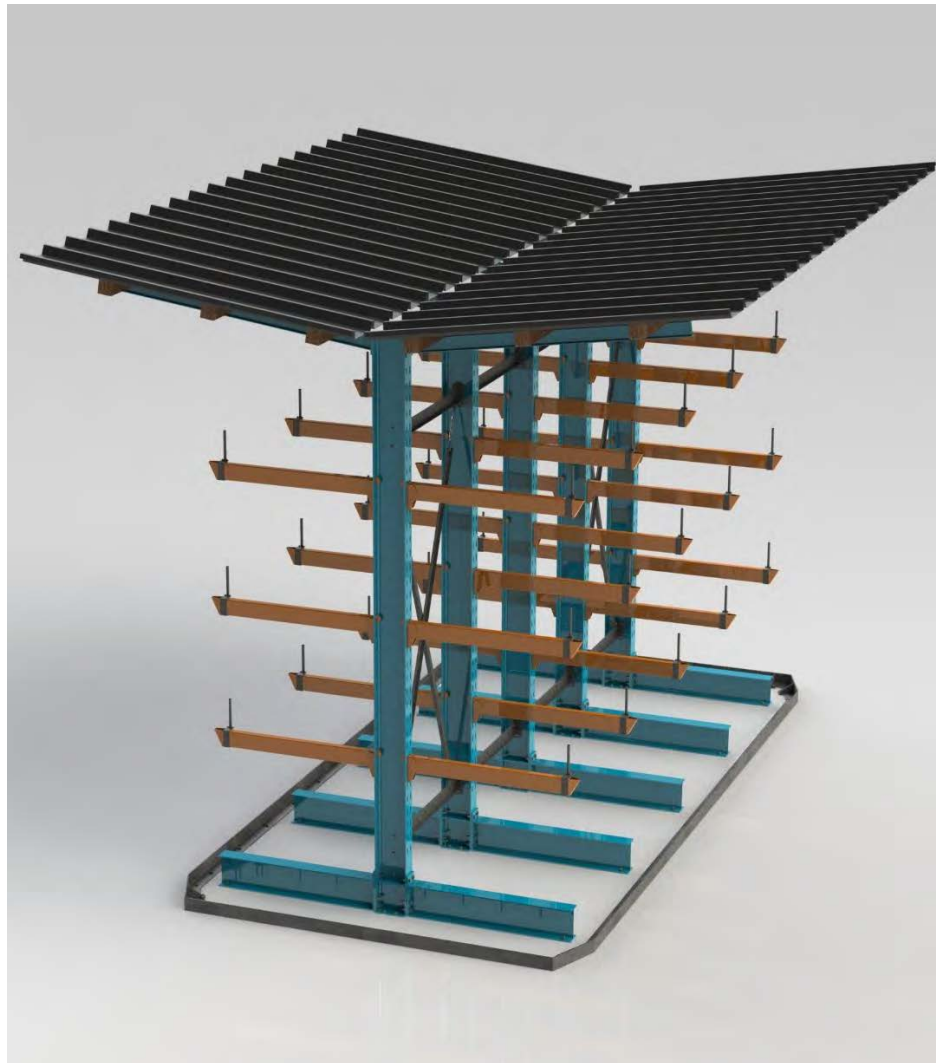


# montage handleiding

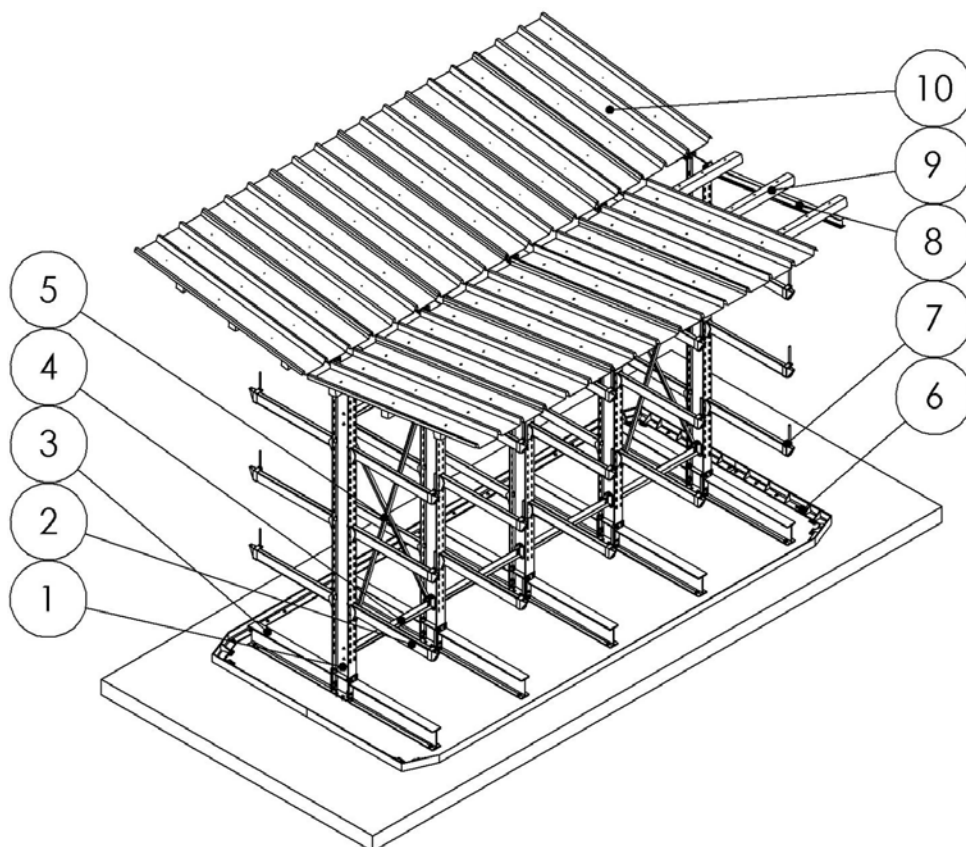
Zware draagarmstellingen  
Heavy duty cantilever racking  
Kragarmregale für Schwerlast  
Rayonnage cantilever

# 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 Ständerfuß 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>	Aanrijdbescherming Hit protection Anfahrschutz Protection pied d'échelle
<b>7</b>	Afrolbeveiliging End stop Abrollsicherung Butée
<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

## Inhoud / List of contents / Inhalt / Sommaire

<b>Belangrijke richtlijnen</b> <b>Important regulations</b> <b>Unbedingt beachten</b> <b>Réglémentations importantes</b>	
Normen Design norms Ausführung normen Normes de référence	<b>4</b>
Veiligheidsvoorschriften Accident prevention regulations Sicherheitsvorschriften Consignes de sécurité	<b>4</b>
Vloereigenschappen Flooring Aufstellfläche Qualité du sol	<b>4</b>
Draagvermogen Load Capacity Belastung Capacité de charge	<b>4</b>
<b>Montage</b> <b>Assembly</b> <b>Montage</b> <b>Montage</b>	
Staander & voet Column & feet Ständer & fuß Mettre & Pied	<b>5</b>
Schoring Shoring Sprießung Étayage	<b>8</b>
Draagarmen Cantilevers Kragarmen Bras	<b>12</b>
Nivellering Levelling Einfahren nivelage	<b>13</b>
Verankering Anchoring Verankerung Ancre	<b>14</b>
Aanrijbescherming Hit protection Anfahrschutz Protection pied d'échelle	<b>15</b>
Afolbeveiliging End stop Abrollsicherung Butée	<b>16</b>
Dak Roof Dach Toit	<b>17</b>
Gebruiksvoorschriften Use specifications Gebrauchsspezifikation spécification d'utilisation	
Belastingbord Load capacity board Belastungsschild Plaque de charge	<b>20</b>
Belading Loading Beladen Charger	<b>21</b>

# 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
- Gebruikers 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

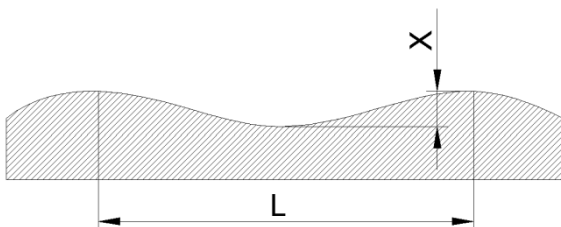
- |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 béto d'une 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

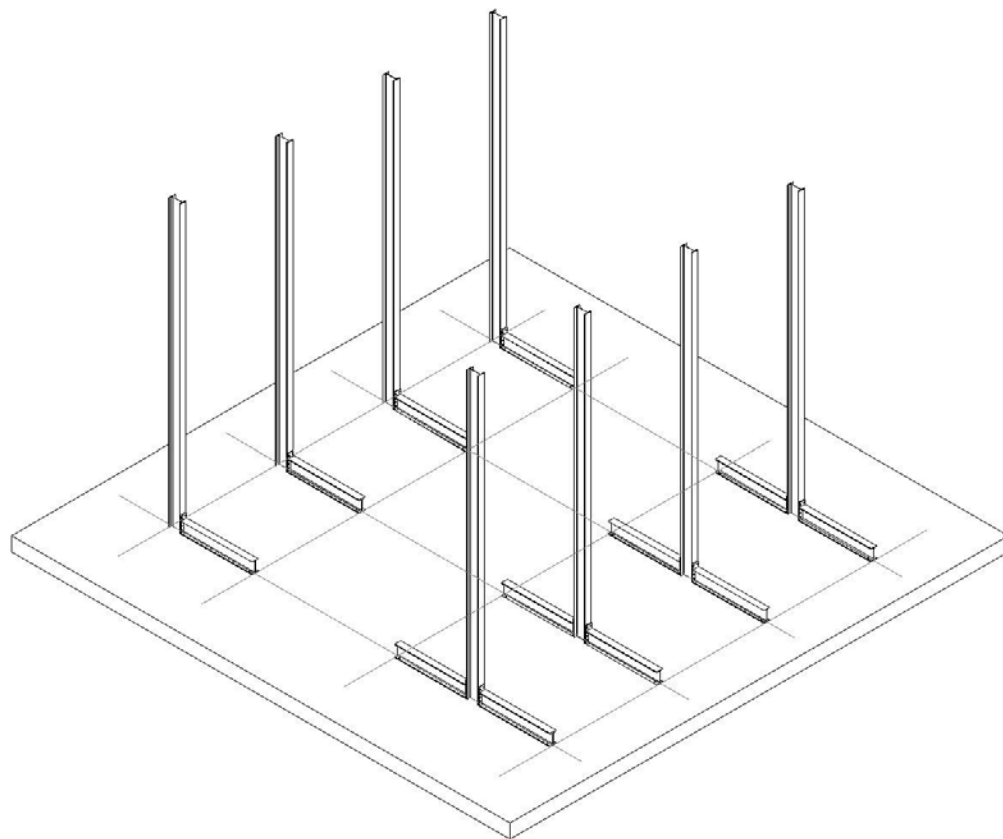
- |                                                                                                                                                                                                         |                                                                                                                                                                                                |                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 I 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

