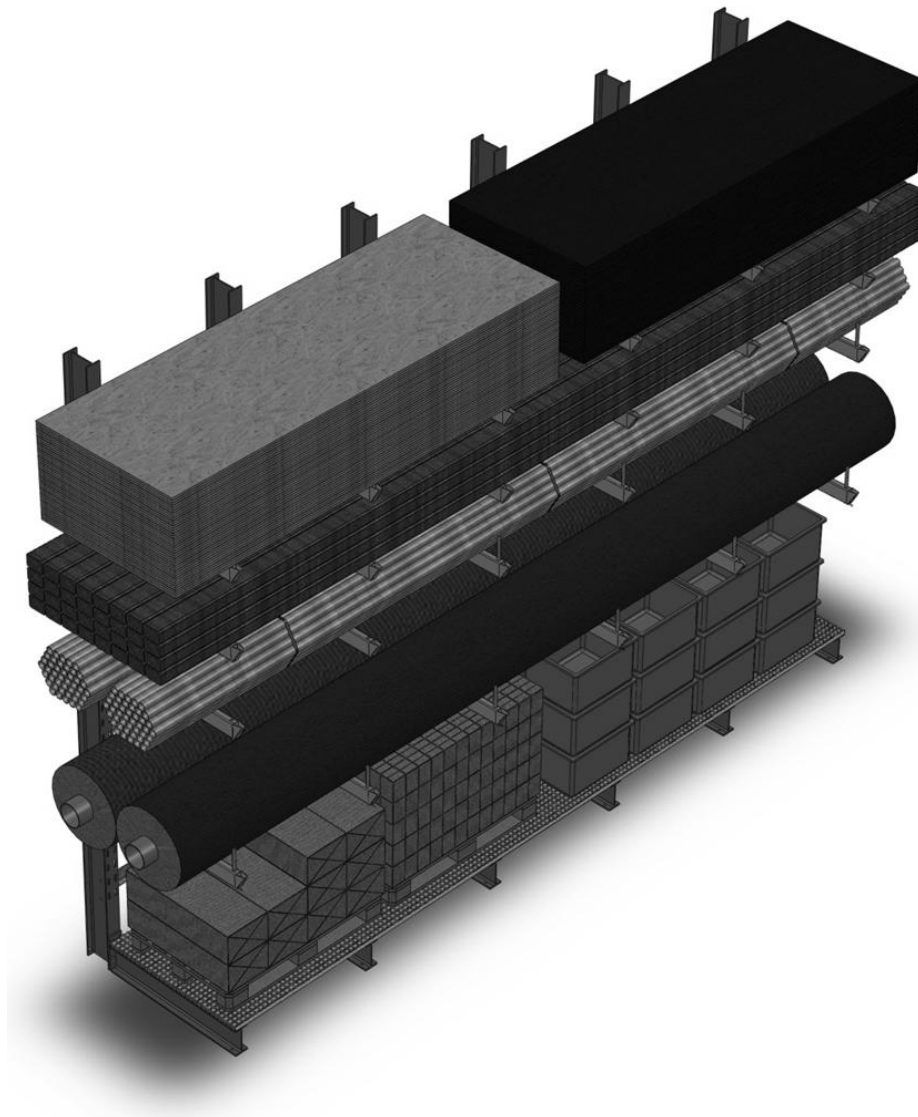
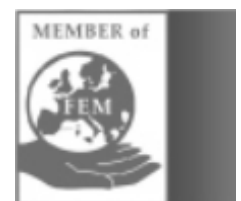




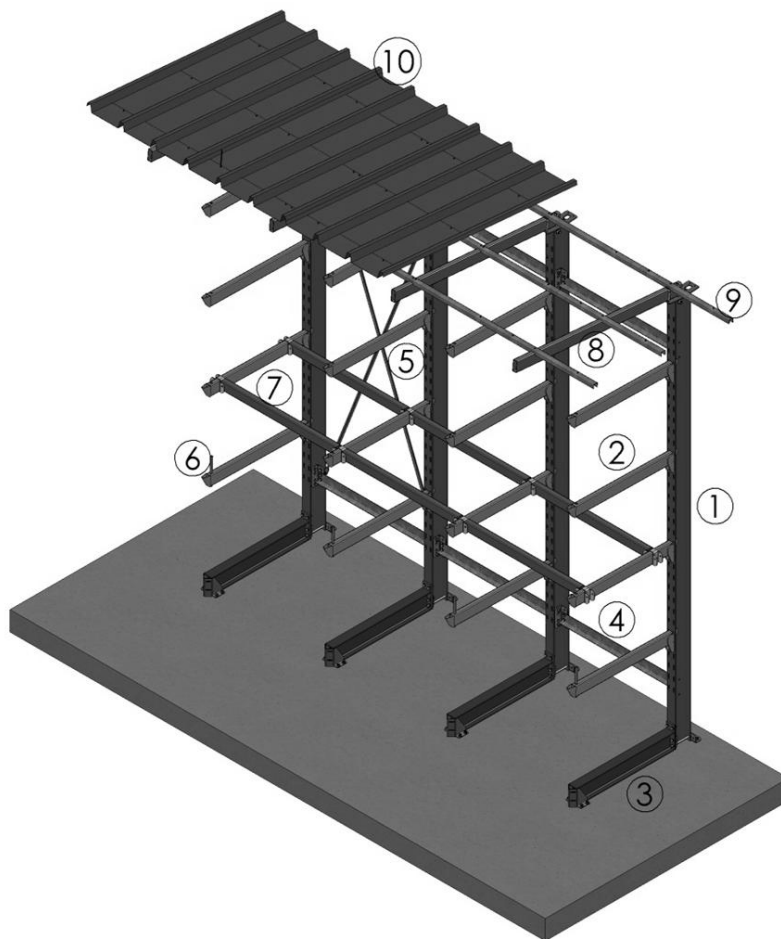
# Draagarmstelling Cantilever racking Kragarmregal Rayonnage cantilever



**Montage- en gebruikershandleiding**  
**Instructions for assembly and use**  
**Aufbau- und Betriebsanleitung**  
**Instructions de montage et d'utilisation**



## Overzicht / Survy / Übersicht / Aperçu



<b>1</b>	Staander Column Ständer Mettre
<b>2</b>	Draagarm Cantilever Kragarm Bras
<b>3</b>	Staandervoet Column feet Standerfuß Pied
<b>4</b>	Horizontaalschoor Horizontal brace Horizontalverbinder Entretoise
<b>5</b>	Diagonaalschoor Cross bracing Diagonalverband Croisillons de liaison
<b>Accessoires / Accessories / Zubehör / Accessoires</b>	
<b>6</b>	Afrolbeveiliging End stop Abrollsicherung Butée
<b>7</b>	Armbruggen Arm bridge Armbrücke Traverses pour bras
<b>8</b>	Dakdrager Roof cantilever Dacharm Bras de toit
<b>9</b>	Dakligger Roof support Dachlänge Longerons de toit
<b>10</b>	Golfplaat Corrugated metal Trapezblech Tôle trapézoïdale

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# Belangrijke richtlijnen / Important regulations / Unbedingt beachten / Réglémentations importantes

Normen  
Design norms  
Ausführung normen  
Normes de référence

- NEN 5052
- NEN 5054
- NEN-EN 15629
- NEN-EN 15635
- Eurocode 0
- Eurocode 1
- Eurocode 3
- Bouwbesluit 2003
- AI 14
- RAL-RG 614
- BGR 234
- Gebuikers dienen rekening te houden met de geldige nationale veiligheidsvoorschriften inzake magazijninrichtingen.
- Users of the installation have to observe the relevant health and safety regulations.
- Benutzer der Installation müssen die relevanten Gesundheits- und Sicherheitsvorschriften kalkulieren.
- En tant que responsable de l'exploitation, veuillez respecter les réglementations de sécurité en vigueur.

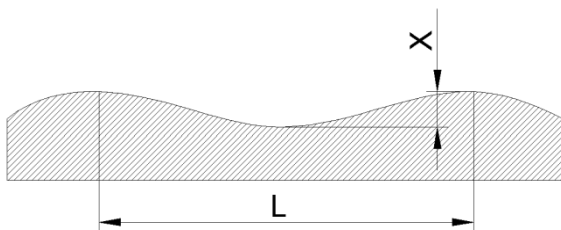
Veiligheidsvoorschriften  
Accident prevention regulations  
Sicherheitsvorschriften  
Consignes de sécurité

- |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Stelling dient door deskundig personeel te worden gemonteerd.</li> <li>Wijzigingen in de stellingconfiguratie mogen enkel na statische berekeningen worden genomen.</li> <li>Beschadigde onderdelen dienen direct te worden vervangen in overleg met de fabrikant.</li> <li>Elke stelling dient te zijn voorzien van informatie over de draagvermogen van de stelling.</li> </ul> | <ul style="list-style-type: none"> <li>Stage must be assembled by qualified specialist personnel.</li> <li>Modifications may only be undertaken after static calculation and clearance by the manufacturer.</li> <li>Any damaged load-bearing components must be replaced immediately after consultation with the manufacturer.</li> <li>All racks must be equipped with a notice about load capacity or the installation.</li> </ul> | <ul style="list-style-type: none"> <li>Die Montage muss von qualifiziertem Fachpersonal durchgeführt werden.</li> <li>Umbauten dürfen nur nach statischer Berechnung und Freigabe vom Hersteller vorgenommen werden</li> <li>Bei Beschädigung von tragenden Teilen sind diese nach Rücksprache mit dem Hersteller sofort zu ersetzen.</li> <li>Jedes Regal ist mit Belastungsschildern oder einem Anlagenschild auszustatten.</li> </ul> | <ul style="list-style-type: none"> <li>Le montage doit être effectué par un personnel spécialisé dûment qualifié.</li> <li>Toute modification ne peut être entreprise qu'après un calcul statique et une autorisation effectués par le constructeur.</li> <li>En cas d'endommagement de parties portantes, celles-ci doivent être immédiatement remplacées après consultation du constructeur.</li> <li>Chaque étagère doit être pourvue de panneaux mentionnant la charge ou d'un panneau indicateur.</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Vloereigenschappen  
Flooring  
Aufstellfläche  
Qualité du sol

Minimum kwaliteit van de betonvloer  
Minimum quality of the concrete flooring  
Betongüte des Hallenbodens min  
Sol de béton de qualité minimum de

**C20/25 DIN 1045**



- Vloeroneffenheden volgens DIN 18202
- For evenness of installation surface see DIN 18202
- Ebenheit des Untergrundes nach DIN 18202
- Planéité du sous-sol selon DIN 18202

L	X
L < 1m	Max. 4 mm
1m < L < 4m	Max. 10 mm
4m < L < 15m	Max. 12mm
L > 15m	Max. 15mm

Draagvermogen  
Load Capacity  
Belastung  
Capacité de charge

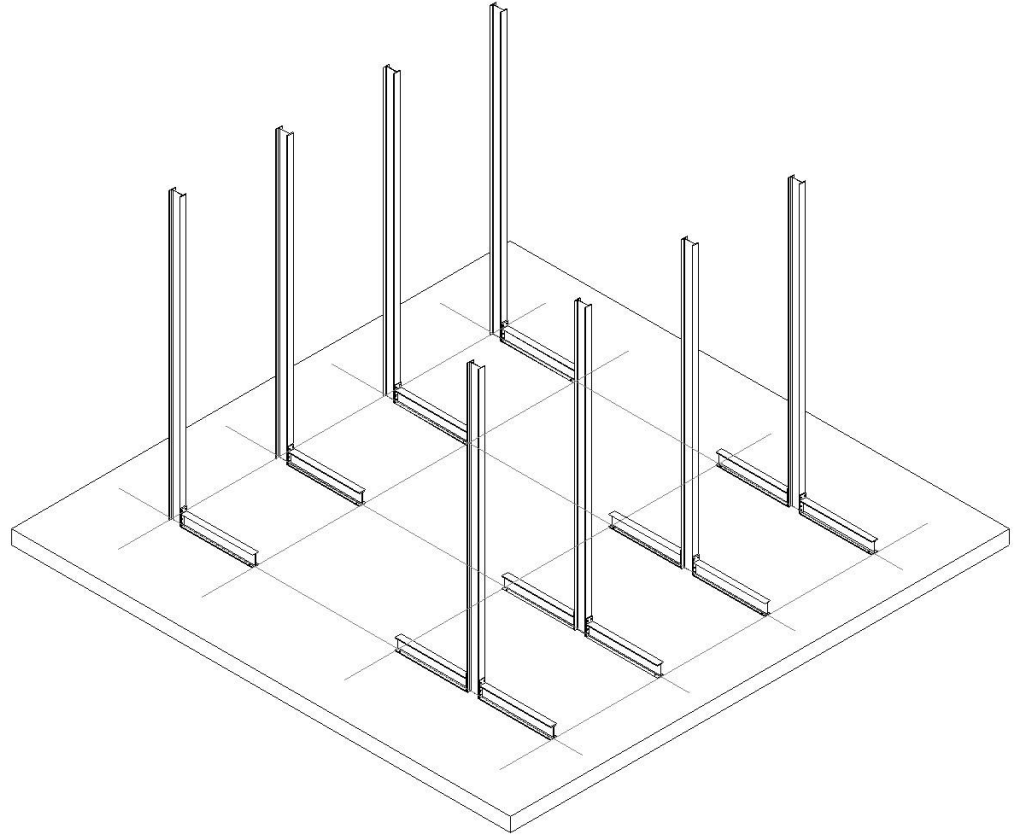
- |                                                                                                                                                                                                         |                                                                                                                                                                                              |                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Stellingen zijn berekend op een sneeuwbelasting van max. 75 kg/m<sup>2</sup> en een windbelasting gebied III terreincategorie III zoals in Eurocode 1</li> </ul> | <ul style="list-style-type: none"> <li>Outdoor cantilever racks are mainly designed for max. 75 kg/m<sup>2</sup> snow load and wind load zone I terrain type III as in Eurocode 1</li> </ul> | <ul style="list-style-type: none"> <li>Die Kragarmregale im Freien sind im Regelfall für max. 75 kg/m<sup>2</sup> schneelasten sowie für Windlastzone I Geländekategorie III gemäß Eurocode 1</li> </ul> | <ul style="list-style-type: none"> <li>Pour une installation à l'extérieur, les bras sont, en règle générale, conçus pour une charge de neige d'un max. de 75 kg/m<sup>2</sup> ainsi que pour une zone de pression de vent I catégorie de terrain III selon Eurocode 1</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 1.0 Staander posities aftekenen

