

Solar systems of Schweizer:

List of components - MSP PV mounting system



MSP PV mounting system:

- MSP-PR for pitched roofs
- MSP-PR Inlay for pitched roofs with inlay profiles
- MSP-TT for trapezoidal metal roofs
- MSP-FR-EW for flat roofs (East-West)
- MSP-FR-S for flat roofs (South)
- MSP-FR-G for flat roofs (Green roof)
- Project solutions – Accessoires

Please note that: Items marked with an **E** expire and are only available for a limited time. Articles marked with **N** are new. Please check availability.

Solar systems of Schweizer:

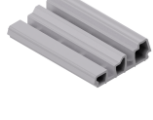
PV mounting system for pitched roofs MSP-PR

The **MSP-PR PV mounting system** is designed for attaching to pitched roofs. A range of aluminium roof hooks with a sophisticated click-in fastening, supplemented by classic stainless steel roof hooks and also hanger bolts are available for attaching to roof structures. Supporting rails are fastened either in single-layers or cross-connected grid-systems using preassembled clamps. Connectors can be used to extend rails in large arrays. There are 2 types of module clamps for all common PV modules with frame heights between 28 mm and 45 mm.



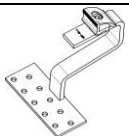
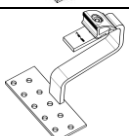
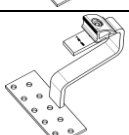
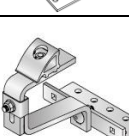
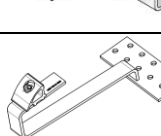
Benefits

- Fast mounting thanks to clever click-in system.
- User-friendly: Parts pre-assembled means no screws or other small parts.
- Components don't rotate out of place.
- Rails can be trod on which helps speed up installation.
- Saves costs: Only as many roof hooks as actually required per site.
- High quality and components balanced and all matched to the system for maximum safety.

Part description		Material	Code	Packing unit	Article number
Roof hook MSP-PR-RHF		Aluminium EN AW-6063 T66	MSP-PR-RHF	12	2048538
Roof Hook adjustable MSP-PR-RHA		Aluminium EN AW-6063 T66	MSP-PR-RHA	12	2048539
Roof hook for grid installation MSP-PR-RHC		Aluminium EN AW-6063 T66	MSP-PR-RHC	12	2048610
Roof hook low profile MSP-PR-RHL		Aluminium EN AW-6063 T66	MSP-PR-RHL	12	2065899
Base plate MSP-PR-BP height 39 mm		Aluminium EN AW-6063 T66	MSP-PR-BP 39 mm	24	2048535
Base plate MSP-PR-BP height 45 mm		Aluminium EN AW-6063 T66	MSP-PR-BP 45 mm	24	2048536
Spacer plate MSP-PR-SP height 10 mm		PA66 GF 30	MSP-PR-SP 10 mm	25	2048537

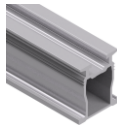
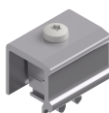
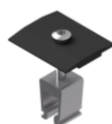
Solar systems of Schweizer:

PV mounting system for pitched roofs MSP-PR

Part description		Material	Code	Packing unit	Article number
Roof hook MSP-RHC 45/5		Stainless steel A2	MSP-PR-RHC 45/5	10	435495
Roof hook MSP-RHC 55/5			MSP-PR-RHC 55/5	10	435496
Roof hook MSP-RHC 41/8			MSP-PR-RHC 41/8	10	435499
Roof hook MSP-RHC 55/8			MSP-PR-RHC 55/8	10	435500
Roof hook MSP-RHC AA 35-45/8			MSP-PR-RHC AA 35-45/8	10	435502
Roof hook MSP-RHC-B 30/5			MSP-PR-RHC-B 30/5	10	435504
Wood screw MSP-PR-HS TX 40		Stainless steel	MSP-PR-HS 8x100	100	424777
			MSP-PR-HS 8x120	100	424778
Hanger bolt MSP-PR-HB A2		Stainless steel	MSP-PR-HB 10x200 A2	20	2045294
			MSP-PR-HB 12x200 A2	50	2096330
			MSP-PR-HB 12x300 A2	20	424751
Earthing clamps set MSP-PR-GCA		Stainless steel	MSP-PR-GCA	10	21965
Earthing clamps set MSP-PR-GCC		Stainless steel	MSP-PR-GCC	10	22963 N

Solar systems of Schweizer:

