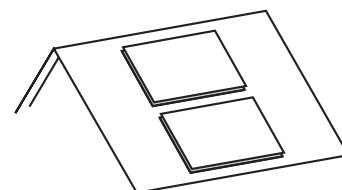
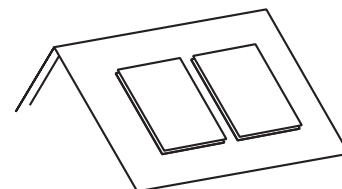
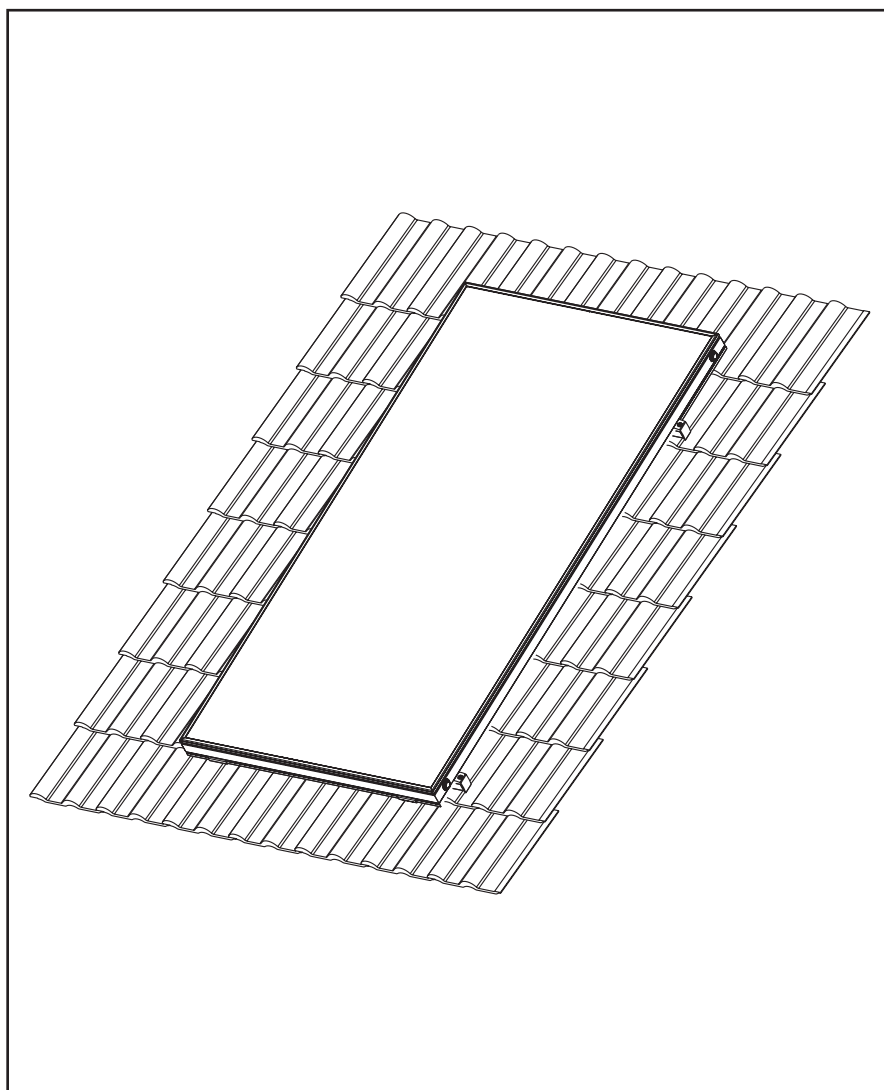


Solar Collectors

On-Roof Installation (First Fix)



Please leave these instructions
with the User

Contents



1.0	Regulations & General Guidance	3
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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 and must be ordered separately. 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.

Guidance Notes

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.

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.

Large arrays will require specialist piping, pump groups and design.

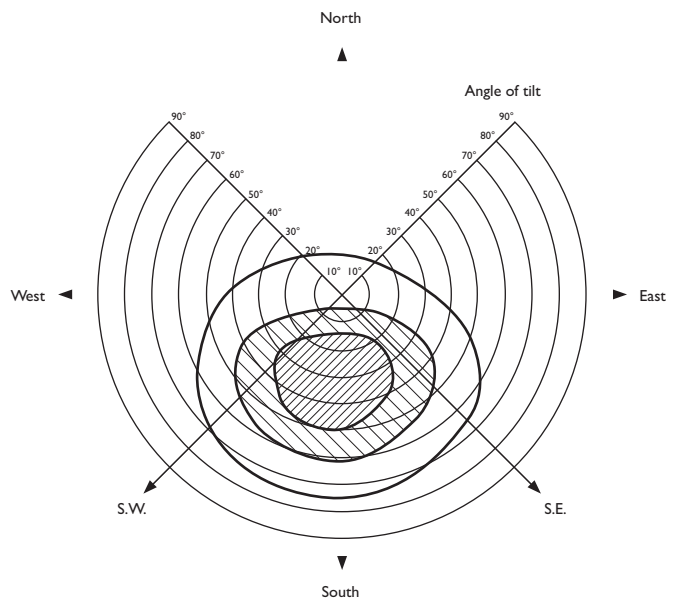
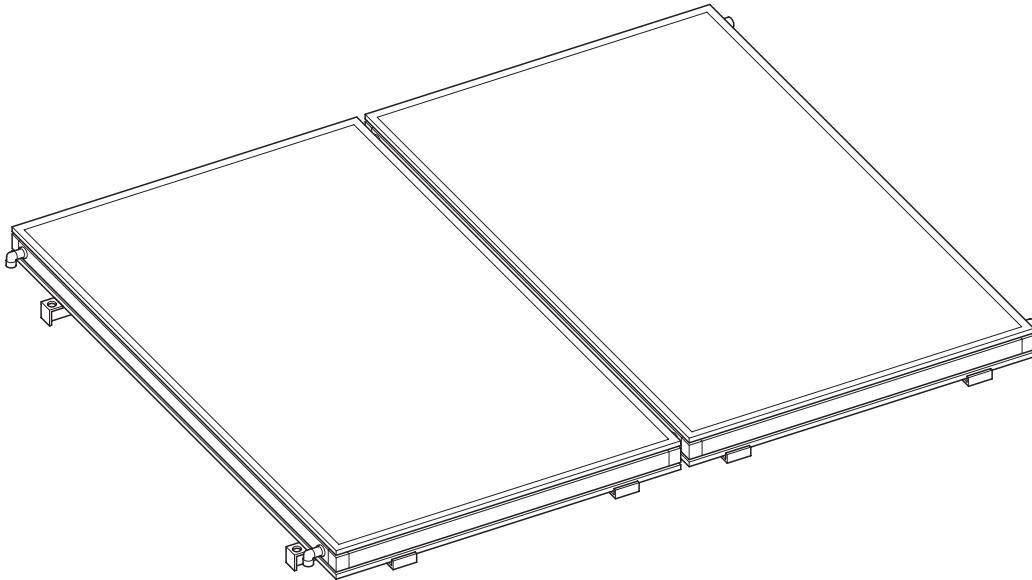
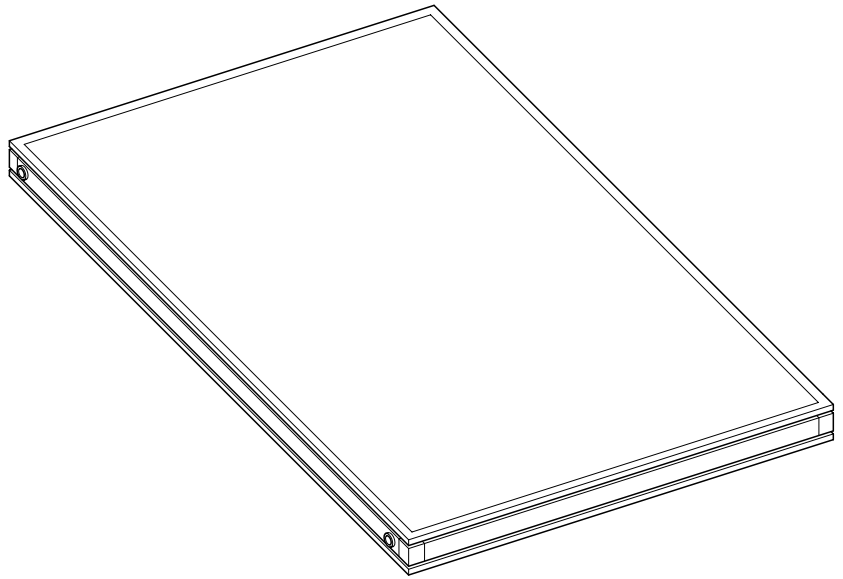
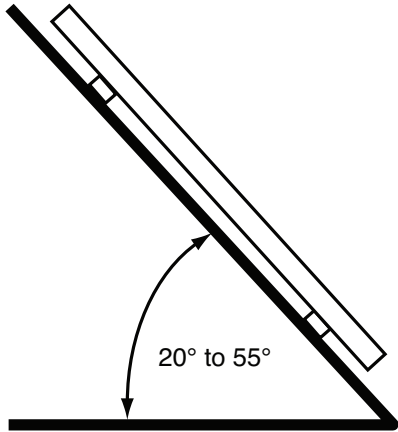
The collector must not be installed on an uneven roof surface.

Do not apply excessive force when installing the collector.

Hot, exposed surfaces that can be touched must be insulated to protect against injury.

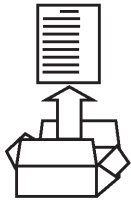
Lubrication is not required for the 'O' ring connections.

2.0 General Layout

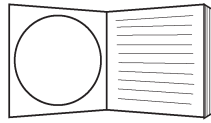


less than optimum by

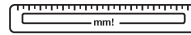
	0-5%		5-10%		10-20%
--	------	--	-------	--	--------

