



ASSEMBLY INSTRUCTIONS



Single Sided - Powder Coated Full Bay



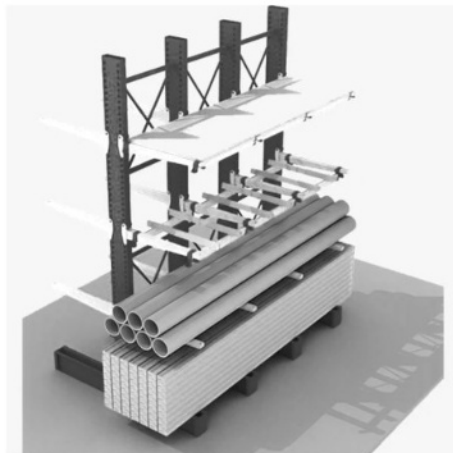
Single Sided - Powder Coated Add On Bay



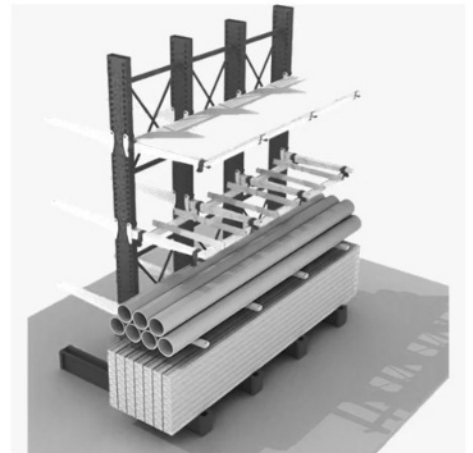
Single Sided - Galvanised Full Bay



Single Sided - Galvanised Add On Bay



Double Sided - Powder Coated



Double Sided - Galvanised

STANDARD DUTY CANTILEVER RACKING

Single & Double Sided | Powder Coated and Galvanised

USING 3500MM - SINGLE SIDED FULL BAY AS AN EXAMPLE

YOU'LL NEED



Hammer Drill



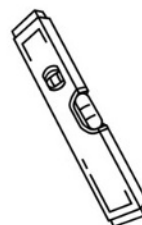
Impact Driver



10MM

12MM

16MM



Level



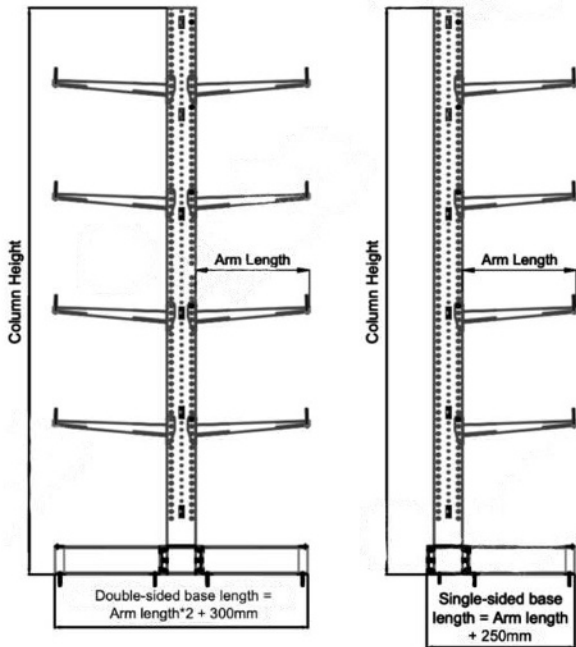
Hammer



Mallet

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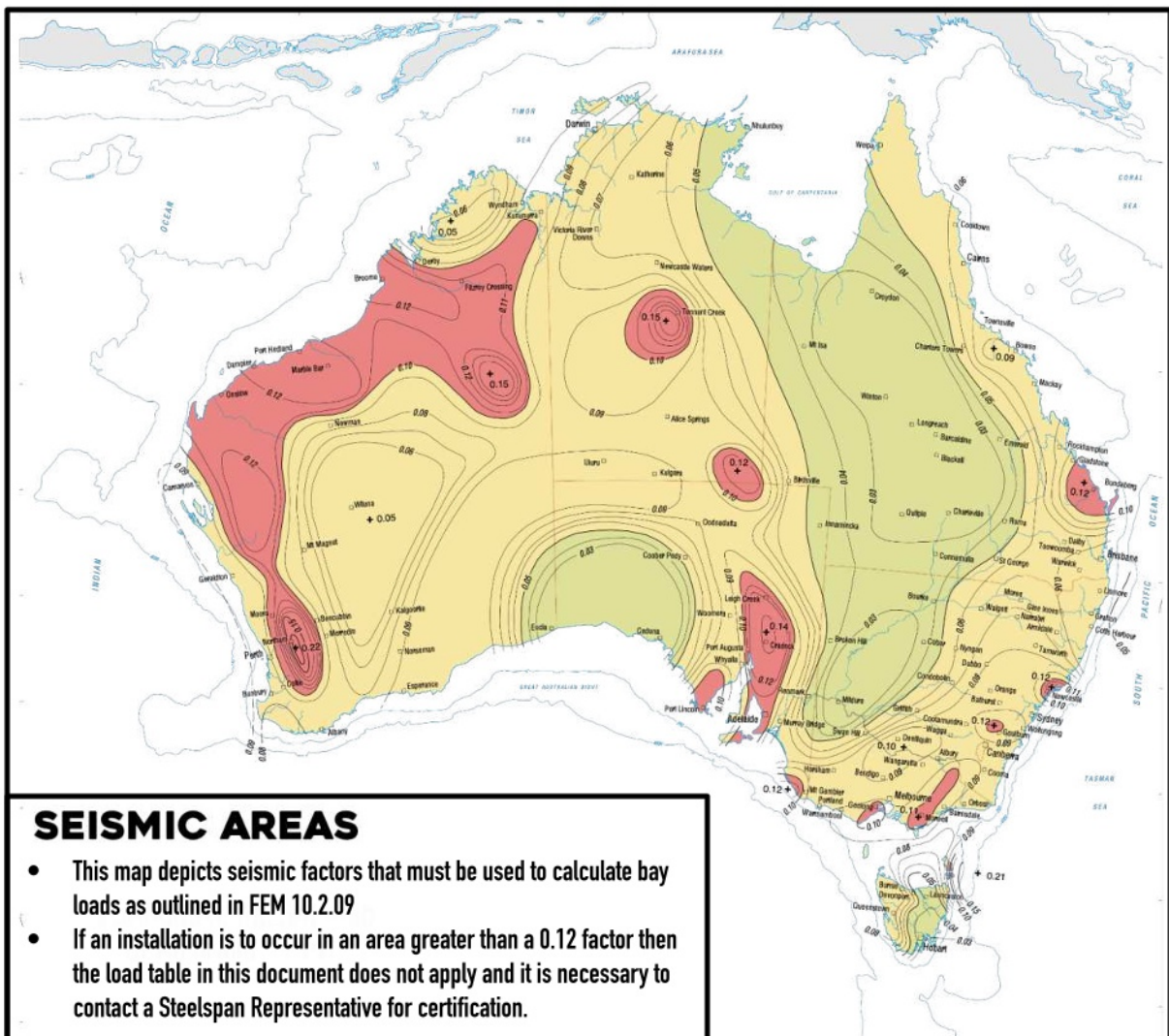


