

ASSEMBLY INSTRUCTIONS

**A-Rack System**



# General safety information

Please note that our general mounting instructions must be followed at all times and can be viewed online at

[www.k2-systems.com/en/technical-information](http://www.k2-systems.com/en/technical-information)

- ▶ The equipment may only be installed and operated by qualified and adequately trained installers.
- ▶ Prior to installation, ensure that the product complies with on-site static loading requirements. For roof-mounted systems, the roof load-bearing capacity must always be checked.
- ▶ National and local building regulations and environmental requirements must be adhered to.
- ▶ Compliance with health and safety regulations, accident prevention guidelines and applicable standards is required.
  - Protective equipment such as safety helmet, boots and gloves must be worn.
  - Roofing works must be in accordance with roofing regulations utilising fall protection safeguards when eaves height exceeds 3 m.
  - At least two people must be present for the duration of the installation work in order to provide rapid assistance in the event of an emergency.
- ▶ K2 mounting systems are continuously developed and improved and the installation process may thereby change at any time. Prior to installation consult our website at [www.k2-systems.com/en/technical-information](http://www.k2-systems.com/en/technical-information) for up-to-date instructions. We can send you the latest version on request.
- ▶ The assembly instructions of the module manufacturer must be adhered to.
- ▶ Equipotential bonding/grounding/earthing between individual parts is to be performed according to country specific standards, as well as national laws and regulations.
- ▶ At least one copy of the assembly instructions should be available on site throughout the duration of the installation.
- ▶ Failure to adhere to our general safety and assembly instructions and not using all system components, K2 is not liable for any resulting defects or damages. We do not accept liability for any damage resulting in the use of competitor's parts. Warranty is excluded in such cases.
- ▶ German law shall apply excluding the UN Convention on CISG. Place of venue is Stuttgart. Our General Terms of Business apply.
- ▶ If all safety instructions are adhered to and the system is correctly installed, there is a product warranty entitlement of 12 years! We strongly recommend reviewing our terms of guarantee, which can be viewed at [www.k2-systems.com/en/technical-information](http://www.k2-systems.com/en/technical-information). We will also send this information on request.
- ▶ Dismantling of the system is performed in reverse order to the assembly.
- ▶ K2 stainless steel components are available in different corrosion resistance classes. Each structure or component must be carefully checked for possible corrosion exposure.

# The following guidelines apply

The A-Rack system can be used without further testing by K2 Systems in the following standard conditions. The system is also suitable for higher requirements. However, if a value exceeds the standard conditions, please contact K2 Systems.



## GROUND REQUIREMENTS

The following soil properties were assumed:

- ▶  $\phi = 25^\circ$  (slide friction angle)
- ▶  $\sigma_{R,d} = 130 \text{ kN/m}^2$  (soil pressure resistance)
- ▶  $\gamma = 16 \text{ kN/m}^3$  (unit weight earth-moist)
- ▶  $\gamma_a = 6 \text{ kN/m}^3$  (unit weight below groundwater table)

A sufficient capacity of the soil needs to be checked in the specific project by the constructor/owner of the site.



## STRUCTURAL REQUIREMENTS

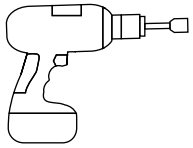
- ▶ Peak velocity pressure  $q_p(z)$  up to:
  - $0.8 \text{ kN/m}^2$  (Set 2002717)
  - $1.3 \text{ kN/m}^2$  (Set 2002780)
- ▶ Ground snow load  $s_k$  of up to:
  - $0.8 \text{ kN/m}^2$  (Set 2002717)
  - $1.3 \text{ kN/m}^2$  (Set 2002780)



## IMPORTANT MOUNTING INSTRUCTIONS

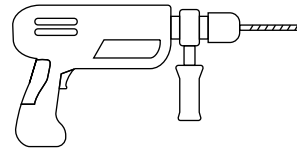
- ▶ On-site general standards and regulations for lightning protection must be observed and consultation with a specialist to create a lightning protection concept is recommended (use lightning protection clamp if necessary).
- ▶ Adhere to module manufacturer recommendations for clamping area and module installation (see module manufacturer instructions).
- ▶ Tightening torque
  - M8 screws: 14 Nm
  - M10 screws: 30 Nm
  - Multi Monti: 90 Nm
- ▶ Module sizes: 1580 - 1650 × 980 - 1005 mm
- ▶ Module frame heights: 32 - 42 mm (other module clamps available)

# Tools



8/17/21 mm

8 mm



Ø 12 mm  
L ≥ 120 mm

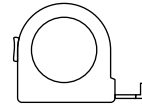


10-100 Nm  
(7.4-73.8 lb-ft)

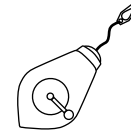


8/17/21 mm

8 mm



≥ 3,0 m



≥ 6,0 m



17 mm

# Components

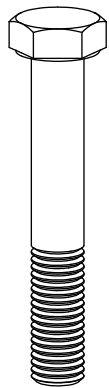


**!**

56x	80x
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↗	↖
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**Set 2002717**    **Set 2002780**  
 3x support    5x support  
 0.8 kN/m<sup>2</sup>    1.3 kN/m<sup>2</sup>



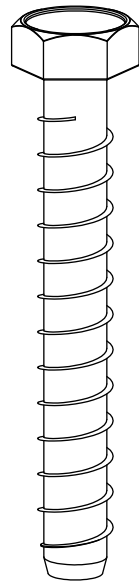
**2002410**  
Hexagon bolt  
M10x60  

27x	45x
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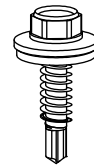
**1002849**  
Self-locking  
hexagon nut M10  

27x	45x
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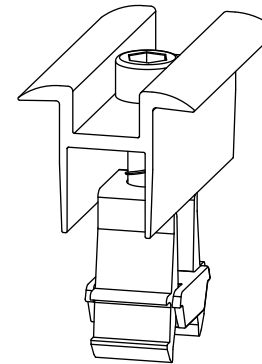
**2002627**  
Multi Monti  
14x110  

6x	10x
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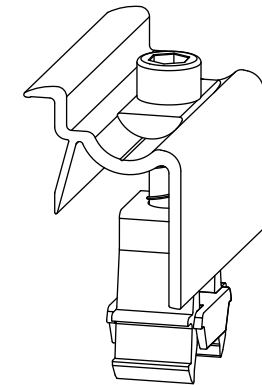
**1001051**  
Self-tapping screw  
5.5x25  

40x	42x
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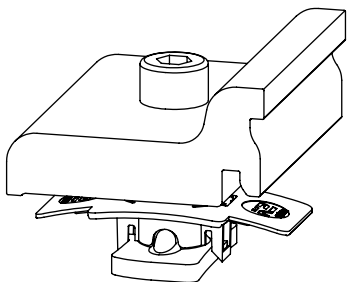
**2002515**  
OneMid  
32-42 mm  

28x	28x
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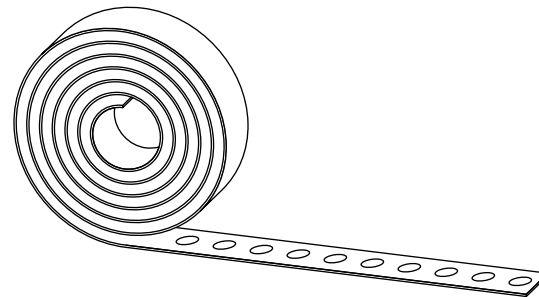
**2002514**  
OneEnd  
32-42 mm  

8x	8x
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**2001626**  
Climber 63 Set  

12x	20x
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**2002735**  
Perforated tape  

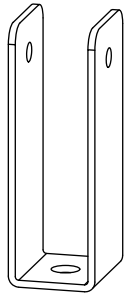
10m	10m
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56x	80x
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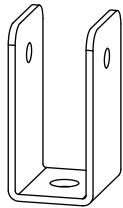


<b>Set 2002717</b> 3x support 0.8 kN/m <sup>2</sup>	<b>Set 2002780</b> 5x support 1.3 kN/m <sup>2</sup>
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**2002582**  
Foot Front

3x	5x
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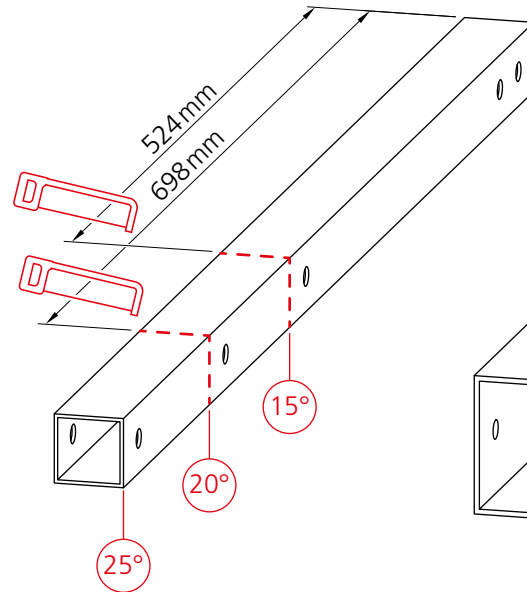
**2002583**  
Foot End

3x	5x
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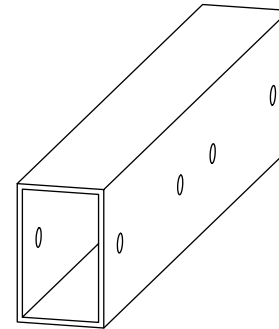
**2002599**  
Connector  
Cross-Tie

