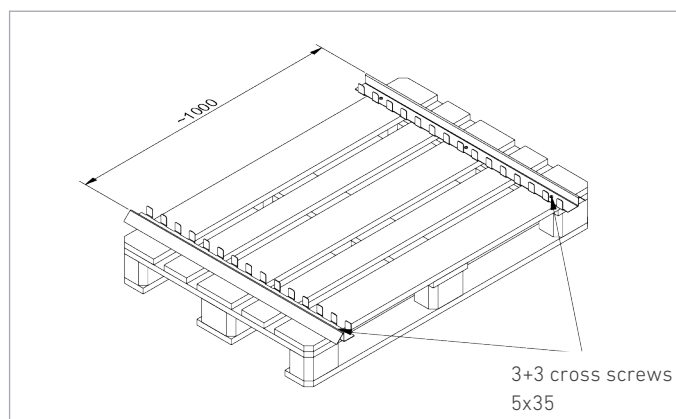
1081x910mm, 1000kg/m²



782x1312 mm,
500 kg/m²

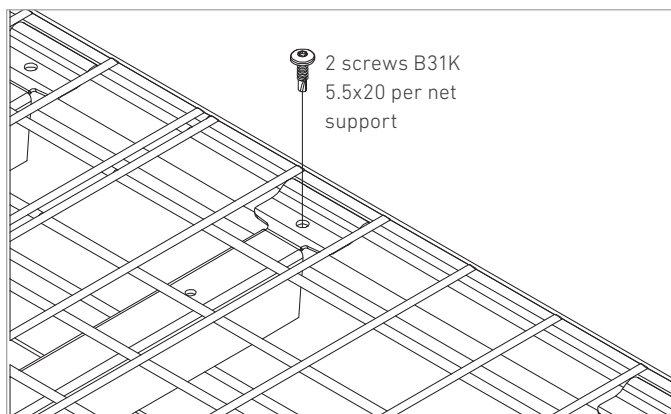
782x1312 mm
1000kg/m²

Assembly jig

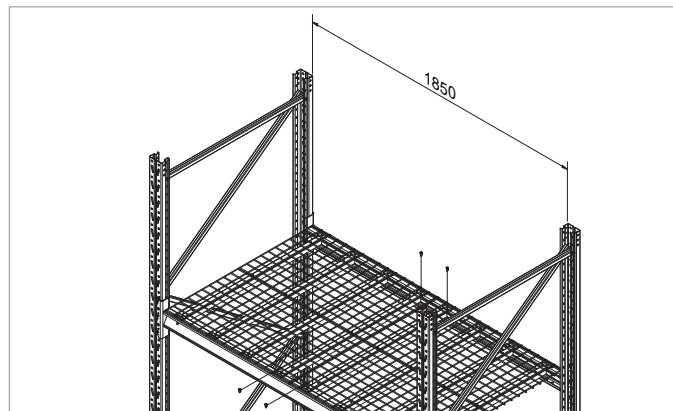


MESH PANEL

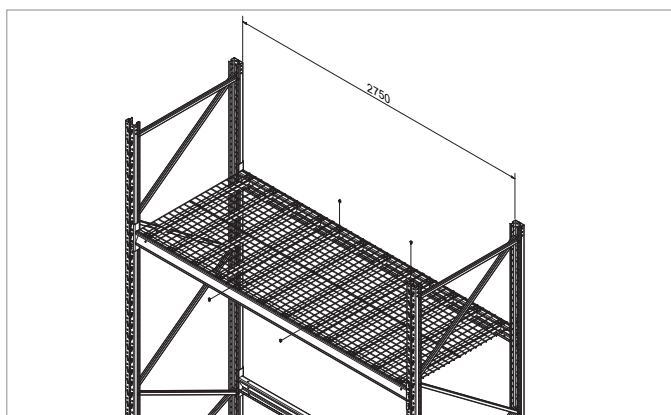
Fixing the mesh panel to beam in an 1850 section



Screw the two middle net supports to the beam using a total of 4 screws B31K 5.5x20.

