CERTIFICATE

MCS Product Certificate

Date Issued	*1st October 2025*	**Annual review date**	*20th November*
Issue number	*3*	**Orignal/Amendment**	*Original*
Certificate number	*KIWA00051*	**Page**	*1 of 31*

MCS Product Certification Certificate

Issued by Kiwa Ltd

MCS Product Certification Scheme Standards – MCS010, MCS011, MCS012 Issue 3.0
Model designations – see Appendix

Producer:

Renusol Europe GmbH

Ettore-Bugatti-Str. 51
51149 Köln
Germany

Manufacturer:

As Above

Kiwa Ltd declares that the products detailed in the Appendices have been assessed by Kiwa and meet the requirements of the above MCS Product Certification Standards.

Signed on behalf of Kiwa Ltd

Mark Crowther
MCS Certification Director

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

UKAS PRODUCT CERTIFICATION 0217

MCS CERTIFIED

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Stella Way
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www.kiwa.co.uk

CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (with RH1 Roof Hook)	REN_RH1_01	KIWA00051/001 IK

Type	*Above Roof:* *System*					
System components	*Components for this system are listed in ANNEX I*					
System Description	*Roof hook based mounting system for use with discontinuous roof coverings. The aluminium alloy roof hooks comprise two parts providing flexibility in positioning.*					
Compatible Roof Coverings	• *Discontinuous* o *Profile concrete/clay tile*					
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*				
	Fire performance	*~~Yes~~ / No*				
	Weather tightness	*Yes / ~~No~~*				
Resistance to Wind Uplift						
If attached to sub-structure: Compatible substructures	*Timber*					
Test Preparation	*2 Solar PV modules (1134 mm x2093 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure by 7 roof hooks and mounted using 2 x 6mm x 80 mm screws. The rafters in the test were 60 mm x 150 mm but the adequacy of attachment to 54 mm x 34 mm was confirmed separately.*					
Maximum Design Wind Uplift Resistance	*1.174 kPa*	Partial (safety) factor(s)	*1.0*			
Failure Mode	*Serviceability Limit State*					
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 54 mm X depth 34 mm*					
Weathertightness						
If discontinuous roof covering						
Reference Roof Covering	Type:	*Tiles*	Pitch:	*22.5 °*	Head-lap	*75 mm,single*
	Maximum unprotected gap in reference roof covering (+/- 1mm)					*Not determined*
Maximum unprotected gap with mounting system/component installed (+/- 1mm)						*Not determined*
Minimum Permissible roof Pitch (°)						*22.5 °*
Test B (if applicable)	Applied suction at leakage rate 10 g/m^2/5min					*n/a*
Test D (if applicable)	Leakage observed after 2 min					*0 g*
Fire Performance						
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*				

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (with RHFLAT Roof Hook)	REN_RHFLAT_01	KIWA00051/002 IK

Type	*Above Roof:* *System*					
System components	*Components for this system are listed in ANNEX I*					
System/Component Description	*Roof hook based mounting system for use with discontinuous roof coverings. The aluminium alloy roof hooks comprise two parts providing flexibility in positioning.*					
Compatible Roof Coverings	• *Discontinuous* o *Plain concrete/clay tile*					
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*				
	Fire performance	*~~Yes~~ / No*				
	Weather tightness	*Yes / ~~No~~*				
Resistance to Wind Uplift						
If attached to sub-structure: Compatible substructures	*Timber*					
Test Preparation	*2 Solar PV modules (1134 mm x2093 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure by 7 roof hooks and mounted using 2 x 6mm x 80 mm screws. The rafters in the test were 60 mm x 150 mm but the adequacy of attachment to 54 mm x 34 mm was confirmed separately.*					
Maximum Design Wind Uplift Resistance	*1.174 kPa*	Partial (safety) factor(s)	*1.0*			
Failure Mode	*Serviceability Limit State*					
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 54 mm X depth 34 mm*					
Weathertightness						
If discontinuous roof covering						
Reference Roof Covering	Type:	*Plain tiles*	Pitch:	*30 °*	Head-lap	*65mm, double*
	Maximum unprotected gap in reference roof covering (+/- 1mm)					*Not determined*
Maximum unprotected gap with mounting system/component installed (+/- 1mm)						*Not determined*
Minimum Permissible roof Pitch (°)						*30 °*
Test B (if applicable)	Applied suction at leakage rate 10 g/m^2/5 min					*0.100 kPa*
Test D (if applicable)	Leakage observed after 2 min					*0 g*
Fire Performance						
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*				

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (RH1 roof hook)	REN_RH1_02	KIWA00051/003 IK

