

Montážní návod

Montage Anleitung/Instruction manual



TS300,TS400,TS500

HARGASSNER 

VERTICAL

www.thermosolar.sk

**CZ****EN****D**

1.	Bezpečnostní pokyny / Safety instructions / Sicherheitshinweise	3.
2.	Montážní nářadí/ Assembly tools / Montagewerkzeuge	5.
3.	Přehled používaného materiálu / Overview of the material used / Übersicht über das verwendete Material	6.
4.	Upevňovací prvky / Fixing elements / Befestigungselemente	8.
5.	Celkové rozměry a instalační rozměry upevňovacích prvků / Overall dimensions and installation dimensions of fastening elements / Gesamtmaße und Einbaumaße der Befestigungselemente	9.
6.	Přehled konstrukcí pro TS300/TS400 — Vertical / Overview of constructions TS300/TS400— vertical / Konstruktionsübersicht TS300/TS400 – vertikal	10.
7.	Přehled konstrukcí pro TS500— Vertical / Overview of constructions TS500— vertical / Konstruktionsübersicht TS500 – vertikal	12.
8.	Instalace nerezových háků / Installation of stainless steel hooks / Edelstahlhakeninstallation	13.
9.	Instalace kombi šroubů / Installation of combi screws / Kombischraubeninstallation	14.
10.	Instalace falcových příchytů / Installation of flange clamps / Montage von Flanschschellen	20.
11.	Instalace trapézových příchytů / Installation of trapezoidal brackets / Montage von Trapezhalterungen	23.
12.	Instalace háku na šindelovou střechu / Installation of a hook on a shingle roof / Montage eines Hakens auf einem Schindeldach	26.
13.	Instalace výškově nastavitelného háku / Installation of a height-adjustable hook / Installation eines höhenverstellbaren Hakens	29.
14.	Instalace konstrukce na rovnou střechu/fasádu / Installation of the structure on a flat roof/wall / Installation der Konstruktion auf einem Flachdach/einer Flachwand	34.
15.	Spojení L-Profilu a Z-Profilu / Connection of L - Profile and Z - Profile / Verbindung von L - Profil und Z - Profil	38.
16.	Instalace a zafixování kolektoru / Installation and fixing of the collector / Installation und Befestigung des Kollektors	40.

CZPro **ONLINE** verzi tohoto návodu prosím oskenujte QR kód.**EN**Please scan the QR code for the **ONLINE** version of this manual.**D**Bitte scannen Sie den QR-Code für die **ONLINE**-Version diese Anleitung.



Návod/Anleitung/Manual

DIN 18338 / DIN 18451



Používej ochranné brýle!

Use the safety glasses !

Verwenden Sie eine Schutzbrille!



Používej bezpečnostní postroj !

Use the safety harness !

Verwenden Sie einen Sicherheitsgurt!



Používej ochranné rukavice!

Use protective gloves !

Verwenden Sie Schutzhandschuhe!



Používej ochrannou přilbu !

Use the safety helmet !

Verwenden Sie einen Schutzhelm!



Používej žebřík předepsaným způsobem!

Use the ladder in the prescribed manner!

Verwenden Sie die Leiter in der vorgeschriebenen Weise!



Používej pracovní obuv !

Use the work shoes !

Verwenden Sie Arbeitsschuhe!



Při práci s elektrickým proudem vypni zdroj !

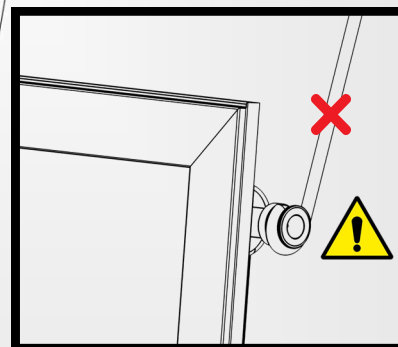
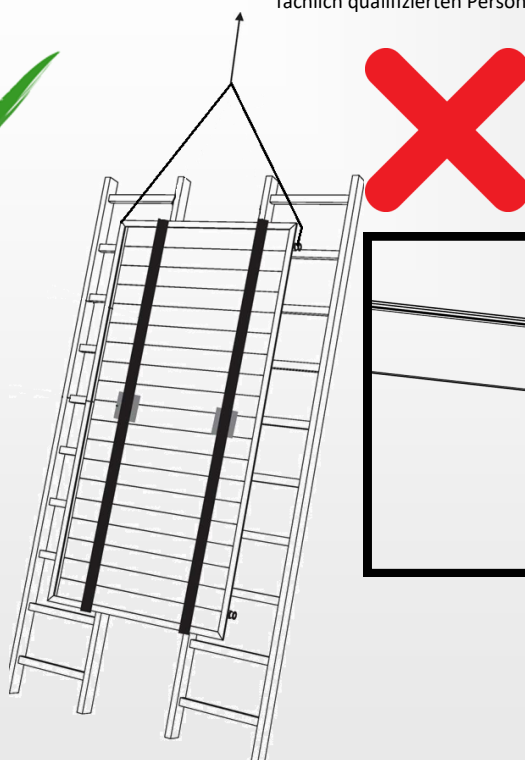
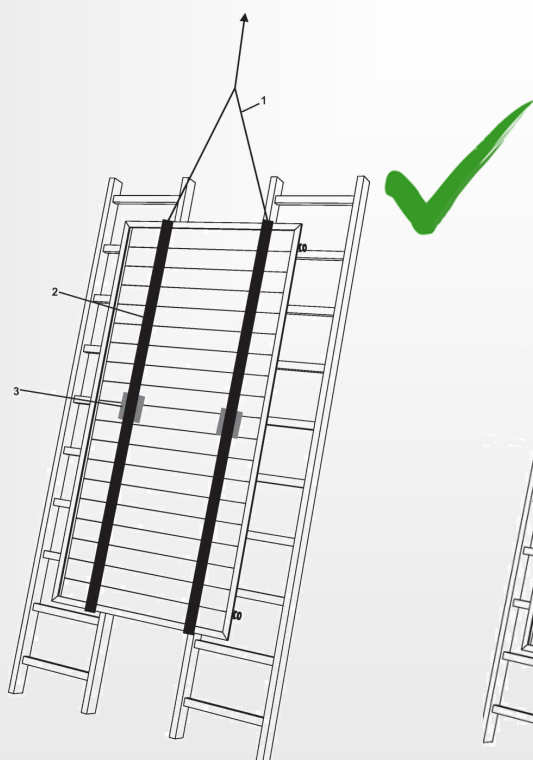
Práci s elektrickými zařízeními musí vykonávat jen odborně způsobilá osoba!

When working with electric current, turn off the source!

Work with electrical equipment must only be carried out by a professionally qualified person!

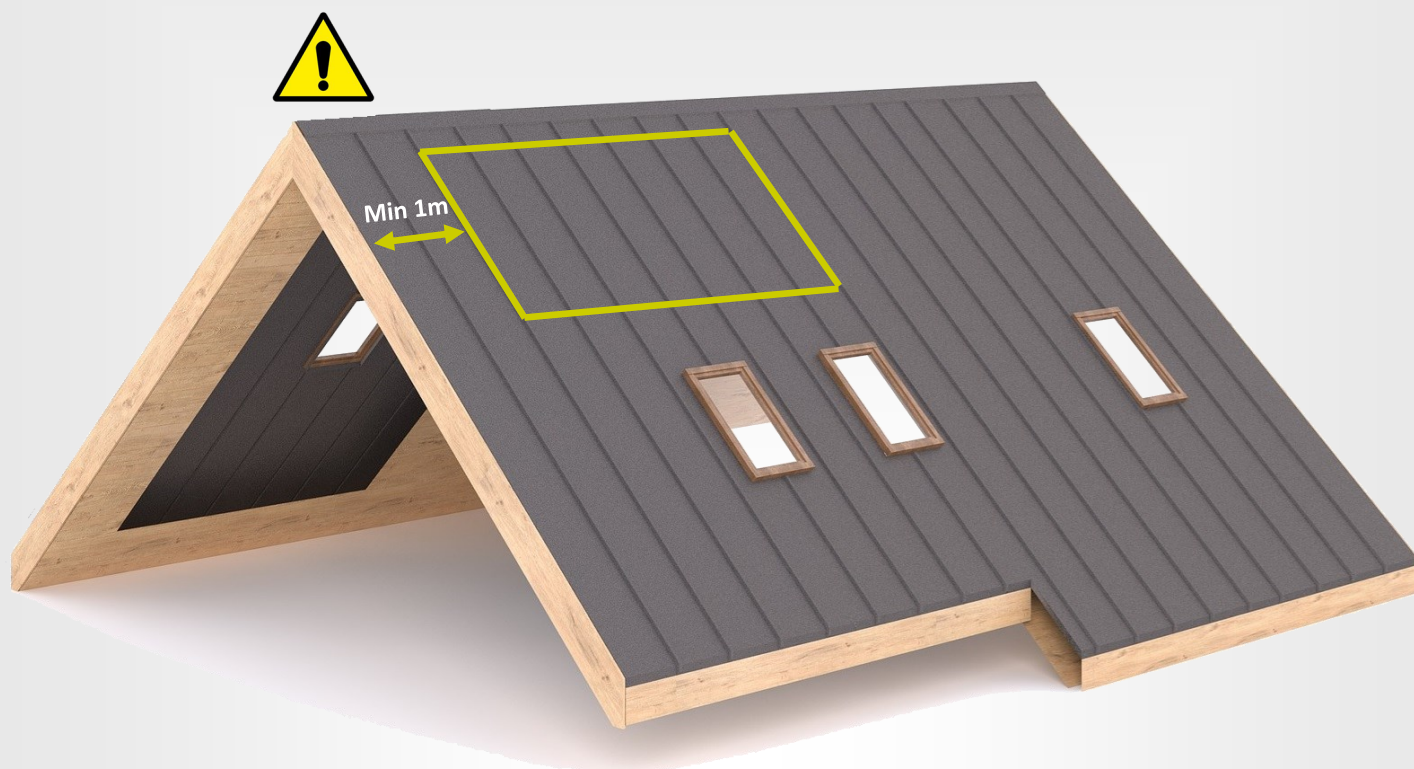
Schalten Sie bei Arbeiten mit elektrischem Strom die Quelle aus!

Arbeiten an elektrischen Geräten dürfen nur von einer fachlich qualifizierten Person durchgeführt werden!



1

CZ	Bezpečnostní pokyny
EN	Safety instructions
D	Sicherheitshinweise

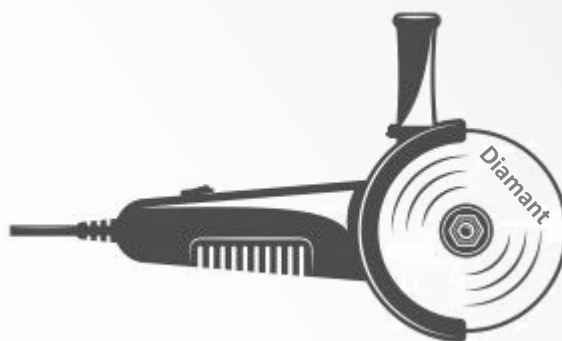


CZ	Při instalaci je potřeba dodržovat vzdálenost od okraje střechy minimálně 1m ! Konstrukci umístit co nejbliž ke štítu střechy.
EN	During installation, the distance from the edge of the roof must be kept at least 1m ! Place the structure as close as possible to the roof gable.
D	Bei der Montage ist der Abstand zum Dachrand mindestens 1m einzuhalten! Platzieren Sie die Konstruktion so nah wie möglich am Dachgiebel.



CZ	Při instalaci v oblastech s vysokým zatížením sněhem nutné použít zpěvňovací sadu S 8022 . Více informací k příslušnému návodu v sadě S 8022.
EN	When installing in areas with a high snow load, the S8022 reinforcement kit must be used. More information on the relevant instructions in the S8022 set.
D	Beim Einbau in Gebieten mit hoher Schneelast muss der Verstärkungssatz S8022 verwendet werden. Weitere Informationen zu den entsprechenden Anleitungen im Set S8022.



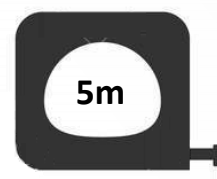
CZ Montážní nářadí**EN** Assembly tools**D** Montagewerkzeuge

Ø8



TORX40

PZ2

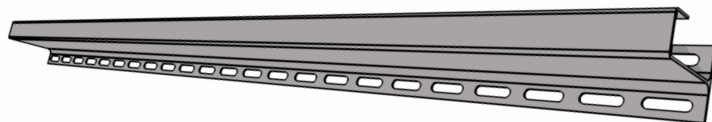


3

CZ Přehled používaného materiálu

EN Overview of the material used

D Übersicht über das verwendete Material

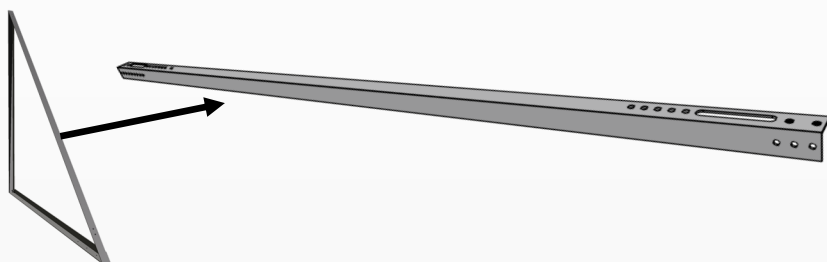


1

CZ Z—Profil

EN Z—Profil

D Z—Profil

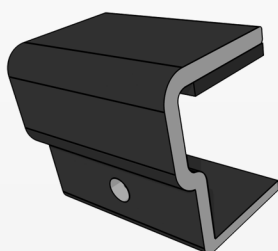


2

CZ L—Profil Universal

EN L—Profil Universal

D L—Profil Universal



3

CZ Větrná pojistka

EN Windclamp

D Windsicherung

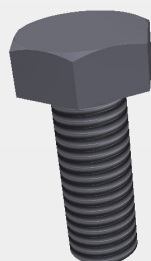


4

CZ Šroub M6x16

EN Screw M6x16

D Schraube M6x16



5

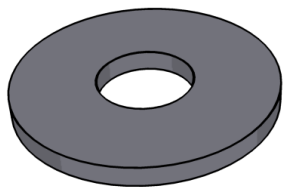
CZ Šroub M8x20

EN Screw M8x20

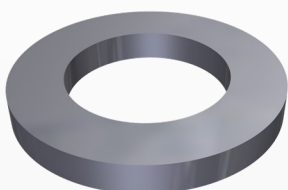
D Schraube M8x20

3

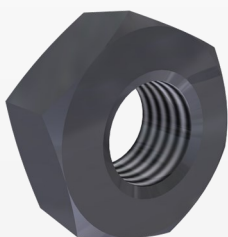
CZ	Přehled používaného materiálu
EN	Overview of the material used
D	Übersicht über das verwendete Material



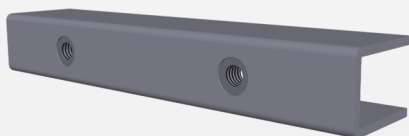
6	CZ	Podložka 6,4mm
	EN	Wascher large 6,4mm
	D	Unterlegscheibe 6,4mm



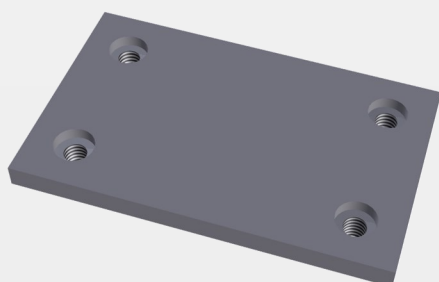
7	CZ	Podložka 8,4mm
	EN	Wascher large 8,4mm
	D	Unterlegscheibe 8,4mm



8	CZ	Matice M8
	EN	Nut M8
	D	Mutter M8



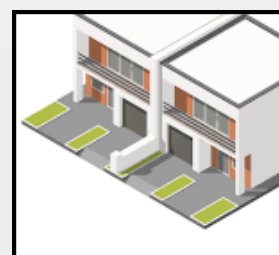
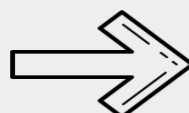
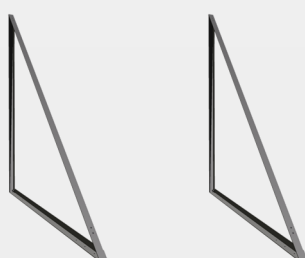
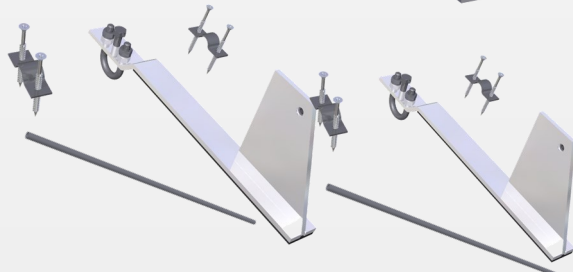
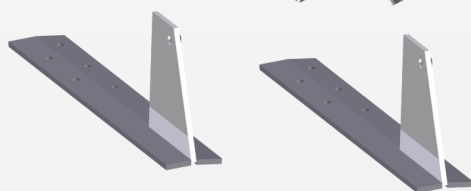
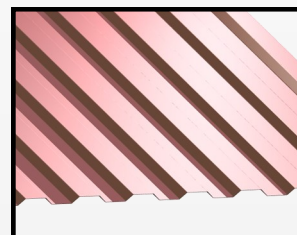
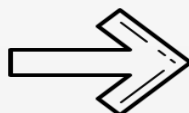
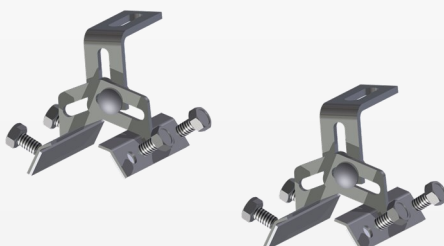
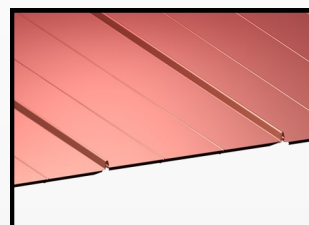
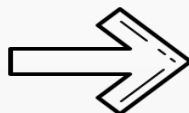
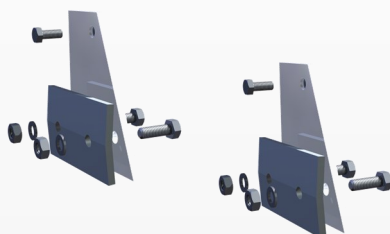
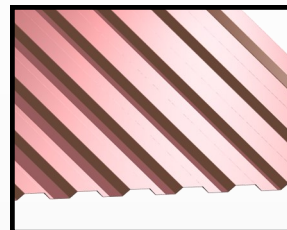
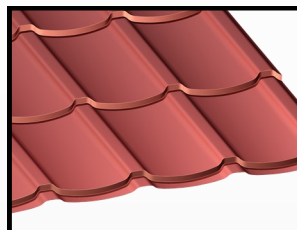
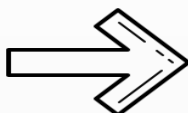
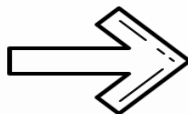
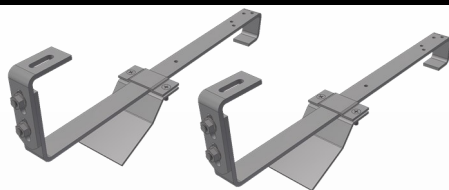
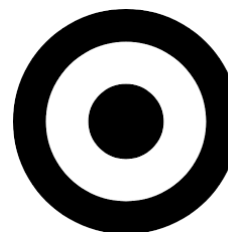
9	CZ	Spojovací soubor pro NK—TYP1
	EN	Connection kit for supportings frames TYP 1
	D	Verbindungssatz für Rahmen—TYP 1

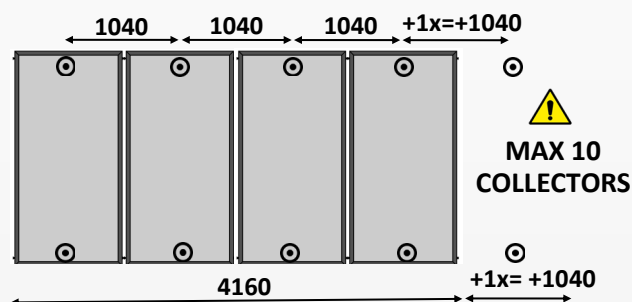
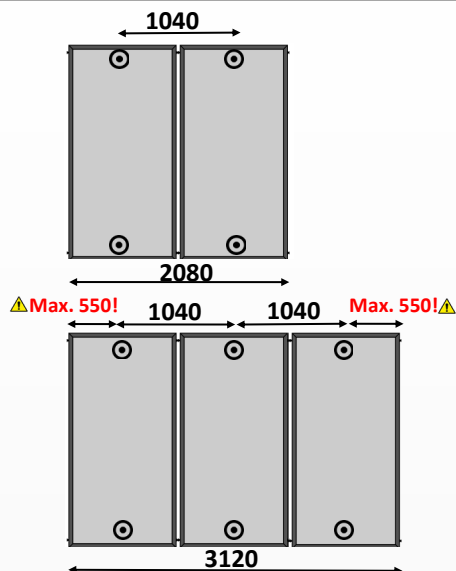
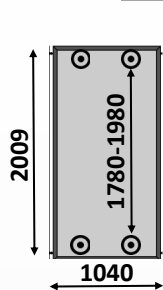


10	CZ	Spojovací soubor pro NK—TYP3
	EN	Connection kit for supportings frames TYP 3
	D	Verbindungssatz für Rahmen—TYP 3

4

CZ Upevňovací prvky
EN Fixing elements
D Befestigungselemente





CZ

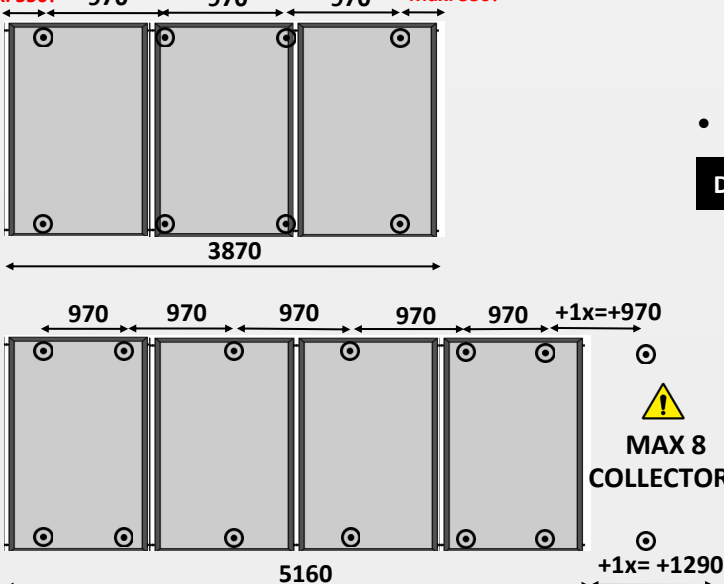
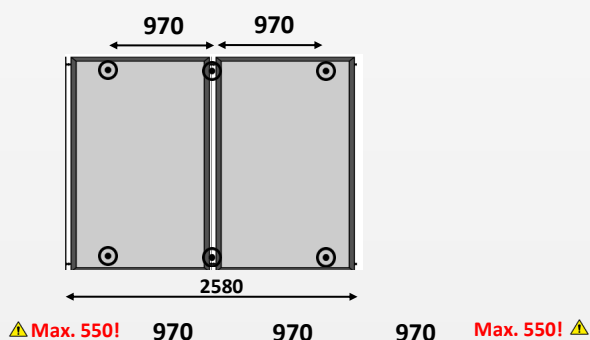
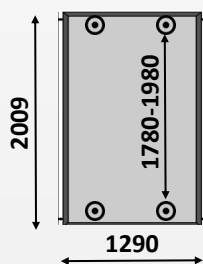
Označení upevňovacího prvku

EN

Fastener designation

D

Bezeichnung des Befestigungsmittels



CZ

Rozměry instalace upevňovacích prvků jsou informační! Při instalaci může dojít ke změně rozměrů umístění upevňovacích prvků podle individuální střešní konstrukce! Při kombinování základních a rozšiřovacích konstrukcí se může lišit počet upevňovacích prvků!