PV mounting system for pitched roofs MSP-PR

Part description		Material	Code	Packing unit	Article number
Hanger bolt plate MSP-PR-HBP for M10 und M12		Aluminium EN AW-6063 T66	MSP-PR-HBP	20	2065896
Carrier profile MSP-PR-CH		Aluminium EN AW-6063 T66	MSP-PR-CH 3,3 m	1	2048618
			MSP-PR-CH 4,8 m	1	21997
			MSP-PR-CH 6,3 m	1	2050015
Sleeve MSP-PR-SL		Aluminium EN AW-6063 T66	MSP-PR-SL	8	2048619
Cross connector MSP-PR-CC		Aluminium EN AW-6063 T66 and stain- less steel 1.4404	MSP-PR-CC	24	2048622
End cap MSP-PR-CAP for carrier section MSP-PR-CH		Polypropylen	MSP-PR-CAP	20	2065895
End clamp MSP-PR-EC 28-45 mm		Various	MSP-PR-EC 28-45 mm	12	22331 N
End clamp MSP-PR-ECB 28-45 mm, black			MSP-PR-ECB 28-45 mm	12	22623 N
Middle clamp MSP-PR-MC 28-45 mm			MSP-PR-MC 28-45 mm	24	22624 N
Middle clamp MSP-PR-MCG 28-45 mm grounding ¹⁾			MSP-PR-MCG 28-45 mm	24	22626 N
Middle clamp MSP-PR-MCB 28-45 mm black			MSP-PR-MCB 28-45 mm	24	22625 N
Middle clamp MSP-PR-MCBG 28-45 mm black, grounding ¹⁾			MSP-PR-MCBG 28-45 mm	24	22627 N

¹⁾ Equipotential tested by VDE

Solar systems of Schweizer:

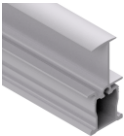
PV mounting system for pitched roofs MSP-PR Inlay

In addition to the MSP-PR product range an **insertion rail system** is available for mounting PV modules without clamping. Modules are inserted into the inlay rails which are the top layer of a grid system and with MSP-PR-CC cross connecting to a lower level of vertically mounted MSP-PR-CH rails. Insertion rails can be extended with rail connectors and the PV modules are secured against shifting with a stopper.



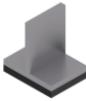
Benefits

- Insertion system for mounting with only minimal loading of the PV modules.
- Compatible with the MSP-PR mounting system.
- Flexible attachment options include aluminium and stainless steel roof hooks and also hanger bolts.
- Module orientation can even be mixed (though not within each row).
- Available in black (RAL 9005 Jet Black)

Part description		Material	Code	Packing unit	Article number
Insertion channel MSP-PR-IC 30		Aluminium EN AW-6063 T66	MSP-PR-IC 30 3.3 m	1	22892 N
Insertion channel MSP-PR-ICB 30 black			MSP-PR-ICB 30 3.3 m	1	22900 N
			MSP-PR-ICB 30 6.3 m	1	22903 N
Insertion channel MSP-PR-IC 35			MSP-PR-IC 35 3.3m	6	21863
Insertion channel MSP-PR-ICB 35 black			MSP-PR-ICB 35 3.3 m	6	21864
			MSP-PR-ICB 35 6.3 m	1	21024 N
Insertion channel MSP-PR-IC 40			MSP-PR-IC 40 3.3 m	6	21865
Insertion channel MSP-PR-ICB 40 black			MSP-PR-ICB 40 3.3 m	6	21866
		Aluminium EN AW-6063 T66	MSP-PR-ICB 40 6.3 m	1	21021
Insertion channel MSP-PR-ICB 43 black			MSP-PR-ICB 43 black 6.3 m	1	21559
Sleeve MSP-PR-SL			MSP-PR-SL	8	2048619

Solar systems of Schweizer:

PV mounting system for pitched roofs MSP-PR Inlay

Part description		Material	Code	Packing unit	Article number
Cross connector MSP-PR-CC		Various	MSP-PR-CC	24	2048622
Edge stop MSP-PR-ESB		Stainless steel A2	MSP-PR-ESB	20	21025
Screw MSP-FR-S M6x16		ZnNi-coated steel	MSP-FR-S	200	2013705
Insertion stopper MSP-PR-IS		Various	MSP-PR-IS	12	21156

Solar systems of Schweizer:

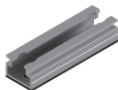
PV mounting system for trapezoidal metal roofs MSP-TT

MSP-TT is for mounting on trapezoidal metal roofs and consists new of no more than 2 components apart from the clamps. Tracks come in 3 pre-cut lengths and it is a simple system suitable for all common types of trapezoidal metal roofs. Tracks are screwed directly to the roof with special thin-sheet screws without pre-drilling. High-quality EPDM sealing tape is applied between tracks and the roof providing weather sealing. Universal clamps - the same as in all MSP mounting systems - are used to fix the PV panels.



