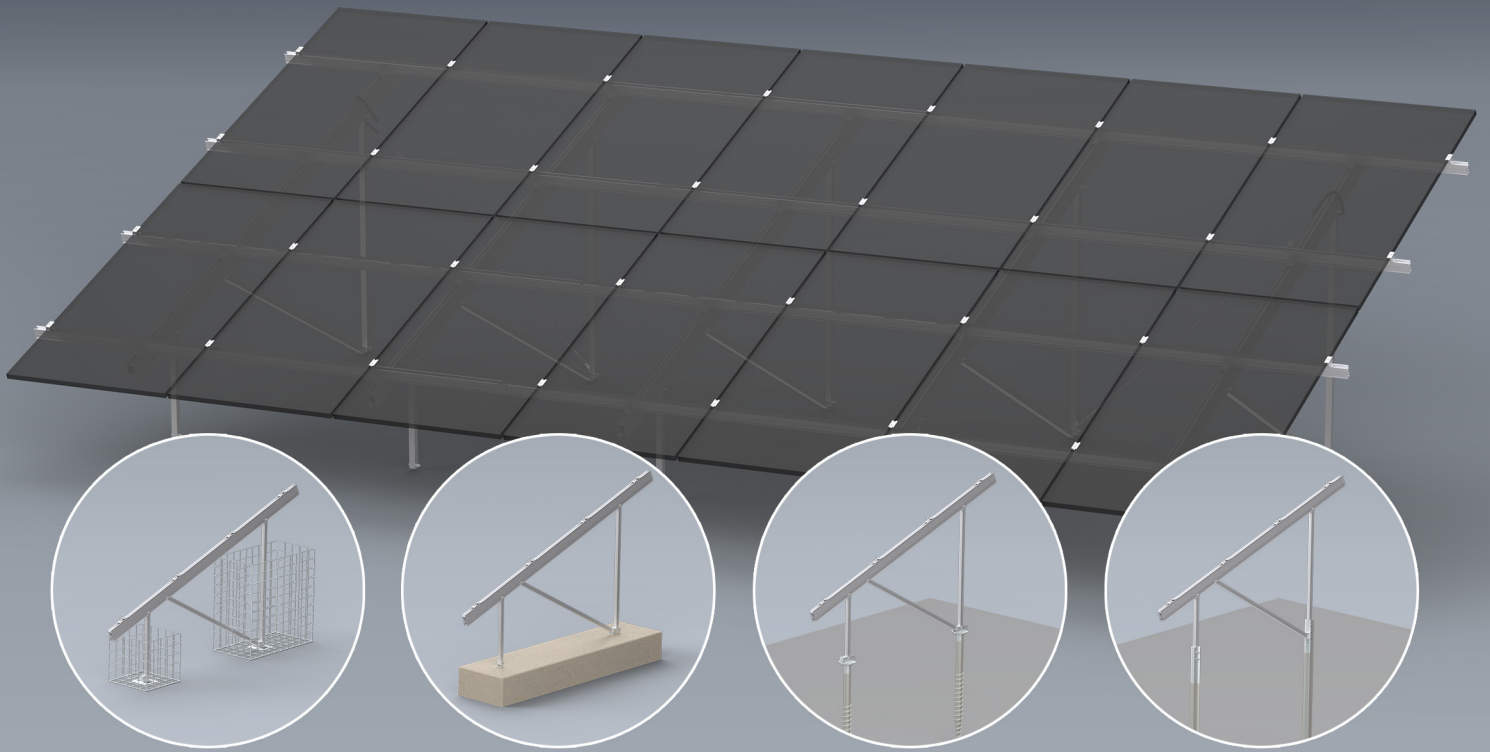




Connecting Strength



 Montageanleitung

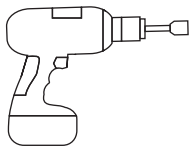
# N-Rack Kit

Gabionen, Beton-, Schraub-  
und Rammfundamente

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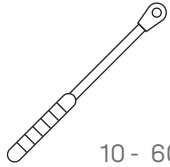
# Hauptwerkzeuge



6 mm



8 mm



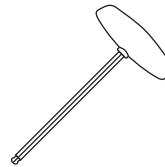
10 - 60 Nm  
(7,4 - 44,2 lb-ft)



6 mm



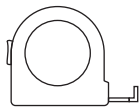
16, 17, 18, 19 mm



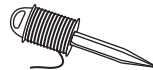
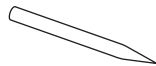
6 mm



16, 17, 18, 19 mm



≥ 3,0 m



## Geprüfte Qualität - mehrfach zertifiziert

K2 Systems steht für sichere Verbindung, höchste Qualität und Präzision. Unsere Kunden und Geschäftspartner wissen das schon lange. Unabhängig Stellen haben unsere Kompetenzen und Komponenten geprüft, bestätigt und zertifiziert.

Unter [k2-systems.com](http://k2-systems.com) finden Sie unsere Qualitäts und Produktzertifikate.

# Allgemeine Sicherheitshinweise

Bitte beachten Sie, dass unsere Allgemeinen Montagevorschriften eingehalten werden müssen.

Diese sind einzusehen unter [k2-systems.com](http://k2-systems.com)

- Anlagen dürfen nur von Personen montiert und in Betrieb genommen werden, die aufgrund ihrer fachlichen Eignung (z.B. Ausbildung oder Tätigkeit) bzw. Erfahrung die vorschriftsmäßige Durchführung gewährleisten können.
- Vor der Montage muss geprüft werden, ob das Produkt den statischen Anforderungen vor Ort entspricht.
- Nationale und ortsspezifische Bauvorschriften, Normen und Umweltschutzbestimmungen sind unbedingt einzuhalten.
- Arbeitsschutz- und Unfallverhütungsvorschriften, entsprechende Normen sowie Vorschriften der Berufsgenossenschaft sind einzuhalten! Insbesondere ist dabei zu beachten:
  - Es ist Sicherheitskleidung zu tragen (v.a. Schutzhelm, Arbeitsschuhe und Handschuhe).
  - Anwesenheit von zwei Personen ist für den gesamten Montageablauf zwingend, um bei einem eventuellen Unfall schnelle Hilfe gewährleisten zu können.
- K2 Montagesysteme werden stetig weiterentwickelt. Montageabläufe können sich dabei ändern. Vor der Montage daher unbedingt den aktuellen Stand der Montageanleitung unter: [k2-systems.com](http://k2-systems.com) überprüfen. Auf Anfrage senden wir Ihnen die aktuelle Version auch gerne zu.
- Die Montageanleitungen der Modulhersteller sind zu beachten.
- Der Potentialausgleich zwischen den einzelnen Anlagenteilen ist nach den jeweiligen landesspezifischen Vorschriften durchzuführen.
- Während der gesamten Montagezeit ist sicherzustellen, dass mindestens ein Exemplar der Montageanleitung auf der Baustelle zur Verfügung steht.
- Bei Nichtbeachtung unserer Montagevorschriften und Montageanleitungen und Nichtverwendung aller Systemkomponenten sowie beim Ein- und Ausbau von Bauteilen, die nicht über uns bezogen wurden, übernehmen wir für daraus resultierende Mängel und Schäden keine Haftung. Die Gewährleistung ist in soweit ausgeschlossen.
- Bei Missachtung unserer Allgemeinen Sicherheitshinweise sowie beim Ein- oder Anbau von Bauteilen des Wettbewerbs behält sich die K2 Systems GmbH den Haftungsausschluss vor.
- Wenn alle Sicherheitshinweise beachtet werden und die Anlage sachgemäß installiert wird, besteht ein Produktgarantie-Anspruch von 12 Jahren! Bitte beachten Sie unsere Garantie-Bedingungen, welche einzusehen sind unter [k2-systems.com](http://k2-systems.com) Auf Anfrage senden wir Ihnen diese selbstverständlich gerne zu.
- Die Demontage des Systems erfolgt anhand der Montageschritte in umgekehrter Reihenfolge.
- K2 Bauteile aus nichtrostenden Stählen sind in unterschiedlichen Korrosionswiderstandsklassen erhältlich. In jedem Fall ist zu prüfen, welche Korrosionsbelastung für das jeweilige Bauwerk oder Bauteil zu erwarten ist.

# Generell gilt

Unter den folgenden Bedingungen kann dieses System standardmäßig verbaut werden. Auch wenn das System durch den Einbezug von Sicherheitsfaktoren höheren Anforderungen gewachsen ist, wenden Sie sich bitte beim Überschreiten der angegebenen Werte zur Prüfung an Ihren Ansprechpartner bei K2 Systems.



## Wichtige Montagehinweise

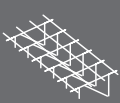



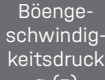
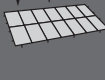
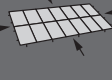
- Bauseits müssen die allgemeinen Normen und Vorschriften für den Blitzschutz beachtet und ggf. eine Fachkraft zur Erstellung eines Blitzschutzkonzeptes (ggf. Blitzschutzklemme verwenden) hinzugezogen werden. Landesspezifische Vorschriften sind hierbei einzuhalten.
- Herstellerangaben zum Klemmbereich der Modulklemmen und zur Montage der Module beachten (siehe Moduldatenblatt des Herstellers).
- Modulrahmenhöhen: 25 - 40 mm



## Statische Hinweise

Je nach Fundamentierung der N-Rack Kits gelten andere statische Vorgaben. Diese Hinweise finden sie im jeweiligen Kapitel:

- Gabionen Seite 14
- Betonfundamente Seite 20
- Schraubfundamente Seite 26
- Rammfundamente Seite 30

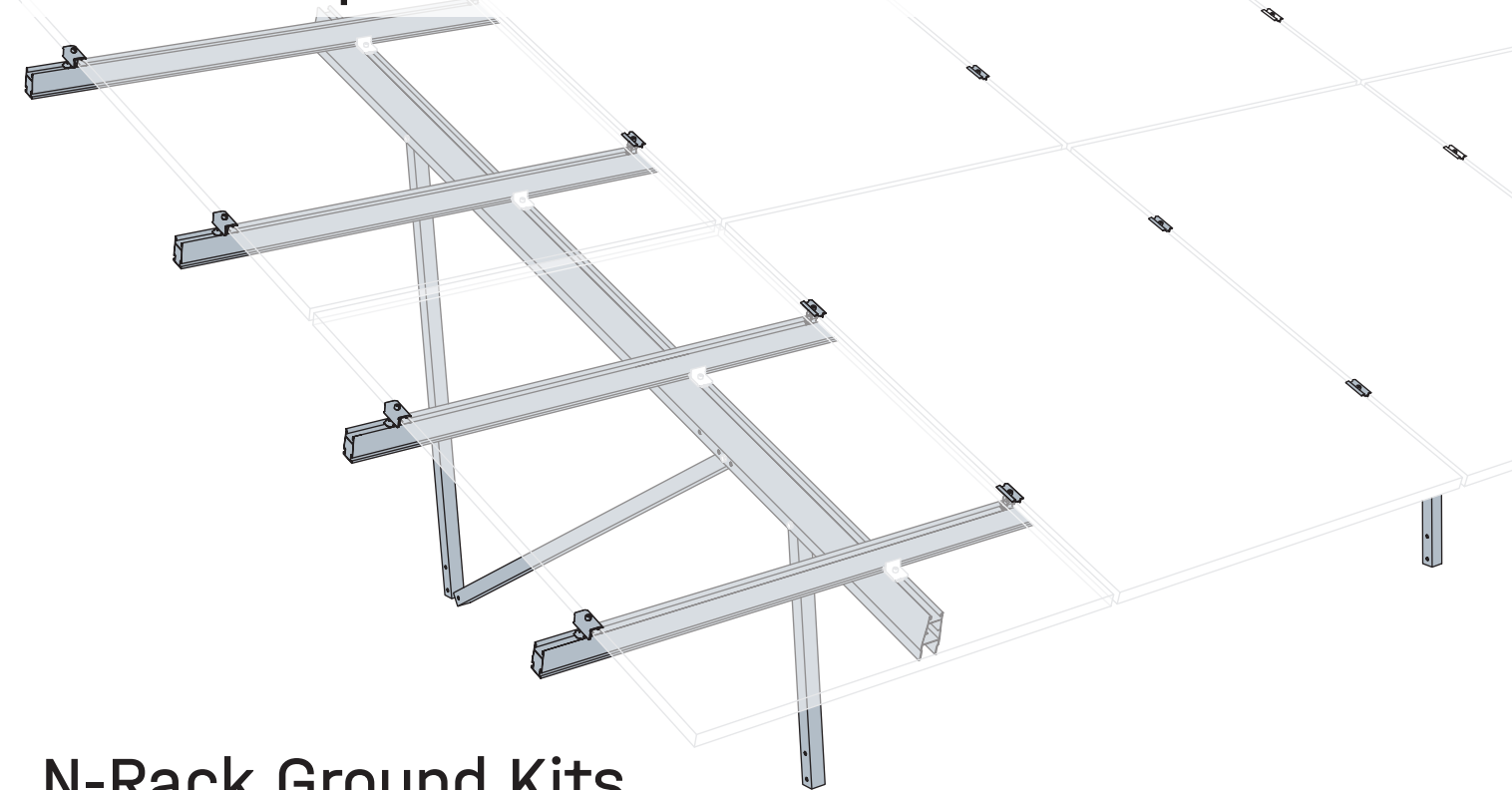
N-Rack Top Kit	Modulanzahl	Modulgrößen		Zulässige Lasten		Abhebende Auflagerkräfte	Vertikale Auflagerkräfte	Horizontale Auflagerkräfte
		Länge [mm]	Breite [mm]	Böengeschwindigkeitsdruck $q_p(z)$	Bodenschneelast $s_k$			
				kN/m <sup>2</sup>	kN/m <sup>2</sup>			
<b>2×7 S</b>	<b>14</b>	1.722 - 1.905	≤1.150	0,67	1,75	-6,27	12,17	0,97
<b>2×7 L</b>	<b>14</b>	1.906 - 2.384	≤1.150	0,67	1,75	-6,29	11,92	0,96
<b>2×12 S</b>	<b>24</b>	1.722 - 1.905	≤1.150	0,67	1,75	-7,03	13,63	1,09
<b>2×12 L</b>	<b>24</b>	1.906 - 2.384	≤1.150	0,67	1,75	-6,66	12,63	1,02

Auch Module mit Rahmenbreite bis zu 1.303 mm lassen sich integrieren. In diesem Fall wird das Layout wie folgt angepasst:

- 2 × 6 Module anstelle von 2 × 7
- 2 × 10 Module anstelle von 2 × 12

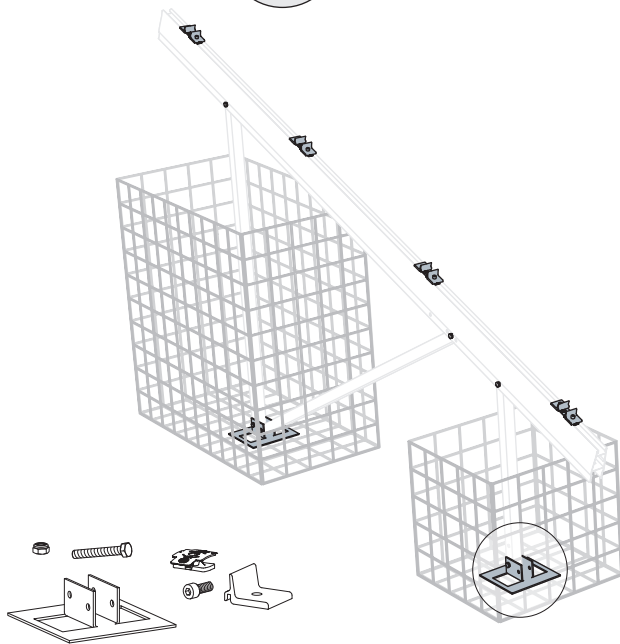
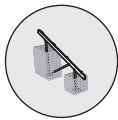
# Überblick Hauptkomponenten

## N-Rack Top Kits



## N-Rack Ground Kits

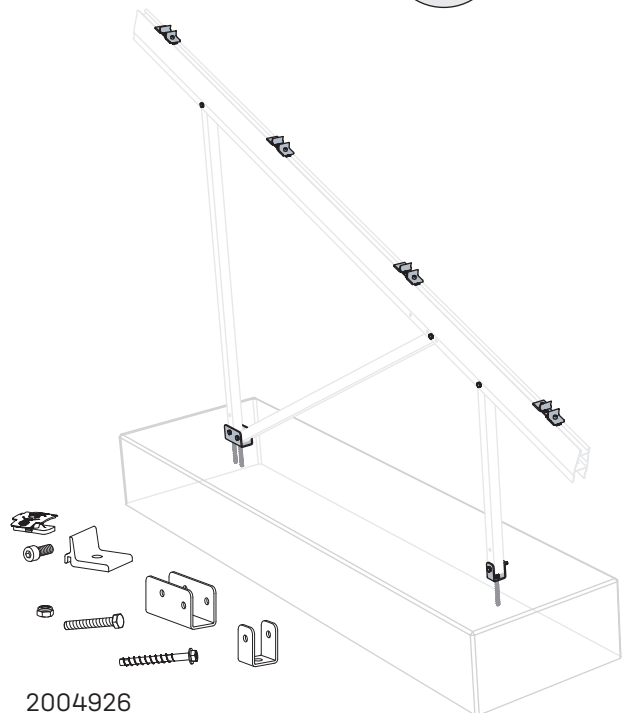
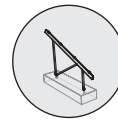
### Gabionen



2005110  
**N-Rack Ground Kit Gabion**  
Siehe Seite 14!

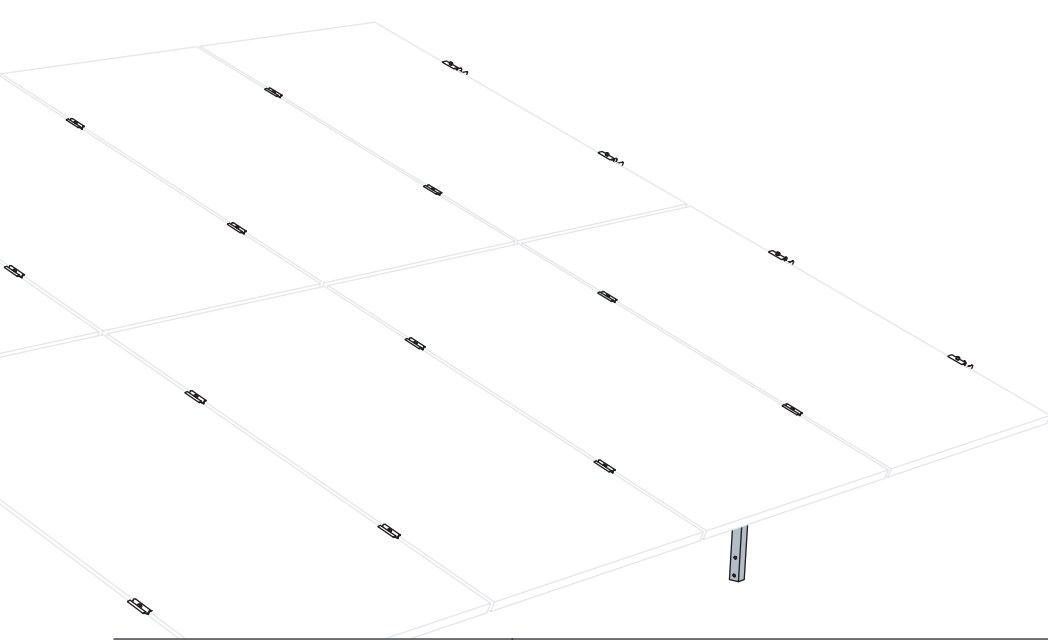
Fundamente sind bauseits zu besorgen.

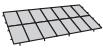
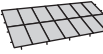
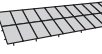
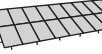
### Betonfundamente



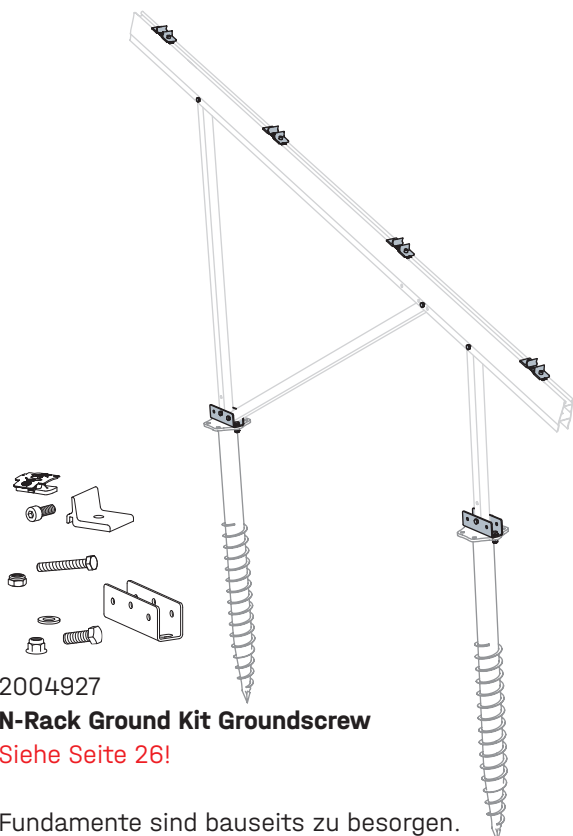
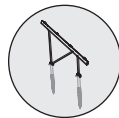
2004926  
**N-Rack Ground Kit Concrete**  
Siehe Seite 20!

Fundamente sind bauseits zu besorgen.



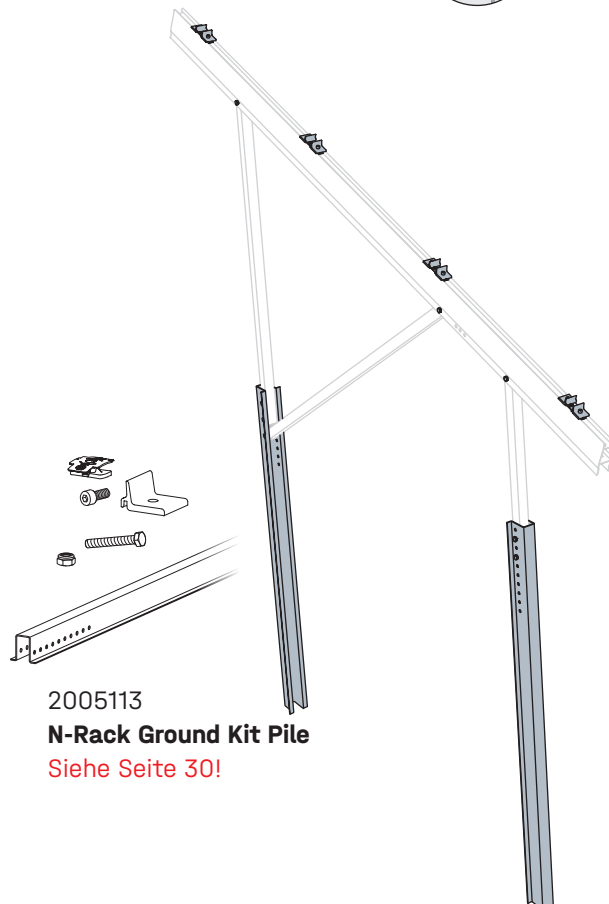
N-Rack Ground Kit		N-Rack Top Kit			
		2×7		2×12	
		S	L	S	L
<b>Modüllängen</b> <b>S:</b> 1.722 - 1.905 mm <b>L:</b> 1.906 - 2.384 mm <b>Modulbreiten</b> <b>S/L:</b> ≤1.150 mm		 1× 2004925	 1× 2004924	 1× 2005048	 1× 2005047
Fundamenttyp	Artikel Nr.	Benötigte Anzahl N-Rack Ground Kits je N-Rack Top Kit			
Gabionen	2005110	4×	5×	6×	8×
Betonfundamente	2004926				
Drehfundamente	2004927				
Rammfundamente	2005113				

## Schraubfundamente



2004927  
**N-Rack Ground Kit Groundscrew**  
 Siehe Seite 26!

## Rammfundamente

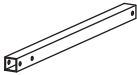
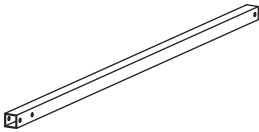
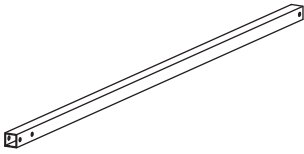
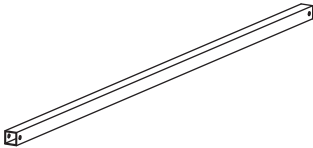
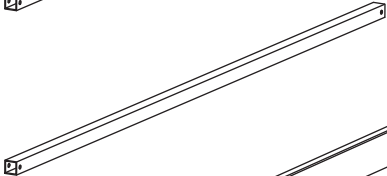
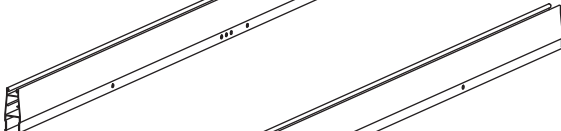
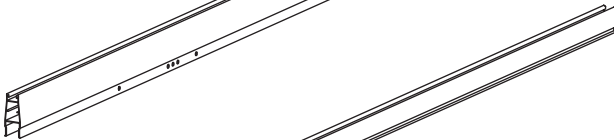
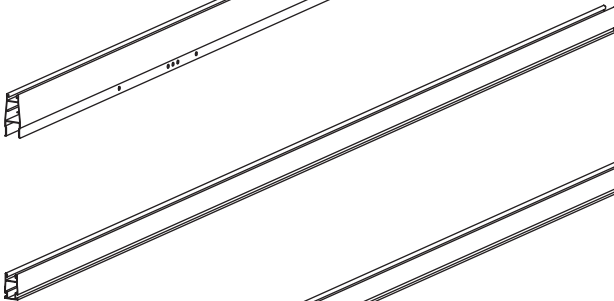
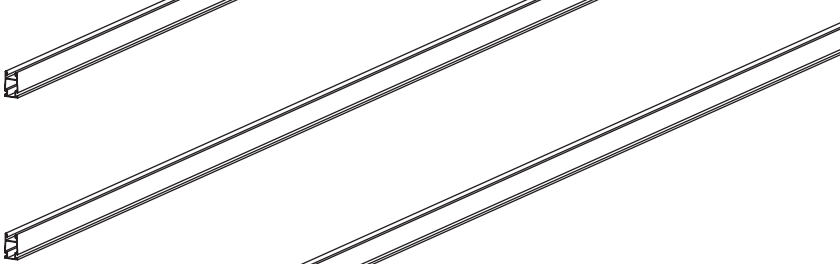



2005113  
**N-Rack Ground Kit Pile**  
 Siehe Seite 30!



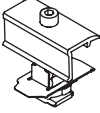
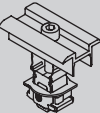
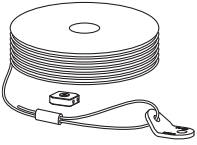
Fundamente sind bauseits zu besorgen.

# Artikelaufstellungen

## N-Rack Top Kits

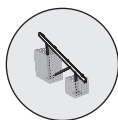
Artikelmenge				Artikel	
2x7		2x12			
S	L	S	L		
4x	5x	6x	8x	2004401 <b>3-Hole Brace N-Rack 715</b>	
4x		6x		2004402 <b>3-Hole Brace N-Rack 1370</b>	
	5x	8x		2004403 <b>3-Hole Brace N-Rack 1625</b>	
4x		6x		2004404 <b>2-Hole Brace N-Rack 1696</b>	
	5x	8x		2004411 <b>2-Hole Brace N-Rack 2072</b>	
	5x	8x		2004399 <b>Beam N-Rack 3750</b>	
4x		6x		2004400 <b>Beam N-Rack 3020</b>	
4x	4x			2005064 <b>CrossRail 73 3,3 m</b>	
		8x	8x	2004460 <b>CrossRail 73 4,55 m</b>	
4x	4x	4x	4x	2004461 <b>CrossRail 73 5 m</b>	

## Small parts

Artikelmenge				Artikel	
2×7		2×12			
S	L	S	L		
4×	4×	8×	8×	2004409 <b>CrossRail 73 Connector</b>	
20×	20×	40×	40×	1001051 <b>Bohrschraube 5,5 × 25 A2</b>	
8×	8×	8×	8×	2004543 <b>K2 Clamp EC 25 - 40</b>	
24×	24×	44×	44×	2004146 <b>K2 Clamp MC 25 - 40</b>	
2×	2×	2×	2×	2004410 <b>Windverband Set</b>	

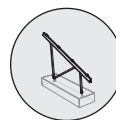
# N-Rack Ground Kits

## Gabion



Artikelmenge	Artikel	
1×	2005109 <b>N-Rack Gabion Foot</b>	
7×	2004408 <b>Sechskant-schraube M10 × 70</b>	
7×	1002849 <b>Sechskant Sicherungsmutter M10</b>	
8×	2003145 <b>Climber 36/50 Set</b>	

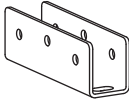





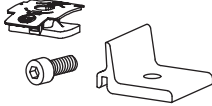
## Concrete



Artikelmenge	Artikel	
1×	2004391 <b>N-Rack Foot Front</b>	
1×	2004392 <b>N-Rack Foot Back</b>	
3×	2004407 <b>Heco Multi-Monti 12 × 105</b>	
7×	2004408 <b>Sechskant-schraube M10 × 70</b>	
7×	1002849 <b>Sechskant Sicherungsmutter M10</b>	
8×	2003145 <b>Climber 36/50 Set</b>	

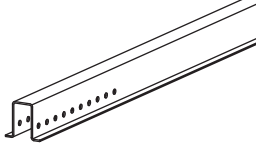


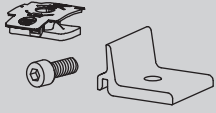
## Groundscrew



Artikel-menge	Artikel	
2×	2004896 <b>N-Rack GS Foot</b>	
4×	2004902 <b>Sechskant- schraube M12 × 35</b>	
4×	2004910 <b>Unterleg- scheibe M12</b>	
4×	2004903 <b>Sechskant- mutter M12</b>	
9×	2004408 <b>Sechskant- schraube M10 × 70</b>	
9×	1002849 <b>Sechskant Sicherungs- mutter M10</b>	
8×	82003145 <b>Climber 36/50 Set</b>	

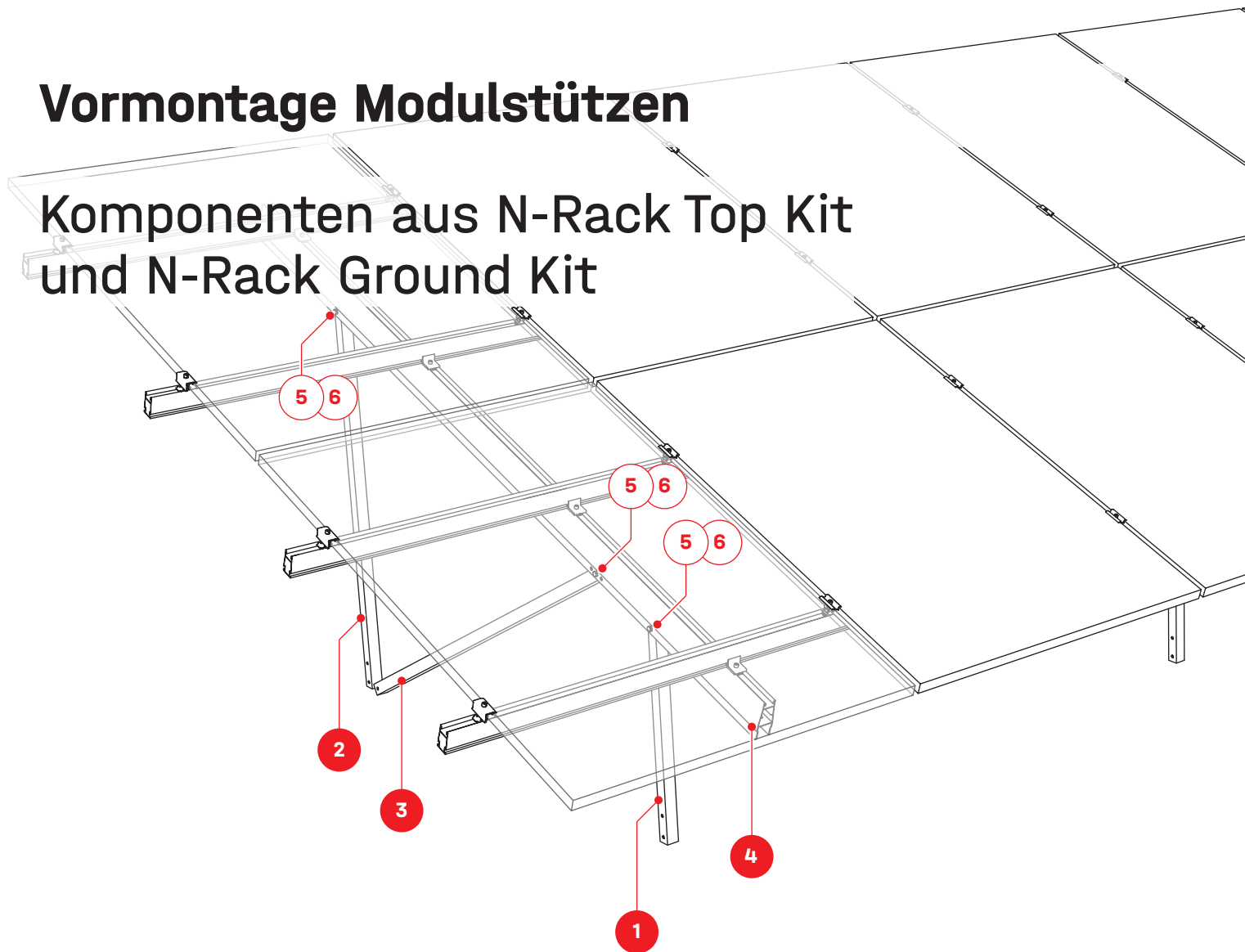
## Pile



Artikel-menge	Artikel	
2×	2005112 <b>Cap-Profil N-Rack 2,3 m</b>	
7×	2004408 <b>Sechskant- schraube M10 × 70</b>	
7×	1002849 <b>Sechskant Sicherungs- mutter M10</b>	
8×	2003145 <b>Climber 36/50 Set</b>	

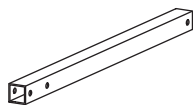
# Vormontage Modulstützen

## Komponenten aus N-Rack Top Kit und N-Rack Ground Kit

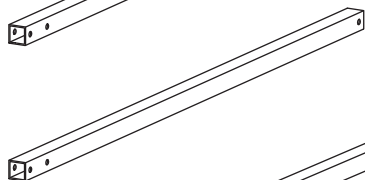


N-Rack Top Kit

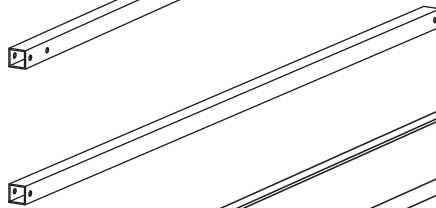
1 3-Loch Brace N-Rack



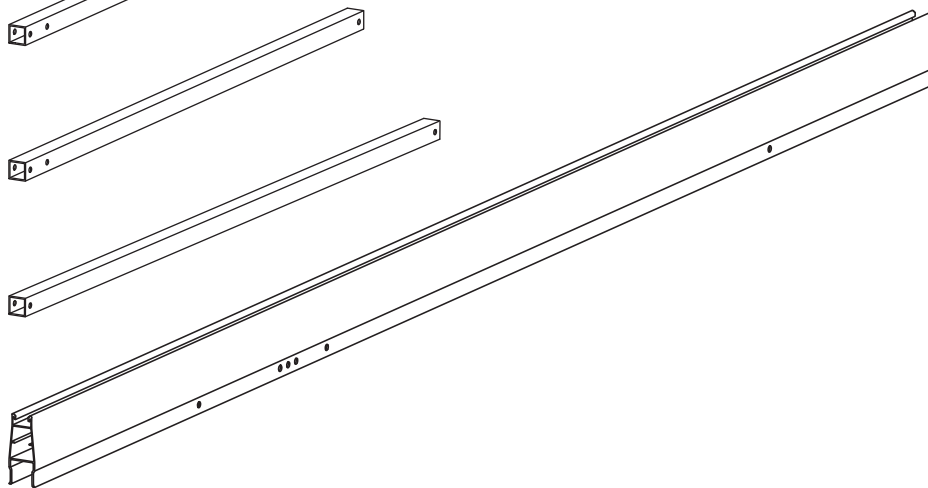
2 3-Loch Brace N-Rack



3 2-Loch Brace N-Rack



4 Beam N-Rack



N-Rack Ground Kit

5 Sechskantschraube mit Schaft M10 x 70



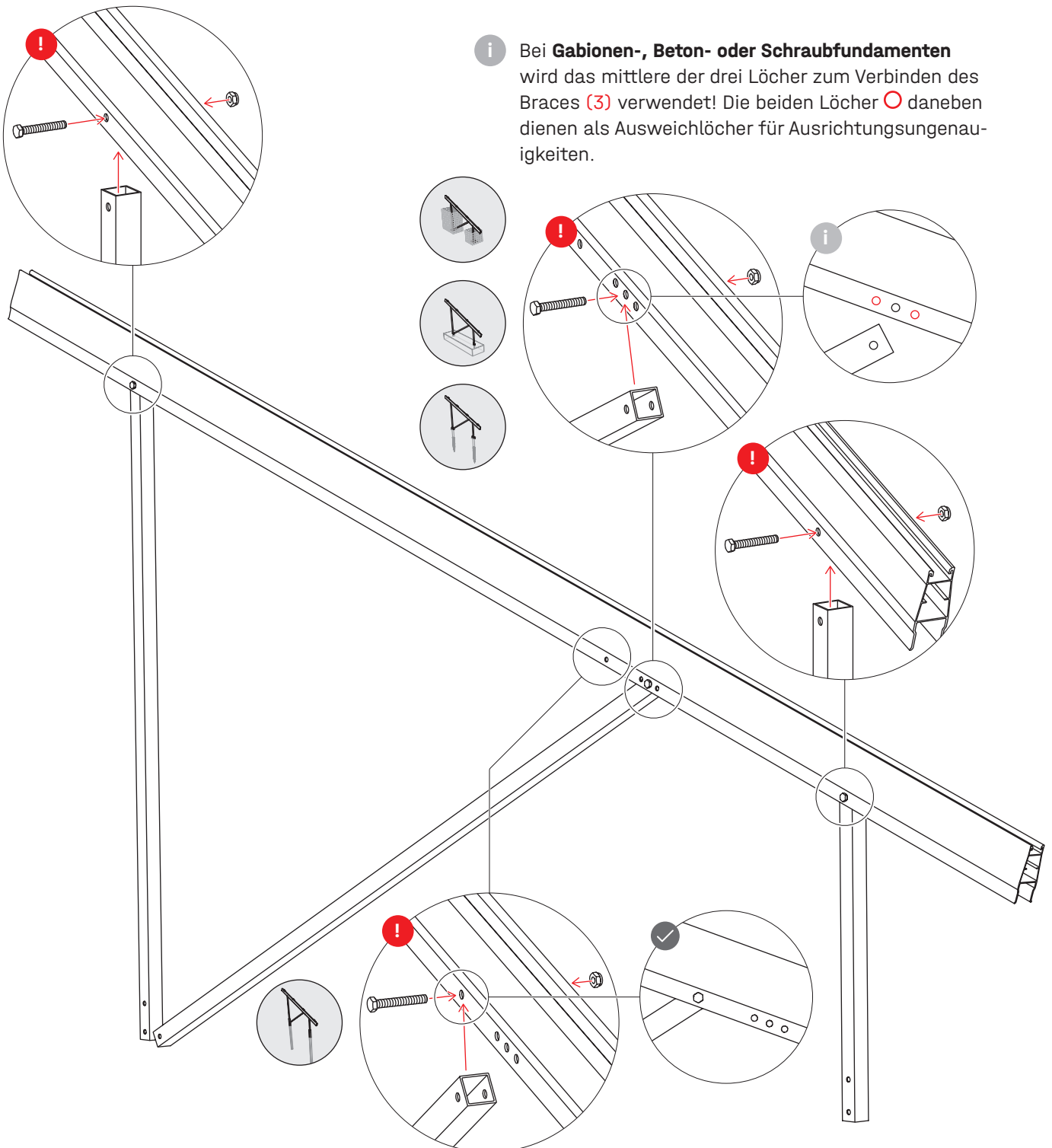
6 Sechskant Sicherungsmutter M10



# Stützen

1

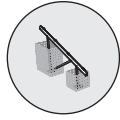
! Schrauben nur handfest anziehen.



i Bei **Gabionen-, Beton- oder Schraubfundamenten** wird das mittlere der drei Löcher zum Verbinden des Braces (3) verwendet! Die beiden Löcher ○ daneben dienen als Ausweidlöcher für Ausrichtungsungenauigkeiten.

Für **Rammprofile** muss der Brace (3) mit dem einzelnen Loch verbunden werden!

# Gabionen



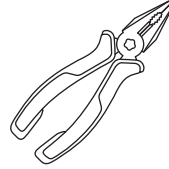
## Generelle Vorgaben

## Zusätzliche Werkzeuge

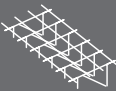





### Bodenanforderungen

Der Untergrund ist so zu verdichten und vorzubereiten, dass er eine setzungsarme und tragfähige Basis gemäß den anerkannten Regeln der Technik (insb. DIN EN 1997-1-Eurocode7-Geotechnik) bildet, um die dauerhafte Lagesicherheit des Bauwerks zu garantieren.



### Statische Anforderungen

N-Rack Top Kit	Modulanzahl	Füllgewicht	
		kg	kg
			
<b>2x7 S</b>	<b>14</b>	220	700
<b>2x7 L</b>	<b>14</b>	230	700
<b>2x12 S</b>	<b>24</b>	240	790
<b>2x12 L</b>	<b>24</b>	240	740

### Wichtige Hinweise

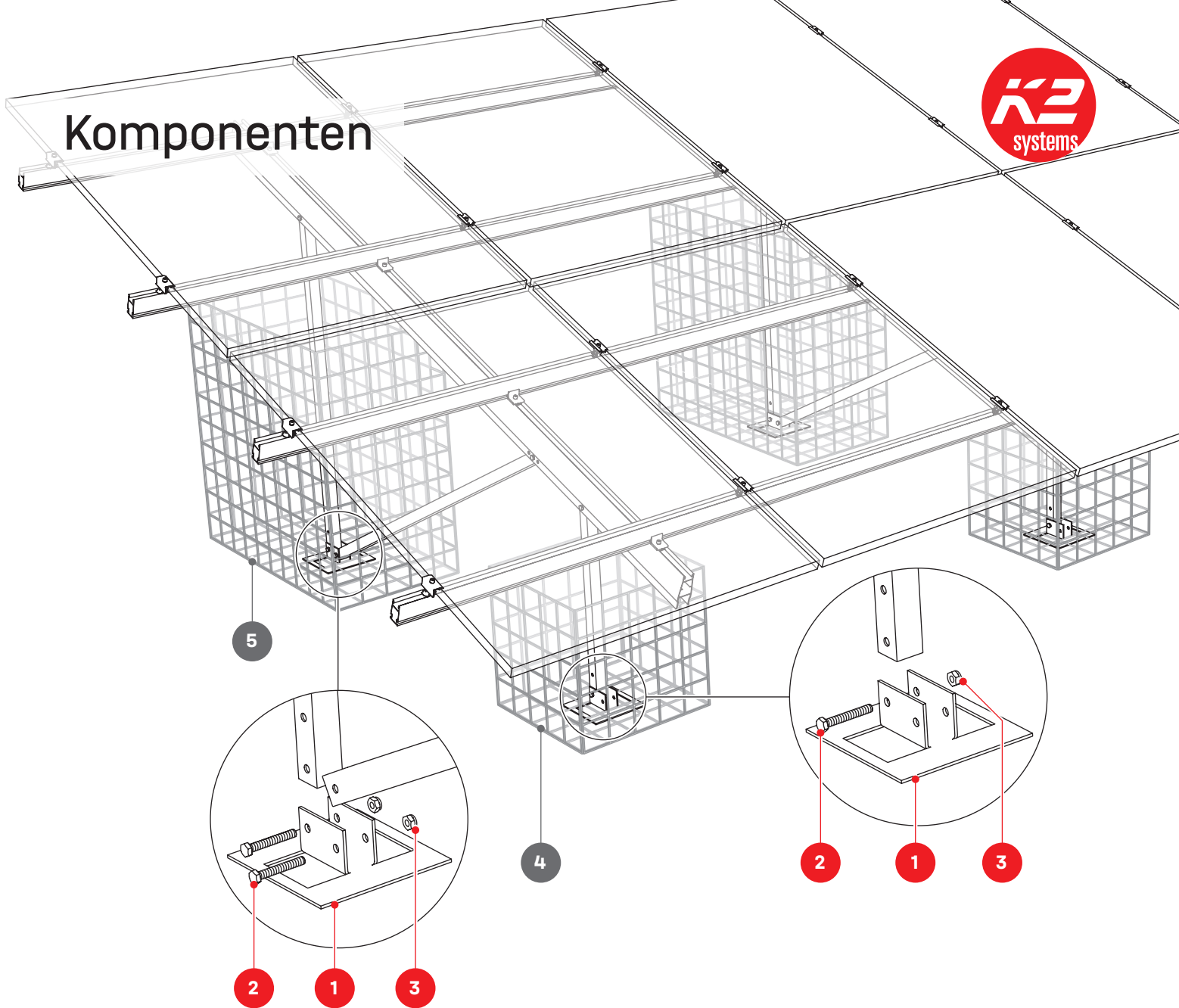
Gabionen sollten mit frost- und witterungsbeständigem, ausreichend druckfestem Steinmaterial hohlraumarm befüllt werden.

Das Schüttgut an der Luftseite muss größer als die Maschenweite sein.

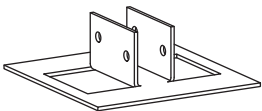
Die Angaben des Gabionen Herstellers sind zu beachten.

Die Montageanleitung für die Gabionen Art. Nr. 2005184 Gabion 50×50×50 und Art. Nr. 2005185 Gabion 100×50×100 ist hier abrufbar: [Montageanleitung.pdf](#)

# Komponenten



## N-Rack Ground Kit Gabion



**1** 2005109  
N-Rack Gabion Foot

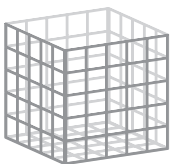


**2** 2004408  
Sechskantschraube  
mit Schaft M10 × 70

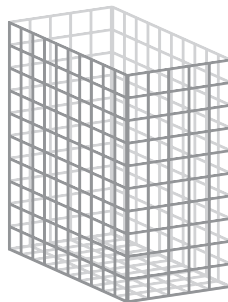


**3** 1002849  
Sechskant Sicherungs-  
mutter M10

## Erforderlich - nicht im Lieferumfang



**4** 2005184  
Gabion 50×50×50  
Bauseits bereitzustellen



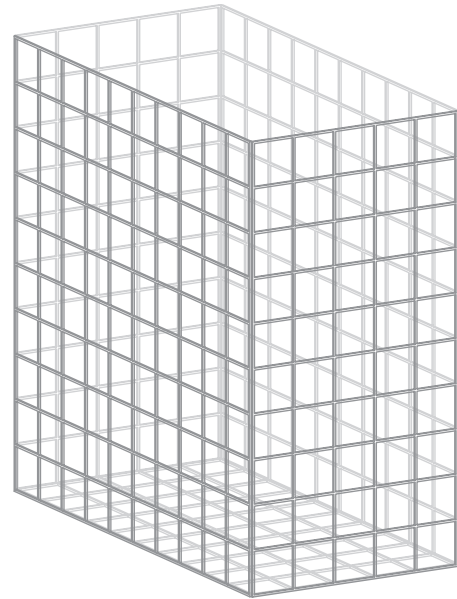
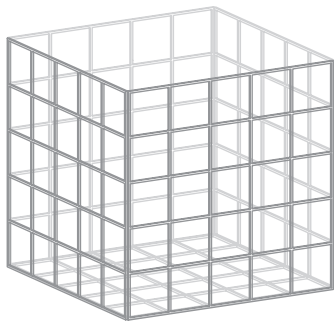
**5** 2005185  
Gabion 100×50×100  
Bauseits bereitzustellen

# Montage

## Gabionen vorbereiten

**1a** Beim Aufbau der Gabionen die Montageanleitung des Herstellers beachten.

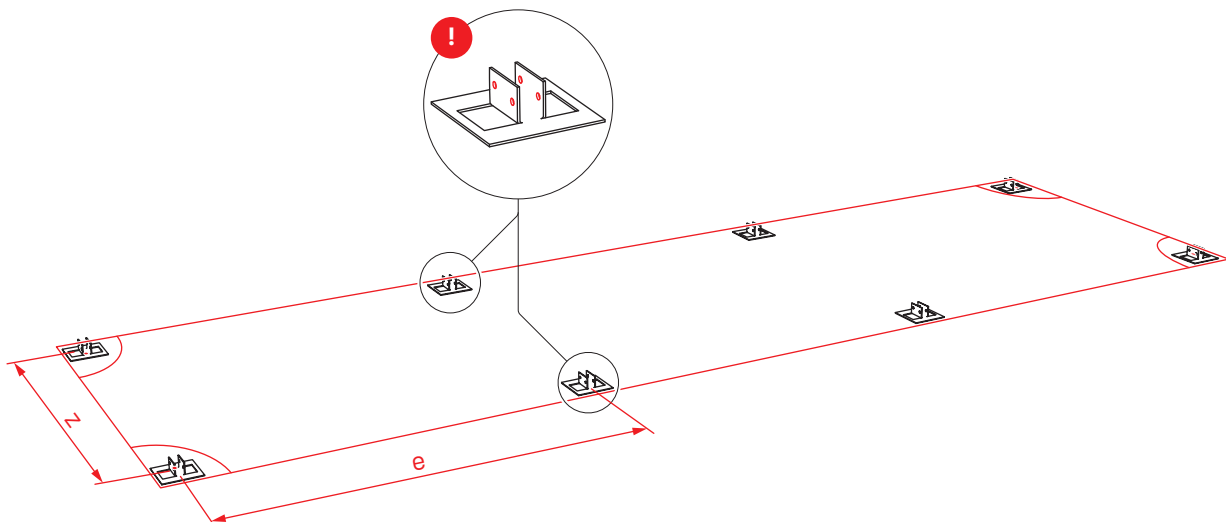
Die Montageanleitung für die Gabionen Art. Nr. 2005184 Gabion 50×50×50 und Art. Nr. 2005185 Gabion 100×50×100 ist hier abrufbar: [Montageanleitung.pdf](#)



Damit der Einbau der Stütze einfacher ist, sollte das hintere Seitengitter noch geöffnet bleiben.