Dodržet symetrické rozmístění upevňovacích prvků!

EN

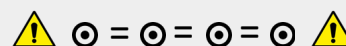
The installation dimensions of the fasteners are informative! During installation, the dimensions of the fastening elements may change according to the individual roof construction! When combining basic and expansion structures, the number of fastening elements may differ!

Symmetrical distribution of fastening elements!

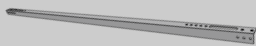
D

Die Einbaumaße der Befestigungselemente sind informativ! Bei der Montage können sich die Maße der Befestigungselemente entsprechend der individuellen Dachkonstruktion ändern! Bei Kombination von Grund- und Erweiterungsaufbauten kann die Anzahl der Befestigungselemente abweichen!

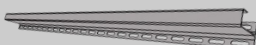
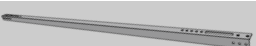
Symmetrische Verteilung der Befestigungselemente!



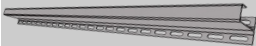
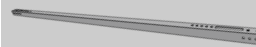
1x TS 300/TS350/TS 400**Artikel****KS/Stück/Pcs**

  ①	2
  ②	2
 ④	10
 ⑥	8
 ③	2

2x TS 300 / TS350/TS 400**Artikel****KS/Stück/Pcs**

  ①	2
  ②	2
 ④	12
 ⑥	8
 ③	4

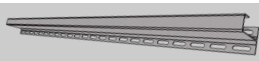
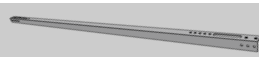
3x TS 300 / TS350/TS 400

Artikel	KS/Stück/Pcs
 1	2
 2	3
 4	18
 6	12
 3	6

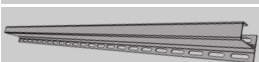
+ 1x TS 300 /TS350/TS 400

Artikel	KS/Stück/Pcs
 1	2
 2	3
 4	18
 6	12
 3	6

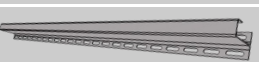
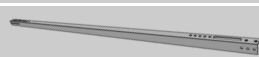
1x TS 500**Artikel****KS/Stück/Pcs**

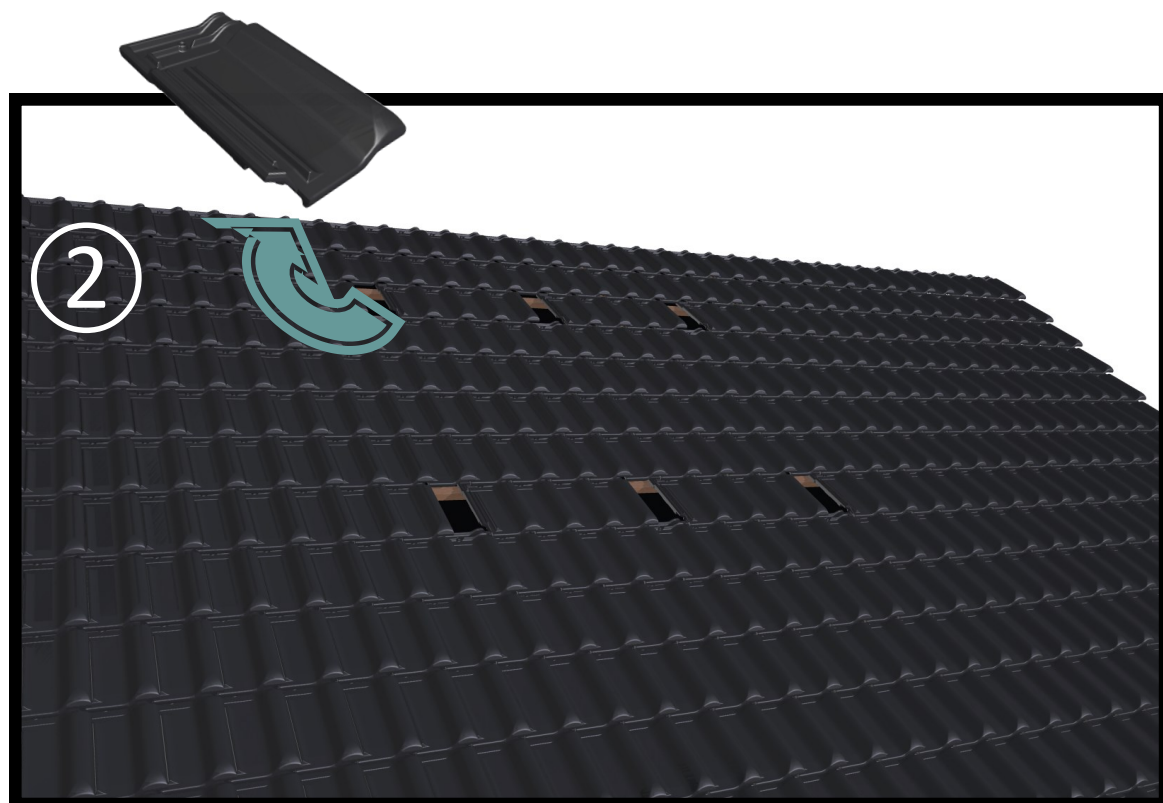
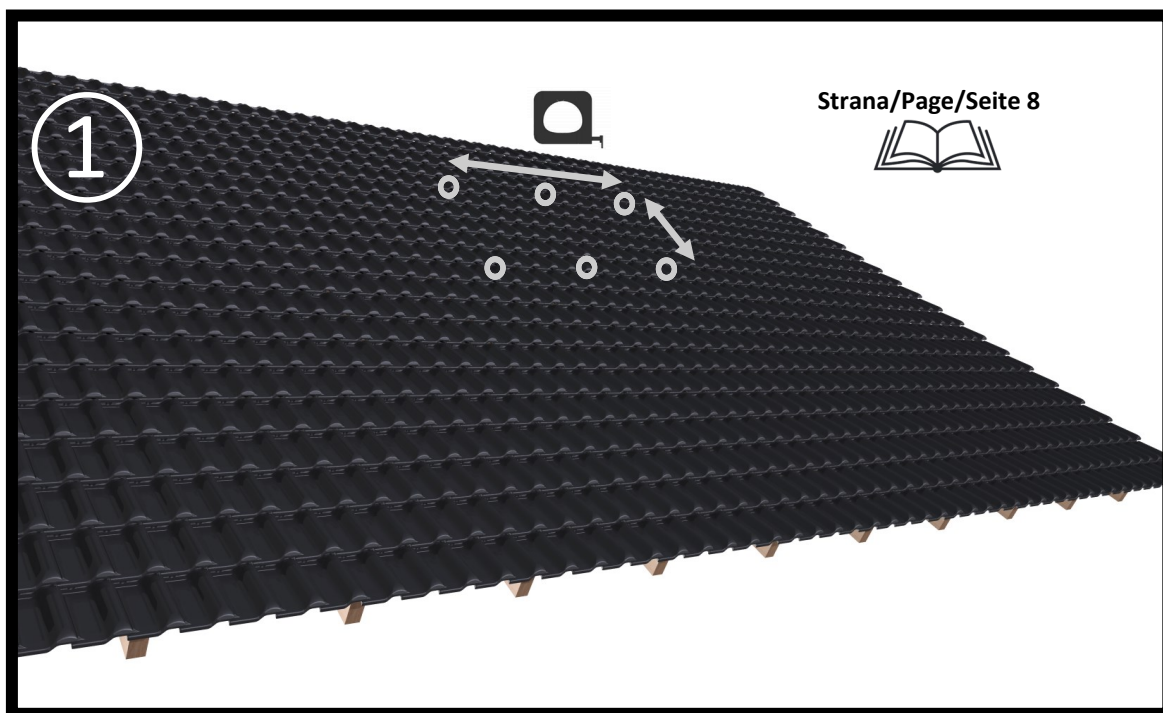
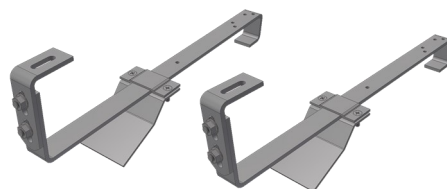
 ①	2
 ②	2
 ④	12
 ⑥	8
 ③	4