BASE LENGTH

- Arms cannot be longer than the external point of the Base.
- Arm loads cannot protrude past the arm tip.
- Please also refer to FEM 10.2.09 for the erection tolerances and guidelines.

ARM LOADS

- Arm load must not protrude past the arm tip.
- Refer to FEM 10.2.09 for further clarification.



SEISMIC AREAS

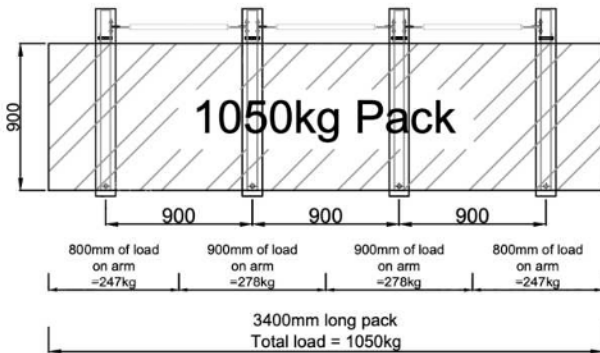
- This map depicts seismic factors that must be used to calculate bay loads as outlined in FEM 10.2.09
- If an installation is to occur in an area greater than a 0.12 factor then the load table in this document does not apply and it is necessary to contact a Steelspan Representative for certification.

ARM LOAD DISTRIBUTION GUIDE - HEAVY DUTY CANTILEVER

- The arm load must not protrude past the arm tip;
- All loads are given as UDL, loads that are not a true UDL must be checked by a Steelspan representative;
- Below are example calculations of how a load is distributed to the arm to ensure that an arm load is not exceeded;
- NOTE - As a general rule the cantilever should be designed so that the outer arm holds less than or equal to the centre arms. If however, the outer arm has more load distance than the centre arms have, then the outer arm load distance must also be used to calculate the outer arm loads. This calculation will result in a higher load on these arms compared to the centre arm, which could result in failure;
- Please refer to the FEM 10.2.09 for further clarification.

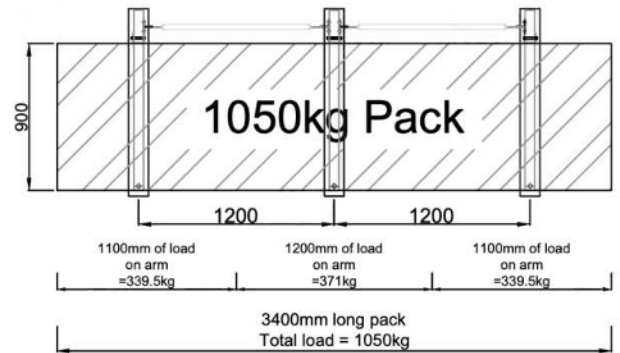
EXAMPLE 1 - PASS

Calculation of actual load on arm.



EXAMPLE 2 - FAIL

Calculation of actual load on arm.



Formula:

1. Load of pack ÷ length of pack e.g. $1050\text{kg} \div 3400\text{mm} = 0.3088$
2. Multiply this by the distance between column centres e.g. $0.3088 \times 900\text{mm} = 278\text{kg}$
3. So loading is ok as the 900mm long arms are rated to 350kg/arm and only 278kg has been calculated.

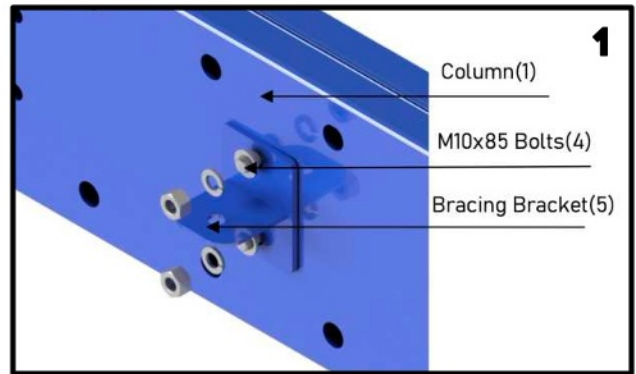
Formula:

1. Load of pack ÷ length of pack e.g. $1050\text{kg} \div 3400\text{mm} = 0.3088$
2. Multiply this by the distance between column centres e.g. $0.3088 \times 1200\text{mm} = 371\text{kg}$
3. So loading will cause the arm to FAIL as the 900mm long arms are only rated to 350kg and 371kg has been calculated.