## Abstände

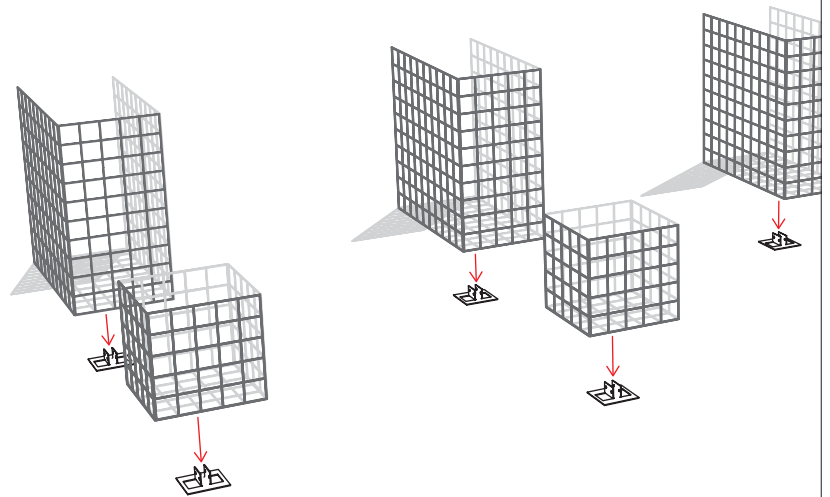
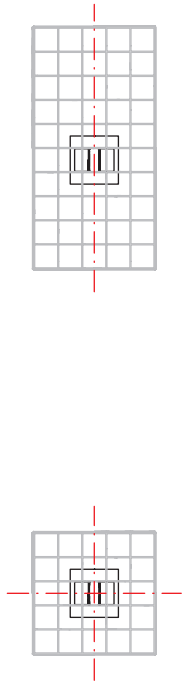
**1b** Werte  $e$  und  $z$  in den Systemdatenblätter „Gabionen“ ab Seite 40.



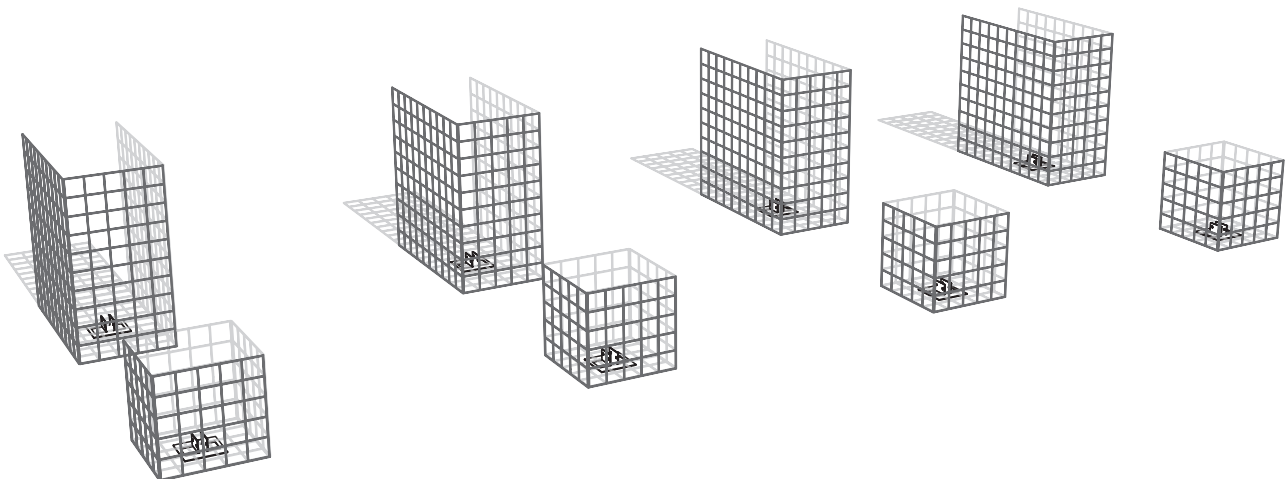
**!** Ausrichtung N-Rack Gabion Foot beachten

## Gabionen setzen

2a

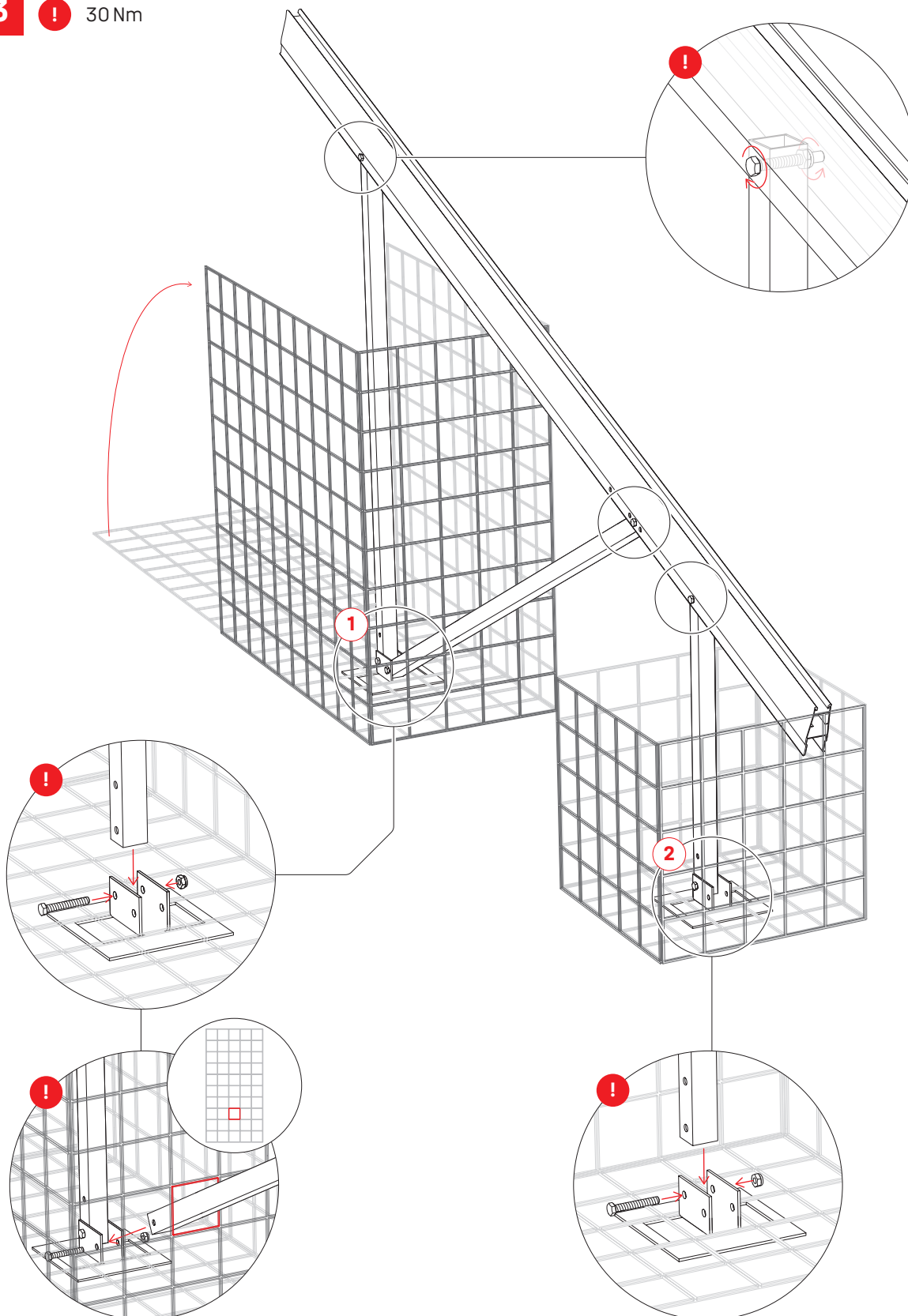


2b



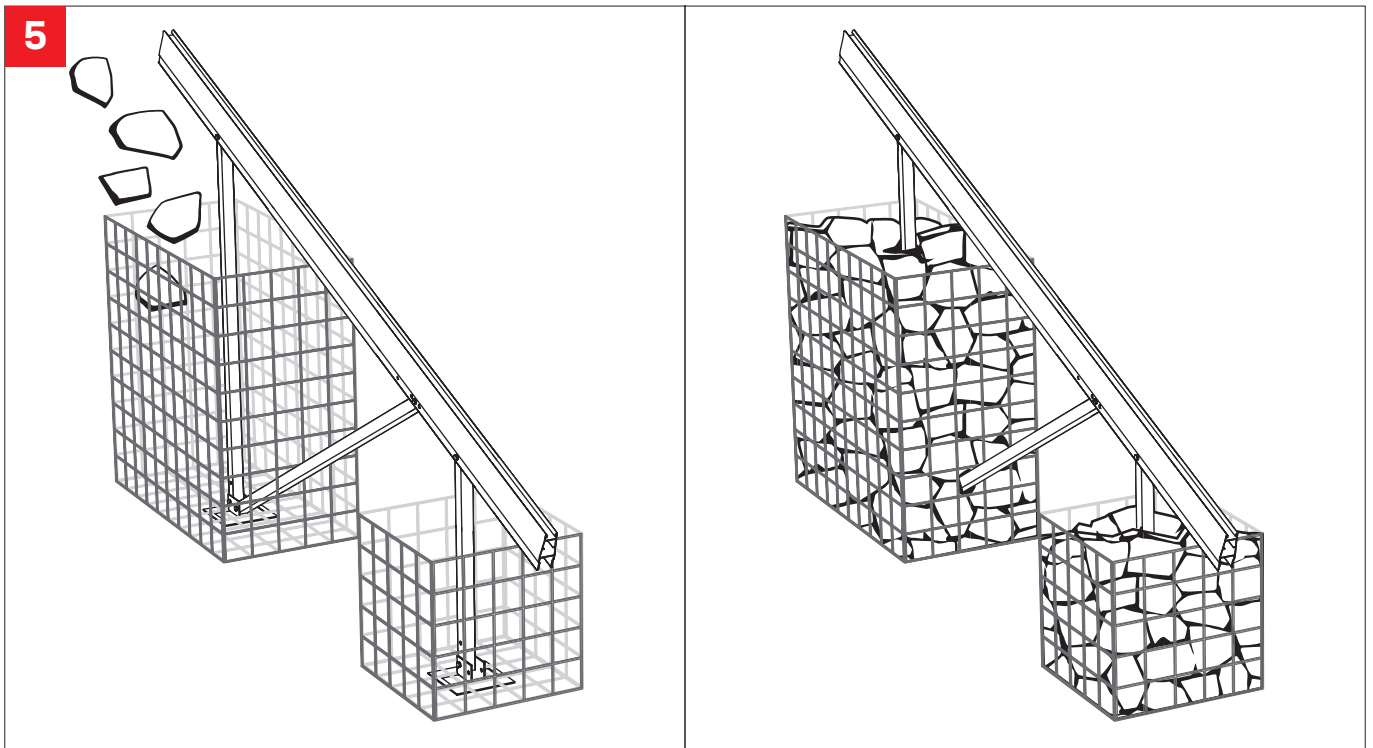
## Anbindung Stützen

**3** ! 30 Nm

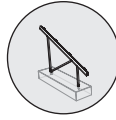


Für das N-Rack Kit mit Gabionen ist kein Windverband erforderlich.

## Schüttgut einfüllen



# Betonfundamente



## Generelle Vorgaben



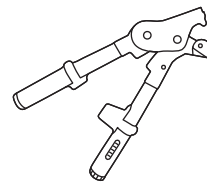
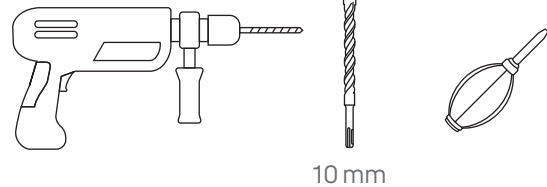
### Bodenanforderungen

Der Untergrund ist so zu verdichten und vorzubereiten, dass er eine setzungsarme und tragfähige Basis gemäß den anerkannten Regeln der Technik (insb. DIN EN 1997-1-Eurocode7-Geotechnik) bildet, um die dauerhafte Lagesicherheit des Bauwerks zu garantieren.

### Statische Anforderungen

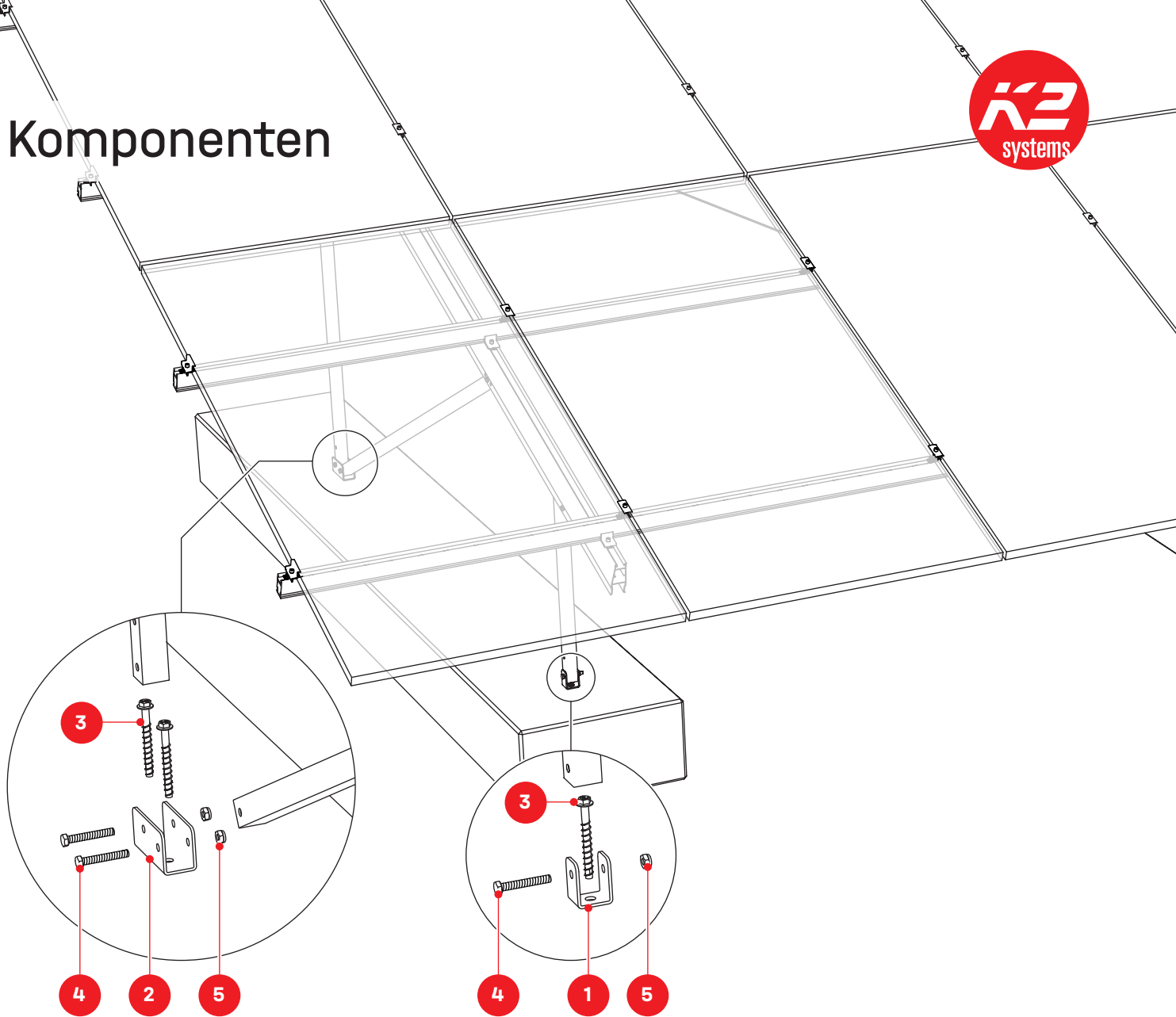
Die Betonfundamente sind gegen Abheben und Kippen infolge der Windsoglasten vordimensioniert. Eine Bewehrung des Fundamentes ist vorzusehen, wie in der Prinzipskizze „Abmessungen“ auf Seite 22 dargestellt. Die Bestimmung der endgültigen Dimension der Betonfundamente sowie deren Bewehrungsplan ist bauseits zu überprüfen.

## Zusätzliche Werkzeuge



**Gripple Spannzange 400 · 2004456**

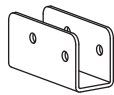
# Komponenten



## N-Rack Ground Kit Concrete



**1** 2004391  
N-Rack Concrete Foot Front



**2** 2004392  
N-Rack Concrete Foot Back



**3** 2004407  
Heco Multi-Monti 12 × 105



**4** 2004408  
Sechskantschraube  
mit Schaft M10 × 70

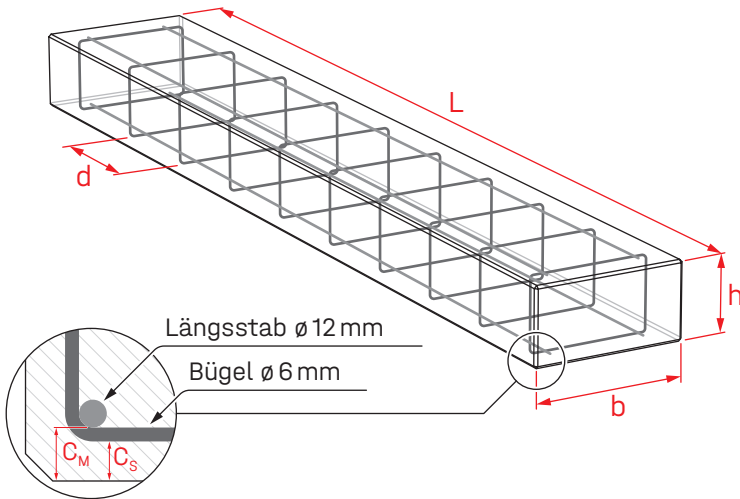


**5** 1002849  
Sechskant Sicherungs-  
mutter M10

# Montage

## Abmessungen

**i** Die Betonfundamente müssen bauseits beschafft bzw. selbst erstellt werden.

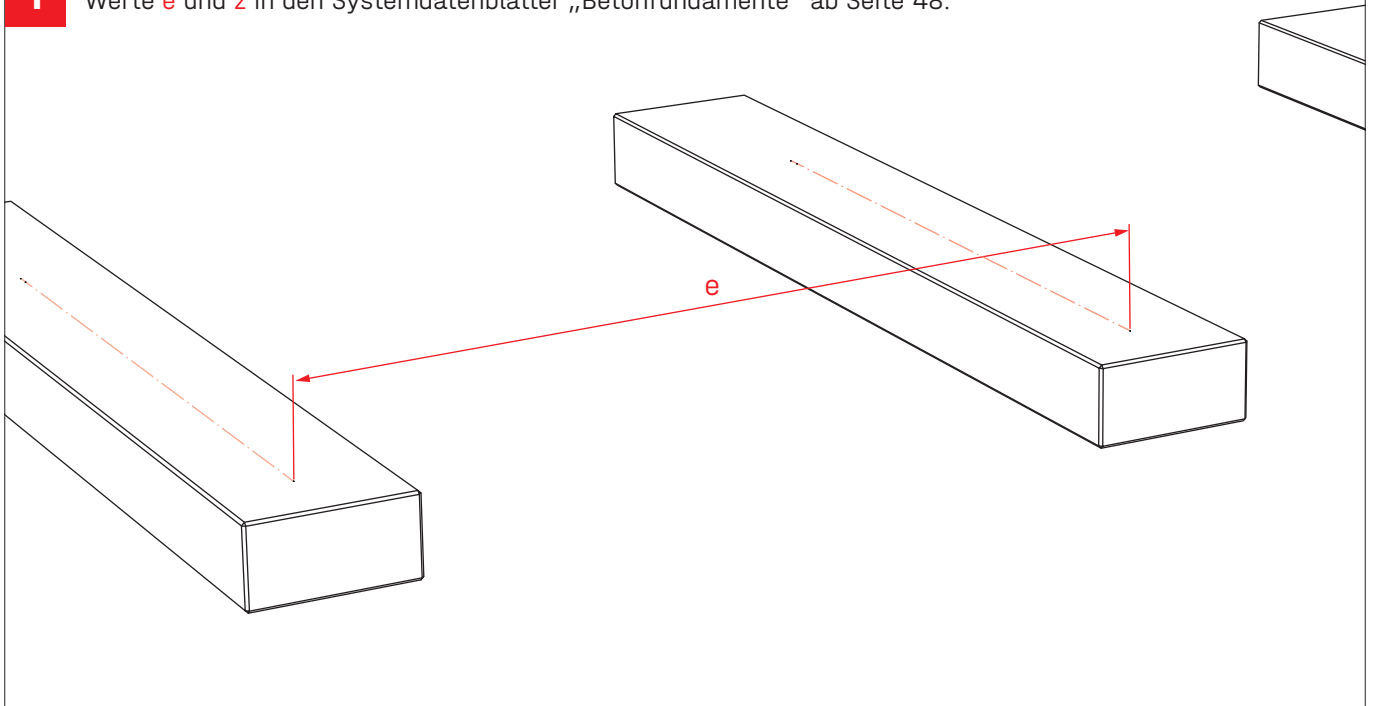


**Betonstahl:** B500  
**Betonfestigkeit:** min. C25/30  
**Betondeckung der Bewehrung:**  $C_M/C_S \geq 0,04$  m

N-Rack	2×7 S	2×7 L	2×12 S	2×12 L
<b>L [m]</b>	2,80	3,40	2,80	3,40
<b>b [m]</b>	0,45	0,45	0,78	0,72
<b>h [m]</b>	0,40	0,40	0,40	0,40
<b>V [m<sup>3</sup>]</b>	0,50	0,61	0,87	0,98
<b>d [m]</b>	0,30	0,30	0,30	0,30
<b>Anzahl der Bügel</b>	10 ×	12 ×	10 ×	12 ×

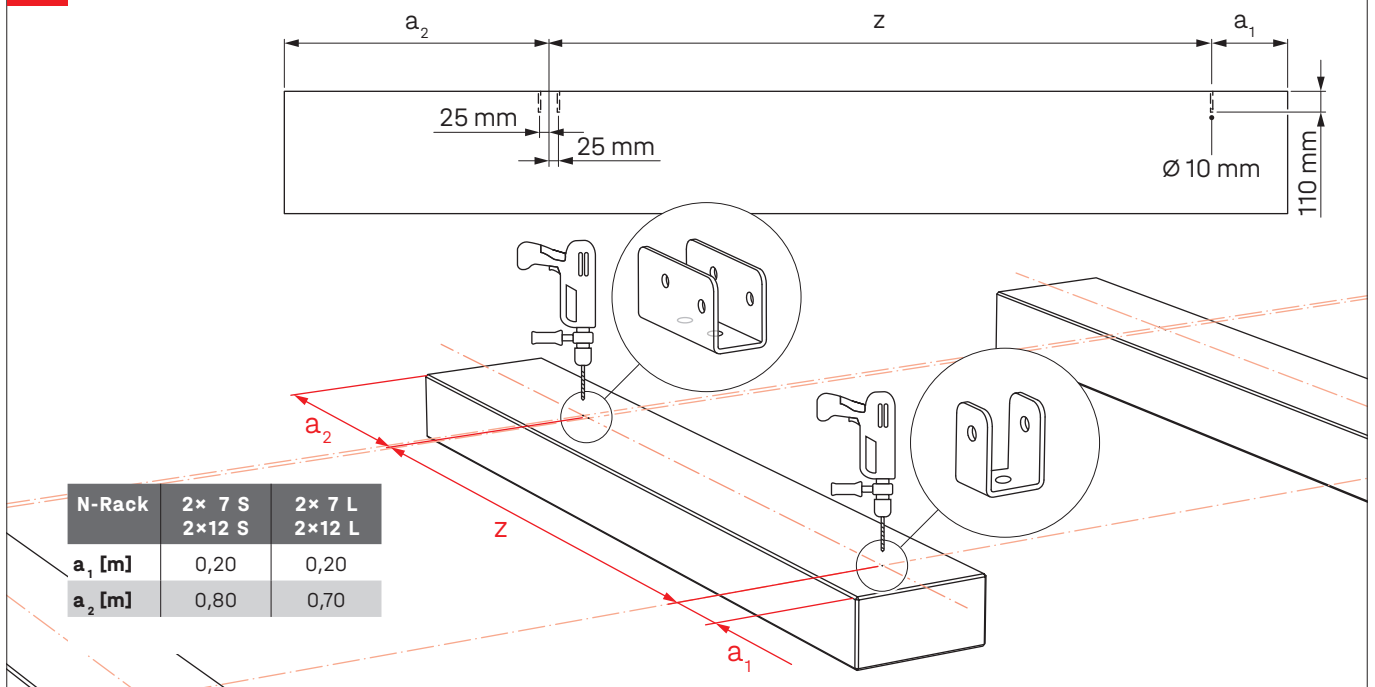
## Abstände

**1** Werte  $e$  und  $z$  in den Systemdatenblätter „Betonfundamente“ ab Seite 48.



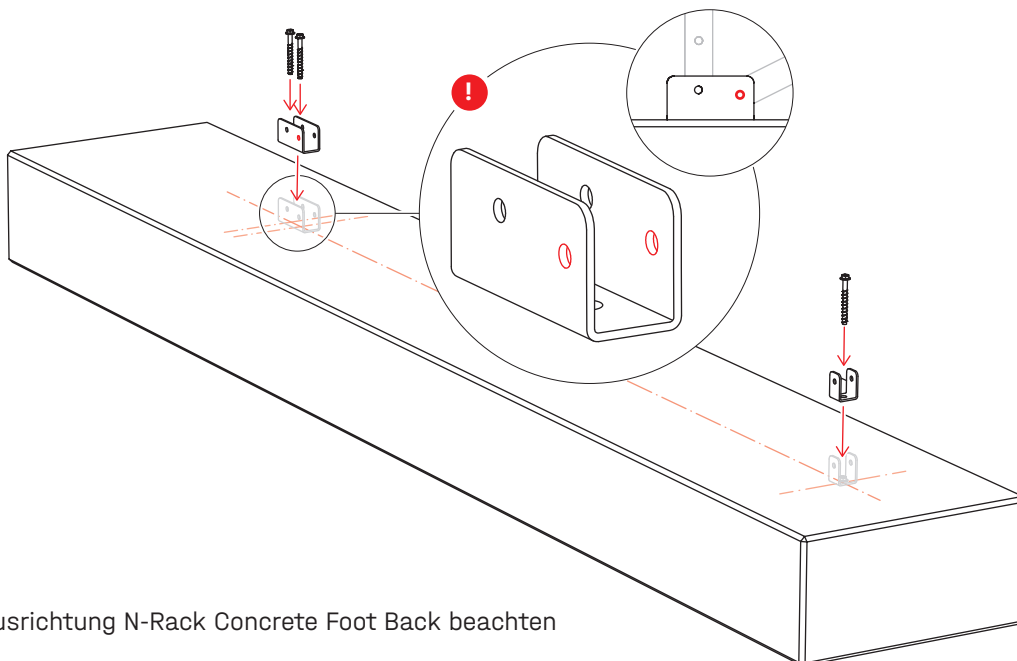
## Anker Vorbohrungen

**2** Wert  $z$  in den Systemdatenblätter „Betonfundamente“ ab Seite 48.



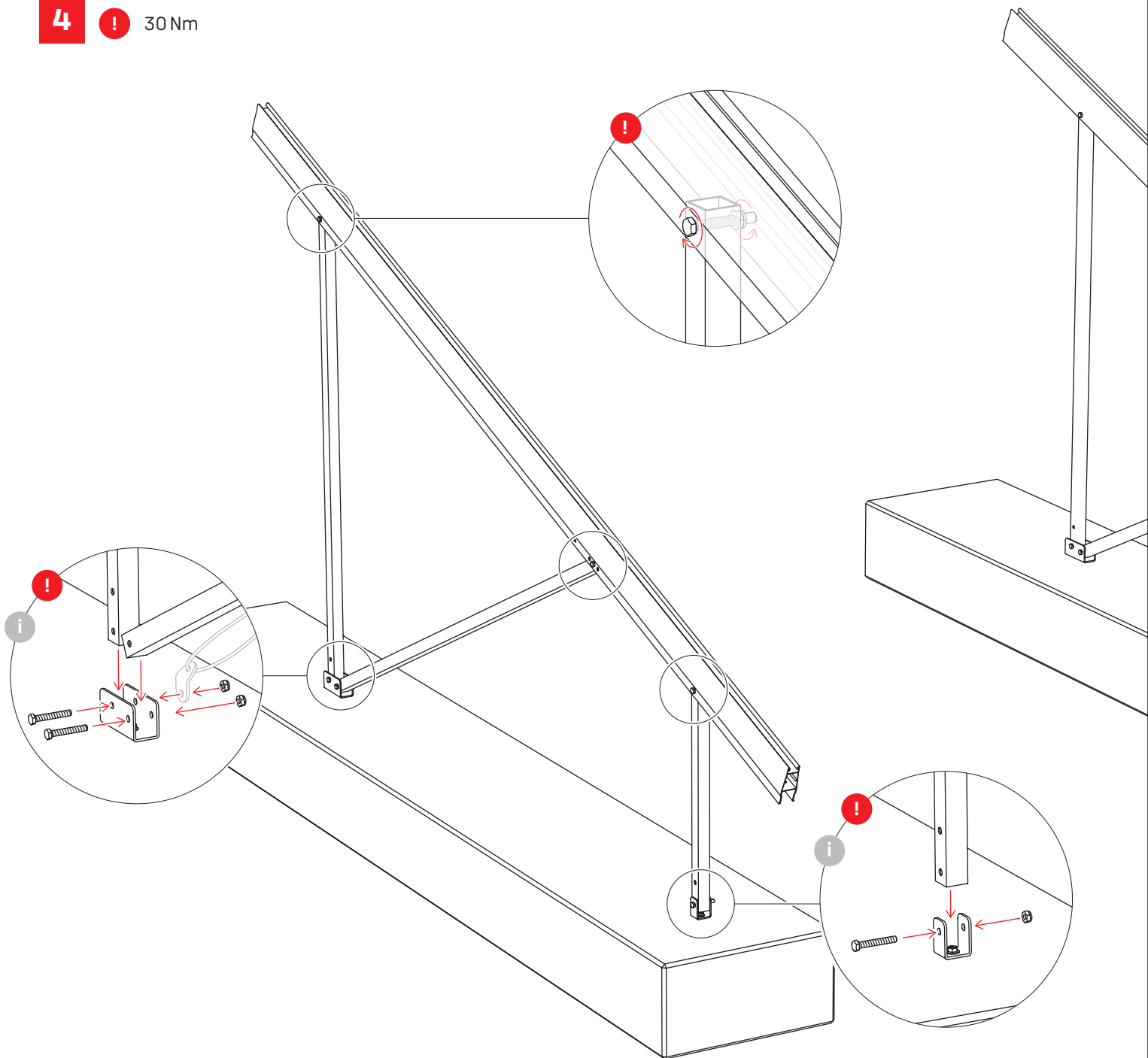
## Anker und Anbindung fixieren


**3** ! 90 Nm



## Anbindung Stützen

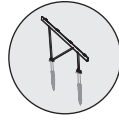
**4**  30 Nm



-  Anbringung des Windverbandes an den äußeren Betonfundamenten.  
„Herstellung Windverband“ auf Seite 38.



# Schraubfundamente



## Generelle Vorgaben



### Baugrundannahme

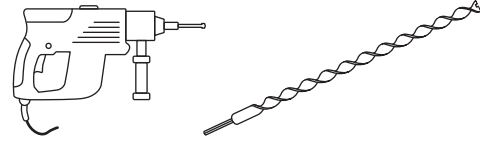
Die Anzahl und die erforderliche Grösse der jeweiligen Schraubfundamente ist immer abhängig von der Bodenart, Grösse, Gewicht sowie Wind und Schnee-lasten der geplanten Aufbauten. Es wird ausgegangen von Bodenklasse TL/TM gemäss DIN 18196, Konsistenz halbfest (DIN 1422). Grundlage der endgültigen Fundamentbemessung ist die Vorort zu ermittelnde Bodenbeschaffenheit sowie der statische Nachweis der Tragfähigkeit, basierend auf ein zutreffendes statisches Berechnungsmodell.



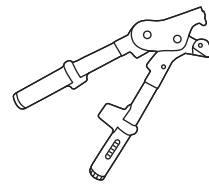
### Statische Anforderungen

- Anforderungen Kits
- 1,2 - 1,25 m Eindrehtiefe Schraubfundamente Krinner M16 bis  $\leq 1,75$  kN Schnee und  $\leq 0,67$  kN Wind

## Zusätzliche Werkzeuge



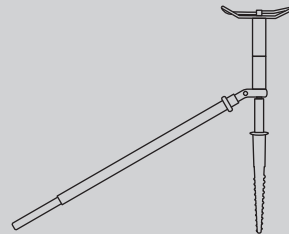
Bohrhammer inkl. Bohrer 25 mm



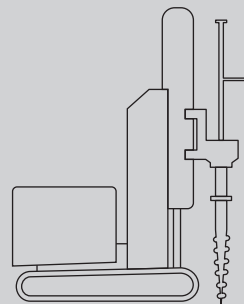
Gripple Spannzange 400 · 2004456



Geräte/Maschinen zum Eindrehen der Schraubfundamente sind beim Baugeräteverleih erhältlich. Alternativ kann auch der Garten- und Landschaftsbau beauftragt werden.

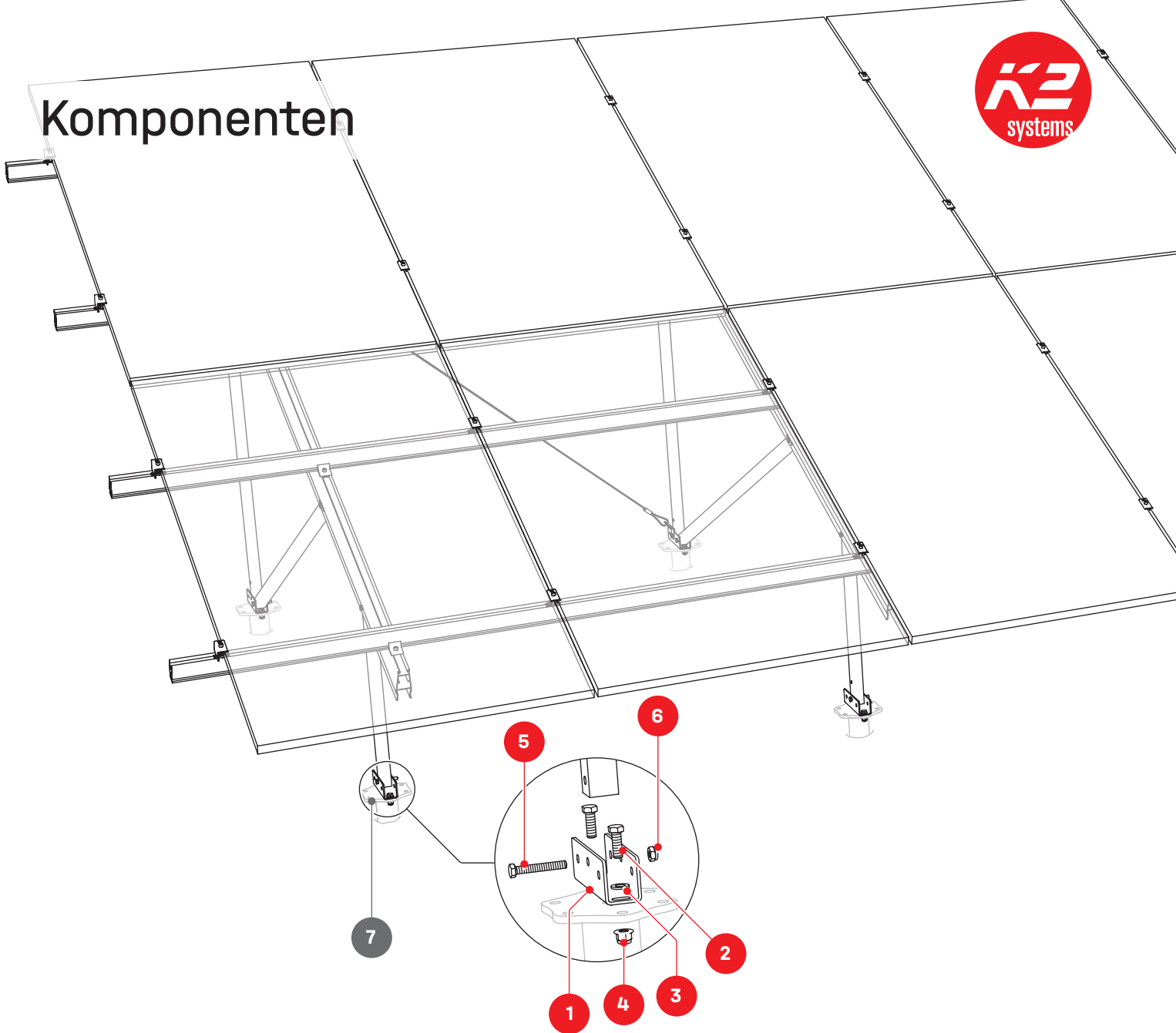


Eindrehmaschine z.B.: Krinner KR E 20-SC

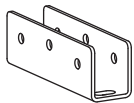


Selbstfahrendes Raupenfahrzeug z.B.: Krinner KR D 30-CO

# Komponenten



## N-Rack Ground Kit Groundscrew



**1** 2004896  
N-Rack GS Foot



**2** 2004902  
Sechskantschraube  
M12 x 35



**3** 2004910  
Unterlegscheibe  
M12



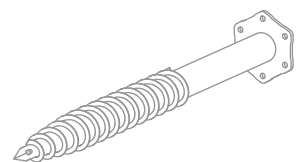
**4** 2004903  
Sechskantmutter mit  
Flansch M12



**5** 2004408  
Sechskantschraube  
mit Schaft M10 x 70



**6** 1002849  
Sechskant Sicherungsmutter M10



**7** 2005095  
Schraubfundament 1,30 m  
KSF M76 1300 M16  
Bauseits bereitzustellen.

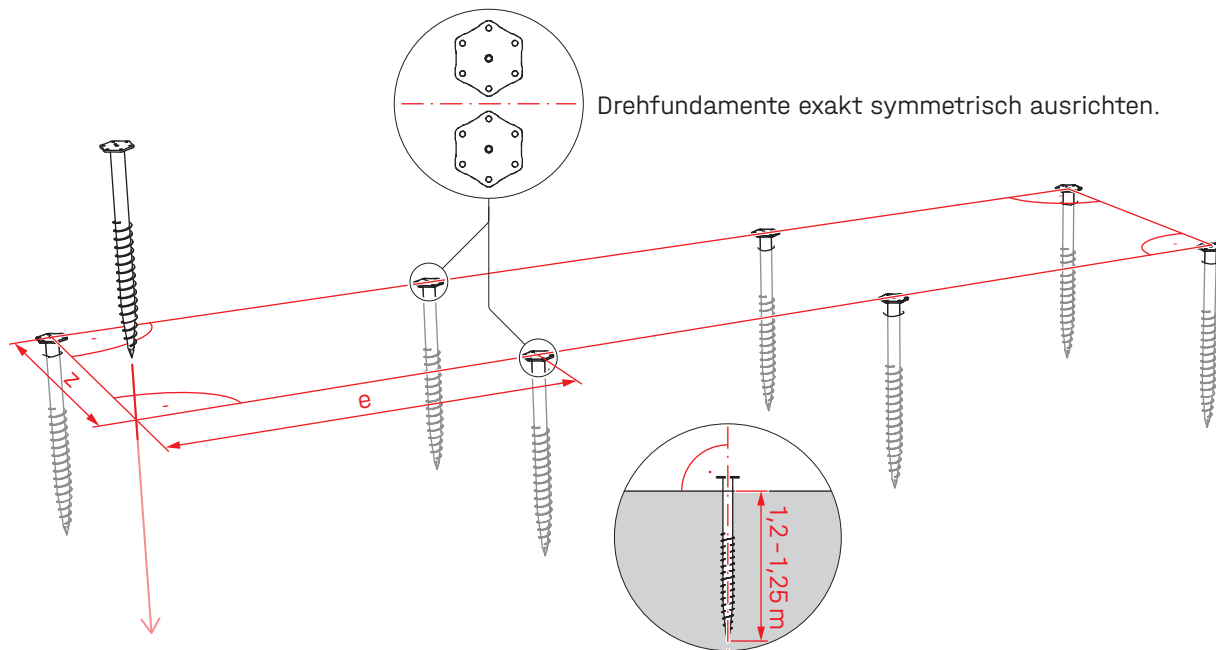
**Erforderlich - nicht  
im Lieferumfang**

# Montage

## Gründung und Abstände

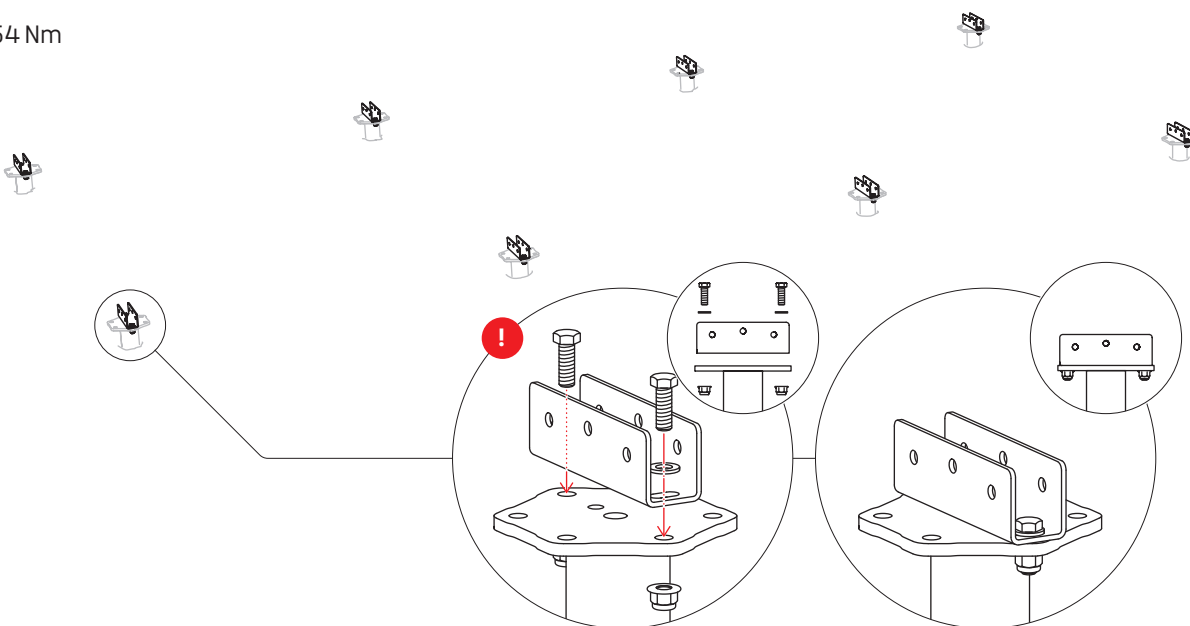
1

Werte  $e$  und  $z$  in den Systemdatenblätter „Schraubfundamente“ ab Seite 56.



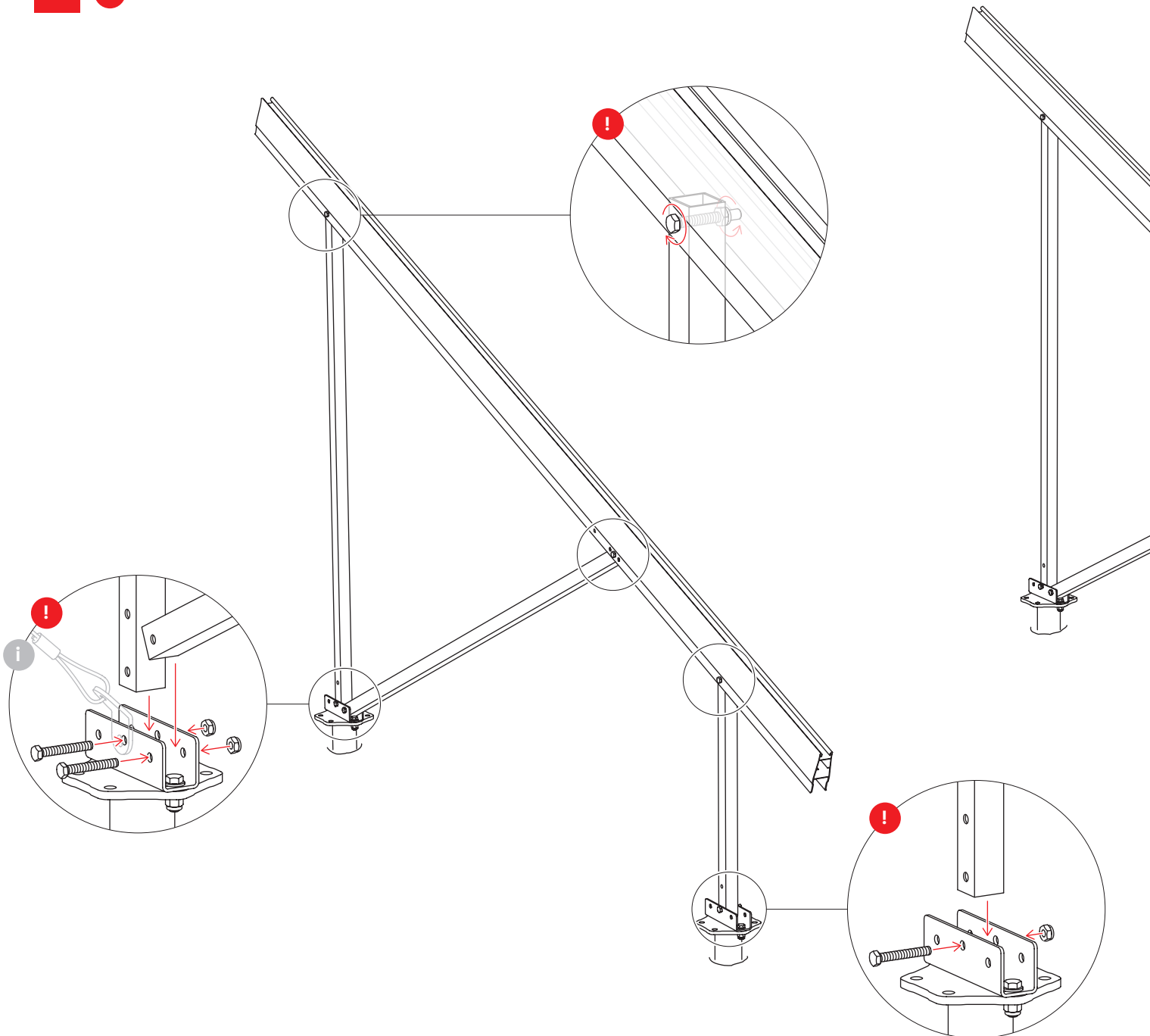
2a

! 54 Nm



## Anbindung Stützen

**2b** ! 30 Nm



**i** Anbringung des Windverbandes: „Herstellung Windverband“ auf Seite 38.

# Rammfundamente



## Generelle Vorgaben



### Bodenanforderungen

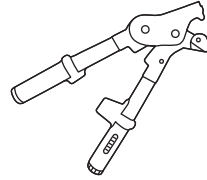
Die Anzahl und die erforderliche Grösse der jeweiligen Rammpfosten ist immer abhängig von der Bodenart, Grösse, Gewicht sowie Wind und Schnee-lasten der geplanten Aufbauten. Es wird ausgegangen von Bodenklasse TL/TM gemäss DIN 18196, Konsistenz halbfest (DIN 1422). Grundlage der endgültigen Fundamentbemessung ist die Vorort zu ermittelnde Bodenbeschaffenheit sowie der statische Nachweis der der Tragfähigkeit, basierend auf ein zutreffendes statisches Berechnungsmodell.

### Statische Anforderungen

Anforderungen Kits

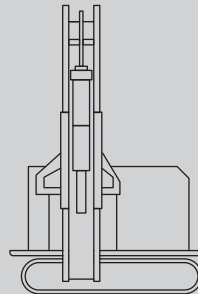
- 1,8 - 1,9 m Einbindetiefe Hutprofil K2
- ≤ 1,75 kN Schnee und ≤ 0,67 kN Wind

## Zusätzliche Werkzeuge

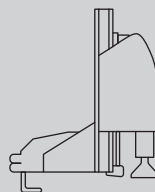


Gripple Spannzange 400 · 2004456

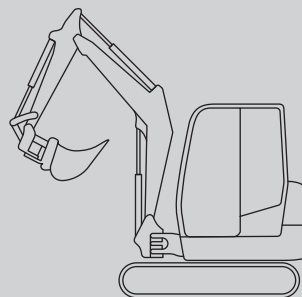
**!** Geräte/Maschinen zum Einbringen der Rammfundamente sind beim Baugeräteverleih erhältlich. Alternativ kann auch der Garten- und Landschaftsbau beauftragt werden.



Rammmaschine

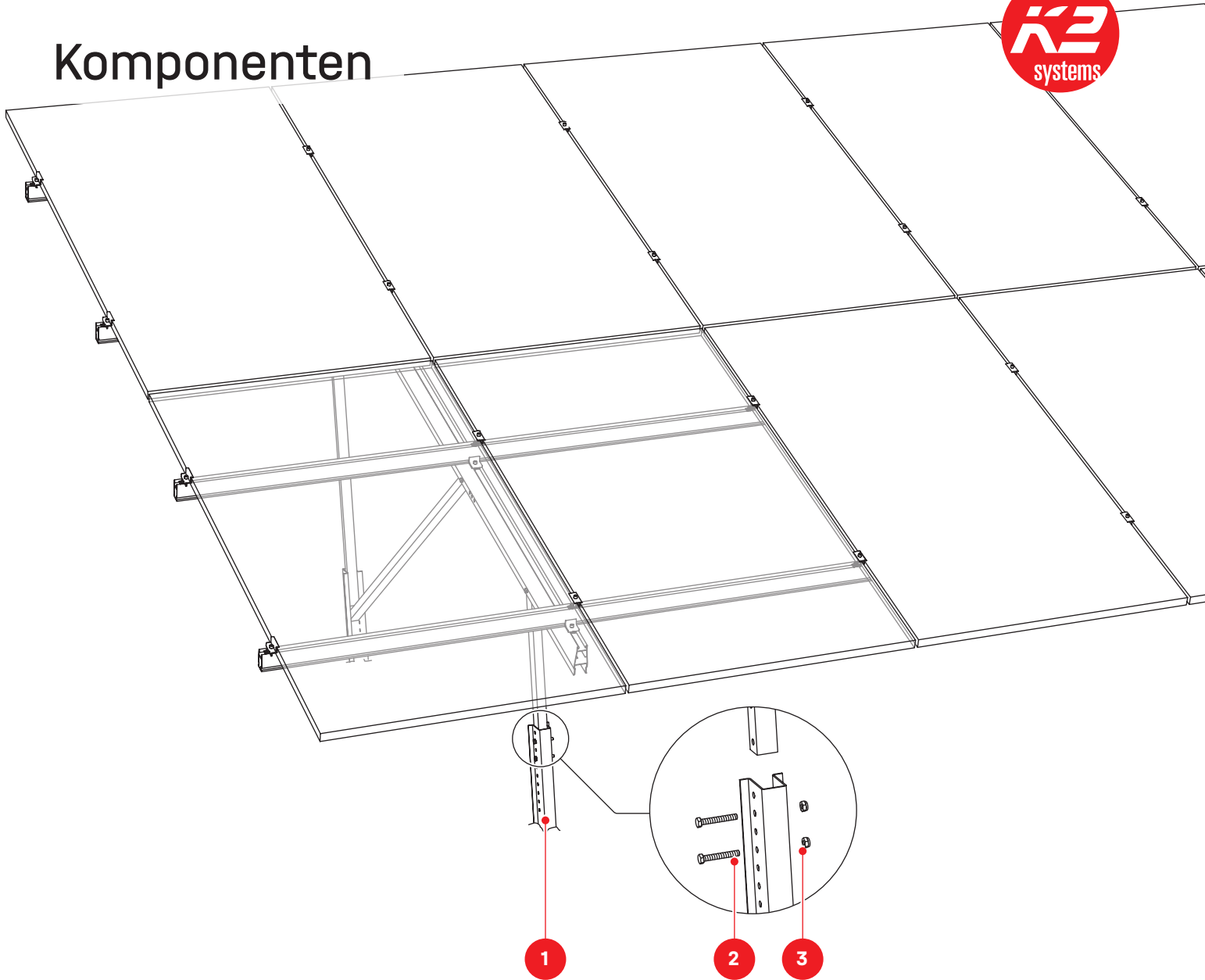


Pfahlramme zum Anbau an Mini-Bagger etc.