2x TS 500**Artikel****KS/Stück/Pcs**

 ①	2
 ②	3
 ④	20
 ⑥	12
 ③	8

3x TS500**Artikel****KS/Stück/Pcs**

 ①	2
 ②	4
 ④	28
 ⑥	16
 ③	12



8

CZ

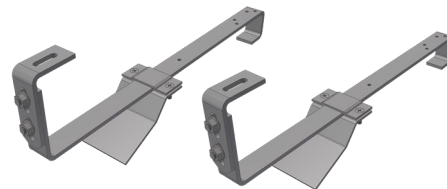
Instalace nerezových háků

EN

Installation of stainless steel hooks

D

Edelstahlhakeninstallation



3



4



8

CZ

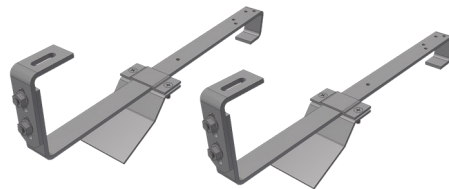
Instalace nerezových háků

EN

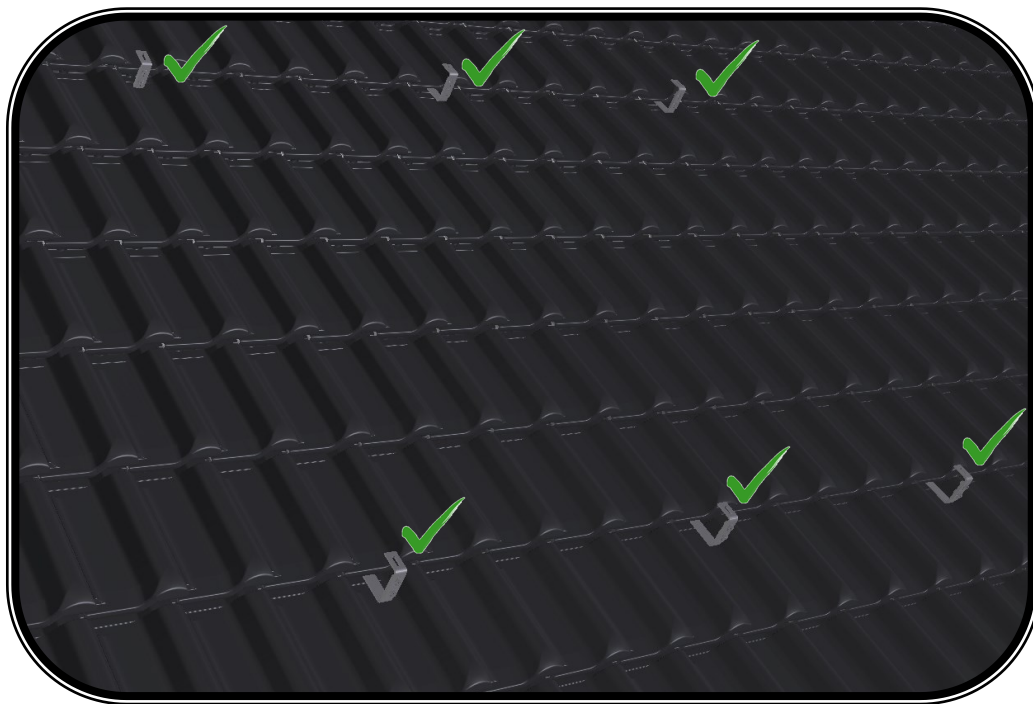
Installation of stainless steel hooks

D

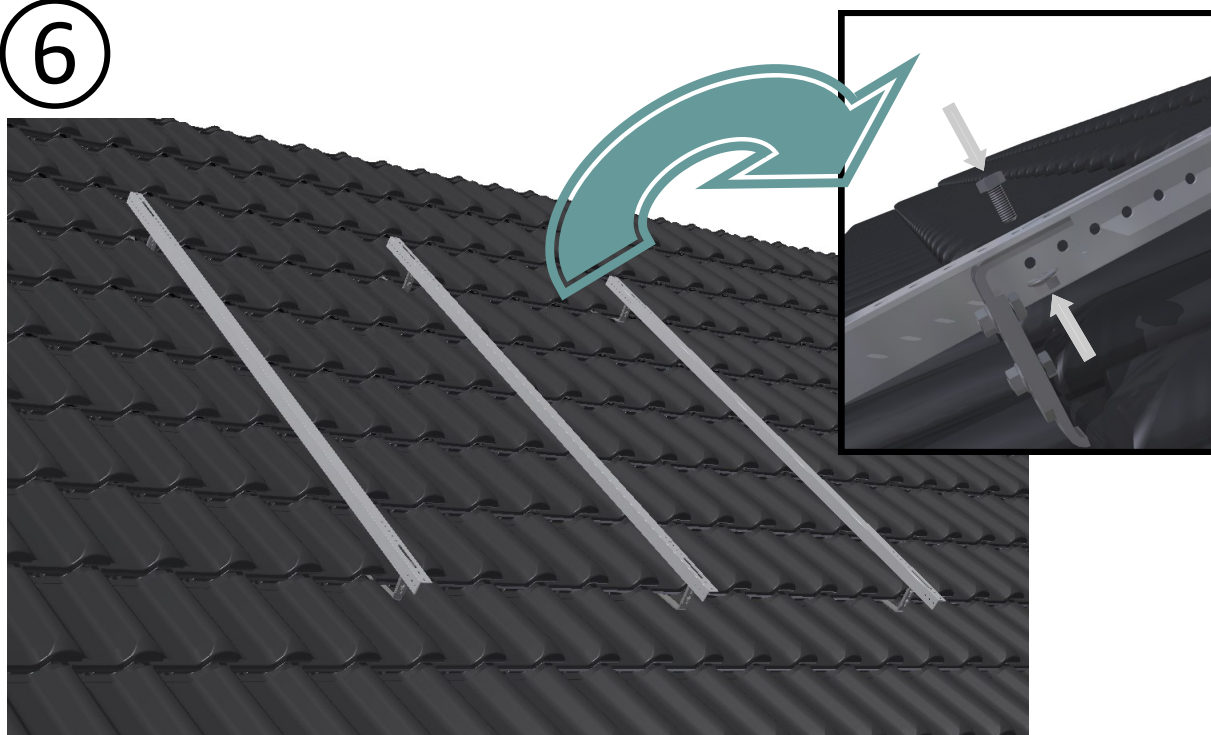
Edelstahlhakeninstallation



5



6



9

CZ

Instalace kombi šroubů

EN

Installation of combi screws

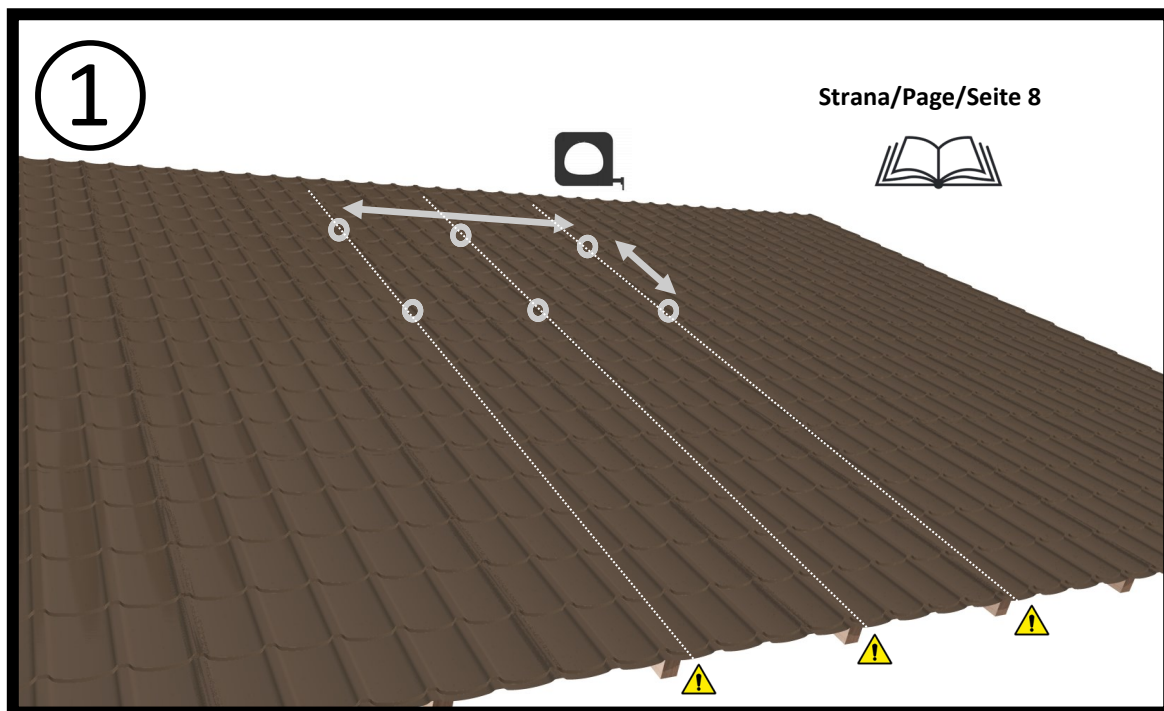
D

Kombischraubeninstallation

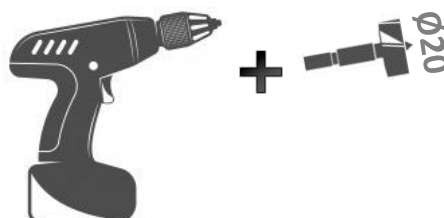


①

Strana/Page/Seite 8



②



9

CZ

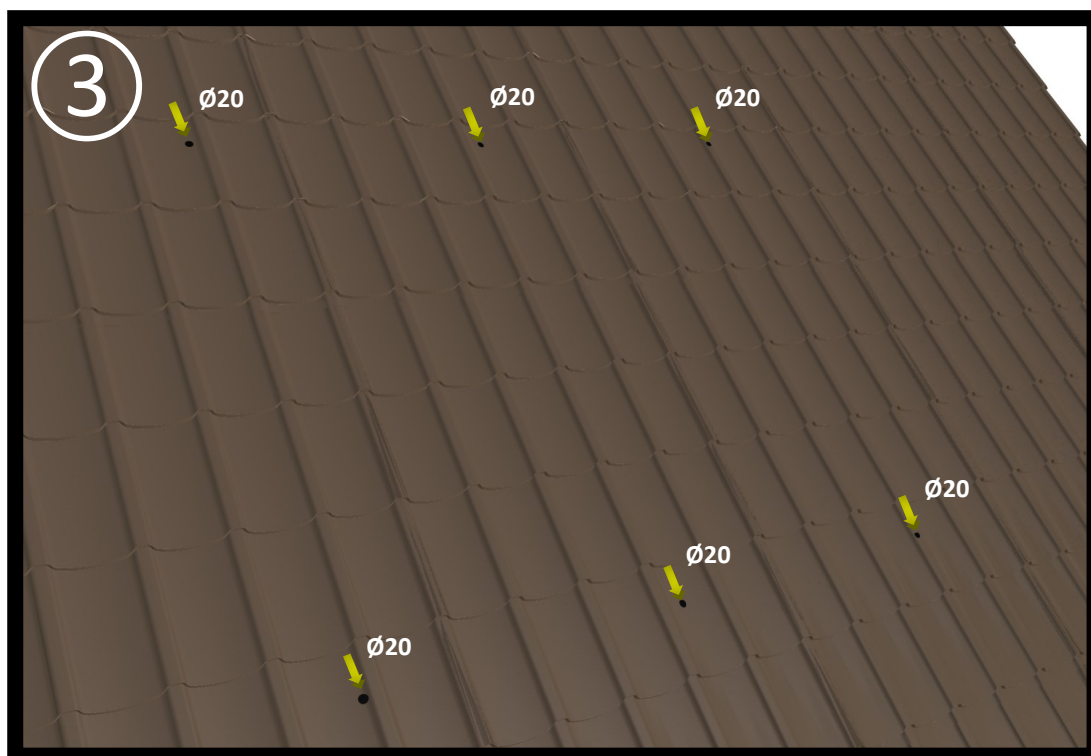
Instalace kombi šroubů

EN

Installation of combi screws

D

Kombischraubeninstallation



9

CZ

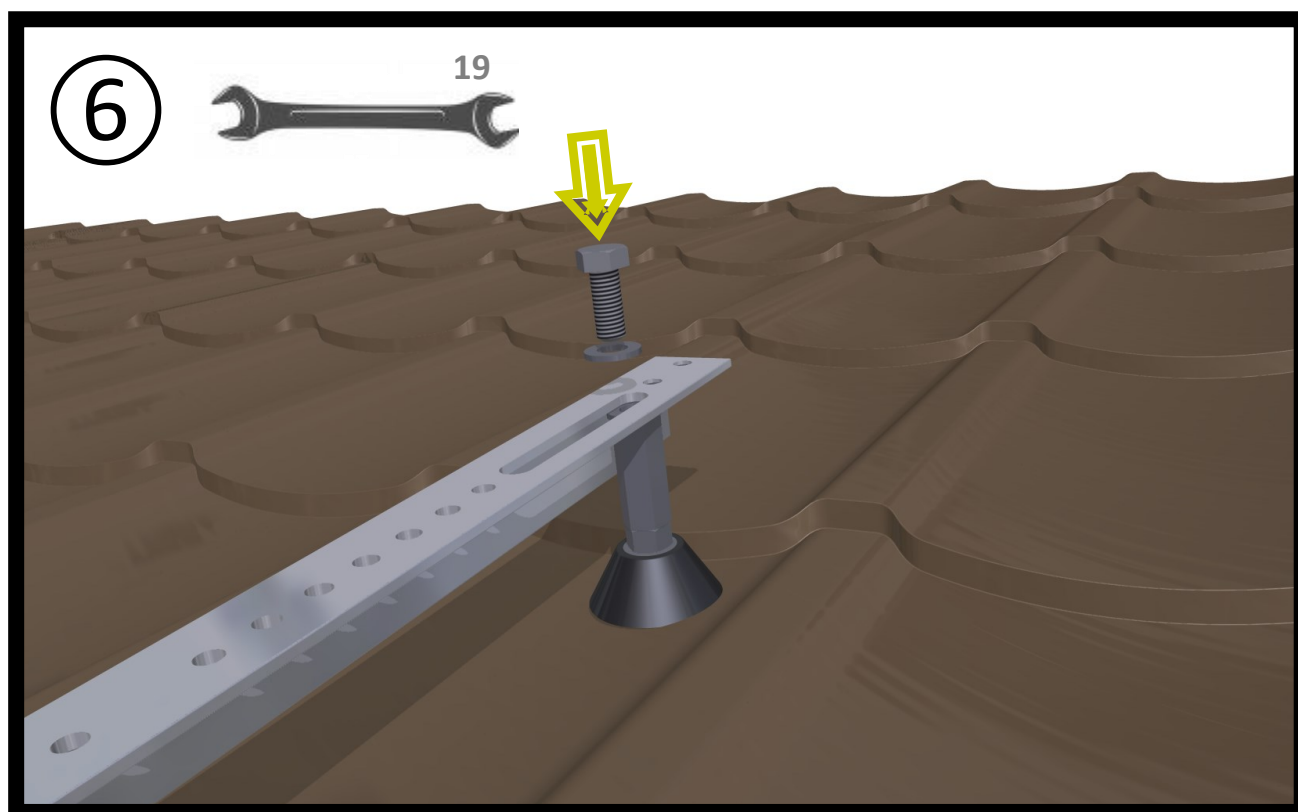
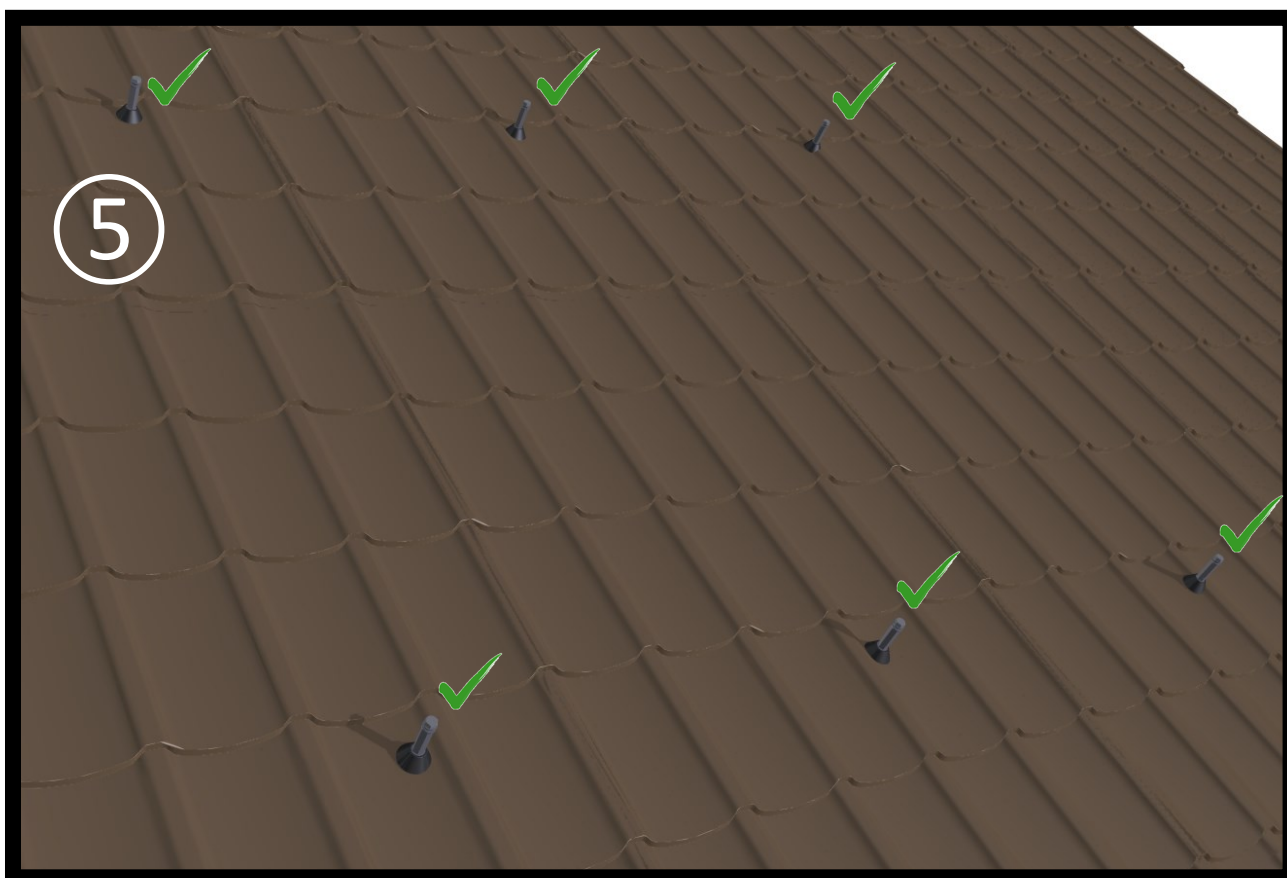
Instalace kombi šroubů

EN

Installation of combi screws

D

Kombischraubeninstallation



9

CZ

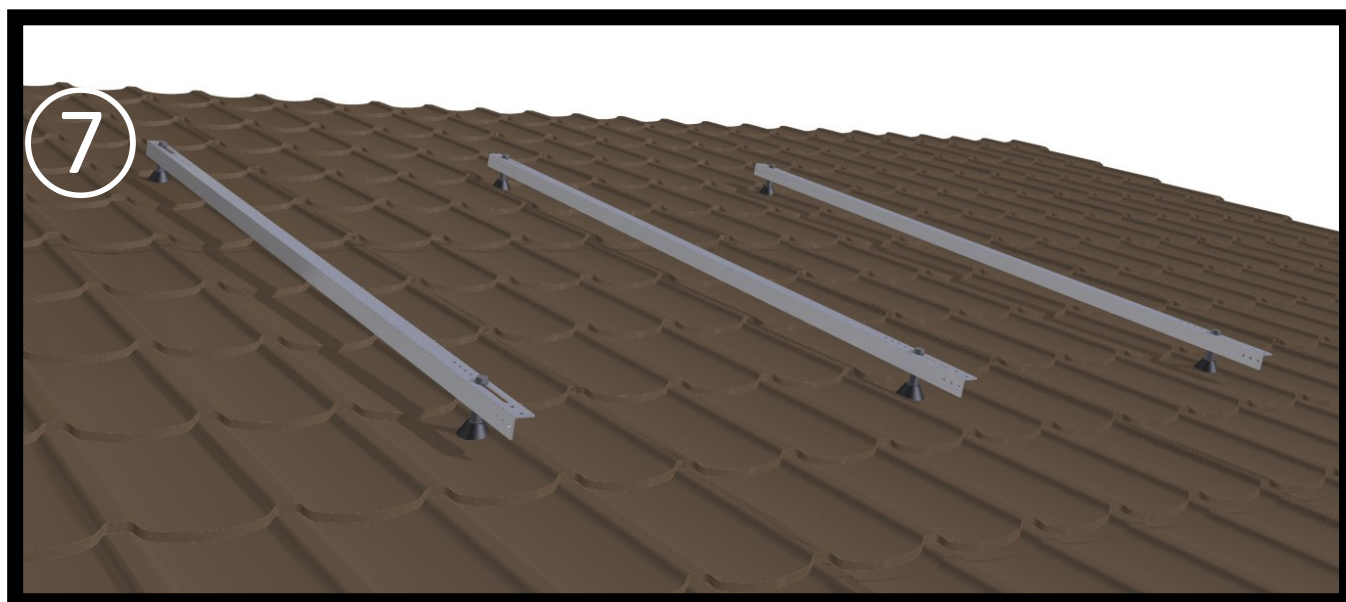
Instalace kombi šroubů

EN

Installation of combi screws

D

Kombischraubeninstallation



10

CZ

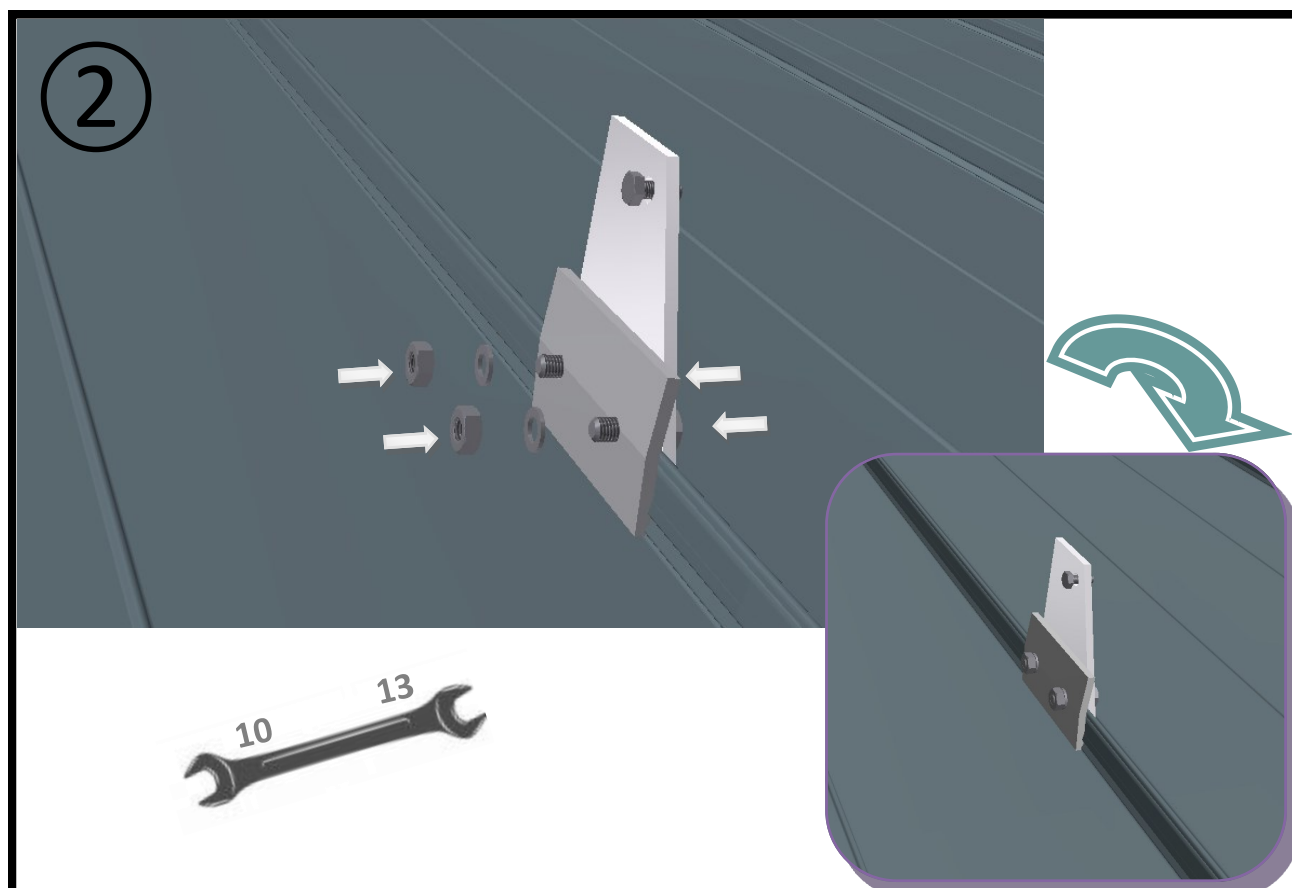
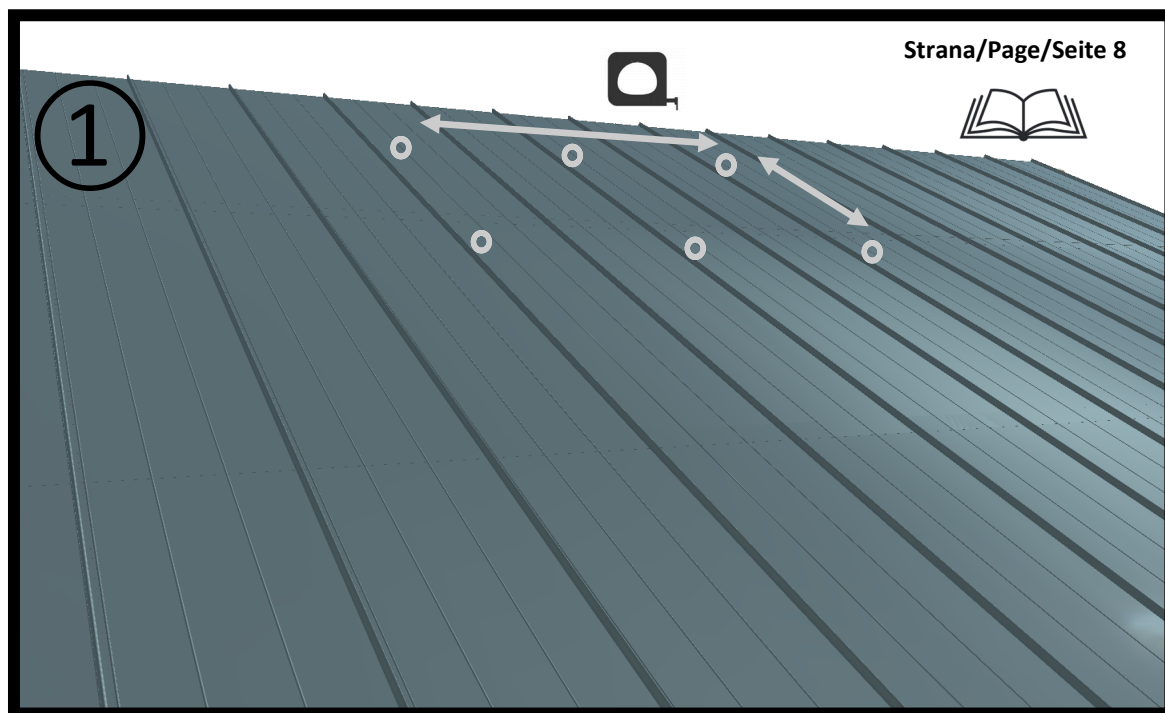
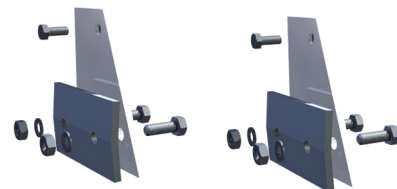
Instalace falcových příchytok

EN

Installation of flange clamps

D

Montage von Flanschschellen



10

CZ

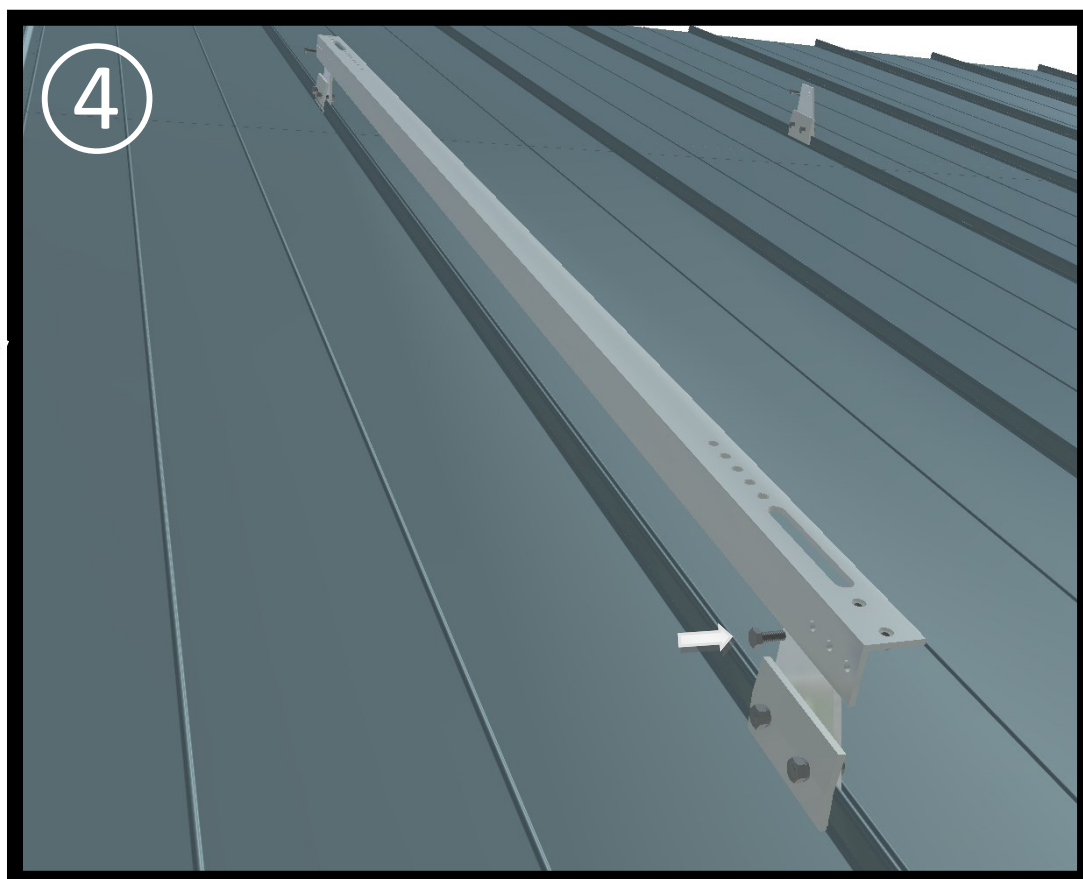
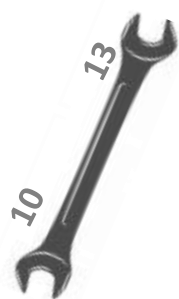
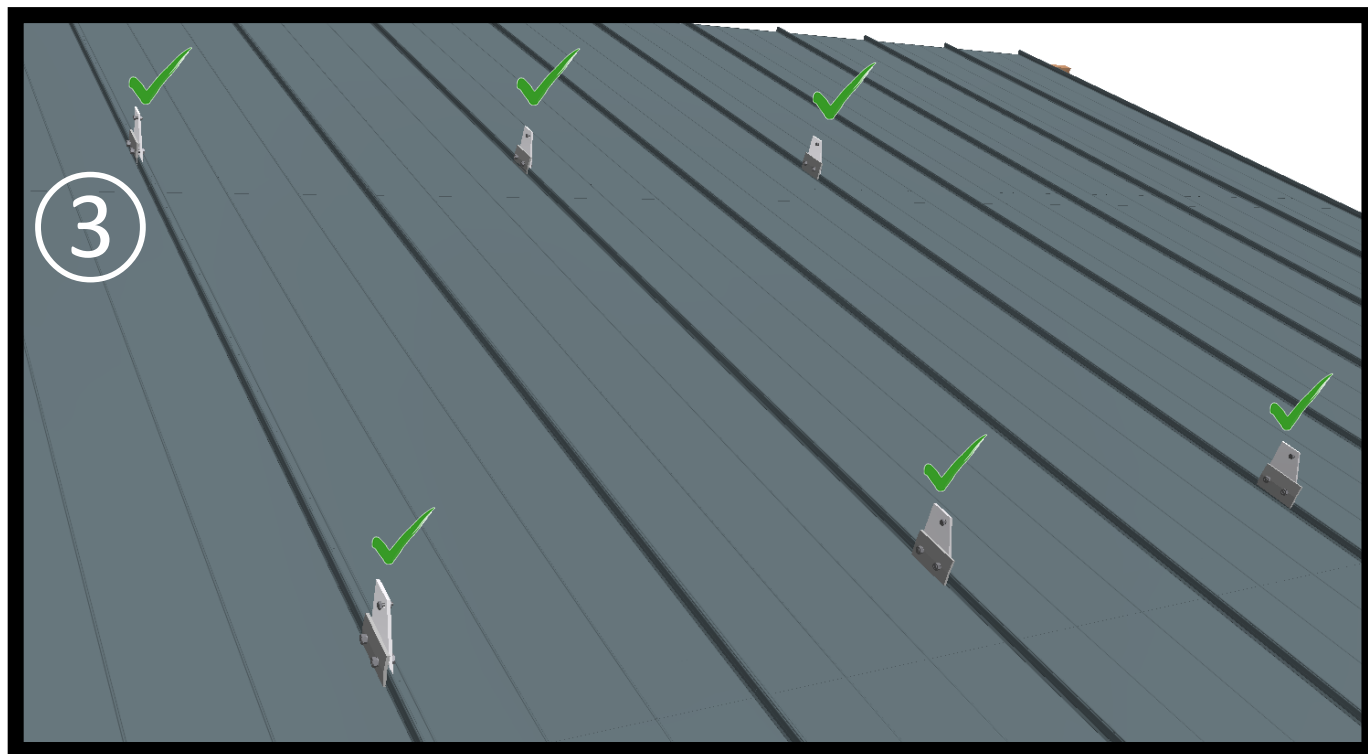
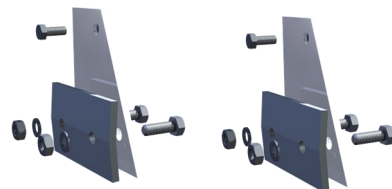
Instalace falcových příchytok

