

D 230

C250V

C250H

Installation sur le toit
On-Roof Installation
Instalación sobre tejado
Instalação sobre telhado
Installazione su tetto
Dach-tegel Installatie
Aufdachmontage

Clipping Rail

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1.0 Symboles Symbols Símbolos Símbolos Simboli Symbolen Symbole

Outils Tools Herramientas Ferramentas Tools Instrumenten Tools



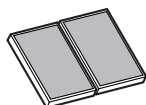
FR - Avertissement
UK- Caution
SP- Precaución
PT- Cuidado
IT- Attenzione
NE- Opgelet
GE- Vorsicht



FR - Informations
UK- Information
SP- Información
PT- Informações
IT- Informazione
NE- Informatie
GE- Information oder Hinweis



FR - 1 Capteur solaire
UK- 1 Collector
SP- 1 Colector
PT- 1 Colector
IT- 1 Collettore
NE- 1 Collector
GE- 1 Kollektor



FR - 2 Capteur solaire
UK- 2 Collector
SP- 2 Colector
PT- 2 Colector
IT- 2 Collettore
NE- 2 Collector
GE- 2 Kollektoren



FR - Numéro de page de référence
UK- Page Reference Number
SP- Número de referencia de página
PT- Número da página de consulta
IT- Numero di riferimento della pagina
NE- Referentienummer pagina
GE- Seitenzahl für Referenz



FR - Acheter
UK- Buy
SP- Comprar
PT- Comprar
IT- Comprare
NE- Kopen
GE- Kaufen



FR - Poids
UK- Weight
SP- Peso
PT- Peso
IT- Peso
NE- Gewicht
GE- Gewicht



FR - Pression maximale
UK- Maximum pressure
SP- Presión máxima
PT- Pressão máxima
IT- Pressione massima
NE- Maximum druk
GE- Maximaldruck



FR - Mesure
UK- Measure
SP- Medida
PT- Medida
IT- Misura
NE- Afmeting
GE- Abmessung



FR - Tournevis
UK- Screwdriver
SP- Destornillador
PT- Chave de fendas
IT- Cacciavite
NE- Schroeendraaier
GE- Schraubendreher



FR - Clé anglaise
UK- Spanner Tight
SP- Llave Inglesa
PT- Chave inglesa
IT- Chiave inglese
NE- Moersleutel
GE- Rollgabelschlüssel



FR - Marteau
UK- Hammer
SP- Martillo
PT- Martelo
IT- Martello
NE- Hamer
GE- Hammer



FR - Percer
UK- Drill
SP- Taladro
PT- Perfurador
IT- Trapano
NE- Boor
GE- Bohren



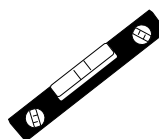
FR - Mètre
UK- Meter
SP- Metro
PT- Metro
IT- Metro
NE- Meter
GE- Meter



FR - Broyeur portatif
UK- Hand held grinder
SP- Radial
PT- Radial
IT- Radiale
NE- Handbediende slijpmachine
GE- Handschleifer



FR - Scie égoïne
UK- Handsaw
SP- Sierra
PT- Serra
IT- Seg a mano
NE- Handzaag
GE- Handsäge



FR - Niveau
UK- Level gauge
SP- Nivel
PT- Nível de bolha
IT- Livella
NE- Waterpas
GE- Wasserwaage

Santé et sécurité
Health and safety
Seguridad y salud
Saúde e segurança
Salute e sicurezza
Gezondheid en veiligheid
Arbeitssicherheit



FR - Utilisez un casque de sécurité
UK- Use safety helmet
SP- Utilizar casco de seguridad
PT- Use um capacete de segurança
IT- Usare il casco di sicurezza
NE- Gebruik een veiligheidshelm
GE- Schutzhelm verwenden



FR - Utilisez des chaussures de sécurité
UK- Use safety shoes
SP- Utilizar calzado de seguridad
PT- Use sapatos de segurança
IT- Usare calzature di sicurezza
NE- Gebruik veiligheidsschoenen
GE- Sicherheitsschuhe verwenden



FR - Utilisez un harnais de sécurité pour éviter les chutes.
UK- Use safety harness for protection against falling.
SP- Utilizar arnés de seguridad para protección contra caídas.
PT- Use um arnés de segurança para evitar as quedas.
IT- Usare cintura di sicurezza per proteggersi da cadute.
NE- Gebruik een veiligheidsgordel voor bescherming tegen vallen.
GE- Sicherheitsgurt zum Schutz vor Herabfallen verwenden.



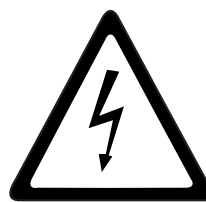
FR - Utilisez des gants de sécurité
UK- Use safety gloves
SP- Utilizar guantes de protección
PT- Use luvas de protecção
IT- Usare guanti di sicurezza
NE- Gebruik veiligheidshandschoenen
GE- Schutzhandschuhe verwenden



FR - Utilisez des lunettes de sécurité
UK- Use safety goggles
SP- Utilizar gafas de seguridad
PT- Use óculos de segurança
IT- Usare occhiali di sicurezza
NE- Gebruik een veiligheidsbril
GE- Schutzbrille verwenden



FR - Incluez le capteur dans le système de protection de l'immeuble contre la foudre.
UK- Include the collector in the lightning protection device of the building.
SP- Incluir el colector en el dispositivo de protección contra rayos del edificio.
PT- Inclua o colector no sistema de protecção contra os raios do imóvel.
IT- Includere il collettore nel dispositivo di protezione contro i fulmini dell'edificio.
NE- Bouw de collector in in de bliksemalleider van het gebouw.
GE- Kollektor in den Blitzschutz des Gebäudes integrieren.



FR - Risque de foudre par temps orageux.
UK- Danger of lightning in stormy weather.
SP- Peligro de rayos en días de tormenta.
PT- Perigo de raios em dias de trovoadas.
IT- Pericolo di fulmini durante i giorni di tempesta.
NE- Bliksemgevaar bij stormweer.
GE- Es besteht Blitzgefahr bei Sturmweather.



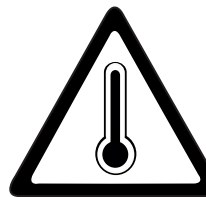
FR - Charge lourde
UK- Heavy load
SP- Carga pesada.
PT- Carga pesada
IT- Carico pesante
NE- Zware lading
GE- Schwerlast



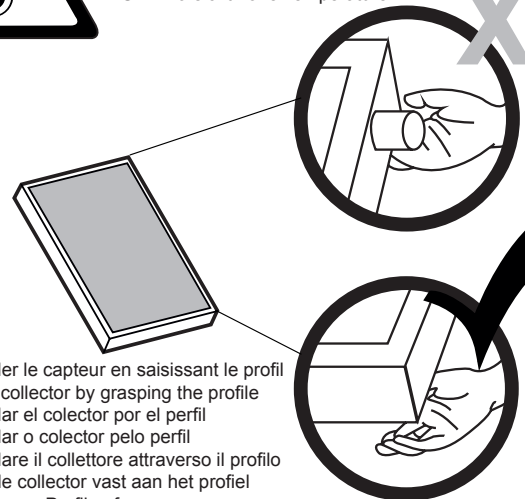
FR - Attention risque de dérapage
UK- Beware of tripping
SP- Atención riesgo de tropezar
PT- Atenção risco de tropeçar
IT- Attenzione, rischio di inciampo
NE- Gevaar van struikelen
GE- Vorsicht Stolpergefahr



FR - Risque de surfaces glissantes
UK- Beware of slippery surfaces
SP- Riesgo de suelo resbaladizo
PT- Atenção risco de superfícies escorregadias
IT- Rischio per suolo scivoloso
NE- Risico van gladde oppervlakken
GE- Vorsicht Rutschgefahr



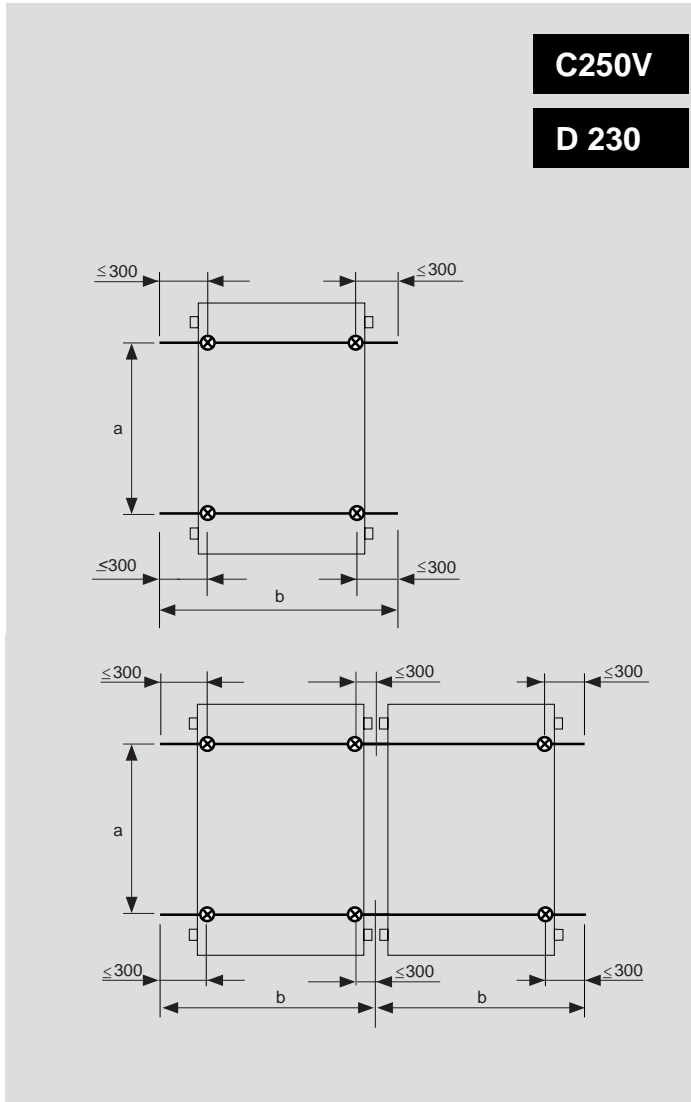
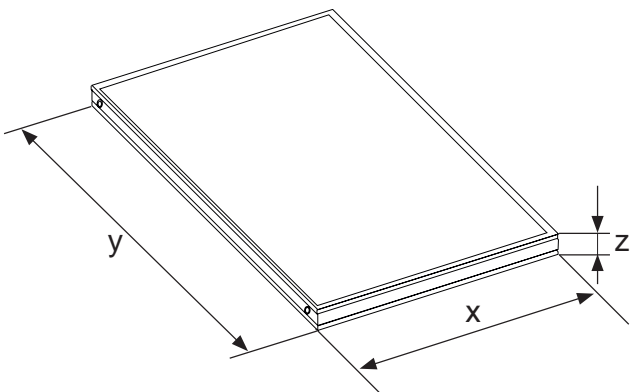
FR - Risque de températures élevées
UK- Beware of high temperatures
SP- Peligro de altas temperaturas
PT- Perigo de altas temperaturas
IT- Pericolo per alte temperature
NE- Gevaar van hoge temperaturen
GE- Vorsicht hohe Temperaturen



FR - Manipuler le capteur en saisissant le profil
UK- Handle collector by grasping the profile
SP- Manipular el colector por el perfil
PT- Manipular o colector pelo perfil
IT- Manipolare il collettore attraverso il profilo
NE- Neem de collector vast aan het profiel
GE- Kollektor am Profil anfassen

3.0 Poids et dimensions
 Weight and measurements
 Peso y medida
 Peso e dimensões
 Peso e misure
 Gewicht en afmetingen
 Gewicht und Abmessungen

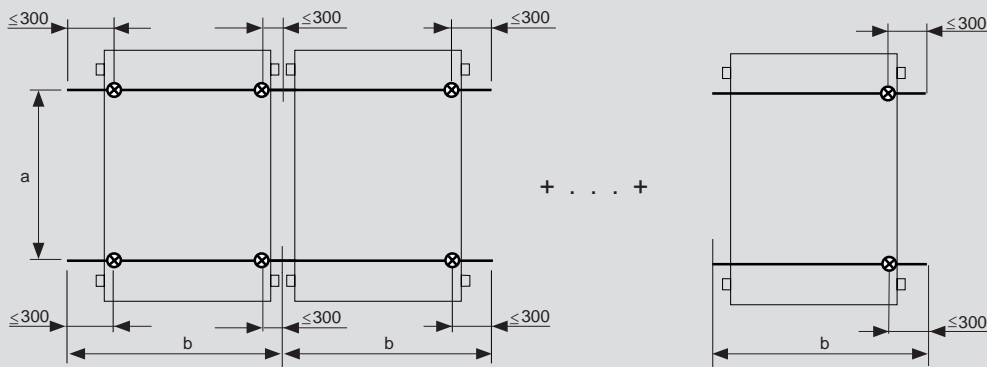
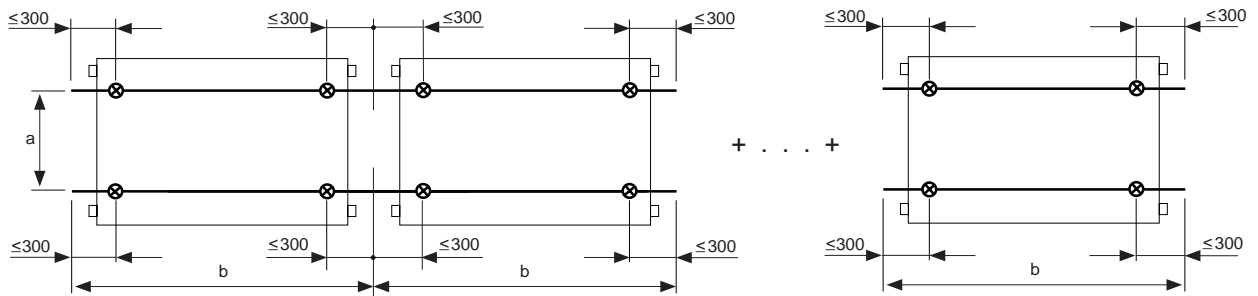
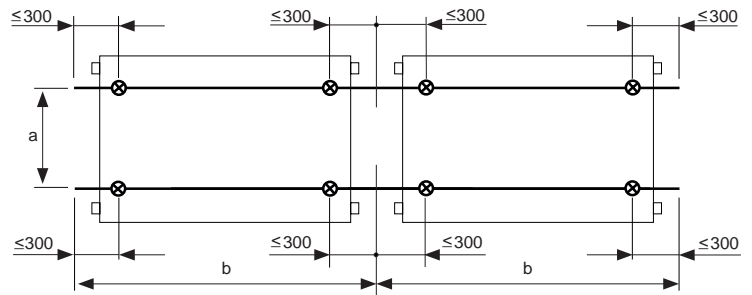
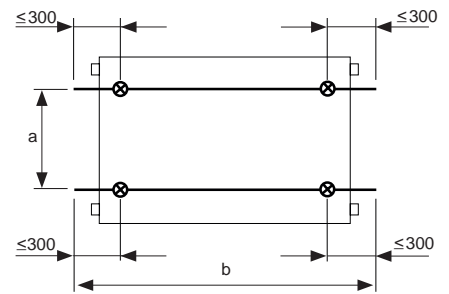
4.0 Position de fixation
 Fixation position
 Posición fijación
 Posição de fixação
 Posizione di fissaggio
 Plaats bevestiging
 Befestigungsposition



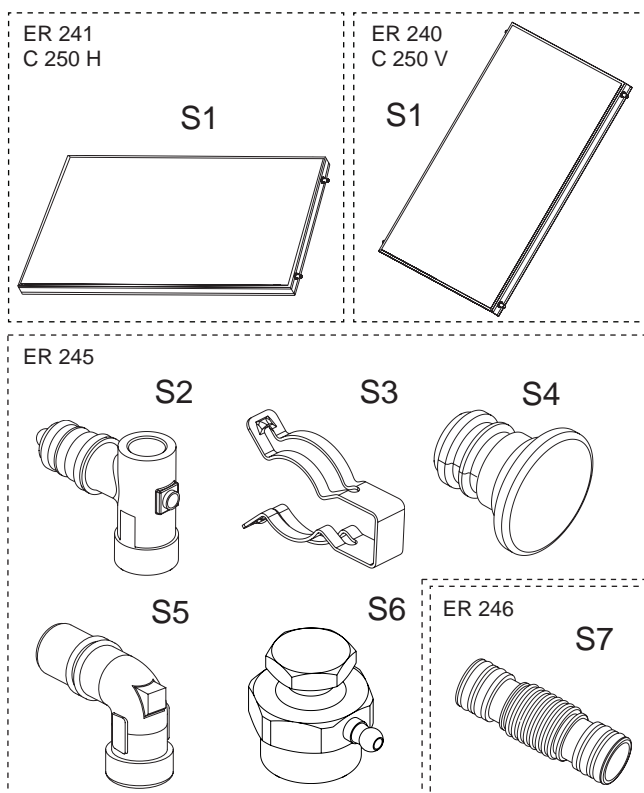
	(kg)	(bar)	y(mm)	x(mm)	z(mm)
C250V	48	10	2187	1147	87
C250H	49	10	1147	2187	87
D 230	40	10	2006	1147	87

C250H

	a (mm)	b (mm)
C250V	1750-1950	1197
C250H	700-900	2237
D 230	1570-1770	1197



5.0 Composants et contenu kit hydraulique Hydraulic kit contents and components Contenido y componentes del kit hidraulico Componentes e conteúdo kit hidráulico Componenti e contenuto kit parte idraulica Kit hydraulische inhoud en onderdelen Inhalt und Komponenten des Hydraulik-Sets



- FR** S1- Capteur
S2- Raccord en té G3/4
S3- Bague
S4- Capuchon d'extrémité
S5- Pièce coudée G3/4
S6- Décharge d'air manuelle
S7- Élément de raccord

- UK** S1- Collector
S2- Tee piece for air vent G3/4
S3- Clip
S4- End Cap
S5- Elbow G3/4
S6- Manual air vent
S7- Joining Piece

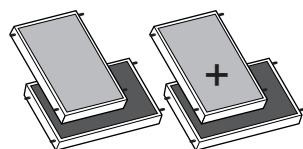
- SP** S1- Colector
S2- Conexión en "T" para purgador G3/4
S3- Clip
S4- Tapón
S5- Codo G3/4
S6- Purgador manual
S7- Pieza de unión

- PT** S1- Colector
S2- Peça em "T" G3/4
S3- Mola
S4- Tampão
S5- Cotovelo G3/4
S6- Ventilação de ar manual
S7- Peça de junção

- IT** S1- Collettore
S2- Elemento a "T" G3/4
S3- Graffa
S4- Tapón
S5- Raccordo a gomito G3/4
S6- Sfiato manuale
S7- Elemento di giunzione

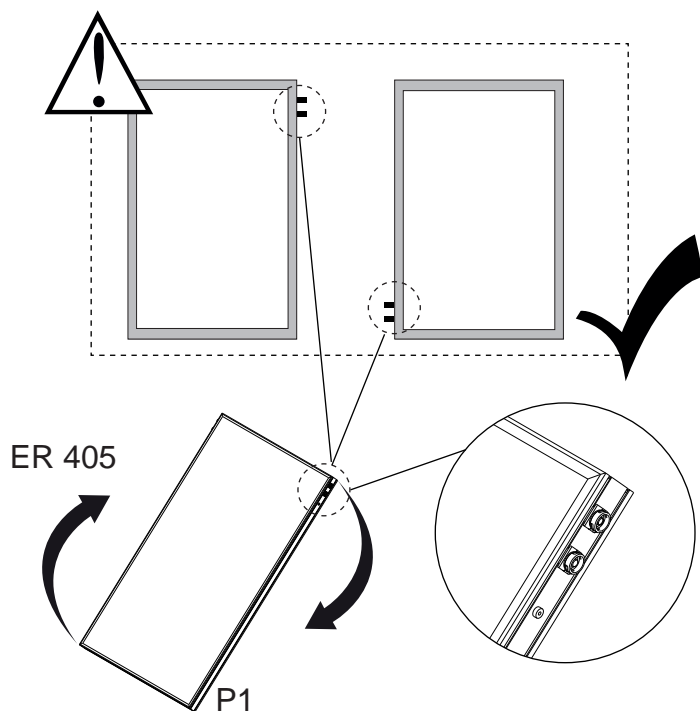
- NE** S1- Collector
S2- T-stuk G3/4
S3- Klem
S4- Eindkap
S5- Bochtstuk G3/4
S6- Handmatige luchtopening
S7- Verbindingsstuk

- GE** S1- Kollektor
S2- T-Stück G3/4
S3- Klemme
S4- Endstopfen
S5- Rohrbogen G3/4
S6- Handentlüfter
S7- Verbindungsstück



ER 245 246

	C250V	C250H	C250V	C250H
S2	1	1	-	-
S3	4	4	-	-
S4	2	2	-	-
S5	1	1	-	-
S6	1	1	-	-
S7	-	-	2	2



ER 405

P1

- FR P1- Capteur
P2- Raccord en U
P3- Tube de connexion
P4- Bague
P5- Pièce coudée G1/2
P6- Raccord hydraulique MG 1/2 - MG 3/4
P7- Adaptateur
P8- Tube de 18mm de jonction par compression
P9- Capteur de température
P10-Élément de raccord

- UK P1- Collector
P2- U Connector
P3- Connection pipe
P4- Clip
P5- Elbow G 1/2
P6- Hydraulic conector MG 1/2- MG 3/4
P7- Adapter
P8- Compression junction 18 mm pipe
P9- Temperature sensor
P10-Joining Piece

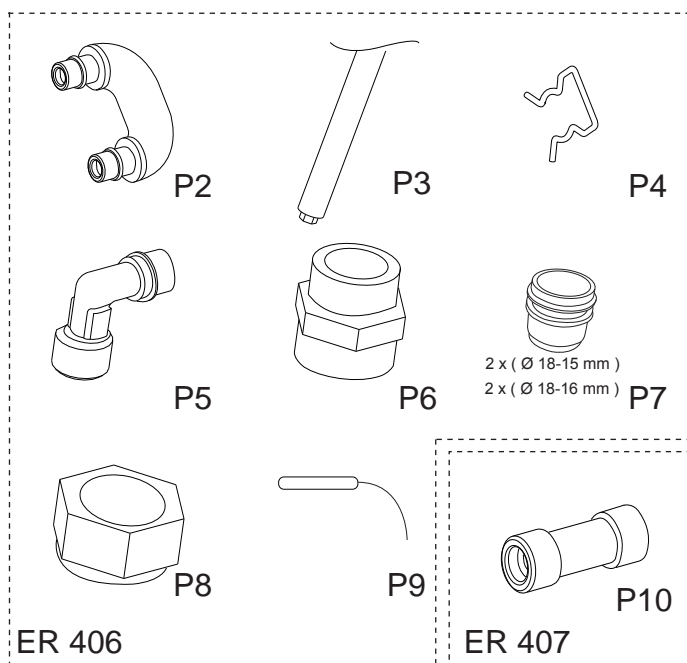
- SP P1- Colector
P2- Conexión en U
P3- Tubos de conexión
P4- Clip
P5- Codo G1/2
P6- Conexión hidráulica MG 1/2- MG 3/4
P7- Adaptador
P8- Conexión de unión para tubos 18 mm
P9- Sensor de temperatura
P10-Pieza de unión

- PT P1- Colector
P2- Conector em U
P3- Tubo de conexão
P4- Mola
P5- Cotovelo G1/2
P6- Conetor hidráulico MG 1/2 - MG 3/4
P7- Adaptador
P8- Tubo de 18mm de junção por compressão
P9- Sensor de temperatura
P10-Peça de junção

- IT P1- Collettore
P2- Raccordo a U
P3- Tubo di connessione
P4- Graffa
P5- Raccordo a gomito G1/2
P6- Raccordo idraulico MG 1/2 - MG 3/4
P7- Adattatore
P8- Tubo da 18 mm di giunzione per compressione
P9- Sensore di temperatura
P10-Elemento di giunzione

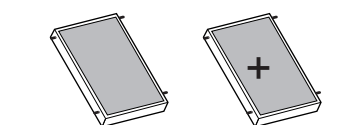
- NE P1- Collector
P2- U-Connector
P3- Verbindungsstück
P4- Klemm
P5- Bochstück G1/2
P6- Hydraulische connector MG 1/2 - MG 3/4
P7- Adapter
P8- Drukverbinding buis 18 mm
P9- Temperatuursensor
P10- Verbindungsstück

- GE P1- Kollektor
P2- U-Verbinder
P3- Anschlussrohr
P4- Klemme
P5- Rohrbogen G1/2
P6- Hydraulikverbinder MG 1/2 - MG 3/4
P7- Adapter
P8- Klemmverbinding 18 mm Rohr
P9- Temperatursensor
P10- Verbindungsstück



ER 406

ER 407

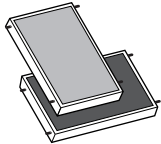


ER	406	407
	D 230	D 230




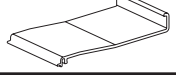
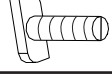


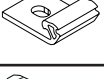

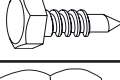

P2	1	-
P3	2	-
P4	4	-
P5	2	-
P6	2	-
P7	2/2	-
P8	2	-
P9	1	-
P10	-	2

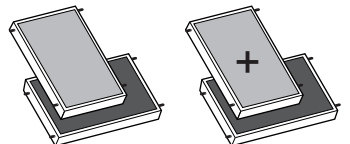
6.0 Contenu et composants du kit Kit Contents and Components Contenido y componentes del kit Conteúdo e componentes do Kit Contenuto e componenti dei kit Inhoud en onderdelen van de kit Inhalt und Komponenten des Sets

- * FR - Non utilisé
- * UK - Not Used
- * SP - No se utiliza
- * PT - Não utilizado
- * IT - Non si usa
- * NE - Niet gebruikt
- * GE - Unbenutzt

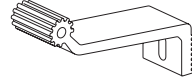
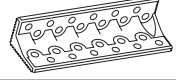

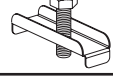
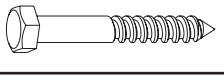




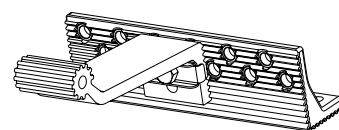
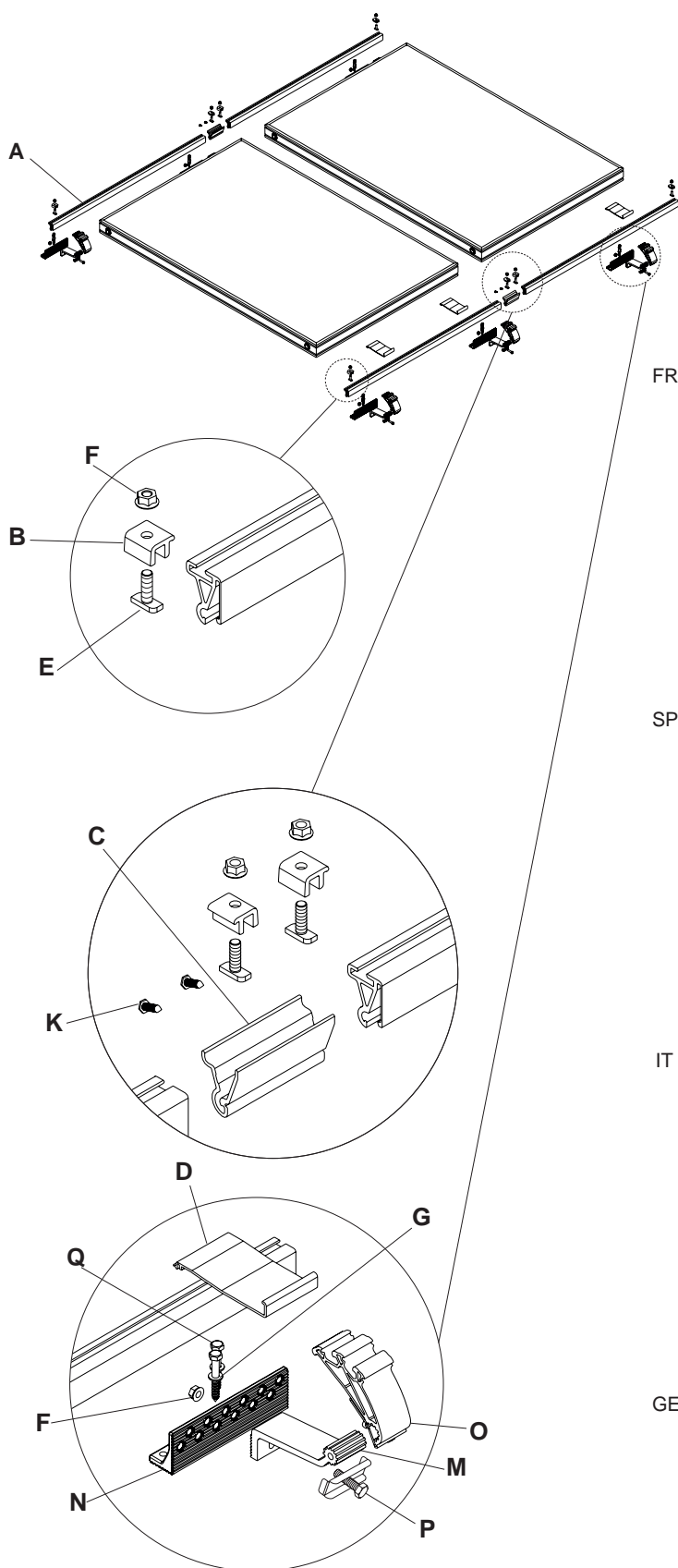
ER 260 261
 D 230 C250V C250H

	A	2	2
	B	4	4
	C	2	2
	D	2	2
	E	4	4
	F	8	8
	G	8	8
	H	4*	4*
	J	4*	4*
	K	4	4
	L	1	1



ER 264 264 265 265
 D 230 C250V C250H D 230 C250V C250H

	M	4	4	2	2
	N	4	4	2	2
	O	4	4	2	2
	P	4	4	2	2
	Q	8	8	4	4
	G	8	8	4	4
	F	4	4	2	2



On-Roof Multi-Fit

ER 264/265

FR

- A- Panneau
- B- Traverse de bout
- C- Rail de fixation
- D- Crochet de support
- E- Boulons en "T" M8x30
- F- Écrous M8
- G- Rondelles M8
- J- Boulons M8x20
- K- Vis auto perforante
- L- Instructions
- M- Crochet inférieur
- N- Faisceau sous tuile
- O- Crochet supérieur
- P- Rondelle captive 8 mm
- Q- 8 vis à bois de 60 mm

SP

- A- Perfil
- B- Fijación lateral
- C- Fijación perfiles
- D- Fijación inferior
- E- Tornillo "T" M8x30
- F- Tuerca M8
- G- Arandela M8
- J- Tornillo M8x20
- K- Tornillo autopercutor
- L- Instrucciones
- M- Soporte inferior
- N- Brida bajo teja
- O- Soporte superior
- P- Anilla posicionadora 8mm
- Q- Tornillo para madera 8x60mm

IT

- A- Guida
- B- Morsetto terminale
- C- Fissaggio profili
- D- Staffa di supporto
- E- TBulloni M8x30
- F- Dadi M8
- G- Rondelle M8
- J- Bulloni M8x20
- K- Vite autofilettante
- L- Istruzioni
- M- Staffa inferiore
- N- Dispositivo di ancoraggio sottotegola
- O- Staffa superiore
- P- Rondella prigioniera 8 mm
- Q- Viti per legno 8 x 60 mm

GE

- A- Modulschiene
- B- Abschlussklemmung
- C- Schienenbefestigung
- D- Halterung
- E- T-Bolzen M8x30
- F- M8 Muttern
- G- M8 Unterlegscheiben
- J- Bolzen M8x20
- K- Bohrschraube
- L- Anleitung
- M- Untere Halterung
- N- Unterziegelträger
- O- Obere Halterung
- P- 8 mm Sicherungsscheibe
- Q- 8 x 60 mm Holzschrauben (13 mm A/F)

UK

- A- Rail
- B- End Clamp
- C- Rail fixation
- D- Support Bracket
- E- T-Bolts M8x30
- F- M8 Nuts
- G- M8 Washers
- J- Bolts M8x20
- K- Self drilling screw
- L- Instructions
- M- Lower Bracket
- N- Under Tile Beam
- O- Upper Bracket
- P- Captive 8mm washer
- Q- 8x60mm Wood screws