1.0 Draw in rack position

1.0 Regalposition aufzeichnen

1.0 Tracer le positionnement de l'étagère

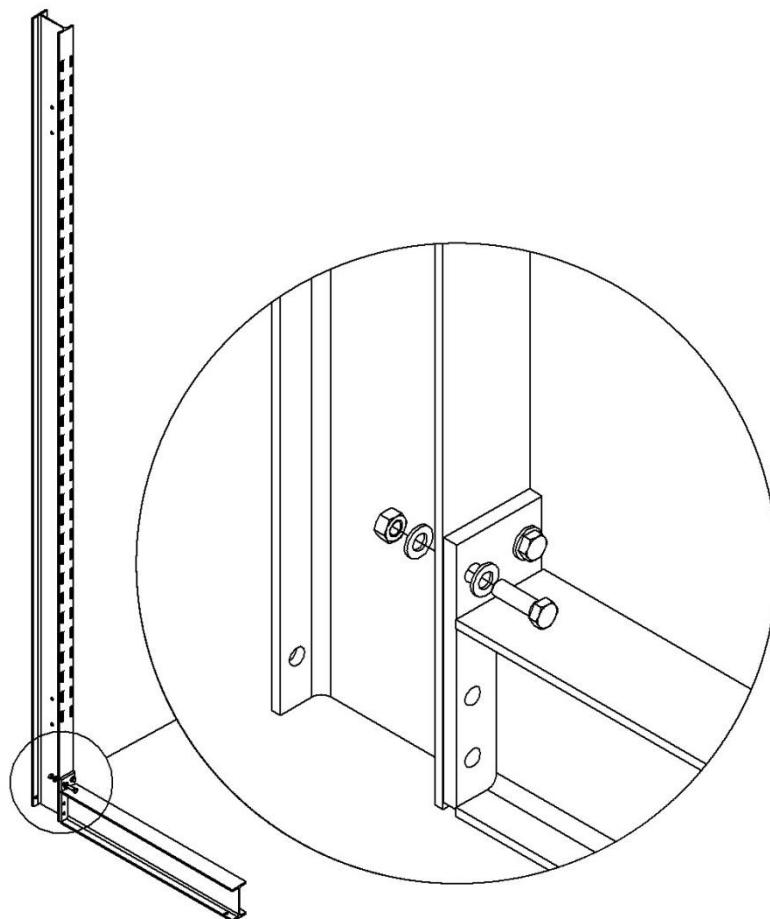


## 2.0 Staander enkelzijdig monteren

2.0 Bolting owo-sided rack

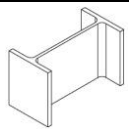




2.0 Ständer einseitig verschrauben

2.0 Visser les montants simples

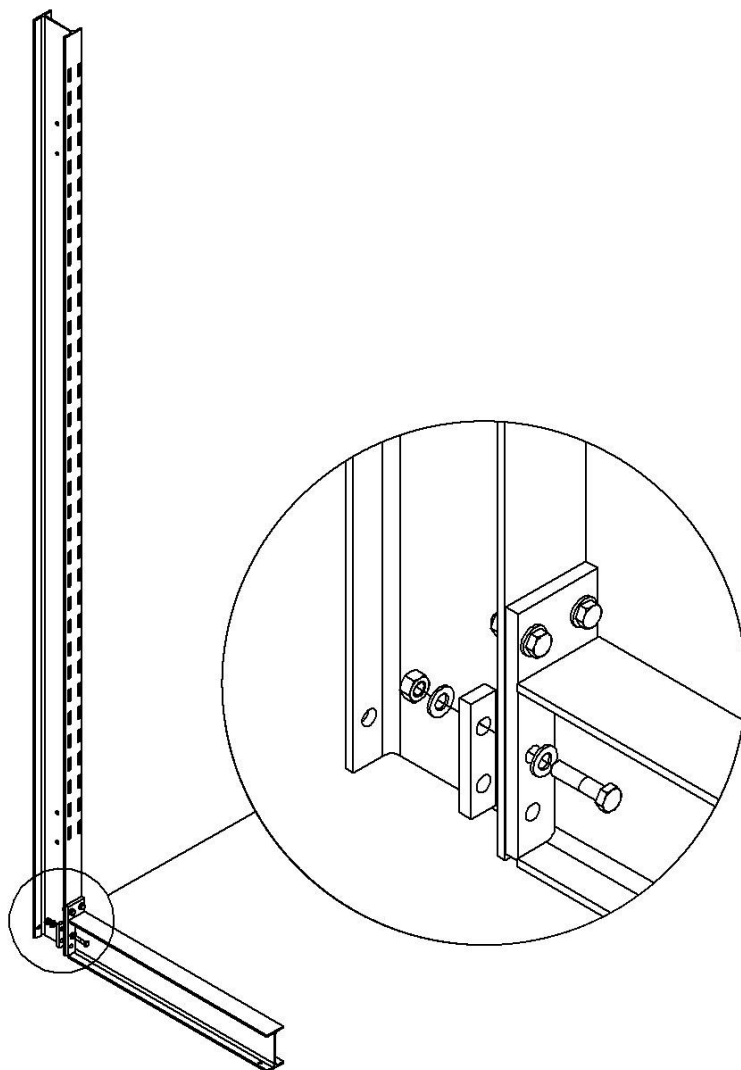


(1) Indoor/outdoor rack  
(1) Partie intérieure/extérieure  
(1) Lato interno/esterno

(2) Galvanised  
(2) Zingué  
(2) Zincato

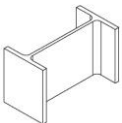




Binnen/buiten stelling (1)		Verzinkt (2)			
					
	Nr.	DIN 931/10.9	DIN 934/10.9	DIN 125	
160	2x	M12X40	M12	Ø 13	100 Nm
180	2x	M16x60	M16	Ø 17	250 Nm
200	2x	M16x60	M16	Ø 17	250 Nm
220	2x	M16x60	M16	Ø 17	250 Nm
240	2x	M16x60	M16	Ø 17	250 Nm
270	2x	M20x70	M20	Ø 21	450 Nm
300	2x	M20x70	M20	Ø 21	450 Nm

## 2.1 Staander enkelzijdig monteren

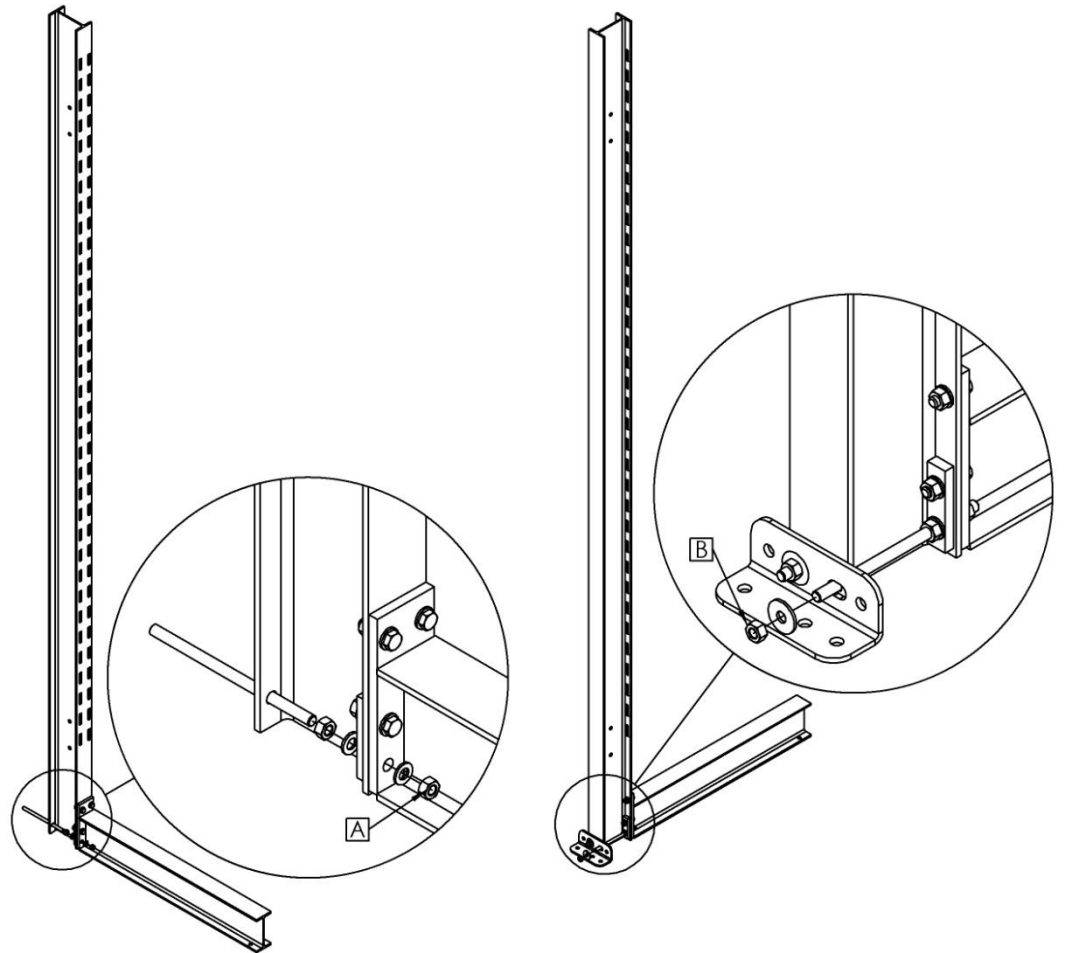


(1) Indoor/outdoor rack  
 (1) Partie  
 intérieure/extérieure  
 (1) Lato interno/esterno

(2) Galvanized  
 (2) Verzinkt  
 (2) Zingué

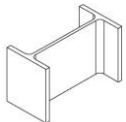




Binnen/buiten stelling (1)		Verzinkt (2)			
					
	Nr.	DIN 931/10.9	DIN 934/10.9	DIN 125	
160	2x	M12X40	M12	Ø 13	100 Nm
180	2x	M16x60	M16	Ø 17	250 Nm
200	2x	M16x60	M16	Ø 17	250 Nm
220	2x	M16x60	M16	Ø 17	250 Nm
240	2x	M16x60	M16	Ø 17	250 Nm
270	2x	M20x70	M20	Ø 21	450 Nm
300	2x	M20x70	M20	Ø 21	450 Nm

## 2.2 Staander enkelzijdig monteren



(1) Indoor/outdoor rack  
 (1) Partie  
 intérieure/extérieure  
 (1) Lato interno/esterno

(2) Galvanized  
 (2) Verzinkt  
 (2) Zingué

Binnen/buiten stelling (1)		Verzinkt (2)				
						
	Nr.	DIN 975/10.9	DIN 934/10.9	DIN 125 & 9021	A	B
160	2x	M12X40	M12	Ø 13	135 Nm	65 Nm
180	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
200	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
220	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
240	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
270	2x	M20x70	M20	Ø 21	660 Nm	300 Nm
300	2x	M20x70	M20	Ø 21	660 Nm	300 Nm