EN

Installation of flange clamps

D

Montage von Flanschschellen



10

CZ

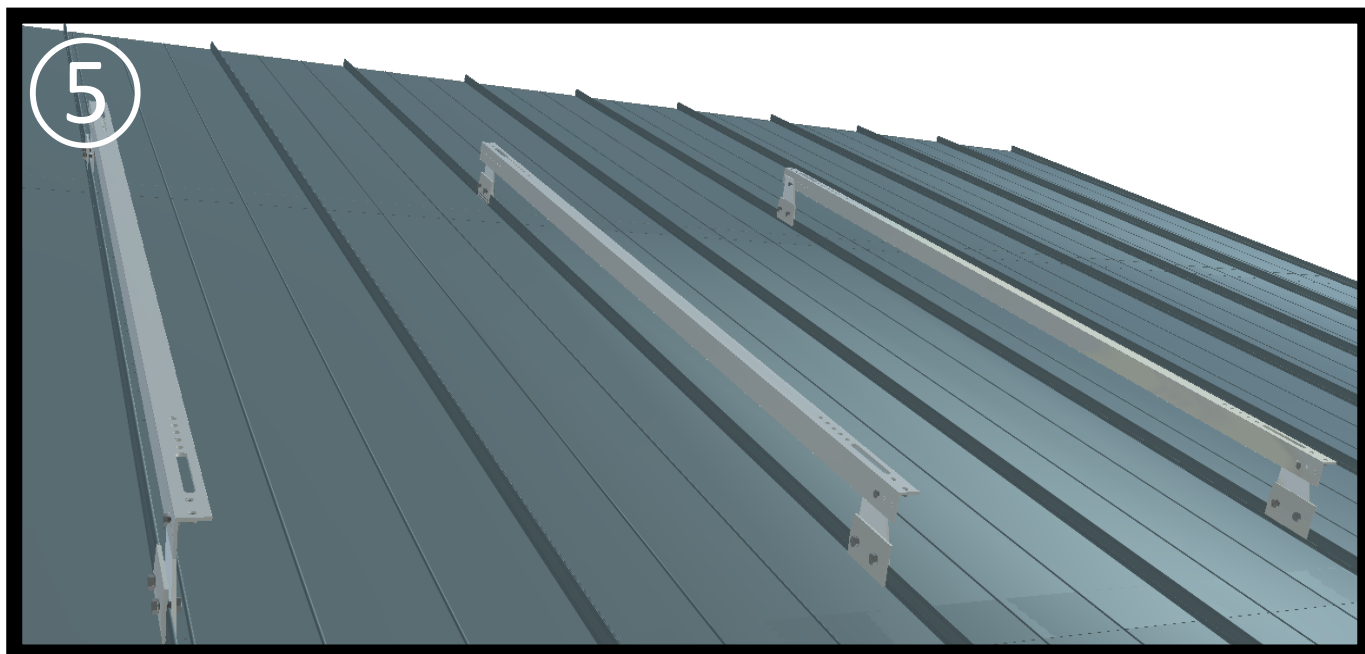
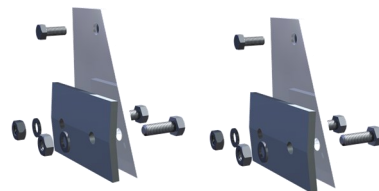
Instalace falcových příchytek

EN

Installation of flange clamps

D

Montage von Flanschsellen



1 1

CZ

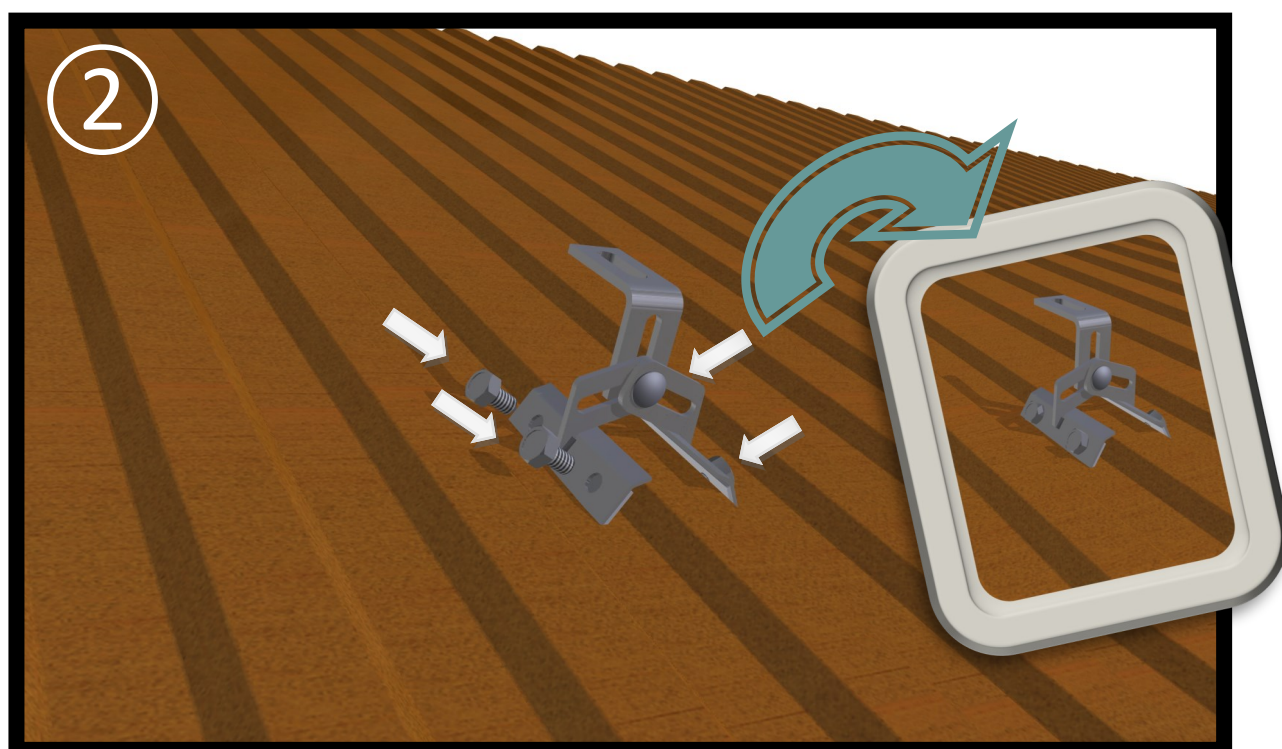
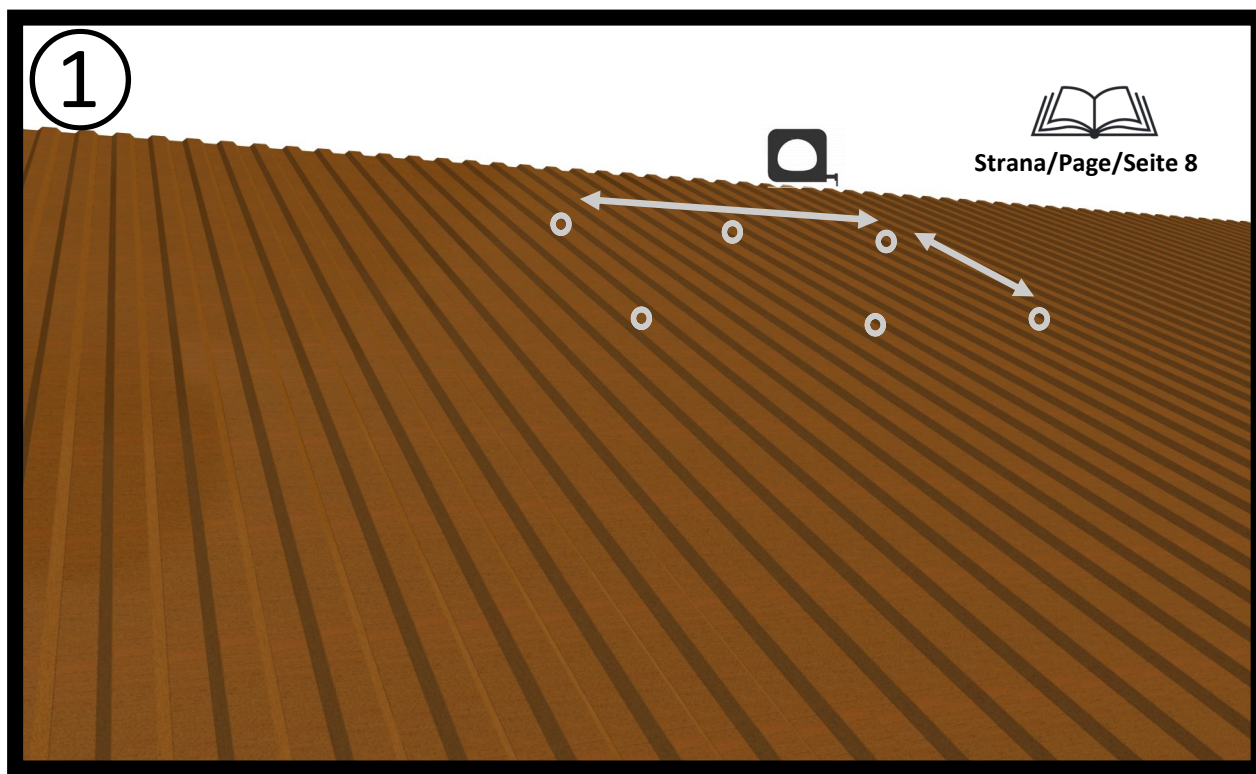
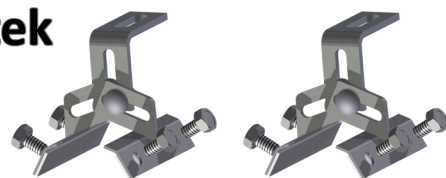
Instalace trapézových příchyttek

EN

Installation of trapezoidal brackets

D

Montage von Trapezhalterungen



1 1

CZ

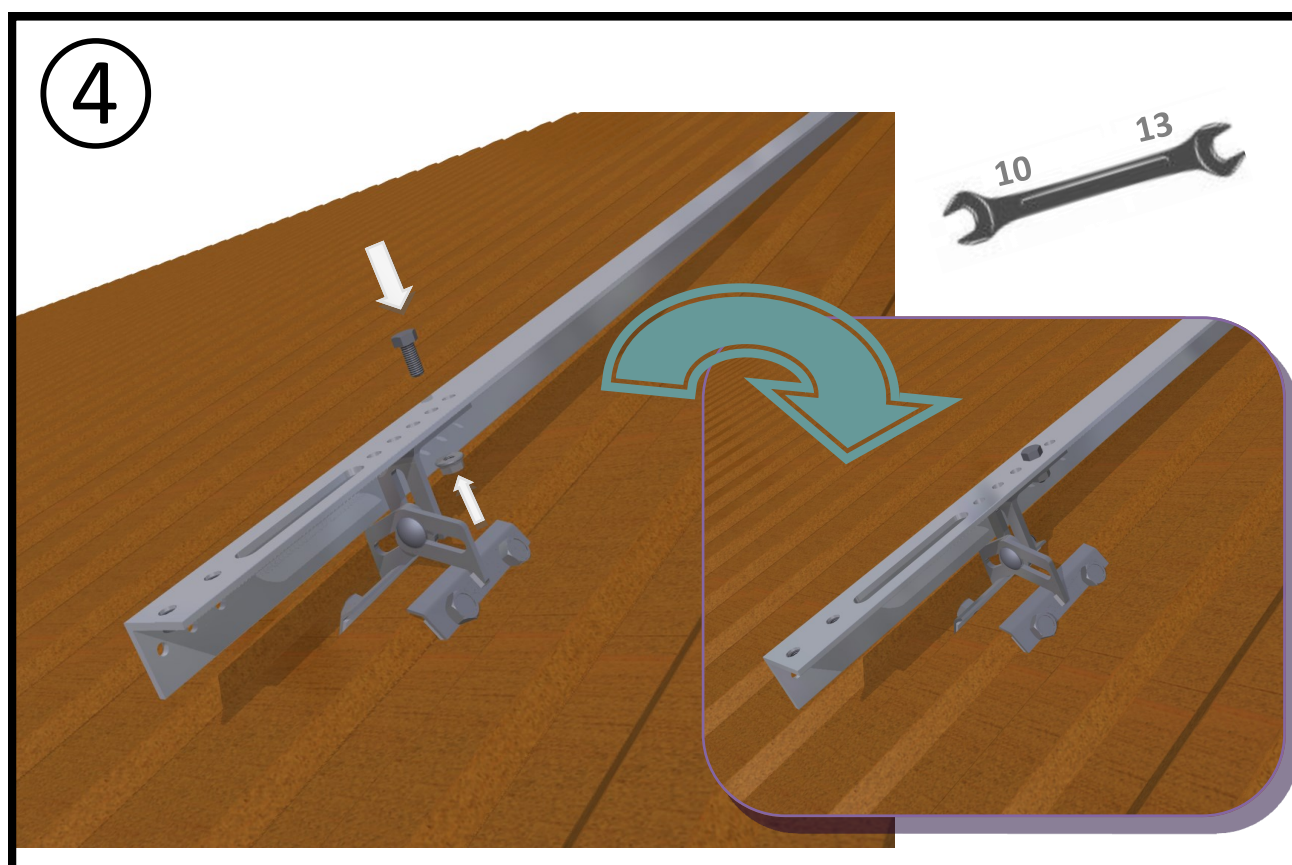
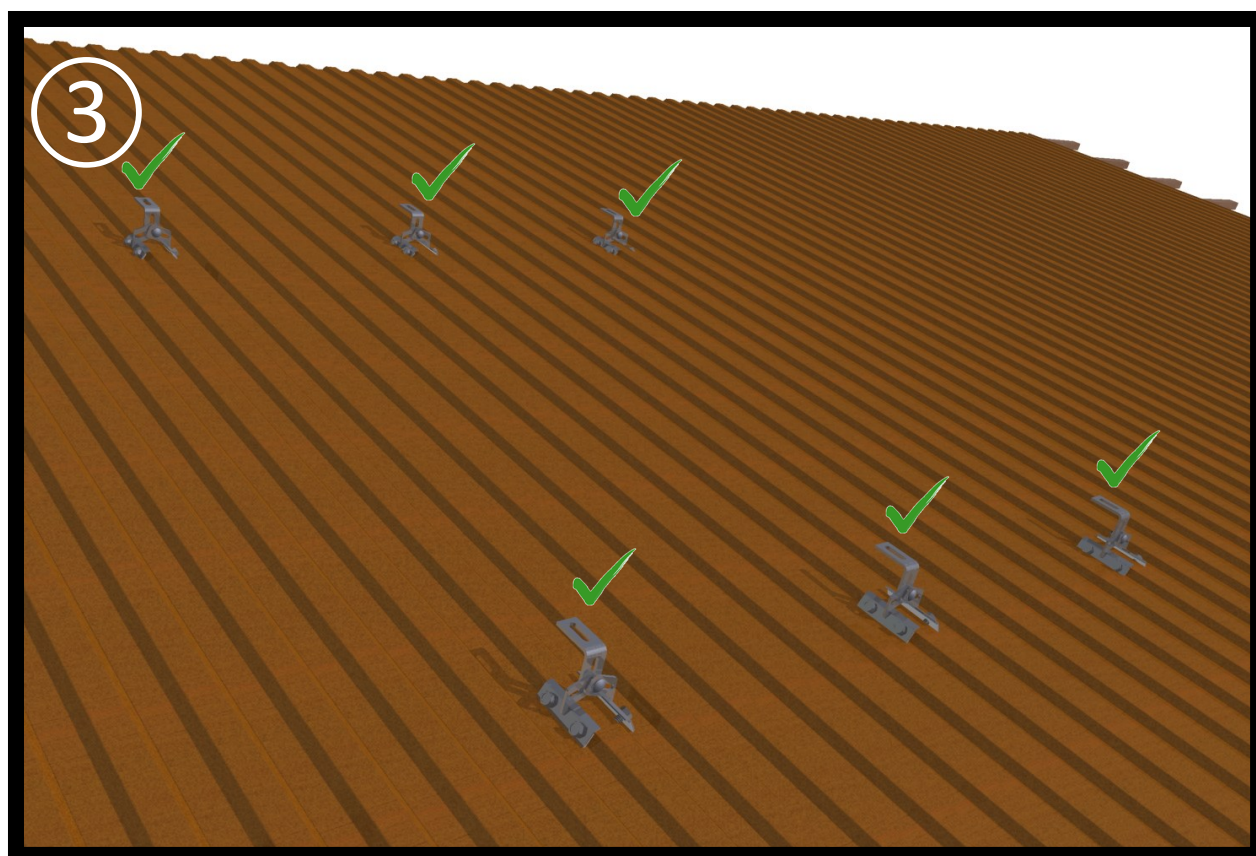
Instalace trapézových příchytek