Type	*Above Roof:* *System*					
System components	*Components for this system are listed in ANNEX I*					
System/Component Description	*Roof hook based mounting system for use with discontinuous roof coverings. The aluminium alloy roof hooks comprise two parts providing flexibility in positioning.*					
Compatible Roof Coverings	• *Discontinuous* o *Profile concrete/clay tile*					
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*				
	Fire performance	*~~Yes~~ / No*				
	Weather tightness	*Yes / ~~No~~*				
Resistance to Wind Uplift						
If attached to sub-structure: Compatible substructures	*Timber*					
Test Preparation	*2 Solar PV modules (1134 mm x2333 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure by 6 roof hooks and mounted using 3 x 6mm x 80 mm screws. The rafters in the test were 35 mm x 120 mm.*					
Maximum Design Wind Uplift Resistance	*1.96 kPa*	Partial (safety) factor(s)	*1.0*			
Failure Mode	*Serviceability Limit State*					
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 35 mm X depth 120 mm*					
Weathertightness						
If discontinuous roof covering						
Reference Roof Covering	Type:	*Tiles Double Roman*	Pitch:	*30 °*	Head-lap	*100 mm (single)*
	Maximum unprotected gap in reference roof covering (+/- 1mm)					*Not determined*
Maximum unprotected gap with mounting system/component installed (+/- 1mm)						*Not determined*
Minimum Permissible roof Pitch (°)						*30 °*
Test B (if applicable)	Applied suction at leakage rate 10 g/m^2/5 min					*0.050 kPa*
Test D (if applicable)	Leakage observed after 2 min					*0 g*
Fire Performance						
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*				

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (Medium roof hooks)	REN_VS+_01	KIWA00051/004 IK

Type	*Above Roof:* *System*					
System components	*Components for this system are listed in ANNEX I*					
System/Component Description	*Roof hook based mounting system for use with discontinuous roof coverings. The roof hooks are single piece steel or structural steel items or cast aluminium items.*					
Compatible Roof Coverings	*• Discontinuous* *o Plain / Profile concrete/clay tile*					
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*				
	Fire performance	*~~Yes~~ / No*				
	Weather tightness	*Yes / ~~No~~*				
Resistance to Wind Uplift						
If attached to sub-structure: Compatible substructures	*Timber*					
Test Preparation	*2 Solar PV modules (1134 mm x2333 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure by 6 roof hooks and mounted using 2 x 6mm x 80 mm screws. The rafters in the test were 35 mm x 120 mm.*					
Maximum Design Wind Uplift Resistance	*1.61 kPa*	Partial (safety) factor(s)	*1.0*			
Failure Mode	*Serviceability Limit State*					
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 35 mm X depth 120 mm*					
Weathertightness						
If discontinuous roof covering						
Reference Roof Covering	Type:	*Tiles Plain / Double Roman*	Pitch:	*30 ° / 30 °*	Head-lap	*66 mm (double) / 100 mm (single)*
	Maximum unprotected gap in reference roof covering (+/- 1mm)					*Not determined*
Maximum unprotected gap with mounting system/component installed (+/- 1mm)						*Not determined*
Minimum Permissible roof Pitch (°)						*30 ° / 30 °*
Test B (if applicable)	Applied suction at leakage rate 10 g/m^2/5 min					*0.100 kPa / 0.050 kPa*
Test D (if applicable)	Leakage observed after 2 min					*0 g*
Fire Performance						
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*				

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

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Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (Basic roof hooks)	REN_VS+_02	KIWA00051/005 IK

Type	*Above Roof:* *System*					
System components	*Components for this system are listed in ANNEX I*					
System/Component Description	*Roof hook based mounting system for use with discontinuous roof coverings. The roof hooks are single piece steel or stainless steel items.*					
Compatible Roof Coverings	• *Discontinuous* *o Profile concrete/clay tile*					
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*				
	Fire performance	*~~Yes~~ / No*				
	Weather tightness	*Yes / ~~No~~*				
Resistance to Wind Uplift						
If attached to sub-structure: Compatible substructures	*Timber*					
Test Preparation	*2 Solar PV modules (1134 mm x2333 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure by 6 roof hooks and mounted using 2 x 6mm x 80 mm screws. The rafters in the test were 35 mm x 120 mm.*					
Maximum Design Wind Uplift Resistance	*1.49 kPa*	Partial (safety) factor(s)	*1.0*			
Failure Mode	*Serviceability Limit State*					
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 35 mm X depth 120 mm*					
Weathertightness						
If discontinuous roof covering						
Reference Roof Covering	Type:	*Tiles Double Roman*	Pitch:	*30 °*	Head-lap	*100 mm (single)*
	Maximum unprotected gap in reference roof covering (+/- 1mm)					*Not determined*
Maximum unprotected gap with mounting system/component installed (+/- 1mm)						*Not determined*
Minimum Permissible roof Pitch (°)						*30 °*
Test B (if applicable)	Applied suction at leakage rate 10 g/m²/5 min					*0.050 kPa*
Test D (if applicable)	Leakage observed after 2 min					*0 g*
Fire Performance						
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*				