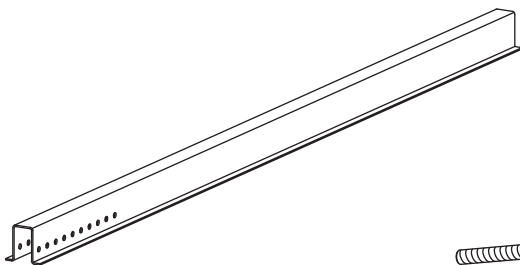


Bagger

# Komponenten



## N-Rack Ground Kit Pile



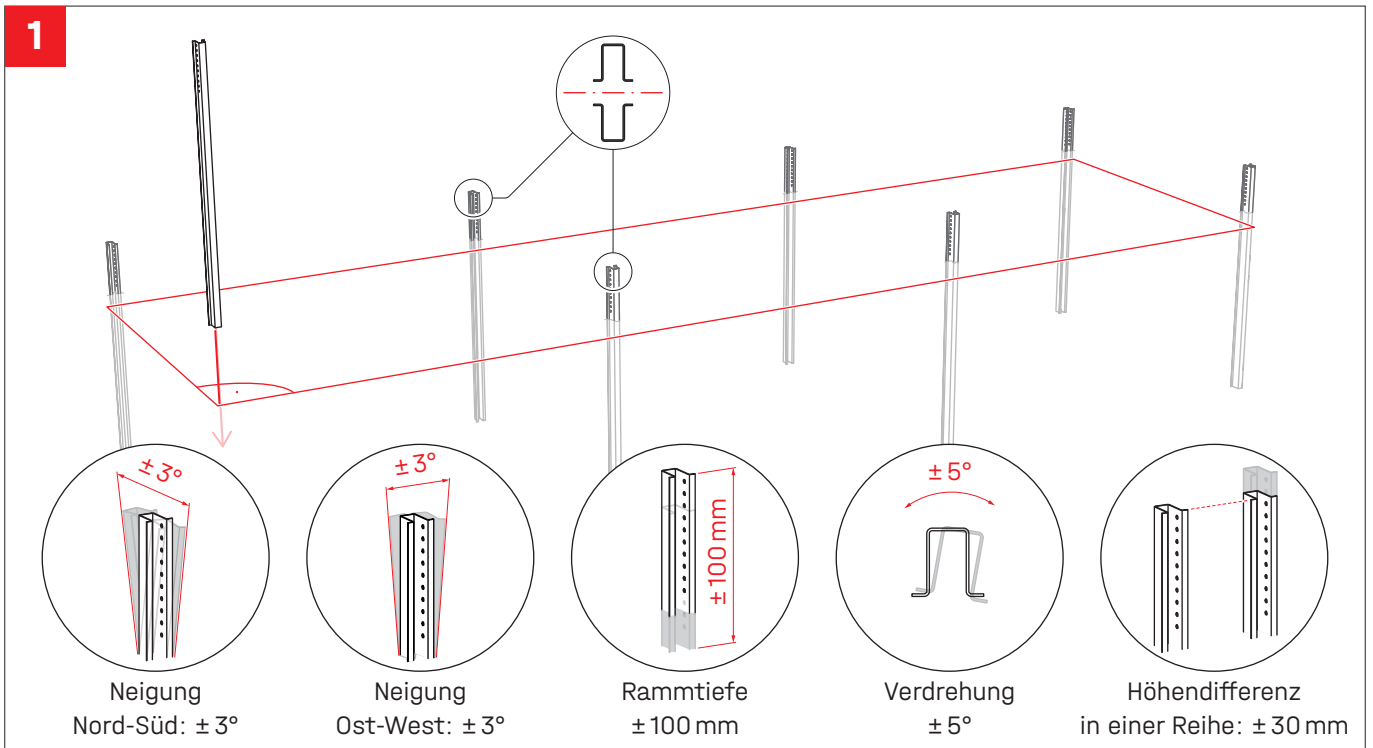
**1** 2005112  
Cap-Profile  
N-Rack 2,3 m

**2** 2004408  
Sechskantschraube  
mit Schaft M10 × 70

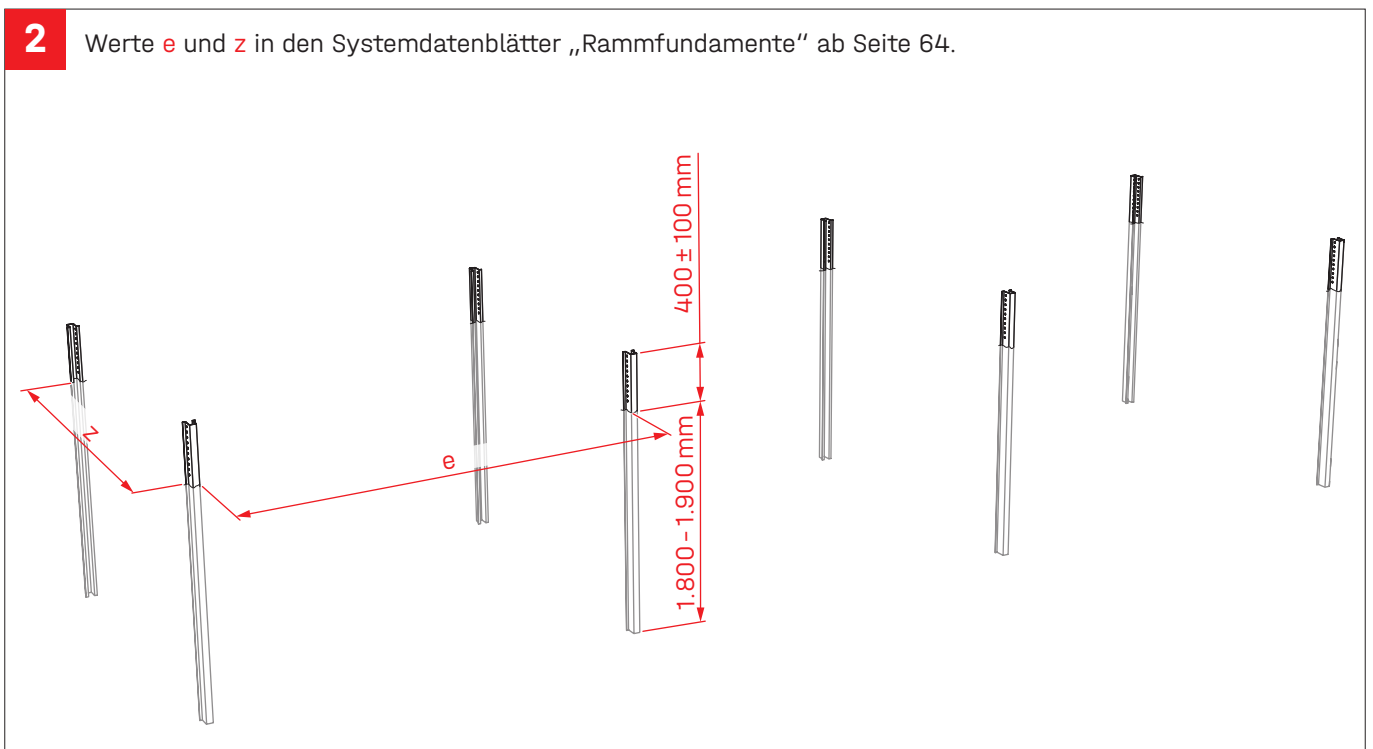
**3** 1002849  
Sechskant Sicherungs-  
mutter M10

# Montage

## Gründung

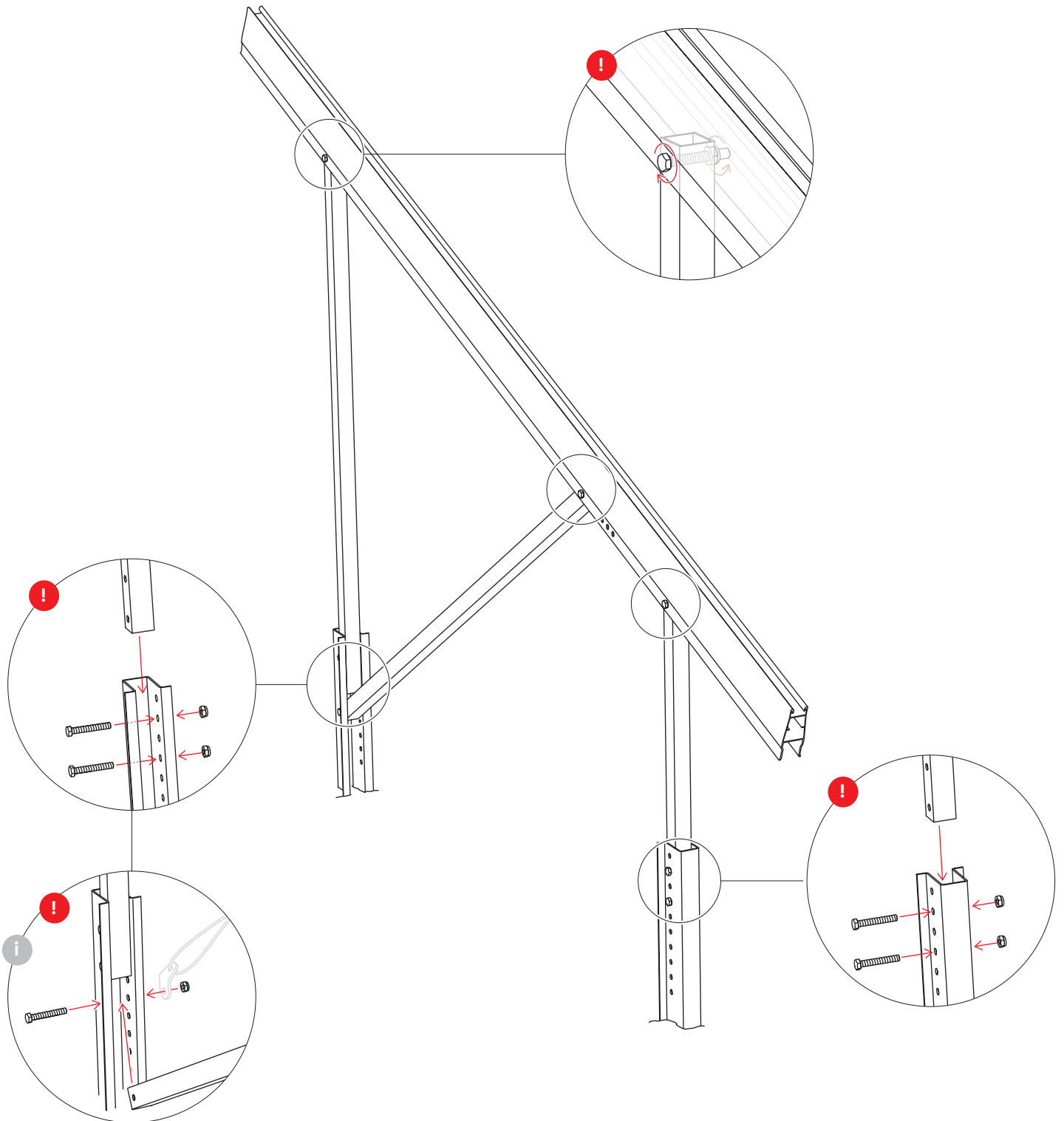


## Abstände



## Anbindung Stützen

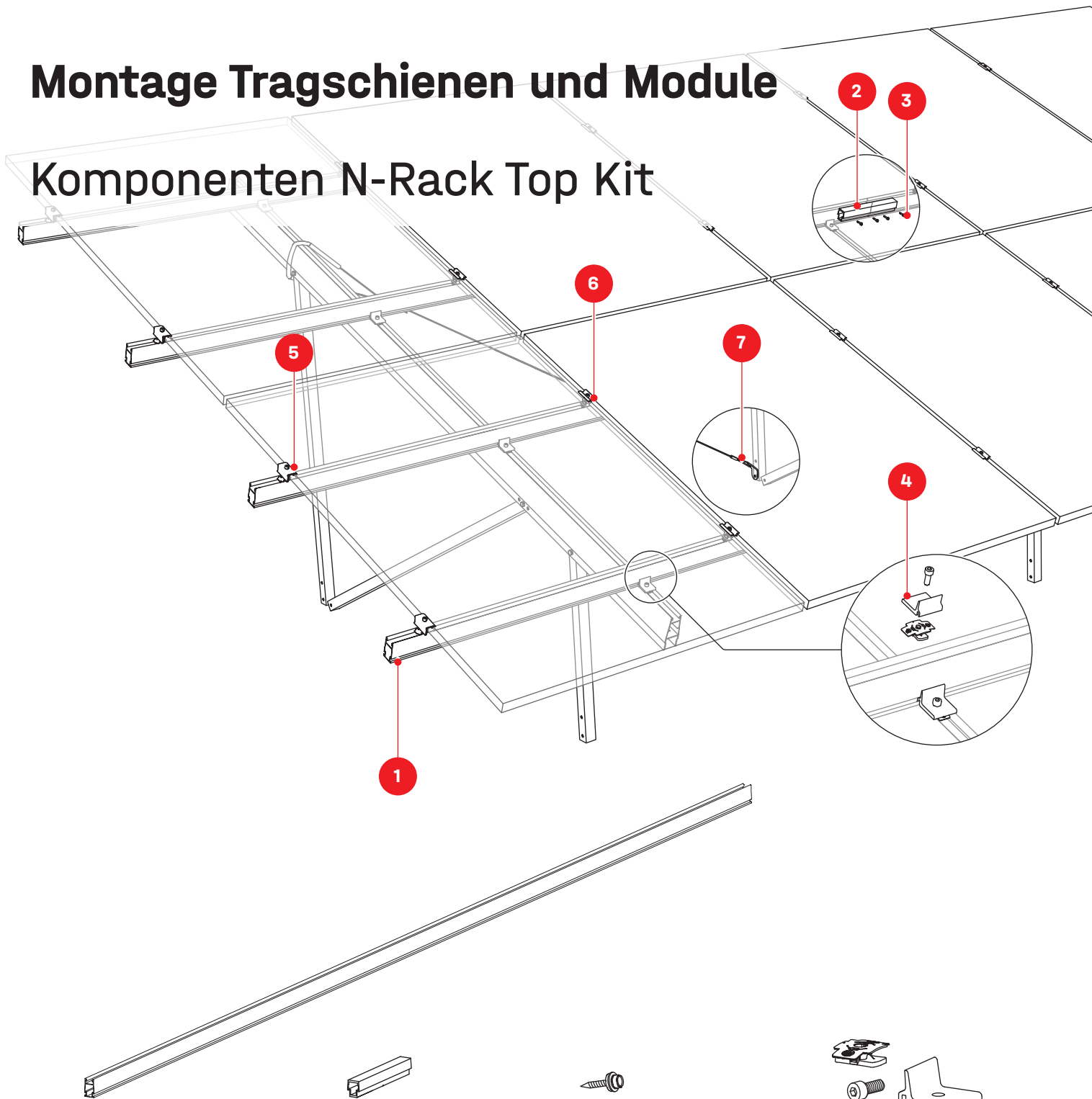
**3** ! 30 Nm



**i** Anbringung des Windverbandes: „Herstellung Windverband“ auf Seite 38.

# Montage Tragschienen und Module

## Komponenten N-Rack Top Kit



**1** Artikelnummer  
anlagenspezifisch,  
siehe S. 8  
**CrossRail 73**

**2** 2004409  
**CrossRail 73  
Connector**

**3** 1001051  
**Bohrschraube  
5,5 × 25**

**4** 2003145  
**Climber 36/50 Set**

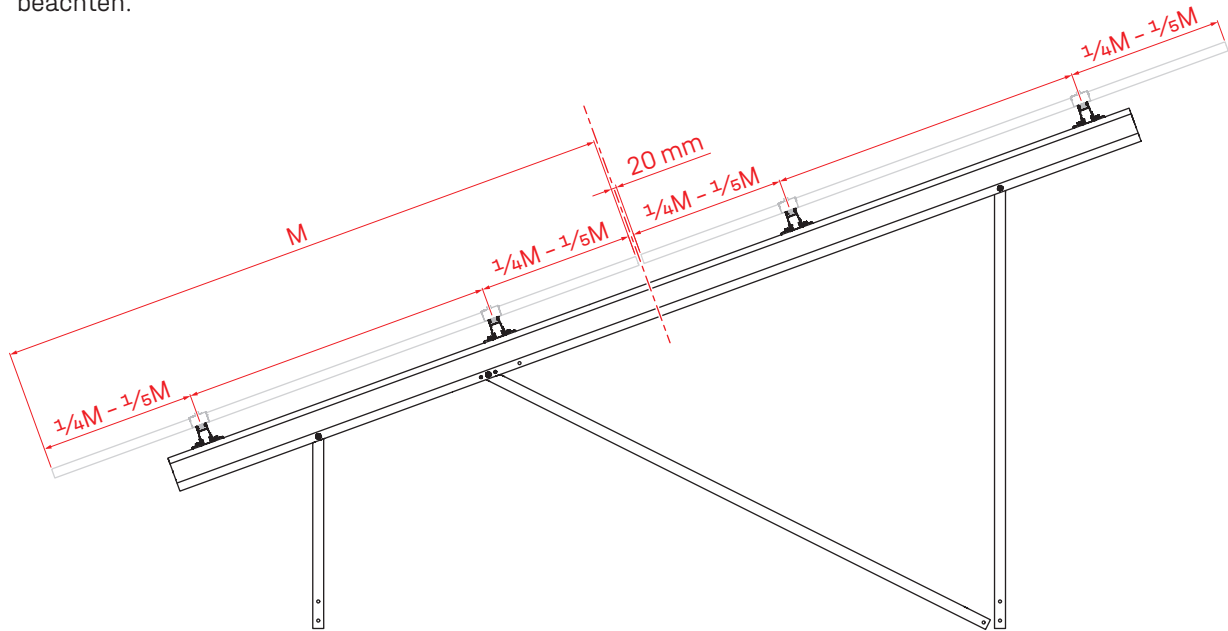
**5** 2004543  
**Modulendklemme  
K2 Clamp EC 25 - 40**

**6** 2004146  
**Modulmittelklemme  
K2 Clamp MC 25 - 40**

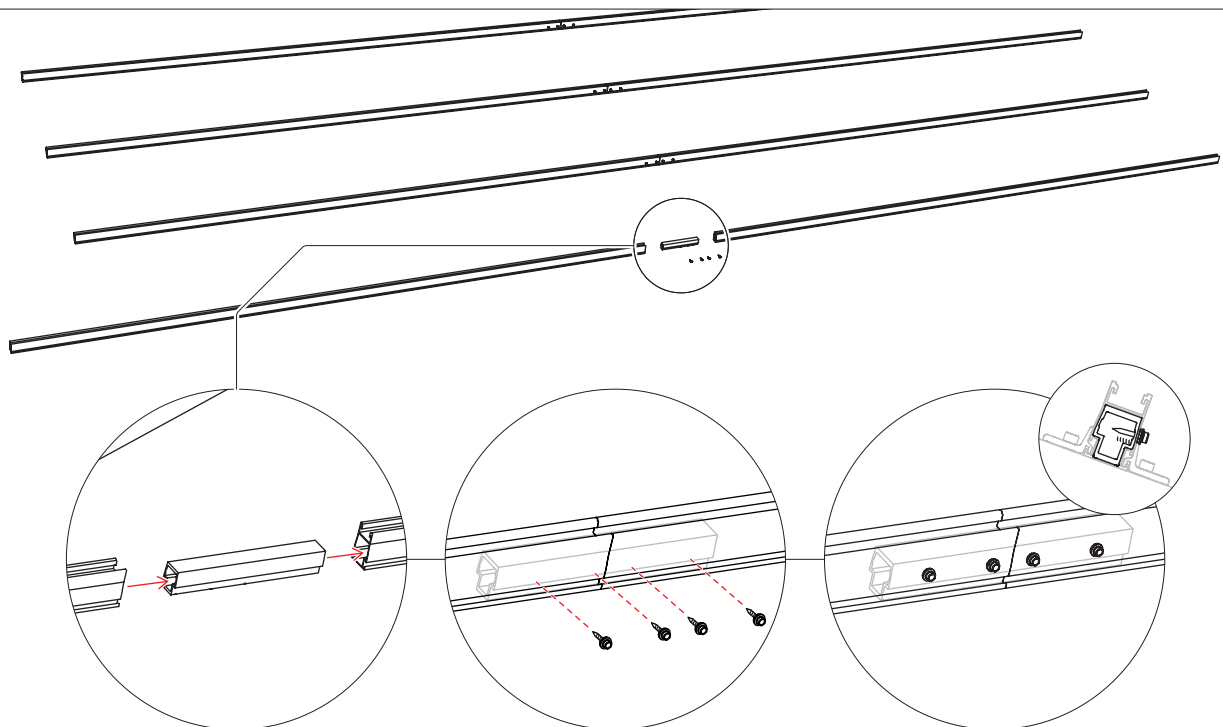
**7** 2004410  
**Windverband Set**

# Montage

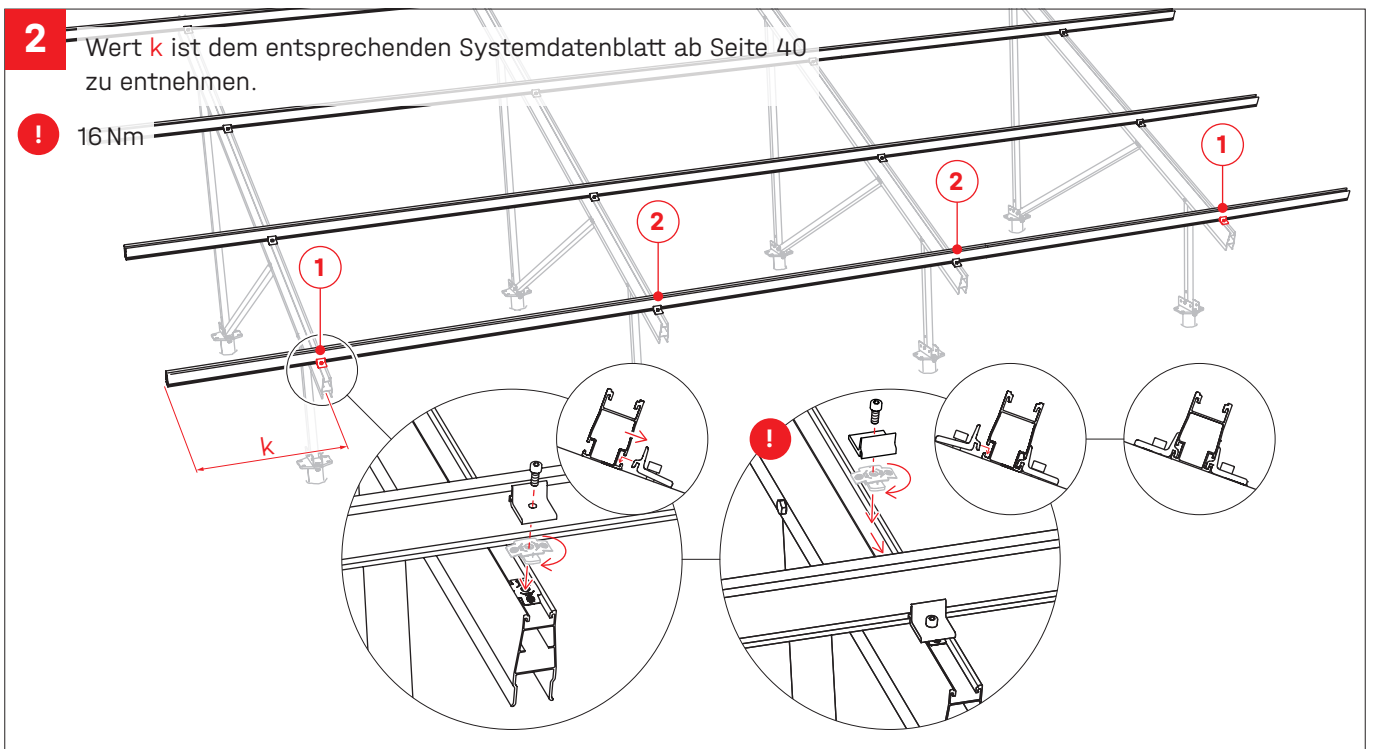
**1a**  $M$  = Modullänge. Die Klemmenposition und die Module müssen symmetrisch zur Länge des Obergurts angeordnet werden. Herstellerangaben zum Klemmbereich der Module beachten.



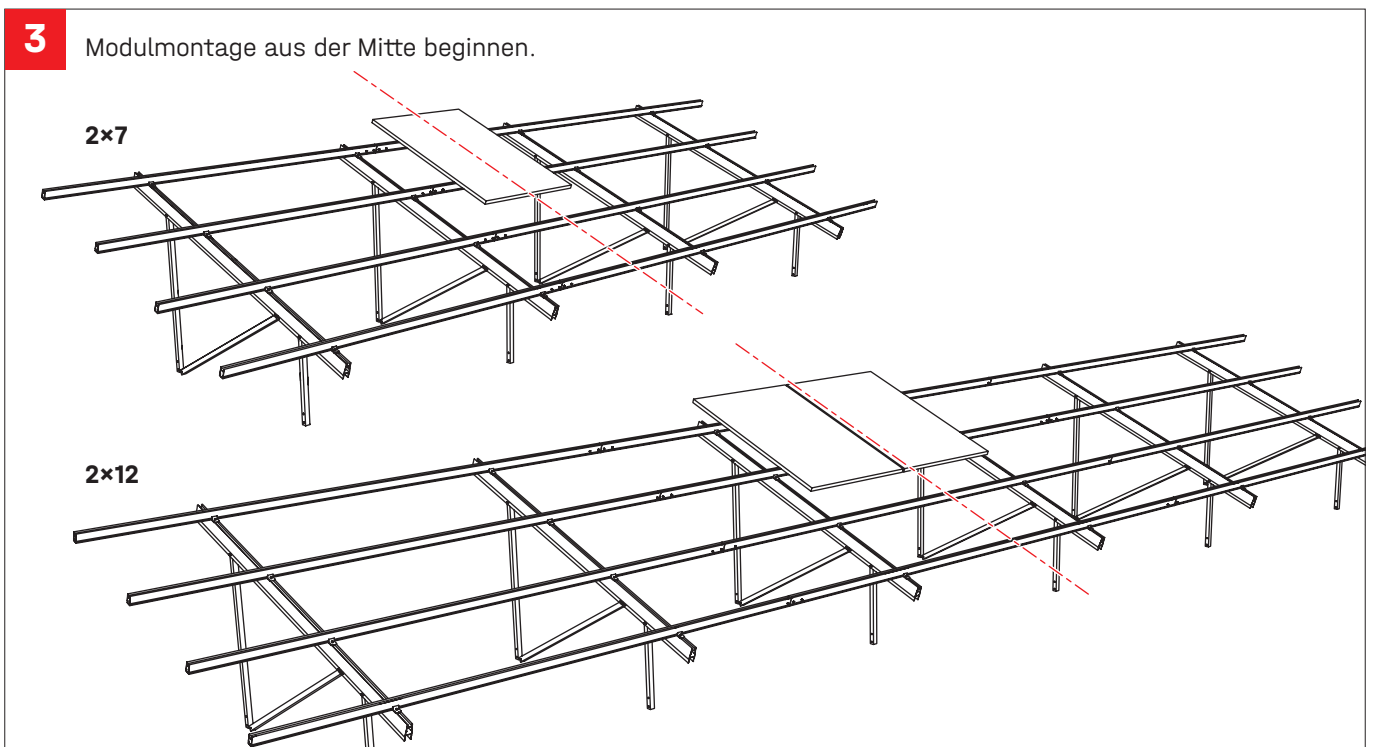
**1b**

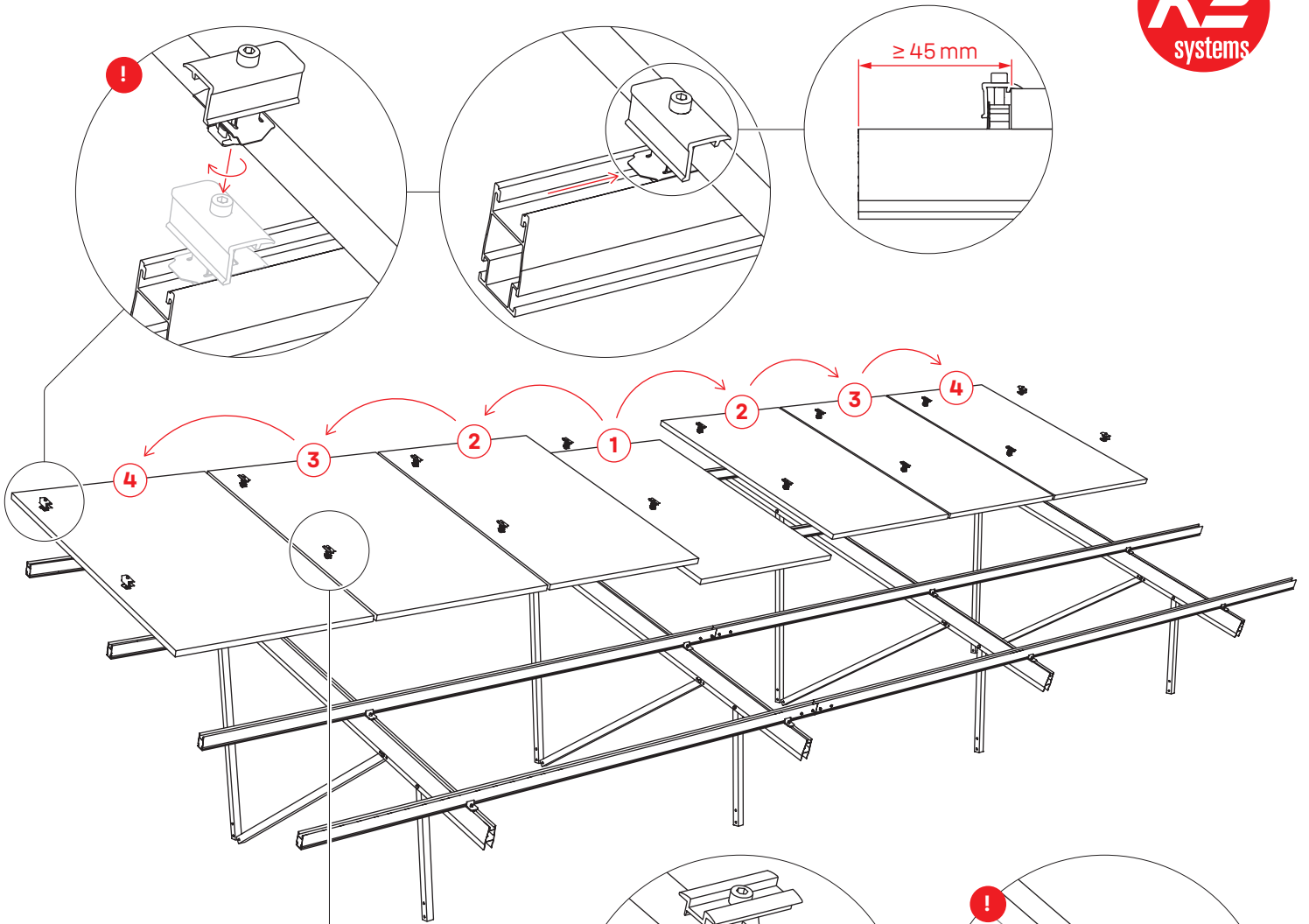


## Anbindung Tragschiene CrossRail

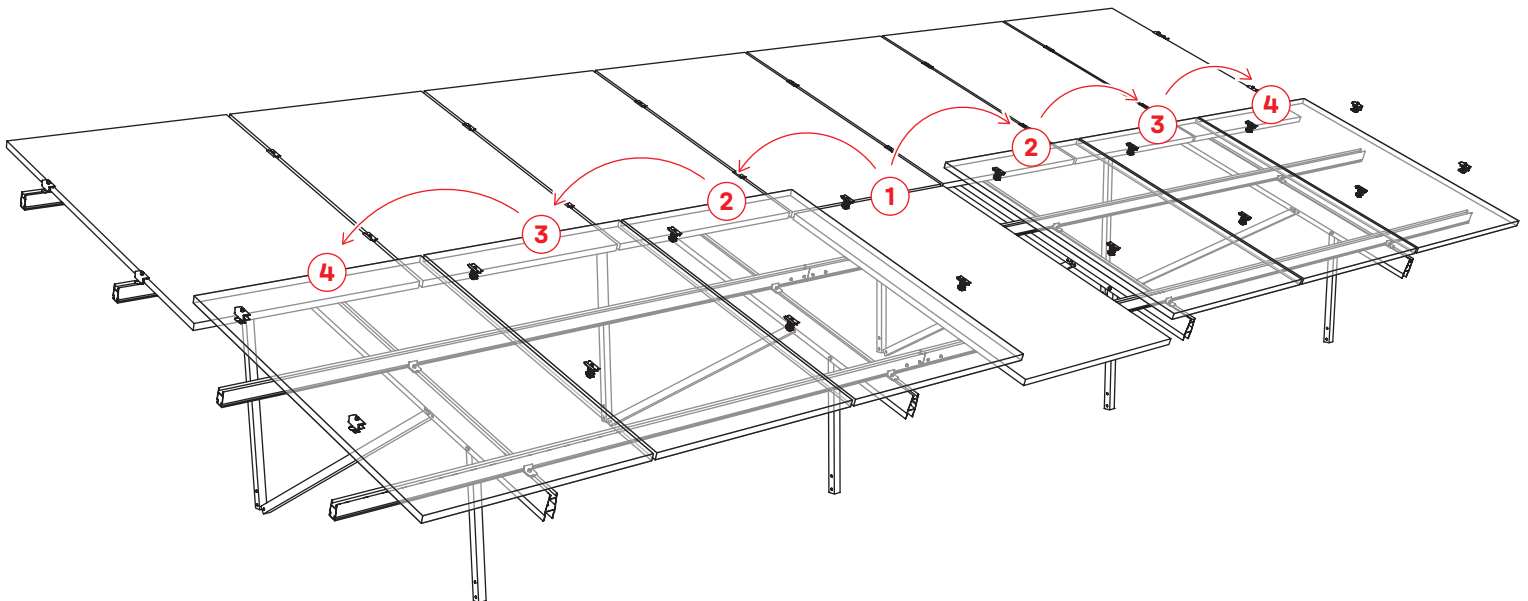
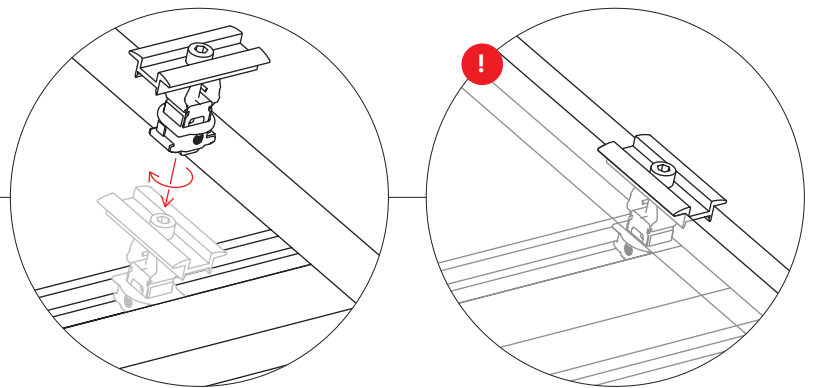


## Modulmontage

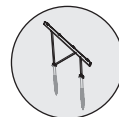
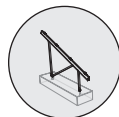




! 16 Nm

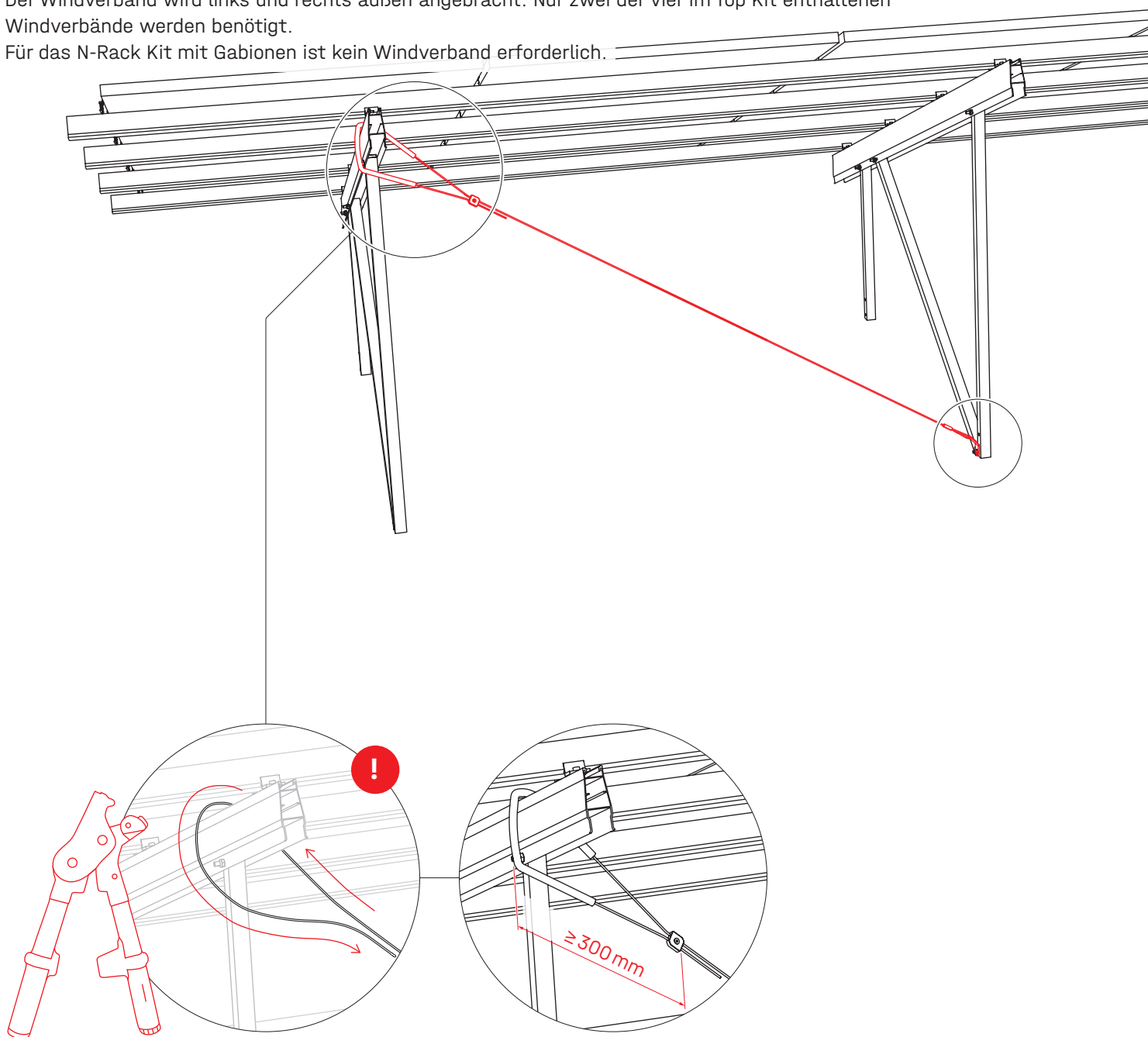


# Herstellung Windverband

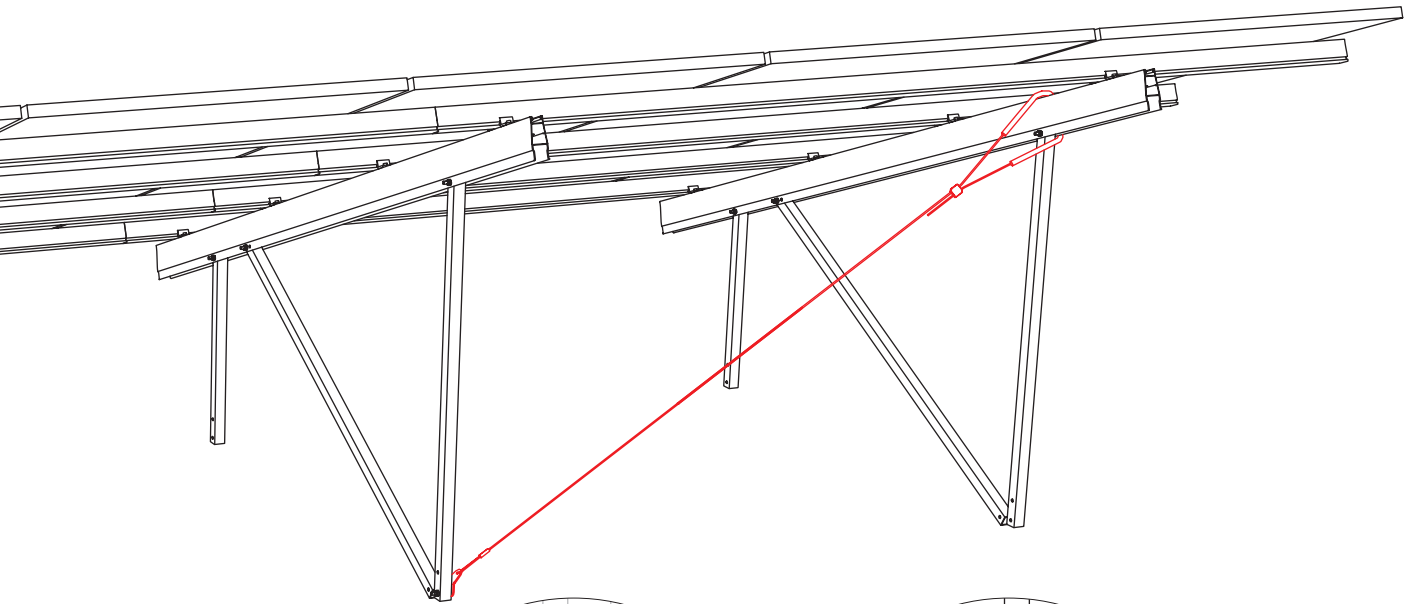


Der Windverband wird links und rechts außen angebracht. Nur zwei der vier im Top Kit enthaltenen Windverbände werden benötigt.

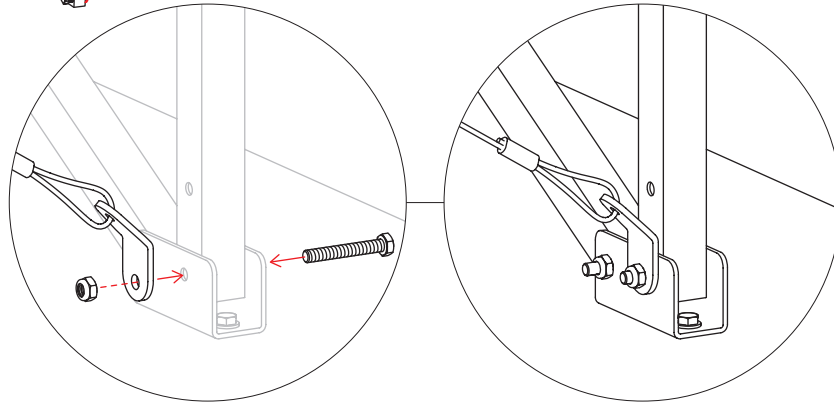
Für das N-Rack Kit mit Gabionen ist kein Windverband erforderlich.