EN

Installation of trapezoidal brackets

D

Montage von Trapezhalterungen



1 1

CZ

Instalace trapézových příchytek

EN

Installation of trapezoidal brackets

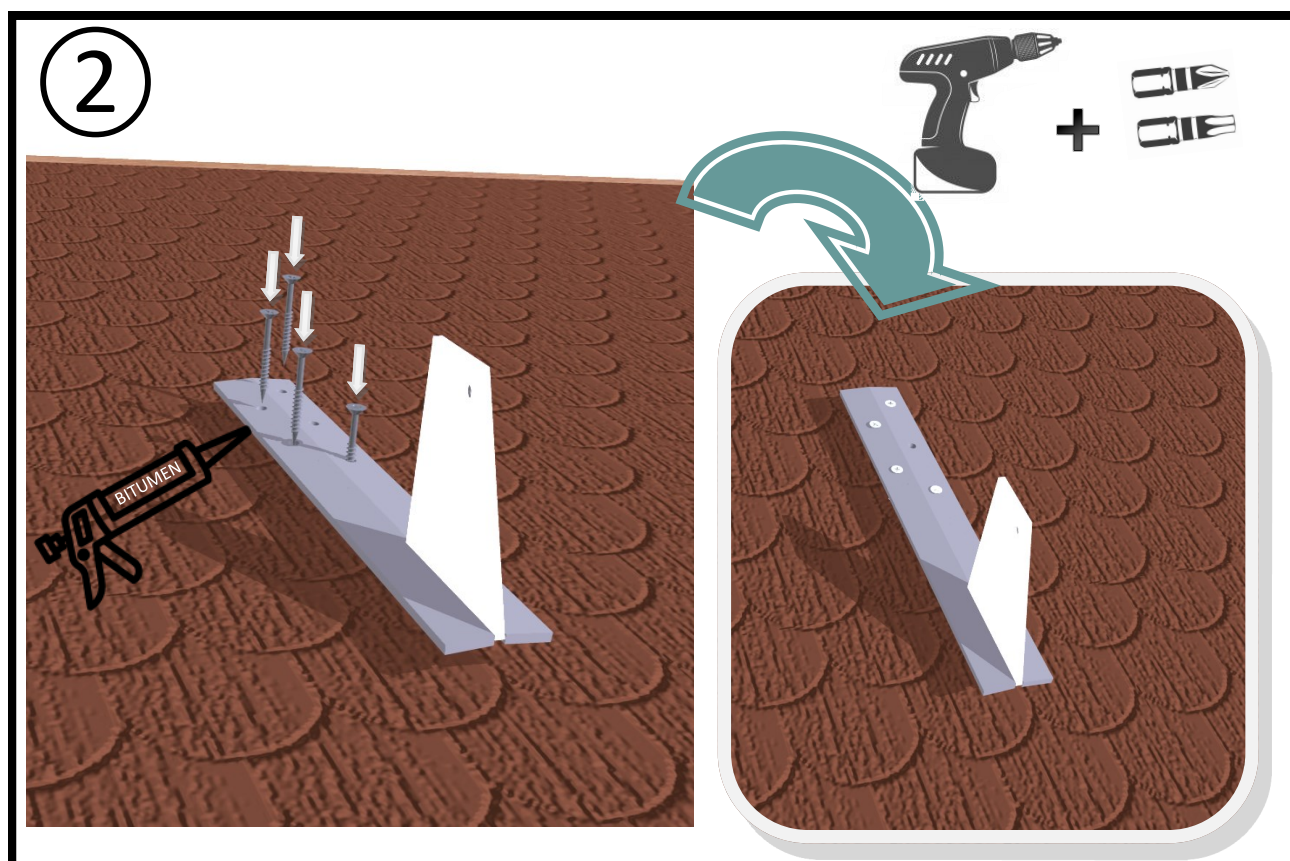
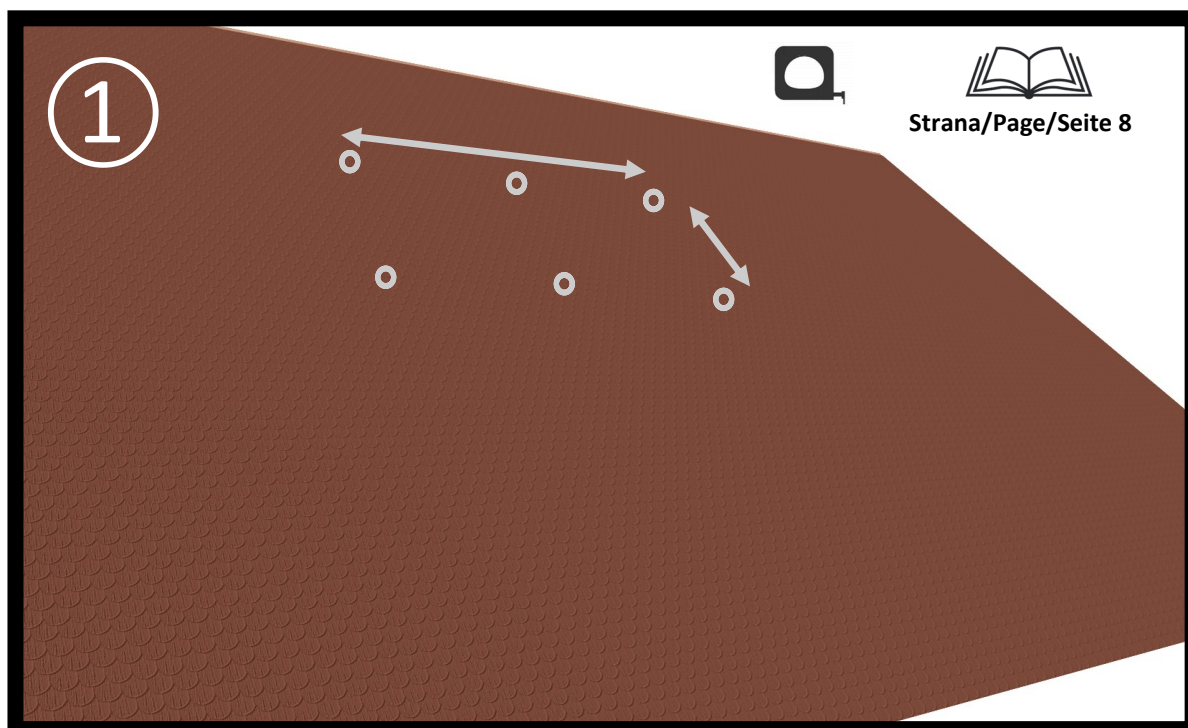
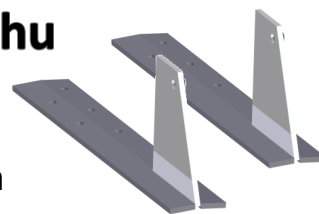
D

Montage von Trapezhalterungen



5



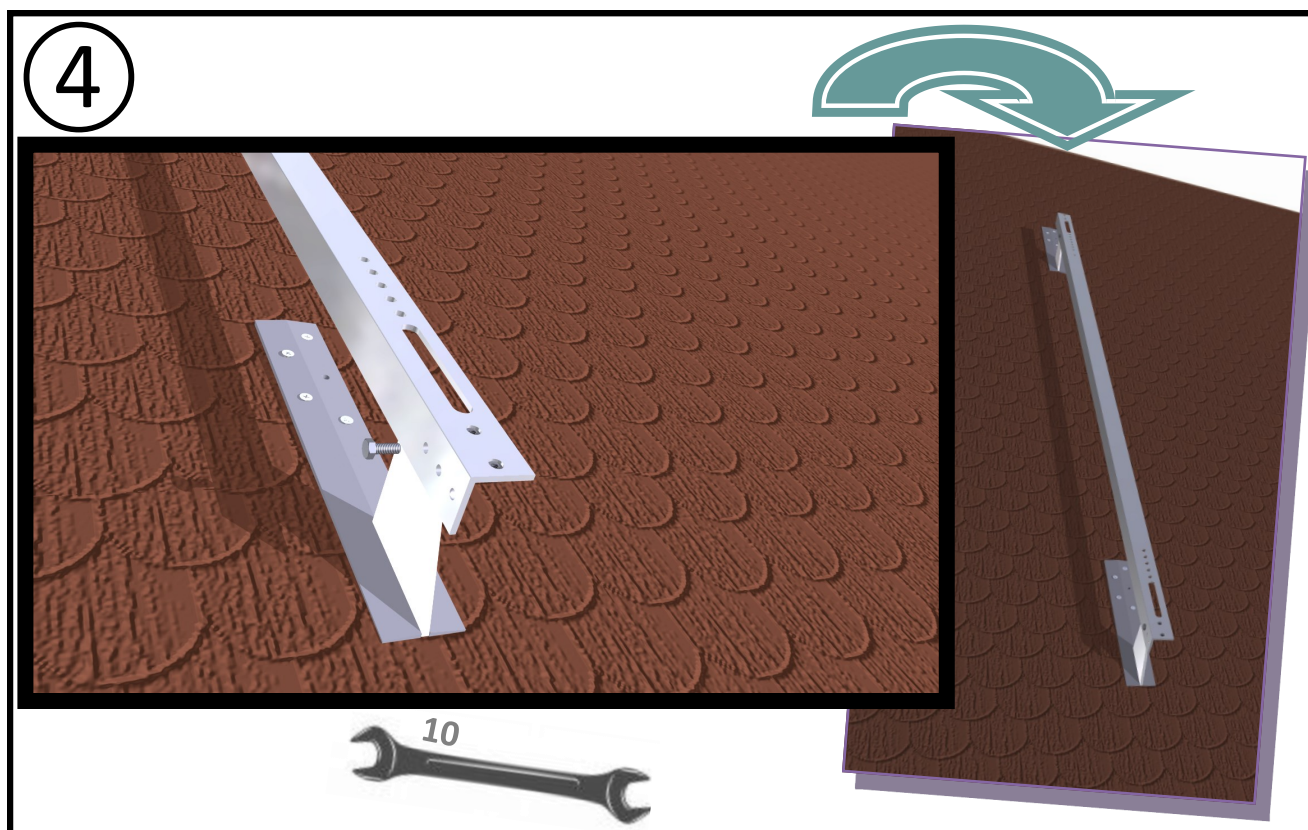
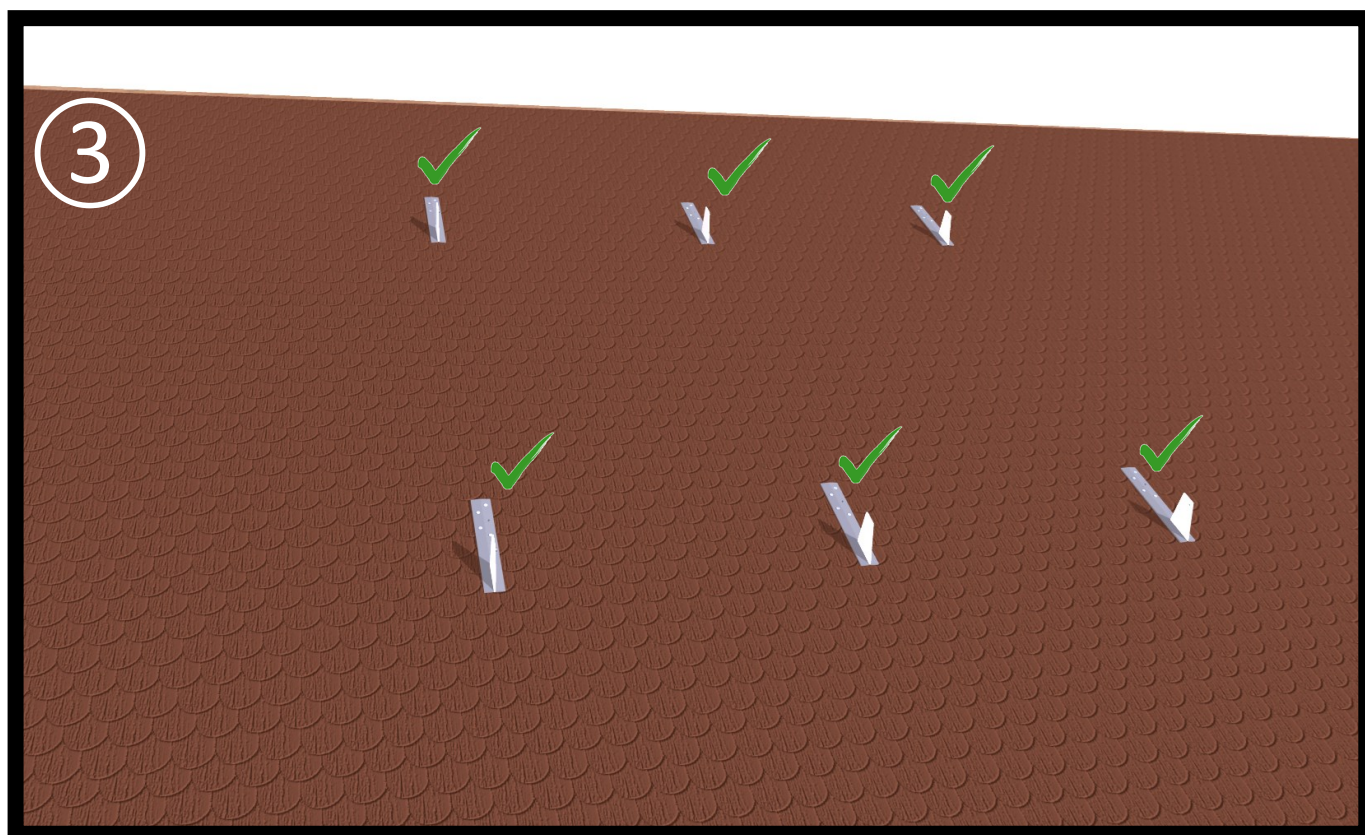
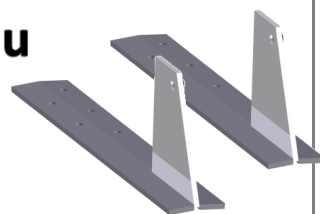


1 2

CZ Instalace háků na šindelovou střechu

EN Installation of a hook on a shingle roof

D Montage eines Hakens auf einem Schindeldach



12

CZ

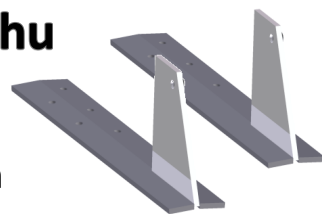
Instalace háků na šindelovou střechu

EN

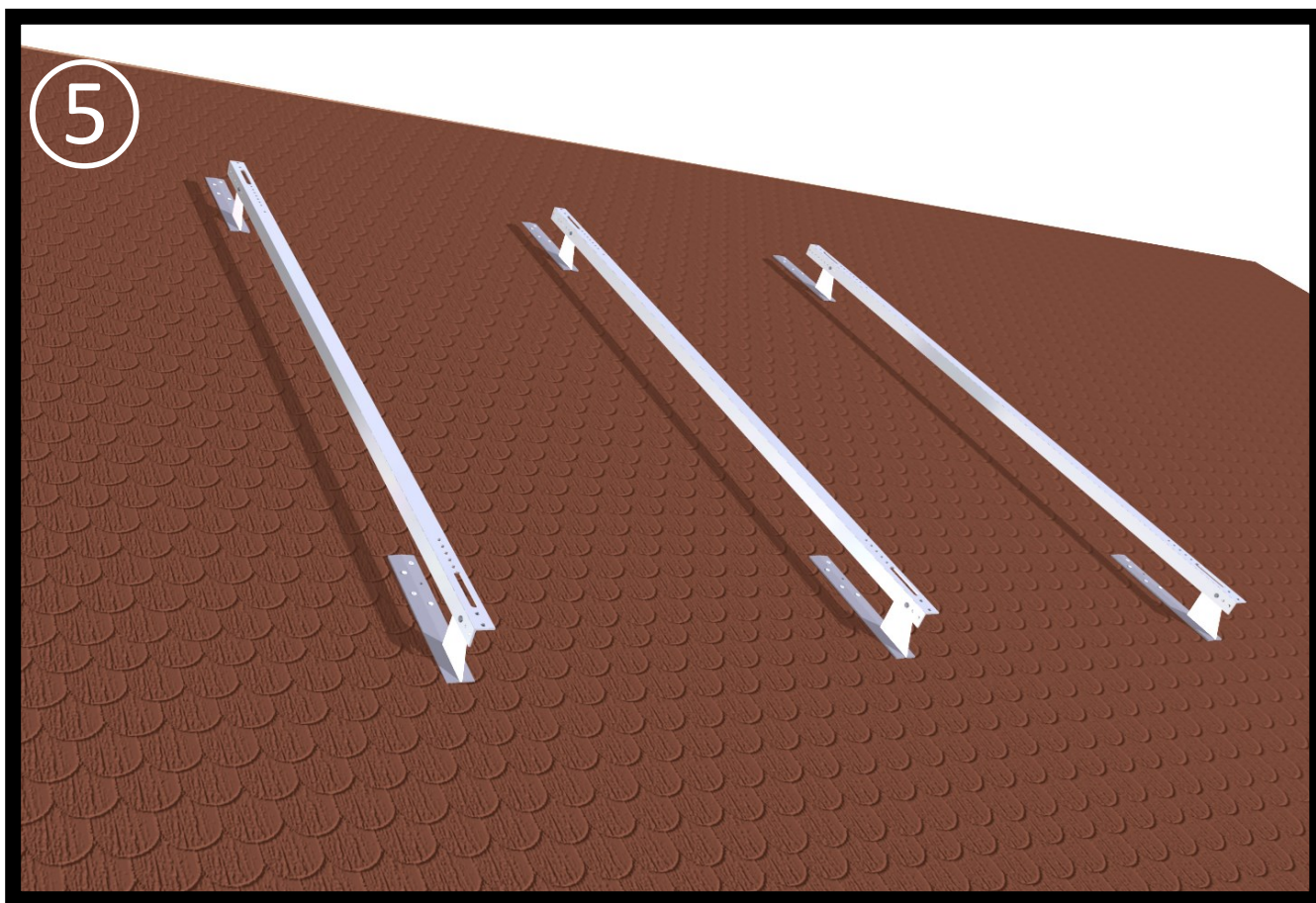
Installation of a hook on a shingle roof

D

Montage eines Hakens auf einem Schindeldach



5



13

CZ

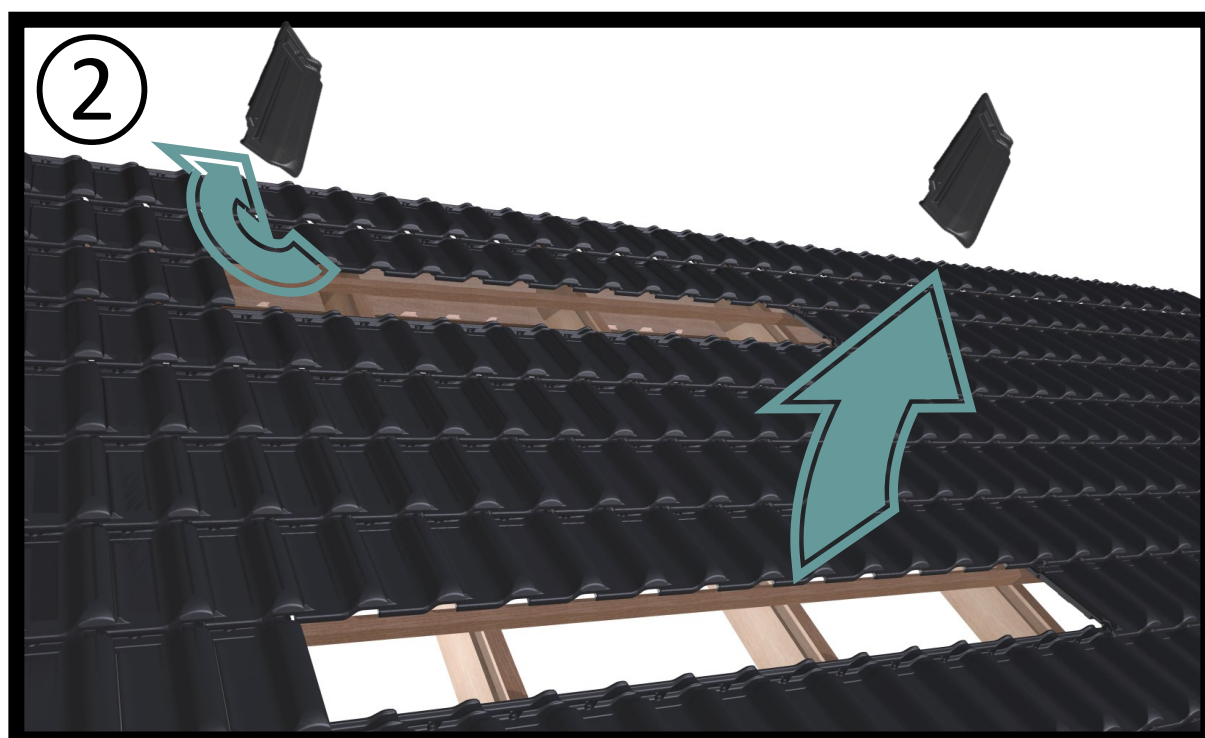
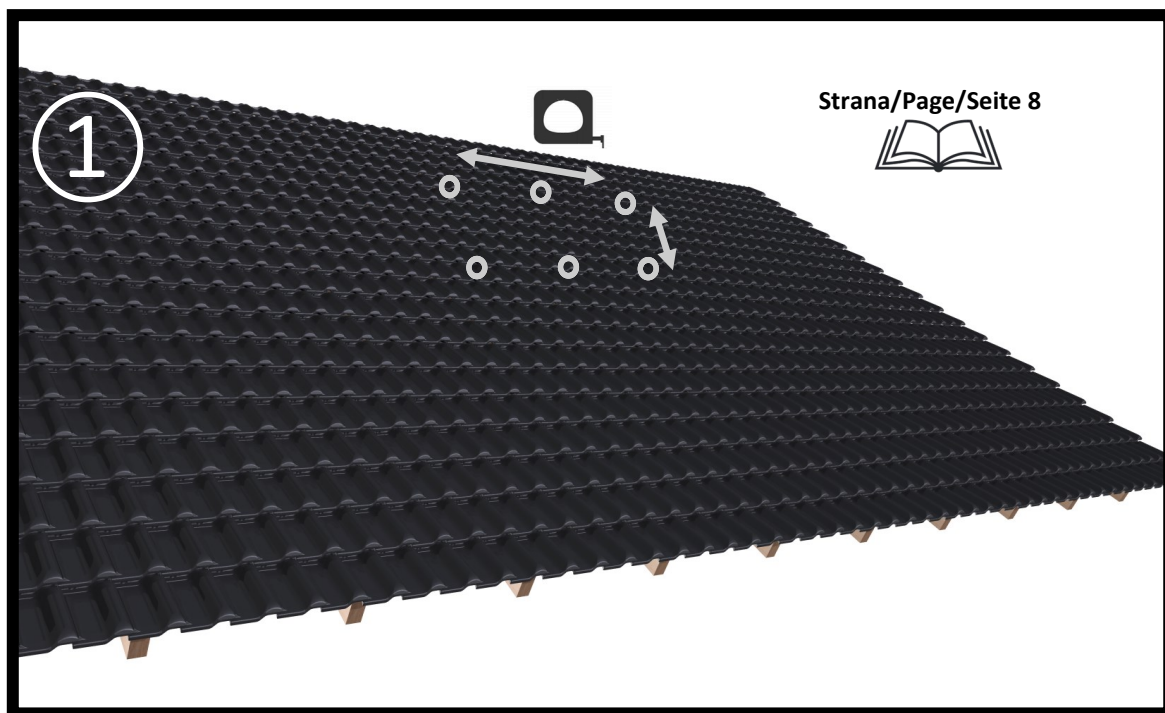
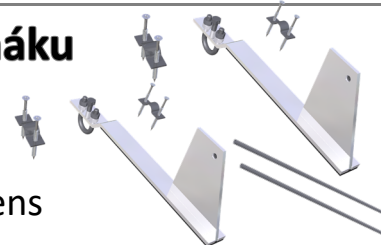
Instalace výškově nastavitelného háku

EN

Installation of a height-adjustable hook

D

Installation eines Höhenverstellbaren Hakens



13

CZ

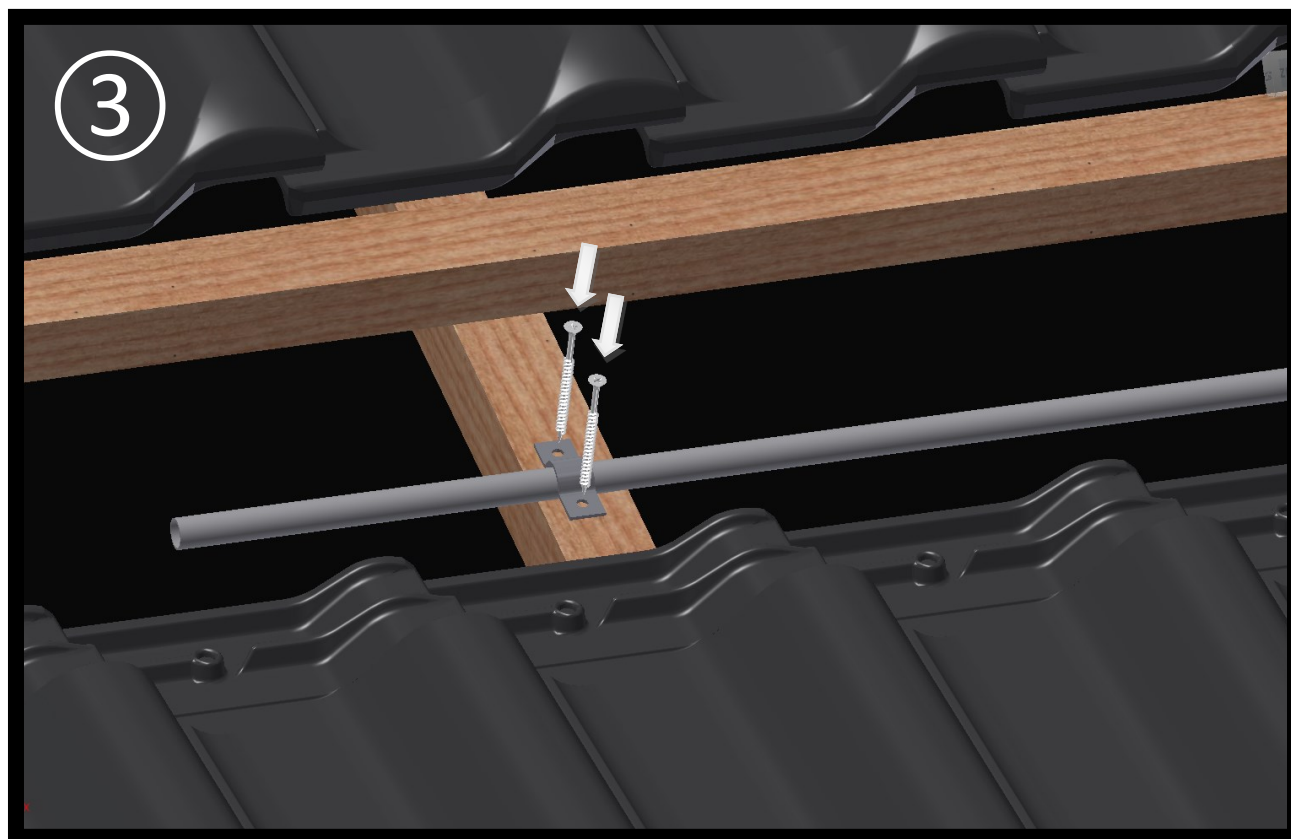
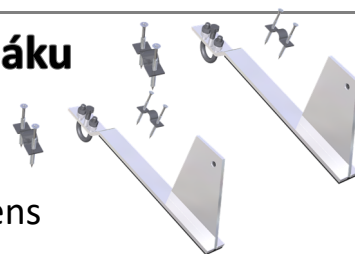
Instalace výškově nastavitelného háku

EN

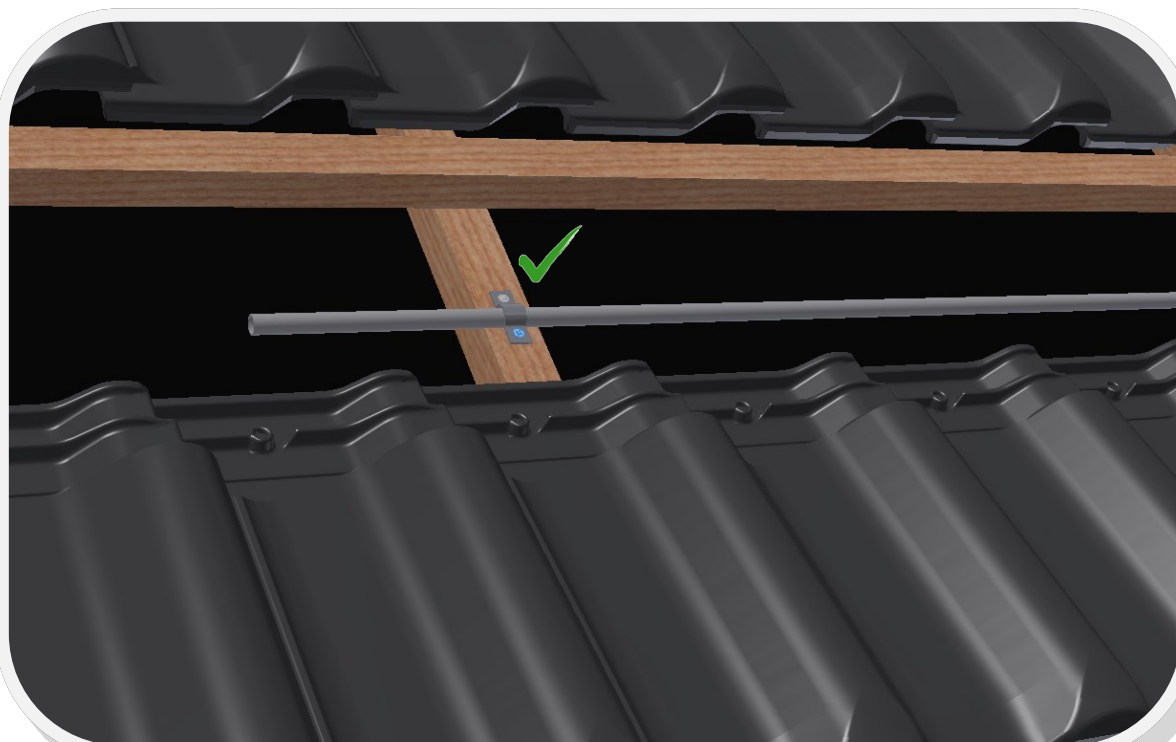
Installation of a height-adjustable hook

D

Installation eines Höhenverstellbaren Hakens

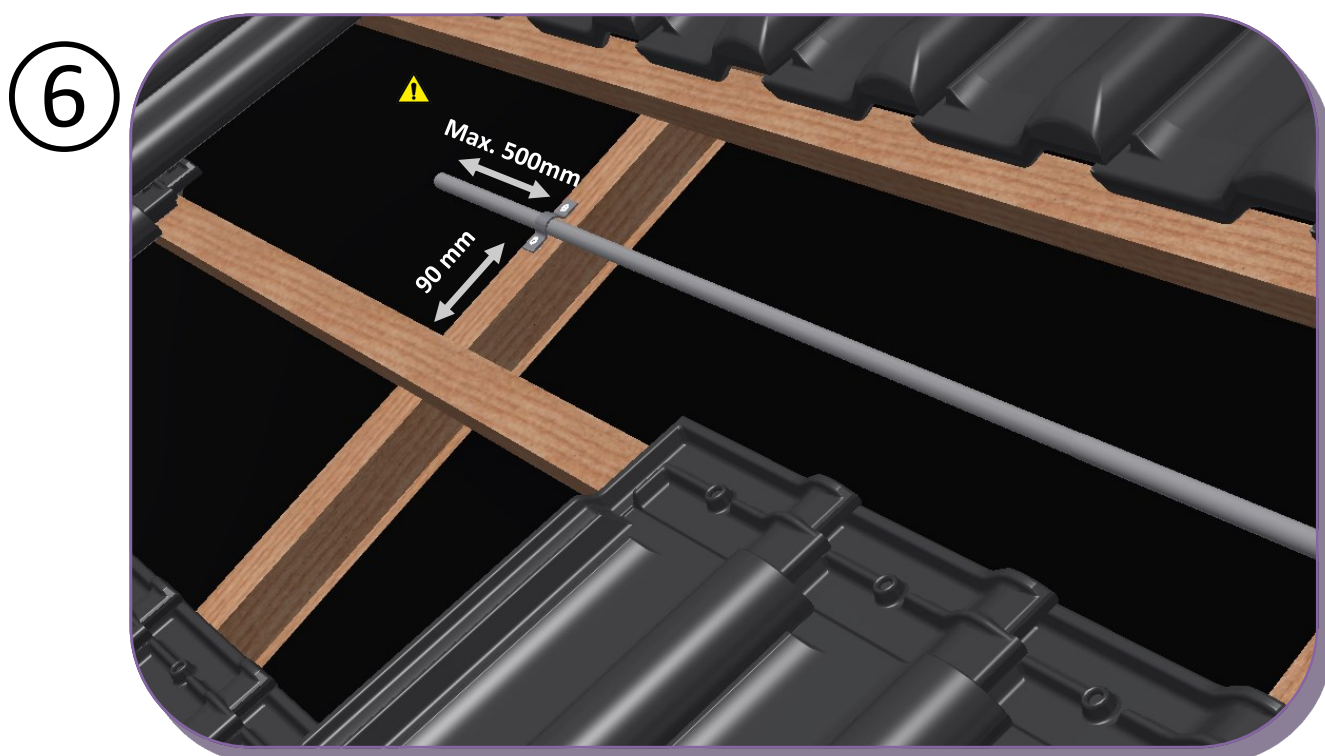
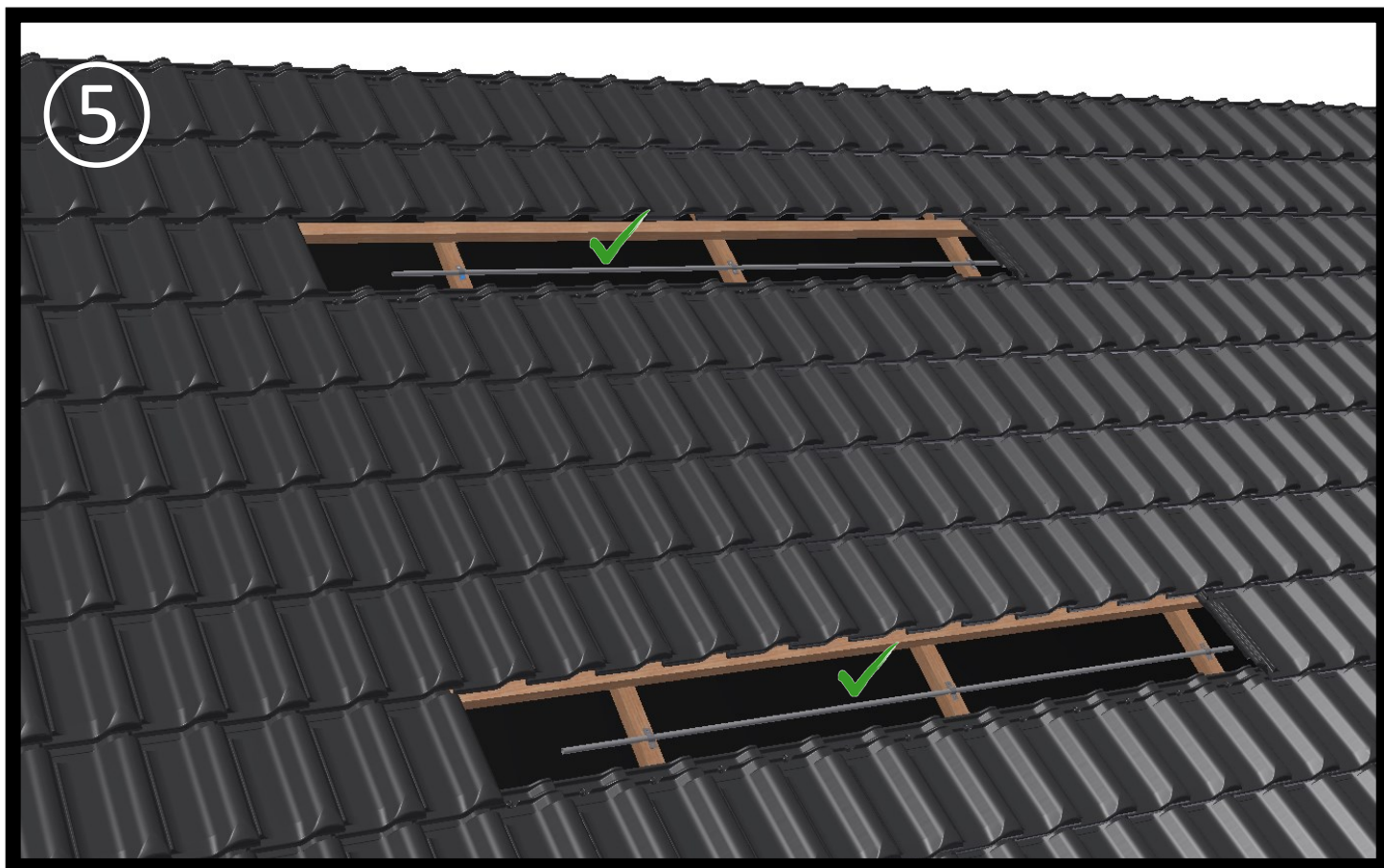
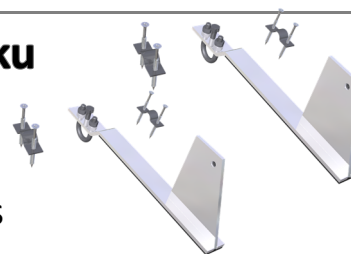


④



13

- CZ** Instalace výškově nastavitelného háku
- EN** Installation of a height-adjustable hook
- D** Installation eines Höhenverstellbaren Hakens

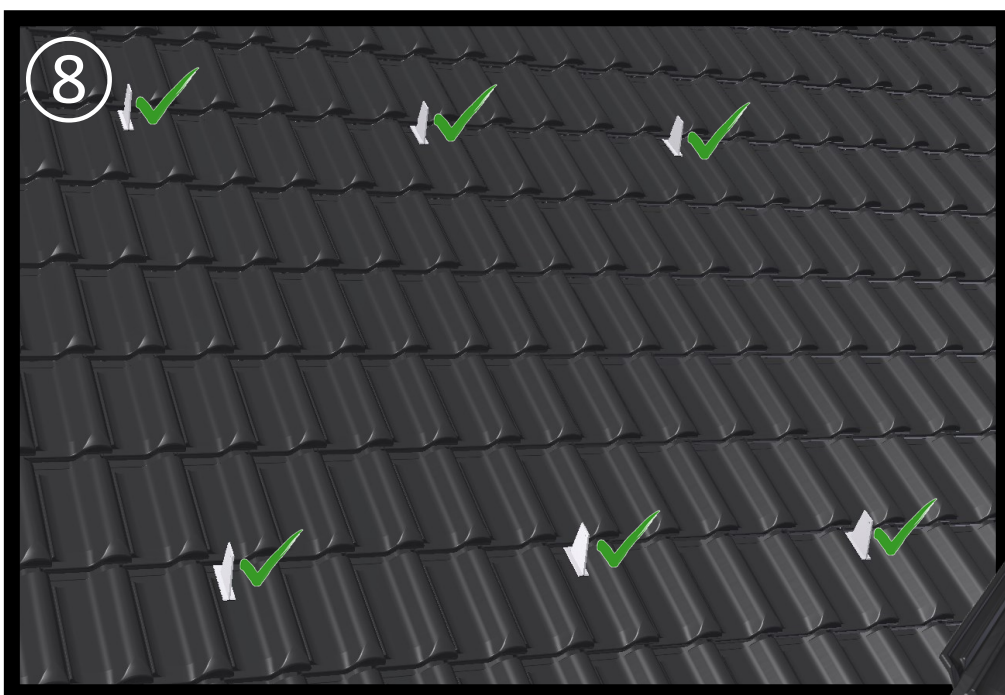
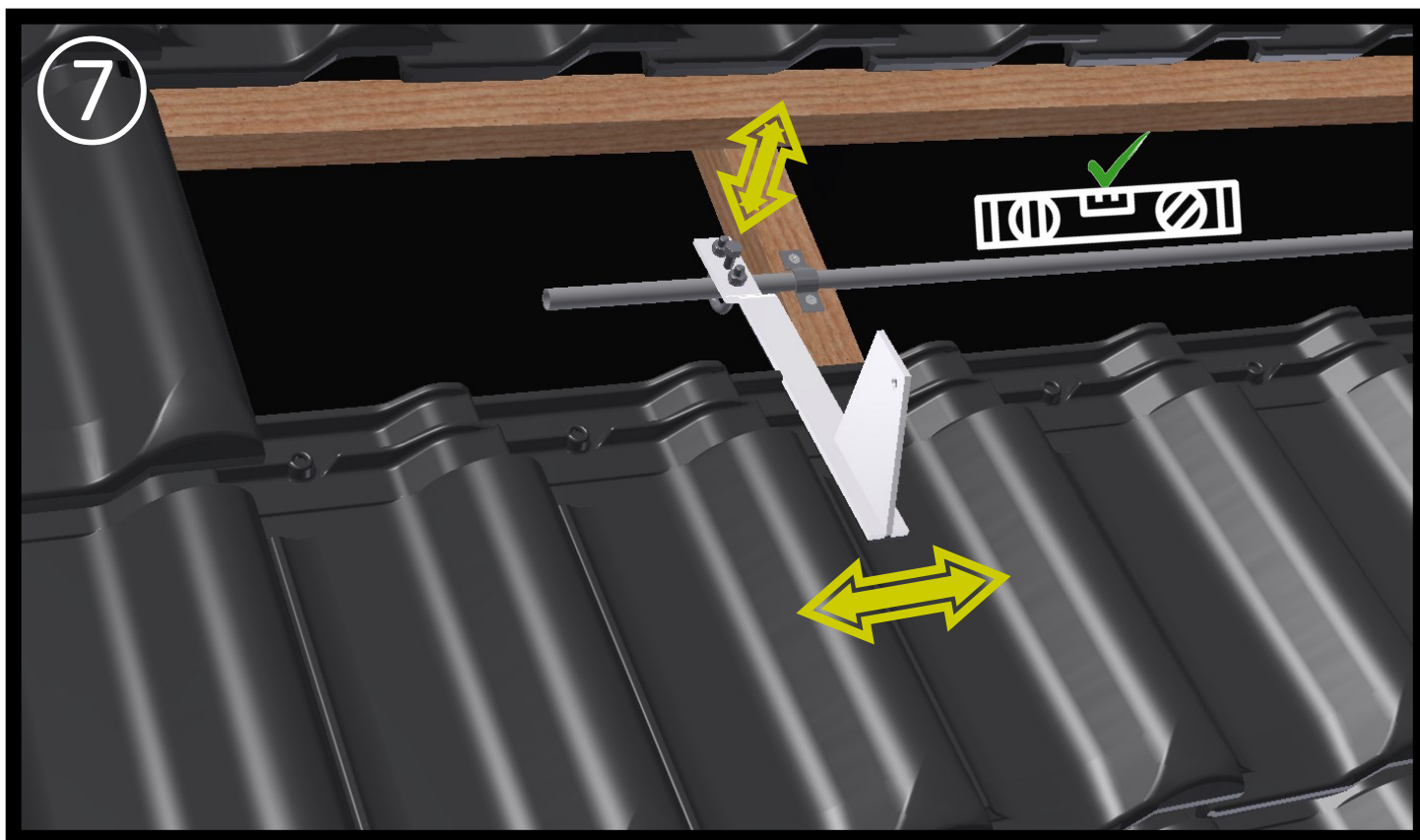
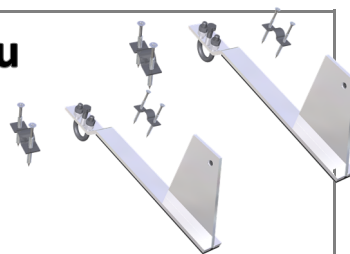


13

CZ Instalace výškově nastavitelného háku

EN Installation of a height-adjustable hook

D Installation eines Höhenverstellbaren Hakens



• U některých typů střešní krytiny je potřeba vybroušení krytiny, aby vznikl dostatečný prostor mezi hákem a střešní krytinou.

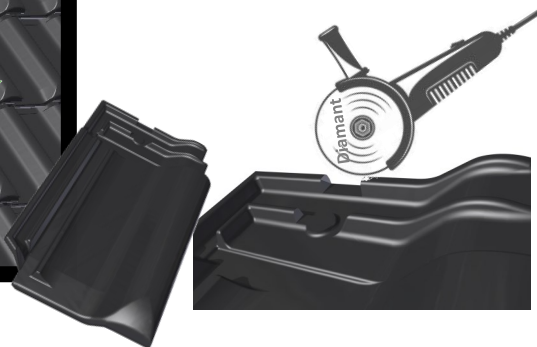
SK

• Some types of roofing require sanding of the roofing to create enough space between the hooks and the roofing.

EN

• Bei einigen Arten von Dacheindeckungen muss die Dacheindeckung geschliffen werden, um genügend Platz zwischen den Haken und der Dacheindeckung zu schaffen.

