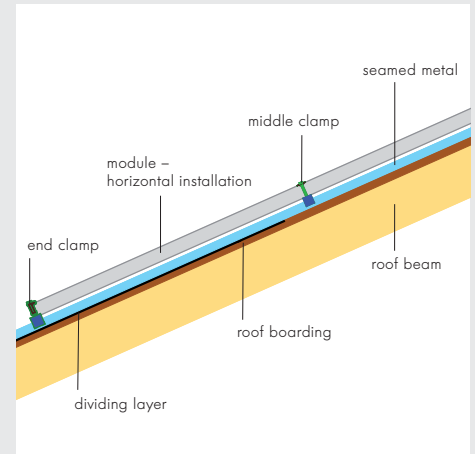




## MHHnovotegra for Seamed Metal Roof



Direct installation with rounded seam clamp



Construction of a direct installation

### Easy, Stable, and Flexible

MHHnovotegra is our mounting system with exceptional qualities: it is easy to install on a variety of roof types and is extremely stable. The system is constructed from durable and corrosion resistant materials under DIN 1055 regulations\* and is extremely resilient—even under high snow and wind load conditions.

### Direct Installation

Industrial seamed metal roofs are playing an ever growing role in the installation and planning of photovoltaic arrays because they often offer large, completely unshaded surfaces. The MHHnovotegra system offers innovative and cost-effective solutions for these types of installations. Mounting modules directly onto a seamed metal roof is quick and easy with the MHHnovotegra system: the modules are layed horizontally on the roof and secured directly to the roof surface with our seam clamp set. The clamp is simply layed onto the seam of the roof and fixed with a set screw. Our unique seam clamps are available for both standing and rounded seams. This configuration does not require any railing or extra components which reduces overall system costs. The modules are then quickly and securely fastened with the end and middle clamp sets, which come pre-assembled with standing or round seam clamps. These are also available in anodized black to better match the frames of some modules. We also offer special solutions for copper roofs—please contact us for information.

### Advantages

- Very lightweight and durable
- Quick and easy installation
- No rails necessary
- Material saving design means reduced overall system costs
- Suitable for standing and round seamed metal roofs
- Pre-configured fasteners for quick installation
- Proven mounting technology
- Easy layout to 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.

MHHnovotegra for Seamed Metal Roof

Direct Installation (Horizontal Installation)

Standing Seam Mounting Hardware	Description	Material	Pieces/Pkg.	Art. Nr.
Middle clamp set 35—standing seam	for module frame heights 34–37 mm	Stainless Steel /Alu	50	210120
Middle clamp set 35 black—standing seam	for black module frame heights 34–37 mm	Stainless Steel /Alu	50	210220
Middle clamp set 40—standing seam	for module frame heights 38–42 mm	Stainless Steel /Alu	50	210125
Middle clamp set 40 black—standing seam	for black module frame heights 38–42 mm	Stainless Steel /Alu	50	210225
Middle clamp set 45—standing seam	for module frame heights 43–47 mm	Stainless Steel /Alu	50	210130
Middle clamp set 45 black—standing seam	for black module frame heights 43–47 mm	Stainless Steel /Alu	50	210230
Middle clamp set 50—standing seam	for module frame heights 48–52 mm	Stainless Steel /Alu	50	210135
Middle clamp set 50 black—standing seam	for black module frame heights 48–52 mm	Stainless Steel /Alu	50	210235
End clamp set 35—standing seam	for module frame heights 34–37 mm	Stainless Steel /Alu	50	210100
End clamp set 35 black—standing seam	for black module frame heights 34–37 mm	Stainless Steel /Alu	50	210200
End clamp set 40—standing seam	for module frame heights 38–42 mm	Stainless Steel /Alu	50	210105
End clamp set 40 black—standing seam	for black module frame heights 38–42 mm	Stainless Steel /Alu	50	210205
End clamp set 45—standing seam	for module frame heights 43–47 mm	Stainless Steel /Alu	50	210110
End clamp set 45 black—standing seam	for black module frame heights 43–47 mm	Stainless Steel /Alu	50	210210
End clamp set 50—standing seam	for module frame heights 48–52 mm	Stainless Steel /Alu	50	210115
End clamp set 50 black—standing seam	for black module frame heights 48–52 mm	Stainless Steel /Alu	50	210215

