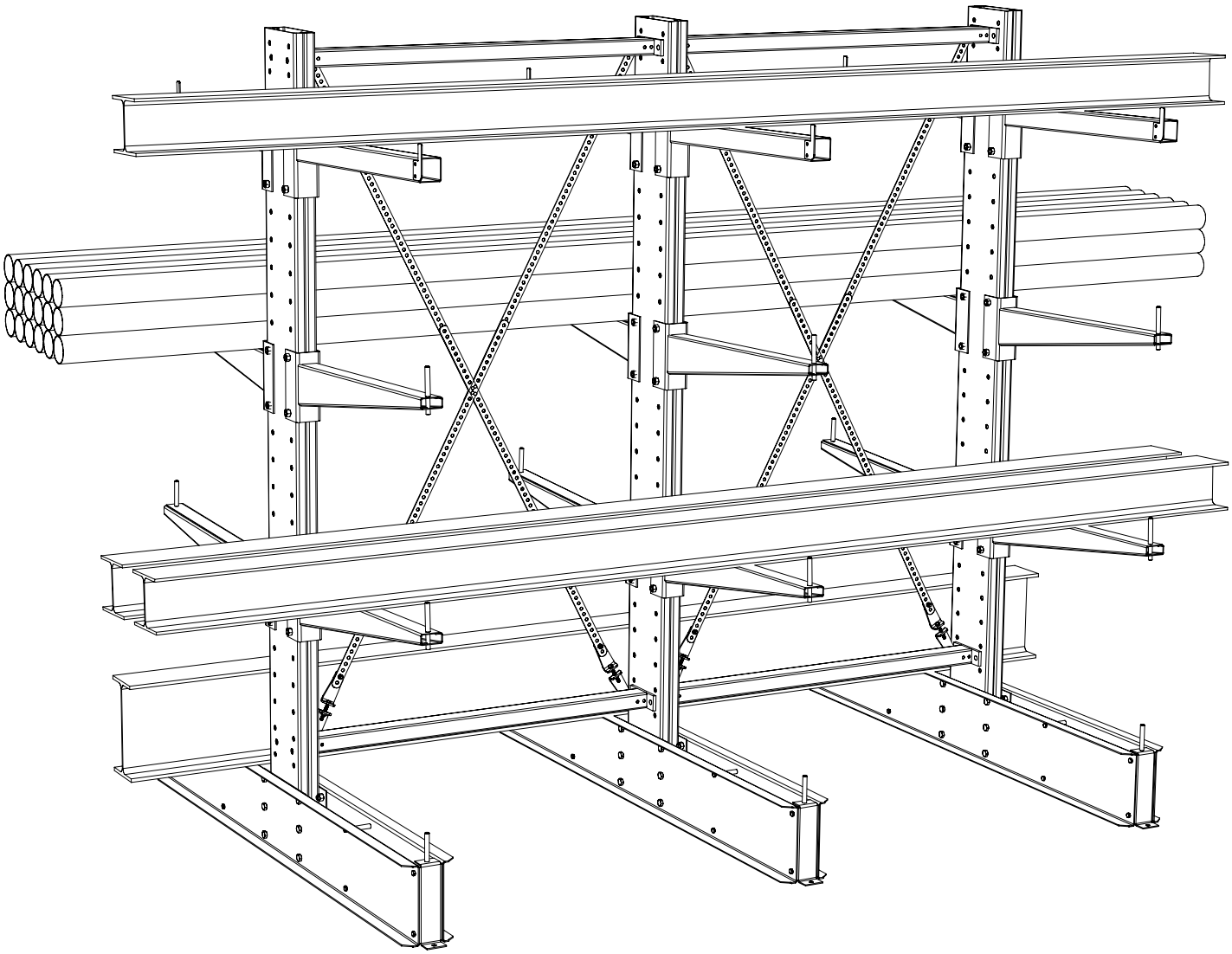
Assembly and users manual

Cantilever racking Heavy-duty model



EAB

Assembling tools
16 mm Hex socket
17 mm Hex socket
18 mm Hex socket
19 mm Hex socket
8 mm Concrete drill bit
10 mm Concrete drill bit
12 mm Concrete drill bit
Driver/Impact wrench
Level alt. Laserliner
Rotary Hammer alt. Hammer-drill
Hammer

Concrete floor
The concrete grade shall be minimum C 25/30
Construction joints must not pass through the rack, because a movement in the joint can cause unpredictable forces in the rack. Construction joints shall be placed between the racks.