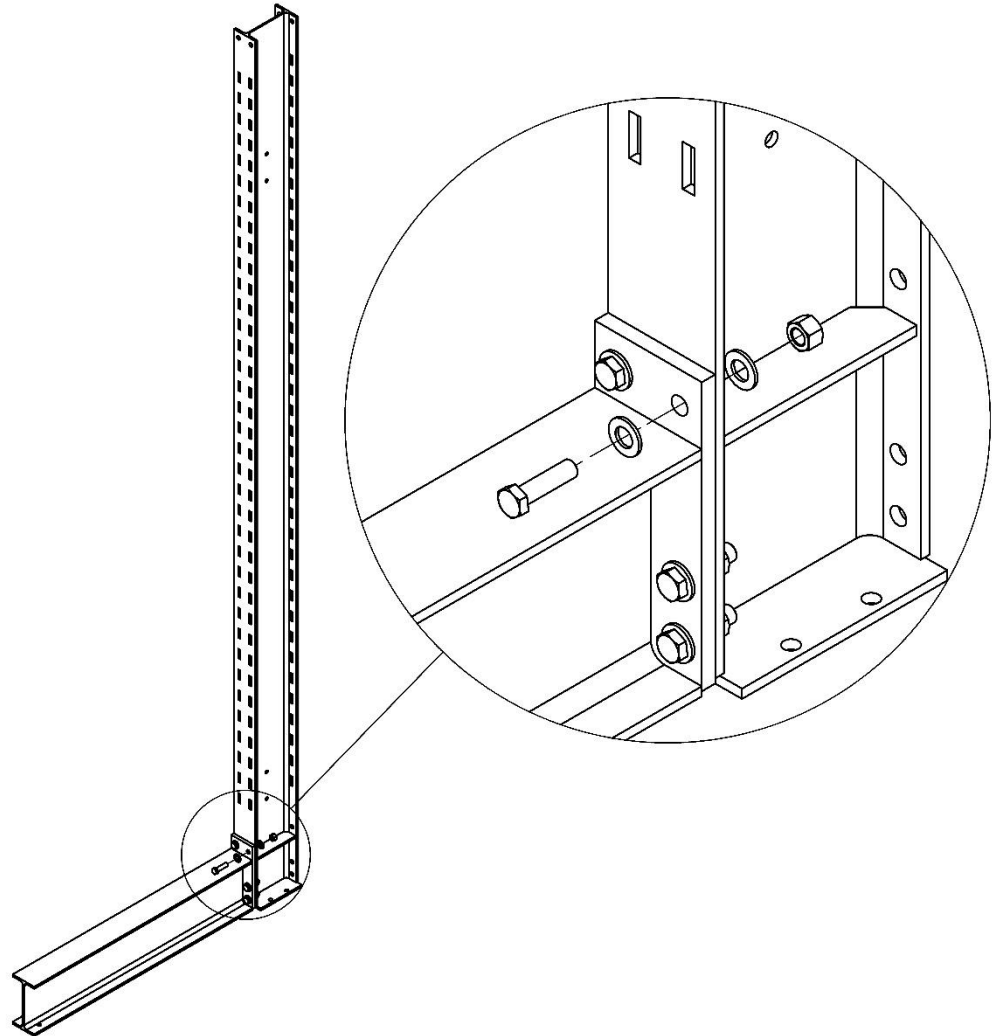


## 2.0 Staander enkelzijdig monteren

2.0 Bolting one-sided rack

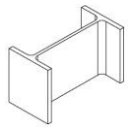




2.0 Ständer einseitig verschrauben

2.0 Visser les montants simples



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

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

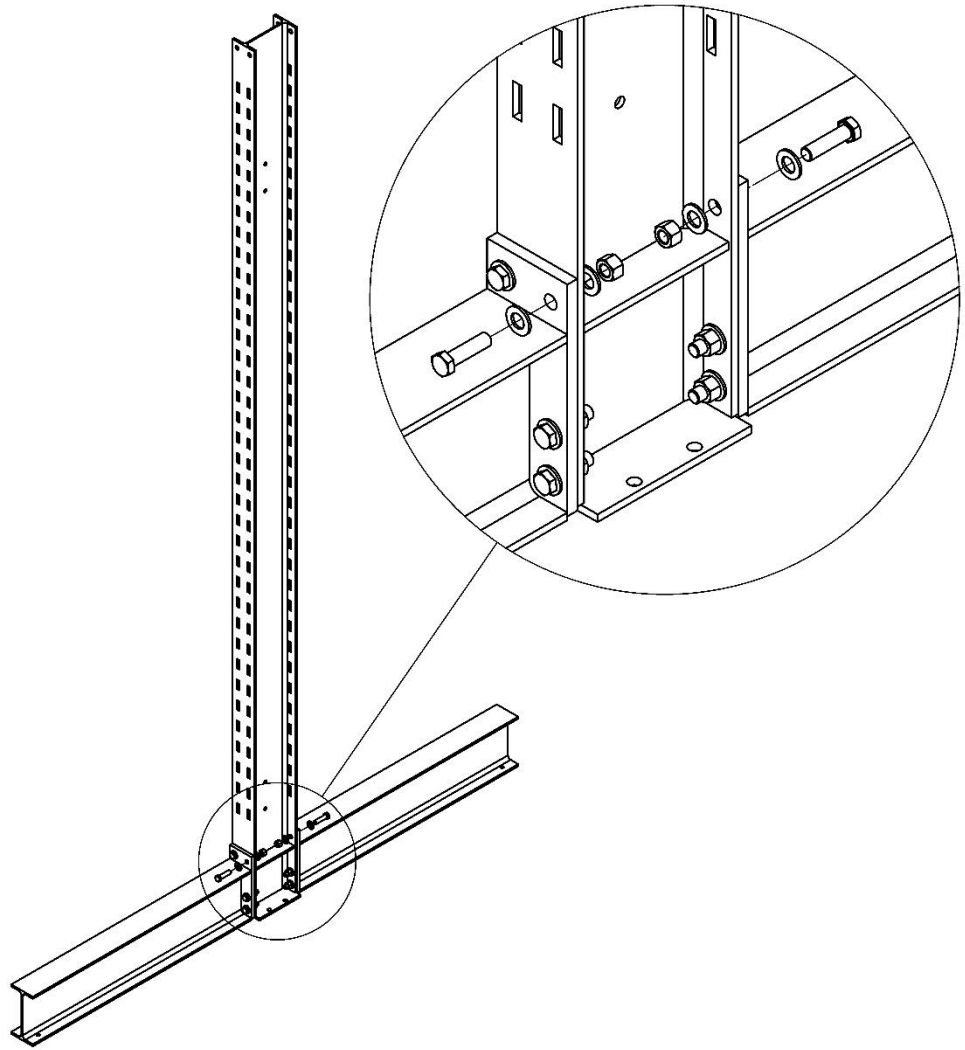
Binnen/buiten stelling (1)		Verzinkt (2)			
	Nr.	 DIN 931/8.8	 DIN 934/8.8	 DIN 125	
160	6x	M12X40	M12	Ø 13	100 Nm
180	6x	M16x60	M16	Ø 17	250 Nm
200	6x	M16x60	M16	Ø 17	250 Nm
220	6x	M16x60	M16	Ø 17	250 Nm
240	6x	M16x60	M16	Ø 17	250 Nm
270	6x	M20x70	M20	Ø 21	450 Nm
300	6x	M20x70	M20	Ø 21	450 Nm

## 3.0 Staander dubbelzijdig monteren

3.0 Bolting two-sided rack

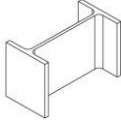




3.0 Ständer zweiseitig verschrauben

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 931/8.8	DIN 934/8.8	DIN 125	
160	12x	M12X40	M12	Ø 13	100 Nm
180	12x	M16x60	M16	Ø 17	250 Nm
200	12x	M16x60	M16	Ø 17	250 Nm
220	12x	M16x60	M16	Ø 17	250 Nm
240	12x	M16x60	M16	Ø 17	250 Nm
270	12x	M20x70	M20	Ø 21	450 Nm
300	12x	M20x70	M20	Ø 21	450 Nm