6x	10x
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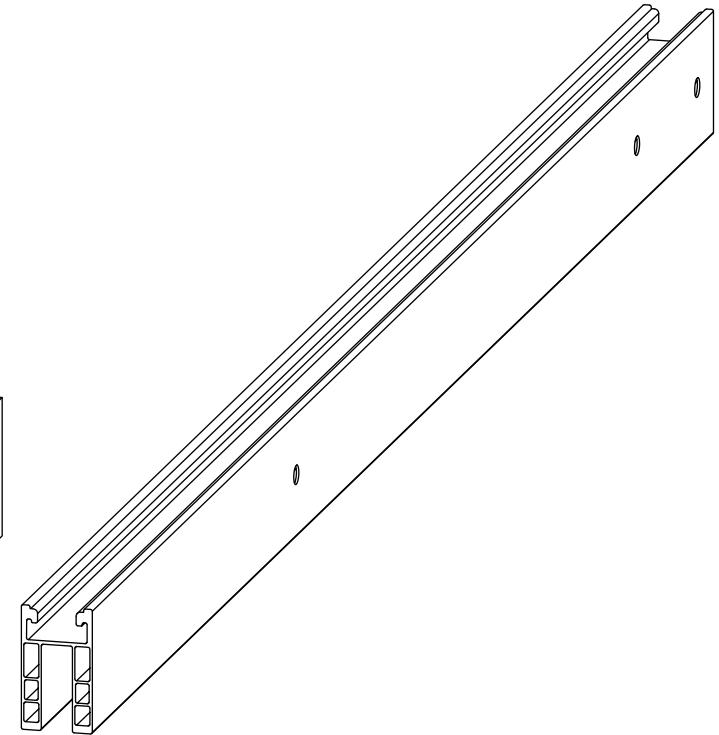
**2002602**  
Cross-Tie  
· 25° no sawing  
· 20° sawing at 698 mm  
· 15° sawing at 524 mm

3x	5x
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**2002516**  
Rail Connector  
CrossBar 3.0

3x	5x
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**2002584**  
CrossBar 3.0

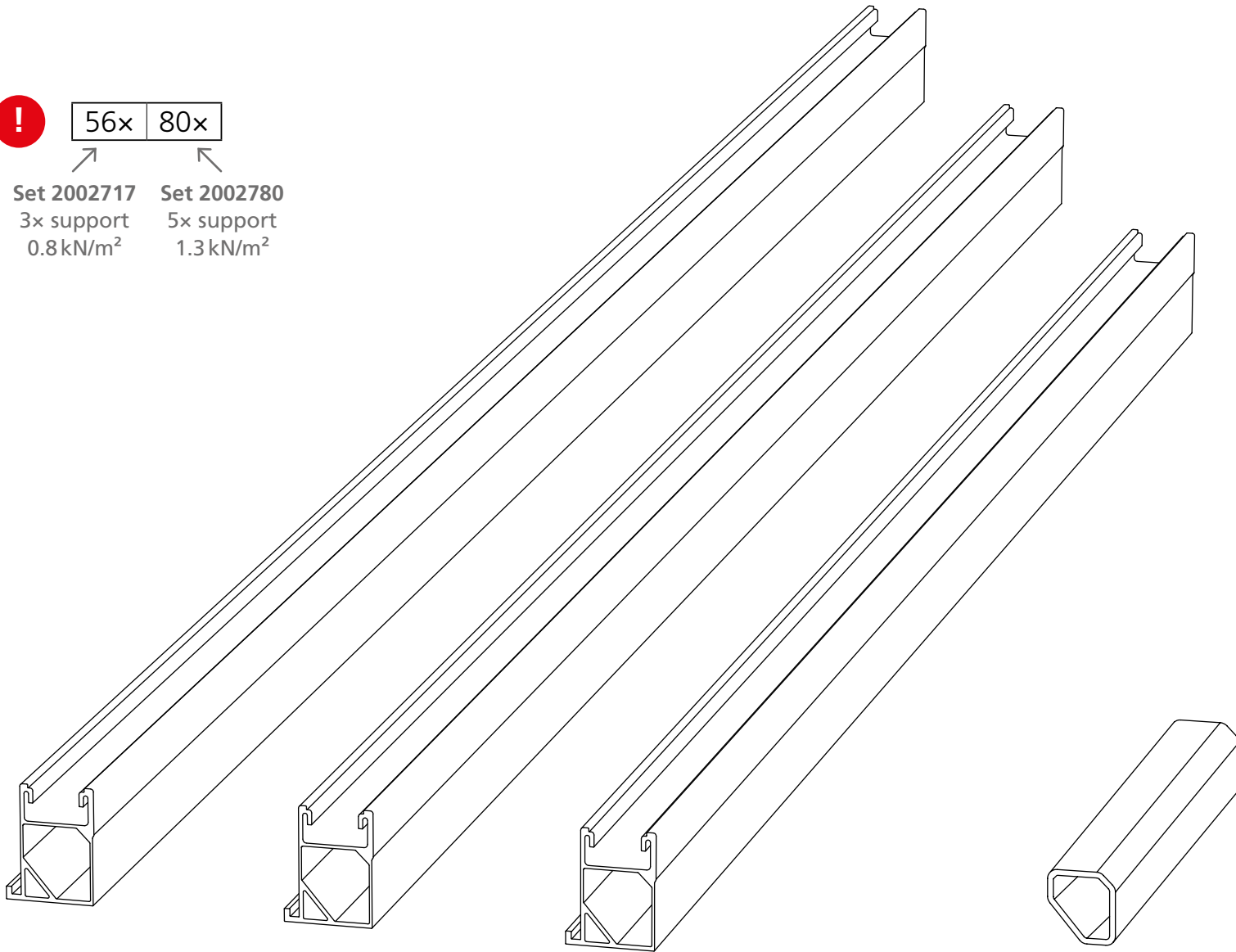
6x	10x
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56x	80x
-----	-----



<b>Set 2002717</b>	<b>Set 2002780</b>
3x support	5x support
0.8 kN/m <sup>2</sup>	1.3 kN/m <sup>2</sup>



**2002580 / 2002784**

SingleRail 63;  
1.90/2.0m

8x	8x
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**2002579 / 2002785**

SingleRail 63;  
1.60/1.72 m

8x	8x
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**2002578 / 2002786**

SingleRail 63;  
1.30/0.87 m

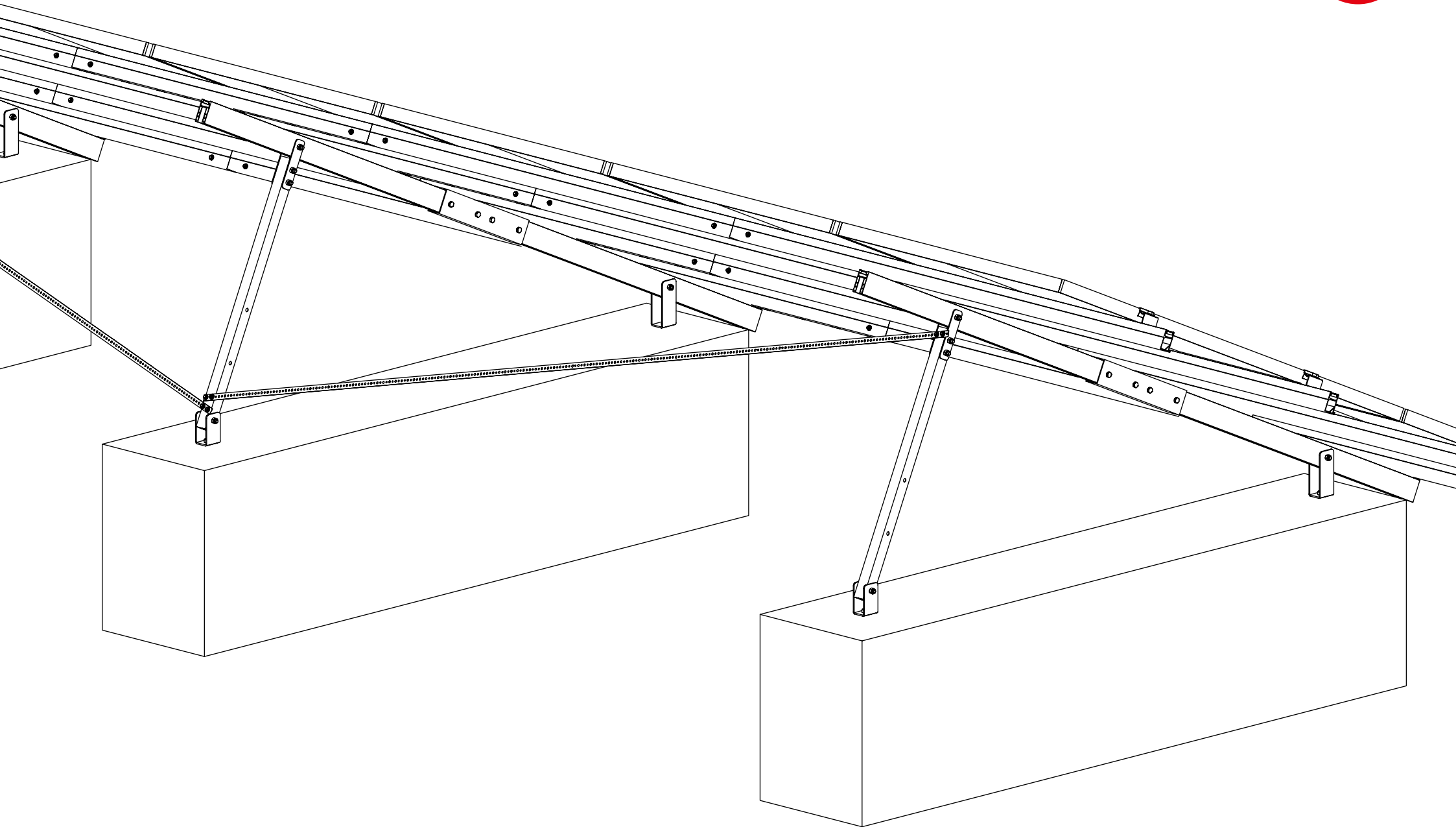
4x	4x
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**2001297**