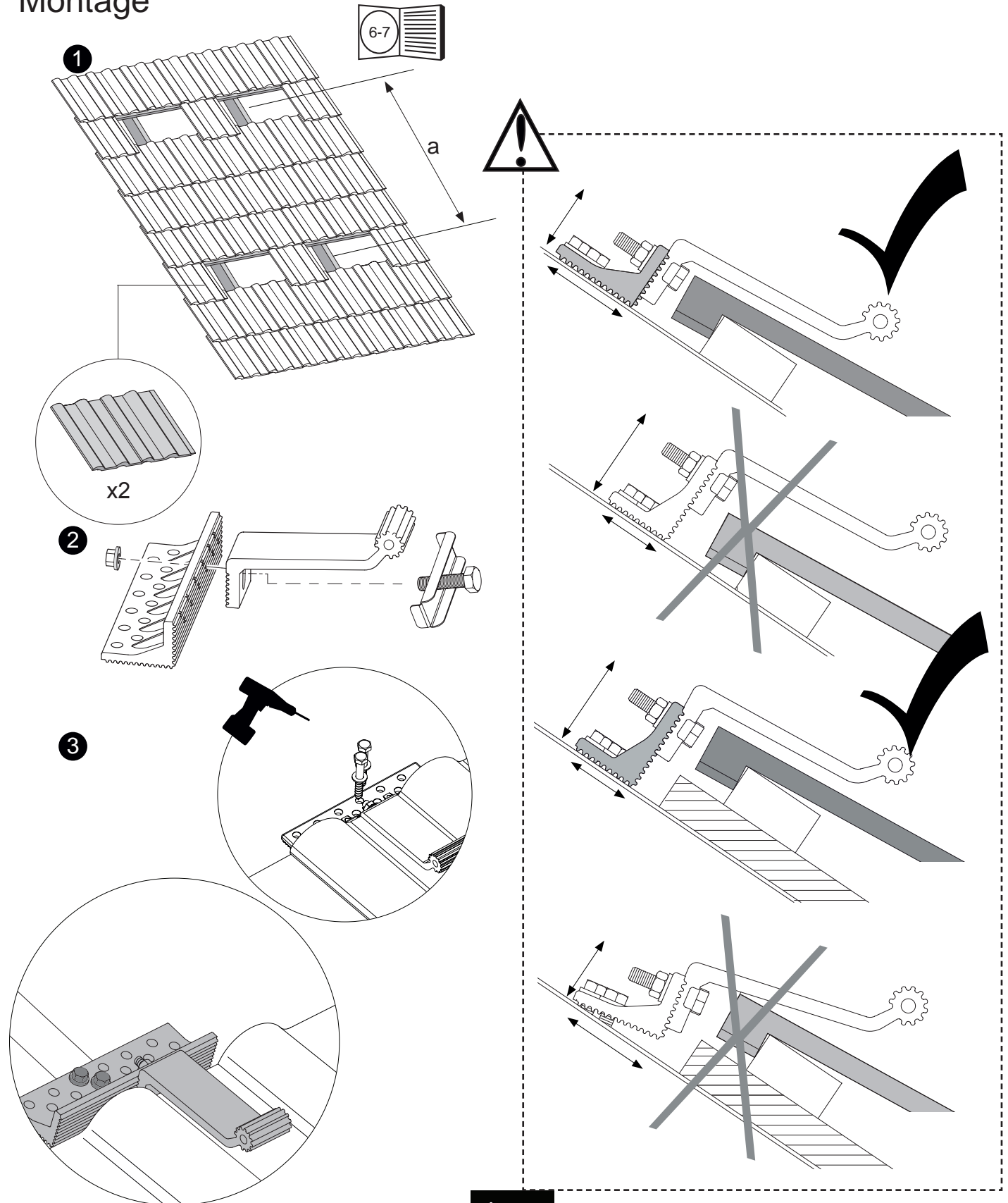
PT

- A- Perfil
- B- Grampo fecho
- C- Guia de fixação
- D- Clip suporte
- E- Parafusos "T" M8x30
- F- Porcas M8
- G- Anilhas M8
- J- Parafusos M8x20
- K- Parafuso autopercutor
- L- Instruções
- M- Clip inferior
- N- Barra sub telha
- O- Clip superior
- P- Anilha posicionadora 8mm
- Q- Parafusos madeira 8x60mm

NE

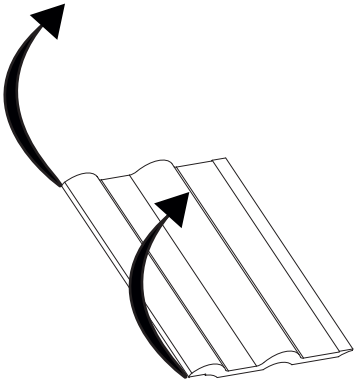
- A- Staaf
- B- Eindklem
- C- Railbevestiging
- D- Tegenlagerblok
- E- T-bouten M8x30
- F- M8 Moeren
- G- Rondelles M8
- J- Bouten M8x20
- K- Zelftappende schroef
- L- Instructies
- M- Onderarm
- N- Tegelseun onder het dak
- O- Bovenbeugel
- P- Geïntegreerde dichtingsring van 8mm
- Q- 8 x 60mm Houtschroeven

7.0 Installation
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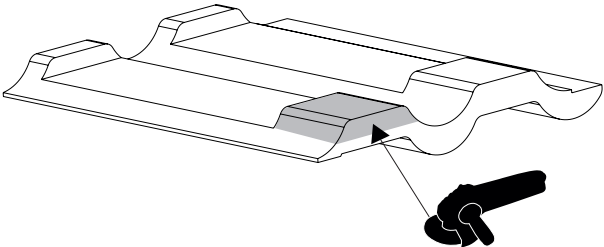




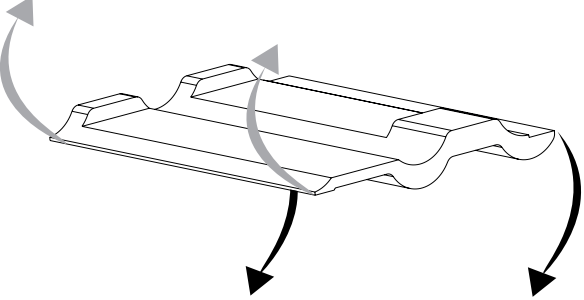
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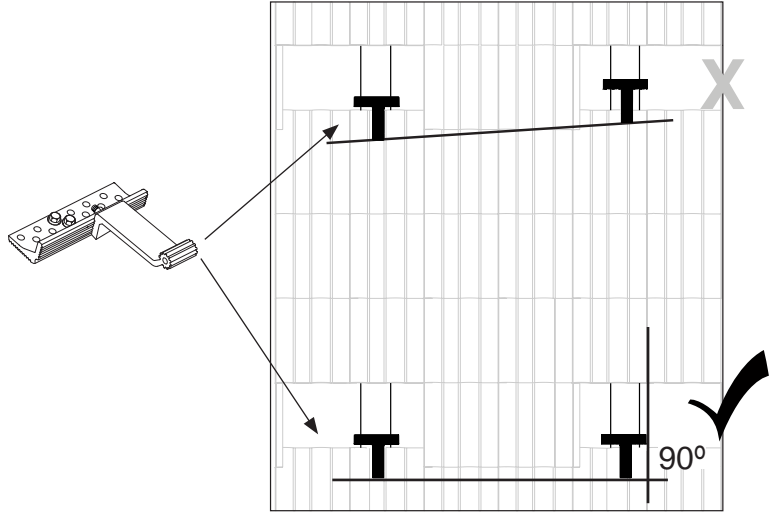
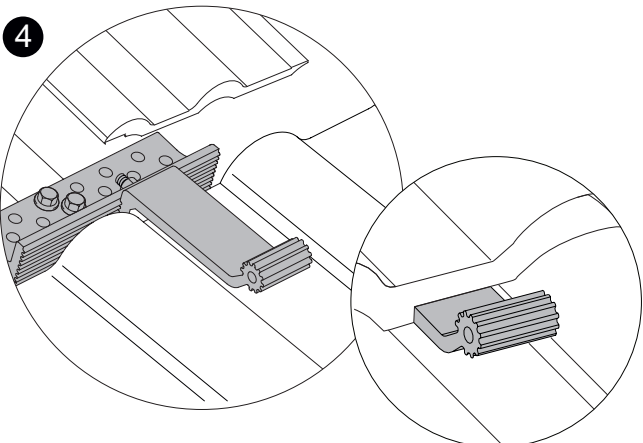
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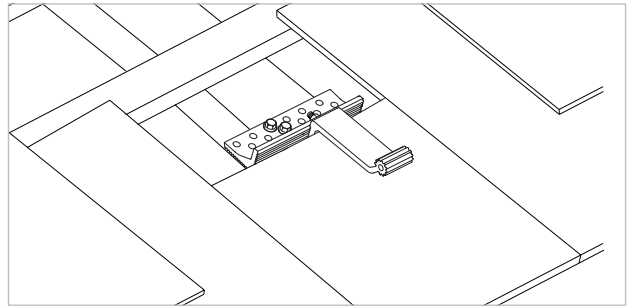
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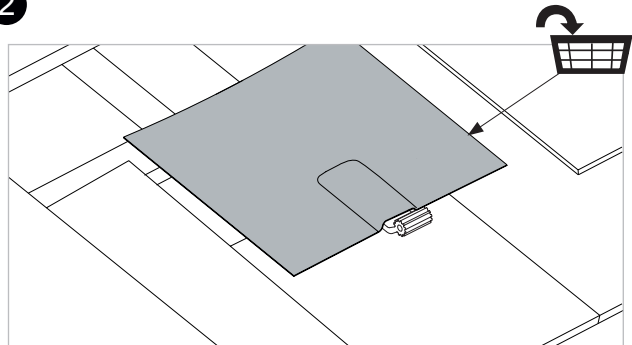
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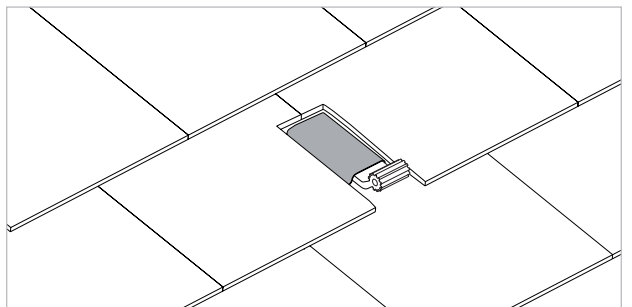
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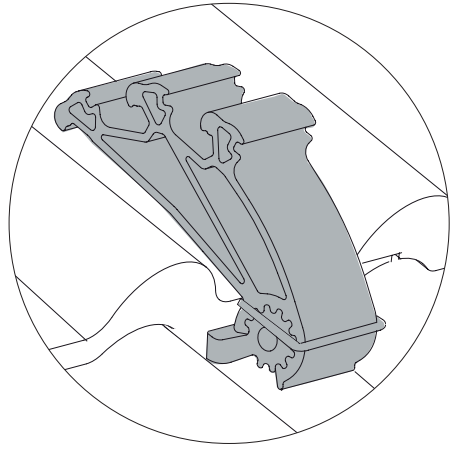
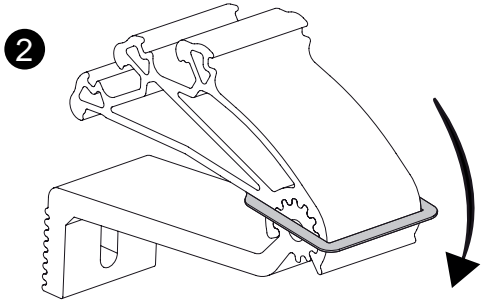
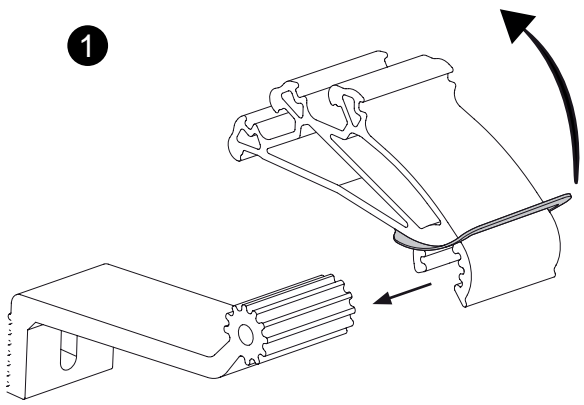
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3

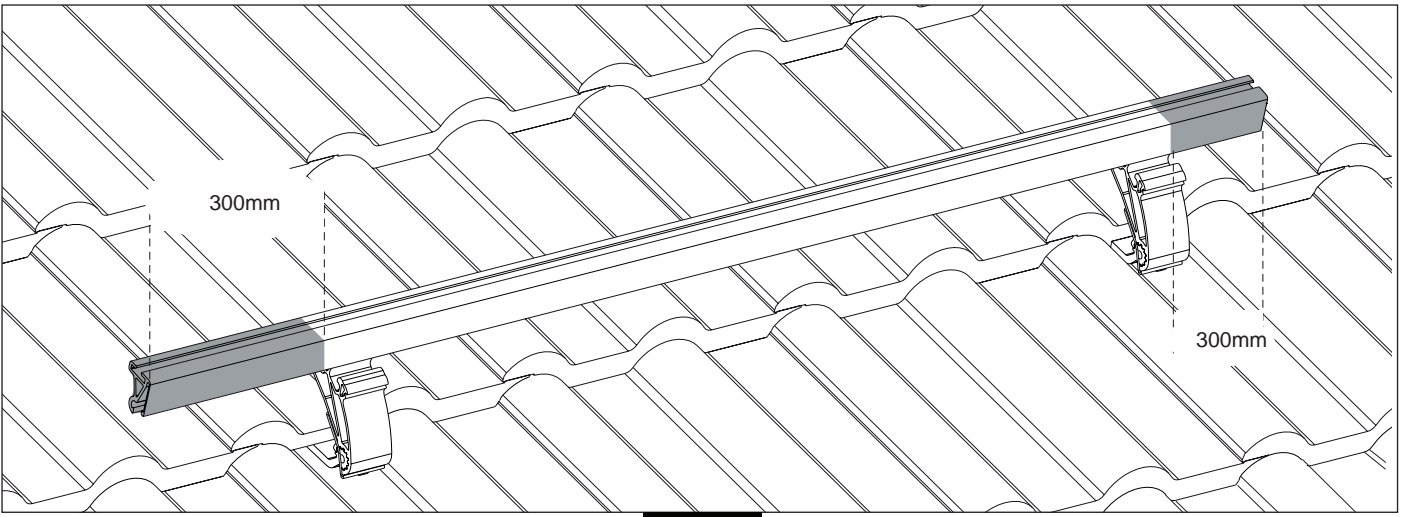
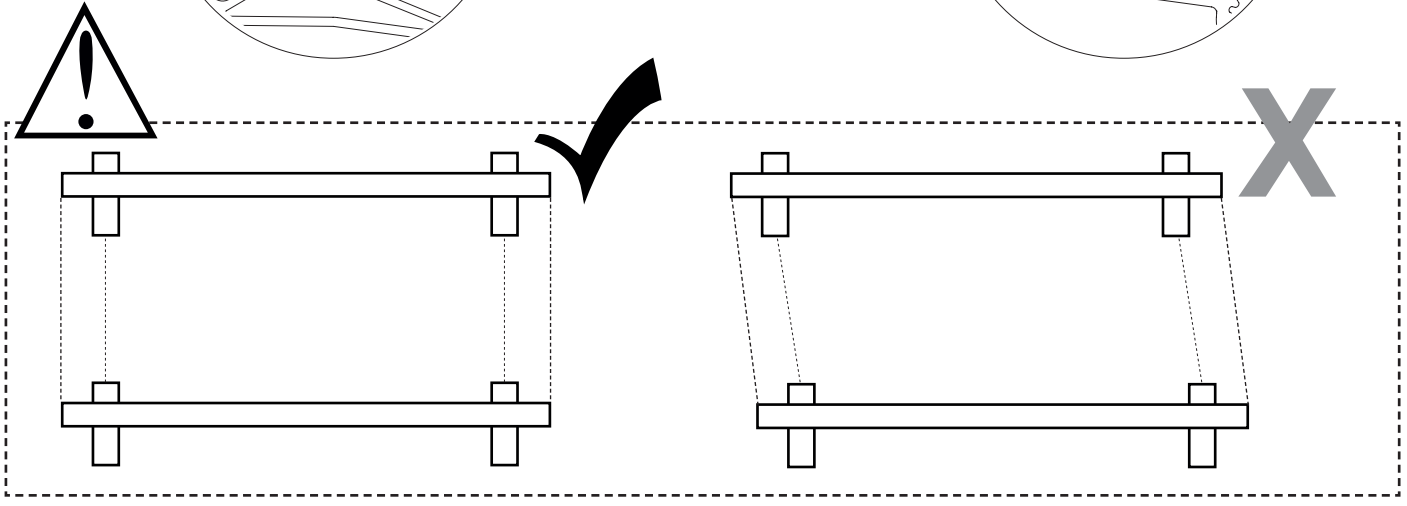
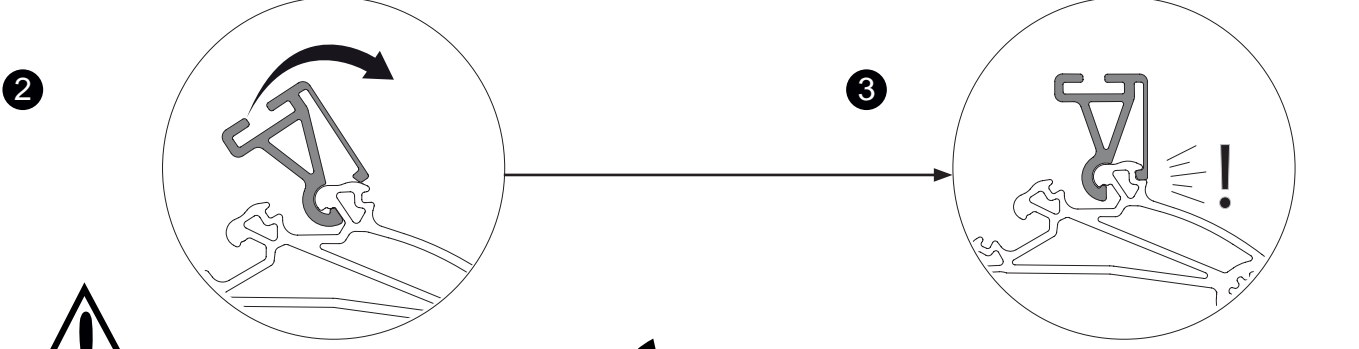
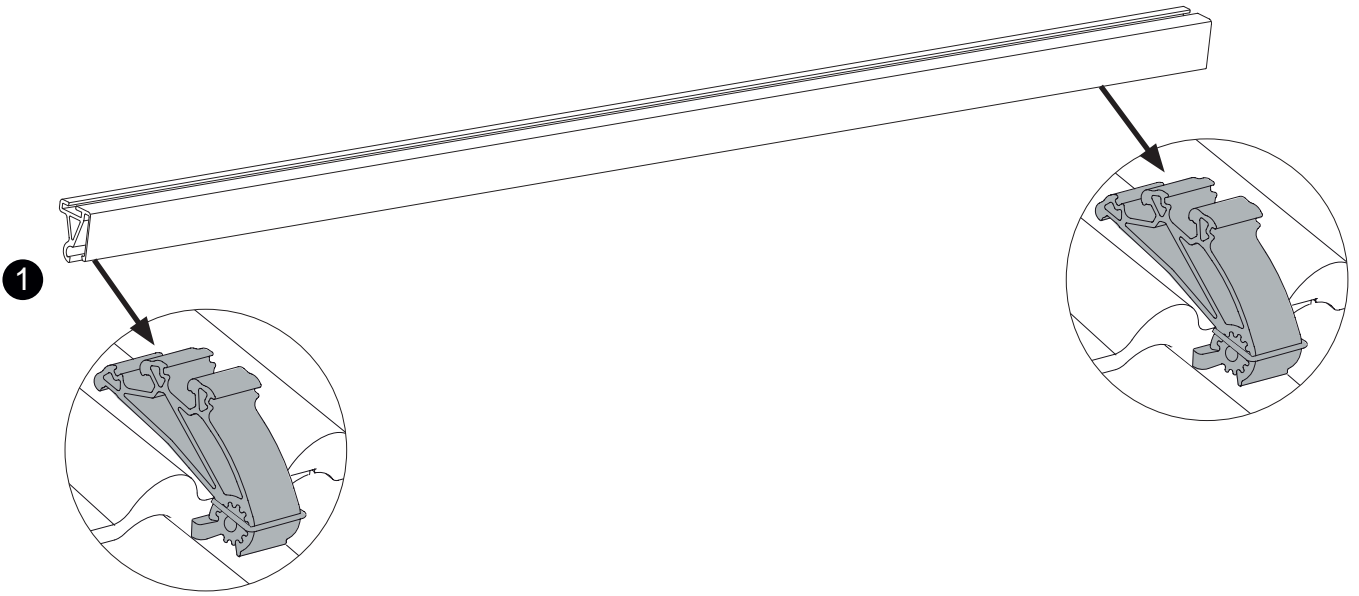


7.0 Installation
 Installation
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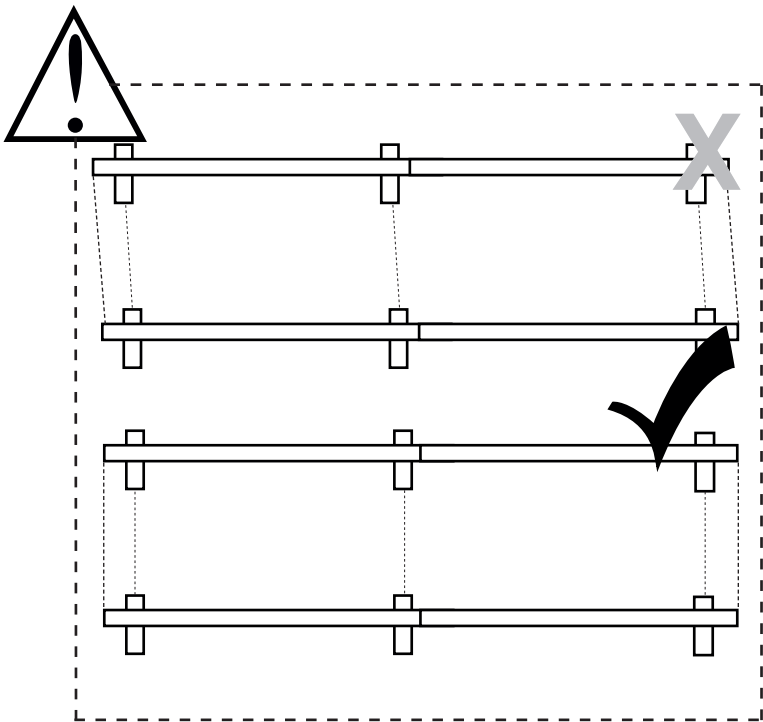
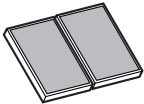


i

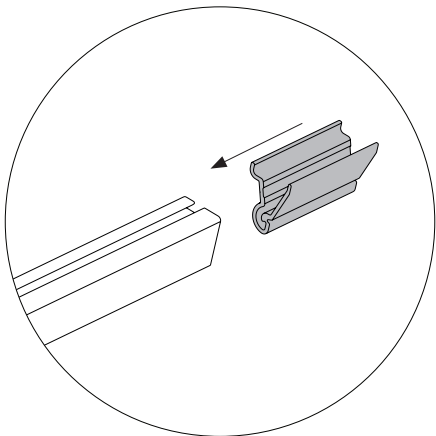
	a (mm)	b (mm)	c (mm)
Z1	<50	<80	<105
Z2	<58	<87	<112



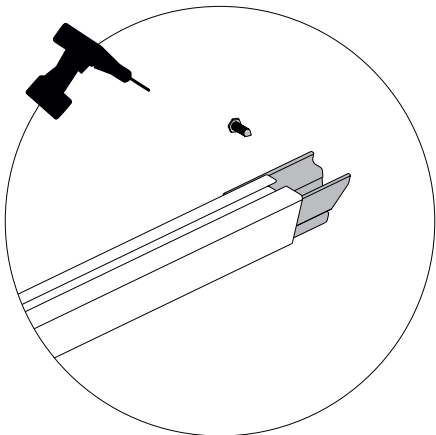
7.0 Installation
Installation
Instalación
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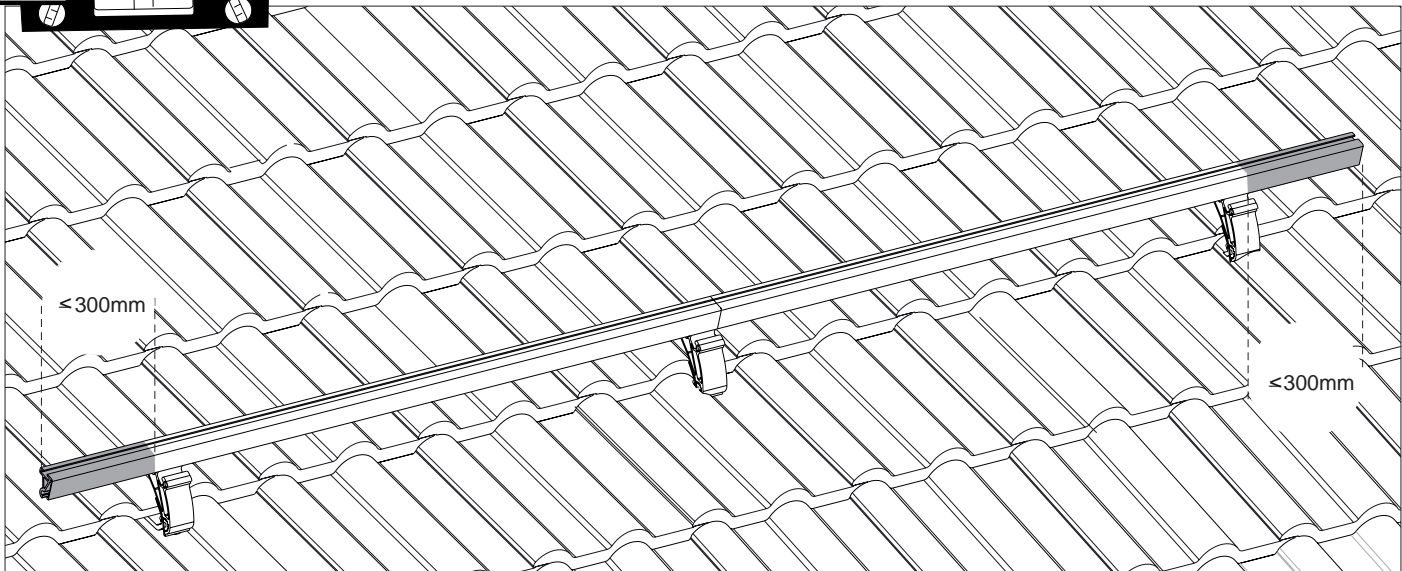
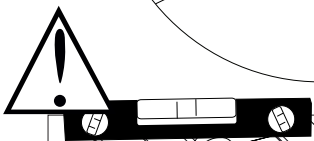
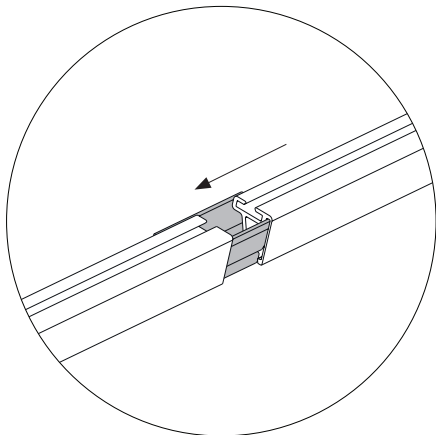
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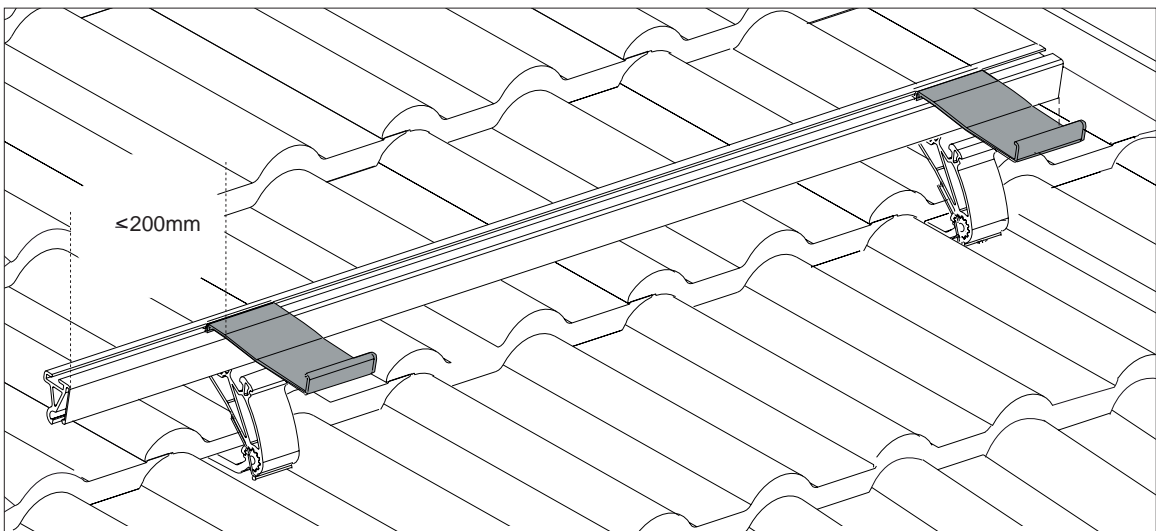
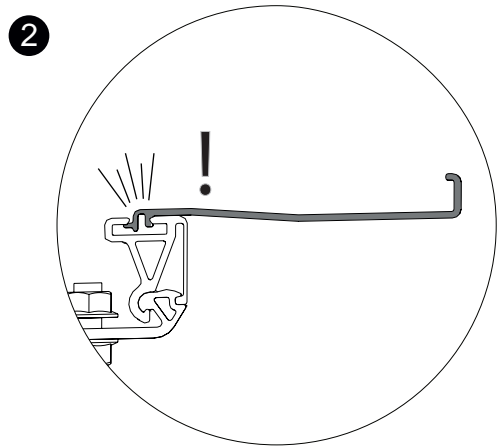
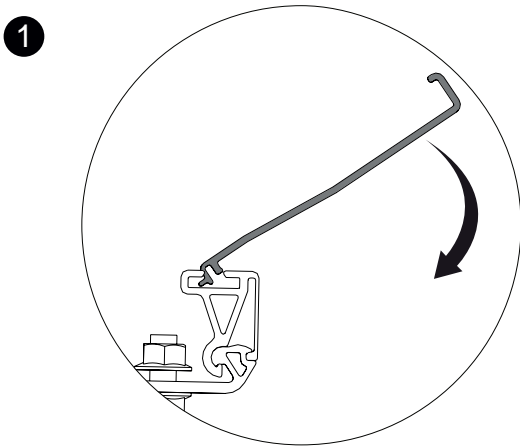
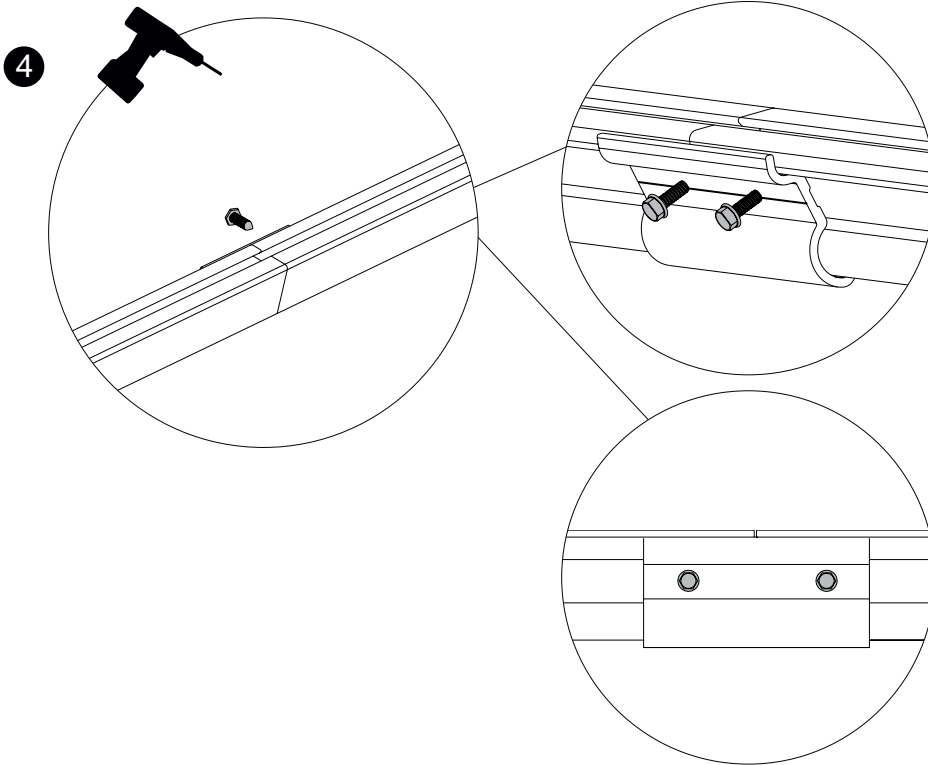
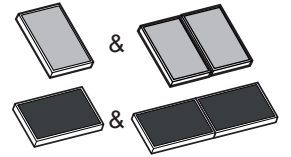