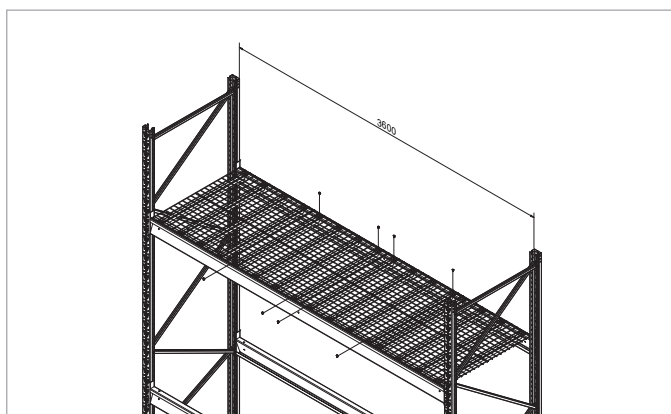


Fixing the mesh panel to beam in a 2750 section



Screw the two outer net supports in the middle net to the beam using a total of 4 screws B31K 5.5x20.

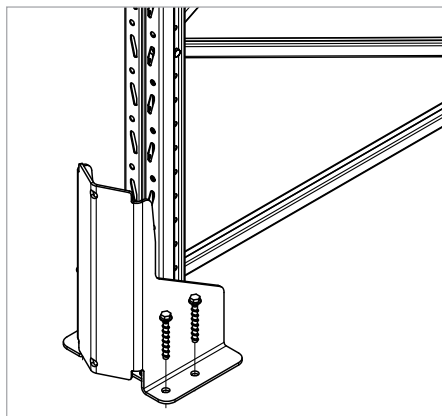
Fixing the mesh panel to beam in a 3600 section



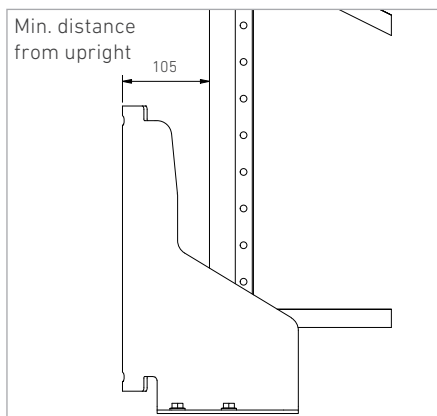
Screw the two outer net supports in the two middle nets to the beam using a total of 8 screws B31K 5.5x20.

UPRIGHT PROTECTION

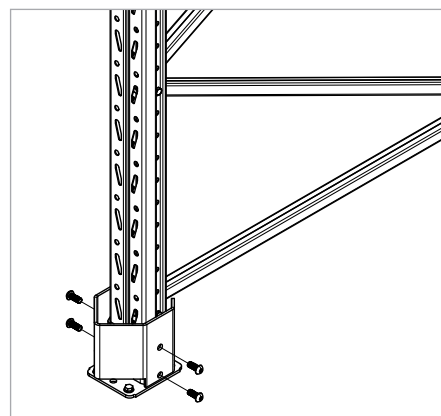
Upright protection H=400



4 screw anchors HUS4-H 10x80 or alternatively 4 Expansion anchors HST3 M12x105.