Rail Connector  
SingleRail 63

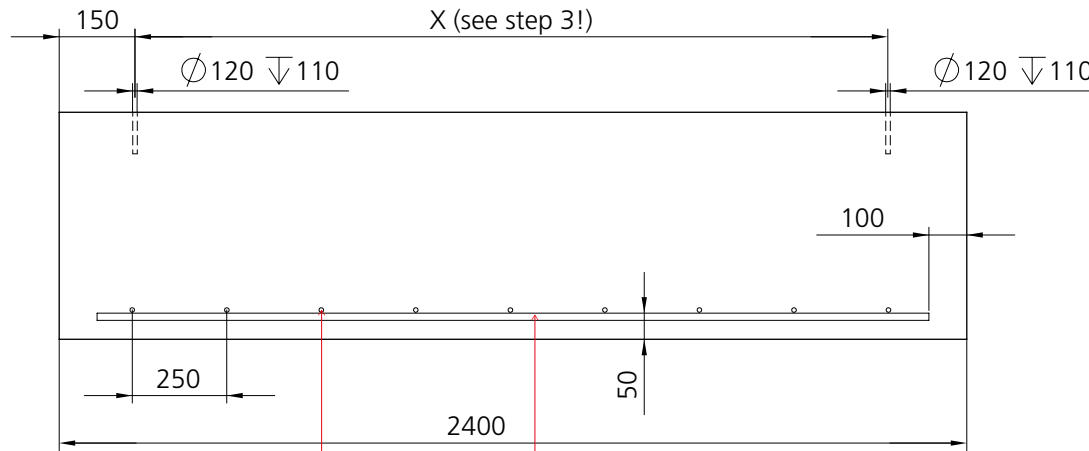
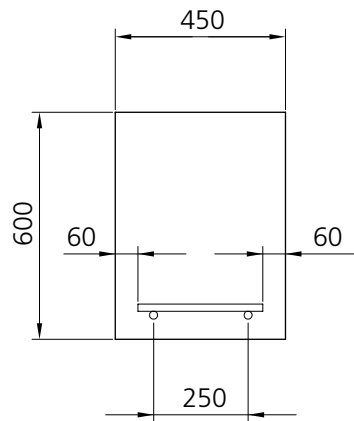
16x	16x
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# Assembly