Purchaser/User is responsible that the floor is designed for the actual loads.
EAB can by request provide information about floor loads from the rack.

Maximum height tolerances

Measure	Measure length	Tolerance
Flatness	0,25 m	± 1,2 mm
Flatness	2,0 m	± 5 mm
Inclination	1/600	

All points, regarding both flatness and slope, shall be within ±20 mm of the horizontal datum.

Tightening Torque

Screw M10 8.8	Max. tightening torque 47 Nm
Screw M12 8.8	Max. tightening torque 81 Nm
Screw M16 8.8	Max. tightening torque 197 Nm

Lock nut M10 class 8
Tighten screw joints for good contact.
Max. tightening torque must not be exceeded.

Tarmac floor
Screw anchor and "Häftprimer EP" shall be used for assembly on tarmac.
Before use, read the operating and safety instructions on the packaging for "Häftprimer EP".
For complete product data, see www.hagmans.se.
Fill drill holes with "Häftprimer EP", let the glue sink and fill again.
Insert the screw and tighten.

Tarmac plates must always be used according to the assembly instruction.
Maximum permitted load assumes that the surface pressure on the tarmac is at least 0,8 MPa for long-term loads.
The client/user must approve that the pressure requirement is met.

Declared strength values are based on tarmac temperatures below 25°C.
On warmer days when tarmac is exposed to sunlight, the strength is reduced.
EAB recommend protecting the tarmac from direct sunlight to ensure the permitted load according to the load label.

Floor anchoring in concrete

Screw Anchor

Hilti HUS3-H 8x85
Drill hole Ø8
Drilling depth 90 mm in a cleaned hole
Drilling depth 114 mm in an uncleaned hole
Min. mounting depth 5 mm
Max. thickness fastened 15 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 depth 5 mm
Max. thickness fastened 15 mm

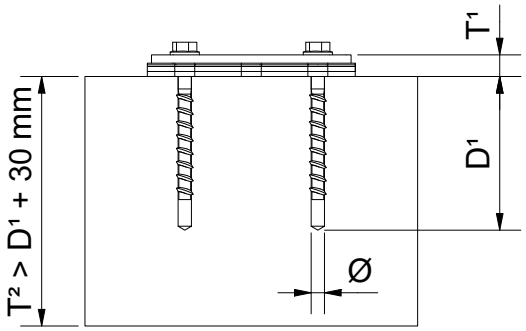
Hilti HUS4-H 10x150
Drill hole Ø10
Drilling depth 135 mm in a cleaned hole
Drilling depth 155 mm in an uncleaned hole
Min. mounting depth 25 mm
Max. thickness fastened 65 mm

Max. 10mm adjustability of screw is allowed,
if the above stated drilling depth is increased by +10mm.

Expansion anchor

M10x90 Hilti HST3
Drill hole Ø10
Drilling depth 73 mm in a cleaned hole
Drilling depth 85 mm in an uncleaned hole
Max. thickness fastened 10 mm
Max. tightening torque 45 Nm

M12x105 Hilti HST3
Drill hole Ø10
Drilling depth 68 mm in a cleaned hole
Drilling depth 80 mm in an uncleaned hole
Max. thickness fastened 30 mm
Max. tightening torque 60 Nm



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

T^1 = Max. thickness fastened
D^1 = Drill hole
Ø = Drill hole diameter
T^2 = Thickness of concrete slab

See Hiltis instructions on the package.
Tighten screw anchor to good contact.
If the distance between the anchor and the
concrete edge is less than 65mm, please contact EAB