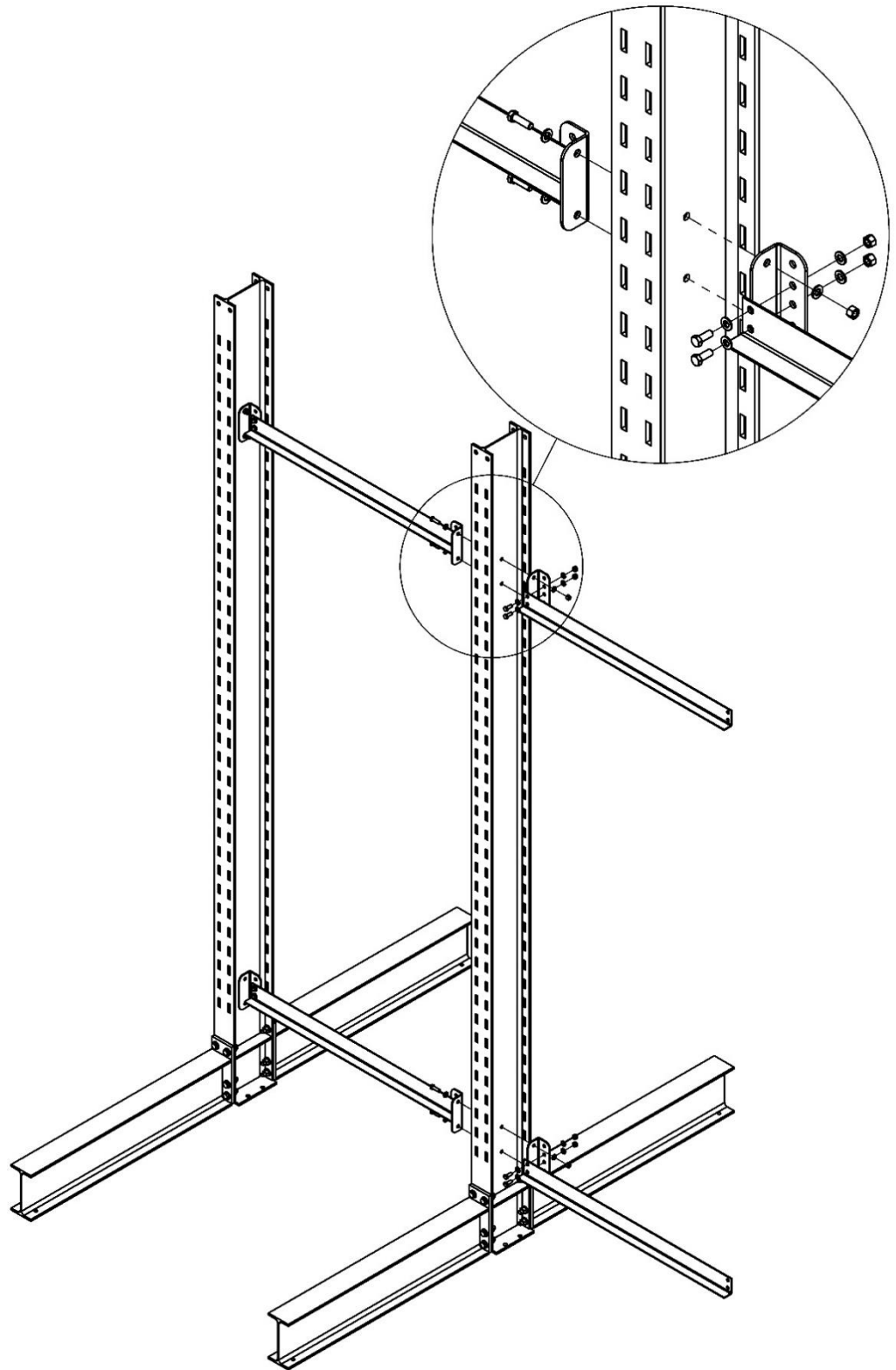






## 4.0 Schoring horizontaal monteren

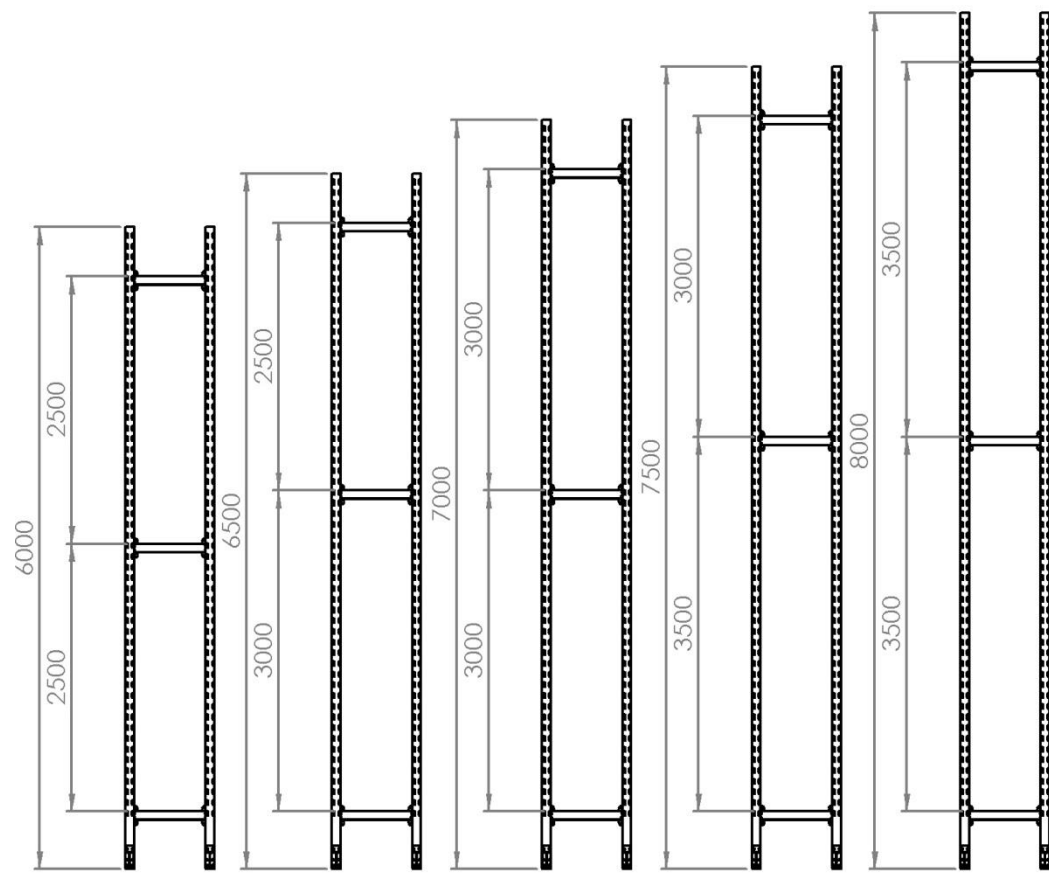
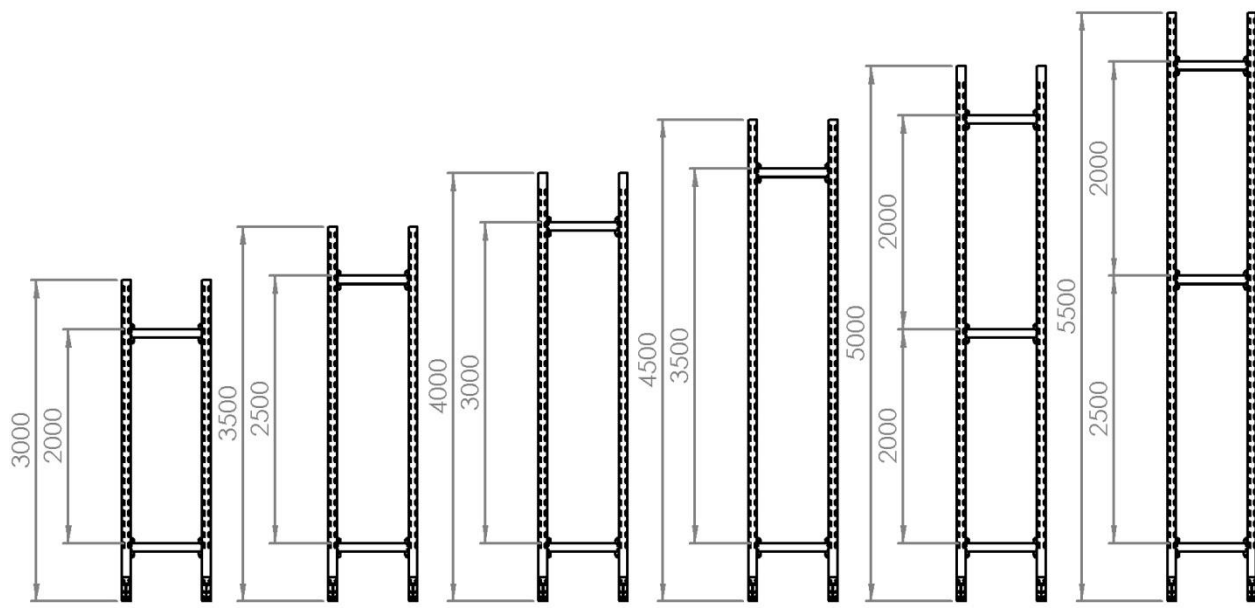
4.0 Assemble  
horizontal brace

4.0 Horizontalverbinder  
monteren

4.0 Monter entretoise



			
<b>DIN 933/8.8</b>	<b>DIN 934/8.8</b>	<b>DIN 125</b>	
<b>M12X40</b>	<b>M12</b>	<b>Ø 13</b>	<b>100 Nm</b>
<b>M12X25</b>	<b>M12</b>	<b>Ø 13</b>	<b>100 Nm</b>



## 5.0 Schoring diagonaal monteren

### 5.0 Assemble Cross bracing

### 5.0 Diagonalverband montieren

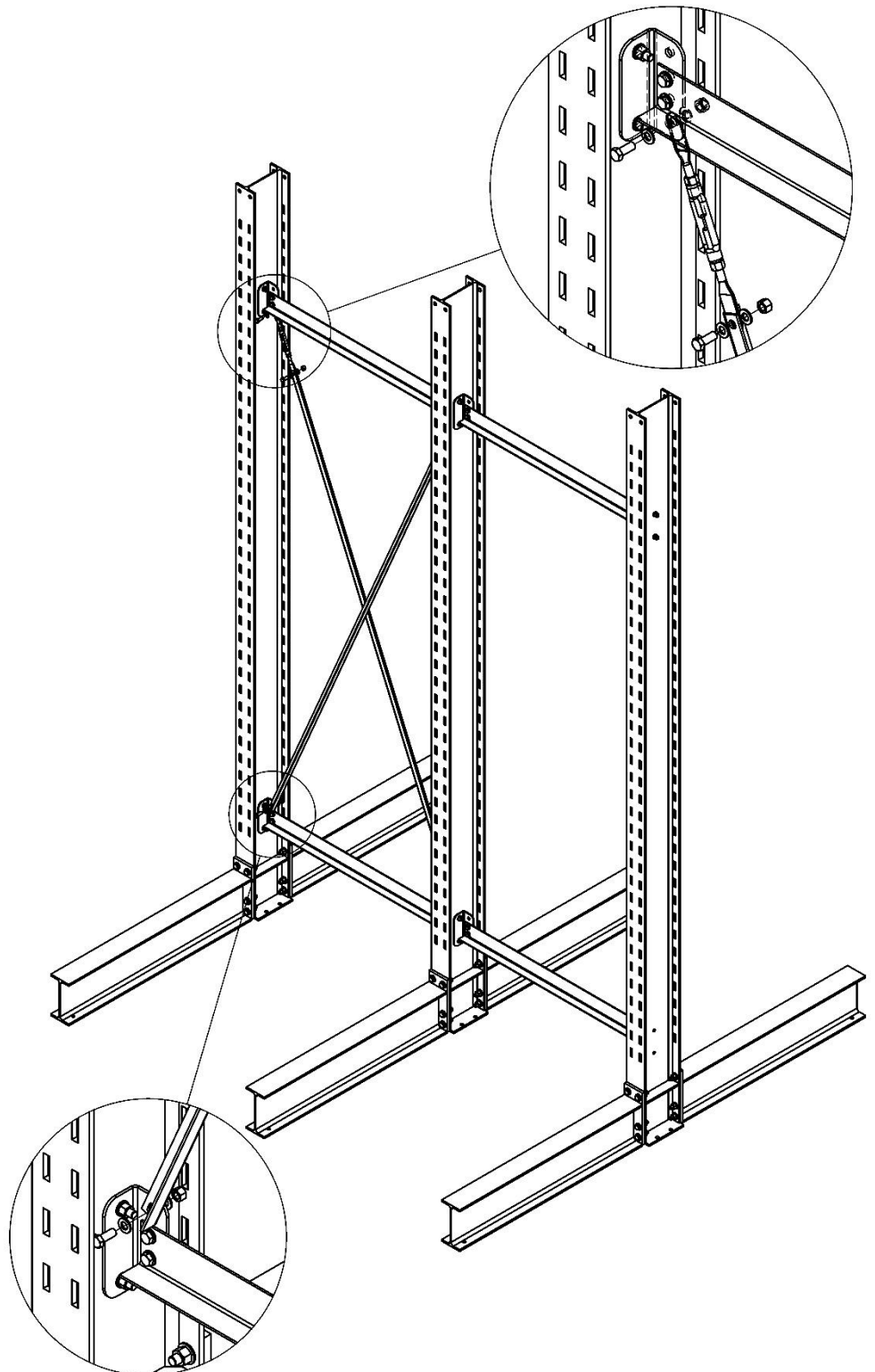
### 5.0 Monter croisillons de liaison





Binnen toepassing / inside use  
/ binenbereich / demande  
intérieure

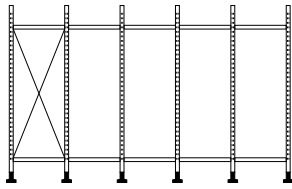
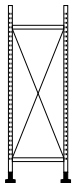
- Per 5 secties, 1 kruisschoor
- For every 5 bays, 1 cross bracing
- Je 5 Felder = 1 diagonalverband
- Par 5 travées = 1 croisillon

buiten toepassing / outside  
use / outdooreinsatz /  
inappleble

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

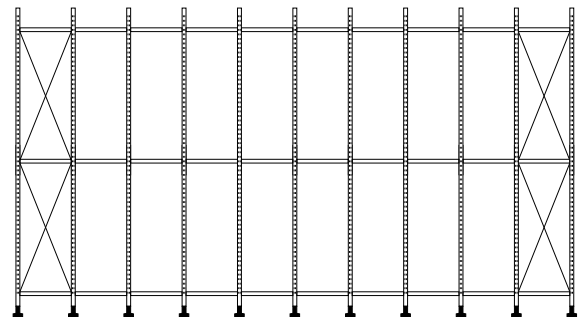
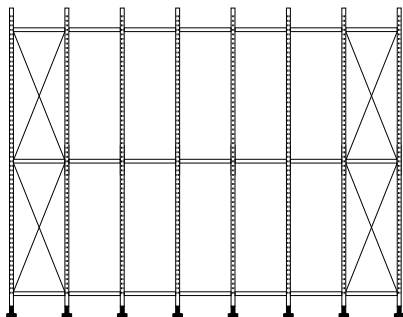
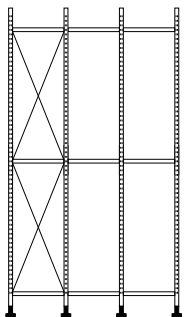
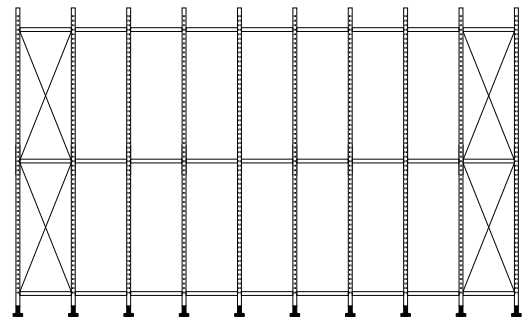
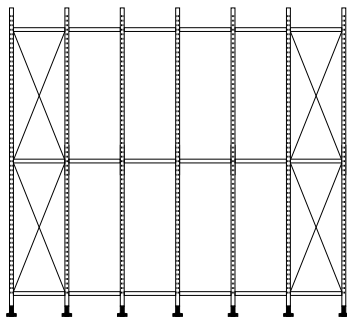
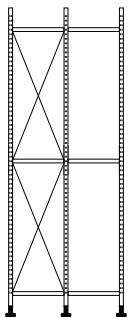
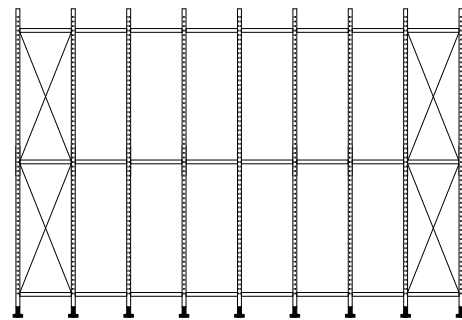
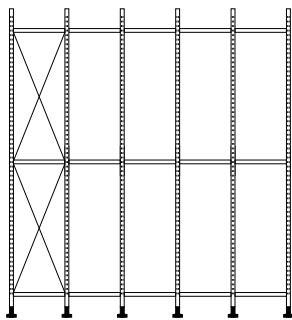
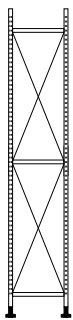
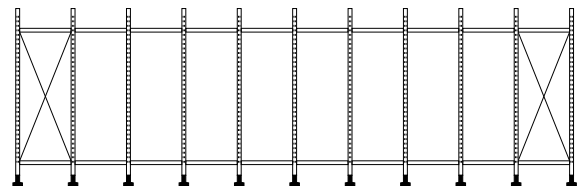
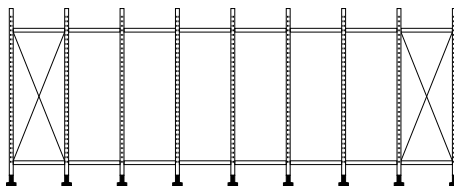
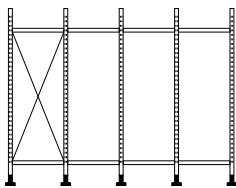
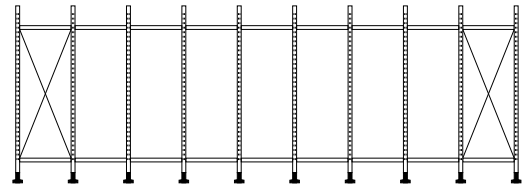
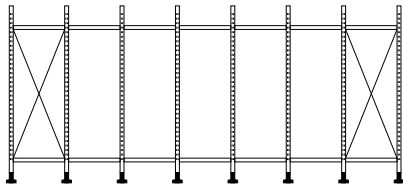
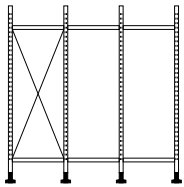
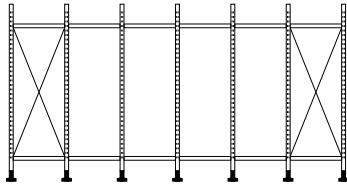
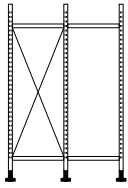


