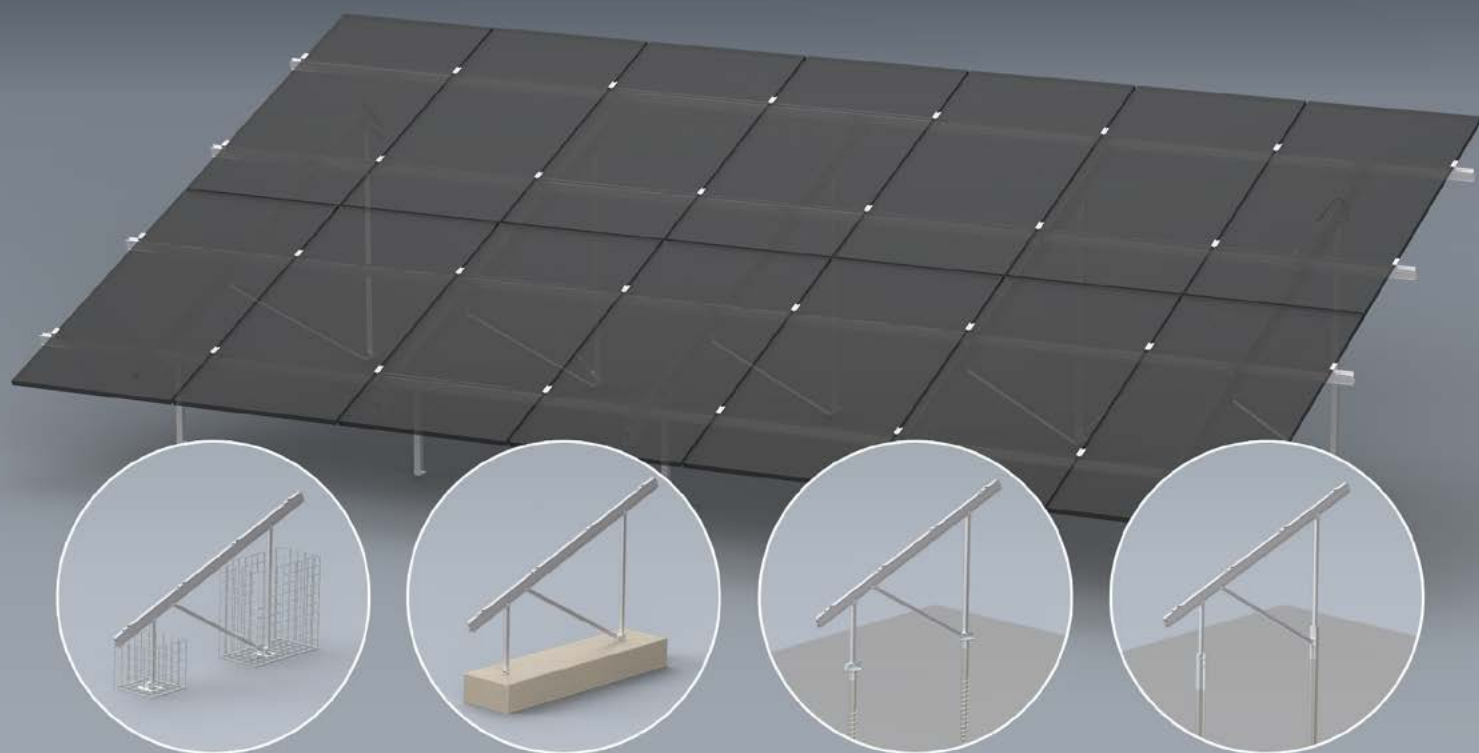




Connecting Strength



Instructions de montage

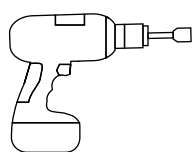
N-Rack Kit

**Gabions, Béton, Vis de fondation et
pieux battus**

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Outils requis



6 mm



8 mm



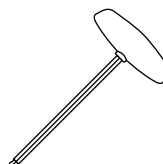
10 - 60 Nm
(7.4 - 44.2 lb-ft)



6 mm



16, 17, 18, 19 mm



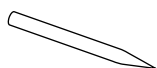
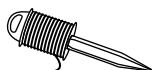
6 mm



16, 17, 18, 19 mm



≥ 3.0 m



Une qualité contrôlée - plusieurs certifications

K2 Systems est synonyme d'un assemblage sûr, d'une excellente qualité et d'une grande qualité. Ces caractéristiques sont connues de nos clients et de nos partenaires depuis longtemps. Plusieurs instituts indépendants testent, approuvent et certifient nos produits et compétences.

Retrouvez ci-dessous nos certifications de produits et de qualité :

k2-systems.com/fr/informations-techniques

Instructions générales de sécurité

Veuillez noter que nos instructions générales de montage doivent toujours être respectées. Elles sont consultables en ligne sur k2-systems.com

- Seuls des installateurs qualifiés et correctement formés sont autorisés à installer et à mettre en service cet équipement.
- Avant l'installation, vérifier que le produit est conforme aux exigences de charge statique sur site. Pour les systèmes installés en toiture, la capacité portante du toit doit toujours être vérifiée.
- Les normes de constructions nationales et locales et les directives concernant la protection de l'environnement doivent impérativement être respectés.
- Les réglementations relatives à la santé et à la sécurité, les consignes de prévention des accidents ainsi que les normes en vigueur doivent être respectées. Vous devez observer tout particulièrement les instructions suivantes :
 - Le port d'équipements de protection individuelle, tels qu'un casque de sécurité, des chaussures de sécurité et des gants, est obligatoire.
 - Les travaux de toiture doivent être réalisés conformément à la réglementation en vigueur, en utilisant des dispositifs de protection contre les chutes lorsque la hauteur à l'égout du toit dépasse 3 m.
 - Au moins deux personnes doivent être présentes pendant toute la durée des travaux d'installation afin de pouvoir apporter une assistance rapide en cas d'urgence.
- Les systèmes de montage K2 font l'objet d'un développement et d'améliorations continus. Le processus d'installation est donc susceptible d'être modifié à tout moment. Avant toute installation, consultez notre site web à l'adresse suivante k2-systems.com. Sur demande, nous pouvons également vous envoyer la version actualisée.
- Veuillez prendre en compte les instructions de montage du fabricant des modules.
- La liaison équipotentielle et la mise à la terre entre les différents éléments doivent être réalisées conformément aux normes spécifiques du pays, ainsi qu'aux lois et réglementations nationales en vigueur.
- Tout au long du montage, assurez-vous qu'au moins un exemplaire des instructions de montage soit disponible sur le chantier.
- K2 Systems GmbH décline toute responsabilité en raison du non-respect des instructions et notices de montage et de la non-utilisation de tous les composants du système ou du montage et démontage de pièces non fournies par K2 Systems et pouvant causer des blessures ou dégâts. La garantie est alors exclue.
- K2 Systems GmbH se réserve le droit de dégager sa responsabilité en cas de non-respect de nos consignes générales de sécurité, ainsi qu'en cas de montage ou d'installation de composants d'un concurrent.
- Le respect des instructions de sécurité ainsi qu'une installation appropriée du système ouvrent droit à une garantie produit de 12 ans! Veuillez consulter nos conditions de garantie à l'adresse k2-systems.com/fr/conditions-de-garantie-de-la-societe Nous pouvons également vous les envoyer sur simple demande.
- Procédez au démontage du système en suivant les étapes de montage dans le sens inverse..
- Les composants en acier inoxydable K2 sont disponibles dans différentes classes de résistance à la corrosion. Chaque structure ou composant doit être soigneusement vérifié quant à son éventuelle exposition à la corrosion

Généralités



Ce système peut être utilisé sans essais supplémentaires par K2 Systems dans les conditions standard suivantes. Il convient également à des exigences plus élevées ; toutefois, si une valeur dépasse les conditions standard, veuillez contacter K2 Systems.



Instructions de montage importantes.

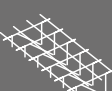
- Les normes et réglementations générales relatives à la protection contre la foudre doivent être respectées sur site et, le cas échéant, un spécialiste doit être consulté afin d'élaborer un concept de protection contre la foudre (utiliser si nécessaire une pince de liaison équipotentielle pour protection foudre). Les réglementations spécifiques à chaque pays doivent être respectées
- Respecter la plage de serrage admissible indiquée dans les notices de montage des fabricants de modules.
- Hauteurs de cadre de module : 25 - 40 mm



Exigences statiques

Différentes spécifications statiques s'appliquent selon les fondations des N-Rack Kits. Ces informations figurent dans la section correspondante :

- Gabions Page 14
- Fondations en béton Page 20
- Fondations visées Page 26
- Fondations sur pieux battus Page 30

N-Rack Top Kit	Nb de modules	Taille des modules		Charges admissibles		Forces d'appui à l'arrachement	Forces d'appui verticales	Forces d'appui horizontales
		Longueur [mm]	Largeur [mm]	Pression dynamique de pointe $q_p(z)$	Charge de neige au sol s_k			
				kN/m ²	kN/m ²	kN	kN	kN
2×7 S	14	1,722 - 1,905	≤ 1,150	0.67	1.75	-6.27	12.17	0.97
2×7 L	14	1,906 - 2,384	≤ 1,150	0.67	1.75	-6.29	11.92	0.96
2×12 S	24	1,722 - 1,905	≤ 1,150	0.67	1.75	-7.03	13.63	1.09
2×12 L	24	1,906 - 2,384	≤ 1,150	0.67	1.75	-6.66	12.63	1.02

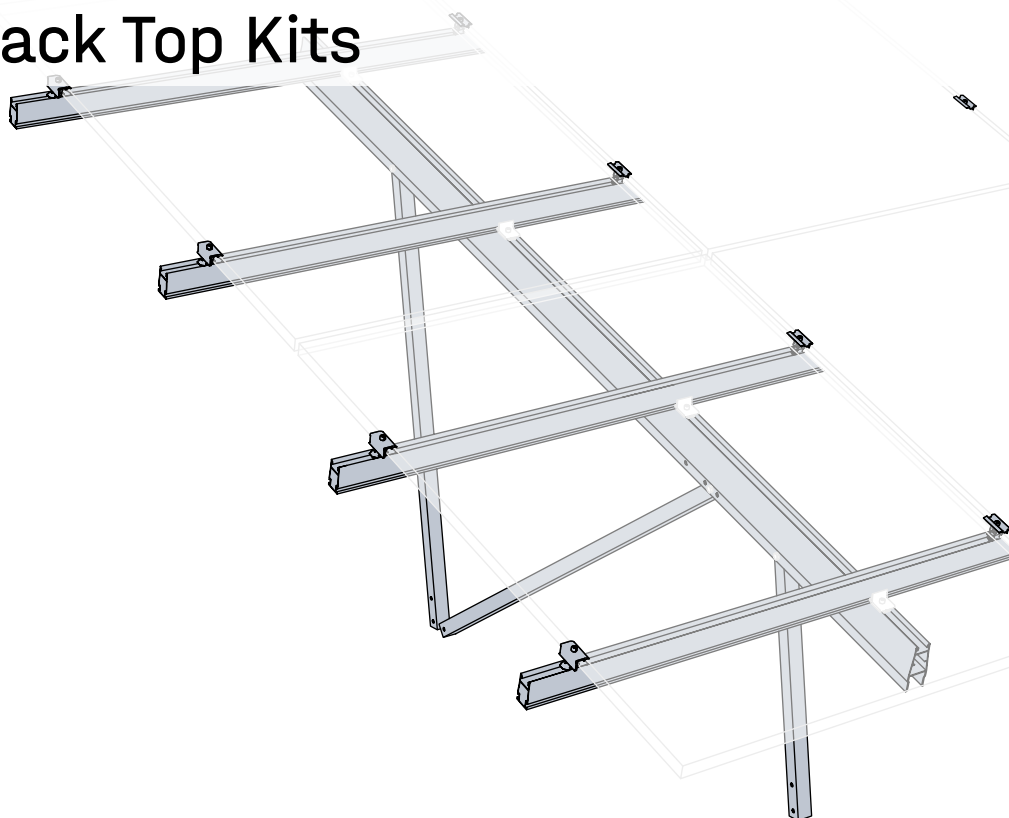
La pression dynamique de pointe (rafale) est basée sur une durée de vie de 50 ans. Les N-Rack Kits sont dimensionnés structurellement pour une durée de vie de 25 ans.

** Les modules d'une largeur de cadre allant jusqu'à 1 303 mm peuvent également être intégrés. Dans ce cas, la disposition est adaptée comme suit :

- 2 × 6 modules au lieu de 2 × 7
- 2 × 10 modules au lieu de 2 × 12

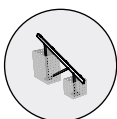
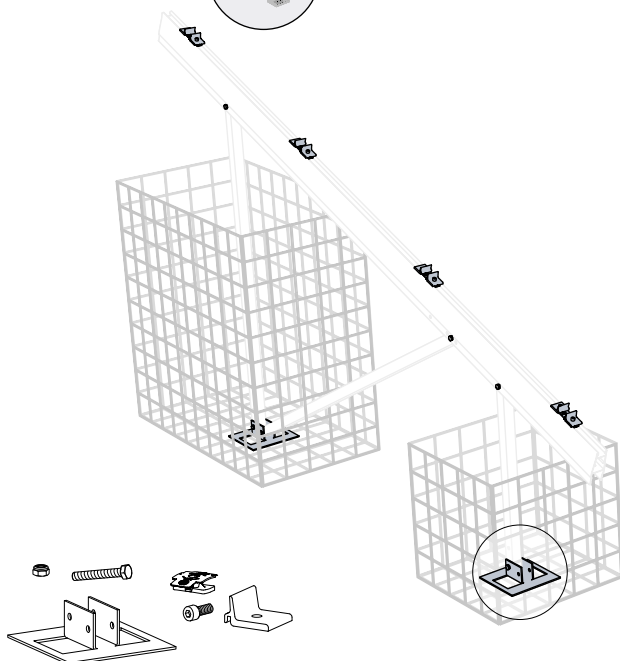
Composants principaux

N-Rack Top Kits



N-Rack Ground Kits

Gabions



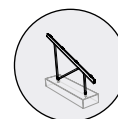
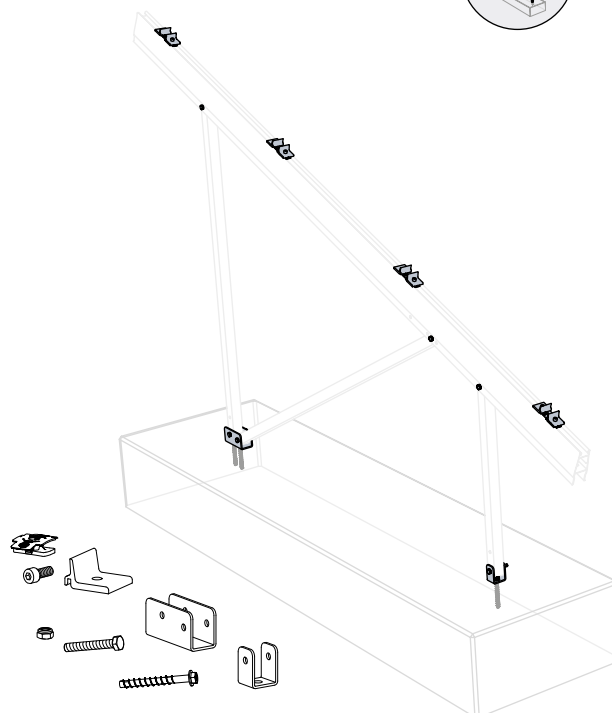
2005110

N-Rack Ground Kit Gabion

Voir page 14!

Remarque : les gabions doivent être fournis séparément.

Fondations en béton

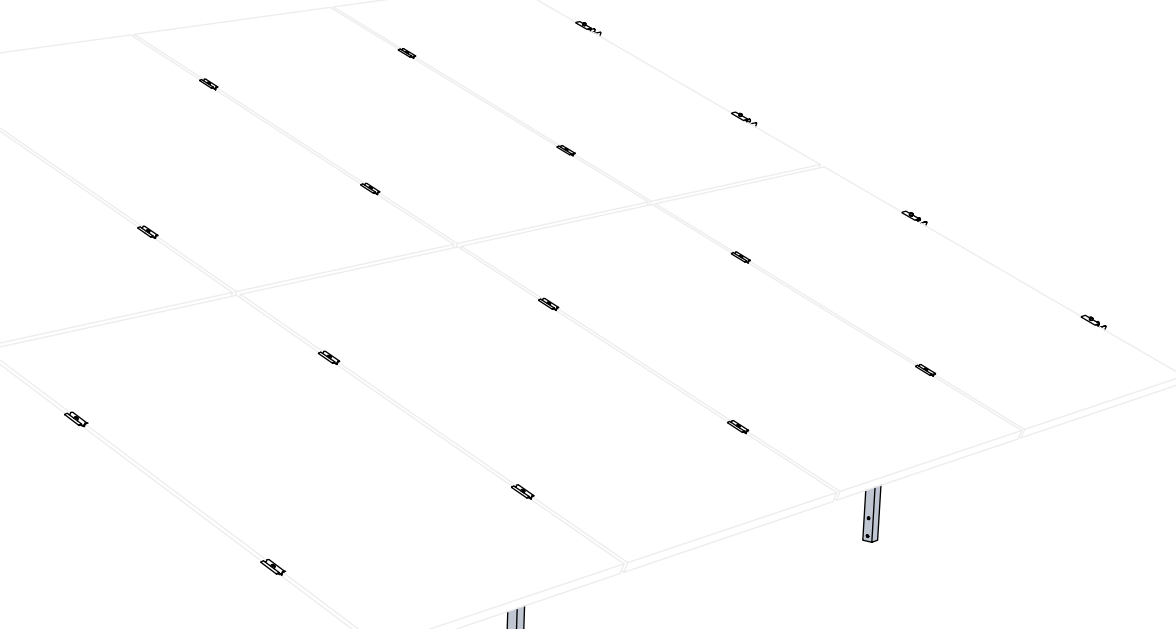


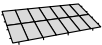
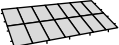
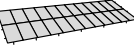
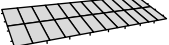
2004926

N-Rack Ground Kit Béton

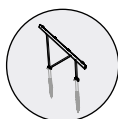
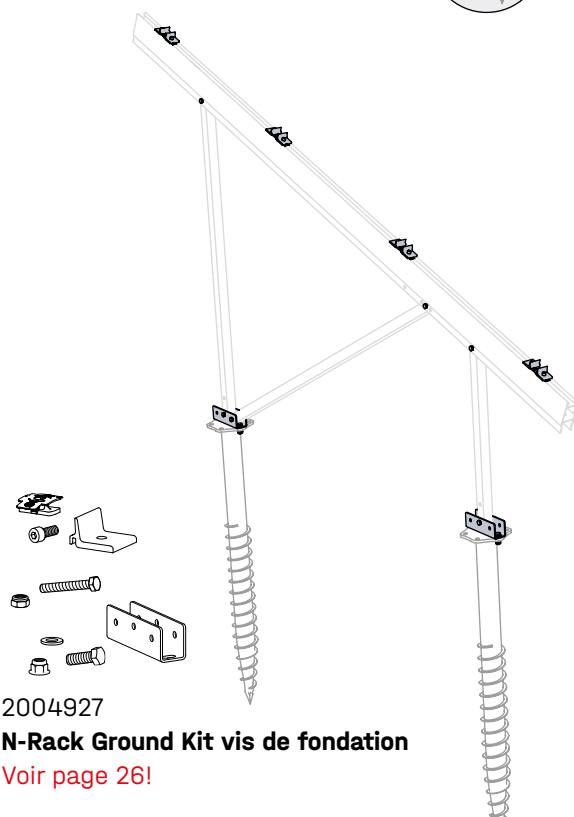
Voir page 20!

Remarque : les fondations en béton doivent être fournies séparément.



N-Rack Ground Kit		N-Rack Top Kit			
		2x7		2x12	
Longueurs de modules		S	L	S	L
S: 1,722 - 1,905 mm					
L: 1,906 - 2,384 mm		1x	1x	1x	1x
La		2004925	2004924	2005048	2005047
S/L: ≤1,150 mm					
Type de fondation	Article no.	Quantité requise de N-Rack Ground Kits par N-Rack Top Kit			
Gabions	2005110	4x	5x	6x	8x
Fondations en béton	2004926				
Fondations vissées	2004927				
Fondations sur pieux battus	2005113				

Fondations vissées

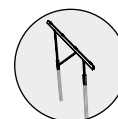
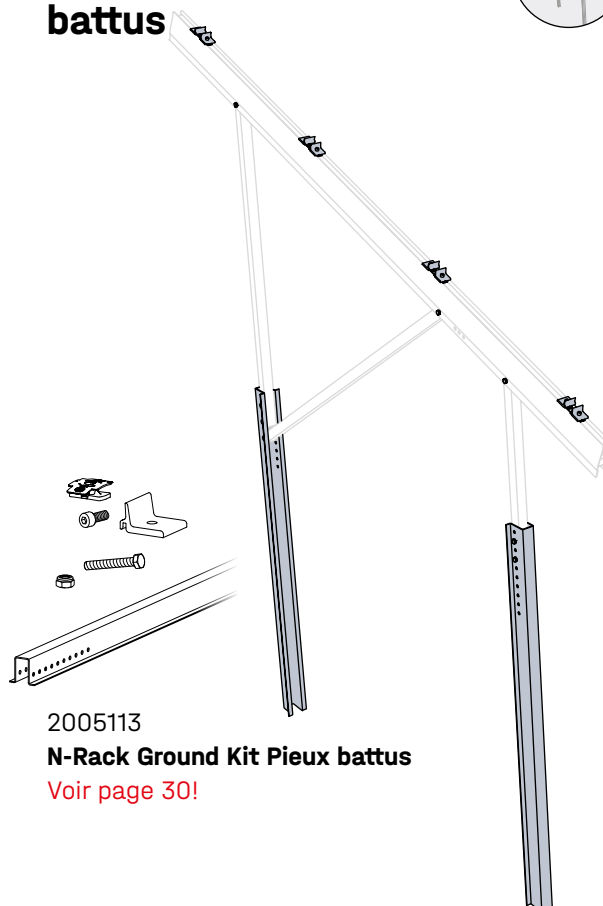


2004927

N-Rack Ground Kit vis de fondation

Voir page 26!

Fondations sur pieux battus



2005113

N-Rack Ground Kit Pieux battus

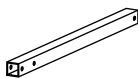
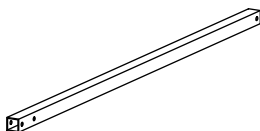
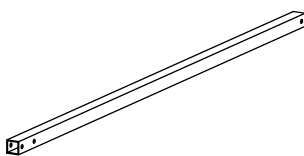
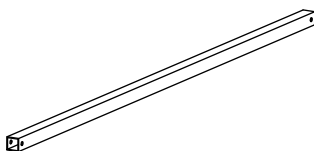
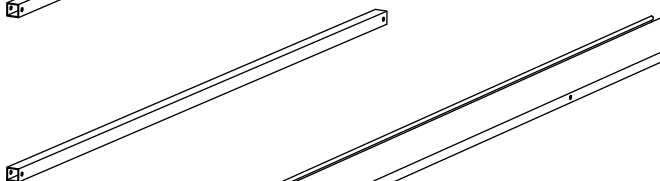
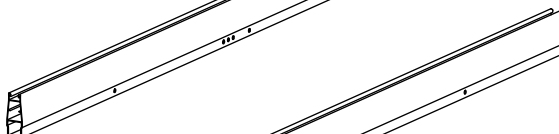
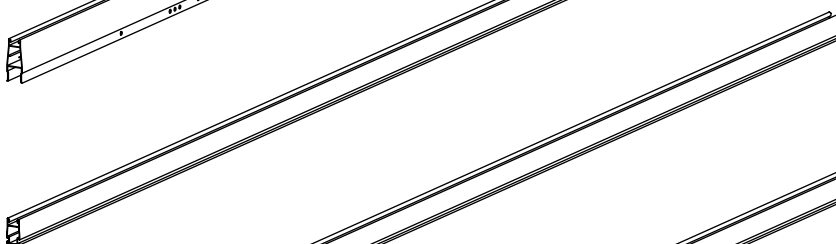
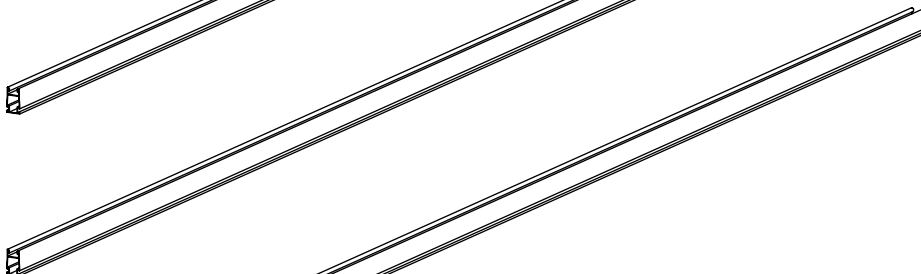
Voir page 30!

Remarque : les vis de fondation doivent être fournies séparément.

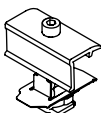
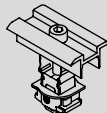
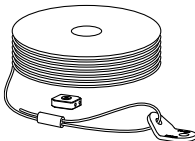
Liste des articles

N-Rack Top Kits

Quantité d'articles				Article
2×7		2×12		
S	L	S	L	
4×	5×	6×	8×	2004401 3-Hole Brace N-Rack 715
4×		6×		2004402 3-Hole Brace N-Rack 1370
	5×		8×	2004403 3-Hole Brace N-Rack 1625
4×		6×		2004404 2-Hole Brace N-Rack 1696
	5×		8×	2004411 2-Hole Brace N-Rack 2072
	5×		8×	2004399 Beam N-Rack 3750
4×		6×		2004400 Beam N-Rack 3020
4×	4×			2005064 CrossRail 73 3.3 m
		8×	8×	2004460 CrossRail 73 4.55 m
4×	4×	4×	4×	2004461 CrossRail 73 5 m

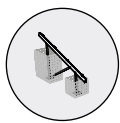


Petites pièces

Quantité d'articles				Article	
2×7		2×12			
S	L	S	L		
4×	4×	8×	8×	2004409 CrossRail 73 Connector	
20×	20×	40×	40×	1001051 Drilling Screw 5.5 × 25 A2	
8×	8×	8×	8×	2004543 K2 Clamp EC 25 - 40	
24×	24×	44×	44×	2004146 K2 Clamp MC 25 - 40	
2×	2×	2×	2×	2004410 Wind Bracing Set	

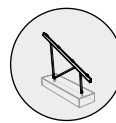
N-Rack Ground Kits

Gabion



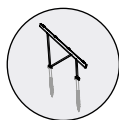
Quantité d'articles	Article	
2×	2005109 N-Rack Gabion Foot	
7×	2004408 Vis hexagonale M10 × 70	
7×	1002849 Écrou hexagonal autobloquant M10	
8×	2003145 Climber 36/50 Set	

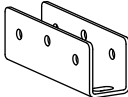
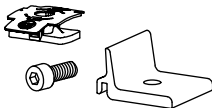
Béton



Quantité d'articles	Article	
1×	2004391 N-Rack Foot Front	
1×	2004392 N-Rack Foot Back	
3×	2004407 Heco Multi-Monti 12 × 105	
7×	2004408 Hexagon Head Screw M10 × 70	
7×	1002849 Écrou hexagonal autobloquant M10	
8×	2003145 Climber 36/50 Set	

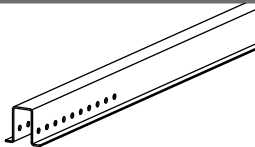
Vis de fondation



Quantité d'articles	Article	
2×	2004896 N-Rack GS Foot	
4×	2004902 Vis hexago- nale M12 × 35	
4×	2004910 Washer M12	
4×	2004903 Hexagon Nut M12	
9×	2004408 Vis hexago- nale M10 × 70	
9×	1002849 Écrou hexag- onal autoblo- quant M10	
8×	82003145 Climber 36/50 Set	

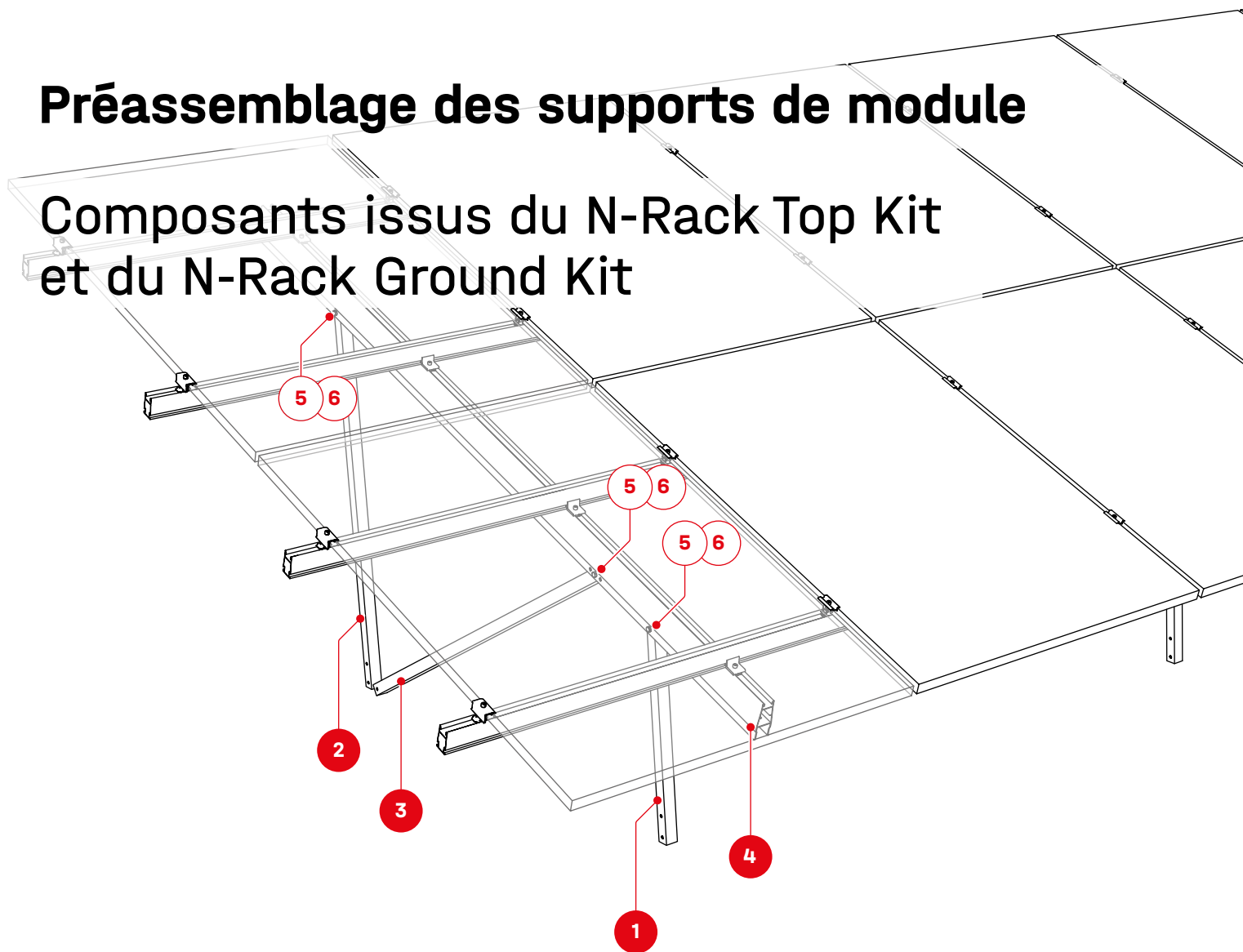
Pieux battus



Quantité d'articles	Article	
2×	2005112 Cap Profile N-Rack 2,3 m	
7×	2004408 Vis hexago- nale M10 × 70	
7×	1002849 Écrou hexag- onal autoblo- quant M10	
8×	2003145 Climber 36/50 Set	

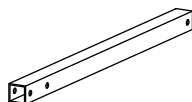
Préassemblage des supports de module

Composants issus du N-Rack Top Kit et du N-Rack Ground Kit

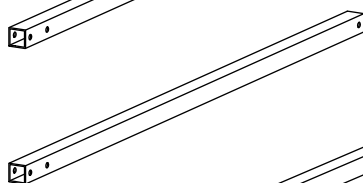


N-Rack Top Kit

1 3-Hole Brace N-Rack



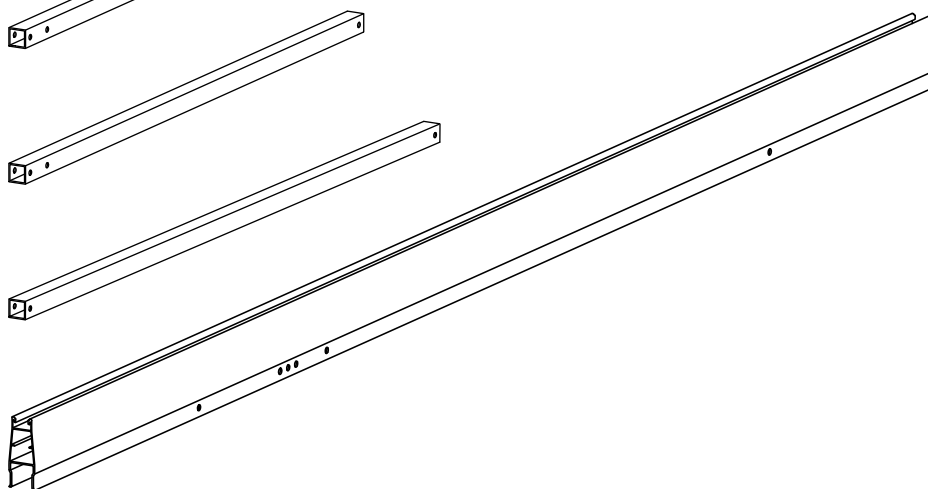
2 3-Hole Brace N-Rack



3 2-Hole Brace N-Rack



4 Beam N-Rack



N-Rack Ground Kit

5 Vis hexagonale M10 x 70



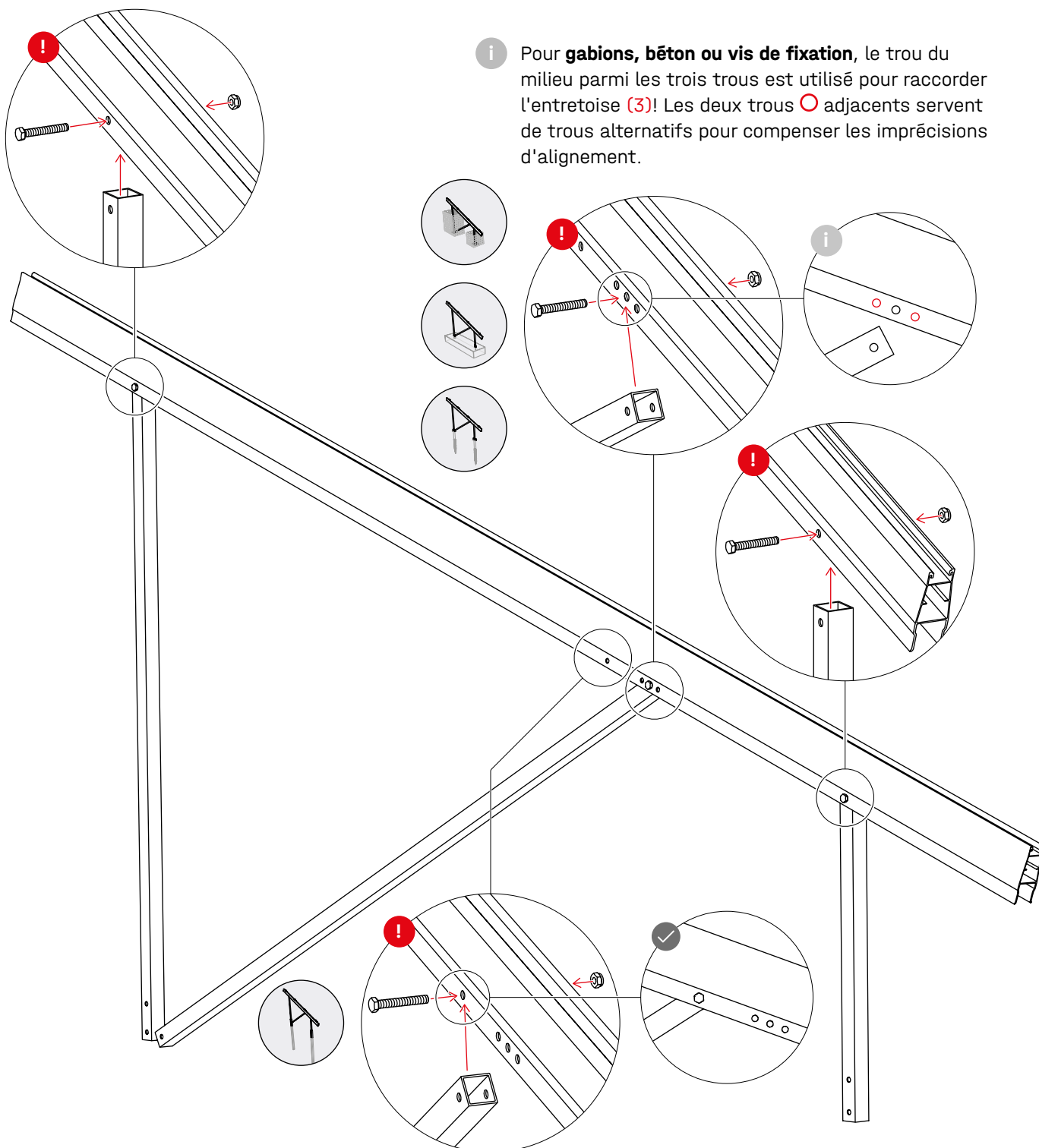
6 Écrou hexagonal autobloquant M10



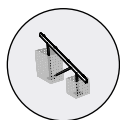
Supports

1

! Serrez les vis uniquement à la main.



Pour les fondations sur **pieux battus**, l'entretoise (3) doit être raccordée au trou individuel !



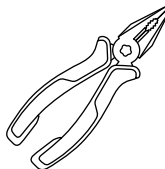
Directives générales

Outils supplémentaires

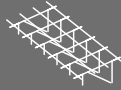
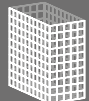


Exigences relatives au sol

Le substrat doit être compacté et antidérapant conformément aux règles de l'art reconnues (notamment : DIN EN 1997-1 - Eurocode 7 - Calcul géotechnique) afin de garantir la sécurité positionnelle durable de la structure.