Floor anchoring in tarmac

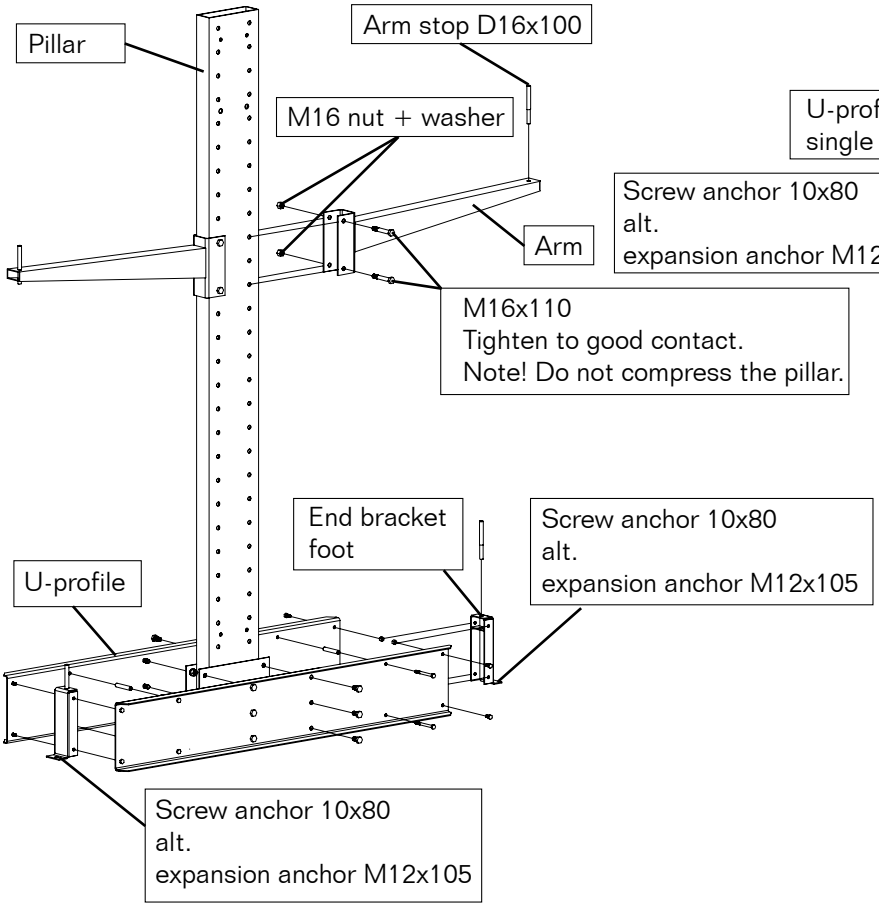
Screw Anchor
Hilti HUS3-H 8x85
Drill hole Ø 8
Drilling depth 100 mm
Min. thickness fastened 5 mm
Max. thickness fastened 15 mm

Hilti HUS4-H 10x80
Drill hole Ø 10
Drilling depth 95 mm
Min. thickness fastened 5 mm
Max. thickness fastened 15mm

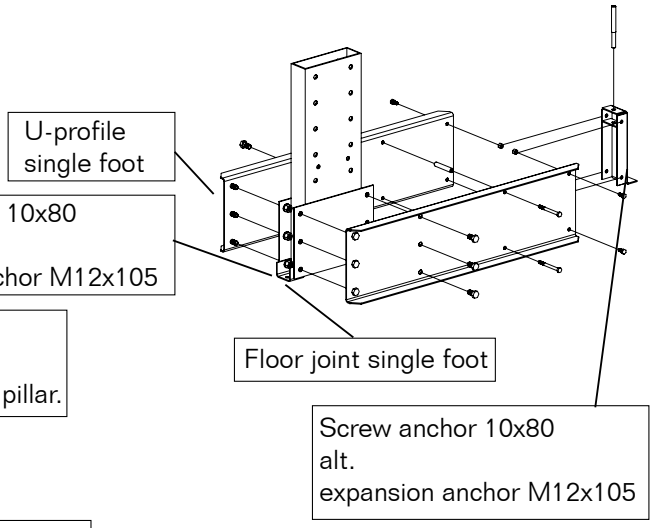
Hilti HUS4-H 10x150
Drill hole Ø10
Drilling depth 155 mm
Min. thickness fastened 25 mm
Max. thickness fastened 65 mm