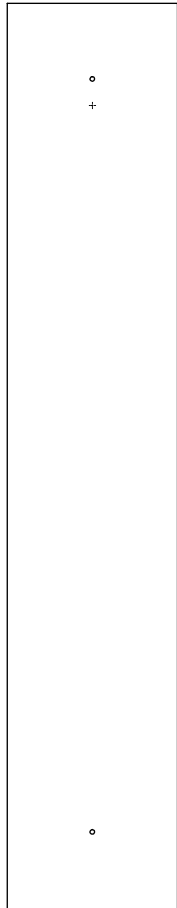




1

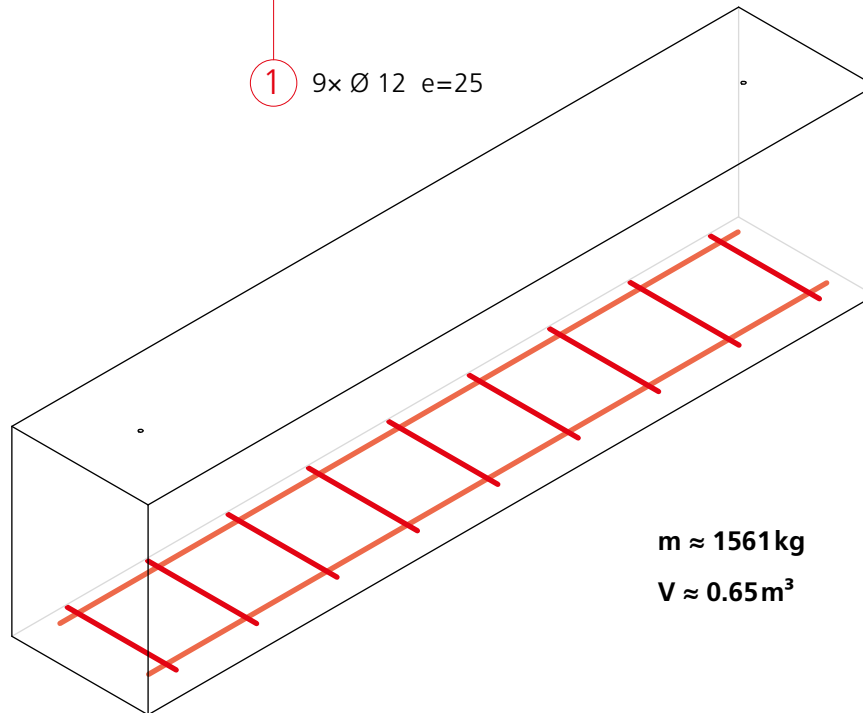


**Dimensions in millimetre [mm]!**



2 2x Ø 12 e=25

1 9x Ø 12 e=25



$m \approx 1561 \text{ kg}$   
 $V \approx 0.65 \text{ m}^3$

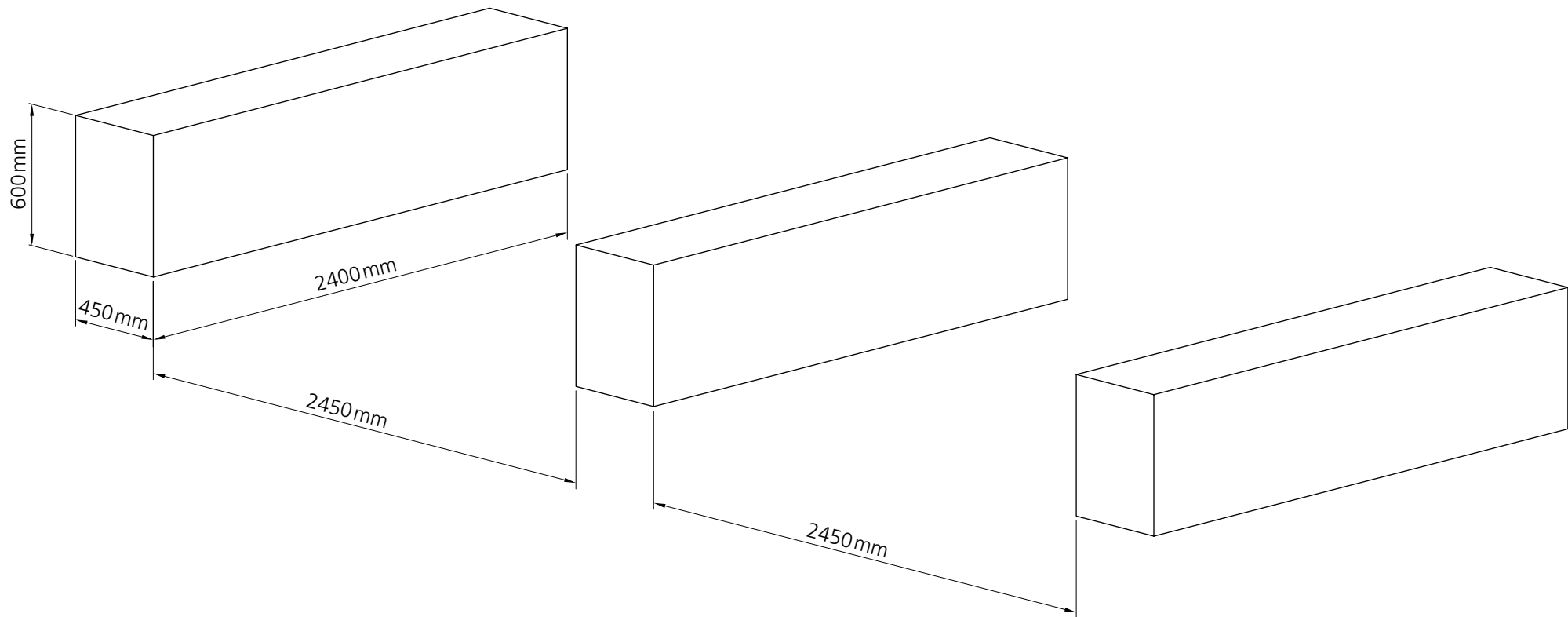
Construction steel EN10025

Position	Amount	Ø	Length
1	9	12	0.33m
2	2	12	2.20m

$\Sigma = 7.37 \text{ m (6.55 kg)}$

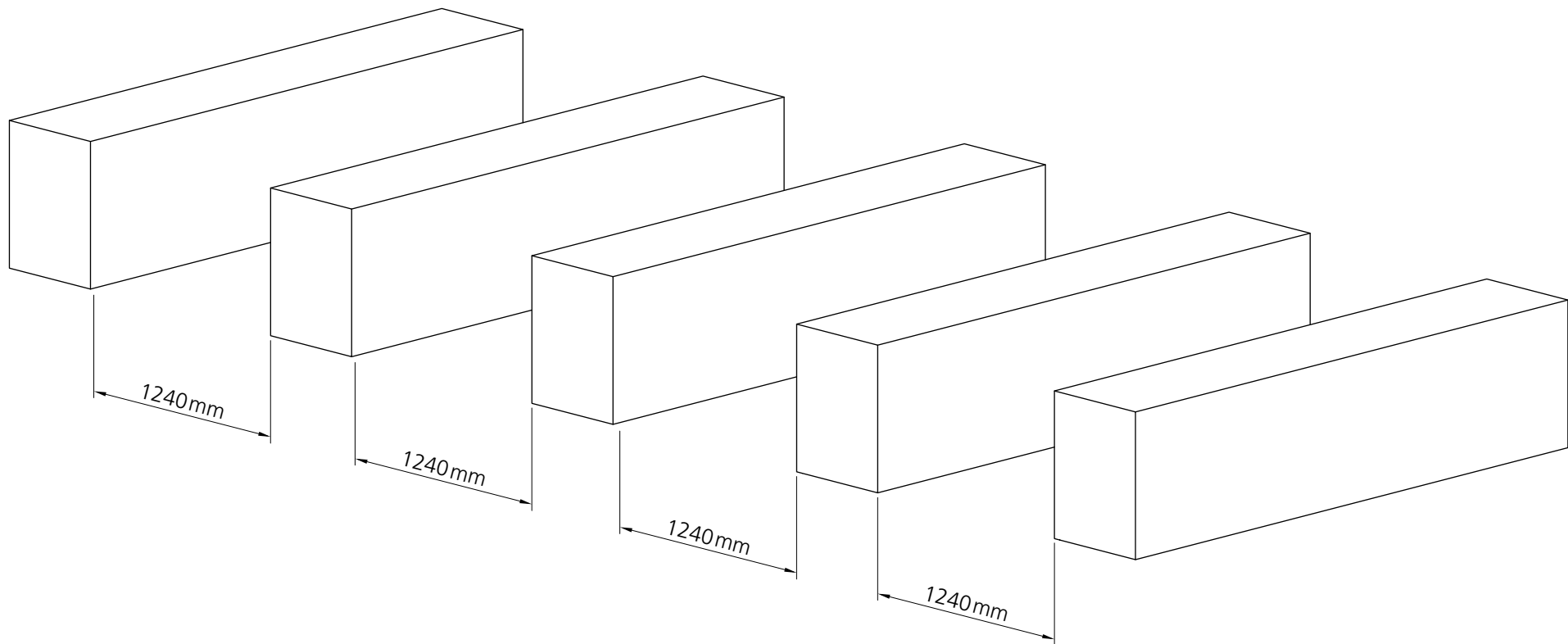
2

A 3x support · 0.8 kN/m<sup>2</sup> wind/snow load



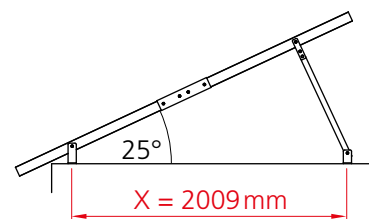
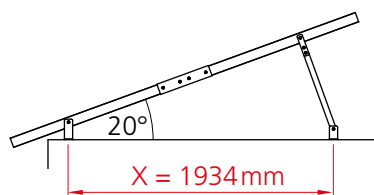
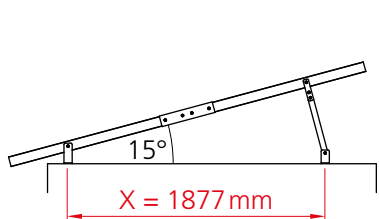
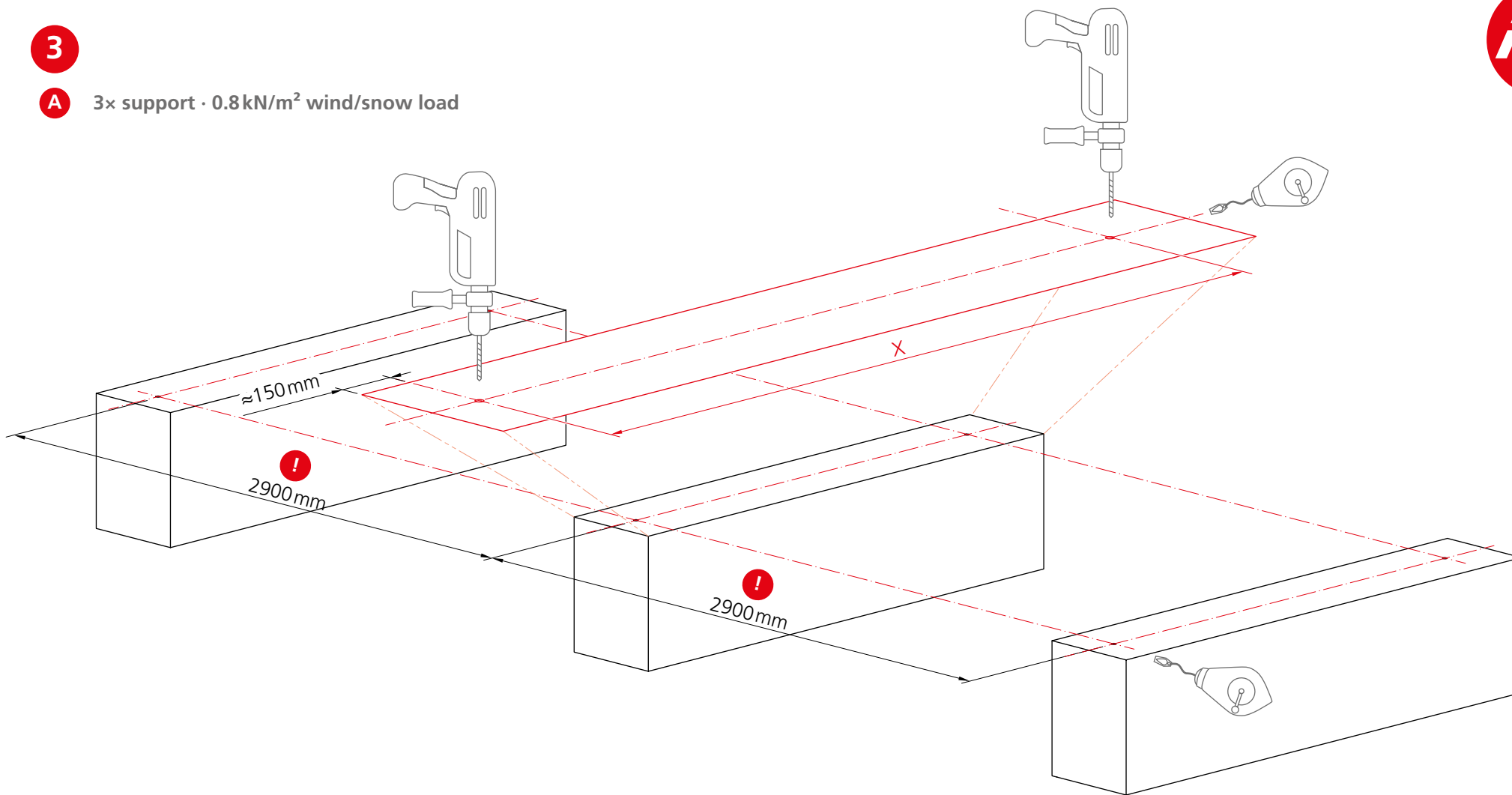
2

B 5x support · 1.3 kN/m<sup>2</sup> wind/snow load



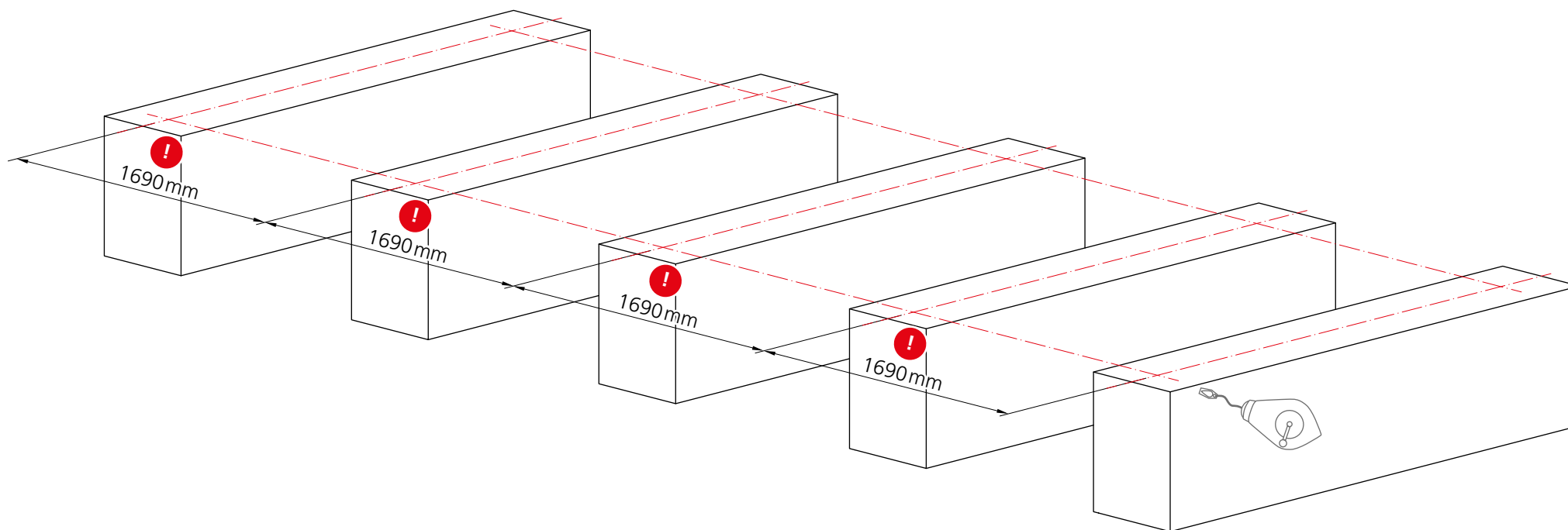
3

A 3x support · 0.8 kN/m<sup>2</sup> wind/snow load




3

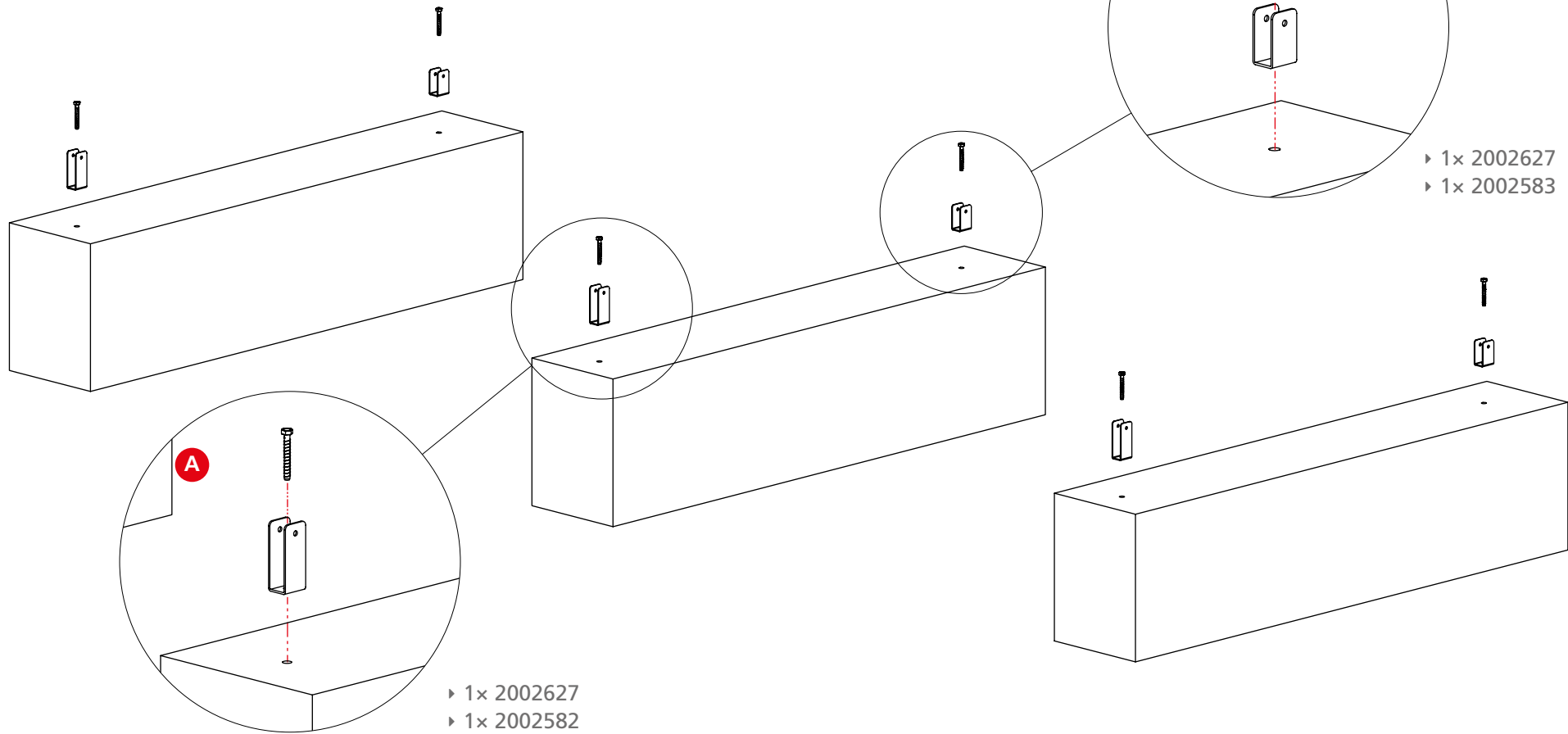
B 5x support · 1.3 kN/m<sup>2</sup> wind/snow load




4

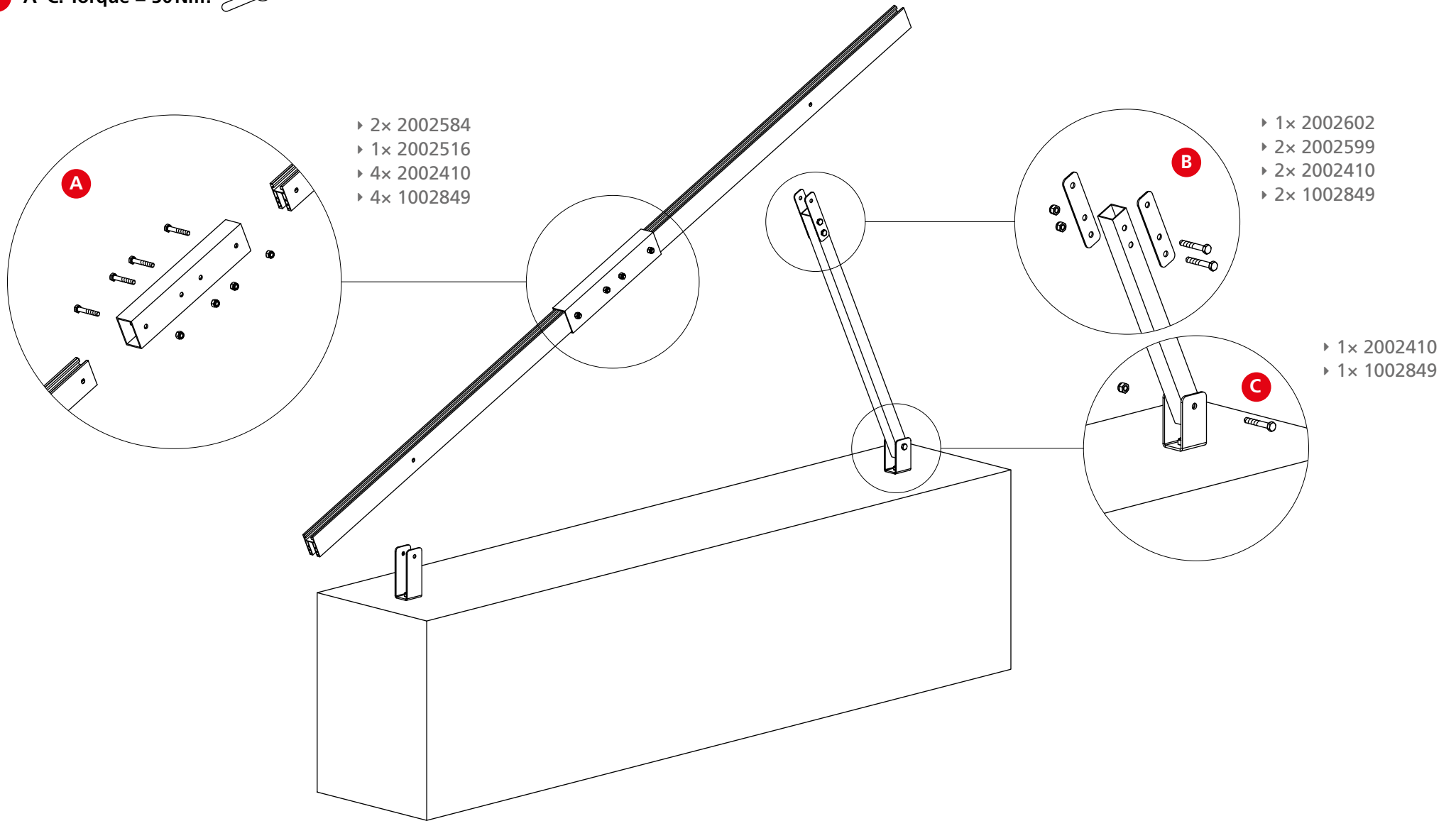


! A+B: Torque = 90Nm! 



5 3x 5x

! A-C: Torque = 30Nm! 