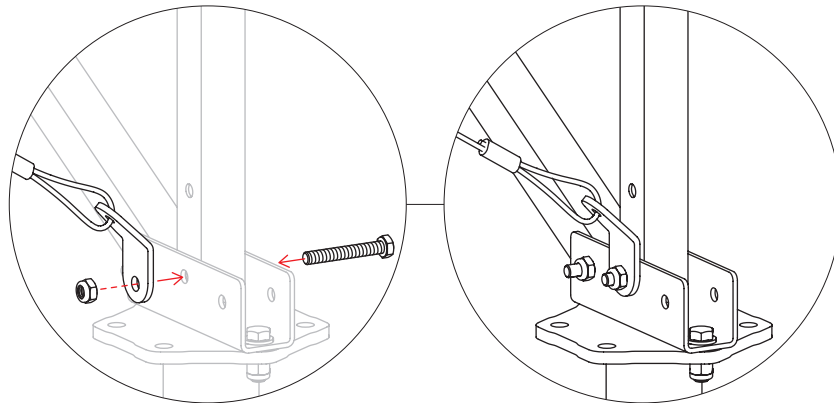
 Anwendungshinweise des Werkzeugherstellers beachten



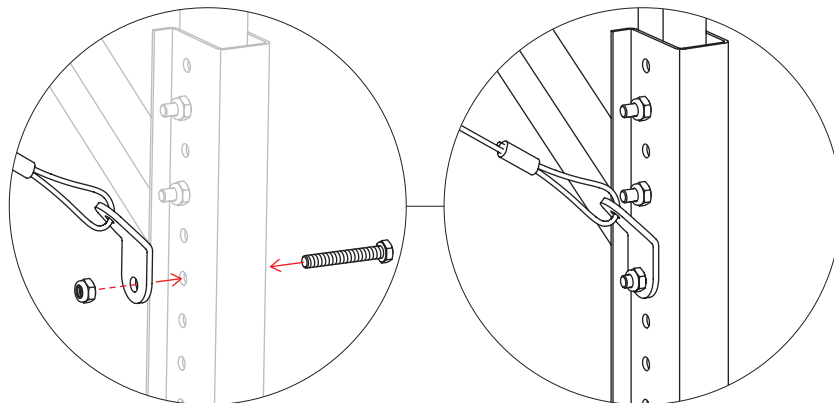
Betonfundamente



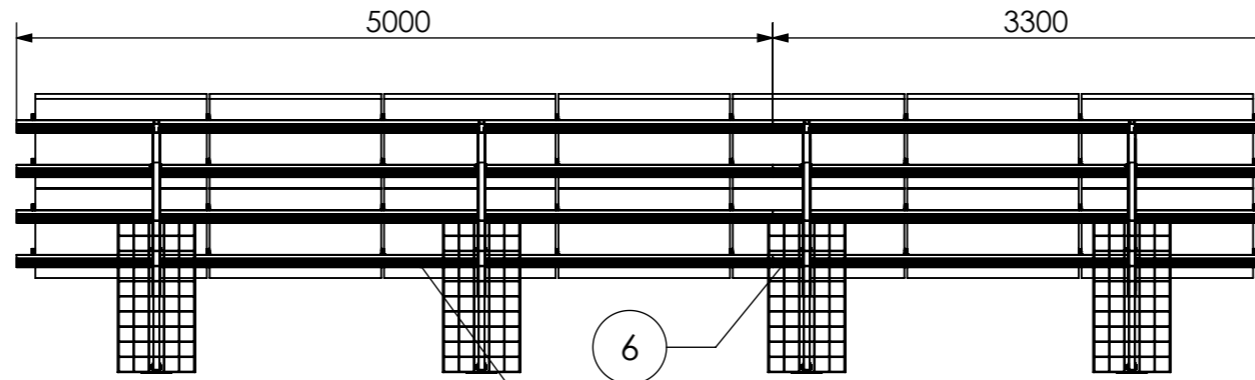
Schraubfundamente



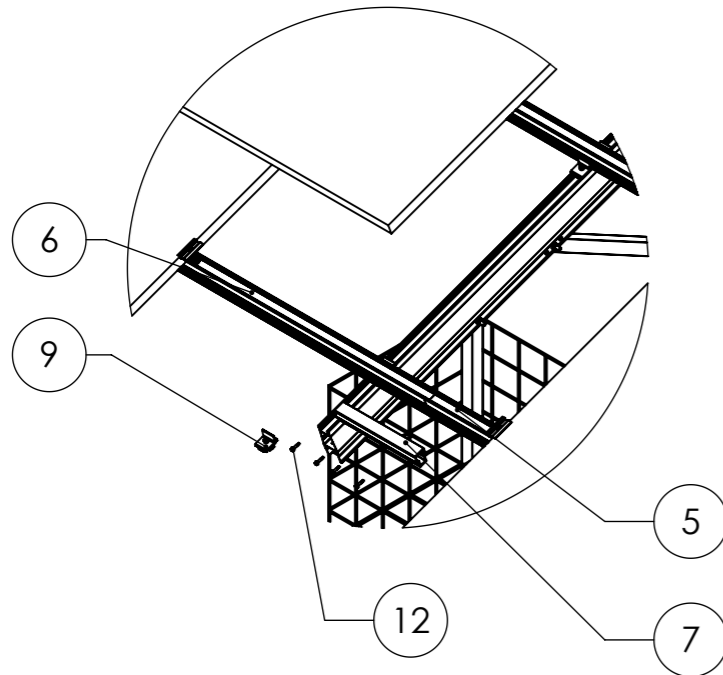
Rammfundamente



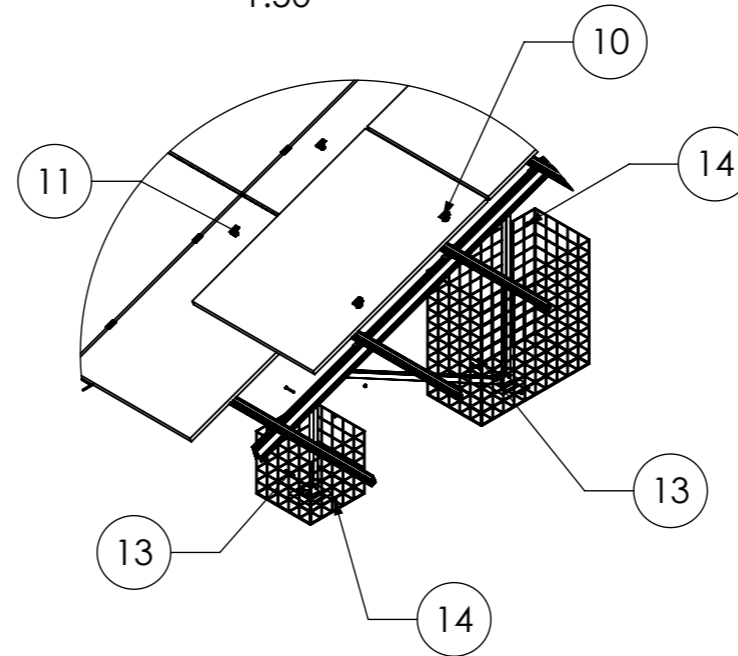




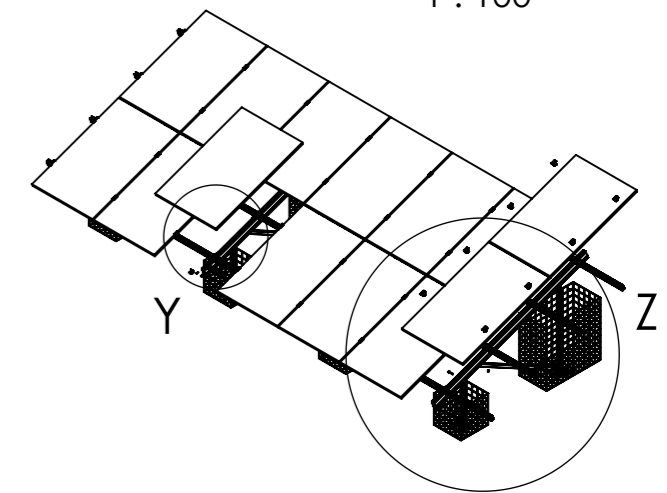
Detail Y  
1 : 20



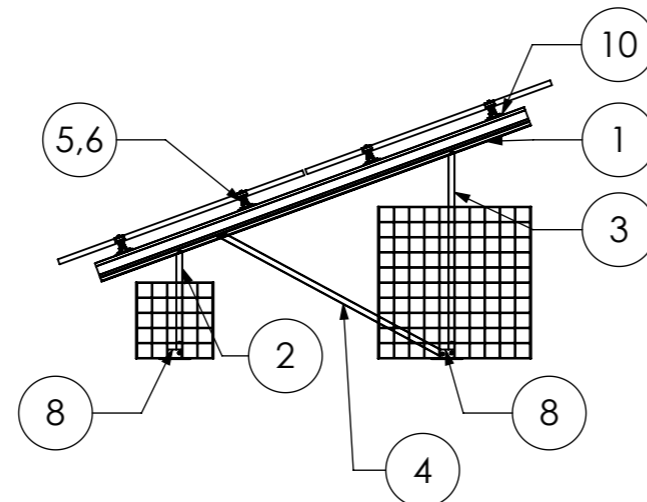
Detail Z  
1:50



Isometric  
1 : 100



Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack Base Plate
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Self-tapping screw 5,5 x 25 - A2
13	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
14	Hexagon nut M10 - DIN 985 - A2-70



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



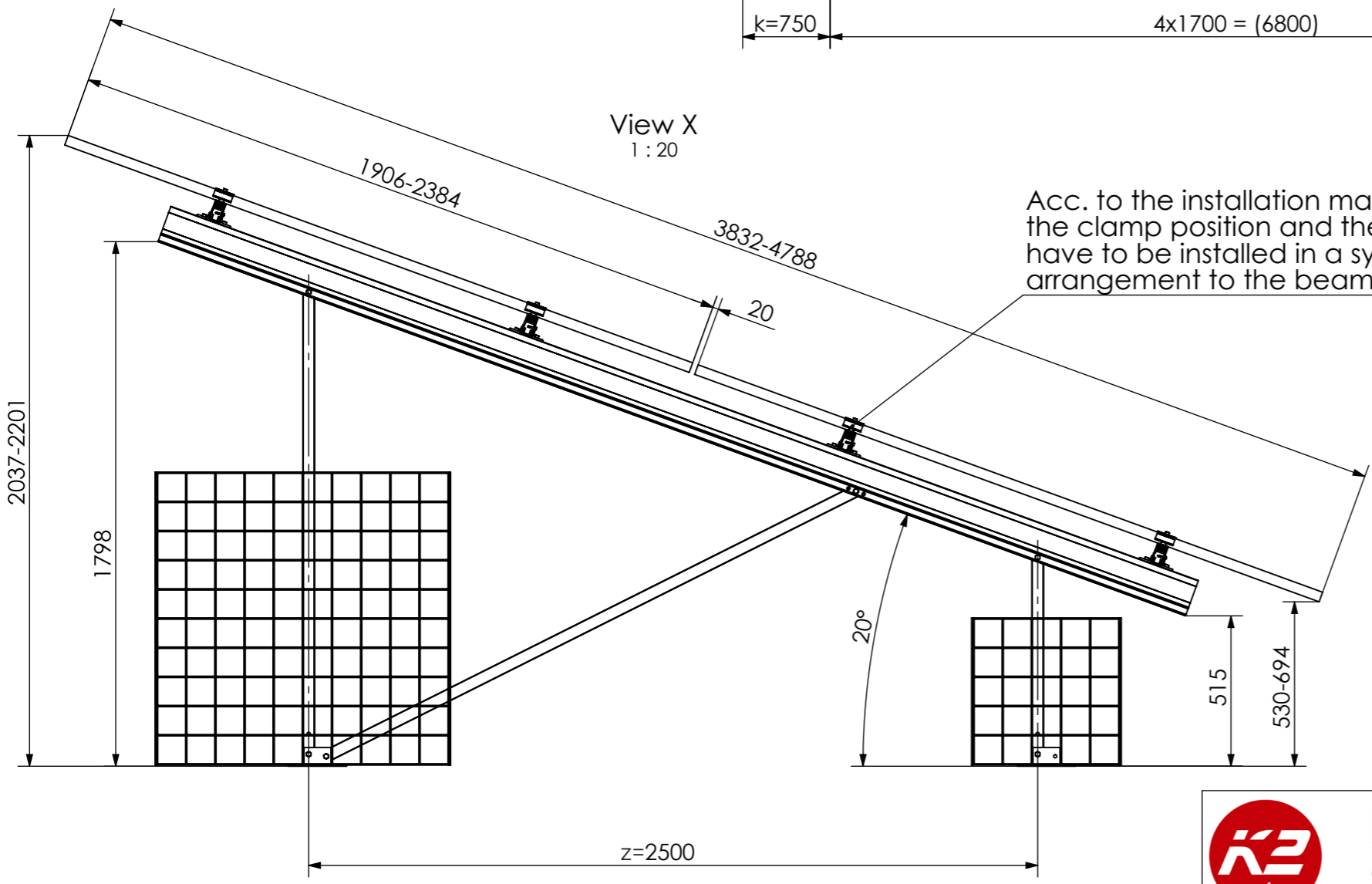
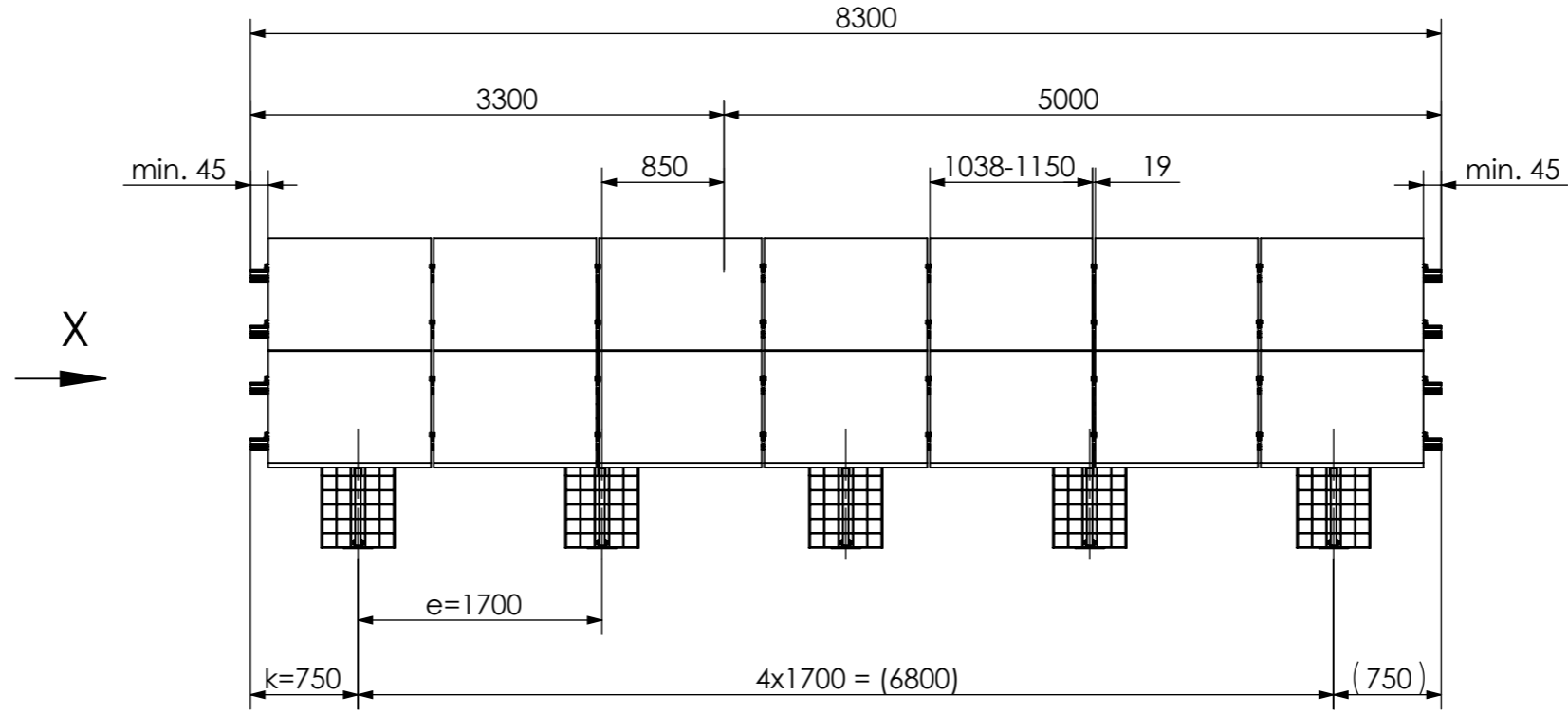
K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation: **Data sheet  
N-Rack 2.20 Gabion 2x7 S**

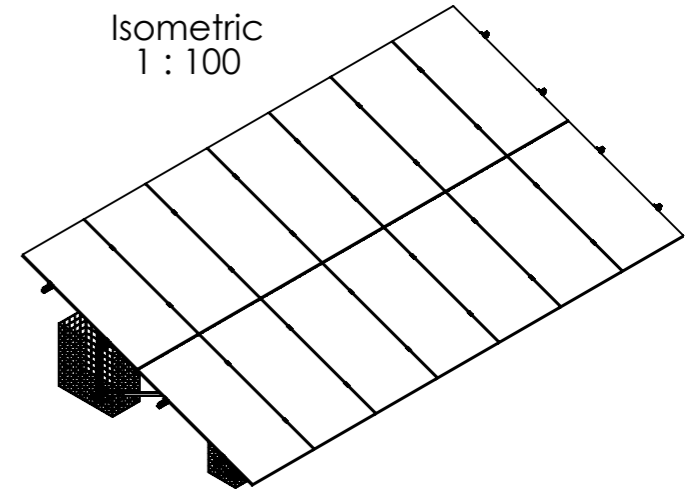
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Designed C. Erb	26.01.2026	-	---	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: --	All dimensions in mm
Last change		Weight: -	Scale: 1:50	Sheet 1 of 1

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**Gabion Kit 2x7 L**



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



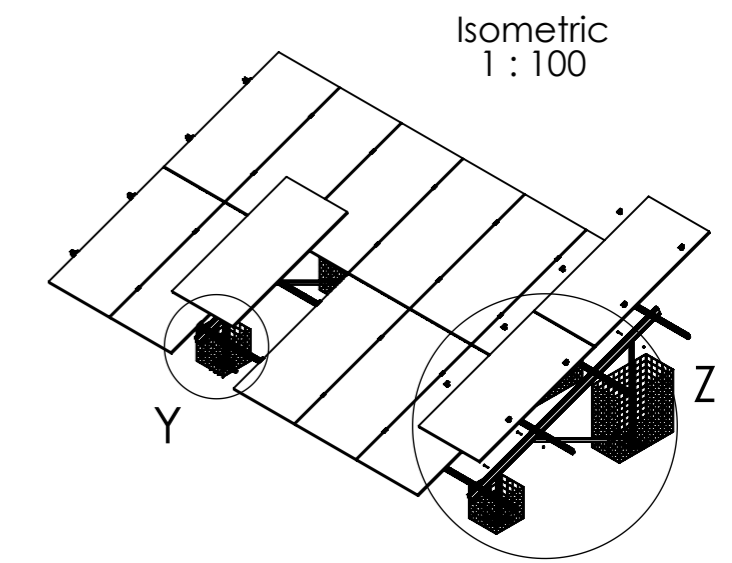
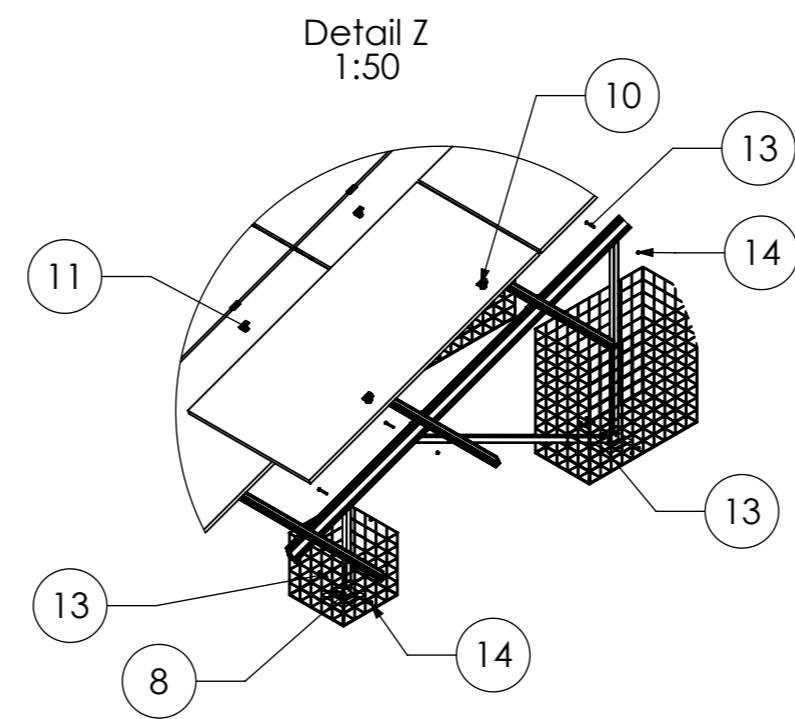
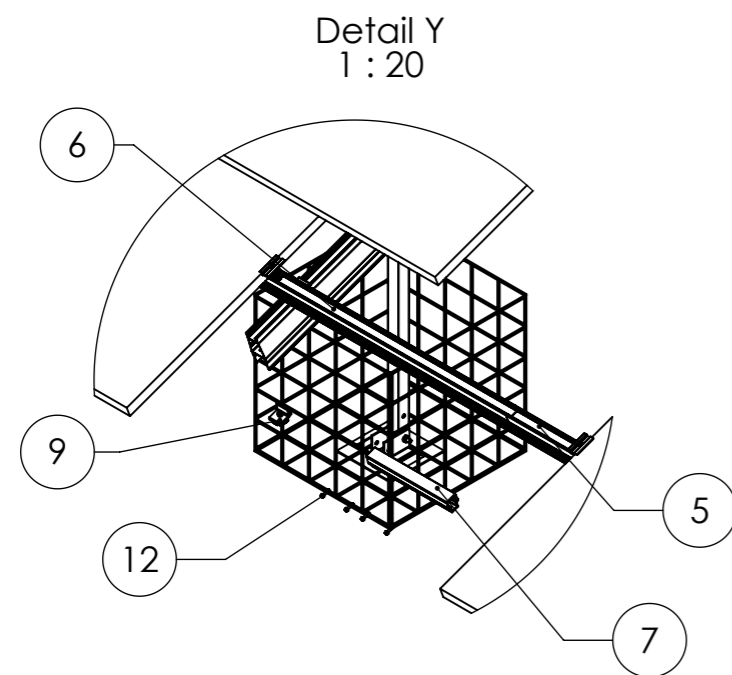
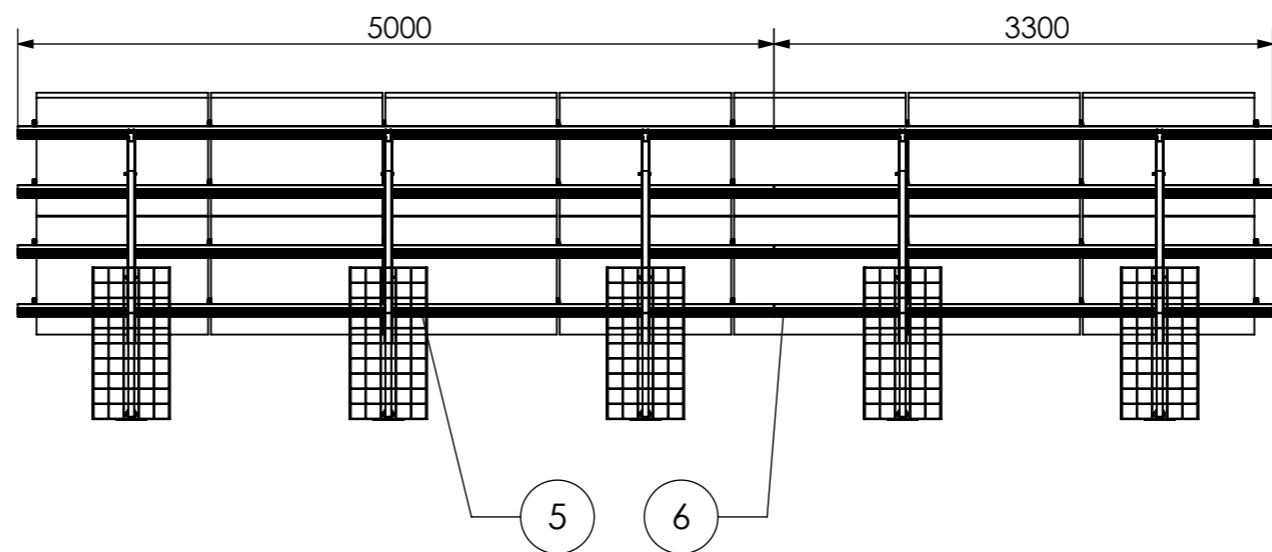
14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

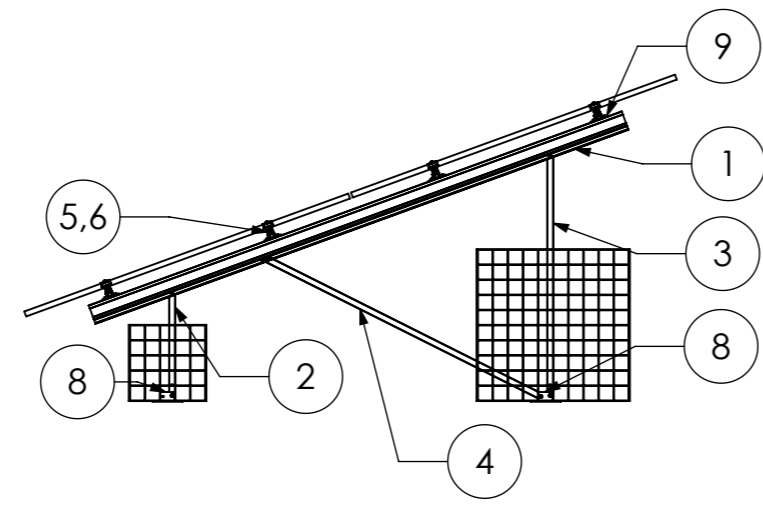
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet N-Rack 2.20 Gabion 2x7 L</b>	
	Name	Date	Material:	Item no.:	---
	Designed	C. Erb	26.01.2026	Surface: -	---
	Approved	L. Kreemke	16.03.2026	Weight: -	---
Last change			Scale: 1:50		---

A3	
Item no.:	---
Drawing no.:	---
All dimensions in mm Sheet 1 of 1	



Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack Base Plate
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Self-tapping screw 5,5 x 25 - A2
13	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
14	Hexagon nut M10 - DIN 985 - A2-70



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



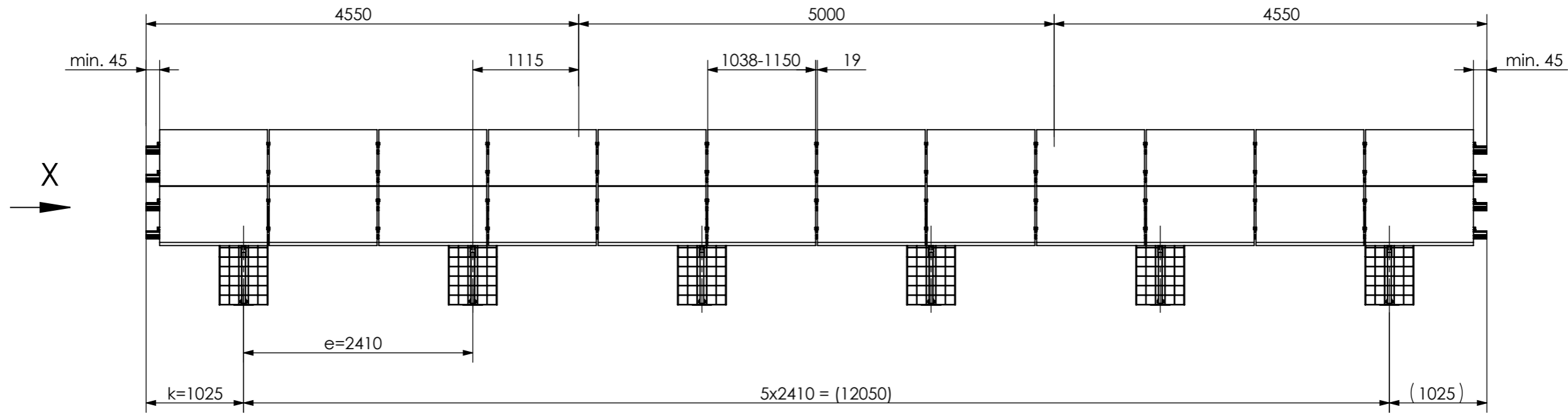
K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation: **Data sheet**  
**N-Rack 2.20 Gabion 2x7 L**

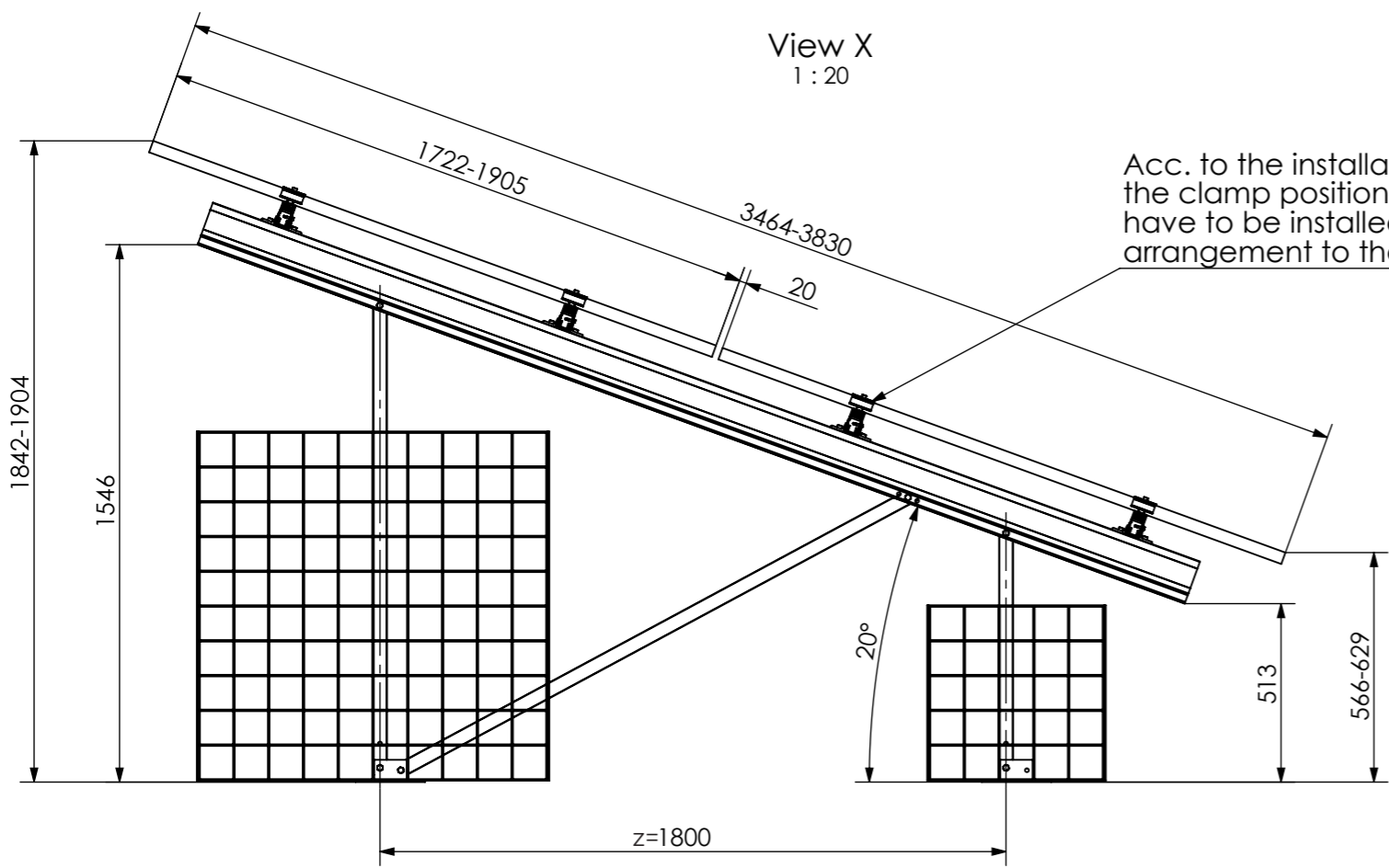
Name	Date	Material:	Item no.:	A3
Designed C. Erb	26.01.2026	-	---	All dimensions in mm Sheet 1 of 1
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: --	
Last change		Weight: -	Scale: 1:50	

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# Gabion Kit 2x12 S

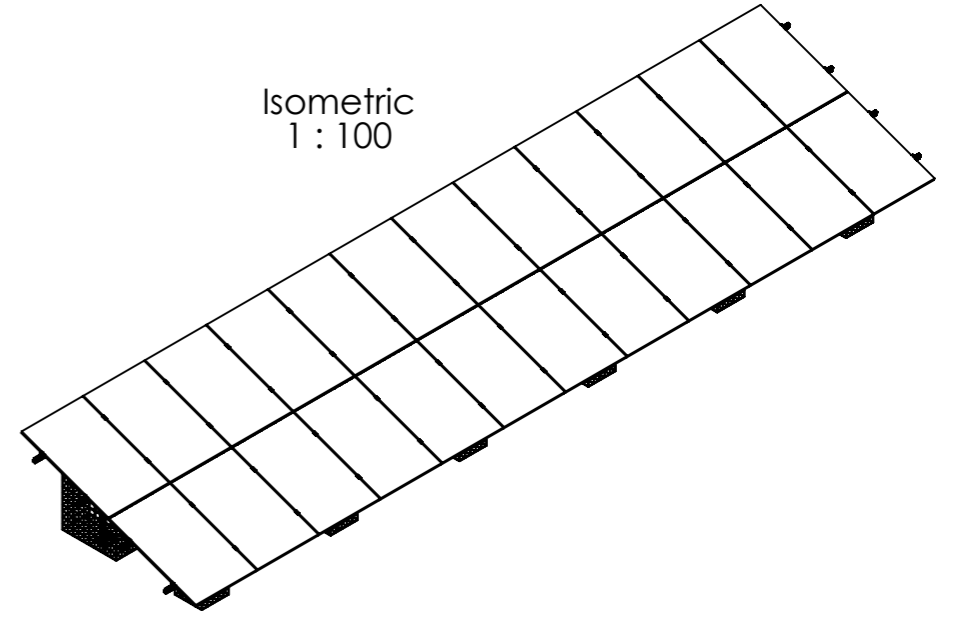


View X  
1 : 20



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.

Isometric  
1 : 100



24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width > 1150-1303mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

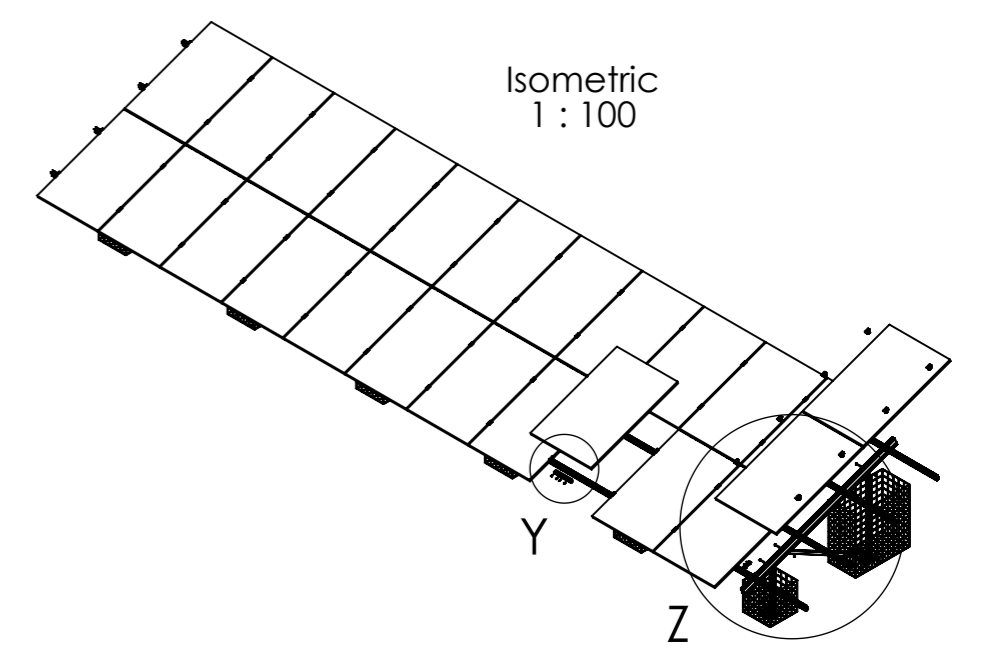
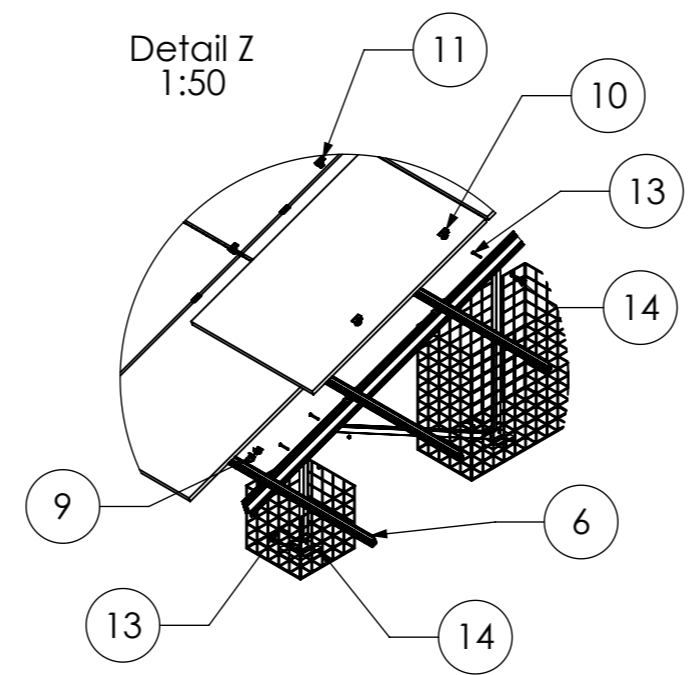
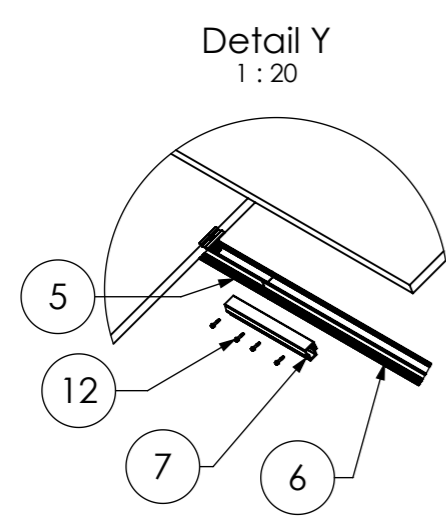
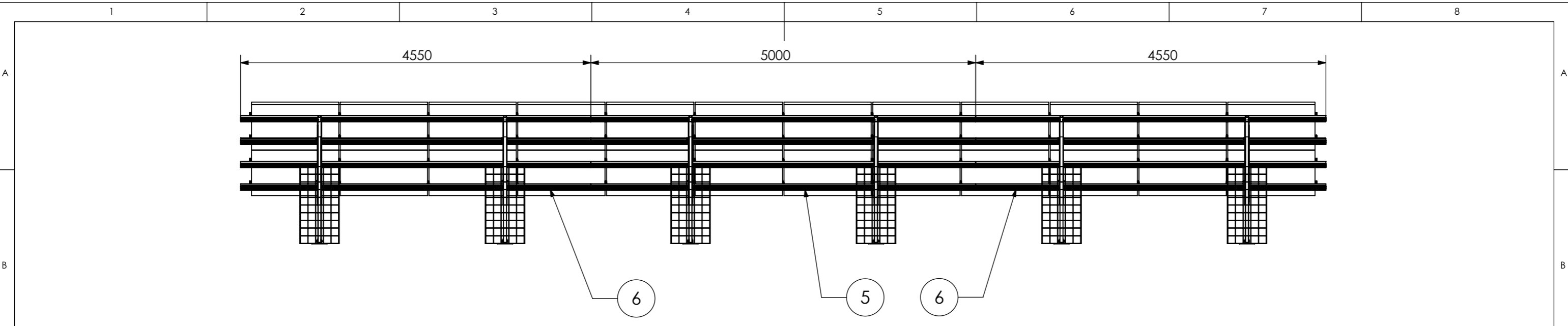


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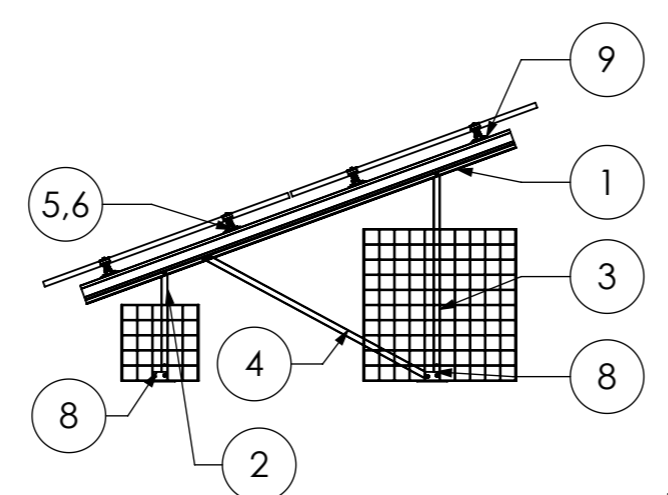
Designation: **Data sheet**  
**N-Rack 2.20 Gabion 2x12 S**

Name	Date	Material:	Item no.:	A3
Designed C. Erb	27.01.2026	-	-	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.:	All dimensions in mm
Last change		Weight: -	Scale: 1:50	Sheet 1 of 1

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Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5m
6	CrossRail 73 - 4,55m
7	CrossRail 73 Connector
8	N-Rack Base Plate
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Self-tapping screw 5,5 x 25 - A2
13	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
14	Hexagon nut M10 - DIN 985 - A2-70



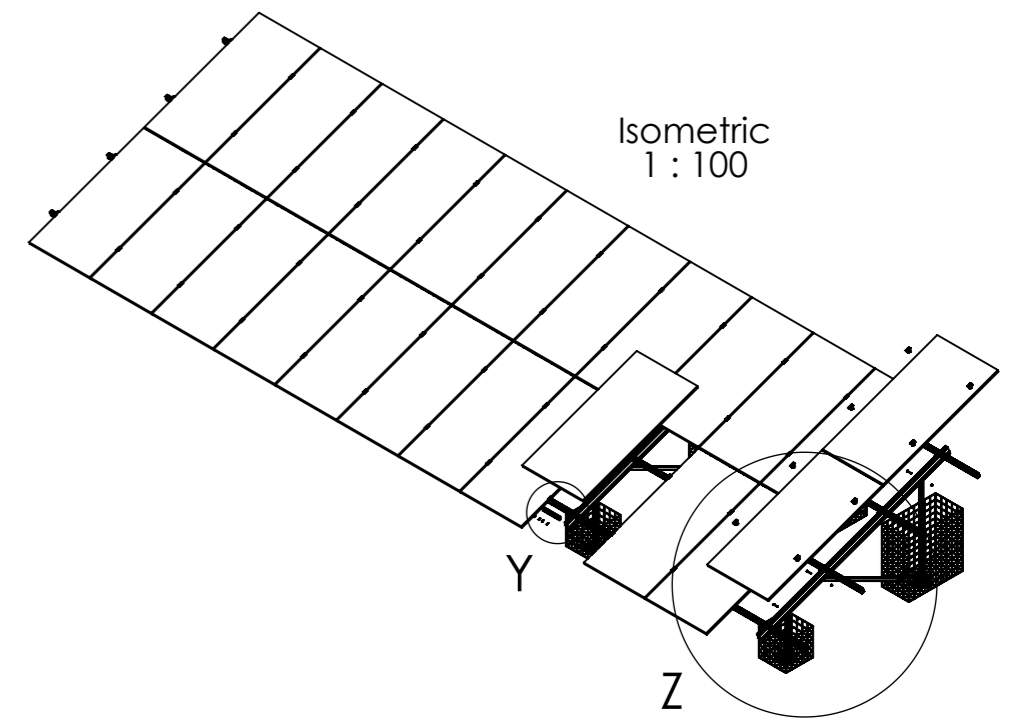
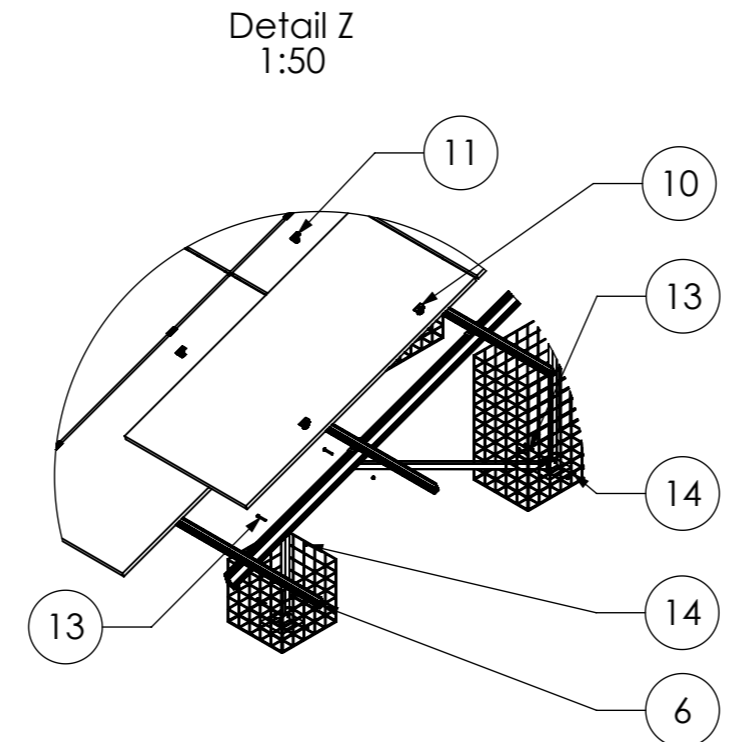
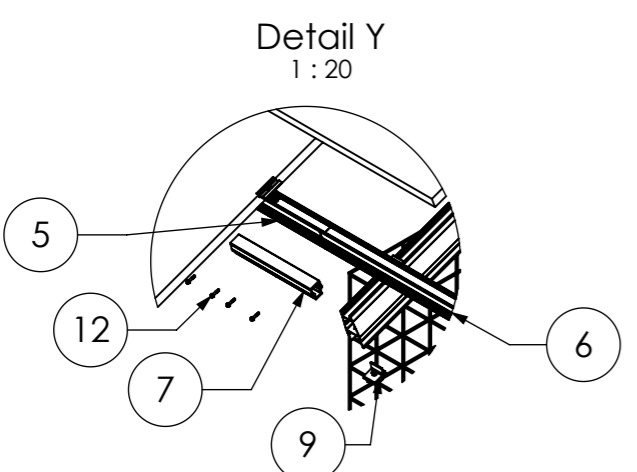
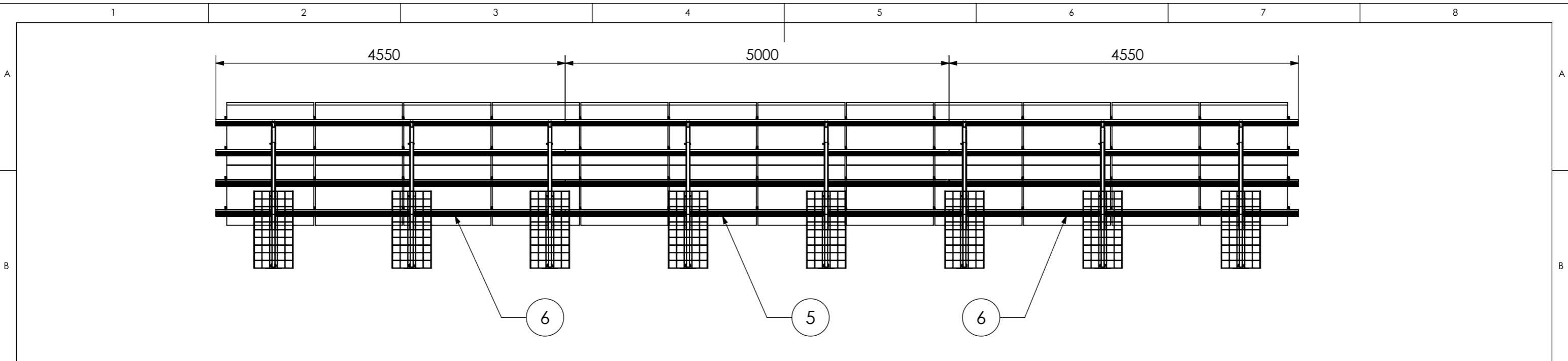
24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width >1150-1303mm

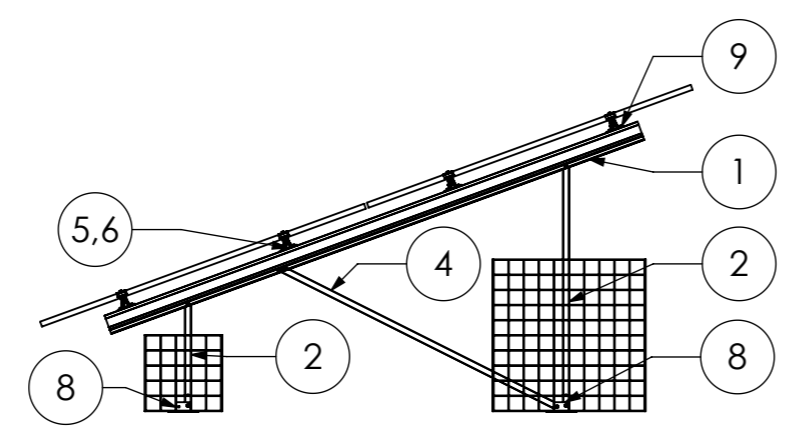
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet N-Rack 2.20 Gabion 2x12 S</b>												
	<table border="1"> <thead> <tr> <th>Name</th> <th>Date</th> <th>Material:</th> </tr> </thead> <tbody> <tr> <td>Designed C. Erb</td> <td>27.01.2026</td> <td>-</td> </tr> <tr> <td>Approved L. Kreemke</td> <td>16.03.2026</td> <td>Surface: -</td> </tr> <tr> <td>Last change</td> <td></td> <td>Weight: -</td> </tr> </tbody> </table>	Name	Date	Material:	Designed C. Erb	27.01.2026	-	Approved L. Kreemke	16.03.2026	Surface: -	Last change		Weight: -	Item no.: -	A3	Drawing no.: -
Name	Date	Material:														
Designed C. Erb	27.01.2026	-														
Approved L. Kreemke	16.03.2026	Surface: -														
Last change		Weight: -														
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Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	N-Rack Base Plate
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Self-tapping screw 5,5 x 25 - A2
13	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
14	Hexagon nut M10 - DIN 985 - A2-70



24 modules (2x12 Portrait)  
for module width ≤ 1150mm

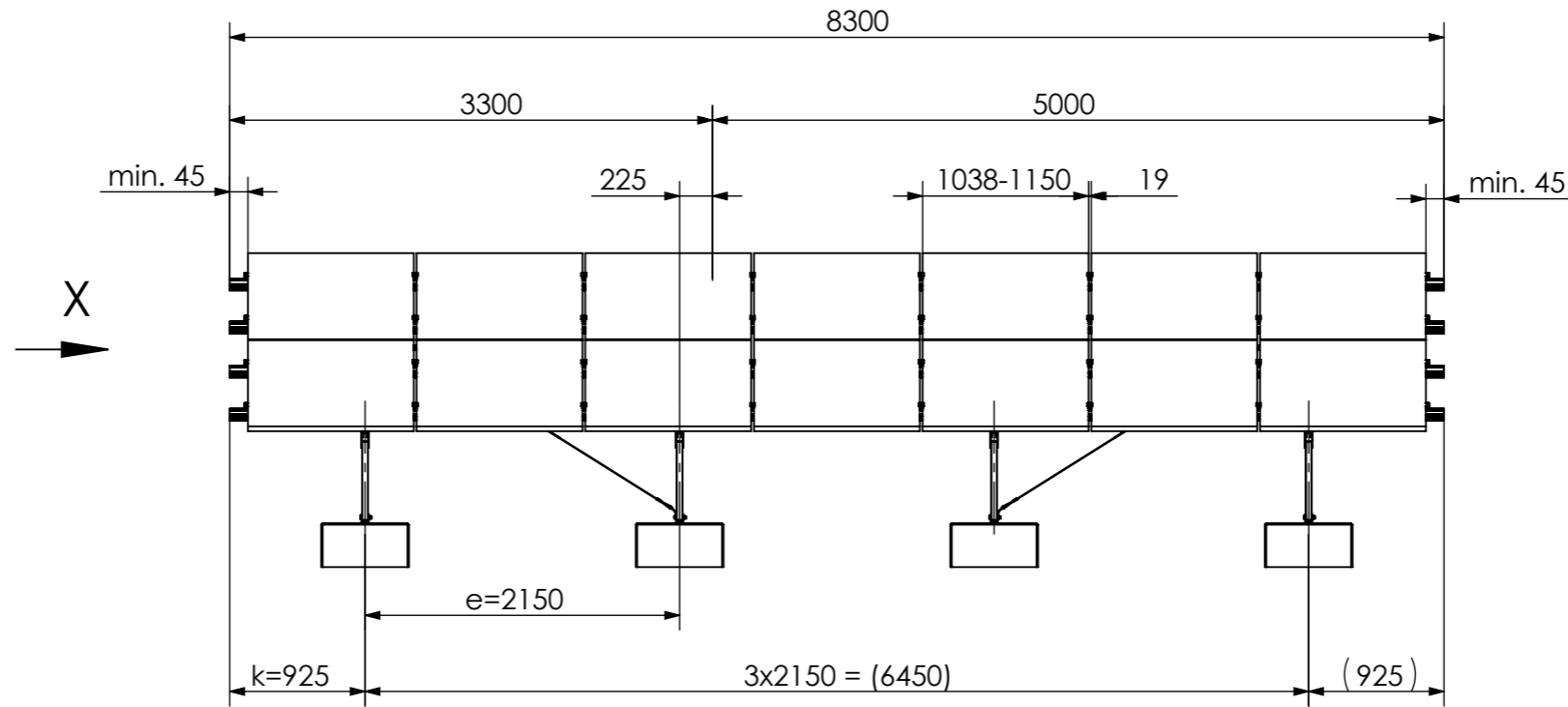
20 modules (2x10 Portrait)  
for module width > 1150-1303mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

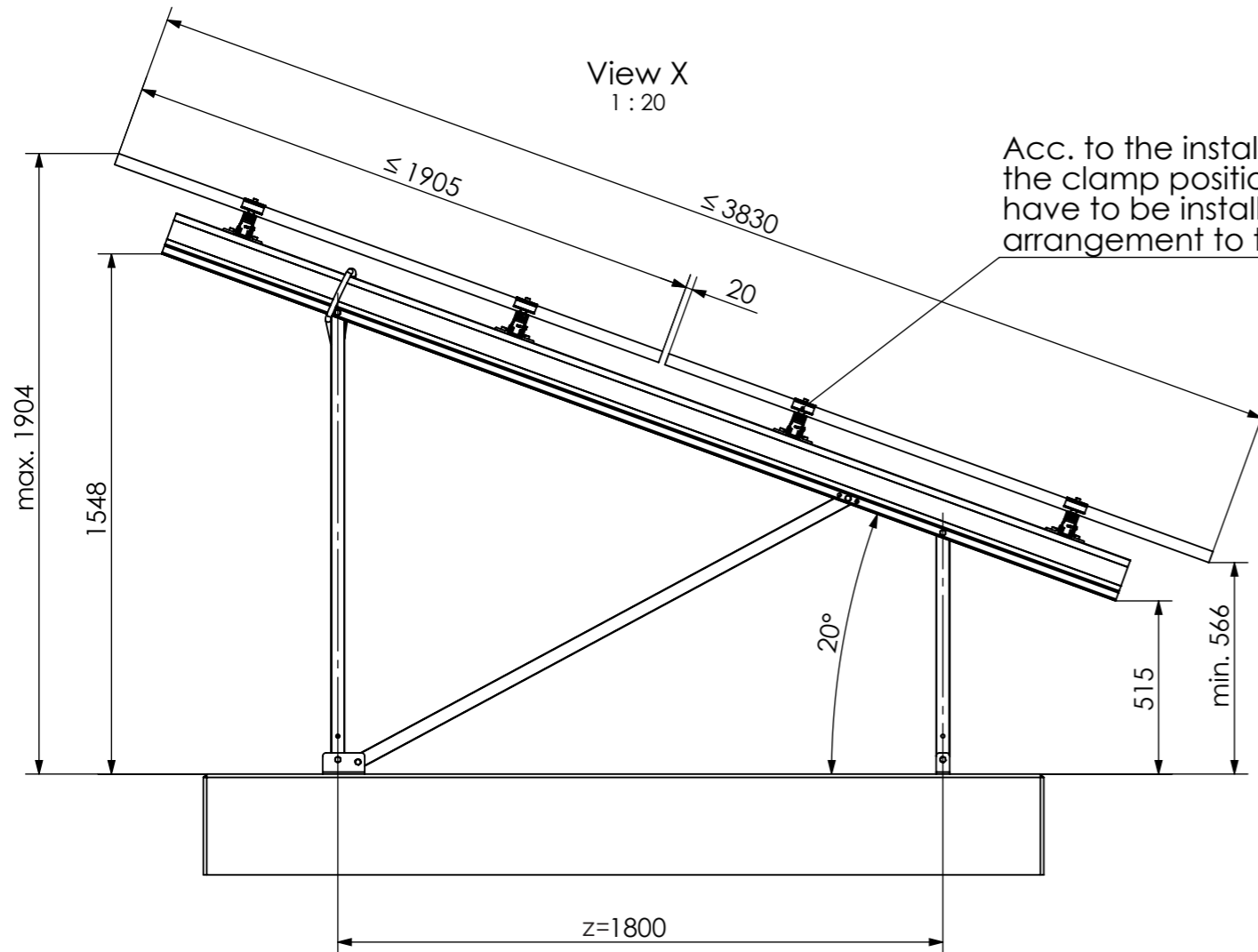
	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <h3>Data sheet</h3> <h2>N-Rack 2.20 Gabion 2x12 L</h2>														
	<table border="1"> <thead> <tr> <th>Name</th> <th>Date</th> <th>Material:</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>C. Erb</td> <td>27.01.2026</td> <td>-</td> </tr> <tr> <td>Approved</td> <td>L. Kreemke</td> <td>16.03.2026</td> <td>Surface: -</td> </tr> <tr> <td>Last change</td> <td></td> <td>Weight: -</td> <td>Scale: 1:50</td> </tr> </tbody> </table>	Name	Date	Material:	Designed	C. Erb	27.01.2026	-	Approved	L. Kreemke	16.03.2026	Surface: -	Last change		Weight: -	Scale: 1:50	Item no.: -	Drawing no.: -
Name	Date	Material:																
Designed	C. Erb	27.01.2026	-															
Approved	L. Kreemke	16.03.2026	Surface: -															
Last change		Weight: -	Scale: 1:50															
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# Betonfundamente

## Concrete Kit 2x7 S

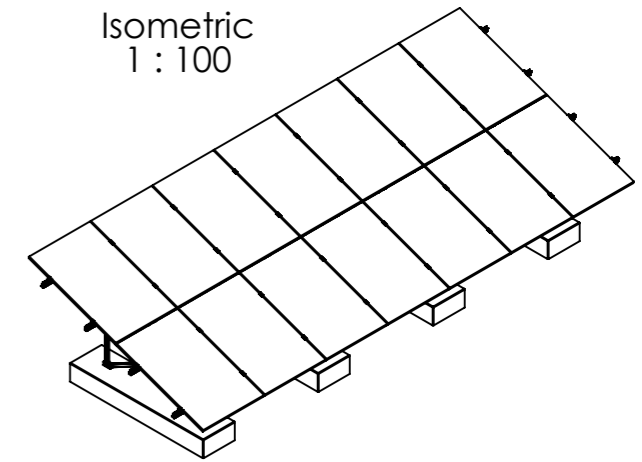


View X  
1 : 20



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.