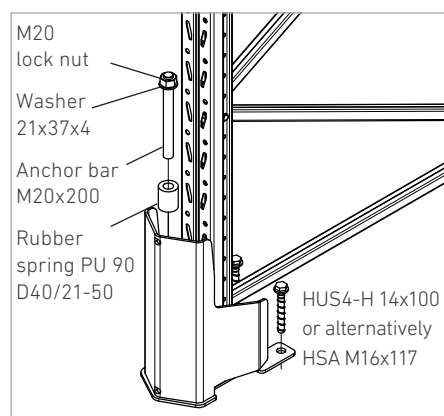


Upright reinforcement low

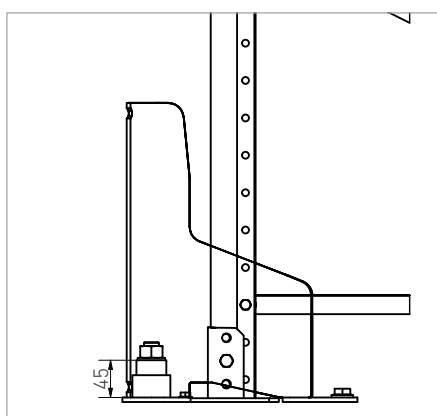


4 socket head bolts round M10x25+M10 lock nut.

Upright protector H=400 with PU spring

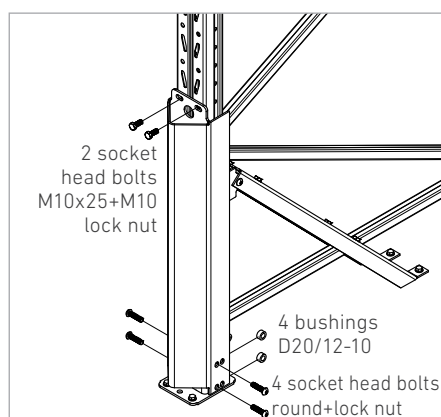


Fix the anchor rod with Hilti HIT-CT 100. Please read the "Hilti HIT-CT 100" brochure before use.

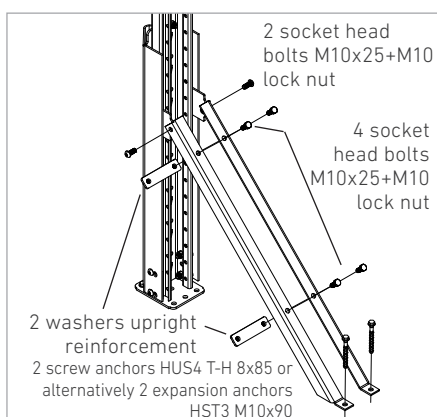


45 mm, height of PU spring after tightening.

Upright reinforcement high

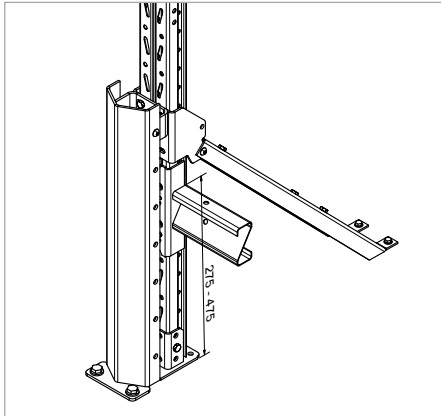


Bushing D20/12-10, only for 90 upright.
Hexagon socket head screw round M10x40,
90 upright/M10x25, 110-upright + M10 lock nut.



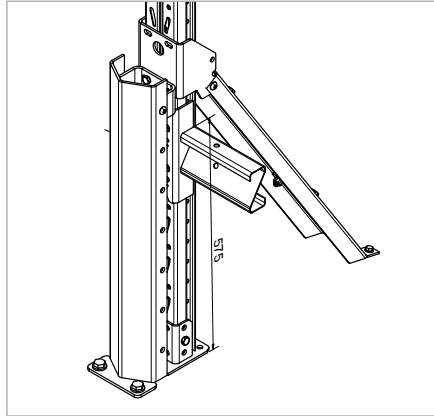
UPRIGHT PROTECTION

Upright reinforcement high front



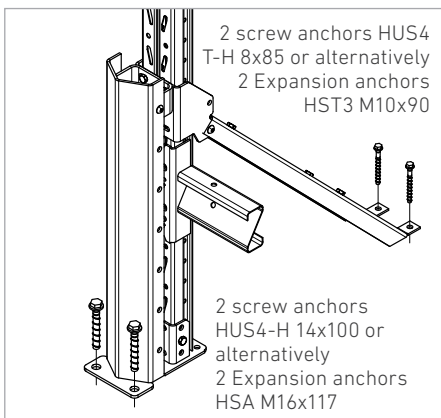
For beam level assembled 275-475 mm from the floor.