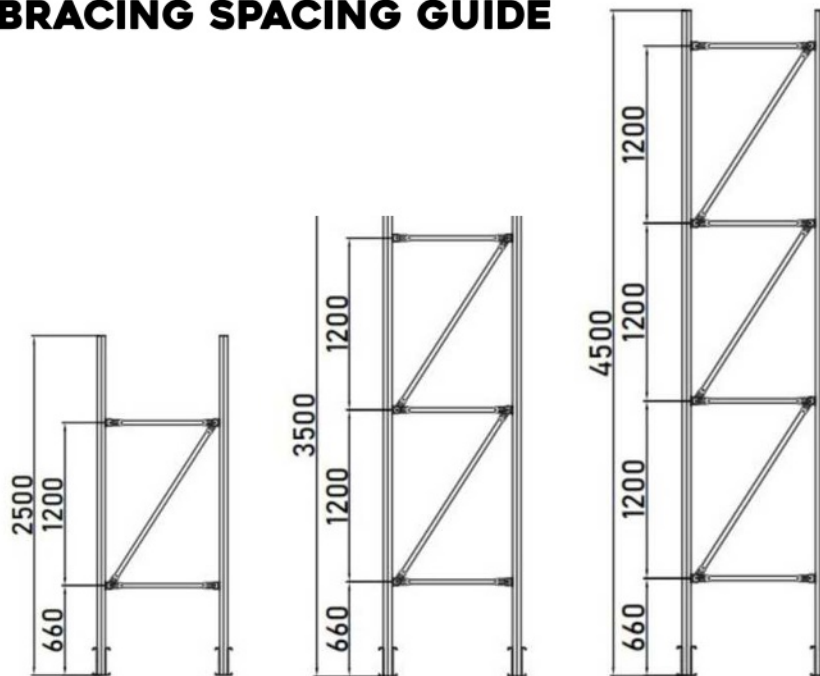
ASSEMBLE THE BRACING BRACKETS & COLUMNS

1 + 2. Attach the Bracing Brackets to the upright Columns with M10x85 bolts, nuts and washers as shown in diagram 1. Refer to the diagram below - 2. Bracing Spacing Guide - for the distance between Bracing Brackets relevant to your height of Cantilever Racking.

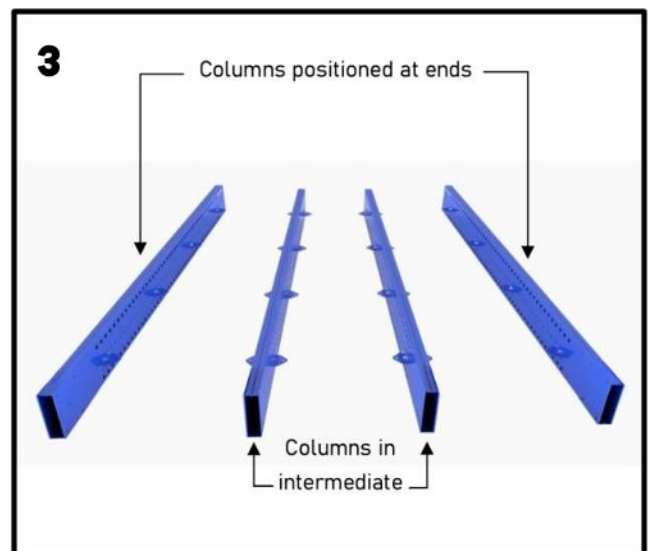
Tightening torque=86~103N.M



2. BRACING SPACING GUIDE



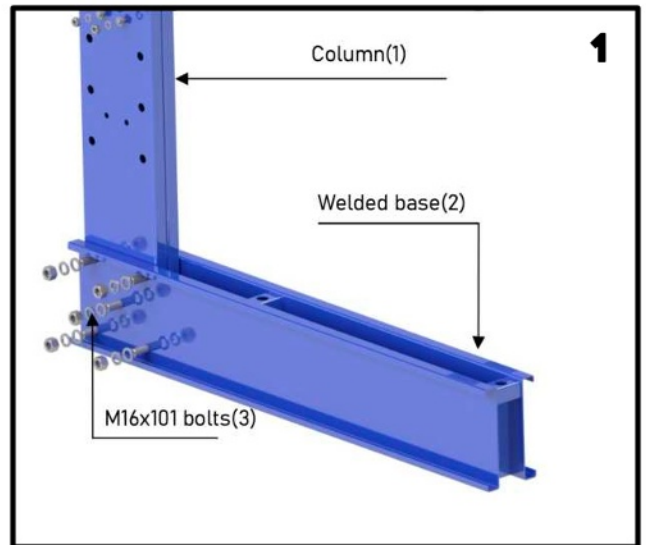
3. Fix one row of Bracing Brackets on the inside of the columns positioned at the ends as shown. Fix a row of Bracing Brackets to both sides of the columns in intermediate. Be sure to follow the spacing outlined in the Bracing Spacing Guide above relevant to the height of columns.



ASSEMBLE THE COLUMN BASES

1. Position the Columns vertically into the Column Bases as shown. Fix the Column to the Column Base with M16x101 bolts, washers and nuts.

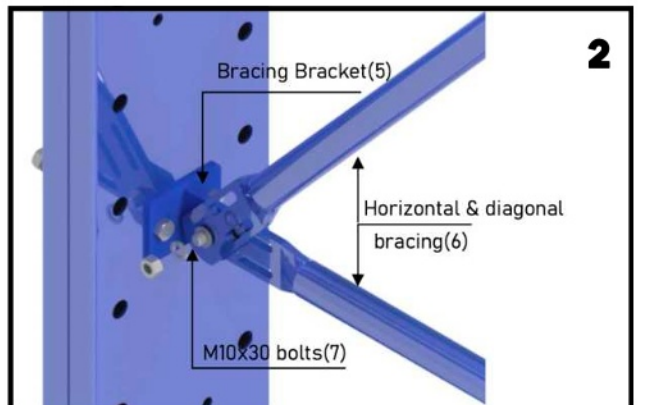
Recommended torque: 193~257N.M



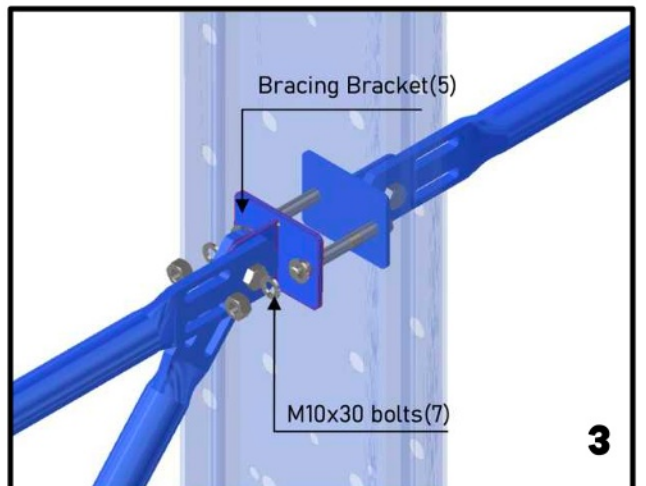
ASSEMBLE THE HORIZONTAL & DIAGONAL BRACING

2. Fasten the Horizontal and Diagonal Bracings to the Bracing Brackets on the sides of the Columns with M10x30 bolts, washers and nuts.