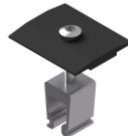
Benefits

- Minimal number of components
- Universal clamps – same as in all MSP mounting systems
- Flexibility: Array length unlimited, thermal expansion automatically absorbed
- No special trapezoidal sheet metal fasteners or bridges: Attachment is straight onto the metal beads without the need for custom parts

Part description		Material	Code	Packing unit	Article number
Track preassembled MSP-TT-CHA		Aluminium EN-AW-6063 T66, EPDM	MSP-TT-CHA 270 mm	60	21859
			MSP-TT-CHA 370 mm	60	21560
Track preassembled MSP-TT-CHV		Aluminium EN-AW-6063 T66, EPDM	MSP-TT-CHV 100 mm	216	21874
Thin sheet metal screw MSP-TT-TS 6x25		Stainless steel A2	MSP-TT-TS 6x25	200	19944
End clamp MSP-PR-EC 28-45 mm		Various	MSP-PR-EC 28-45 mm	12	22331 N
End clamp MSP-PR-EC 28-45 mm, black			MSP-PR-ECB 28-45 mm	12	22623 N

Solar systems of Schweizer:

PV mounting system for trapezoidal metal roofs MSP-TT

Part description		Material	Code	Packing unit	Article number
Middle clamp MSP-PR-MC		Various	MSP-PR-MC 28-45 mm	24	22624 N
Middle clamp MSP-PR-MCG grounding ¹⁾			MSP-PR-MCG 28-45 mm	24	22626 N
Middle clamp MSP-PR-MCB black			MSP-PR-MCB 28-45 mm	24	22625 N
Middle clamp MSP-PR-MCBG black, grounding ¹⁾			MSP-PR-MCBG 28-45 mm	24	22627 N

¹⁾ Equipotential tested by VDE

Solar systems from Schweizer:

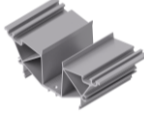
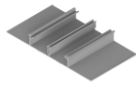
PV mounting system for flat roofs MSP-FR-EW

MSP-FR-EW is for mounting PV modules on **flat roofs facing East-West**, though azimuth deviation hardly matters. The amount of ballasting required is uniquely low. Base plates (supports) do not interfere with roof drainage (avoiding water build-up) and are available in various sizes to suit all types of thermal insulation. A special wind-deflector is available (MSP-FR-EW-WD) and can be used in parts of an array where there is not enough space for a full East-West module gable.



Benefits

- No roof penetrations required
- Fast installation: less than 20 minutes per kW and installer
- Highly efficient installation work flow
- No interference with water drainage
- Optimal spread of loading to minimize impact on roofing membrane
- Minimal ballasting required
- Very low area loads, starting at 7 kg/m²
- Excellent mechanical and chemical protection of roofing membrane

Part description		Material	Code	Packing unit	Article number
Support low MSP-FR-EW-SL8		Aluminium EN AW-6063 T66	MSP-FR-EW-SL8	18	19927
Support low MSP-FR-EW-SL10			MSP-FR-EW-SL10	18	2072553
Support high MSP-FR-EW-SH		Aluminium EN AW-6063 T66	MSP-FR-EW-SH	12	2072554
Base profile MSP-FR-EW-BP		Aluminium EN AW-6063 T66	MSP-FR-EW-BP 150	10	2072555
			MSP-FR-EW-BP 300	10	2072556
			MSP-FR-EW-BP 450	10	2072557
			MSP-FR-EW-BP 600	10	2072558
			MSP-FR-EW-BP 900	10	2072559
			MSP-FR-EW-BP 1200	10	2072560
Wind deflector MSP-FR-EW-WD for EW support		Aluminium EN AW-6063 T66	MSP-FR-EW-WD 1620-1684	5	20771
			MSP-FR-EW-WD 1685-1749	5	21836
			MSP-FR-EW-WD 1750-1814	5	21854

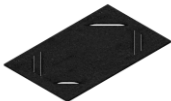
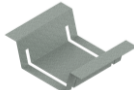
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-EW

