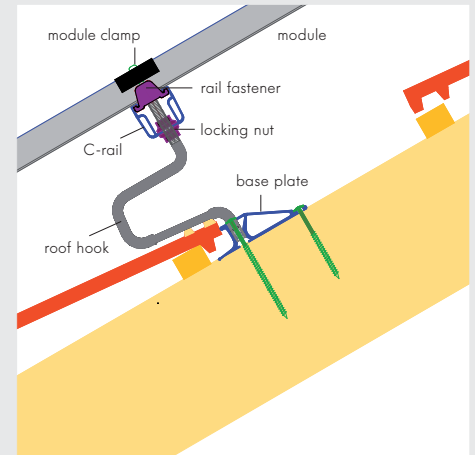


MHHnovotegra for Tile Roof



Construction of the mounting system
on a grooved tile roof

Advantages

- Very lightweight and durable
- Proven mounting technology
- Easily installed from above the rails
- Pre-configured fasteners for quick installation
- Concealed system frame
- Double height adjustable roof-hooks
- Roof-hook doesn't make contact with tile, even when under load
- C-rail functions as a cable channel
- Built to new DIN 1055 regulations
- 10 year product guarantee

* New DIN 1055 Load Norms

The MHHnovotegra system has been developed within the guidelines for load bearing structures set out by the German Institute for Norms (DIN) in section 1055. This guarantees a stable construction that can withstand extremely high snow and wind loads. Due to country specific variations in load bearing regulations, an independent assessment of building and mounting system statics maybe required for the installation of MHHnovotegra components outside of Germany.



Easy, Stable, and Flexible

MHHnovotegra is our mounting system with extraordinary qualities: it is easy to install in a variety of roof configurations and is extremely stable. The system is constructed from durable and corrosion resistant materials under DIN 1055 regulations* and is therefore extremely resilient, even under high snow and wind load conditions.

MHHnovotegra for Grooved Tile Roofs

The roof hook set from the MHHnovotegra product family is the ideal solution for installations on roofs with grooved tiles. The set consists of a base plate and a hook which is easily screwed into the base plate. With its double height adjustment, the roof-hook can be configured to every type of tile and roof and makes it possible to achieve flat and even module configurations, even on uneven roofs. In areas with high snow loads, a second hook can be screwed into a large base plate to increase system stability.

Mounting the C-rails on the hooks always follows the same principle, regardless of configuration: a simple screw fastener with an M12 locking bolt secures a quick, strong and reliable connection, whether you are installing the system with single rails or in a cross rail configuration. The inside chamber of the rails serves as a canal for cables, and offers plenty of room for both wiring and module connections. Thanks to proven MHH clamp technology, modules can be quickly and safely mounted onto the railing in both vertical and horizontal layouts. Individual modules can be easily removed and remounted at will. All of our end and middle clamps are shipped ready to install and are also available in anodized black.

MHHnovotegra for Tile Roof

Grooved Tile

Roof Mounting Hardware	Description	Material	Pieces/ Pkg.	Art. Nr.
Roof hook set	appropriate for tile lengths up to 80 mm	Stainless Steel/Alu	50	210002
Double hook set	extremely stable for high snow load regions	Stainless Steel/Alu	25	210003
Fastening set 100/140	for 0–30 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214165
Fastening set 140/180	for 31–70 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214169
Fastening set 180/220	for 71–110 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214162
Fastening set 220/260	for 111–150 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214163
Fastening set 300	for 151–190 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	21415

Mounting Rails

C-rail 4,20 m	with slotted holes every 10 cm	Alu	70	21500
C-rail 6,12 m	with slotted holes every 10 cm	Alu	70	215110
Rail connector set	for end to end rail connections	Stainless Steel/Alu	50	21530
Cross rail connector set	for cross rail mounting configurations	Stainless Steel/Alu	50	21540

Module Clamps

Middle clamp set 34–42	for frame heights between 34–42 mm	Stainless Steel/Alu	100	216010
Middle clamp set 34–42 in black	for black frame heights between 34–42 mm	Stainless Steel/Alu	100	216011
Middle clamp set 43–52	for frame heights between 43–52 mm	Stainless Steel/Alu	100	216012
Middle clamp set 43–52 in black	for black frame heights between 43–52 mm	Stainless Steel/Alu	100	216013
End clamp set 34–42	for frame heights between 34–42 mm	Stainless Steel/Alu	20	216210
End clamp set 34–42 in black	for black frame heights between 34–42 mm	Stainless Steel/Alu	20	216211
End clamp set 43–52	for frame heights between 43–52 mm	Stainless Steel/Alu	20	216212
End clamp set 43–52 in black	for black frame heights between 43–52 mm	Stainless Steel/Alu	20	216213
Module slip guard M6	for frame holes between 6–8 mm	Stainless Steel	50	21640
Module slip guard M8	for frame holes between 8–10 mm	Stainless Steel	50	21645
Slip guard for horizontal modules	slip guard for modules mounted horizontally	Stainless Steel/Alu	50	216500
Slip guard for horizontal installation in black	slip guard for black framed modules mounted horizontally	Stainless Steel/Alu	50	216502

Accessories

C-rail end cap	for an asthetic look for rail ends	Stainless Steel/Alu	50	210600
Grounding connector set SW18	mounting system grounding	Stainless Steel	10	21700
Special lock nut SW18 deep	socket with clamp effect for M12 stock bolts		1	21900
Bit extension 250 mm	facilitates installation of roof hooks		1	21905