Isometric  
1 : 100



14 modules (2x7 Portrait)  
for module width  $\leq 1150$  mm

12 modules (2x6 Portrait)  
for module width  $>1150-1303$  mm

Peak velocity  $q_p[z]$ :  $0.67 \text{ kN/m}^2$   
Ground snow load  $S_k$ :  $1.75 \text{ kN/m}^2$



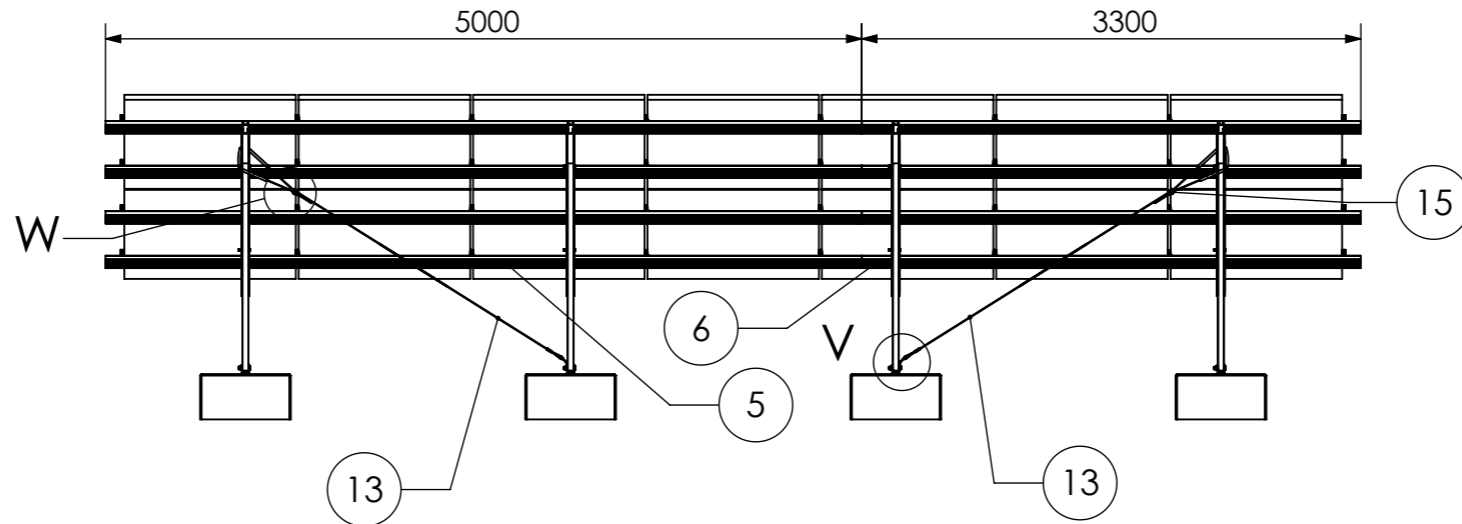
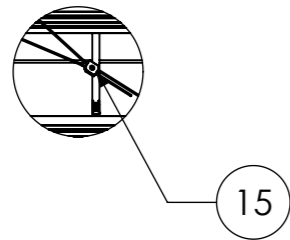
K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet  
N-Rack 2.20 Concrete 2x7 S**

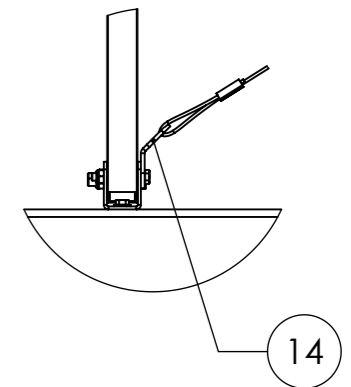
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Designed C. Erb	18.12.2025	-	---	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: --	All dimensions in mm
Last change		Weight: -	Scale: 1:50	Sheet 1 of 1

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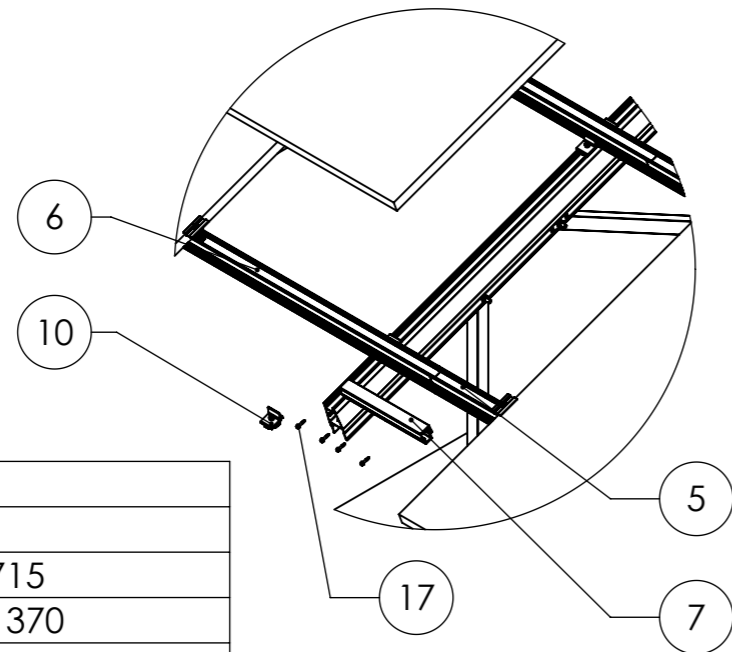
Detail W  
1 : 20



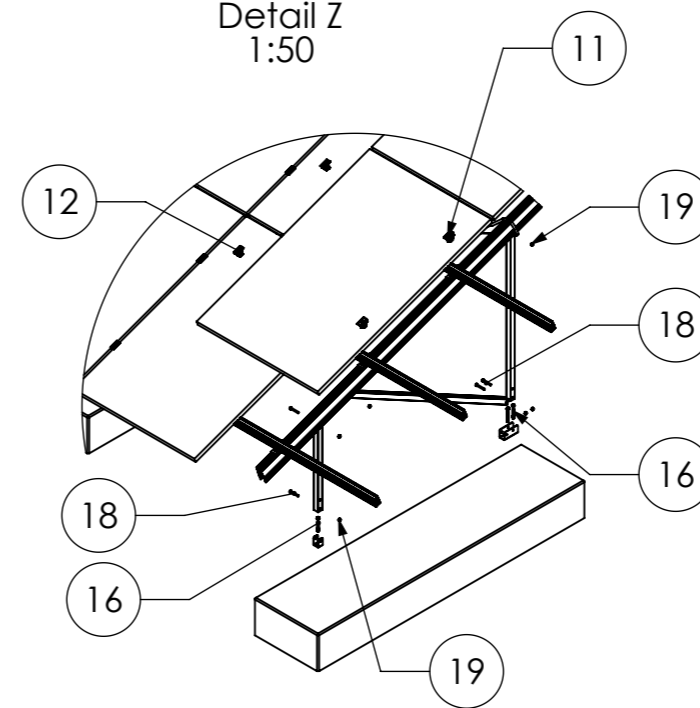
Detail V  
1 : 10



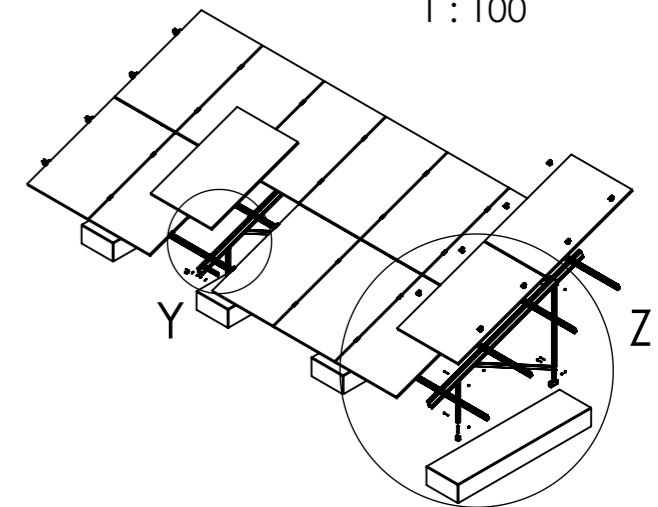
Detail Y  
1 : 20



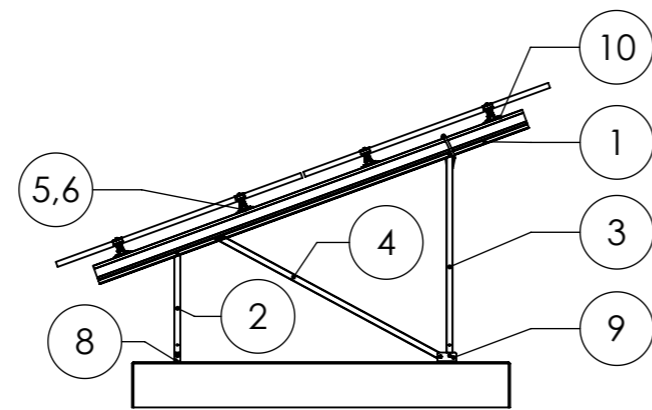
Detail Z  
1:50



Isometric  
1 : 100



Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack Foot front
9	N-Rack Foot back
10	Climber 36/50 Set
11	EC Clamp Set
12	MC Clamp Set
13	Gripple Bracing
14	Gripple Angle
15	Gripple Lock
16	Heco Multi-Monti 12 x105 - A4
17	Self-tapping screw 5,5 x 25 - A2
18	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
19	Hexagon nut M10 - DIN 985 - A2-70



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



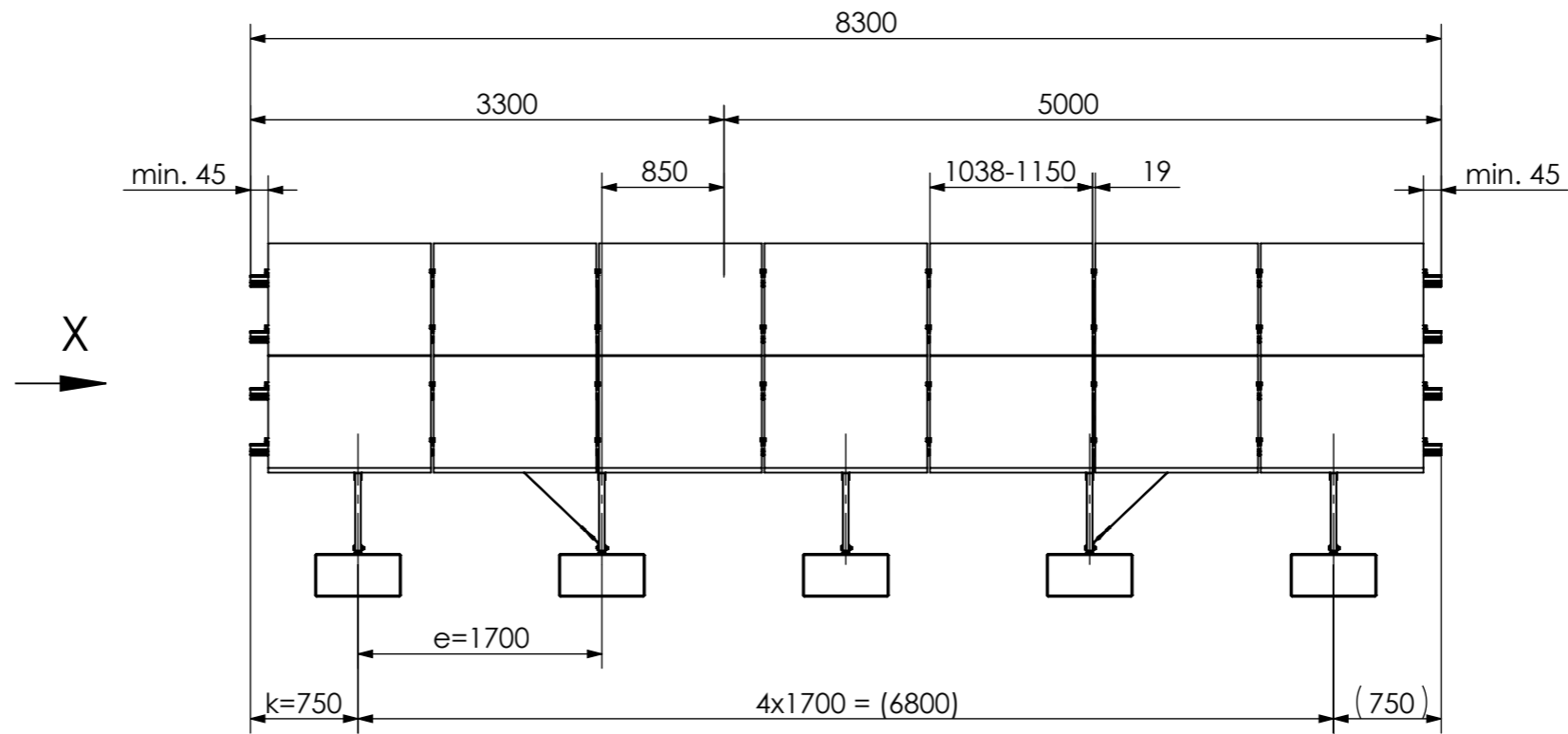
K2 Systems GmbH  
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71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet**  
**N-Rack 2.20 Concrete 2x7 S**

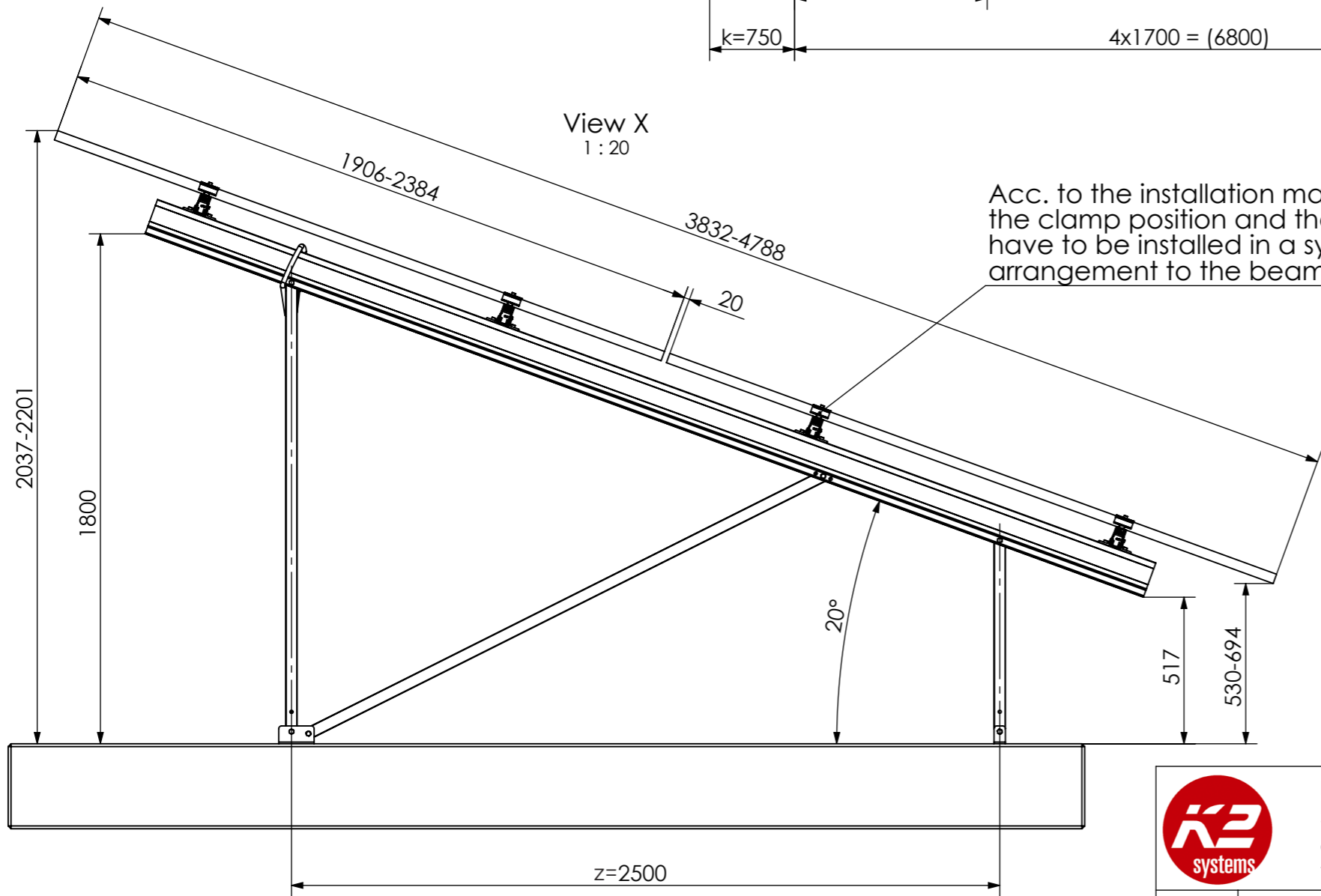
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Designed	C. Erb	18.12.2025	-	---	
Approved	L. Kreemke	16.03.2026	Surface: -	Drawing no.:	All dimensions in mm
Last change			Weight: -	---	
				Scale: 1:50	Sheet 1 of 1

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**Concrete Kit 2x7 L**

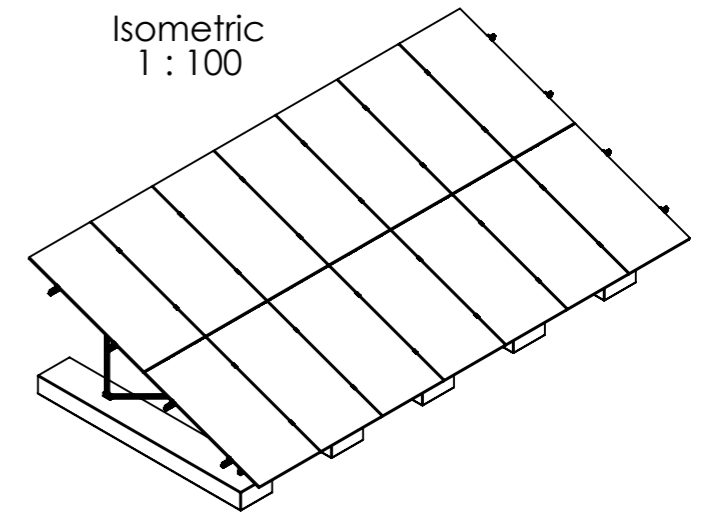


View X  
1 : 20



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.

Isometric  
1 : 100



14 modules (2x7 Portrait)  
for module width  $\leq 1150$  mm

12 modules (2x6 Portrait)  
for module width  $>1150-1303$  mm

Peak velocity  $q_p[z]$ :  $0.67 \text{ kN/m}^2$   
Ground snow load  $S_k$ :  $1.75 \text{ kN/m}^2$



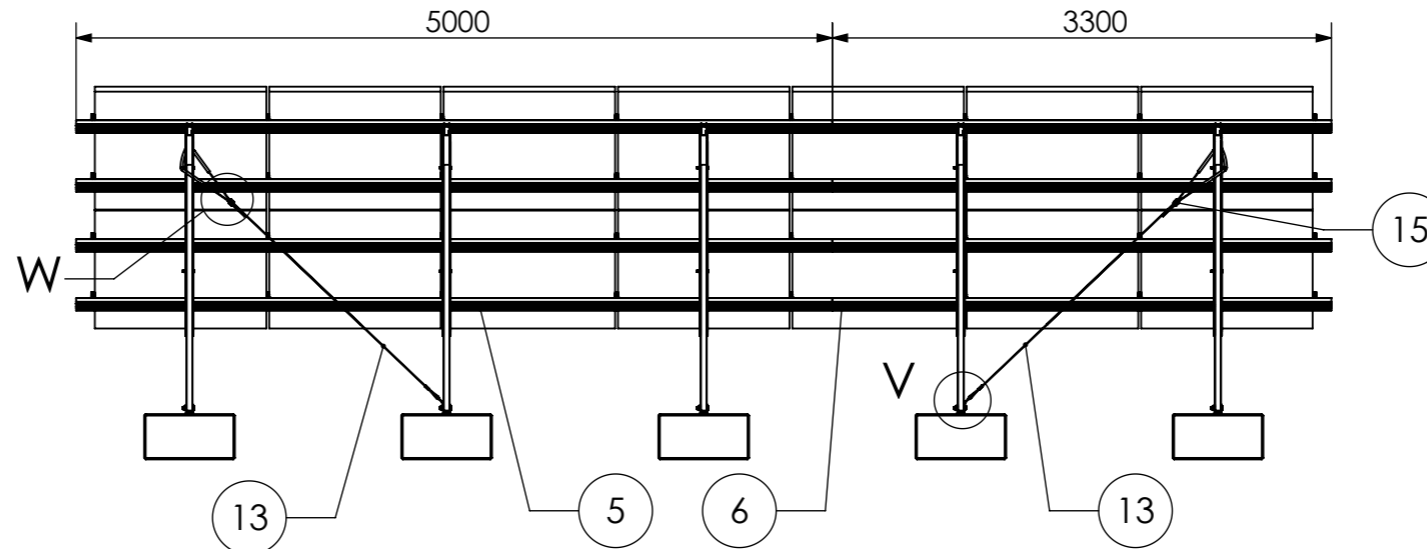
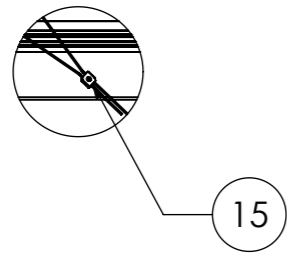
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71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet  
N-Rack 2.20 Concrete 2x7 L**

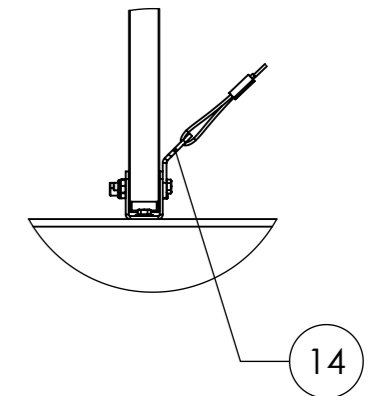
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Designed C. Erb	16.12.2025	-	---	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: --	All dimensions in mm Sheet 1 of 1
Last change		Weight: -	Scale: 1:50	

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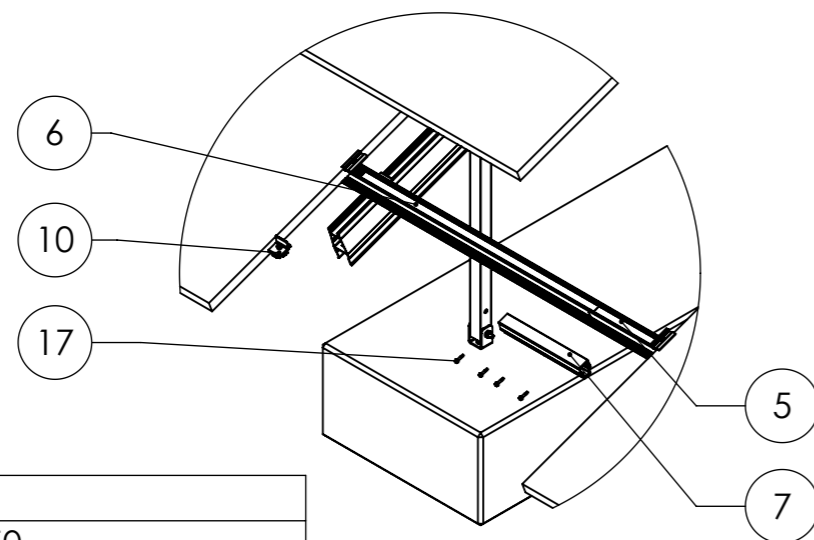
Detail W  
1 : 20



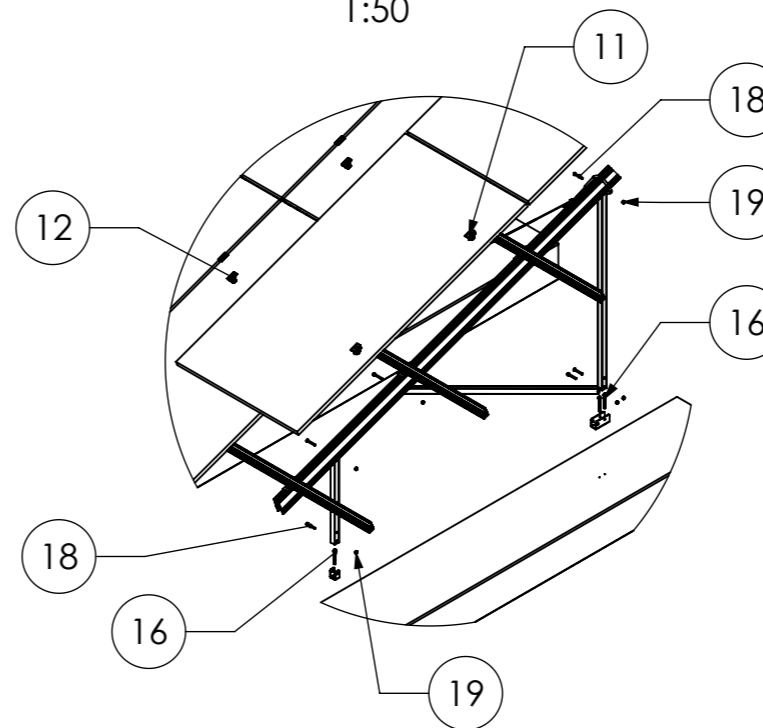
Detail V  
1 : 10



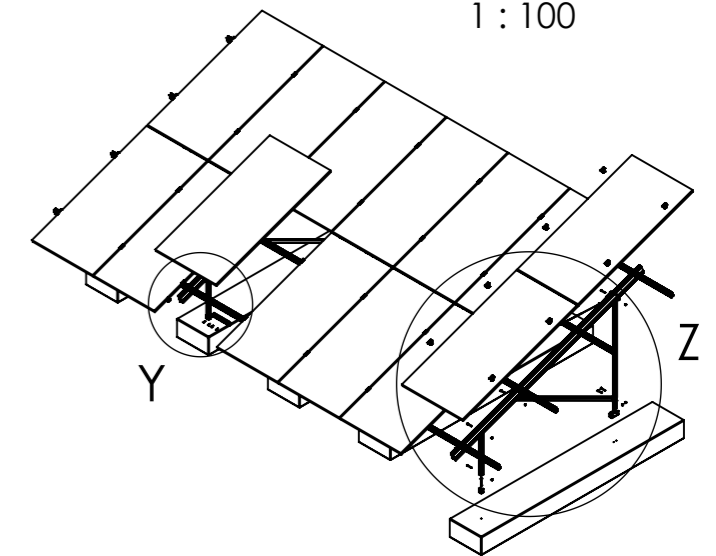
Detail Y  
1 : 20



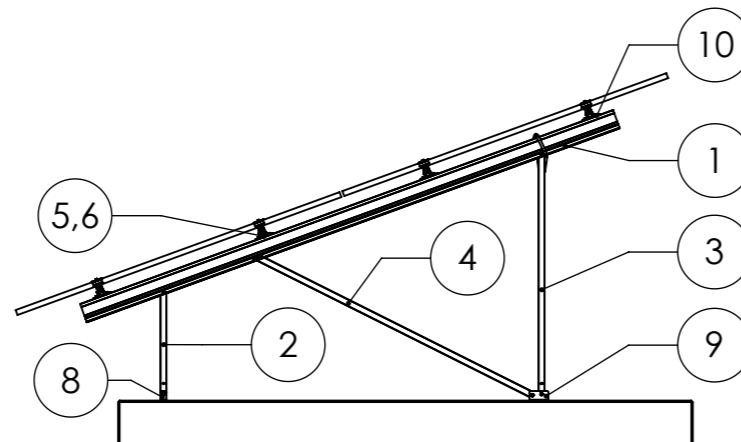
Detail Z  
1 : 50



Isometric  
1 : 100



Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack Foot front
9	N-Rack Foot back
10	Climber 36/50 Set
11	EC Clamp Set
12	MC Clamp Set
13	Gripple Bracing
14	Gripple Angle
15	Gripple Lock
16	Heco Multi-Monti 12 x105 - A4
17	Self-tapping screw 5,5 x 25 - A2
18	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
19	Hexagon nut M10 - DIN 985 - A2-70



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



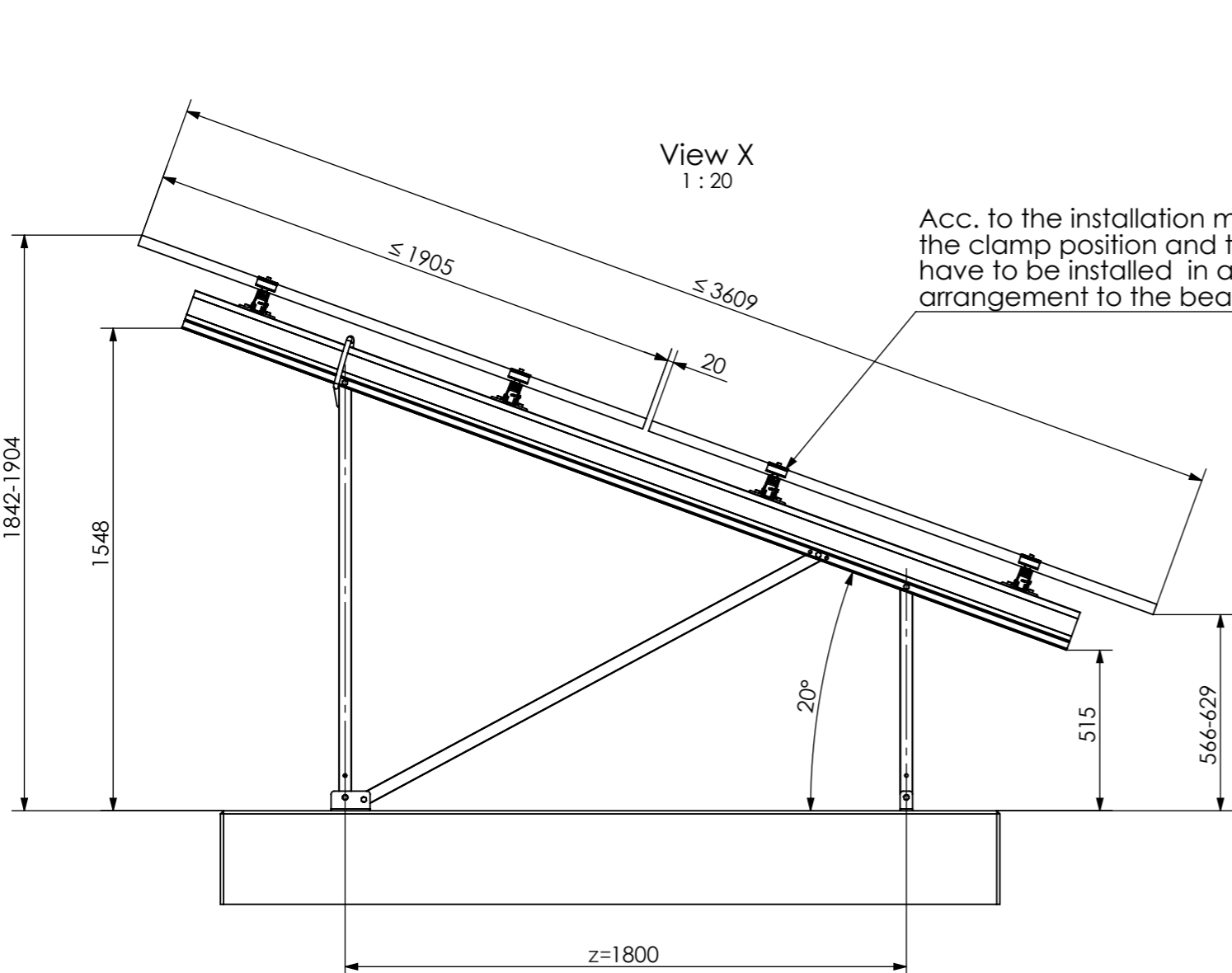
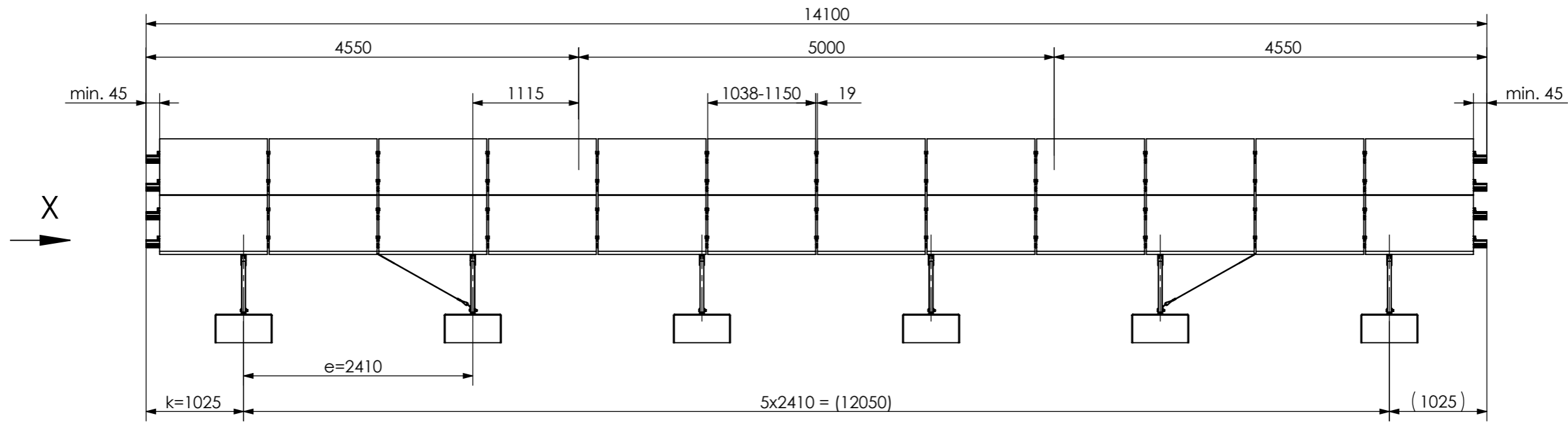
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71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet**  
**N-Rack 2.20 Concrete 2x7 L**

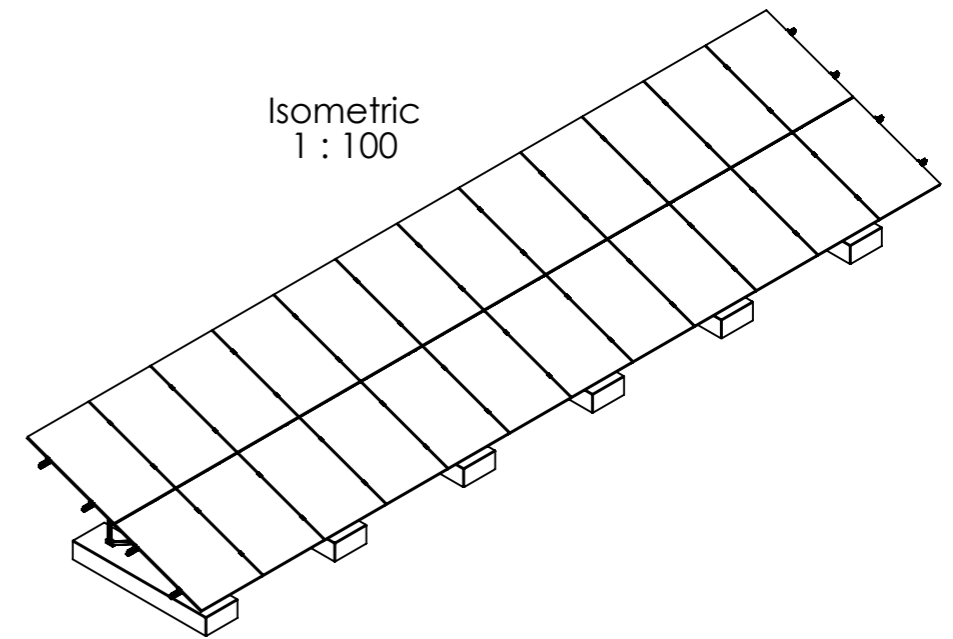
	Name	Date	Material:	Item no.:	---	A3
Designed	C. Erb	16.12.2025	-	Drawing no.:	---	All dimensions in mm
Approved	L. Kreemke	16.03.2026	Surface: -			Sheet 1 of 1
Last change			Weight: -	Scale: 1:50		

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**Concrete Kit 2x12 S**




Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



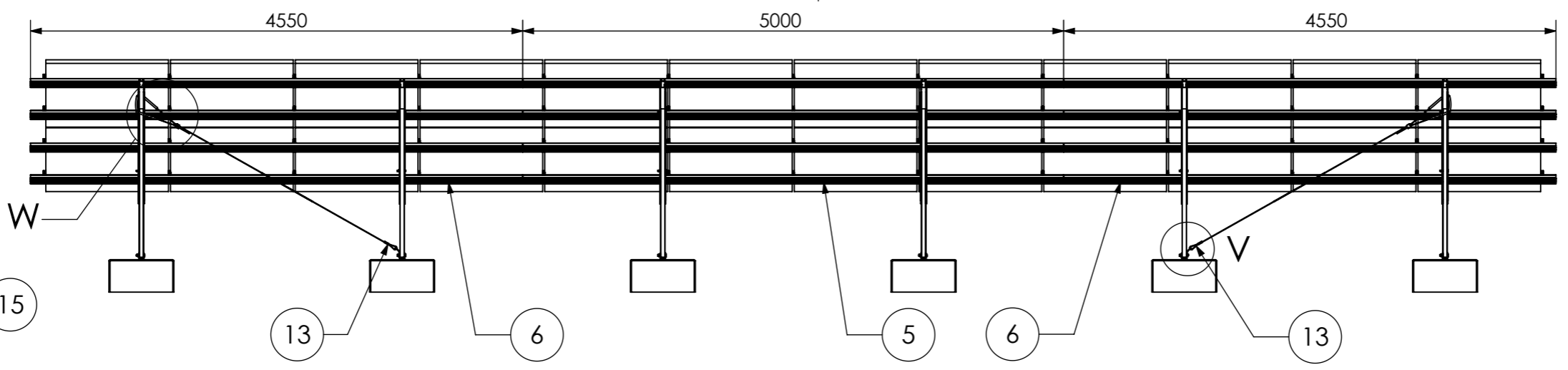
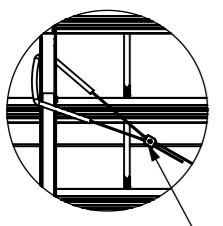
24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width >1150-1303mm

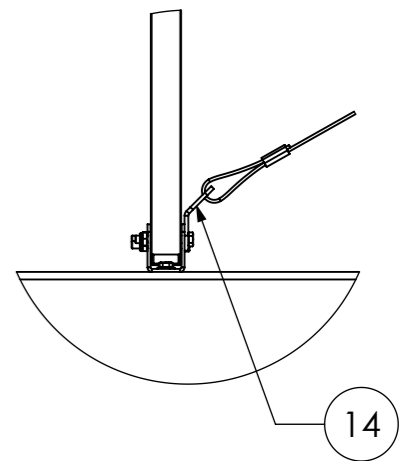
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Concrete 2x12 S</b>	
	Name B. Koch	Date 17.01.2024	Material: -	Item no.: -	A3
Designed B. Koch	Date 30.06.2025	Surface: -	Drawing no.: -	All dimensions in mm	
Last change A. Soumpalas	Date 20.03.2026	Weight: -	Scale: 1:50	Sheet 1 of 1	
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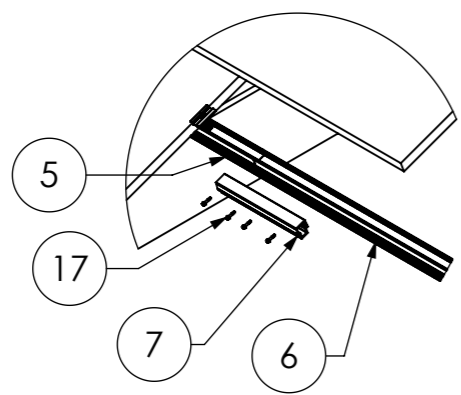
Detail W  
1 : 25



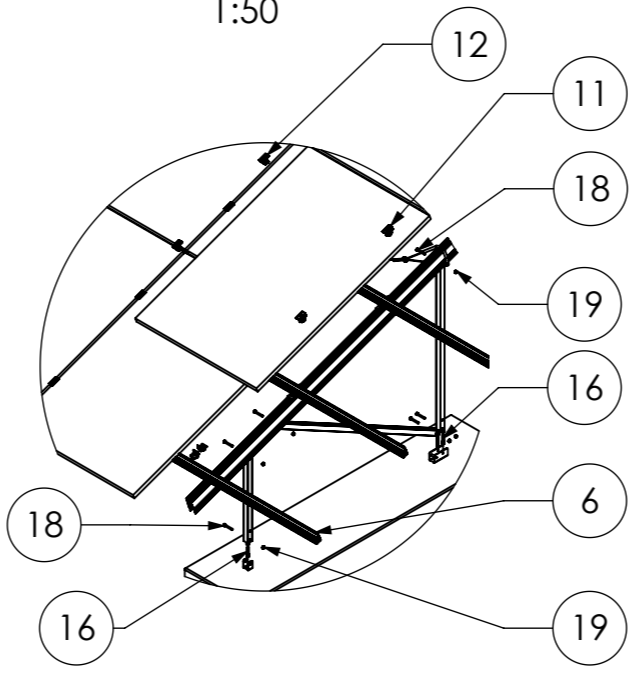
Detail V  
1 : 10



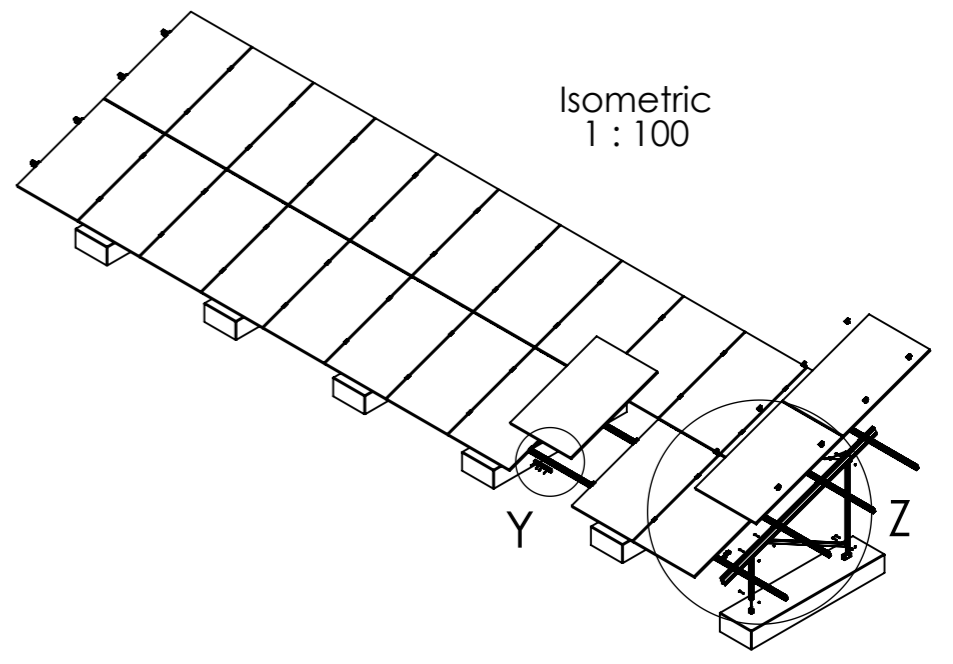
Detail Y  
1 : 20



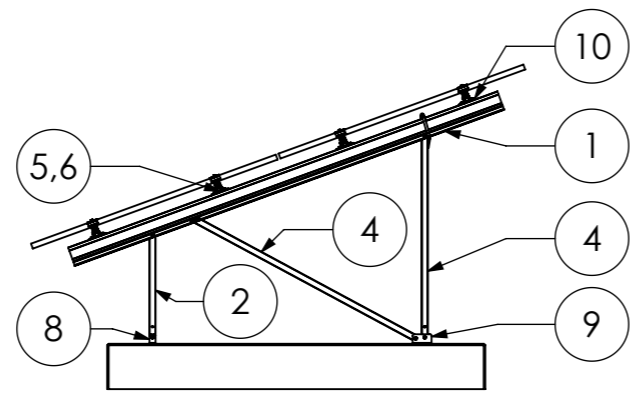
Detail Z  
1 : 50



Isometric  
1 : 100



Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5m
6	CrossRail 73 - 4,55m
7	CrossRail 73 Connector
8	N-Rack Foot front
9	N-Rack Foot back
10	Climber 36/50 Set
11	EC Clamp Set
12	MC Clamp Set
13	Gripple Bracing
14	Gripple Angle
15	Gripple Lock
16	Heco Multi-Monti 12 x105 - A4
17	Self-tapping screw 5,5 x 25 - A2
18	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
19	Hexagon nut M10 - DIN 985 - A2-70