Recommended torque: 45~59N.M



3. The bracing configuration should appear as shown in the diagram after it has been fastened to the columns.



FASTEN BASES TO THE FLOOR

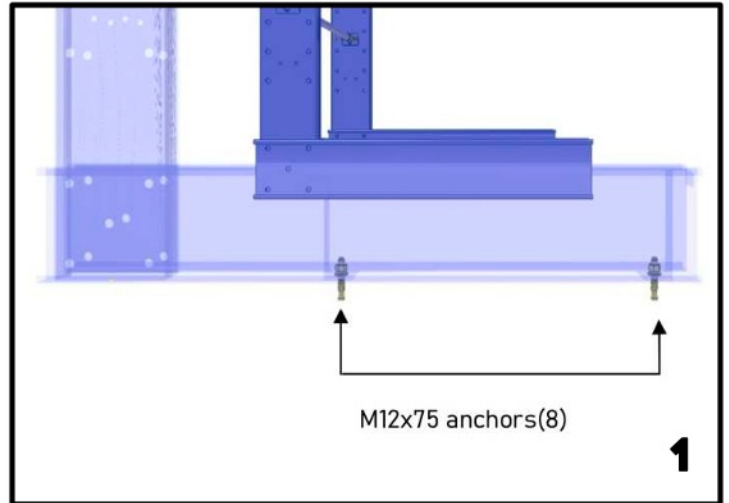
1. Level the Column Bases with Metal Levelling Plates if necessary and make sure the Cantilever Structure is in place.

If the total height of the Metal Levelling Plates exceeds 25mm then they must be welded together to avoid movement.

Using a $\varnothing 14$ bit drill bit, drill a hole into the floor through the drill holes in the Column Bases with a minimum depth of 75mm. Be careful to measure this depth as it cannot be less under any circumstances.

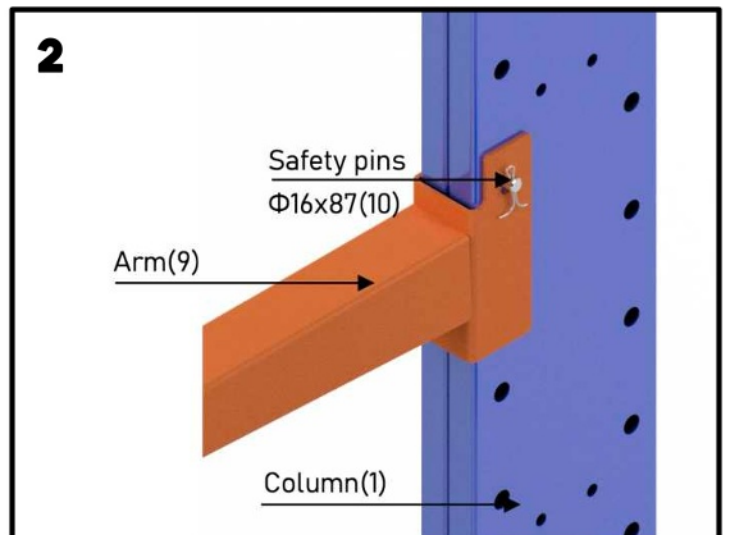
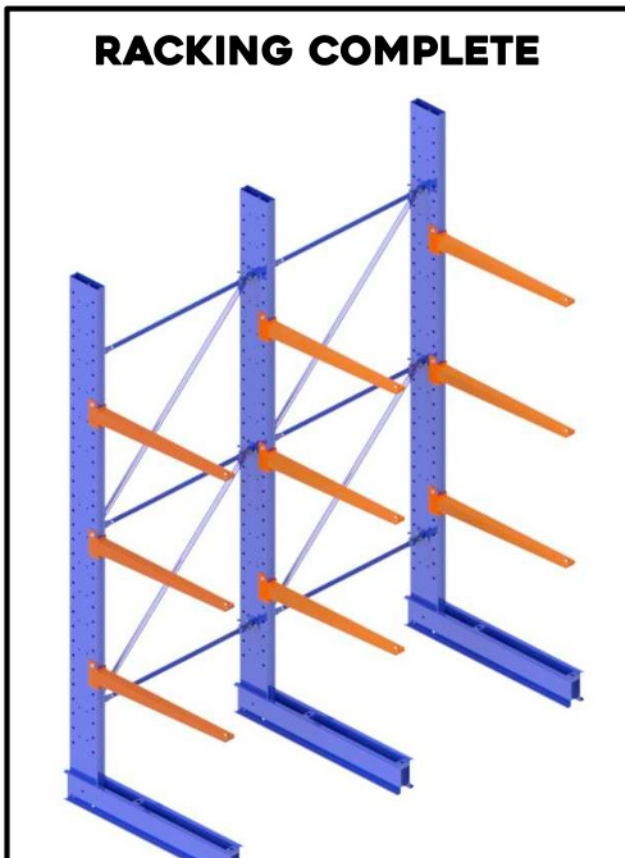
Remove the drilling remains and carefully hammer in the fastening M12x75 anchors as shown.

Recommended torque: 50N.M



FIX CANTILEVER ARMS

2. Fix the arms to the Columns as shown using the Safety Pins. It's important to refer to and adhere to the load capacities specific to your Cantilever Racking Arms and Columns.

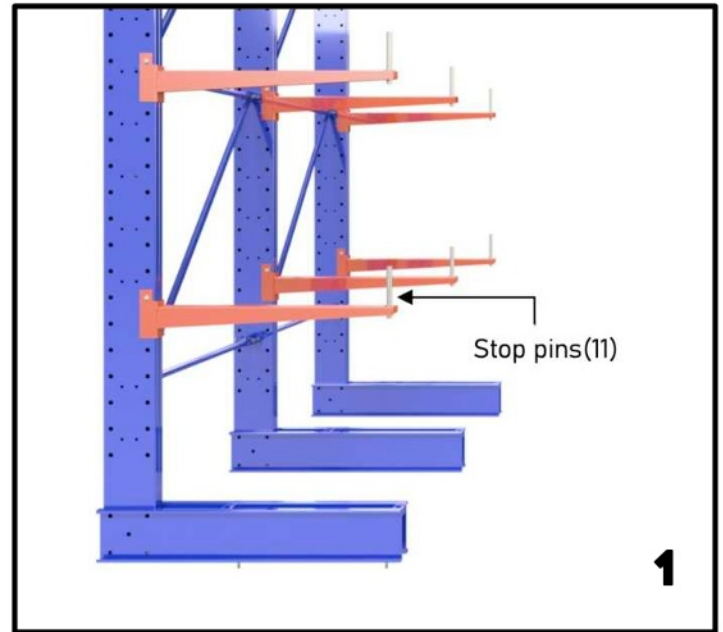


ENJOY YOUR NEW STORAGE SYSTEM!