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (Hanger bolts)	REN_VS+_03	KIWA00051/006 IK

Type	*Above Roof:* *System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A hanger bolt based mounting system for use with continuous roof coverings over timber or steel substructures.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal* *o Other (describe) - profiled fibre cement sheet*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to sub-structure: Compatible substructures	*Timber or Steel*			
Test Preparation	*2 Solar PV modules (1134 mm x2333 mm x 30 mm) mounted on two aluminium rails (41 mm x 35 mm) clamped by 4 edge clamps and 2 mid clamps. The two rails were attached to the timber structure (3 wooden purlins of 150 x 56, spaced at 1140 mm) by 6 hanger bolts with brackets, in two columns of three.*			
Maximum Design Wind Uplift Resistance	*2.49 kPa*	Partial (safety) factor(s)	*1.1*	
Failure Mode	*Ultimate Limit State* *• Failure in a metal component*			
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*width 56 mm X depth 150 mm*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Fibre cement corrugated sheet and Metal corrugated sheet*	Pitch:	*0 °*
Impermeability test (if applicable)	According to principles of EN 491:2011			
Leakage observed at end of test				0 g
Test D (if applicable)				Not Determined
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name		MCS Certificate Number
VarioSole+ (VS+) (Round seam clamps)	REN_VS+_04		KIWA00051/007 IK
Type	*Above Roof: System*		
System components	*Components for this system are listed in ANNEX I*		
System/Component Description	*A seam clamp based mounting system for use with 'round' standing seam roof coverings.*		
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*		
Tests Undertaken	*Resistance to wind uplift*		*Yes / ~~No~~*
	Fire performance		*~~Yes~~ / No*
	Weather tightness		*~~Yes~~ / No*
Resistance to Wind Uplift			
If attached to roof covering: Compatible roof covering	*Round standing seam roof coverings*		
Test Preparation	*Six metal panels for 'round' standing seam roof covering were installed and 6 seam clamps attached in two rows. A mounting rail (41 x 35) was attached to each row by three brackets. Two PV modules (2333 x 1134) were mounted on the rails with 4 clamps each (2 end and 2 middle).*		
Maximum Design Wind Uplift Resistance	*0.96 kPa*	Partial (safety) factor(s)	*1.0*
Failure Mode	*Serviceability Limit State*		
Fire Performance			
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*	

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
VarioSole+ (VS+) (Double seam clamps)	REN_VS+_05	KIWA00051/008 IK

Type	*Above Roof:* *System*		
System components	*Components for this system are listed in ANNEX I*		
System/Component Description	*A seam clamp based mounting system for use with 'double fold' standing seam roof coverings.*		
Compatible Roof Coverings	• *Continuous:* *o Sheet or profiled metal*		
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*	
	Fire performance	*~~Yes~~ / No*	
	Weather tightness	*~~Yes~~ / No*	
Resistance to Wind Uplift			
If attached to roof covering: Compatible roof covering	*Double folded standing seam roof coverings*		
Test Preparation	*Five zinc panels for 'double folded' standing seam roof covering were installed and 6 seam clamps attached in two rows. A mounting rail (41 x 35) was attached to each row by three brackets. Two PV modules (2333 x 1134) were mounted on the rails with 4 clamps each (2 end and 2 middle).*		
Maximum Design Wind Uplift Resistance	*0.87 kPa*	Partial (safety) factor(s)	*1.0*
Failure Mode	*Serviceability Limit State*		
Fire Performance			
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*	

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
MetaSole+ (MS+) (Sandwich profiles)	REN_MS+_01	KIWA00051/009 IK

Type	*Above Roof:* *System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A mounting bracket based mounting system for attachment of pv modules in landscape orientation to continuous trapezoidal sandwich panel roof coverings.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to roof covering: Compatible roof covering	*Trapezoidal profiled, metal sandwich panels*			
Test Preparation	*Two trapezoidal steel roof covering sandwich panels (arranged: half panel at each side of a whole panel in the centre) were fixed to a timber substructure. Six mounting brackets in two columns of 3 were attached (2 screws each) to the steel sheets. Two pv modules (2333 x 1134) were mounted onto the brackets with four clamps each (2 end and 2 mid) in landscape orientation.*			
Maximum Design Wind Uplift Resistance	*0.91 kPa*	Partial (safety) factor(s)	*1.25*	
Failure Mode	*Ultimate Limit State* *• Pull out from a metal component*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Trapezoidal sandwich panels*	Pitch:	*0 °*
Impermeability test (if applicable)	*According to principles of EN 491:2011*			
Leakage observed at end of test				*0 g*
Test D (if applicable)				*Not Determined*
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
MetaSole+ (MS+) (Trapezoidal profiles)	REN_MS+_02	KIWA00051/010 IK