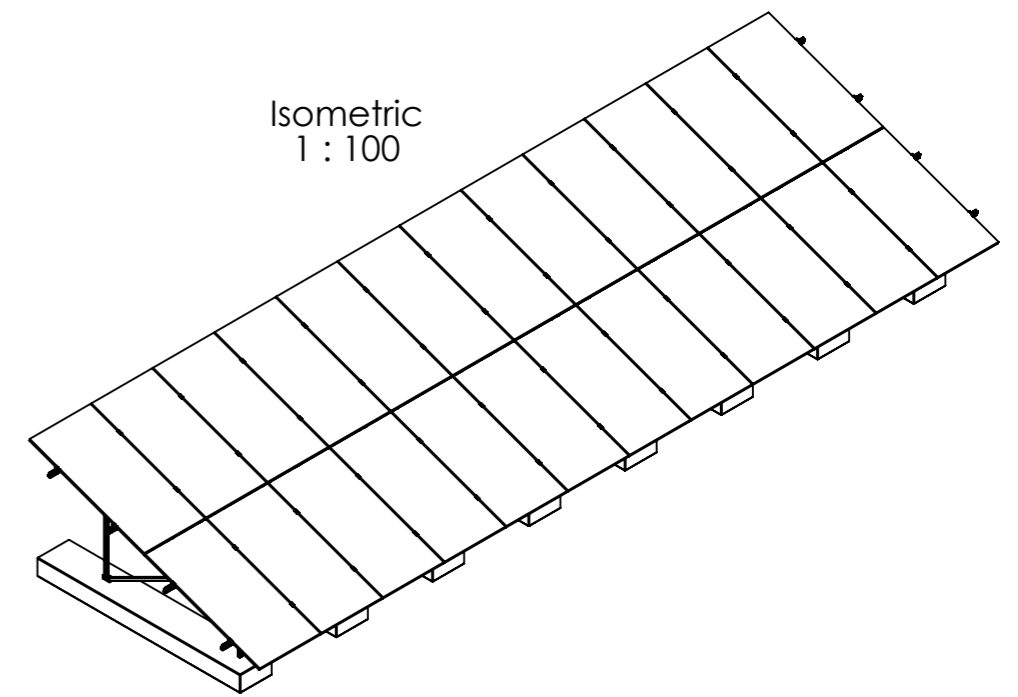
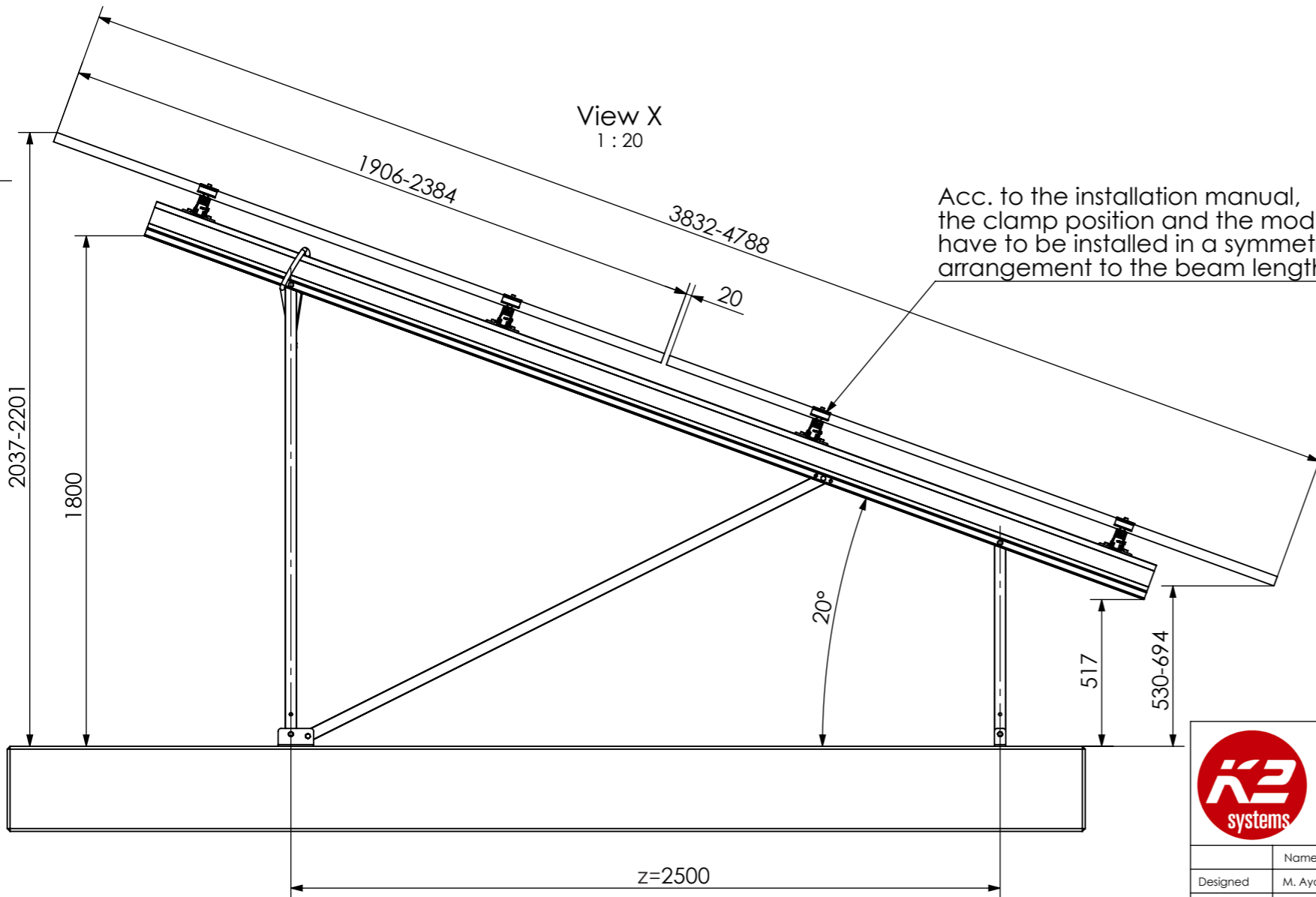
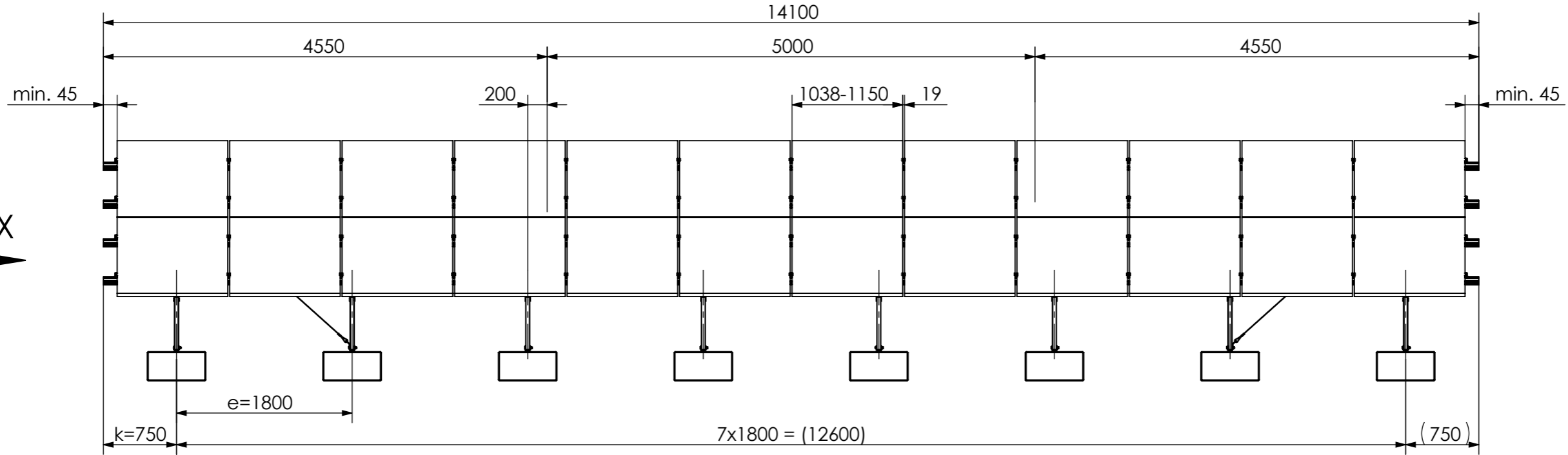
24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width >1150-1303mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Concrete 2x12 S</b>											
	<table border="1"> <thead> <tr> <th>Name</th> <th>Date</th> <th>Material:</th> </tr> </thead> <tbody> <tr> <td>Designed B. Koch</td> <td>17.01.2024</td> <td>-</td> </tr> <tr> <td>Approved B. Koch</td> <td>30.06.2025</td> <td>Surface: -</td> </tr> <tr> <td>Last change A. Soumpalas</td> <td>20.03.2026</td> <td>Weight: -</td> </tr> </tbody> </table>	Name	Date	Material:	Designed B. Koch	17.01.2024	-	Approved B. Koch	30.06.2025	Surface: -	Last change A. Soumpalas	20.03.2026	Weight: -	Item no.: -	Drawing no.: -
Name	Date	Material:													
Designed B. Koch	17.01.2024	-													
Approved B. Koch	30.06.2025	Surface: -													
Last change A. Soumpalas	20.03.2026	Weight: -													
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**Concrete Kit 2x12 L**



24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width >1150-1303mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

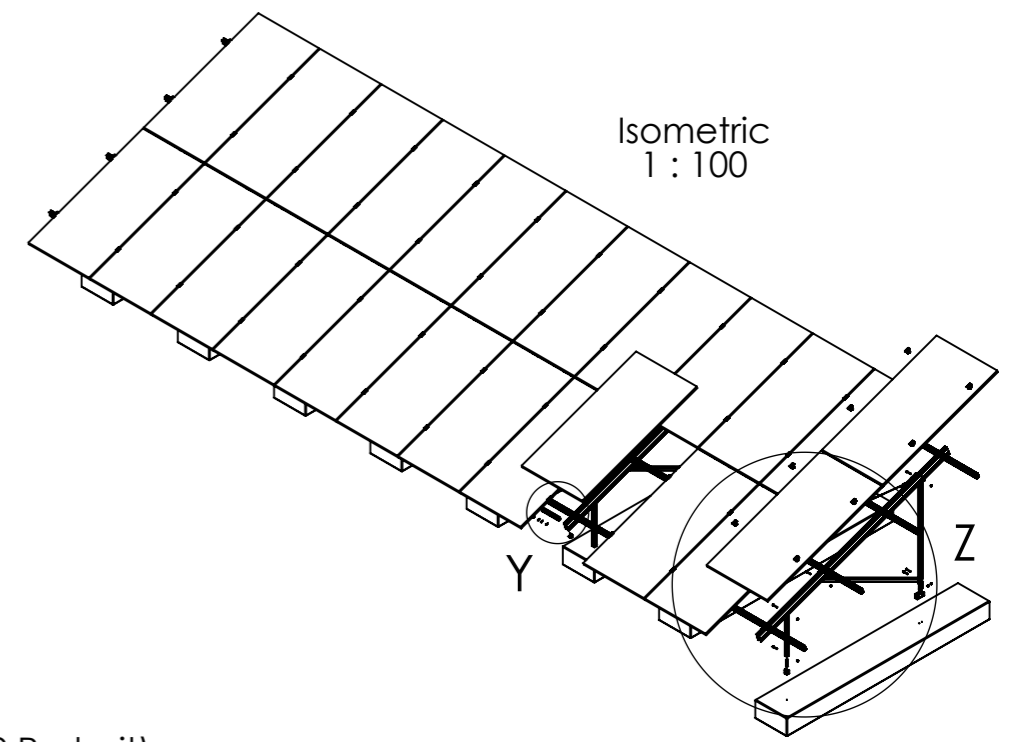
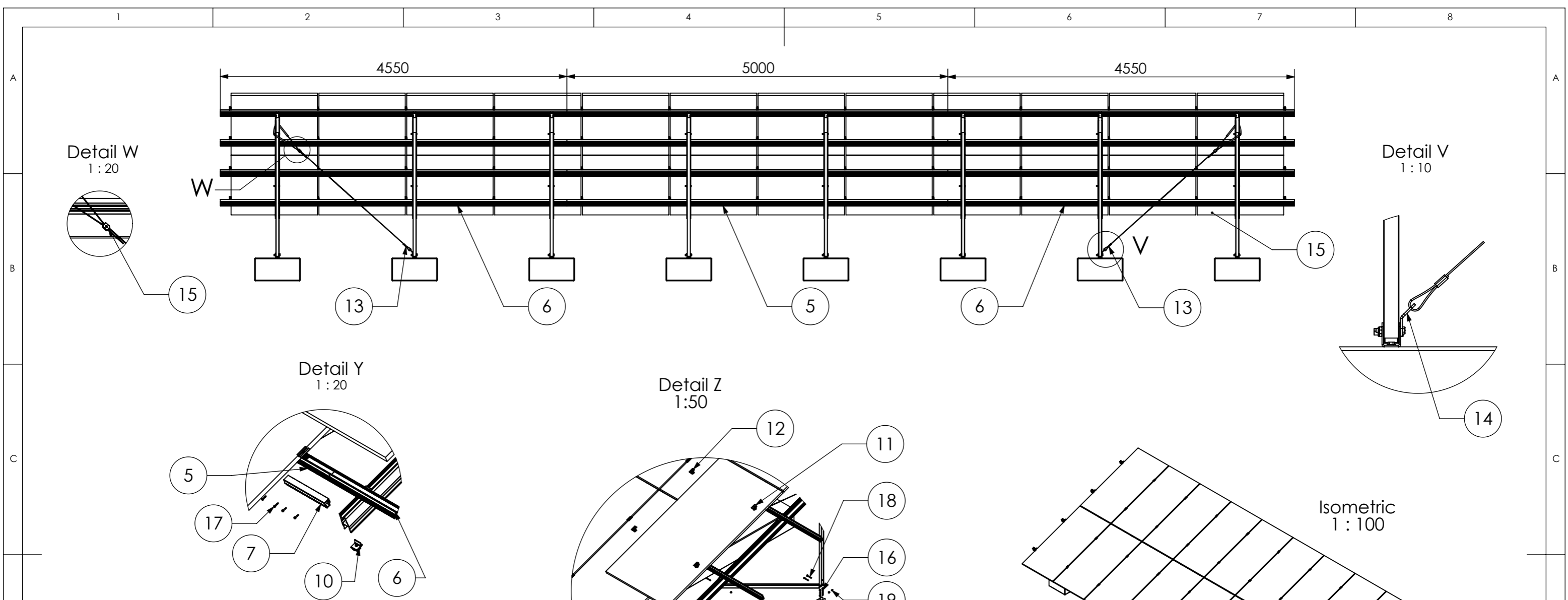


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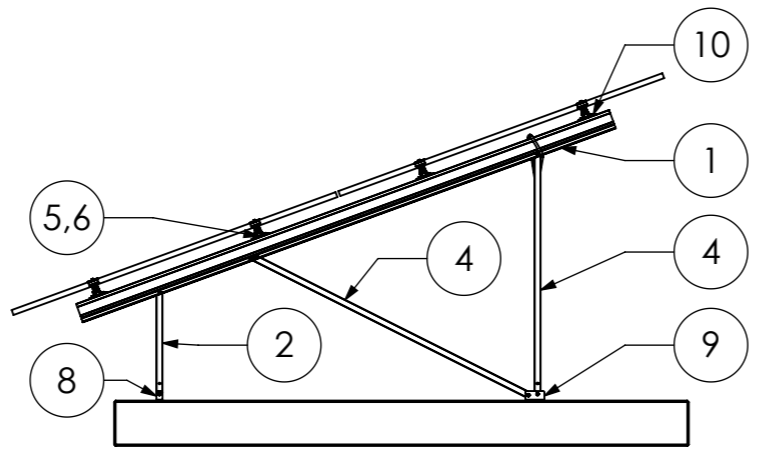
Designation:  
**Data sheet**  
**N-Rack 2.20 Concrete 2x12 L**

Name	Date	Material:	Item no.:	A3
Designed M. Aydemir	30.01.2024	-	-	All dimensions in mm Sheet 1 of 1
Approved B. Koch	30.06.2025	Surface: -	Drawing no.: -	
Last change A. Soumpalas	20.03.2026	Weight: -	Scale: 1:50	

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Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	N-Rack Foot front
9	N-Rack Foot back
10	Climber 36/50 Set
11	EC Clamp Set
12	MC Clamp Set
13	Gripple Bracing
14	Gripple Angle
15	Gripple Lock
16	Heco Multi-Monti 12 x105 - A4
17	Self-tapping screw 5,5 x 25 - A2
18	Hexagon head bolt M10 x 70 ISO 4014 - A2-70
19	Hexagon nut M10 - DIN 985 - A2-70



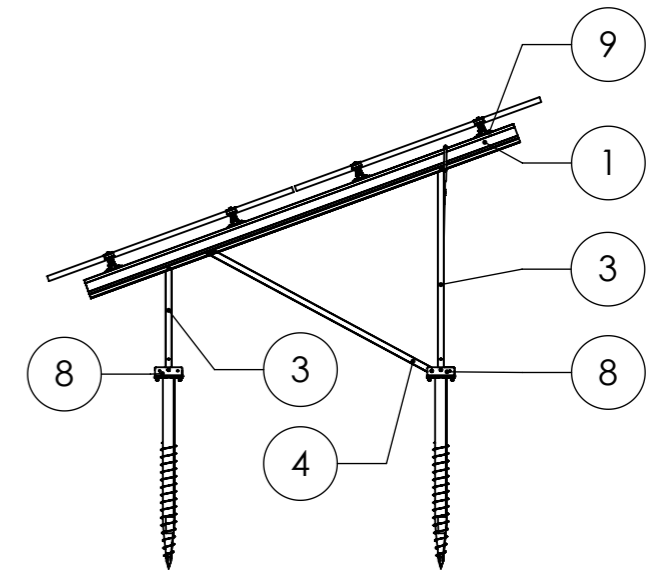
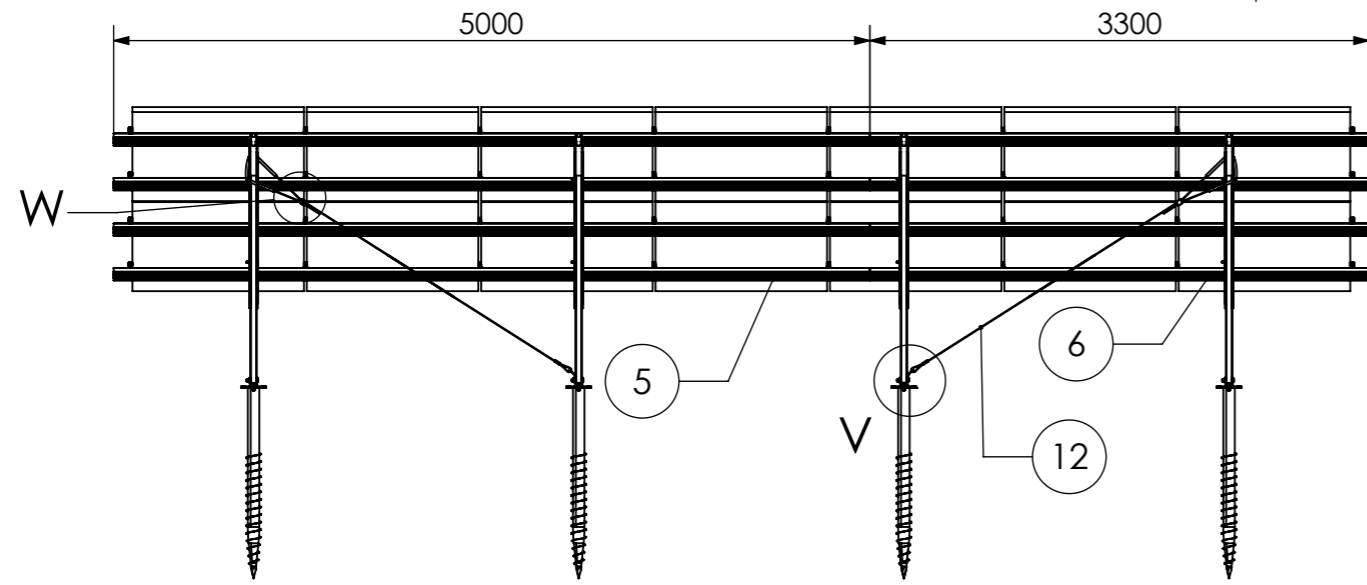
24 modules (2x12 Portrait)  
for module width ≤ 1150mm

20 modules (2x10 Portrait)  
for module width >1150-1303mm

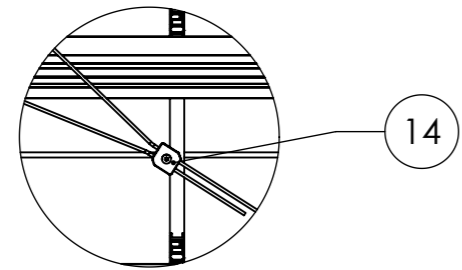
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Concrete 2x12 L</b>																					
	<table border="1"> <tr><td>Name</td><td>Date</td><td>Material:</td></tr> <tr><td>Designed M. Aydemir</td><td>30.01.2024</td><td>-</td></tr> <tr><td>Approved B. Koch</td><td>30.06.2025</td><td>Surface: -</td></tr> <tr><td>Last change A. Soumpalas</td><td>20.03.2026</td><td>Weight: -</td></tr> </table>	Name	Date	Material:	Designed M. Aydemir	30.01.2024	-	Approved B. Koch	30.06.2025	Surface: -	Last change A. Soumpalas	20.03.2026	Weight: -	<table border="1"> <tr><td>Item no.:</td><td>-</td><td>A3</td></tr> <tr><td>Drawing no.:</td><td>-</td><td>All dimensions in mm</td></tr> <tr><td>Scale:</td><td>1:50</td><td>Sheet 1 of 1</td></tr> </table>	Item no.:	-	A3	Drawing no.:	-	All dimensions in mm	Scale:	1:50	Sheet 1 of 1	This drawing is the sole property of K2 Systems GmbH. It is protected by copyright and may only be copied, reproduced or distributed to a third party with explicit permission!	
Name	Date	Material:																							
Designed M. Aydemir	30.01.2024	-																							
Approved B. Koch	30.06.2025	Surface: -																							
Last change A. Soumpalas	20.03.2026	Weight: -																							
Item no.:	-	A3																							
Drawing no.:	-	All dimensions in mm																							
Scale:	1:50	Sheet 1 of 1																							

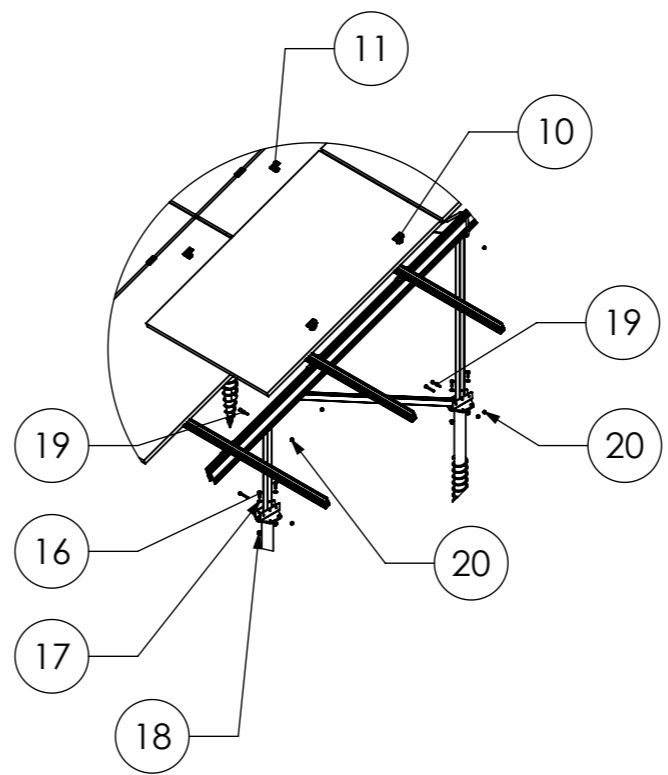




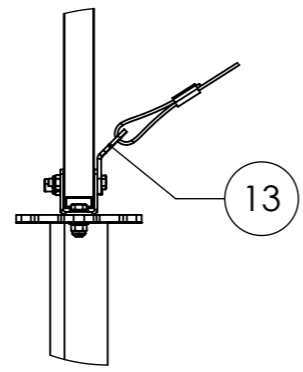
Detail W  
1:10



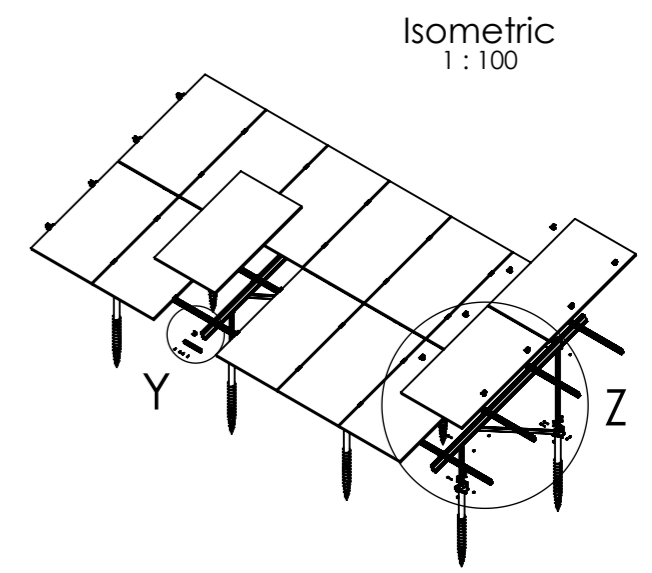
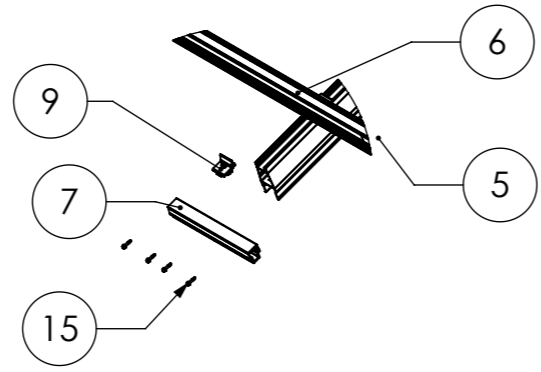
Detail Z  
1:50



Detail V  
1:10



Detail Y  
1:20




Isometric  
1:100

14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

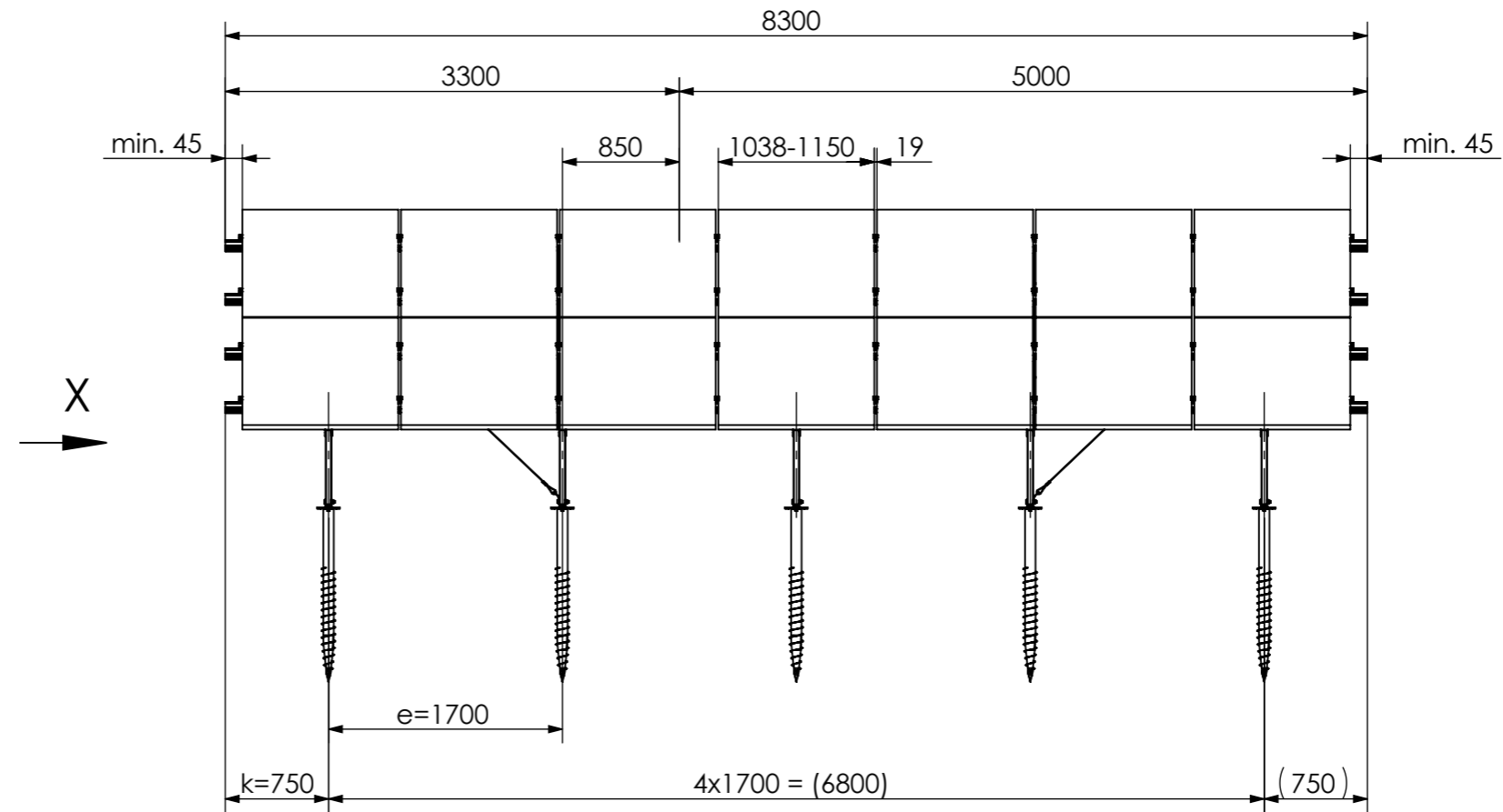
12 modules (2x6 Portrait)  
for module width > 1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

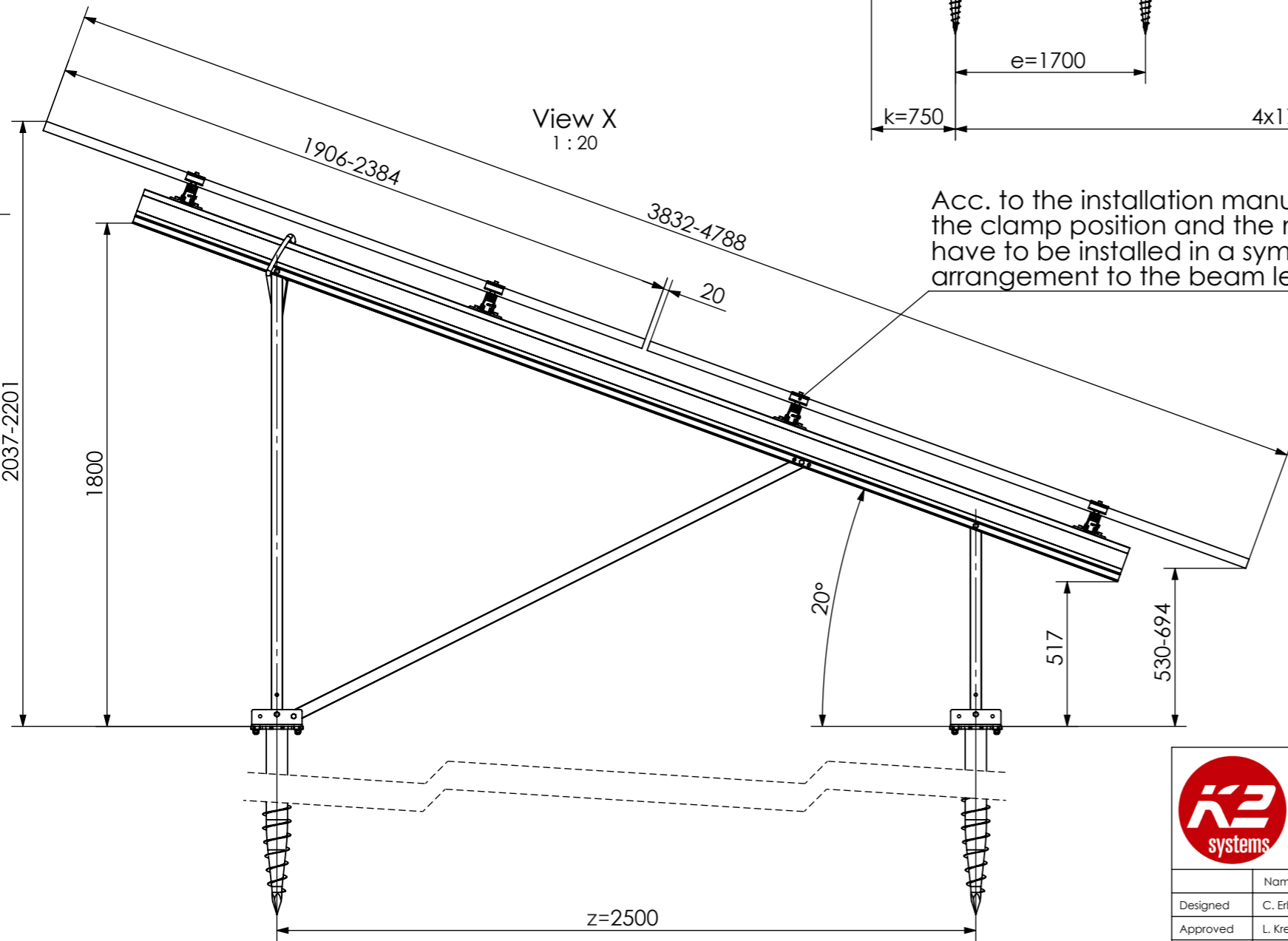
Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack GS Foot
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4017 - M8x35 - A2-70
17	Plain washer - ISO 7089 - 12 - A2-50
18	Hexagon nut with flange and clamping part - EN 1663 - M12 - A2-70
19	Hexagon head bolt - ISO 4014 - M10x70-A2-70
20	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0		Designation: <b>Data sheet</b> <b>N-Rack 2.20 Groundscrew 2x7 S</b>	
	Name: C. Erb Date: 15.12.2025 Material: -	Item no.: --- Drawing no.: ---	A3 All dimensions in mm Sheet 1 of 1	
Designed: C. Erb Approved: L. Kreemke Last change:	Date: 16.03.2026 Surface: - Weight: -	Scale: 1:50	This drawing is the sole property of K2 Systems GmbH. It is protected by copyright and may only be copied, reproduced or distributed to a third party with explicit permission!	

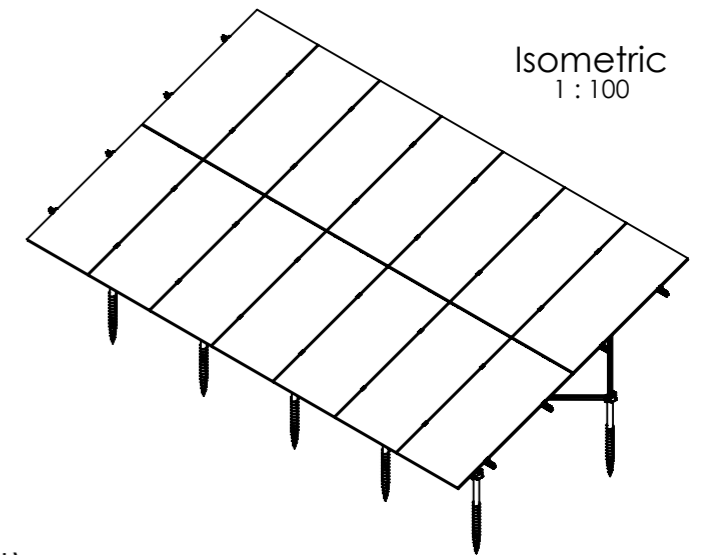
# Groundscrew Kit 2x7 L



View X  
1:20



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



Isometric  
1:100

14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

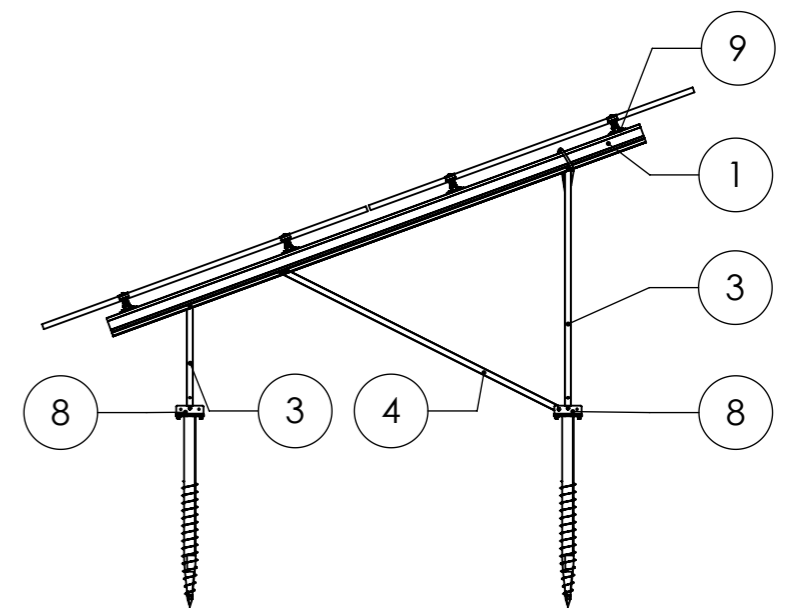
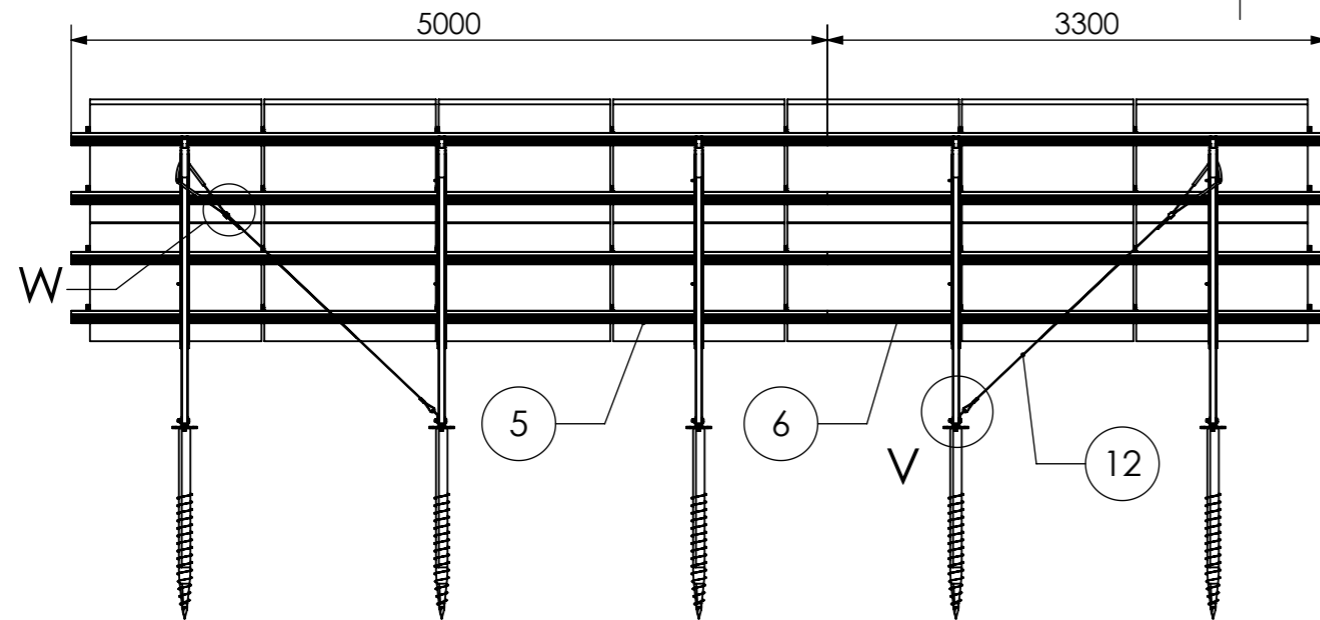


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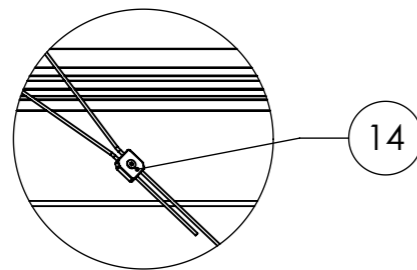
Designation: Data sheet  
N-Rack 2.20 Groundscrew 2x7 L

Name	Date	Material:	Item no.:	A3
Designed C. Erb	12.12.2025	-	---	All dimensions in mm Sheet 1 of 1
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: --	
Last change		Weight: -	Scale: 1:50	

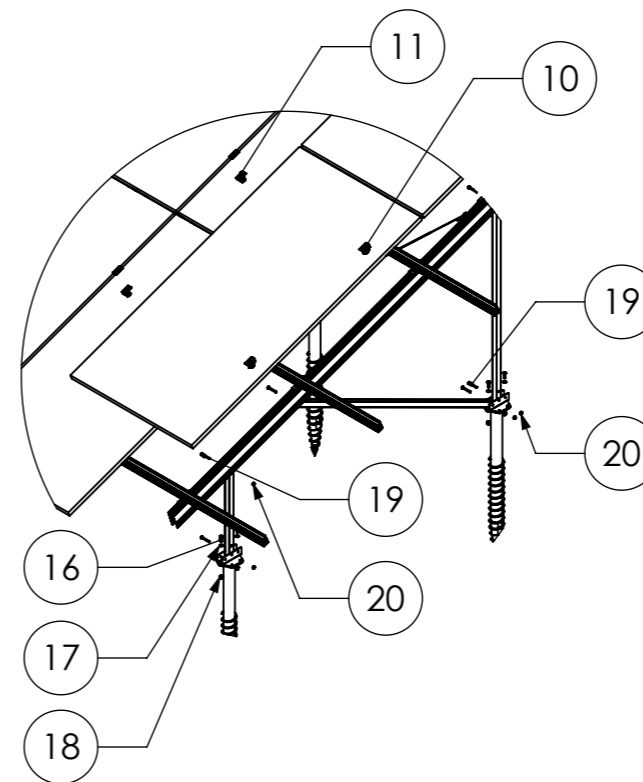
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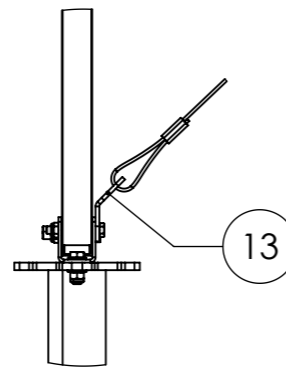
Detail W  
1:10



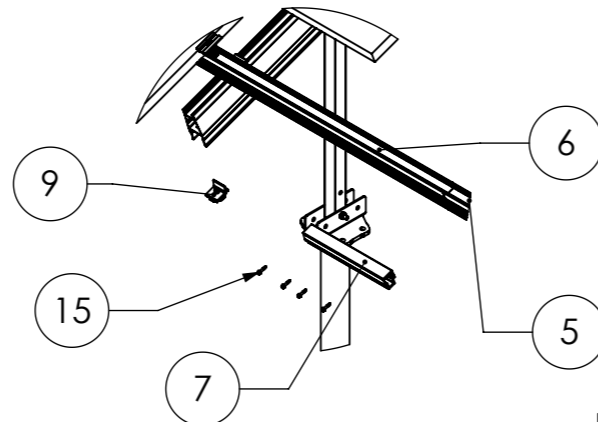
Detail Z  
1:50



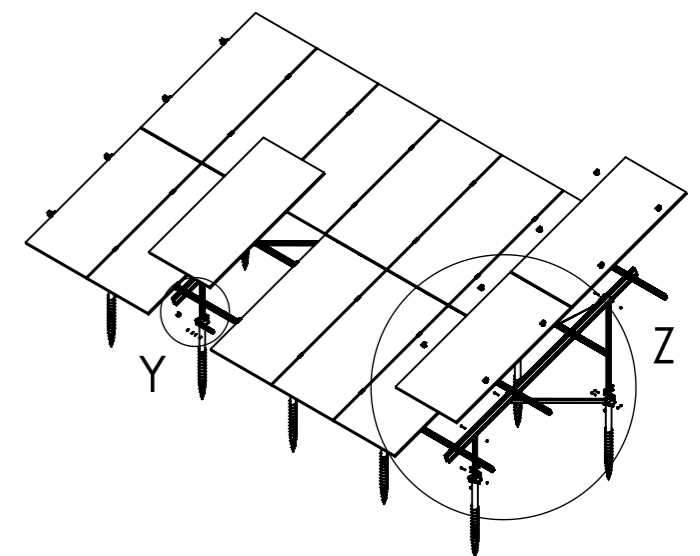
Detail V  
1:10



Detail Y  
1:20



Isometric  
1:100



Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	N-Rack GS Foot
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4017 - M8x35 - A2-70
17	Plain washer - ISO 7089 - 12 - A2-50
18	Hexagon nut with flange and clamping part - EN 1663 - M12 - A2-70
19	Hexagon head bolt - ISO 4014 - M10x70- A2-70
20	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70

14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

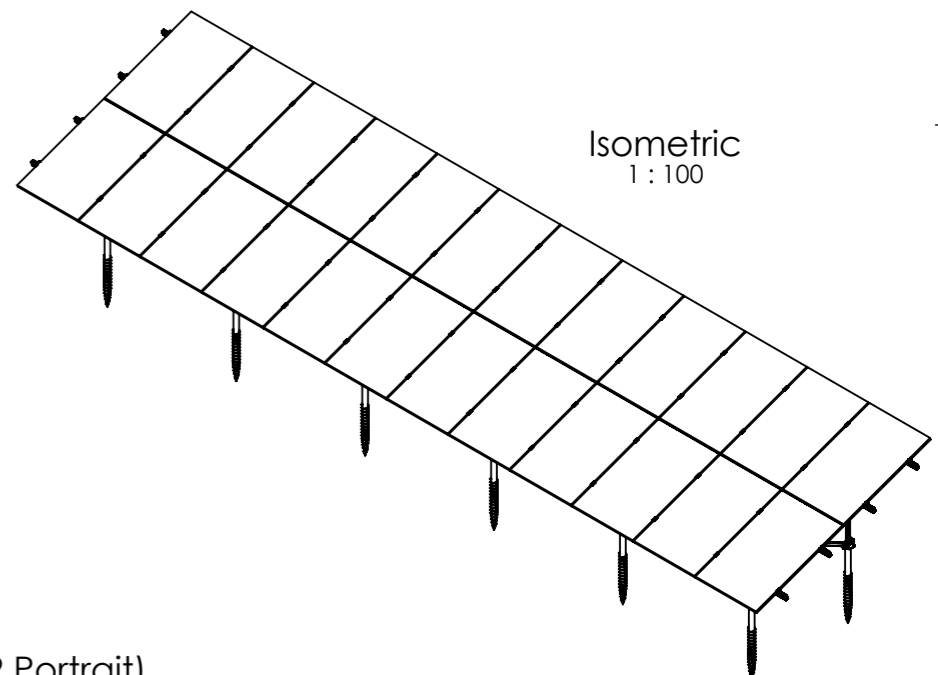
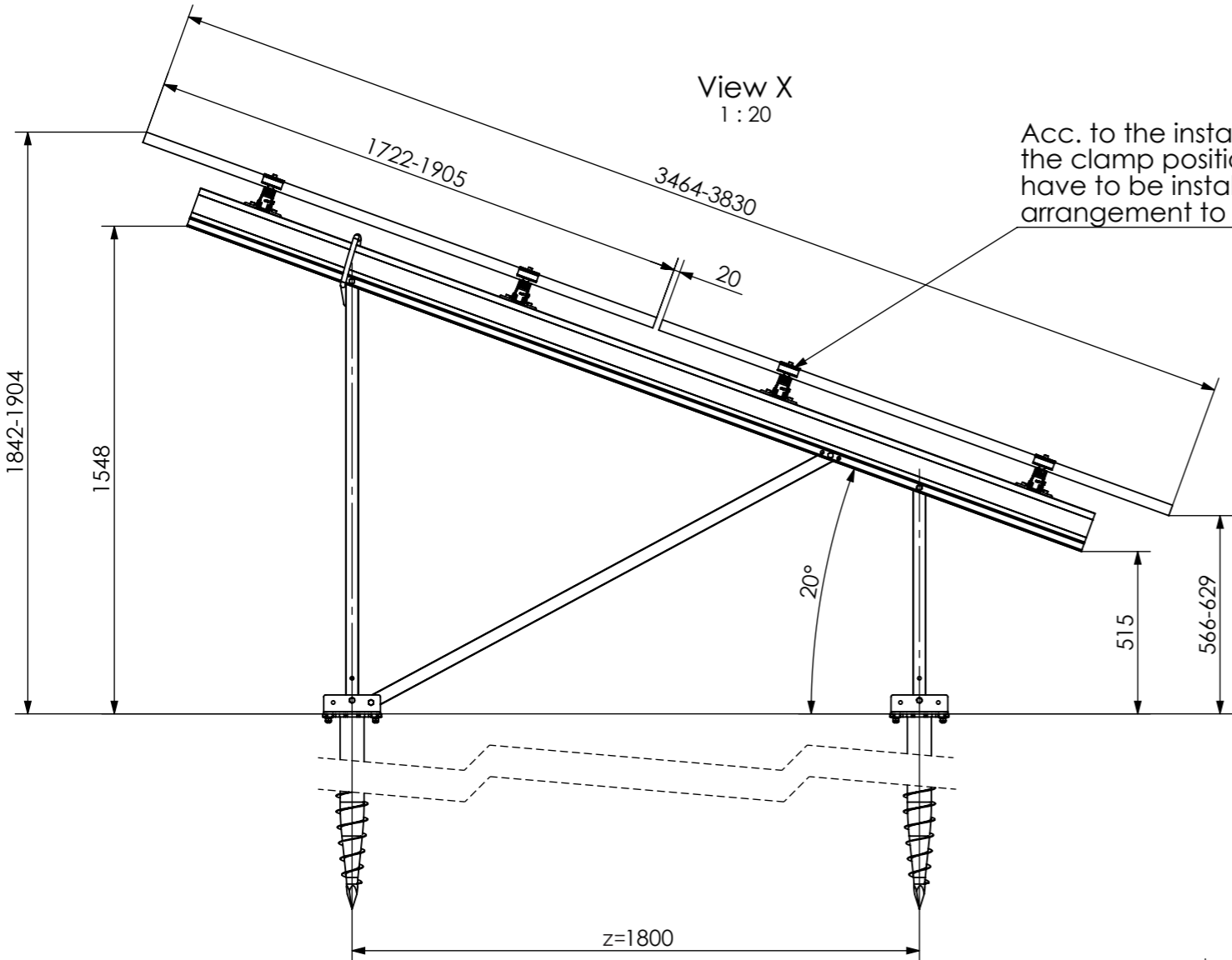
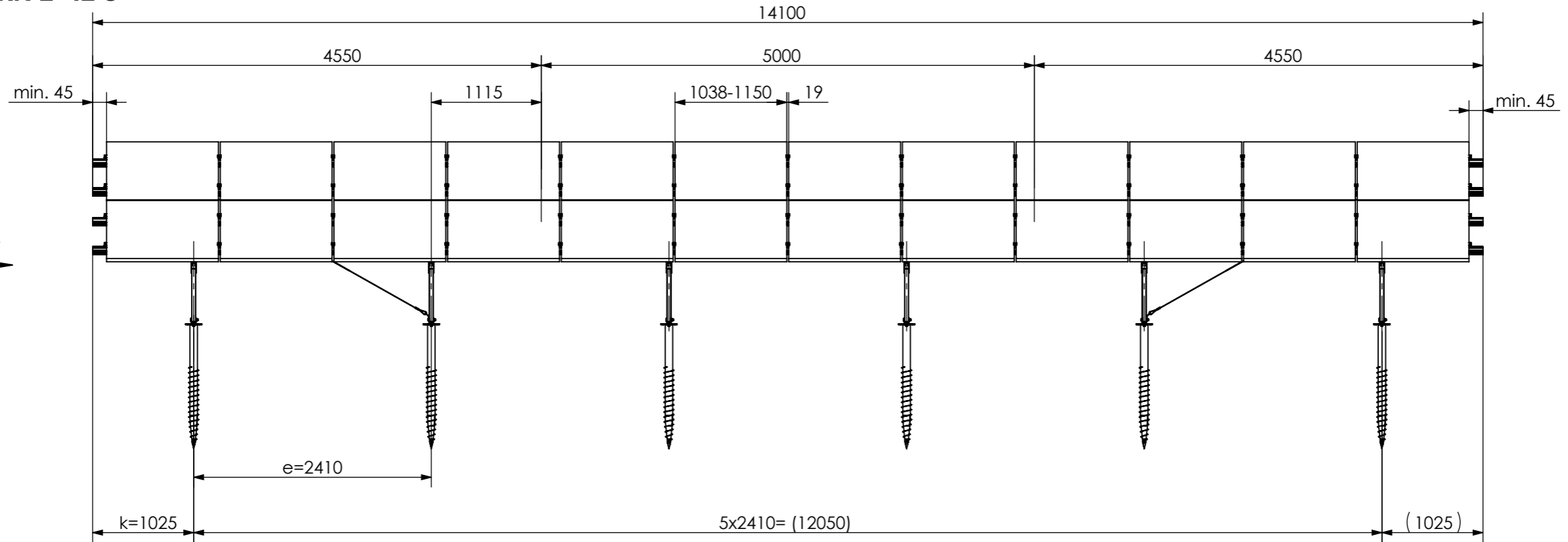
12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Groundscrew 2x7 L</b>										
	<table border="1"> <thead> <tr> <th>Name</th> <th>Date</th> <th>Material:</th> </tr> </thead> <tbody> <tr> <td>Designed C. Erb</td> <td>12.12.2025</td> <td>-</td> </tr> <tr> <td>Approved L. Kreemke</td> <td>16.03.2026</td> <td>Surface: -</td> </tr> <tr> <td>Last change</td> <td></td> <td>Weight: -</td> </tr> </tbody> </table>	Name	Date	Material:	Designed C. Erb	12.12.2025	-	Approved L. Kreemke	16.03.2026	Surface: -	Last change		Weight: -	Item no.: ---
Name	Date	Material:												
Designed C. Erb	12.12.2025	-												
Approved L. Kreemke	16.03.2026	Surface: -												
Last change		Weight: -												
Scale: 1:50			Drawing no.: ---											
All dimensions in mm Sheet 1 of 1														

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# Groundscrew Kit 2x12 S

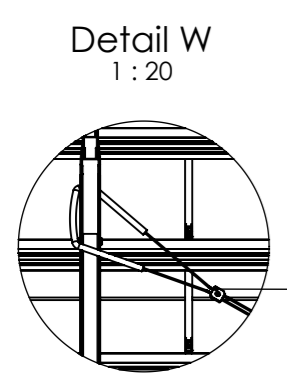
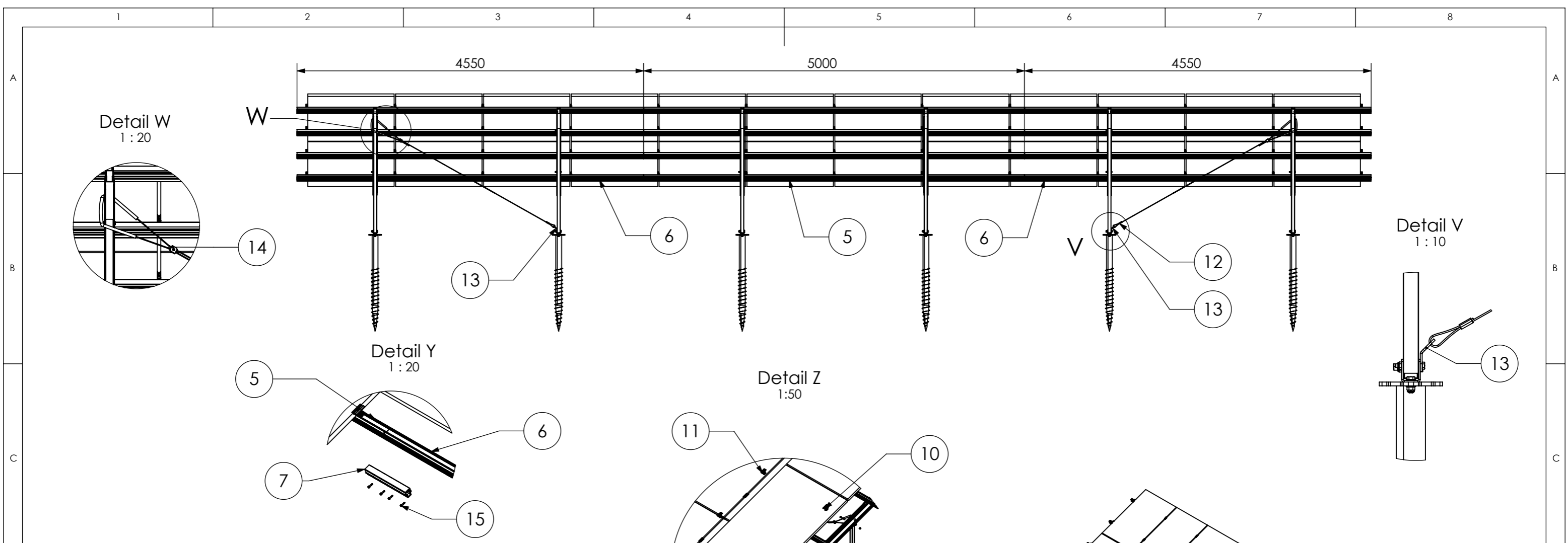


24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

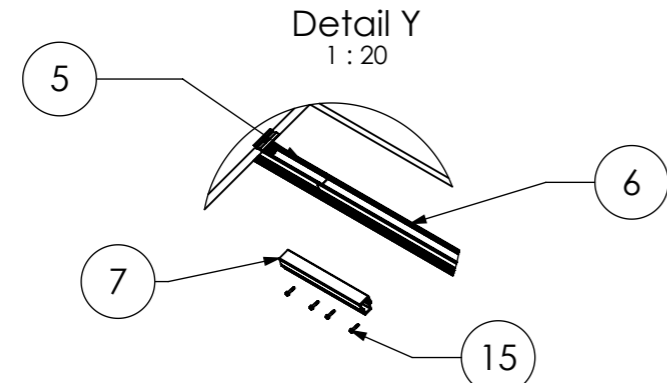
20 modules (2x10 Portrait)  
for module width > 1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

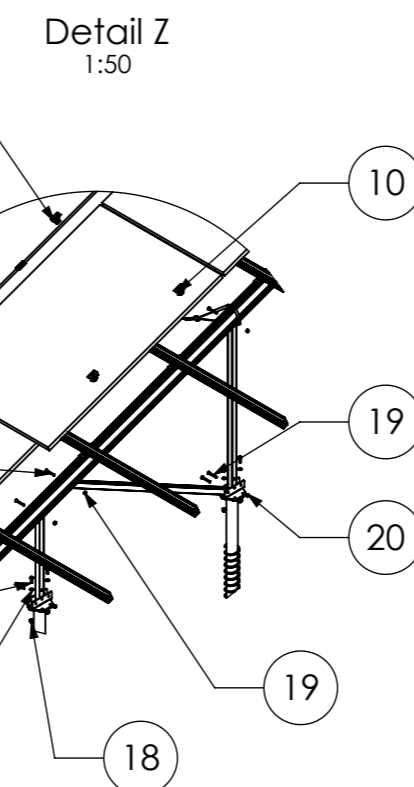
	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Groundscrew</b> <b>2x12 S</b>	
	Name: S. Frey Date: 11.08.2025 Material: -	Item no.: -	A3	Approved: B. Koch Date: 01.10.2025 Surface: -	Drawing no.: -
Last change: A. Soumpalas Date: 20.03.2026 Weight: -	Scale: 1:50	Sheet 1 of 1	This drawing is the sole property of K2 Systems GmbH. It is protected by copyright and may only be copied, reproduced or distributed to a third party with explicit permission!		