			
<b>DIN 933/8.8</b>	<b>DIN 934/8.8</b>	<b>DIN 125</b>	
<b>M12X25</b>	<b>M12</b>	<b>Ø 13</b>	<b>100 Nm</b>



**Binnen toepassing / inside use /  
binenbereich / demande intérieure**

- Per 5 secties, 1 kruisschoor
- For every 5 bays, 1 cross bracing
- Je 5 Felder = 1 diagonalverband
- Par 5 travées = 1 croisillon

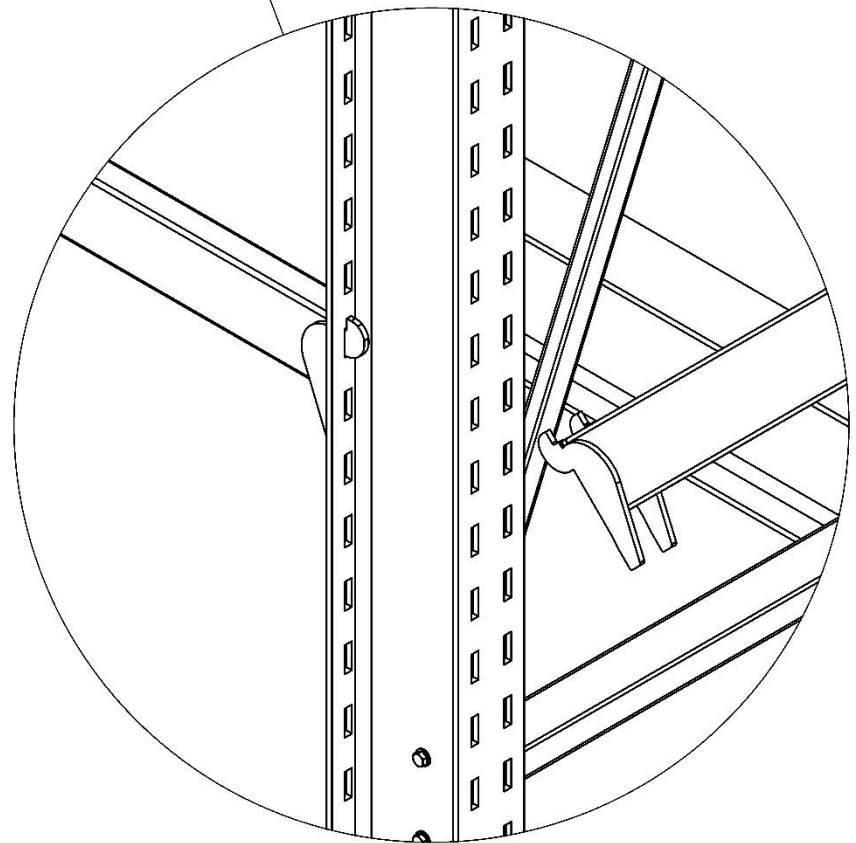
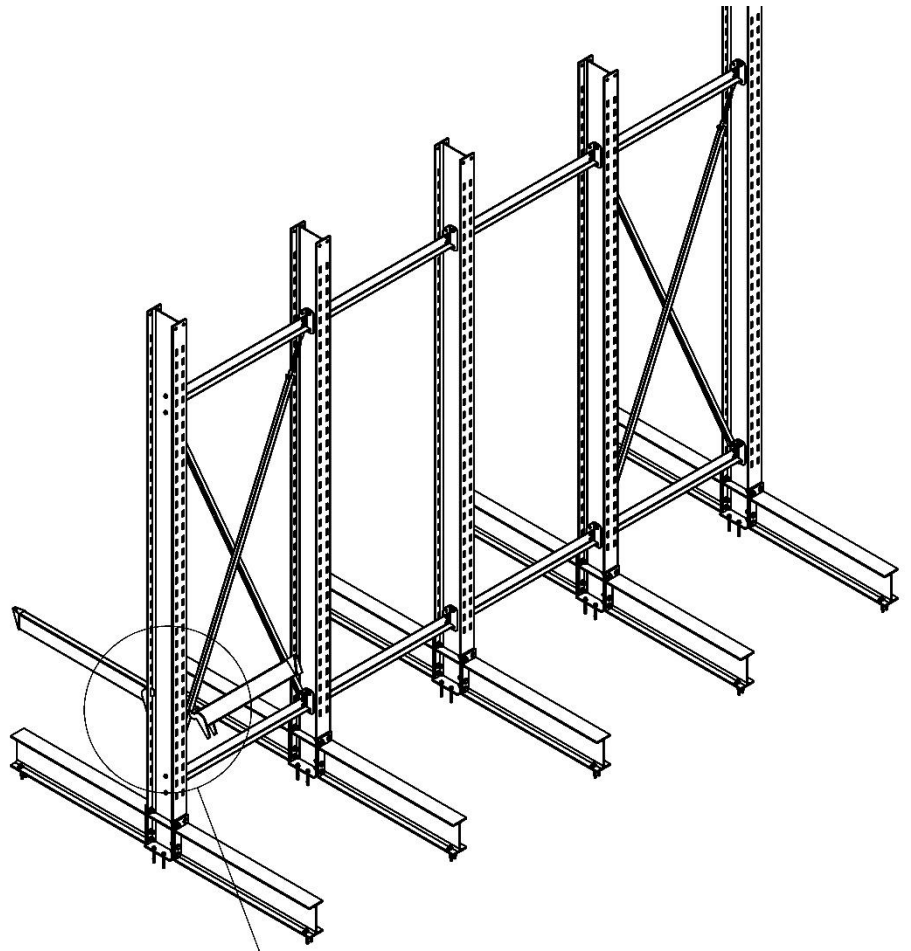


## 6.0 Inhaken draagarm

6.0 Hook in arm

6.0 Einhängen kragarm

6.0 Emboîter le bras



## 7.0 Stelling uitwaterpassen

### 7.0 Draagarmstelling uitwaterpassen

Verticale afwijkingen afstellen met opvulplaten en spanwartels

**LET OP:** de afbeelding toont de maximaal toegestane afwijking. De draagarmstelling moet recht worden gemonteerd!

### 7.0 Cantilever rack

Vertical deviation should be adjusted with underlay plates and turnbuckle

**Note:** The image shows the maximum allowable deviation. The cantilever rack must be mounted straight!

### 7.0 Kragarmregal ausrichten

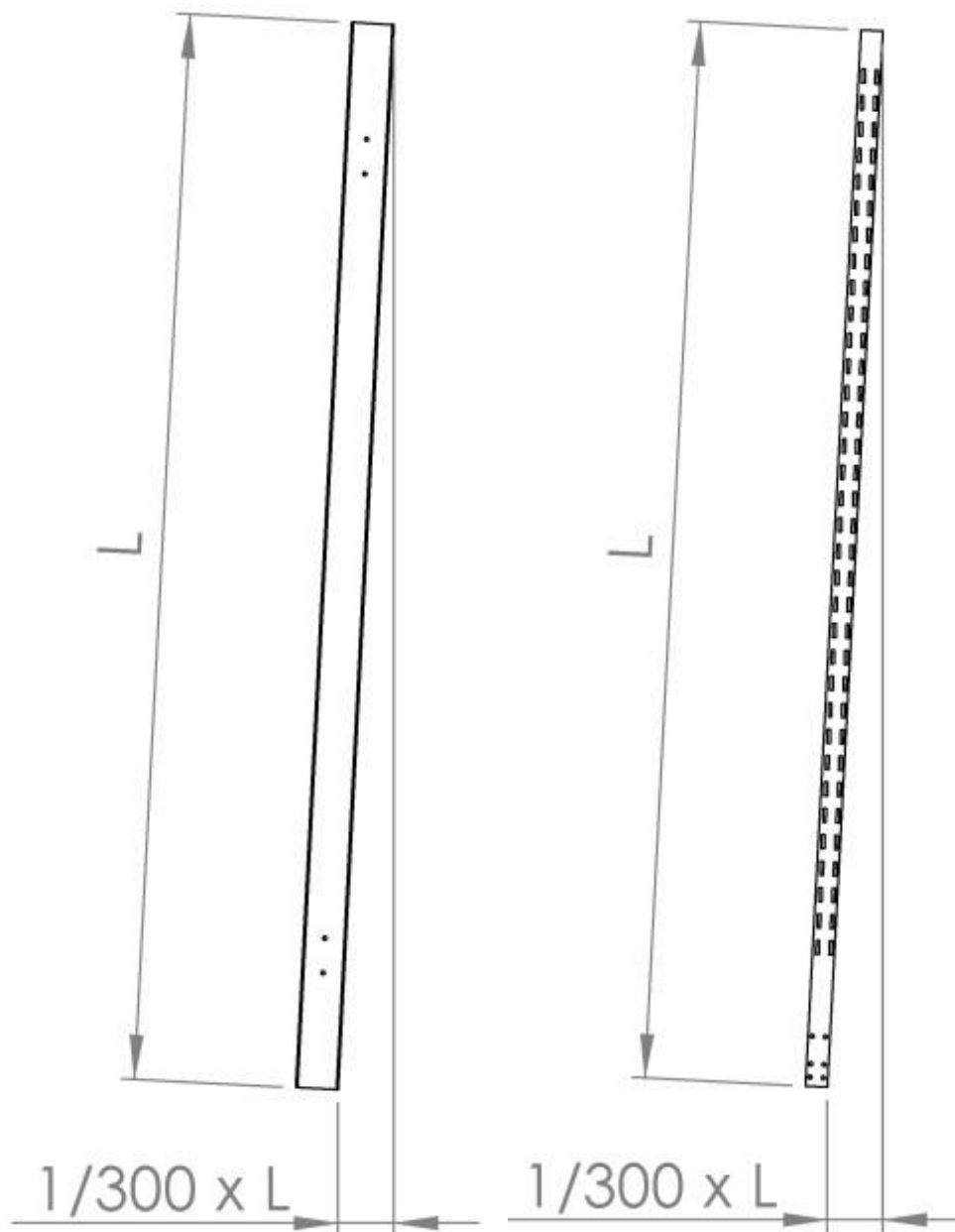
vertikale afwijkingen met onderlegblechen und spannschloss justieren