Part description		Material	Code	Packing unit	Article number
Connection channel MSP-FR-EW-C		Aluminium EN AW-6063 T66	MSP-FR-EW-C 300-360	12	2072368
			MSP-FR-EW-C 470-530	12	20679
			MSP-FR-EW-C 950-1010	24	2072369
			MSP-FR-EW-C 1011-1075	24	21464
			MSP-FR-EW-C 1076-1140	24	21872
			MSP-FR-EW-C 1141-1205	24	21873
			MSP-FR-EW-C 1230-1290	10	19945 A
			MSP-FR-EW-C 1206-1270	10	22250
			MSP-FR-EW-C 1271-1335	10	22277
			MSP-FR-EW-C 1495-1559	10	19616 A
			MSP-FR-EW-C 1555-1619	10	21999
			MSP-FR-EW-C 1620-1684	10	2072551
			MSP-FR-EW-C 1685-1749	10	21465
			MSP-FR-EW-C 1750-1814	10	21794
			MSP-FR-EW-C 1815-1879	10	21856
			MSP-FR-EW-C 1880-1944	10	21857
			MSP-FR-EW-C 1945-2009	10	2072552
			MSP-FR-EW-C 2010-2074	10	21810
			MSP-FR-EW-C 2075-2139	10	21793
			MSP-FR-EW-C 2140-2204	10	22083
			MSP-FR-EW-C 2205-2269	10	22084
			MSP-FR-EW-C 2270-2334	10	22085
			MSP-FR-EW-C 2335-2399	10	22086

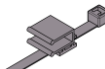
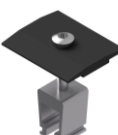
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-EW

Part description		Material	Code	Packing unit	Article number
Protection sheet MSP-FR-PSF for Base profile MSP-FR-EW-BP		Fleece	MSP-FR-PSF 150	60	21034
			MSP-FR-PSF 300	30	21035
			MSP-FR-PSF 450	60	21979
			MSP-FR-PSF 600	60	21980
			MSP-FR-PSF 900	30	21981
			MSP-FR-PSF 1200	30	21982
Wind deflector / Ballast tray MSP-FR-S-WD		Galvanized sheet steel	MSP-FR-S-WD 1620-1684	6	20680
			MSP-FR-S-WD 1685-1749	6	21562
			MSP-FR-S-WD 1750-1814	6	21811
Ballast tray holder MSP-FR-S-SB		Galvanized sheet steel SVZ EN 10346	MSP-FR-S-SB	24	20682 A
Ballast tray holder MSP-FR-BT		Galvanized sheet steel	MSP-FR-BT 2270-2399	5	22964 N
			MSP-FR-BT 2140-2269	5	22965 N
			MSP-FR-BT 2010-2139	5	22966 N
			MSP-FR-BT 1880-2009	5	22967 N
			MSP-FR-BT 1750-1879	5	22968 N
			MSP-FR-BT 1620-1749	5	22969 N
Ballast tray clamp MPS-FR-BC		Stainless steel	MSP-FR-BC	5	22970 N

Solar systems from Schweizer:

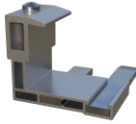
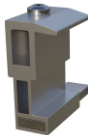
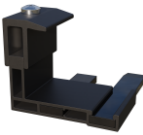
PV mounting system for flat roofs MSP-FR-EW

Part description		Material	Code	Packing unit	Article number
Initial ballast plate support MSP-FR-EW-BS		Galvanized sheet steel	MSP-FR-EW-BS	5	22972 
Gravel tray MSP-FR-EW-S		Aluminium EN AW-5005	MSP-FR-EW-S Alu 1620-1749 mm	1	21744
			MSP-FR-EW-S Alu 1750-1849 mm	1	21876
Screw MSP-FR-S M6x16		ZnNi-coated steel	MSP-FR-S	200	2013705
Screw MSP-FR-TS 6,3x22		Stainless steel A2	MSP-FR-TS	200	21348
Grounding screw MSP-FR-GS 6x60		Stainless steel A2	MSP-FR-GS	100	2013706
Cable holder with edge clip MSP-FR-CHE		PA6.6 UV-resistant	MSP-FR-CHE	100	22628
End clamp MSP-PR-EC 28-45 mm		Various	MSP-PR-EC 28-45 mm	12	22331 
End clamp MSP-PR-EC 28-45 mm, black			MSP-PR-ECB 28-45 mm	12	22623 
Middle clamp MSP-PR-MC 28-45 mm			MSP-PR-MC 28-45 mm	24	22624 
Middle clamp MSP-PR-MCG 28-45 mm grounding ¹⁾			MSP-PR-MCG 28-45 mm	24	22626 
Middle clamp MSP-PR-MCB 28-45 mm schwarz			MSP-PR-MCB 28-45 mm	24	22625 
Middle clamp MSP-PR-MCBG black, grounding ¹⁾			MSP-PR-MCBG 28-45 mm	24	22627 