Type	*Above Roof: System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A mounting bracket based mounting system for attachment of pv modules in landscape orientation to continuous trapezoidal metal sheet roof coverings.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to roof covering: Compatible roof covering	*Trapezoidal profiled, metal panels*			
Test Preparation	*Two trapezoidal steel roof covering sheets (arranged: half panel at each side of a whole panel in the centre) were fixed to a timber substructure. Six mounting brackets in two columns of 3 were attached (2 screws each) to the steel sheets. Two pv modules (2333 x 1134) were mounted onto the brackets with four clamps each (2 end and 2 mid) in landscape orientation.*			
Maximum Design Wind Uplift Resistance	*1.42 kPa*	Partial (safety) factor(s)	*1.0*	
Failure Mode	*Serviceability Limit State*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Trapezoidal metal sheet*	Pitch:	*0 °*
Impermeability test (if applicable)	*According to principles of EN 491:2011*			
Leakage observed at end of test				*0 g*
Test D (if applicable)				*Not Determined*
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
MetaSole+ P (MS+P) (Sandwich profiles)	REN_MS+_03	KIWA00051/0011 IK

Type	*Above Roof:* *System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A mounting bracket based mounting system for attachment of pv modules in portrait orientation to continuous trapezoidal sandwich panel roof coverings.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to roof covering: Compatible roof covering	*Trapezoidal profiled, metal sandwich panels*			
Test Preparation	*Two trapezoidal steel roof covering sandwich panels (arranged: half panel at each side a whole panel in the centre) were fixed to a timber substructure. Six mounting brackets in two rows of 3 were attached (4 screws each) to the steel sheets. Two pv modules (2333 x 1134) were mounted onto the brackets with four clamps each (2 end and 2 mid) in portrait orientation.*			
Maximum Design Wind Uplift Resistance	*1.58 kPa*	Partial (safety) factor(s)	*1.0*	
Failure Mode	*Serviceability Limit State*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Trapezoidal sandwich panels*	Pitch:	*0 °*
Impermeability test (if applicable)	*According to principles of EN 491:2011*			
Leakage observed at end of test				*0 g*
Test D (if applicable)				*Not Determined*
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
MetaSole+ P (MS+P) (Trapezoidal profiles)	REN_MS+_04	KIWA00051/0012 IK

Type	*Above Roof:* *System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A mounting bracket based mounting system for attachment of pv modules in portrait orientation to continuous trapezoidal metal sheet roof coverings.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to roof covering: Compatible roof covering	*Trapezoidal profiled, metal panels*			
Test Preparation	*Two trapezoidal steel roof covering sheets (arranged: half panel at each side a whole panel in the centre) were fixed to a timber substructure. Six mounting bracketsin two rows of 3 were attached (2 screws each) to the steel sheets. Two pv modules (2333 x 1134) were mounted onto the brackets with four clamps each (2 end and 2 mid) in landscape orientation.*			
Maximum Design Wind Uplift Resistance	*1.83 kPa*	Partial (safety) factor(s)	*1.0*	
Failure Mode	*Serviceability Limit State*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Trapezoidal metal sheet*	Pitch:	*0 °*
Impermeability test (if applicable)	*According to principles of EN 491:2011*			
Leakage observed at end of test				*0 g*
Test D (if applicable)				*Not Determined*
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

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CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012 Issue 3.0

Product Name	Model Name	MCS Certificate Number
MetaSole+ (MS+) (Corrugated profile)	REN_MS+_05	KIWA00051/0013 IK

Type	*Above Roof: System*			
System components	*Components for this system are listed in ANNEX I*			
System/Component Description	*A mounting bracket based mounting system for attachment of pv modules in landscape orientation to continuous corrugated metal sheet roof coverings.*			
Compatible Roof Coverings	*• Continuous:* *o Sheet or profiled metal*			
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*		
	Fire performance	*~~Yes~~ / No*		
	Weather tightness	*Yes / ~~No~~*		
Resistance to Wind Uplift				
If attached to roof covering: Compatible roof covering	*Corrugated metal sheet*			
Test Preparation	*Two corrugated (radius 24) aluminium roof covering sheets were fixed to a timber substructure. Six mounting brackets in two columns of 3 were attached (2 screws each) to the aluminium sheets. Two pv modules (2333 x 1134) were mounted onto the brackets with four clamps each (2 end and 2 mid) in landscape orientation.*			
Maximum Design Wind Uplift Resistance	*1.01 kPa*	Partial (safety) factor(s)	*1.25*	
Failure Mode	*Ultimate Limit State* *• Pull out from a metal component*			
Weathertightness				
If continuous roof covering				
Reference Roof Covering	Type:	*Corrugated metal sheet*	Pitch:	*0 °*
Impermeability test (if applicable)	*According to principles of EN 491:2011*			
Leakage observed at end of test				*0 g*
Test D (if applicable)				*Not Determined*
Fire Performance				
Fire Classification	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system.*		