D



13

CZ

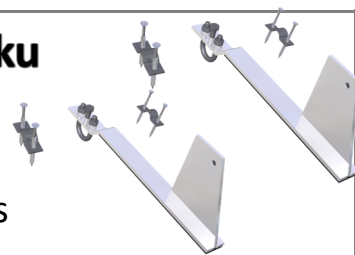
Instalace výškově nastavitelného háku

EN

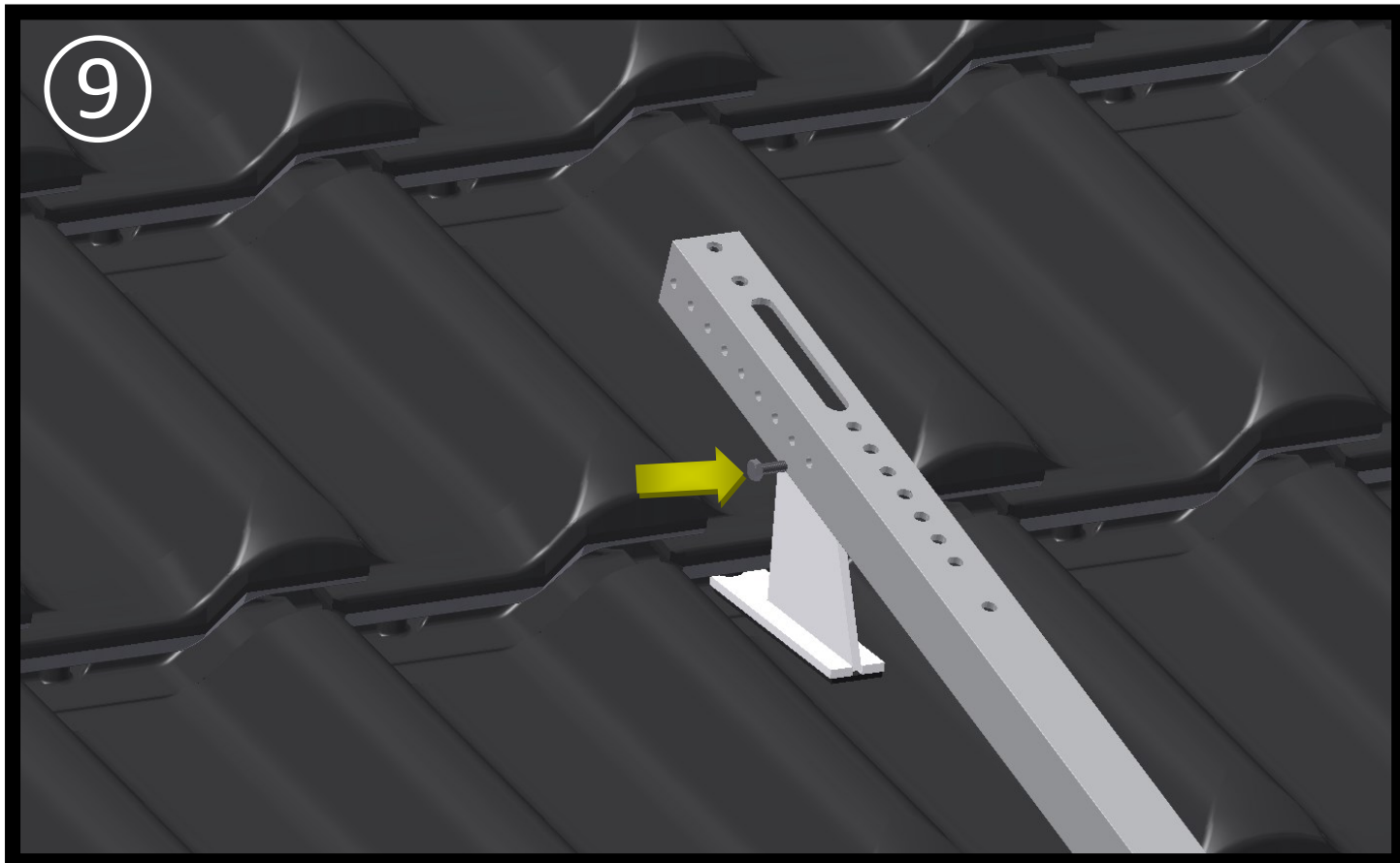
Installation of a height-adjustable hook

D

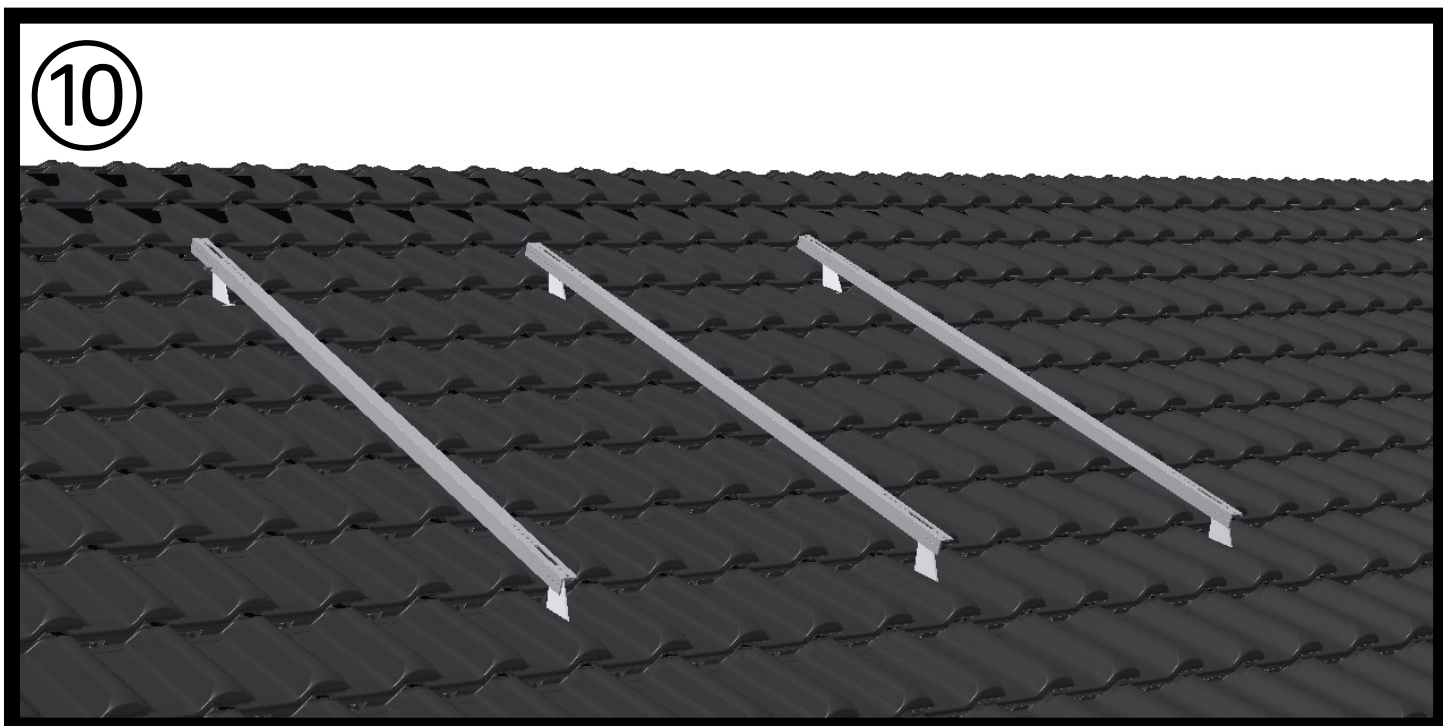
Installation eines Höhenverstellbaren Hakens



⑨



⑩



14

CZ

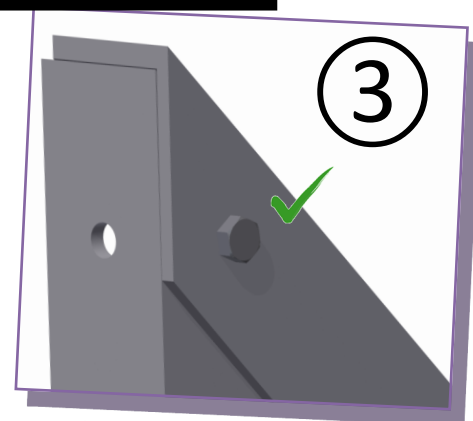
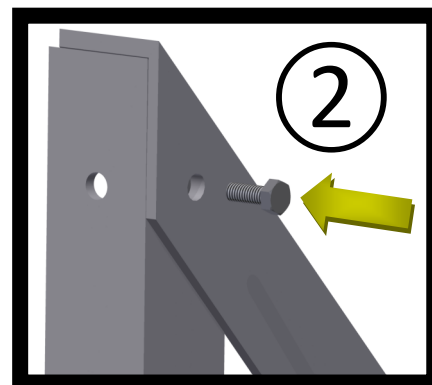
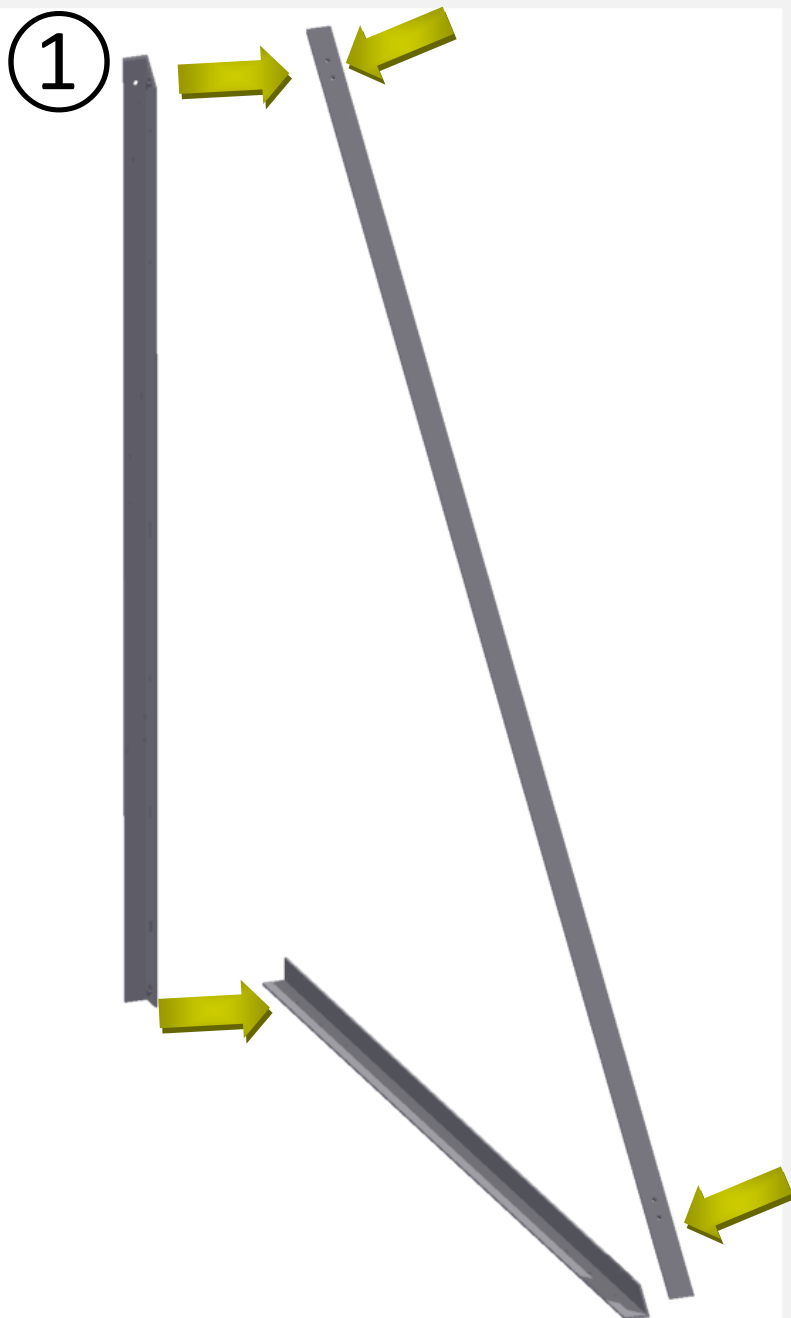
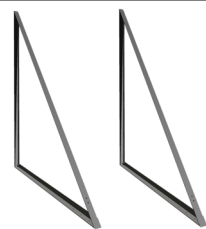
Instalace konstrukce na rovnou střechu /stěnu

EN

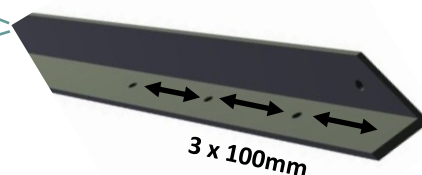
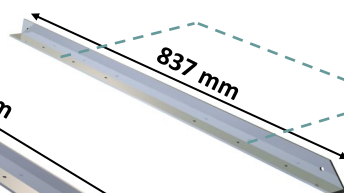
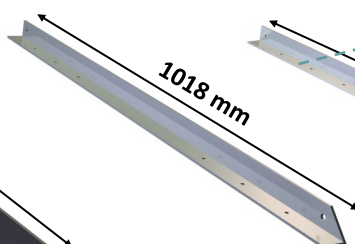
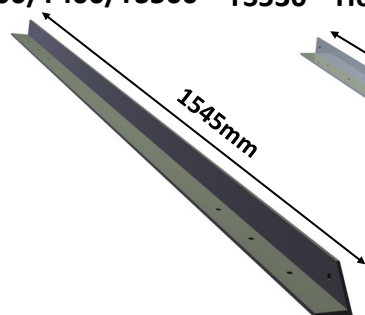
Installation of the structure on a flat roof/wall

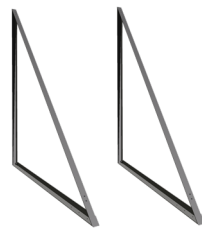
D

Installation der Konstruktion auf einem Flachdach/einer Flachwand

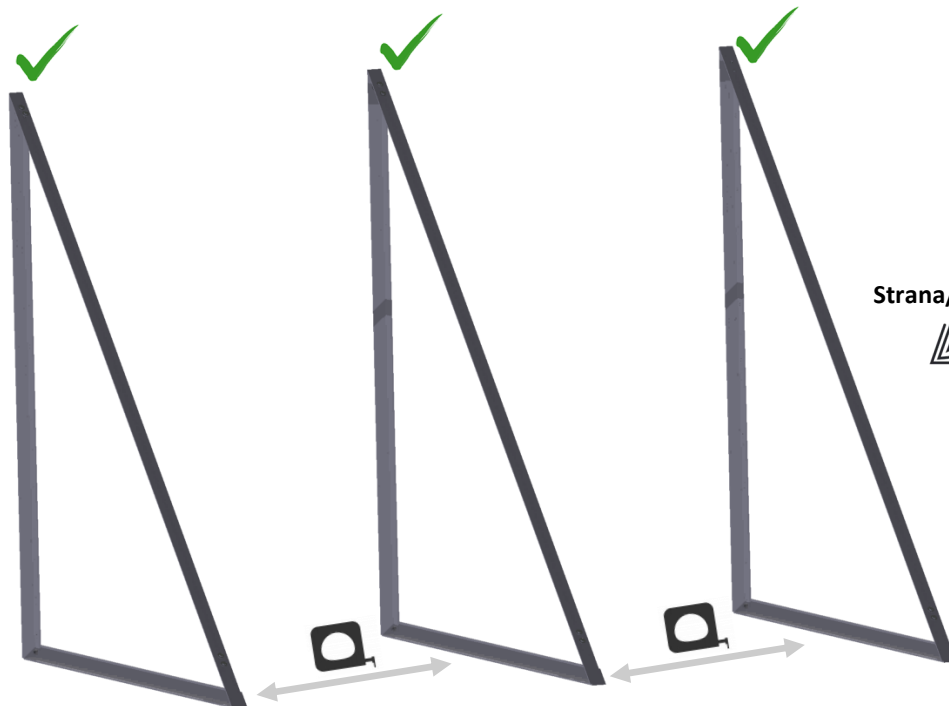


TS300/T400/TS500 TS530—Horizontal TS330—Horizontal





④

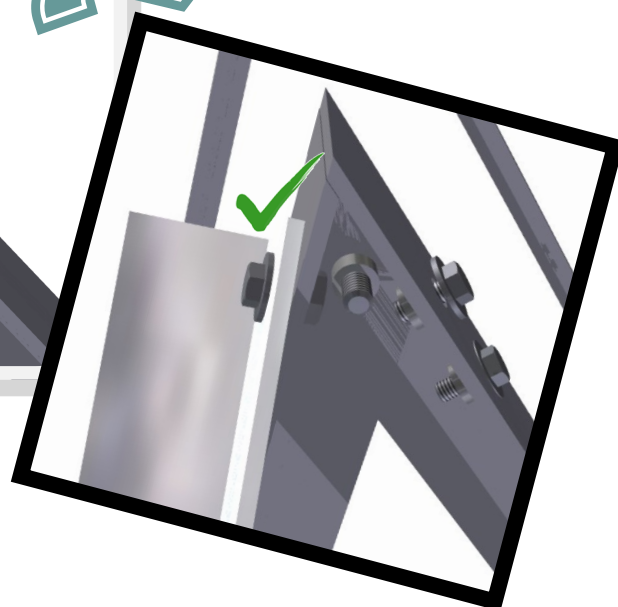
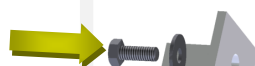


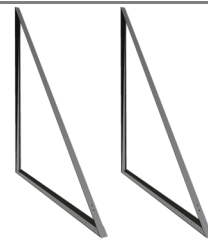
Strana/Page/Seite 8



13

⑤

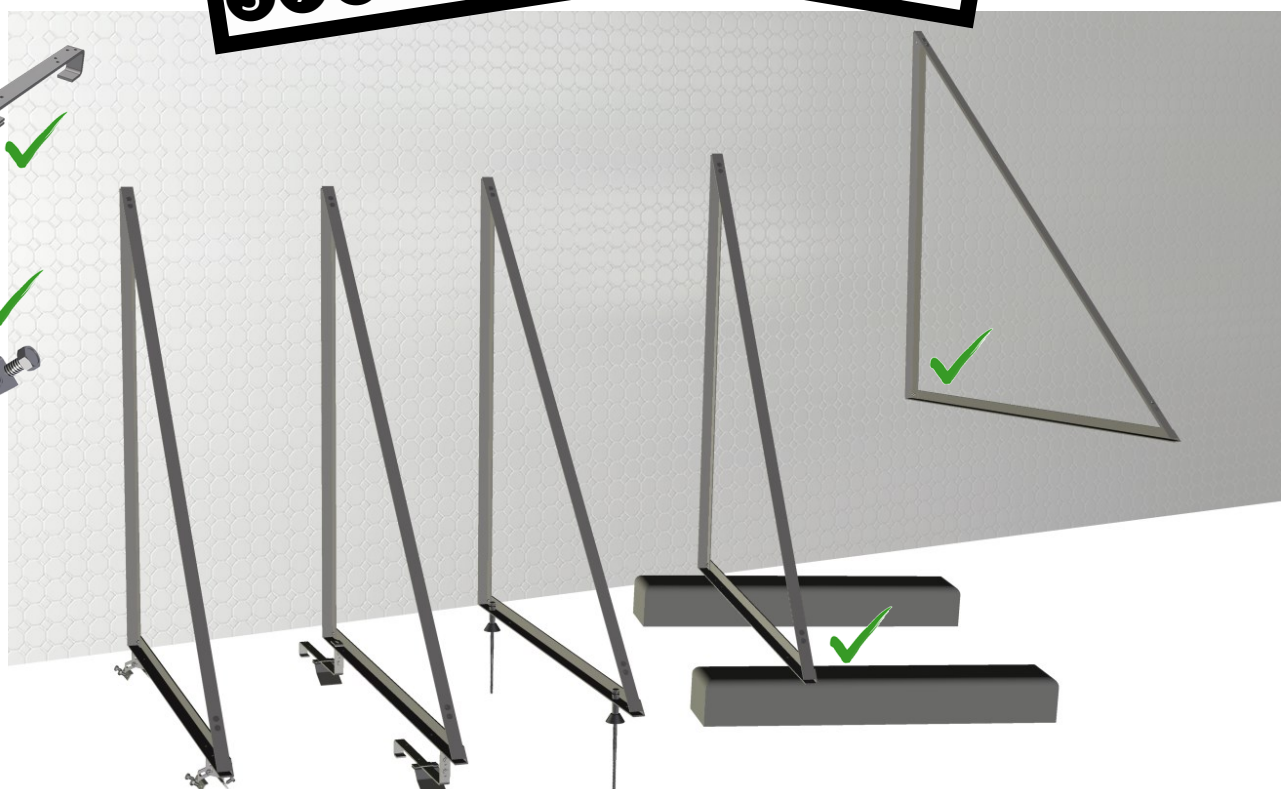
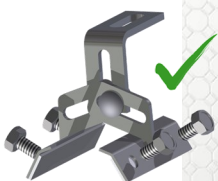
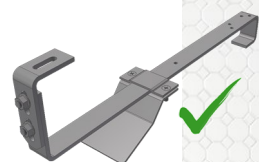
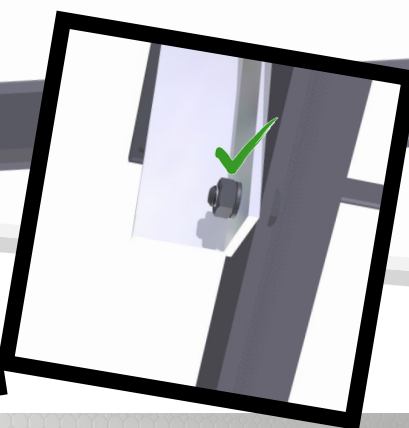
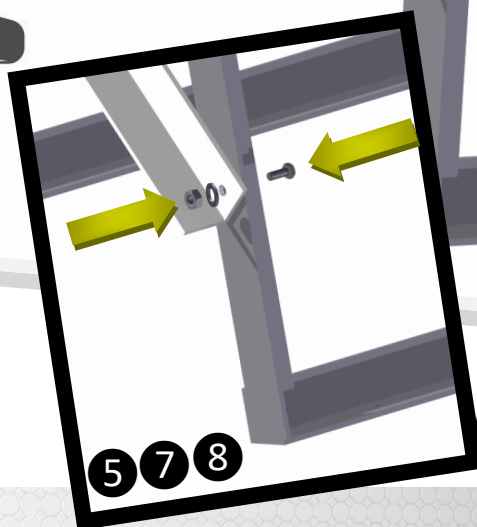