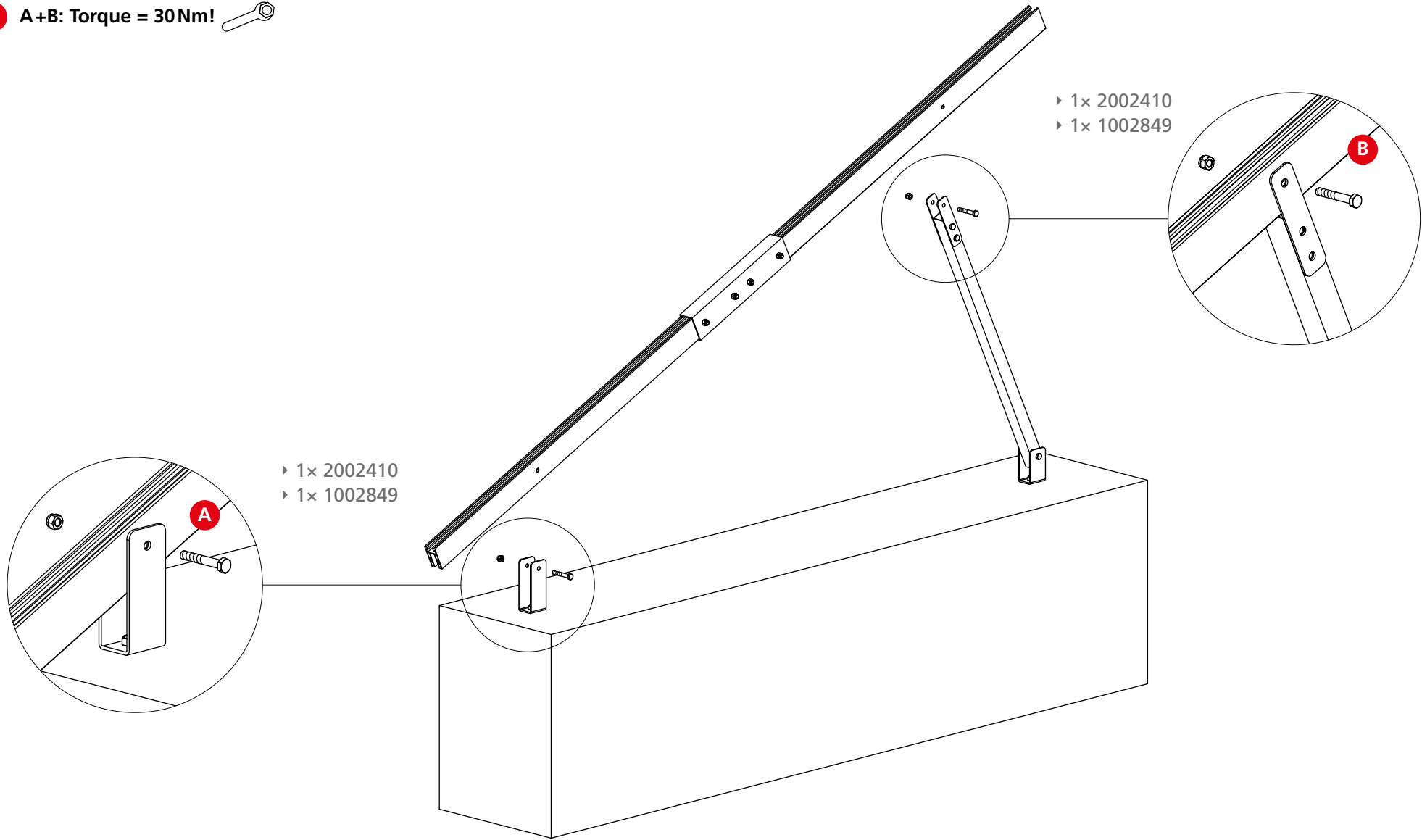
6

3x

5x



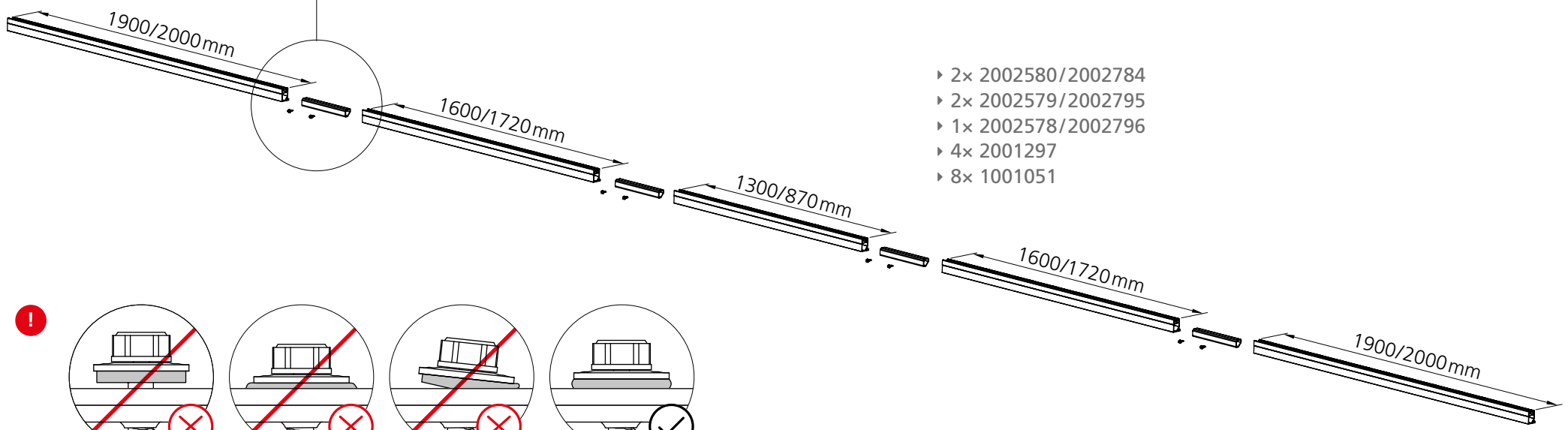
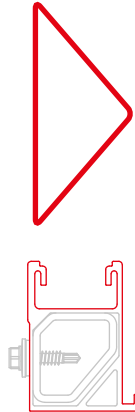
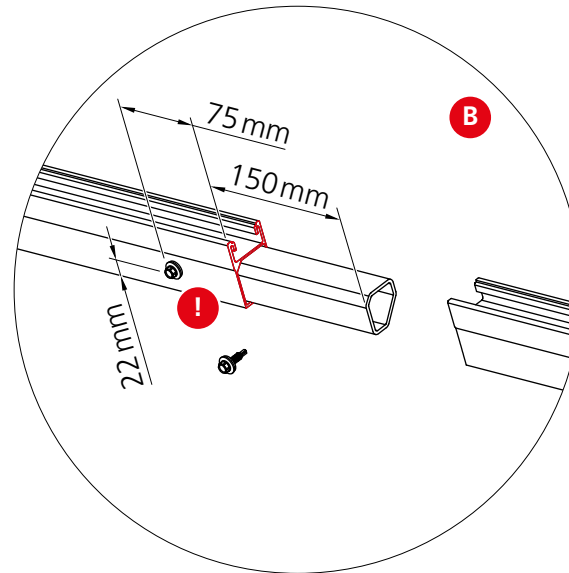
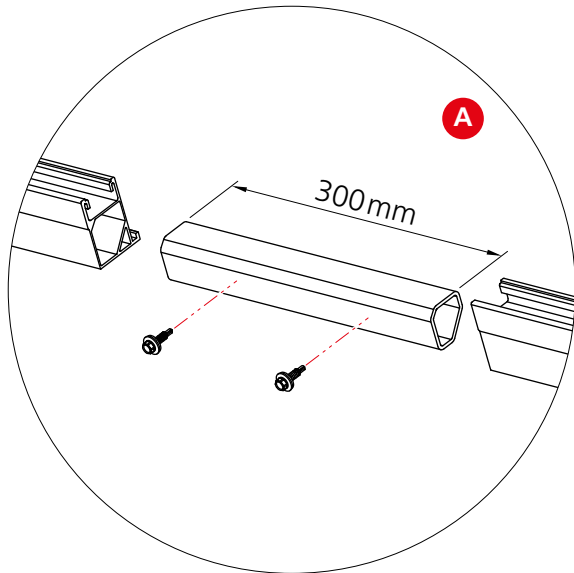
! A+B: Torque = 30Nm! 