Signed on behalf of Kiwa Ltd
Mark Crowther - MCS Certification Director - Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012

Product Name	Model Name	MCS Certificate Number
FS Pro 10-S (ballasted)	REN_FSPRO_01	KIWA00051/014 IK

Type	*Above Roof: System* *(On Roof Not mechanically attached system)*		
System components	*Components for this system are listed in ANNEX I*		
System/Component Description	*Aluminium mounting framework for use on flat roofs to attach two solar PV modules in landscape orientation, and a single aspect to concrete ballast blocks.*		
Compatible Roof Coverings	• *Continuous:* *o Other (describe)* *Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Tests Undertaken	*Resistance to wind uplift*	*Yes / ~~No~~*	
	Fire performance	*~~Yes~~ / No*	
	Weather tightness	*~~Yes~~ / No*	
Resistance to Wind Uplift			
If not mechanically attached to roof sub-structure or covering	*Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Test Preparation	*Two PV modules 2333 mm x 1134 mm x 30 mm in landscape orientation, attached by mid (2 between 2 modules) and end (2 per module) clamps via FS Pro eave and ridge supports, to three aluminium base rail sets 1500 mm FS Pro 10-S, which arrangement includes ballast profile connectors, loaded with concrete ballast tiles amounting to 180 kg/module, (360 kg total for system), placed on FS Pro Roof protection pads on a coated concrete deck.*		
Maximum Design Wind Uplift Resistance	*0.43 kPa*	Partial (safety) factor(s)	*1*
Failure Mode	*Serviceability Limit State* • *System slid > 5 mm*		
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*N/A*		
Resistance to sliding – Coefficient of Friction	*Coefficient of Friction is 0.3 unless site specific determination is available*		
Pressure coefficients	• *Cp values from BRE Digest 489 apply unless the applicable laboratory report is obtained from the manufacturer* • *Laboratory report available in accordance with BS EN 1991-1-4:* *o Wind loads on the "FS10-S gen2" solar ballasted roof-mount system of Renusol Europe GmbH BWA23-40-01-1*		
Fire Performance			
Fire Classification	BS 476-3: 2004	*Not determined*	
	CEN TS 1187:2012 Test 4	*Not determined*	
	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system. OR delete*	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director - Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012

Product Name	Model Name		MCS Certificate Number
FS Pro 10-EW (ballasted)	REN_FSPRO_02		KIWA00051/015 IK
Type	*Above Roof: System* *(On Roof Not mechanically attached system)*		
System components	*Components for this system are listed in ANNEX I*		
System/Component Description	*Aluminium mounting framework for use on flat roofs to attach four solar PV modules in landscape orientation, and dual aspect, to concrete ballast blocks.*		
Compatible Roof Coverings	*• Continuous:* *o Other (describe)* *Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Tests Undertaken	*Resistance to wind uplift*		*Yes / ~~No~~*
	Fire performance		*~~Yes~~ / No*
	Weather tightness		*~~Yes~~ / No*
Resistance to Wind Uplift			
If not mechanically attached to roof sub-structure or covering	*Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Test Preparation	*Four PV modules 2333 mm x 1134 mm x 30 mm in landscape orientation, attached by mid (2 between 2 modules) and end (2 per module) clamps via FS Pro eave and ridge supports, to three aluminium base rail sets 2300 mm FS Pro 10-EW, which arrangement includes ballast profile connectors, loaded with concrete ballast tiles amounting to 180 kg/module, (720 kg total for system), placed on FS Pro Roof protection pads on a coated concrete deck.*		
Maximum Design Wind Uplift Resistance	*0.66 kPa*	Partial (safety) factor(s)	*1*
Failure Mode	*Serviceability Limit State* *• System slid > 5 mm*		
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*N/A*		
Resistance to sliding – Coefficient of Friction	*Coefficient of Friction is 0.3 unless site specific determination is available*		
Pressure coefficients	*• Cp values from BRE Digest 489 apply unless the applicable laboratory report is obtained from the manufacturer* *• Laboratory report available in accordance with BS EN 1991-1-4:* *o Wind loads on the "FS10-EW" solar ballasted roof-mount system of Renusol Europe GmbH BWA23-40-02*		
Fire Performance			
Fire Classification	BS 476-3: 2004	*Not determined*	
	CEN TS 1187:2012 Test 4	*Not determined*	
	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system. OR delete*	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director - Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

CERTIFICATE

The following products have been assessed and registered by Kiwa Ltd against the provisions of: MCS 010, MCS 011, MCS 012