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

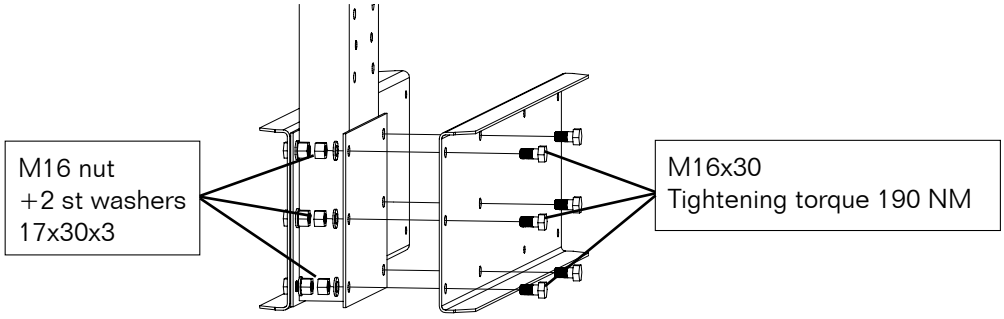
PILLAR WITH DOUBLE FOOTPLATE

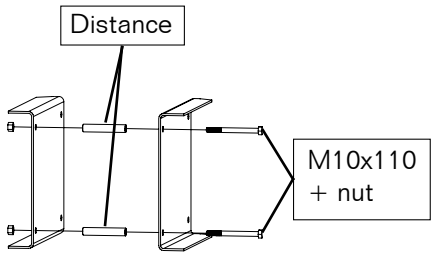


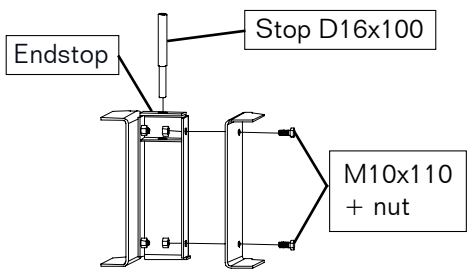
PILLAR WITH SINGLE FOOTPLATE



SINGLE FOOTPLATE



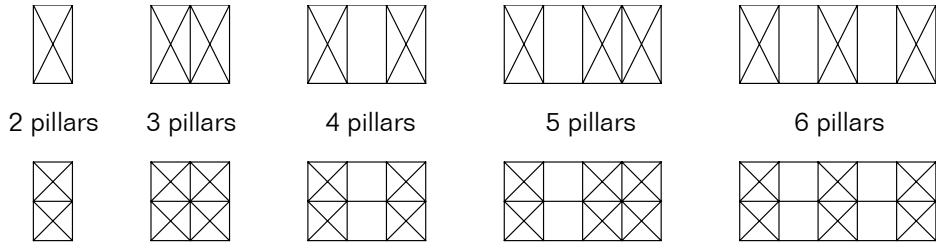




BRACING

$$\text{The number of sections with cross braces} = \frac{\text{number of pillars}}{2} \text{ round up}$$