Exigences structurelles

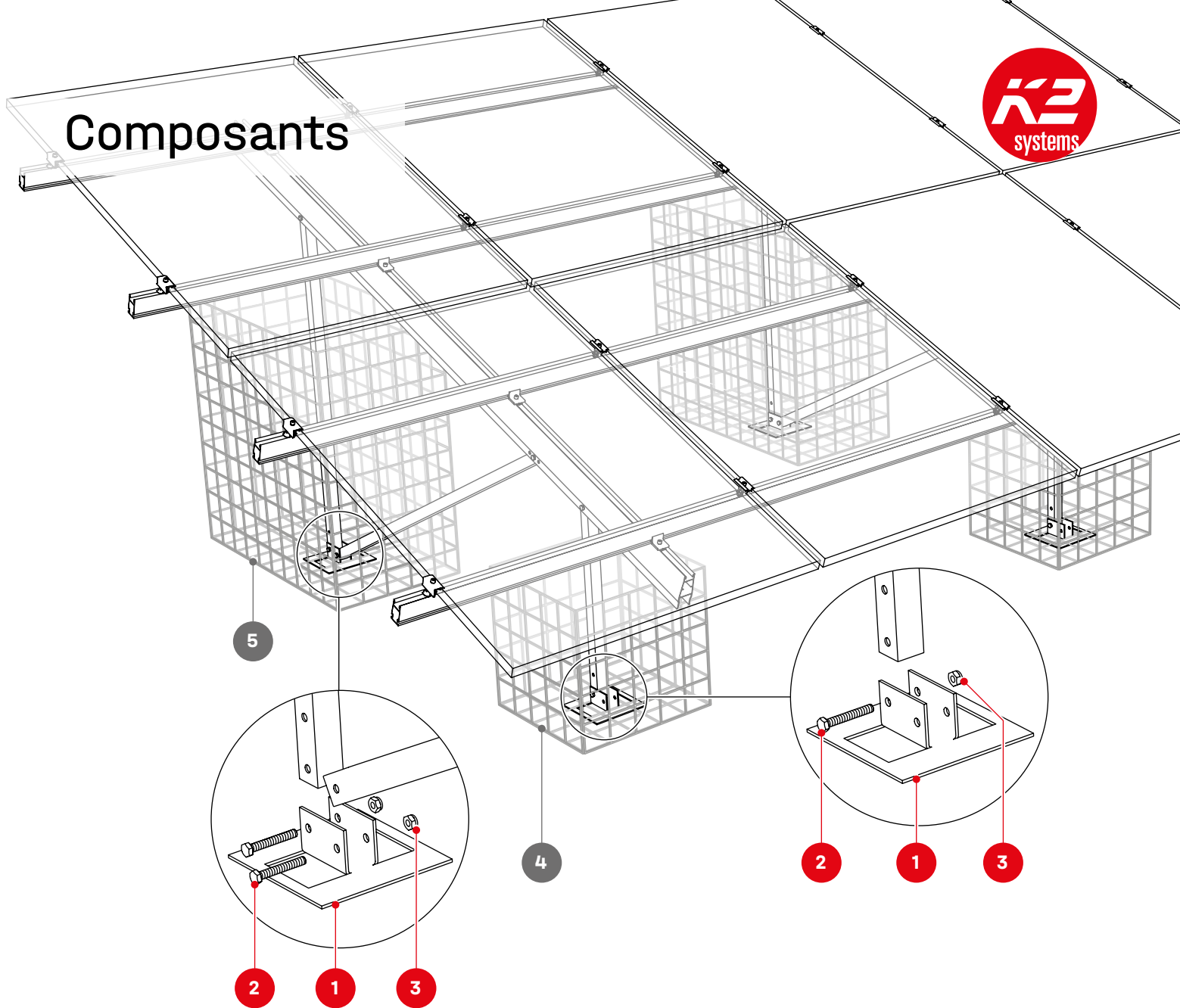
N-Rack Top Kit 	Number of modules 	Filling weight	
		 kg	 kg
2×7 S	14	220	700
2×7 L	14	230	700
2×12 S	24	240	790
2×12 L	24	240	740

Remarques importantes

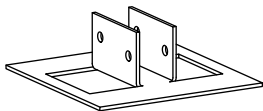
Les gabions doivent être remplis de pierres / granulats résistants au gel et aux intempéries, suffisamment résistants à la pression et présentant un minimum de vides.

Les informations fournies par le fabricant des gabions doivent être respectées.

Composants



Requis - non inclus



1 2005109
N-Rack Gabion Foot

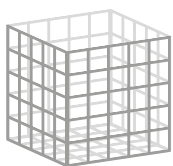


2 2004408
Vis hexagonale
M10 x 70

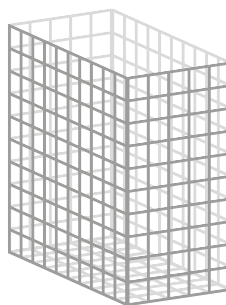


3 1002849
Écrou hexagonal autob-
loquant M10

Requis - non inclus



4 2005184
Gabion 50×50×50
À fournir séparément



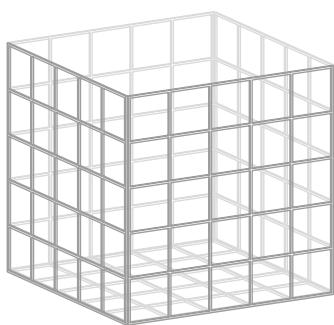
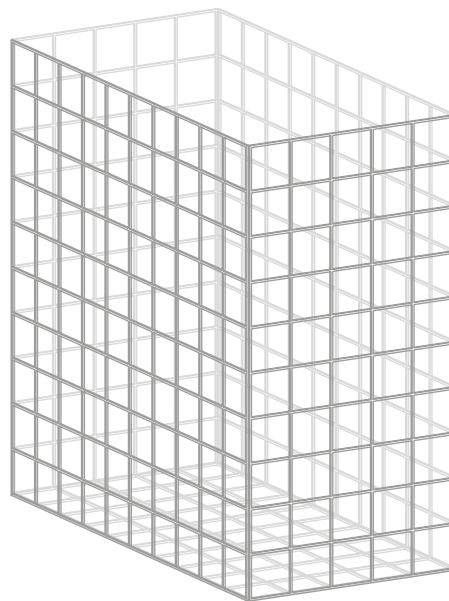
5 2005185
Gabion 100×50×100
À fournir séparément

Installation

Préparation des gabions

1a

Respectez les instructions de montage du fabricant lors de l'installation des gabions..

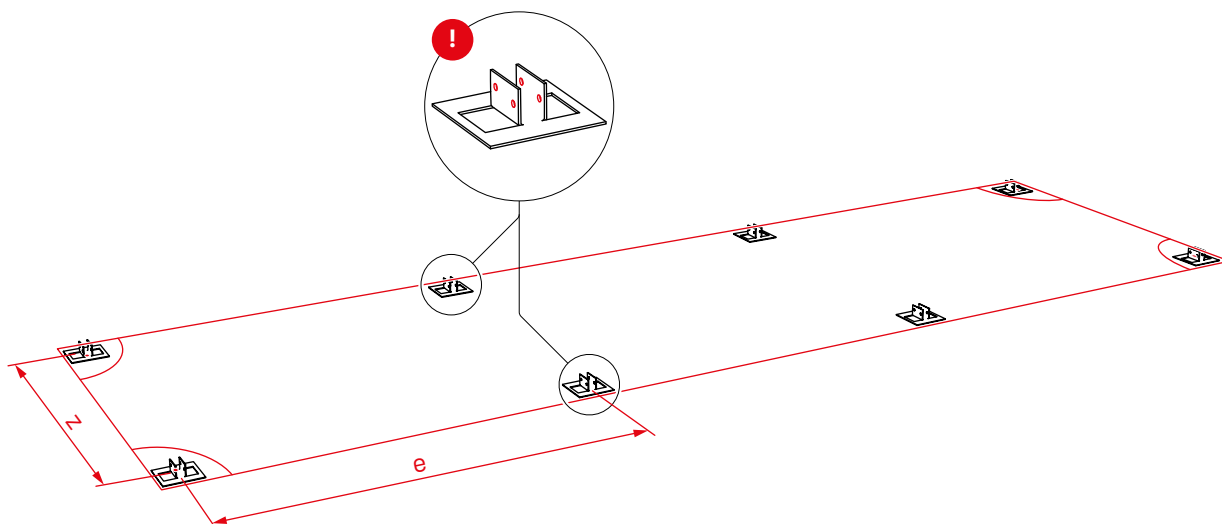


Pour faciliter l'installation du support, le grillage arrière doit rester ouvert.

Espacement

1b

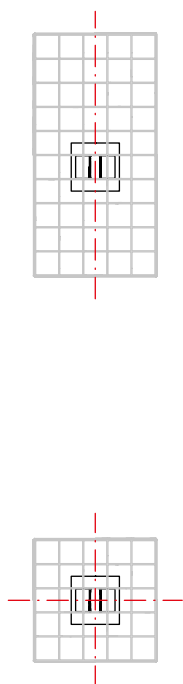
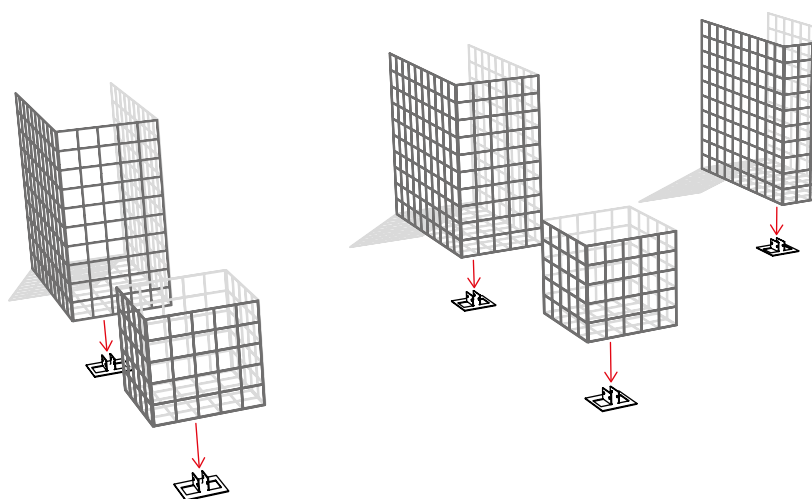
Values **e** and **z** in the system data sheets "Gabions" from page 40 onwards.



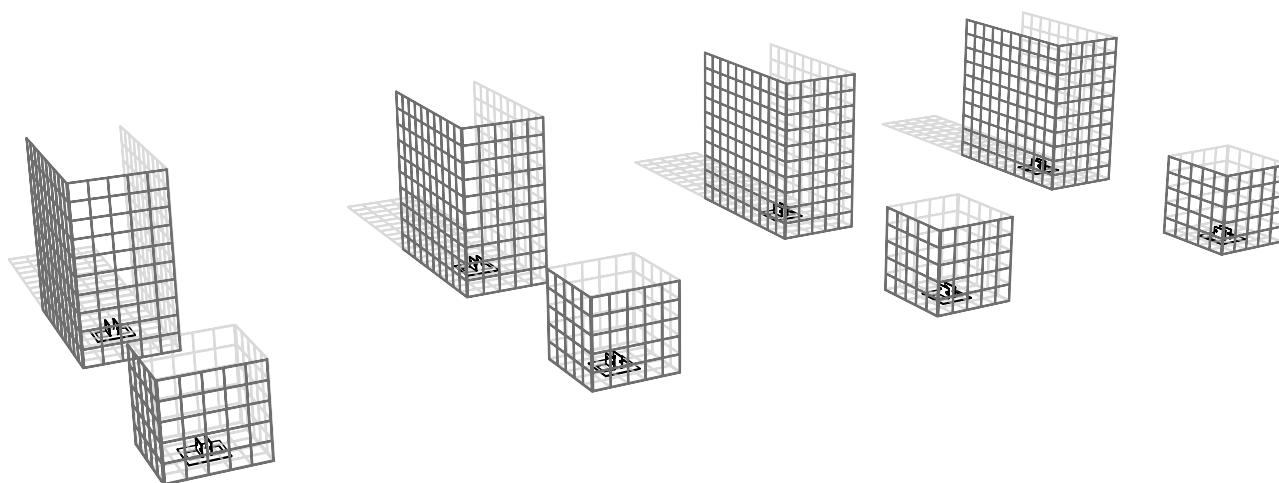
! Respectez l'alignement du N-Rack Gabion Foot

Positionnement des gabions

2a



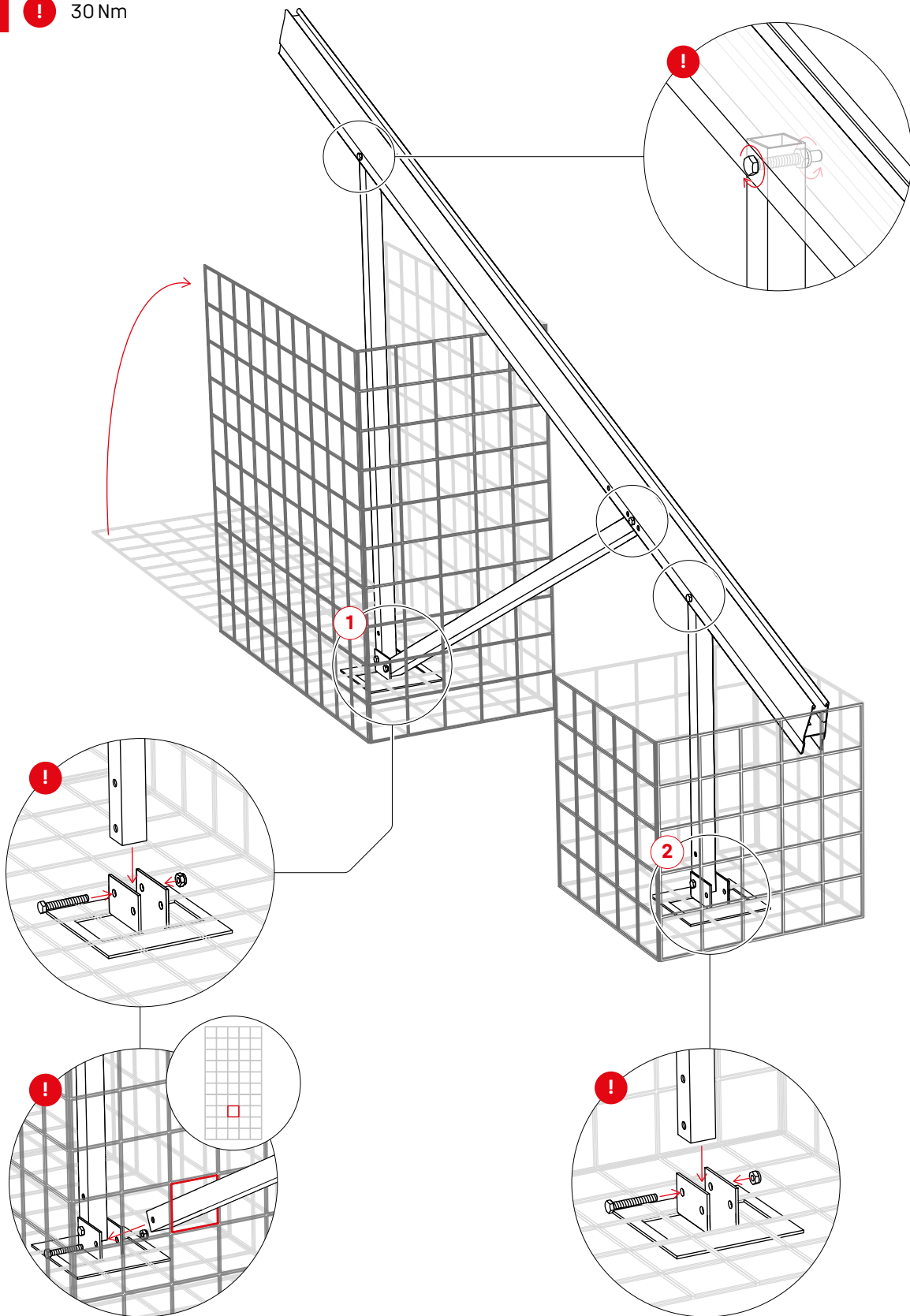
2b



Raccordement des supports

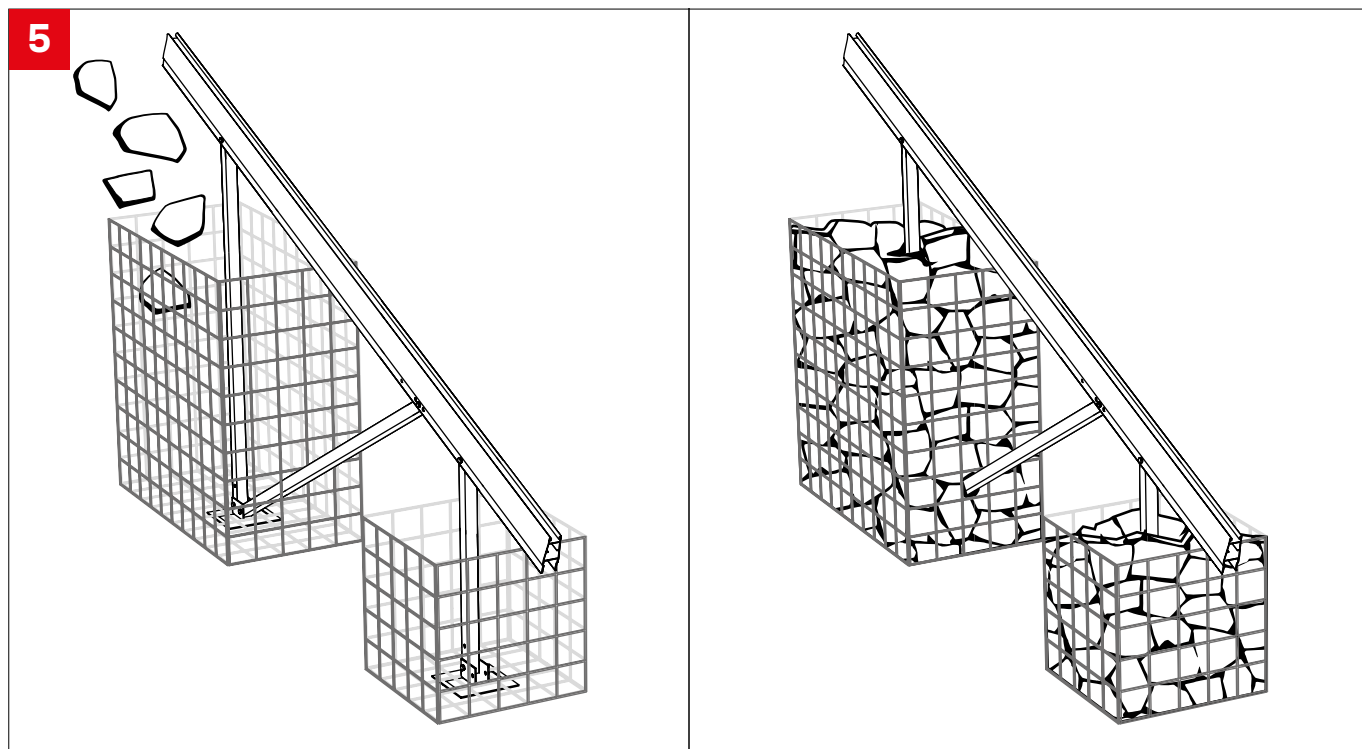


30 Nm

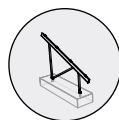


Aucun contreventement n'est requis pour le N-Rack Kit avec gabions.

Ajout du matériau de remplissage



Fondations en béton



Directives générales



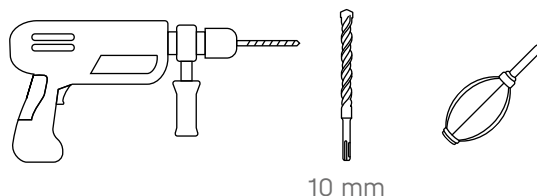
Exigences relatives au sol

Le substrat doit être compacté et antidérapant conformément aux règles de l'art reconnues (notamment : DIN EN 1997-1 - Eurocode 7 - Calcul géotechnique) afin de garantir la sécurité positionnelle durable de la structure.

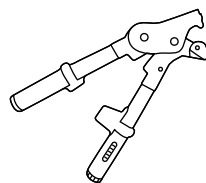
Structural requirements

Les fondations en béton sont pré-dimensionnées pour assurer la protection contre le soulèvement et le basculement sous l'effet des charges de vent. Le renforcement des fondations doit être réalisé conformément au schéma « Dimensions » à la page 22. La détermination des dimensions finales des fondations en béton et de leur plan de ferrailage doit être vérifiée sur site.

Outils supplémentaires

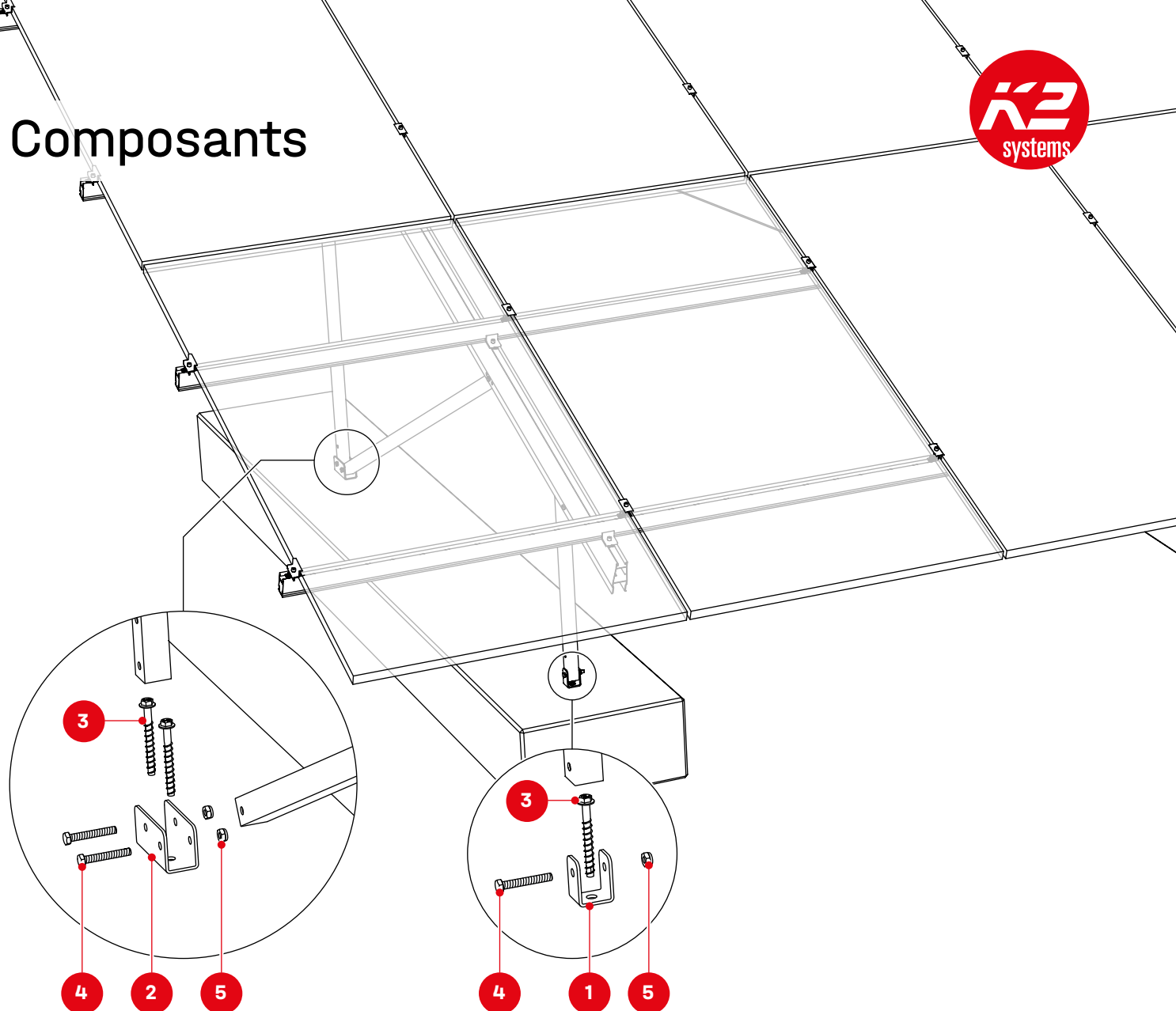


10 mm



Gripple Collet Chuck 400 · 2004456

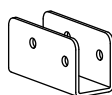
Composants



N-Rack Ground Kit Béton



1 2004391
N-Rack Concrete Foot Front



2 2004392
N-Rack Concrete Foot Back



3 2004407
Heco Multi-Monti 12 x 105



4 2004408
Écrou hexagonal au-
tobloquant M10 x 70



5 1002849
Vis hexagonale M10

Installation

Dimensions

i

Les fondations en béton doivent être fournies séparément et construites sur site.

Armatures (acier): B500

Concrete strength: min. C25/30

Concrete covering of the reinforcement: $C_M/C_S \geq 0.04$ m

N-Rack	2×7 S	2×7 L	2×12 S	2×12 L
L [m]	2.80	3.40	2.80	3.40
w[m]	0.45	0.45	0.78	0.72
h [m]	0.40	0.40	0.40	0.40
V [m³]	0.50	0.61	0.87	0.98
d [m]	0.30	0.30	0.30	0.30
Quantity of brackets	10 ×	12 ×	10 ×	12 ×

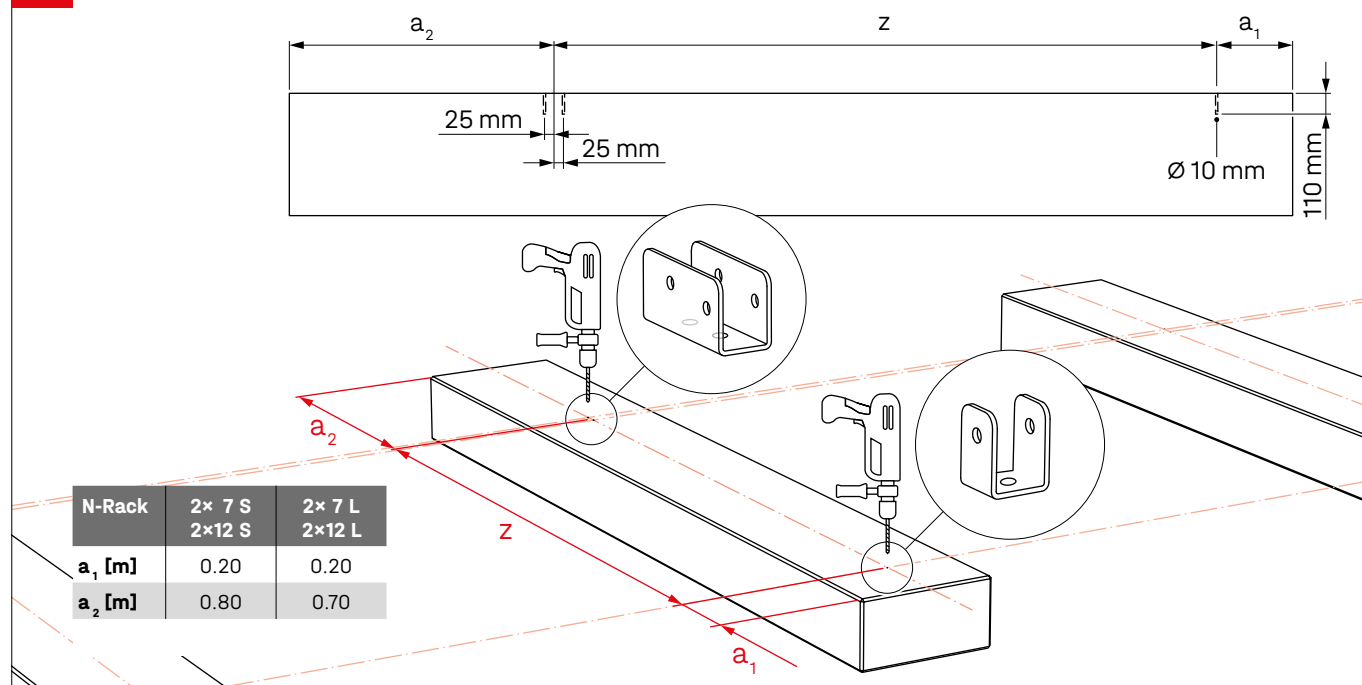
Espacement

1

Valeurs **e** et **z** dans les fiches techniques système « Fondations en béton » à partir de la page 48.

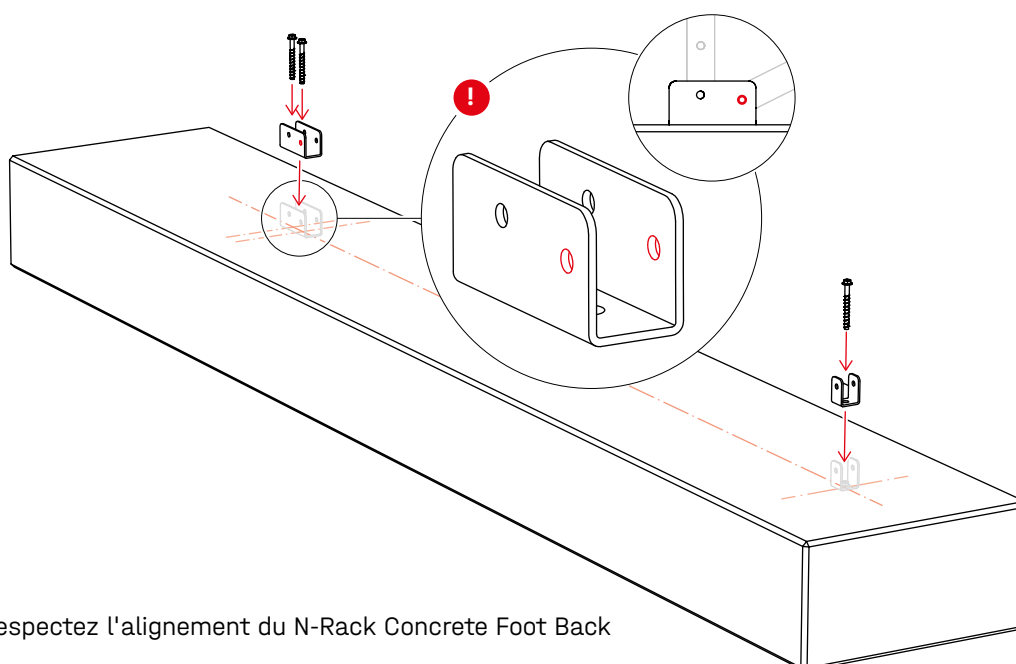
Trous d'ancrage pré-perçés

2 Valeur z dans les fiches techniques système « Fondations en béton » à partir de la page 48.



Fixation des ancrages et raccordement

3 ! 90 Nm

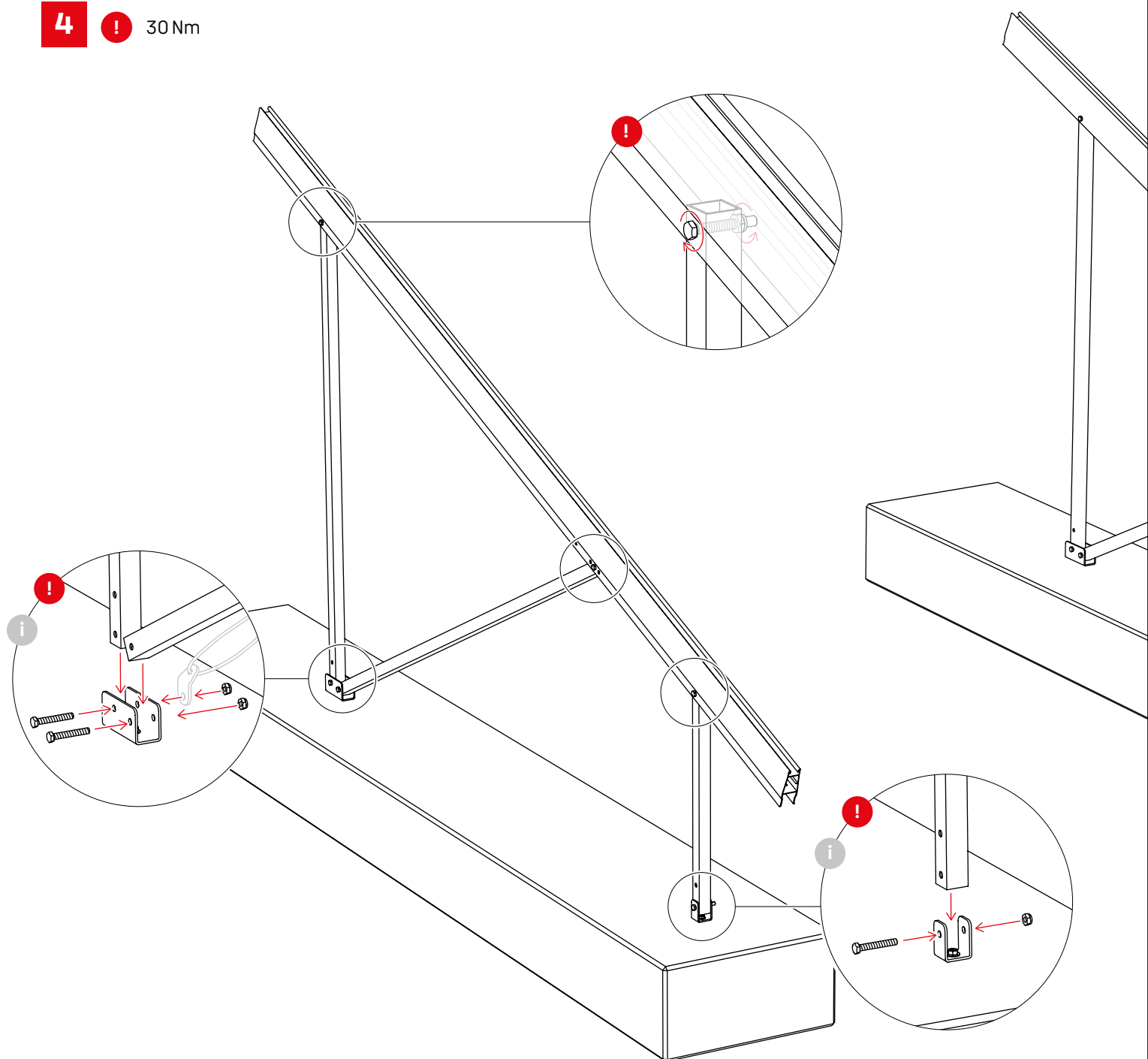


! Respectez l'alignement du N-Rack Concrete Foot Back

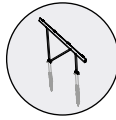
Raccordement des supports

4

! 30 Nm



i Fixation du contreventement sur les fondations en béton extérieures.
« Mise en place du contreventement » à la page 38.



Directives générales



Hypothèse liée au sol

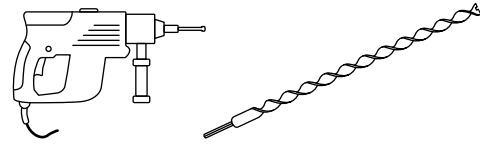
La quantité et la taille requises des fondations à vis dépendent toujours du type de sol, de la taille et du poids de la structure, ainsi que des charges de vent et de neige applicables à l'ouvrage prévu. Il est admis une classe de sol TL/TM conformément à la norme DIN 18196, avec une consistance semi-solide (DIN 1422). Les dimensions finales des fondations reposent sur l'état du sol à déterminer sur site, ainsi que sur l'analyse structurelle de la capacité portante, sur la base d'un modèle de calcul statique applicable.



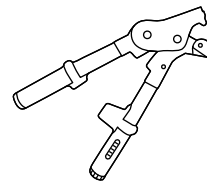
Exigences structurelles

- Exigences du kit
 - Profondeur d'insertion de 1,2 à 1,25 m des fondations à vis Krinner M16 pour une charge de neige $\leq 1,75$ kN et une charge de vent $\leq 0,67$ kN

Outils supplémentaires



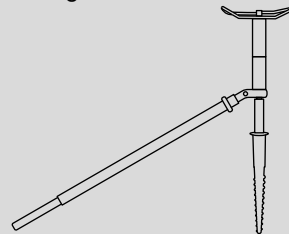
Drill hammer incl. drill 25 mm



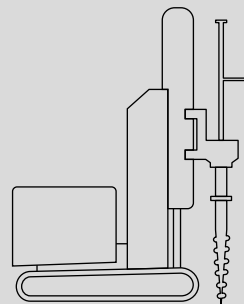
Pince de serrage 400 · 2004456



Les équipements/machines nécessaires au vissage des fondations vissées au sol sont disponibles auprès d'un loueur de matériel de chantier. Il est également possible de faire appel à une entreprise de paysagisme/aménagement extérieur.