Alternative fastening

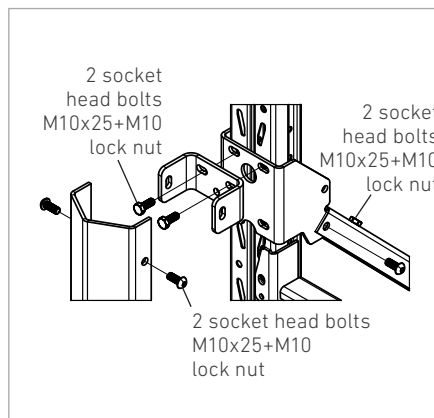


For beam level assembled 575 mm from the floor.

Floor anchoring

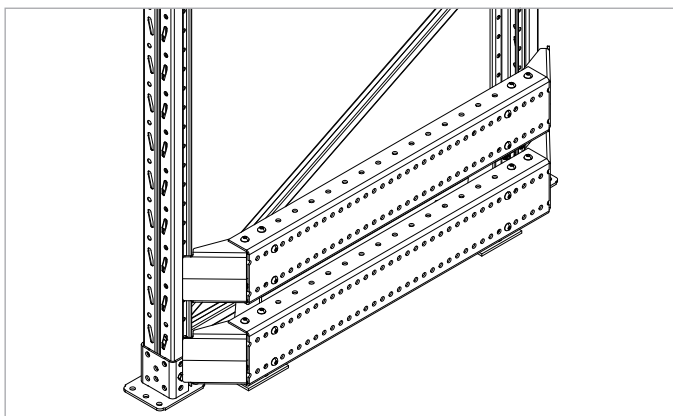


Bracket

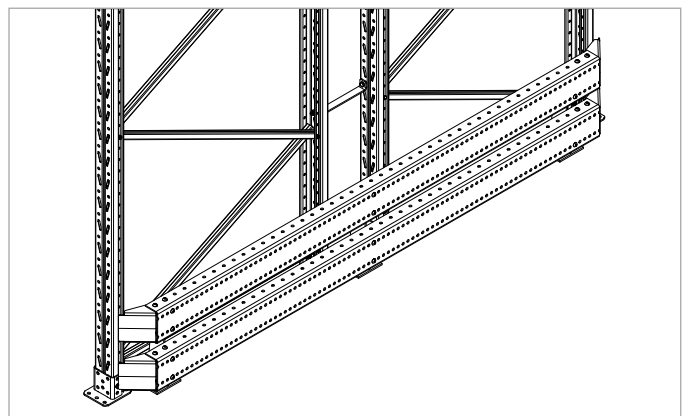


FRAME PROTECTION

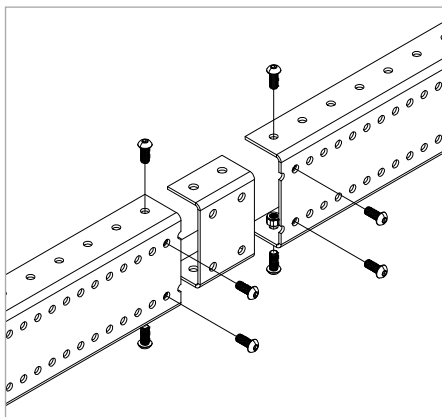
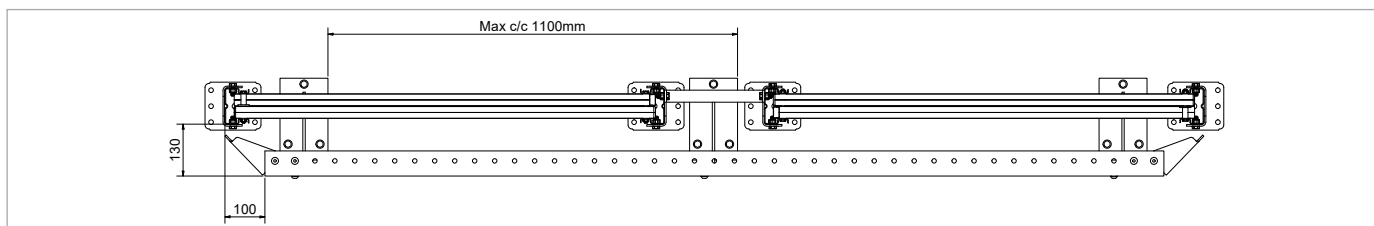
Frame protection for single rack



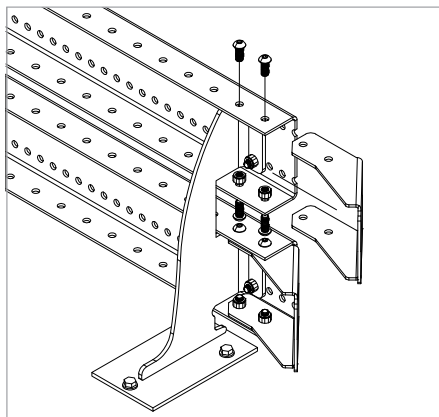