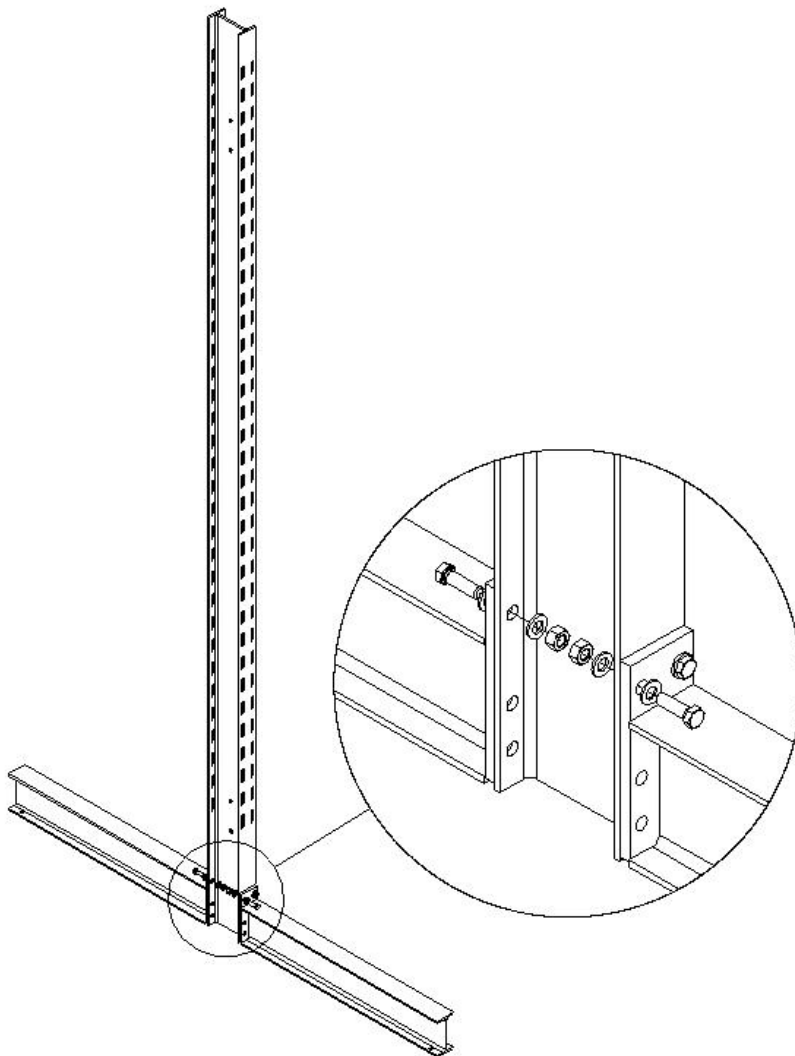


## 3.0 Staander dubbelzijdig monteren

3.0 Bolting two-sided rack

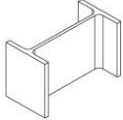




3.0 Ständer zweiseitig verschrauben

3.0 Visser les montants doubles

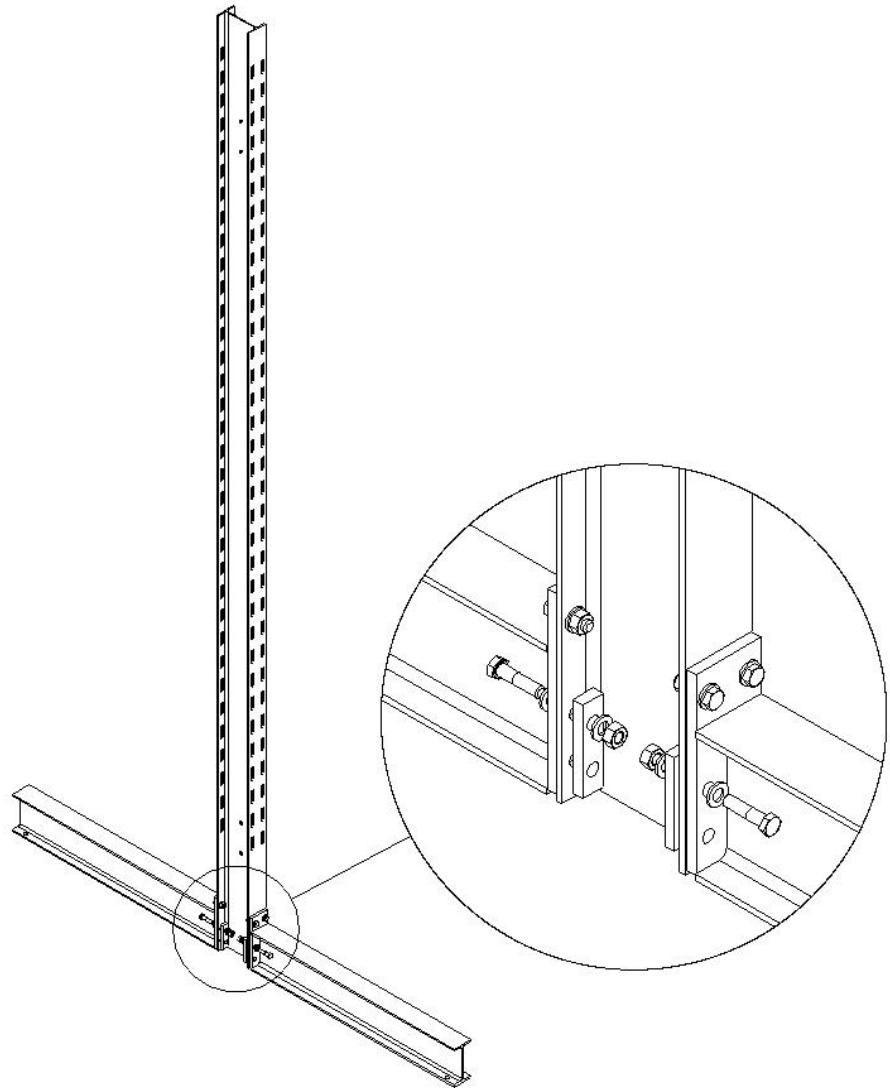


(1) Indoor/outdoor rack  
(1) Innen- und Außenbereich  
(1) Partie intérieure/extérieure

(2) Galvanized  
(2) Verzinkt  
(2) Zingué

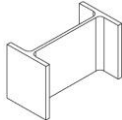




Binnen/buiten stelling (1)		Verzinkt (2)			
	Nr.	 DIN 931/10.9	 DIN 934/10.9	 DIN 125	
160	2x	M12X40	M12	Ø 13	100 Nm
180	2x	M16x60	M16	Ø 17	250 Nm
200	2x	M16x60	M16	Ø 17	250 Nm
220	2x	M16x60	M16	Ø 17	250 Nm
240	2x	M16x60	M16	Ø 17	250 Nm
270	2x	M20x70	M20	Ø 21	450 Nm
300	2x	M20x70	M20	Ø 21	450 Nm

### 3.1 Staander dubbelzijdig monteren

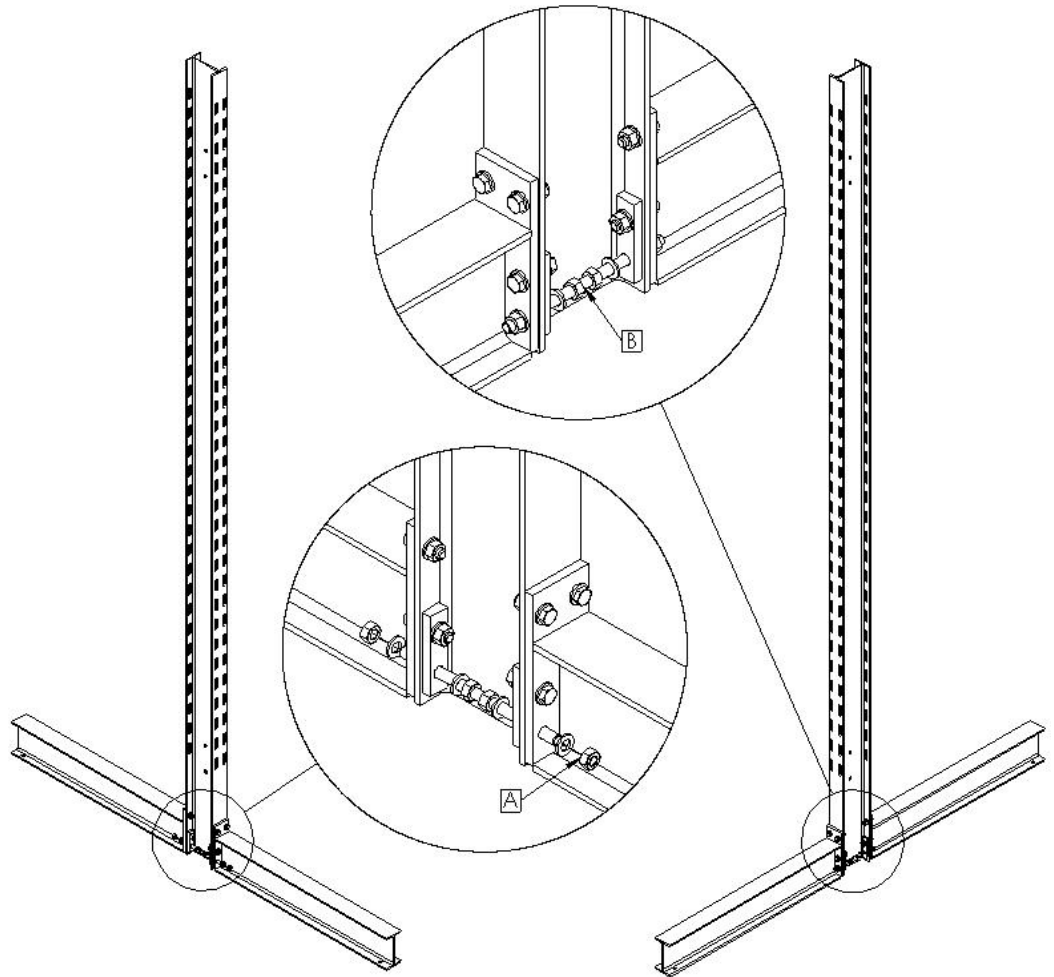


- (1) Indoor/outdoor rack
- (1) Innen- und Außenbereich
- (1) Partie intérieure/extérieure

- (2) Galvanized
- (2) Verzinkt
- (2) Zingué

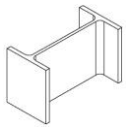




Binnen/buiten stelling (1)		Verzinkt (2)			
	Nr.	 DIN 931/10.9	 DIN 934/10.9	 DIN 125	
<b>160</b>	<b>2x</b>	<b>M12X40</b>	<b>M12</b>	<b>Ø 13</b>	<b>100 Nm</b>
<b>180</b>	<b>2x</b>	<b>M16x60</b>	<b>M16</b>	<b>Ø 17</b>	<b>250 Nm</b>
<b>200</b>	<b>2x</b>	<b>M16x60</b>	<b>M16</b>	<b>Ø 17</b>	<b>250 Nm</b>
<b>220</b>	<b>2x</b>	<b>M16x60</b>	<b>M16</b>	<b>Ø 17</b>	<b>250 Nm</b>
<b>240</b>	<b>2x</b>	<b>M16x60</b>	<b>M16</b>	<b>Ø 17</b>	<b>250 Nm</b>
<b>270</b>	<b>2x</b>	<b>M20x70</b>	<b>M20</b>	<b>Ø 21</b>	<b>450 Nm</b>
<b>300</b>	<b>2x</b>	<b>M20x70</b>	<b>M20</b>	<b>Ø 21</b>	<b>450 Nm</b>

## 3.2 Staander dubbelzijdig monteren



(1) Indoor/outdoor rack  
 (1) Innen- und Außenbereich  
 (1) Partie  
 intérieure/extérieure

(2) Galvanized  
 (2) Verzinkt  
 (2) Zingué

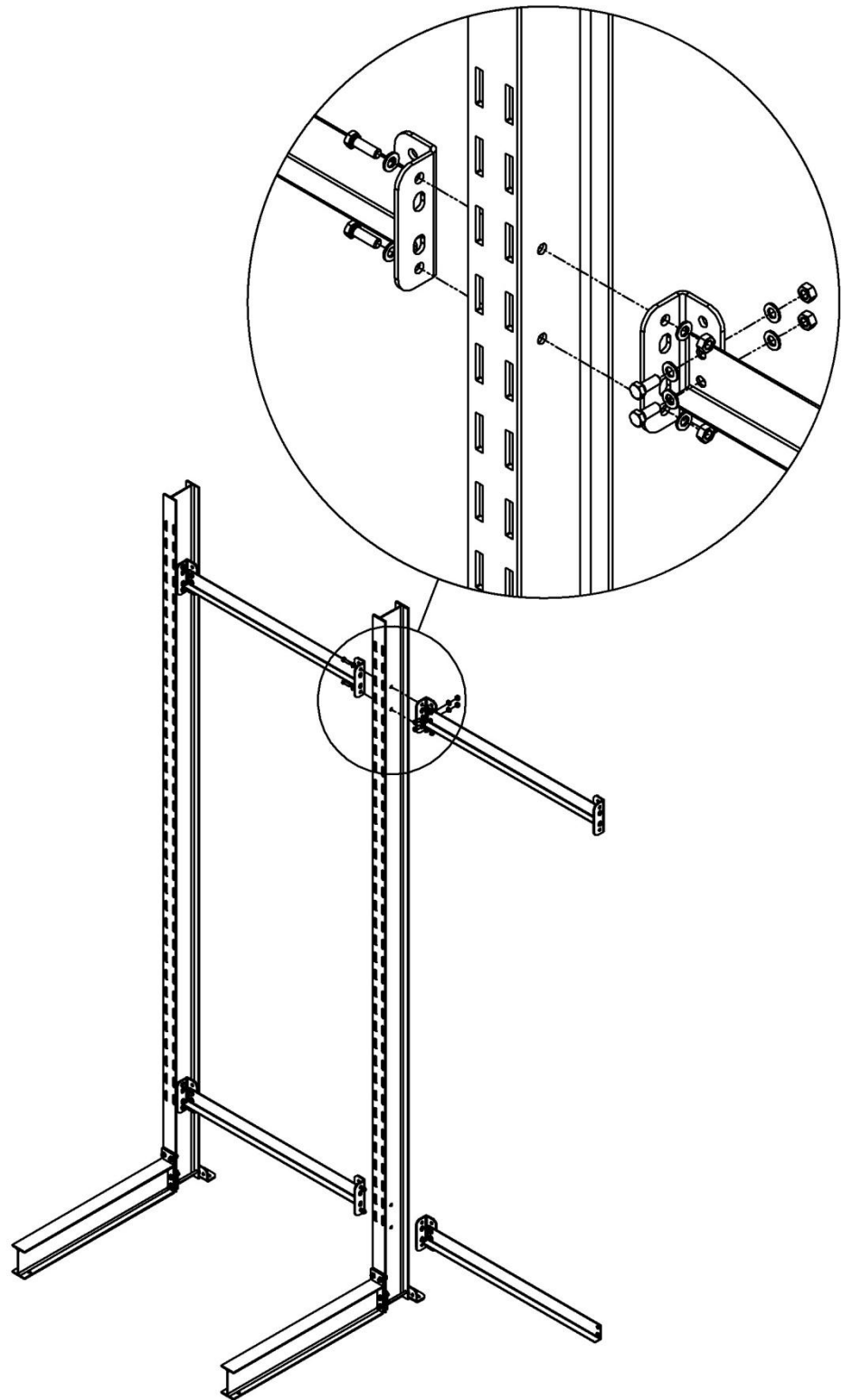
Binnen/buiten stelling (1)		Verzinkt (2)				
						
	Nr.	DIN 975/10.9	DIN 934/10.9	DIN 125	A	B
160	2x	M12X40	M12	Ø 13	135 Nm	65 Nm
180	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
200	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
220	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
240	2x	M16x60	M16	Ø 17	335 Nm	150 Nm
270	2x	M20x70	M20	Ø 21	660 Nm	300 Nm
300	2x	M20x70	M20	Ø 21	660 Nm	300 Nm