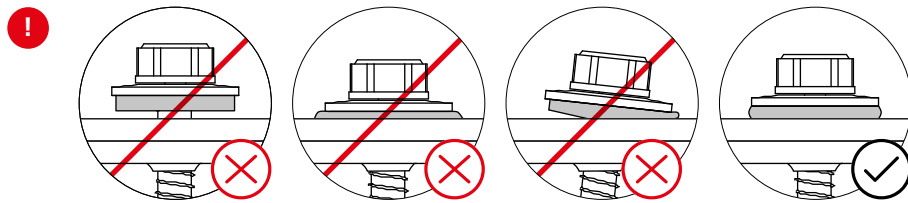


7 4x

- ▶ 1x 2002580/2002784
- ▶ 1x 2002579/2002795
- ▶ 1x 2001297
- ▶ 2x 1001051

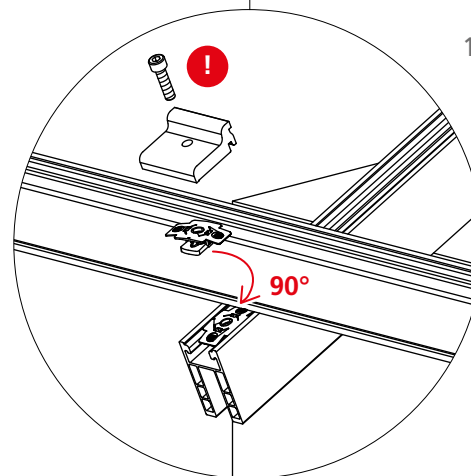
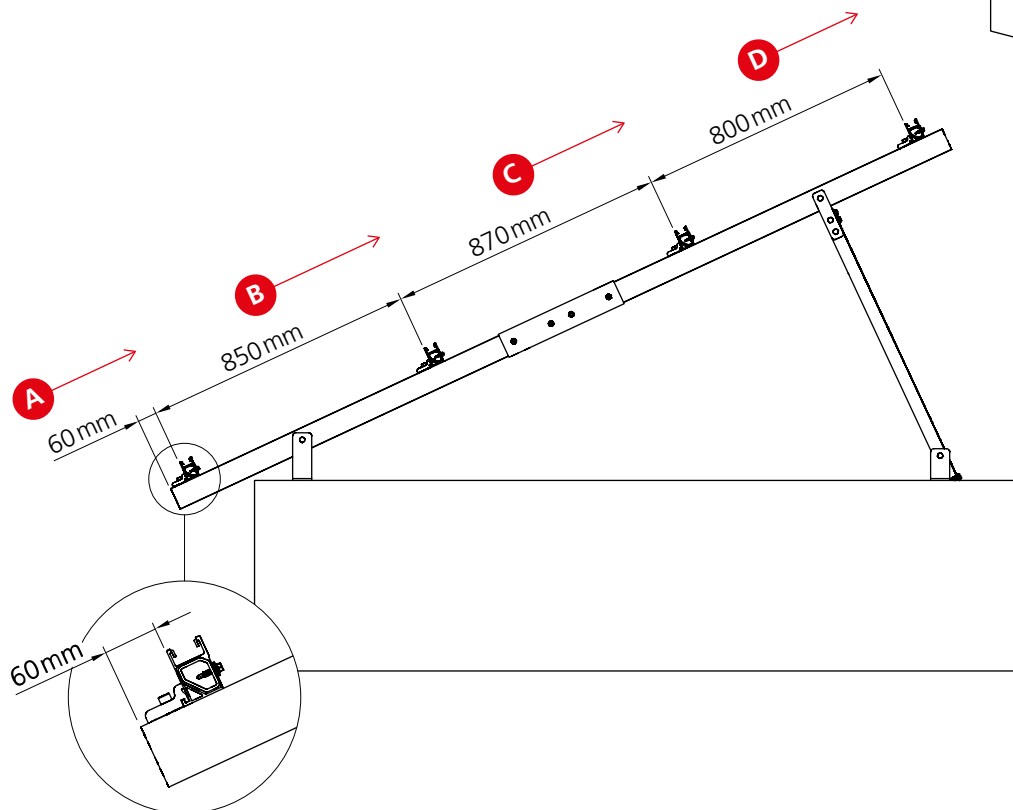
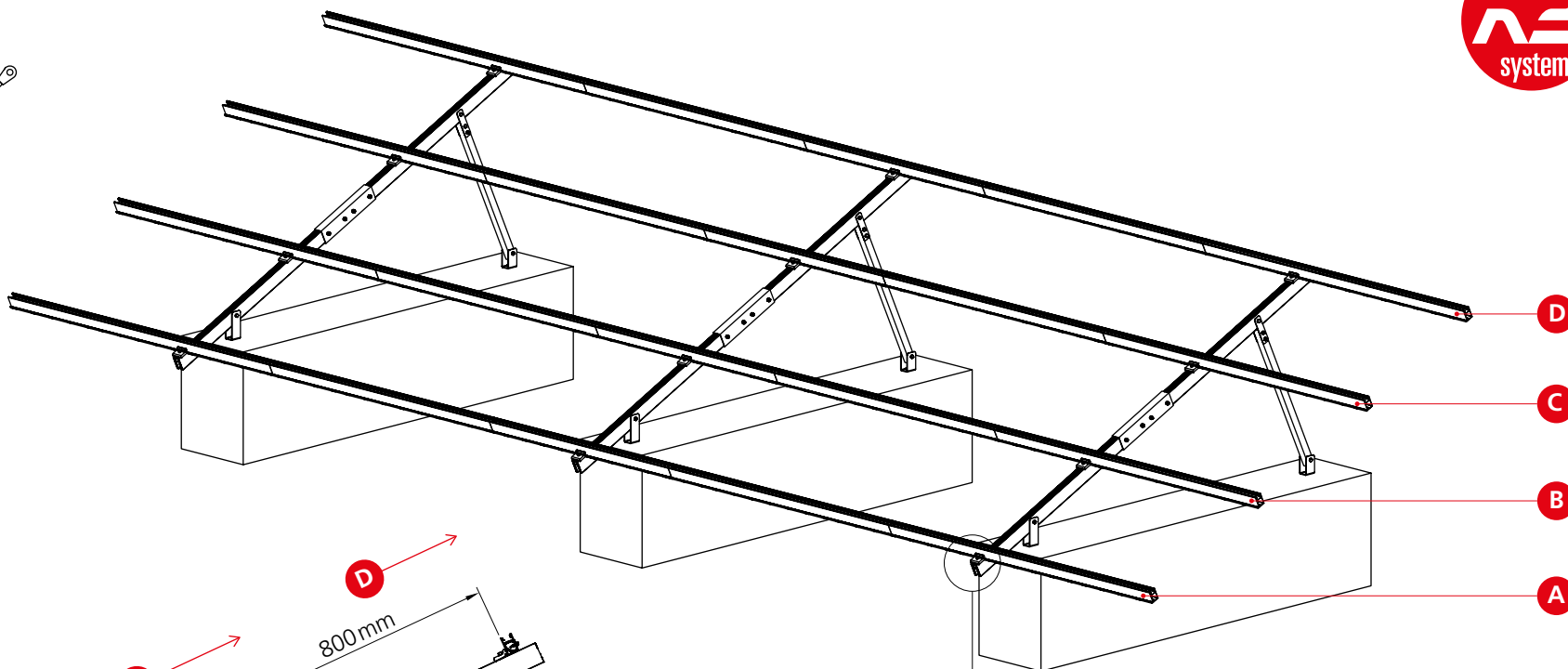


- ▶ 2x 2002580/2002784
- ▶ 2x 2002579/2002795
- ▶ 1x 2002578/2002796
- ▶ 4x 2001297
- ▶ 8x 1001051



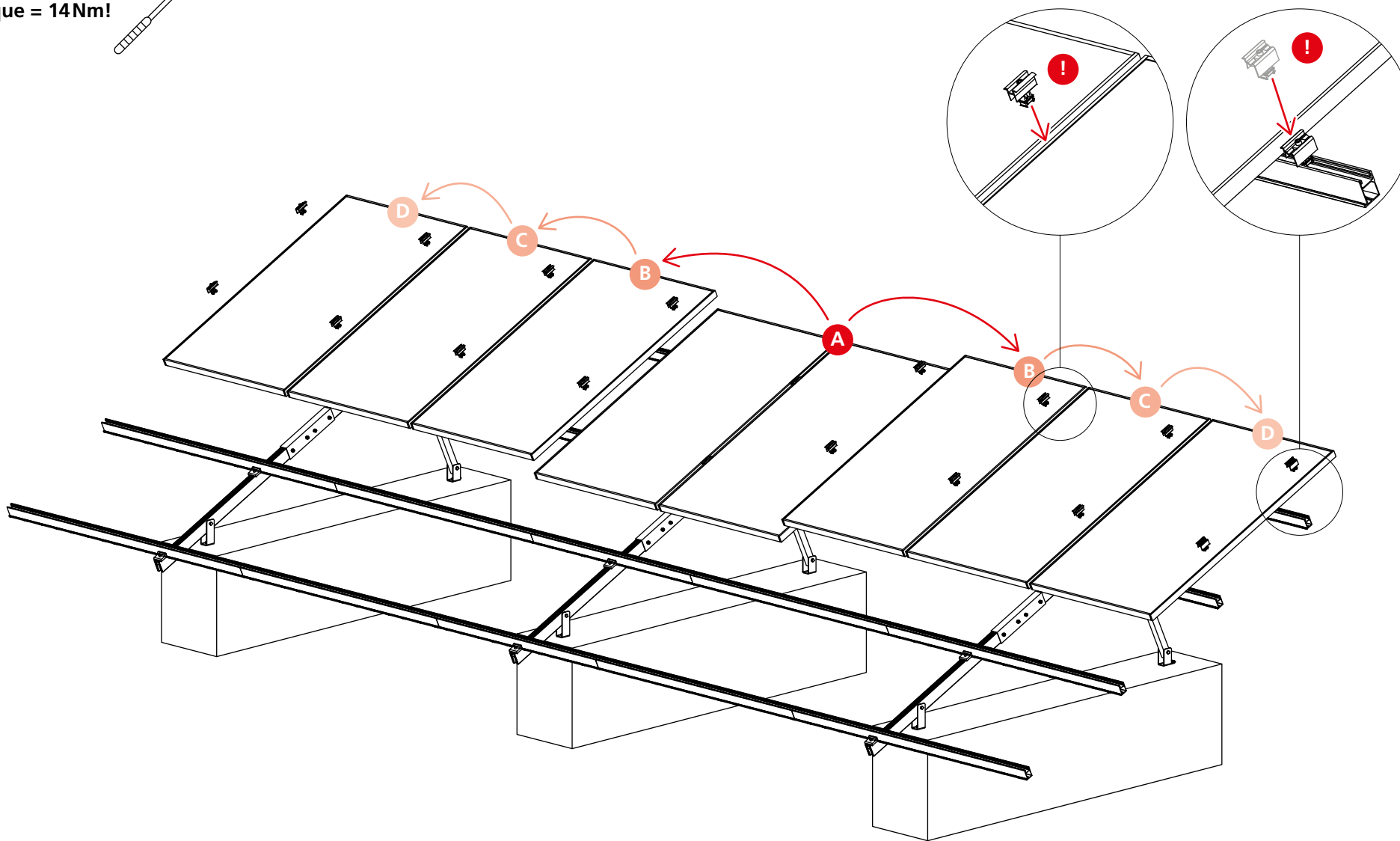
8

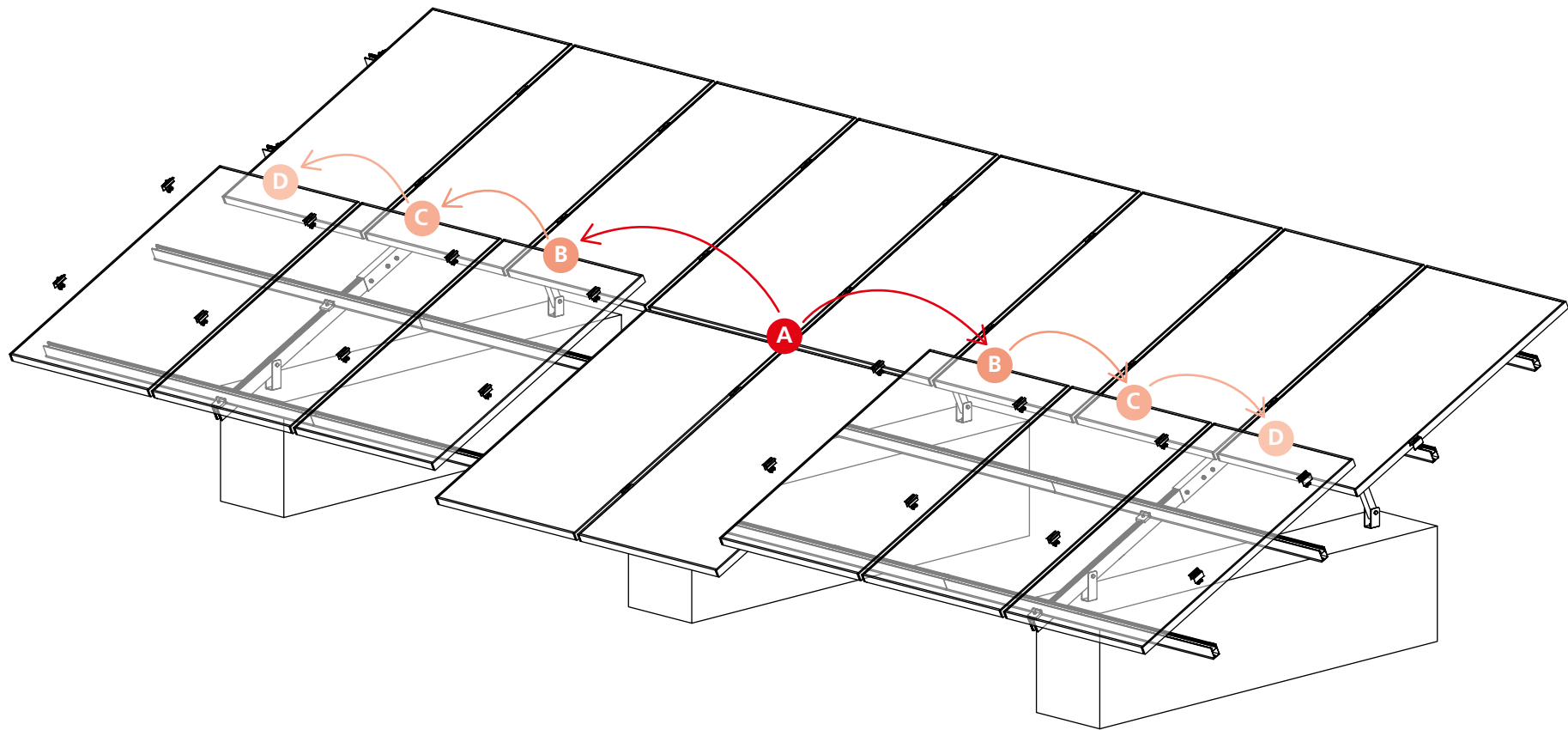
! Torque = 14Nm!

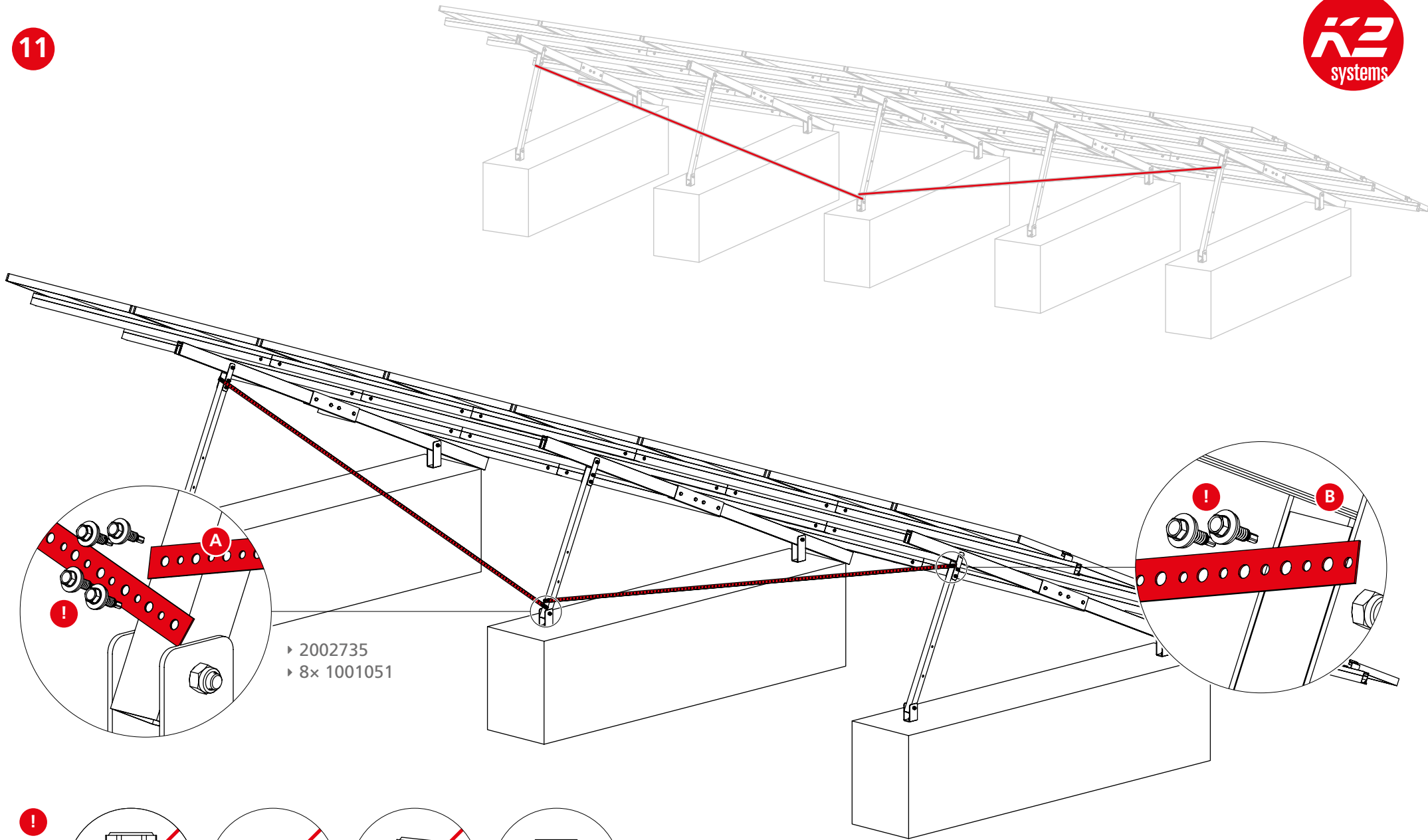


9

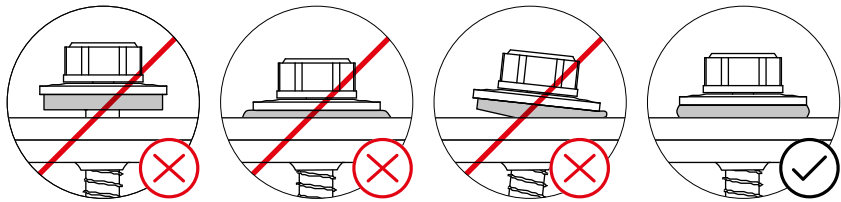
! Torque = 14Nm!

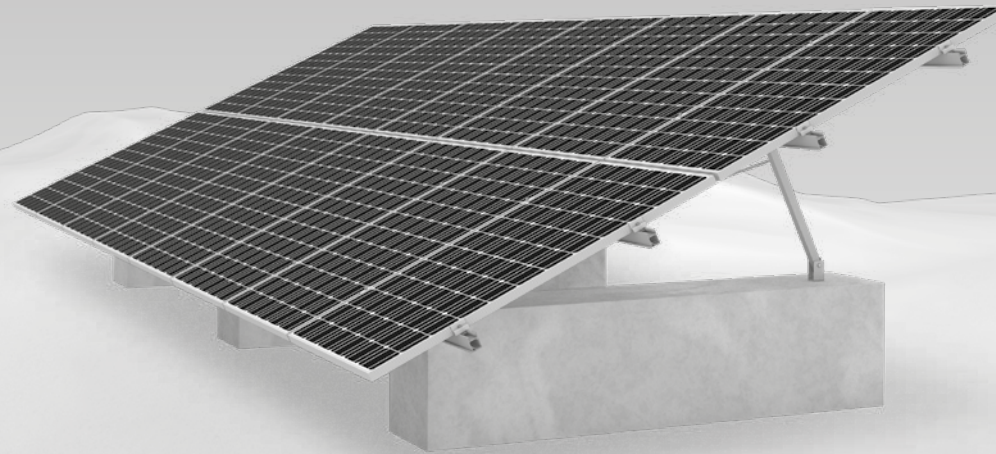






▶ 2002735  
▶ 8x 1001051





## THANK YOU FOR CHOOSING A K2 MOUNTING SYSTEM.

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:

- ▶ [www.k2-systems.com/en/contact](http://www.k2-systems.com/en/contact)
- ▶ **Service Hotline: +49 (0)7159 42059-0**

German law shall apply excluding the UN Convention on CISG. Place of venue is Stuttgart.

Our General Terms of Business apply. Please refer:  
[www.k2-systems.com](http://www.k2-systems.com)