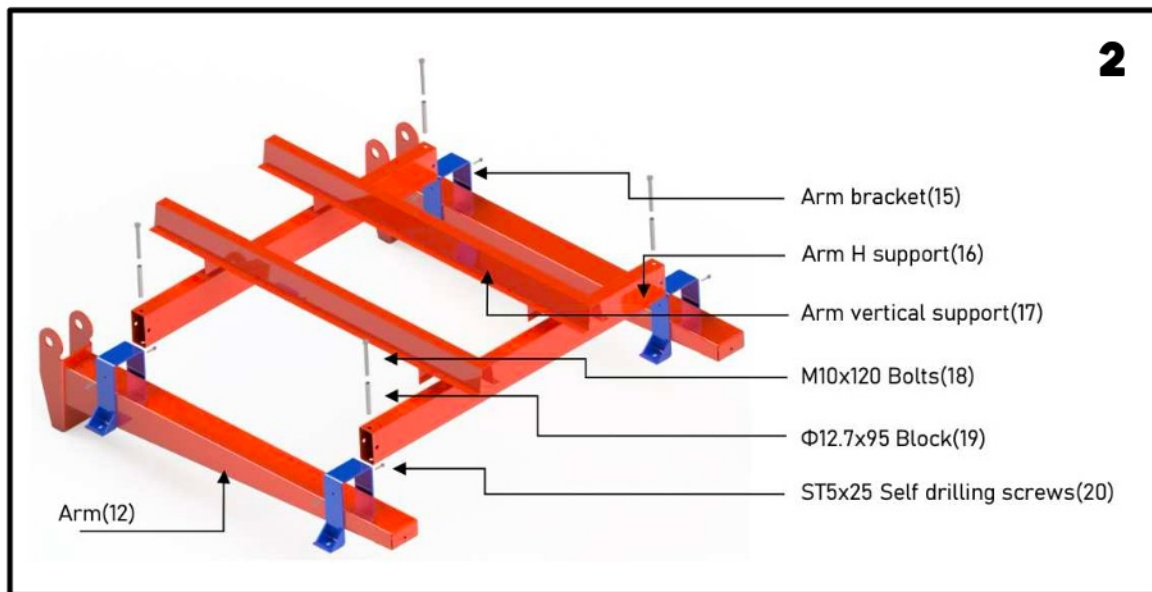
OPTIONAL ACCESSORY INSTRUCTIONS ON NEXT PAGE.

STOP PINS (OPTIONAL)

1. Stop Pins can be fitted to the ends of the Arms and Bases to avoid items moving to the front and falling. Insert the Stop Pins at the ends of the Arms and Bases in the pre-drilled holes and secure with the Lynch Pins provided.



ARM BRACKETS & HORIZONTAL BARS (OPTIONAL)



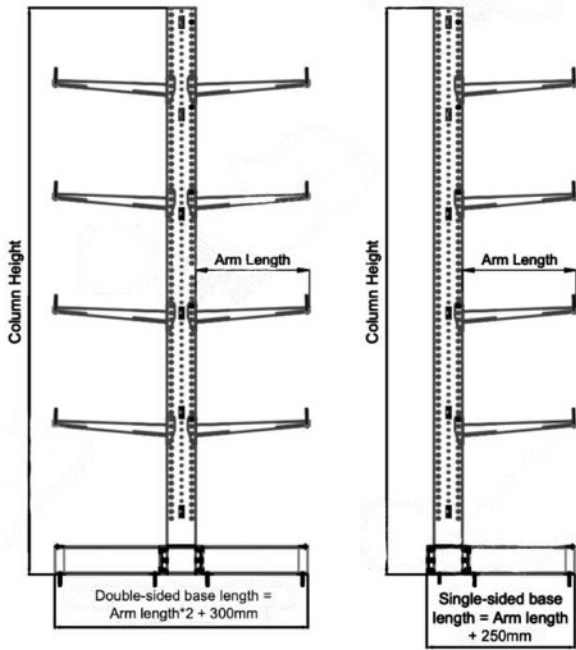
2. Arm Brackets and Horizontal Bars can be provided that offer horizontal support in the form of Support Bars (pictured), Wire Mesh Deck or Steel Shelves. Secure the Arm Brackets through the drill holes with the ST5x25 self drilling screws.

Bolt the Horizontal Beams to the Arm Brackets using the M10x120 Bolts and $\Phi 12.7 \times 95$ Blocks.

Place the Support Beams, Wire Mesh Deck or Steel Shelf across the Horizontal Beams as shown.