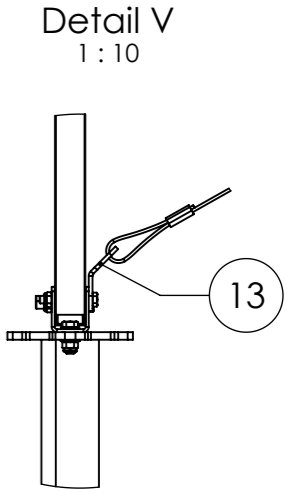
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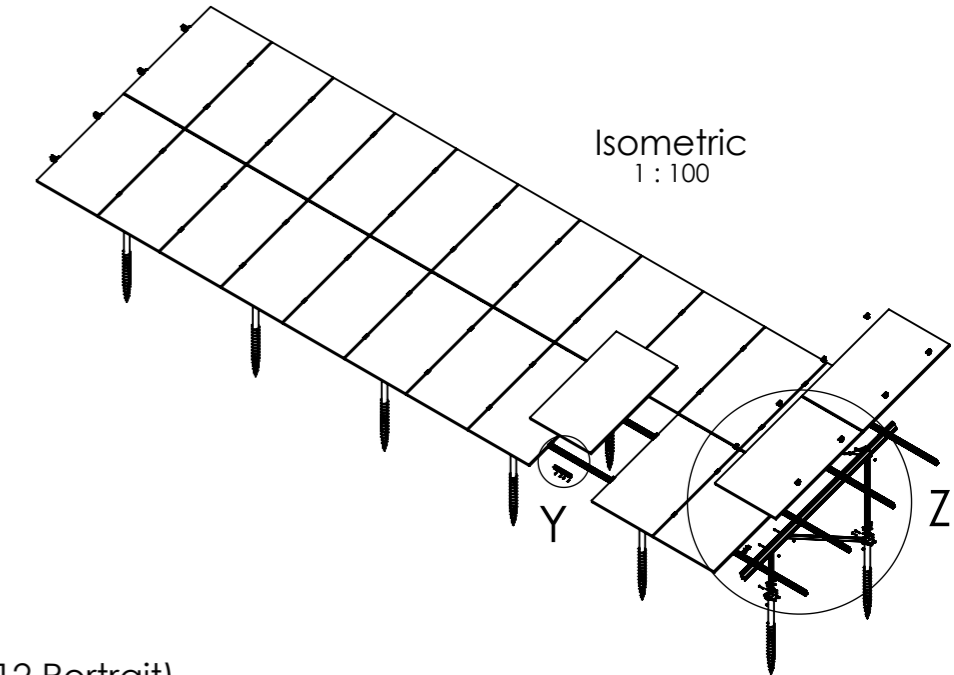
5



Detail Z  
1:50

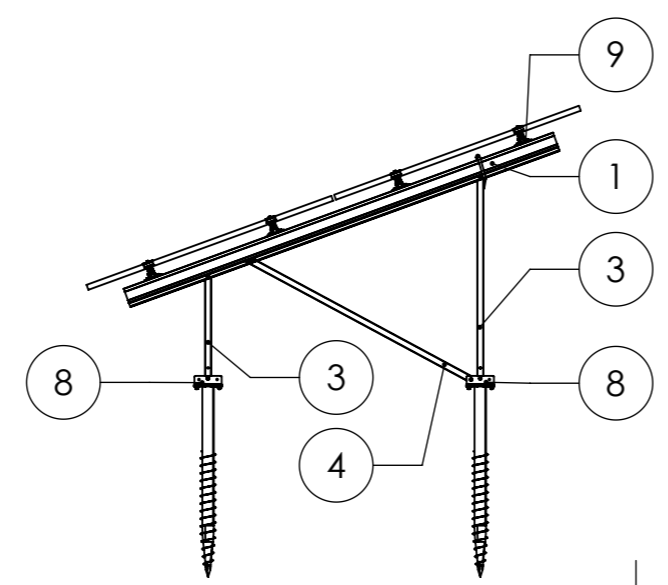


Detail V  
1:10



Isometric  
1:100

Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	N-Rack GS Foot
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4017 - M8x35 - A2-70
17	Plain washer - ISO 7089 - 12 - A2-50
18	Hexagon nut with flange and clamping part - EN 1663 - M12 - A2-70
19	Hexagon head bolt - ISO 4014 - M10x70-A2-70
20	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70



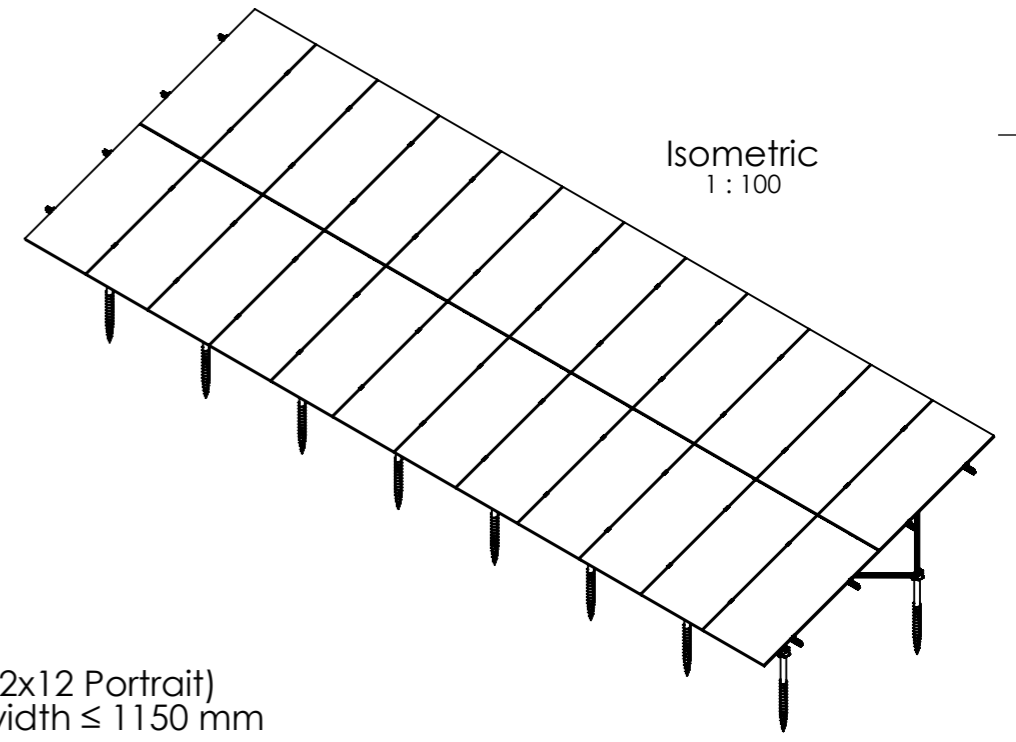
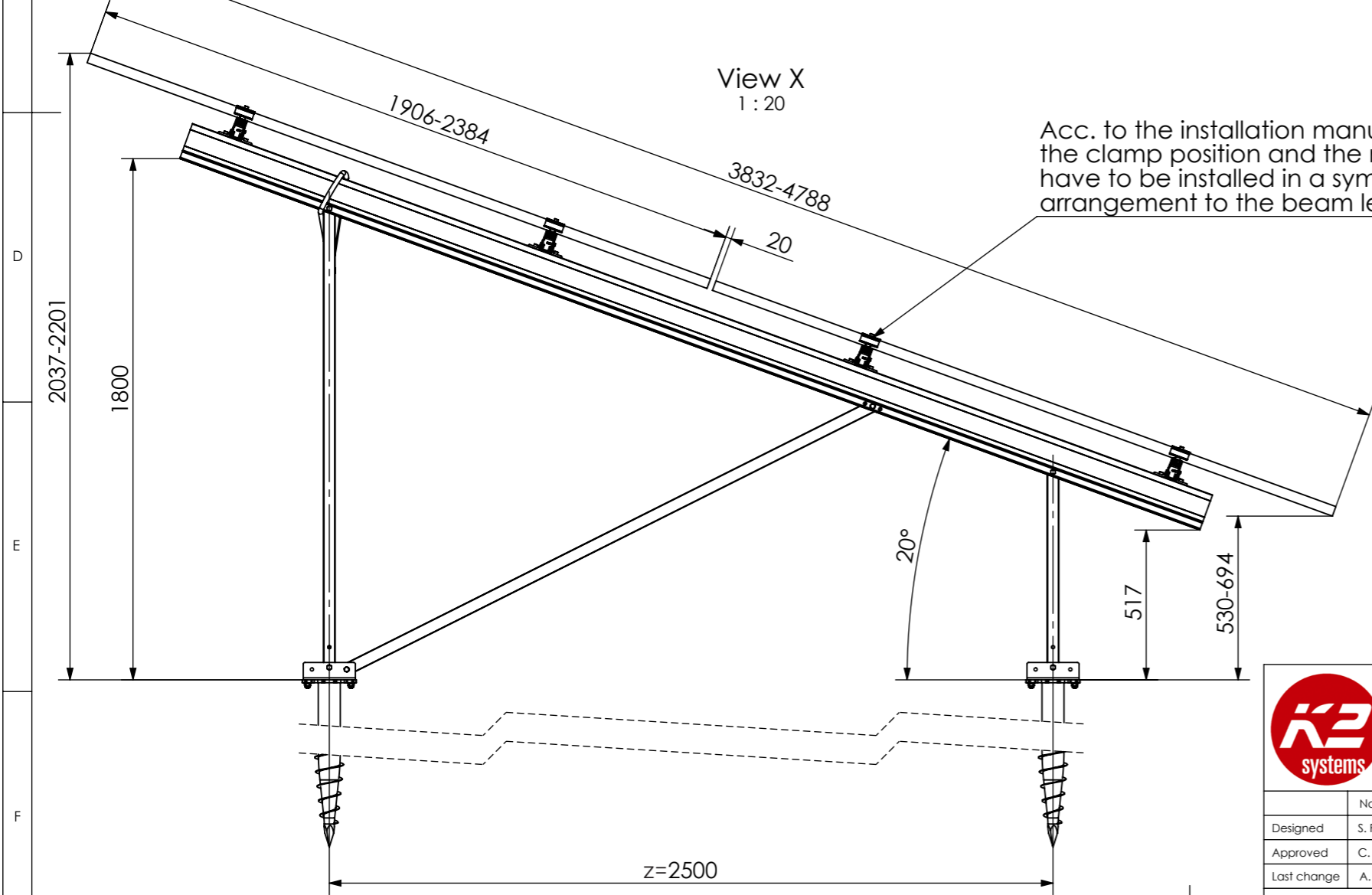
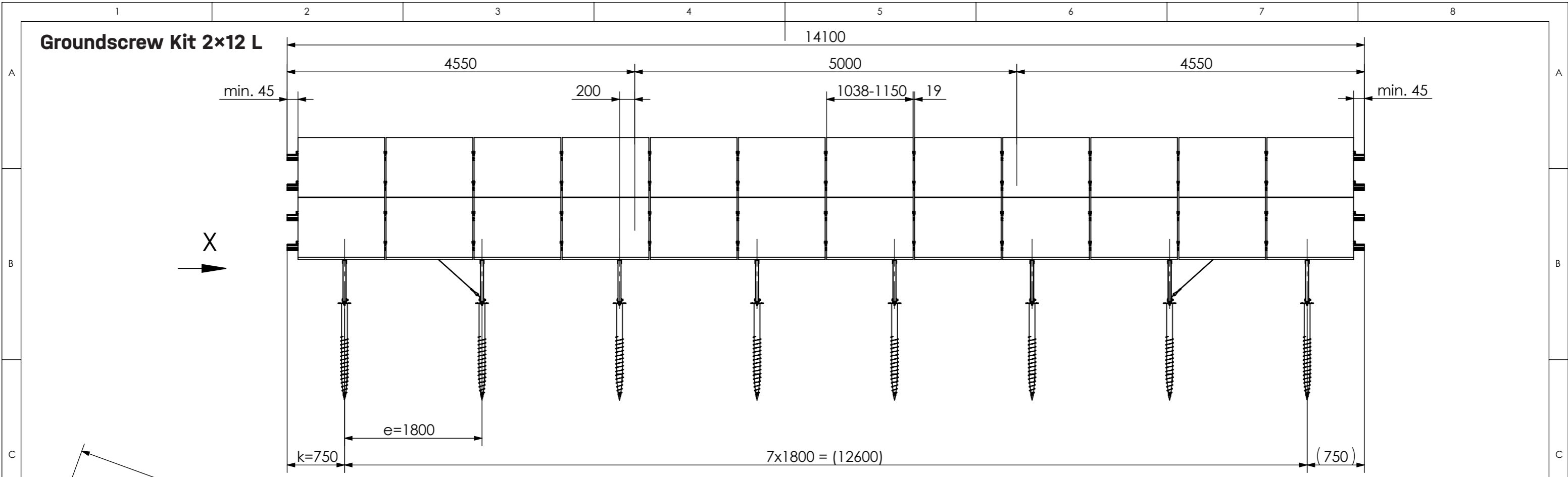
24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Groundscrew</b> <b>2x12 S</b>																							
	<table border="1"> <tr><td>Name</td><td>S. Frey</td><td>Date</td><td>11.08.2025</td><td>Material:</td><td>-</td></tr> <tr><td>Designed</td><td>S. Frey</td><td>Date</td><td>11.08.2025</td><td>Surface:</td><td>-</td></tr> <tr><td>Approved</td><td>B. Koch</td><td>Date</td><td>01.10.2025</td><td>Weight:</td><td>-</td></tr> <tr><td>Last change</td><td>A. Soumpalas</td><td>Date</td><td>20.03.2026</td><td>Scale:</td><td>1:50</td></tr> </table>	Name	S. Frey	Date	11.08.2025	Material:	-	Designed	S. Frey	Date	11.08.2025	Surface:	-	Approved	B. Koch	Date	01.10.2025	Weight:	-	Last change	A. Soumpalas	Date	20.03.2026	Scale:	1:50	Item no.: -	Drawing no.: -
Name	S. Frey	Date	11.08.2025	Material:	-																						
Designed	S. Frey	Date	11.08.2025	Surface:	-																						
Approved	B. Koch	Date	01.10.2025	Weight:	-																						
Last change	A. Soumpalas	Date	20.03.2026	Scale:	1:50																						
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**Groundscrew Kit 2x12 L**

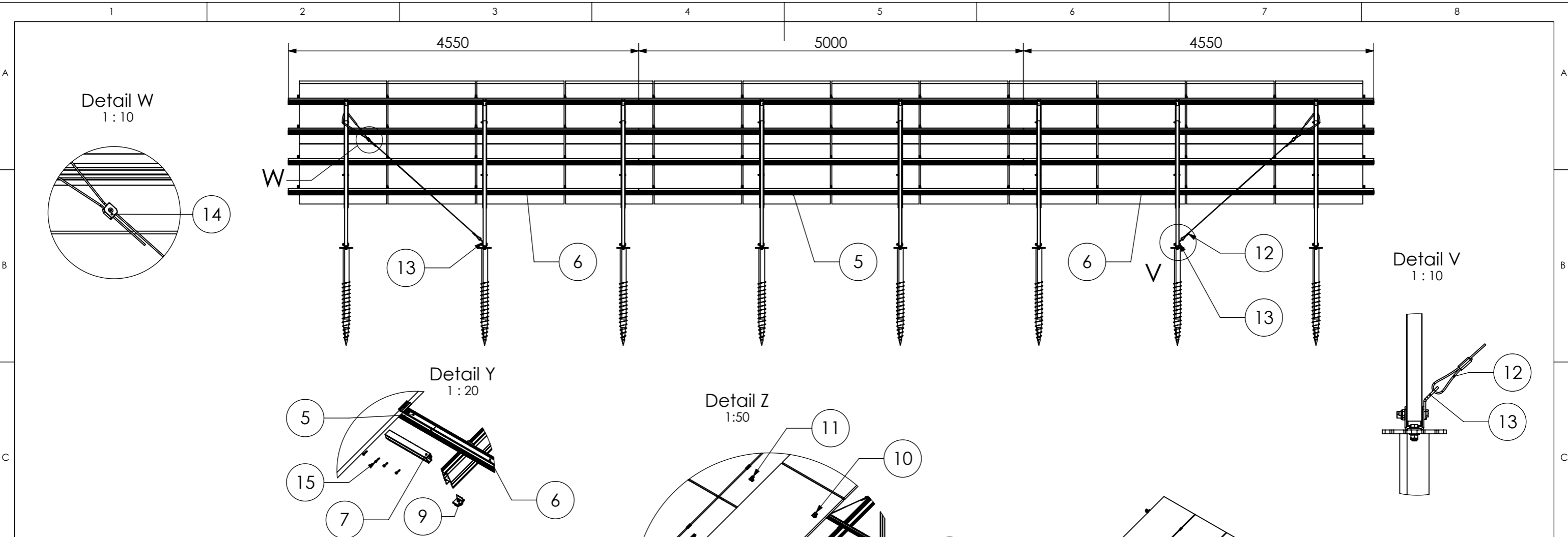


24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

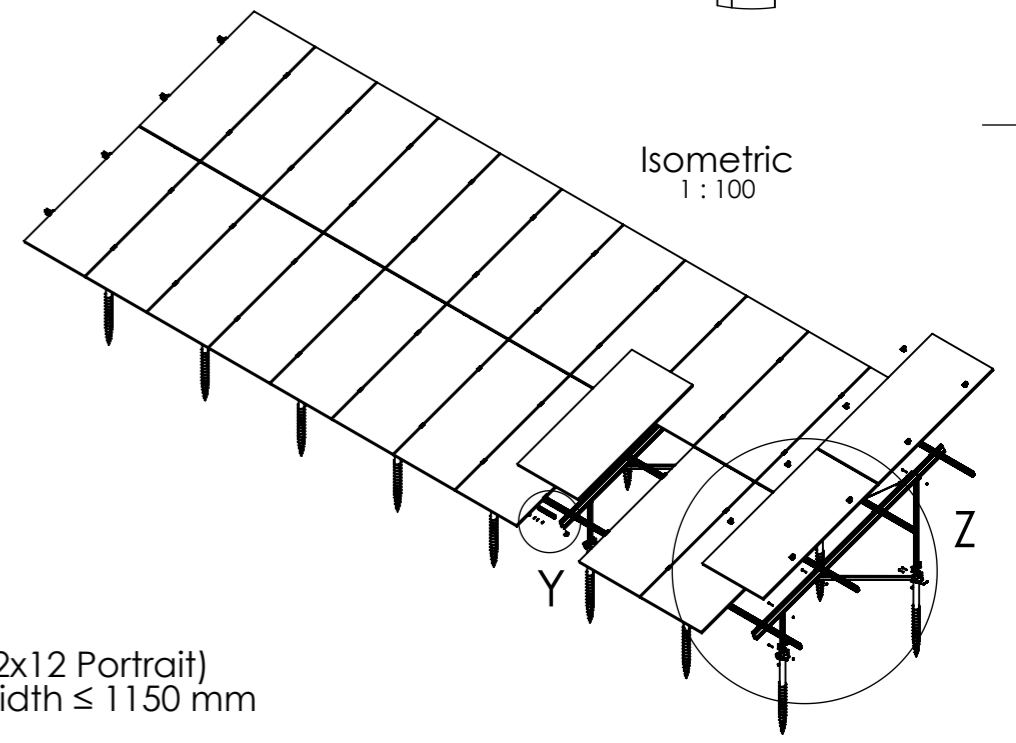
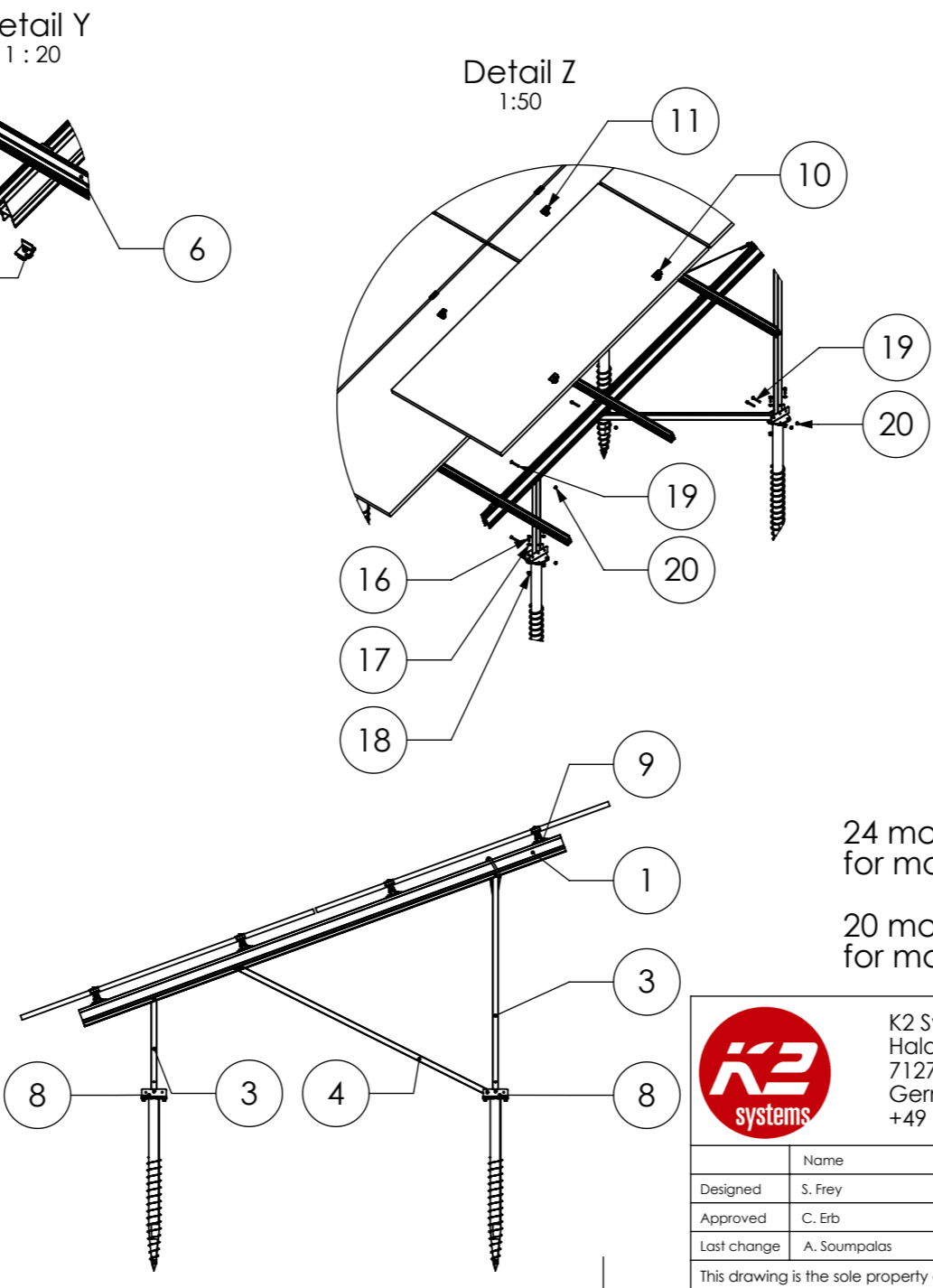
20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet</b> <b>N-Rack 2.20 Groundscrew 2x12 L</b>	
	Name S. Frey	Date 07.08.2025	Material: -	Item no.: -	A3
Designed S. Frey	Date 07.08.2025	Surface: -	Drawing no.: -	All dimensions in mm	
Approved C. Erb	Date 17.03.2026	Weight: -	Scale: 1:50	Sheet 1 of 1	
Last change A. Soumpalas	Date 20.03.2026	This drawing is the sole property of K2 Systems GmbH. It is protected by copyright and may only be copied, reproduced or distributed to a third party with explicit permission!			



Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	N-Rack GS Foot
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4017 - M8x35 - A2-70
17	Plain washer - ISO 7089 - 12 - A2-50
18	Hexagon nut with flange and clamping part - EN 1663 - M12 - A2-70
19	Hexagon head bolt - ISO 4014 - M10x70-A2-70
20	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70



24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

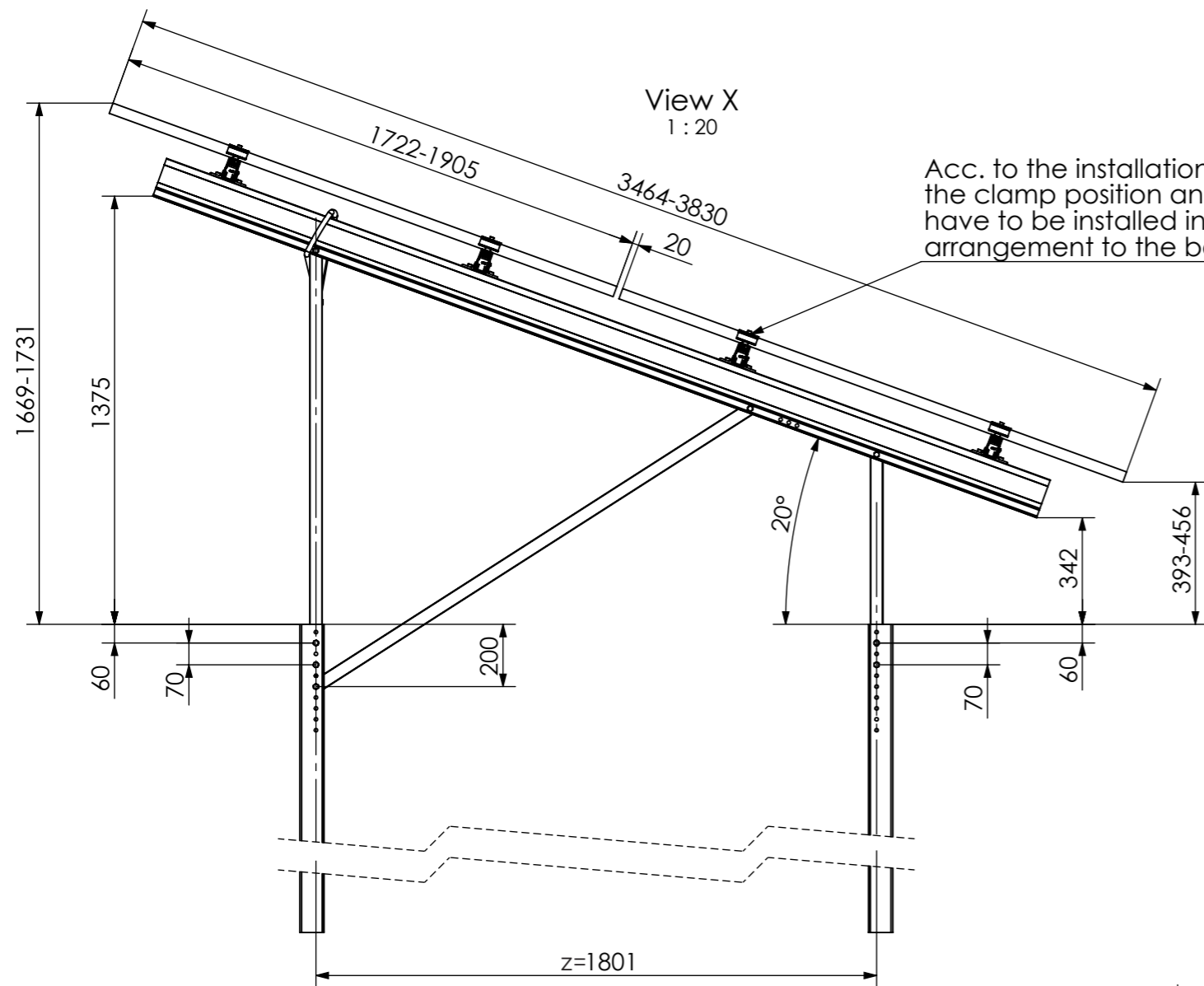
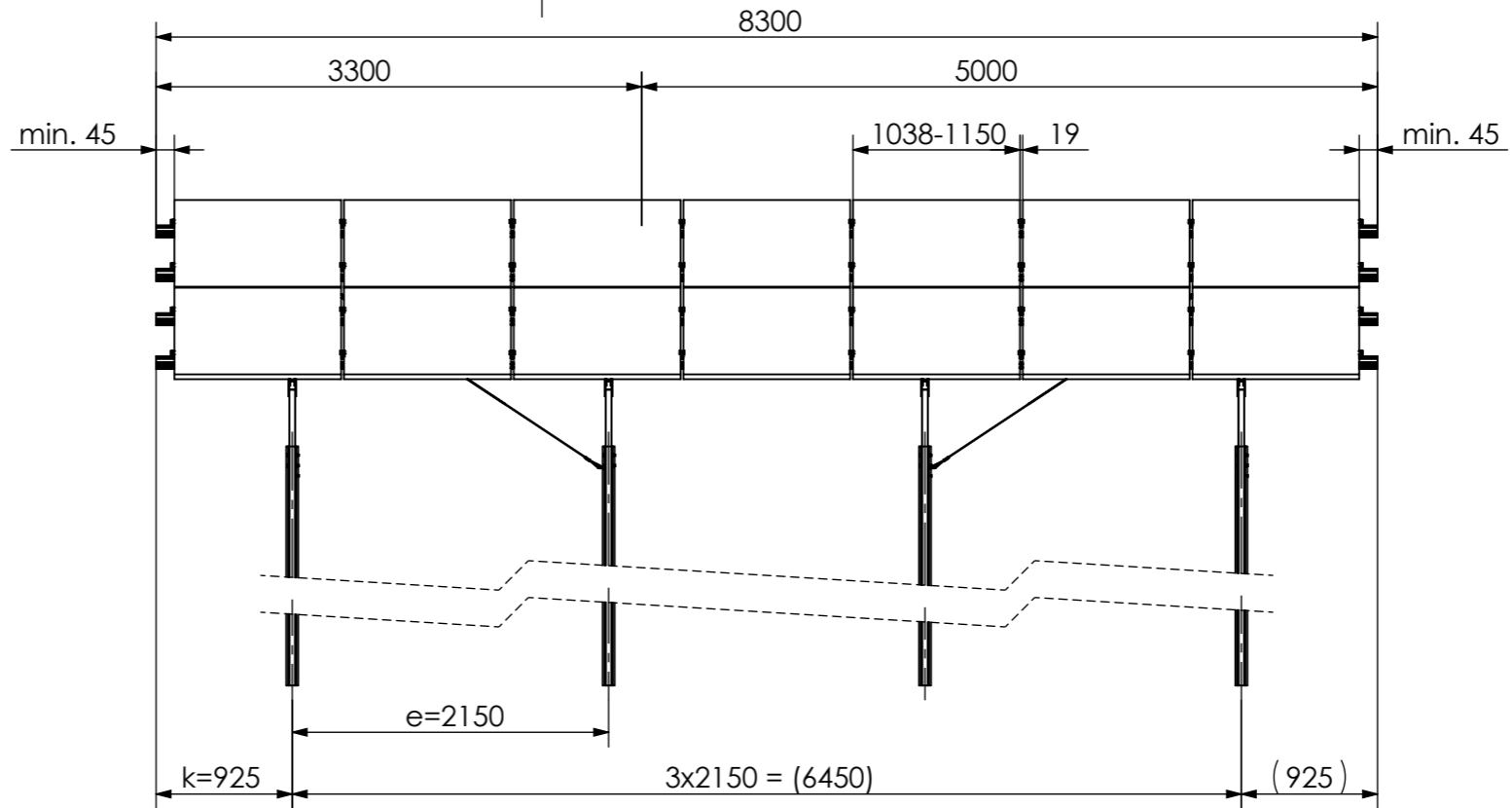
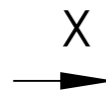
	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0		Designation: <b>Data sheet N-Rack 2.20 Groundscrew 2x12 L</b>	
	Name	Date	Material:	Item no.: -
	Designed	S. Frey	07.08.2025	-
	Approved	C. Erb	17.03.2026	Surface: -
Last change	A. Soumpalas	20.03.2026	Weight: -	Scale: 1:50

A3	
Drawing no.:	-
All dimensions in mm	
Sheet 1 of 1	

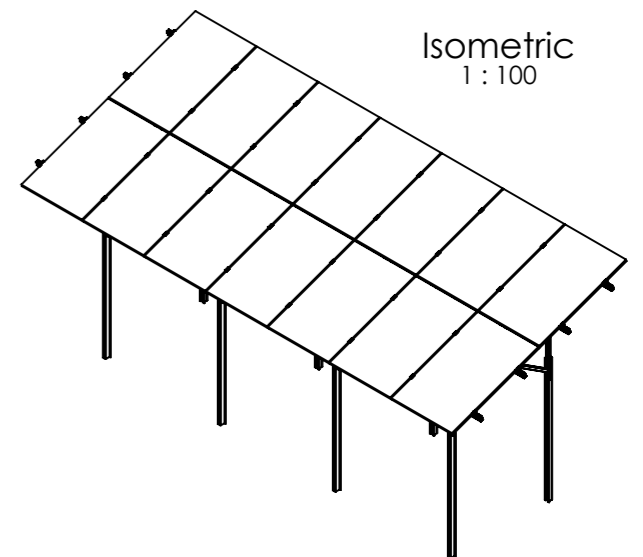
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# Rammfundamente

Pile Kit 2x7 S



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



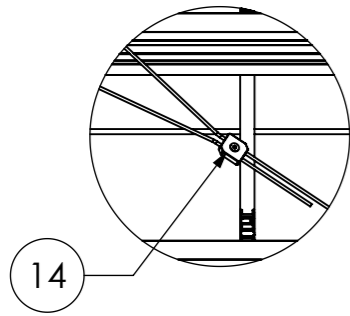
K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet**  
**N-Rack 2.20 Pile 2x7 S**

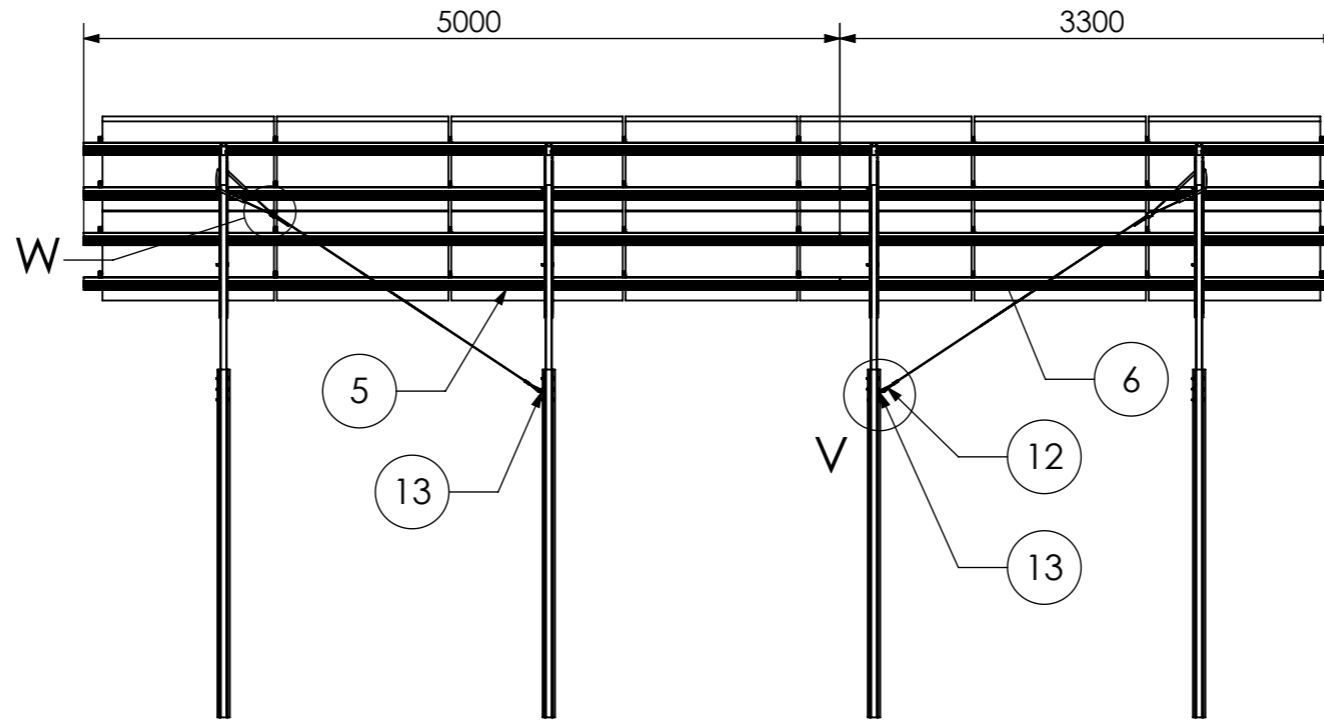
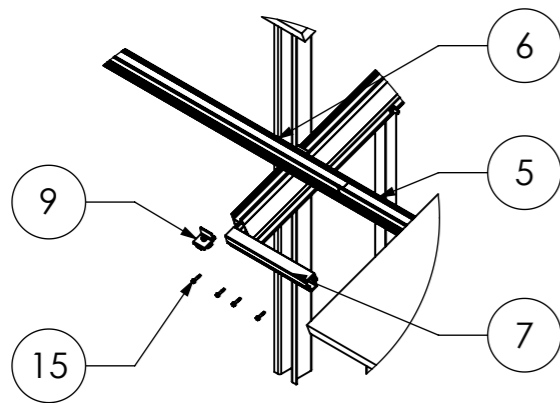
Name	Date	Material:	Item no.:	A3
Designed C. Erb	28.01.2026	-	-	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: -	All dimensions in mm
Last change		Weight: -	Scale: 1:50	Sheet 1 of 1

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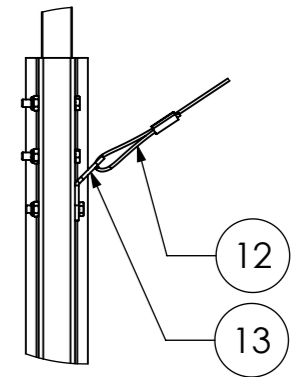
Detail W  
1:10



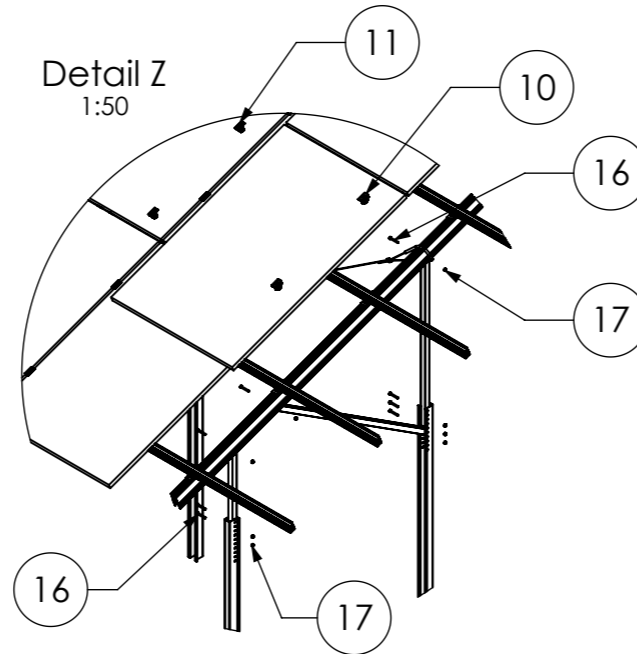
Detail Y  
1:20



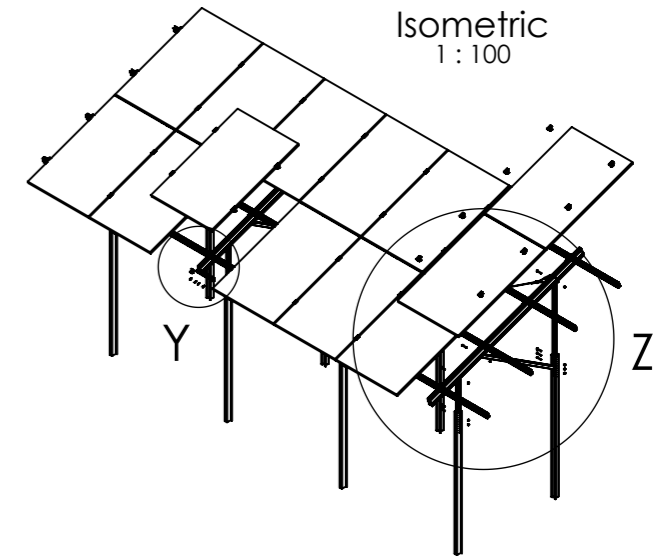
Detail V  
1:10



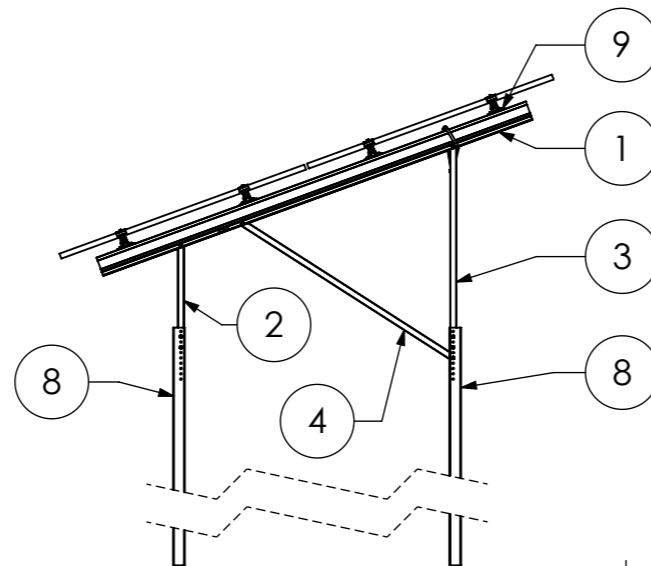
Detail Z  
1:50



Isometric  
1:100



Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	Cap-Profile N-Rack
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4014 - M10x70-A2-70
17	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

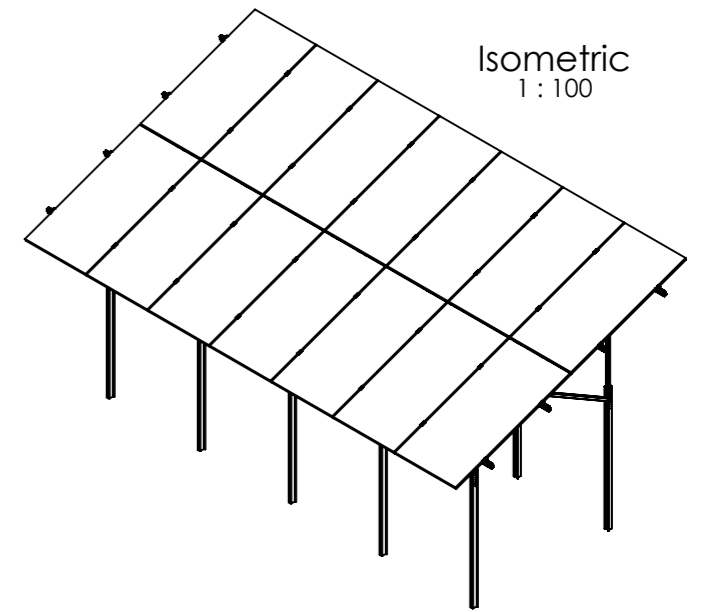
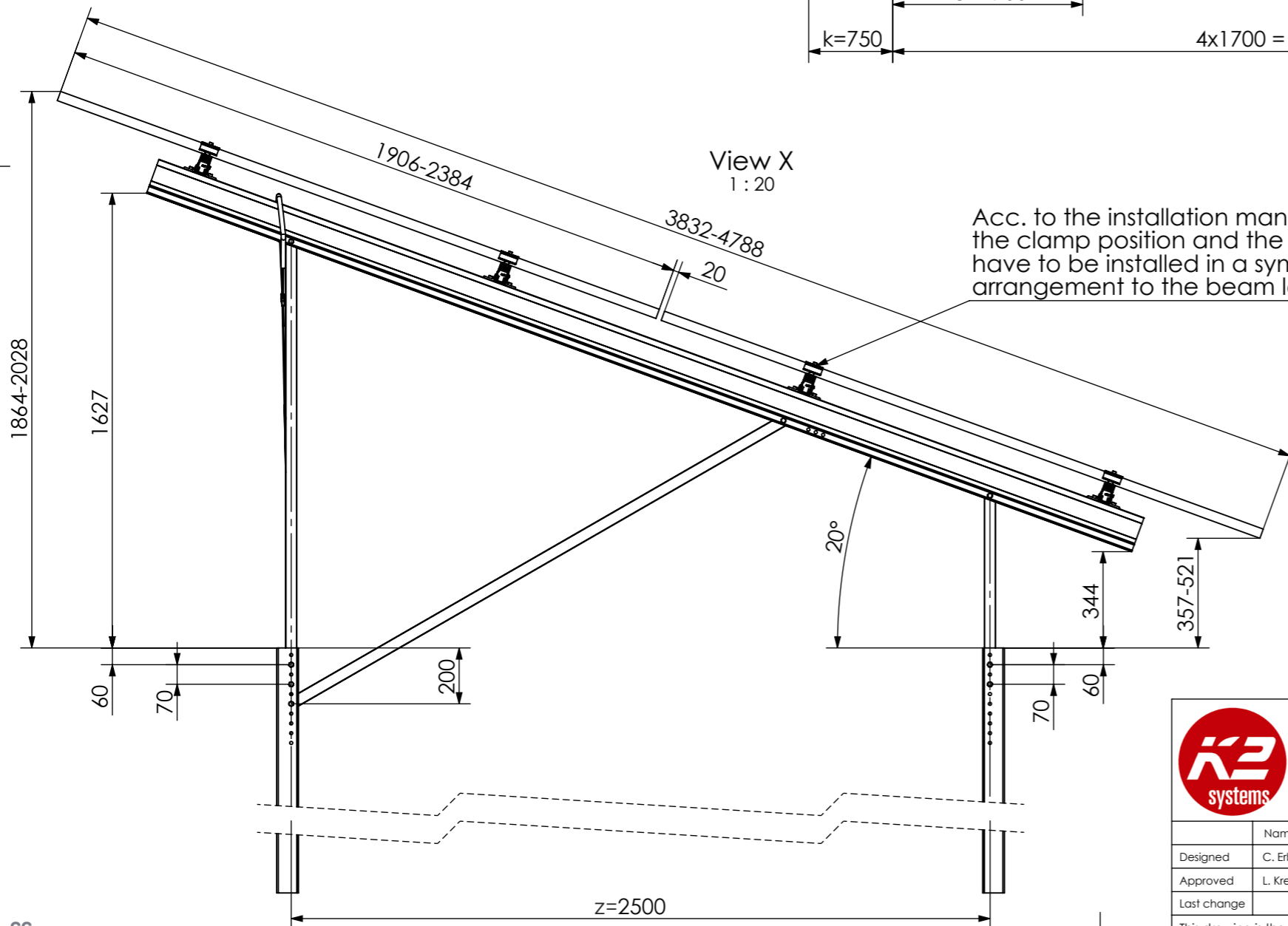
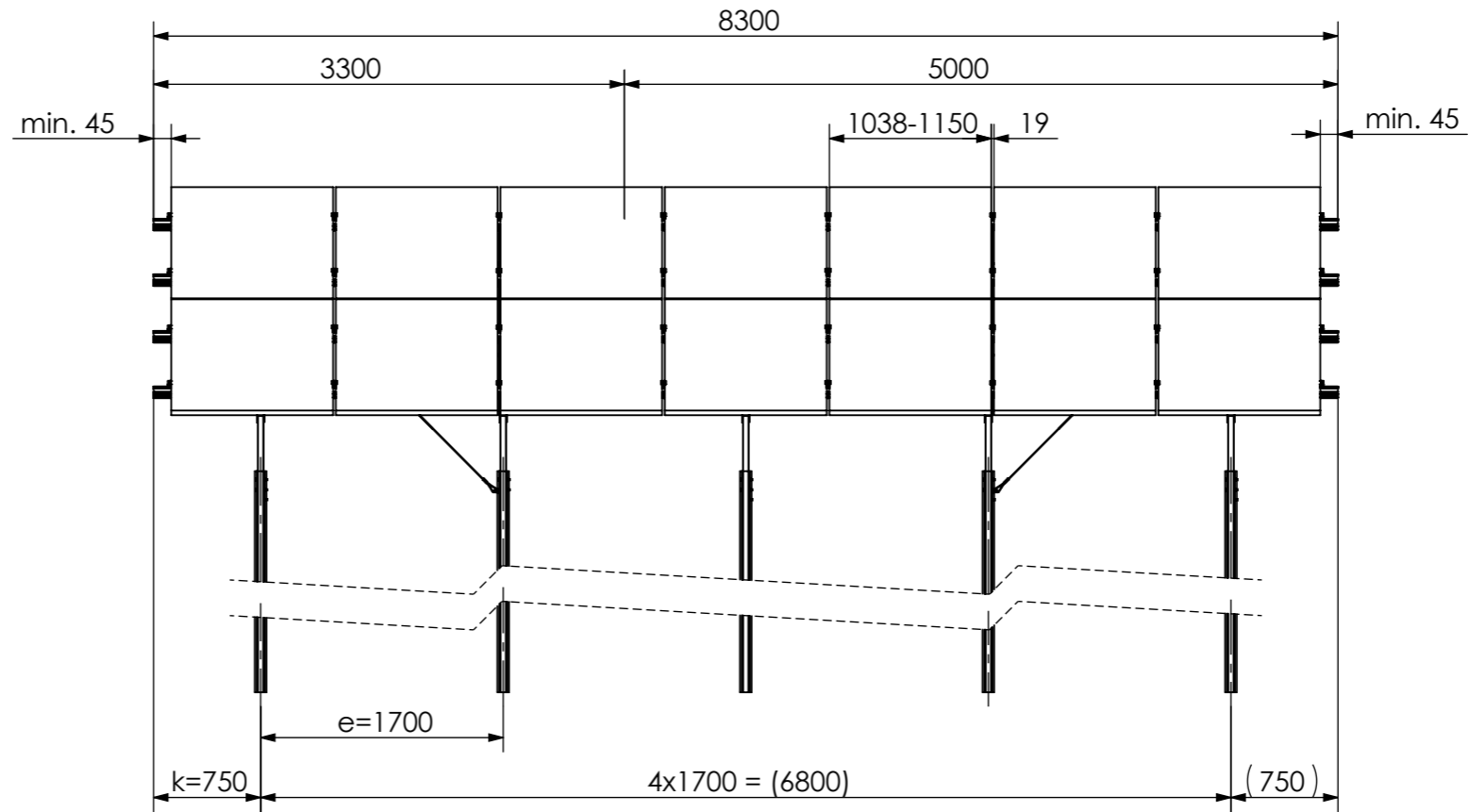
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation:		Data sheet N-Rack 2.20 Pile 2x7 S	
Name	Date	Item no.:	A3
Designed	C. Erb	28.01.2026	-
Approved	L. Kreemke	16.03.2026	-
Last change		Weight: -	Scale: 1:50
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**Pile Kit 2x7 L**