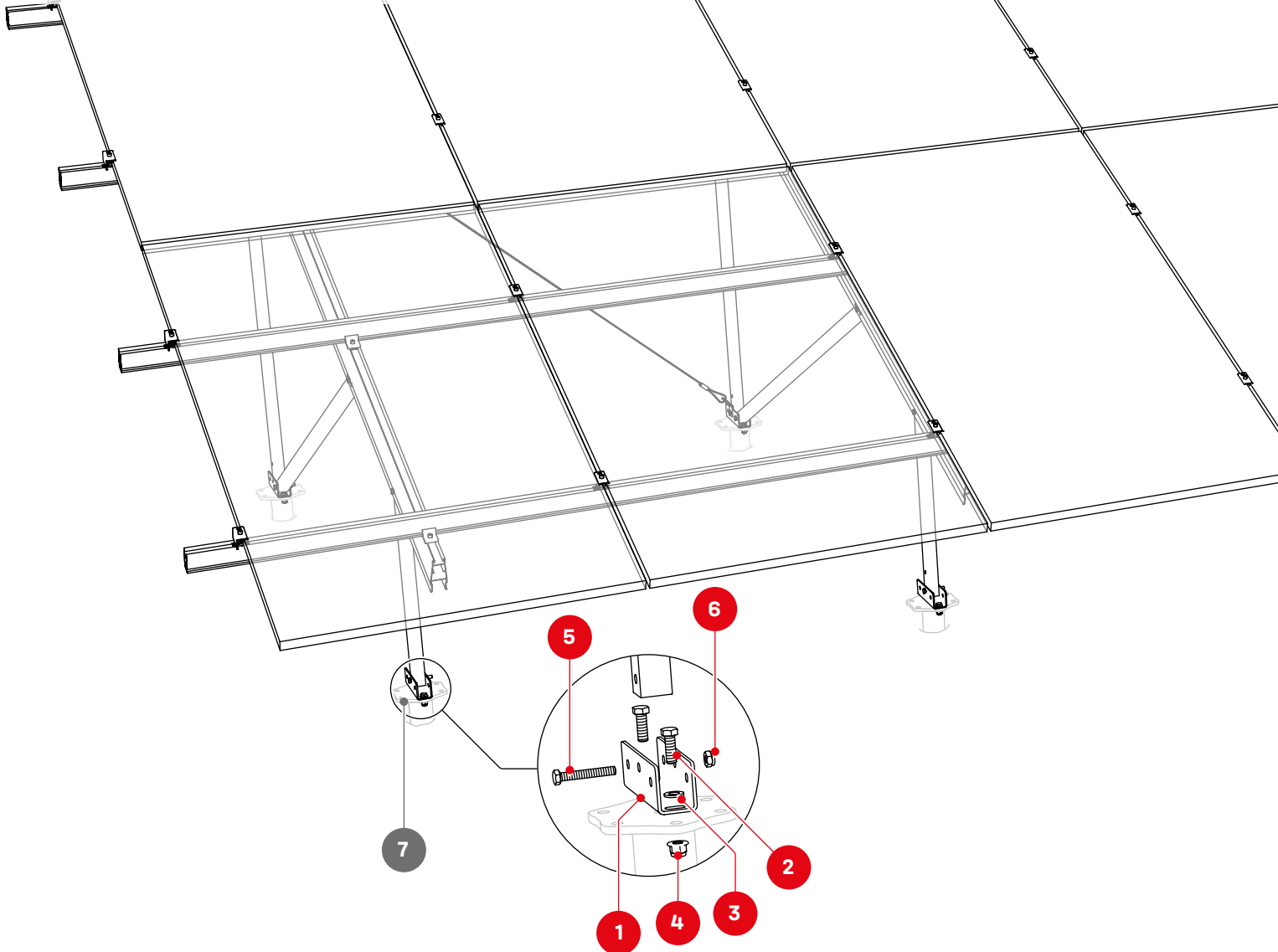


Visseuse pour vis de sol, e.g.: Krinner KR E 20-SC

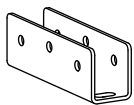


Chenillards autopropulsés, e.g.: Krinner KR D 30-CO

Composants



N-Rack Ground Kit Vis de fondation



1 2004896
N-Rack GS Foot



2 2004902
Vis hexagonale
M12 × 35



3 2004910
Washer M12



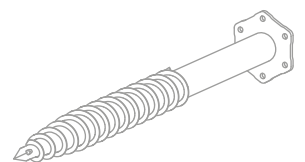
4 2004903
Hexagon nut with
flange M12



5 2004408
Vis hexagonale
M10 × 70



6 1002849
Écrou hexagonal
autobloquant M10



7 2005095
Vis de fondation 1.30 m
KSF M76 1300 M16
À fournir séparément.

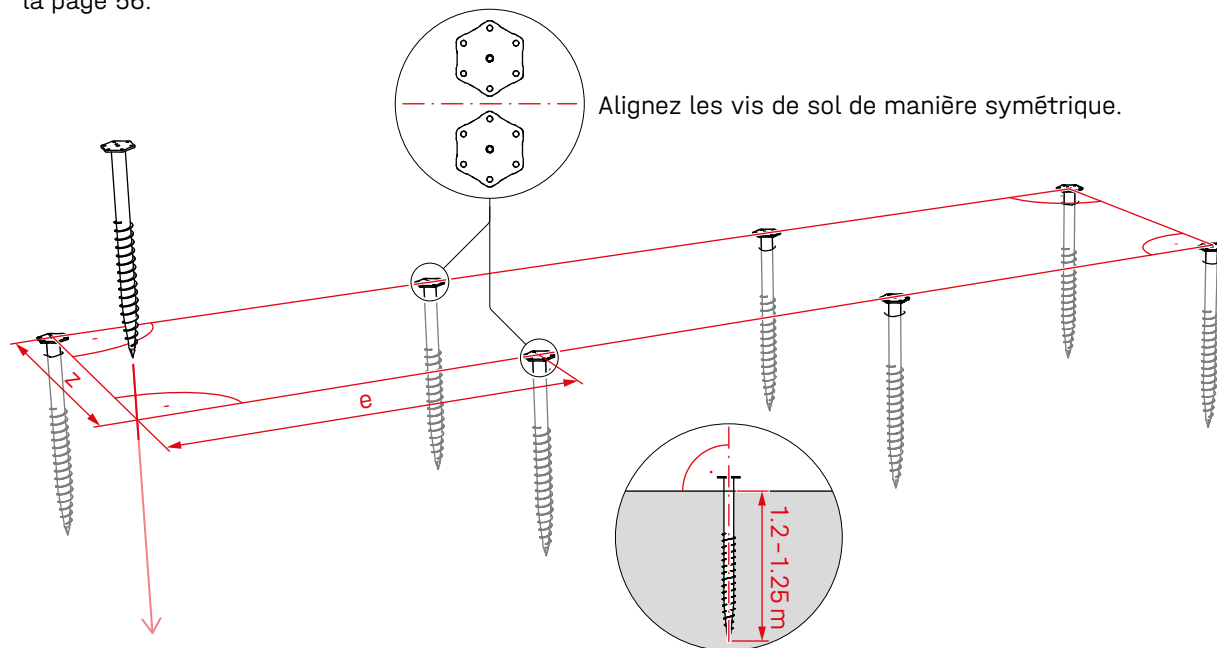
Requis - non inclus

Installation

Travaux de fondation et espacement

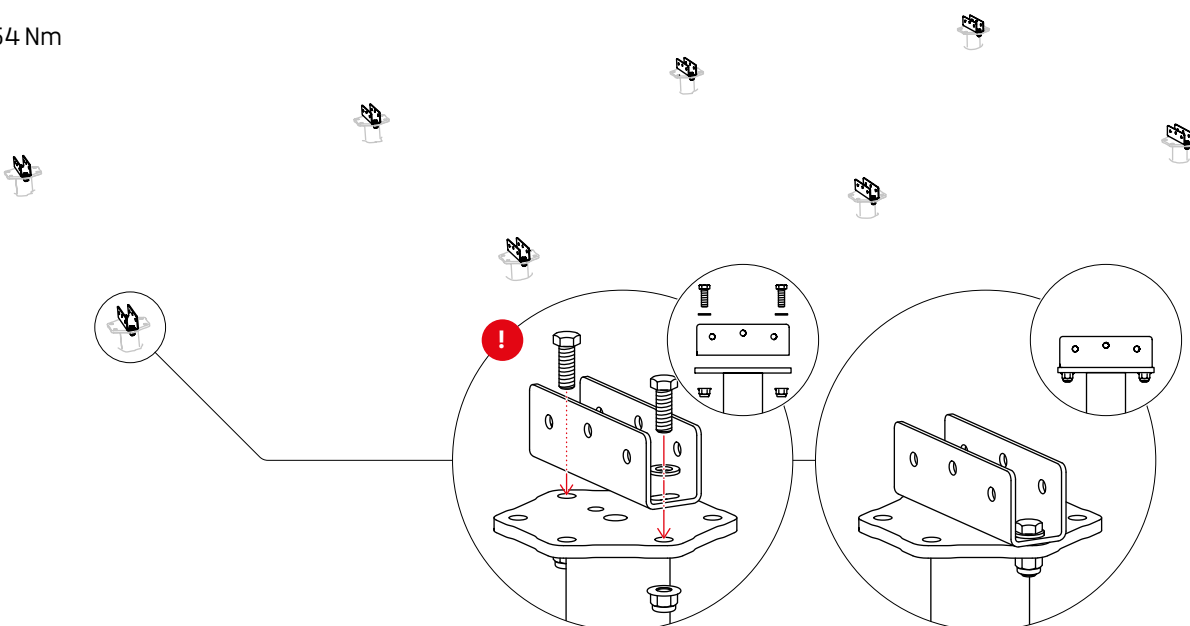
1

Valeurs e et z dans les fiches techniques système « Fondations à vis de sol » à partir de la page 56.



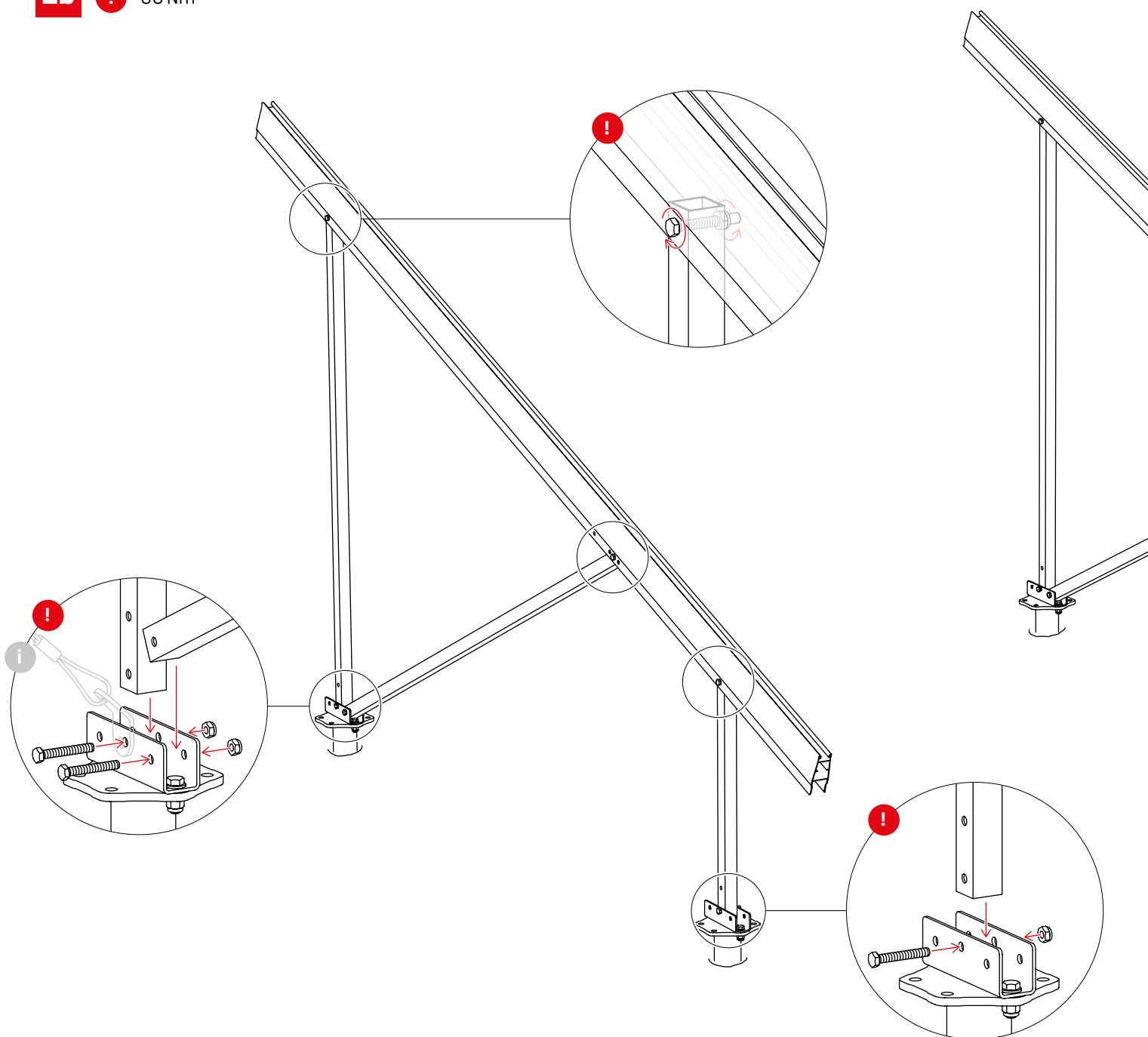
2a

! 54 Nm



Raccordement des supports

2b ! 30 Nm



i Fixation du contreventement : « Mise en place du contreventement » à la page 38.

Fondations sur pieux battus



Directives générales



Exigences relatives au sol

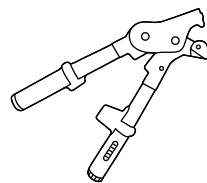
La quantité et la taille requises des pieux dépendent toujours du type de sol, de la taille et du poids de la structure, ainsi que des charges de vent et de neige applicables à l'ouvrage prévu. Il est admis une classe de sol TL/TM conformément à la norme DIN 18196, avec une consistance semi-solide (DIN 1422). Les dimensions finales des fondations reposent sur l'état du sol à déterminer sur site, ainsi que sur l'analyse structurelle de la capacité portante, sur la base d'un modèle de calcul statique applicable..

Exigences structurelles

Exigences du kit

- Profondeur d'insertion de 1,8 à 1,9 m du profilé chapeau K2 pour une charge de neige $\leq 1,75$ kN et une charge de vent $\leq 0,67$ kN

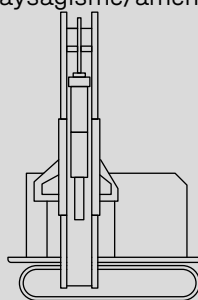
Outils supplémentaires



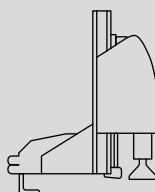
Pince de serrage 400 · 2004456



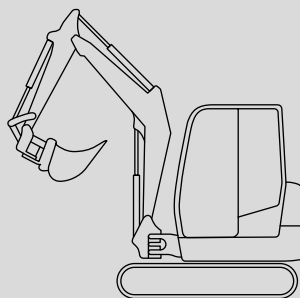
Les équipements/machines nécessaires à la mise en place des fondations par battage sont disponibles auprès d'un loueur de matériel de chantier. Il est également possible de faire appel à une entreprise de paysagisme/aménagement extérieur.



Machine de battage

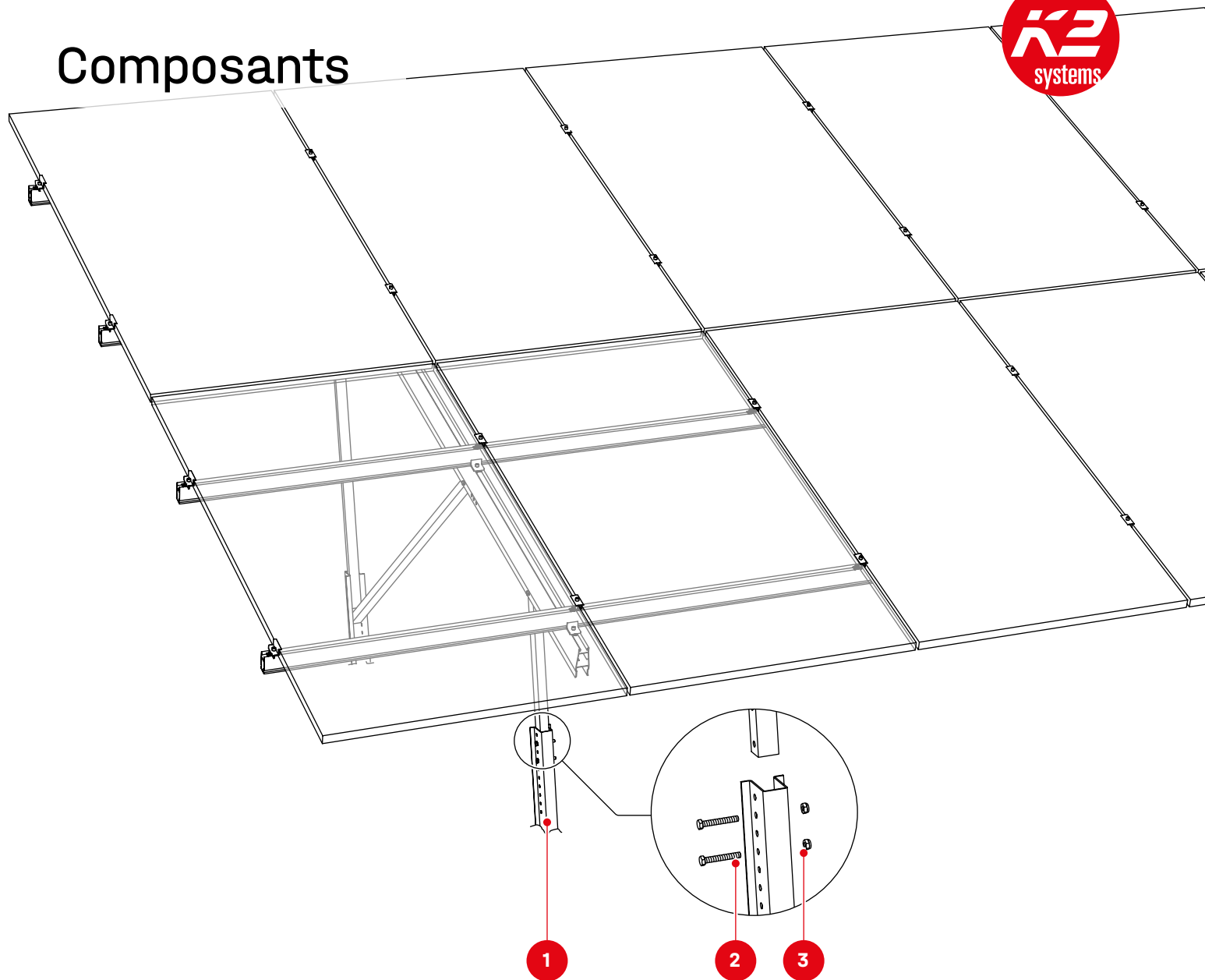


Marteau de battage pour fixation sur mini-pelle, etc

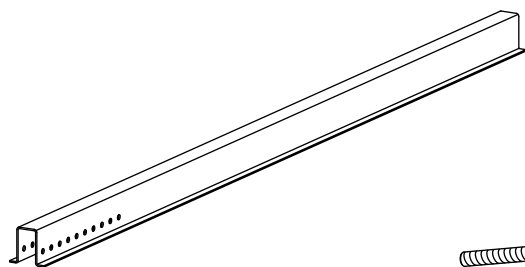


Pelle

Composants



N-Rack Ground Kit Pieux battus



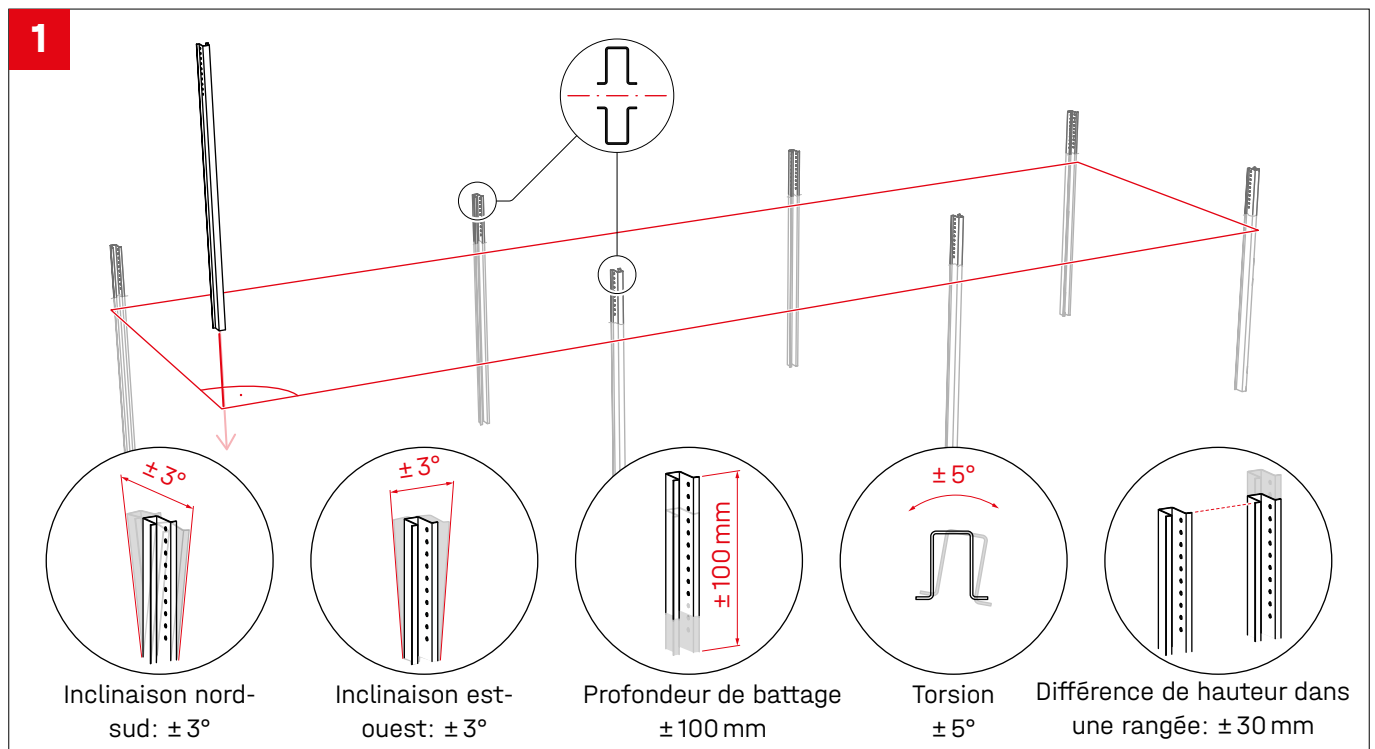
1 2005112
Cap Profile
N-Rack 2,3 m

2 2004408
Vis hexagonale
M10 x 70

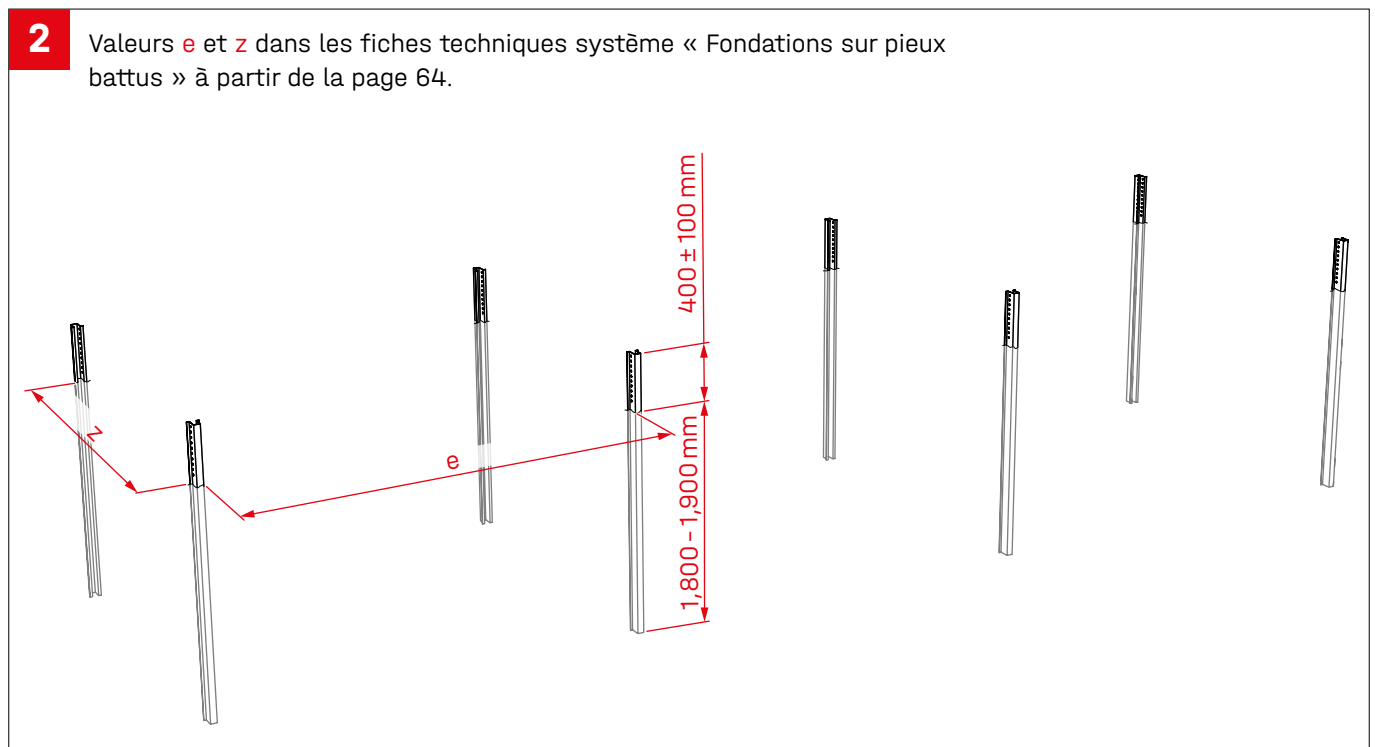
3 1002849
Écrou hexagonal autob-
loquant M10

Installation

Travaux de fondation



Espacement

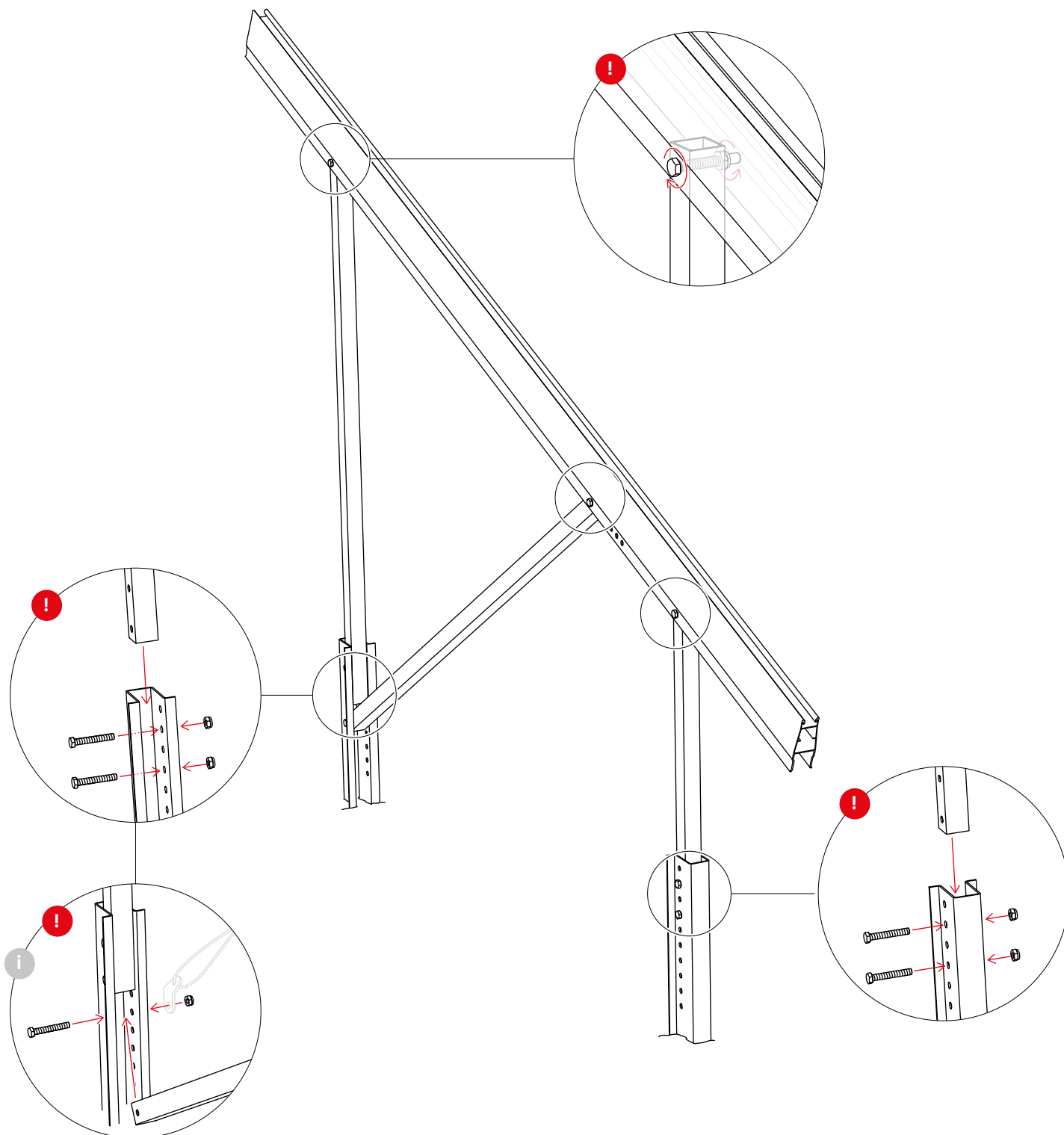


Raccordement des supports

3



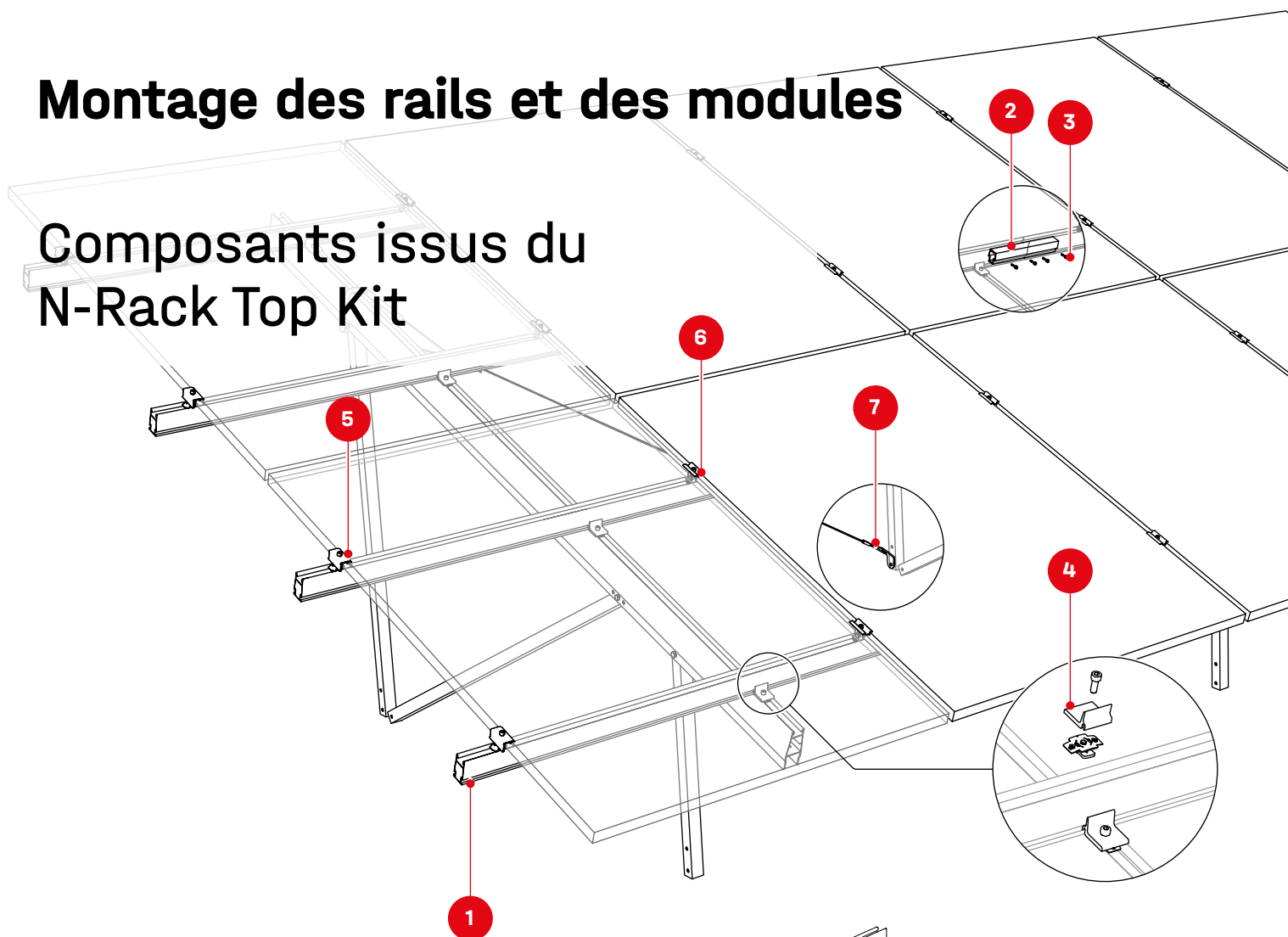
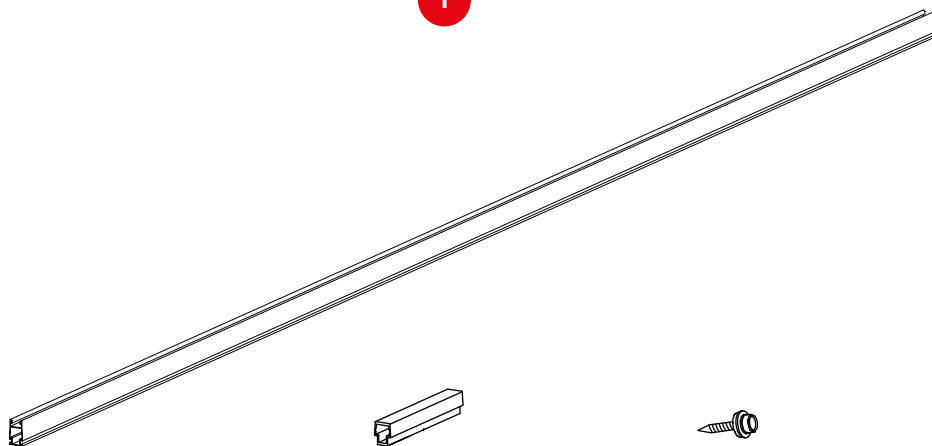
30 Nm



i Fixation du contreventement : « Mise en place du contreventement » à la page 38.

Montage des rails et des modules

Composants issus du N-Rack Top Kit



1 Numéro d'article spécifique au système, voir page 8
CrossRail 73

2 2004409
CrossRail 73 Connector

3 1001051
Drilling Screw 5.5 × 25

4 2003145
Climber 36/50 Set

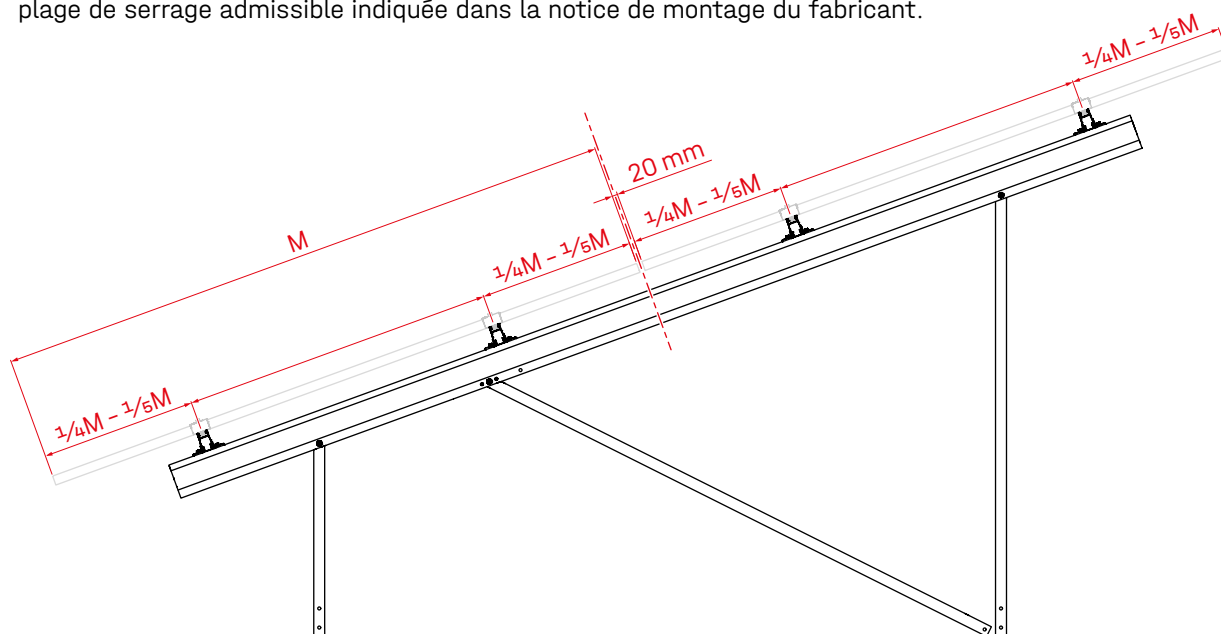
5 2004543
Étrier final K2 Clamp EC 25 - 40

6 2004146
Étrier intermédiaire K2 Clamp MC 25 - 40

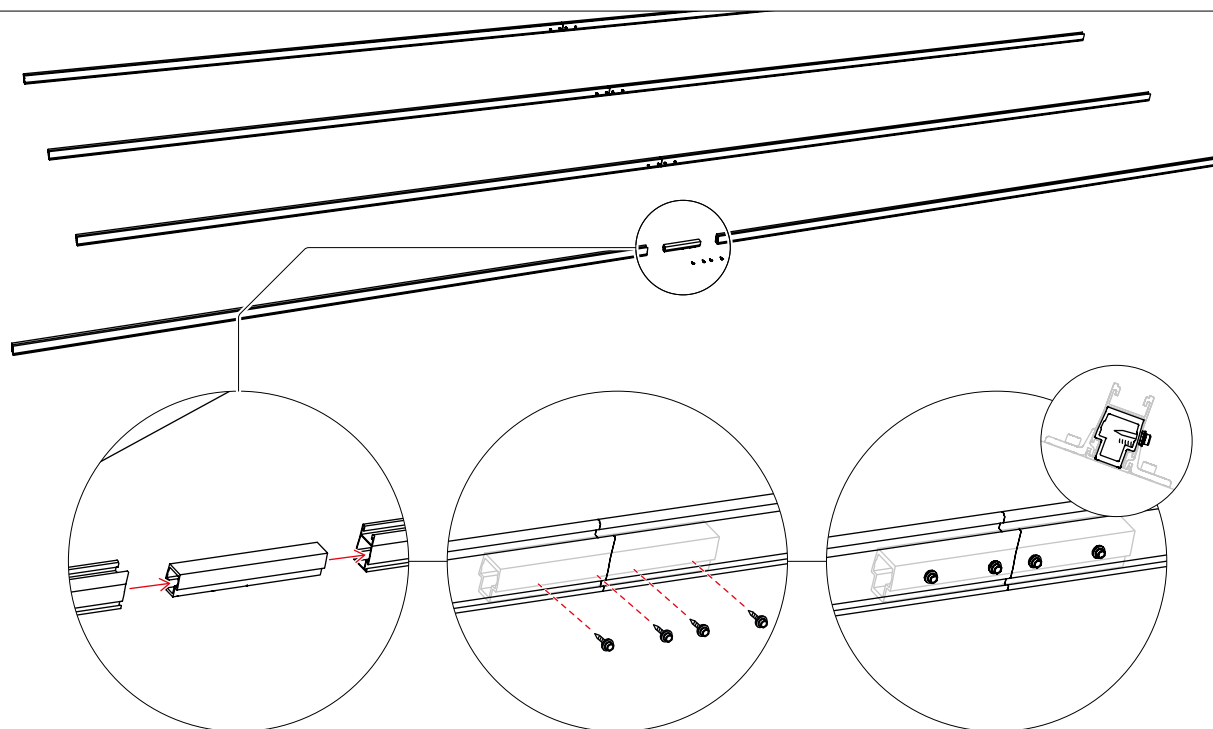
7 2004410
Wind Bracing Set

Installation

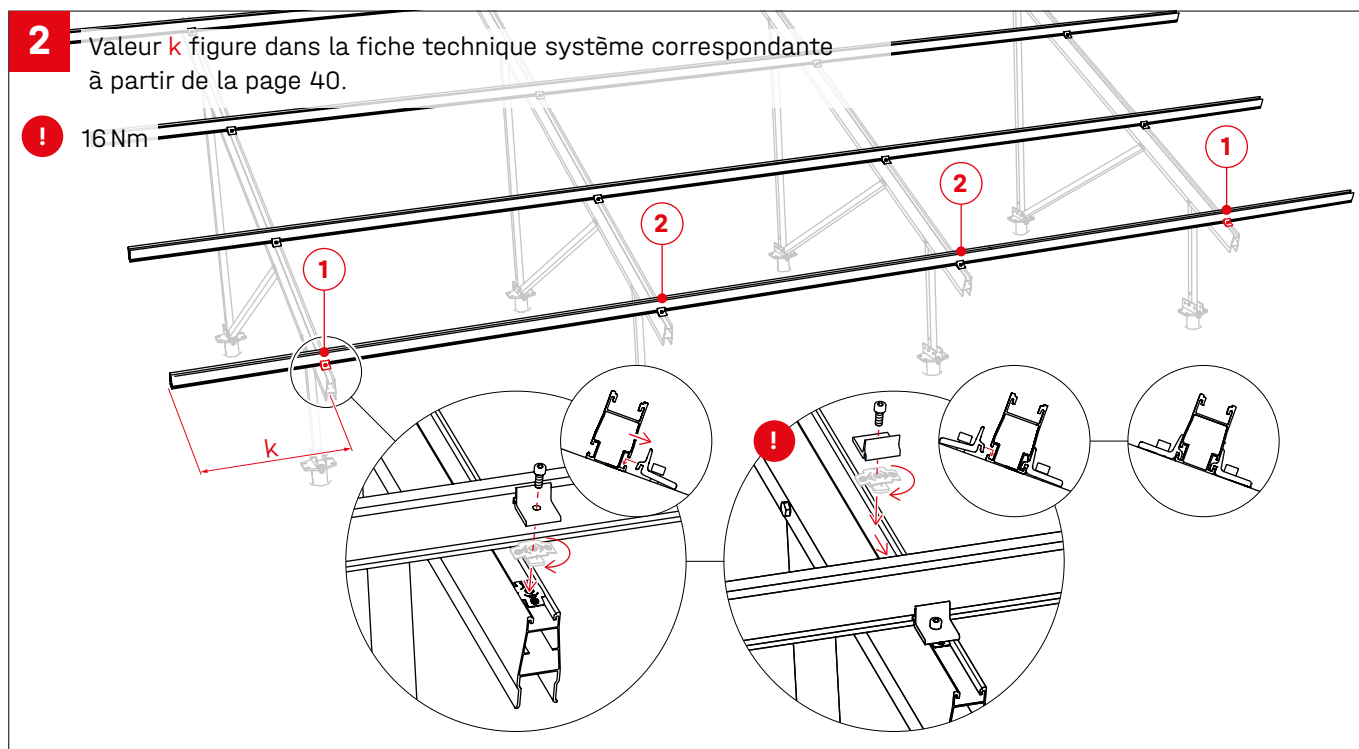
- 1a** M = Longueur du module. La position de la pince et les modules doivent être disposés de manière symétrique par rapport à la longueur de l'aile supérieure. Respecter la plage de serrage admissible indiquée dans la notice de montage du fabricant.



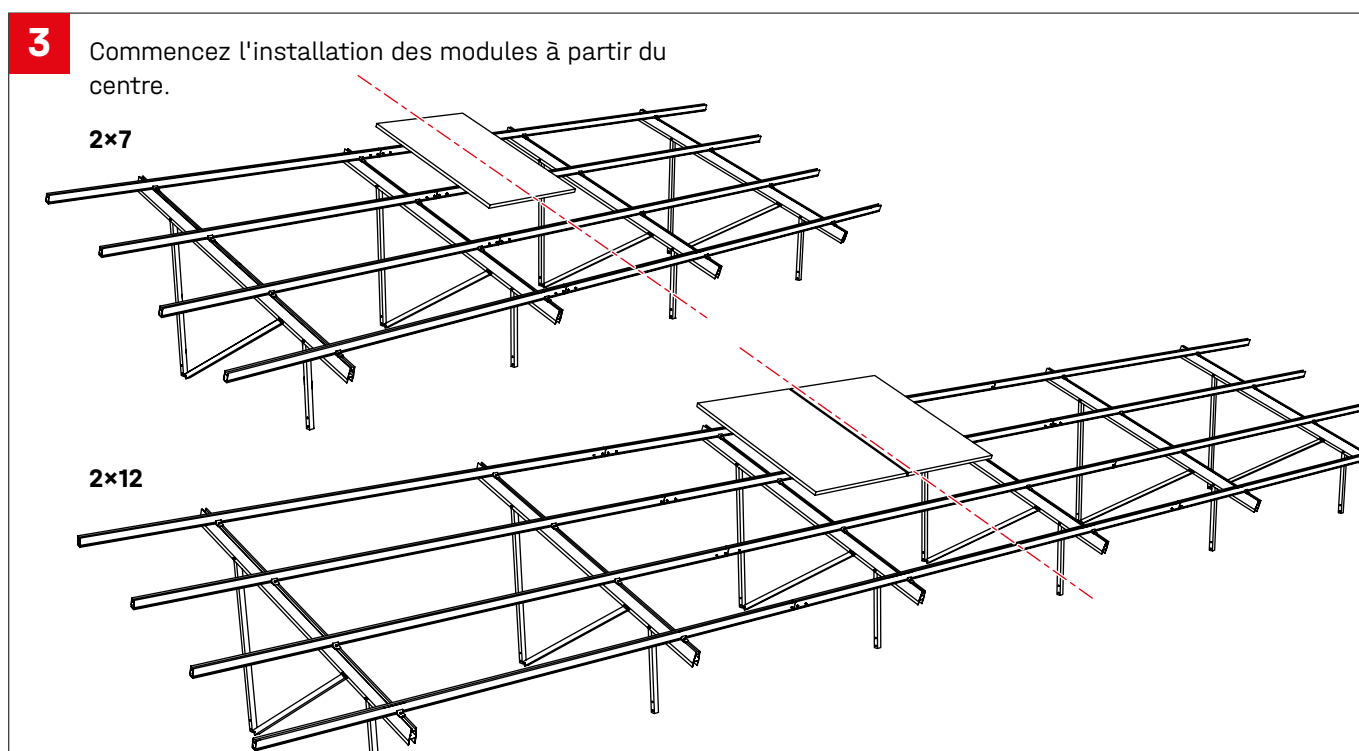
1b

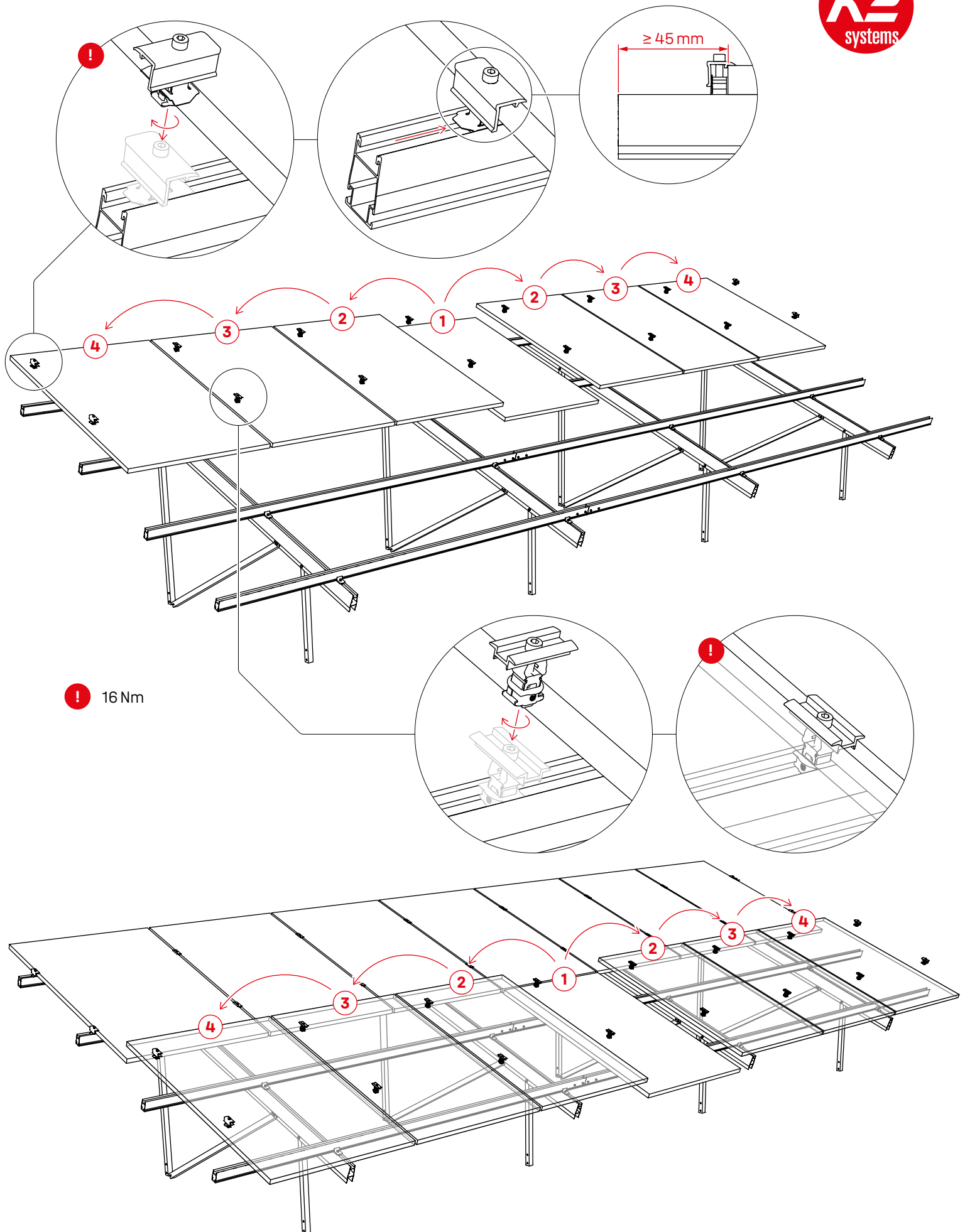


Raccordement du rail de montage CrossRail

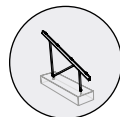
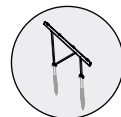


Installation des modules



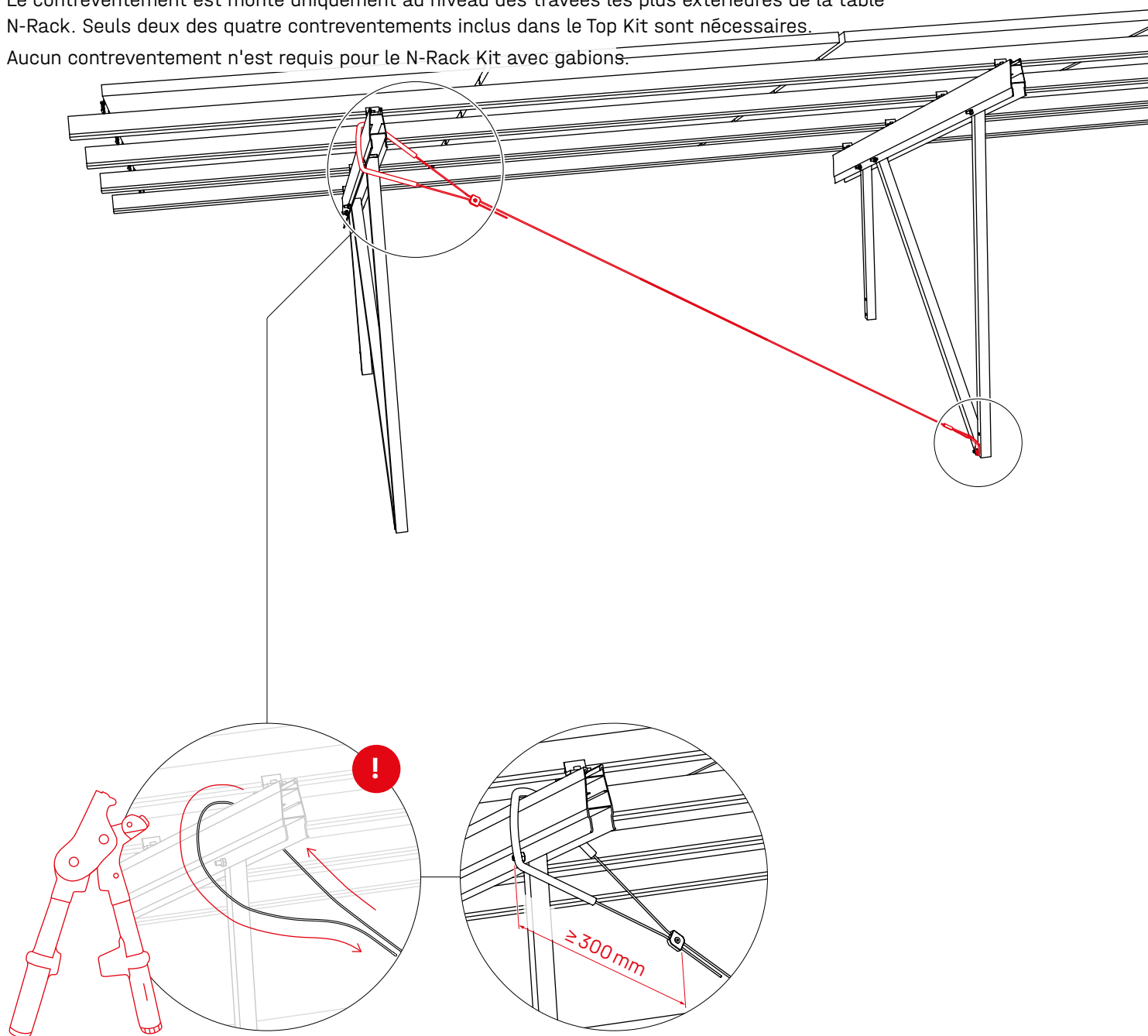


Mise en place du contreventement

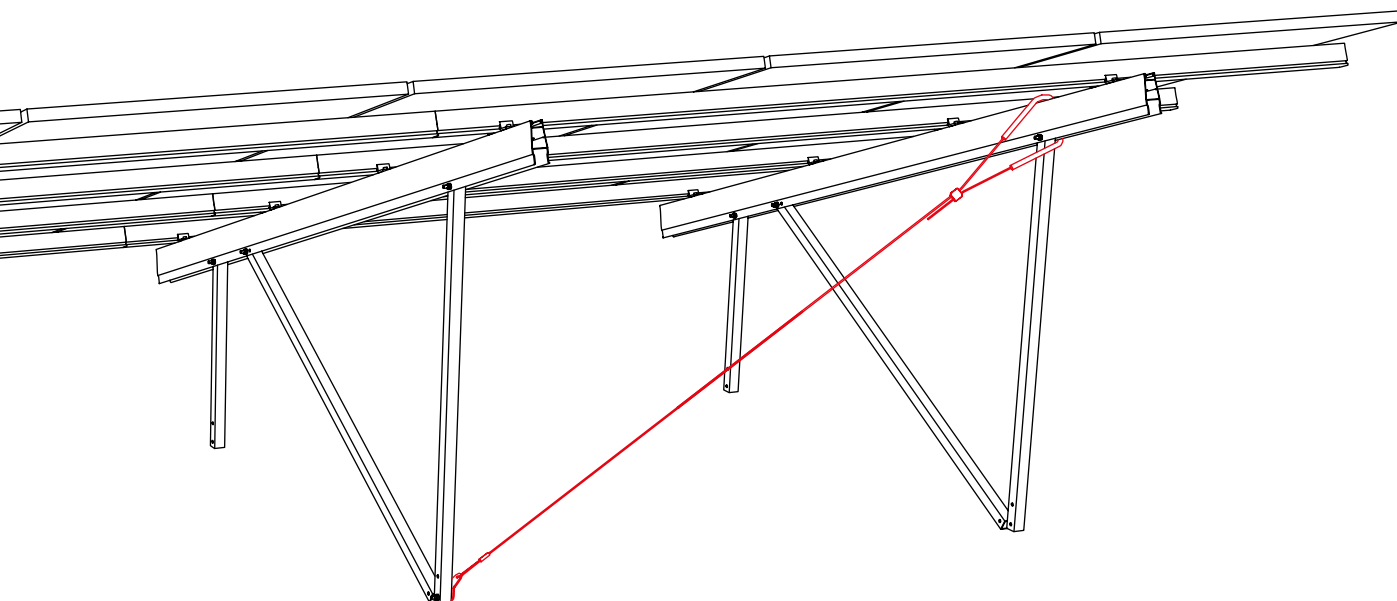


Le contreventement est monté uniquement au niveau des travées les plus extérieures de la table N-Rack. Seuls deux des quatre contreventements inclus dans le Top Kit sont nécessaires.

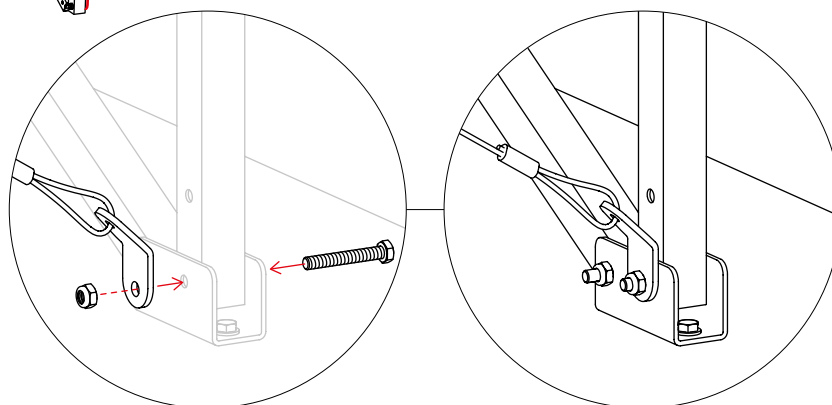
Aucun contreventement n'est requis pour le N-Rack Kit avec gabions.



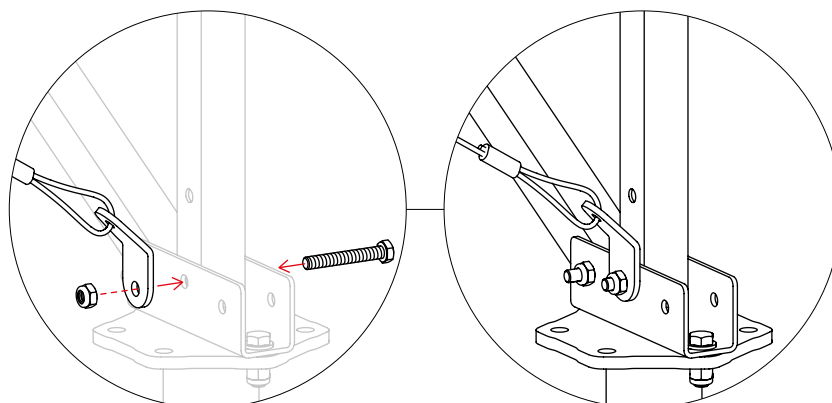
Respectez les instructions d'utilisation du fabricant de l'outil.



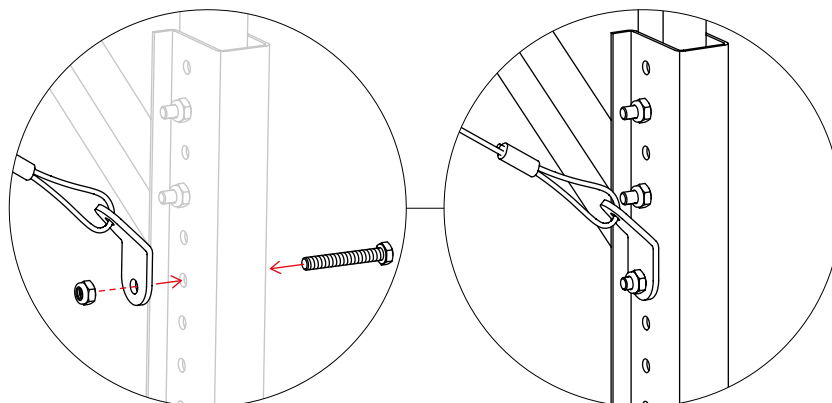
Fondations
en béton



Fondations
vissées



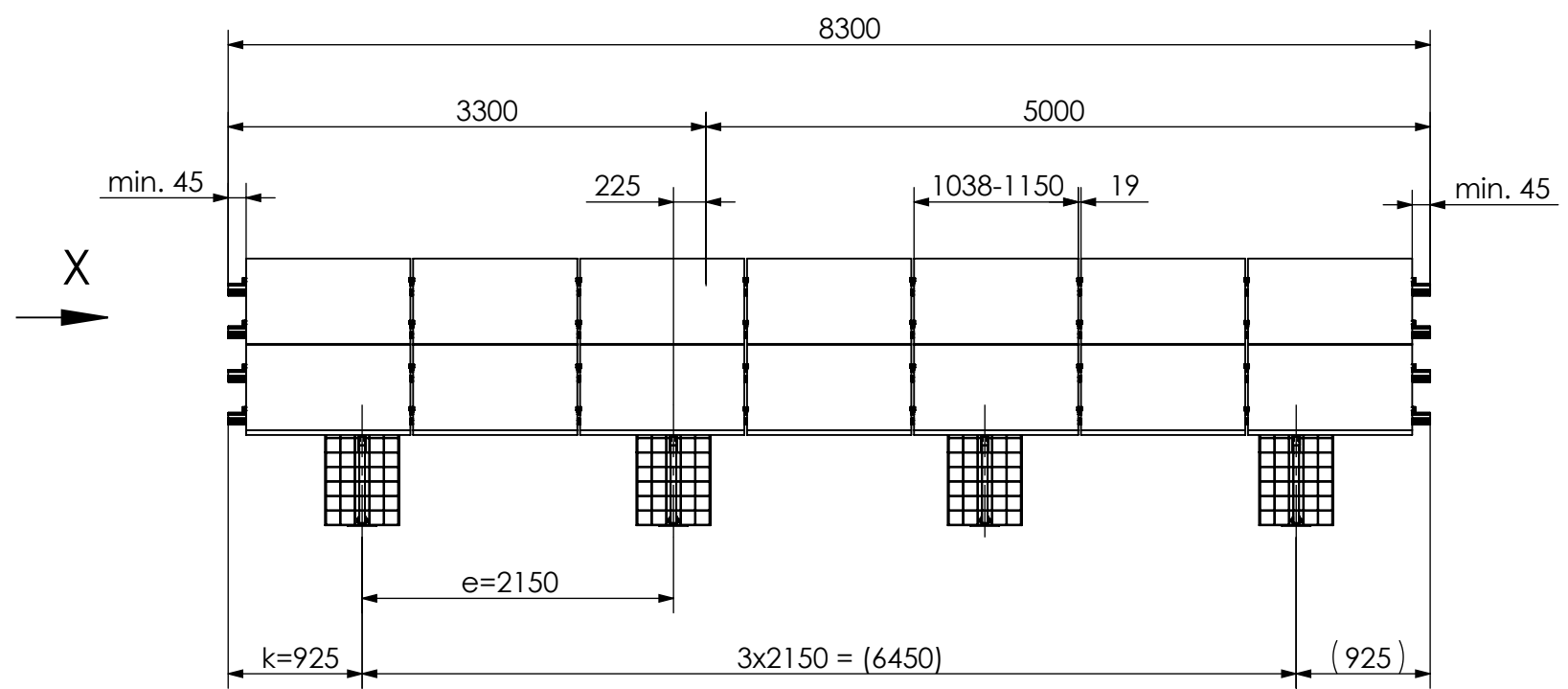
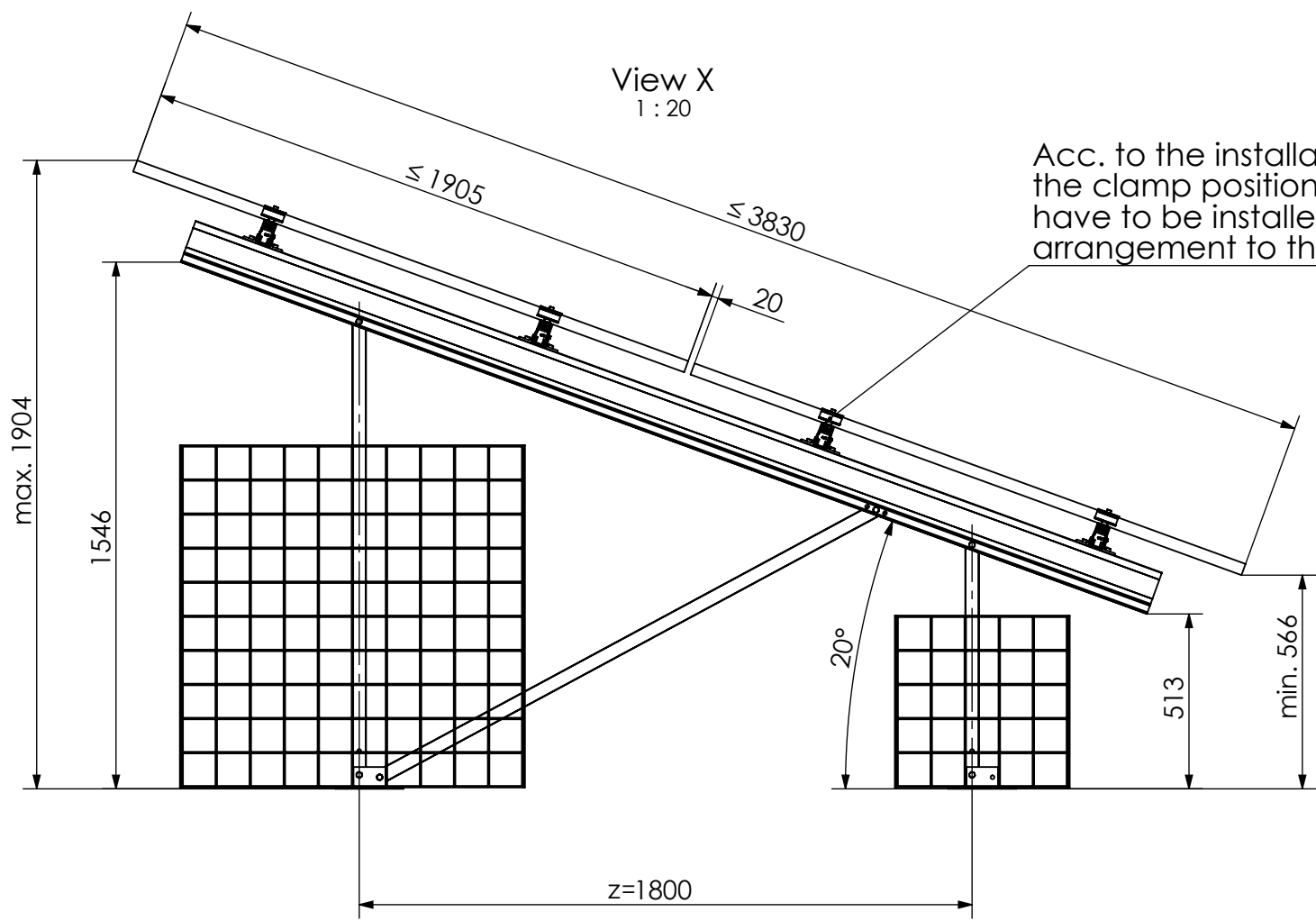
Fondations
sur pieux
battus



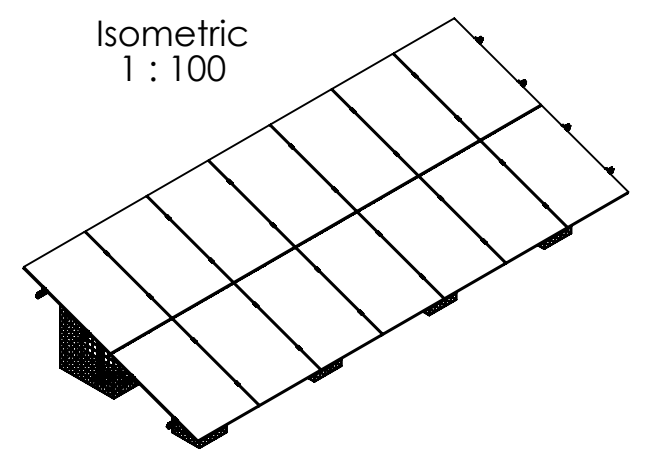
Fiches techniques du système

Gabions

Gabion 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/m²
Ground snow load S_k : 1.75kN/m²



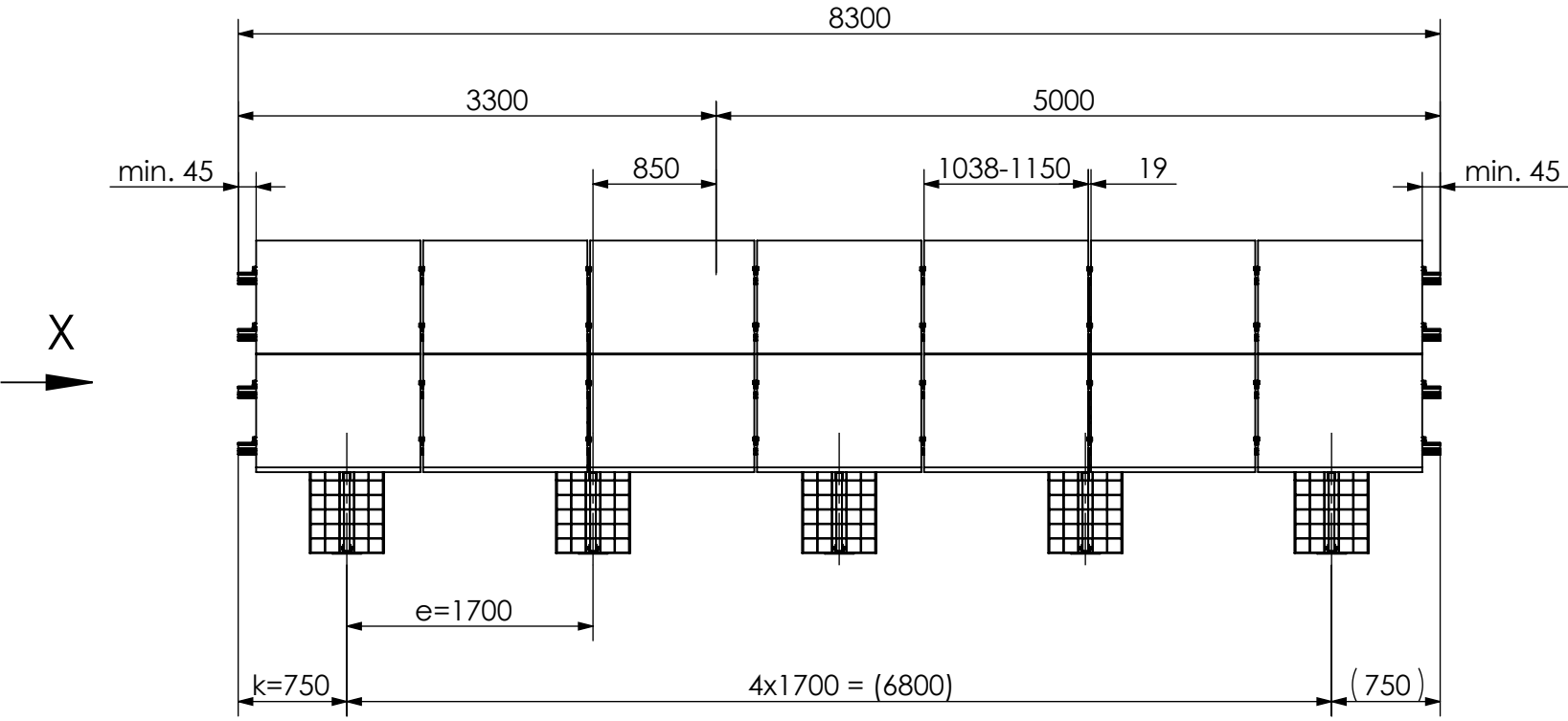
K2 Systems GmbH
Haldenstr. 1
71272 Renningen
Germany
+49 7159 42059-0

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

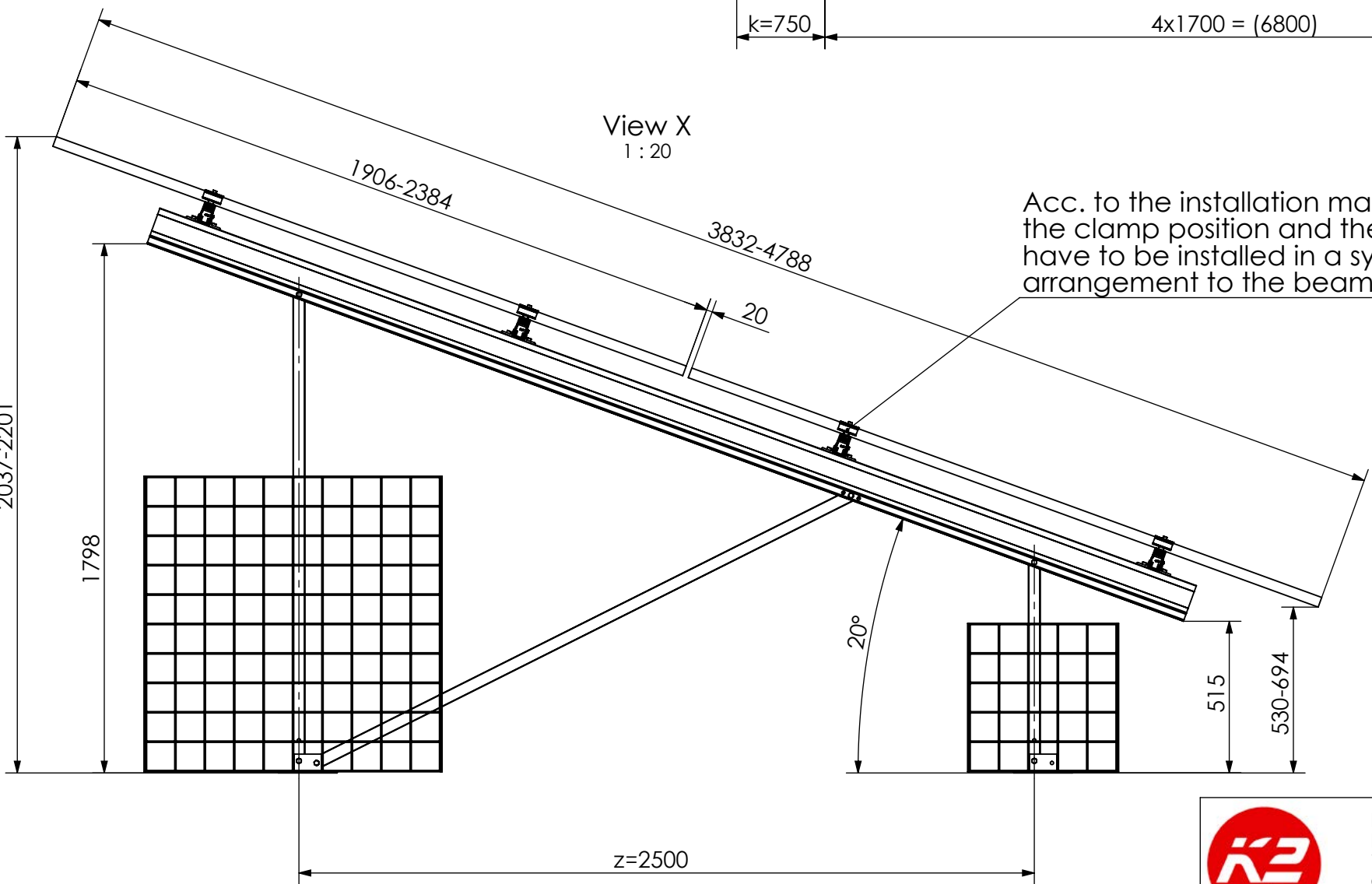
Name	Date	Material:	Item no.:	A3
Designed	C. Erb	26.01.2026	---	
Approved	L. Kreemke	16.03.2026	Surface: -	
Last change		Weight: -	Scale: 1:50	