**HINWEIS:** Das Bild zeigt die maximal zulässige Abweichung. Das Auslegergestell muss gerade montiert werden!

### 7.0 Positionnement de l'étagère cantilever

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

**REMARQUE:** l'image montre l'écart maximal autorisé. Le rack cantilever doit être monté droit!



## 8.0 Stelling verankeren

Rek verankeren

2 ankers per staander

2 ankers per voet

### 8.0 Rack anchorage

2 steel anchors per column

2 steel anchors per foot

### 8.0 Regale verankerung

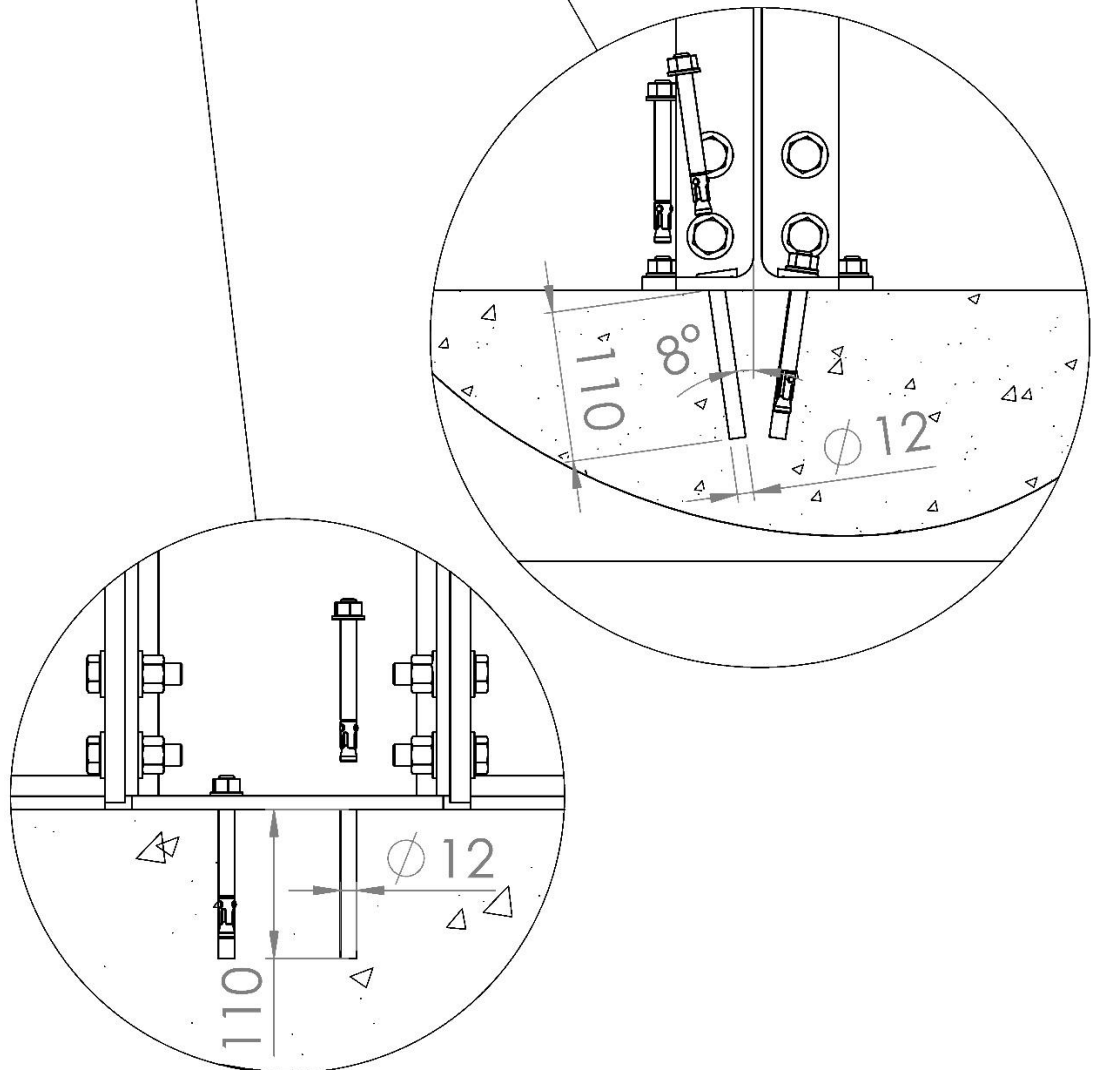
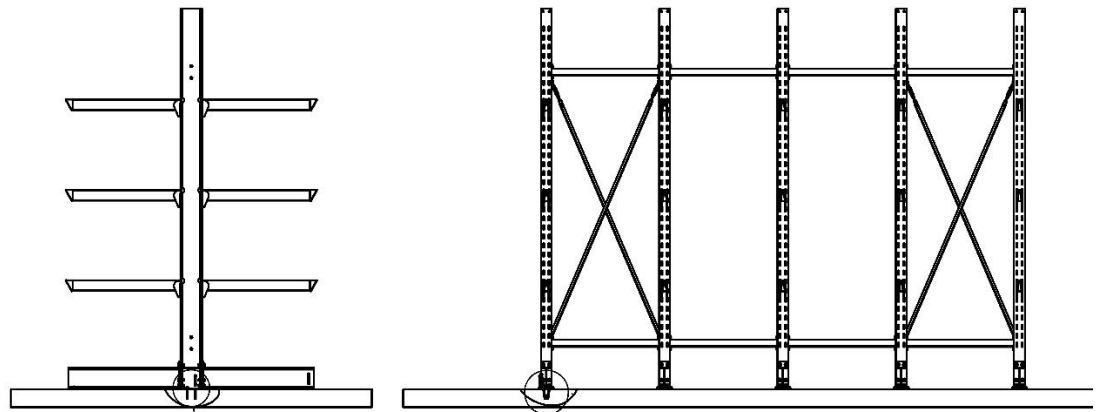
2 Stahlanker je ständer