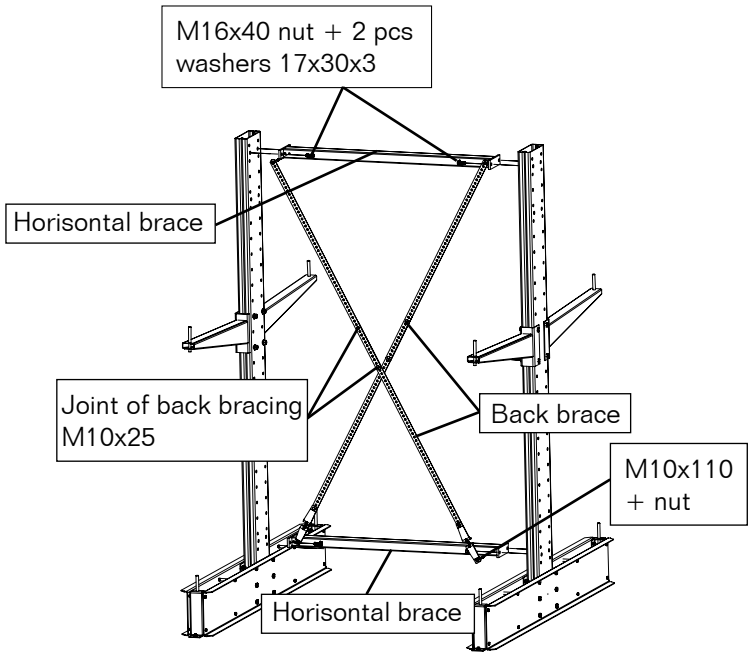
Ex



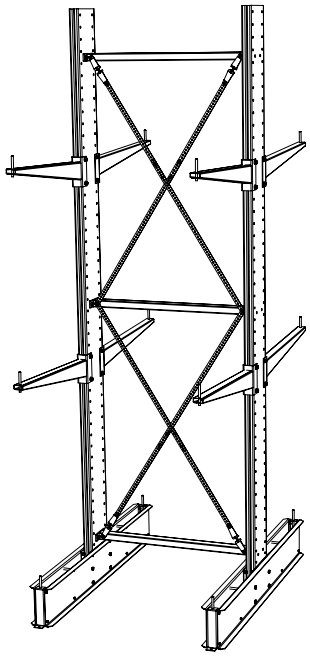
The number of back braces at each section (Counts all pillar dimensions)

C/C Pillars	Pillar height 3000			Pillar height 4000			Pillar height 5000			Pillar height 6000		
	Lengths of back braces			Lengths of back braces			Lengths of back braces			Lengths of back braces		
	1000	1500	3000	1000	1500	3000	1000	1500	3000	1000	1500	3000
1000		4		2		2	4	4			8	
1250		4		2		2	4	4			8	
1500		4		2		2		8			8	
1750		4		2		2		8			8	
2000	2		2	2		2		8		4		4
2500	2		2		2	2	4		4	4		4

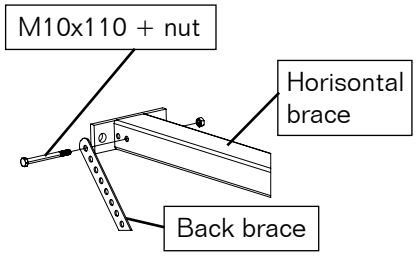
Single bracing
Upright height 3 and 4 meter



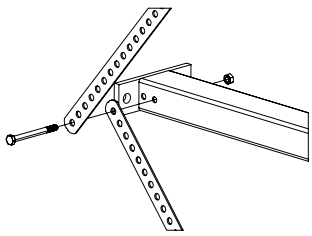
Double bracing
Upright height 5 and 6 meter

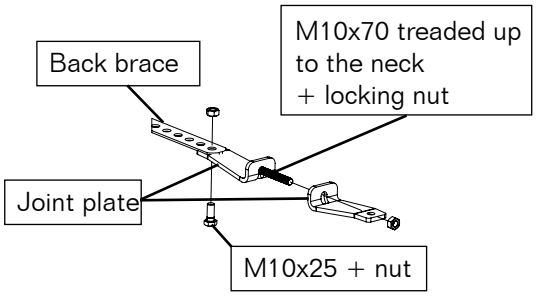


Single bracing



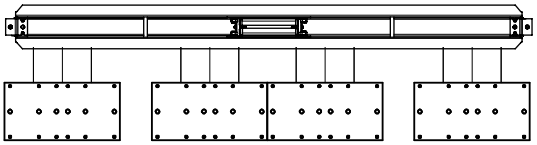
Double bracing



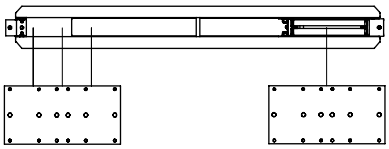


LEVELING

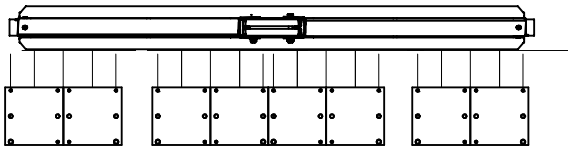
Location tarmac slab double footplate foot*



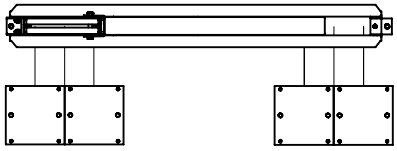
Location tarmac slab single footplate



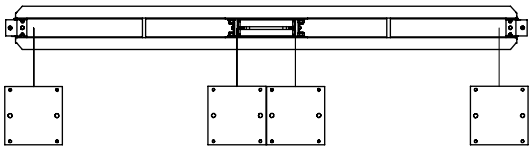
Location levelling double footplate on tarmac



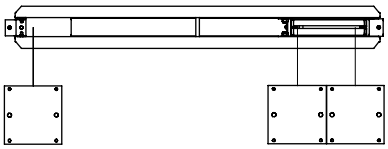
Location levelling single footplate on tarmac



