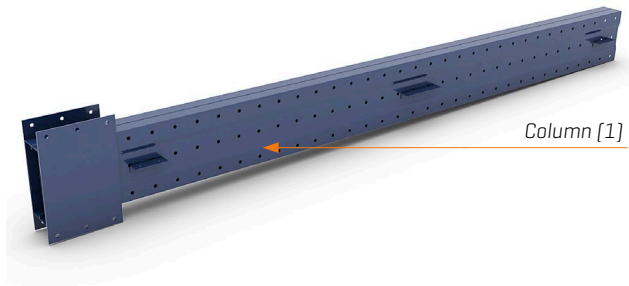
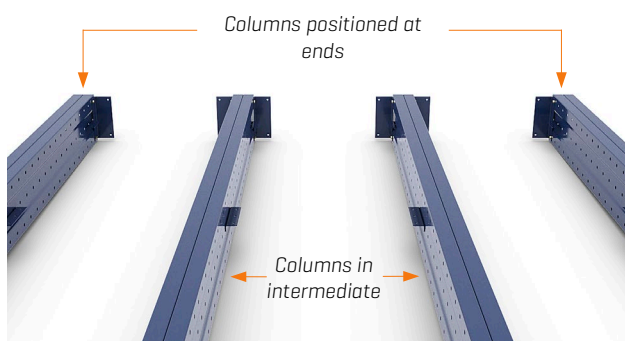


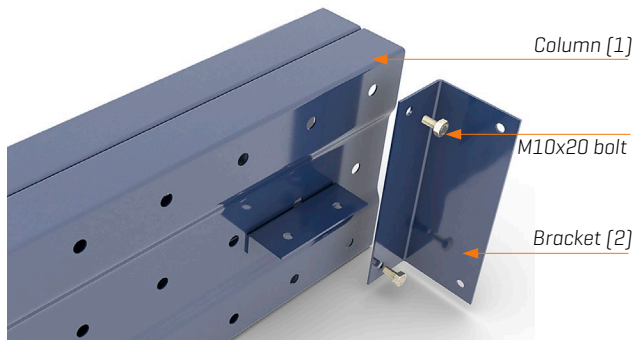
1 Bracing brackets and columns



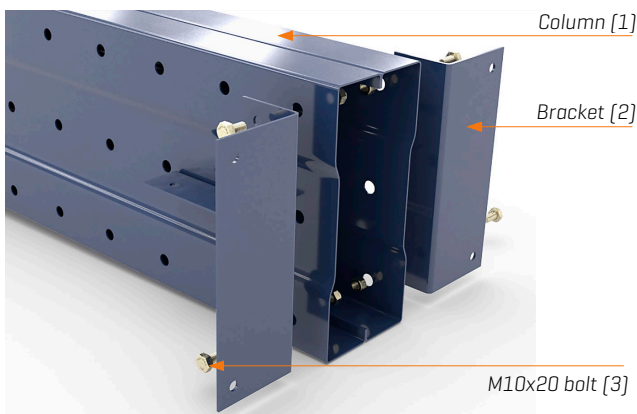
Position the column [1] on the floor on a side with no drill-holes.



Columns of 3000 mm or higher have two bracing brackets fixed to the top ends, one on each side, except for those positioned at the ends of the structure, which have only one bracket.

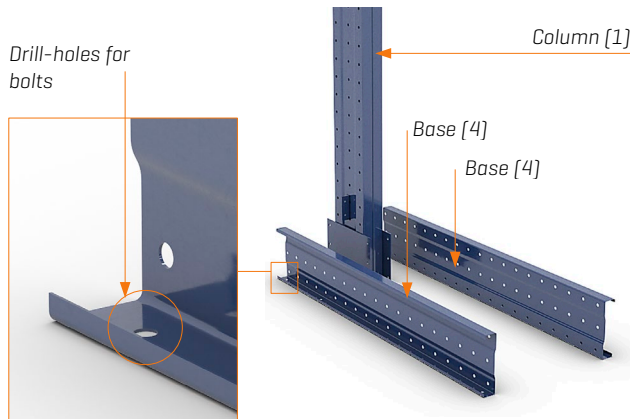


The coupling is made by fastening the narrowest side of the bracket to the column using two M10x20 bolts [3]. The edge of the column and the widest side of the bracket must be flush with each other.



The columns in intermediate positions have two bracing brackets fitted as shown in the illustration.