Two hooks stabilize the system in high snow load zones



C-rail with cross rail connector



C-rail with rail connector



Middle and end clamps for easy installation



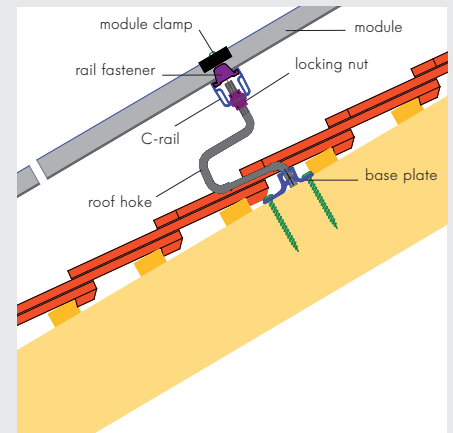
MHHnovotegra for beaver tail tile roofs

MHHnovotegra for Beaver tail tiles

For the installation of our system on a beaver tail tile roof, we offer a beaver tail roof hook set. The set consists of a base plate and a specially formed hook which is screwed into the base plate. Due to its slim form, the beaver tail roof hook fits perfectly through the small spaces between roof battens that are common in beaver tail tile roofs. Even better: the hook lays directly between two tiles and doesn't run under the tiles themselves. In areas with high snow loads, a second hook can be screwed into the base plate to increase the stability of the entire system. The beaver tail roof hook is double adjustable and easily configured to different tile and roof batten heights. In this way, uneven roof surfaces can be corrected to achieve level module arrays. Because the hook does not lie directly on the tiles there is no need for expensive protective shims. Mounting the C-rails always follows the same principle: a simple screw fastener with an M12 locking bolt secures a quick, strong and reliable connection, regardless of whether you are installing the system with single rails or in a cross rail configuration.

Thanks to proven MHH clamp technology, modules can be quickly and safely mounted onto the C-rails in either vertical or horizontal layouts. Individual modules can be easily removed and remounted at will.

All of our end and middle clamps are shipped ready to install and are also available in anodized black to better match modules with black frames.



Construction on roof with beaver tail tiles

Advantages

- Very lightweight and durable
- Proven mounting technology
- Easily installed from above the rails
- Pre-configured fasteners for quick installation
- Concealed system frame
- Double adjustable roof hooks
- Roof hook doesn't make contact with tile, even when under load
- No need for expensive shims
- C-rail functions as a cable channel
- Built to new DIN 1055 regulations
- 10 year product guarantee

MHHnovotegra for Tile Roof

Beavertail Tile Roof

Roof Mounting Hardware	Description	Material	Pieces/Pkg.	Art. Nr.
Beavertail tile roof hook set	for beavertail tiles	Stainless Steel/Alu	50	214060
Beavertail tile double hook set	extremely stable for high snow load regions	Stainless Steel/Alu	25	214061
Fastening set for beavertail tiles 100	for 0–30 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214166
Fastening set for beavertail tiles 140	for 31–70 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214161
Fastening set 180/220	for 71–110 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214162
Fastening set 220/260	for 111–150 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	214163
Fastening set 300	for 151–190 mm roof board, counter latten and over rafter insulation	Stainless Steel/ Electroplated Steel	50	21415

Mounting Rails

Beavertail C-rail 5,10 m	with hole pattern for beavertail tile widths of 180 mm	Alu	70	21517
Rail connector set	for end to end rail connections	Stainless Steel/Alu	50	21530
Cross rail connector set	for cross rail mounting configurations	Stainless Steel/Alu	50	21540

Module Clamps

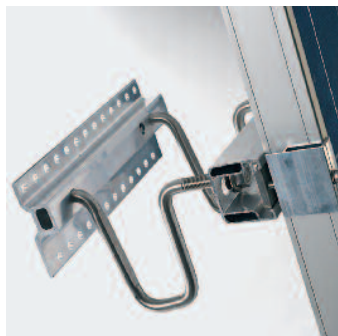
Middle clamp set 34–42	for frame heights between 34–42 mm	Stainless Steel/Alu	100	216010
Middle clamp set 34–42 in black	for black frame heights between 34–42 mm	Stainless Steel/Alu	100	216011
Middle clamp set 43–52	for frame heights between 43–52 mm	Stainless Steel/Alu	100	216012
Middle clamp set 43–52 in black	for black frame heights between 43–52 mm	Stainless Steel/Alu	100	216013
End clamp set 34–42	for frame heights between 34–42 mm	Stainless Steel/Alu	20	216210
End clamp set 34–42 in black	for black frame heights between 34–42 mm	Stainless Steel/Alu	20	216211
End clamp set 43–52	for frame heights between 43–52 mm	Stainless Steel/Alu	20	216212
End clamp set 43–52 in black	for black frame heights between 43–52 mm	Stainless Steel/Alu	20	216213
Module slip guard M6	for frame holes between 6–8 mm and vertically mounted modules	Stainless Steel	50	21640
Module slip guard M8	for frame holes between 8–10 mm and vertically mounted modules	Stainless Steel	50	21645
Slip guard for horizontal modules	slip guard for modules mounted horizontally	Stainless Steel/Alu	50	216500
Slip guard for horizontal installation in black	slip guard for black framed modules mounted horizontally	Stainless Steel/Alu	50	216502

Accessories

C-rail end cap	for an aesthetic look for rail ends	Stainless Steel/Alu	50	210600
Grounding connector set SW18	mounting system grounding	Stainless Steel	10	21700
Special lock nut SW18 deep	socket with clamp effect for M12 stock bolts		1	21900
Bit extension 250 mm	facilitates installation of roof hooks		1	21905



The C-rail—shown here with grounding connector—has enough room for cables and connectors



Double hook configuration



Specially designed lock nut with clamp effect for M12 stock bolts

Your specialty dealer: