

Certificate of Approval

Certificate Number: MCS IK0197

Issue: 09

Renusol Europe GmbH

Piccoloministr. 2

Cologne

51063

Germany

having complied with the requirements of the following:

MCS 010: Issue 2.0

Generic Factory Production Control (FPC) Requirements
and

MCS 012: Issue 2.3/2.4

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 Limited and TÜV Rheinland Energy GmbH



David Gall

Signed for BRE Global Ltd.

David Gall

Certification Lead

30 October 2020

Date of Issue

23 June 2014

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Appendix to Certificate No: MCS IK0197

Renusol Europe GmbH

Products

Issue: 09

Model	Description	Reference No.
InterSole SE / ISSE ⁱⁱ (when installed with CentroSolar S xxxP60 Professional modules, xxx = 200-265W)	Roof Installation Kit (Roof Integrated)	MCS IK0197/01
<p><i>Technical information for InterSole SE using Anker roof fixing:</i></p> <p>Roof substrate: Timber battensⁱ</p> <p>Minimum roof Pitch: 20°</p> <p>Maximum design wind uplift: 2954.5Pa (when used on 2 modules with a total of 6 fixings)</p> <p>Value of partial safety factor: 1.1</p> <p>Fire safety performance: EXT.S.AA</p> <p><i>Certificated system components:</i></p> <ul style="list-style-type: none"> InterSole anchor (400015) InterSole plate (500007) Mid clamp (400019) End clamp (410000) Flashing bottom (700002) Flashing side (700001) Flashing top (700003) Universal middle clamp (420082) Universal middle clamp (blk) (420082-BE) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-BE) Mounting rail (400018, 460018, 400024) <p><i>Other system componentsⁱⁱⁱ:</i></p> <ul style="list-style-type: none"> P-Clip (Potential equalization) (900268) Wood screw Mounting clip Mounting bracket Sealing strip Sealing tape Glue 		

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Issue: 09

Model	Description	Reference No.
MetaSole, MetaSole+ / MS+	Roof Installation Kit (Above Roof)	MCS IK0197/02
<p><i>Technical Information for MetaSole using Klemfuß roof fixing:</i></p> <p>Roof substrate: Minimum Roof pitch: Maximum design wind uplift: Value of partial safety factor:</p> <p>Trapezoidal sheet on 80 x 100 mm timber raftersⁱ 10° 1994.4 Pa (when used on 2 modules with a total of 6 fixings) 1.25</p> <p><i>Certificated system components:</i> Clamp foot (400402) Clamp foot portrait (420420, 420421) (Design uplift resistance 2600 Pa) Mid clamp (400019) End clamp (410000) Screw JT3-X2 Screw SDK2-S-377 Screw RP-TS-LK 6,0x25 Universal middle clamp (420082) Universal middle clamp (blk) (420082-BE) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-BE) Adapter corrugated sheet (420401) MS+ H clamp foot (420423)</p> <p><i>Other system componentsⁱⁱⁱ:</i> P-Clip (Potential equalization) (900268)</p>		

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Model	Description	Reference No.
VarioSole SE, VarioSole+ / VS+ (with Aluminium Roof Hooks)	Roof Installation Kit (Above Roof)	MCS IK0197/03
<p><i>Technical information for VarioSole SE using Dachhaken Aluminium roof hooks:</i></p> <p>Roof substrate: Timber raftersⁱ 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</p>		
<p><i>Certificated system components:</i> Mid clamp (400019) End clamp (410000) Rail connector (400532) Cross rail connector (420083) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) Roof hook adjustable (420161) Bracket (IFP M8/M10, set(1pc.)) (420024)^{iv} Mounting rail (400502, 400505, 400506, 400509 + black variants) (400527, 400528, 500529^{iv}) Mounting rail 41mm (400511, 400512, 400513, 400519 + black) (400523, 400524, 400525^{iv}) Universal middle clamp (420082) Universal middle clamp (blk) (420082-BE) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-BE)</p> <p><i>Other system componentsⁱⁱⁱ:</i> P-Clip (Potential equalization) (900268) Mushroom head screw</p>		

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Model	Description	Reference No.
VarioSole SE, VarioSole+ / VS+ (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 raftersⁱ 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>Certificated system components:</i> Solar fastener bracket (900181 - 192) Hanger bolt (R860006, -7, -17, R920002, -008, -136, -137, -159) Mid clamp (400019) End clamp (410000) Bracket (IFP M8/M10, set(1pc.)) (420024)^{iv} Rail connector (400532) Cross rail connector (420083) Mounting rail (400502, 400505, 400506, 400509 + black variants) (400527, 400528, 400529)^{iv} Mounting rail 41mm (400511, 400512, 400513, 400519 + black) (400523, 400524, 400525)^{iv} Universal middle clamp (420082) Universal middle clamp (blk) (420082-BE) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-BE)</p> <p><i>Other system componentsⁱⁱⁱ:</i> P-Clip (Potential equalization) (900268) EPDM washer Washer trapezoidal metal sheet Washer corrugated metal sheet</p>		

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Model	Description	Reference No.
VarioSole SE, VarioSole+ / VS+ (with Steel Roof Hooks)	Roof Installation Kit (Above Roof)	MCS IK0197/05
<p><i>Technical information for VarioSole SE using Dachhaken Biber & Schiefer roof hooks (without sealing kitⁱⁱ):</i></p> <p>Roof substrate: Timber raftersⁱ Minimum roof pitch: 20° Maximum design wind uplift: 2000 Pa (when used on 2 modules with a total of 6 fixings) Value of partial safety factor: 1.0</p> <p>Certificated system components: Roof hook UK pantile (420180) Roof hook plain tiles, slates (420181) Roof hook UK Flexible (420182) Roof hook UK Flexible 90° (420183) Roof hook UK Plain tiles/slates (420181) Roof hook UK Plain Tile HL (420184)^{iv} Roof hook stainless steel (420150) Roof hook plain tiles (420153) Roof hook slate tiles (420155) Roof hook ECO Basic (420165) Mid clamp (400019) End clamp (410000) Bracket (IFP M8/M10, set(1pc.)) (420024)^{iv} Mounting rail (400502, 400505, 400506, 400509 + black variants) (400527, 400528, 400529)^{iv} Mounting rail 41mm (400511, 400512, 400513, 400519 + black) (400523, 400524, 400525)^{iv} Universal middle clamp (420082), ((blk)420082-BE) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) RS1 – ultimate clamp (420080), ((blk)420080-BE) Cross rail connector (42008)</p> <p>Other system componentsⁱⁱⁱ: P-Clip (Potential equalization) (900268) Rail connector Mushroom head screw</p>		

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Model	Description	Reference No.
VarioSole+ / VS+ (with Standing Seam Clamps)	Roof Installation Kit (Above Roof)	MCS IK0197/06
<p><i>Technical information for VarioSole+ using S5 Standing Seam Clamps.</i></p> <p>Roof substrate: Standing seam metal sheet (on 100x40mm battens and 80x100mm rafters)</p> <p>Maximum design wind uplift: 3181.8 Pa (when used on 2 modules with a total of 6 fixings)</p> <p>Value of partial safety factor: 1.1</p> <p>Certificated system components: Hexagon bolt (900025) M8 Nut (900001) Mounting rail (400527, 400528, 400529)^{iv} Mounting rail 41mm (40051X +Black Variants) (400523, 400524, 400525)^{iv} Mounting rail 50mm (40050X +Black Variants) Universal middle clamp (420082) Universal middle clamp (blk) (420082-BE) Universal end clamp (420081) Universal end clamp (blk) (420081-BE) RS1 – ultimate clamp (420080) RS1 – ultimate clamp (blk) (420080-BE) M10 Bracket (420014) Bracket (IFP M8/M10, set(1pc.)) (420024)^{iv} S5-E-Mini (400254) S5-Z-Mini (400255) S5-S-Mini (400259) S5-R-465-Mini (400563) S5-R-465 (400252) Round seam clamp for Kalzip and similar (400362) Kalzip clamp for standing seam Typ FS (400256)^{iv}</p> <p>Other system componentsⁱⁱⁱ: P-Clip (Potential equalization) (900268)</p>		

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- ⁱ Rafter and batten size should be adequate to resist applied wind load and comply with current building regulations of the country in which installed.
- ⁱⁱ Certificated to MCS 012 only when used **without** plastic sealing surround.
- ⁱⁱⁱ Other system components' are either not subject to the testing requirements of MCS 012 and therefore not certificated, or they do not carry identification numbers. They are listed in this certificate solely to indicate the certificated system(s) that they are compatible with.
- ^{iv} These components have been assessed against the requirements of MCS 012 Issue 2.4

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