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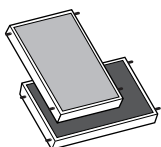
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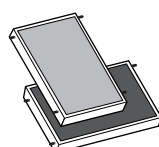


6.0 Contenu et composants du kit Kit Contents and Components Contenido y componentes del kit Conteúdo e componentes do Kit Contenuto e componenti dei kit Inhoud en onderdelen van de kit Inhalt und Komponenten des Sets

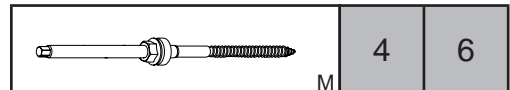
- * FR - Non utilisé
- * UK - Not Used
- * SP - No se utiliza
- * PT - Não utilizado
- * IT - Non si usa
- * NE - Niet gebruikt
- * GE - Unbenutzt






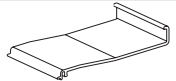
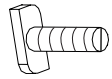

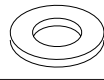
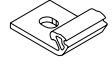
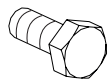
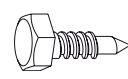

ER 260 261
 D 230 C250H
 C250V

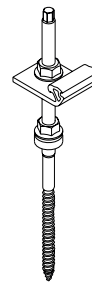


ER 94 95



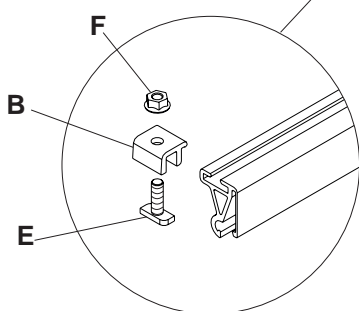
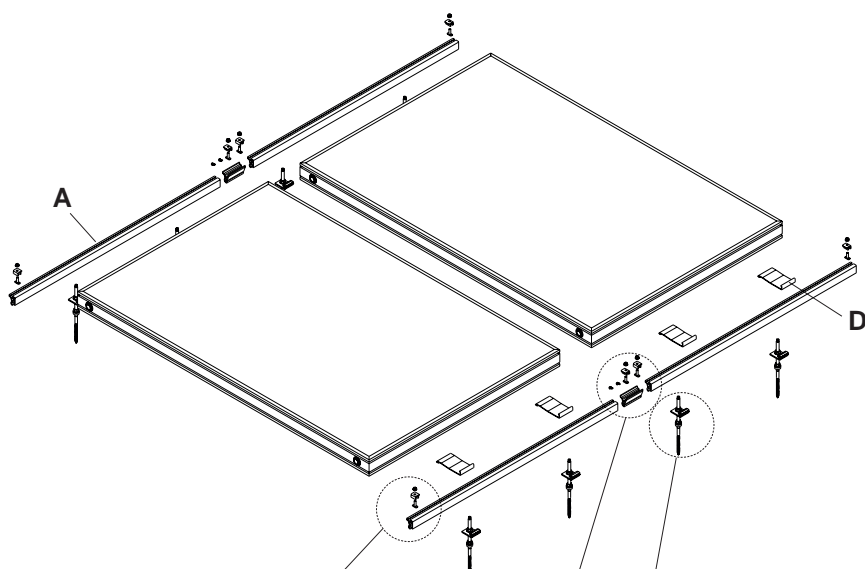
M 4 6

	A	2	2
	B	4	4
	C	2	2
	D	2	2
	E	4	4
	F	8	8
	G	8	8
	H	4	4
	J	4*	4*
	K	4	4
	L	1	1



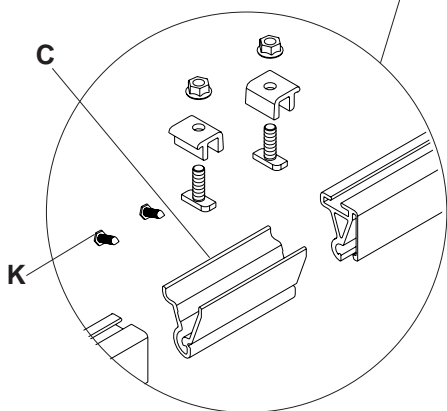
On-Roof Through-Tile

EG 94/95



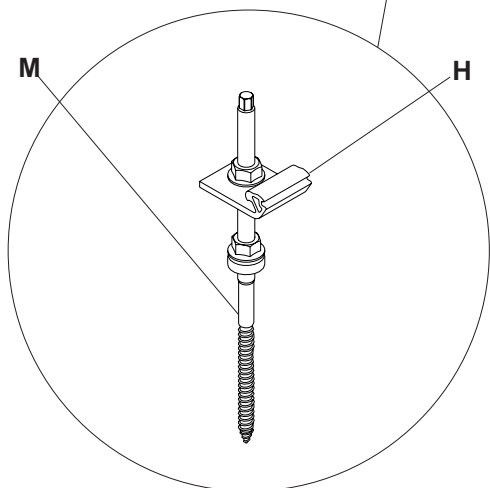
- FR**
- A- Panneau
 - B- Traverse de bout
 - C- Rail de fixation
 - D- Crochet de support
 - E- Boulons en "T" M8x30
 - F- Écrous M8
 - G- Rondelles M8
 - H- Crochet supérieur
 - K- Vis auto perforante
 - L- Instructions
 - M- Crochet inférieur

- UK**
- A- Rail
 - B- End Clamp
 - C- Rail fixation
 - D- Support Bracket
 - E- T-Bolts M8x30
 - F- M8 Nuts
 - G- M8 Washers
 - H- Upper Bracket
 - K- Self drilling screw
 - L- Instructions
 - M- Lower Bracket



- SP**
- A- Perfil
 - B- Fijación lateral
 - C- Fijación perfiles
 - D- Fijación inferior
 - E- Tornillo "T" M8x30
 - F- Tuerca M8
 - G- Arandela M8
 - H- Soporte superior
 - K- Tornillo autopercorante
 - L- Instruciones
 - M- Soporte inferior

- PT**
- A- Perfil
 - B- Grampo fecho
 - C- Guia de fixação
 - D- Clip suporte
 - E- Parafusos "T" M8x30
 - F- Porcas M8
 - G- Anilhas M8
 - H- Clip superior
 - K- Parafuso autopercorante
 - L- Instruções
 - M- Clip inferior

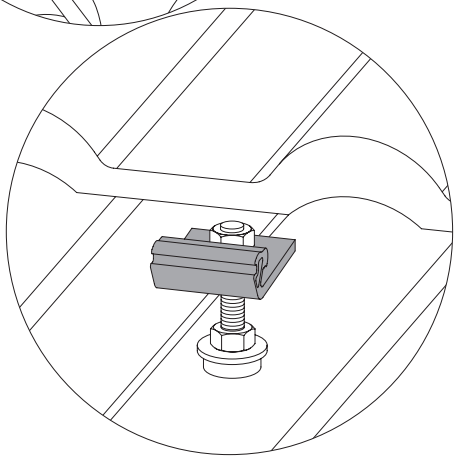
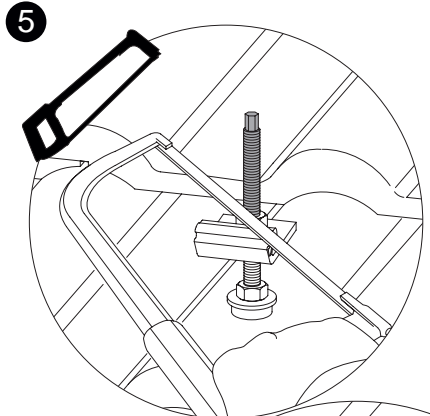
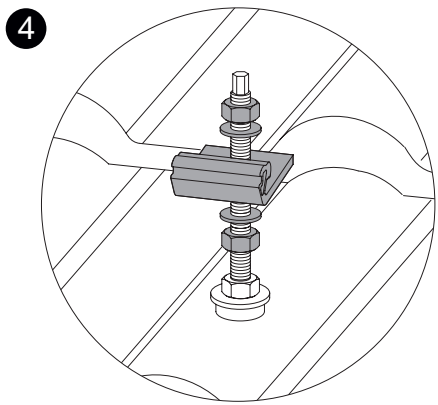
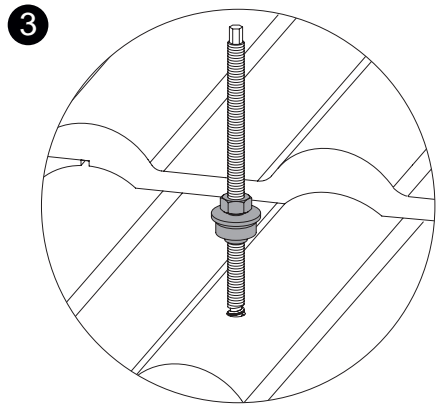
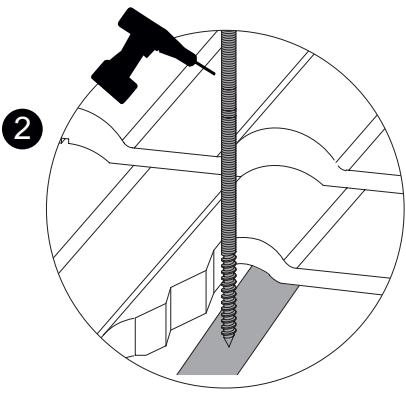
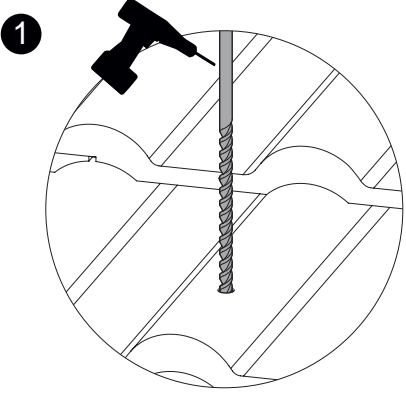
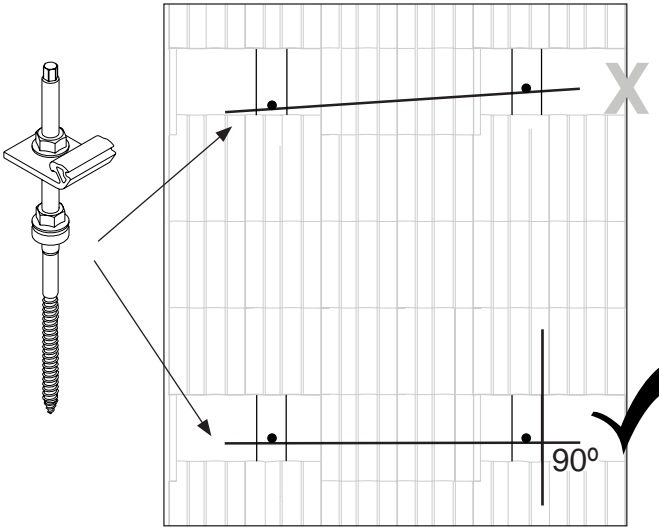
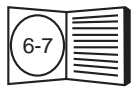


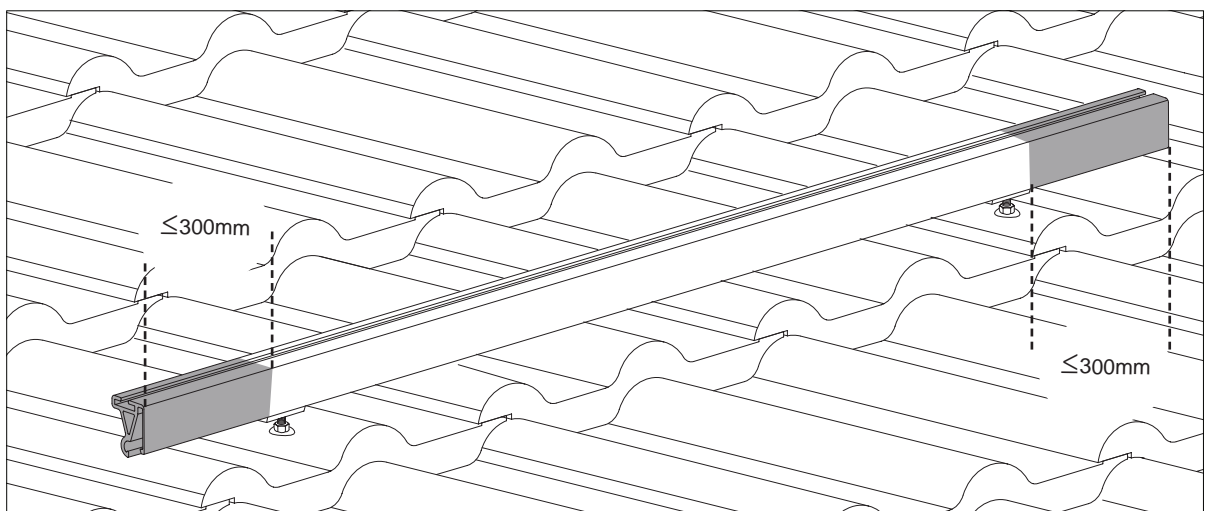
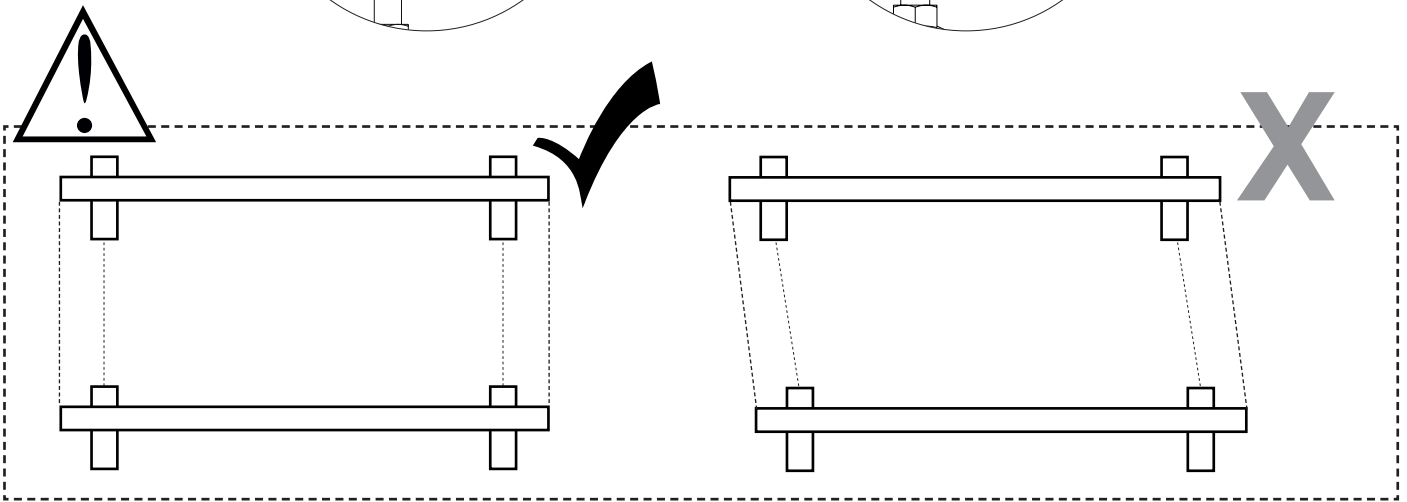
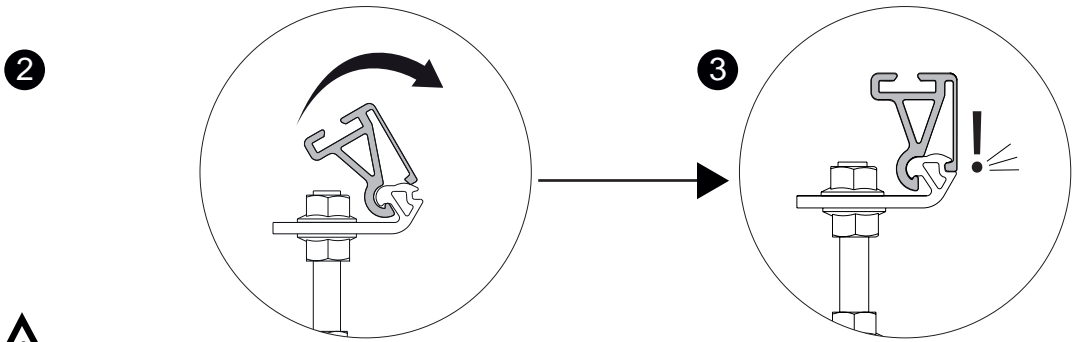
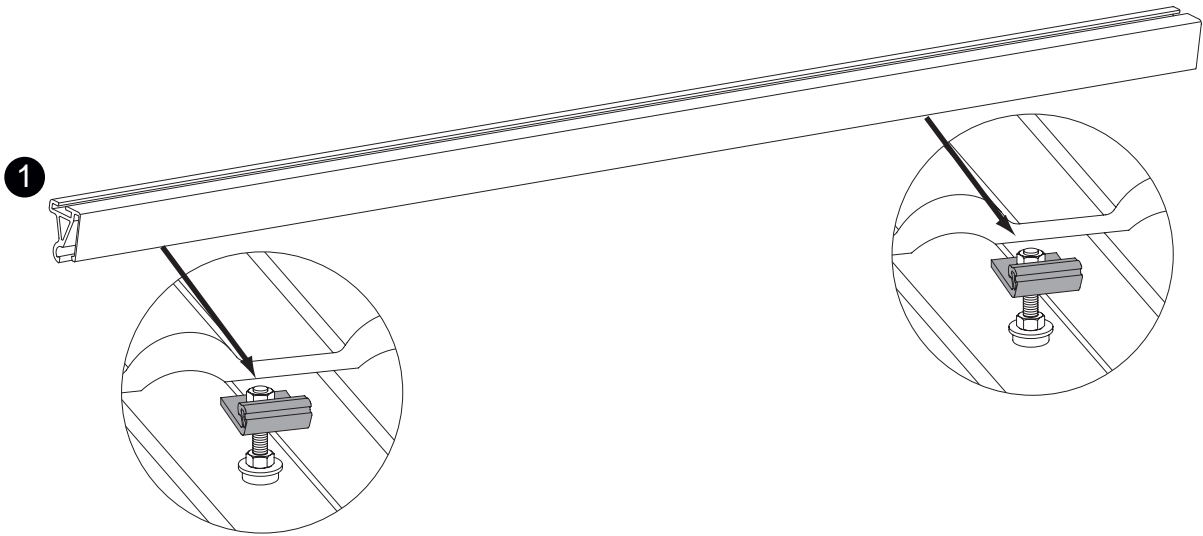
- IT**
- A- Guida
 - B- Morsetto terminale
 - C- Fissaggio profili
 - D- Staffa di supporto
 - E- TBulloni M8x30
 - F- Dadi M8
 - G- Rondelle M8
 - H- Staffa superiore
 - K- Vite autofilettante
 - L- Istruzioni
 - M- Staffa inferiore

- NE**
- A- Staaf
 - B- Eindklem
 - C- Railbevestiging
 - D- Tegenlagerblok
 - E- T-bouten M8x30
 - F- M8 Moeren
 - G- Rondelles M8
 - H- Bovenbeugel
 - K- Zelftappende schroef
 - L- Instructies
 - M- Onderarm

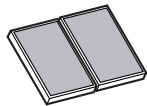
- GE**
- A- Modulschiene
 - B- Abschlussklemmung
 - C- Schienenbefestigung
 - D- Halterung
 - E- T-Bolzen M8x30
 - F- M8 Muttern
 - G- M8 Unterlegscheiben
 - H- Obere Halterung
 - K- Bohrschraube
 - L- Anleitung
 - M- Untere Halterung

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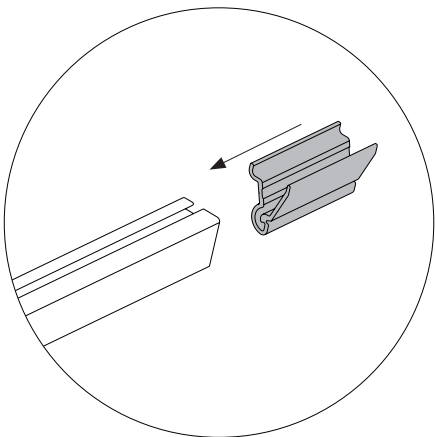




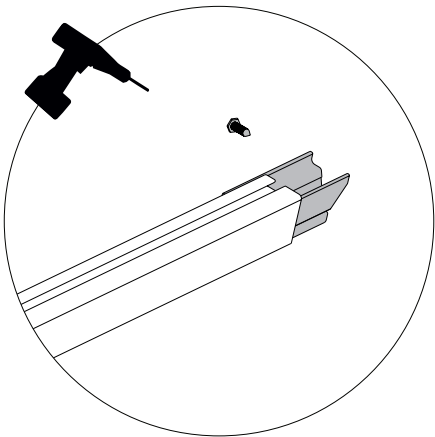
7.0 Installation
 Installation
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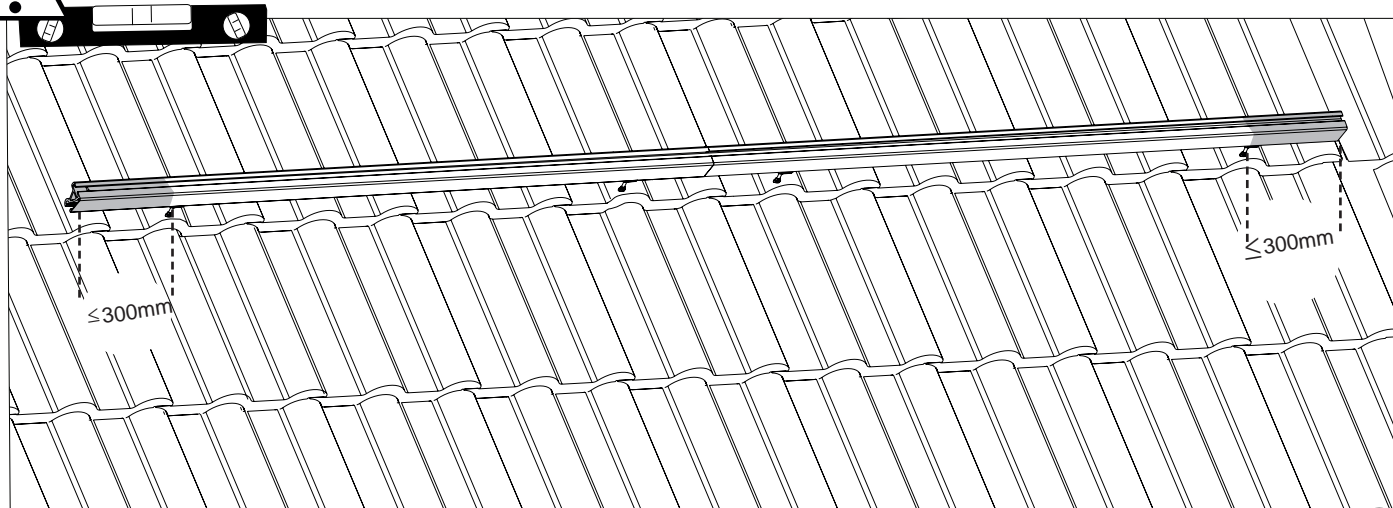
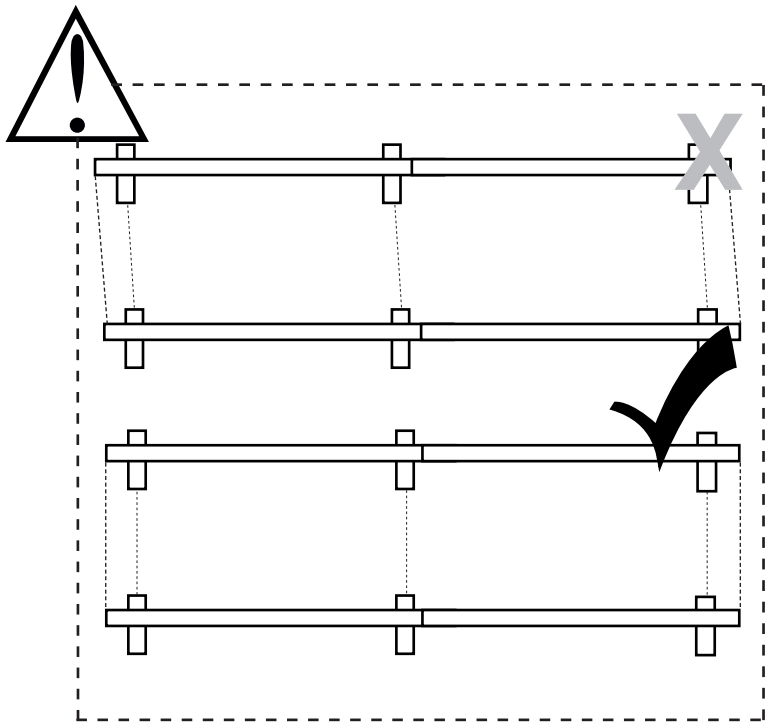
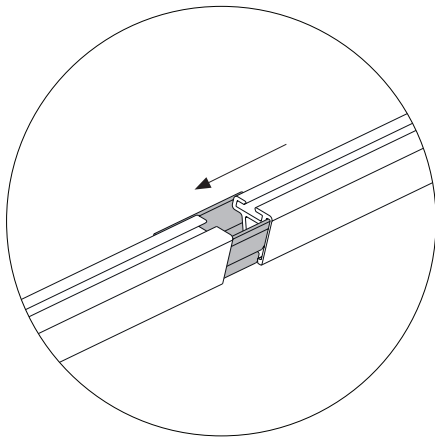
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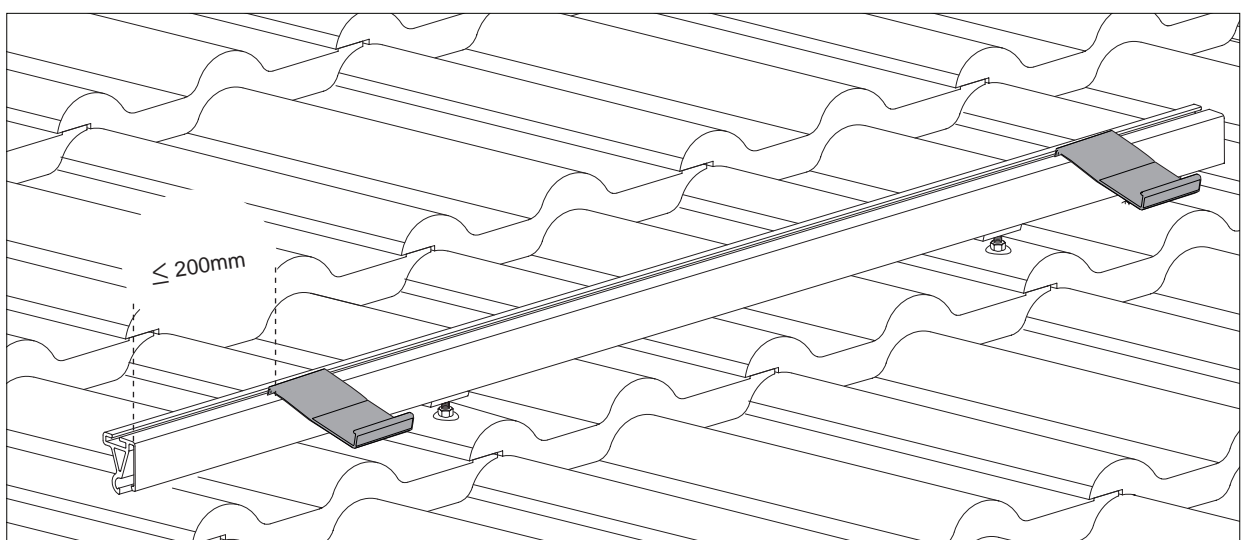
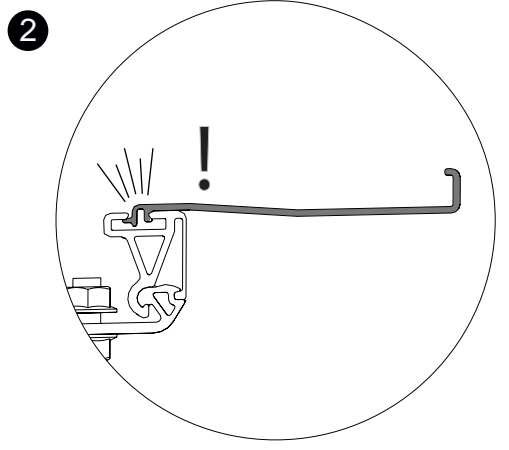
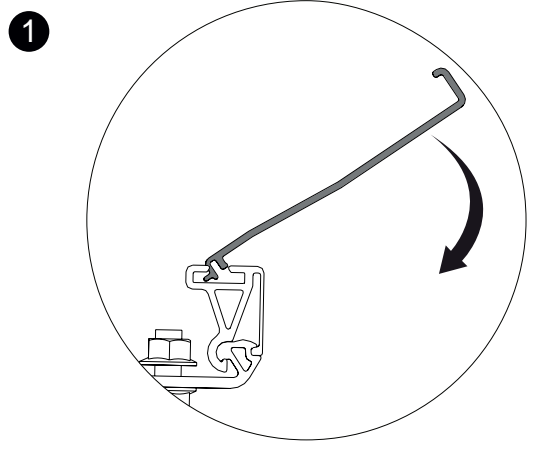
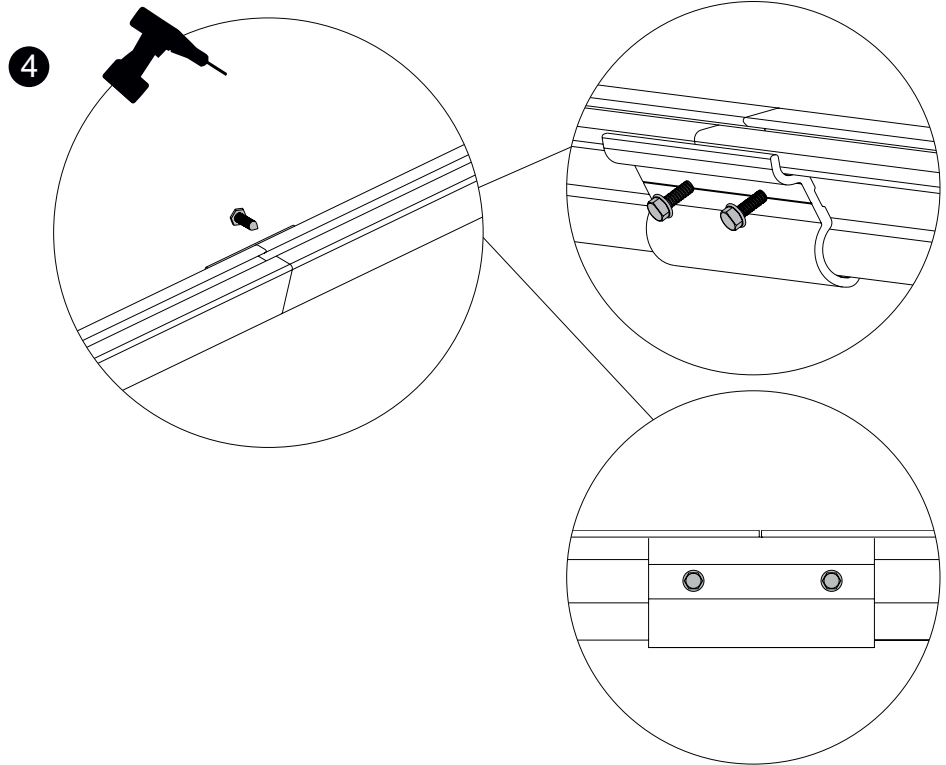
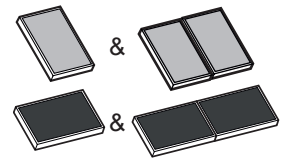


2



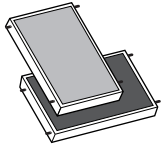
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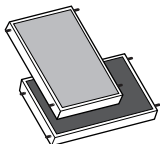


6.0 Contenu et composants du kit Kit Contents and Components Contenido y componentes del kit Conteúdo e componentes do Kit Contenuto e componenti dei kit Inhoud en onderdelen van de kit Inhalt und Komponenten des Sets




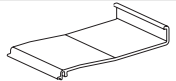
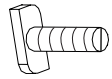

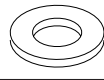
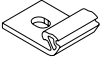
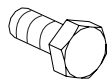
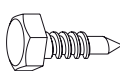

- * FR - Non utilisé
- * UK - Not Used
- * SP - No se utiliza
- * PT - Não utilizado
- * IT - Non si usa
- * NE - Niet gebruikt
- * GE - Unbenutzt

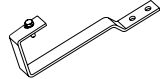


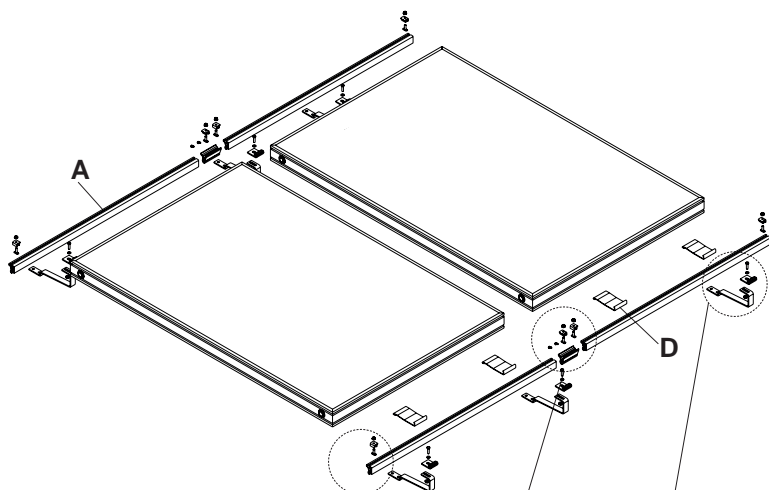
ER 260 261
 C250V D 230 C250H



ER 315 316

	A	2	2
	B	4	4
	C	2	2
	D	2	2
	E	4	4
	F	8	8
	G	8	8
	H	4	4
	J	4	4
	K	4	4
	L	1	1

	M	4	6
--	---	---	---



On-Roof Flat-Tiles

EG 315/316

UK

- A- Rail
- B- End Clamp
- C- Rail fixation
- D- Support Bracket
- E- T-Bolts M8x30
- F- M8 Nuts
- G- M8 Washers
- H- Upper Bracket
- J- Bolts M8x20
- K- Self drilling screw
- L- Instructions
- M- Lower Bracket

FR

- A- Panneau
- B- Traverse de bout
- C- Rail de fixation
- D- Crochet de support
- E- Boulons en "T" M8x30
- F- Écrous M8
- G- Rondelles M8
- H- Crochet supérieur
- J- Boulons M8x20
- K- Vis auto perforante
- L- Instructions
- M- Crochet inférieur

PT

- A- Perfil
- B- Grampo fecho
- C- Guia de fixação
- D- Clip suporte
- E- Parafusos "T" M8x30
- F- Porcas M8
- G- Anilhas M8
- H- Clip superior
- J- Parafusos M8x20
- K- Parafuso autoperforante
- L- Instruções
- M- Clip inferior

SP

- A- Perfil
- B- Fijación lateral
- C- Fijación perfiles
- D- Fijación inferior
- E- Tornillo "T" M8x30
- F- Tuerca M8
- G- Arandela M8
- H- Soporte superior
- J- Tornillo M8x20
- K- Tornillo autoperforante
- L- Instrucciones
- M- Soporte inferior

NE

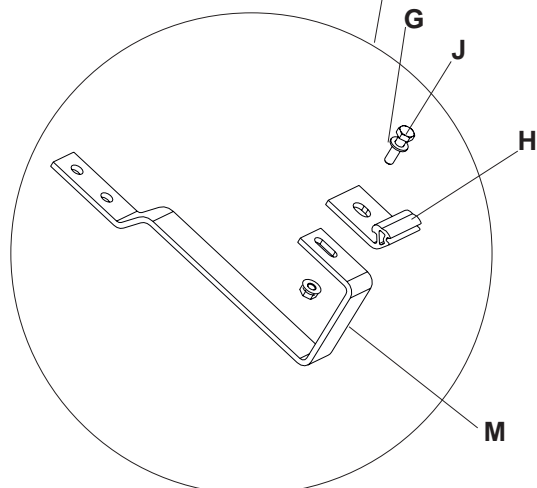
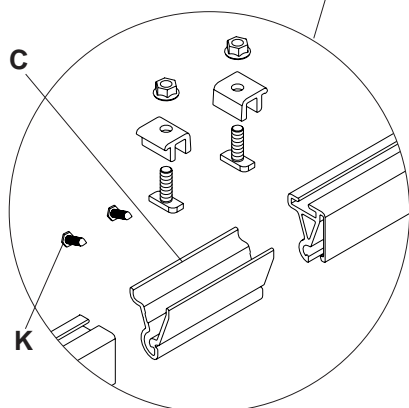
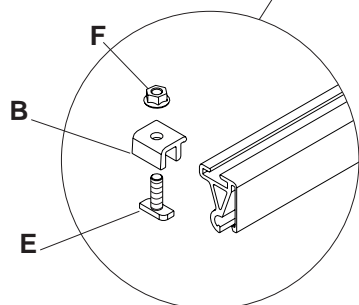
- A- Staaf
- B- Eindklem
- C- Railbevestiging
- D- Tegenlagerblok
- E- T-bouten M8x30
- F- M8 Moeren
- G- Rondelles M8
- H- Bovenbeugel
- J- Bouten M8x20
- K- Zelftappende schroef
- L- Instructies
- M- Onderarm

IT

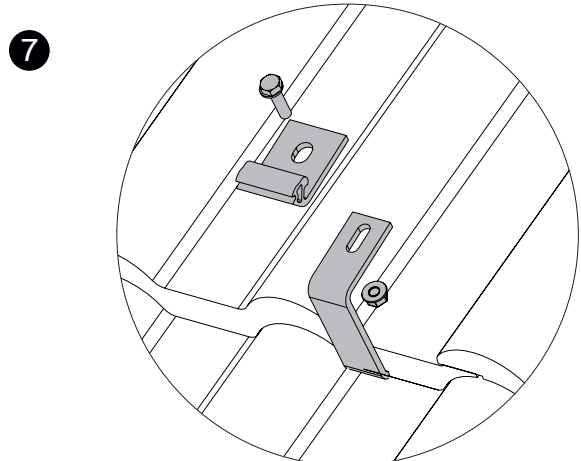
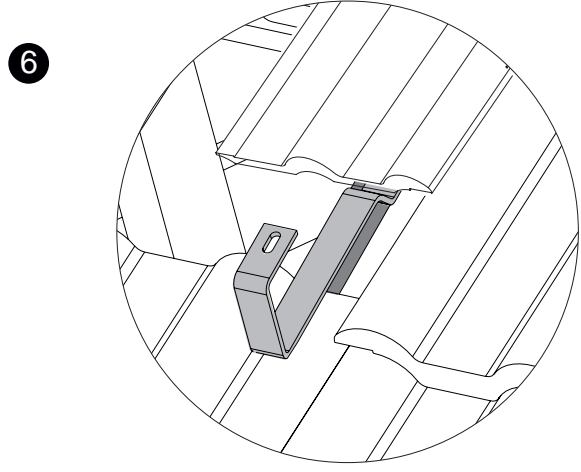
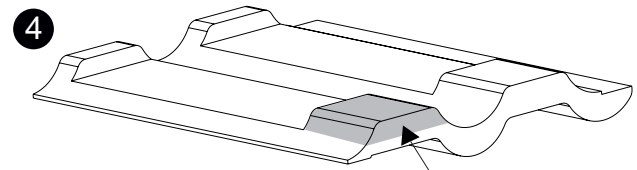
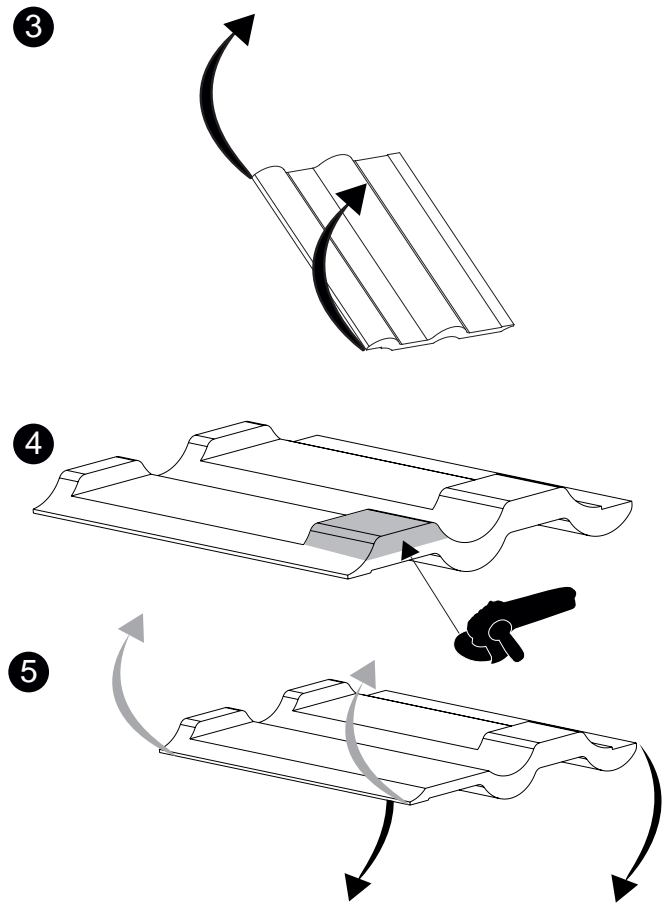
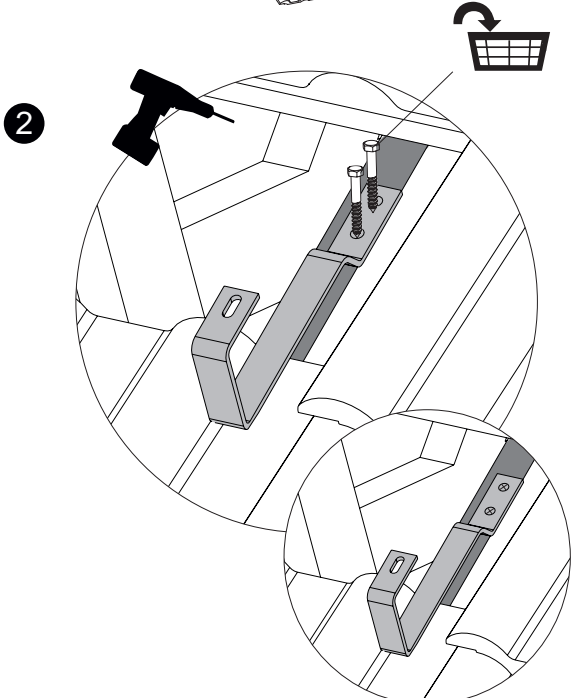
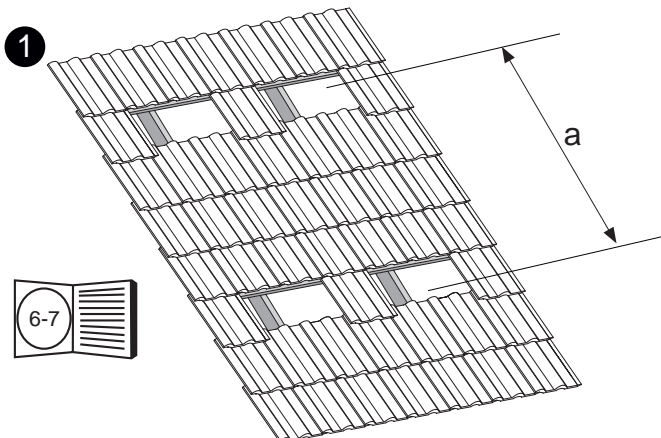
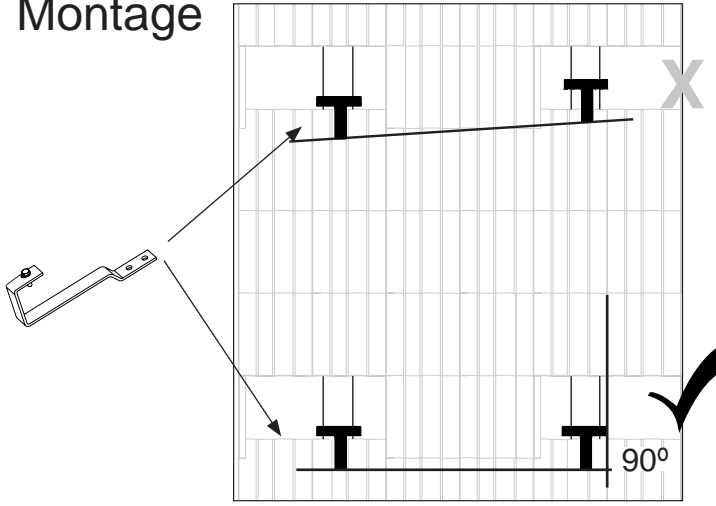
- A- Guida
- B- Morsetto terminale
- C- Fissaggio profili
- D- Staffa di supporto
- E- TBulloni M8x30
- F- Dadi M8
- G- Rondelle M8
- H- Staffa superiore
- J- Bulloni M8x20
- K- Vite autofilettante
- L- Istruzioni
- M- Staffa inferiore

GE

- A- Modulschiene
- B- Abschlussklemmung
- C- Schienenbefestigung
- D- Halterung
- E- T-Bolzen M8x30
- F- M8 Muttern
- G- M8 Unterlegscheiben
- H- Obere Halterung
- J- Bolzen M8x20
- K- Bohrschraube
- L- Anleitung
- M- Untere Halterung

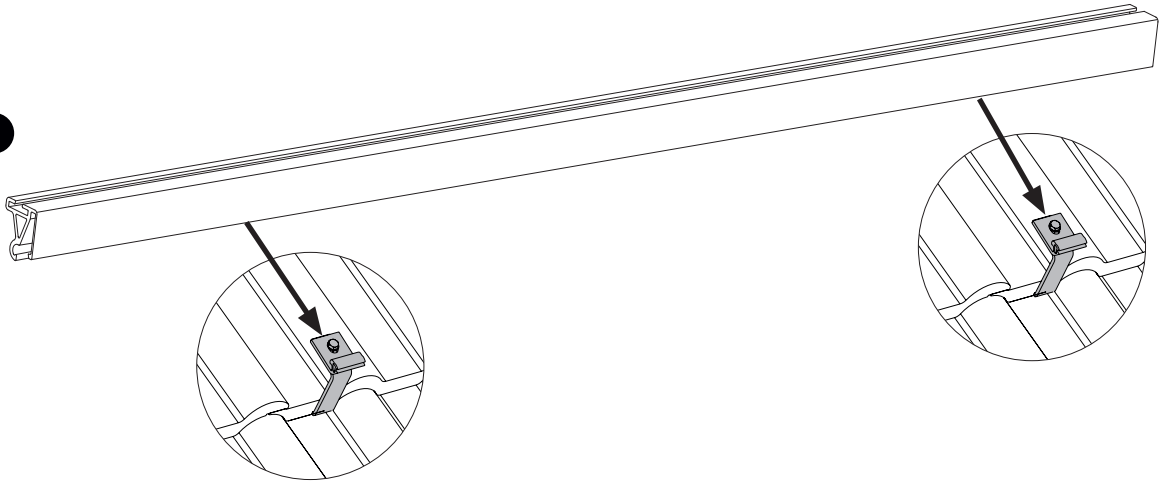


7.0 Installation
 Installation
 Instalación
 Instalação
 Installazione
 Installatie
 Montage

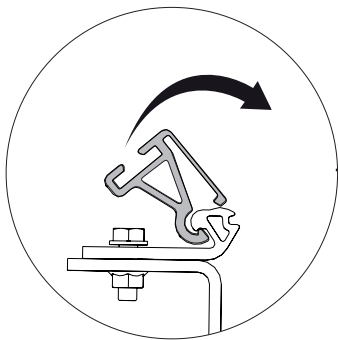




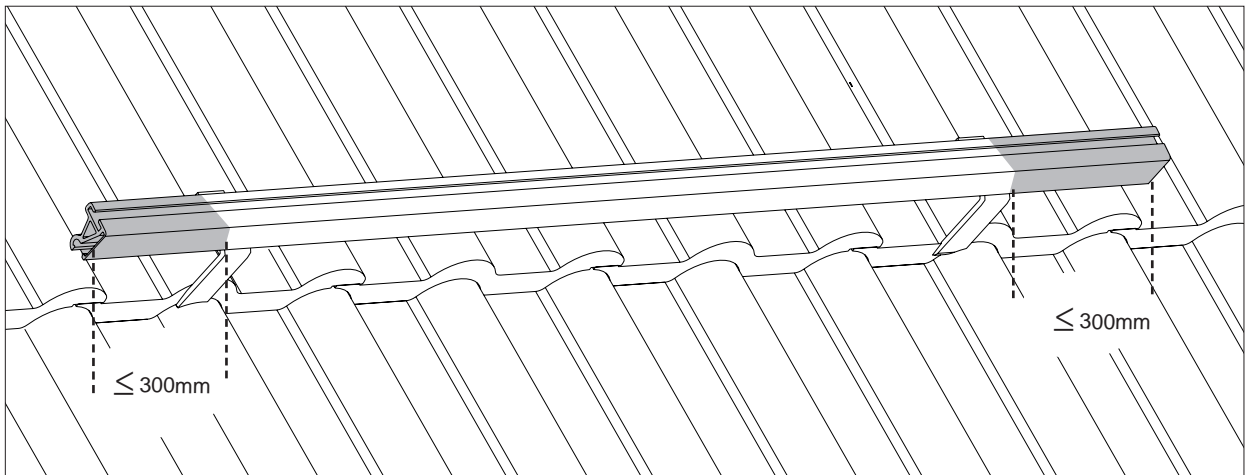
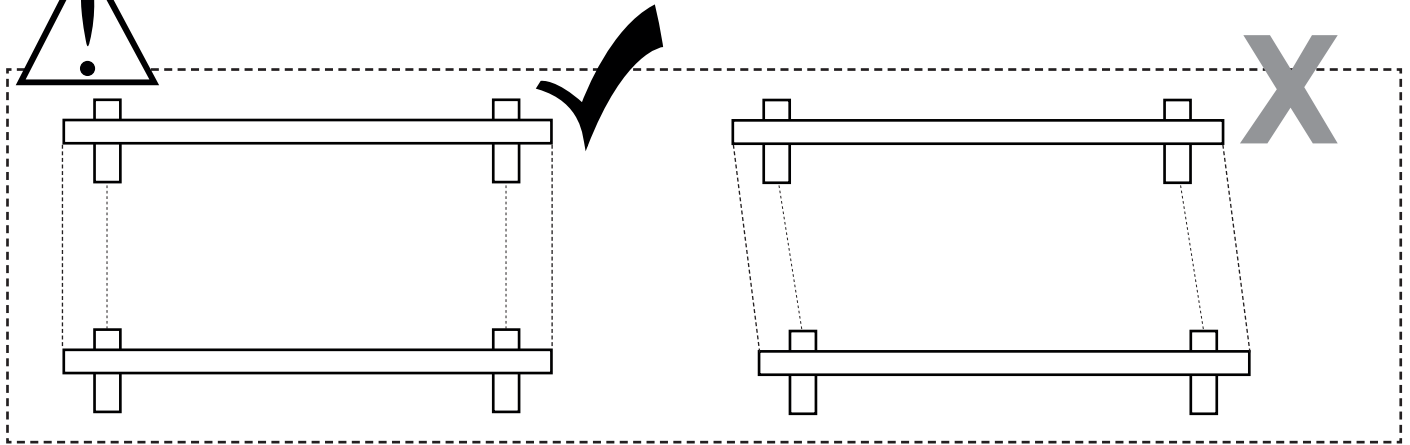
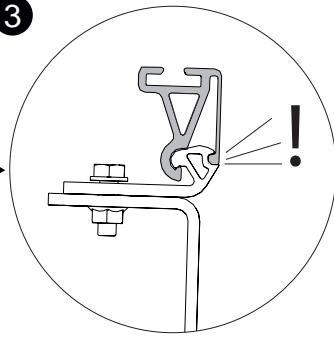
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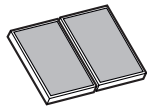
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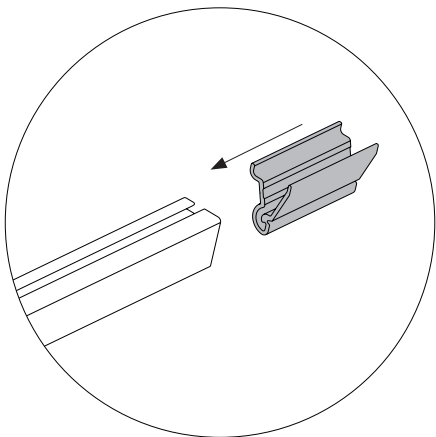
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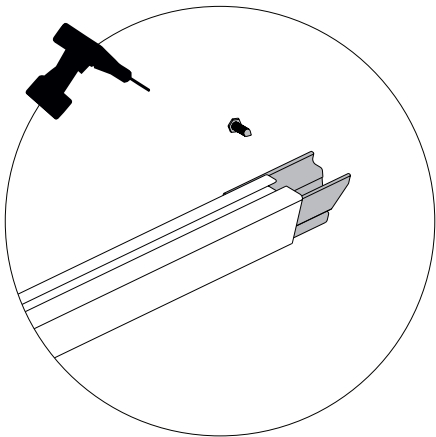
7.0 Installation
 Installation
 Instalación
 Instalação
 Installazione
 Installatie
 Montage



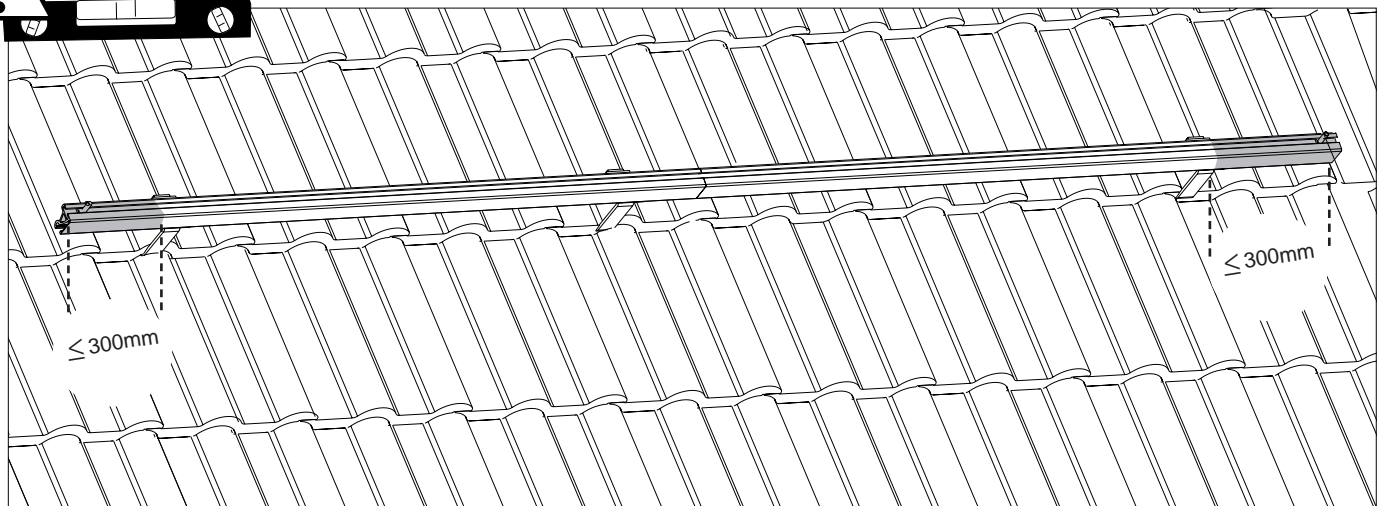
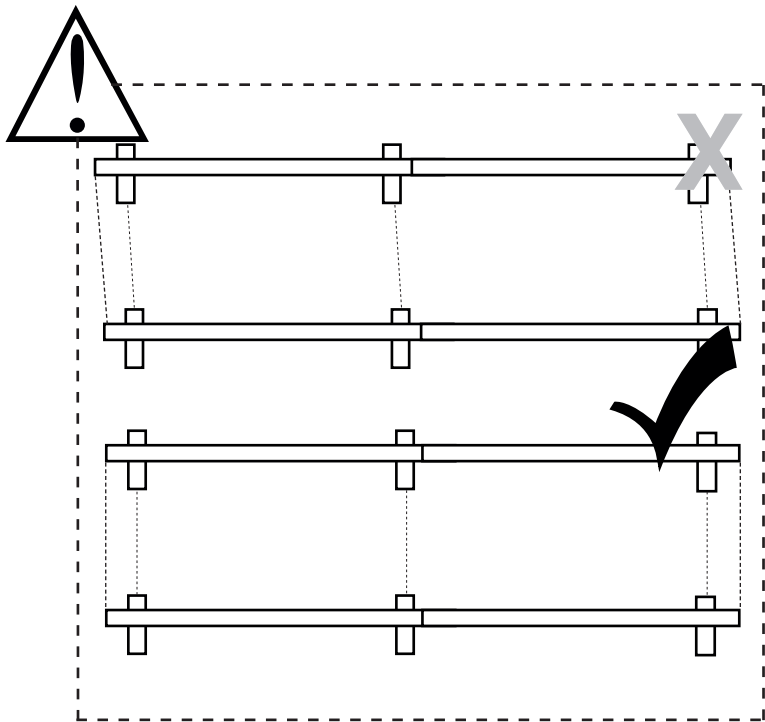
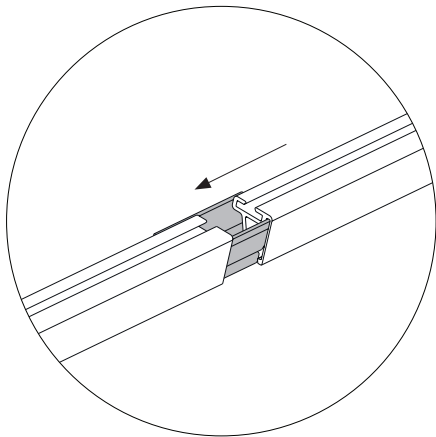
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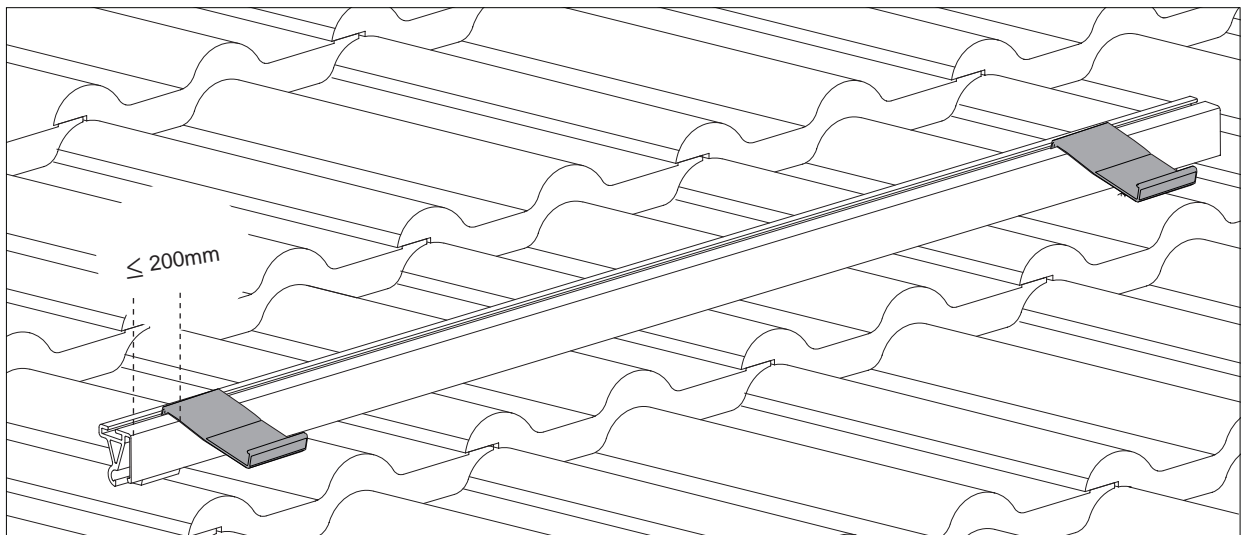
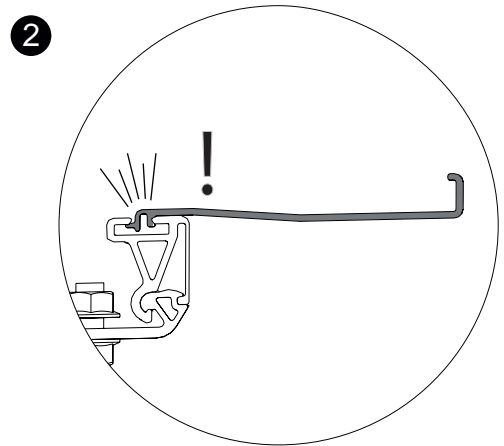
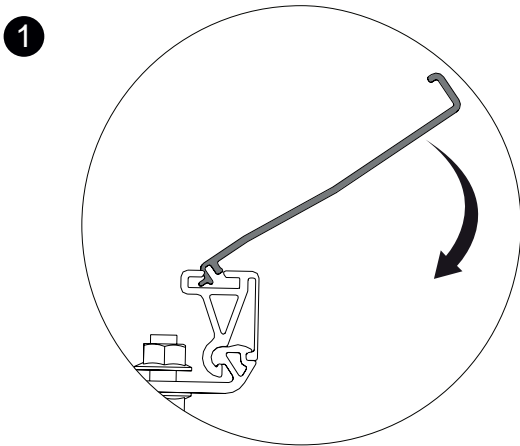
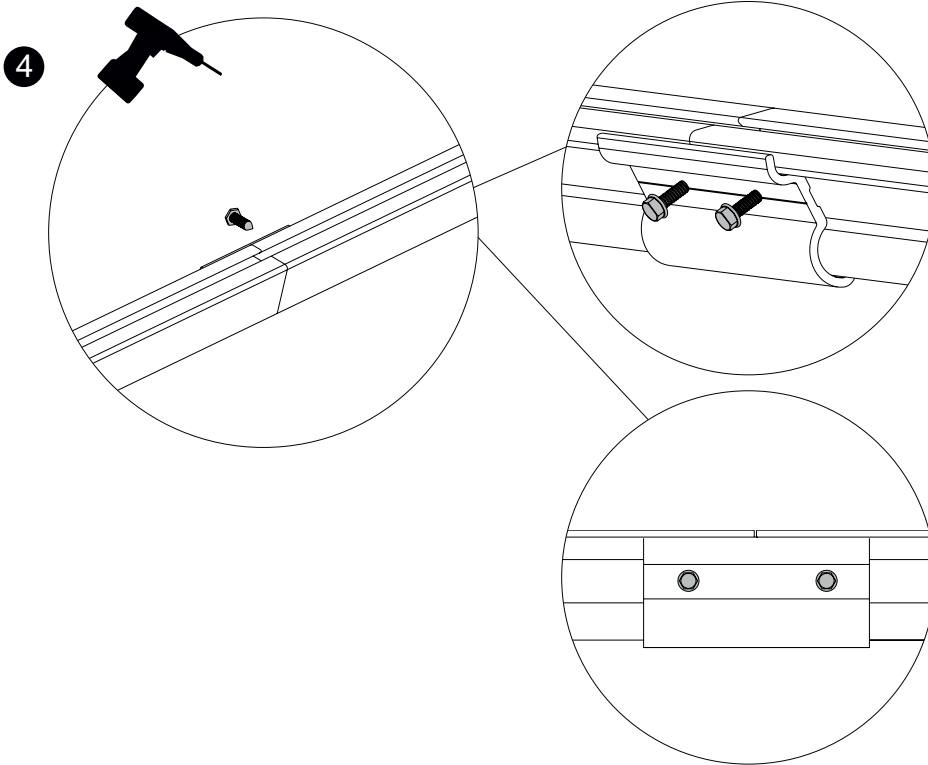
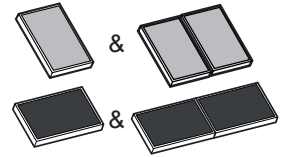


2



3





6.0 Contenu et composants du kit

Kit Contents and Components

Contenido y componentes del kit

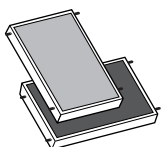
Conteúdo e componentes do Kit

Contenuto e componenti dei kit

Inhoud en onderdelen van de kit




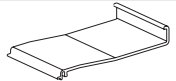
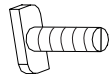

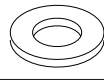
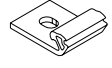
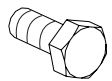
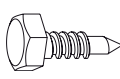

Inhalt und Komponenten des Sets

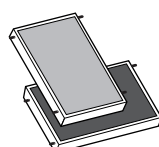
- * FR - Non utilisé
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- * GE - Unbenutzt



ER 260 261

D 230 C250H
C250V

 A	2	2
 B	4	4
 C	2	2
 D	2	2
 E	4	4
 F	8	8
 G	8	8
 H	4	4
 J	4	4
 K	4	4
 L	1	1

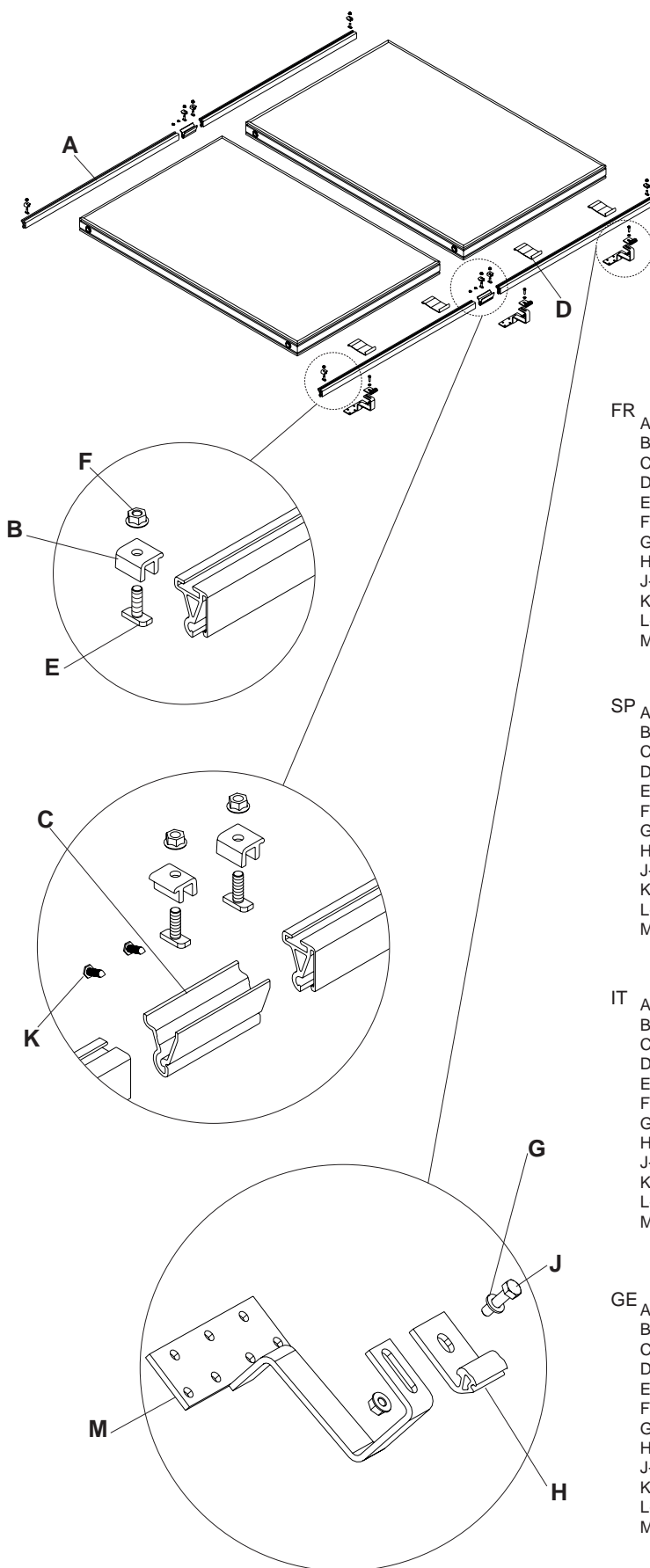
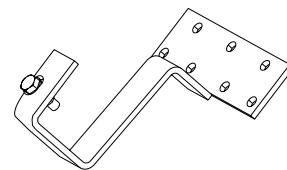


ER 313 314

 M	4	6
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On-Roof Mechanical-Tiles

EG 313/314



FR

- A- Panneau
- B- Traverse de bout
- C- Rail de fixation
- D- Crochet de support
- E- Boulons en "T" M8x30
- F- Écrous M8
- G- Rondelles M8
- H- Crochet supérieur
- J- Boulons M8x20
- K- Vis auto perforante
- L- Instructions
- M- Crochet inférieur

UK

- A- Rail
- B- End Clamp
- C- Rail fixation
- D- Support Bracket
- E- T-Bolts M8x30
- F- M8 Nuts
- G- M8 Washers
- H- Upper Bracket
- J- Bolts M8x20
- K- Self drilling screw
- L- Instructions
- M- Lower Bracket

SP

- A- Perfil
- B- Fijación lateral
- C- Fijación perfiles
- D- Fijación inferior
- E- Tornillo "T" M8x30
- F- Tuerca M8
- G- Arandela M8
- H- Soporte superior
- J- Tornillo M8x20
- K- Tornillo autopercorante
- L- Instruciones
- M- Soporte inferior

PT

- A- Perfil
- B- Grampo fecho
- C- Guia de fixação
- D- Clip suporte
- E- Parafusos "T" M8x30
- F- Porcas M8
- G- Anilhas M8
- H- Clip superior
- J- Parafusos M8x20
- K- Parafuso autopercorante
- L- Instruções
- M- Clip inferior

IT

- A- Guida
- B- Morsetto terminale
- C- Fissaggio profili
- D- Staffa di supporto
- E- TBulloni M8x30
- F- Dadi M8
- G- Rondelle M8
- H- Staffa superiore
- J- Bulloni M8x20
- K- Vite autofilettante
- L- Istruzioni
- M- Staffa inferiore

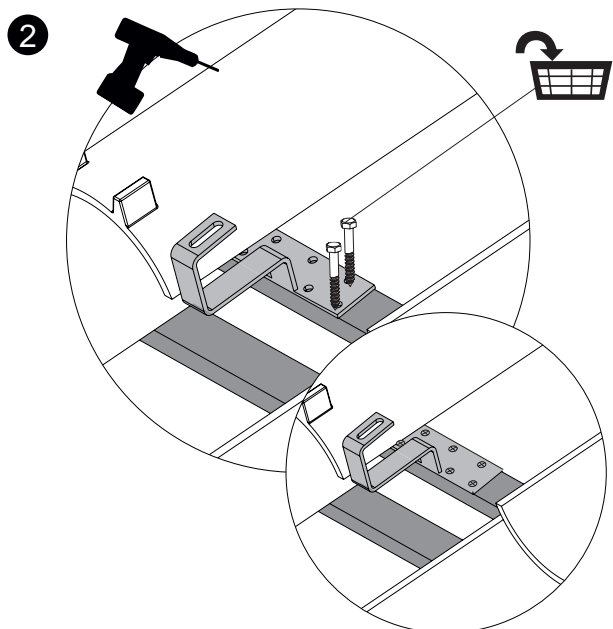
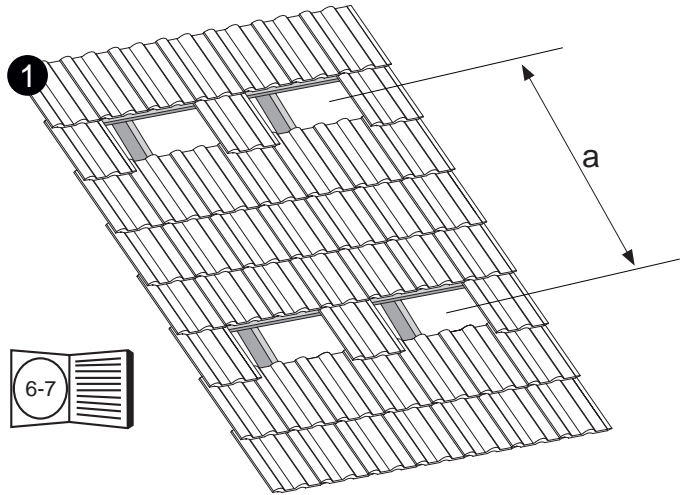
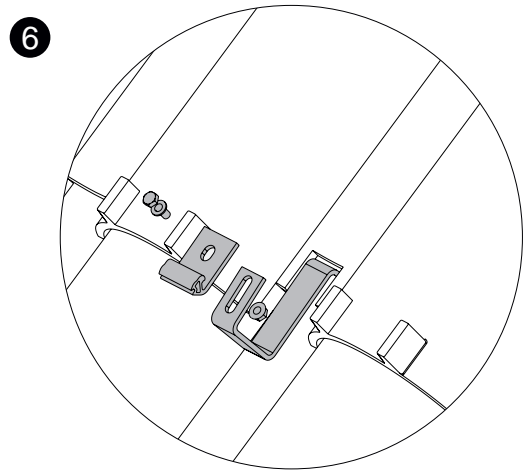
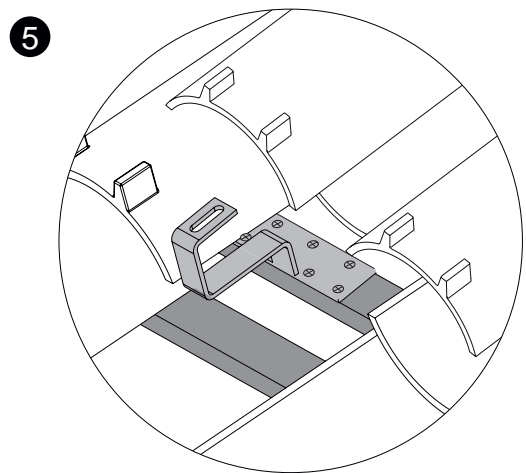
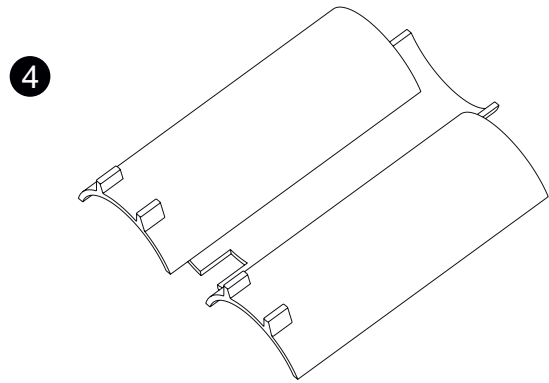
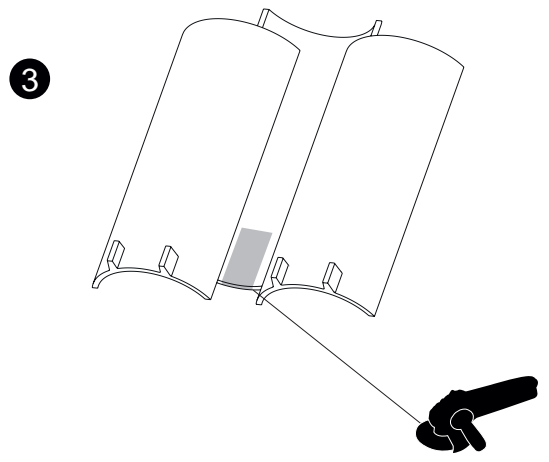
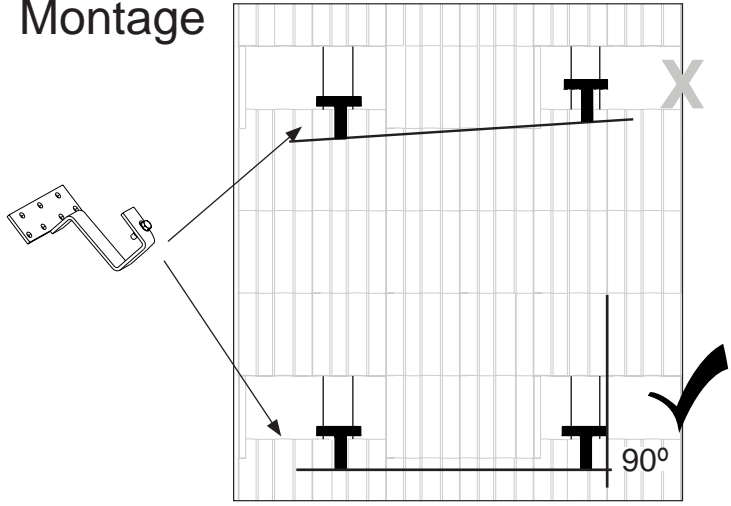
NE

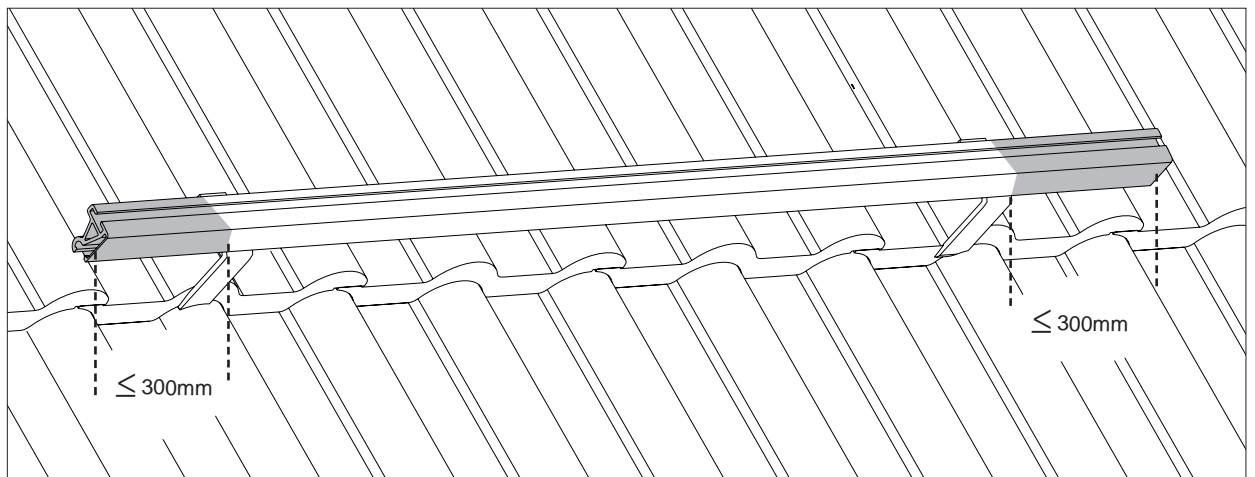
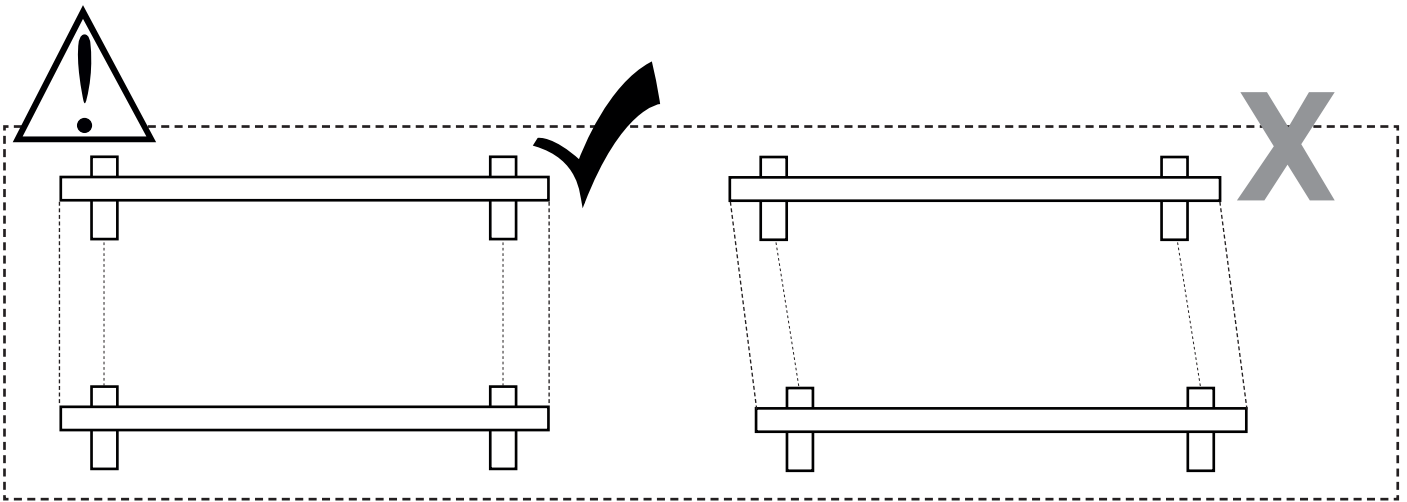
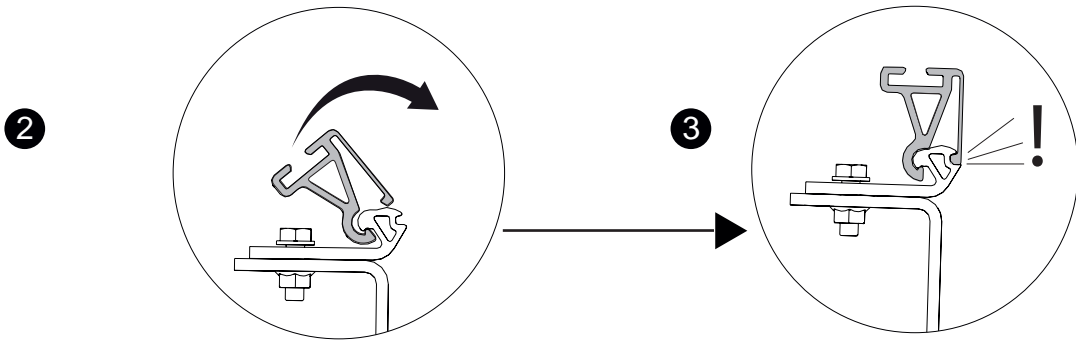
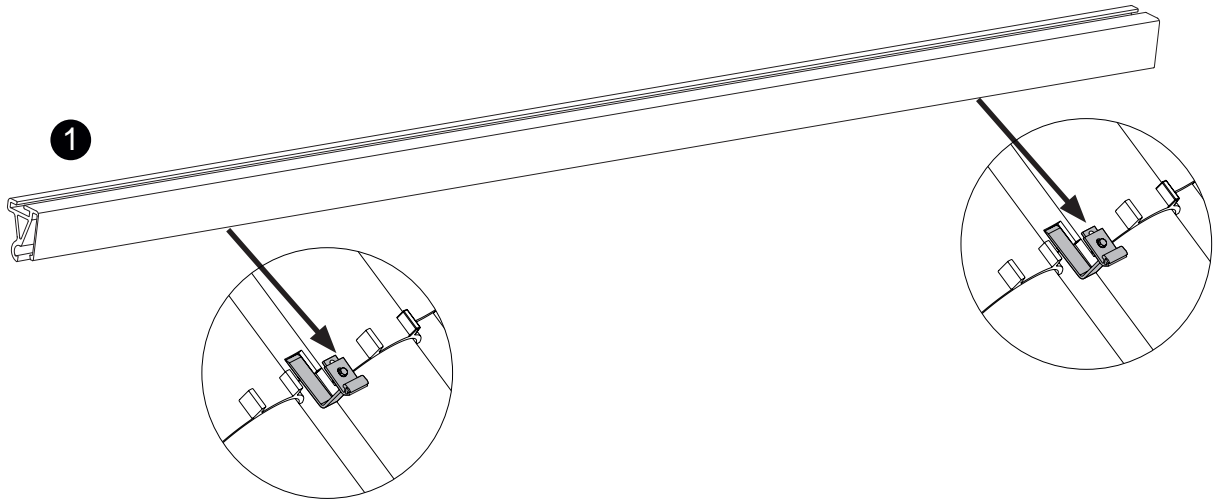
- A- Staaf
- B- Eindklem
- C- Railbevestiging
- D- Tegenlagerblok
- E- T-bouten M8x30
- F- M8 Moeren
- G- Rondelles M8
- H- Bovenbeugel
- J- Bouten M8x20
- K- Zelftappende schroef
- L- Instructies
- M- Onderarm

GE

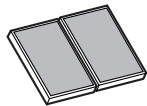
- A- Modulschiene
- B- Abschlussklemmung
- C- Schienenbefestigung
- D- Halterung
- E- T-Bolzen M8x30
- F- M8 Muttern
- G- M8 Unterlegscheiben
- H- Obere Halterung
- J- Bolzen M8x20
- K- Bohrschraube
- L- Anleitung
- M- Untere Halterung

7.0 Installation
 Installation
 Instalación
 Instalação
 Installazione
 Installatie
 Montage

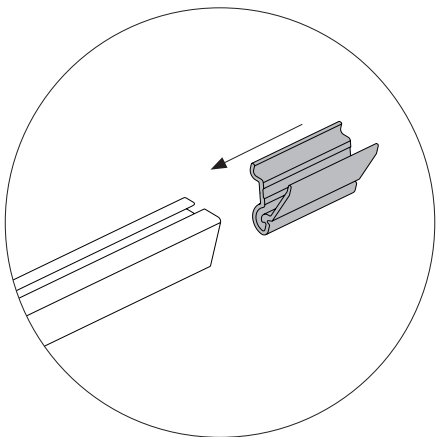




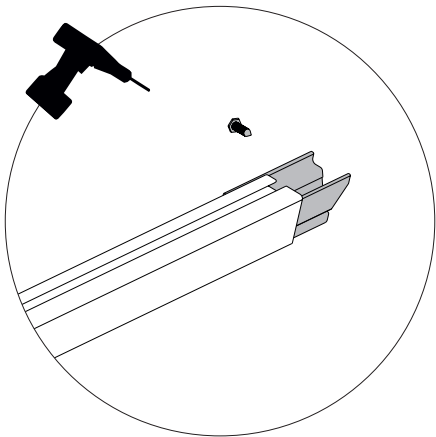
7.0 Installation
 Installation
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 Installatie
 Montage



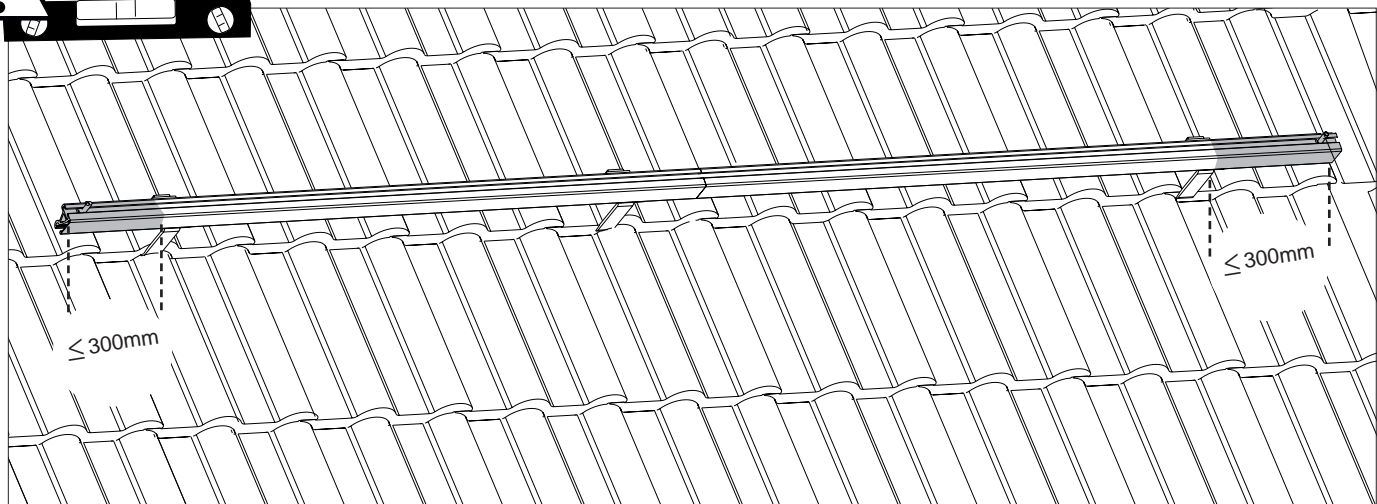
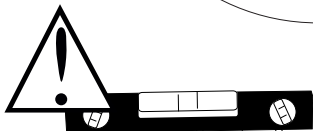
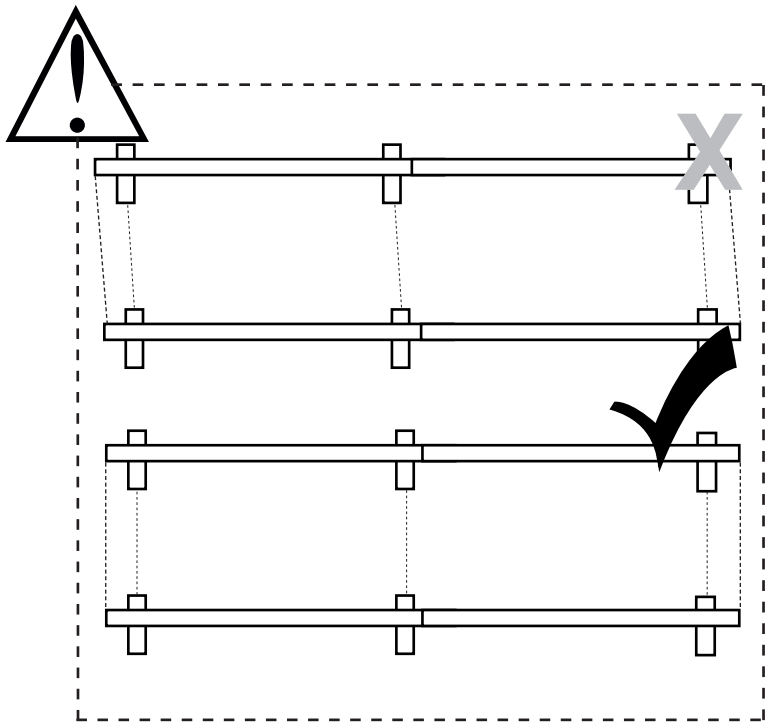
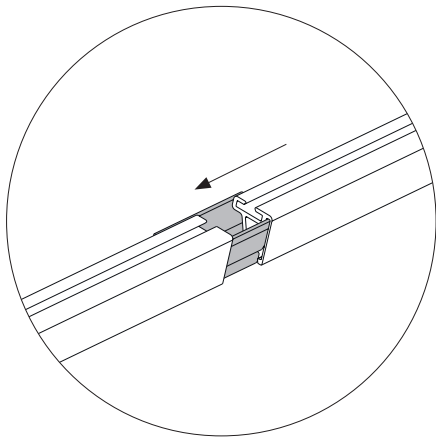
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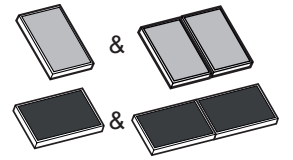


2

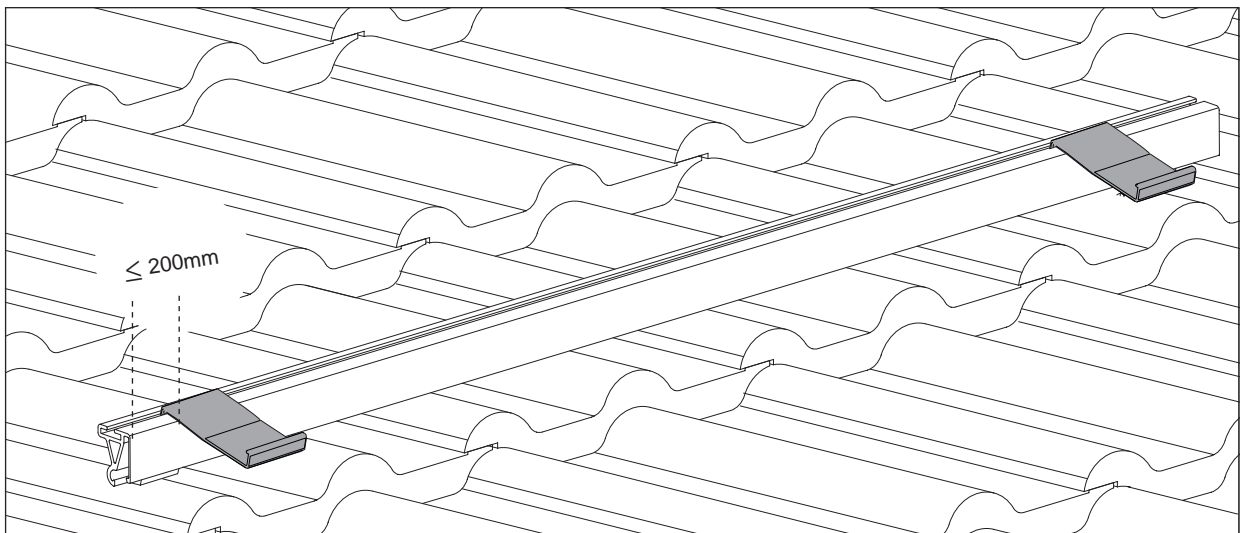
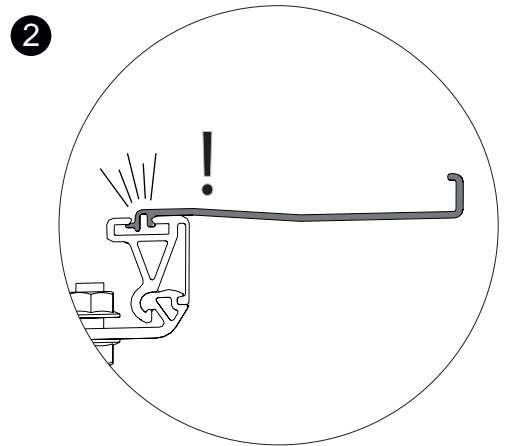
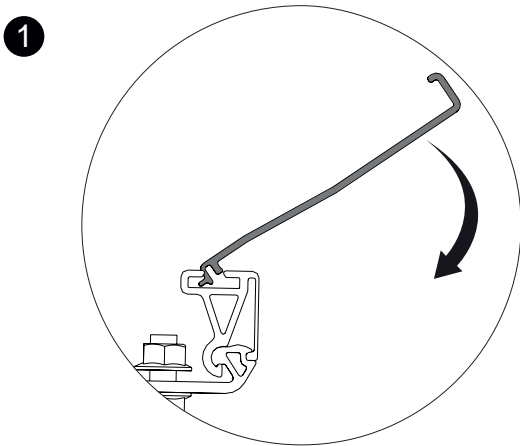
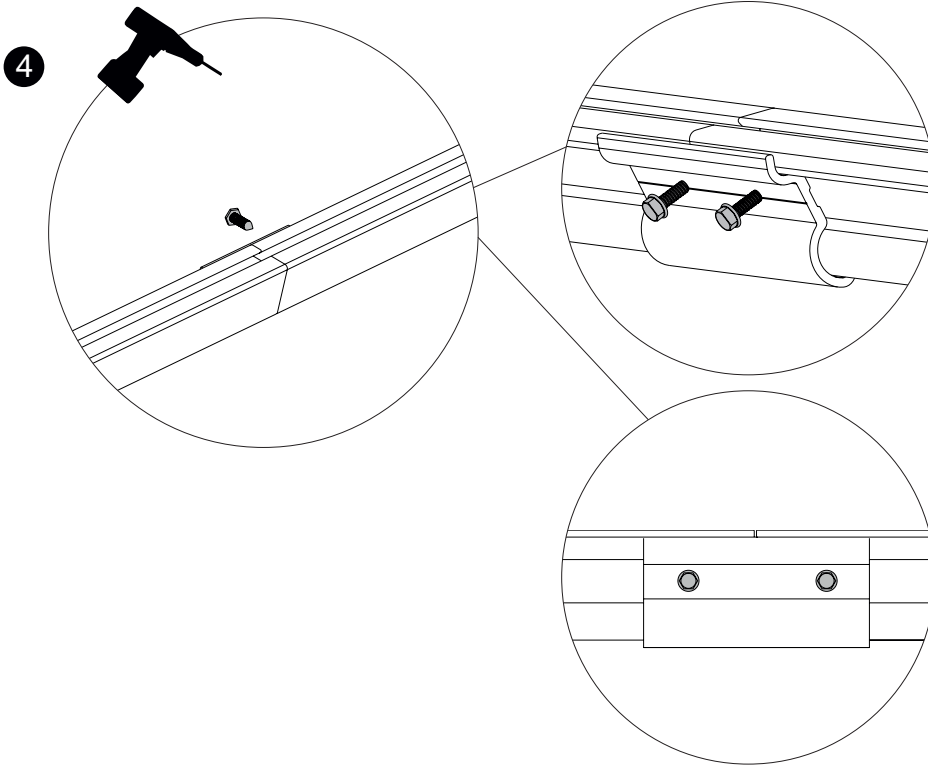


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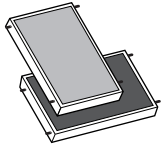


7.0

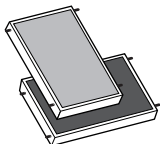


6.0 Contenu et composants du kit Kit Contents and Components Contenido y componentes del kit Conteúdo e componentes do Kit Contenuto e componenti dei kit Inhoud en onderdelen van de kit Inhalt und Komponenten des Sets




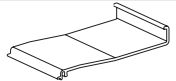
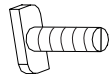

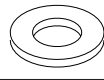
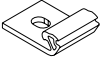
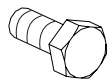
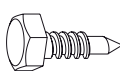

- * FR - Non utilisé
- * UK - Not Used
- * SP - No se utiliza
- * PT - Não utilizado
- * IT - Non si usa
- * NE - Niet gebruikt
- * GE - Unbenutzt



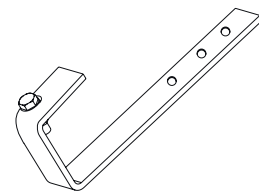
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 C250V C250H
 D 230



ER 319 310

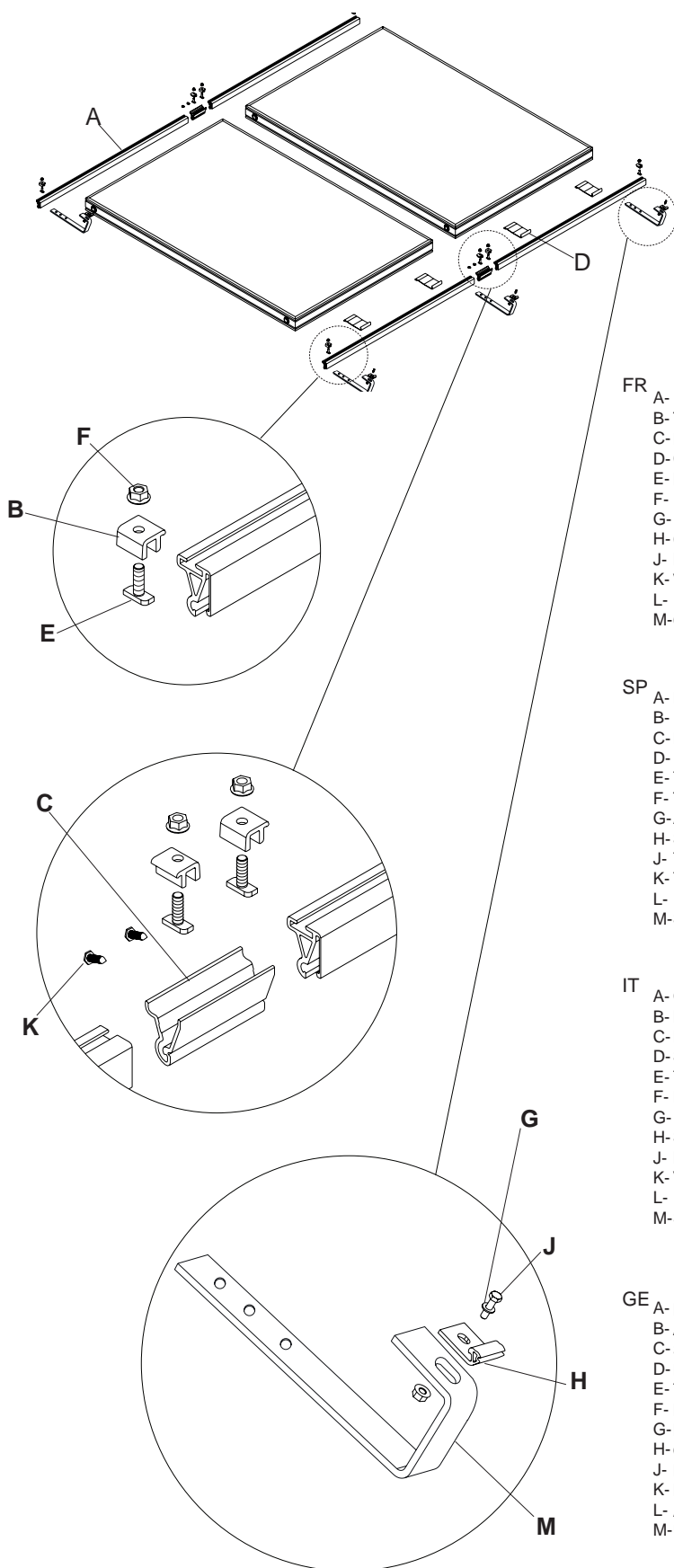
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	C	2	2
	D	2	2
	E	4	4
	F	8	8
	G	8	8
	H	4	4
	J	4	4
	K	4	4
	L	1	1

	M	4	6
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On-Roof Slate-Tiles

EG 319/320



FR
 A- Panneau
 B- Traverse de bout
 C- Rail de fixation
 D- Crochet de support
 E- Boulons en "T" M8x30
 F- Écrous M8
 G- Rondelles M8
 H- Crochet supérieur
 J- Boulons M8x20
 K- Vis auto perforante
 L- Instructions
 M- Crochet inférieur

UK
 A- Rail
 B- End Clamp
 C- Rail fixation
 D- Support Bracket
 E- T-Bolts M8x30
 F- M8 Nuts
 G- M8 Washers
 H- Upper Bracket
 J- Bolts M8x20
 K- Self drilling screw
 L- Instructions
 M- Lower Bracket

SP
 A- Perfil
 B- Fijación lateral
 C- Fijación perfiles
 D- Fijación inferior
 E- Tornillo "T" M8x30
 F- Tuerca M8
 G- Arandela M8
 H- Soporte superior
 J- Tornillo M8x20
 K- Tornillo autoperforante
 L- Instrucciones
 M- Soporte inferior

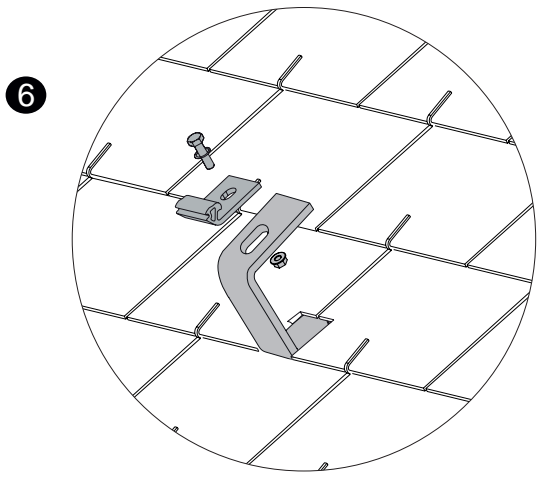
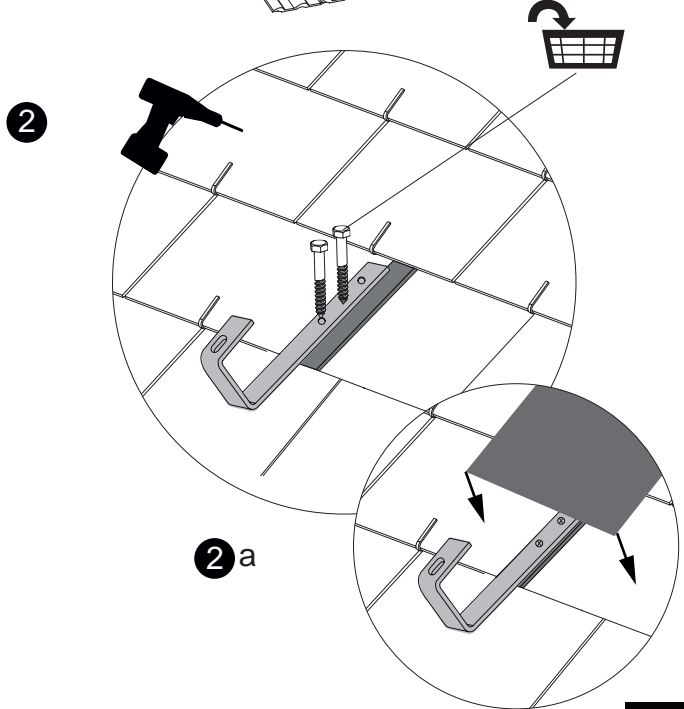
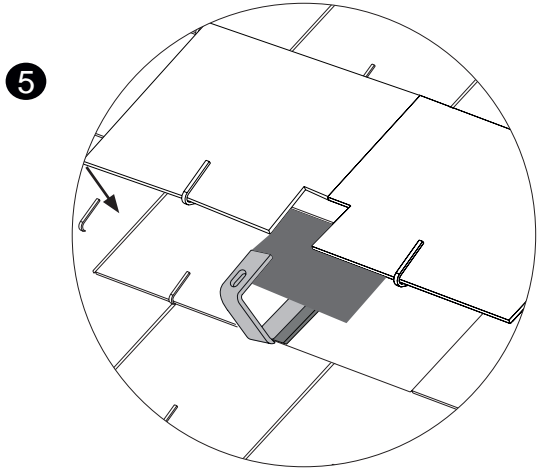
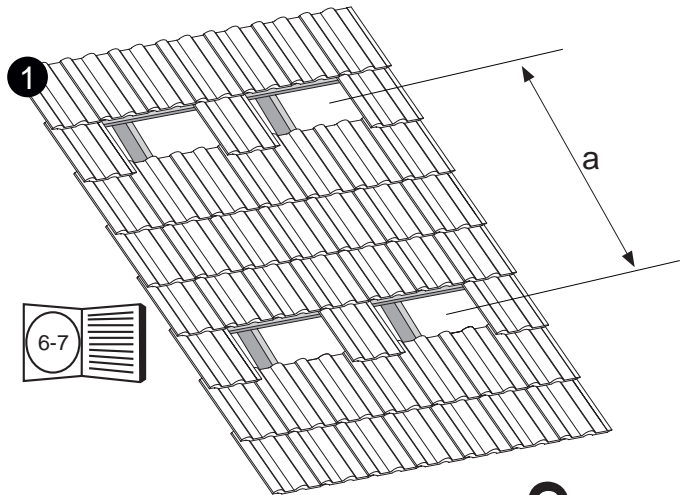
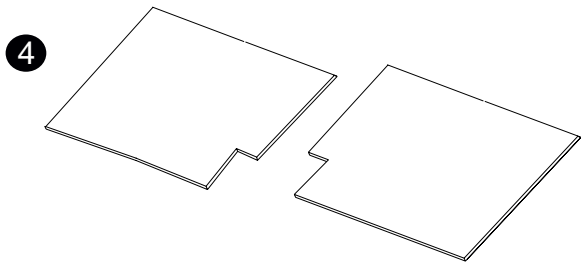
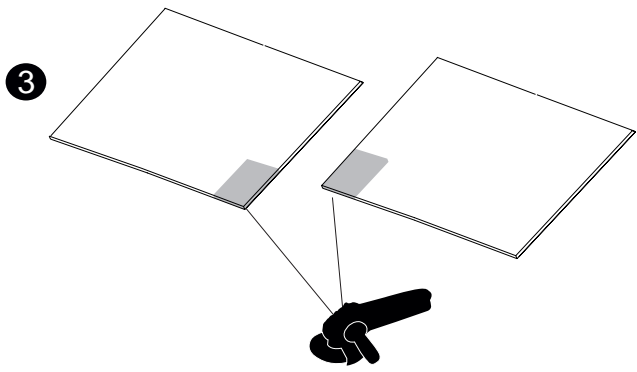
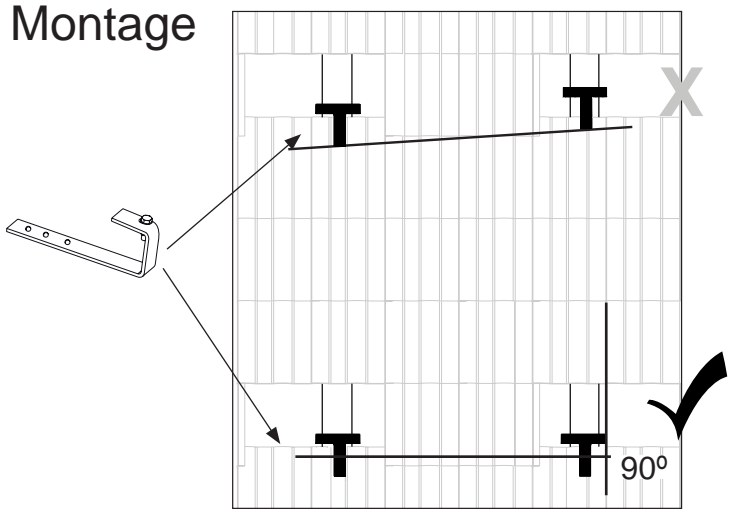
PT
 A- Perfil
 B- Grampo fecho
 C- Guia de fixação
 D- Clip suporte
 E- Parafusos "T" M8x30
 F- Porcas M8
 G- Anilhas M8
 H- Clip superior
 J- Parafusos M8x20
 K- Parafuso autoperforante
 L- Instruções
 M- Clip inferior

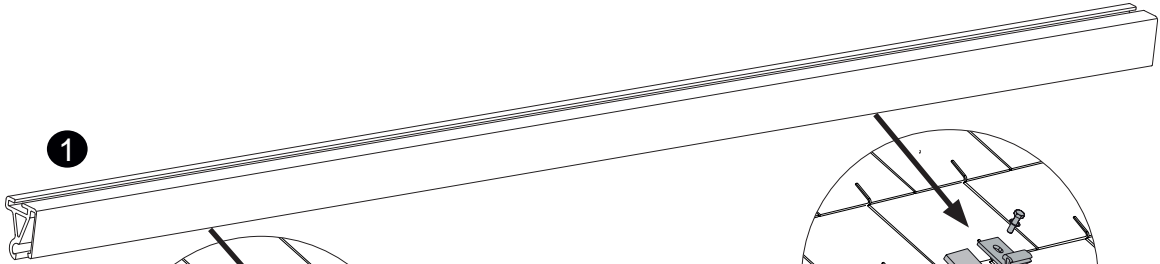
IT
 A- Guida
 B- Morsetto terminale
 C- Fissaggio profili
 D- Staffa di supporto
 E- TBulloni M8x30
 F- Dadi M8
 G- Rondelle M8
 H- Staffa superiore
 J- Bulloni M8x20
 K- Vite autofilettante
 L- Istruzioni
 M- Staffa inferiore

NE
 A- Staaft
 B- Eindklem
 C- Railbevestiging
 D- Tegenlagerblok
 E- T-bouten M8x30
 F- M8 Moeren
 G- Rondelles M8
 H- Bovenbeugel
 J- Bouten M8x20
 K- Zelftappende schroef
 L- Instructies
 M- Onderarm

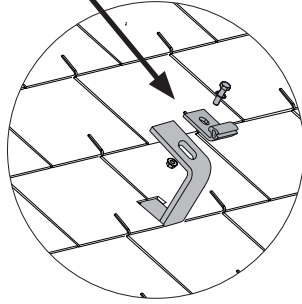
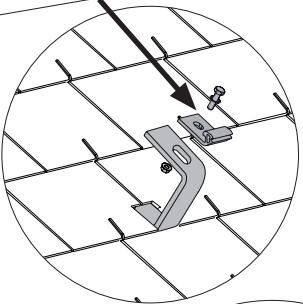
GE
 A- Modulschiene
 B- Abschlussklemmung
 C- Schienenbefestigung
 D- Halterung
 E- T-Bolzen M8x30
 F- M8 Muttern
 G- M8 Unterlegscheiben
 H- Obere Halterung
 J- Bolzen M8x20
 K- Bohrschraube
 L- Anleitung
 M- Untere Halterung

7.0 Installation
 Installation
 Instalación
 Instalação
 Installazione
 Installatie
 Montage

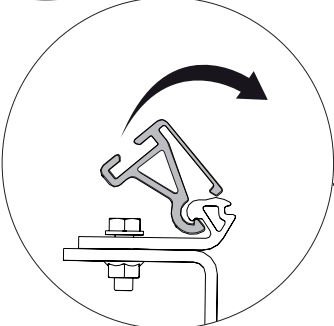




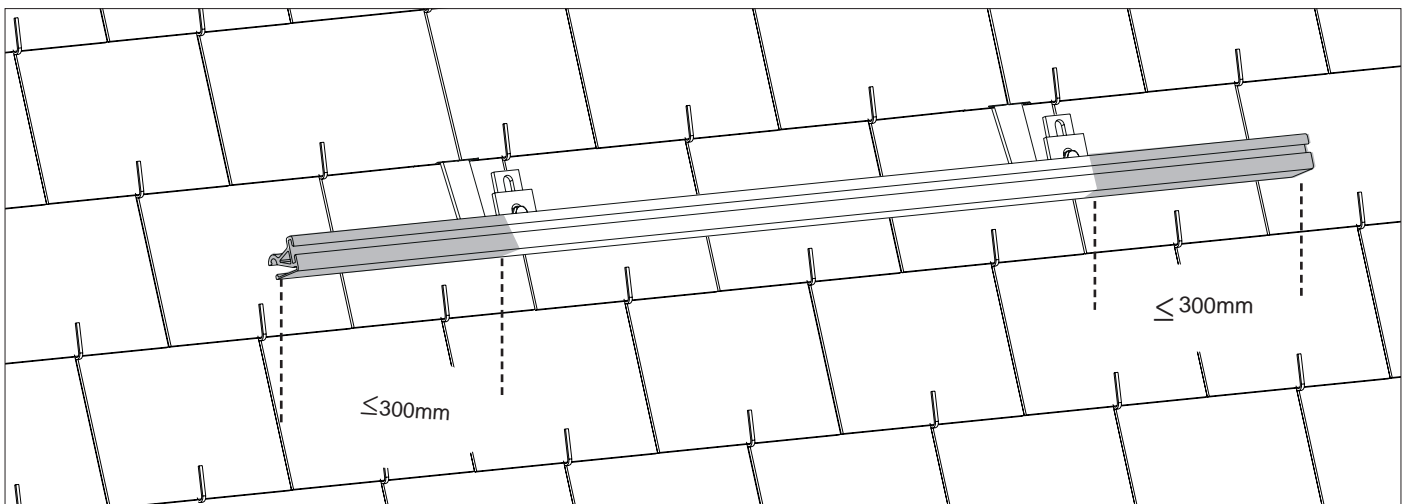
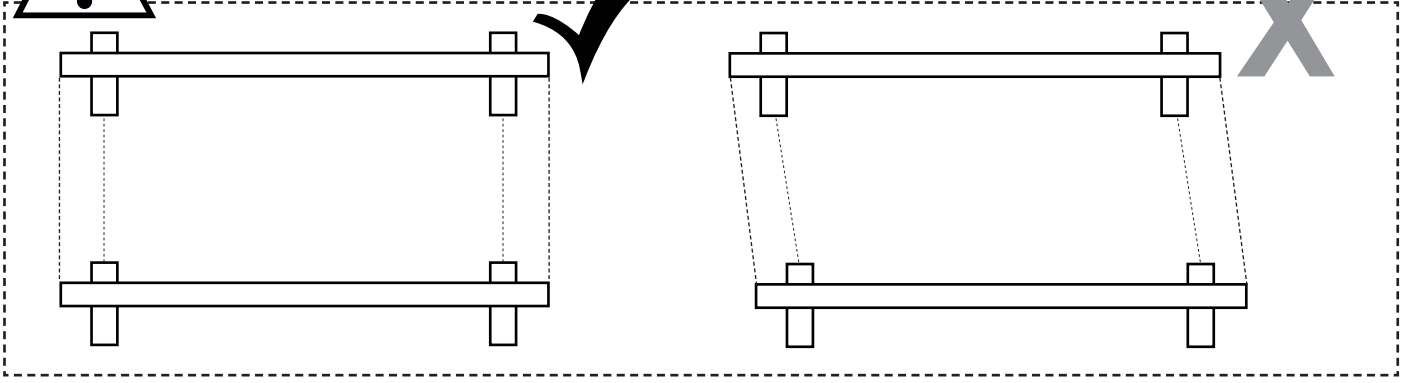
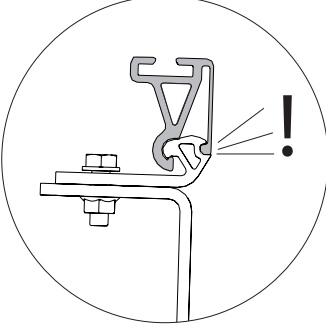
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2



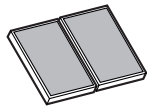
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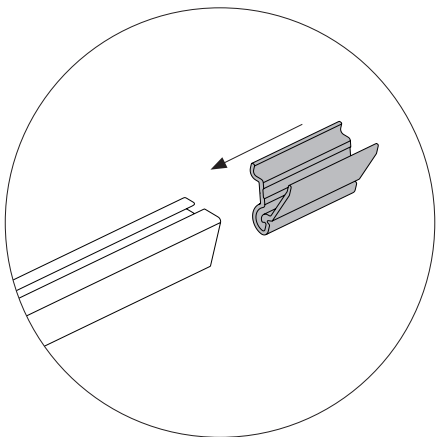
≤ 300mm

≤ 300mm

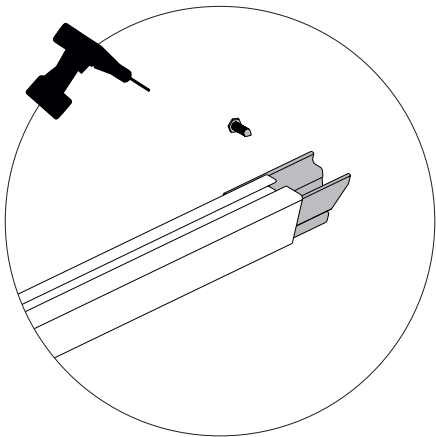
7.0 Installation
 Installation
 Instalación
 Instalação
 Installazione
 Installatie
 Montage



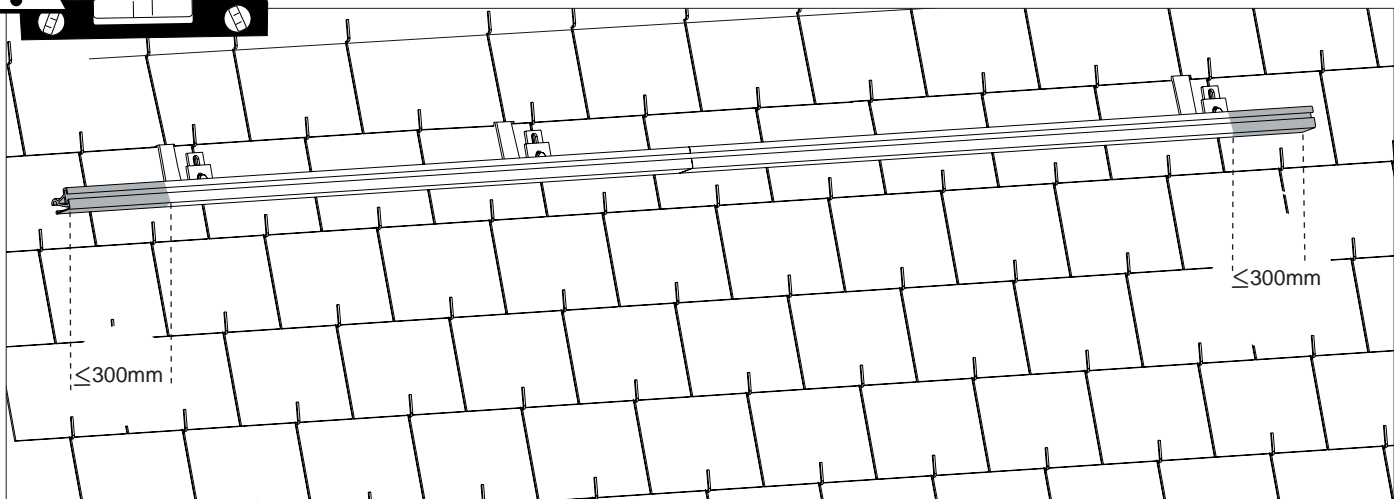
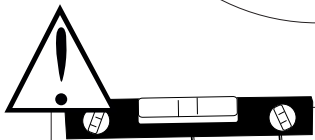
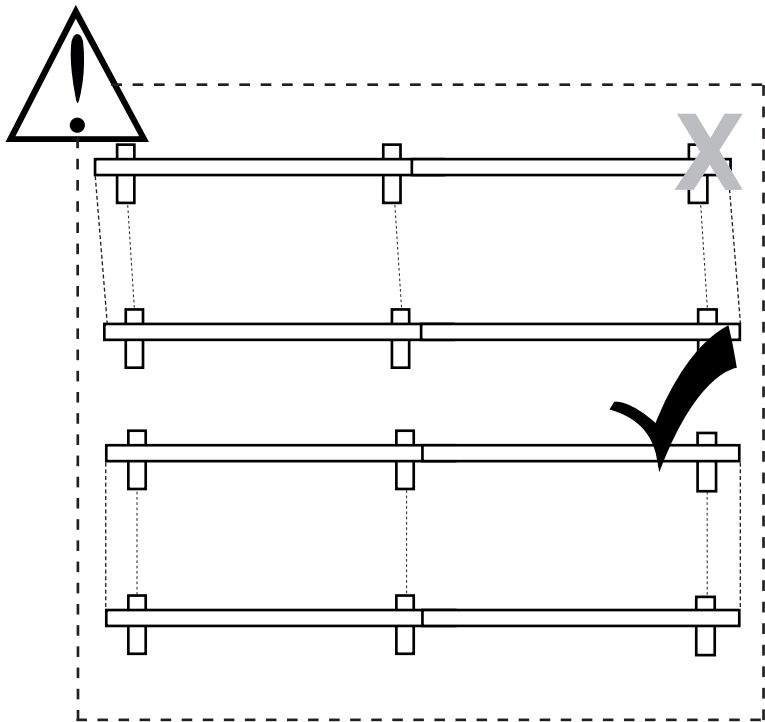
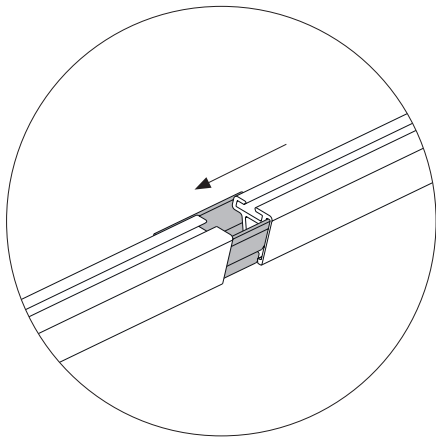
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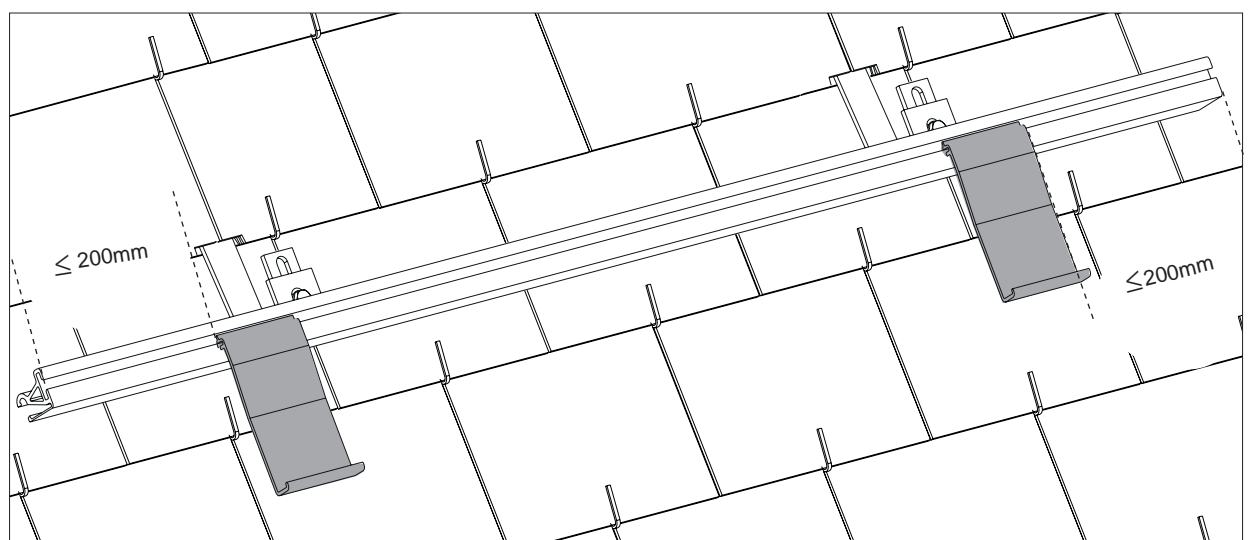
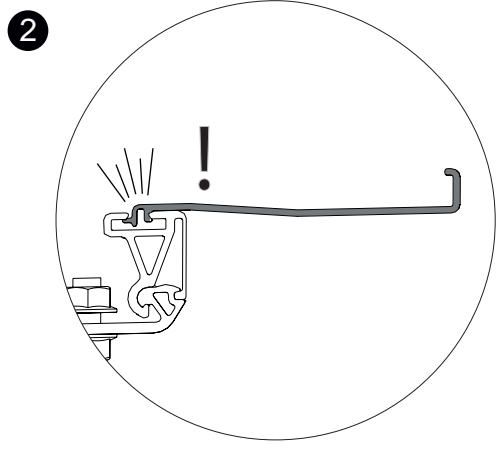
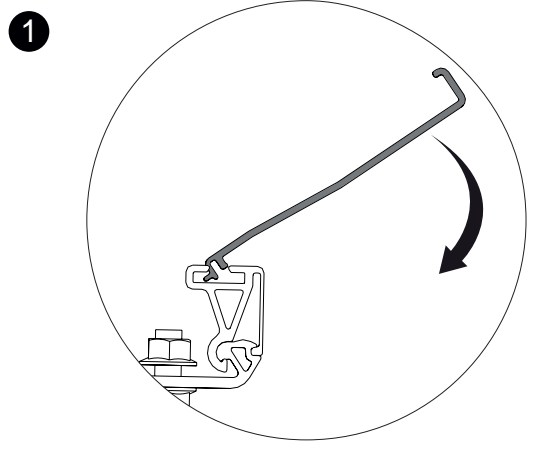
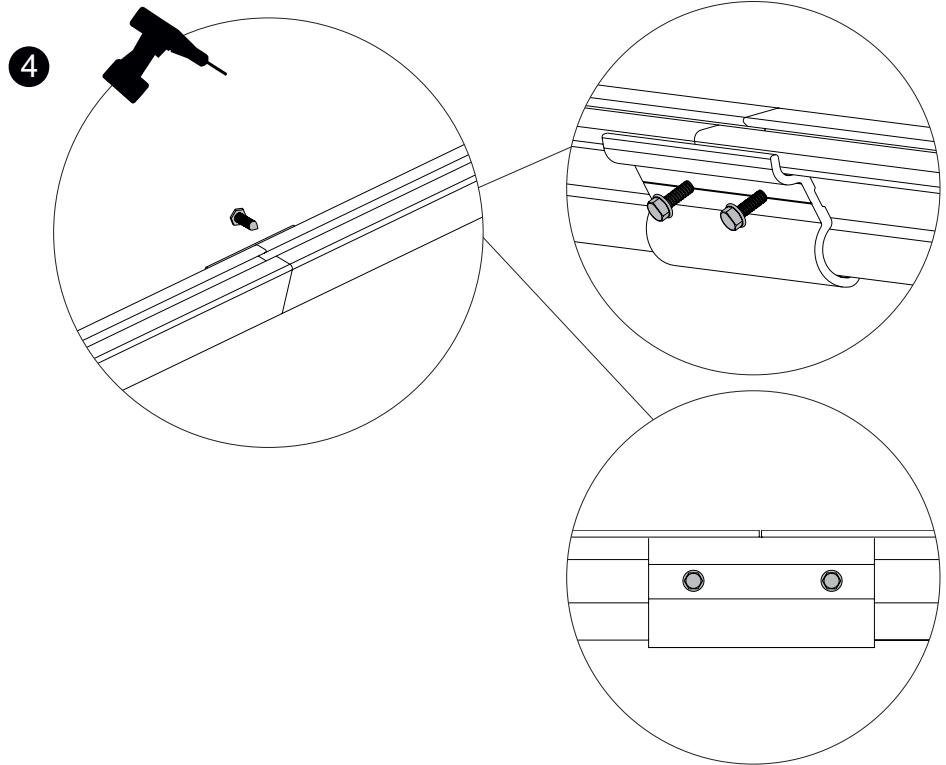
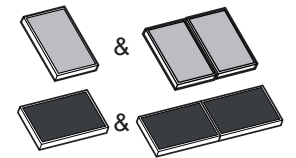


2



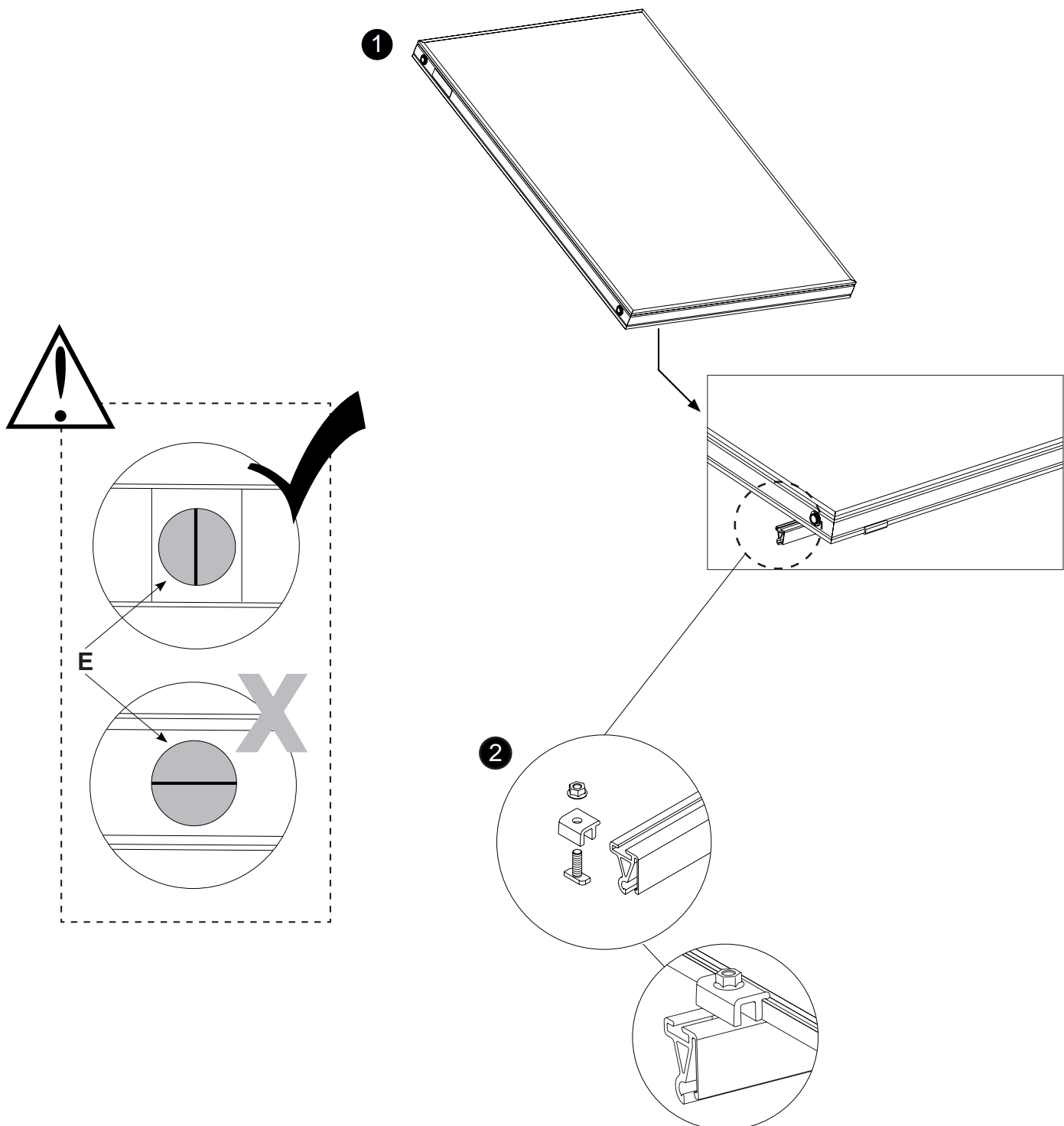
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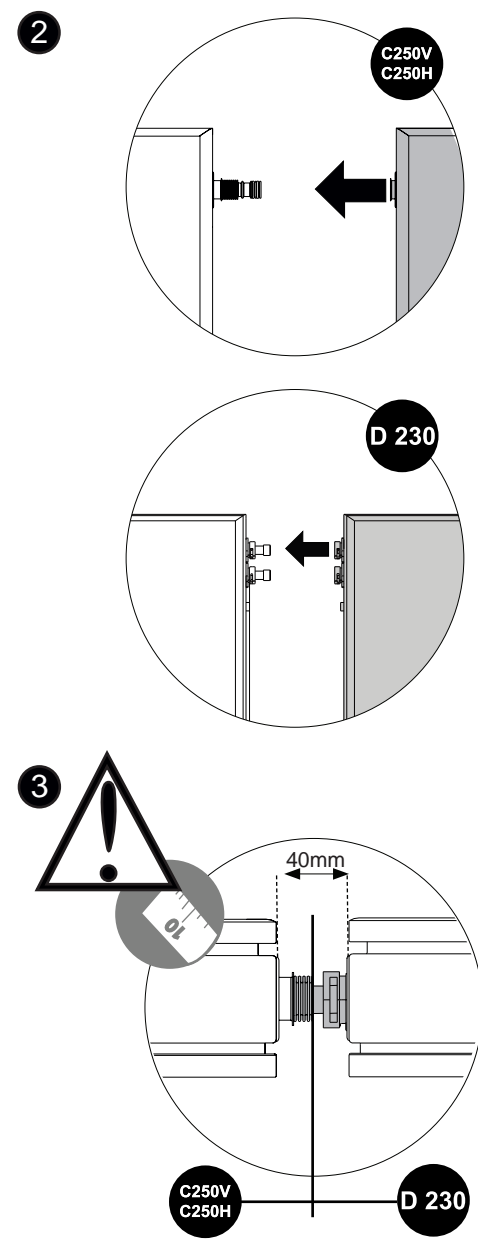
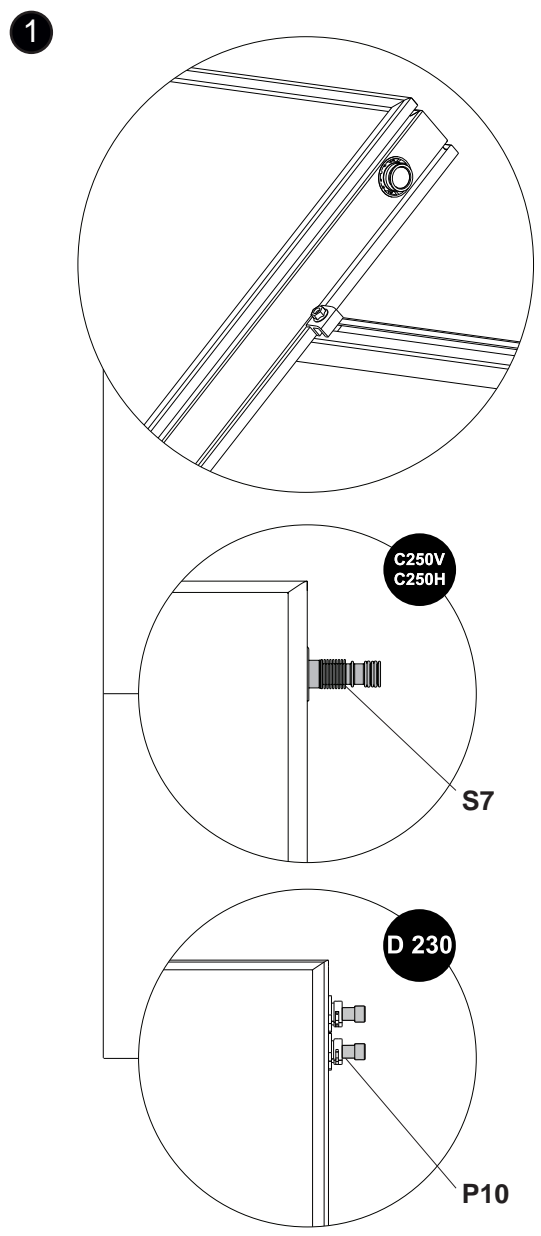
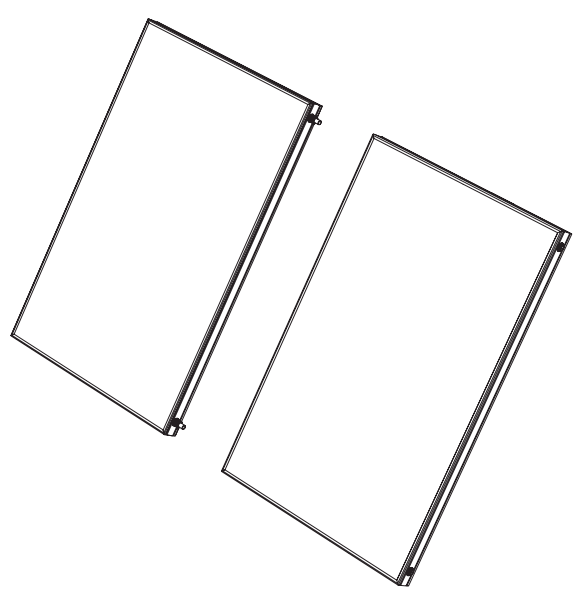


7.0 Installation
Installation
Instalación
Instalação
Installazione
Installatie
Montage

Multi-Fit
Through-Tile
Flat-Tiles
Mechanical-Tiles
Slate-Tiles



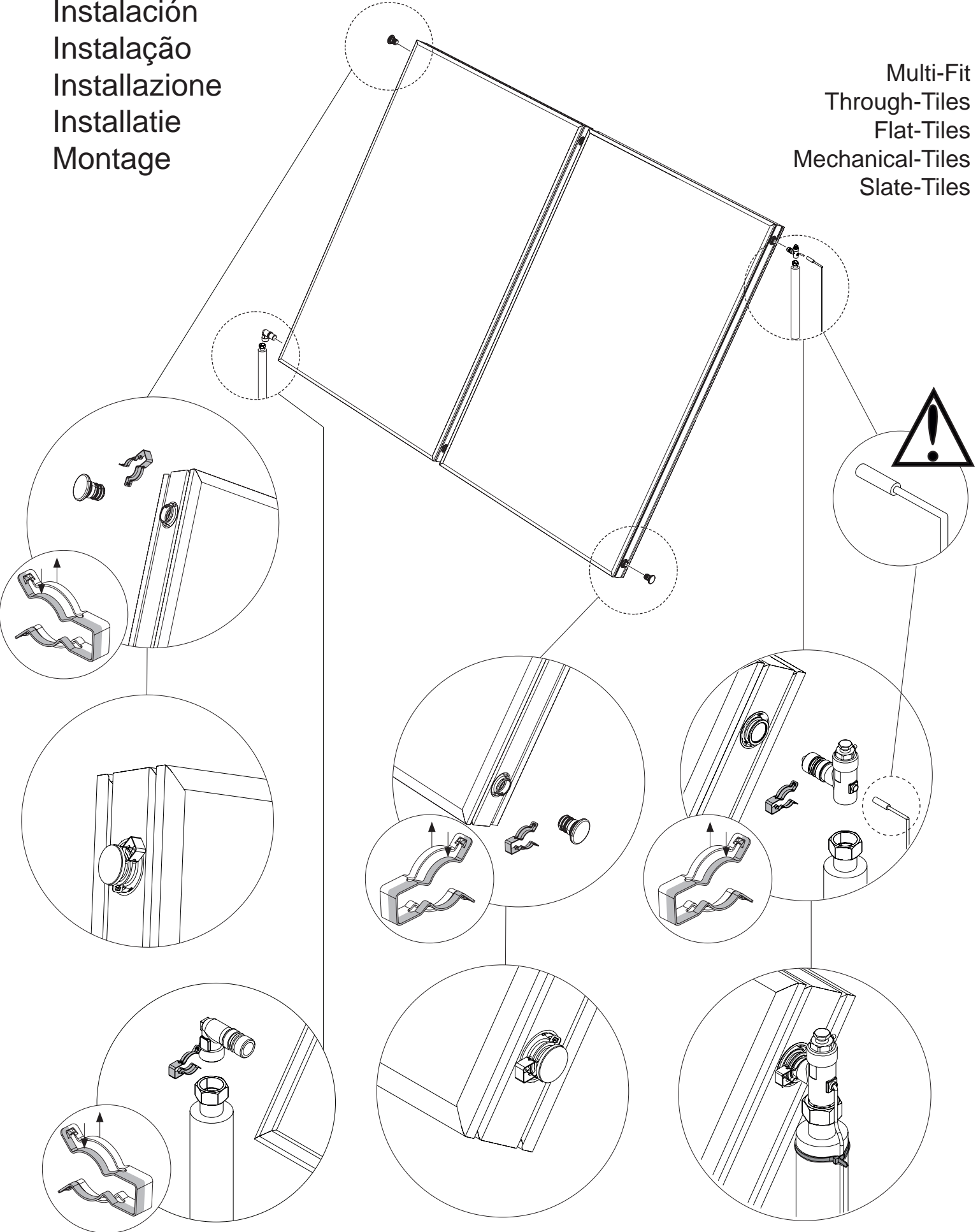
Multi-Fit
Through-Tile
Flat-Tiles
Mechanical-Tiles
Slate-Tiles



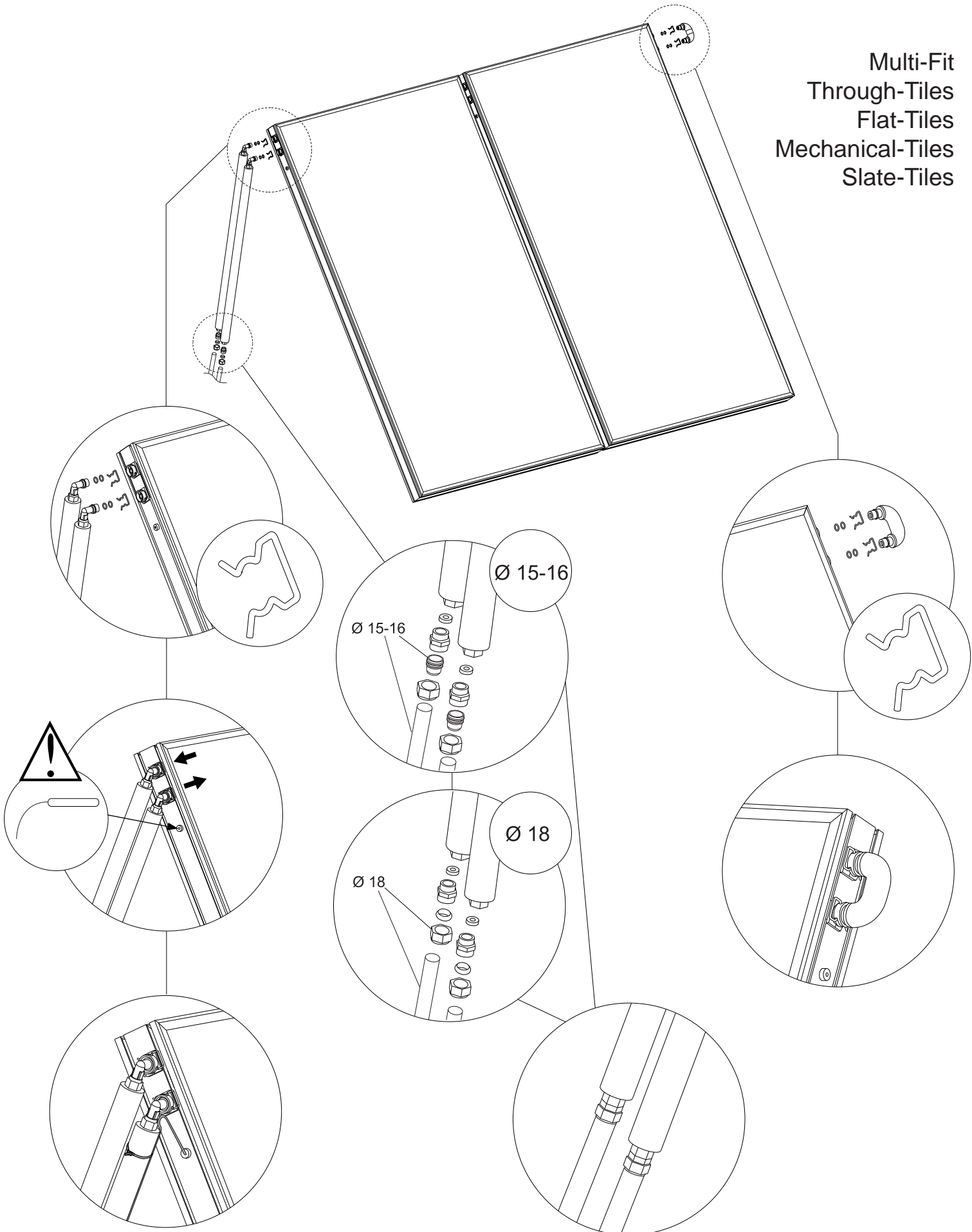
7.0 Installation
Installation
Instalación
Instalação
Installazione
Installatie
Montage

C250V C250H

Multi-Fit
Through-Tiles
Flat-Tiles
Mechanical-Tiles
Slate-Tiles



Multi-Fit
Through-Tiles
Flat-Tiles
Mechanical-Tiles
Slate-Tiles



7.0 Charges de neige et de vent

Snow and Wind Load

Cargas de nieve y viento

Carga de vento e neve

Carico della neve e del vento

Sneeuw- en windlast

Schnee- und Windlast



FR

Charge de neige limite de la conception en surface = **1.9 kN/m²**

REMARQUE : cette limite sera réduite pour les installations où les contreforts augmentent les risques de chutes d'eau ou de neige. Dans les zones à charge de neige élevée (plus de 1kN/m²), il est recommandé d'installer un pare-neige à une distance maximale de 0.5 m au-dessus du capteur solaire.

La charge de vent maximale supportée par la structure de montage dépend, entre autres facteurs, de la hauteur et de la zone géographique du site. Cette structure doit être installée conformément aux dispositions de la norme EN1991. Consultez votre revendeur agréé en cas de doute.

UK

Design limit snow load on the ground = **1.9kN/m²**

NOTE: This limit will be reduced for installations where abutments create additional risks of drifting or falling snow. In high snow load areas (greater than 1kN/m²) it is recommended that a snow fence is fitted at maximum distance of 0.5m above the collector.

The maximum wind load to be borne by the mounting structure depends on the height and geographical area of the site among other factors This structure must be installed in accordance with the provisions of the EN1991 standard. Consult your official dealer if in doubt.

SP

Límite de diseño para carga de nieve en el suelo = **1.9 kN/m²**

NOTA: Este límite se reducirá en instalaciones con estribos que causen riesgos adicionales de acumulación o caída de nieve. En zonas donde se produzcan grandes cargas de nieve (superiores a 1kN/m²), se recomienda instalar una barrera paranieve a una distancia máxima de 0.5 m sobre el colector.

La carga máxima de viento a soportar por la estructura de montaje depende de la altura y zona geográfica del emplazamiento entre otros factores. Esta estructura debe instalarse de acuerdo con las disposiciones de la norma EN1991. Consulte su distribuidor oficial en caso de duda.

PT

Limite de projecto para carga de neve no solo = **1.9 kN/m²**

NOTA: Este limite será reduzido em instalações onde os pilares criem riscos adicionais de deslizamento ou queda de neve. Nas áreas com carga de neve elevada (superior a 1 kN/m²), recomenda-se a instalação de uma barreira de neve a uma distância máxima de 0,5 m acima do coletor.

A carga de vento máxima suportada pela estrutura de montagem depende da altura e da zona geográfica do lugar, entre diversos factores. Esta estrutura deve ser instalada de acordo com o disposto pela norma EN1991. Consulte o seu vendedor oficial caso tenha dúvidas.

IT

Limite di progetto per il carico della neve a terra= **1.9 kN/m²**

NOTA: tale limite andrà ridotto per installazioni nelle quali gli ancoraggi creano ulteriore rischio di spostamento o caduta di neve. Nelle zone soggette a carichi di neve elevati (maggiori di 1 kN/m²) si raccomanda di installare una barriera paranieve ad una distanza massima di 0,5 m al di sopra del collettore.

Tra gli altri fattori, dipende dall'altezza e dalla zona geografica del luogo. Questa struttura deve essere installata in ottemperanza alla norma EN1991. Consultare il distributore ufficiale in caso di dubbi.

NE

Ontwerplimiet sneeuwlast op de grond= **1.9 kN/m²**

OPMERKING : Deze limiet zal gereduceerd worden voor installaties waarvan steunpunten bijkomende risico's vormen voor opgewaarde of vallende sneeuw. In gebieden met een grote sneeuwlast (hoger dan 1kN/m²) wordt de opstelling van een sneeuwheka aanbevolen op een maximale afstand van 0.5m boven de collector.

De maximum windbelasting die de montagestructuur moet aankunnen, hangt o.a. af van de hoogte en het geografische gebied van de locatie. Deze structuur moet geïnstalleerd worden in overeenstemming met de bepalingen van de norm EN1991. Raadpleeg uw officiële verdeler in geval van twijfel.

GE

Auslegungsgrenzwert für Schneelast am Boden = **1,9 kN/m²**

HINWEIS: Dieser Grenzwert wird für Installationen, bei denen Dachaufbauten zu einem zusätzlichen Risiko für Abrutschen oder Herabfallen von Schnee führen, herabgesetzt. In Bereichen mit hoher Schneelast (höher als 1 kN/m²) wird empfohlen, einen Schneezäun in einem maximalen Abstand von 0,5 m über dem Kollektor anzubringen.

Die vom Montagesystem aufzunehmende Höchstbelastung durch Wind hängt neben anderen Faktoren von der Höhe und der geografischen Lage des Standorts ab. Das Montagesystem ist nach den Anweisungen der Norm EN1991 zu installieren. Bei Fragen bitte an Ihren Vertriebshändler wenden.

Législation, maintenance et recommandations

Legislation, maintenance and recommendations

Legislación , mantenimiento y recomendación

Legislação, manutenção e recomendações

Legislazione, manutenzione e raccomandazioni

Wetgeving, onderhoud en aanbevelingen

Gesetzgebung, Wartung und Empfehlungen

FR LÉGISLATION

Veillez tenir compte des instructions suivantes en termes de lois, réglementations et règles techniques. Lors de la mise en place d'installations à énergie solaire, il convient de respecter la législation et la réglementation en vigueur aux niveaux régional, national, européen ou international s'appliquant au pays concerné. Les règles techniques généralement admises s'appliquent. Elles sont habituellement formulées sous formes de normes, directives, prescriptions, dispositions et règlements techniques formulés par les organismes régionaux et nationaux, les fournisseurs d'énergie, les organisations de commerce et comités techniques dans les domaines concernés. Lors de l'installation de modules solaires, sont à prendre en compte de manière conséquente les éventuelles mesures d'étanchéification du toit et des murs répondant à des exigences élevées en matière de protection contre les eaux de pluie. Afin de répondre aux exigences en termes de prévention des accidents, l'emploi de dispositifs de sécurité tels que des sangles, échafaudages, supports, etc. peut s'avérer nécessaire. Un tel matériel de sécurité n'est pas fourni et doit être commandé séparément. Seul un personnel dûment qualifié et autorisé, disposant de qualifications reconnues (délivrées par un institut régional ou national) dans le domaine concerné, est en droit de procéder au montage.

RECOMMEANDATIONS

- Utilisez un harnais de sécurité lors de travaux en hauteur.
- La structure du toit doit être contrôlée et reconnue comme appropriée avant le début des travaux.
- Consultez un ingénieur en charpente si vous n'êtes pas sûr de l'installation du capteur solaire.
- Les charges dues à la neige peuvent dépasser les capacités de la structure de la propriété.
- Les charges dues au vent peuvent engendrer des forces excessives au niveau de la structure et provoquer des dégâts.
- L'installateur est responsable de l'adéquation du site et de sa sous-structure.
- Des goujons et boulons d'ancrage peuvent s'avérer nécessaires pour sécuriser le capteur solaire sur une surface de toit appropriée.
- Si le toit n'est pas adapté pour l'utilisation de goujons et de boulons d'ancrage, des lests peuvent être utilisés.
- Le capteur solaire doit être installé correctement afin d'éviter tout dommage dû à la chute de débris ou à des actes de vandalisme.
- Tous les travaux de tuyauterie de l'installation doivent être reliés à la terre.
- Dans les zones à risques, le capteur solaire doit être protégé contre la foudre.
- Deux personnes au moins sont recommandées pour soulever ce produit.
- Le capteur solaire ne doit pas être soulevé par ses raccords de tuyauterie.
- Assurez-vous que tous les raccords hydrauliques sont correctement serrés et exempts de fuites.
- Le système doit être inspecté une fois les travaux terminés.
- Il est en outre recommandé de procéder à une inspection annuelle.
- Évitez d'installer le capteur solaire dans des zones ombragées.
- Le couple de serrage généralement recommandé pour les écrous et boulons est de 10 Nm.
- Un champ séparé peut être installé derrière le premier si nécessaire.
- Pour les champs importants, des canalisations, des ensembles de pompes et des plans spécifiques seront nécessaires.
- Le capteur solaire ne doit pas être installé sur une surface de toit irrégulière.
- N'employez pas de force excessive lors de l'installation du capteur solaire.
- Les surfaces chaudes et exposées devant être touchées doivent être isolées pour éviter toute blessure.
- Il n'est pas nécessaire de lubrifier les raccords à joint torique.
- Le montage à 90° sur un mur doit être possible (sur le profil sur le toit), mais seulement si la partie supérieure du panneau est couverte par une couverture fabriquée par l'installateur.

MAINTENANCE

Il est recommandé d'effectuer chaque année les vérifications suivantes:

- 1) Vérifiez que l'installation du capteur solaire ne présente pas de signe de détérioration ni d'accumulation de débris.
- 2) Vérifiez que le capteur solaire et le système de montage ne sont pas corrodés et réparez-les si nécessaire.
- 3) Vérifiez l'étanchéité des attaches. Si les attaches ne sont pas facilement accessibles, la sécurité globale de l'installation du capteur solaire peut indiquer la présence d'un problème.
- 4) Recherchez d'éventuelles fuites de liquide ou détériorations sur les raccords et la tuyauterie, en vérifiant notamment l'état de l'isolation des tuyaux, et réparez si nécessaire. Recherchez d'éventuelles traces de fuites à l'intérieur du bâtiment.
- 5) Examinez la toiture autour de l'installation du capteur solaire et recherchez d'éventuelles détériorations ; réparez-les si nécessaire.
- 6) Assurez-vous que des feuillages ne font pas de l'ombre aux capteurs solaires.
- 7) Le cas échéant, vérifiez l'état des lests servant à sécuriser le système.
- 8) Dans les zones où de la poussière s'est accumulée sur le capteur solaire, utilisez uniquement des matériaux et méthodes de nettoyage non abrasifs pour nettoyer les capteurs solaires et les composants du système de montage.

UK LEGISLATION

Please note the following instructions regarding laws, regulations and technical rules. When setting up solar energy installations, the laws and regulations at local, state, European and international level that apply to the country in question must be observed. Generally acknowledged technical regulations apply; these are usually formulated in the form of standards, guidelines, provisions, regulations and technical rules laid down by local and national bodies, energy supply companies, trade organisations and technical committees in the relevant fields. The installation of solar units may require improved rain resistance with regard to roof, wall and sealing technology and this must be taken into account accordingly. To meet regulations for the prevention of accidents, it may be necessary to use safety equipment (straps, scaffolding, supports, etc.). Such safety equipment is not supplied. Installation must only be carried out by technically qualified and authorised personnel with a recognised qualification (verified by a state or national body) in the relevant technical area.

RECOMMENDATIONS

- Use a safety harness when working at height.
- The structure of the roof must be assessed for its suitability prior to commencing work.
- Consult a Structural Engineer if you are unsure of the collector's siting.
- Loading due to snow may exceed the capability of the property's structure.
- Wind loads may cause excess forces on the structure and cause damage.
- The Installer is responsible for the suitability of the site and its sub-structure.
- An anchor plug and bolt may be used to secure the collector on a suitable roof surface.
- The collector should be sited to avoid damage from falling debris and vandalism.
- All pipe work within this installation must be Earth bonded.
- In exposed areas, the collector must be protected against the risk of lightning.
- It is recommended that a minimum of 2 people are used to lift this product.
- The collector must not be lifted by its pipe connections.
- Ensure all hydraulic connections are securely fixed and are free of leaks.
- The system must be inspected on completion of the work.
- A further inspection is recommended annually.
- Avoid installing the collector in shaded areas.
- The general recommended torque setting for nuts and bolts is 10Nm.
- A separate second array can be installed behind the first if necessary.
- The collector must not be installed on an uneven roof surface.
- Do not apply excessive force when installing the collector.
- Hot, exposed surfaces that can be touched must be insulated to protect against injury.
- Lubrication is not required for the 'O' ring connections.
- Before the installation an In Roof kit, waterproof the roof with a protective membrane.
- Remove protection film for each component.
- The mounting at 90° on a wall must be possible (on the on-roof profile) but only if the panel is covered on his top with a cover which is build by the installer.

MAINTENANCE

It is recommended that the following checks are carried out on an annual basis:

- 1) Check the collector installation for any signs of damage or any build up of debris.
- 2) Check for any corrosion to the collector or the mounting system and repair if necessary.
- 3) Check the tightness of the fasteners. Where fasteners cannot be readily accessed, the overall security of the collector installation may indicate whether problems exist.
- 4) Check the fittings and pipe work for any signs of fluid leakage or damage, including the condition of the pipe insulation, and repair if necessary. Check inside the building for any evidence of leaks.
- 5) Examine the roof tiles around the collector installation for any damage or deterioration, and repair if necessary.
- 6) Check for any foliage growth that may cause shading of the collectors.
- 7) Where applicable, check the condition of any ballast used to secure the system.
- 8) In areas where there may be a build up of dirt on the collector, only nonabrasive cleaning materials and methods should be used to clean the collectors and mounting system components.

8.0 Législation, maintenance et recommandations

Legislation, maintenance and recommendations

Legislación, mantenimiento y recomendación

Legislação, manutenção e recomendações

Legislazione, manutenzione e raccomandazioni

Wetgeving, onderhoud en aanbevelingen

Gesetzgebung, Wartung und Empfehlungen

SP LEGISLACIÓN

Tenga en cuenta las siguientes instrucciones acerca de leyes, reglamentaciones y normativas técnicas. Al realizar instalaciones de energía solar, se deben observar las leyes y reglamentos a nivel local, estatal, europeo e internacional que se aplican al país en cuestión. Se aplican reglamentos técnicos ampliamente aceptados; normalmente están formulados en forma de normas, directrices, cláusulas, reglamentos y normativas técnicas, establecidos por organismos locales y nacionales, compañías de suministro de energía, organizaciones de comercio y comités técnicos en los campos correspondientes. La instalación de unidades solares puede requerir una tecnología de techos, paredes y sellado más resistente a la lluvia, lo cual debe tenerse en cuenta según sea necesario. Para cumplir los reglamentos para la prevención de accidentes, puede ser necesario utilizar equipos de seguridad (correas, andamios, soportes, etc.). Ese equipamiento de seguridad no se incluye. La instalación sólo debe llevarla a cabo personal cualificado técnicamente y autorizado, con acreditación aprobada (verificada por un organismo estatal o nacional) en el ámbito técnico correspondiente.

RECOMENDACIONES

- Utilice un arnés de seguridad al trabajar en alturas.
- Debe evaluarse que la estructura del techo sea adecuada antes de comenzar la obra.
- Consulte a un ingeniero de estructuras si no está seguro del emplazamiento del colector.
- La carga de nieve puede exceder la capacidad de la estructura de la propiedad.
- Las cargas de viento pueden provocar fuerzas excesivas sobre la estructura y provocar daños.
- El instalador es el responsable de que el emplazamiento y su subestructura sean adecuados.
- Se pueden utilizar pernos y tacos de anclaje para asegurar el colector a una superficie de techo adecuada.
- El colector debe ubicarse en un emplazamiento que evite daños por la caída de escombros y actos vandálicos.
- Todas las tuberías dentro de esta instalación deben estar conectadas a tierra.
- En las zonas expuestas, el colector debe estar protegido contra el riesgo de rayos.
- Se recomienda que se utilicen un mínimo de dos personas para levantar este producto.
- El colector no debe levantarse por sus conexiones de tuberías.
- Asegúrese de que todas las conexiones hidráulicas se fijen con seguridad y no tengan fugas.
- El sistema debe inspeccionarse una vez terminada la obra.
- Se recomienda una inspección anual adicional.
- Evite instalar el colector en zonas con sombra.
- El ajuste de par de apriete general recomendado para tuercas y pernos es de 10 Nm.
- Se puede instalar una segunda fila detrás de la primera en caso necesario.
- El colector no debe instalarse en una superficie de techo irregular.
- No aplique una fuerza excesiva al instalar el colector.
- Las superficies calientes expuestas al contacto deben aislarse para proteger contra posibles lesiones.
- No es necesario lubricar las juntas tóricas.
- Antes de la instalación de un kit In Roof impermeabilizar el tejado mediante una membrana protectora.
- Retirar plástico protector de cada pieza.
- El montaje a 90 ° sobre una pared debe ser posible (en el perfil de techo), pero sólo si el panel está cubierto en su parte superior con una tapa que se construye por el instalador.

MANTENIMIENTO

Se recomienda que cada año se realicen las comprobaciones siguientes:

- 1) Compruebe si la instalación del colector presenta daños o si se han acumulado desechos.
- 2) Compruebe si existe corrosión en el colector o en el sistema de montaje, y realice las reparaciones necesarias.
- 3) Compruebe que los elementos de fijación estén bien ajustados. Si no pueda accederse con facilidad a los elementos de fijación, la seguridad general de la instalación del colector podrá indicar si existen problemas.
- 4) Compruebe si existen daños o fugas en los accesorios y las tuberías, y verifique el estado del aislamiento de las tuberías. Realice las reparaciones que correspondan. Compruebe si existen fugas dentro del edificio.
- 5) Examine las tejas que rodean la instalación del colector y compruebe si se han producido daños o deterioro. Realice las reparaciones que correspondan.
- 6) Compruebe si existe maleza que pueda llegar a tapar los colectores.
- 7) Si corresponde, compruebe el estado del lastre utilizado para asegurar el sistema.
- 8) En las zonas del colector donde haya podido concentrarse la suciedad, sólo deben utilizarse productos y métodos de limpieza no abrasivos para limpiar los colectores y los componentes del sistema de montaje.