i**3.0 Icon Quick Reference Guide**

3A



3B



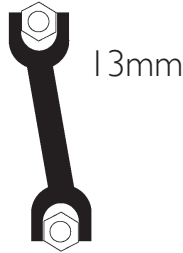
3C



3D



3E



3F



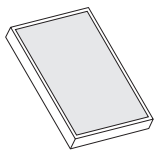
3G



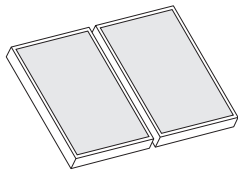
3H



3J



3K



3L

R/H

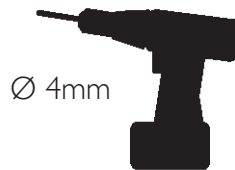
3M

L/H

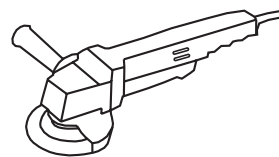
3N



3P



3Q

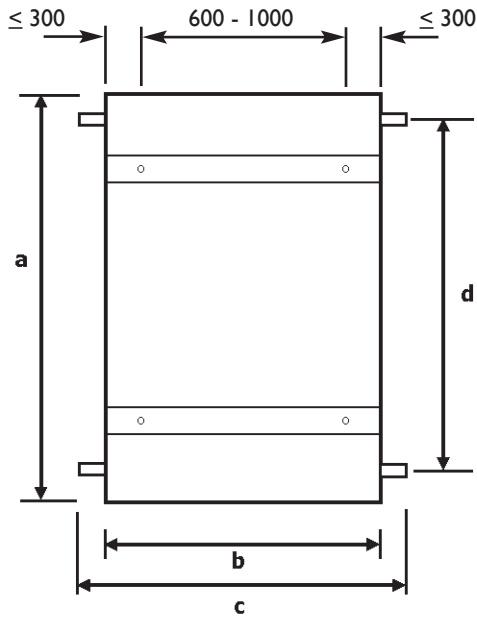


3R

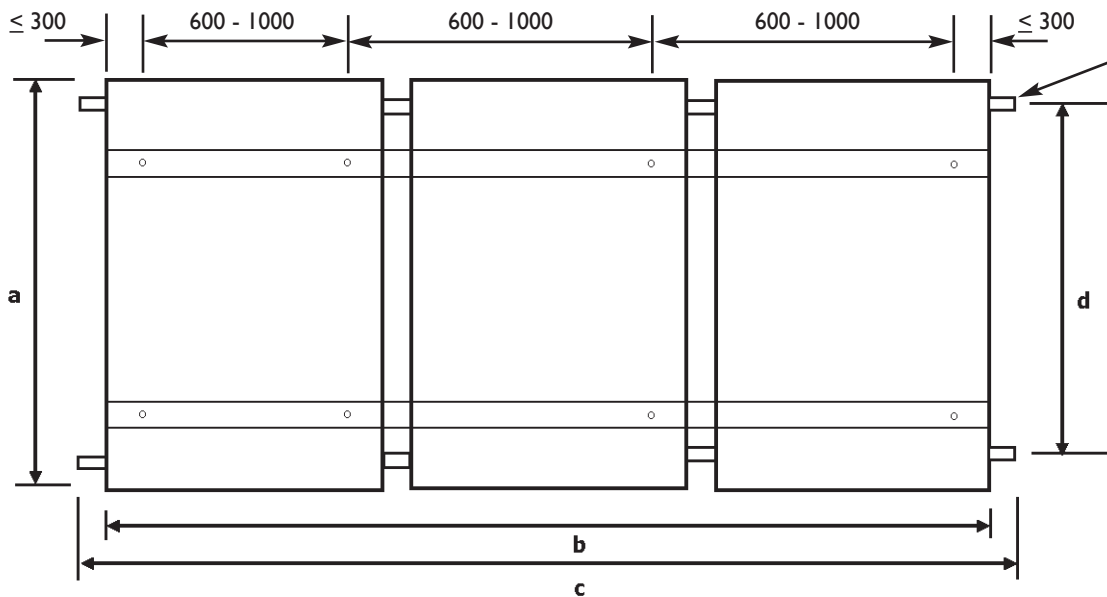
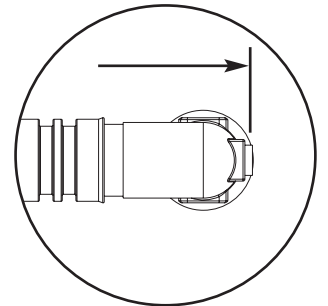
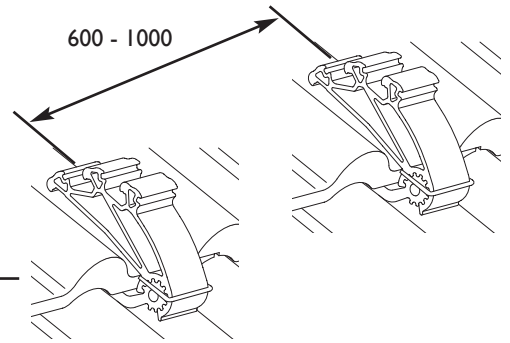
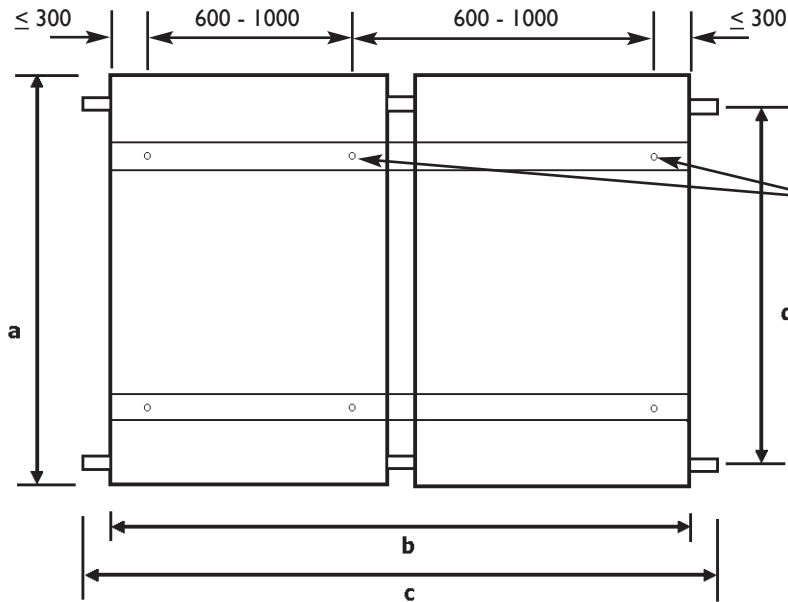
- 3A - Contents
- 3B - Page Reference Number
- 3C - Measure
- 3D - Specialist Advice Required
- 3E - Materials to be Provided by Installer
- 3F - Spanner Tight
- 3G - Information or Advice
- 3H - Screwdriver
- 3J - Hammer
- 3K - 1 Collector
- 3L - 2 Collectors
- 3M - Right Hand Side
- 3N - Left Hand Side
- 3P - Caution
- 3Q - Drill - Ø 4mm
- 3R - Tile Cutter



4.0 Dimensions



	SOL 200	SOL 200H	SOL 250	SOL 250H
 kg	35kg	36kg	48kg	49kg
 !	10bar	10bar	10bar	10bar















i

4.0 Dimensions

mm
↔ Sol 200 Sol 200H Sol 250 Sol 250H

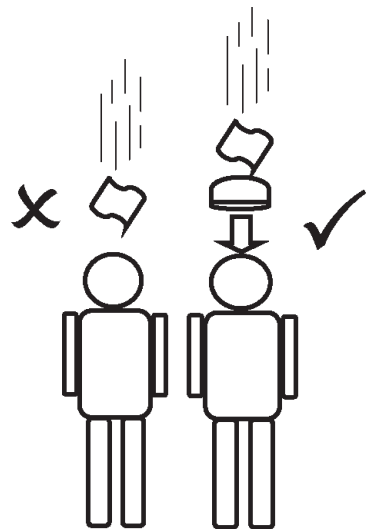
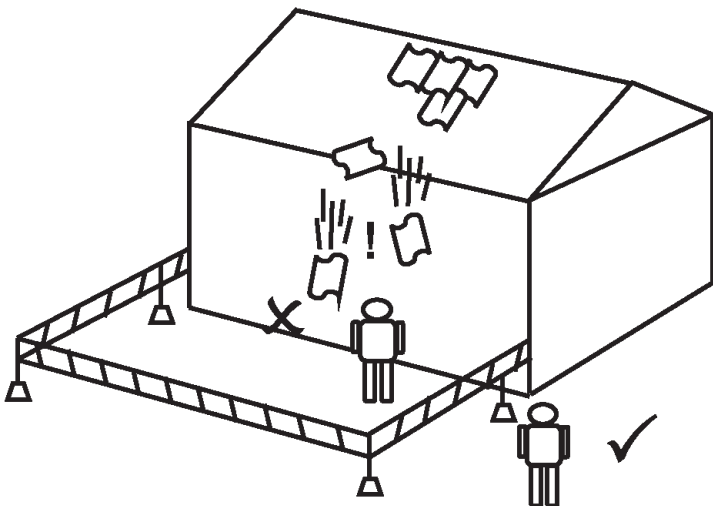
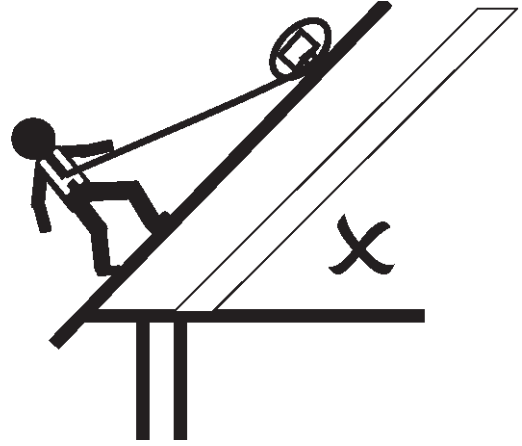
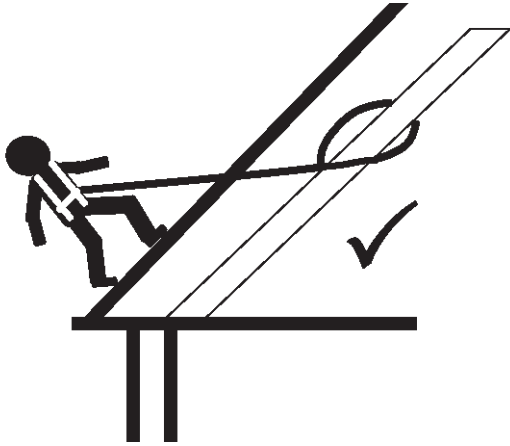
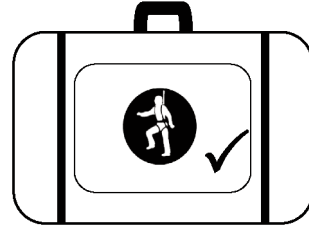
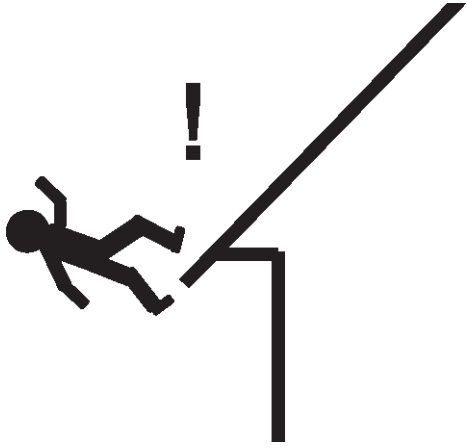


		Sol 200	Sol 200H	Sol 250	Sol 250H
 1	a	1753	1147	2187	1147
	b	1147	1753	1147	2187
	c	1232	1838	1232	2272
	d	1610	1004	2044	1004
 2	a	1753	1147	2187	1147
	b	2334	3546	2334	4414
	c	2419	3631	2419	4499
	d	1610	1004	2044	1004
 3	a	1753	1147	2187	1147
	b	3481	5299	3481	6601
	c	3606	5424	3606	6726
	d	1610	1004	2044	1004
 4	a	1753	1147	2187	1147
	b	4628	7052	4628	8788
	c	4793	7217	4793	8953
	d	1610	1004	2044	1004
 5	a	1753	1147	2187	1147
	b	5775	8805	5775	10975
	c	5980	9010	5980	11180
	d	1610	1004	2044	1004
 6	a	1753	1147	2187	1147
	b	6922	10558	6922	13162
	c	7167	10803	7167	13407
	d	1610	1004	2044	1004
 7	a	1753	1147	2187	1147
	b	8069	12311	8069	15349
	c	8354	12596	8354	15634
	d	1610	1004	2044	1004
 8	a	1753	1147	2187	1147
	b	9216	14064	9216	17536
	c	9541	14389	9541	17861
	d	1610	1004	2044	1004
 9	a	1753	1147	2187	1147
	b	10363	15817	10363	19723
	c	10728	16182	10728	20088
	d	1610	1004	2044	1004
 10	a	1753	1147	2187	1147
	b	11510	17570	11510	21910
	c	11915	17975	11915	22315
	d	1610	1004	2044	1004



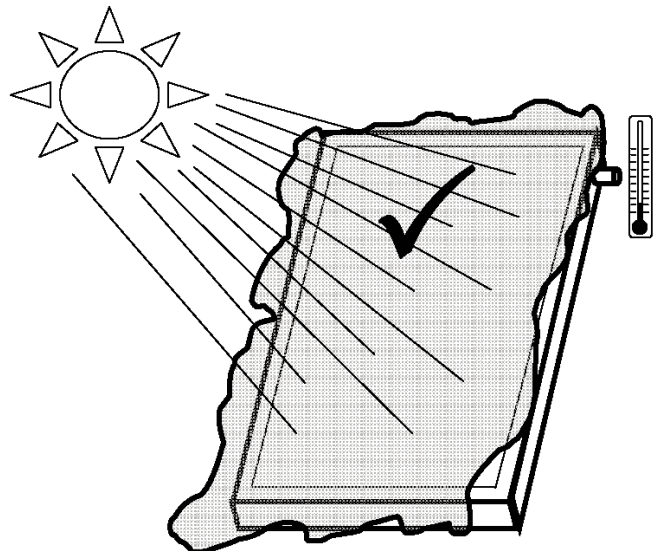
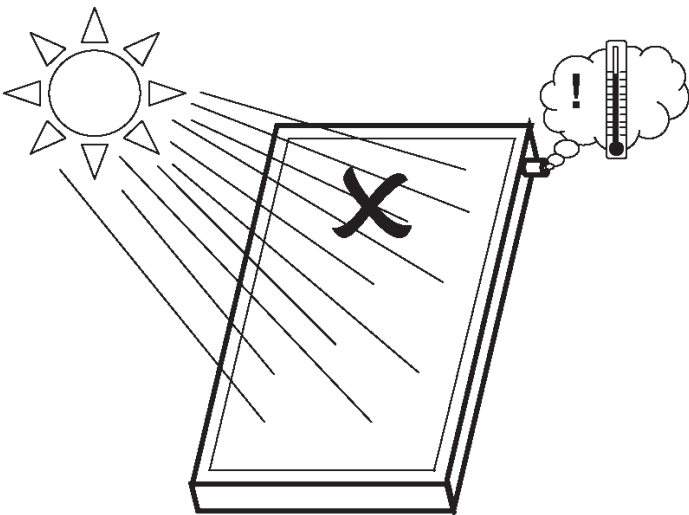
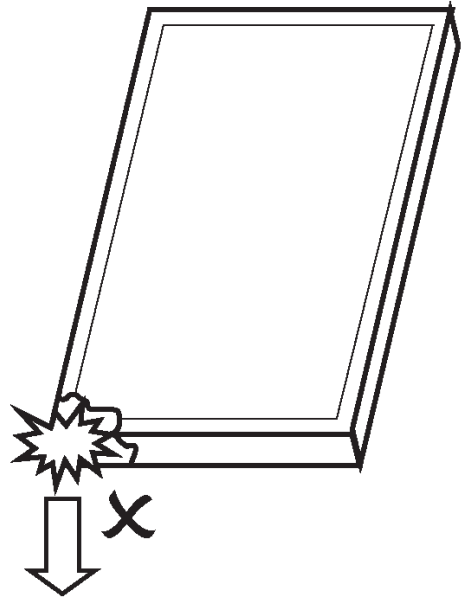
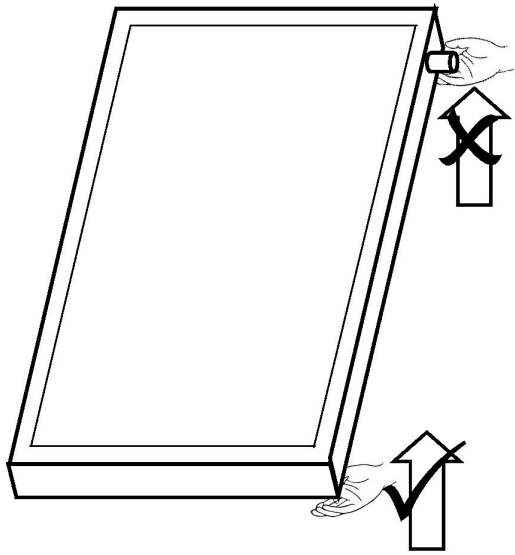
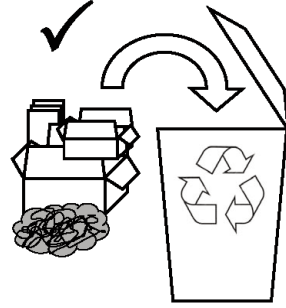
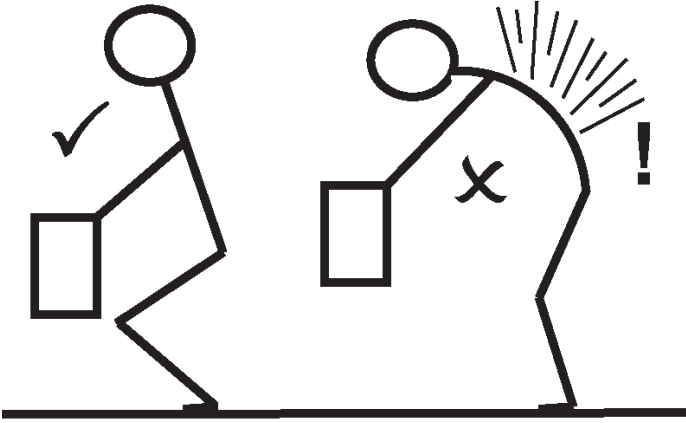
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5.0 Health and Safety





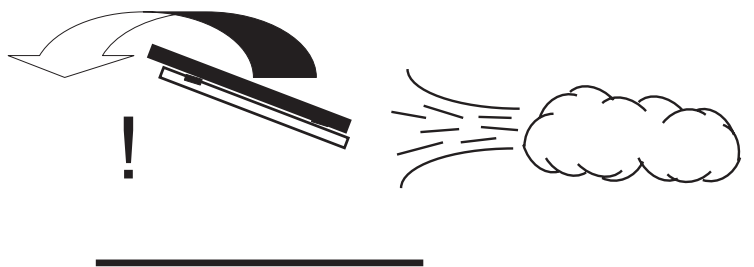
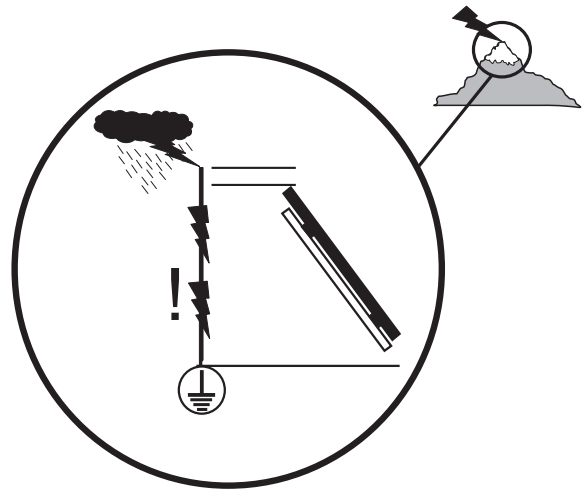
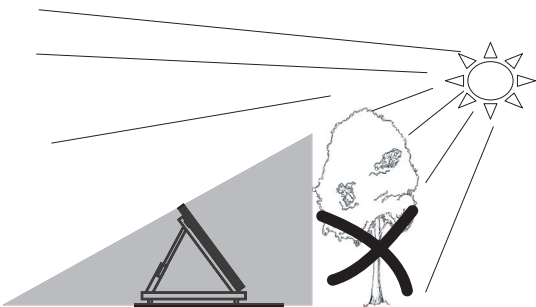
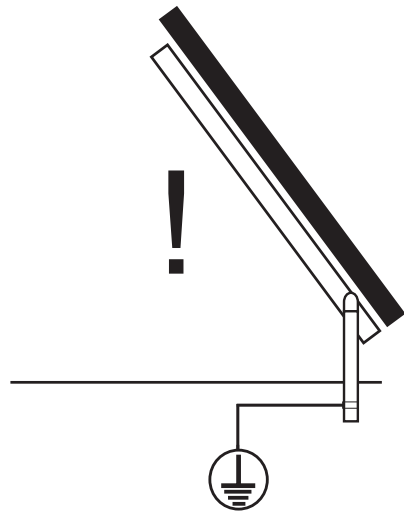
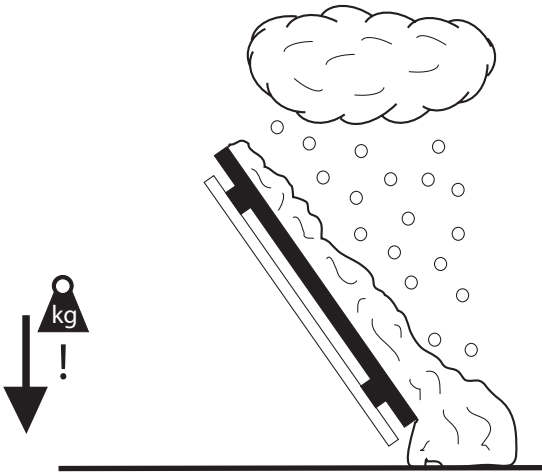
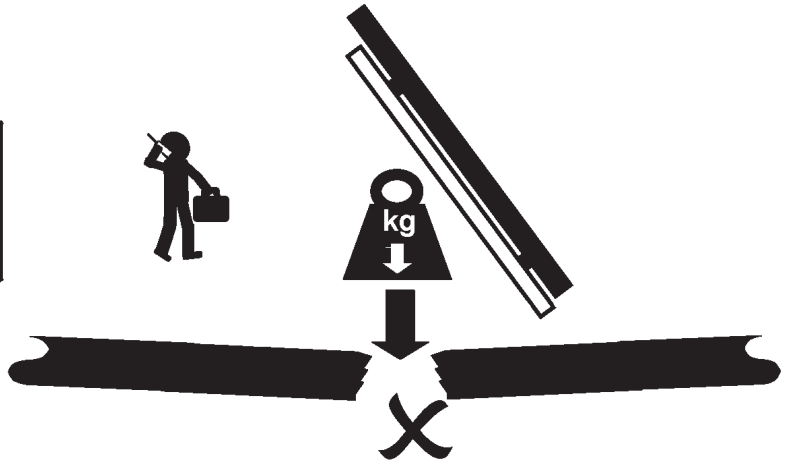
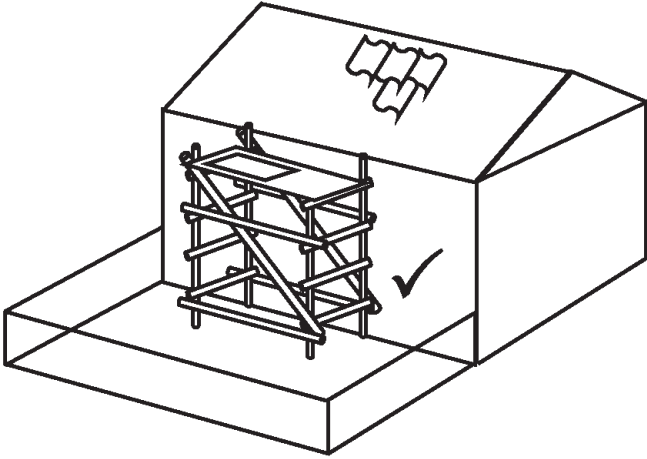
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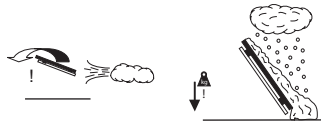




i

5.0 Health and Safety





i

6.0 Snow and Wind Load

EN1991-1-3:2003

- Standard - Snow Loading

SOL 200/200H

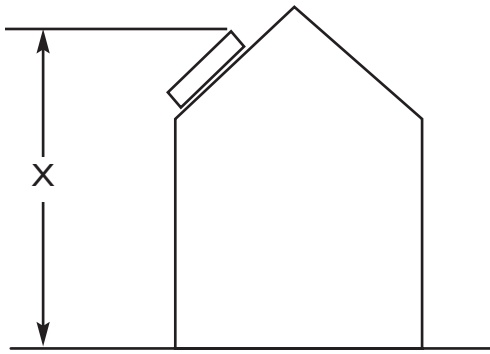
- Design limit snow load on the ground = 2.3kN/m²

SOL 250/250H

- 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.

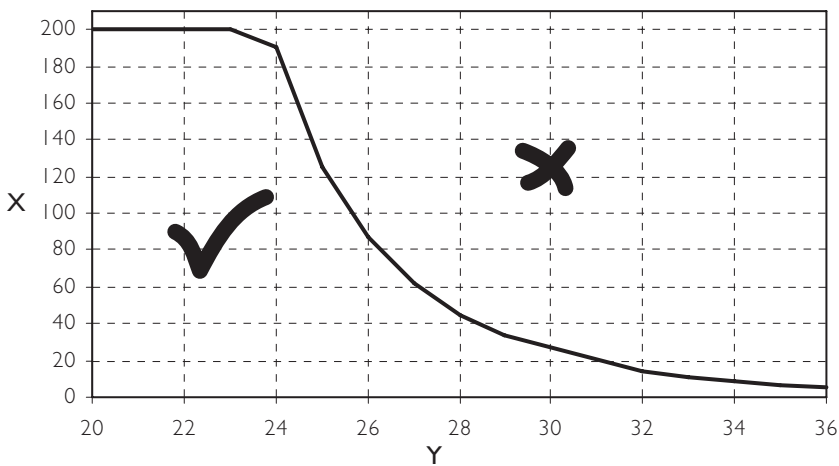


EN1991-1-4:2005

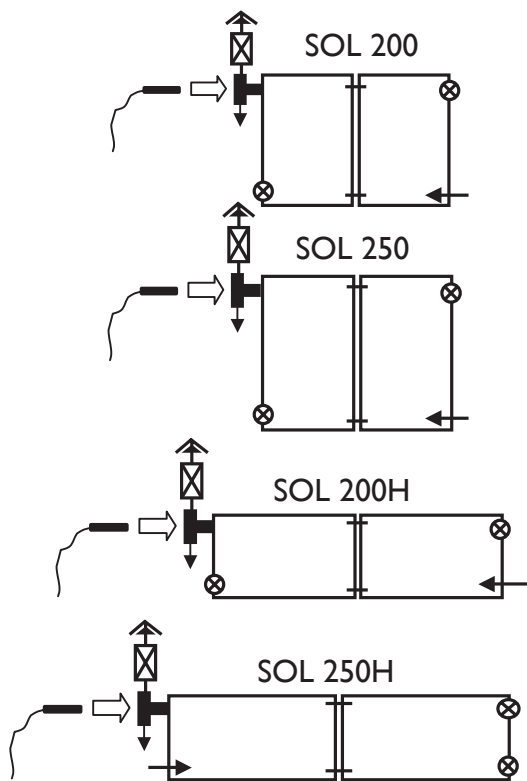
- Standard - Wind Loading









X - Height above ground (metres)

Y - Wind Speed (V_b in metre/second)

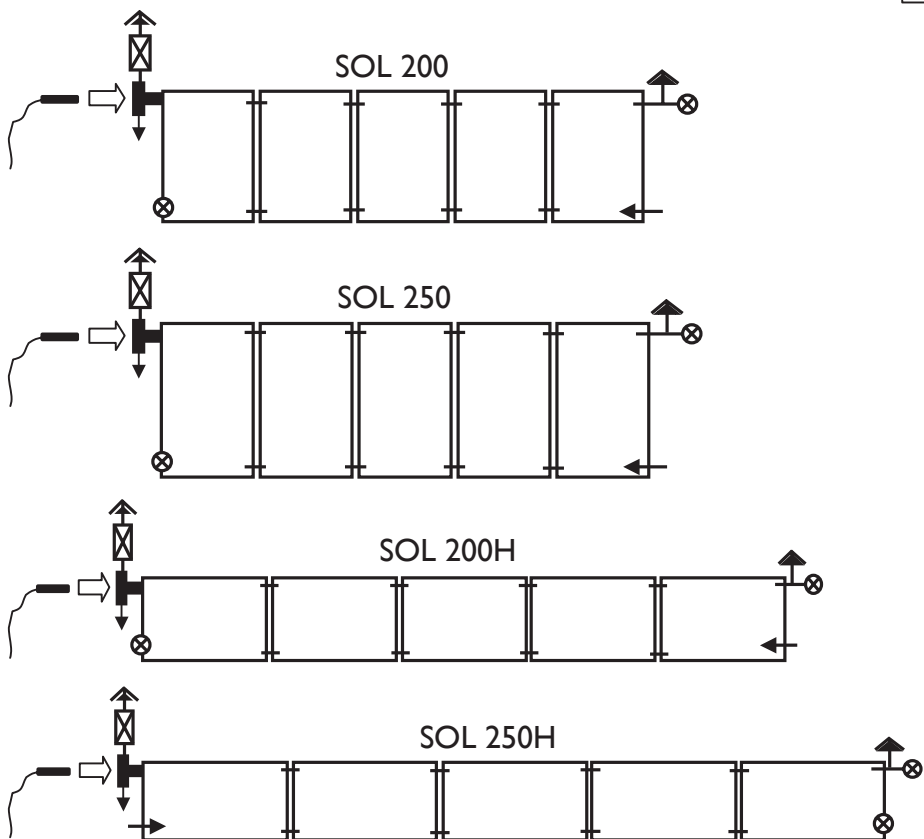


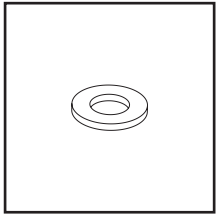
$n < 5$



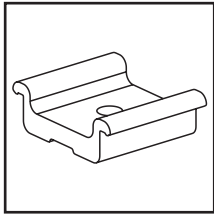
-  - Elbow
-  - Tee Piece
-  - Valve (Optional Extra)
-  - Plug
-  - Air Vent (Optional Extra)
-  - Flow
-  - Sensor
-  - Insert & Secure

$n \geq 5$

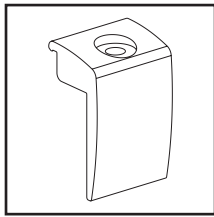


**i****8.0 Kit Contents and Components**

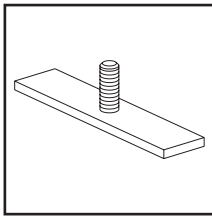
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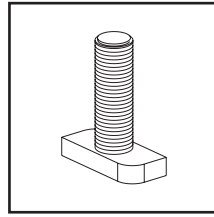
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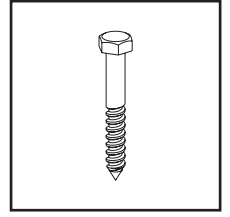
CC



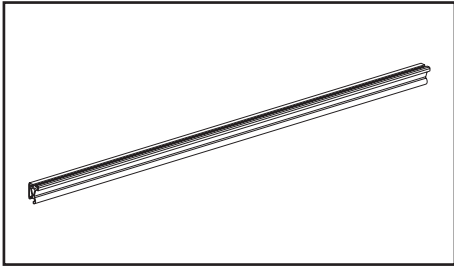
DD



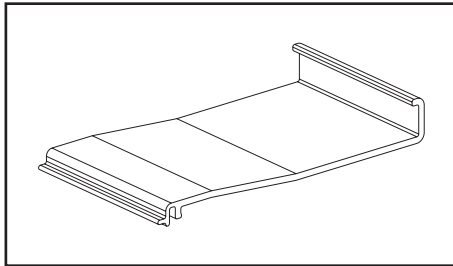
LL



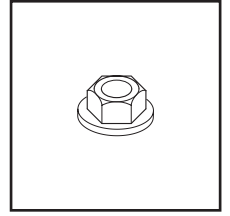
QQ



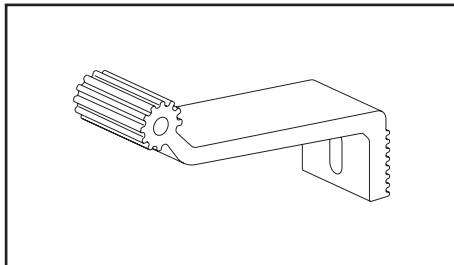
AA



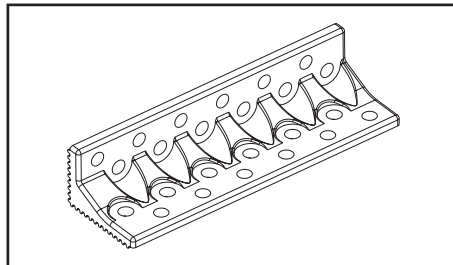
EE



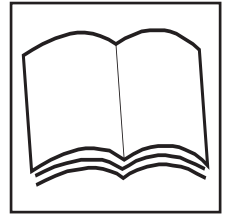
NN



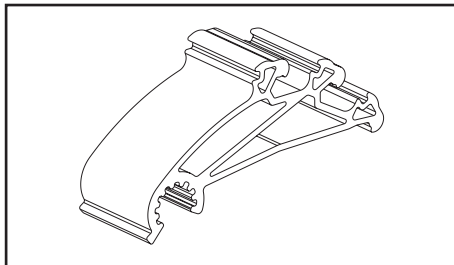
FF



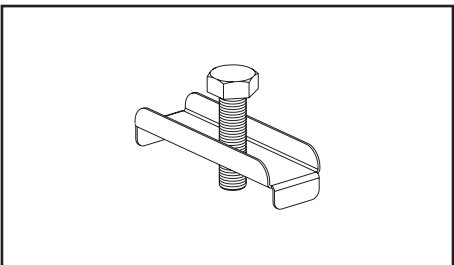
GG



TT



HH



SS

AA - Rail I Panel Portrait

BB - Joining Plate

CC - End Clamp

DD - Join Stud Plate

EE - Support Bracket

FF - Lower Bracket

GG - Under Tile Beam

HH - Upper Bracket

LL - T-Bolts (28/15) M8x25

NN - M8 Nuts

OO - M8 Washers

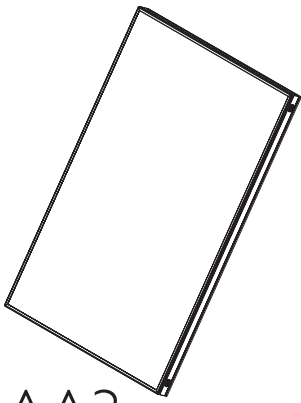
QQ - 8 x 60mm Wood screws (13mm A/F)

SS - Bolt and Captive 8mm washer

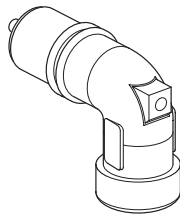
TT - Instructions



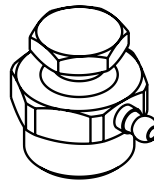
8.0 Kit Contents and Components



AA3



BB3



JJ3

AA3 - Collector

BB3 - Sensor Elbow

CC3 - End Cap

DD3 - Joining Piece

EE3 - Elbow

FF3 - Air Vent

GG3 - Tee Piece

HH3 - Clip

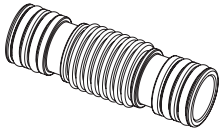
JJ3 - Manual Vent

KK3 - Auto Air Vent

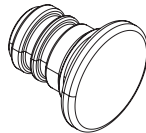
LL3 - Sensor

MM3 - 2m Pipe Kit

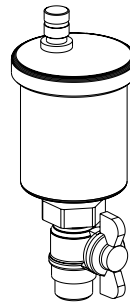
NN3 - Straight Connector with Fittings



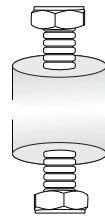
DD3



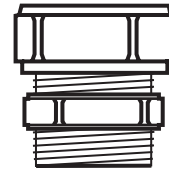
CC3



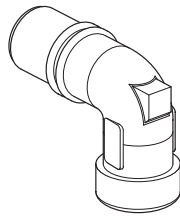
KK3



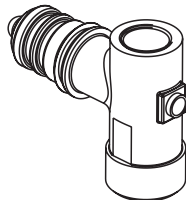
MM3



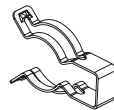
NN3



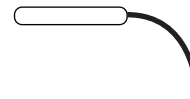
EE3



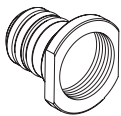
GG3



HH3



LL3

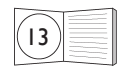
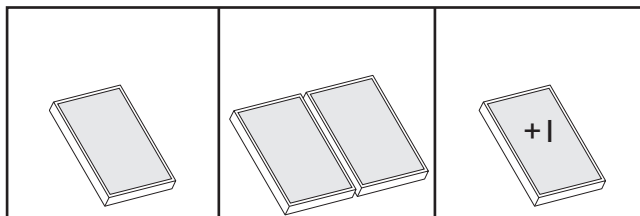


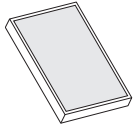
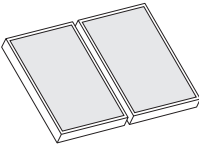
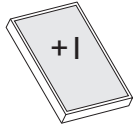
FF3

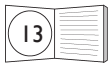


8.0 Kit Contents and Components

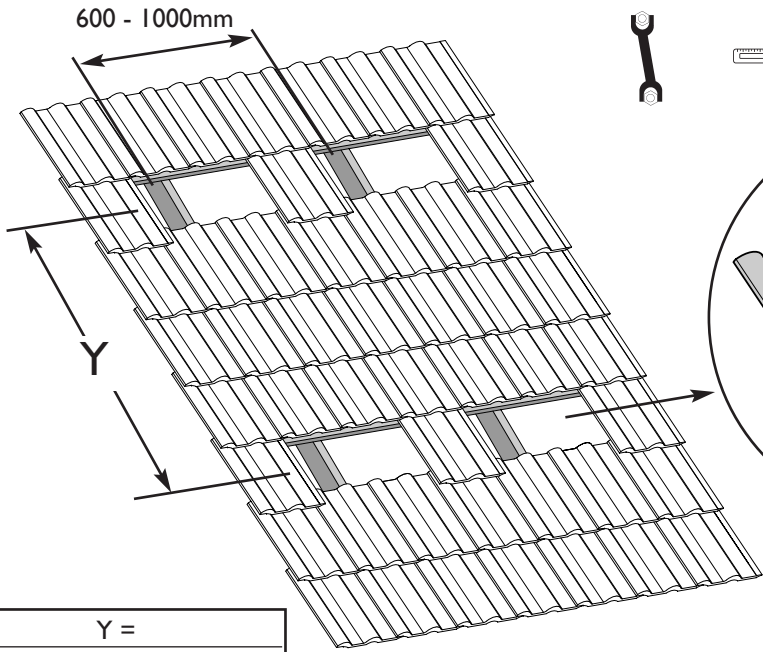
A	- One SOL200/250 Portrait Collector Kit
B	- One SOL200H Landscape Collector Kit
C	- One SOL250H Landscape Collector Kit
D	- Two SOL200/250 Portrait Collector Kit
E	- Two SOL200H Landscape Collector Kit
F	- Two SOL250H Landscape Collector Kit
G	- One SOL200/250 + I Extension Portrait Kit
H	- One SOL200H + I Extension Landscape Kit
J	- One SOL250H + I Extension Landscape Kit



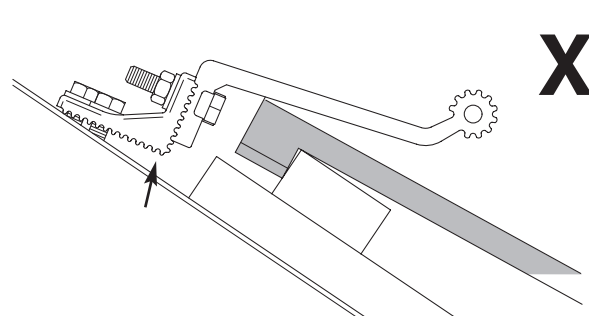
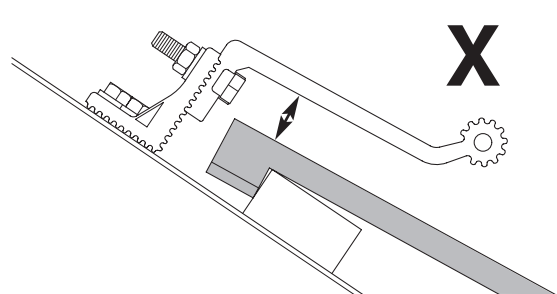
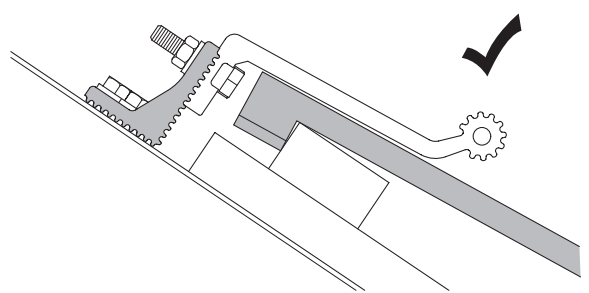
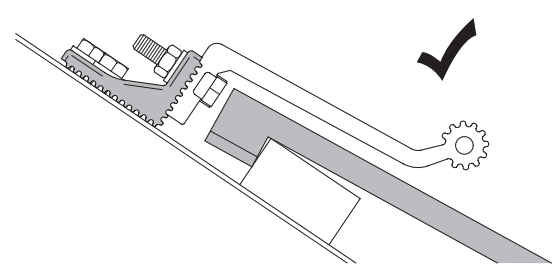
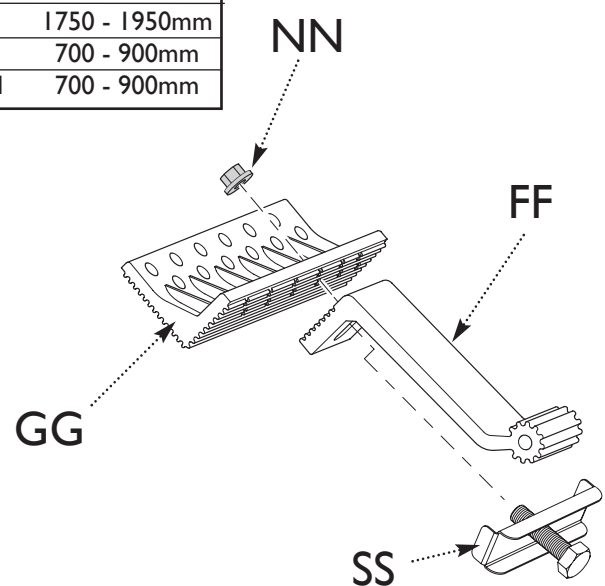
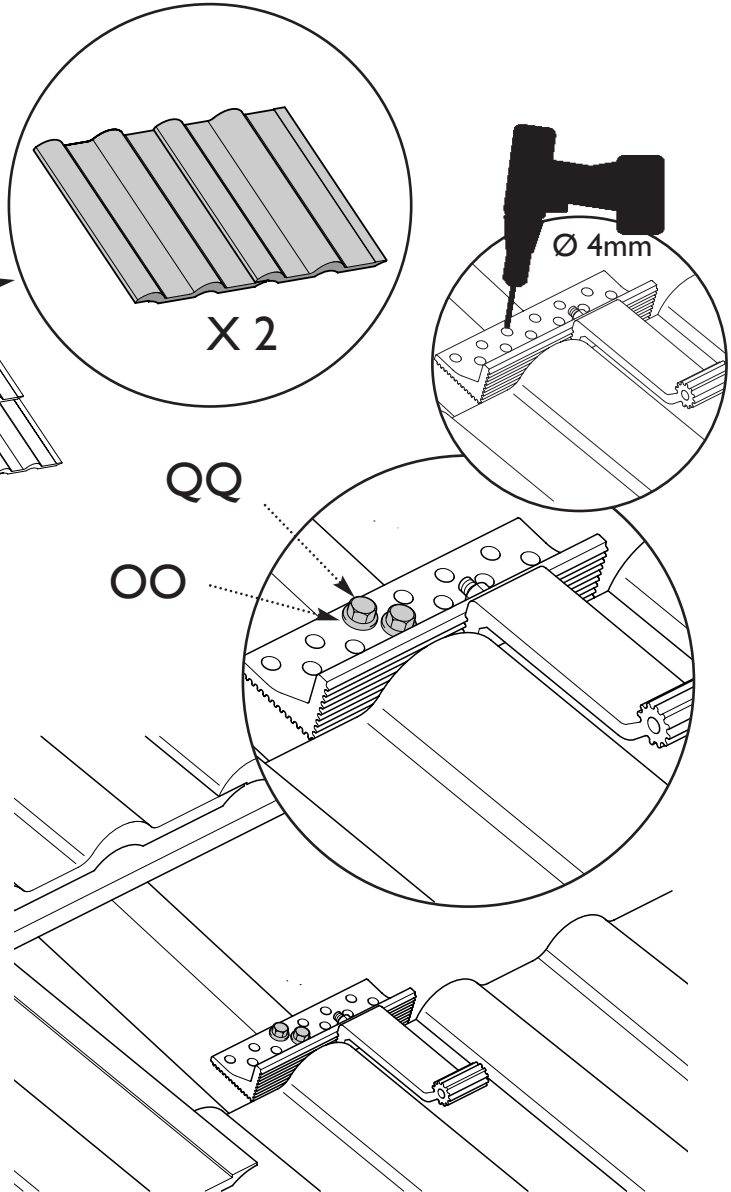
									
	A	B	C	D	E	F	G	H	J
AA	2	2	2	4	4	4	2	2	2
BB	-	-	-	2	2	2	2	2	2
CC	4	4	4	4	4	4	-	-	-
DD	-	-	-	2	2	2	2	2	2
EE	2	2	2	4	4	4	2	2	2
FF	4	4	4	6	8	8	2	4	4
GG	4	4	4	6	8	8	2	4	4
HH	4	4	4	6	8	8	2	4	4
LL	4	4	4	4	4	4	-	-	-
NN	8	8	8	12	14	14	4	6	6
OO	9	9	9	12	16	16	4	8	8
QQ	8	8	8	12	16	16	4	8	8
SS	4	4	4	6	8	8	2	4	4
TT	1	1	1	1	1	1	-	-	-
BB3	1	1	1	1	1	1	-	-	-
CC3	2	2	2	2	2	2	-	-	-
DD3	-	-	-	2	2	2	2	2	2
EE3	1	1	1	1	1	1	-	-	-
HH3	4	4	4	4	4	4	-	-	-



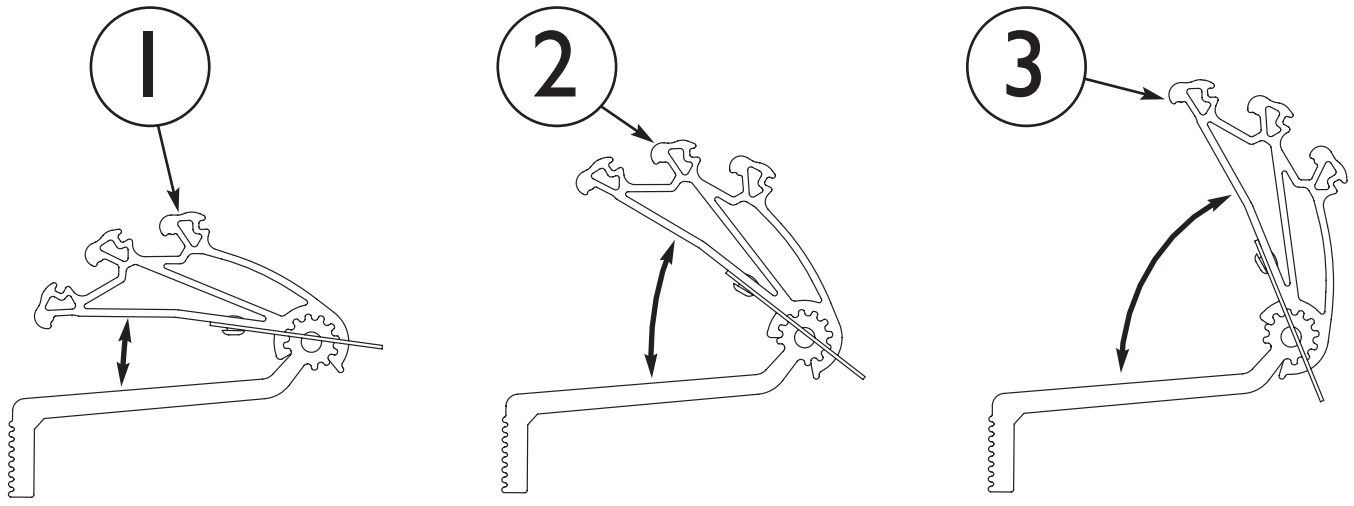
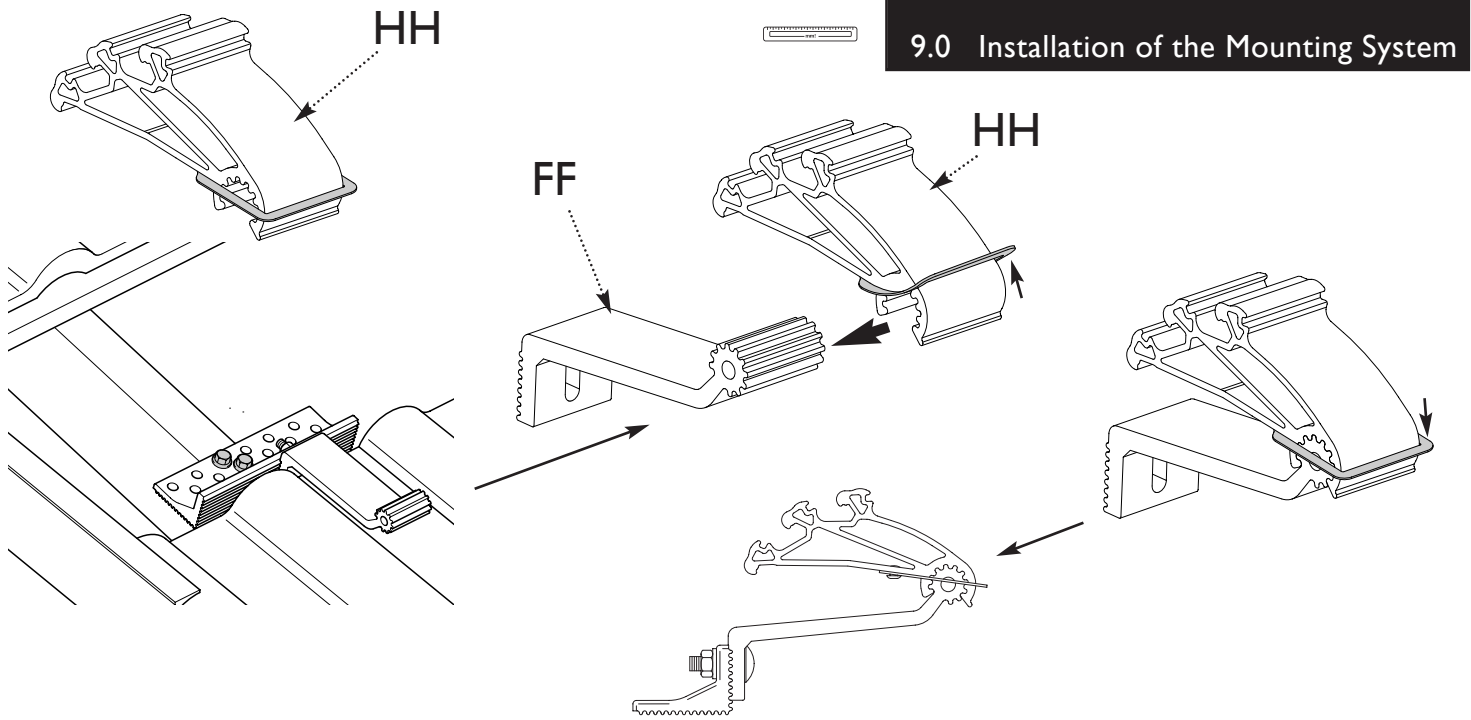
9.0 Installation of the Mounting System



Y =	
Sol 200	1250 - 1550mm
Sol 250	1750 - 1950mm
Sol 200H	700 - 900mm
Sol 250 H	700 - 900mm

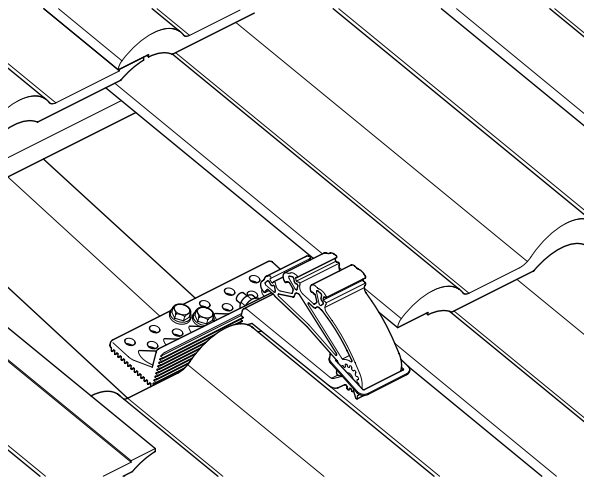
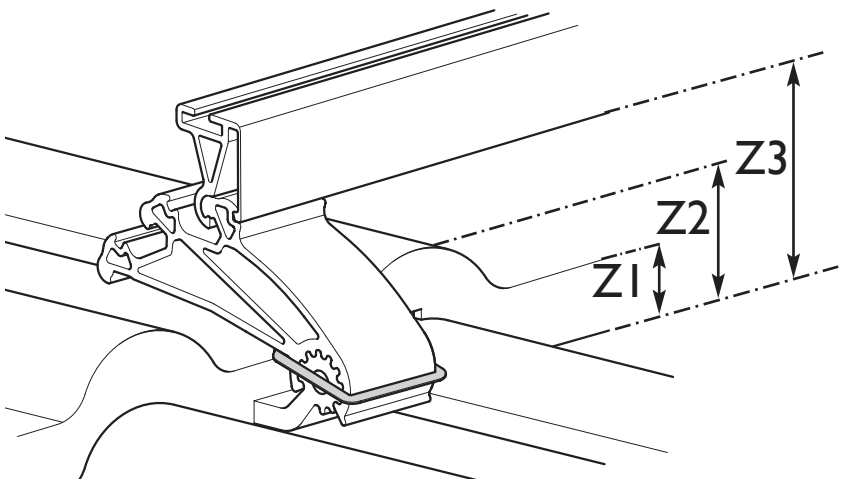


9.0 Installation of the Mounting System



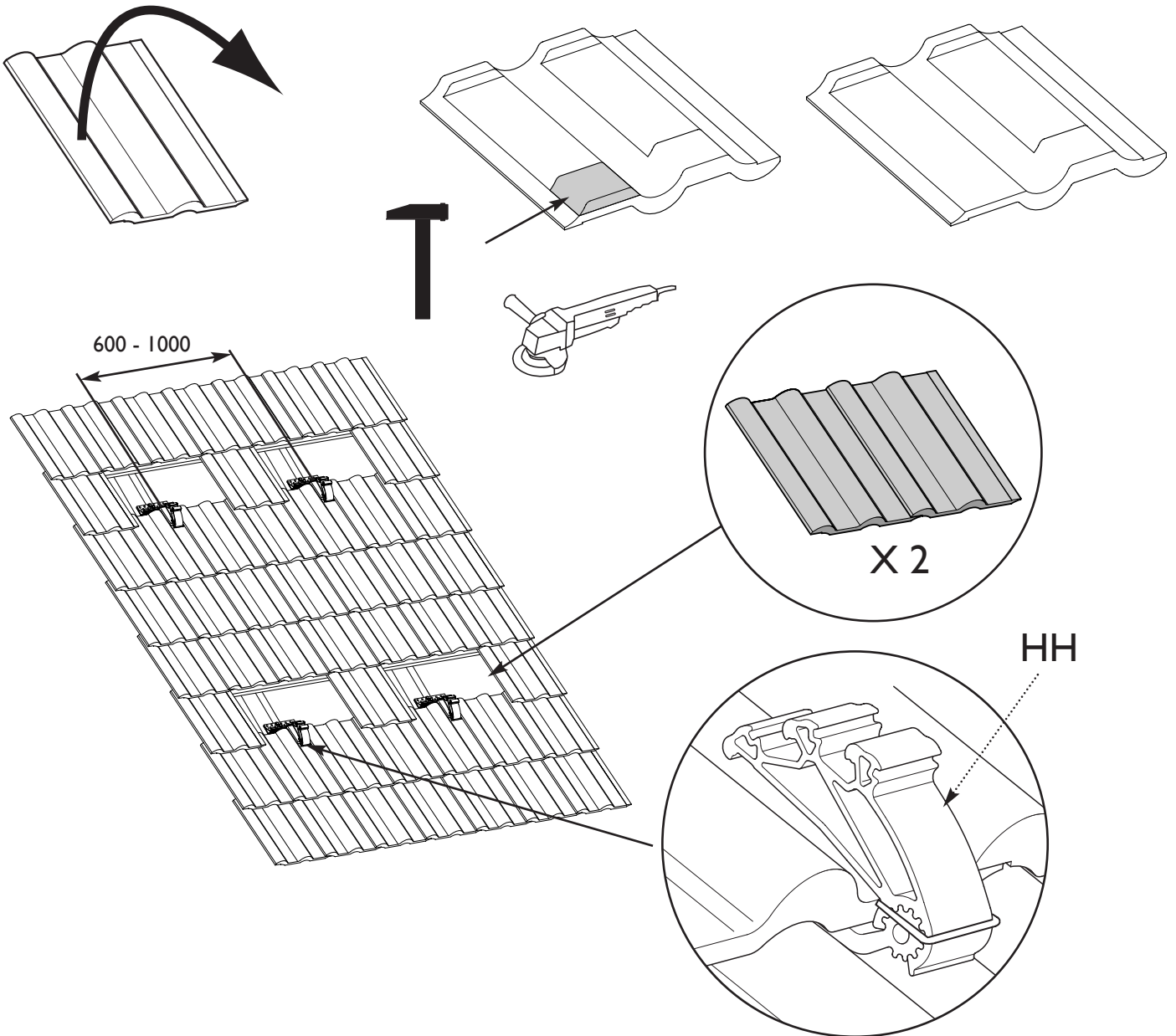
	①	②	③
Z1	≤ 25	≤ 34	≤ 50
Z2	≤ 50	≤ 80	≤ 105
Z3	58	87	112

 mm

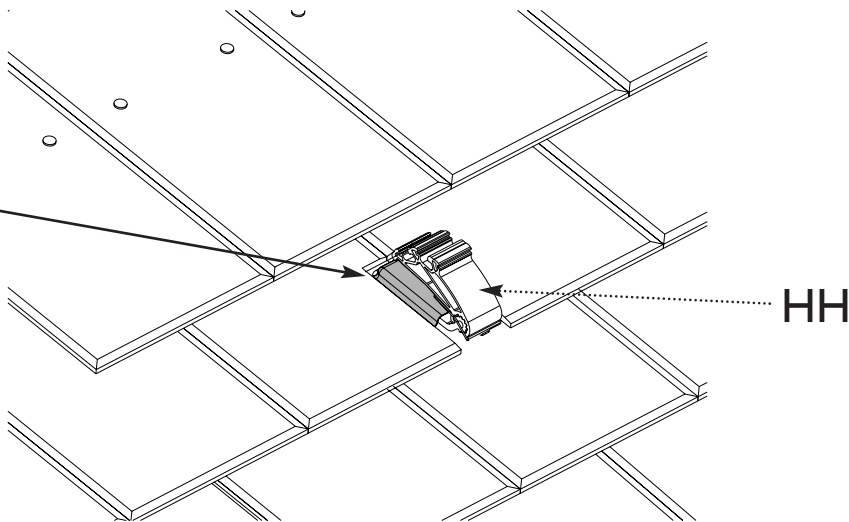
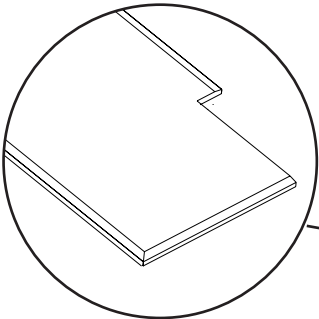
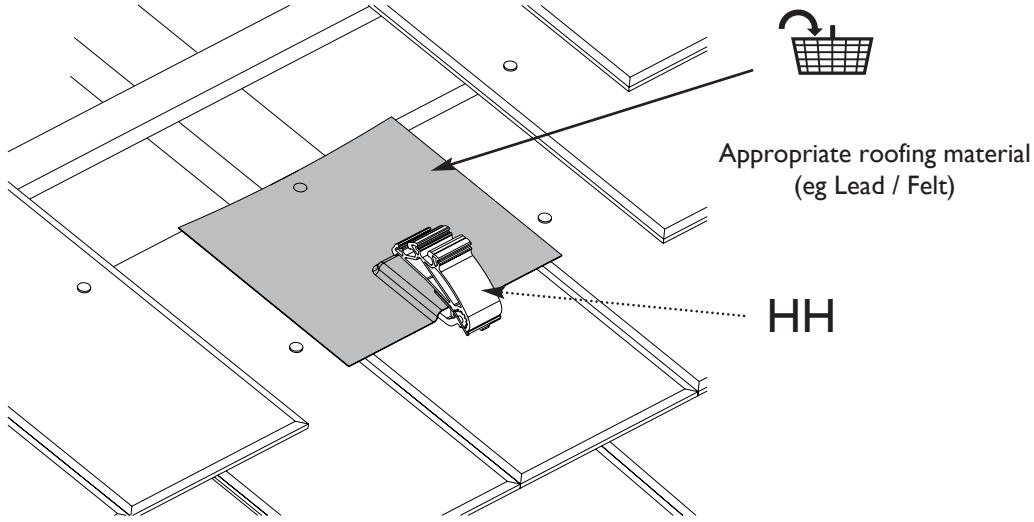
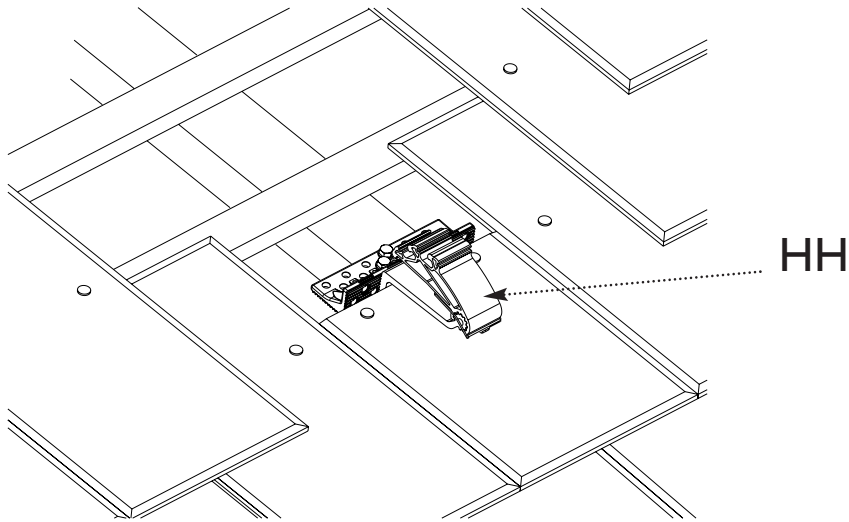


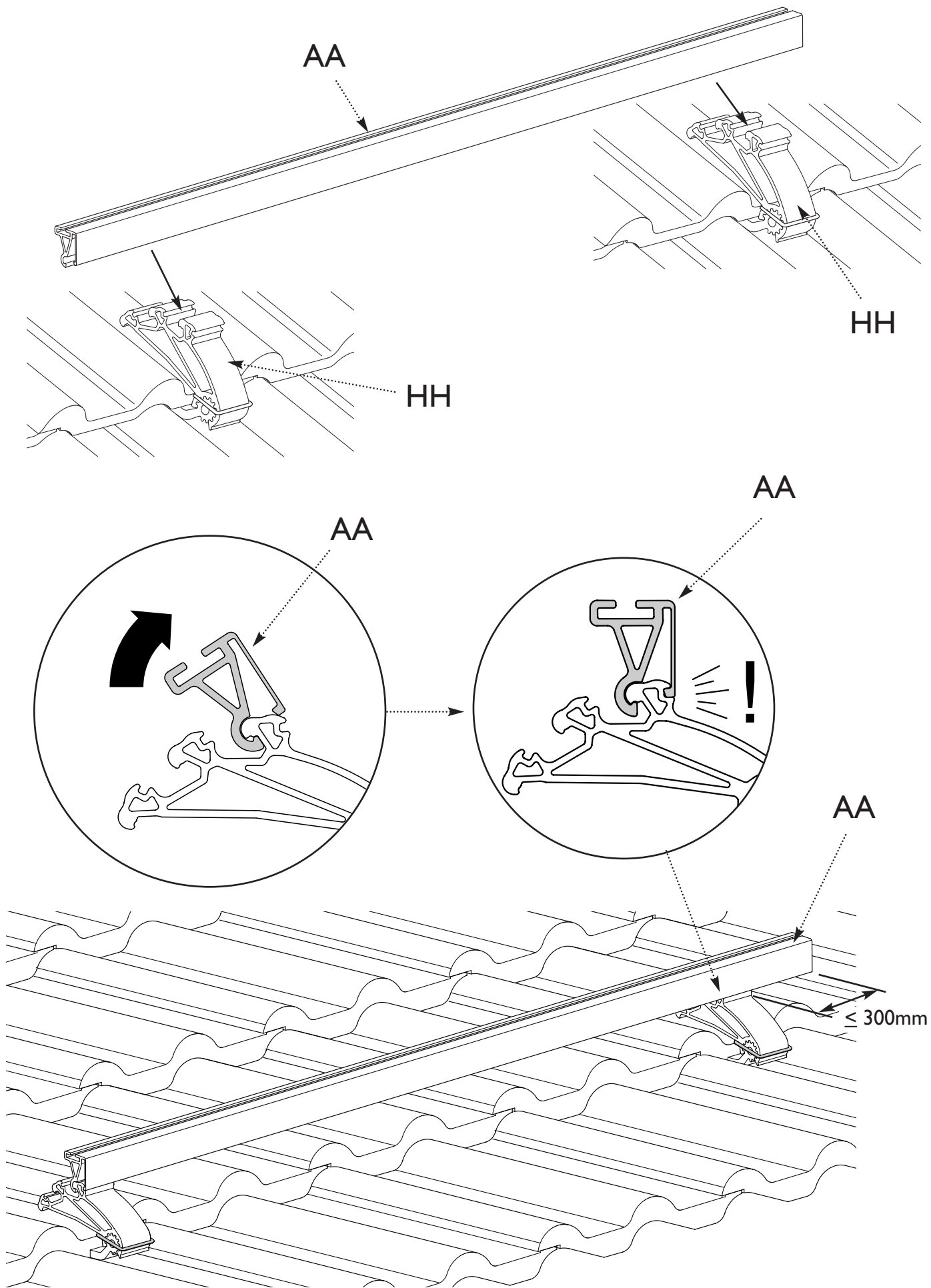


Profiled Tile

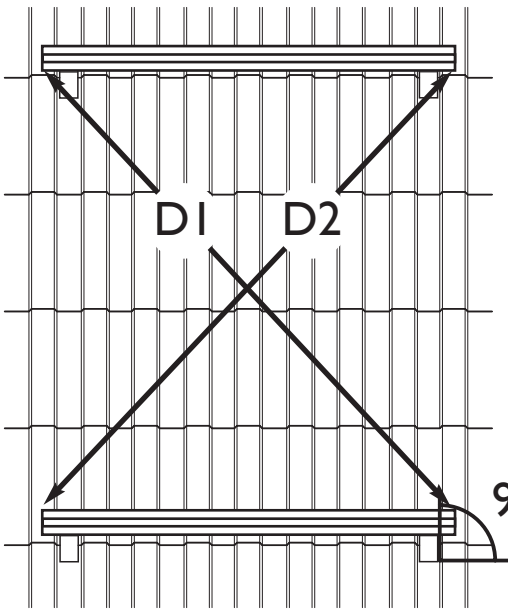


Slate and Flate Tile

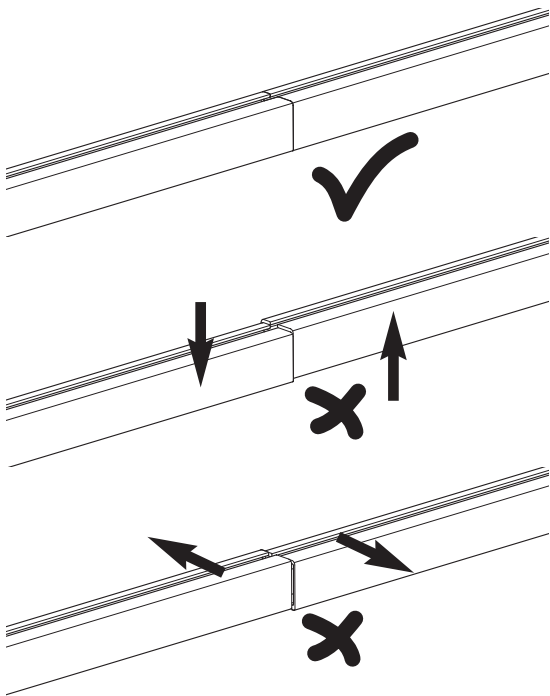
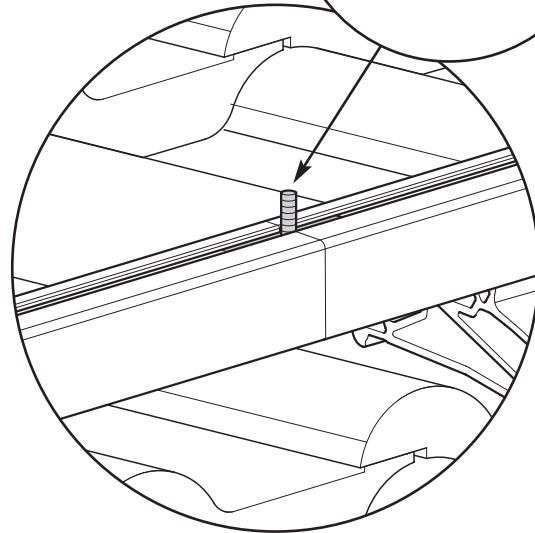
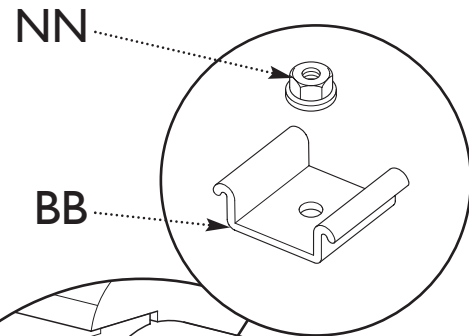
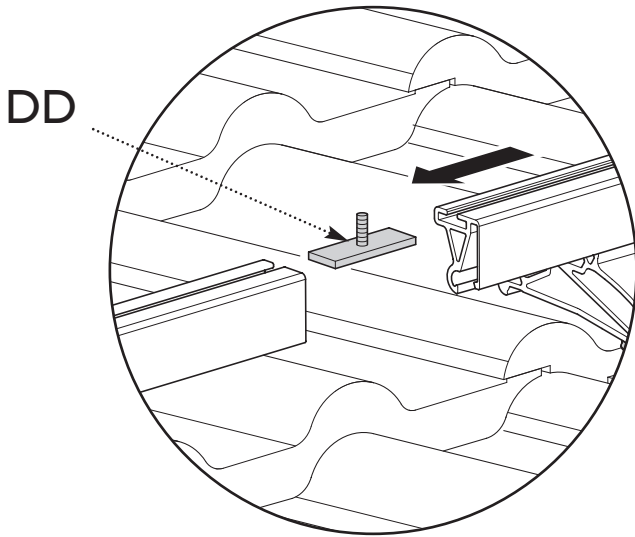
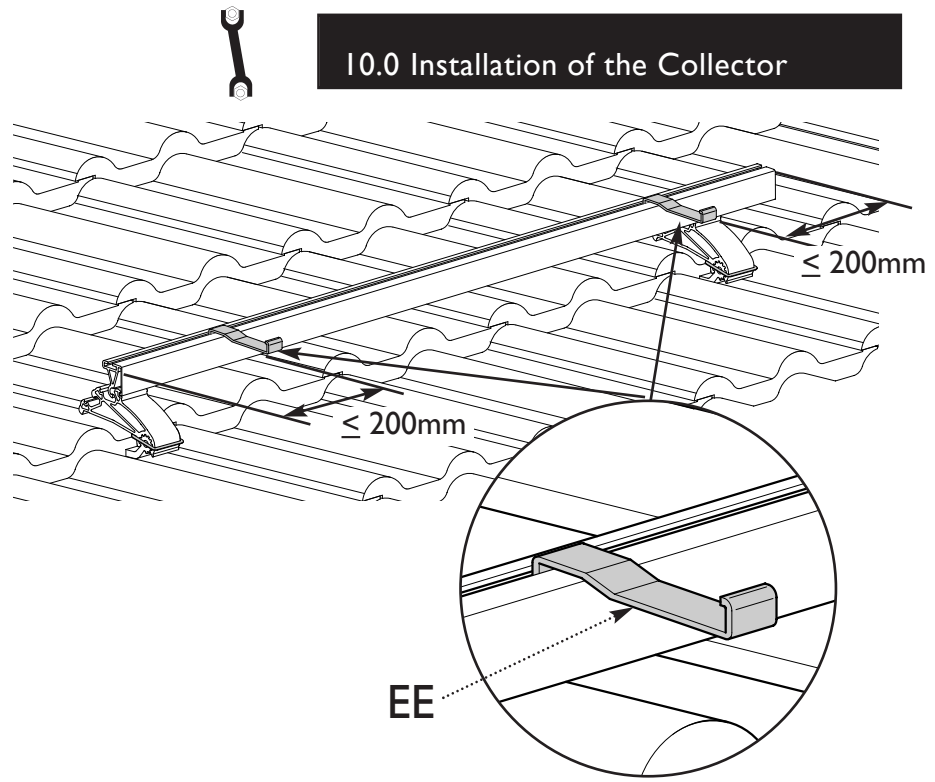




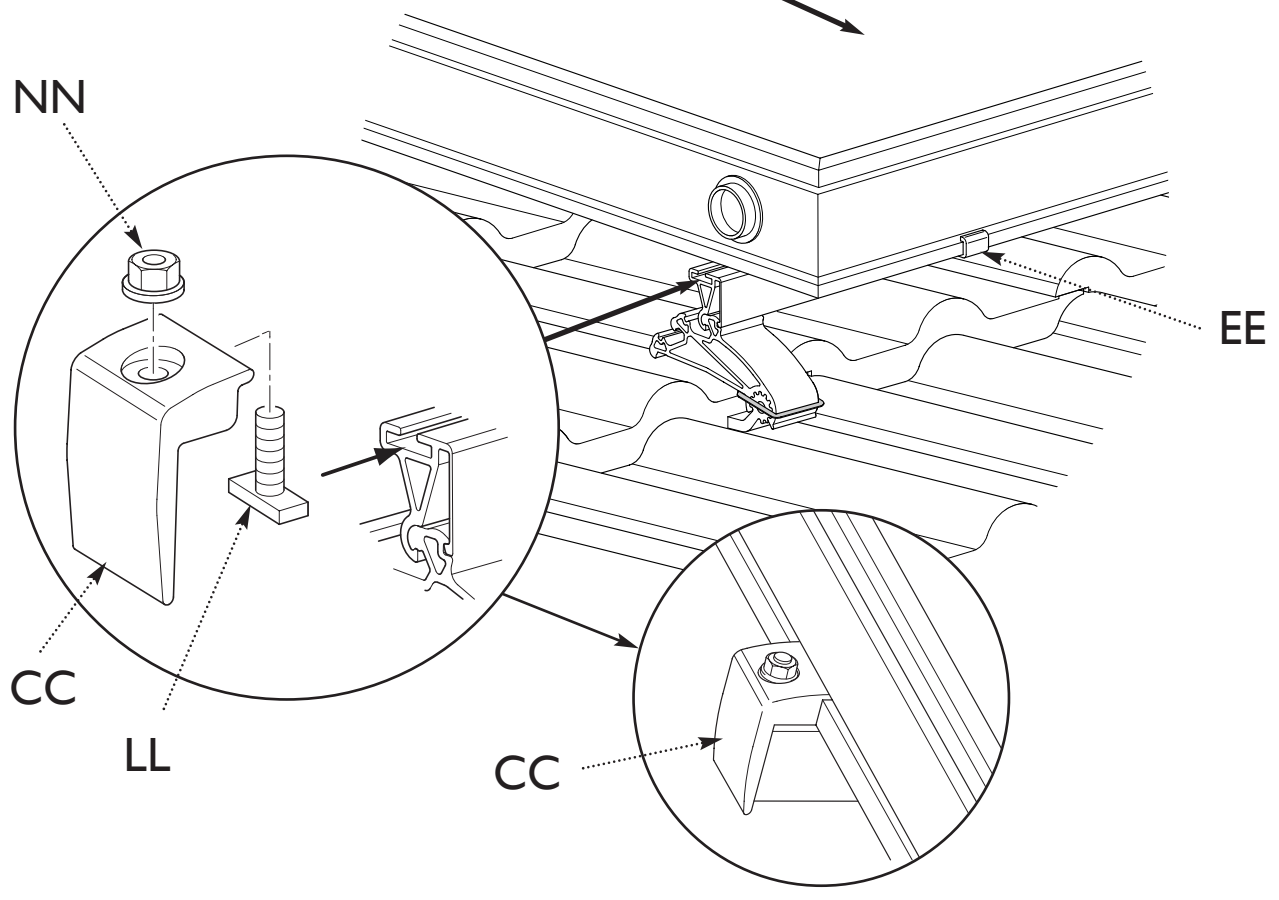
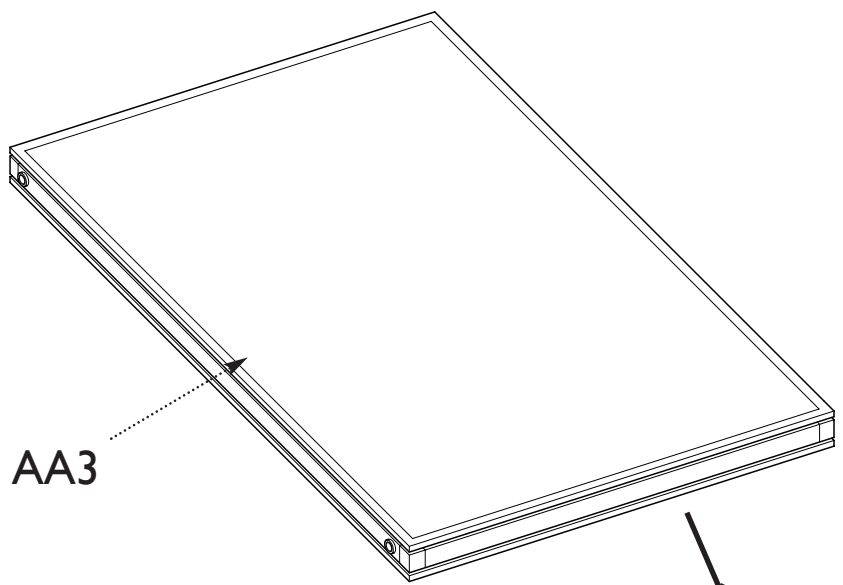
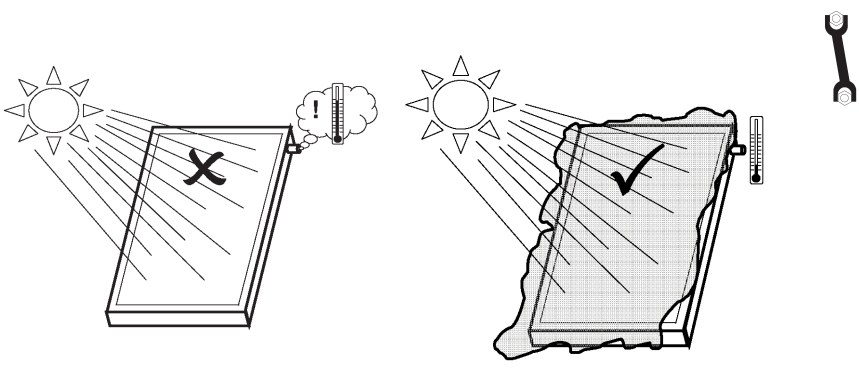
10.0 Installation of the Collector