¹⁾ Equipotential tested by VDE

Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-EW

Part description		Material	Code	Packing unit	Article number
Additional clamp low MSP-FR-LC 28-40 mm		Various	MSP-FR-LC 28-40 mm	12	22700 N
Additional clamp high MSP-FR-HC 28-40 mm			MSP-FR-HC 28-40 mm	12	22629 N
Additional clamp low MSP-FR-LCB 28-40 mm, black			MSP-FR-LCB 28-40 mm	12	22717 N
Additional clamp high MSP-FR-HCB 28-40 mm, black			MSP-FR-HCB 28-40 mm	12	22719 N

Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-S

MSP-FR-S is for mounting PV modules on **flat roofs facing South**. The amount of ballasting required is very low. Base plates (supports) do not interfere with roof drainage (avoiding water build-up) and are available in various sizes to suit all types of thermal insulation and not to damage roofing membranes. MSP-FR-S for flat roofs South is compatible with MSP-FR-EW for flat roofs East-West and most components are common with both mounting systems.



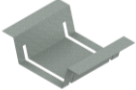
Benefits

- No roof penetrations required
- Fast installation: less than 20 minutes per kW and installer
- Highly efficient installation work flow
- No interference with water drainage
- Optimal spread of loading to minimize impact on roofing membrane
- Minimal ballasting required
- Very low area loads, starting at 7 kg/m²
- Excellent mechanical and chemical protection of roofing membrane

Part description		Material	Code	Packing unit	Article number
Support low MSP-FR-S-SL8		Aluminium EN AW-6063 T66	MSP-FR-S-SL8	30	21877
Abstützung tief MSP-FR-S-SL10			MSP-FR-S-SL10	30	20678
Support high MSP-FR-S-SH		Aluminium EN AW-6063 T66	MSP-FR-SH	12	20677
Base profile MSP-FR-EW-BP		Aluminium EN AW-6063 T66	MSP-FR-EW-BP 150	10	2072555
			MSP-FR-EW-BP 300	10	2072556
			MSP-FR-EW-BP 450	10	2072557
			MSP-FR-EW-BP 600	10	2072558
			MSP-FR-EW-BP 900	10	2072559
			MSP-FR-EW-BP 1200	10	2072560

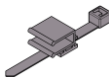
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-S

Part description		Material	Code	Packing unit	Article number
Protection sheet MSP-FR-PSF for Base profile MSP-FR-EW-BP		Fleece	MSP-FR-PSF 150	60	21034
			MSP-FR-PSF 300	30	21035
			MSP-FR-PSF 450	60	21979
			MSP-FR-PSF 600	60	21980
			MSP-FR-PSF 900	30	21981
			MSP-FR-PSF 1200	30	21982
Wind deflector / Ballast tray MSP-FR-S-WD		Galvanized sheet steel	MSP-FR-S-WD 1620-1684	6	20680
			MSP-FR-S-WD 1685-1749	6	21562
			MSP-FR-S-WD 1750-1814	6	21811
			MSP-FR-S-WD 1815-1879	6	22987 N
			MSP-FR-S-WD 1880-1944	6	22988 N
			MSP-FR-S-WD 1945-2009	6	22989 N
			MSP-FR-S-WD 2010-2074	6	22990 N
			MSP-FR-S-WD 2075-2139	6	22991 N
			MSP-FR-S-WD 2140-2204	6	22992 N
			MSP-FR-S-WD 2205-2269	6	22993 N
			MSP-FR-S-WD 2270-2334	6	22994 N
			MSP-FR-S-WD 2335-2399	6	22995 N
Ballast tray holder MSP-FR-S-SB		Galvanized sheet steel SVZ EN 10346	MSP-FR-S-SB	24	20682 A

Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-S

Part description		Material	Code	Packing unit	Article number
Ballast tray MSP-FR-BT		Galvanized sheet steel	MSP-FR-BT 2270-2399	5	22964 
			MSP-FR-BT 2140-2269	5	22965 
			MSP-FR-BT 2010-2139	5	22966 
			MSP-FR-BT 1880-2009	5	22967 
			MSP-FR-BT 1750-1879	5	22968 
			MSP-FR-BT 1620-1749	5	22969 
Ballast tray clamp MPS-FR-BC		Stainless steel	MSP-FR-BC	5	22970 
Initial ballast plate support MSP-FR-EW-BS		Galvanized sheet steel	MSP-FR-EW-BS	5	22972 
Screw MSP-FR-S M6x16		ZnNi-coated steel	MSP-FR-S	200	2013705
Screw MSP-FR-TS 6,3x22		Stainless steel A2	MSP-FR-TS	200	21348
Grounding screw MSP-FR-GS 6x60		Stainless steel A2	MSP-FR-GS	100	2013706
Cable holder with edge clip MSP-FR-CHE		PA6.6 UV-resistant	MSP-FR-CHE	100	22628