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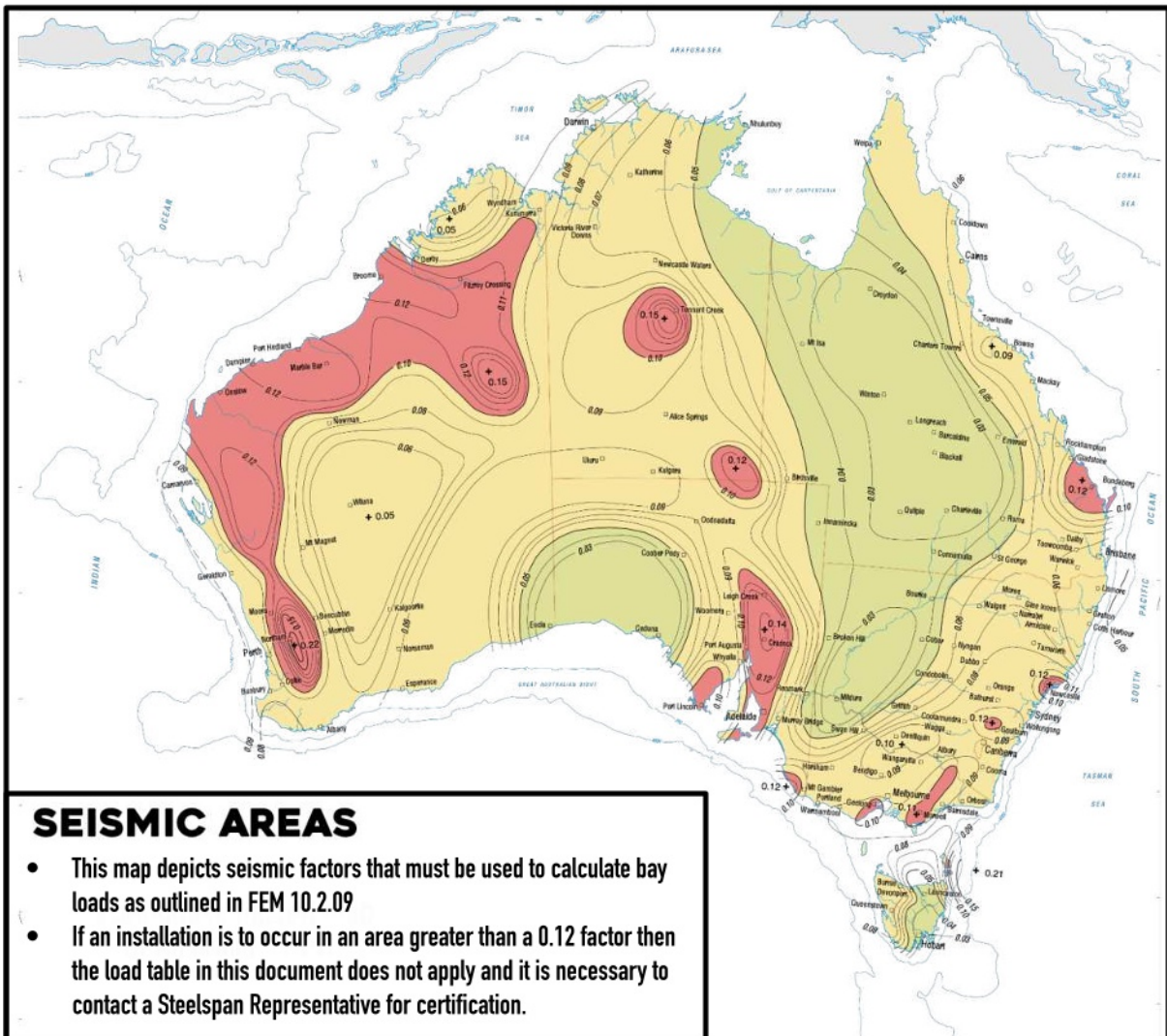


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ARM LOADS

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- Refer to Load Table on Page 3 of this document for arm load specifications specific to Column height and Arm length.
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SEISMIC AREAS

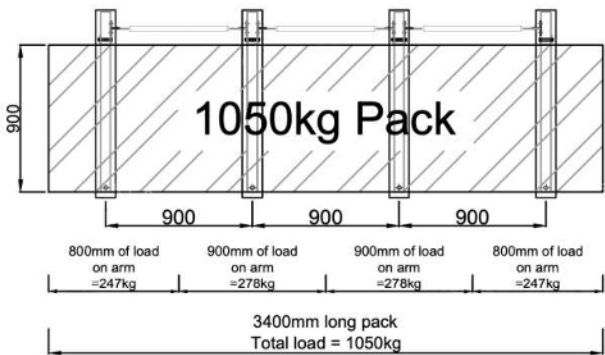
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Calculation of actual load on arm.

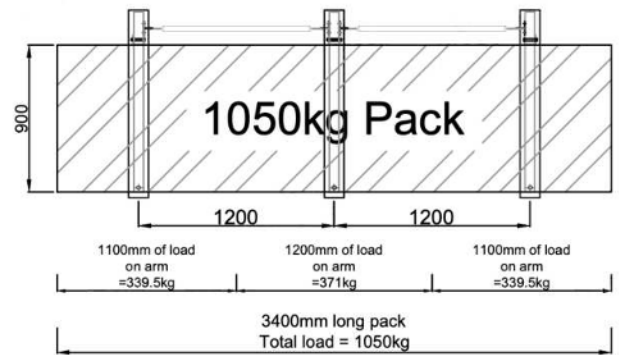


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Standard Duty Cantilever Rack Arm Capacities

Arm Length	Working Load Limit (WLL)
700mm	465kg per arm
900mm	360kg per arm
1200mm	255kg per arm

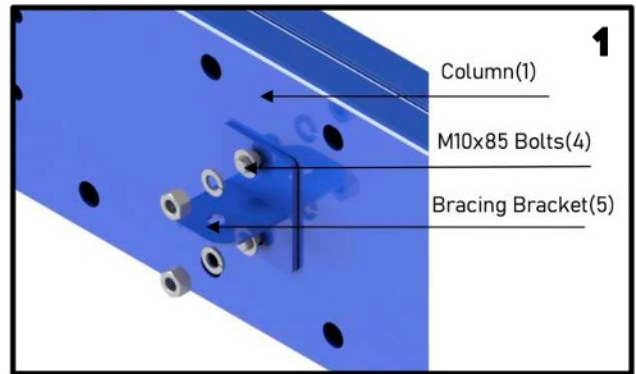
Standard Duty Cantilever Rack Column Capacities - WLL per column side

Column Height	Arm Length		
	700mm	900mm	1200mm
2500mm	2065kg	1740kg	1374kg
3500mm	2055kg	1730kg	1374kg
4500mm	2055kg	1730kg	1374kg

