SKYRACK Standing Seam
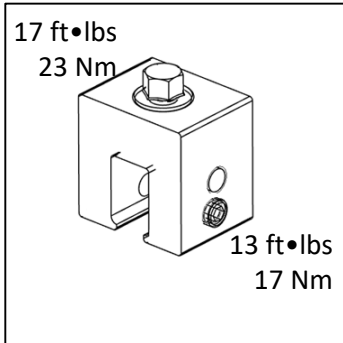# Field Guide
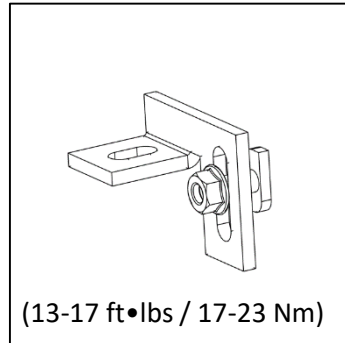

TOOL LIST

String Line

Measuring Tape

Sharpie

13mm Socket

Torx 40 bit
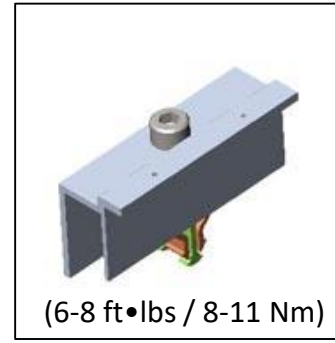
Impact Driver

hb Solar International Inc.
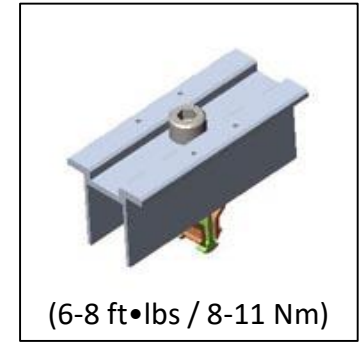
Components with Torque Values:

17 ft•lbs
23 Nm

13 ft•lbs
17 Nm

98121-02
Standing Seam Clamp

(13-17 ft•lbs / 17-23 Nm)

92873
Miracle Bracket

(6-8 ft•lbs / 8-11 Nm)

1412b
ClikLoc end-clamp

(6-8 ft•lbs / 8-11 Nm)

1411b
ClikLoc mid-clamp
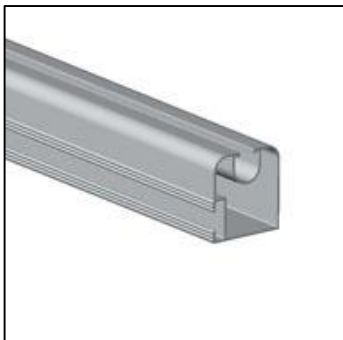
8395
SkyRail3

1946
Splice bar with bonding
washer - SkyRail3

(13-17 ft•lbs / 17-23 Nm)

3220: T-bolt
3501: Nut

2.9 ft•lbs
4 Nm

6.3 ft•lbs
8.5 Nm
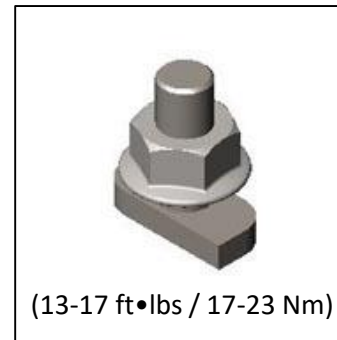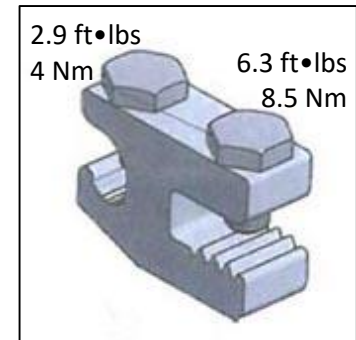
8210
Ilsco SGB-4 lug

Standing Seam Roof: Standing Seam CLAMPS

- On standing seam roof, standing seam clamps are used
- Use string line to mark the location points for clamps
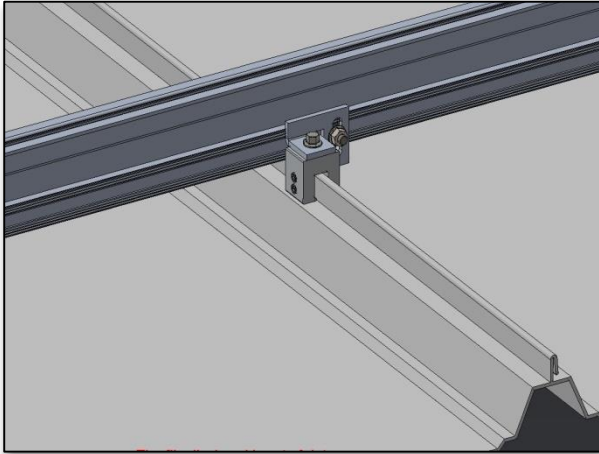- Use 5mm allen bit to secure the clamp