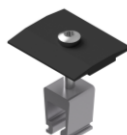
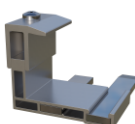
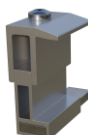
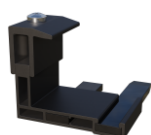
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-S

Part description		Material	Code	Packing unit	Article number
Connection channel MSP-FR-EW-C		Aluminium EN AW-6063 T66	MSP-FR-EW-C 300-360	12	2072368
			MSP-FR-EW-C 470-530	12	20679
			MSP-FR-EW-C 950-1010	24	2072369
			MSP-FR-EW-C 1011-1075	24	21464
			MSP-FR-EW-C 1076-1140	24	21872
			MSP-FR-EW-C 1141-1205	24	21873
			MSP-FR-EW-C 1230-1290	10	19945 A
			MSP-FR-EW-C 1206-1270	10	22250
			MSP-FR-EW-C 1271-1335	10	22277
			MSP-FR-EW-C 1495-1559	10	19616 A
			MSP-FR-EW-C 1555-1619	10	21999
			MSP-FR-EW-C 1620-1684	10	2072551
			MSP-FR-EW-C 1685-1749	10	21465
			MSP-FR-EW-C 1750-1814	10	21794
			MSP-FR-EW-C 1815-1879	10	21856
			MSP-FR-EW-C 1880-1944	10	21857
			MSP-FR-EW-C 1945-2009	10	2072552
			MSP-FR-EW-C 2010-2074	10	21810
			MSP-FR-EW-C 2075-2139	10	21793
			MSP-FR-EW-C 2140-2204	10	22083
			MSP-FR-EW-C 2205-2269	10	22084
			MSP-FR-EW-C 2270-2334	10	22085
			MSP-FR-EW-C 2335-2399	10	22086

Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-S

Part description		Material	Code	Packing unit	Article number
End clamp MSP-PR-EC 28-45 mm		Various	MSP-PR-EC 28-45 mm	12	22331 
End clamp MSP-PR-ECB 28-45 mm, black			MSP-PR-ECB 28-45 mm	12	22623 
Middle clamp MSP-PR-MC 28-45 mm			MSP-PR-MC 28-45 mm	24	22624 
Middle clamp MSP-PR-MCG 28-45 mm grounding ¹⁾			MSP-PR-MCG 28-45 mm	24	22626 
Middle clamp MSP-PR-MCB 28-45 mm schwarz			MSP-PR-MCB 28-45 mm	24	22625 
Middle clamp MSP-PR-MCBG 28-45 mm black, grounding ¹⁾			MSP-PR-MCBG 28-45 mm	24	22627 
Additional clamp low MSP-FR-LC 28-40 mm			MSP-FR-LC 28-40 mm	12	22700 
Additional clamp high MSP-FR-HC 28-40 mm			MSP-FR-HC 28-40 mm	12	22629 
Additional clamp low MSP-FR-LCB 28-40 mm, black			MSP-FR-LCB 28-40 mm	12	22717 
Additional clamp high MSP-FR-HCB 28-40 mm, black			MSP-FR-HCB 28-40 mm	12	22719 

¹⁾ Equipotential tested by VDE

Solar systems from Schweizer:

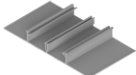
PV mounting system for flat roofs MSP-FR-G

MSP-FR-G was specially designed for green roofs and is characterised by its low intrinsic weight as well as by the highest standard of material quality and durability. The system can be flexibly used on green roofs that have 'grown'. It is installed without roof penetration and permits maximum flexibility in alignment and arrangement.



Benefits

- Easy assembly due to modular design
- System mounting possible without modules
- No penetration of the roof cladding
- Simple and fast handling due to small number of components
- Easy retrofitting on existing green roofs
- Installed directly on rooted green roof substrates without any preparatory work
- Efficient solution based on the proven PV mounting system MSP

Part description		Material	Code	Packing unit	Article number
Adapter support MSP-FR-G-AS		Aluminium EN AW-6063 T66	MSP-FR-G-AS	12	22891 N
Support MSP-FR-EW-SH		Aluminium EN AW-6063 T66	MSP-FR-EW-SH	12	2072554
Base profile MSP-FR-EW-BP		Aluminium EN AW-6063 T66	MSP-FR-EW-BP 300	10	2072556
			MSP-FR-EW-BP 450	10	2072557
			MSP-FR-EW-BP 600	10	2072558
			MSP-FR-EW-BP 900	10	2072559
			MSP-FR-EW-BP 1200	10	2072560