## 4.0 Schoring horizontaal monteren

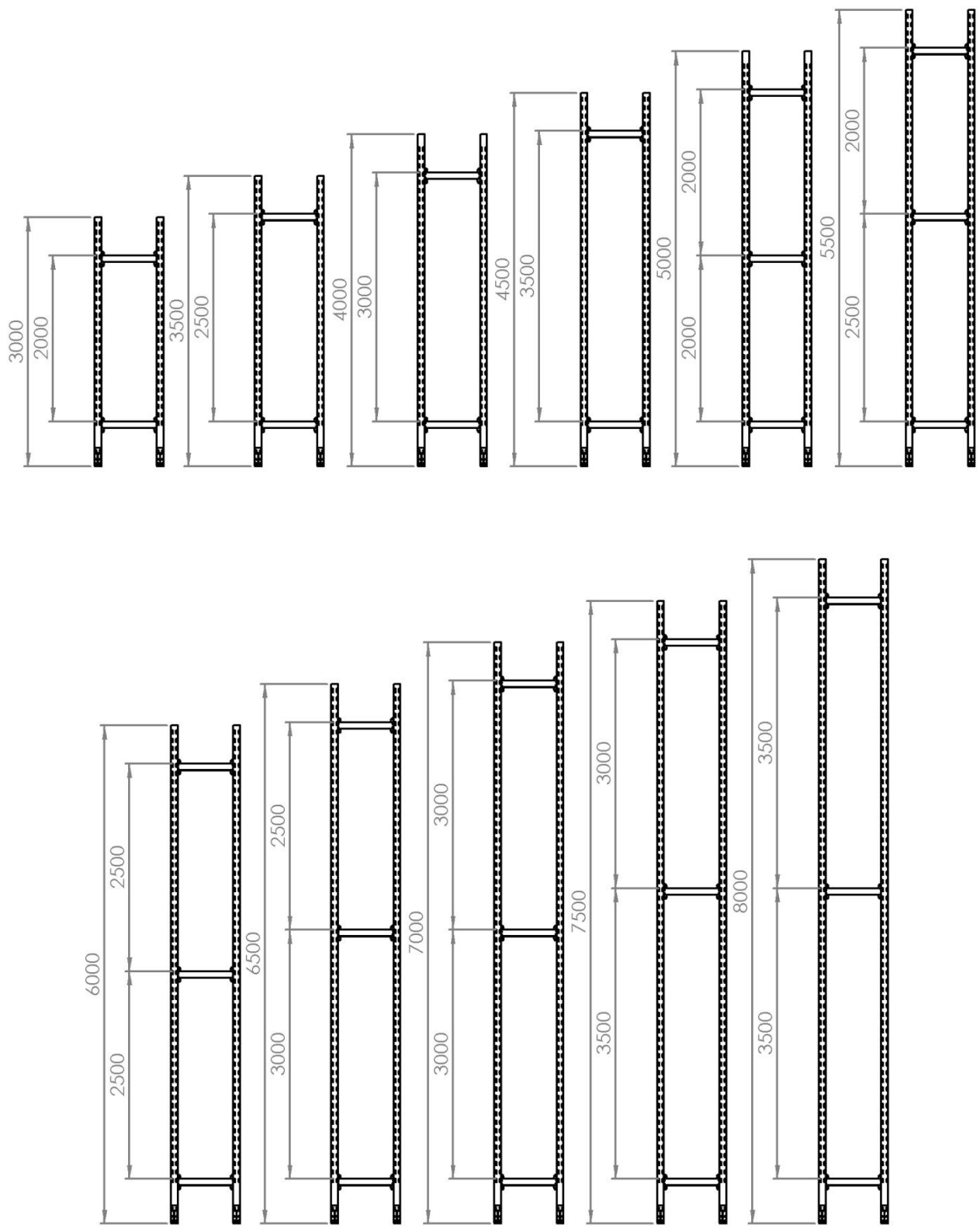
4.0 Assemble  
horizontal brace

4.0 Horizontalverbinder  
montieren

4.0 Monter entretoise



			
DIN 933/10.9	DIN 934/10.9	DIN 125	
M12X40	M12	Ø 13	100 Nm



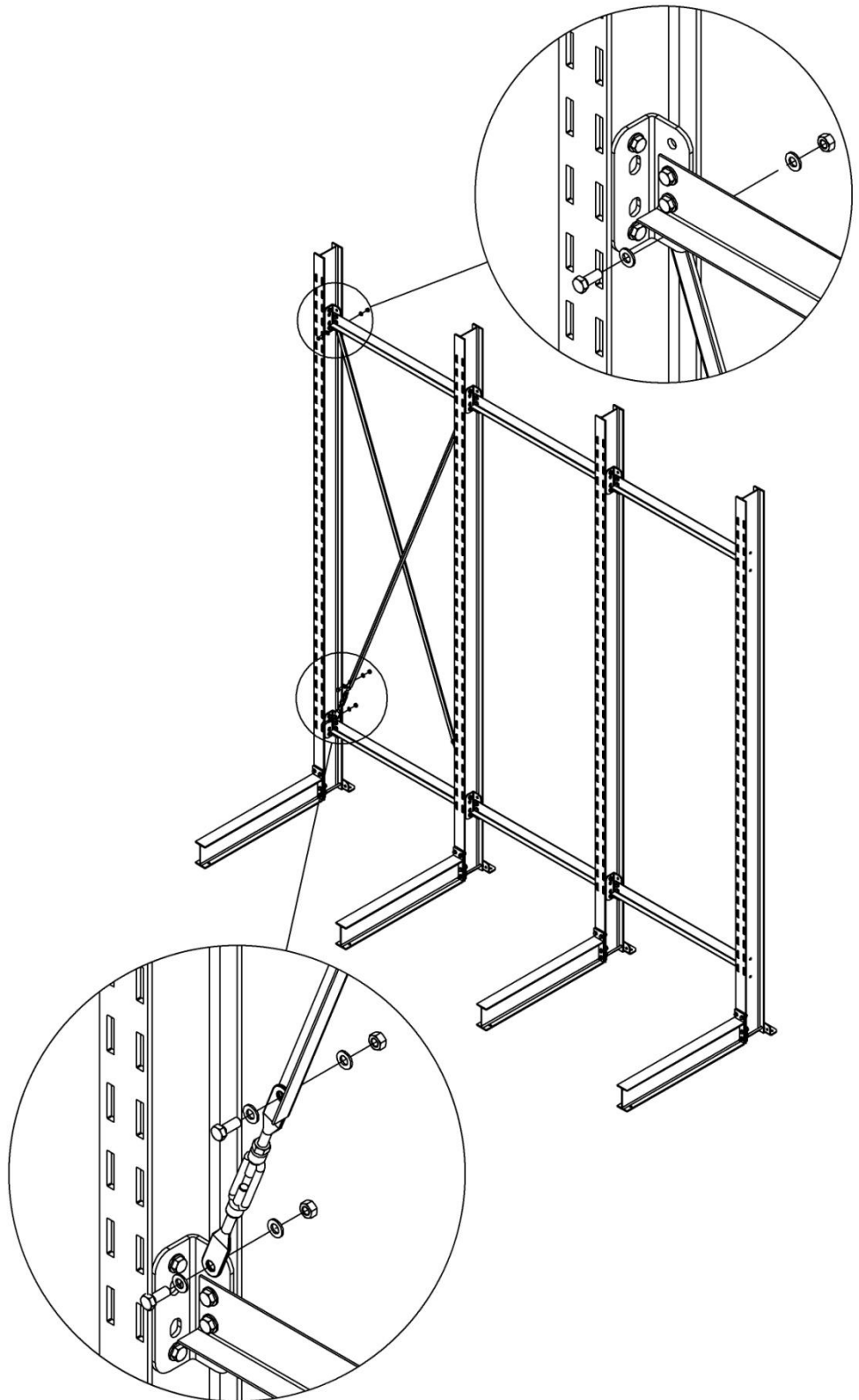
## 5.0 Schoring diagonaal monteren





### 5.0 Assemble Cross bracing

### 5.0 Diagonalverband montieren

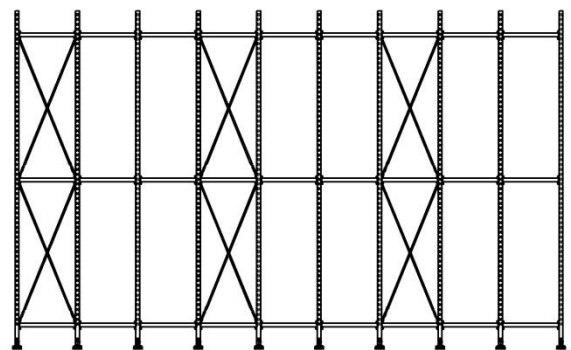
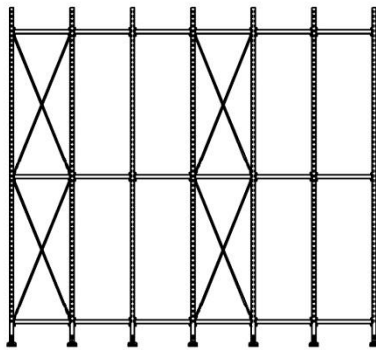
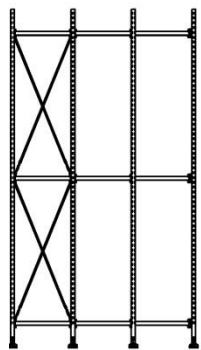
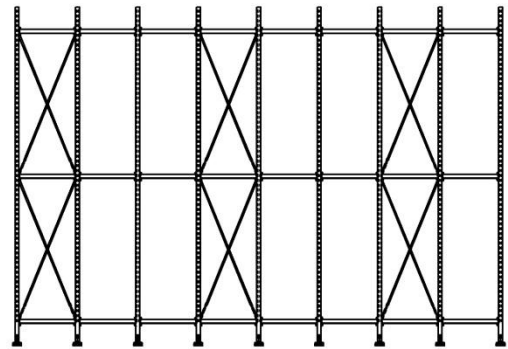
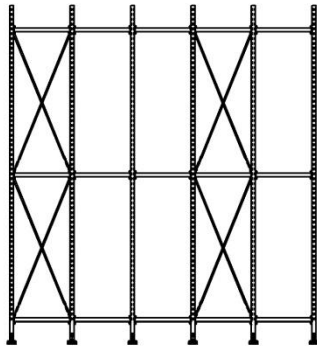
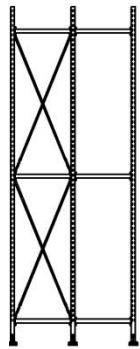
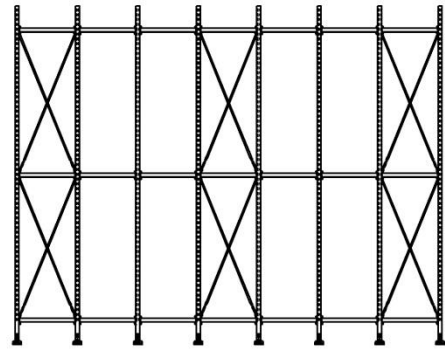
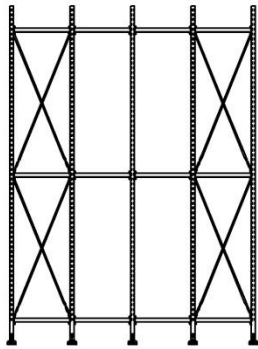
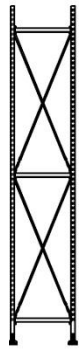
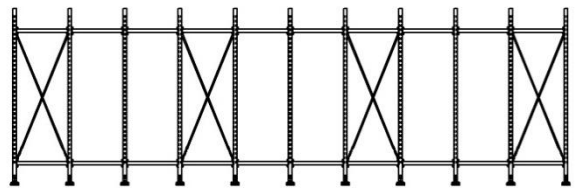
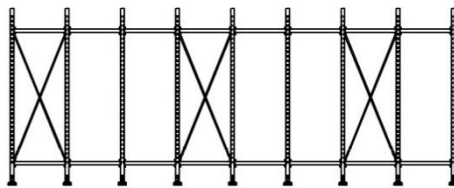
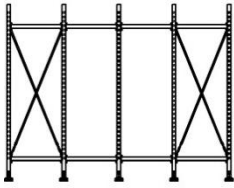
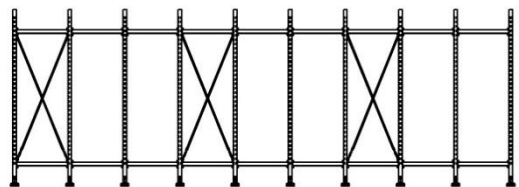
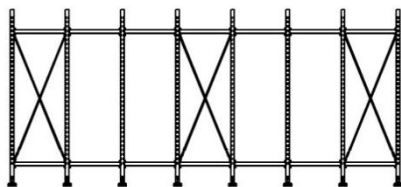
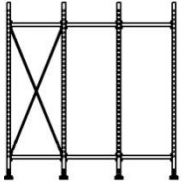
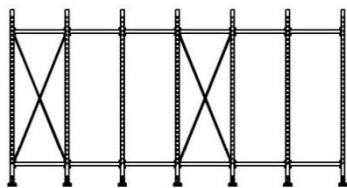
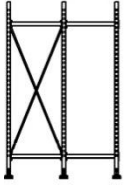
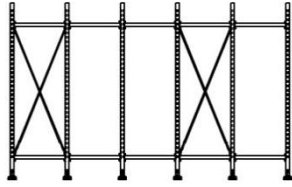
### 5.0 Monter croisillons de liaison

- Per 3 secties, 1 kruisschoor
- For every 3 bays, 1 cross bracing
- Je 3Felder = 1 diagonalverband
- Par 3 travées = 1 croisillon



			
<b>DIN 933/10.9</b>	<b>DIN 934/10.9</b>	<b>DIN 125</b>	
<b>M12X30</b>	<b>M12</b>	<b>Ø 13</b>	<b>100 Nm</b>



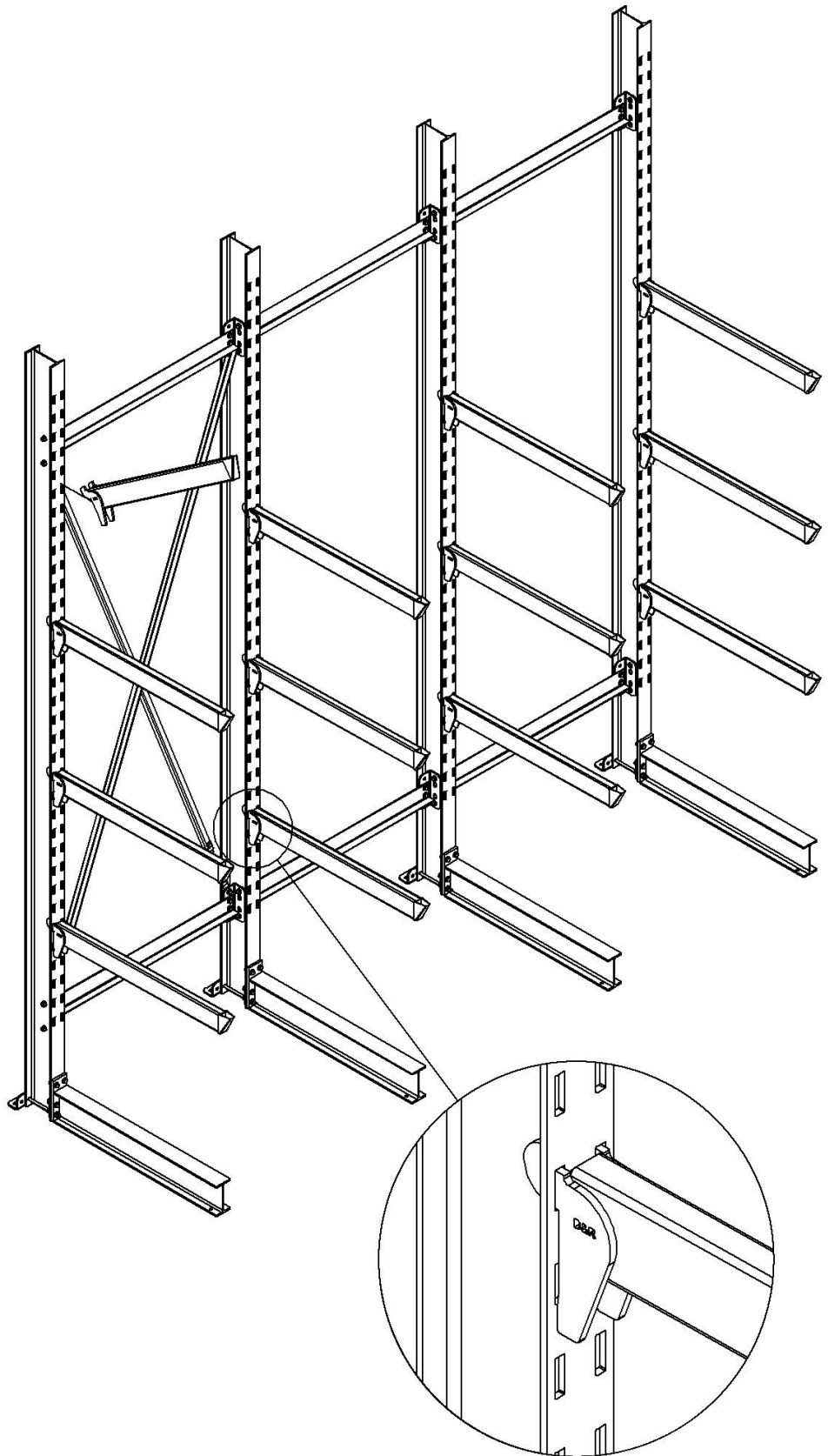


## 6.0 Inhaken draagarm

6.0 Hook in arm

6.0 Einhängen kragarm

6.0 Emboîter le bras





## 7.0 Stelling uitwaterpassen

Horizontale hoogtevariatie draagarmen uitwaterpassen met opvulplaten

### 7.0 Cantilever rack adjustment

Horizontal differences in level should be compensated with underlay plates.

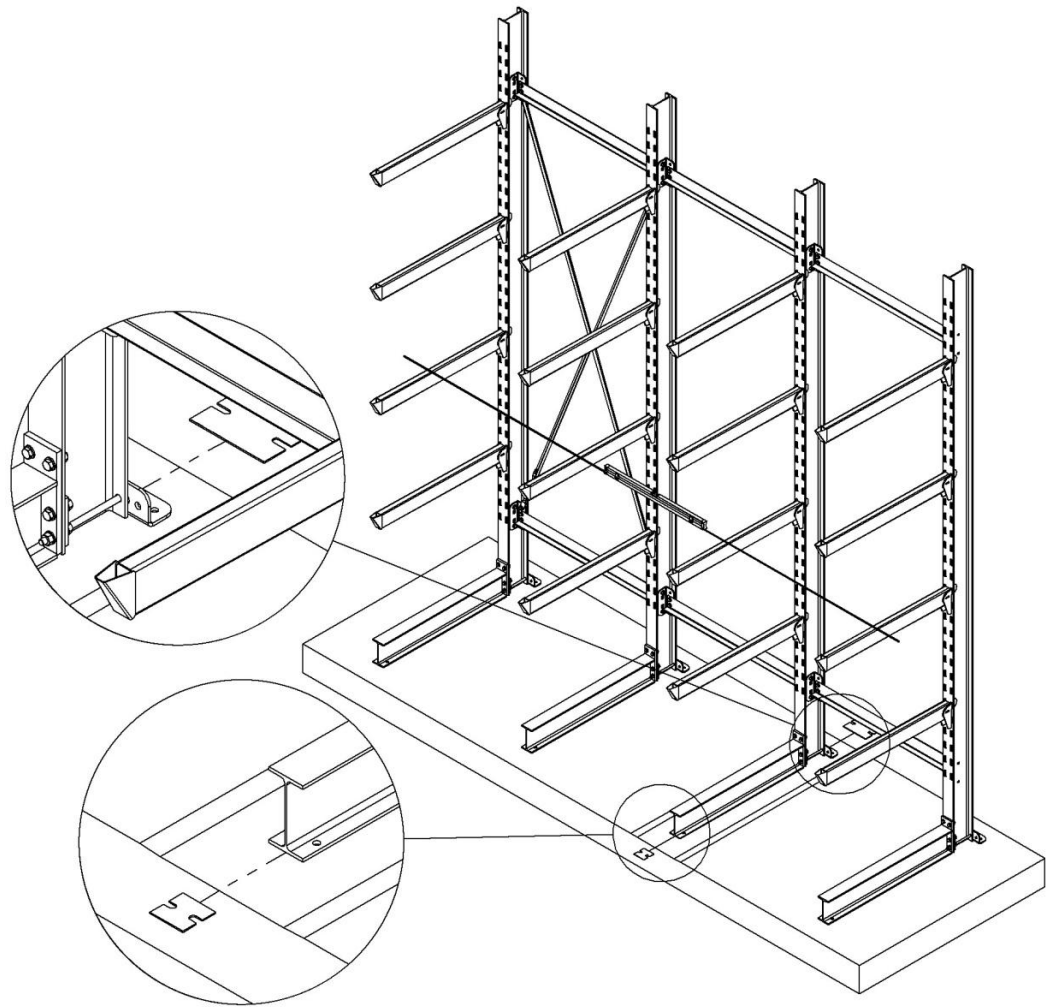
### 7.0 Kragarmregal ausrichten

Horizontale niveau-unterschiede mit unterlegblechen ausgleichen.