Frame protection for double rack



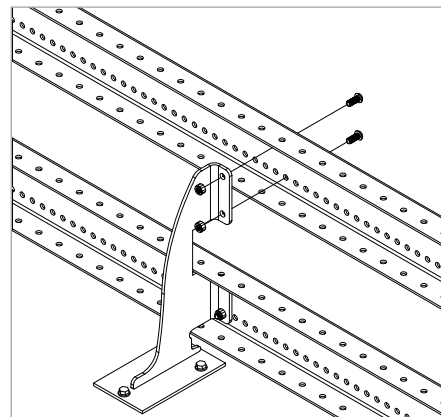
FRAME PROTECTION



Splicing plate | 8 socket head bolts round M10x25+M10 lock nut/splice.

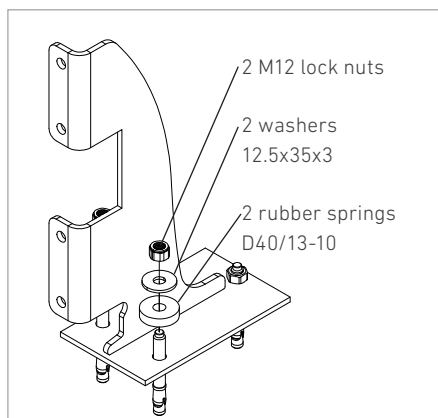
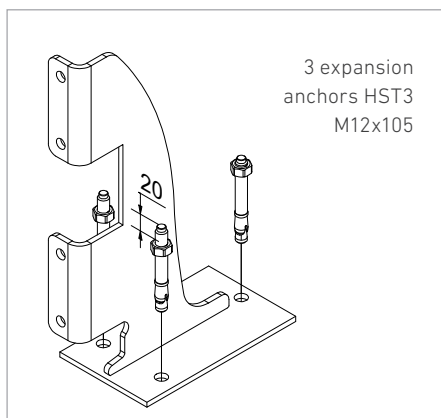


End plate | 4 socket head bolts round M10x25+M10 lock nut/end plate.



Foot | 4 socket head bolts round M10x25+M10 lock nut/foot.

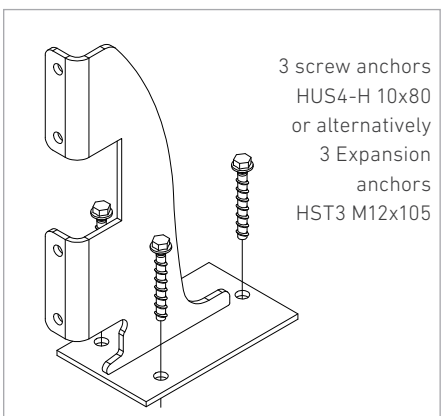
Anchoring of foot with PU spring



A PU spring may only be used in combination with expansion anchor.

1. Screw down the nuts 20 mm on the two front expansion anchors.
2. Hammer down and tighten the expansion anchors.
3. Unscrew two front nuts and attach the rubber spring, washer and lock nut.
4. Tighten the lock nut for good contact against the washer.

Anchoring of foot without PU spring



WAREHOUSE SAFETY

EAB's pallet racking is based on a proven design where safety and function come first. The pallet racking complies with the European standard for pallet racking, with designations SS-EN 15512, SS-EN 15620, SS-EN 15629, SS-EN 15635, which include instructions for material selection, sizing, testing, assembly and marking.

Assembly/Modification

In the interest of safety, it is important that the pallet racking is always assembled according to the instructions provided in this user manual. The load diagram shows how the pallet racking is affected when the load carrying capacity is moved. The distance from the floor to the first beam level and also the distance between the beam level affects the load carrying capacity of the pallet racking.

Marking

Uprights are stamped with type numbers. Beams have the maximum load capacity/load carrying capacity stamped on them. The load tables supplied with the frames must be placed in clearly visible locations and it is management's task to ensure that they are complied with.

Maintenance

Impact damage must always be remedied immediately, as it usually has a decisive impact on the load carrying capacity of the pallet racking. An upright that has been hit is always a safety hazard and must therefore be replaced.

Accessories

An effective way to increase warehouse safety is to supplement the pallet racking with impact protection, pallet stops, half pallet support bars, etc.

Inspection

Assembly inspection

Before the pallet racking is put into use, the assembly must be inspected according to the instructions in this manual (+ assembly drawings, if any).

Regular inspection

The pallet racking must be regularly inspected with respect to locking devices, bracing, damage caused by impact and anything else that may affect durability.

Periodic inspection

The pallet racking must be inspected at least every 12 months, to ensure that it still complies with this user manual (+ any assembly drawings).

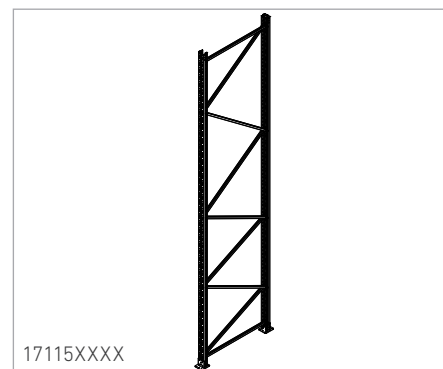
Re-inspection

Must always be carried out if the horizontal pallet support beams are moved or if the frames are rebuilt. The purchaser or user is responsible for ensuring that the aforementioned inspections are carried out.

INDEX OF ARTICLES

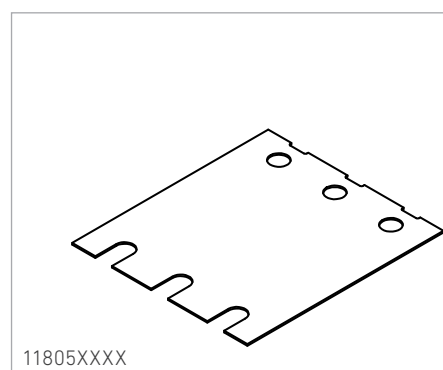
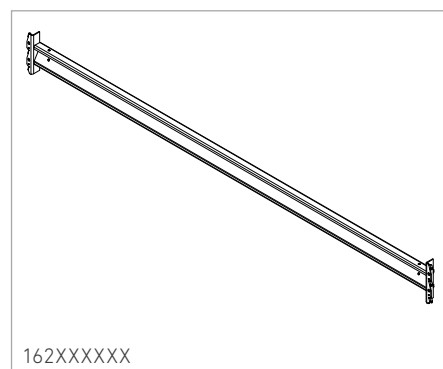
Frame