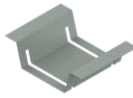
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-G

Part description		Material	Code	Packing unit	Article number
Connection channel MSP-FR-EW-C		Aluminium EN AW-6063 T66	MSP-FR-EW-C 300-360	12	2072368
			MSP-FR-EW-C 470-530	12	20679
			MSP-FR-EW-C 950-1010	24	2072369
			MSP-FR-EW-C 1011-1075	24	21464
			MSP-FR-EW-C 1076-1140	24	21872
			MSP-FR-EW-C 1141-1205	24	21873
			MSP-FR-EW-C 1230-1290	10	19945 A
			MSP-FR-EW-C 1206-1270	10	22250
			MSP-FR-EW-C 1271-1335	10	22277
			MSP-FR-EW-C 1495-1559	10	19616 A
			MSP-FR-EW-C 1555-1619	10	21999
			MSP-FR-EW-C 1620-1684	10	2072551
			MSP-FR-EW-C 1685-1749	10	21465
			MSP-FR-EW-C 1750-1814	10	21794
			MSP-FR-EW-C 1815-1879	10	21856
			MSP-FR-EW-C 1880-1944	10	21857
			MSP-FR-EW-C 1945-2009	10	2072552
			MSP-FR-EW-C 2010-2074	10	21810
			MSP-FR-EW-C 2075-2139	10	21793
			MSP-FR-EW-C 2140-2204	10	22083
			MSP-FR-EW-C 2205-2269	10	22084
			MSP-FR-EW-C 2270-2334	10	22085
			MSP-FR-EW-C 2335-2399	10	22086

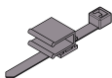
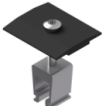
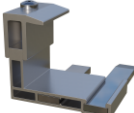
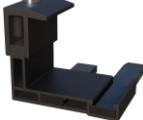
Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-G

Part description		Material	Code	Packing unit	Article number
Wind deflector / Ballast tray MSP-FR-S-WD		Galvanized sheet steel	MSP-FR-S-WD 1620-1684	6	20680
			MSP-FR-S-WD 1685-1749	6	21562
			MSP-FR-S-WD 1750-1814	6	21811
Ballast tray holder MSP-FR-S-SB		Galvanized sheet steel SVZ EN 10346	MSP-FR-S-SB	24	20682 A
Ballast tray MSP-FR-BT		Galvanized sheet steel	MSP-FR-BT 2270-2399	5	22964 N
			MSP-FR-BT 2140-2269	5	22965 N
			MSP-FR-BT 2010-2139	5	22966 N
			MSP-FR-BT 1880-2009	5	22967 N
			MSP-FR-BT 1750-1879	5	22968 N
			MSP-FR-BT 1620-1749	5	22969 N
Ballast tray clamp MPS-FR-BC		Stainless steel	MSP-FR-BC	5	22970 N
Initial ballast plate support MSP-FR-EW-BS		Galvanized sheet steel	MSP-FR-EW-BS	5	22972 N
Screw MSP-FR-S M6x16		ZnNi-coated steel	MSP-FR-S	200	2013705
Screw MSP-FR-TS 6,3x22		Stainless steel A2	MSP-FR-TS	200	21348
Grounding screw MSP-FR-GS 6x60		Stainless steel A2	MSP-FR-GS	100	2013706

Solar systems from Schweizer:

PV mounting system for flat roofs MSP-FR-G

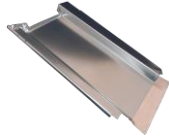
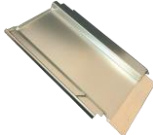
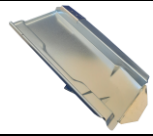
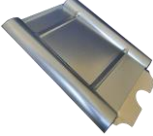
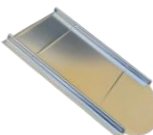
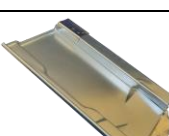
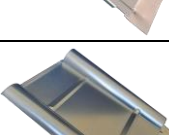
Part description		Material	Code	Packing unit	Article number
Cable holder with edge clip MSP-FR-CHE		PA6.6 UV-resistant	MSP-FR-CHE	100	22628
Gravel tray MSP-FR-EW-S		Aluminium EN AW-5005	MSP-FR-EW-S Alu 1620-1749 mm	1	21744
			MSP-FR-EW-S Alu 1750-1849 mm	1	21876
End clamp MSP-PR-EC 28-45 mm		Various	MSP-PR-EC 28-45 mm	1	22331 
End clamp MSP-PR-ECB 28-45 mm, black			MSP-PR-ECB 28-45 mm	12	22623 
Middle clamp MSP-PR-MC 28-45 mm			MSP-PR-MC 28-45 mm	24	22624 
Middle clamp MSP-PR-MCG 28-45 mm grounding ¹⁾			MSP-PR-MCG 28-45 mm	24	22626 
Middle clamp MSP-PR-MCB 28-45 mm schwarz			MSP-PR-MCB 28-45 mm	24	22625 
Middle clamp MSP-PR-MCBG 28-45 mm black, grounding ¹⁾			MSP-PR-MCBG 28-45 mm	24	22627 
Additional clamp low MSP-FR-LC 28-40 mm			MSP-FR-LC 28-40 mm	12	22700 
Additional clamp high MSP-FR-HC 28-40 mm			MSP-FR-HC 28-40 mm	12	22629 
Additional clamp low MSP-FR-LCB 28-40 mm, black			MSP-FR-LCB 28-40 mm	12	22717 
Additional clamp high MSP-FR-HCB 28-40 mm, black			MSP-FR-HCB 28-40 mm	12	22719 