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Gabion Kit 2x7 L

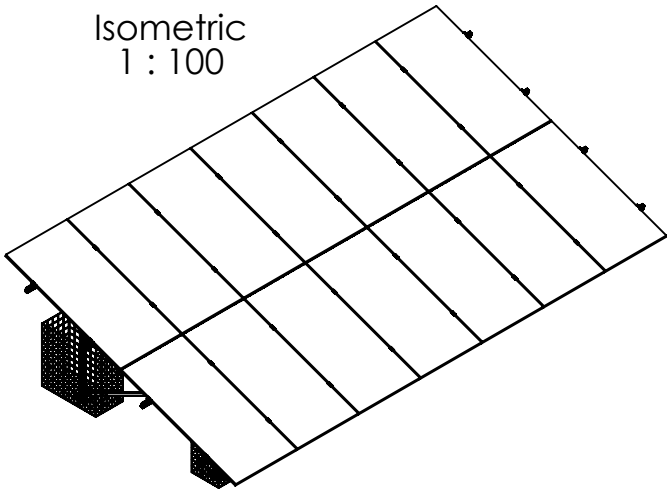


View X
1 : 20



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/m²
Ground snow load S_k : 1.75kN/m²



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	-	---	
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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1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Detail Y
1 : 20

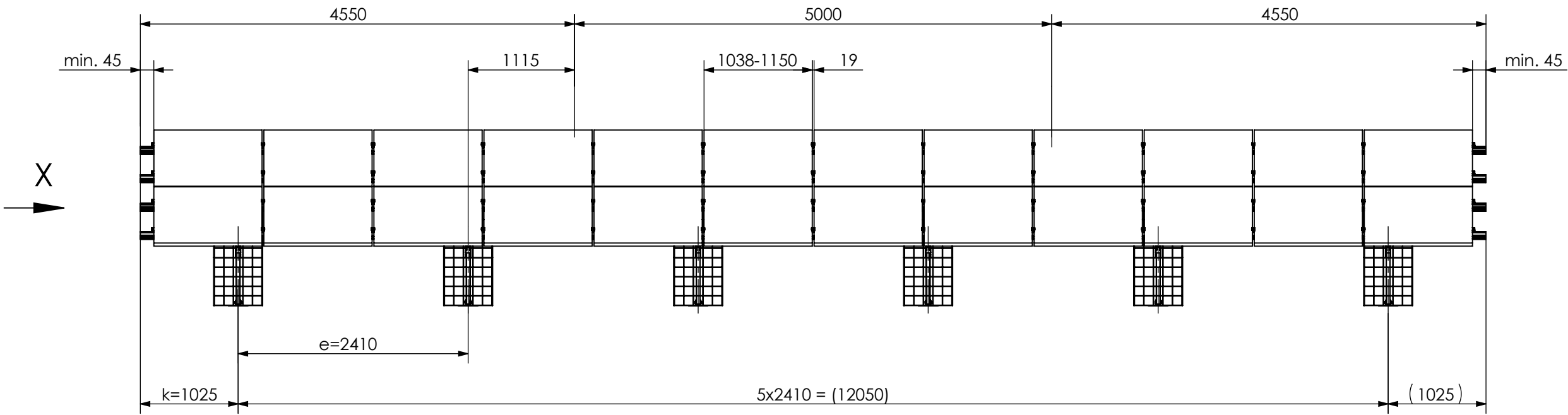
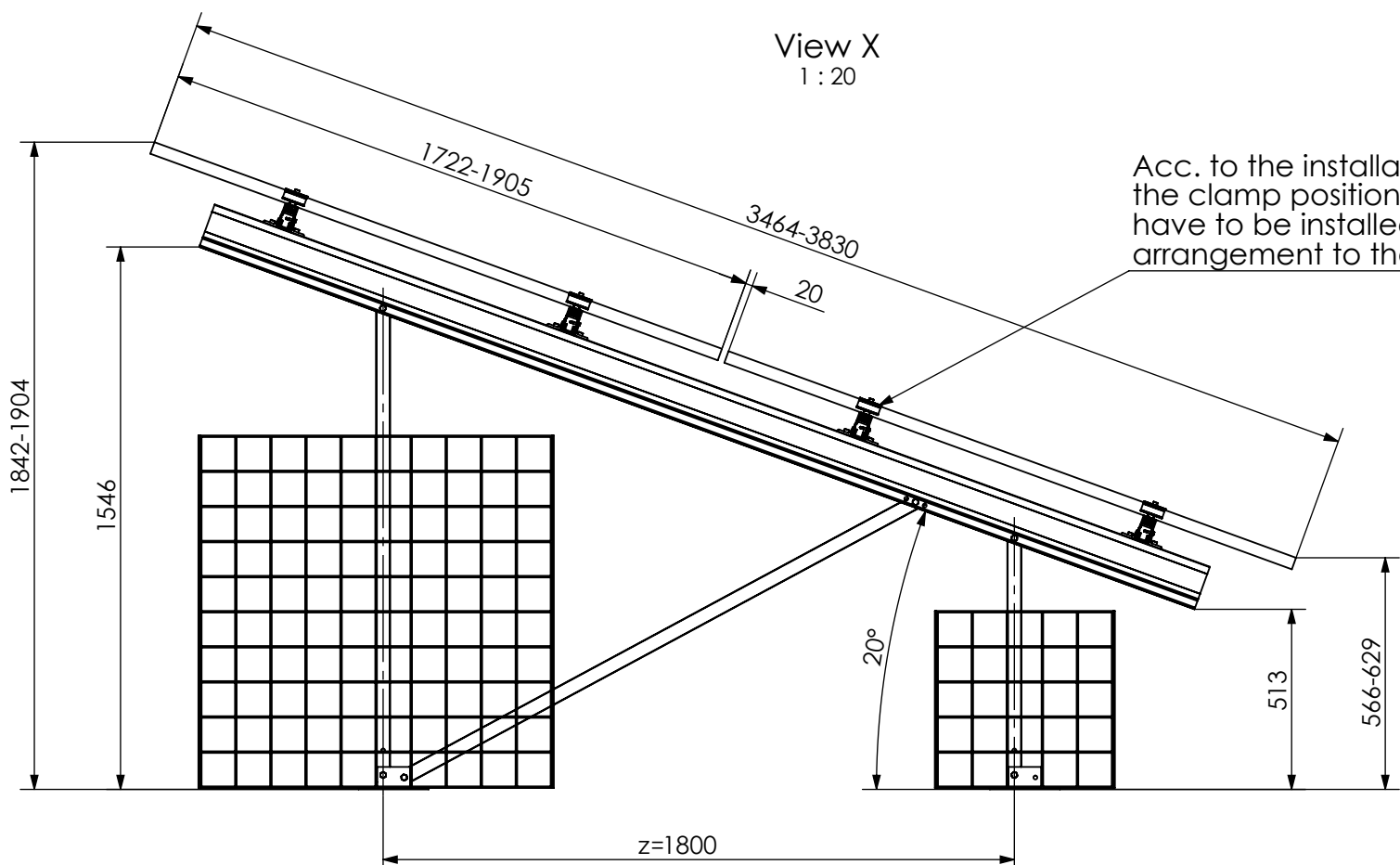
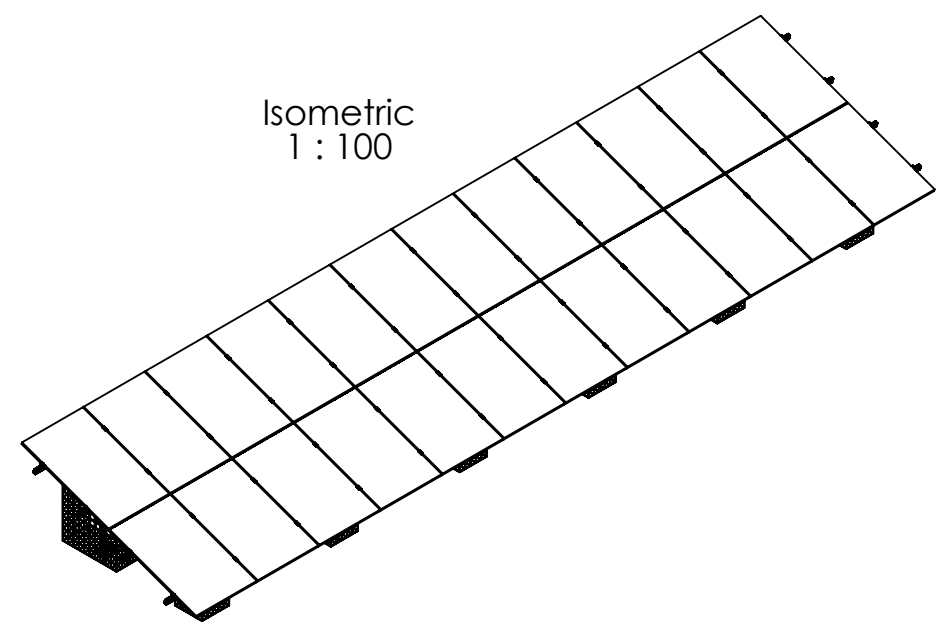
Detail Z
1:50

Isometri
1 : 100

	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.: ---
	Designed	C. Erb	26.01.2026	-		A3
	Approved	L. Kreemke	16.03.2026	Surface: -		
Last change			Weight: -	Scale: 1:50		All dimensions in mm Sheet 1 of 1

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Gabion Kit 2x12 S



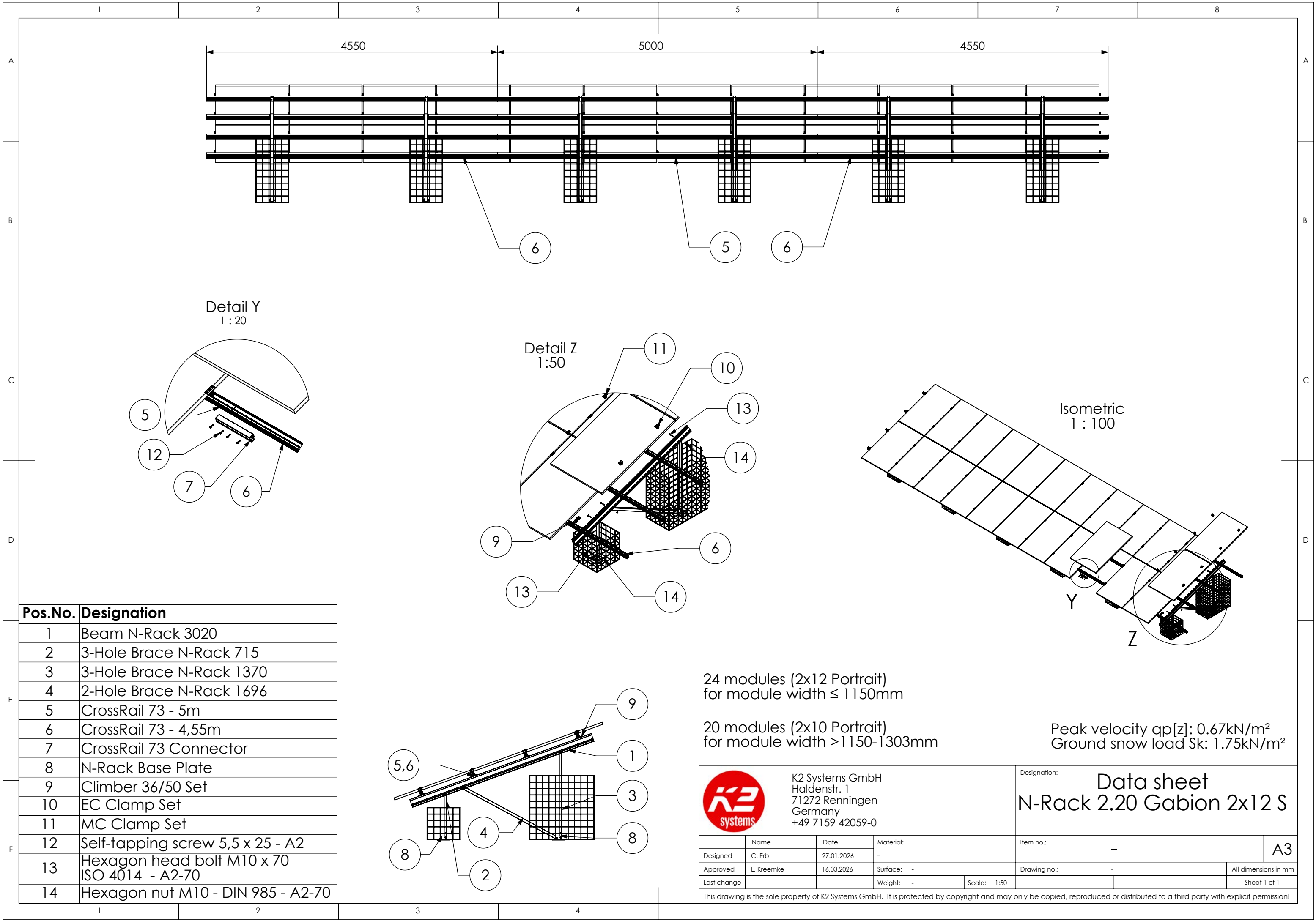
Acc. to the installation manual,
the clamp position and the modules
have to be installed in a symmetrical
arrangement to the beam length.

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

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

Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

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	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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Gabion Kit 2x12 L

Technical drawing showing the layout and dimensions of the Gabion Kit 2x12 L. The drawing includes a plan view and a side view.

Plan View Dimensions:

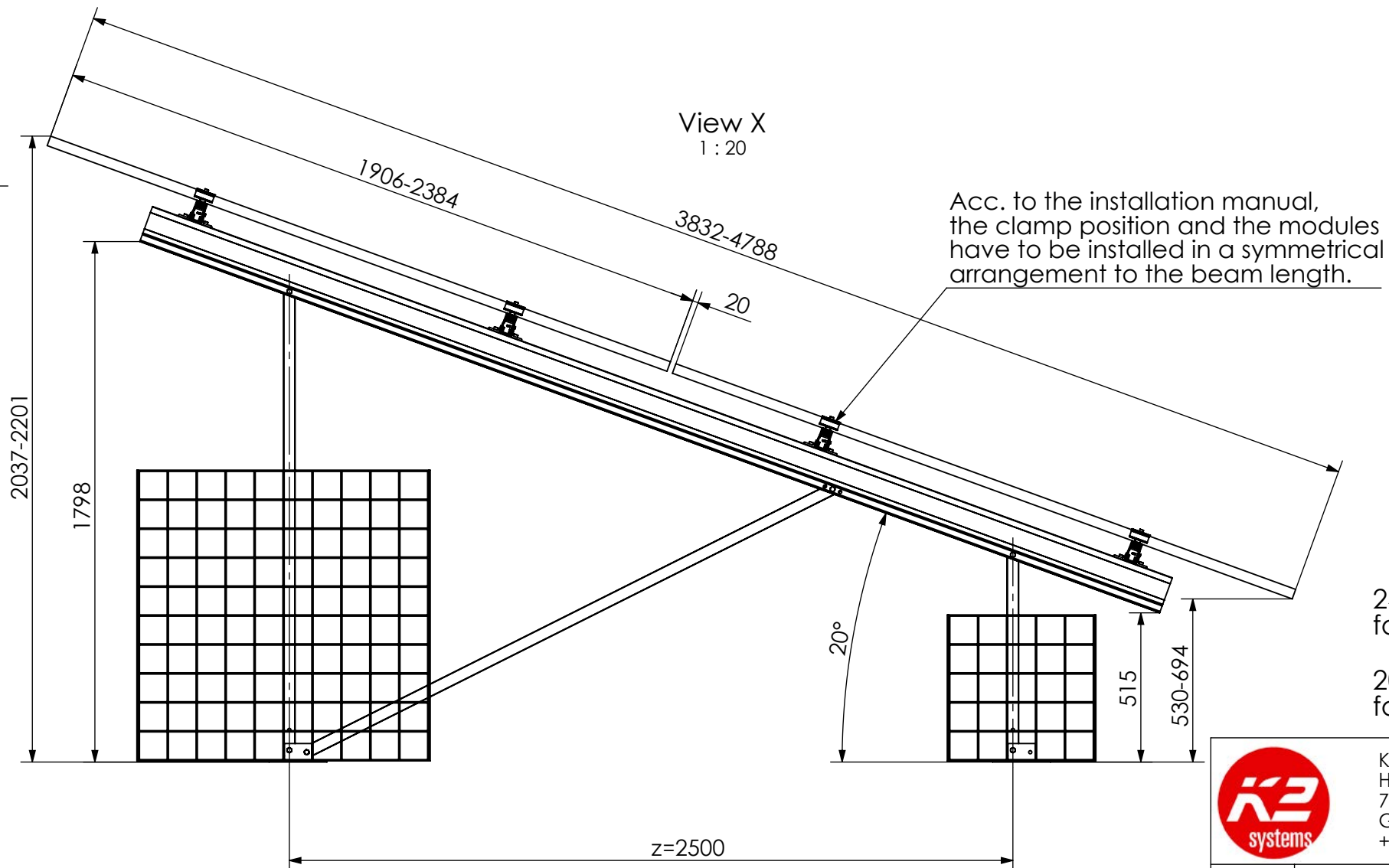
- Overall length: 14100
- Segment lengths: 4550, 5000, 4550
- Minimum width: min. 45
- Width of the central section: 1038-1150
- Width of the side sections: 200
- Width of the central section: 19
- Width of the side sections: 19

Side View Dimensions:

- Overall width: 7x1800 = (12600)
- Width of the central section: e=1800
- Width of the side sections: k=750
- Width of the side sections: (750)

Other Labels:

- X (Coordinate axis)
- min. 45 (Minimum width)
- 14100 (Overall length)
- 4550 (Segment length)
- 5000 (Segment length)
- 1038-1150 (Width of the central section)
- 200 (Width of the side sections)
- 19 (Width of the central section)
- 19 (Width of the side sections)
- e=1800 (Width of the central section)
- k=750 (Width of the side sections)
- (750) (Width of the side sections)
- 7x1800 = (12600) (Overall width)

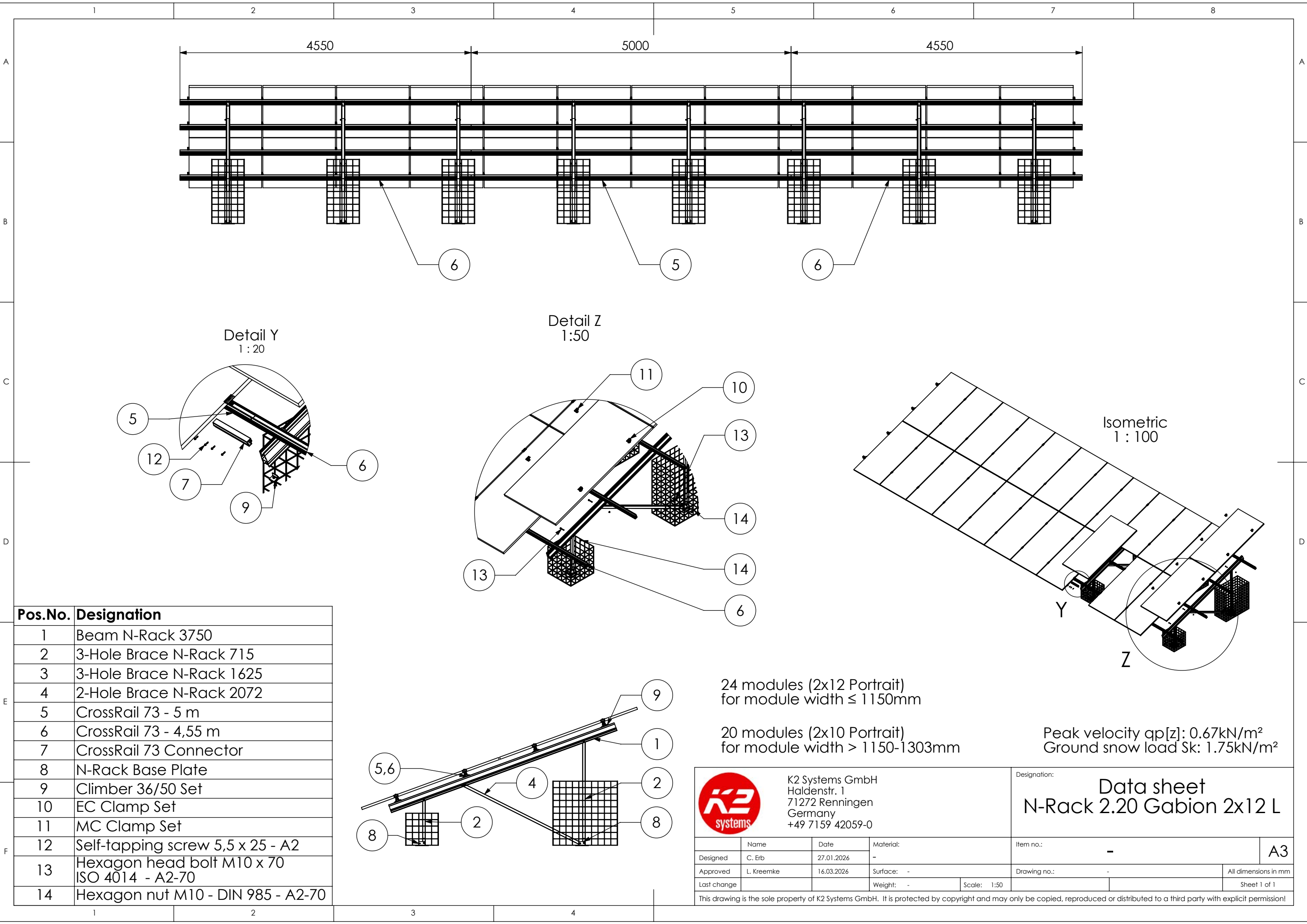


Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

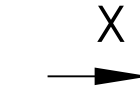


Designation:	Data sheet N-Rack 2.20 Gabion 2x12 L
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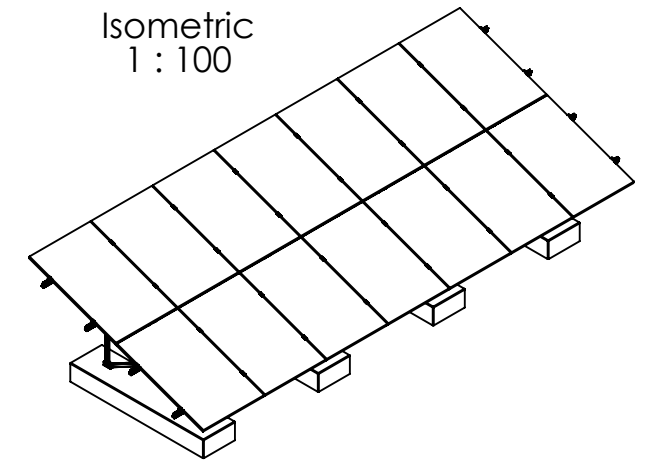
	Name	Date	Material:		Item no.:		A3
Designed	C. Erb	27.01.2026	-		-		
Approved	L. Kreemke	16.03.2026	Surface: -		Drawing no.: -		All dimensions in mm
Last change			Weight: -	Scale: 1:50			Sheet 1 of 1
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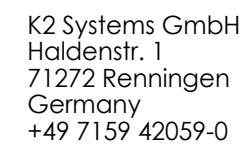
Concrete Kit 2x7 S



Isometric
1 : 100



Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²



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

	Name	Date	Material:		Item no.: ---		A3
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

Top view dimensions:

- Total width: 8300
- Module width: 1150
- Spacing: 19
- Number of modules: 14 (2x7 Portrait)

Side view (View X) dimensions:

- Height: 1800
- Base width: 2500
- Inclination: 20°

Isometric view: 1 : 100

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/m²

Ground snow load S_k : 1.75kN/m²

K2 Systems GmbH				Designation:	
Haldenstr. 1				Data sheet	
71272 Renningen				N-Rack 2.20 Concrete 2x7 L	
Germany					
+49 7159 42059-0					
Name	Date	Material:	Item no.: ---		
Designed	C. Erb	16.12.2025	A3		
Approved	L. Kreemke	16.03.2026	Drawing no.: ---		
Last change			All dimensions in mm		
Weight: -			Scale: 1:50		Sheet 1 of 1

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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 qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²



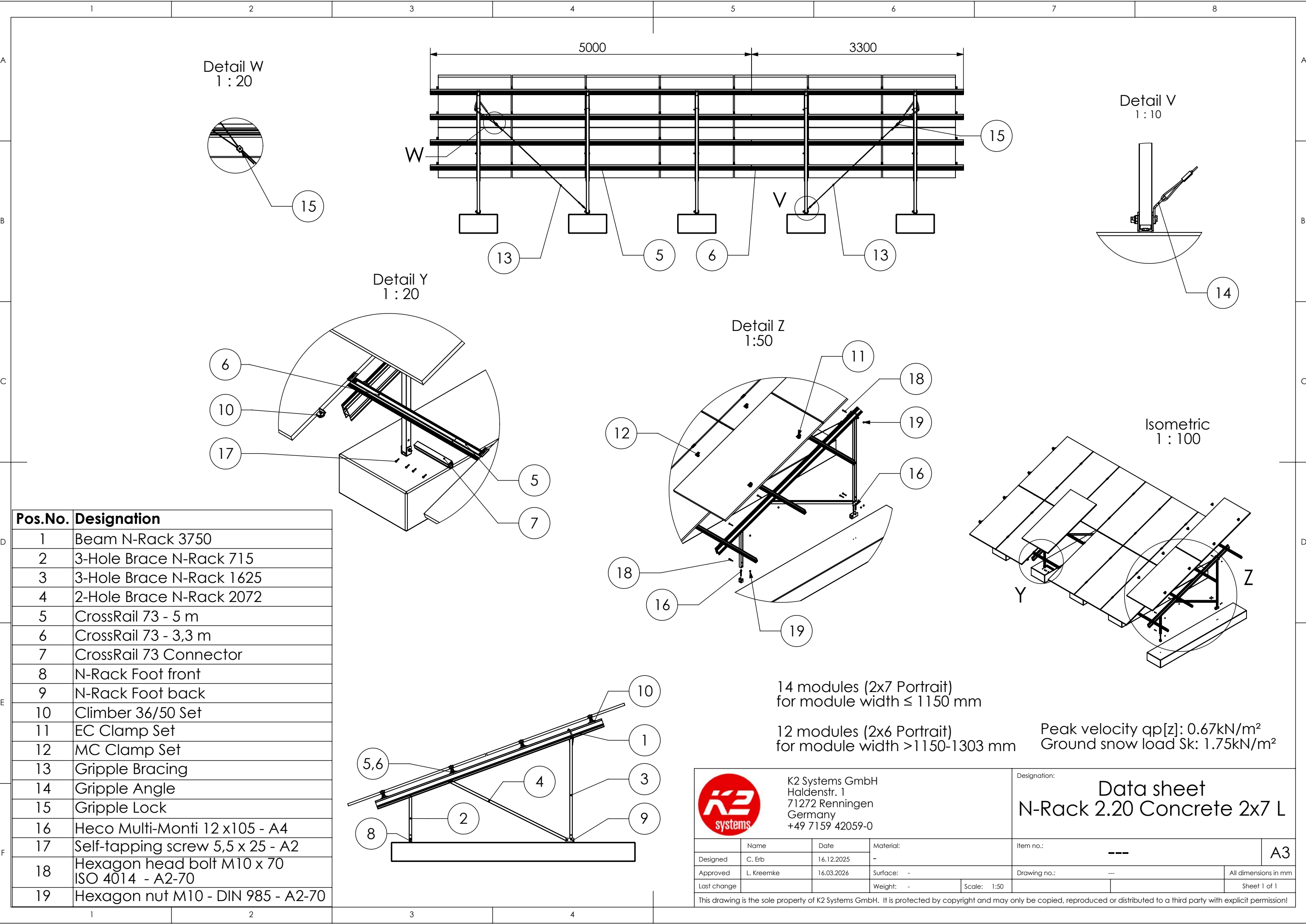
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Designation:	
--------------	--

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

	Name	Date	Material:	Item no.:	A3
Designed	C. Erb	16.12.2025	-	---	
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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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/m²
Ground snow load S_k : 1.75kN/m²

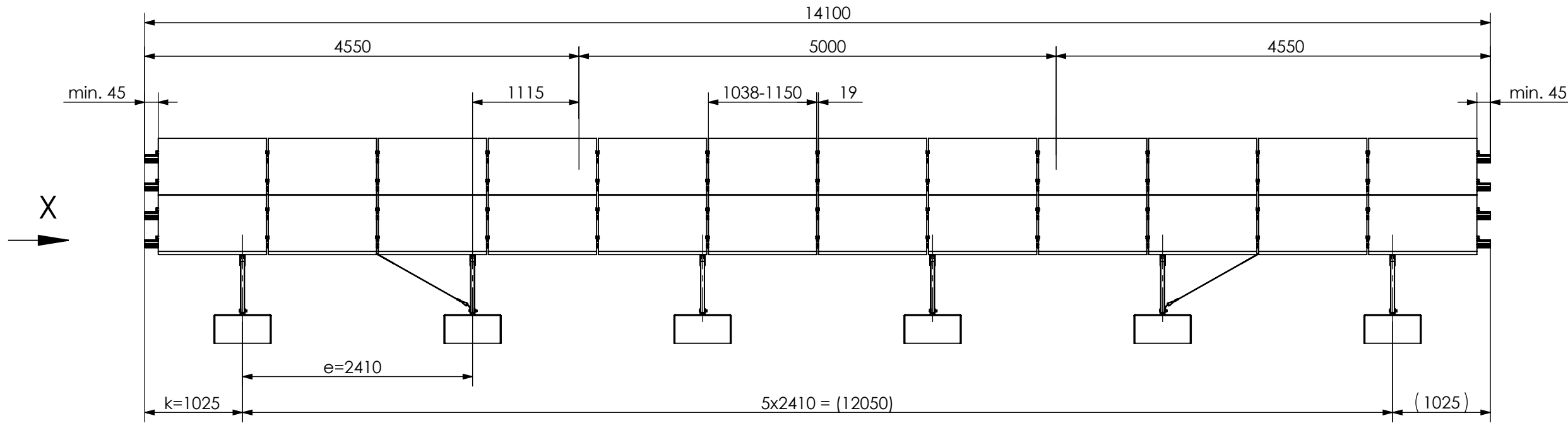
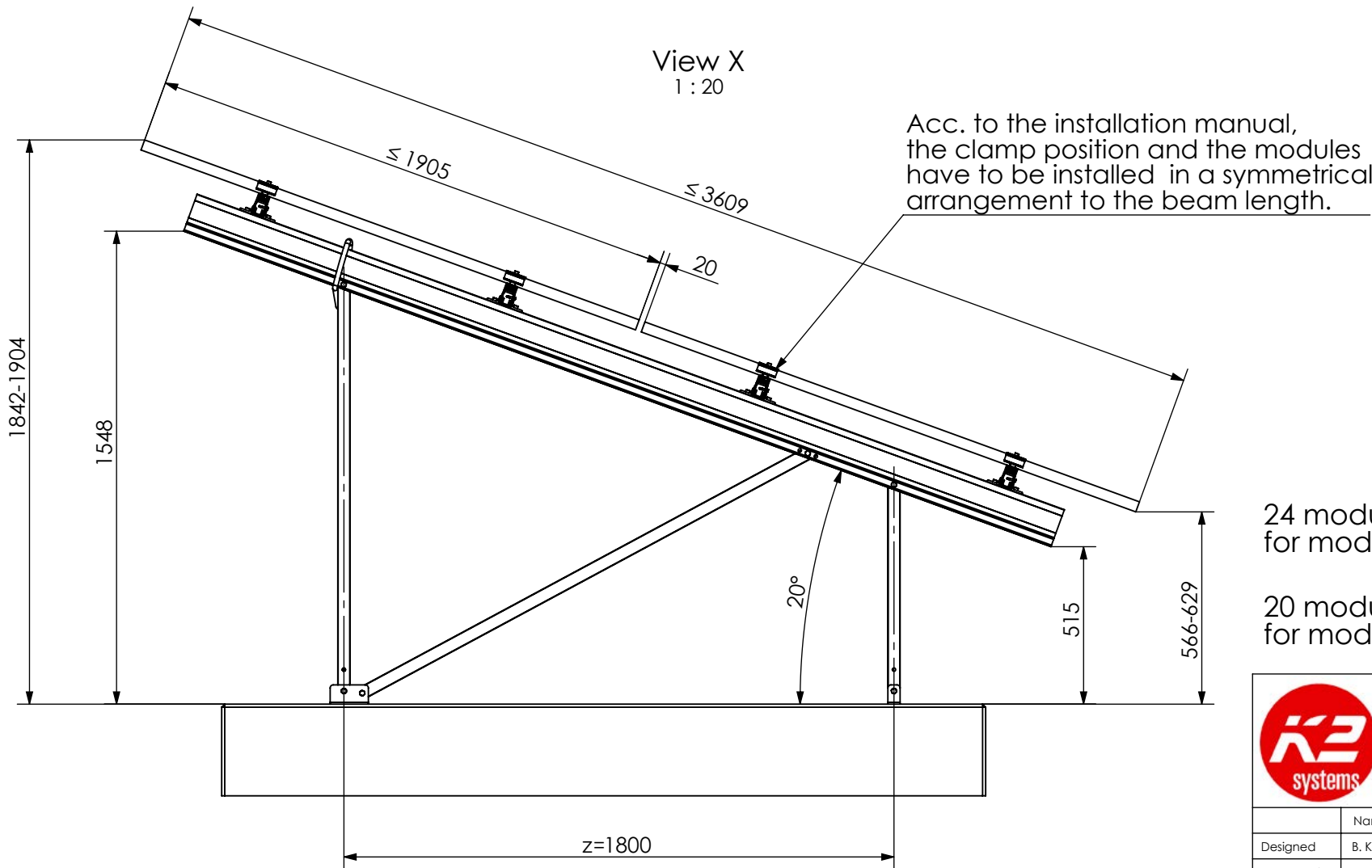


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Designation:		Data sheet	
		N-Rack 2.20 Concrete 2x7 L	
Item no.:	---	A3	
Drawing no.:	---	All dimensions in mm	
		Sheet 1 of 1	

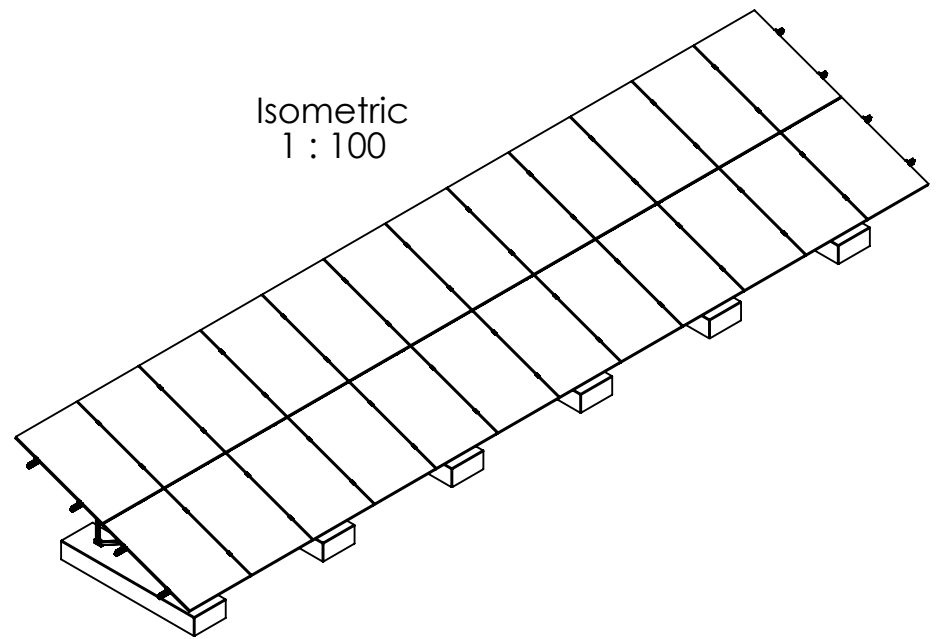
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Concrete Kit 2x12 S



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

Isometric
1 : 100



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

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

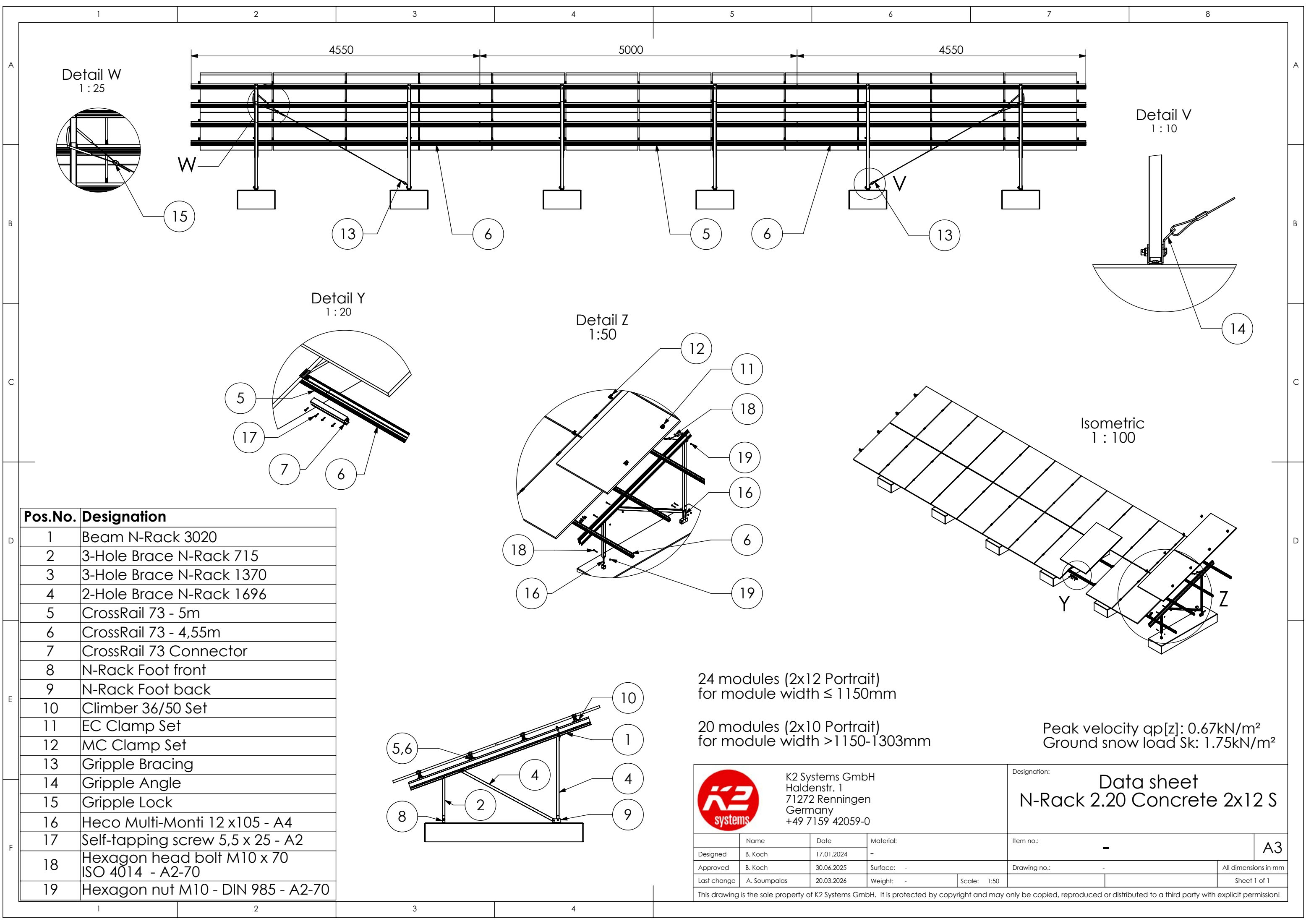
Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²