Art. number	Designation
171152011	Frame 90-1 2000*1100 mm
171152011	Frame 90-1 2500*1100 mm
171153011	Frame 90-1 3000*1100 mm
171153511	Frame 90-1 3500*1100 mm
171154011	Frame 90-1 4000*1100 mm
171154511	Frame 90-1 4500*1100 mm
171155011	Frame 90-1 5000*1100 mm
171155511	Frame 90-1 5500*1100 mm
171256011	Frame 90-1 6000*1100 mm



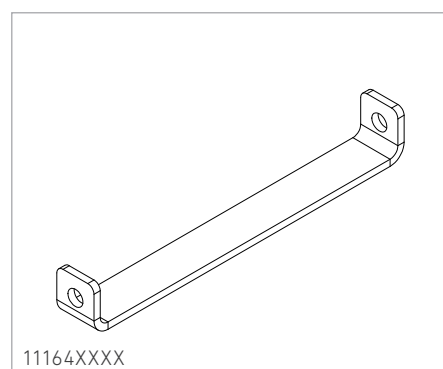
Beam

Art. number	Designation
162030950	Beam Z6 100x1.85-950 (1x1500 kg)
162031850	Beam Z6 100x1.85-1850 (2x1000 kg)
162132300	Beam Z6 100x2.35-2300 (2x1000 kg)
162132750	Beam Z6 100x2.35-2750 (3x550 kg)
162232750	Beam Z6 115x2.35-2750 (3x750 kg)
162332750	Beam Z6 140x2.35-2750 (3x1000 kg)
152432750	Beam Z4 142x2.95-2750 (3x1250 kg)
162333000	Beam Z6 140x2.35-3000 (3x900 kg)
162333300	Beam Z6 140x2.35-3300 (3x750 kg)
162333600	Beam Z6 140x2.35-3600 (3x500 kg)
152533600	Beam Z4 160x2.95-3600 (4x800 kg)
161031350	Beam Z6 100x1.85-1350 (1x1500 kg)
161232650	Beam Z6 115x2.35-2650 (2x1150 kg)



Shim plate

Art. number	Designation
118059010	Shim plate 1.0/90
118059030	Shim plate 3.0/90
118051110	Shim plate 1.0/110
118051130	Shim plate 3.0/110

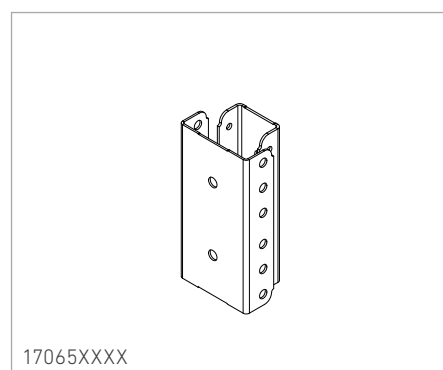


Frame spacer

Art. number	Designation
111640100	Frame spacer 100 mm
111640150	Frame spacer 150 mm
111640200	Frame spacer 200 mm
111640250	Frame spacer 250 mm
111640300	Frame spacer 300 mm