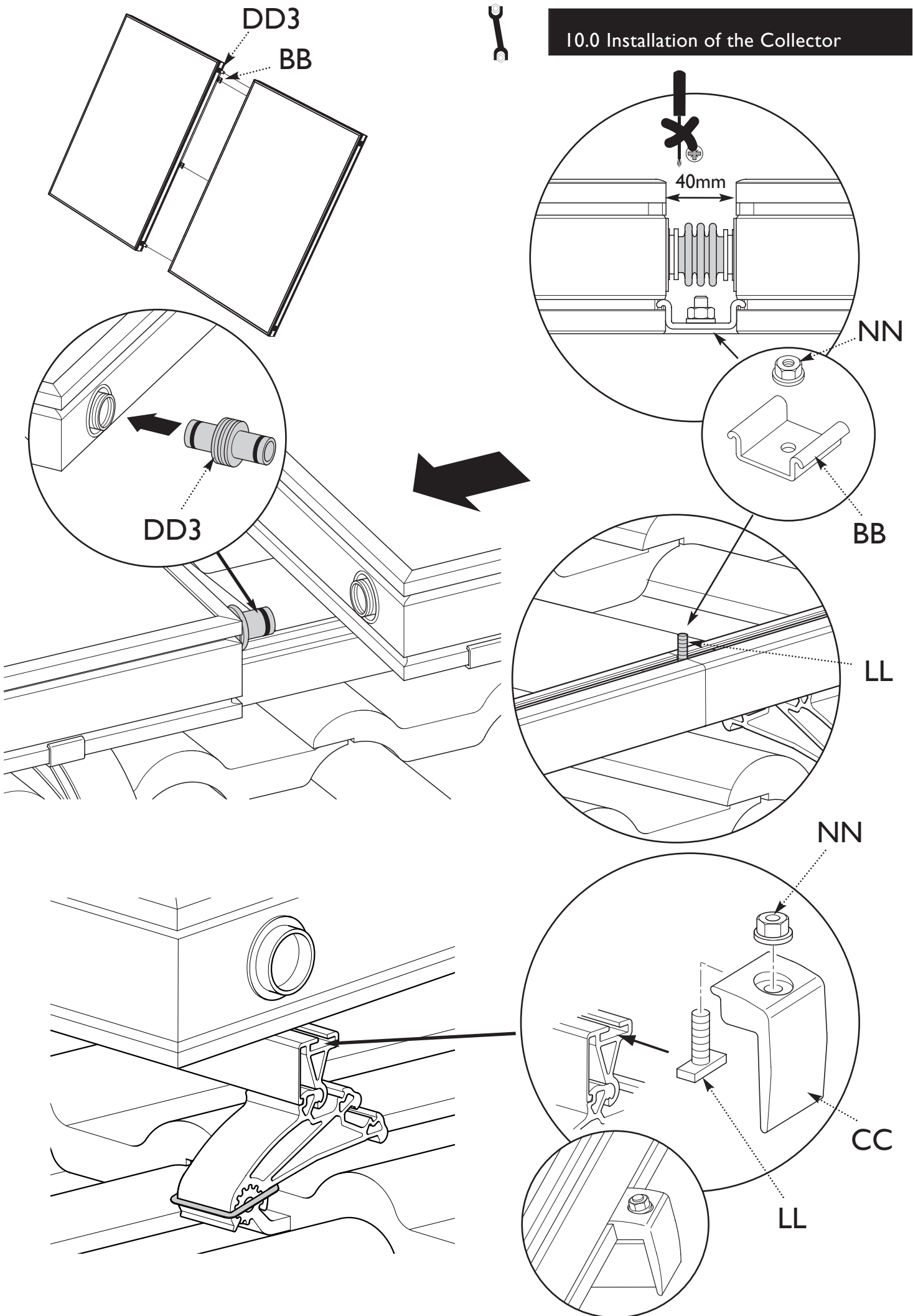
 $D1 = D2$



10.0 Installation of the Collector



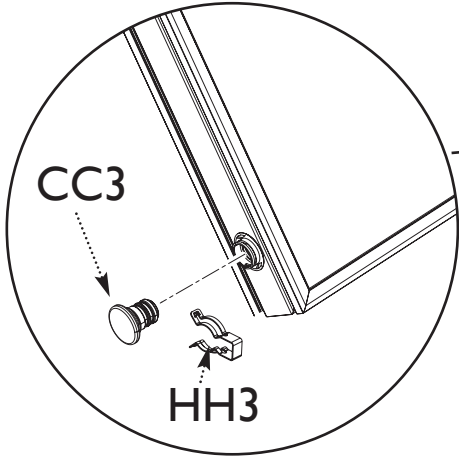
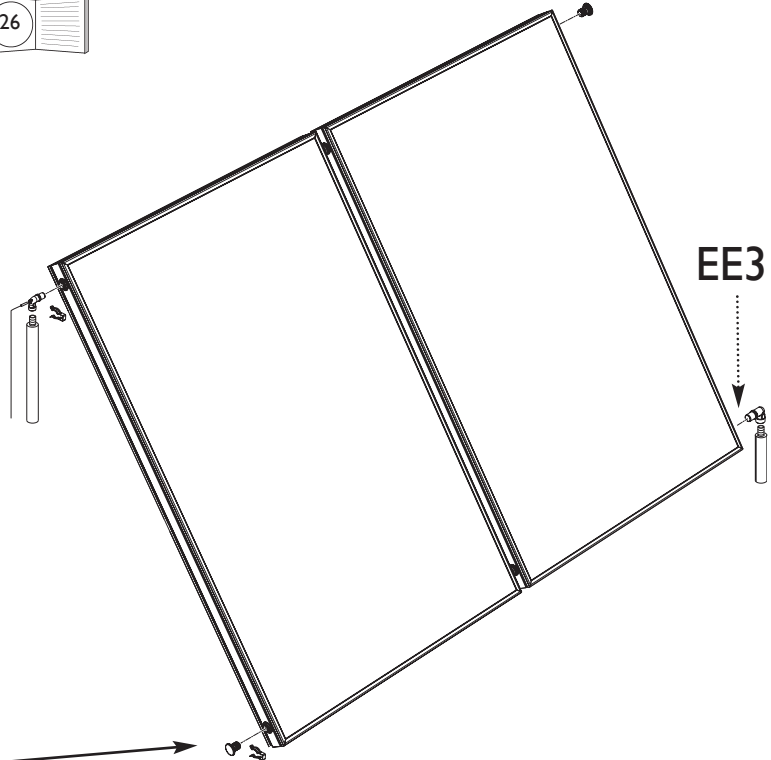
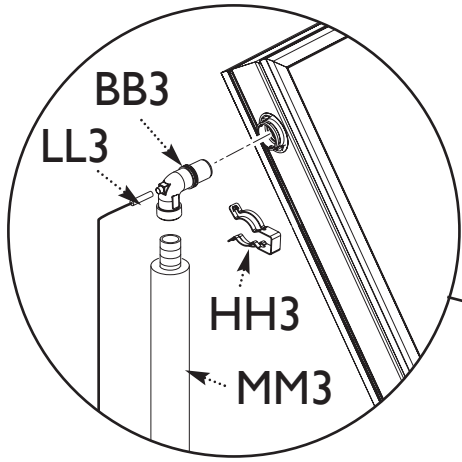
10.0 Installation of the Collector





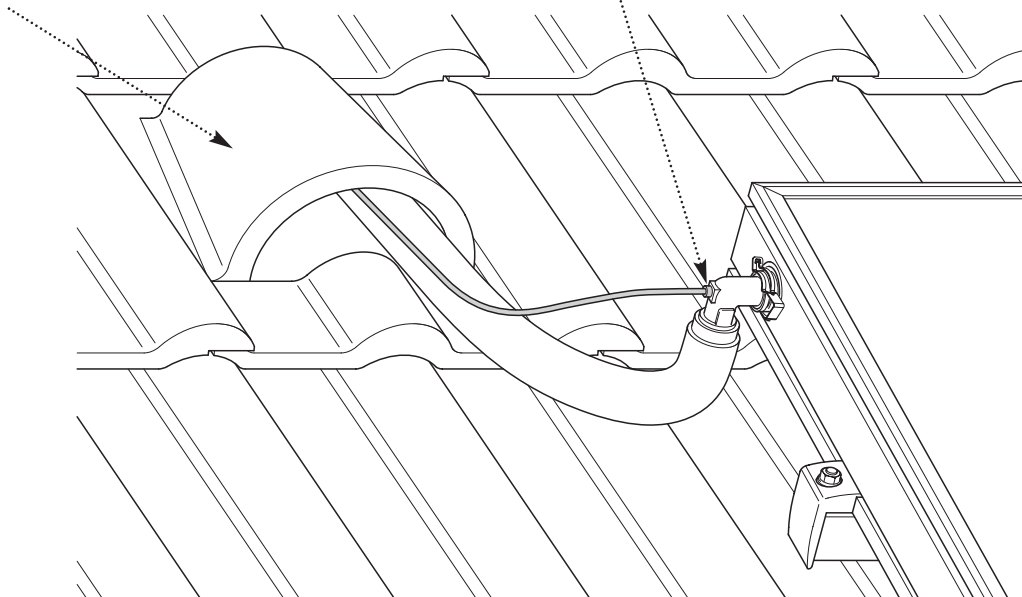
10.0 Installation of the Collector

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Example of Roof Access

Seal using High Temperature UV Stable Sealant



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 non-abrasive cleaning materials and methods should be used to clean the collectors and mounting system components.

All descriptions and illustrations provided in this leaflet have been carefully prepared but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet. All goods are sold subject to our standard Conditions of Sale which are available on request.

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Brooks House, Coventry Road, Warwick. CV34 4LL
After Sales Service & Technical Enquiries 0844 871 1568
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