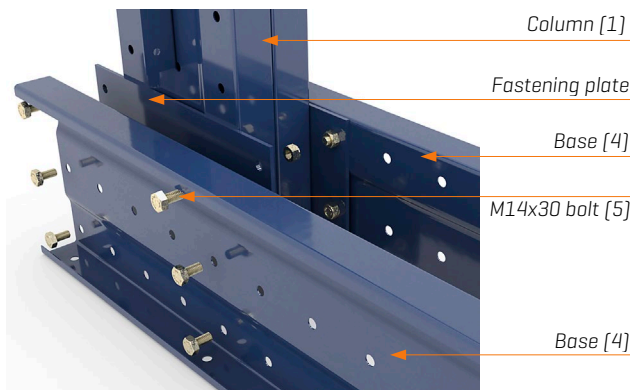
2 Column bases



Position the column [1] vertically.

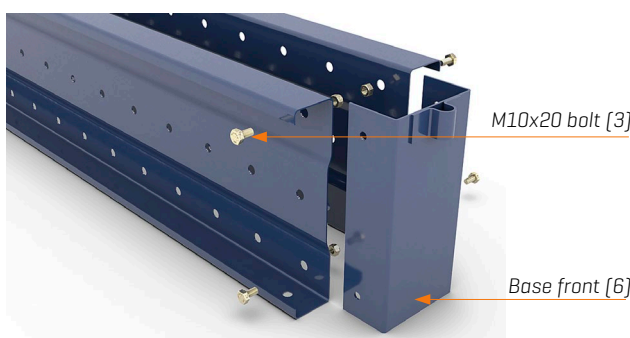
Position both bases [4] on the floor on their narrow sides with the open sides facing outwards.

The drill-holes for the bolts will be accessible as shown in the illustration.



Bolt the end of the bases to the fastening plates on the lower side of each column using six M14x30 bolts [5].

Do not tighten the bolts completely so that the columns can be positioned vertically later on as shown in [step 5](#).



A base front [6] has to be fitted on the front of the bases to close off the edges of both bases; fasten it in position using M10x20 bolts [3].



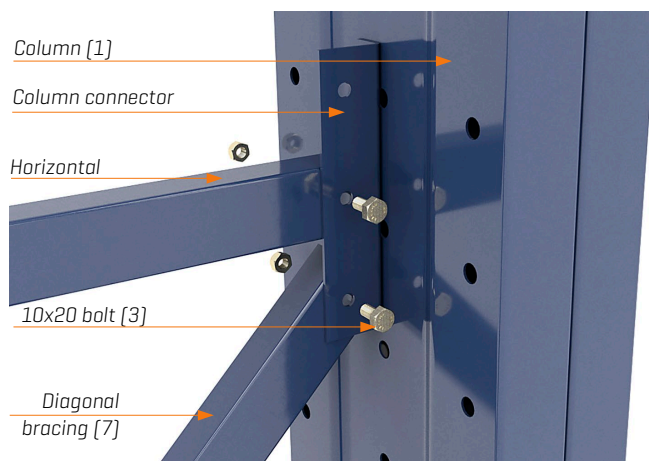
Do not tighten the bolts completely so that the columns can be positioned vertically later on as shown in [step 5](#).

3 Horizontal and diagonal bracings



Align the column [1] and base [4] units parallel to each other.

Couple the columns together using horizontal and diagonal bracings; the number of bracings and their positions are shown in the corresponding project drawing, where applicable.

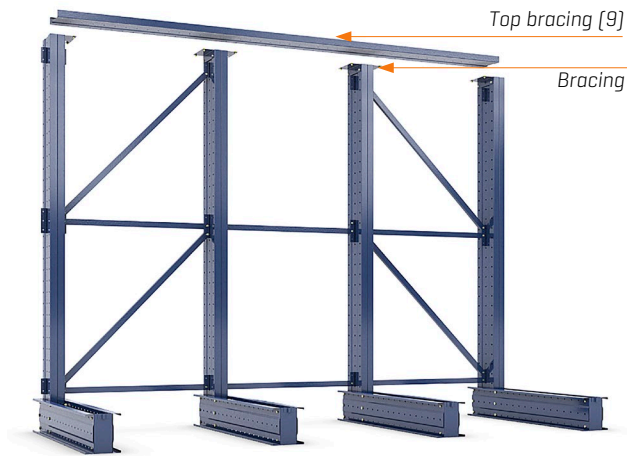


The diagonal [7] and horizontal [8] bracings are fastened to the connectors on the sides of the columns using M10x20 bolts [3].



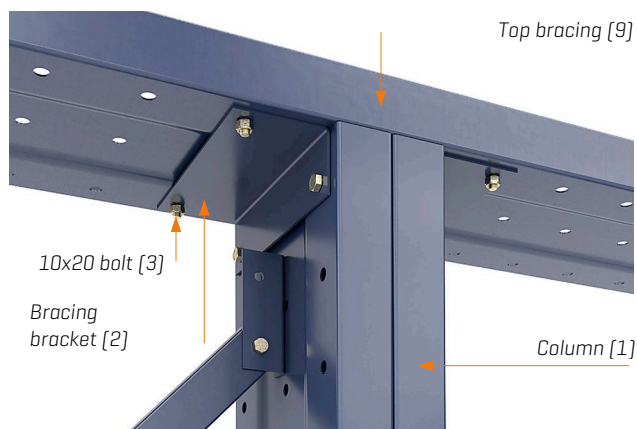
The standard composition of the vertical bracing, after it has been fastened to the columns, is as shown in the illustration.

4 Top bracing.



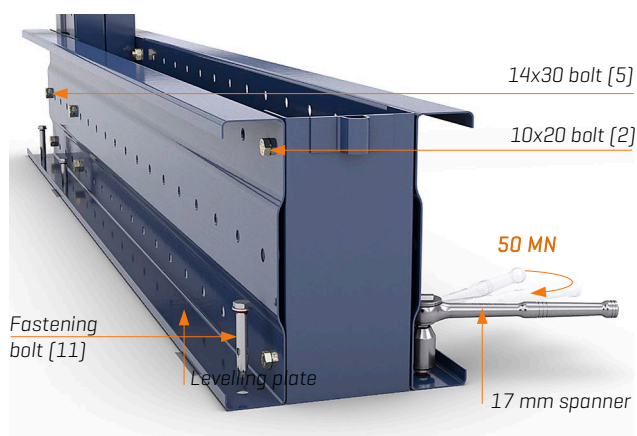
Columns of 3000 mm or higher must be coupled together using a top bracing [9] positioned horizontally on the ends.

Position the bracing [9] on the top of the columns [1]



Then fasten it to the bracing frames using the M10x20 bolts [3] previously fitted to the columns as indicated in [step 1](#).

5 Fastening to the floor



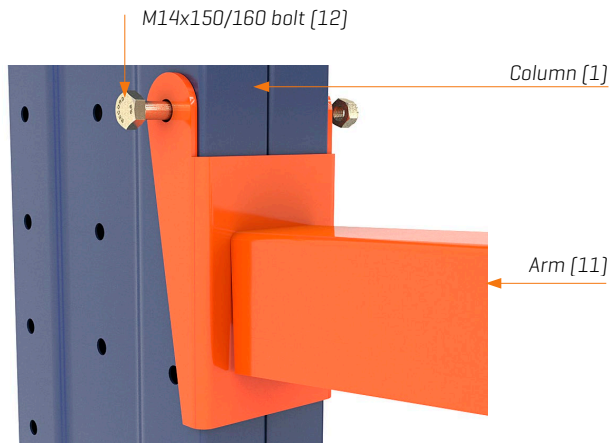
The bases must be levelled with metal levelling plates if necessary. Then, fully tighten the 10x20 bolts [2] on the base front as indicated in [step 2](#).

Make sure the columns are vertical and then fully tighten the M14x30 bolts [5] that couple the rear ends of the bases to the column fastening plates, as indicated in [step 2](#).

Using the drill-holes in the columns for fastening them to the floor use a Ø14 bit and drill a hole with a minimum depth of 100 mm. Remove the drilling remains and carefully hammer in the fastening bolt [11].

Firmly bolt the fastening plate in place. Recommended torque: 50 MN.

6 Arms



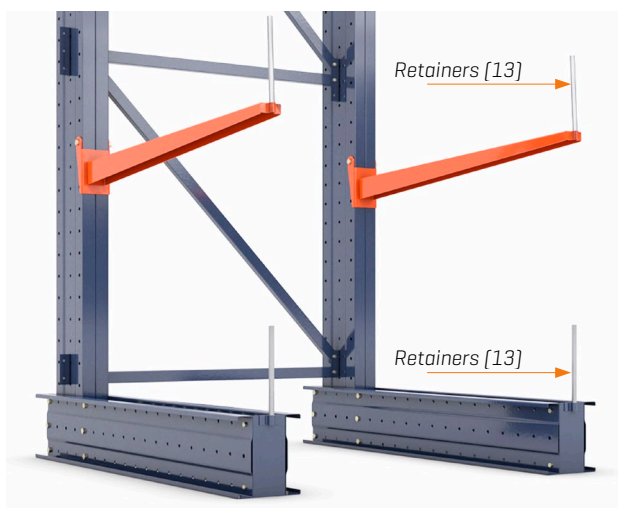
The arm [11] is fastened to the column using a M14x150 or M14x160 bolt [12] depending on the width.

Fit the arms [11] according to the heights and distribution shown on the corresponding project drawing, where applicable.



Finally, the completed structure should look like the illustration.

7 Removable retainers (optional)



Cantilever shelving is often used to store goods which, owing to their physical characteristics and because they are not properly packaged or fastened in place, may move to the front of the arms and fall off the shelf. To avoid this, vertical retainers [13] can be fitted on the ends of the arms and bases.