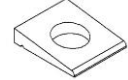

2 Stahlanker je fuß

### 8.0 Visser les montants Ancreage

2 ancrs en acier par montant

2 ancrs en acier par pied



	<b>M12x10</b>
	<b>Ø14 DIN 435</b>
	<b>70 Nm</b>

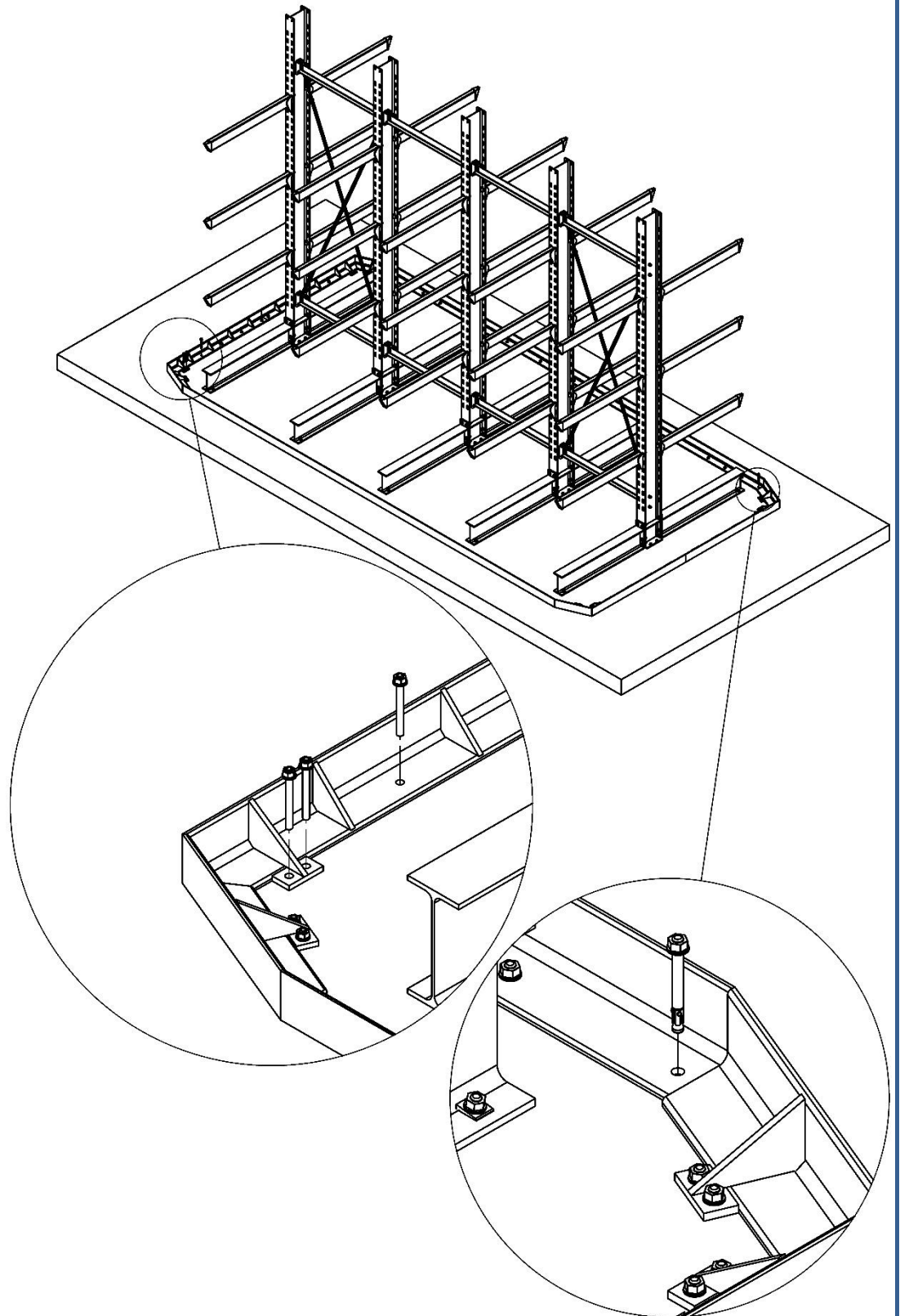
## 9.0 Aanrijdbescherming

### 9.0 Hit protection

### 9.0 Anfahrerschutz

### 9.0 Protection pied d'échelle

- (1) - Chemisch ankers
- Chemical anchors
- Verbundanker
- Ancrage chimique



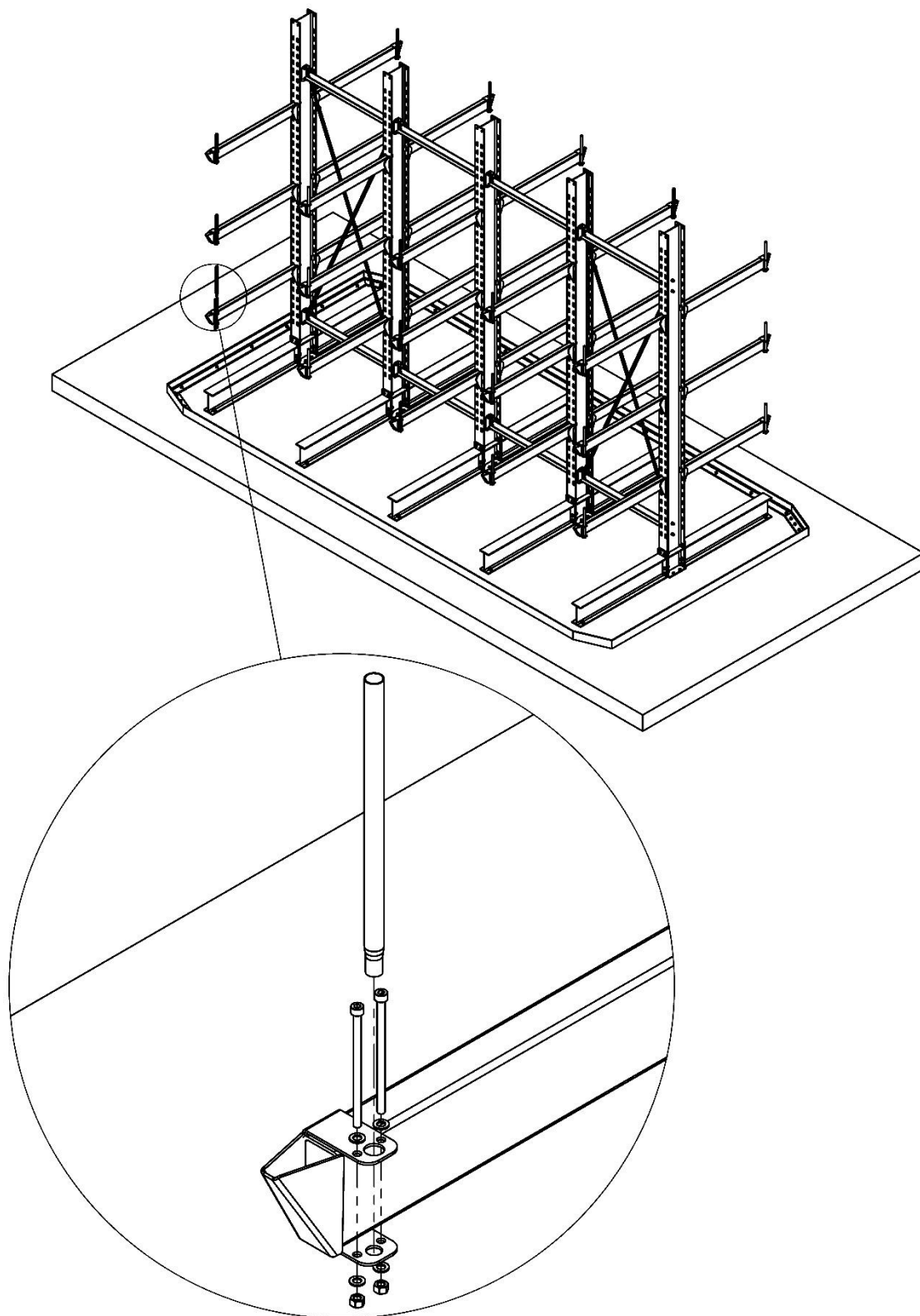


## 10.0 Afrolbeveiliging

10.0 End stop

10.0  
Abrollsicherung

10.0 Butée



## 11.0 Dak

11.0 Roof

11.0 Dach

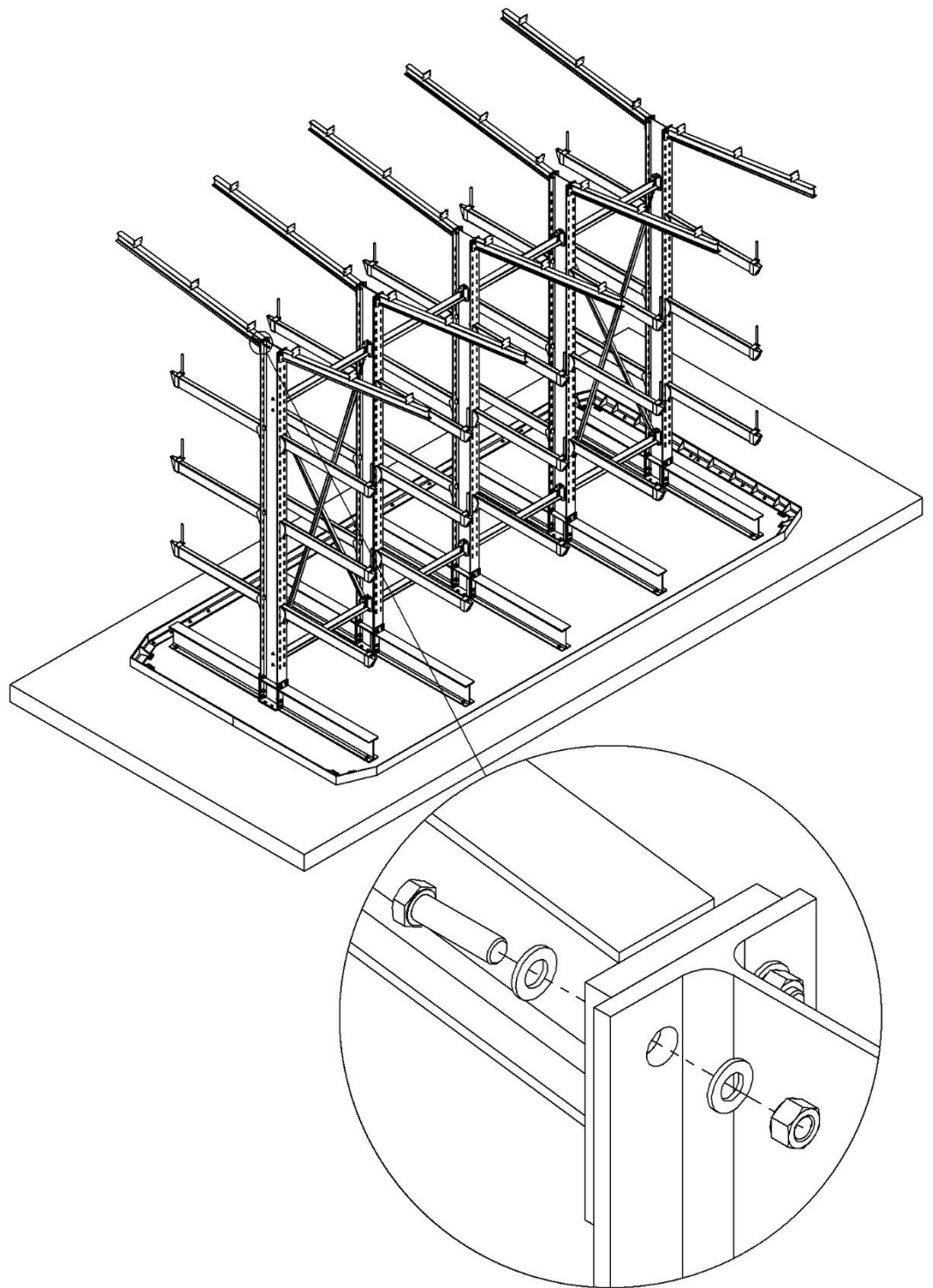
11.0 Toiture





11.1 Dakdrager

11.1 Roof cantilever

11.1 Dacharm

11.1 Arbre de la toiture



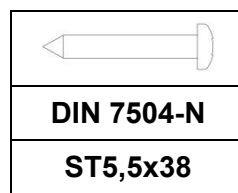
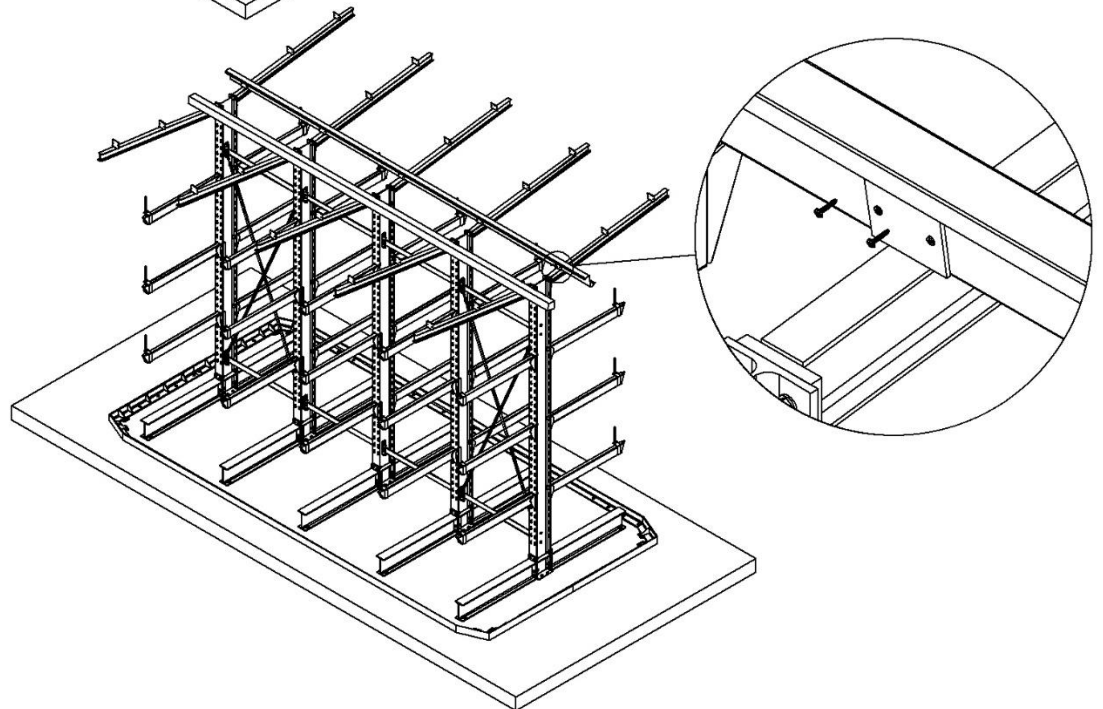
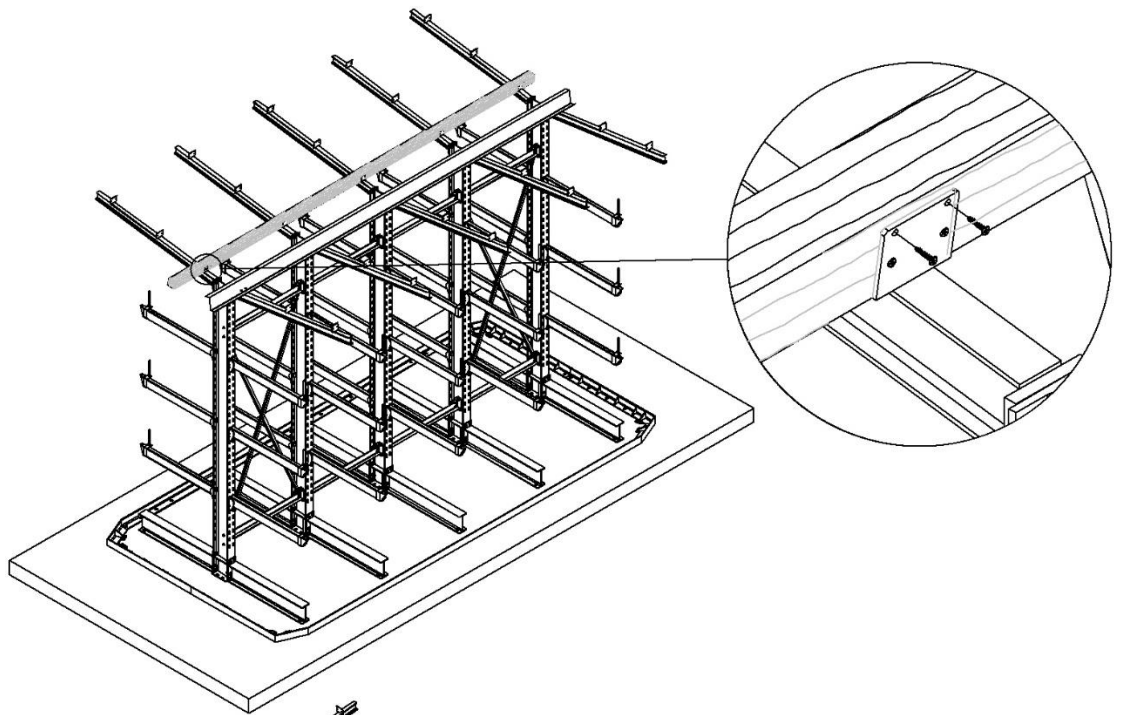
			