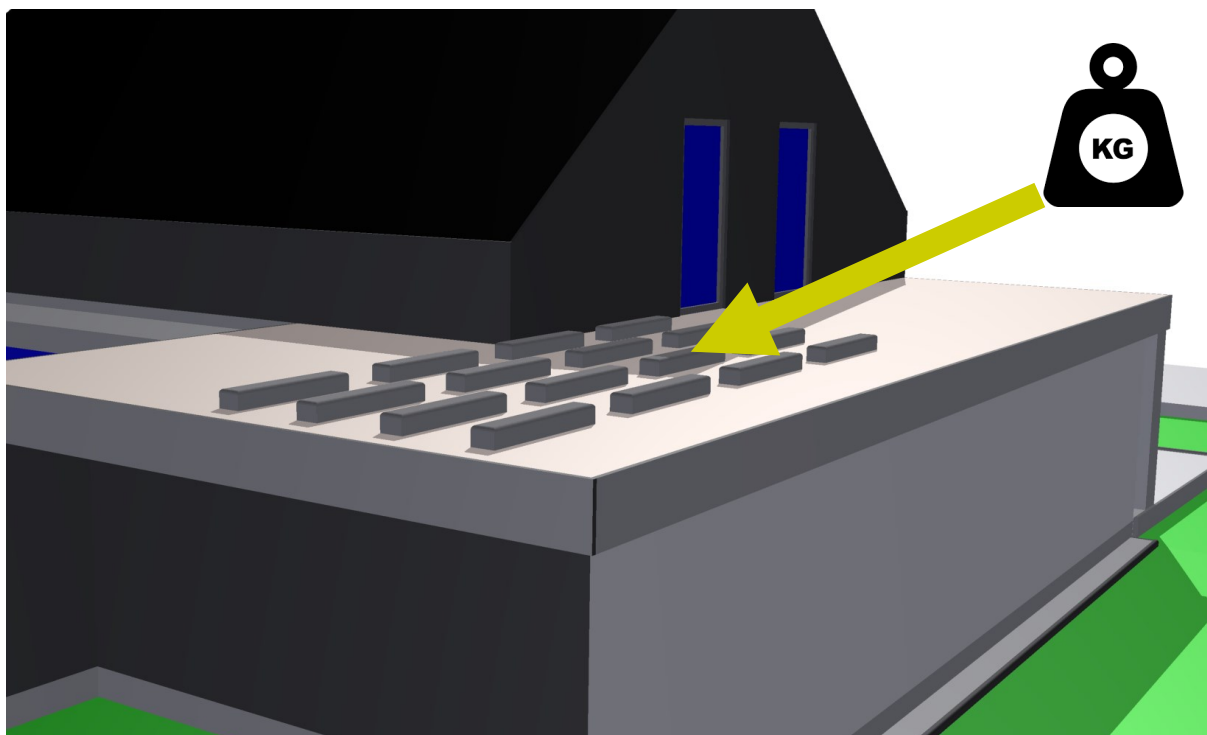
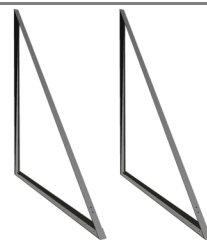


⑥



+ Ø8,5





CZ

Jakmile se kolektorové pole nedá upevnit přímo na spodní střešní konstrukci, musí se pro zabezpečení stability, vůči tlaku větru, nosná konstrukce zatížit kontrahmotou (balastem) s dostatečnou protiváhou (ŽB bloky, ocelová konstrukce apod.). Potřebná hmotnost kontrahmoty musí být stanovená pro konkrétní instalaci odborníkem v oblasti statiky staveb. Výrobce nenese žádnou odpovědnost za škody způsobené nesprávným návrhem.

EN

If the collector field cannot be attached directly to the lower roof structure, to ensure stability against wind pressure, the supporting structure must be loaded with a counterweight (ballast) with a sufficient counterweight (RC blocks, steel structure, etc.). The necessary weight of the counterweight must be determined for a specific installation by an expert in the field of building statics. The manufacturer bears no responsibility for damages caused by incorrect design.

D

Kann das Kollektorfeld nicht direkt an der unteren Dachkonstruktion befestigt werden, muss zur Gewährleistung der Standfestigkeit gegen Winddruck die Tragkonstruktion mit einem Gegengewicht (Ballast) mit ausreichendem Gegengewicht (Eisenbeton Klötze, Stahlkonstruktion etc.) belastet werden. Das erforderliche Gewicht des Gegengewichts muss anlagenspezifisch durch einen Sachverständigen für Baustatik ermittelt werden. Der Hersteller übernimmt keine Verantwortung für Schäden, die durch falsche Konstruktion verursacht werden.

15

CZ

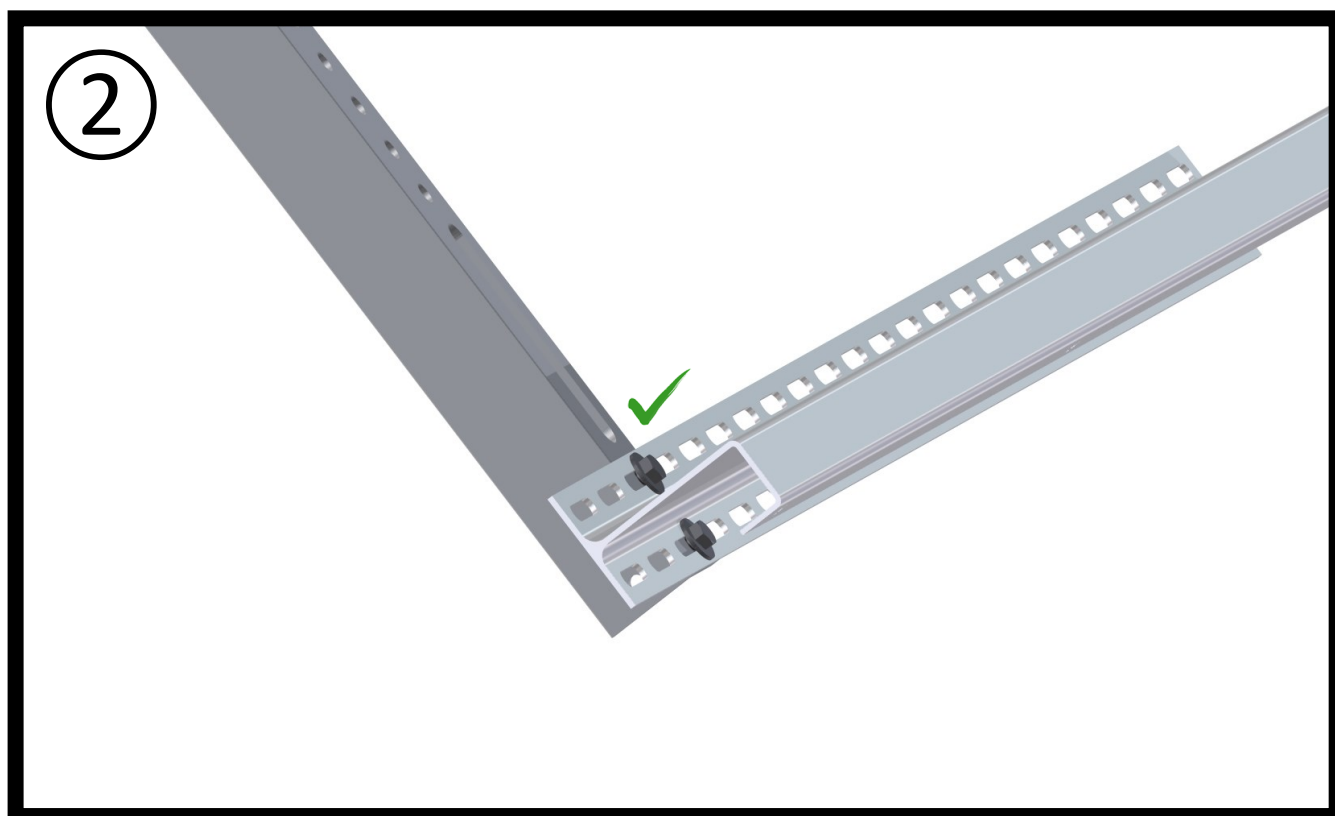
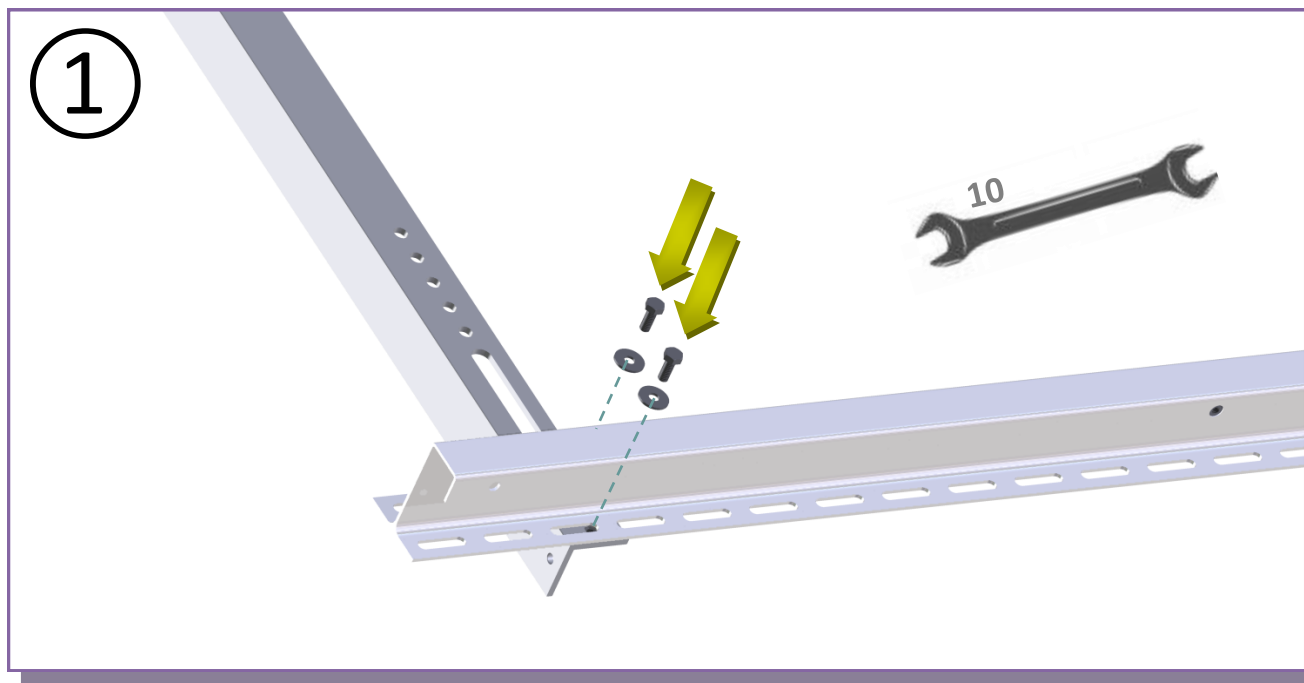
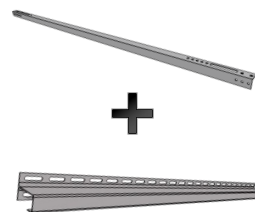
Spojení L - Profilu a Z - Profilu

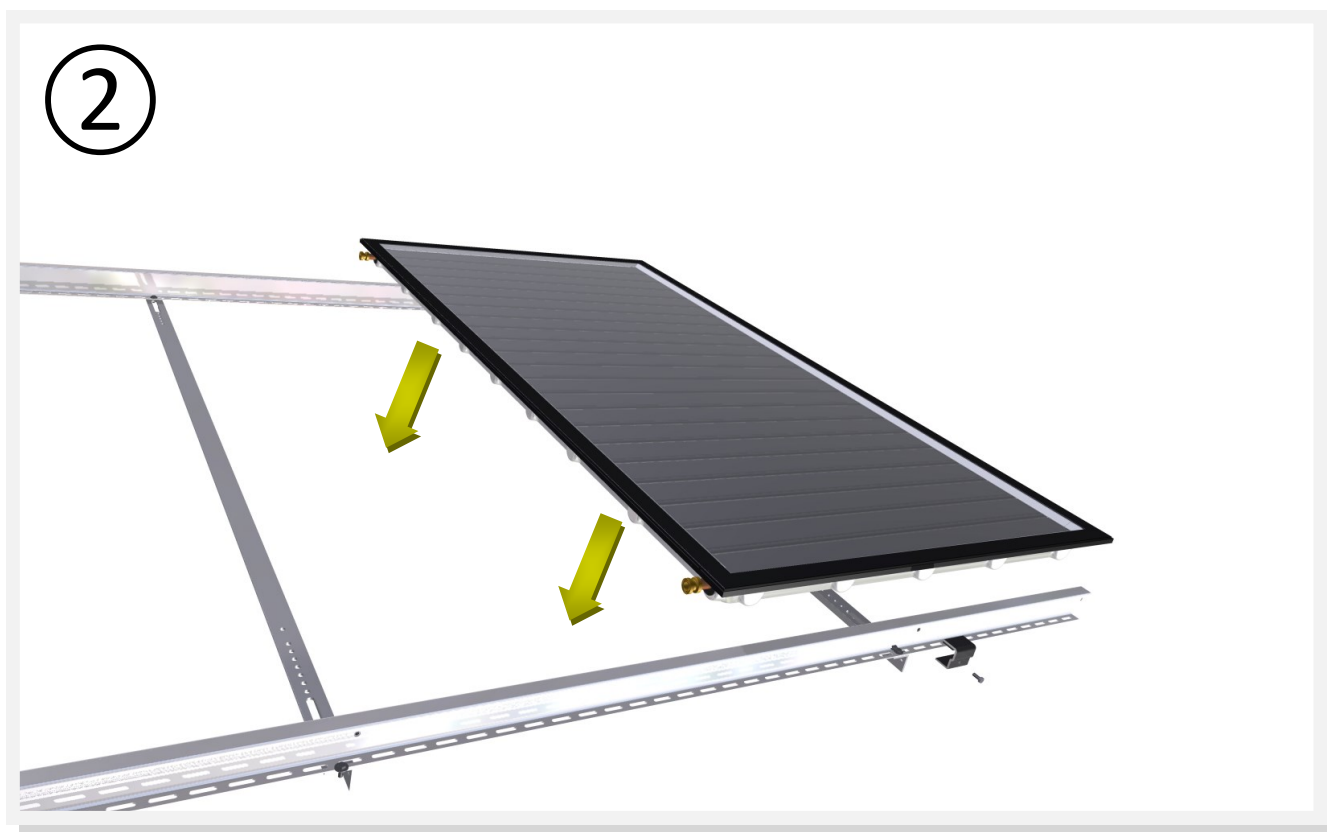
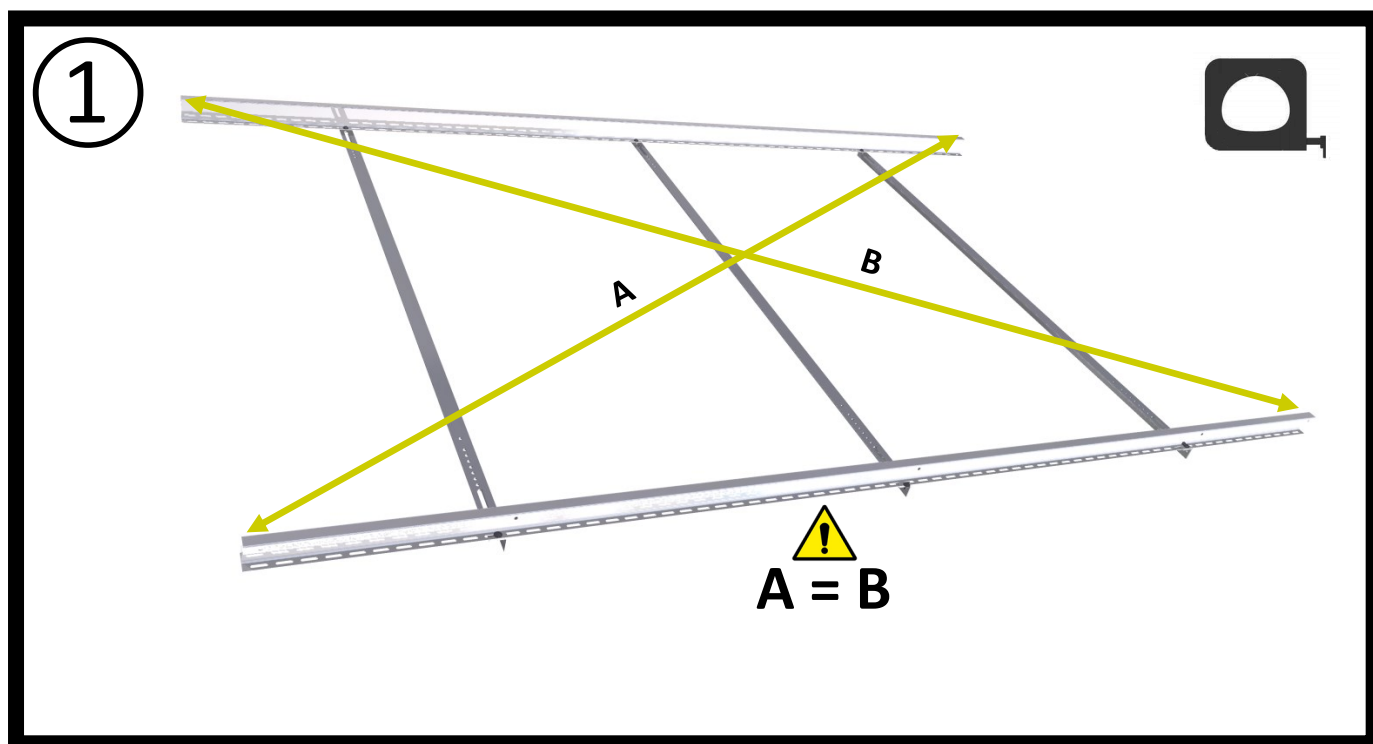
EN

Connection of L - Profile and Z - Profile

D

Verbindung von L - Profil und Z - Profil





16

CZ

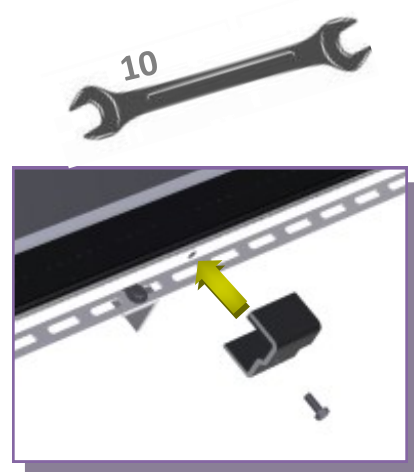
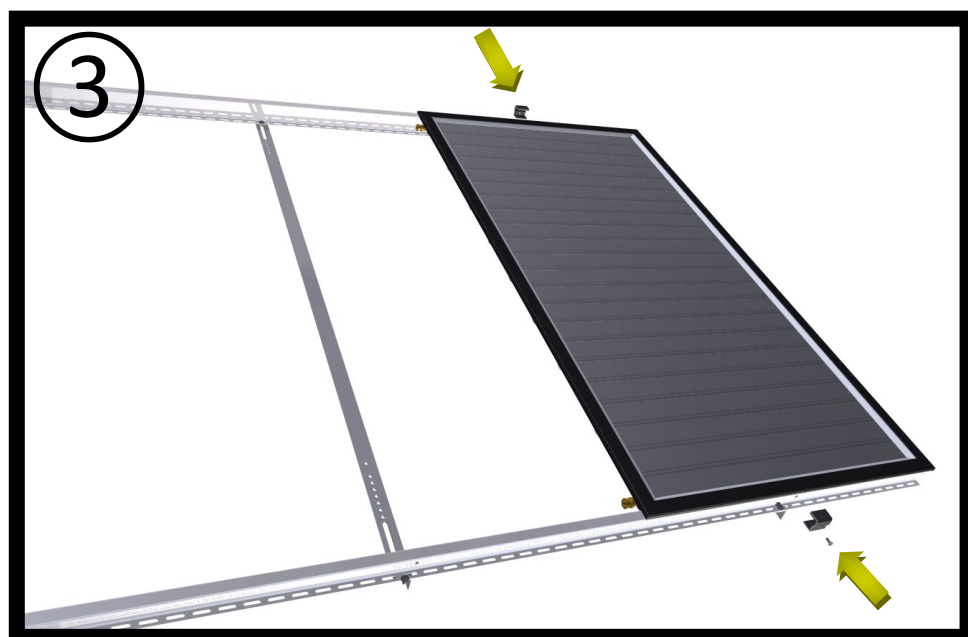
Instalace a zafixování kolektoru

EN

Installation and fixing of the collector

D

Installation und Befestigung des Kollektors



4