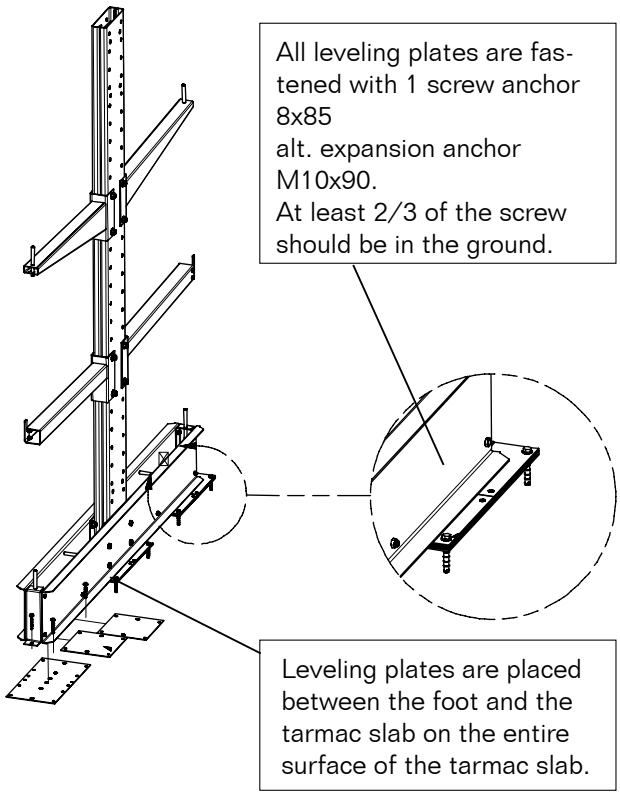
Location leveling double footplate on concrete



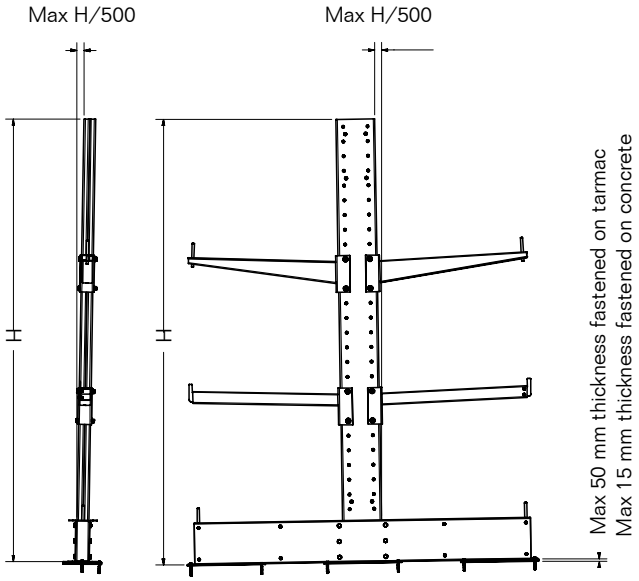
Location leveling single footplate on concrete



*Shorter double sided racks with arm length L=750mm , can be assembles by using only 3pcs tarmac plates.



INSTALLATION TOLERANCES



Maximum slope H / 500 on unloaded pillar measured immediately after installation.

SAFETY IN WAREHOUSES

EABs Cantilever racking meets all safety requirements under the European Supplier Code, FEM 10.2.09, which contains instructions for material selection, static calculations, testing, assembly and labeling.

Assembly / modification

To ensure safety, it is important that cantilever racking are always assembled in accordance with the instructions given here.

Marking

After assembly, a surely visible sign showing maximum allowed load shall be placed on the uprights.
The management shall supervise that the load limits are not exceeded.

Inspection

Erections inspection

Before starting to use the cantilever racking, it must be inspected in accordance with these instructions and in any special erection drawings.

Regular inspection

Cantilever racking must be regularly inspected in respect of locking devices, bracing, damage by vehicles etc. and anything else that could affect their strength.

Periodic inspection

Cantilever racking must be inspected at least every twelve moths to ensure that they continue to comply with these instructions and with any special erection drawings.

Re-inspection

Must always be performed if the positions of the arms and upright are moved. The purchaser or user is responsible for ensuring that the above inspections are performed.

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