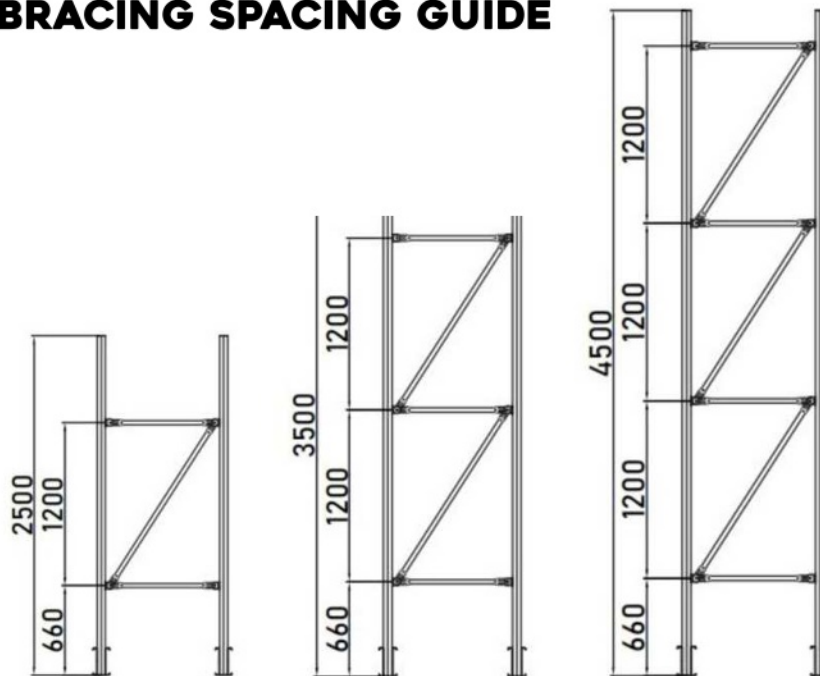
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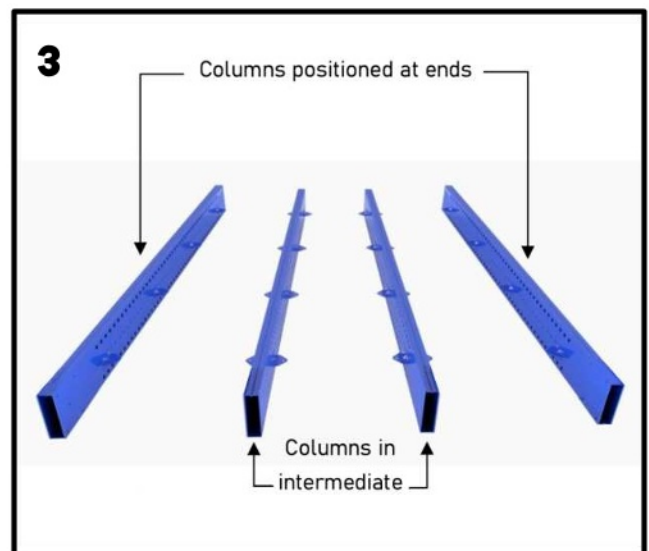
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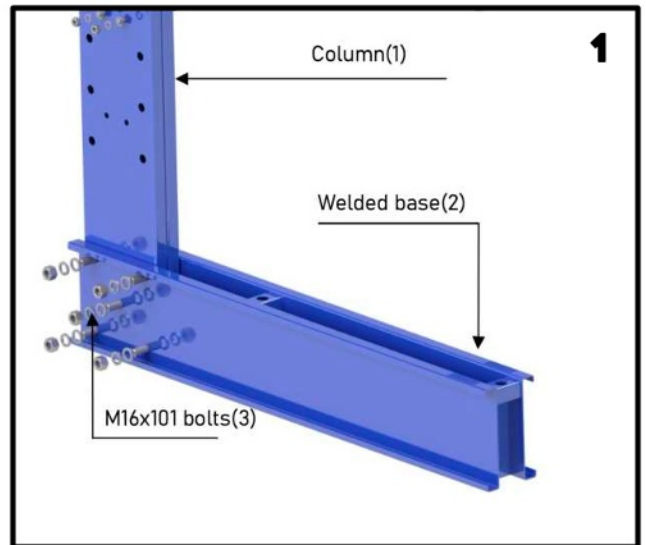
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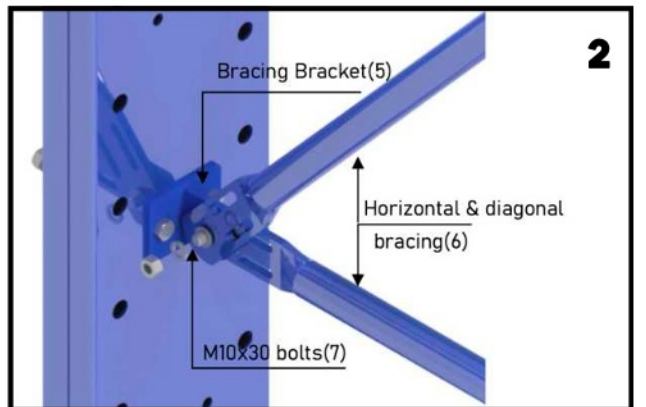
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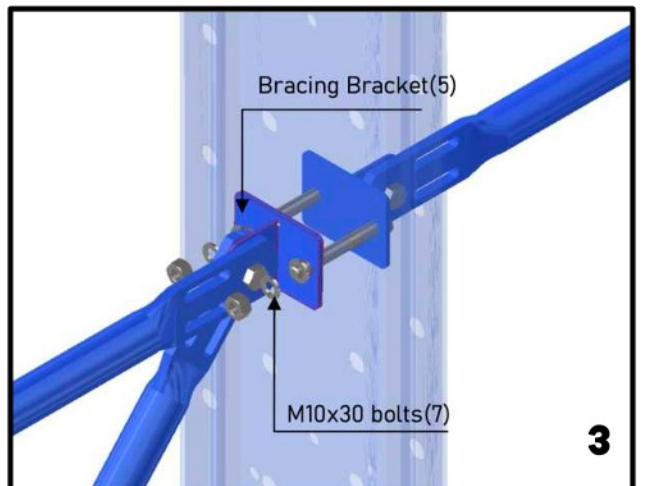
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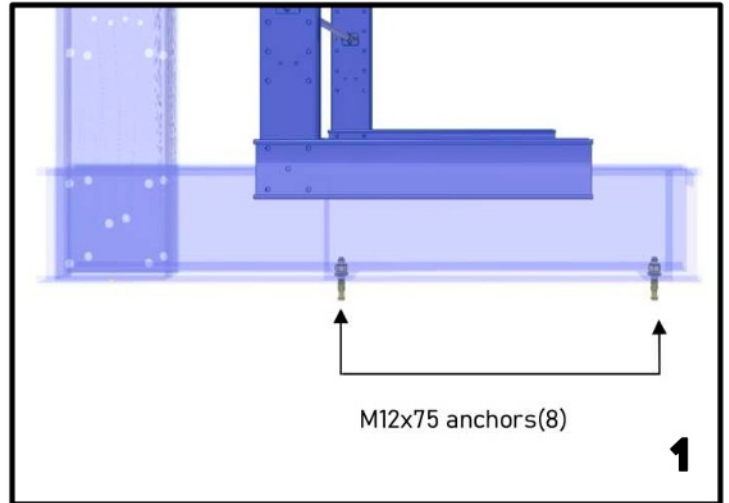
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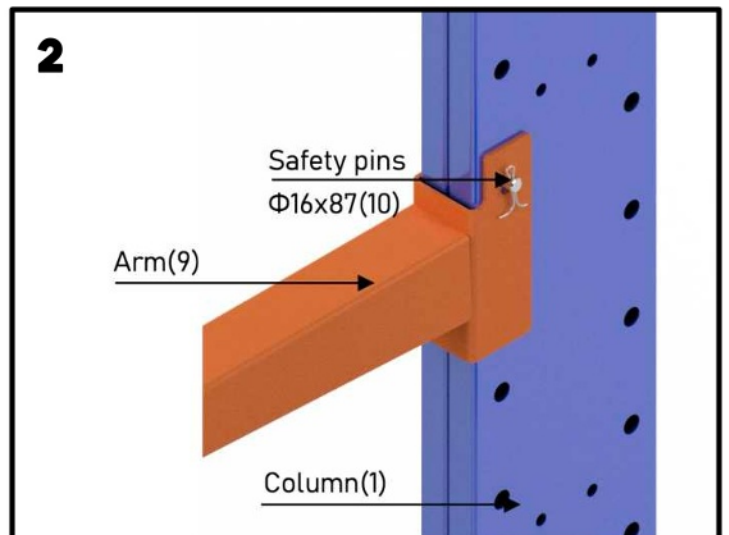
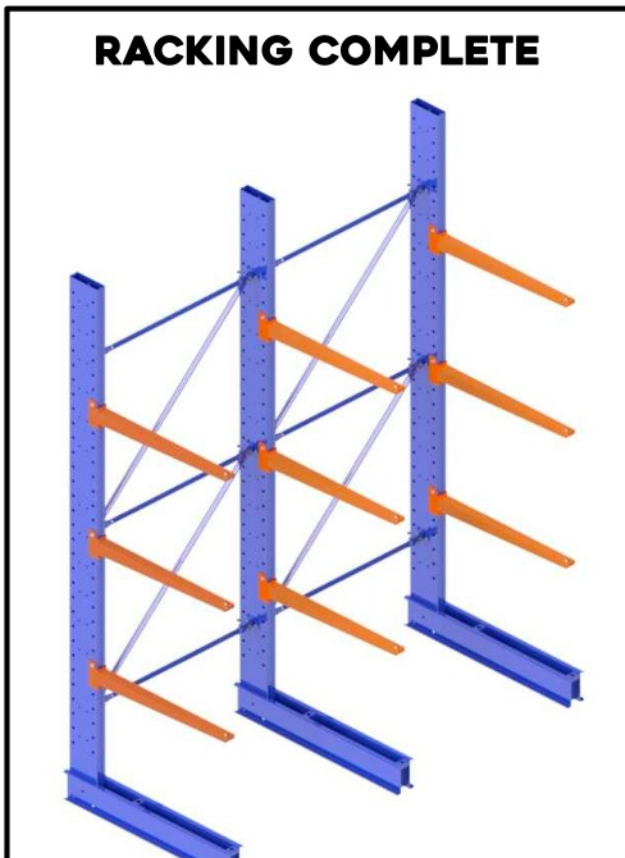
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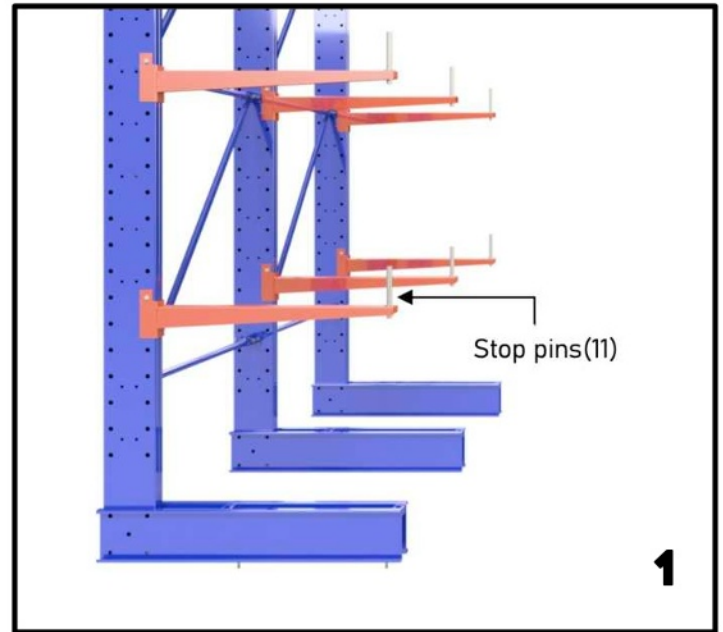