¹⁾ Equipotential tested by VDE

Solar systems from Schweizer:

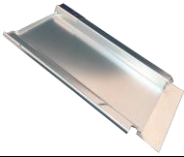
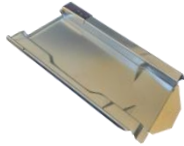
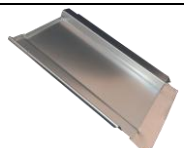
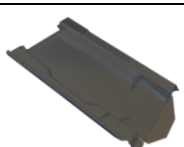
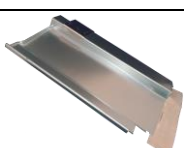
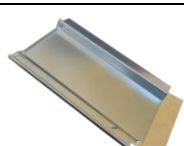
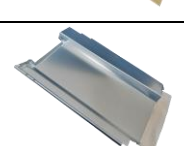
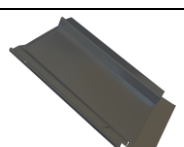
Project solutions - Accessoires

We are pleased to offer you the following articles as optional accessories.

Part description		Material	Code	Packing unit	Article number
MSP test set friction coefficient		Various	MSP test set friction coefficient	1	21998
Protection sheet MSP-FR-EW-PSF		Fleece	MSP-FR-EW-PSF	1	2072561
Metal roof panel Grande 323 galvanised		Galvanised sheet steel	Metal roof panel Grande 323 galvanised	10	595619 N
Metal roof panel Ton 269 galvaised			Metal roof panel Ton 269 galvanised	15	595620 N
Metal roof panel Ton 260 galvanised			Metal roof panel Ton 260 galvanised	20	595621 N
Metal roof panel Beton galvanised			Metal roof panel Beton galvanised	20	595622 N
Metal roof panel Biberschwanz vario galvanized			Metal roof panel Biberschwanz vario galvanized	30	595636 N
Metal roof panel Typ Ton 250 galvanized			Metal roof panel Typ Ton 250 galvanized	20	595639 N
Metal roof panel Grande 290 galvanized			Metal roof panel Grande 290 galvanized	20	595640 N
Metal roof panel Beton big galvanized			Metal roof panel Beton big galvanized	16	595641 N

Solar systems from Schweizer:

Project solutions - Accessoires

Part Description		Material	Code	Packing unit	Article number
Metal roof panel Typ Ton 265 galvanized		Galvanised sheet steel	Metal roof panel Typ Ton 265 galvanized	20	595642 N
Metal roof panel Typ Ton 240 galvanized			Metal roof panel Typ Ton 240 galvanized	20	595643 N
Metal roof panel Grande 300 galvanizede			Metal roof panel Grande 300 verzinkt	15	595646 N
Metal roof panel Typ Ton 240 anthracite			Metal roof panel Typ Ton 240 anthracite	20	595660 N
Metal roof panel Grande 280 galvanized			Metal roof panel Grande 280 galvanized	15	595661 N
Metal roof panel Typ Ton 251 galvanised			Metal roof panel Typ Ton 251 galvanised	20	595670 N
Metal roof panel Grande L 360 galvanised			Metal roof panel Grande L 360 galvanised	14	595671 N
Metal roof panel Typ Ton 251 anthracite			Metal roof panel Typ Ton 251 anthracite	20	595672 N
Wing clamp MSP-CC-HB		Various	MSP-CC-HB	100	424754 N
Seam clamp MSP-BFK-CC-HB		Various	MSP-BFK-CC- HB	20	3470376 N