Crimp seams if necessary to get the clamps to fit over the seam and sit flat.
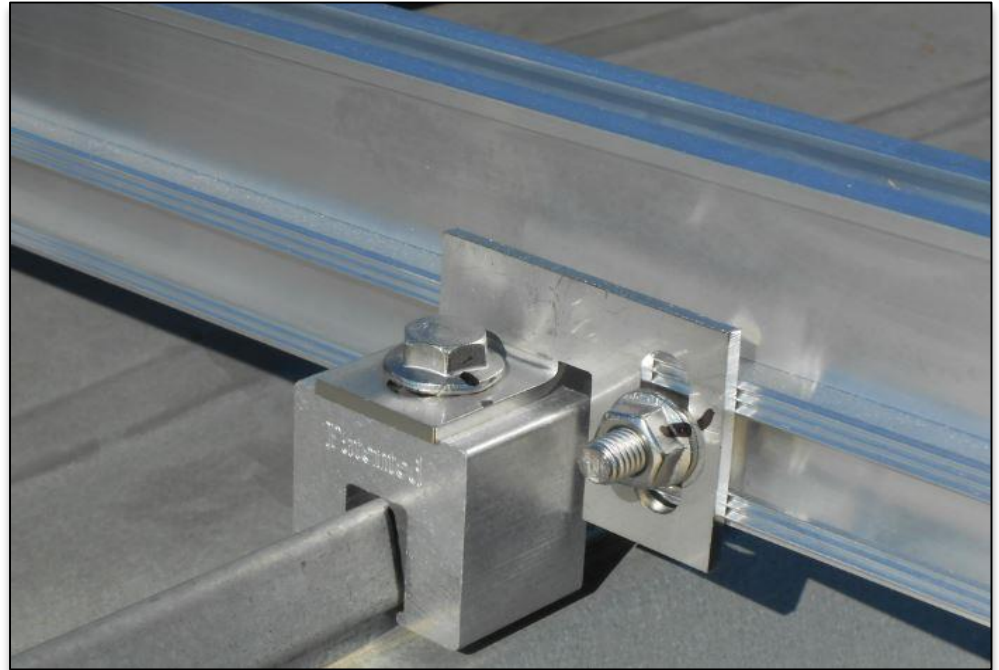

- Standing seam clamps will work with SKYRACK in the vertical or horizontal position

# Miracle Brackets *(17-23N·m, 13-17ft·lb)*

Standing Seam Clamp

Attach miracle bracket to seam clamp using supplied hex bolt
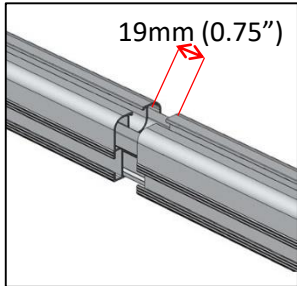

IMPORTANT NOTE: *before installing all rails for entire array, always confirm using modules, or accurate measuring, that expected module row lengths will not only fit on installed rails, but that there will be no interference between rail splice points and modules clamps.*
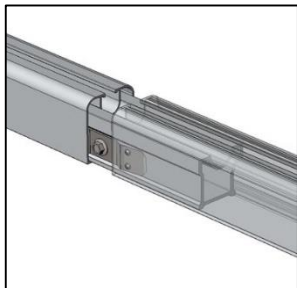
Module Rail Splicing
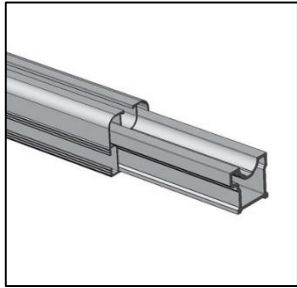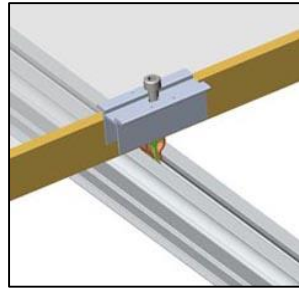
Step 1 – Insert splice bar into first rail

Step 2 – Slide second rail over splice – gap between rails = 19mm (0.75")
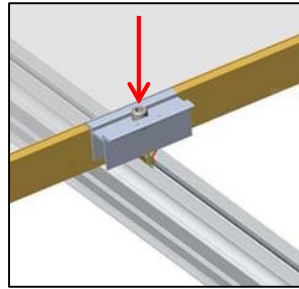
19mm (0.75")