### 7.0 Positionnement de l'étagère cantilever

Équilibrer les différences horizontales de niveau au moyen de plaques métalliques

- Opvulplaten op aanvraag leverbaar.
- Underlay plates can be supplied upon request
- Unterlegbleche bei Bedarf bestellen
- Cales peuvent être fournies sur demande



Verticale afwijkingen afstellen met opvulplaten en spanwartels

### 7.1 Cantilever rack adjustment

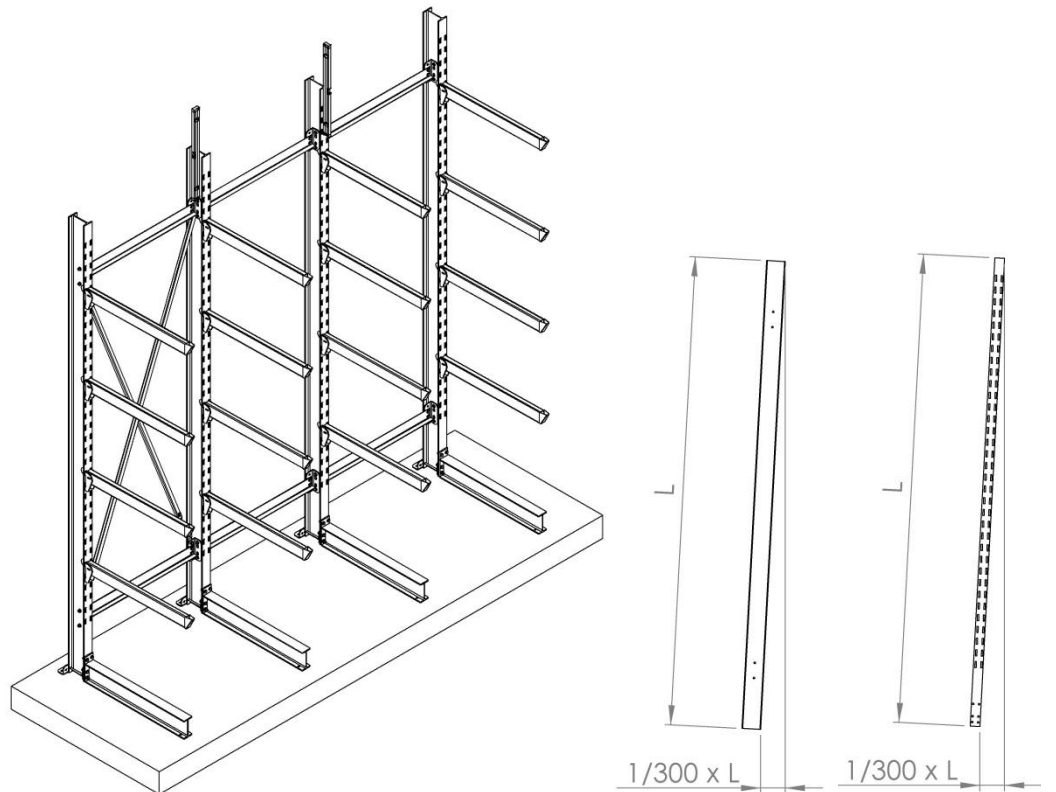
Vertical deviation should be adjusted with underlay plates and turnbuckle

### 7.1 Kragarmregal ausrichten

vertikale abweichungen mit unterlegblechen und spannschloss justieren

### 7.0 Positionnement de l'étagère cantilever

Égaliser les écarts verticaux au moyen de plaques métalliques et d'un tendeur à vis



## 8.0 Stelling verankeren

4 ankers per staandervoet

### 8.0 Rack anchorage

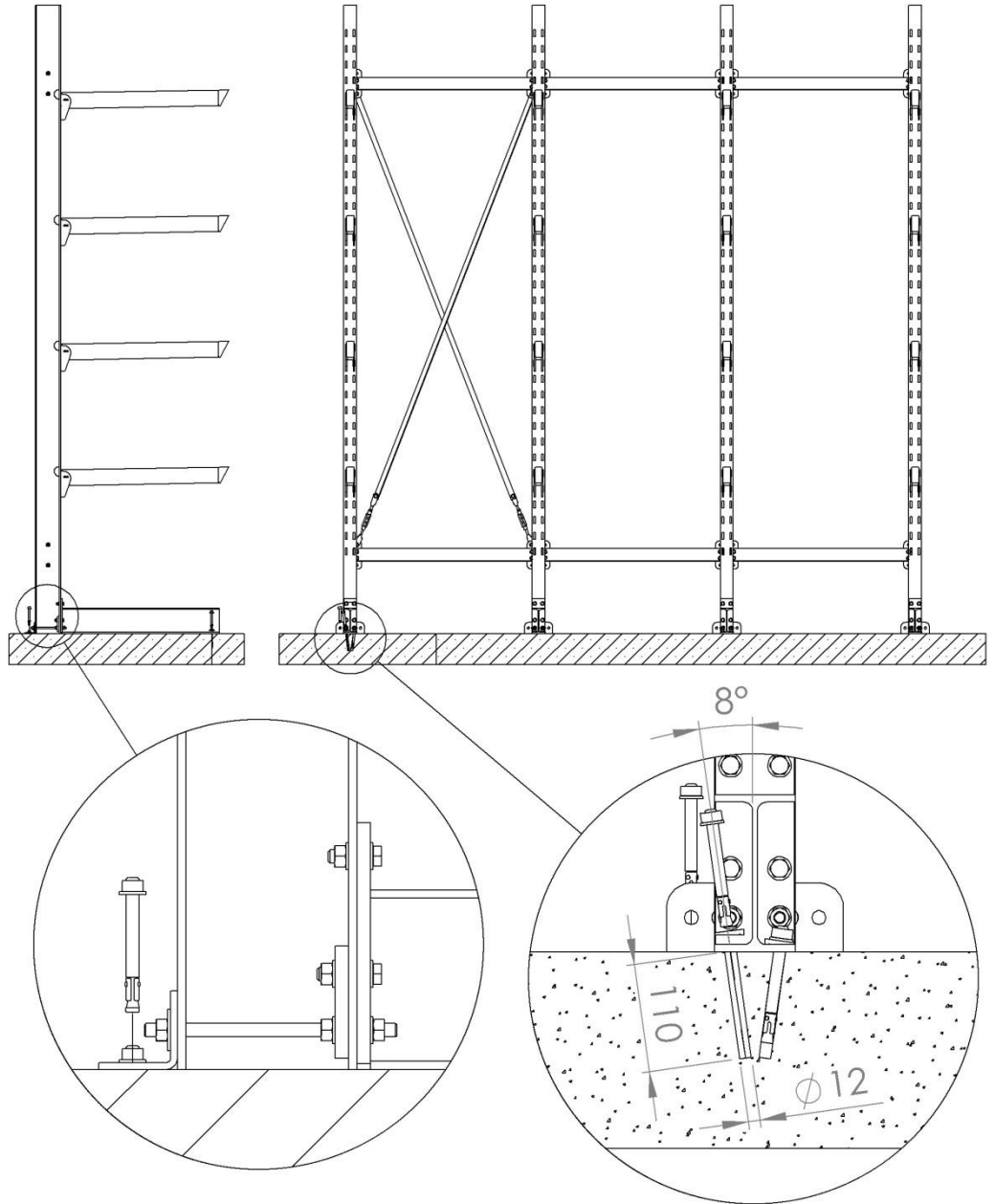
4 steel anchors per rack foot

### 8.0 Verankerung

4 Stahlanker je Ständerfuß

### 8.0 Ancrage

4 ancras en acier par pied de montant



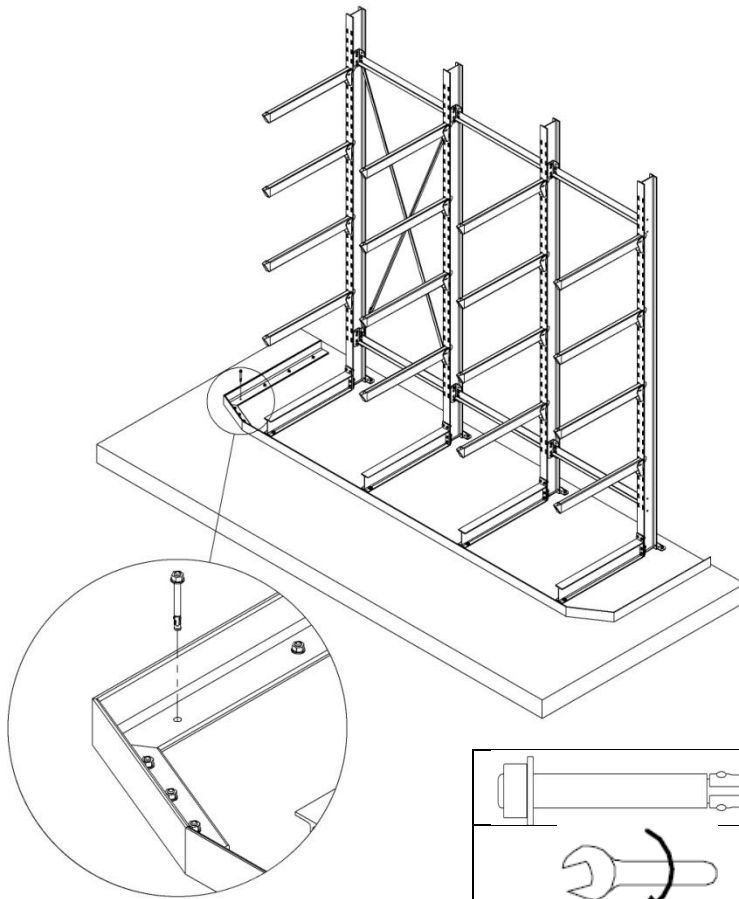
	<b>M12x100</b>
	<b>Ø14 DIN 435</b>
	<b>70 Nm</b>



## 9.0 Aanrijdbescherming

9.0 Hit protection

9.0 Anfahrschutz

9.0 Protection pied d'échelle

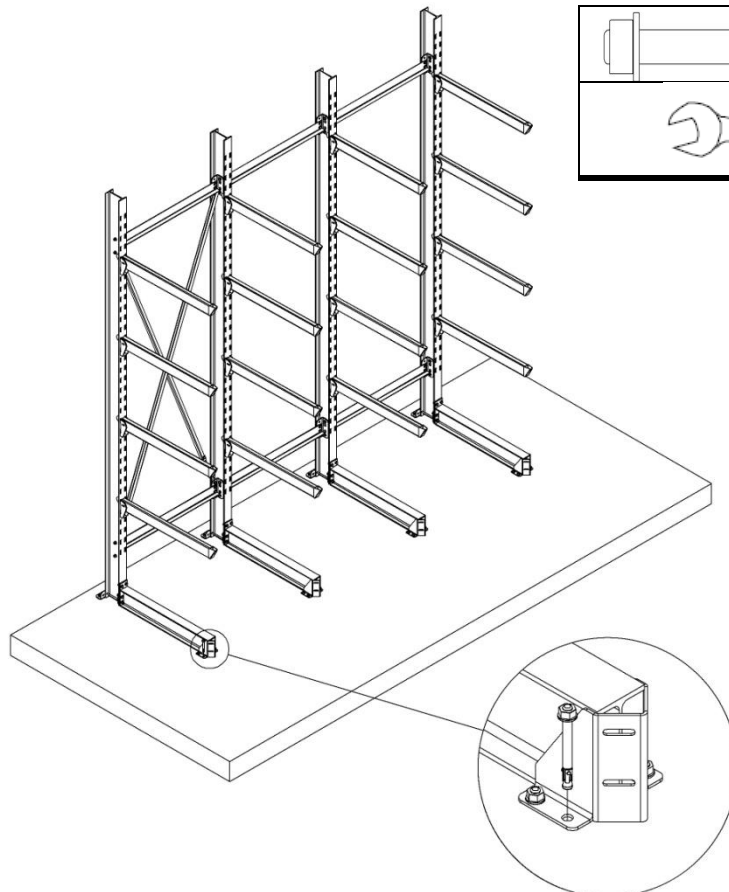



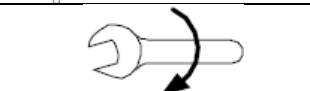
	<b>M12x100</b>
	<b>70 Nm</b>

9.0 Hit protection

9.0 Anfahrschutz

9.0 Protection pied d'échelle



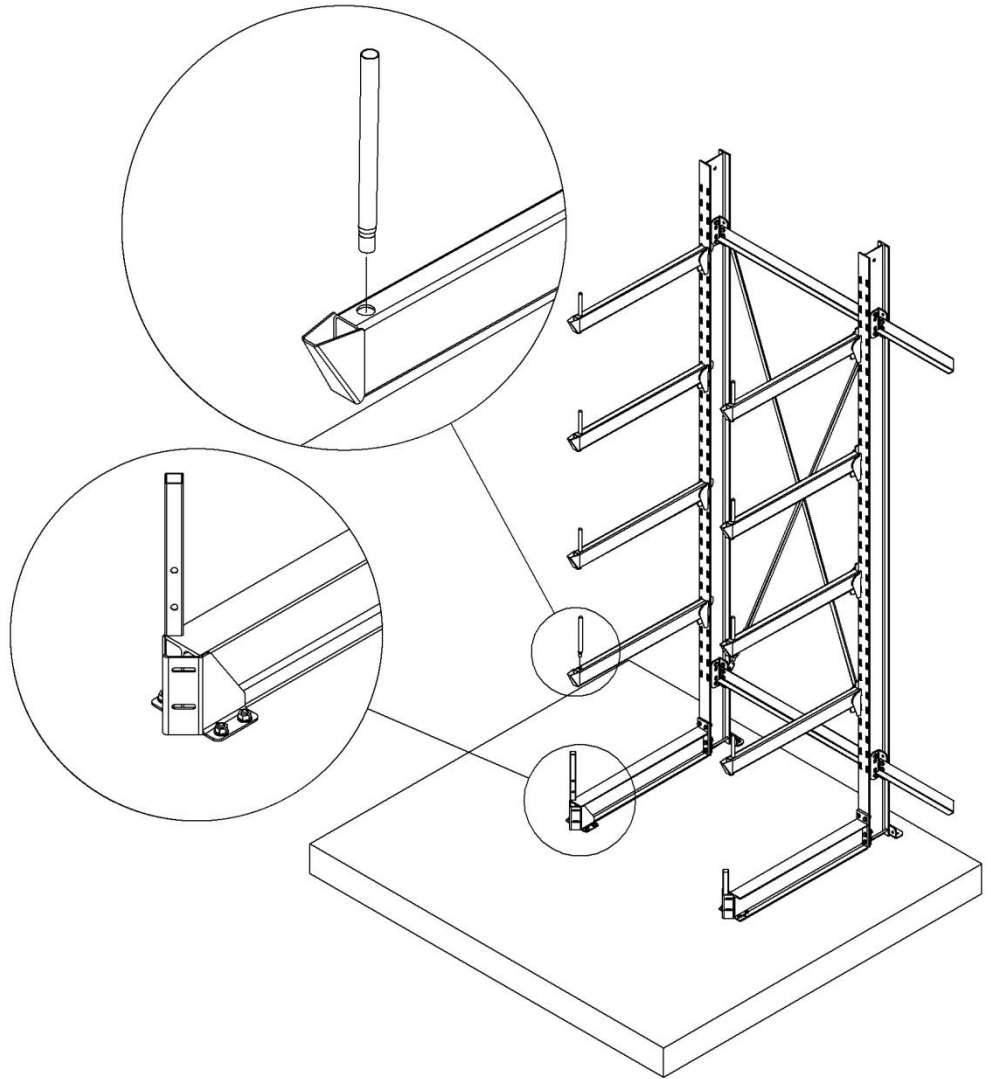
	<b>M12x100</b>
	<b>70 Nm</b>

## 10.0 Afrolbeveiliging

10.0 End stop

10.0 Abrollsicherung

10.0 Butée

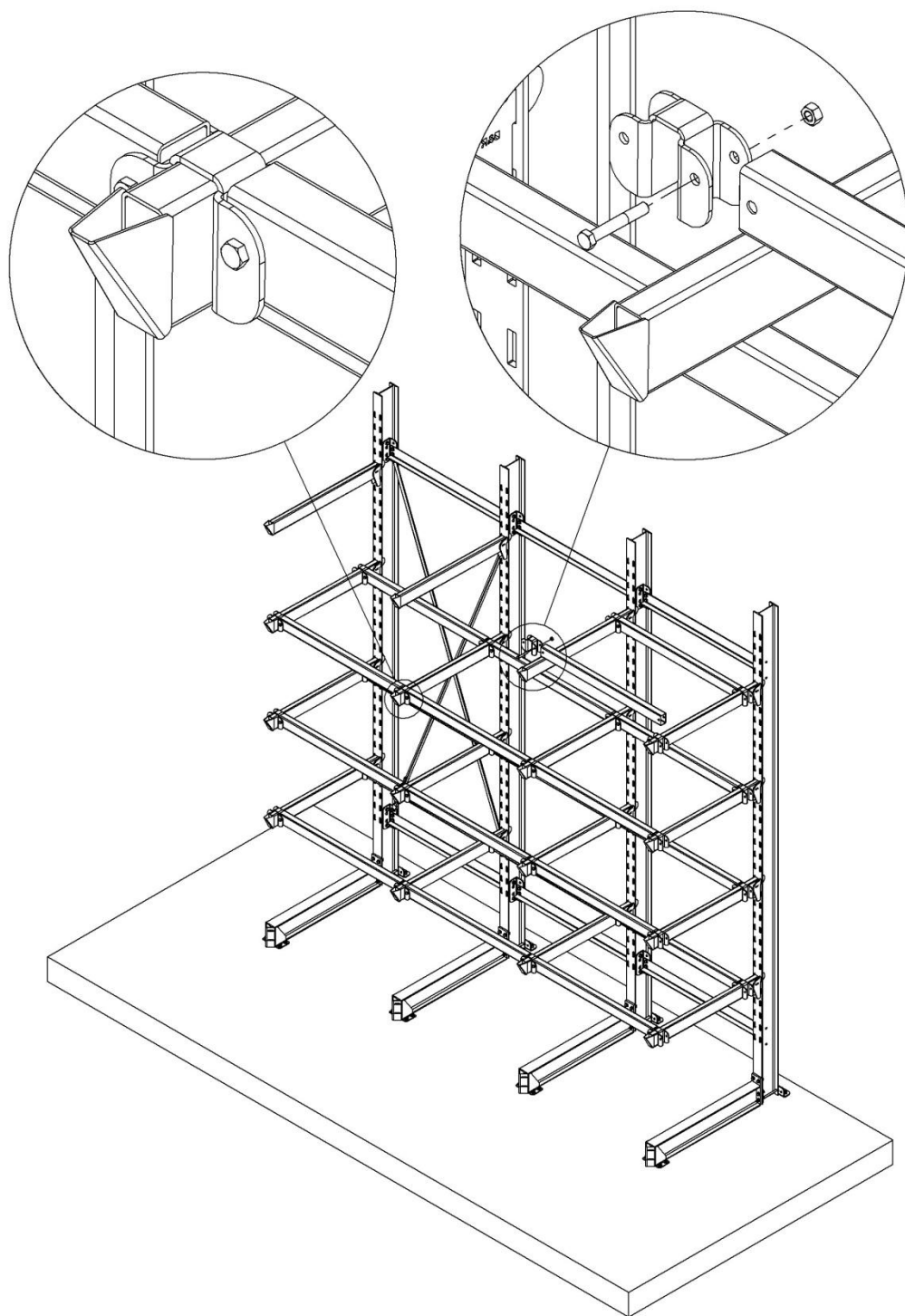




## 11.0 Arm brug


11.0 Arm bridge

11.0 Armbrücke

11.0 Traverses pour bras



	
<b>DIN 931/8.8</b>	<b>DIN 985/8.8</b>
<b>M12X70</b>	<b>M12</b>


<b>DIN 7504-N</b>
<b>ST5,5x19</b>



## 12.0 Dak

12.0 Roof

12.0 Dach

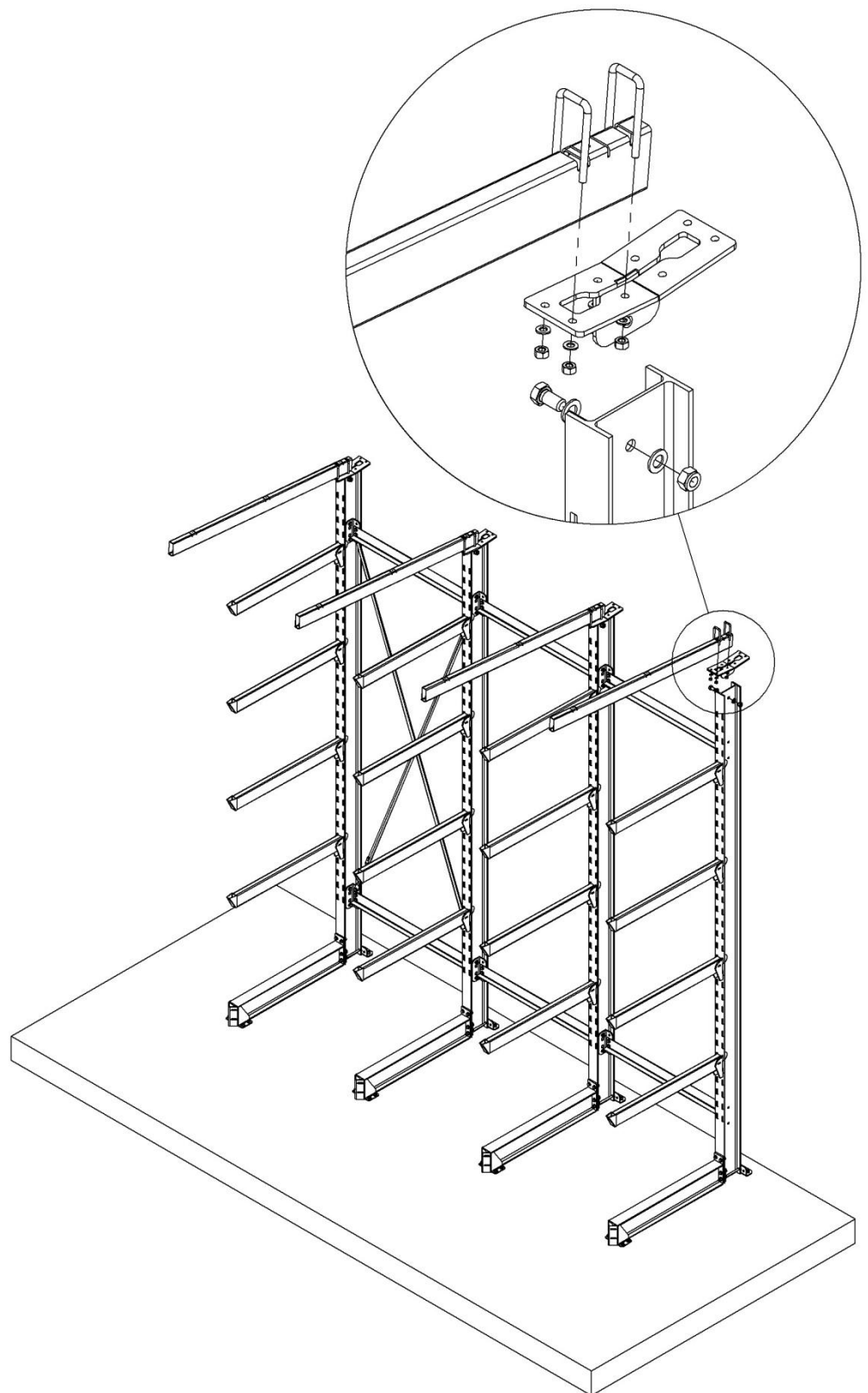
12.0 Toiture





12.1 Dakdrager

12.2 Roof cantilever

12.3 Dacharm

12.4 Arbre de la toiture



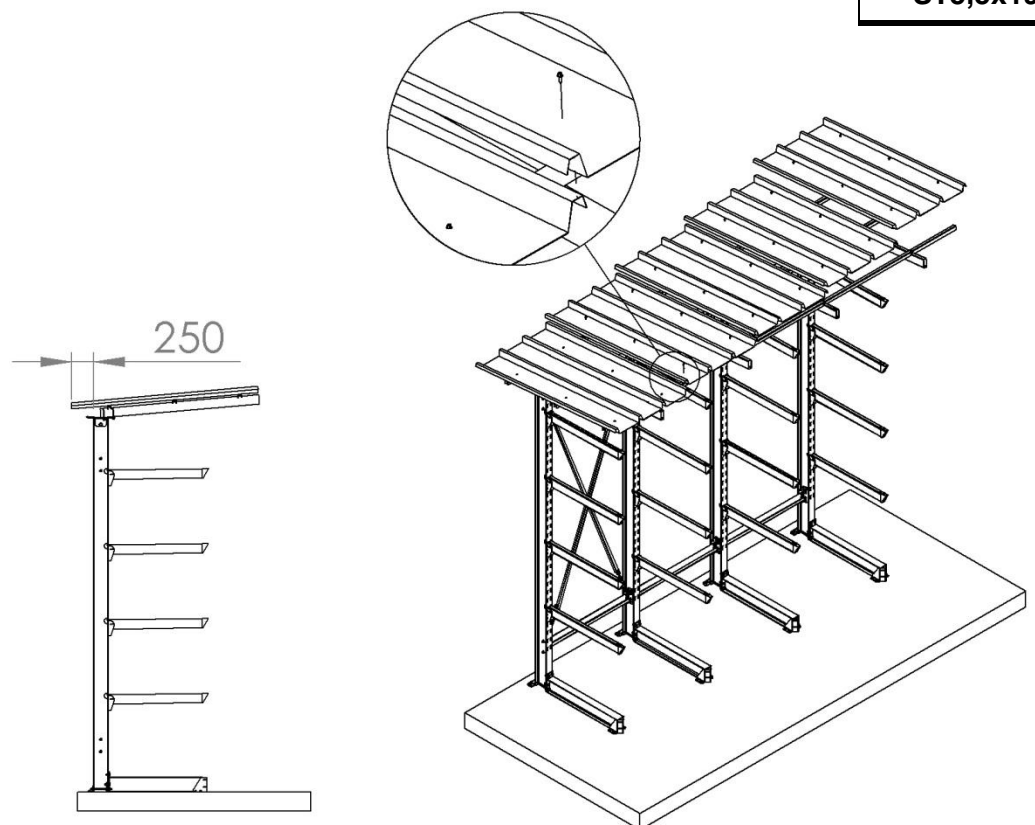
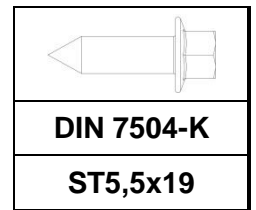
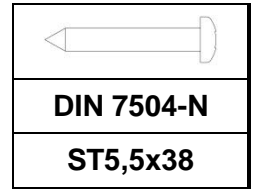
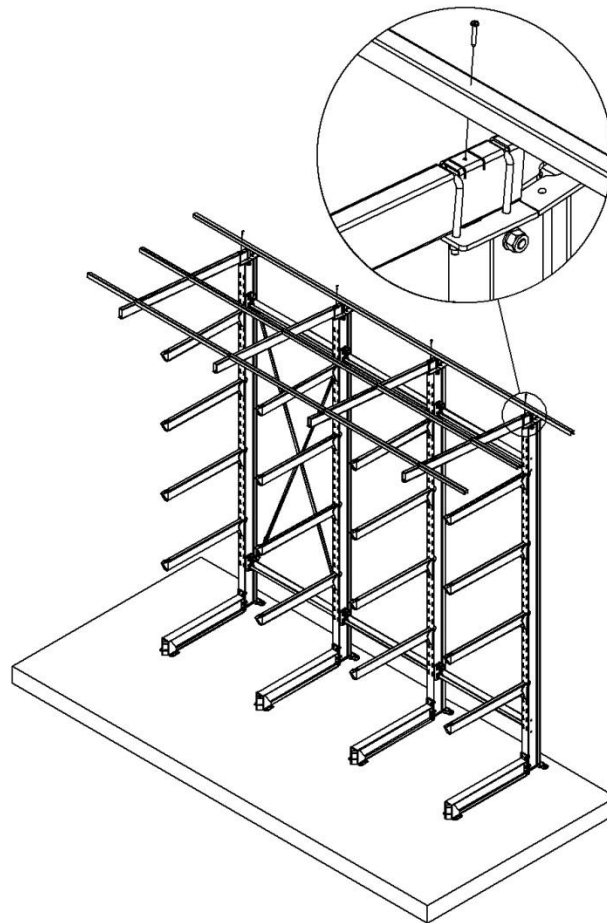
			
<b>DIN 933/8.8</b>	<b>DIN 934/8.8</b>	<b>DIN 125</b>	
	<b>M10</b>	<b>Ø 10,5</b>	<b>35 Nm</b>
<b>M16X40</b>	<b>M16</b>	<b>Ø 17</b>	<b>250 Nm</b>

## 12.2 Dakligger & Golfplaat

12.2 Roof support  
& Corrugated metal

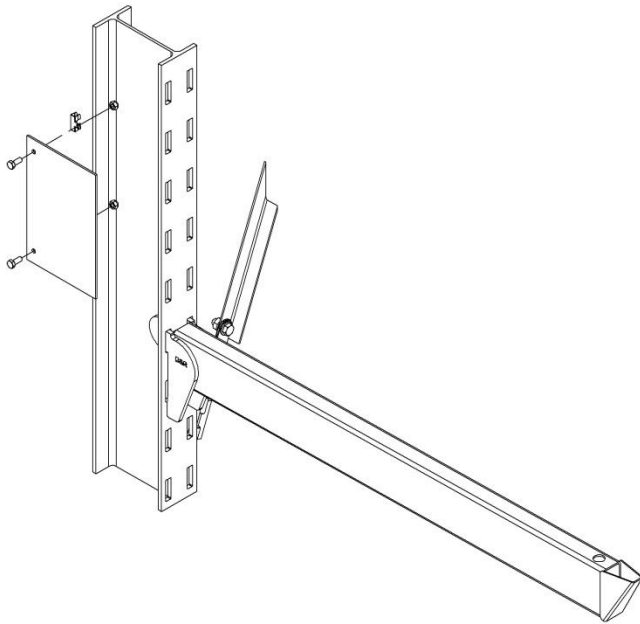
12.2 Dachlange  
& Trapezblech

12.3 Longérons de  
toit & Tole  
trapzodale



# Gebruiksvoorschriften / Use specifications / Gebrauchsspezifikation spécification d`utilisation

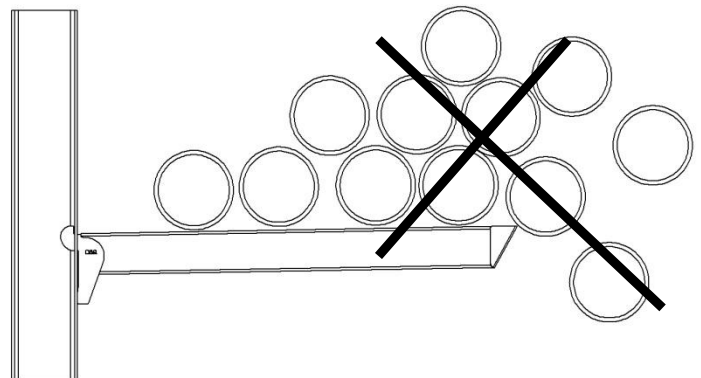
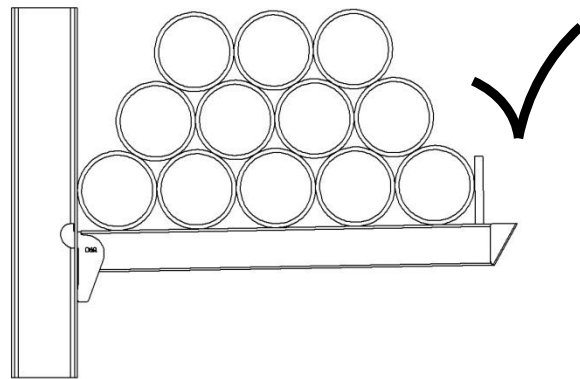
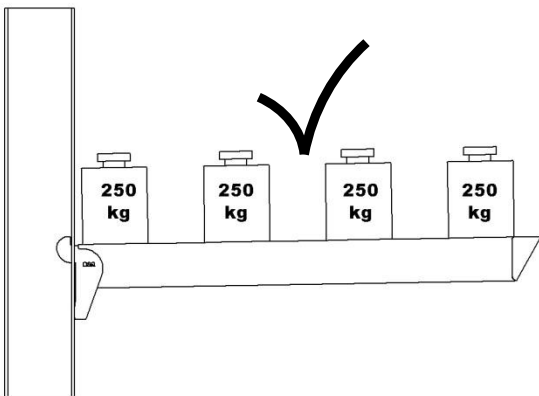
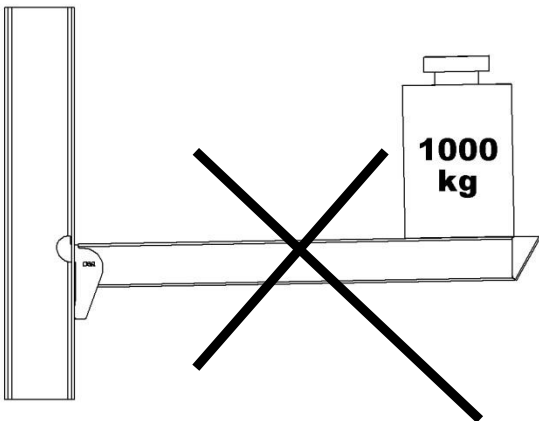
Belastingsbord  
Load capacity board  
Belastungsschild  
Plaque de charge



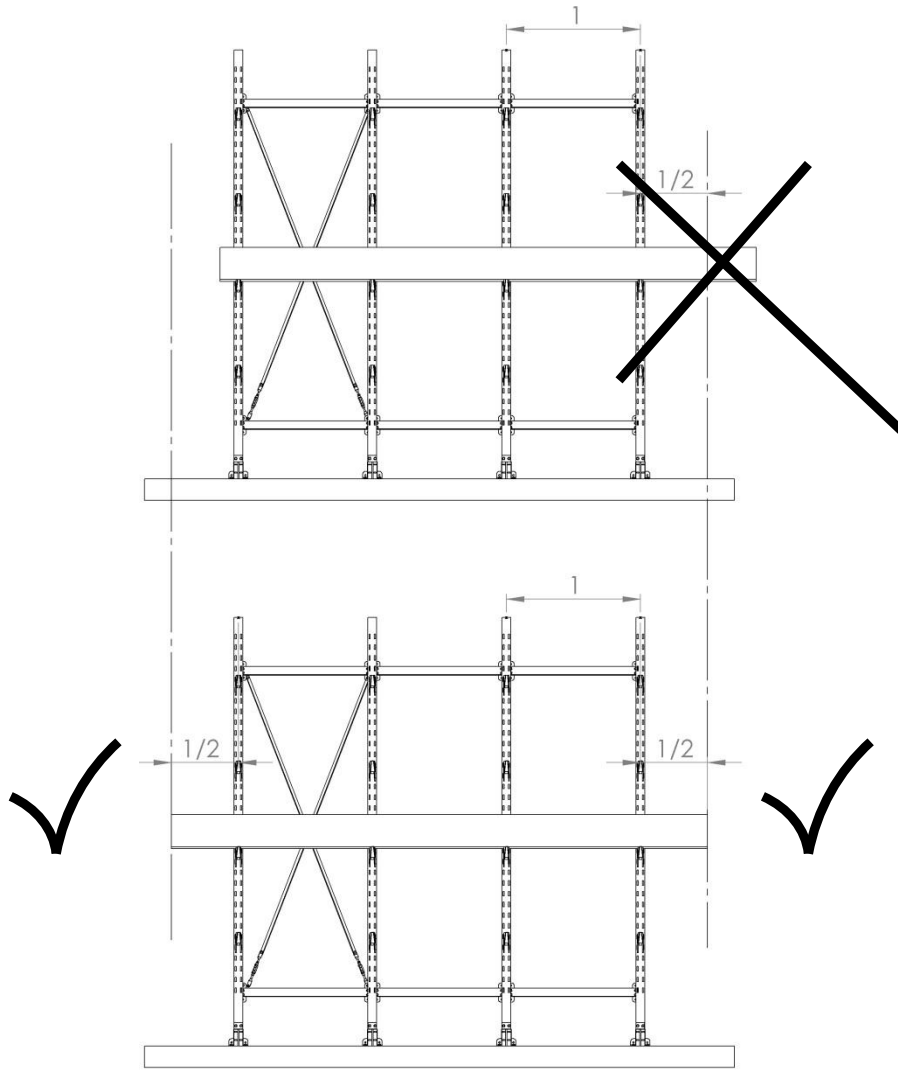
- Op staander monteren op ooghoogte
- Screw to pillar at eye height
- In Augenhöhe mit Ständer verschrauben
- Visser sur montant à hauteur des yeux

Opgave belastingcapaciteit  
Load capacity data  
Belastungsangabe  
Indication de capacité de charge

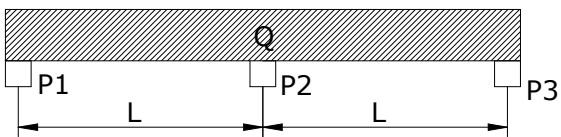
Goederen borgen  
Securing goods  
Ware sichern  
Sécuriser la marchandise



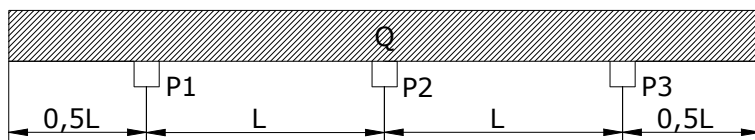




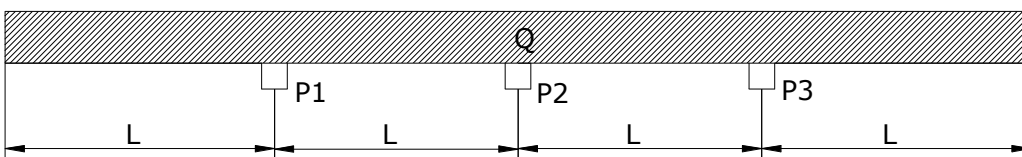
Q= Equal spread load  
 P= Load per arm  
 F= Total load



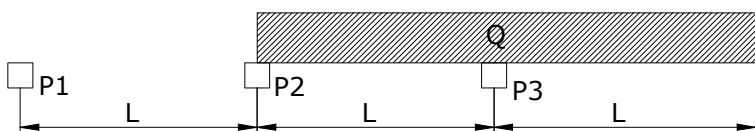
$$\begin{aligned} P1 &= 0,2 Q \\ P2 &= 0,6 Q \\ P3 &= 0,2 Q \end{aligned}$$



$$\begin{aligned} P1 &= 0,35 Q \\ P2 &= 0,30 Q \\ P3 &= 0,35 Q \end{aligned}$$



$$\begin{aligned} P1 &= 0,5 Q \\ P2 &= 0,0 Q \\ P3 &= 0,5 Q \end{aligned}$$



$$\begin{aligned} P1 &= 0,0 Q \\ P2 &= 0,0 Q \\ P3 &= 1,0 Q \end{aligned}$$