Rounded Seam Mounting Hardware	Description	Material	Pieces/Pkg.	Art. Nr.
Middle clamp set 35—rounded seam	for module frame heights 34–37 mm	Stainless Steel /Alu	50	210320
Middle clamp set 35 black—rounded seam	for black module frame heights 34–37 mm	Stainless Steel /Alu	50	210420
Middle clamp set 40—rounded seam	for module frame heights 38–42 mm	Stainless Steel /Alu	50	210325
Middle clamp set 40 black—rounded seam	for black module frame heights 38–42 mm	Stainless Steel /Alu	50	210425
Middle clamp set 45—rounded seam	for module frame heights 43–47 mm	Stainless Steel /Alu	50	210330
Middle clamp set 45 black—rounded seam	for black module frame heights 43–47 mm	Stainless Steel /Alu	50	210430
Middle clamp set 50—rounded seam	for module frame heights 48–52 mm	Stainless Steel /Alu	50	210335
Middle clamp set 50 black—rounded seam	for black module frame heights 48–52 mm	Stainless Steel /Alu	50	210435
End clamp set 35—rounded seam	for module frame heights 34–37 mm	Stainless Steel /Alu	50	210300
End clamp set 35 black—rounded seam	for black module frame heights 34–37 mm	Stainless Steel /Alu	50	210400
End clamp set 40—rounded seam	for module frame heights 38–42 mm	Stainless Steel /Alu	50	210305
End clamp set 40 black—rounded seam	for black module frame heights 38–42 mm	Stainless Steel /Alu	50	210405
End clamp set 45—rounded seam	for module frame heights 43–47 mm	Stainless Steel /Alu	50	210310
End clamp set 45 black—rounded seam	for black module frame heights 43–47 mm	Stainless Steel /Alu	50	210410
End clamp set 50—rounded seam	for module frame heights 48–52 mm	Stainless Steel /Alu	50	210315
End clamp set 50 black—rounded seam	for black module frame heights 48–52 mm	Stainless Steel /Alu	50	210415



Direct Installation with standing seam clamp



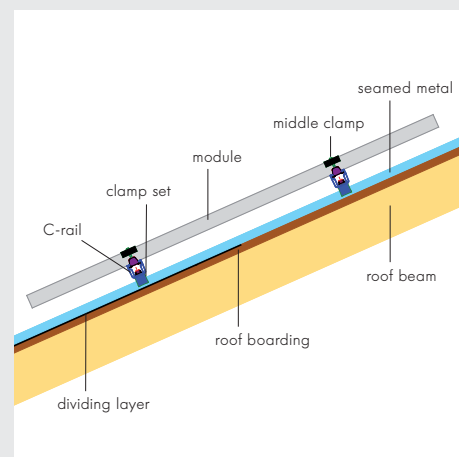
End and middle clamps for round seamed roofs



End and middle clamps for standing seamed roofs



C-rail installation on round seamed roof



Construction of C-rail installation

### C-Rail Installation

In addition to the direct installation of modules to seamed metal roofs, it is possible to mount your modules in a vertical configuration using our unique C-railing. With a specially designed seam clamp set for vertical installations, the MHHnovotegra family offers a flexible and secure solution for your needs.

When mounting modules in this configuration, the seam clamps are directly attached to the roof seams and secured with a set screw. The unique MHHnovotegra clamps are available for both standing and round seamed roofs, and we offer a special standing seam clamp set for copper roofs as well. The C-rails are then attached to the seam clamps horizontally along the roof. 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. We recommend installing the lock bolts with our specially designed socket and a torque wrench. Additionally, the inside chamber of the rails serves as a channel for cables, and offers plenty of room for both wiring and module connections. The modules are then attached to the C-rail in a vertical orientation using the appropriate end and middle clamps. Proven MHH clamp technology ensures a secure connection between the module and the C-rail. All of our end and middle clamps are shipped ready to install and are also available in anodized black.

### Advantages

- Very lightweight and durable
- Quick and easy installation
- Material saving design means reduced overall system costs
- Suitable for standing and round seamed metal roofs
- Pre-configured fasteners for quick installation
- Proven mounting technology
- Easy layout to DIN 1055 regulations
- 10 year product guarantee



## MHHnovotegra for Seamed Metal Roof

### C-Rail Installation (Vertical Installation)

Roof Mounting Hardware	Description	Material	Pieces/Pkg.	Art. Nr.
Standing seam clamp set—vertical installation	for vertical module installation on C-rails on standing seam roofs	Stainless Steel/Alu	50	210500
Rounded seam clamp set—vertical installation	for vertical module installation on C-rails on rounded seam roofs	Stainless Steel/Alu	50	210505
Standing seam clamp set for copper roofs	for vertical module installation on C-rails on copper standing seam roofs	Stainless Steel	50	21430

### Mounting Rails

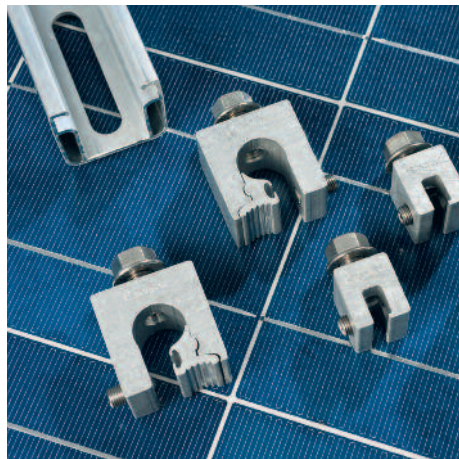
C-rail 4,20 m	with slotted holes every 10 cm	Alu	70	21500
C-rail 6,12 m	with slotted holes every 10 cm	Alu	70	215110
Rail connector set	for end to end rail connections	Stainless Steel/Alu	50	21530

### 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

### Accessories

C-rail end cap	for an aesthetic look for rail ends	Stainless Steel/Alu	50	210600
Special lock nut SW18 deep	socket with clamp effect for M12 stock bolts		1	21900



C-rail with rounded and standing seam clamp set



C-rails are attached directly to the standing seam clamp



Middle and end clamps for easy installation

Your specialty dealer: