

## Certificate of Approval

Certificate Number: MCS IK0197

Issue: 04

### Renusol GmbH

Piccoloministaße 2

Cologne

51063

Germany

Having complied with the requirements of the following:

#### MCS 010-Issue 1.5

Generic Factory Production Control (FPC) Requirements

and

#### MCS 012: Issue 1.2

Product Certification Scheme Requirements: Pitched Roof Installation Kits

is authorised to use the BRE Global Certification Mark and the MCS Certification Mark in association with the following products:

## Products

Please see Appendix for details

This certificate and appendix is maintained and held in force through periodic review and verification

The products listed in this certificate and appendix are certified through the agreement between BRE Global Ltd. and TÜV Rheinland Energie und Umwelt GmbH



  
Signed for BRE Global Ltd.

Laura Critien  
Operations Manager - MCS

23 February 2016  
Date of Issue

23 June 2014  
Date of First Issue



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**Appendix to Certificate No: MCS IK0197**  
**Renusol GmbH**

**Issue: 04**

**Products**

Model	Description	Reference No.
InterSole SE**(when installed with CentroSolar S xxxP60 Professional modules, xxx =200 - 265W)	Roof Installation Kit (Roof Integrated)	MCS IK0197/01
<i>Technical information for InterSole SE using Anker roof fixing:</i>  Roof substrate: Timber battens* Minimum roof Pitch: 20° Maximum design wind uplift: 2954.5Pa (when used on 2 modules with a total of 6 fixings) Value of partial safety factor: 1.1 Fire safety performance: EXT.S.AA		
<i>Components:</i> InterSole anchor (400015)      Universal middle clamp (420082) Wood screw                      Universal middle clamp (blk) (420082-B) InterSole plate (500007)      Universal end clamp (420081) Mid clamp (400019)            Universal end clamp (blk) (420081-B) End clamp (410000)            RS1 – ultimate clamp (420080) Flashing bottom (700002)      RS1 – ultimate clamp (blk) (420080-B) Flashing side (700001)        Sealing strip Flashing top (700003)        Sealing tape Mounting clip                    Glue Mounting bracket              Mounting rail (400018, 460018, 400024)		

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Model	Description	Reference No.
MetaSole / MetaSole+	Roof Installation Kit (Above Roof)	MCS IK0197/02
<i>Technical Information for MetaSole using Klemfuß roof fixing:</i> Roof substrate: Trapezoidal sheet on 800 x 100 mm timber battens* Minimum Roof pitch: 10° Maximum design wind uplift: 1994.4 Pa (when used on 2 modules with a total of 6 fixings) Value of partial safety factor: 1.25		
<i>Components:</i> Clamp foot (400402)      Universal middle clamp (420082) Clamp foot portrait (420420, 420421)      Universal middle clamp (blk) (420082-B) (Design uplift resistance 2600 Pa)      Universal end clamp (420081) Mid clamp (400019)      Universal end clamp (blk) (420081-B) End clamp (410000)      RS1 – ultimate clamp (420080) Screw JT3-X2      RS1 – ultimate clamp (blk) (420080-B) Screw SDK2-S-377      Adapter corrugated sheet (420401) Screw RP-TS-LK 6,0x25		

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Model	Description	Reference No.
VarioSole SE / VarioSole+ (with Aluminium Roof Hooks)	Roof Installation Kit (Above Roof)	MCS IK0197/03
<i>Technical information for VarioSole SE using Dachhaken Aluminium roof hooks:</i> Roof substrate: Timber rafters* Minimum roof pitch: 20° Maximum design wind uplift: 3097.7 Pa (when used on 2 modules with a total of 6 fixings) Value of partial safety factor: 1.1		
<i>Components:</i> Mid clamp (400019) End clamp (410000) Mushroom head screw Rail connector (400532) Cross rail connector (420083) Universal end clamp (420081) Universal end clamp (blk) (420081-B)		
Roof hook aluminum variable (400152) Mounting rail (400502, 400505, 400506, 400509 + black variants) Mounting rail 41mm (400511, 400512, 400513, 400519 + black) Universal middle clamp (420082) Universal middle clamp (blk) (420082-B) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-B)		