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Designation: Data sheet
N-Rack 2.20 Concrete 2x12 S

	Name	Date	Material:		Item no.: -		A3
Designed	B. Koch	17.01.2024	-				
Approved	B. Koch	30.06.2025	Surface: -		Drawing no.: -		All dimensions in mm
Last change	A. Soumpalas	20.03.2026	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 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

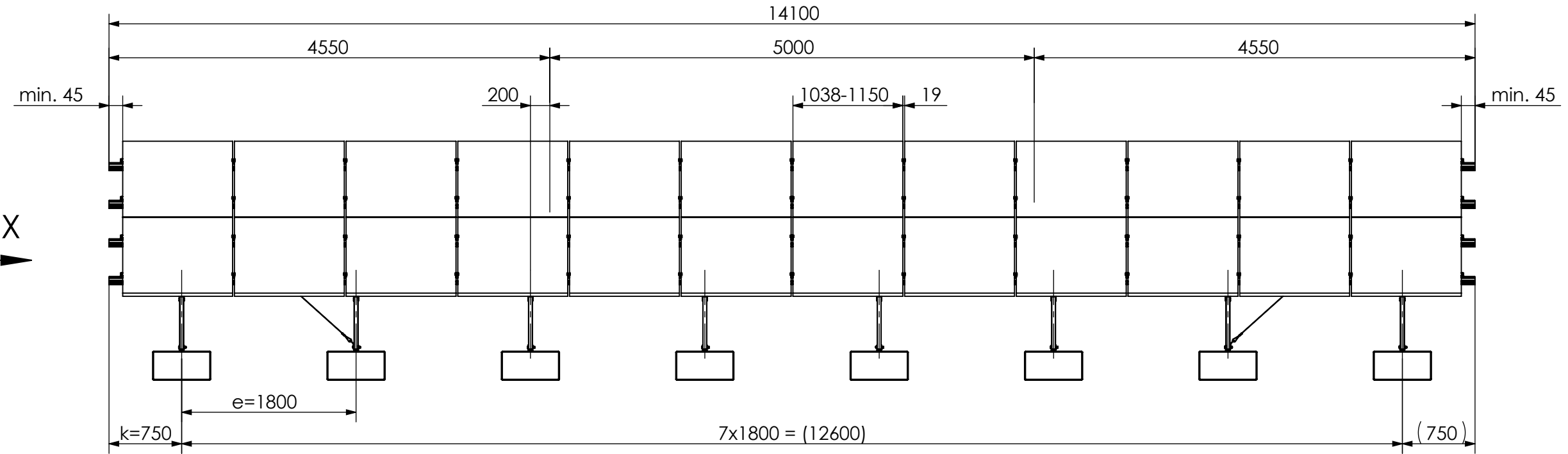
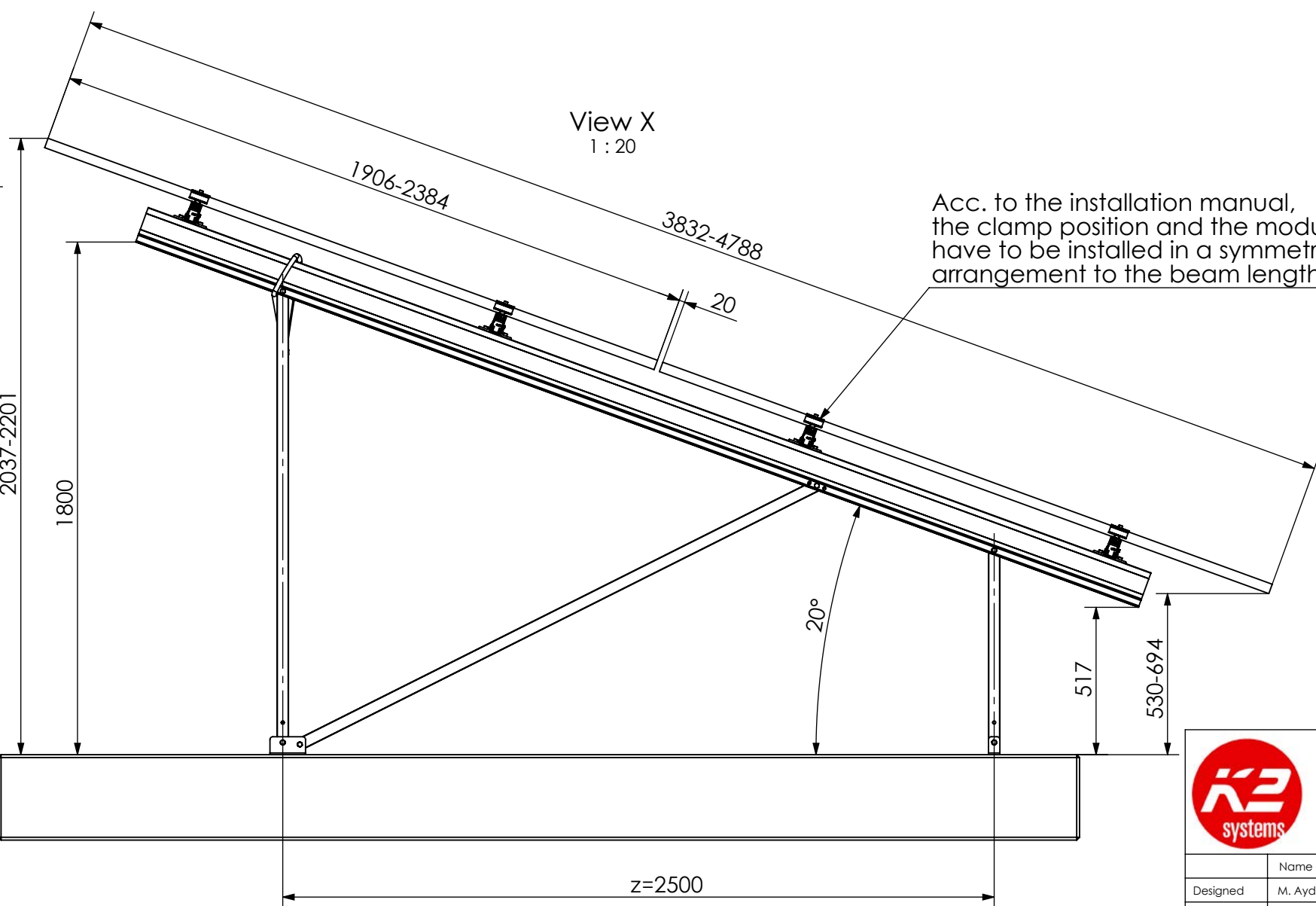
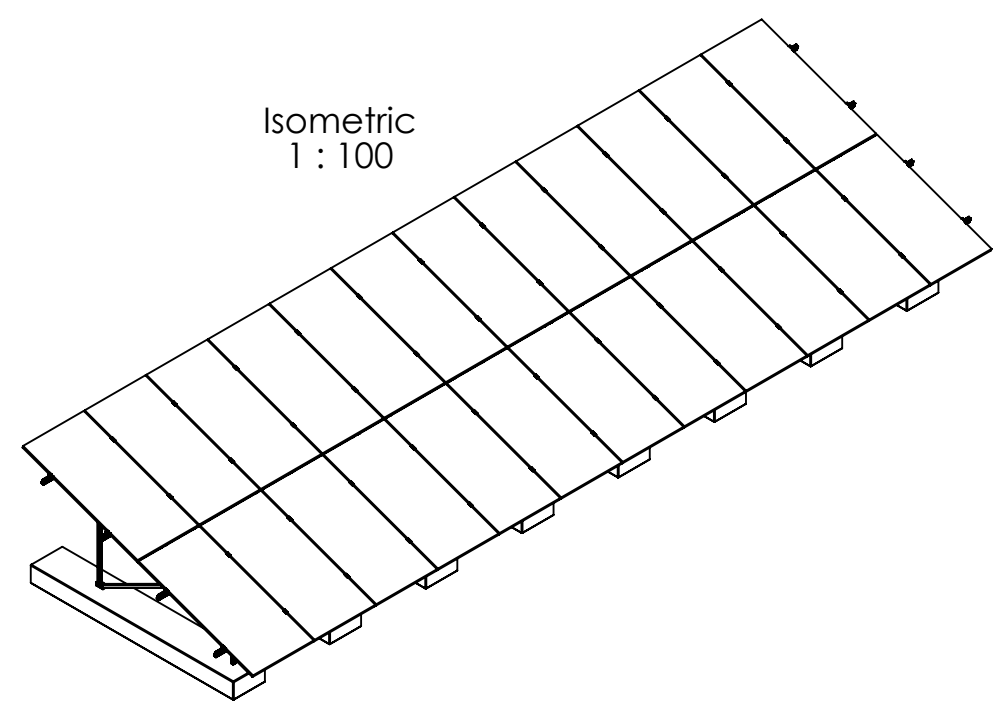
24 modules (2x12 Portrait)
for module width ≤ 1150mm

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

Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

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



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

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

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

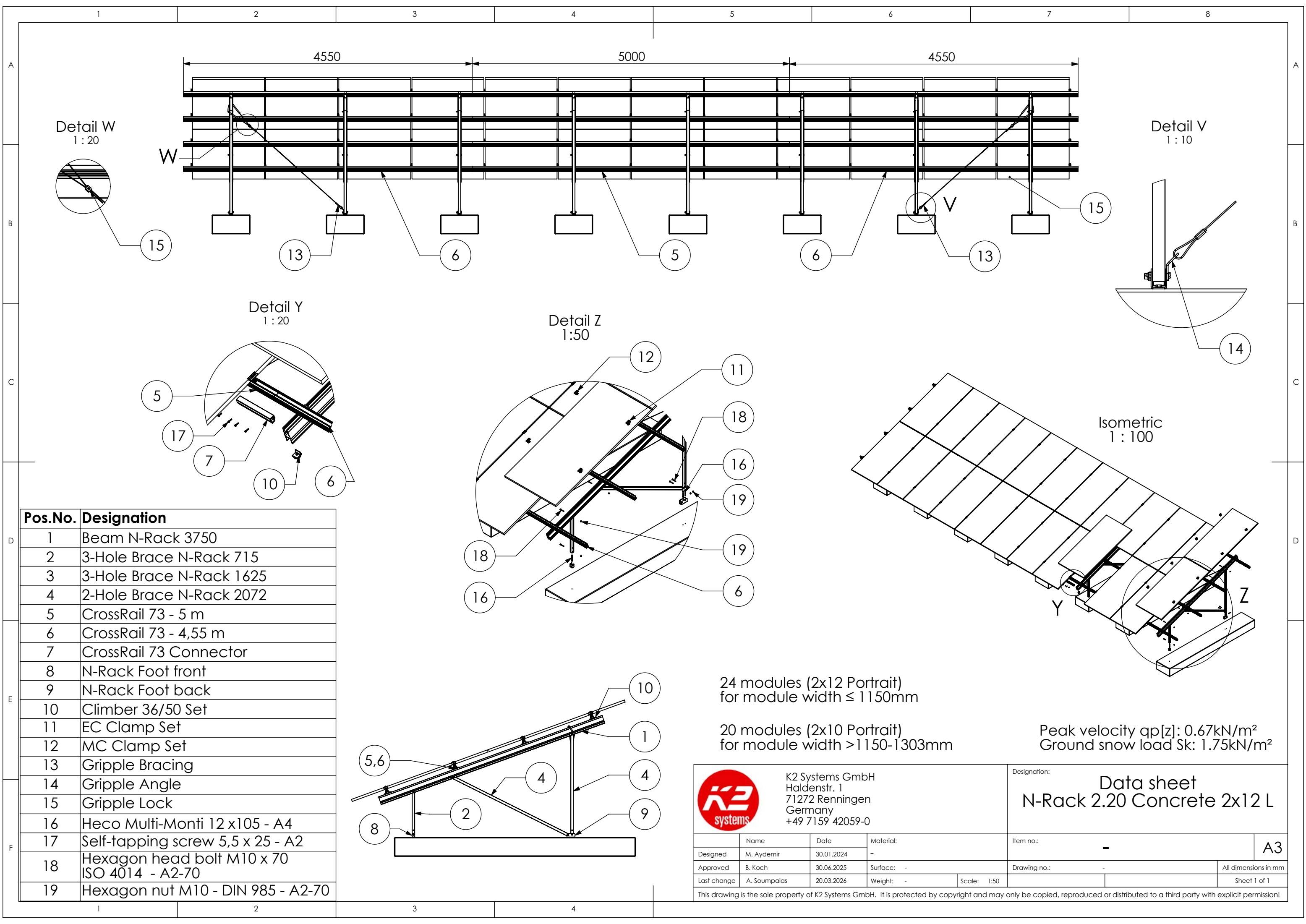


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Designation:
**Data sheet
N-Rack 2.20 Concrete 2x12 L**

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

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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/m²
Ground snow load S_k : 1.75kN/m²



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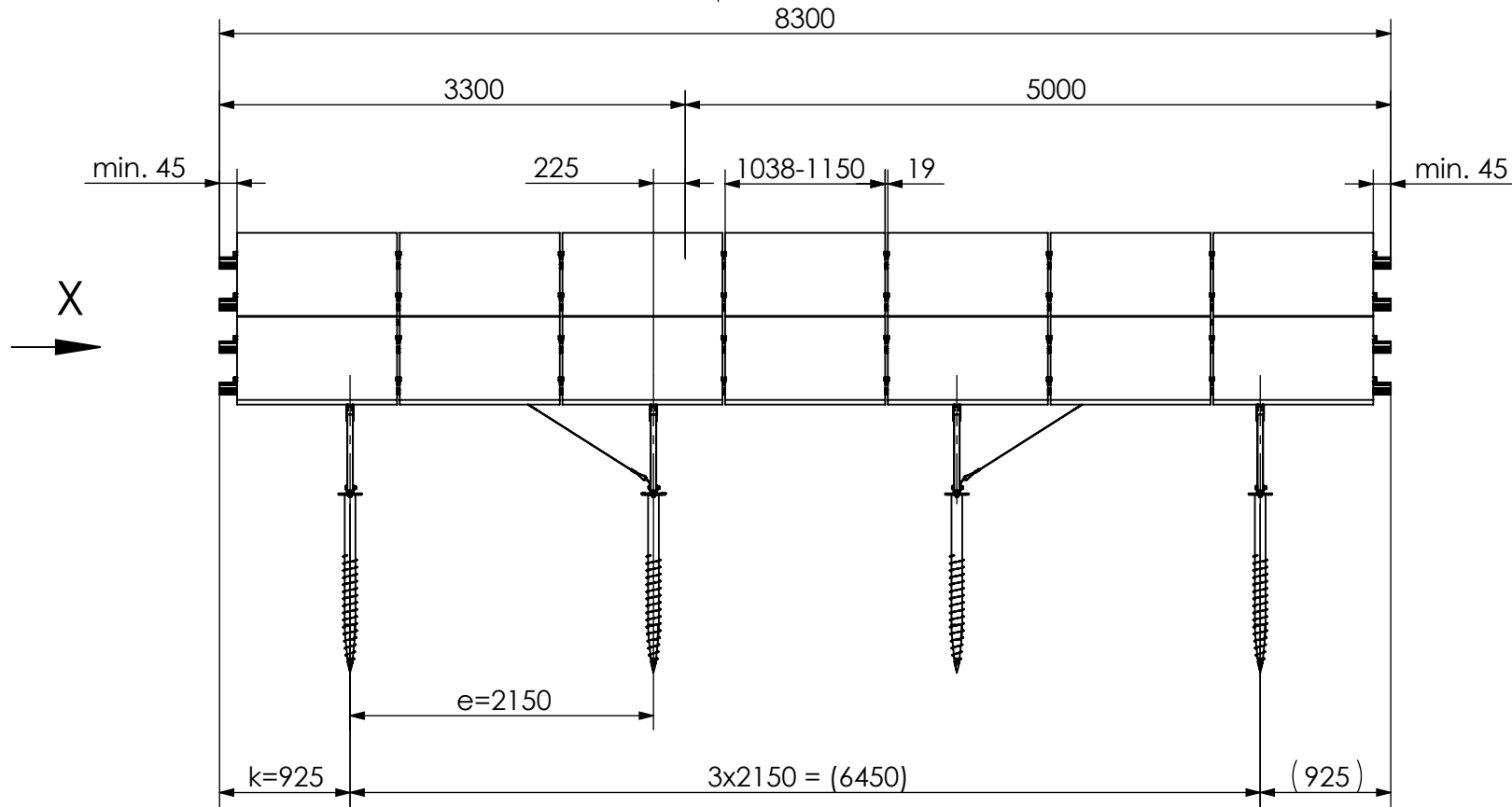
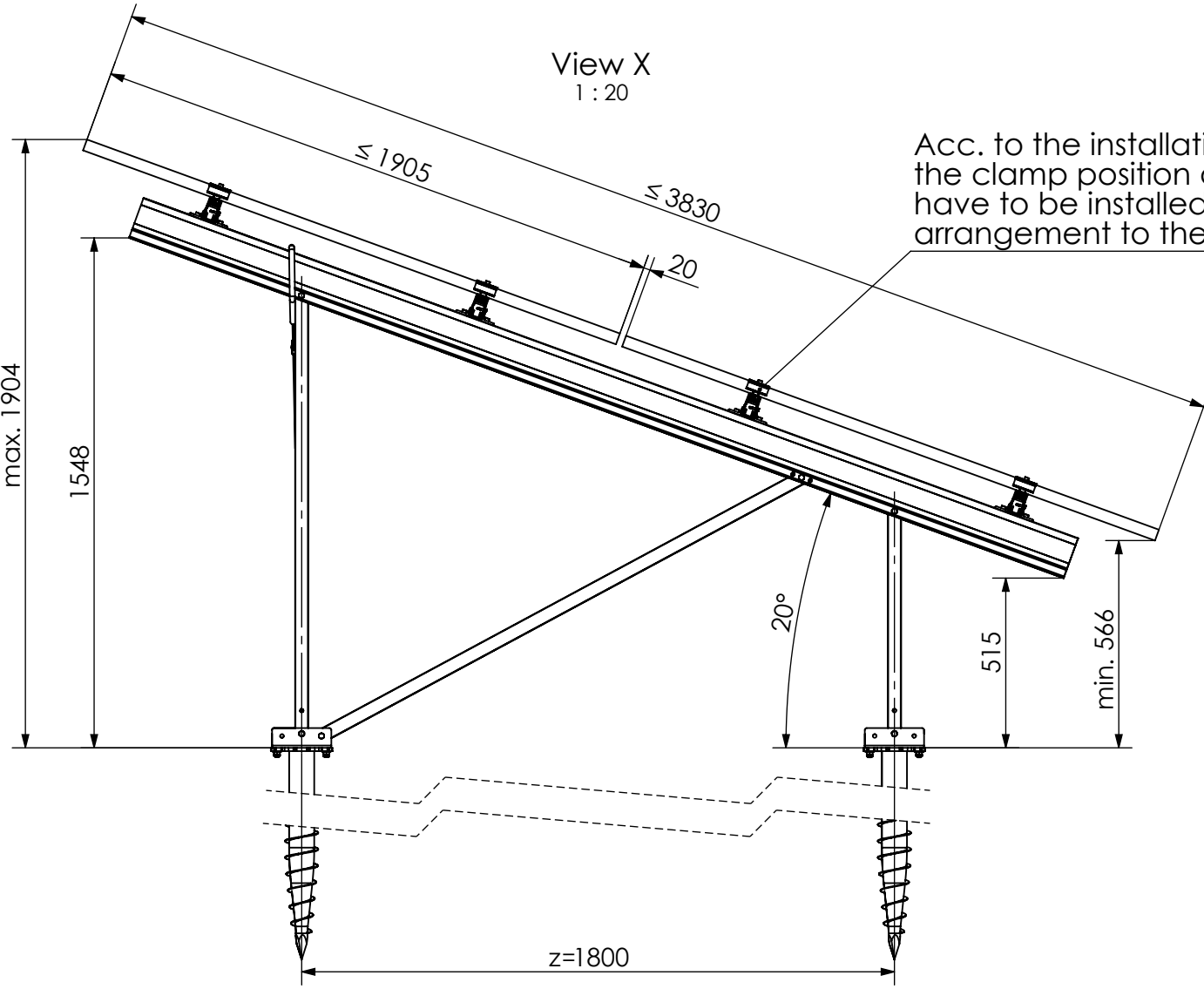
Designation:
Data sheet
N-Rack 2.20 Concrete 2x12 L

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

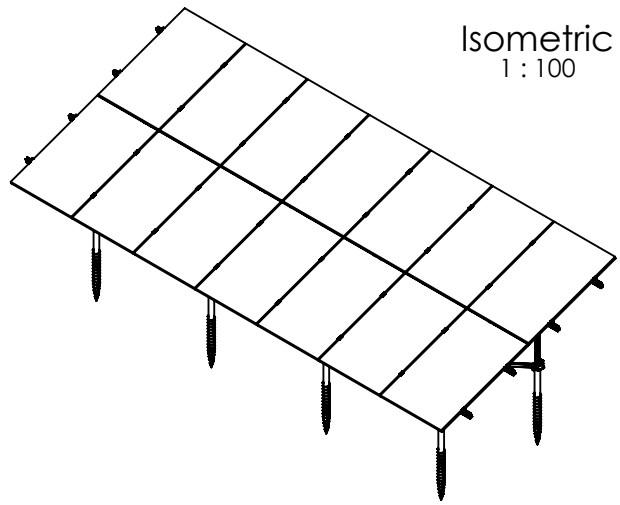
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Fondations vissées

Groundscrew 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 qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

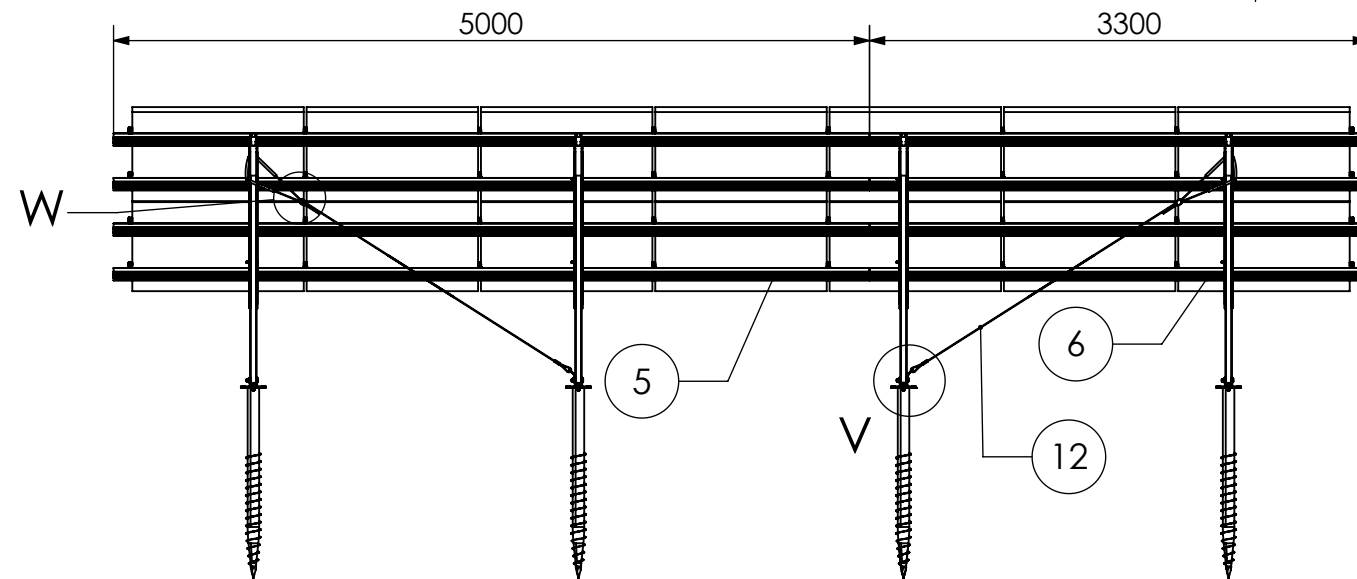


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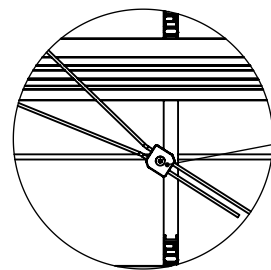
Designation: Data sheet
N-Rack 2.20 Groundscrew 2x7 S

	Name	Date	Material:	Item no.:	---	A3
Designed	C. Erb	15.12.2025	-			
Approved	L. Kreemke	16.03.2026	Surface: -	Drawing no.:	---	All dimensions in mm
Last change			Weight: -	Scale: 1:50		Sheet 1 of 1

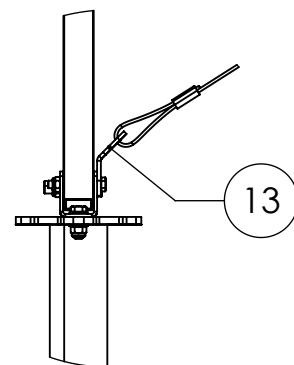
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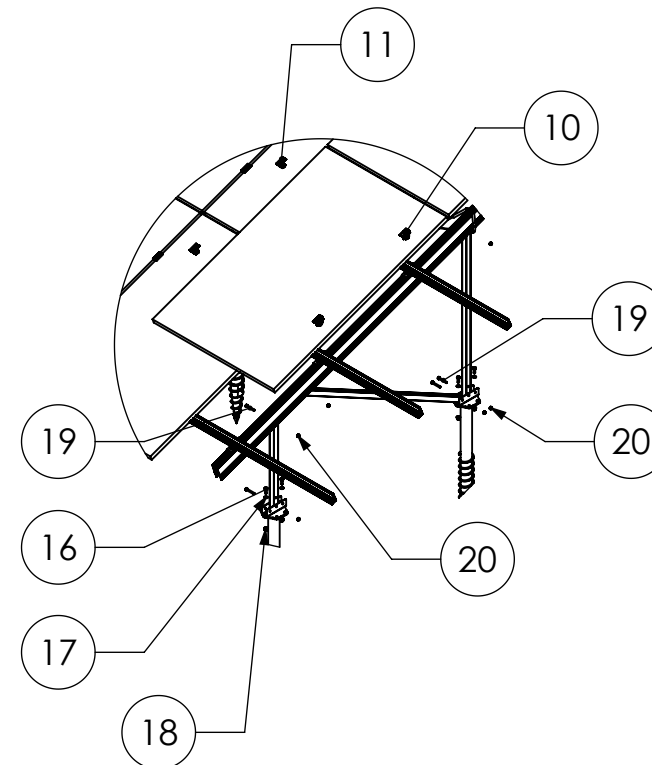
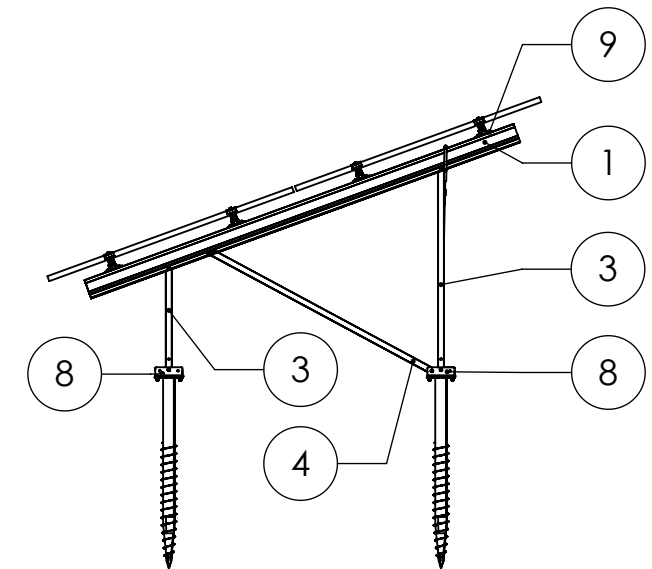
Detail W
1 : 10



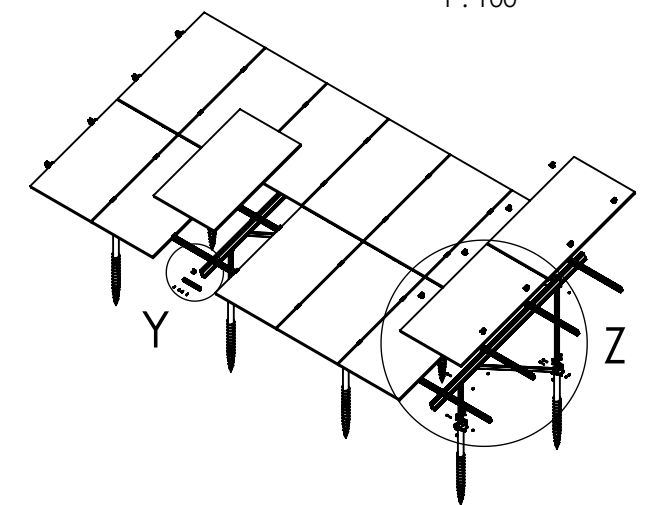
Detail V
1 : 10



Detail Z
1:50

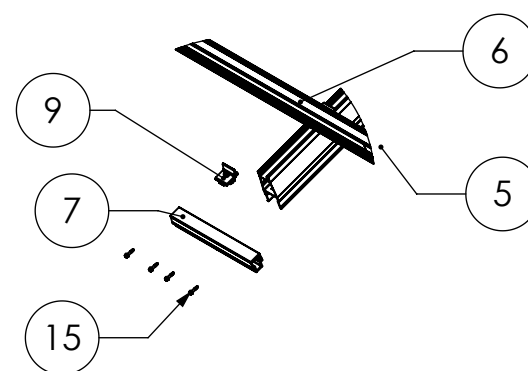


Isometric
1 : 100



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	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

Detail Y
1 : 20



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/m²
Ground snow load S_k : 1.75kN/m²



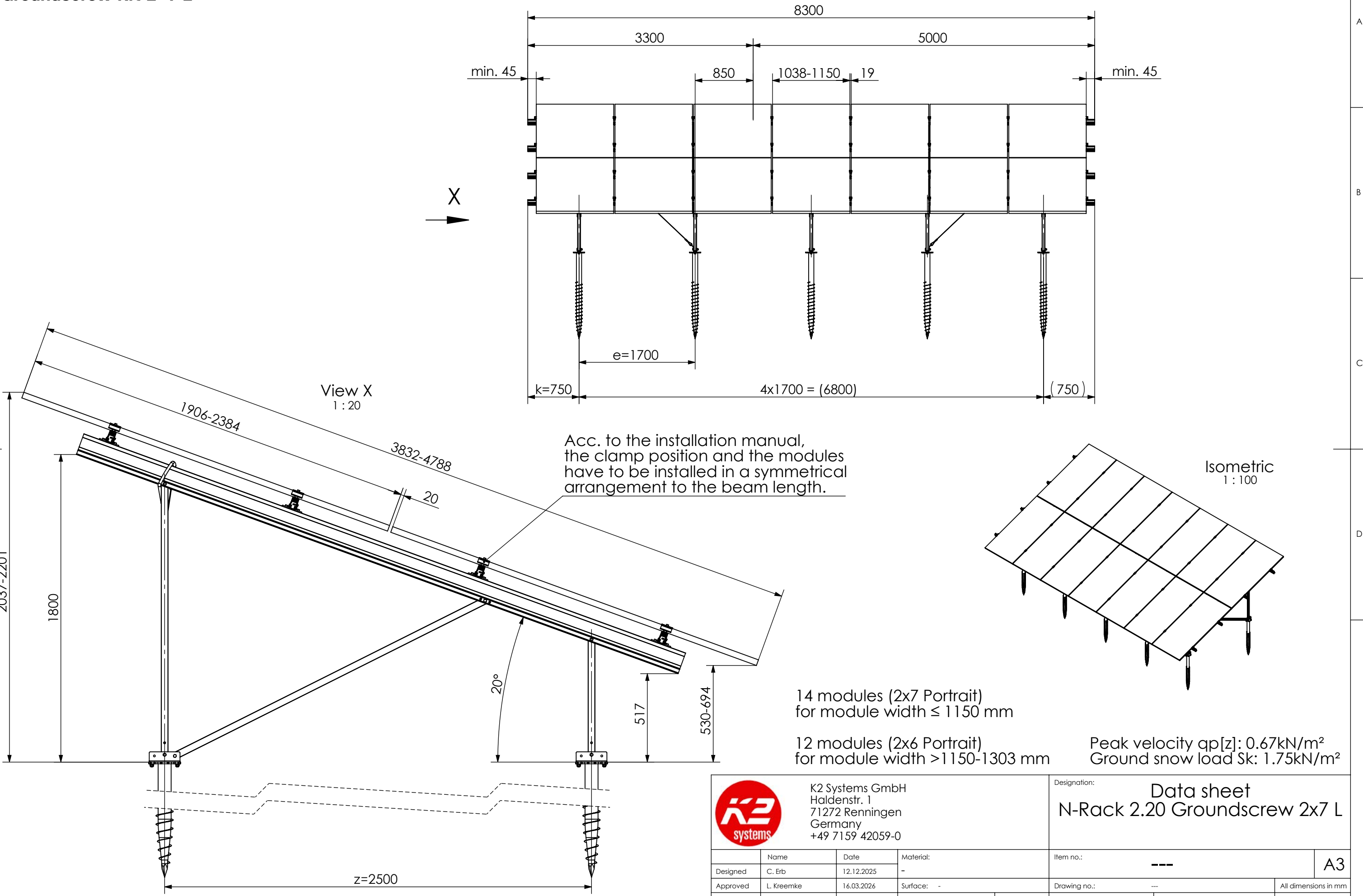
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71272 Renningen
Germany
+49 7159 42059-0

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

Name	Date	Material:	Item no.:	A3
Designed C. Erb	15.12.2025	-	---	
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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Groundscrew Kit 2x7 L



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

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

Peak velocity qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

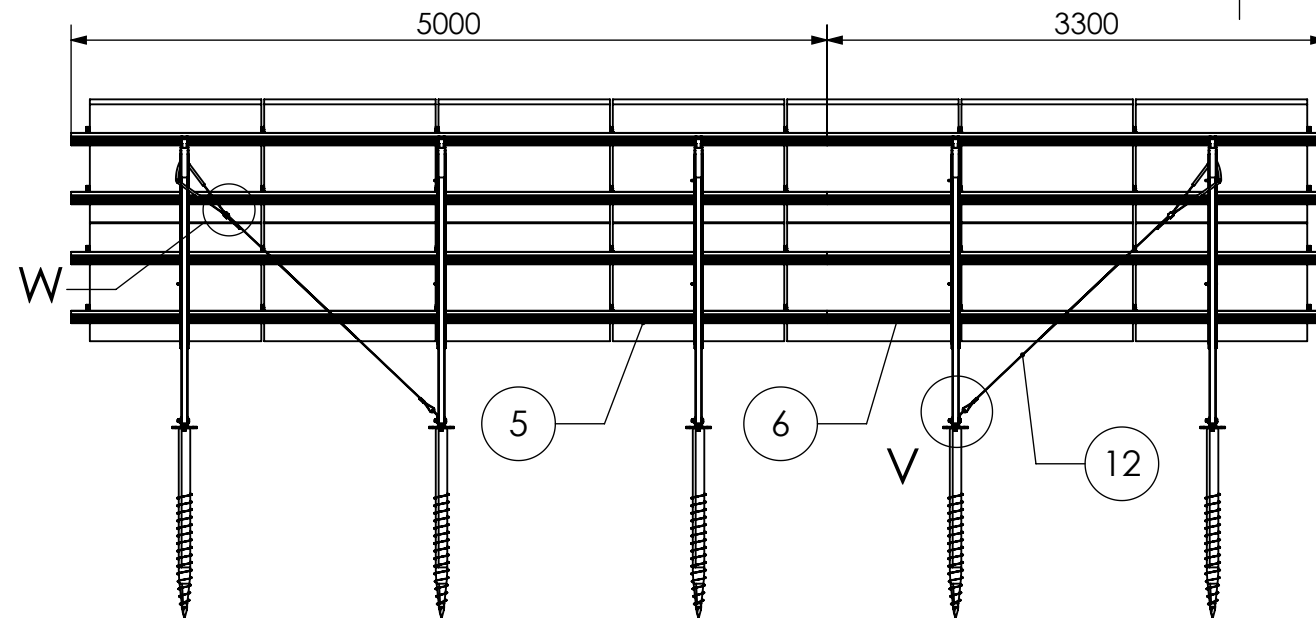


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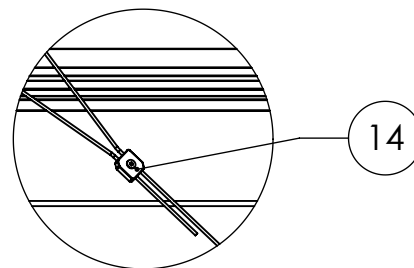
Designation: Data sheet
N-Rack 2.20 Groundscrew 2x7 L