Product Name	Model Name		MCS Certificate Number
Console+ / CS+ (ballasted)	REN_CS+_01		KIWA00051/016 IK
Type	*Above Roof: System* *(On Roof Not mechanically attached system)*		
System components	*Components for this system are listed in ANNEX I*		
System/Component Description	*Polymer based ballast container and attachment for one PV module to it.*		
Compatible Roof Coverings	*• Continuous:* *o Other (describe)* *Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Tests Undertaken	*Resistance to wind uplift*		*Yes / ~~No~~*
	Fire performance		*~~Yes~~ / No*
	Weather tightness		*~~Yes~~ / No*
Resistance to Wind Uplift			
If not mechanically attached to roof sub-structure or covering	*Continuous flat roof coverings capable of withstanding the mounting system under load.*		
Test Preparation	*One PV module 2333 mm x 1134 mm x 30 mm in landscape orientation, attached to two aluminium U-Profile 1035 mm Console CS+, with Elongation rails XL for 1 CS+ set, and rear grip clamp for CS+, which arrangement attached to one Console CS+, loaded with concrete ballast tiles amounting to 225 kg, on a coated concrete deck.*		
Maximum Design Wind Uplift Resistance	*0.3 kPa*	Partial (safety) factor(s)	*1*
Failure Mode	*Serviceability Limit State* *• System slid > 5 mm*		
If attached to timber sub-structure: For certified wind uplift resistance in sound timber - dimensions	*N/A*		
Resistance to sliding – Coefficient of Friction	*Coefficient of Friction is 0.3 unless site specific determination is available*		
Pressure coefficients	*• Cp values from BRE Digest 489 apply unless the applicable laboratory report is obtained from the manufacturer* *• Laboratory report available in accordance with BS EN 1991-1-4:* *o Wind Tunnel Test for the Photo Voltaic Mounting System ConSole+ of the Company Renusol GmbH: RC 1351/0611-1-e* *Wind Loads on the Photovoltaic Elements for smaller Roof-Projects for the System ConSole+ of the Company Renusol GmbH: RC 1828/0714-e*		
Fire Performance			
Fire Classification	BS 476-3: 2004	*Not determined*	
	CEN TS 1187:2012 Test 4	*Not determined*	
	Not required	*The fire performance of this above roof mounting system is not currently required for MCS 012. Research is ongoing into any influence above roof solar panels could have on the fire classification of the roof mounting system. OR delete*	

Signed on behalf of Kiwa Ltd

Mark Crowther - MCS Certification Director - Kiwa Ltd

This certificate is subject to the producer continuing to comply with the Kiwa MCS Product Scheme Rules and ongoing Annual Surveillance

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_RH1_01 - KIWA00051/001 IK	
System component	***Part number***
Roof Hook RH1	*R420171*
Wood screw pan head 6.0x80 SIT 30	*R900318*
VS+ mounting rail 41 x 35 x various lengths	*2.4 m, 400534; 3.3 m, 400524, 3.6 m, 400572*
VS+ mounting rail 50 x 37 x various lengths (or black)	*2.4 m, 400549 (-B); 3.6 m, 400570 (-B), 4.4 m, 400571 (-B)*
VS+ mounting rail 60 x 38 x various lengths (or black)	*3.3 m, 400535 (-B), 3.6 m, 400536, 4.8 m, 400537*
Rail connectors for 41x35, 50x37, 60x38	*R400531, R400532, R400533*
RS1 / RS1 (black) clamp	*R420080 / R420080-BE*
End Clamp+ / End Clamp+ (black)	*R420081 / R420081-BE*
Middle Clamp+ / Middle Clamp+ (black)	*R420082 / R420082-BE*
Sealing Tape MPA (20 x 4000mm)	*R300100*
REN_RHFLAT_01 - KIWA00051/002 IK	
System components:	***Part number***
Roof Hook RH Flat	*R420172*
Wood screw pan head 6.0x80 SIT 30	*R900318*
VS+ mounting rail 41 x 35 x various lengths	*2.4 m, 400534; 3.3 m, 400524, 3.6 m, 400572*
VS+ mounting rail 50 x 37 x various lengths (or black)	*2.4 m, 400549 (-B); 3.6 m, 400570 (-B), 4.4 m, 400571 (-B)*
VS+ mounting rail 60 x 38 x various lengths (or black)	*3.3 m, 400535 (-B), 3.6 m, 400536, 4.8 m, 400537*
Rail connectors for 41x35, 50x37, 60x38	*R400531, R400532, R400533*
RS1 / RS1 (black) clamp	*R420080 / R420080-BE*
End Clamp+ / End Clamp+ (black)	*R420081 / R420081-BE*
Middle Clamp+ / Middle Clamp+ (black)	*R420082 / R420082-BE*
Sealing Tape MPA (20 x 4000mm)	*R300100*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_RH1_02 - KIWA00051/003 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400534*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Wood screw pan head 6 x 80 SIT 30	*R900318*
Wood screw pan head 6 x 80	*R900333*
Roof hook RH1 (without wood screw)	*R420171*