PT LEGISLAÇÃO

Tenha em atenção as seguintes instruções relativas a leis, regulamentos e regras técnicas. Na montagem de instalações de energia solar, devem ser cumpridas as leis e regulamentos ao nível local, estatal, europeu e internacional aplicáveis no país em questão. São aplicáveis regulamentos técnicos geralmente reconhecidos. Estes apresentam-se, habitualmente, na forma de normas, directrizes, disposições, regulamentos e regras técnicas elaboradas pelas entidades locais e nacionais, empresas de fornecimento energético, organizações comerciais e comissões técnicas das áreas relevantes. A instalação de unidades solares pode exigir uma resistência à chuva mais rigorosa no que respeita ao telhado, paredes e tecnologia de vedação, devendo ser considerada de modo adequado. Com vista ao cumprimento dos regulamentos relativos à prevenção de acidentes, poderá ser necessária a utilização de equipamentos de segurança (correias, andaimes, apoios, etc.). Tais equipamentos de segurança não são fornecidos. A instalação só deve ser realizada por pessoal tecnicamente qualificado e autorizado, com uma qualificação acreditada (verificada por uma entidade estatal ou nacional) na área técnica relevante.

RECOMENDAÇÕES

- Utilize um arnés de segurança aquando da realização de trabalhos em altura.
- A estrutura do telhado deve ser avaliada quanto à sua adequação antes do início dos trabalhos.
- Consulte um engenheiro de estruturas caso tenha dúvidas relativamente ao local de instalação do colector.
- A pressão resultante de carga de neve pode exceder a capacidade da estrutura da propriedade.
- As cargas de vento podem forçar em excesso a estrutura e causar danos.
- O Instalador é responsável pela adequação do local e respectiva subestrutura.
- Pode utilizar-se um parafuso e tampão de ancoragem para fixar o colector numa superfície de telhado adequada.
- Se o telhado não for adequado para a utilização de parafuso e tampão de ancoragem, pode utilizar-se lastro.
- O colector deve ser instalado num local onde se evitem danos resultantes da queda de detritos e vandalismo.
- Toda a tubagem relativa à instalação deve estar ligada à terra.
- Em áreas expostas, o colector deve ser protegido contra o risco de relâmpagos.
- Recomenda-se que este produto seja elevado, no mínimo, por 2 pessoas.
- O colector não deve ser elevado através das respectivas ligações de tubagem.
- Verifique se todas as ligações hidráulicas estão firmemente apertadas e se não existem fugas.
- O sistema deve ser inspeccionado após a conclusão do trabalho.
- Recomenda-se a realização de uma inspeção adicional anualmente.
- Evite instalar o colector em áreas com sombra.
- O binário habitualmente recomendado para porcas e parafusos é de 10 Nm.
- Pode ser instalada uma segunda sequência de colectores por detrás da primeira, se necessário.
- O colector não deve ser instalado num telhado de superfície irregular.
- Não exerça força excessiva ao instalar o colector.
- Superfícies quentes e expostas que possam ser tocadas devem ser isoladas com vista a proteger contra ferimentos.
- Não é necessário lubrificar as ligações dos O-ring.
- Antes da instalação de um kit no telhado, impermeabilize o telhado mediante uma membrana protectora
- Retire a película protetora de cada peça.
- A montagem perpendicular (90°) numa parede deve ser possível (no perfil sobre o telhado) mas unicamente se a parte cimeira do painel for coberta por uma cobertura fabricada pelo instalador.

MANUTENÇÃO

Recomenda-se que as seguintes verificações sejam realizadas anualmente:

- 1) Verifique a instalação do colector quanto a danos ou acumulação de detritos.
- 2) Verifique se existe corrosão no colector ou no sistema de montagem e repare, se necessário.
- 3) Verifique a tensão dos fixadores. Quando não for possível aceder facilmente aos fixadores, a segurança geral da instalação do colector pode indicar a existência de problemas.
- 4) Verifique os encaixes e tubagens quanto a fugas de fluido ou danos, incluindo o estado do isolamento da tubagem e repare, se necessário. Verifique a existência de fugas no interior do edifício.
- 5) Examine as telhas nas proximidades da instalação do colector quanto a danos ou deterioração e repare, se necessário.
- 6) Verifique o crescimento de qualquer vegetação que possa causar sombreamento nos colectores.
- 7) Quando aplicável, verifique o estado de qualquer lastro utilizado para fixar o sistema.
- 8) Em áreas onde possa ocorrer a acumulação de sujidade no colector, apenas devem ser utilizados métodos e materiais de limpeza não abrasivos para limpar os colectores e os componentes do sistema de montagem.

IT LEGISLAZIONE

Tenere presenti le seguenti istruzioni in relazione a leggi, normative e regolamenti tecnici. Per la progettazione di un impianto a energia solare occorre rispettare le leggi e le normative in vigore a livello locale, statale, europeo e internazionale valide per il paese in questione. Inoltre, è necessario tenere conto dei regolamenti tecnici comunemente riconosciuti, che in genere sono formulati sotto forma di standard, linee guida, disposizioni, regolamenti e norme tecniche elaborati da organismi locali e nazionali, aziende di erogazione di energia elettrica, organizzazioni commerciali e comitati tecnici nei campi di competenza. L'installazione di unità solari potrebbe richiedere un miglioramento delle caratteristiche di resistenza alla pioggia di tetto, pareti e tecnologie di impermeabilizzazione, che dovranno essere tenute nella dovuta considerazione. Per soddisfare le normative in materia di prevenzione di incidenti, potrebbe essere necessario utilizzare attrezzature di sicurezza (cinghie, ponteggi, supporti, ecc.). Tali attrezzature non sono fornite e pertanto devono essere ordinate separatamente. L'installazione deve essere eseguita da personale tecnico specializzato autorizzato, in possesso di qualifiche riconosciute (verificate da un organismo nazionale) nello specifico settore tecnico.

RACCOMANDAZIONI

- Per l'esecuzione di lavori in altezza utilizzare un'imbracatura di sicurezza.
- Prima di iniziare l'installazione, accertarsi dell'idoneità della struttura del tetto.
- In caso di dubbi nella scelta dell'ubicazione del collettore, rivolgersi a un ingegnere strutturista.
- Il carico dovuto alla neve può superare quello tollerato dalla struttura dell'edificio.
- I carichi dovuti al vento possono esercitare sollecitazioni eccessive sulla struttura e provocare danni.
- È responsabilità dell'installatore verificare l'idoneità del sito di installazione e della struttura su cui poggia.
- Il sito di installazione del collettore deve essere scelto in modo da evitare danni dovuti all'eventuale caduta di detriti o ad atti di vandalismo.
- Tutte le tubazioni dell'impianto devono essere dotate di collegamento a terra.
- Nelle aree esposte, il collettore deve essere dotato di protezione contro i fulmini.
- Questo prodotto deve essere sollevato da almeno 2 persone.
- Per sollevare il collettore, evitare di afferrarlo dai collegamenti per i tubi.
- Verificare che tutti i collegamenti idraulici siano fissati saldamente e non presentino perdite.
- Al termine dell'installazione, ispezionare il sistema.
- È consigliabile ispezionare ulteriormente il sistema con frequenza annuale.
- Evitare di installare il collettore in zone ombreggiate.
- Come regola generale, si consiglia di serrare dadi e bulloni con una coppia di 10 Nm.
- Se necessario, è possibile montare una seconda serie distinta di collettori dietro la prima.
- Le serie di grandi dimensioni richiedono configurazioni, tubazioni e gruppi di pompaggio specifici.
- Non installare il collettore su superfici del tetto irregolari.
- Non esercitare una forza eccessiva per l'installazione del collettore.
- Le superfici calde esposte e accessibili devono essere opportunamente protette per evitare il rischio di infortuni.
- Non è necessario lubrificare i collegamenti ad anello toroidale.
- Prima dell'installazione del kit Nel tetto, impermeabilizzare il tetto con una membrana protettiva.
- Rimuovere la pellicola protettiva trasparente da ciascun componente.
- Il montaggio a 90° su di una parete deve essere possibile (per il profilo su tetto) ma solo se, nella parte superiore, il pannello è coperto da una copertura fabbricata dall'installatore.

MANUTENZIONE

Si raccomanda di effettuare i seguenti controlli ogni anno:

- 1) Controllare l'installazione del collettore per individuare eventuali segni di danneggiamento o accumuli di sporcizia.
- 2) Verificare l'eventuale presenza di segni di corrosione sul collettore o sul sistema di montaggio e riparare se necessario.
- 3) Controllare la tenuta dei dispositivi di fissaggio. Se l'accesso ai dispositivi di fissaggio non è agevole, per individuare la presenza di eventuali problemi può essere utile verificare la tenuta complessiva del collettore.
- 4) Controllare le tubazioni e i raccordi per individuare segni di perdite o danneggiamenti, anche nel sistema di isolamento delle tubazioni, e riparare se necessario. Controllare l'interno dell'edificio per individuare eventuali perdite.
- 5) Esaminare le tegole intorno al collettore, verificare la presenza di danneggiamenti o deterioramenti e riparare se necessario.
- 6) Individuare eventuali crescite di fogliame che provochino ombreggiatura dei collettori.
- 7) Se applicabile, controllare le condizioni di eventuali zavorre utilizzate per fissare il sistema.
- 8) Nelle zone in cui potrebbero esserci accumuli di sporco sul collettore, utilizzare solo materiali e metodi non abrasivi per pulire i collettori e i componenti del sistema di montaggio.

NE WETGEVING

Gelieve de volgende instructies m.b.t. wetten, voorschriften en technische regels in acht te nemen. Bij het opstellen van zonne-energieinstallaties, dienen de wetten en reglementeringen op lokaal, nationaal, Europees en internationaal niveau die van toepassing zijn op het land in kwestie nageleefd te worden. Algemeen erkende technische voorschriften zijn van toepassing; deze worden doorgaans geformuleerd onder de vorm van normen, richtlijnen, bepalingen, voorschriften en technische regels die uitgestippeld werden door lokale en nationale organen, energievoorzieningsbedrijven, handelsorganisaties en technische commissies binnen de desbetreffende branches. De vestiging van zonne-installaties kan verbeterde regenbestendigheidsmaatregelen vereisen m.b.t. dak-, muur- en dichtingstechnologie en er dient dienovereenkomstig rekening mee te worden gehouden. Ten einde te voldoen aan de voorschriften op het gebied van preventie van ongevallen, kan het noodzakelijk zijn veiligheidsuitrusting (riemen, stellingen, steunstukken, etc.). Dergelijke veiligheidsuitrusting wordt niet meegeleverd en dient afzonderlijk besteld te worden. De installatie mag enkel uitgevoerd worden door technisch gekwalificeerd en bevoegd personeel met een erkend diploma (bekrachtigd door een staat of nationaal orgaan) in het desbetreffende technisch vakgebied.

AANBELELINGEN

- Gebruik een veiligheidsgordel als u op grote hoogte werkt.
- De structuur van het dak dient op zijn geschiktheid beoordeeld te worden alvorens het werk aan te vatten.
- Raadpleeg een bouwkundig ingenieur indien u niet zeker bent van de bevestigingsplaats van de collector.
- Verzwaren door sneeuw kan het draagvermogen van de structuur van het gebouw overchrijden.
- Windbelasting kan voor buitensporige kracht op de structuur en zodoende voor schade zorgen.
- De installateur is verantwoordelijk voor de geschiktheid van de locatie en de substructuur ervan.
- Een ankerplug en -bout kunnen gebruikt worden om de collector op een geschikt dakoppervlak te bevestigen.
- Indien het dak ongeschikt is voor de ankerplug en -bout, kan er ballast gebruikt worden.
- De collector dient zodanig geplaatst te worden zodat het niet beschadigd kan worden door vallend puin of door vandalisme.
- Alle leidingen binnen deze installatie moeten aan de aarde bevestigd zijn.
- Op onbeschutte plaatsen dient de collector beschermd te worden tegen bliksemrisico.
- Het wordt aanbevolen dat er minimum 2 personen ingeschakeld worden om dit product op te tillen.
- De collector mag niet opgetild worden via de leidingaansluitingen.
- Zorg ervoor dat alle hydraulische aansluitingen stevig vastzitten en lek vrij zijn.
- Het systeem dient gecontroleerd te worden eens het werk voltooid is.
- Vervolgens dient het jaarlijks opnieuw gecontroleerd te worden.
- Vermijd de installatie van de collector op schaduwrijke plaatsen.
- Het algemeen aanbevolen draaimoment voor moeren en bouten is 10Nm.
- Indien nodig kan er een tweede rij achter de eerste geïnstalleerd worden.
- Grote rijen zullen gespecialiseerde pijplegging, pompgroepen en -ontwerpen vergen.
- De collector mag niet geïnstalleerd worden op een oneffen dakoppervlak.
- Oefen geen overmatige kracht uit bij het installeren van de collector.
- Hete, blootliggende oppervlakken die aangeraakt kunnen worden, dienen te worden geïsoleerd om letsels te voorkomen.
- Smearing is niet vereist bij de 'O'-ringverbindingen.
- Maak u een kit voor in het dak installeert het dak waterdicht aan de hand van beschermfolie.
- Verwijder folie voor elke component.
- Il montaggio a 90° su di una parete deve essere possibile (per il profilo su tetto) ma solo se, nella parte superiore, il pannello è coperto da una copertura fabbricata dall'installatore.

ONDERHOUD

Het wordt aanbevolen dat de volgende controles op jaarlijkse basis uitgevoerd worden:

- 1) Controleer de collectorinstallatie op tekenen van schade of ophopingen van puin.
- 2) Controleer op corrosie aan de collector of aan het montagesysteem en repareer indien nodig.
- 3) Controleer de strakheid van de klemmen. Waar klemmen niet vlot bereikbaar zijn, kan de algemene beveiliging van de collectorinstallatie aangeven of er problemen zijn.
- 4) Controleer de fittings en de leidingen op tekenen van lekkage of schade, waaronder de toestand van de leidingisolatie, en herstel indien nodig. Controleer de binnenkant van het gebouw op sporen van lekkage.
- 5) Controleer de dakpannen rond de collectorinstallatie op enige schade of aantasting, en herstel indien nodig.
- 6) Controleer op gepladertegroei die schaduw op de collectoren kan werpen.
- 7) Waar van toepassing, controleer de conditie van ballast die gebruikt wordt bij de beveiliging van het systeem.
- 8) In gebieden waar er mogelijk een ophoping van vuil op de collector is, mogen er enkel niet-schurende reinigingsmaterialen en -methoden gebruikt worden bij het schoonmaken van de collectoren en de onderdelen van het montagesysteem.

8.0 Législation, maintenance et recommandations

Legislation, maintenance and recommendations

Legislación , mantenimiento y recomendación

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Gesetzgebung, Wartung und Empfehlungen

GE VORSCHRIFTEN

Bitte beachten Sie die folgenden Hinweise zu Gesetzen, Vorschriften und technischen Regeln. Bei der Einrichtung von Solarenergieanlagen müssen die Gesetze und Vorschriften auf der lokalen, europäischen und internationalen Ebene, die für das jeweilige Land gelten, beachtet werden. Es gelten die allgemein anerkannten Regeln der Technik; diese sind für gewöhnlich in Form von Normen, Richtlinien, Bestimmungen, Vorschriften und technischen Regeln formuliert, die von lokalen und nationalen Behörden, Energieversorgungsunternehmen, Handelsorganisationen und technischen Ausschüssen im jeweiligen Gebiet aufgestellt werden. Die Montage von Solareinheiten kann im Hinblick auf Dächer, Wände und die Abdichtungstechnologie eine erhöhte Regenbeständigkeit erfordern, was entsprechend berücksichtigt werden muss. Zur Einhaltung von Unfallverhütungsvorschriften kann es erforderlich sein, Sicherheitsausrüstung (Gurte, Gerüste, Abstützungen usw.) zu verwenden. Derartige Sicherheitsausrüstung ist nicht im Lieferumfang enthalten und muss separat bestellt werden. Die Installation muss durch technisch qualifiziertes und zugelassenes Personal mit einer anerkannten Ausbildung (durch eine staatliche Einrichtung geprüft) im jeweiligen technischen Bereich erfolgen.

EMPFEHLUNGEN

- Bei Höhenarbeiten ein Sicherheitsgeschirr verwenden.
- Die Dachstruktur muss vor Beginn der Arbeiten auf ihre Eignung überprüft werden.
- Bei Zweifeln bezüglich des Montageortes der Kollektoren einen Statiker befragen.
- Die Last aufgrund von Schnee kann die Tragfähigkeit des Gebäudes übersteigen.
- Windlasten können zu übermäßiger Krafteinwirkung auf die Gebäudestruktur führen und Schäden verursachen.
- Der Installateur ist für die Eignung des Montageortes und seines Unterbaus verantwortlich.
- Der Kollektor sollte so platziert werden, dass Schäden durch herabfallende Objekte und Vandalismus vermieden werden.
- Alle Rohre innerhalb der Anlage müssen mit Erdungsschellen versehen werden.
- In exponierten Bereichen muss der Kollektor vor Blitzschlag geschützt werden.
- Es wird empfohlen, dieses Produkt mindestens zu zweit anzuheben.
- Der Kollektor darf nicht an den Rohranschlüssen angehoben werden.
- Sicherstellen, dass alle Hydraulikanschlüsse ordnungsgemäß fixiert sind und frei von Lecks sind.
- Das System muss nach Abschluss der Arbeiten inspiziert werden.
- Es wird empfohlen, jährlich eine weitere Inspektion durchzuführen.
- Vermeiden, den Kollektor in beschatteten Bereichen zu installieren.
- Das allgemeine empfohlene Drehmoment für Muttern und Schrauben ist 10 Nm.
- Bei Bedarf kann eine zweite Kollektorreihe hinter der ersten installiert werden.
- Große Anlagen erfordern eine spezielle Verrohrung und Auslegung sowie spezielle Pumpengruppen.
- Der Kollektor darf nicht auf einer unebenen Dachoberfläche installiert werden.
- Bei der Installation des Kollektors keine übermäßige Kraft anwenden.
- Heiße, freiliegende Oberflächen, die berührt werden könnten, müssen geschützt werden, um Verletzungen zu vermeiden.
- Die O-Ring-Verbindungen müssen nicht geschmiert werden.
- Vor der Installation eines Indach-Sets das Dach mit einer Schutzfolie imprägnieren.
- Entfernen Schutzfolie für jede Komponente
- Die Montage im 90°-Winkel zur Wand ist möglich (auf dem Aufdachprofil), jedoch nur wenn das Panel auf seiner Oberseite mit einer vom Monteur gebauten Abdeckung geschützt ist.

WARTUNG


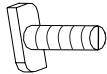

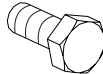
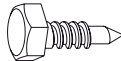
Es wird empfohlen, jährlich folgende Prüfungen durchzuführen:

- 1) Kollektoranlage auf Anzeichen von Beschädigungen oder Ablagerungen prüfen.
- 2) Kollektor- und Montagesystem auf Korrosion prüfen und ggf. reparieren.
- 3) Festen Sitz der Befestigungsteile prüfen. Wenn Befestigungsteile nicht zugänglich sind, kann der Montagezustand des gesamten Kollektors darauf hinweisen, ob Probleme vorliegen.
- 4) Die Anschlussstücke und Rohre auf jegliche Anzeichen von Lecks oder Beschädigungen prüfen, einschließlich Zustand der Rohrisolierung, und ggf. reparieren. Das Gebäudeinnere auf Anzeichen von Lecks prüfen.
- 5) Die Dachziegel im Bereich des Kollektors auf Schäden prüfen und ggf. reparieren.
- 6) Umgebung auf Pflanzenwuchs prüfen, der zur Beschattung der Kollektoren führen könnte.
- 7) Sofern vorhanden, den Zustand jeglichen Ballasts prüfen, der zur Fixierung des Systems verwendet wird.
- 8) In Bereichen, in denen sich Schmutz auf dem Kollektor abgelagert hat, nur nicht scheuernde Materialien und Verfahren verwenden, um die Kollektoren und Komponenten des Montagesystems zu reinigen.



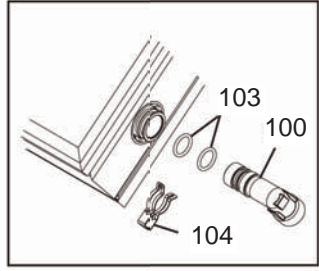
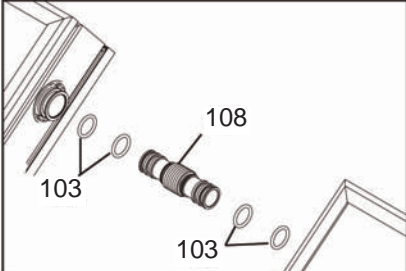
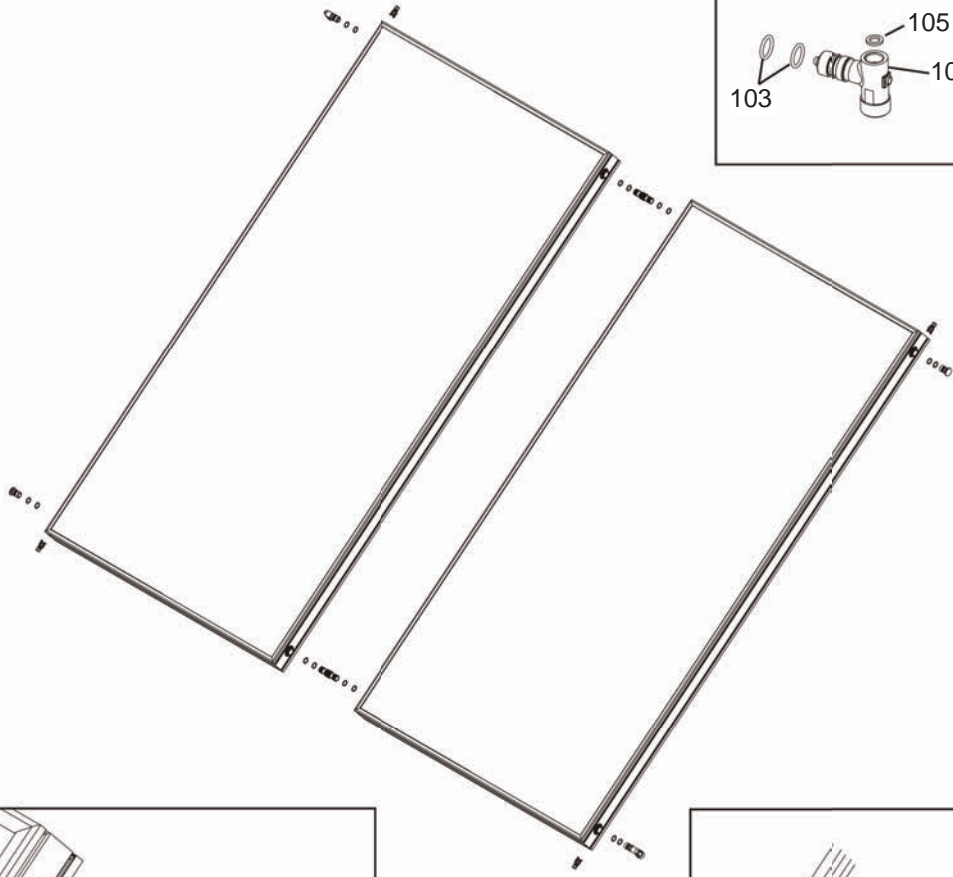
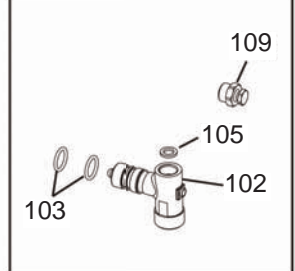
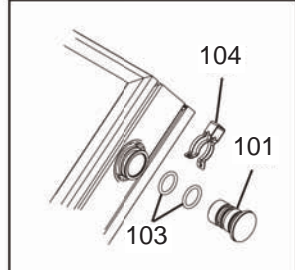
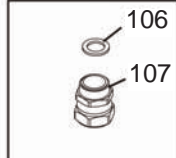
Pièces de rechange
 Spares parts
 Piezas de recambios
 Peças sobressalentes
 Parti di ricambio
 Reserveonderdelen
 Ersatzteile

POCHETTE DE VIS KIT
 SCREWS BAG KIT
 BOLSA DE TORNILLERIA KIT
 SACO DE PARAFUSOS KIT
 CONFEZIONE VITI KIT
 ZAK SCHROEVEN OP DAK
 SCHRAUBEN KIT AUFDACH KLEMMSCHIENE

401		4
		4
		8
		4
		4

9.0 Pièces de rechange
 Spares parts
 Piezas de recambios
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HYDRAULIQUES
 HYDRAULIQUE
 HIDRÁULICOS
 HIDRAULICOS
 IDRAULICO
 HYDRAULICA
 HYDRAULIK



FR	100	Pièce coudée G3/4
	101	Capuchon d'extrémité
	102	Raccord en té G3/4
	103	Joint torique raccord hydraulique(x10)
	104	Bague (x10)
	105	Joint purgeur (x10)
	106	Joint raccord flexible (x10)
	107	Raccord flexible (x2)
	108	Élément de raccord
	109	Décharge d'air manuelle

UK	100	Elbow G3/4
	101	End Cap
	102	Tee piece for air vent G3/4
	103	HYD.Connec. O-ring (x10)
	104	Clip (x10)
	105	Vent sealing washers (x10)
	106	Pipes seal washers (x10)
	107	Far end straight connector (x2)
	108	Joining Piece
	109	Manual air vent

SP	100	Codo G3/4
	101	Tapón
	102	Conexión en "T" para purgador G3/4
	103	Juntas para conectores hidráulicos (x10)
	104	Clip (x10)
	105	Arandelas de sellado de ventilación (x10)
	106	Tubos de arandelas de sellado (x10)
	107	Conector recto remoto (x2)
	108	Pieza de unión
	109	Purgador manual

PT	100	Cotovelo G3/4
	101	Tampão
	102	Peça em "T" G3/4
	103	Juntas tórica conectores hidráulicos (x10)
	104	Mola (x10)
	105	Anilhas de vedação para purgador (x10)
	106	Anilhas de vedação para tubos (x10)
	107	conector para extremidade tubos (x2)
	108	Peça de junção
	109	Ventilação de ar manual

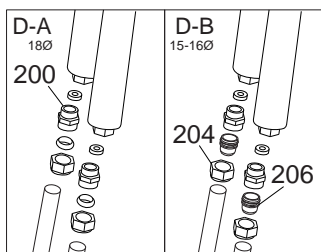
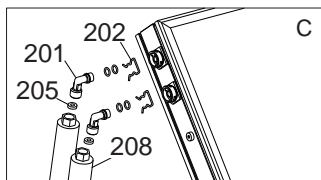
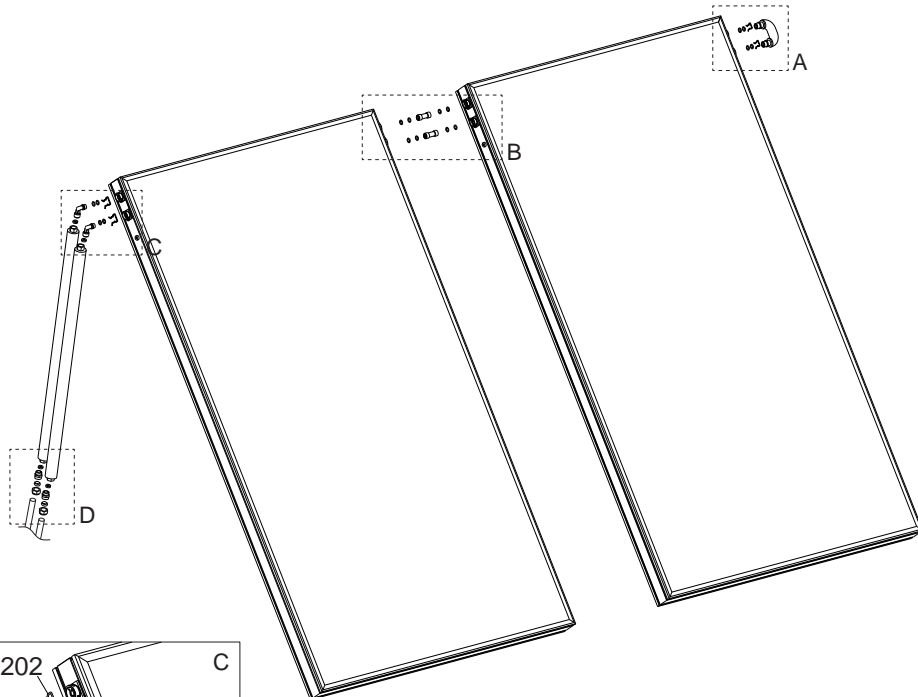
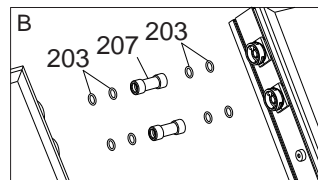
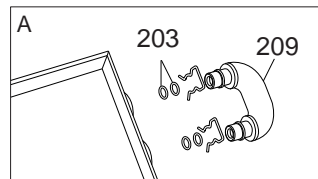
IT	100	Raccordo a gomito G3/4
	101	Tapón
	102	Elemento a "T" G3/4
	103	O-ring raccordi idraulici (x10)
	104	Graffa (x10)
	105	Rondelle di tenuta per sfiato (x10)
	106	Rondelle di tenuta per tubi (x10)
	107	Kit raccordo dritto per estremo tubi (x2)
	108	Elemento di giunzione
	109	Sfiato manuale

NE	100	Bochtstuk G3/4
	101	Eindkap
	102	T-stuk G3/4
	103	O-ring hydraulische verbinding (x10)
	104	Klem (x10)
	105	Afdichtingsringen ontluftingsopening (x10)
	106	Afdichtingsringen buizen (x10)
	107	Recht verbindingstuk uiteinde (x2)
	108	Verbindingstuk
	109	Handmatige luchtopening

GE	100	Rohrbogen G3/4
	101	Endstopfen
	102	T-Stück G3/4
	103	O-ring HYDR. verbinder (x10)
	104	Klemme (x10)
	105	Dichtungsscheiben entlüfter (x10)
	106	Dichtungsscheiben rohre (x10)
	107	Verbinder für rohrenden (x2)
	108	Verbindungsstück
	109	Handentlüfter

9.0 Pièces de rechange
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HYDRAULIQUES
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 HIDRÁULICOS
 HIDRAULICOS
 IDRAULICO
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 HYDRAULIK



FR	200	Raccord hydraulique MG 1/2 - MG 3/4
	201	Pièce coudée G1/2
	202	Bague (x10)
	203	Joint torique raccord hydraulique(x10)
	204	Tube de 18mm de jonction par compression
	205	Joint raccord flexible (x10)
	206	Adaptateur
	207	Élément de raccord
	208	Tube de connexion
	209	Raccord en U

UK	200	Hydraulic conector MG 1/2 - MG 3/4
	201	Elbow G1/2
	202	Clip (x10)
	203	HYD.Connec. O-ring (x10)
	204	Compression junction 18 mm pipe
	205	Pipes seal washers (x10)
	206	Adapter
	207	Joining Piece
	208	Connection pipe
	209	U Connector

SP	200	Conector hidráulico MG 1/2 - MG 3/4
	201	Codo G1/2
	202	Clip (x10)
	203	Juntas para conectores hidráulicos (x10)
	204	Tubo de 18mm de junção por compressão
	205	Tubos de arandelas de sellado (x10)
	206	Adaptador
	207	Pieza de unión
	208	Tubo de conexión
	209	Conector en U

PT	200	Conetor hidráulico MG 1/2 - MG 3/4
	201	Cotovelo G1/2
	202	Mola (x10)
	203	Juntas tórica conectores hidráulicos (x10)
	204	Tubo de 18mm de junção por compressão
	205	Anilhas de vedação para tubos (x10)
	206	Adaptador
	207	Peça de junção
	208	Tubo de conexão
	209	Conetor em U

IT	200	Raccordo idraulico MG 1/2 - MG 3/4
	201	Raccordo a gomito G1/2
	202	Graffa (x10)
	203	O-ring raccordi idraulici (x10)
	204	Tubo da 18 mm di giunzione per compressione
	205	Rondelle di tenuta per tubi (x10)
	206	Adattatore
	207	Elemento di giunzione
	208	Tubo di connessione
	209	Raccordo a U

NE	200	Hydraulische connector MG 1/2 - MG 3/4
	201	Bochtstuk G1/2
	202	Klem (x10)
	203	O-ring hydraulische verbinding (x10)
	204	Drukverbinding buis 18 mm
	205	Afdichtingsringen buizen (x10)
	206	Adapter
	207	Verbindingsstuk
	208	Verbindingsbuis
	209	U-connector

GE	200	Hydraulikverbinder MG 1/2 - MG 3/4
	201	Rohrbogen G1/2
	202	Klemme (x10)
	203	O-ring HYDR. verbinder (x10)
	204	Klemmverbinding 18 mm Rohr
	205	Dichtungsscheiben rohre (x10)
	206	Adapter
	207	Verbindungsstück
	208	Anschlussrohr
	209	U-Verbinder

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