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

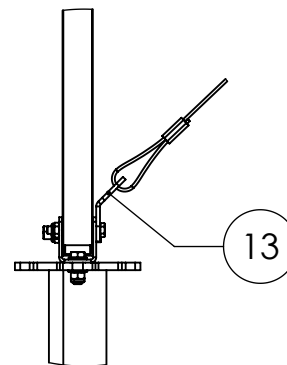
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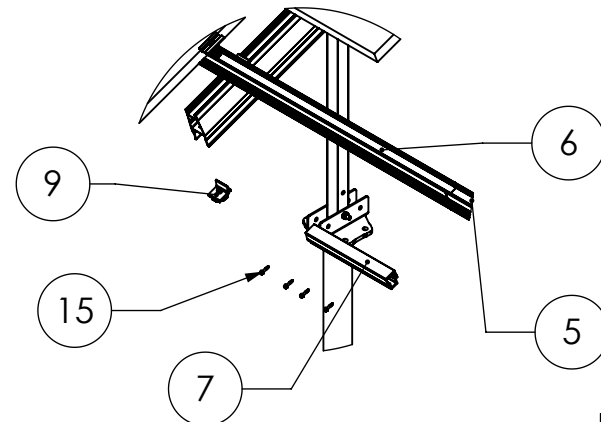
Detail W
1 : 10



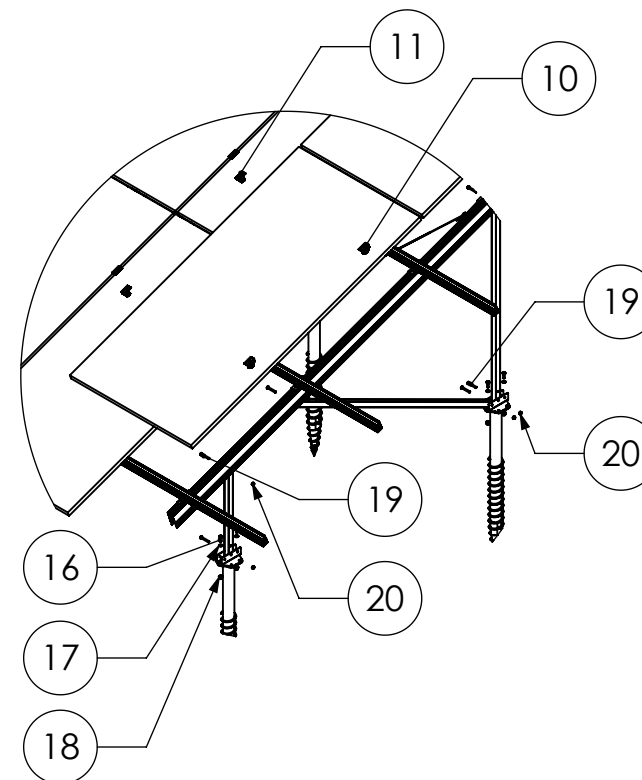
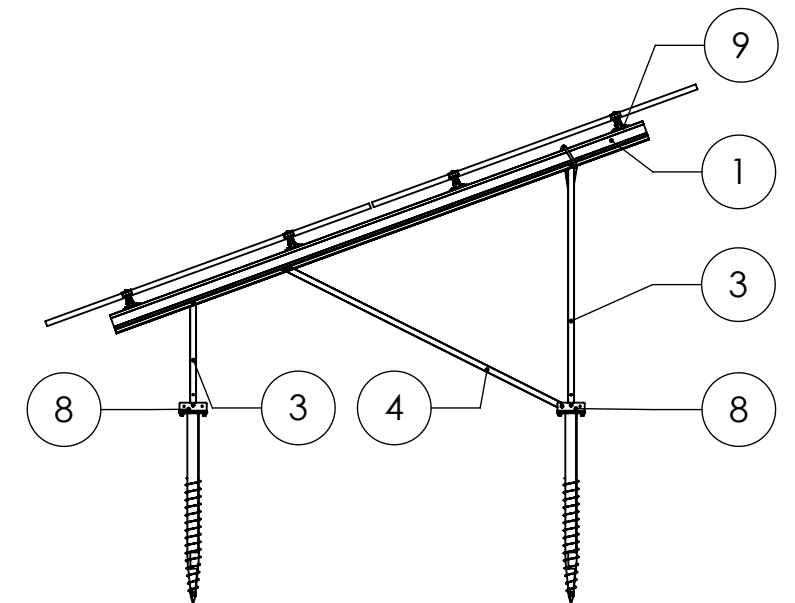
Detail V
1 : 10



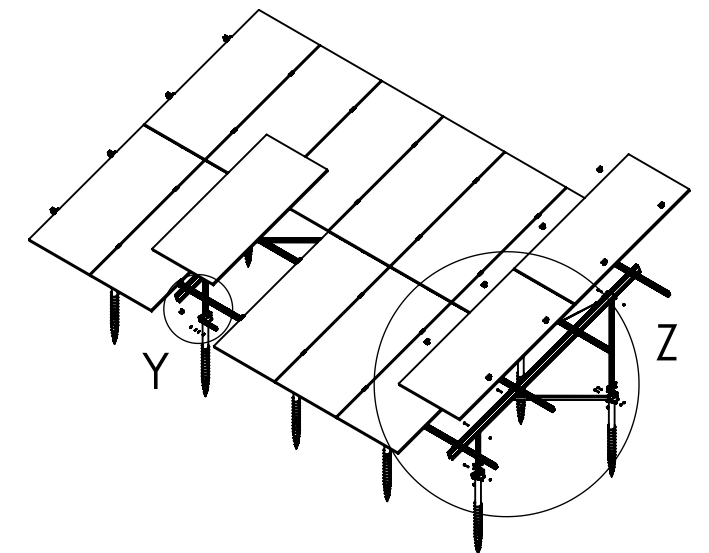
Detail Y
1 : 20



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 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 $q_p[z]$: 0.67 kN/m^2
Ground snow load S_k : 1.75 kN/m^2



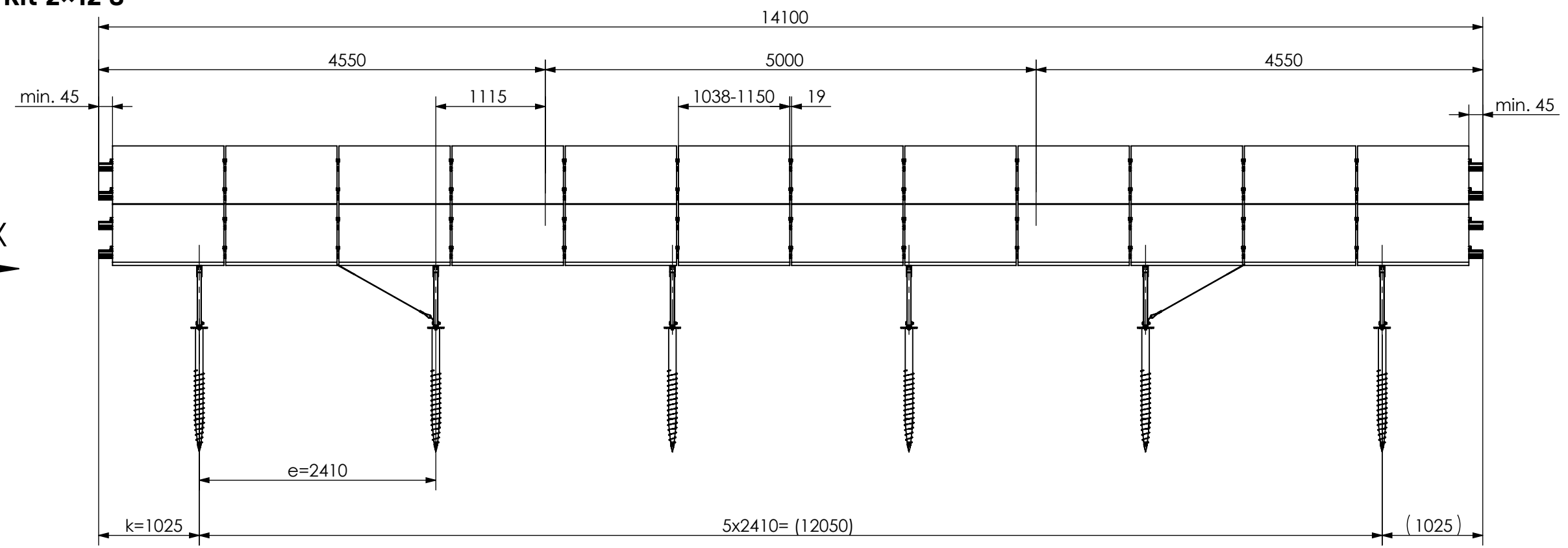
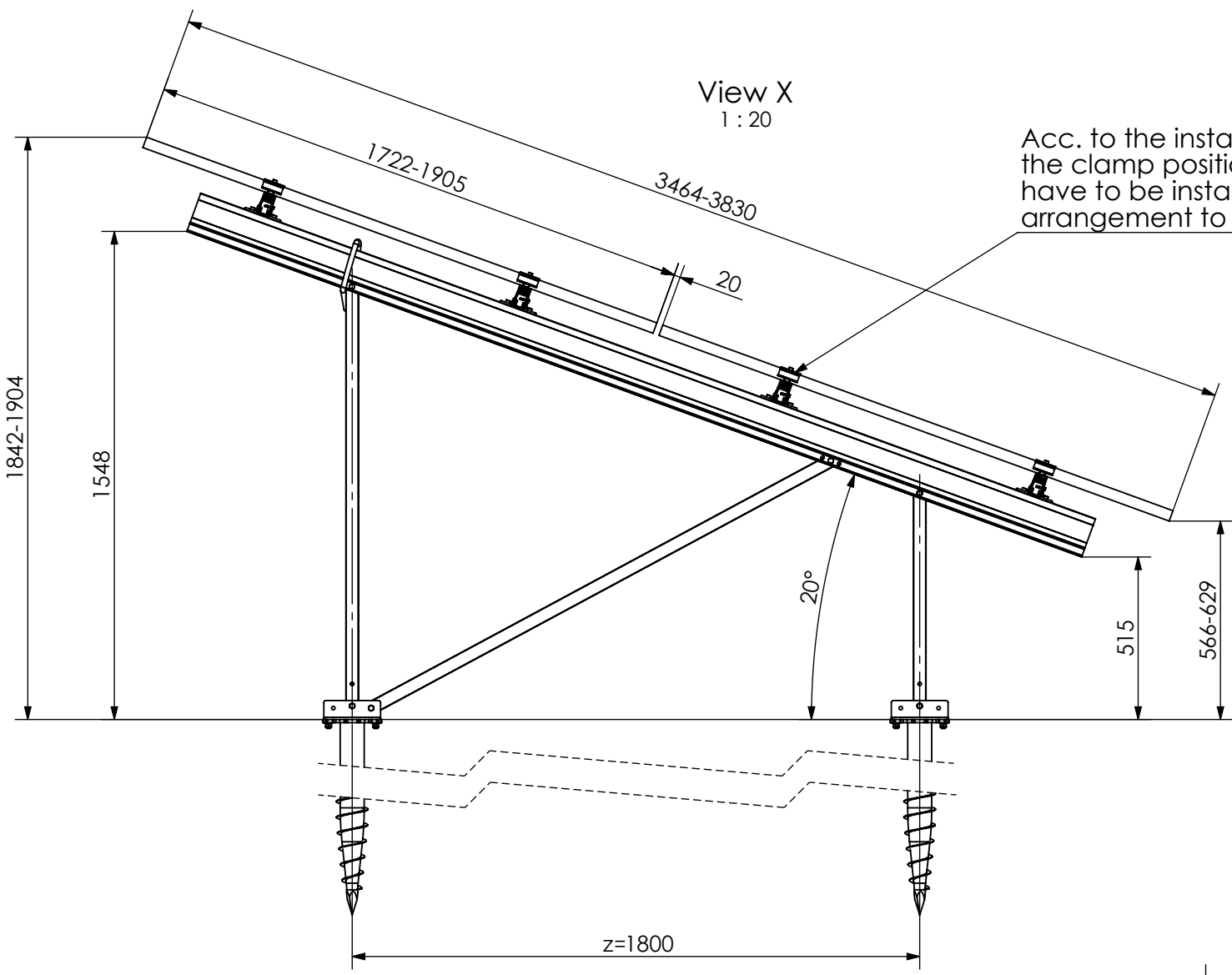
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+49 7159 42059-0

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

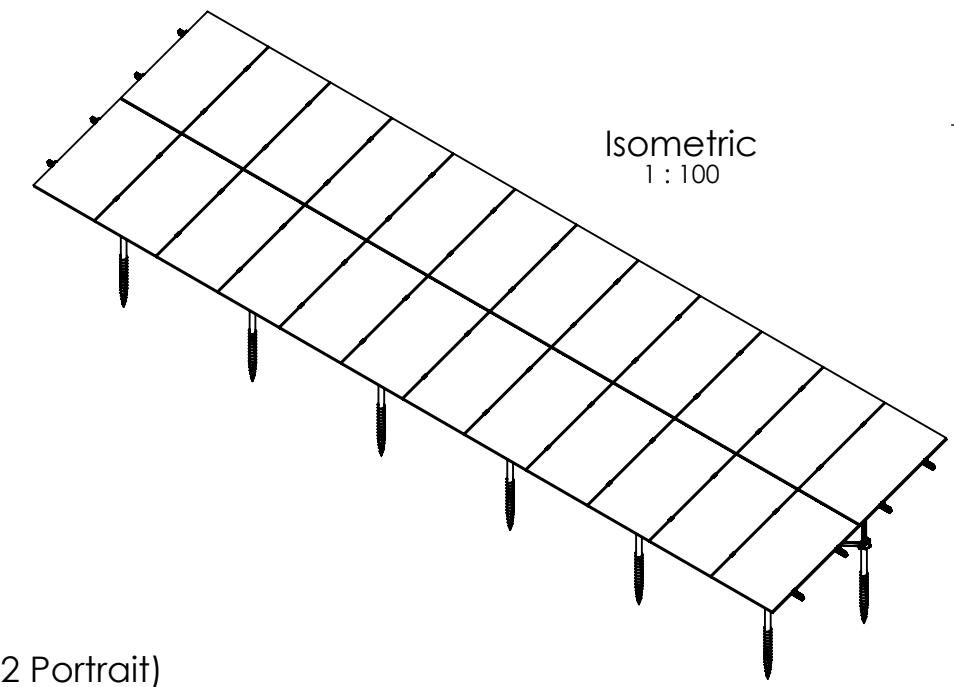
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Designed C. Erb	12.12.2025	-	---	
Approved L. Kreemke	16.03.2026	Surface: -	Drawing no.: ---	All dimensions in mm
Last change		Weight: -	Scale: 1:50	Sheet 1 of 1

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Groundscrew 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.



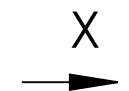
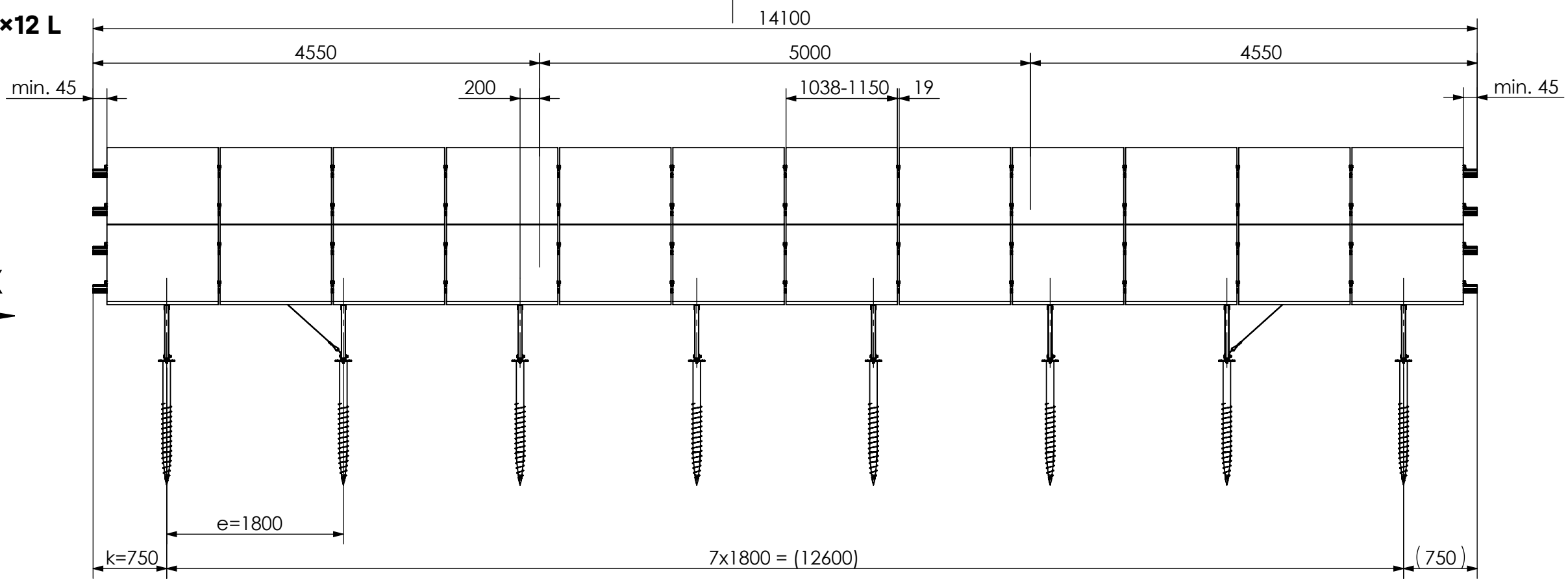
24 modules (2x12 Portrait)
for module width ≤ 1150 mm

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

Peak velocity $q_p[z]$: 0.67kN/m²
Ground snow load S_k : 1.75kN/m²

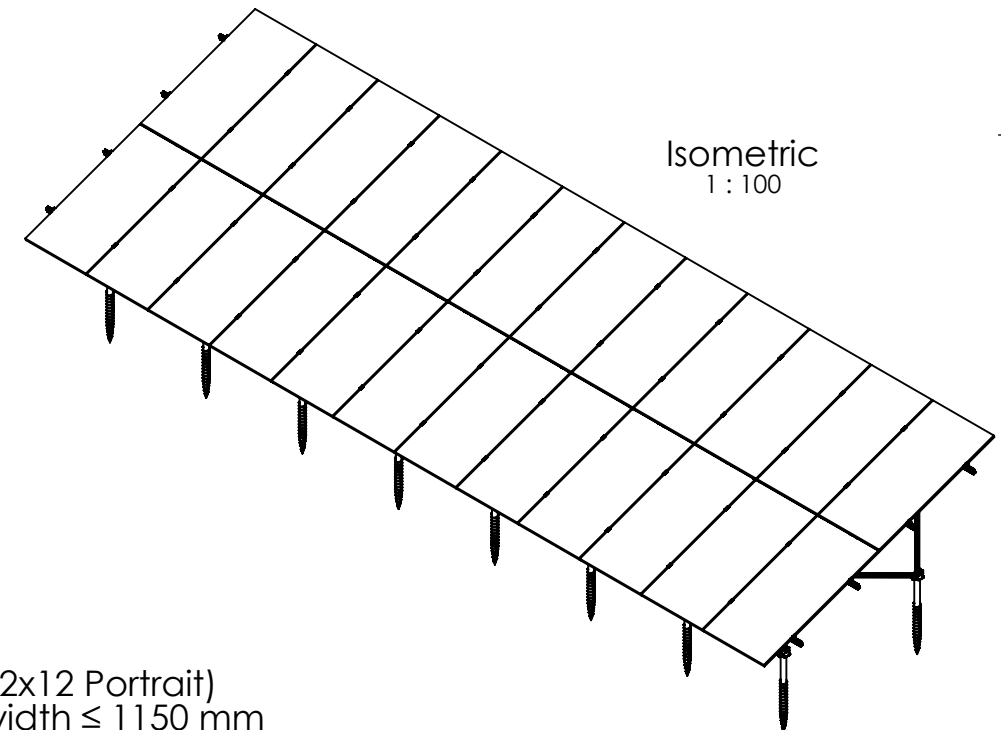
 K2 Systems GmbH Haldenstr. 1 71272 Renningen Germany +49 7159 42059-0				Designation: Data sheet N-Rack 2.20 Groundscrew 2x12 S	
	Name	Date	Material:	Item no.:	A3
Designed	S. Frey	11.08.2025	-		
Approved	B. Koch	01.10.2025	Surface: -	Drawing no.:	All dimensions in mm
Last change	A. Soumpalas	20.03.2026	Weight: -	Scale: 1:50	Sheet 1 of 1
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Groundscrew Kit 2x12 L

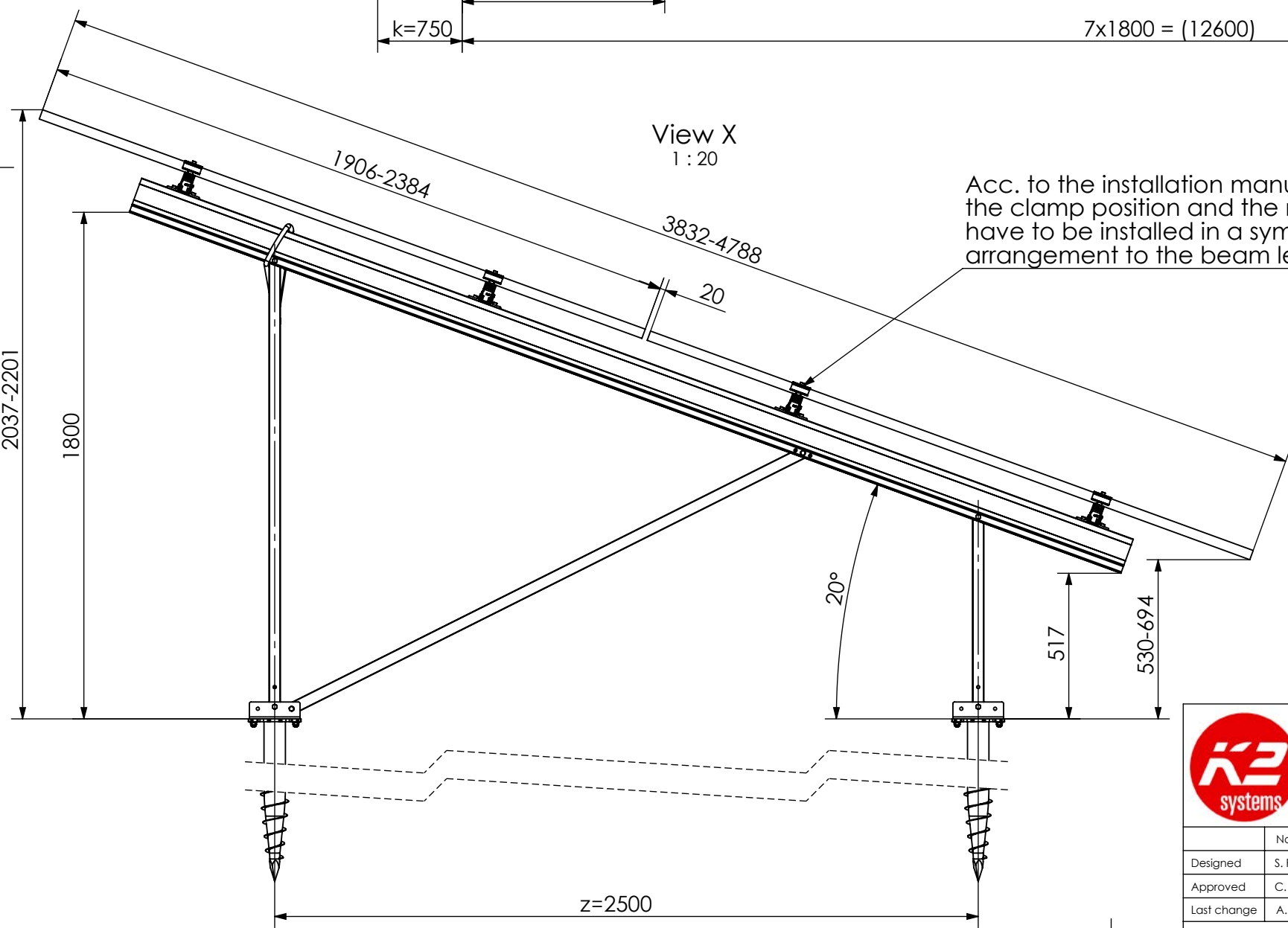


View X
1 : 20

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



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/m²
Ground snow load S_k : 1.75kN/m²

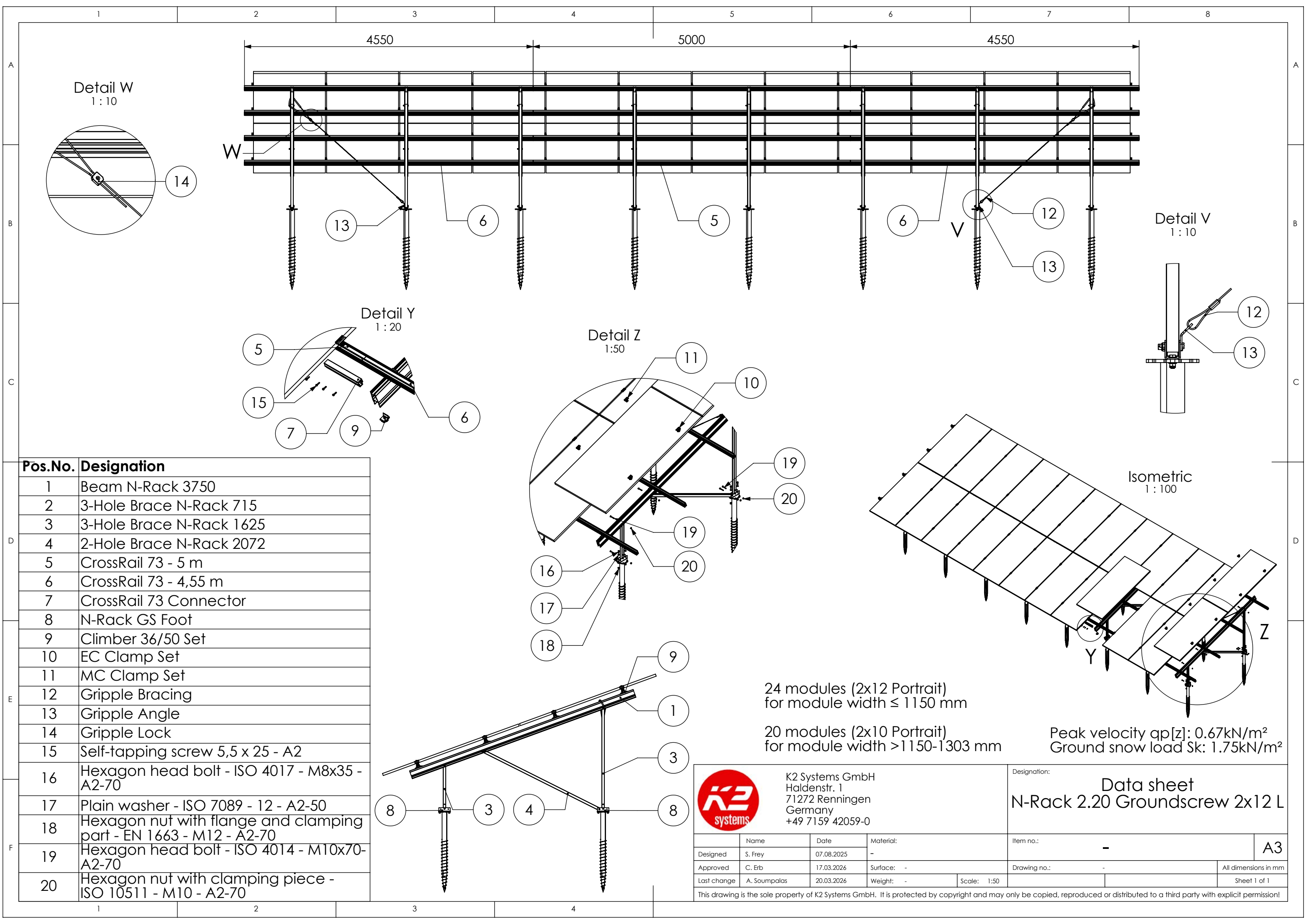


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Designation: Data sheet
N-Rack 2.20 Groundscrew 2x12 L

	Name	Date	Material:	Item no.:	-	A3
Designed	S. Frey	07.08.2025	-			
Approved	C. Erb	17.03.2026	Surface: -	Drawing no.:	-	All dimensions in mm
Last change	A. Soumpalas	20.03.2026	Weight: -	Scale: 1:50		Sheet 1 of 1

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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 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



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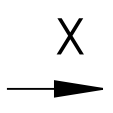
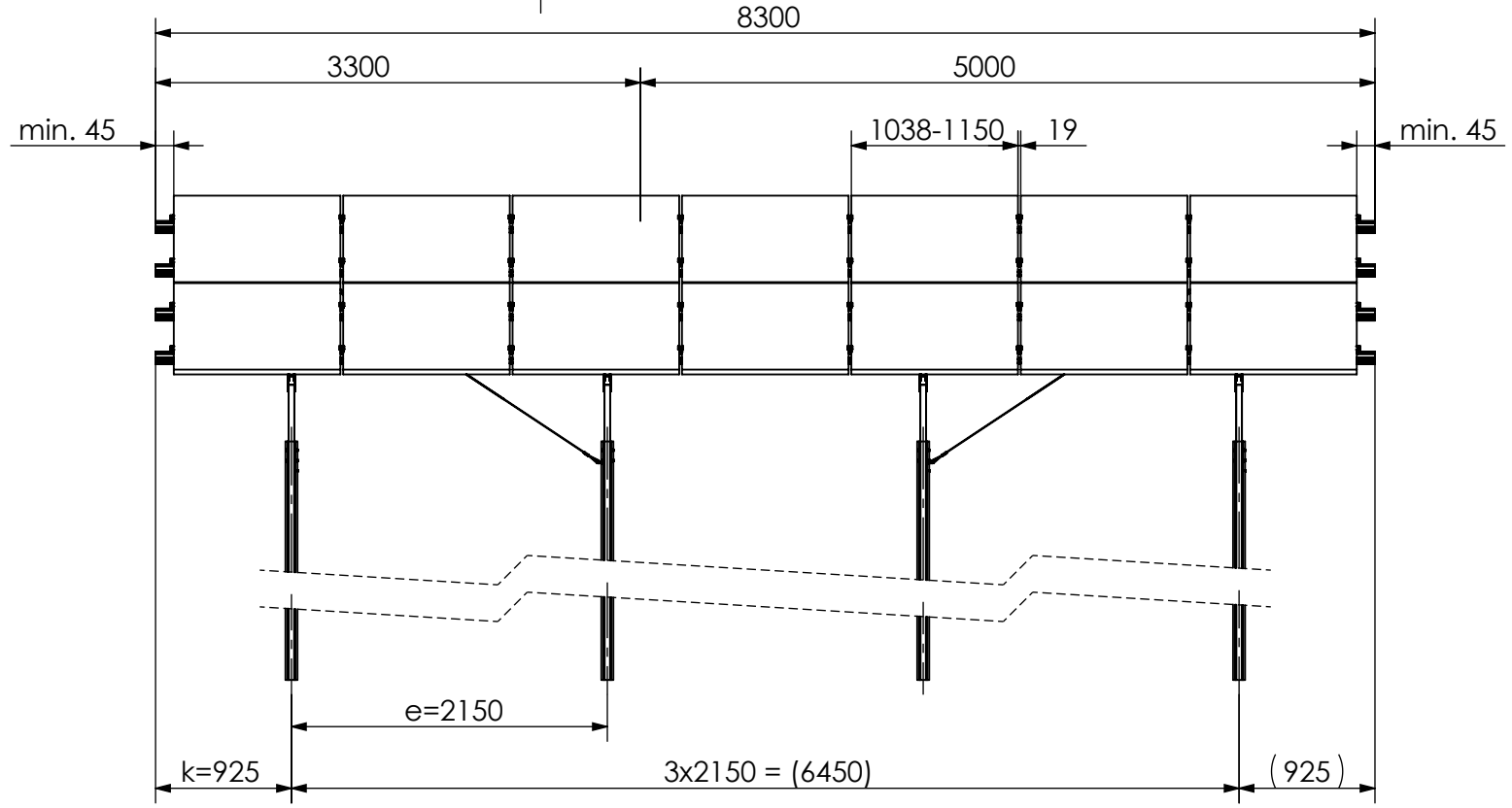
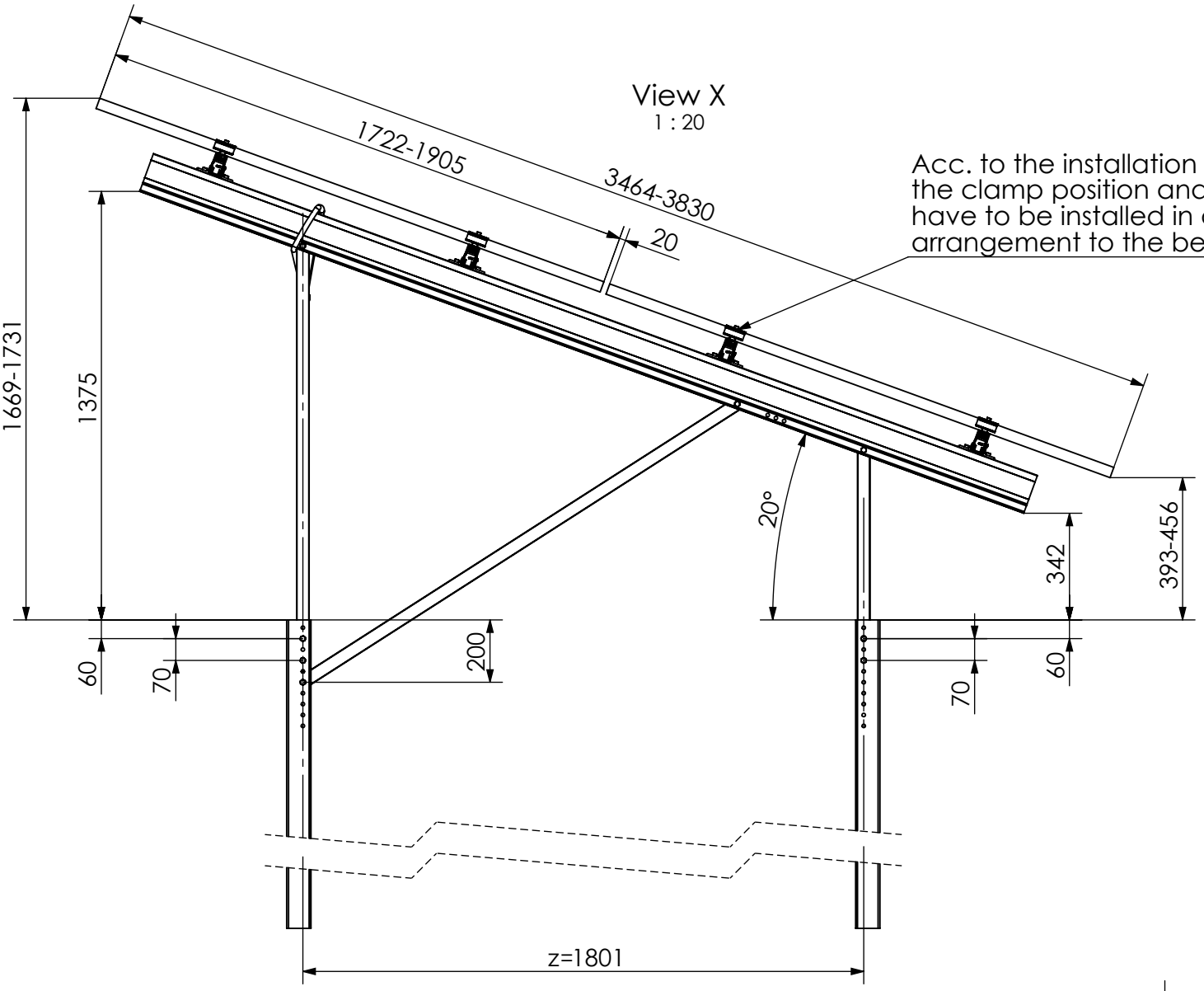
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Designed	S. Frey	07.08.2025	-
Approved	C. Erb	17.03.2026	Surface: -
Last change	A. Soumpalas	20.03.2026	Weight: -

Designation:	Data sheet N-Rack 2.20 Groundscrew 2x12 L		
Item no.:	-		
Drawing no.:	-		
All dimensions in mm			A3
Sheet 1 of 1			

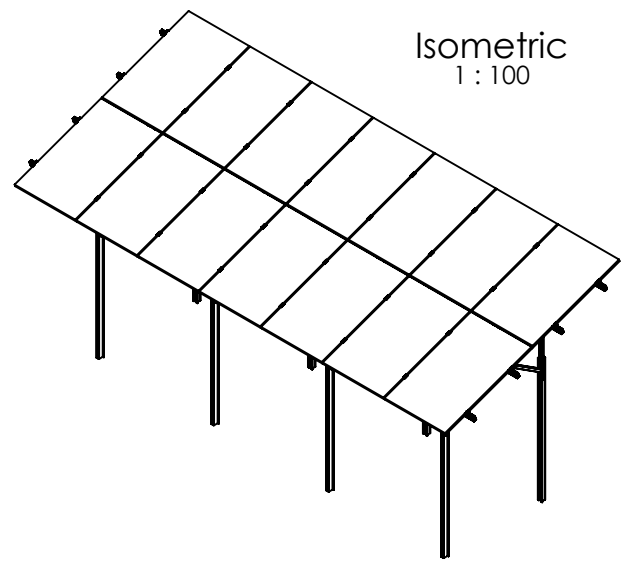
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Fondations sur pieux battus

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 qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