14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width > 1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



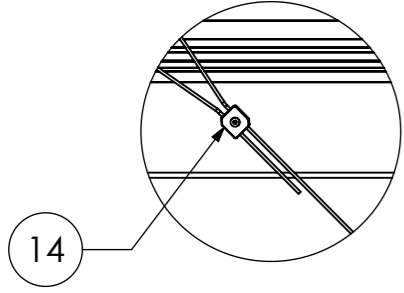
K2 Systems GmbH  
Haldenstr. 1  
71272 Renningen  
Germany  
+49 7159 42059-0

Designation:  
**Data sheet**  
**N-Rack 2.20 Pile 2x7 L**

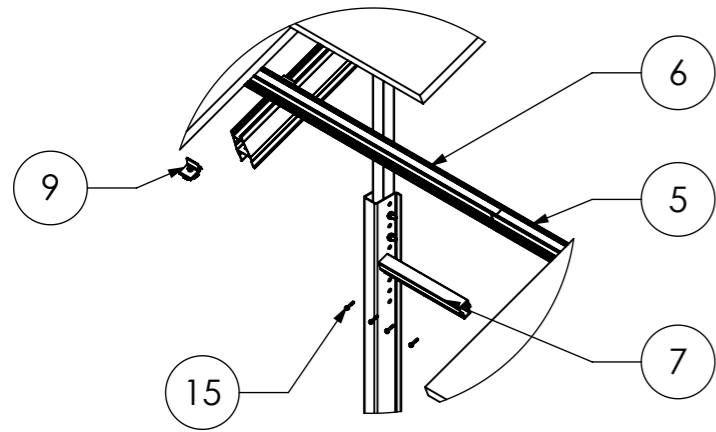
Name	Date	Material:	Item no.:	A3
Designed C. Erb	28.01.2026	-	-	All dimensions in mm Sheet 1 of 1
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: -	
Last change		Weight: -	Scale: 1:50	

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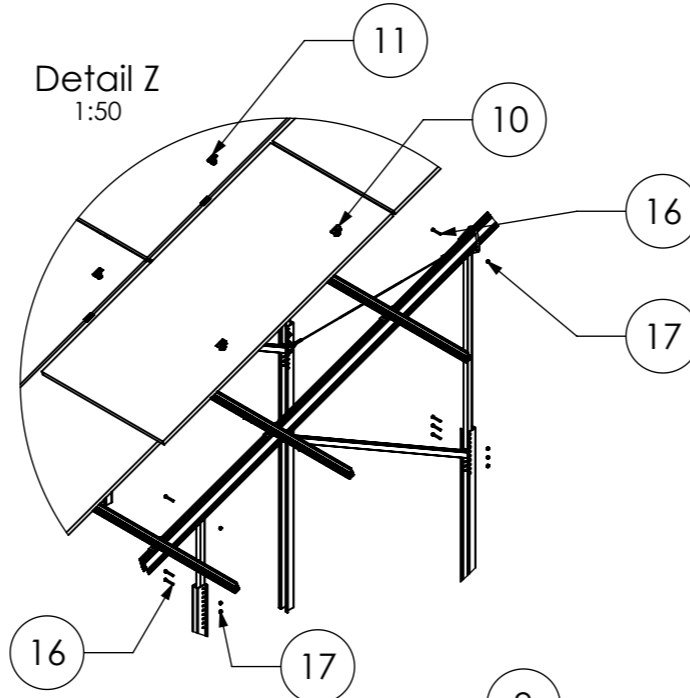
Detail W  
1:10



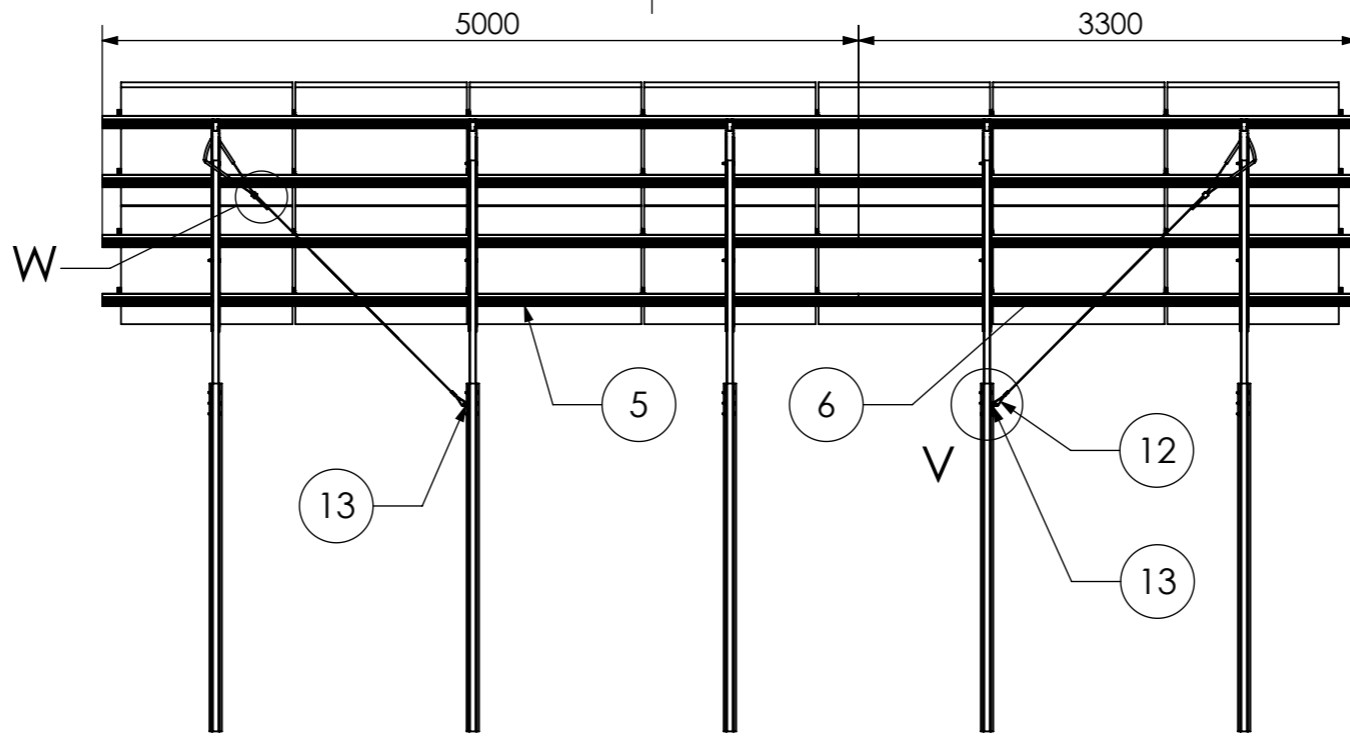
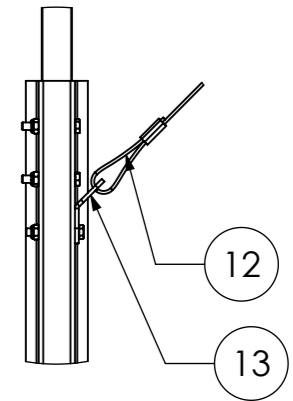
Detail Y  
1:20



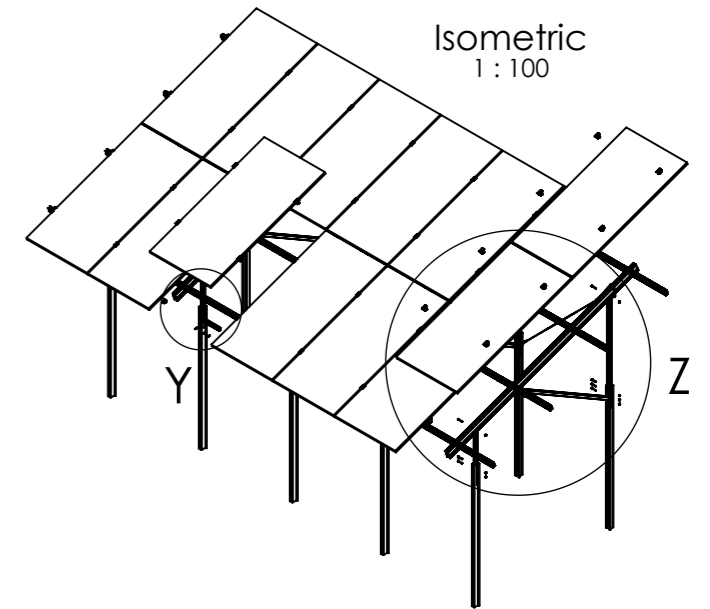
Detail Z  
1:50



Detail V  
1:10



Isometric  
1:100



Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 3,3 m
7	CrossRail 73 Connector
8	Cap-Profile N-Rack
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4014 - M10x70-A2-70
17	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70

14 modules (2x7 Portrait)  
for module width ≤ 1150 mm

12 modules (2x6 Portrait)  
for module width >1150-1303 mm

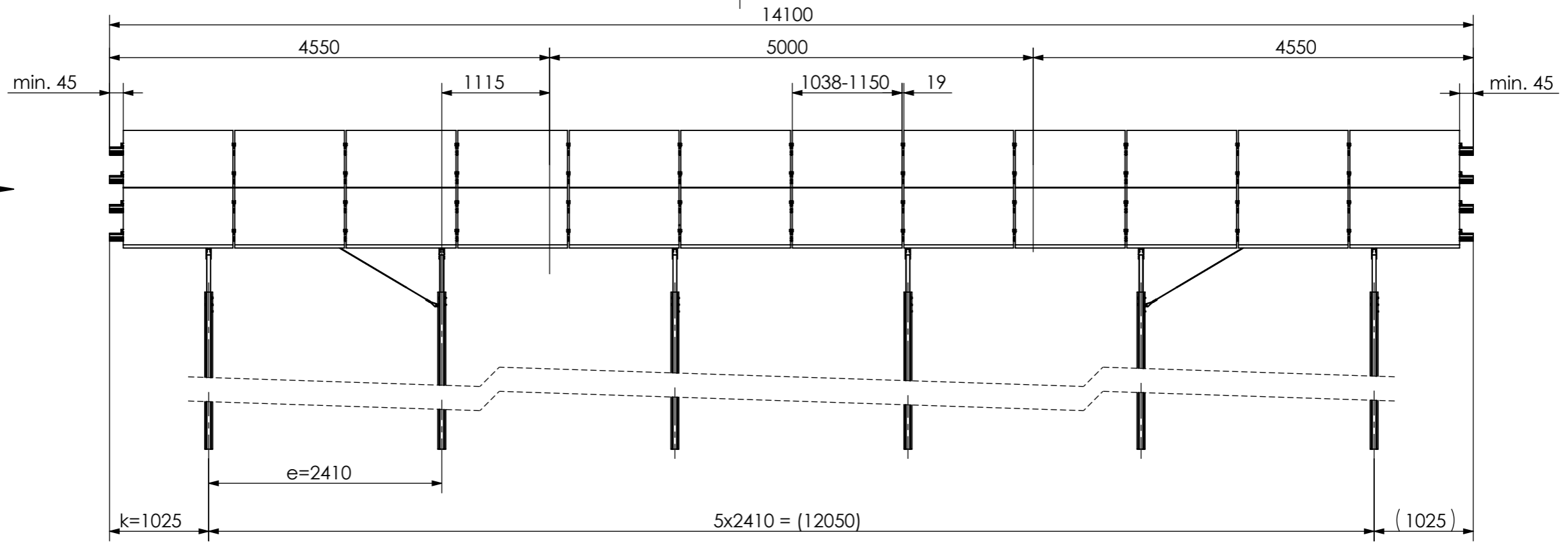
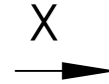
Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>



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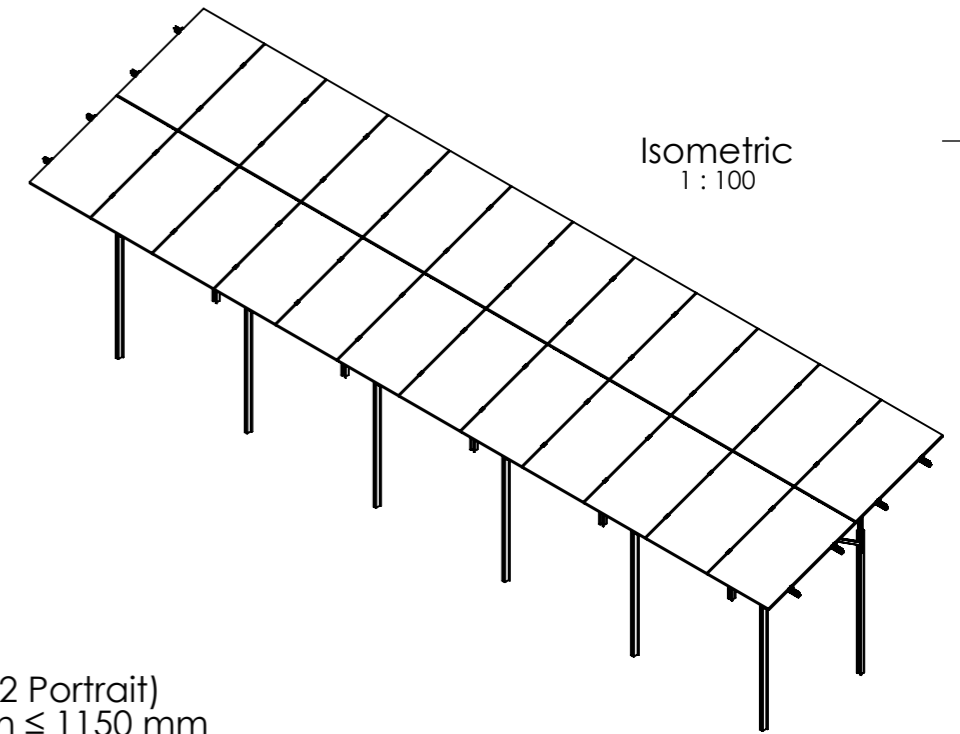
Designation:		Data sheet N-Rack 2.20 Pile 2x7 L	
Name	Date	Material:	Item no.:
Designed C. Erb	28.01.2026	-	-
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.:
Last change		Weight: -	Scale: 1:50
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**Pile Kit 2x12 S**

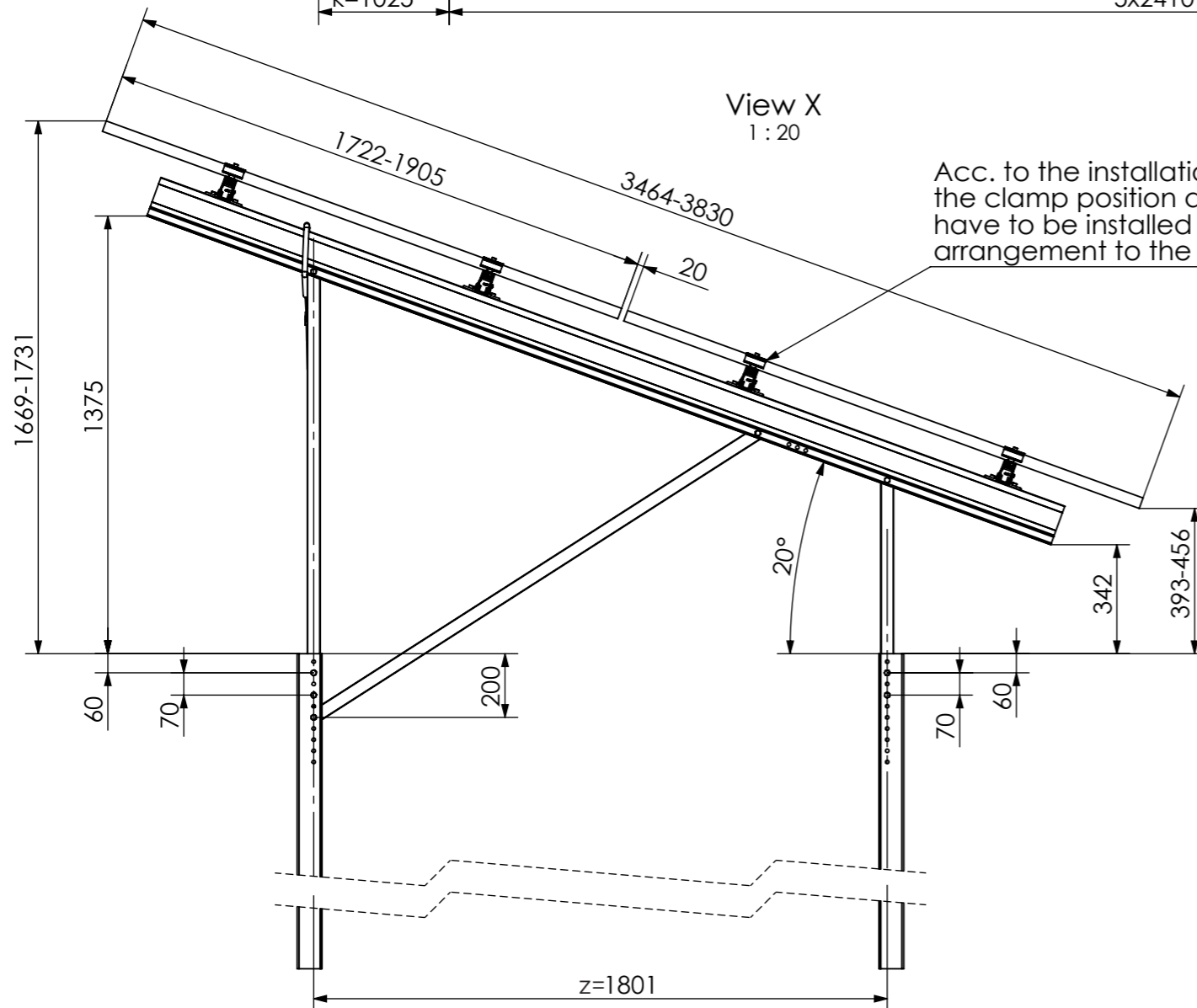


View X  
1 : 20

Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



Isometric  
1 : 100



24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

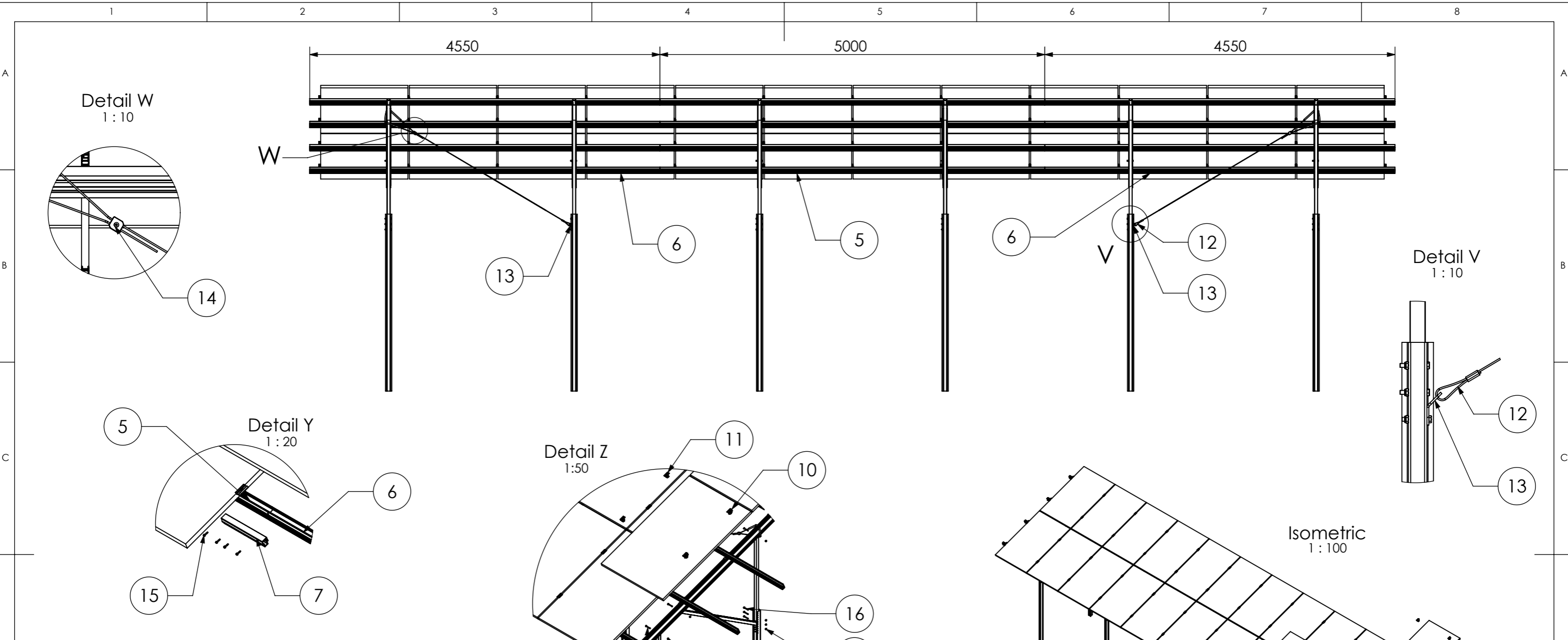


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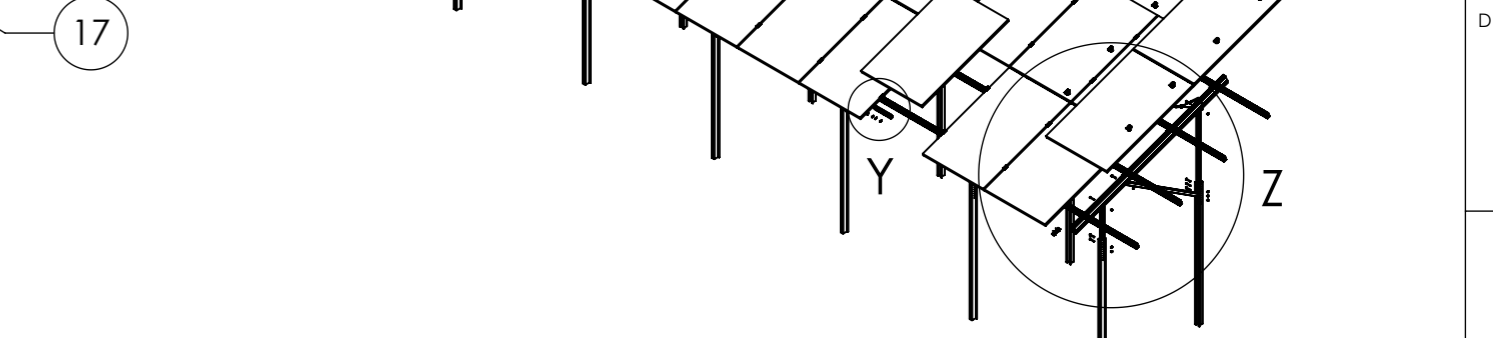
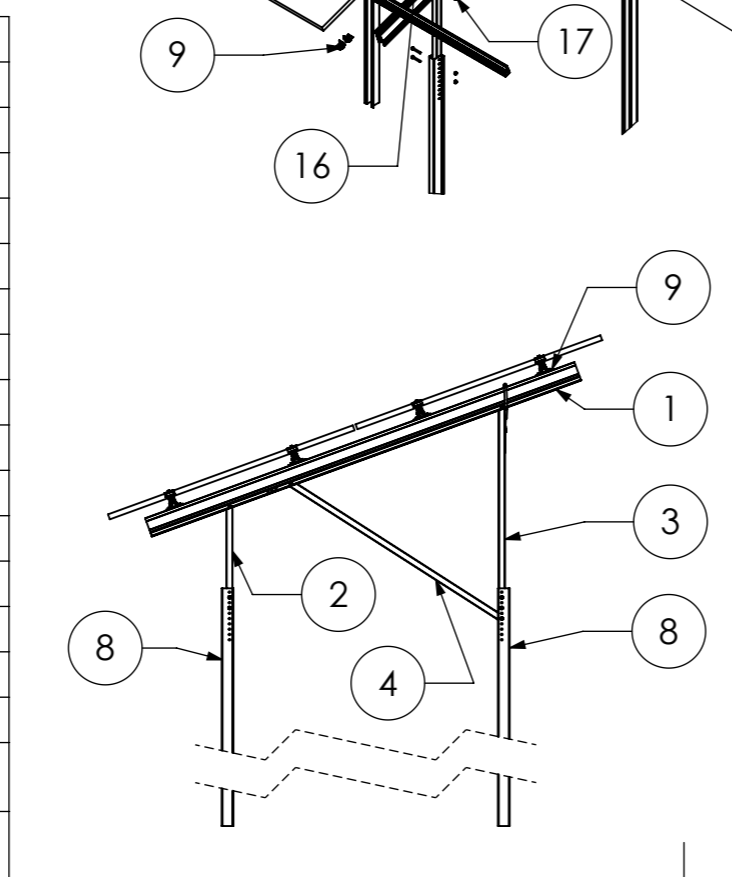
Designation:  
**Data sheet**  
**N-Rack 2.20 Pile 2x12 S**

	Name	Date	Material:	Item no.:	-	A3
Designed	C. Erb	28.01.2026	-	Drawing no.:	-	All dimensions in mm
Approved	L. Kreemke	16.03.2026	Surface: -			Sheet 1 of 1
Last change			Weight: -	Scale: 1:50		

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Pos.No.	Designation
1	Beam N-Rack 3020
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1370
4	2-Hole Brace N-Rack 1696
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	Cap-Profile N-Rack
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4014 - M10x70-A2-70
17	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70



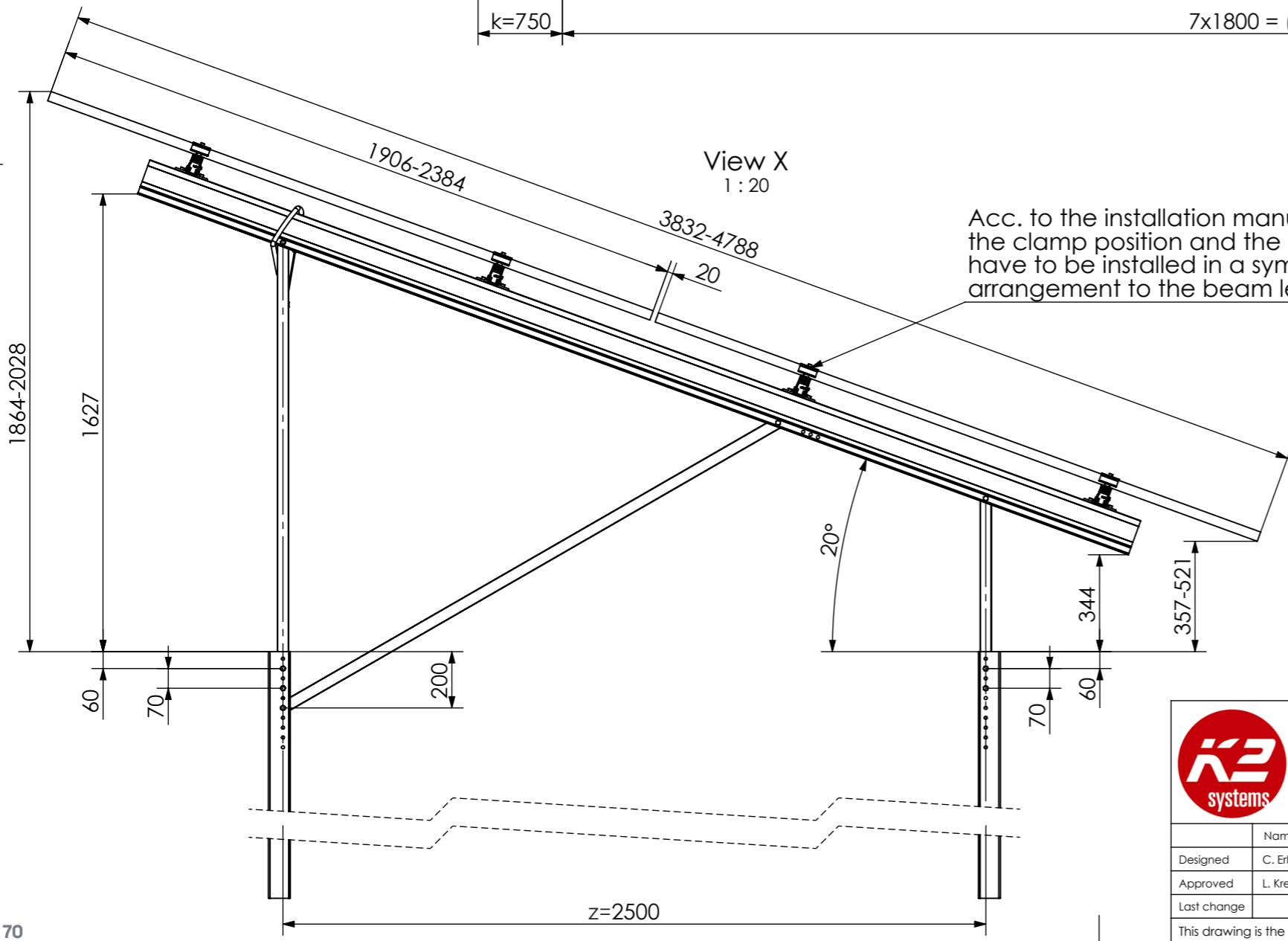
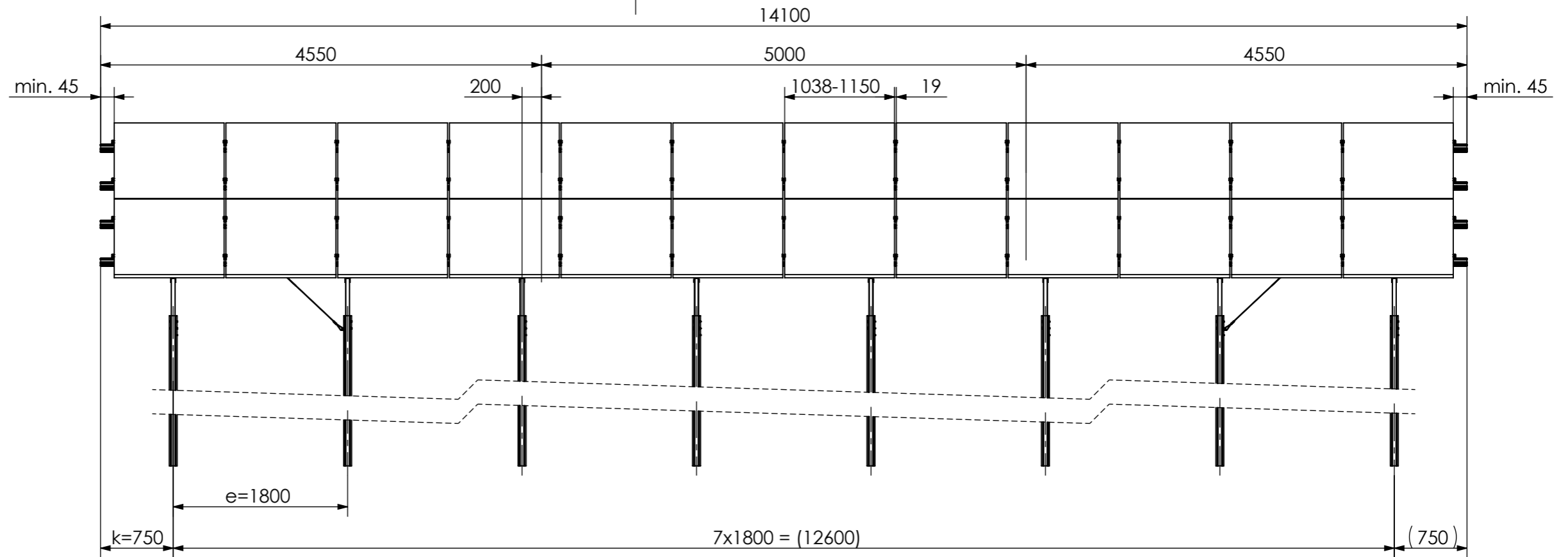
24 modules (2x12 Portrait)  
for module width  $\leq 1150$  mm

20 modules (2x10 Portrait)  
for module width  $>1150-1303$  mm

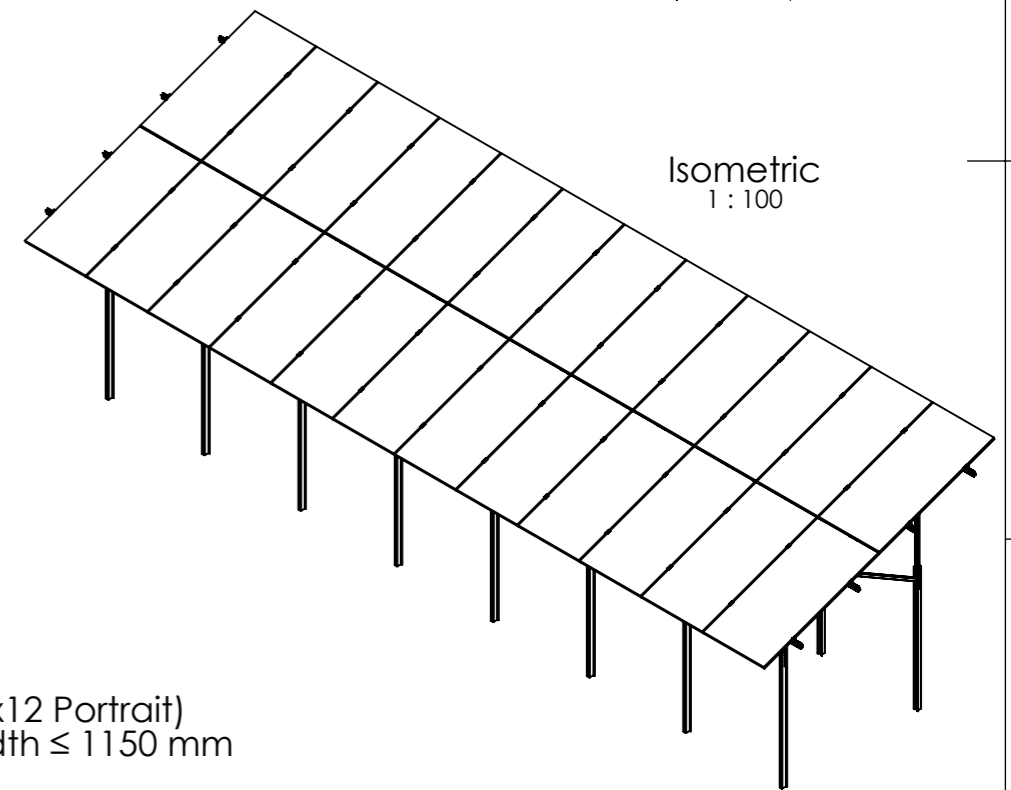
Peak velocity  $q_p[z]: 0.67\text{kN/m}^2$   
Ground snow load  $S_k: 1.75\text{kN/m}^2$

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0		Designation: <b>Data sheet N-Rack 2.20 Pile 2x12 S</b>															
	<table border="1"> <tr><td>Name</td><td>Date</td><td>Material:</td></tr> <tr><td>Designed</td><td>C. Erb</td><td>28.01.2026</td><td>-</td></tr> <tr><td>Approved</td><td>L. Kreemke</td><td>16.03.2026</td><td>Surface: -</td></tr> <tr><td>Last change</td><td></td><td>Weight: -</td><td>Scale: 1:50</td></tr> </table>	Name	Date	Material:	Designed	C. Erb	28.01.2026	-	Approved	L. Kreemke	16.03.2026	Surface: -	Last change		Weight: -	Scale: 1:50	Item no.: -	Drawing no.: -
Name	Date	Material:																
Designed	C. Erb	28.01.2026	-															
Approved	L. Kreemke	16.03.2026	Surface: -															
Last change		Weight: -	Scale: 1:50															
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**Pile Kit 2x12 L**



Acc. to the installation manual, the clamp position and the modules have to be installed in a symmetrical arrangement to the beam length.



24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

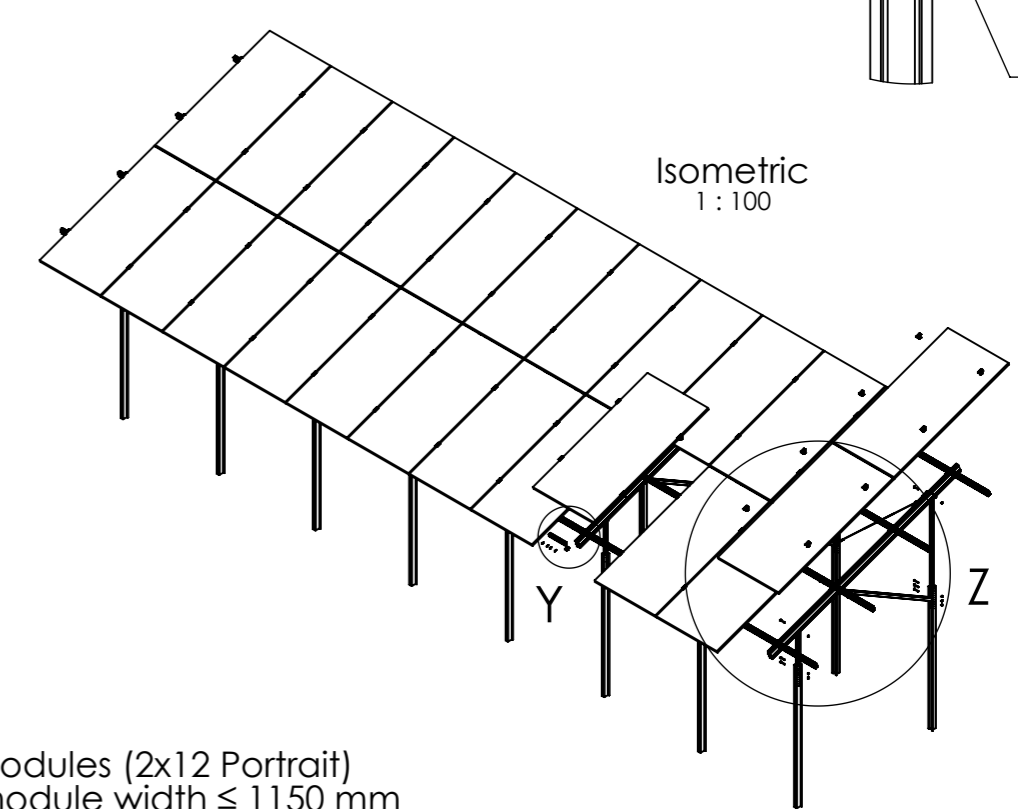
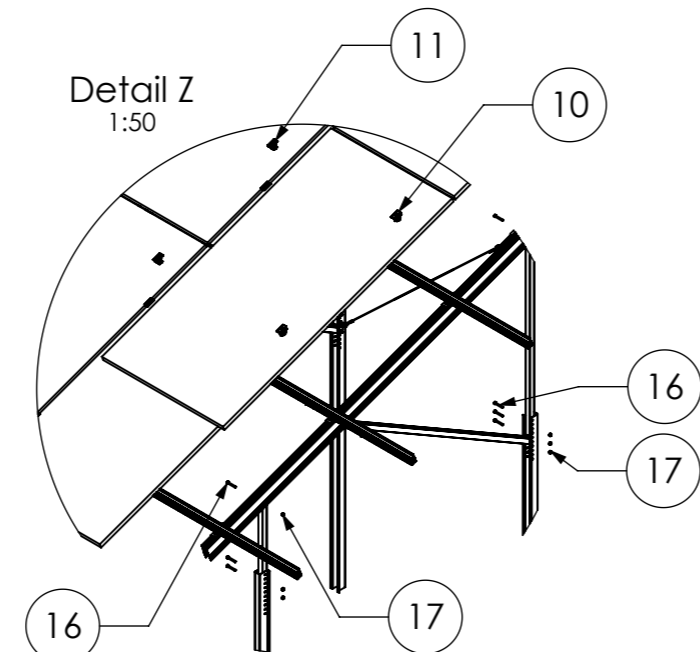
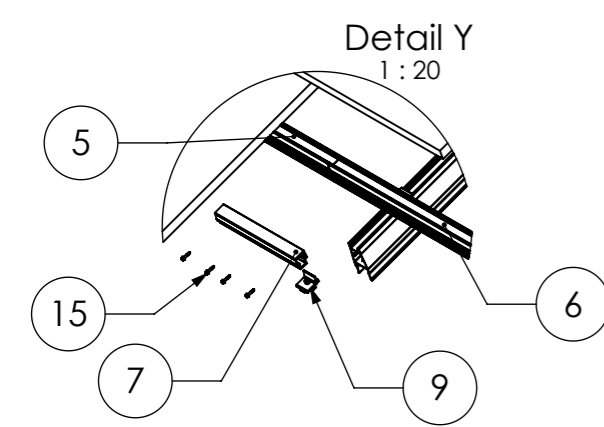
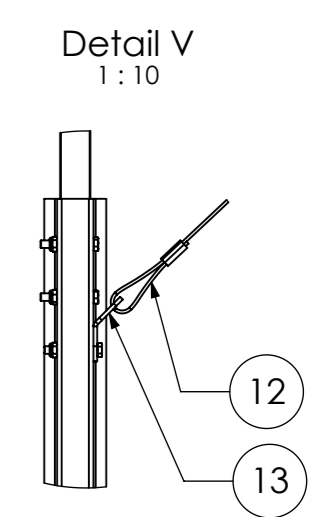
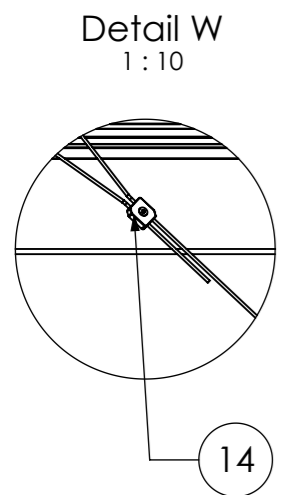
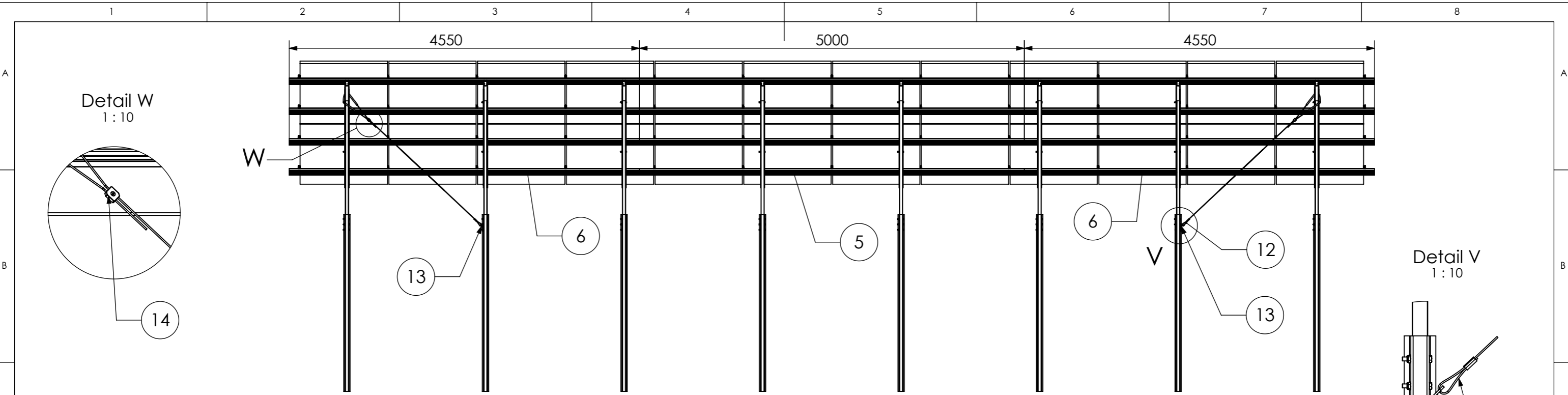


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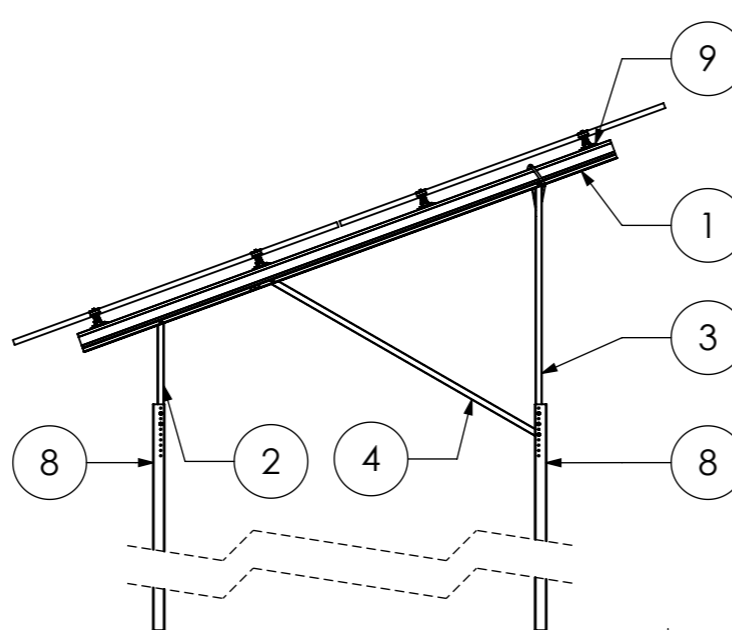
Designation:  
**Data sheet**  
**N-Rack 2.20 Pile 2x12 L**

Name	Date	Material:	Item no.:	A3
Designed C. Erb	28.01.2026	-	-	All dimensions in mm Sheet 1 of 1
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: -	
Last change		Weight: -	Scale: 1:50	

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Pos.No.	Designation
1	Beam N-Rack 3750
2	3-Hole Brace N-Rack 715
3	3-Hole Brace N-Rack 1625
4	2-Hole Brace N-Rack 2072
5	CrossRail 73 - 5 m
6	CrossRail 73 - 4,55 m
7	CrossRail 73 Connector
8	Cap-Profile N-Rack
9	Climber 36/50 Set
10	EC Clamp Set
11	MC Clamp Set
12	Gripple Bracing
13	Gripple Angle
14	Gripple Lock
15	Self-tapping screw 5,5 x 25 - A2
16	Hexagon head bolt - ISO 4014 - M10x70-A2-70
17	Hexagon nut with clamping piece - ISO 10511 - M10 - A2-70



24 modules (2x12 Portrait)  
for module width ≤ 1150 mm

20 modules (2x10 Portrait)  
for module width >1150-1303 mm

Peak velocity  $q_p[z]$ : 0.67kN/m<sup>2</sup>  
Ground snow load  $S_k$ : 1.75kN/m<sup>2</sup>

	K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0			Designation: <b>Data sheet N-Rack 2.20 Pile 2x12 L</b>	
	Name	Date	Material:	Item no.:	A3
	Designed	C. Erb	28.01.2026	-	
	Approved	L. Kreemke	16.03.2026	Surface: -	Drawing no.: -
Last change			Weight: -	Scale: 1:50	All dimensions in mm Sheet 1 of 1

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## Connecting Strength

### Vielen Dank, dass Sie sich für ein K2 Montagesystem entschieden haben.

Systeme von K2 Systems sind schnell und einfach zu montieren. Wir hoffen, diese Anleitung hat Ihnen dabei geholfen. Für Anregungen, Fragen oder Verbesserungsvorschläge stehen wir Ihnen gerne zur Verfügung. Alle Kontaktdaten finden Sie unter:

- [k2-systems.com/kontakt](https://k2-systems.com/kontakt)
- **Service-Hotline: +49 7159 42059-0**

Es gelten unsere ALB; einzusehen unter: [k2-systems.com](https://k2-systems.com)

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