Splice profile

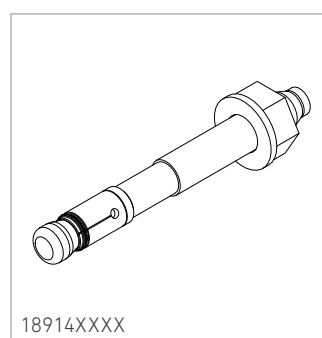
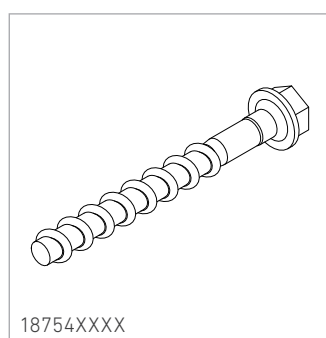
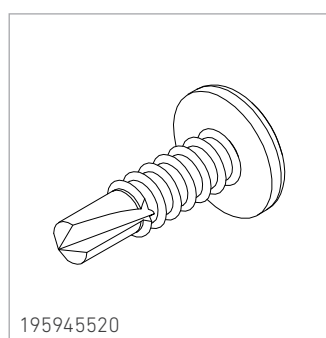
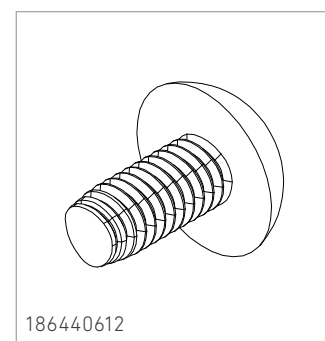
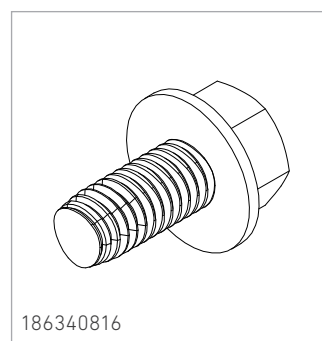
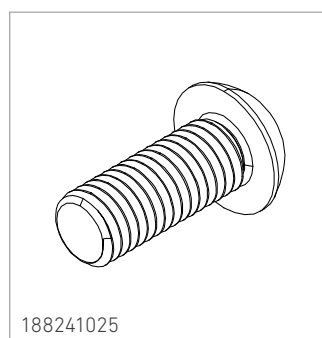
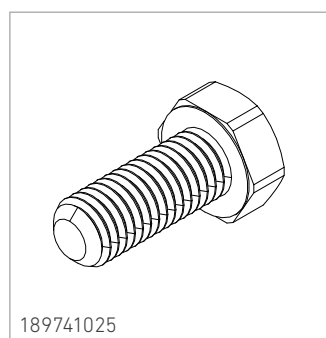
Art. number	Designation
170650090	Splice profile 90 omega
170650110	Splice profile 110 omega



INDEX OF ARTICLES

Fasteners

Art. number	Designation	Art. number	Designation
189741025	Hex bolt M10x25 M6S-H8.8 FZB	189141090:	Expansion anchor HST3 M10x90
188940875	Hex bolt M8x75 M6S-H8.8 FZB	1891410110	Expansion anchor HST3 M10x110
188241025	Socket head bolt round M10x25 MK6S-H 10.9	1891412100	Expansion anchor HST3 M12x105
189640010	Nut M10 locking M6M-8 FZB	1891416120	Expansion anchor HSA M16x117
189640008	Nut M8 locking M6M-8 FZB		
184740030	Spacer single brace		
188540000	Safety pin		
186340816	Taptite M8x16		
186440612	Taptite low M6x12		
195945520	Screw B31K 5.5x20		
187540885	Screw anchor HUS4 T-H 8x85		
1875408100	Screw anchor HUS4 T-H 8x100		
187541080	Screw anchor HUS4-H 10x80		
1875410100	Screw anchor HUS4-H 10x100		
1875414100	Screw anchor HUS4-H 14x100		



MADE IN SWEDEN

EAB's warehouse storage solutions are manufactured in our own factory in Smålandsstenar. After many years in the industry, EAB has built up a high level of knowledge and experience within warehouses and logistics, which we will gladly share with you.

With a broad and well-thought-out product range, we help create the right solution for your warehouse.



Built to last.®

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