DIN 933/8.8	DIN 934/8.8	DIN 125	
M16X40	M16	Ø 17	250 Nm

## 11.2 Dakligger & Golfplaat

11.2 Roof support  
& Corrugated metal

11.2 Dachlänge  
& Trapezblech

11.2 Longerons de  
toit & Tôle  
trapézoïdale

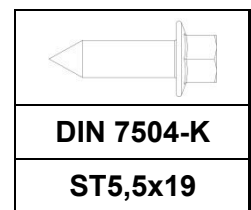
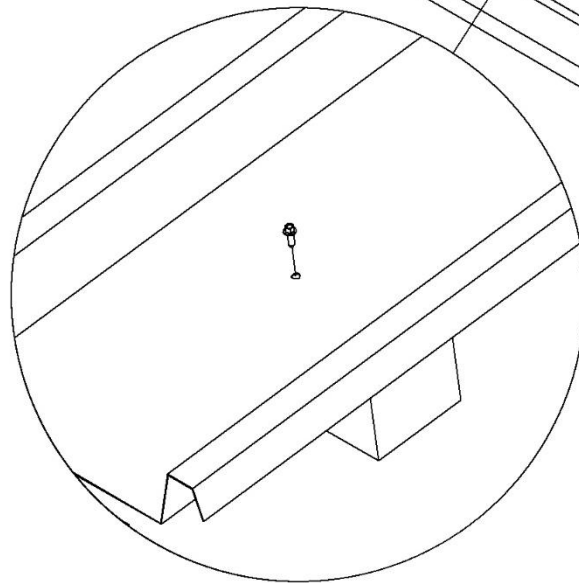
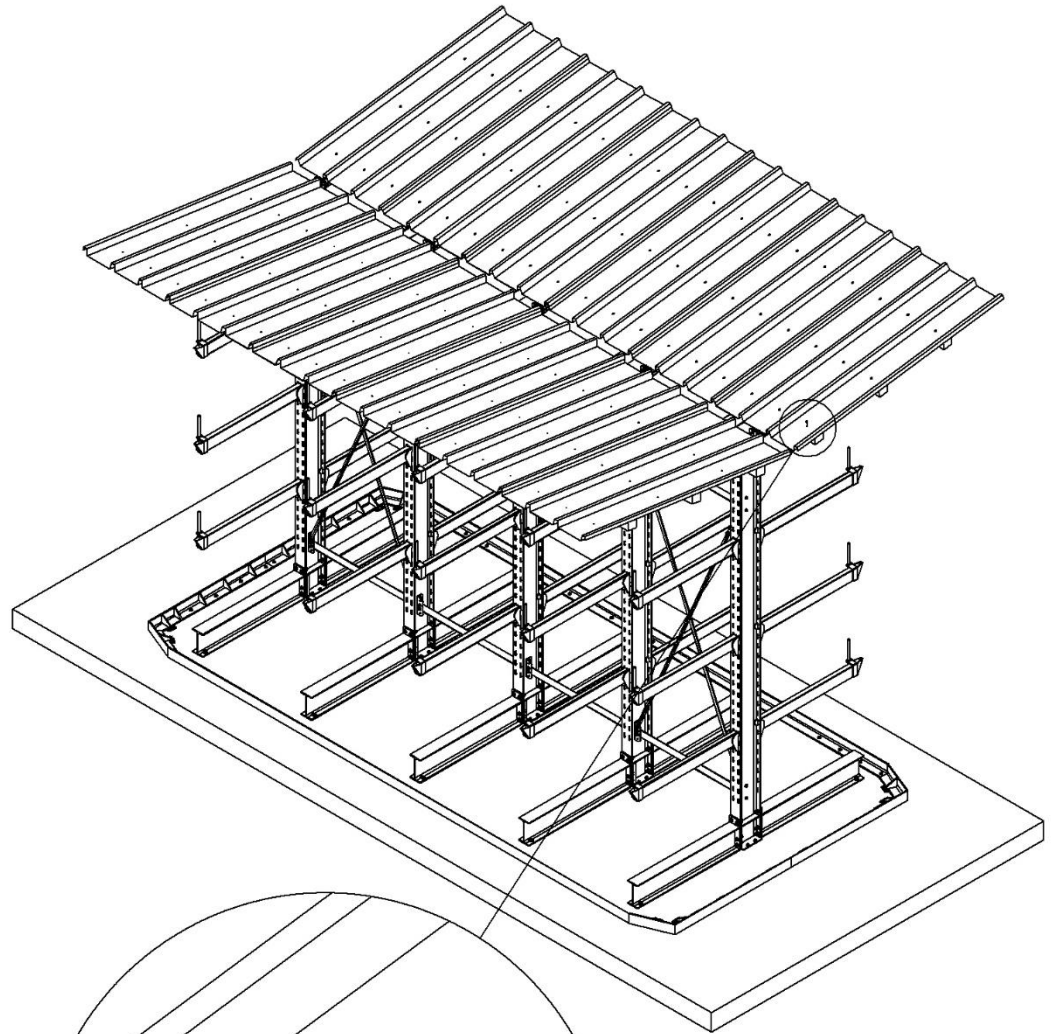


## 11.2 Dakligger & Golfplaat

11.3 Roof support  
& Corrugated metal

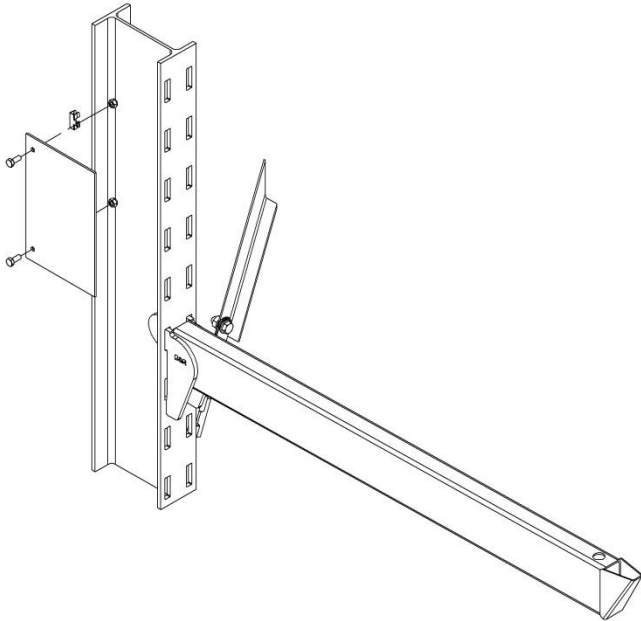
11.3 Dachlänge  
& Trapezblech

11.3 Longerons de  
toit & Tôle  
trapézoïdale



# Gebruiksaanwijzingen / Use specifications / Gebrauchsspezifikation spécification d'utilisation

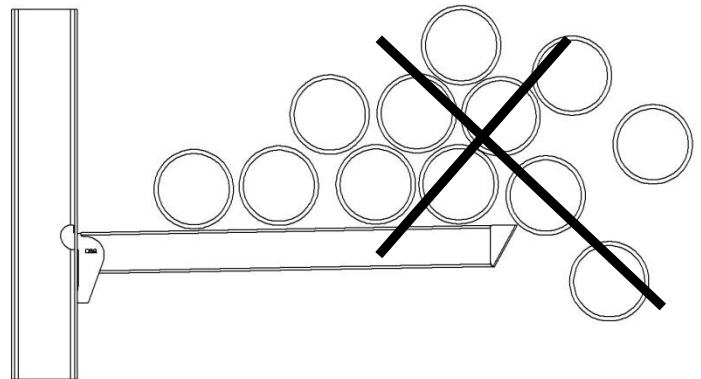
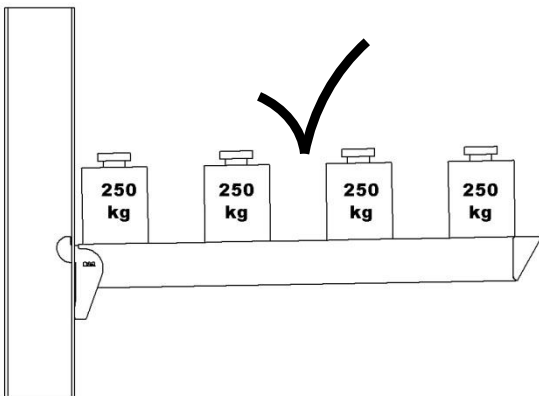
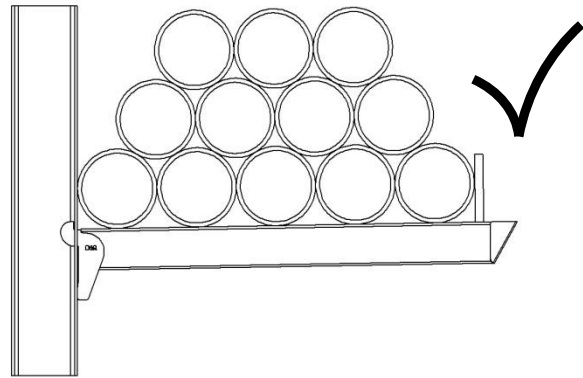
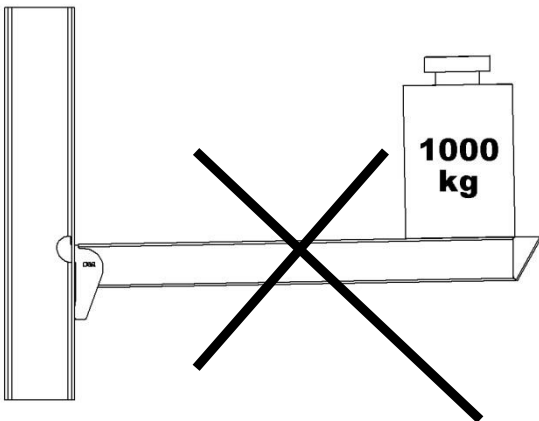
Belastingsbord  
Load capacity board  
Belastungsschild  
Plaque de charge

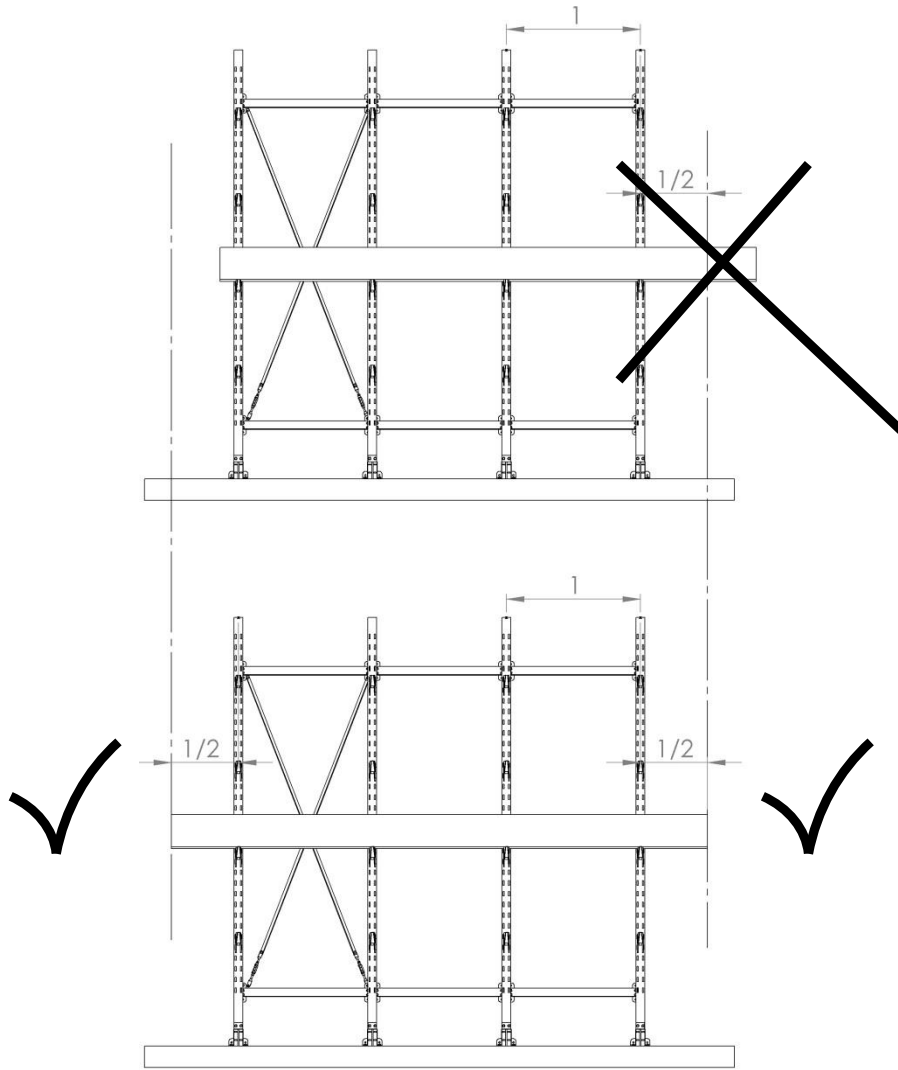


- Op staander monteren op ooghoogte
- Screw to pillar at eye height
- In Augenhöhe mit Ständer verschrauben
- Visser sur montant à hauteur des yeux

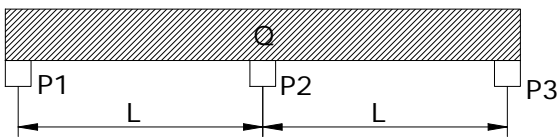
Opgave belastingcapaciteit  
Load capacity data  
Belastungsangabe  
Indication de capacité de charge