CERTIFICATE

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_01- KIWA00051/004 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Wood screw pan head 6 x 80 SIT 30	*R900318*
Wood screw pan head 6 x 80	*R900333*
Roof hook UK Plain tiles/slates HL (without wood screw) AND SolarFlash® Small Flat	*R420184*
Roof hook UK Plain tiles/slates (without wood screw) AND SolarFlash® Small Flat	*R420181*
(SolarFlash® Small Flat)	*SFS011*
Roof hook aluminium (without wood screw)	*R420151*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_02- KIWA00051/005 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Wood screw pan head 6 x 80 SIT 30	*R900318*
Wood screw pan head 6 x 80	*R900333*
Roof hook ECO Basic (without wood screw)	*R420165*
Roof hook stainless steel (without wood screw)	*R420150*
Roof hook UK Flexible (without wood screw)	*R420182*
Roof hook UK Pantile (without wood screw)	*R420180*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_03- KIWA00051/006 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400534*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Bracket M10	*R420014*
Bracket M12	*R420012*
Bracket M10 (offset connection)	*R420131*
Bracket M12 (offset connection)	*R420130*
Bracket IFP M8/M10	*R420024*
Sealing plate 15/95 used with R300000	*R900274*
Ubiflex High-Tack MS adhesive used only with R900274	*R300000*
Hanger bolt M10 x 160 (offset)	*R920159*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_03- KIWA00051/006 IK	
System component	***Part number***
Hanger bolt M10x180	*R860020*
Hanger bolt M10 x 200	*R860006*
Hanger bolt M10 x 250	*R860021*
Hanger bolt M12 x 250	*R860007*
Hanger bolt M12 x 300	*R860017*
Hanger bolt M12 x 350	*R920136*
Hanger bolt M12 x 400	*R920137*
Hanger bolt M10x200 (offset)	*R920008*
Hanger bolt M10 x 250 (offset)	*R860022*
Hanger bolt M12 x 250 (offset)	*R920002*
Solar fastener for steel substructure 80/50	*R900181*
Solar fastener for steel substructure 100/50	*R900182*
Solar fastener for steel substructure 125/50	*R900183*
Solar fastener for steel substructure 150/50	*R900184*
Solar fastener for steel substructure 160/50	*R900185*
Solar fastener for steel substructure 200/50	*R900186*
Solar fastener for wood substructure 80/50	*R900187*
Solar fastener for wood substructure 100/50	*R900188*
Solar fastener for wood substructure 130/50	*R900189*
Solar fastener for wood substructure 150/50	*R900190*
Solar fastener for wood substructure 180/50	*R900191*
Solar fastener for wood substructure 200/50	*R900192*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_04- KIWA00051/007 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400534*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Bracket M10	*R420014*
Bracket M12	*R420012*
Bracket M10 (offset connection)	*R420131*
Bracket M12 (offset connection)	*R420130*
Bracket IFP M8/M10	*R420024*
M8 screw	*R900025*
M8 nut	*R900001*
S5!® Stehfalzklemme Z-mini	*R420255*
Round seam clamp for Kalzip and similar	*R400362*
Kalzip clamp for standing seam Typ FS	*R400256*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_VS+_05- KIWA00051/008 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
VS+ Mounting rail 41 x 35	*R400534*
VS+ Mounting rail 41 x 35	*R400572*
VS+ Mounting rail 41 x 35	*R400525*
VS+ Mounting rail 50 x 37	*R400549*
VS+ Mounting rail 50 x 37	*R400570*
VS+ Mounting rail 50 x 37	*R400571*
VS+ Mounting rail 50 x 37	*R400549-B*
VS+ Mounting rail 50 x 37	*R400570-B*
VS+ Mounting rail 50 x 37	*R400571-B*
VS+ Mounting rail 60 x 38	*R400536*
VS+ Rail connector 41 x 35	*R400531*
VS+ Rail connector 50 x 37	*R400532*
VS+ Rail connector 60 x 38	*R400533*
Bracket M10	*R420014*
Bracket M12	*R420012*
Bracket M10 (offset connection)	*R420131*
Bracket M12 (offset connection)	*R420130*
Bracket IFP M8/M10	*R420024*
M8 screw	*R900025*
M8 nut	*R900001*
S5!® Stehfalzklemme S-mini	*R420259*
S5! Stehfalzklemme E-mini	*R420254*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_MS+_01 - KIWA00051/009 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
MetaSole+	*R420402*
MS+H (Set)	*R420423*
Self drilling screw 5,5x25 SW 8 E16	*R400301*
REN_MS+_02 - KIWA00051/010 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
MetaSole+	*R420402*
MS+H (Set)	*R420423*
Self drilling screw 5,5x25 SW 8 E16	*R400301*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_MS+_03 - KIWA00051/011 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
MS+ Portrait 350mm (Set)	*R420420*
MS+ Portrait 400mm (Set)	*R420421*
MS+ Portrait 3600mm (without EPDM)	*R400405*
MS+ Portrait 4200mm (without EPDM)	*R400406*
EPDM Roll 5m for MS+ Portrait	*R300224*
Self drilling screw 5,5x25 SW 8 E16	*R400301*
REN_MS+_04 - KIWA00051/012 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
MS+ Portrait 350mm (Set)	*R420420*
MS+ Portrait 400mm (Set)	*R420421*
MS+ Portrait 3600mm (without EPDM)	*R400405*
MS+ Portrait 4200mm (without EPDM)	*R400406*
EPDM Roll 5m for MS+ Portrait	*R300224*
Self drilling screw 5,5x25 SW 8 E16	*R400301*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_MS+_05 - KIWA00051/013 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
MetaSole+	*R420402*
MS+ Adapter corrugated sheet radius 24	*R420401*
MS+ corrugated sheet radius 24	*R420411*

CERTIFICATE

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_FSPRO_01 - KIWA00051/014 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
FS Pro End clamp LS	*R520283*
FS Pro 10-S Base rail 1500 (Set)	*R520220*
FS Pro 10-S-P Base rail 3000	*R500224*
FS Pro 10-S Base rail 1500	*R500220*
FS Pro 10-S-P Base rail 3000 (Set)	*R520224*
FS Pro Ridge support	*R500230*
FS Pro Securing clip ridge support	*R500228*
FS Pro Eave support 10-S	*R500231*
FS Pro Securing bolt	*R500227*
FS Pro Ballast profile 1900	*R500250*
FS Pro Ballast profile connector	*R500251*
FS Pro Ballast profile support	*R500252*
FS Pro Securing clip ballast support	*R500253*
FS Pro Roof protection pad 55	*R500272*
FS Pro Roof protection pad 300	*R500270*
FS Pro adapter LS	*R500235*
Non-structural system components	***Part number***
FS Pro Streamliner 10-S 1900	*R500240*
FS Pro Streamliner 10-S 2300	*R500236*
FS Pro Streamliner bracket	*R500241*
Self Drilling Screw 4,8x19 A2	*R900229*
FS Pro Potential equalisation clip S	*R500260*
FS Pro Cable tray 450	*R500262*
FS Pro Side deflector 10 (Set)	*R520265*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_FSPRO_02 - KIWA00051/015 IK	
System component	***Part number***
End clamp+ (black)	*R420081-BE*
Middle clamp+ (black)	*R420082-BE*
End clamp+	*R420081*
Middle clamp+	*R420082*
RS1	*R420080*
RS1 (black)	*R420080-BE*
RS Pro (black)	*R420025-B*
RS Pro	*R420025*
FS Pro Mid clamp EW	*R520282*
FS Pro End clamp LS	*R520283*
FS Pro 10-EW Base rail 2100	*R500222*
FS Pro 10-EW Base rail 2100 (Set)	*R520222*
FS Pro 10-EW Base rail 2300	*R500223*
FS Pro 10-EW Base rail 2300 (Set)	*R520223*
FS Pro 10-EW Base rail 2380	*R500244*
FS Pro 10-EW Base rail 2380 (Set)	*R520244*
FS Pro 10-EW Base rail 2700	*R500229*
FS Pro 10-EW Base rail 2700 (Set)	*R520229*
FS Pro 10-EW-P Base rail 3600	*R500225*
FS Pro 10-EW-P Base rail 3600 (Set)	*R520225*
FS Pro Ridge support	*R500230*
FS Pro Securing clip ridge support	*R500228*
FS Pro Eave support 10-EW	*R500232*
FS Pro Securing bolt	*R500227*
FS Pro Ballast profile 1900	*R500250*
FS Pro Ballast profile connector	*R500251*
FS Pro Ballast profile support	*R500252*
FS Pro Securing clip ballast support	*R500253*
FS Pro Roof protection pad 110	*R500271*
FS Pro Roof protection pad 300	*R500270*
FS Pro adapter LS	*R500235*
Non-structural system components	***Part number***
FS Pro Potential equalisation clip EW	*R500261*
FS Pro Cable tray 450	*R500262*
FS Pro Side deflector 10 (Set)	*R520265*

The following components are common for the product systems that have been assessed and registered by Kiwa Ltd against the provisions of:

MCS 010, MCS 011, MCS 012 Issue 3.0

Mounting frame installation components	
REN_CS+_01 - KIWA00051/016 IK	
System component	***Part number***
ConSole+, SET	*R520075-K*
Elongation rails XL for 1 CS, SET	*R460196*
Rear grip clamp for CS+	*R420023*
ConSole+	*R500075*
Aluminium U-Profile 1035 mm ConSole CS+	*R400005*
Mounting material for ConSole CS+	*R420022*
Non-structural system components	***Part number***
Streamliner+	*R520076*