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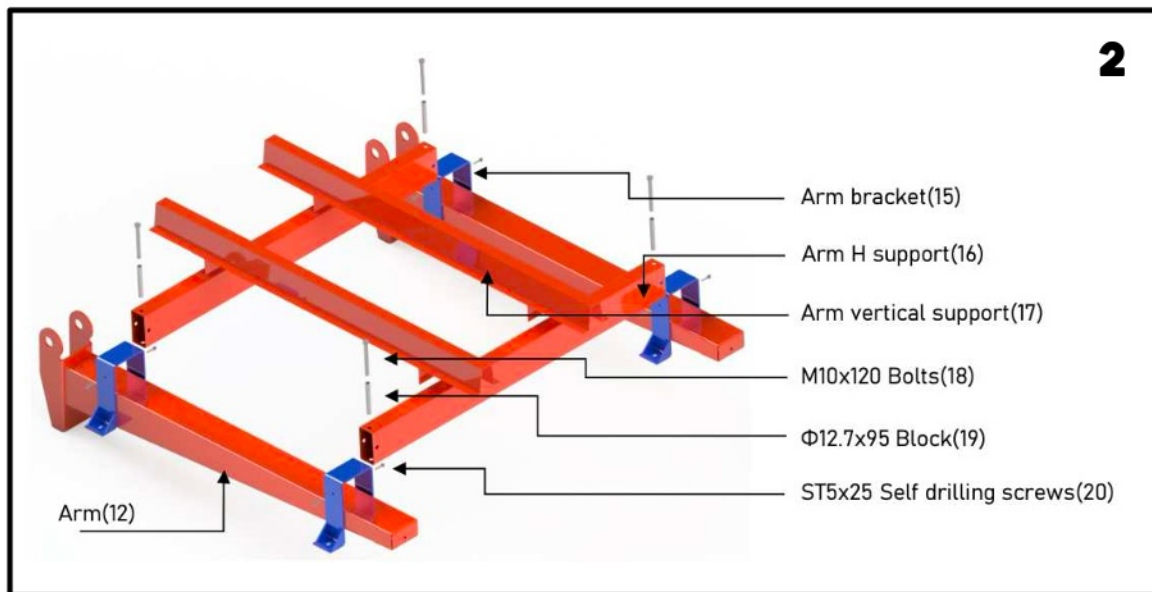
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