Goederen borgen  
Securing goods  
Ware sichern  
Sécuriser la marchandise

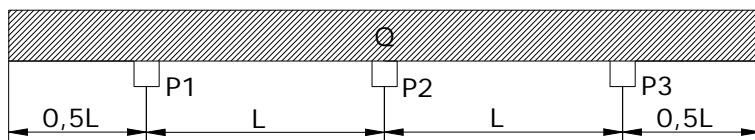




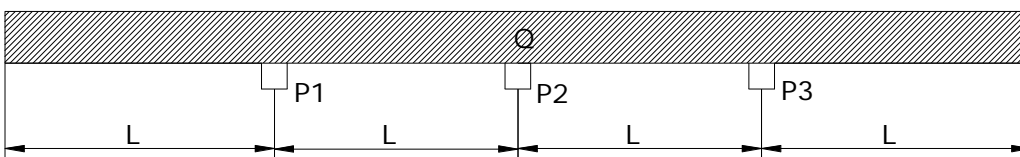
Q= Equal spread load  
 P= Load per arm  
 F= Total load



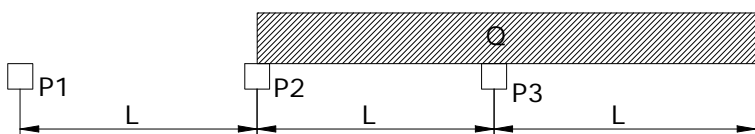
$$\begin{aligned} P1 &= 0,2 Q \\ P2 &= 0,6 Q \\ P3 &= 0,2 Q \end{aligned}$$



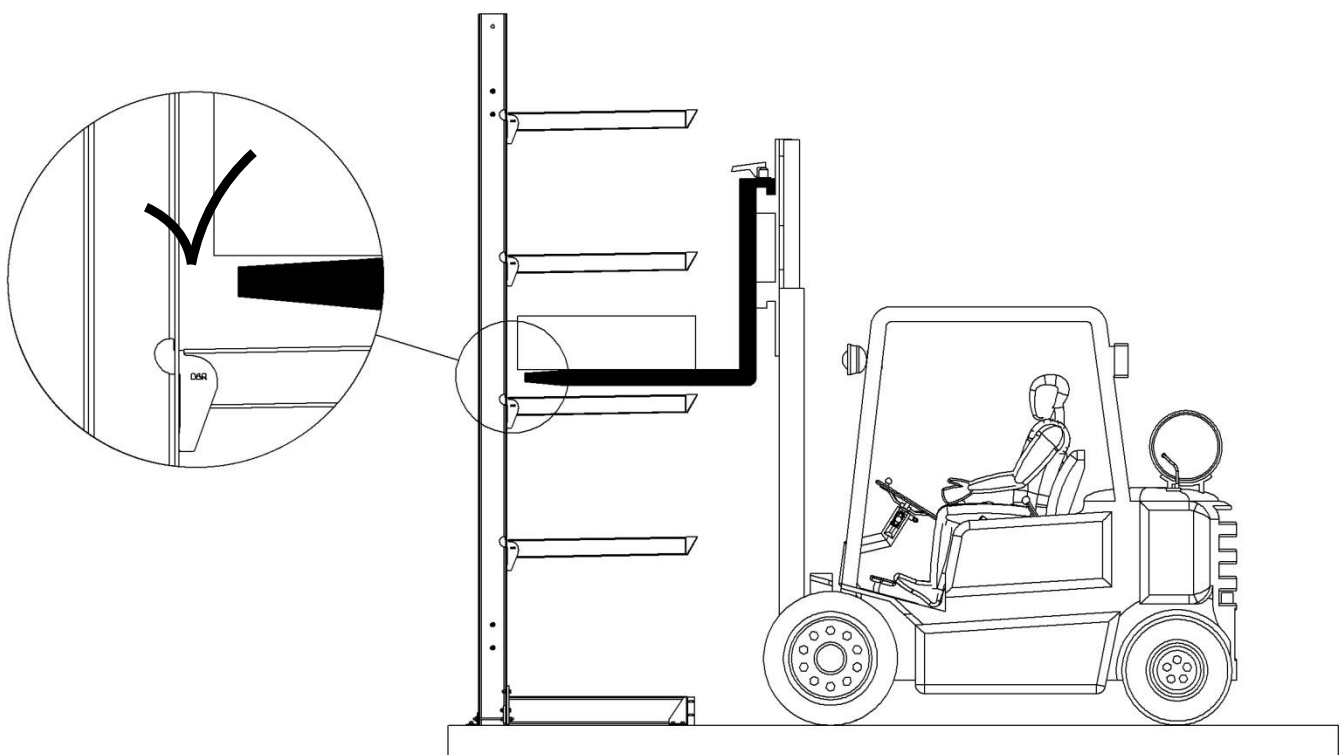
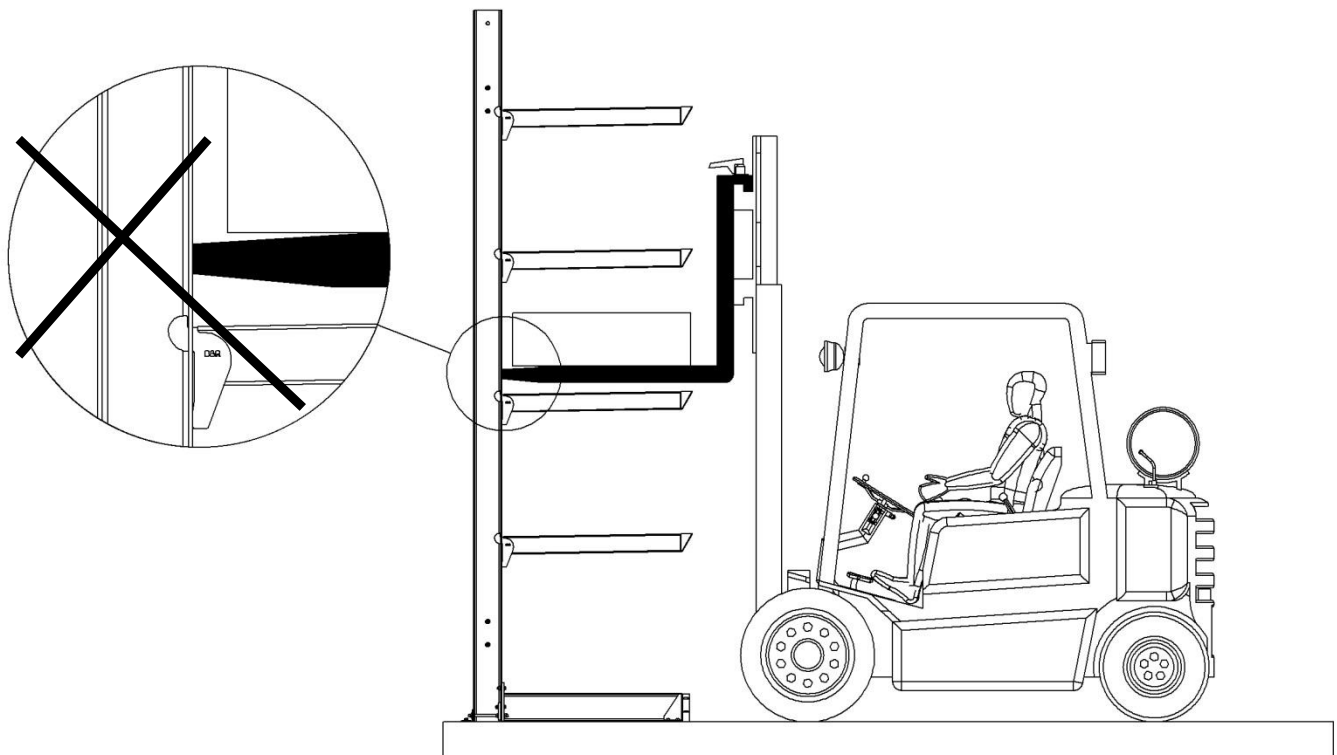
$$\begin{aligned} P1 &= 0,35 Q \\ P2 &= 0,30 Q \\ P3 &= 0,35 Q \end{aligned}$$

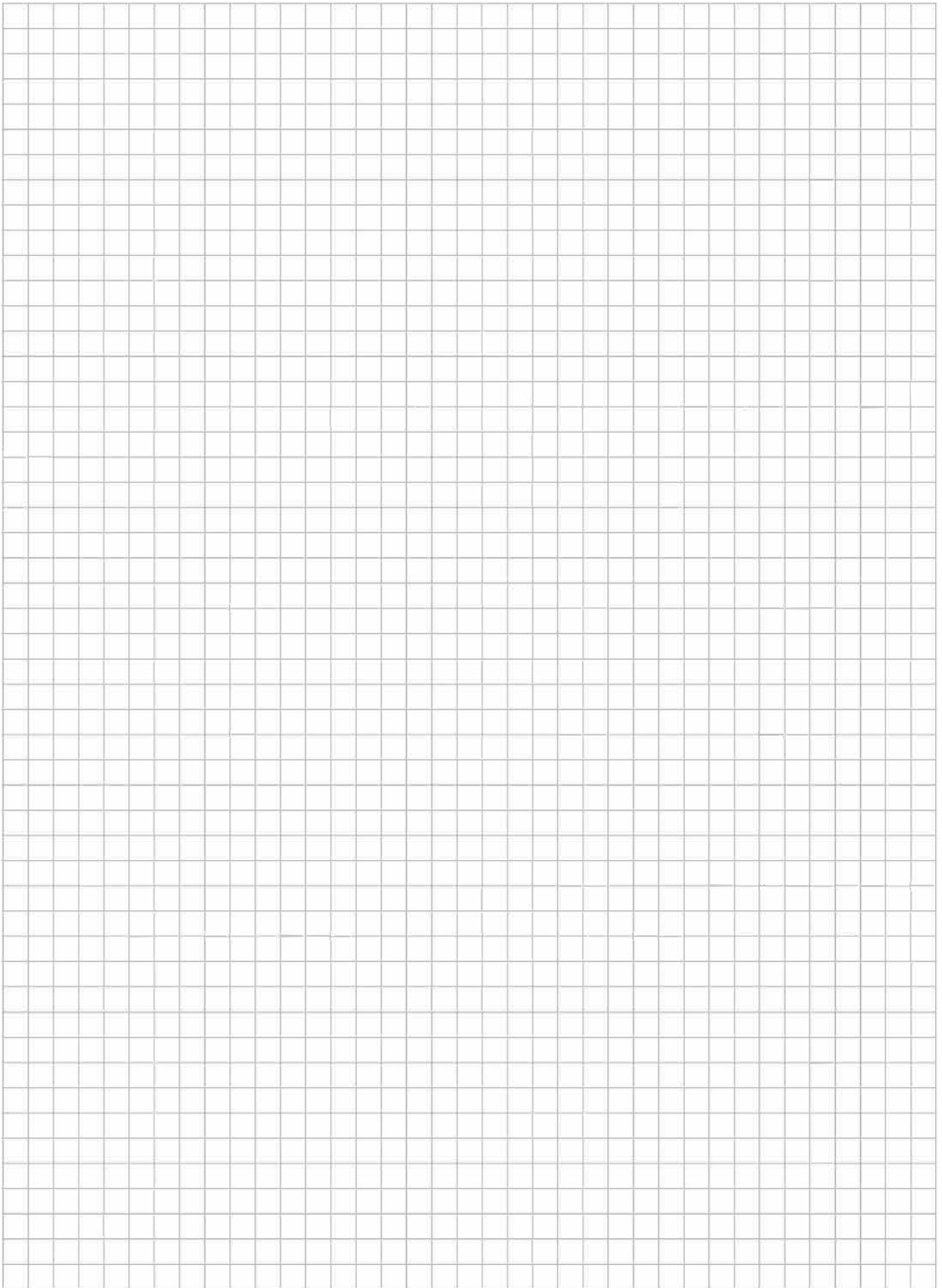


$$\begin{aligned} P1 &= 0,5 Q \\ P2 &= 0,0 Q \\ P3 &= 0,5 Q \end{aligned}$$



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









Ijsselstraat 9-13 \ 5347 KG Oss \ The Netherlands \ T +31 (0)412 667650 \ E [info@begra.nl](mailto:info@begra.nl) \ [www.begra.nl](http://www.begra.nl)  
[Iban](#) NL80 RABO 0146 3423 21 \ [KvK](#) Oost Brabant 17207142 \ [BTW](#) 8180.3852.4B01