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Model	Description	Reference No.																		
VarioSole SE / VarioSole+ (with Hanger Bolts)	Roof Installation Kit (Above Roof)	MCS IK0197/04																		
<p><i>Technical information for VarioSole SE using Solarbefestiger hanger bolts on metal sheets:</i></p> <p>Roof substrate: Metal sheet on timber rafters*            Minimum roof pitch: 10°            Maximum design wind uplift: 3097.7 Pa (when used on 2 modules with a total of 6 fixings)            Value of partial safety factor: 1.1</p>																				
<p><i>Components:</i></p> <table border="0"> <tr> <td>Solar fastener bracket (900181 - 192)</td> <td>Mounting rail (400502, 400505, 400506, 400509 + black variants)</td> </tr> <tr> <td>Hanger bolt (R860006, -7, -17, R920002, -008, -136, -137, -159)</td> <td>Mounting rail 41mm (400511, 400512, 400513, 400519 + black)</td> </tr> <tr> <td>Mid clamp (400019)</td> <td>Universal middle clamp (420082)</td> </tr> <tr> <td>End clamp (410000)</td> <td>Universal middle clamp (blk) (420082-B)</td> </tr> <tr> <td>EPDM washer</td> <td>Universal end clamp (420081)</td> </tr> <tr> <td>Washer trapezoidal metal sheet</td> <td>Universal end clamp (blk) (420081-B)</td> </tr> <tr> <td>Washer corrugated metal sheet</td> <td>RS1 – ultimate clamp (420080)</td> </tr> <tr> <td>Rail connector (400532)</td> <td>RS1 – ultimate clamp (blk) (420080-B)</td> </tr> <tr> <td>Cross rail connector (420083)</td> <td></td> </tr> </table>			Solar fastener bracket (900181 - 192)	Mounting rail (400502, 400505, 400506, 400509 + black variants)	Hanger bolt (R860006, -7, -17, R920002, -008, -136, -137, -159)	Mounting rail 41mm (400511, 400512, 400513, 400519 + black)	Mid clamp (400019)	Universal middle clamp (420082)	End clamp (410000)	Universal middle clamp (blk) (420082-B)	EPDM washer	Universal end clamp (420081)	Washer trapezoidal metal sheet	Universal end clamp (blk) (420081-B)	Washer corrugated metal sheet	RS1 – ultimate clamp (420080)	Rail connector (400532)	RS1 – ultimate clamp (blk) (420080-B)	Cross rail connector (420083)	
Solar fastener bracket (900181 - 192)	Mounting rail (400502, 400505, 400506, 400509 + black variants)																			
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Washer trapezoidal metal sheet	Universal end clamp (blk) (420081-B)																			
Washer corrugated metal sheet	RS1 – ultimate clamp (420080)																			
Rail connector (400532)	RS1 – ultimate clamp (blk) (420080-B)																			
Cross rail connector (420083)																				

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Model	Description	Reference No.																						
VarioSole SE / VarioSole+ (with Steel Roof Hooks)	Roof Installation Kit (Above Roof)	MCS IK0197/05																						
<p><i>Technical information for VarioSole SE using Dachhaken Biber &amp; Schiefer roof hooks (without sealing kit**):</i></p> <p>Roof substrate: Timber rafters*</p> <p>Minimum roof pitch: 20°</p> <p>Maximum design wind uplift: 2000 Pa (when used on 2 modules with a total of 6 fixings)</p> <p>Value of partial safety factor: 1.0</p>																								
<p><i>Components:</i></p> <table border="0"> <tr> <td>Roof hook UK pantile (420180)</td> <td>Mounting rail (400502, 400505, 400506, 400509 + black variants)</td> </tr> <tr> <td>Roof hook plain tiles, slates (420181)</td> <td>Mounting rail 41mm (400511, 400512, 400513, 400519 + black)</td> </tr> <tr> <td>Roof hook UK Flexible (420182)</td> <td>Universal middle clamp (420082)</td> </tr> <tr> <td>Roof hook UK Flexible 90° (420183)</td> <td>Universal middle clamp (blk) (420082-B)</td> </tr> <tr> <td>Roof hook UK Plain tiles/slates (420181)</td> <td>Universal end clamp (420081)</td> </tr> <tr> <td>Roof hook stainless steel (420150)</td> <td>Universal end clamp (blk) (420081-B)</td> </tr> <tr> <td>Roof hook plain tiles (420153)</td> <td>RS1 – ultimate clamp (420080)</td> </tr> <tr> <td>Roof hook slate tiles (420155)</td> <td>RS1 – ultimate clamp (blk) (420080-B)</td> </tr> <tr> <td>Mid clamp (400019)</td> <td>Rail connector</td> </tr> <tr> <td>End clamp (410000)</td> <td>Cross rail connector (42008)</td> </tr> <tr> <td></td> <td>Mushroom head screw</td> </tr> </table>			Roof hook UK pantile (420180)	Mounting rail (400502, 400505, 400506, 400509 + black variants)	Roof hook plain tiles, slates (420181)	Mounting rail 41mm (400511, 400512, 400513, 400519 + black)	Roof hook UK Flexible (420182)	Universal middle clamp (420082)	Roof hook UK Flexible 90° (420183)	Universal middle clamp (blk) (420082-B)	Roof hook UK Plain tiles/slates (420181)	Universal end clamp (420081)	Roof hook stainless steel (420150)	Universal end clamp (blk) (420081-B)	Roof hook plain tiles (420153)	RS1 – ultimate clamp (420080)	Roof hook slate tiles (420155)	RS1 – ultimate clamp (blk) (420080-B)	Mid clamp (400019)	Rail connector	End clamp (410000)	Cross rail connector (42008)		Mushroom head screw
Roof hook UK pantile (420180)	Mounting rail (400502, 400505, 400506, 400509 + black variants)																							
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Roof hook UK Flexible (420182)	Universal middle clamp (420082)																							
Roof hook UK Flexible 90° (420183)	Universal middle clamp (blk) (420082-B)																							
Roof hook UK Plain tiles/slates (420181)	Universal end clamp (420081)																							
Roof hook stainless steel (420150)	Universal end clamp (blk) (420081-B)																							
Roof hook plain tiles (420153)	RS1 – ultimate clamp (420080)																							
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Mid clamp (400019)	Rail connector																							
End clamp (410000)	Cross rail connector (42008)																							
	Mushroom head screw																							

\* Rafter and batten size should be adequate to resist applied wind load and comply with current building regulations of the country in which installed

\*\* Certificated to MCS 012 only when used **without** plastic sealing surround.

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