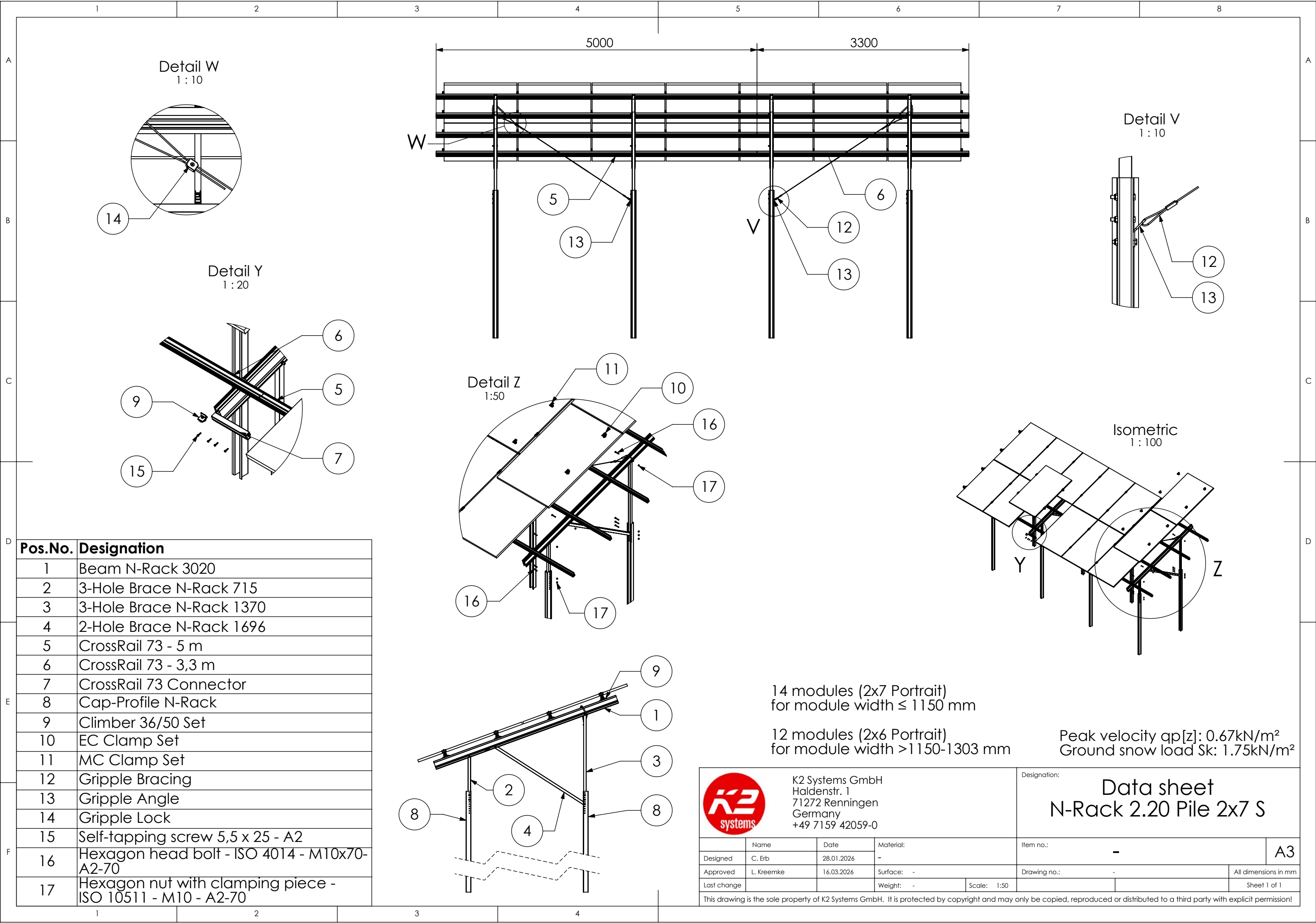


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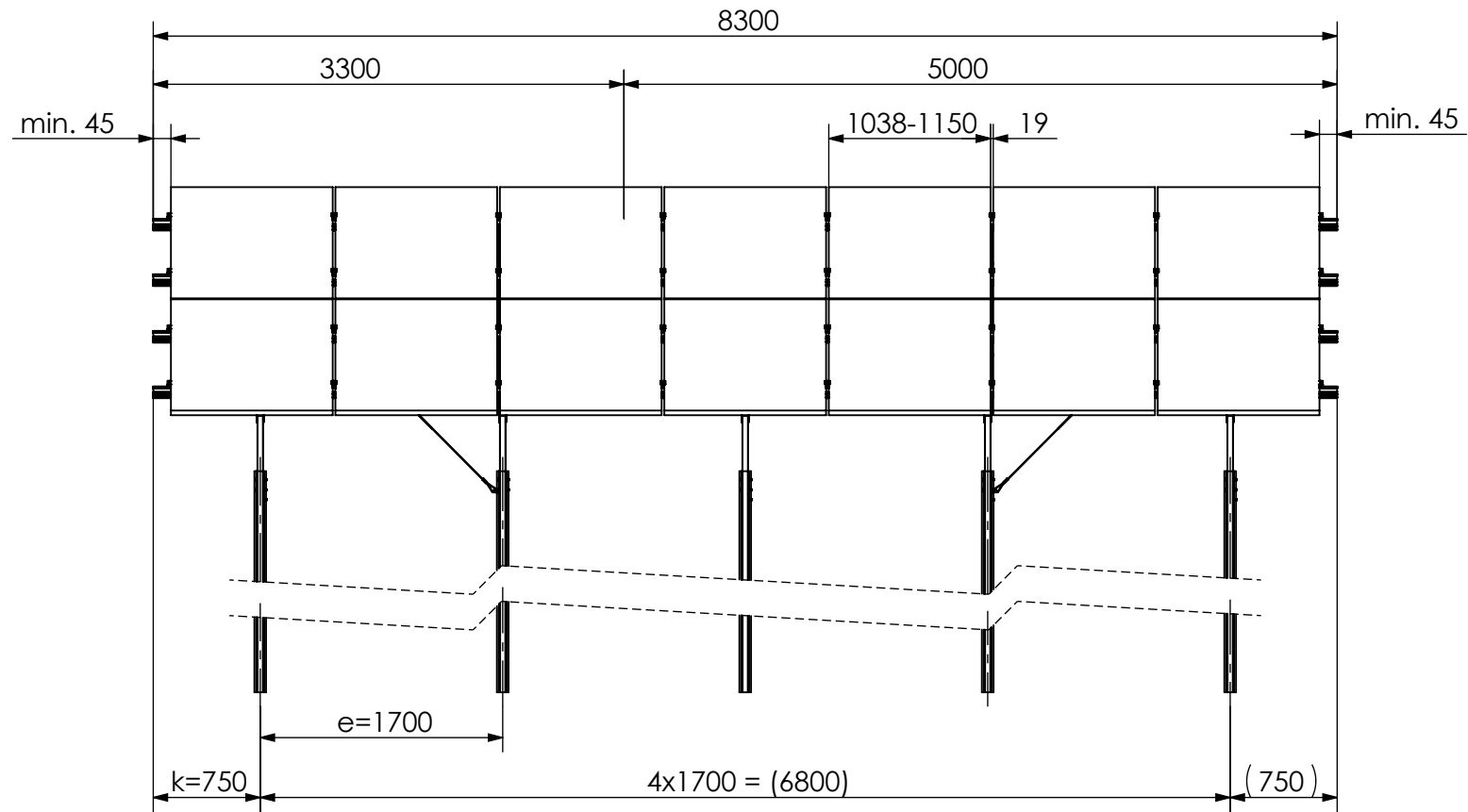
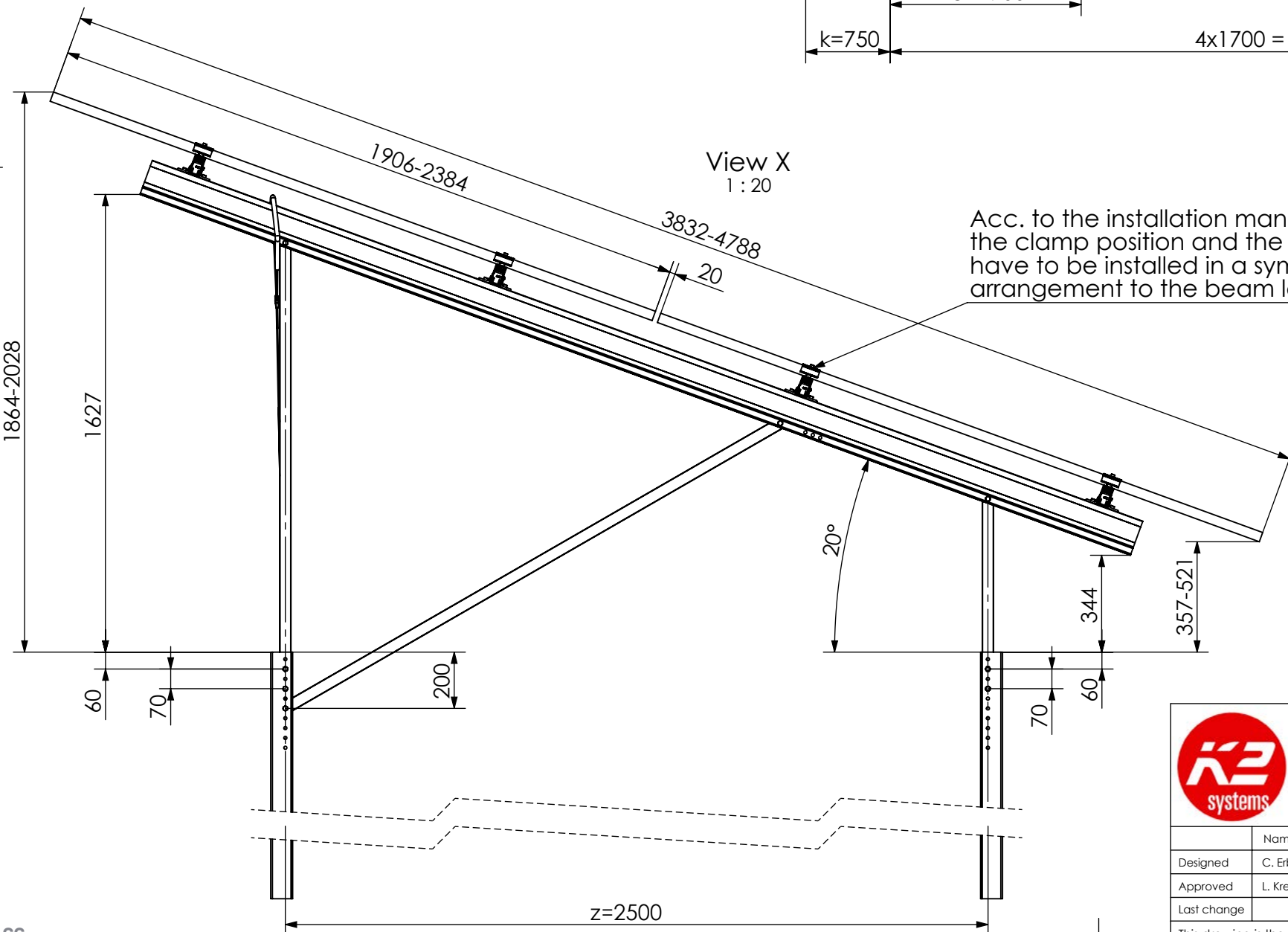
Designation: Data sheet
N-Rack 2.20 Pile 2x7 S

	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

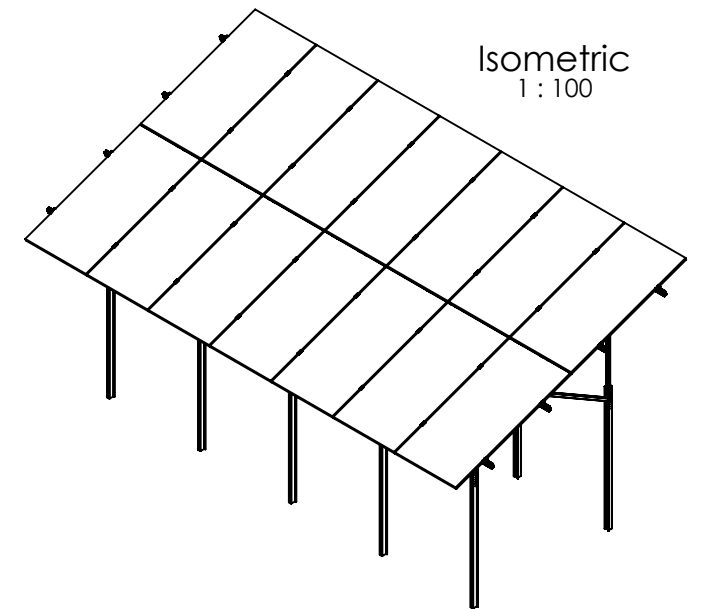
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Pile Kit 2x7 L



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/m²
Ground snow load S_k : 1.75kN/m²



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Designation:		Data sheet	
		N-Rack 2.20 Pile 2x7 L	
Item no.:	-	A3	
Drawing no.:	-	All dimensions in mm	
Scale:	1:50	Sheet 1 of 1	

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Pos.No.	Designation
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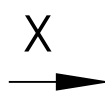
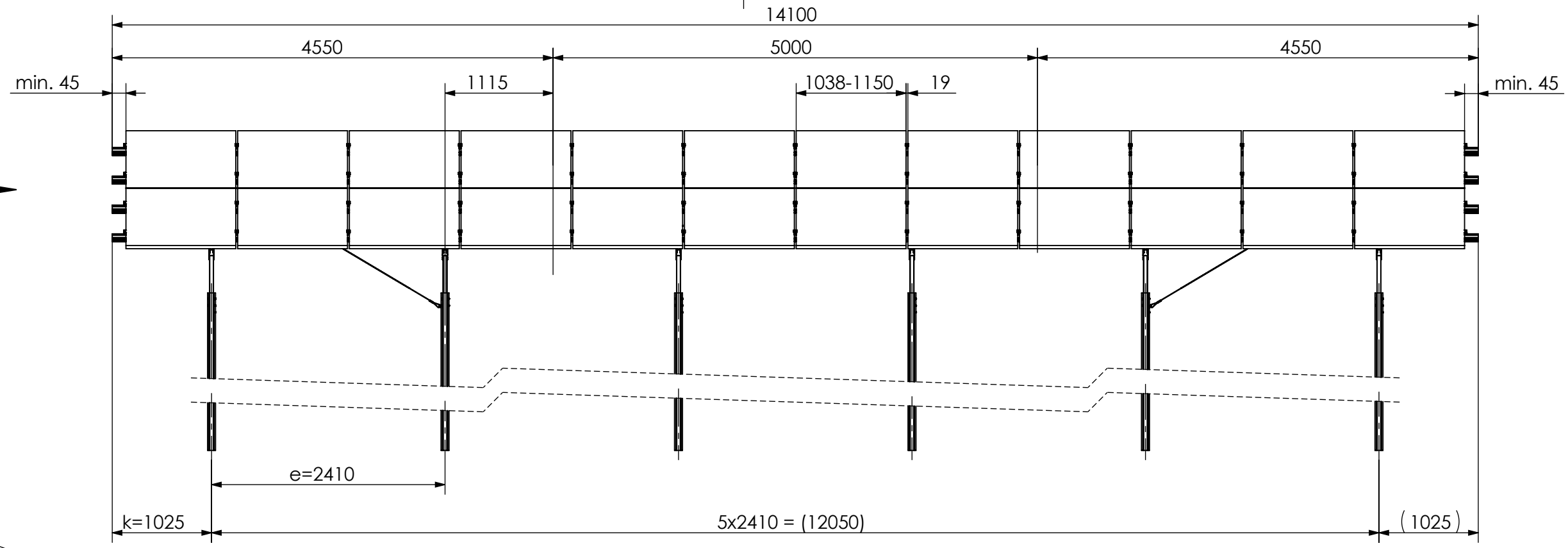


Designation: Data sheet
N-Rack 2.20 Pile 2x7 L

	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

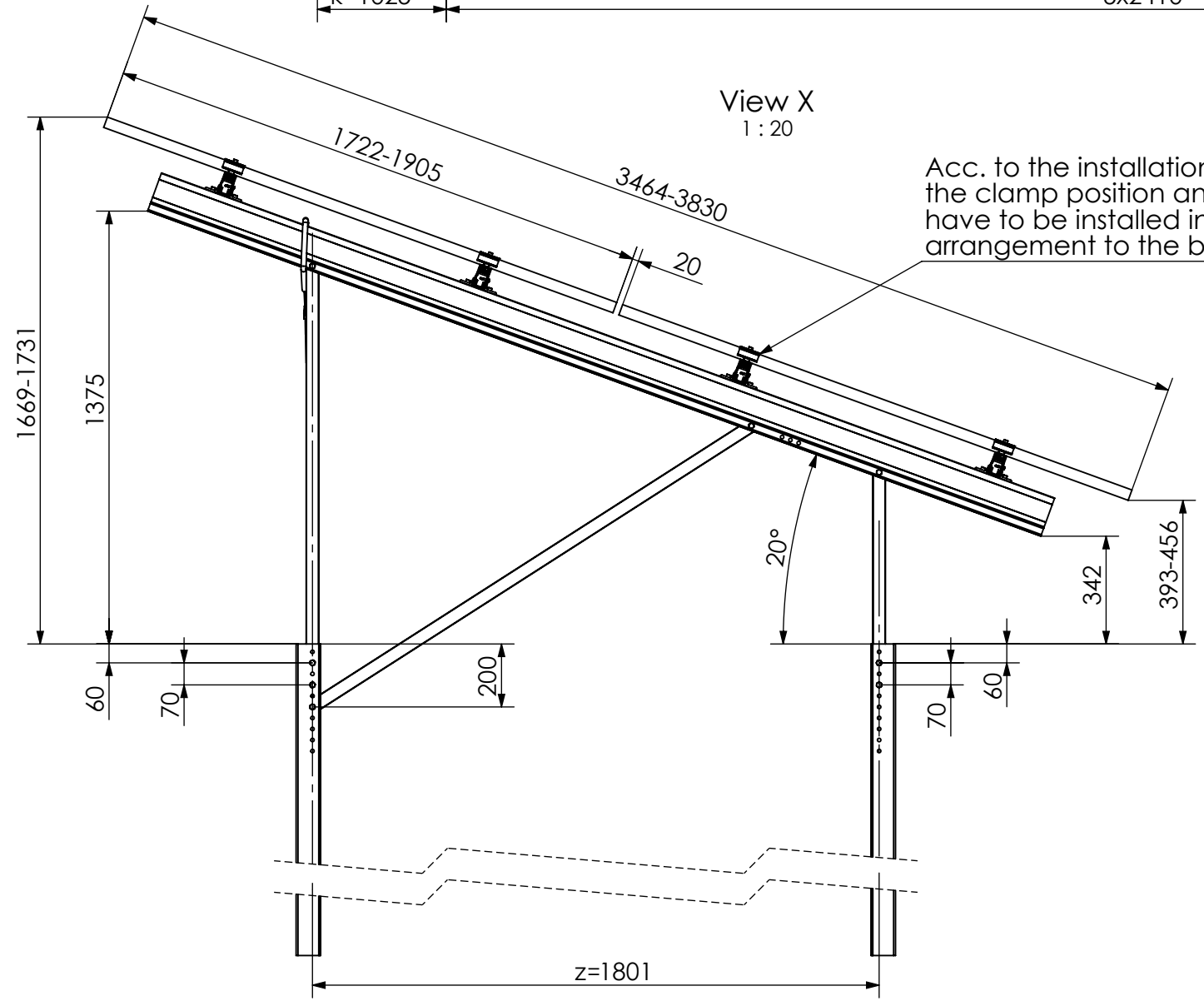
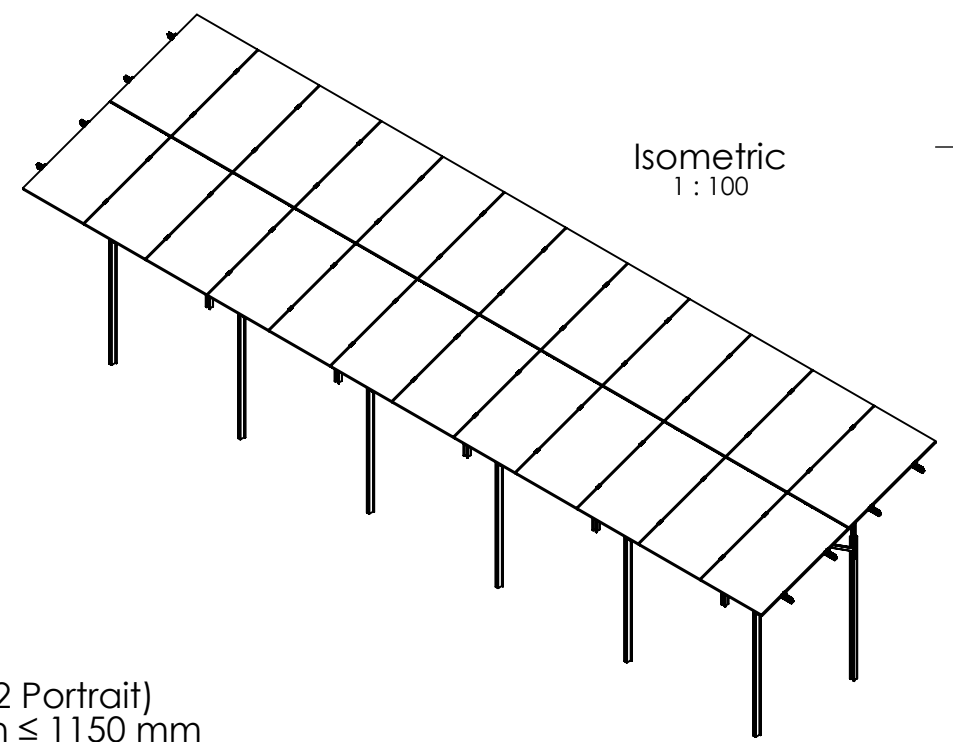
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Pile Kit 2x12 S



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 qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²



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Designation:

Data sheet

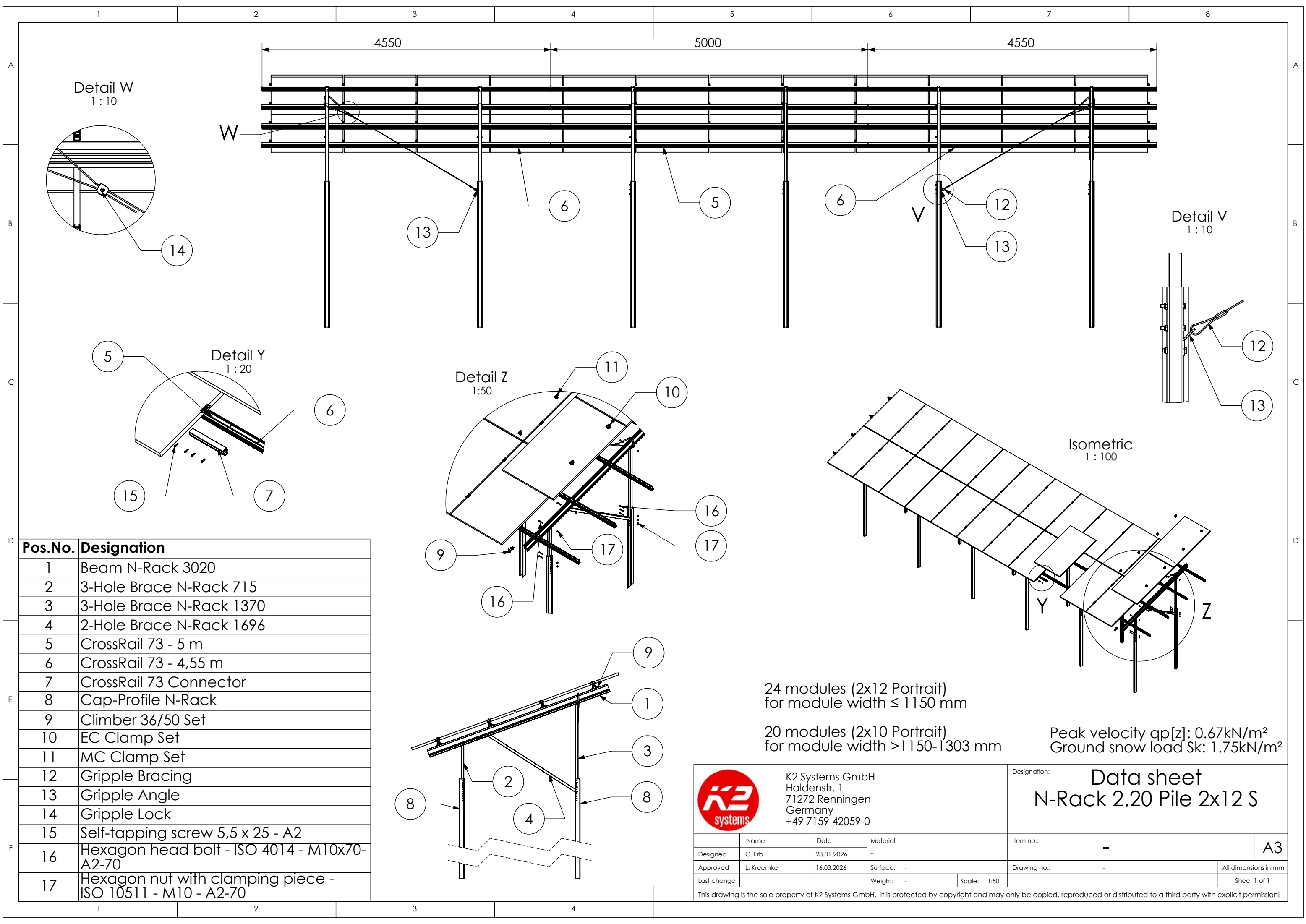
N-Rack 2.20 Pile 2x12 S

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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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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

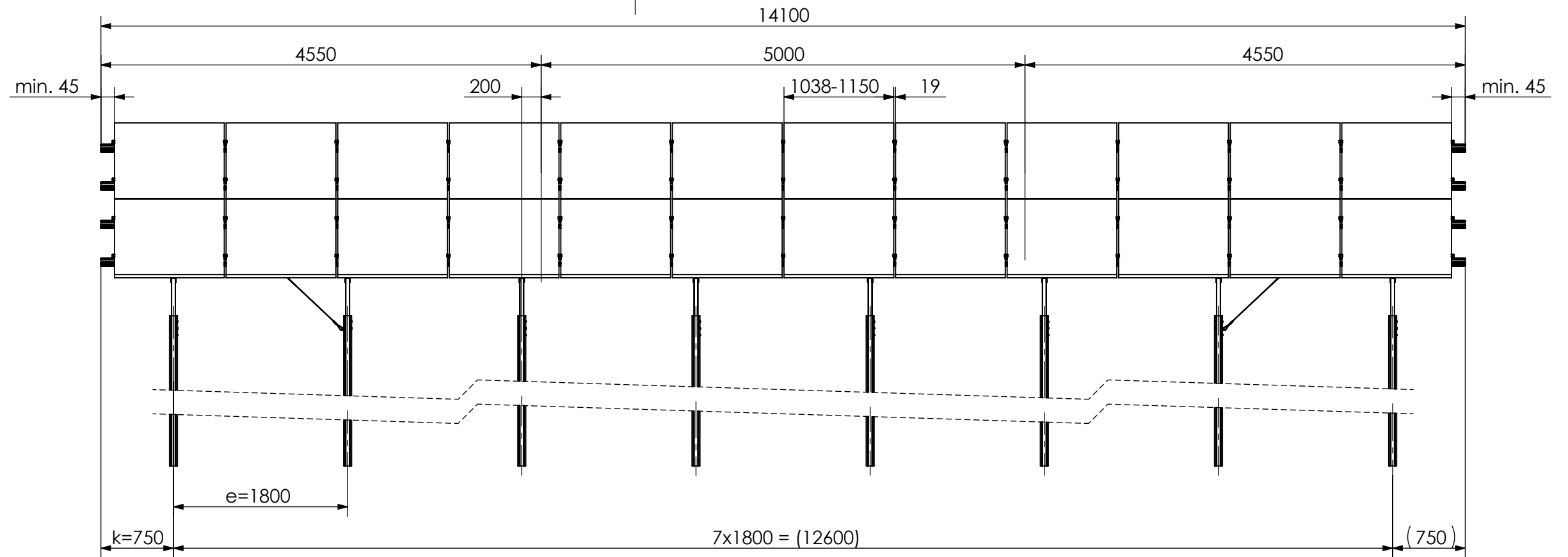
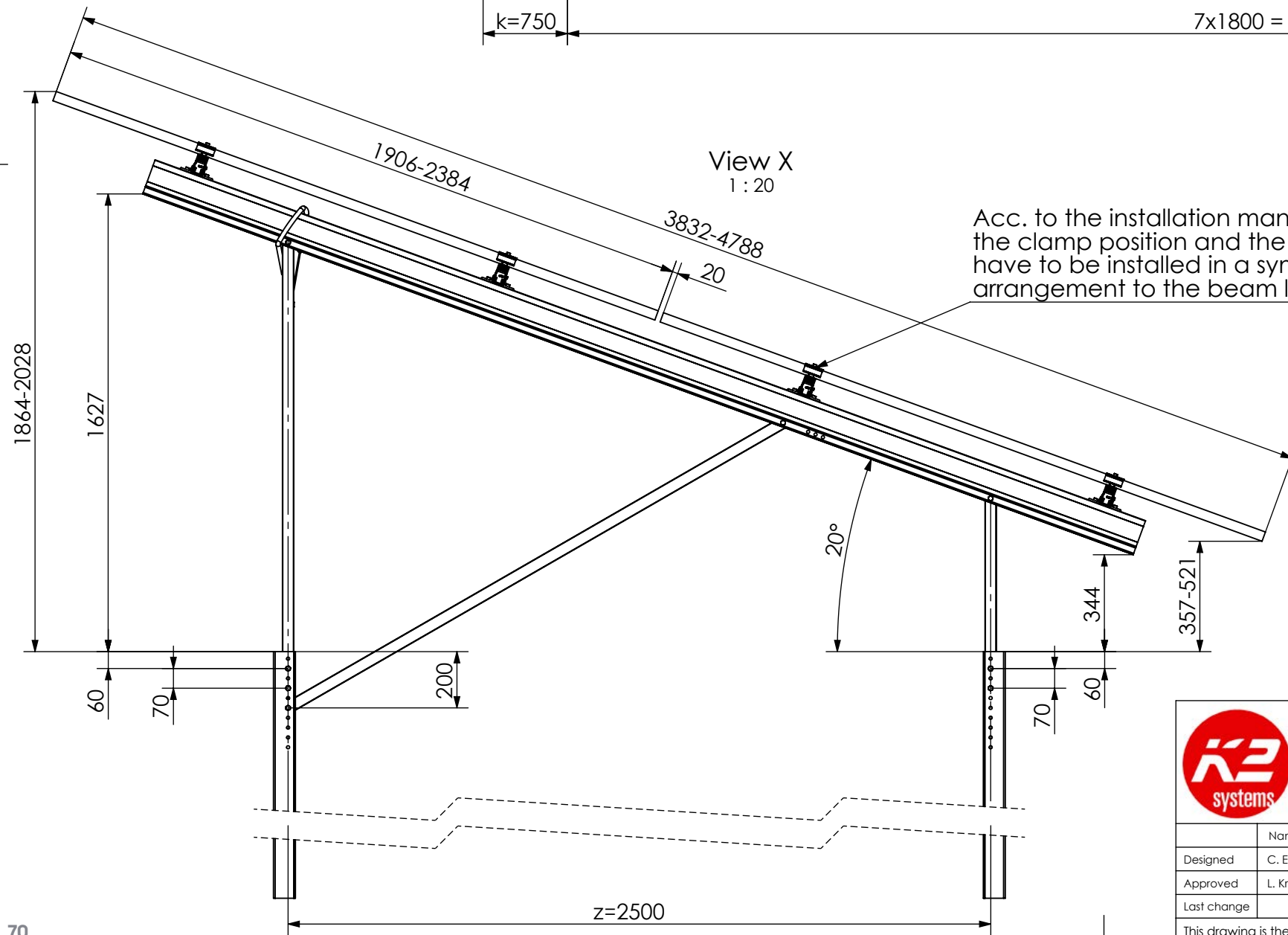


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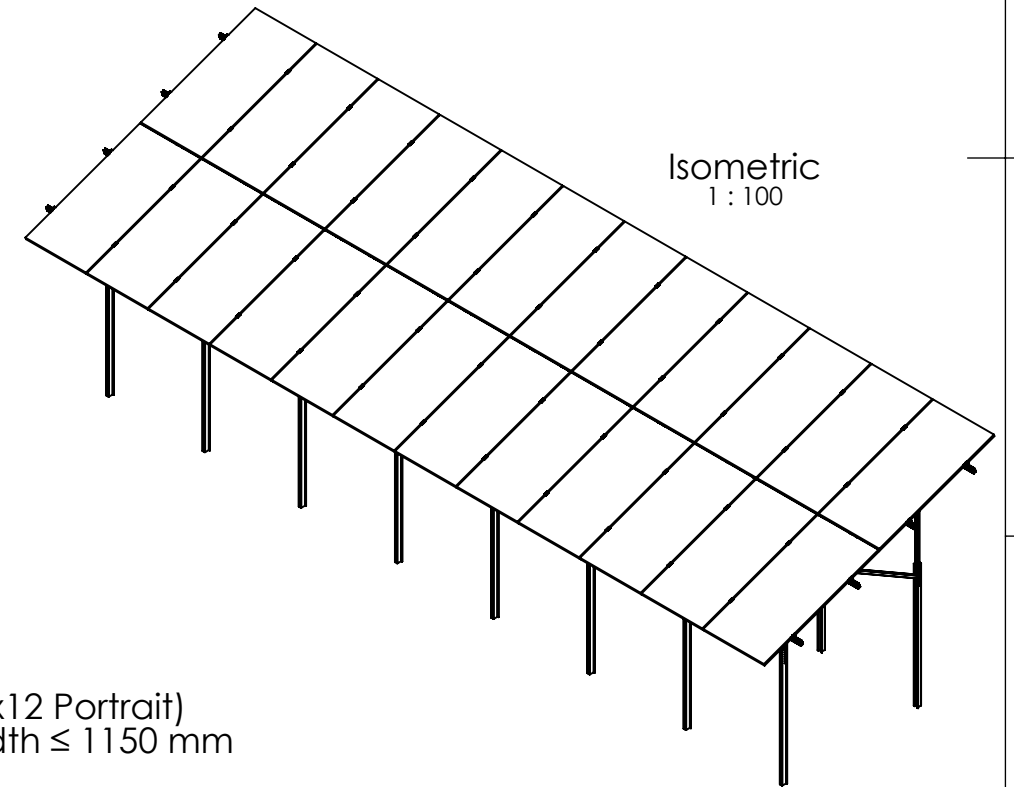
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Last change			Weight: -	Scale: 1:50		Sheet 1 of 1

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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 qp[z]: 0.67kN/m²
Ground snow load Sk: 1.75kN/m²

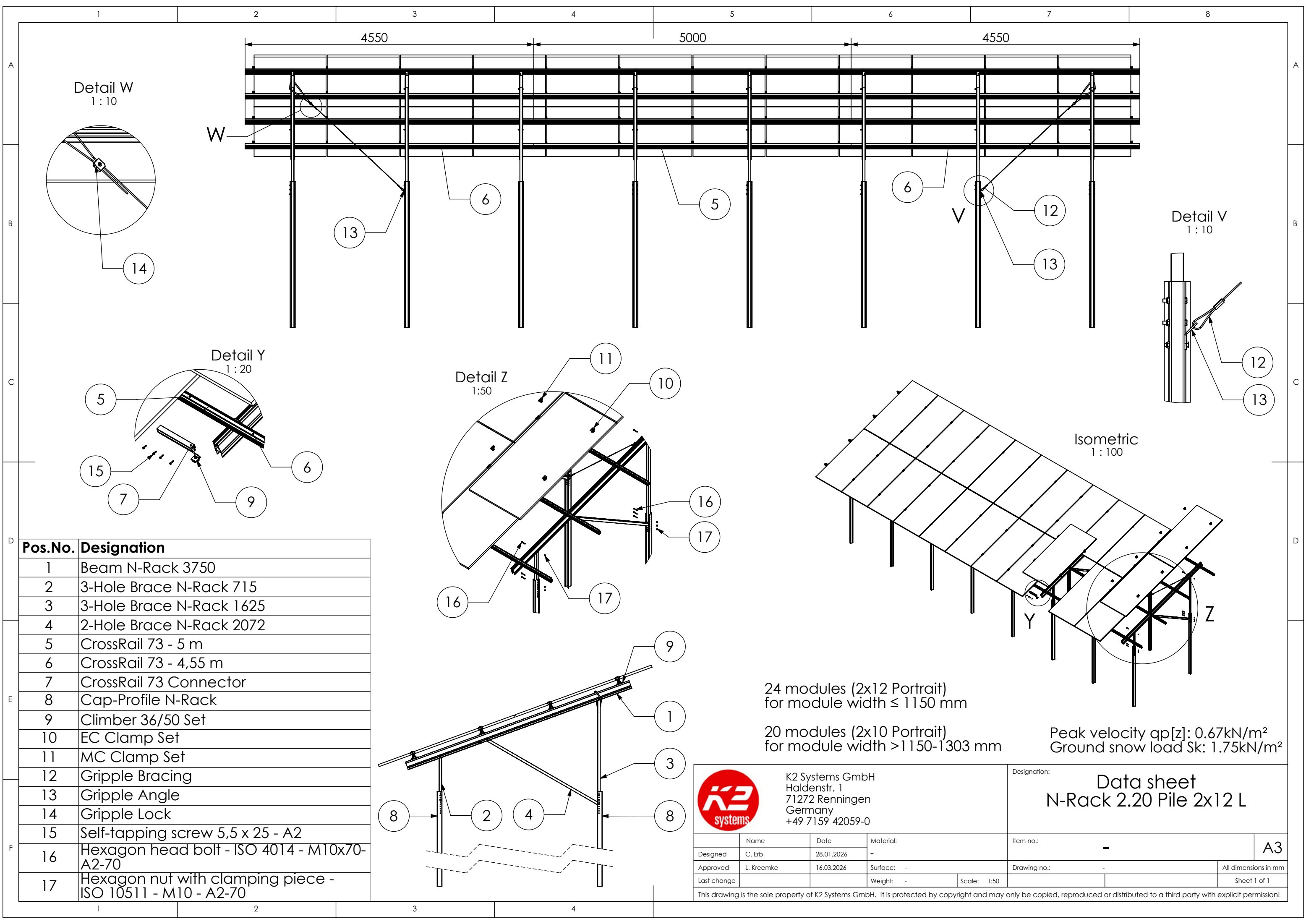


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Designation: Data sheet
N-Rack 2.20 Pile 2x12 L

	Name	Date	Material:		Item no.:		A3
Designed	C. Erb	28.01.2026	-		-		
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

Thank you for choosing a K2 mounting system.

Mounting systems from K2 Systems are quick and easy to install. We hope these instructions have helped. Please contact us with any questions or suggestions for improvement. Our contact data:

- k2-systems.com/en/contact
- **Service Hotline: +49 7159 42059-0**

Our General Terms of Business apply. Please refer: k2-systems.com

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+49 (0) 7159 - 42059 - 0 · info@k2-systems.com · k2-systems.com

N-Rack Kits Assembly EN V1 | 1026 · Subject to change
Product illustrations are exemplary and may differ from the original.