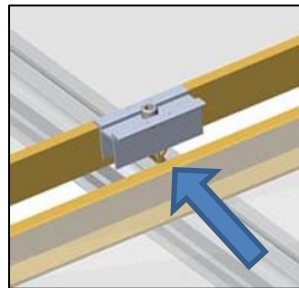Step 3 – back side of rail/splice showing grounding washer
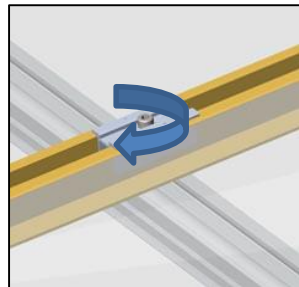
Module Clamping

Step 1 – Place clamp on rail near first module

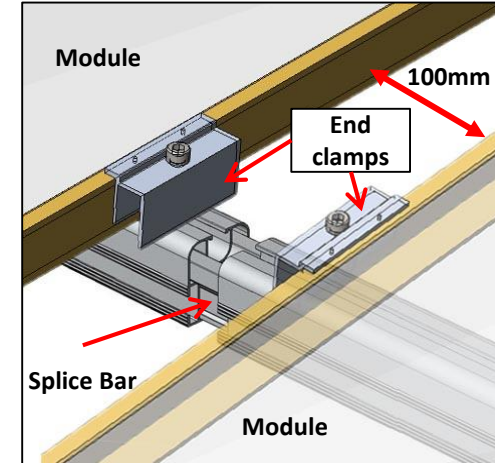Step 2 – Push down sharply on bolt with tool. Confirm teeth are engaged with rail

Step 3 – Slide next module tight to/under clamp

Step 4 – *Torque bolt to 6-8 ft•lbs (8-11 Nm) or to module manufacturer's specified torque.*

Expansion Splice

Module

100mm

End clamps

Splice Bar

Module

Expansion splices - *only where indicated on Layout* (using end-clamps and standard splice bar):
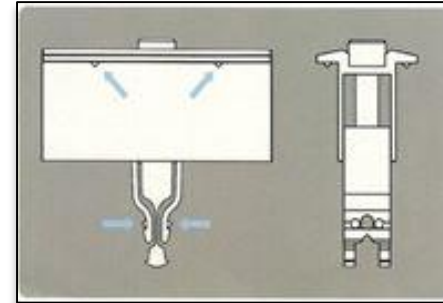
- Expansion splices typically installed after every 18m of continuously joined rails
- Leave 100mm (4") between modules. Cut rails in between modules if needed.
- Use end-clamps on either side of expansion splice
- **Leave 19mm (0.75") between *rail ends***

Placing Solar Modules – ClicLoc Clamps *(8-11N·m, 6-8ft·lb)*
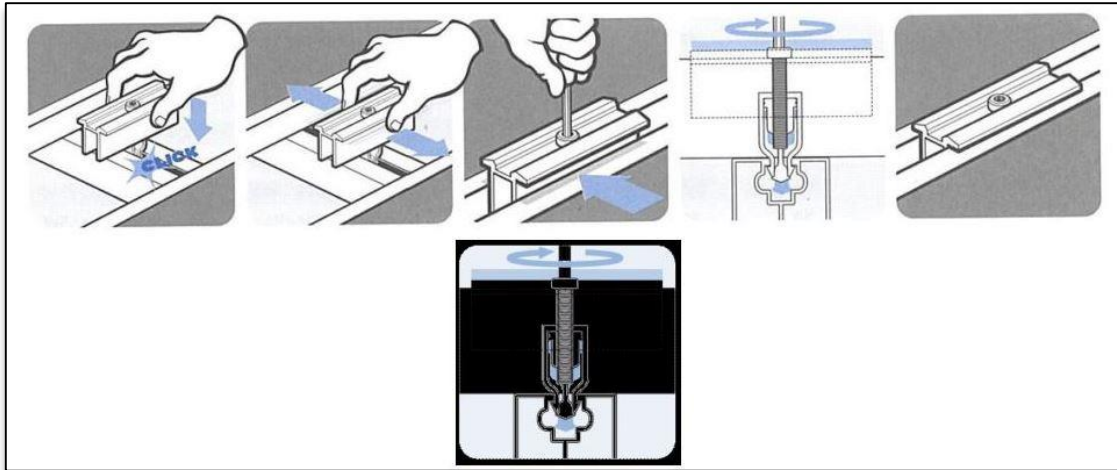
ClicLoc mid-clamp with integrated grounding nodes.

Use a mid-clamp as a temporary spacer to ensure an even 3/4" (20mm) gap around modules

- Snap ClicLoc clamp into rail by pushing downwards. Tighten once clamp is flush with module
- Once ClicLoc end clamp is secure and module in place, snap the ClicLoc mid-clamp into the rail flush against module
- Confirm modules are flush with clamps. Taking time/care in getting the first PV module square, following modules line up more easily
- Consult installation layout when placing the first module. Ensure there is enough space on all rails to fit all required modules and clamps before proceeding

Torque module clamps to 6-8 ft-lbs (8-11Nm) using Torx 40 bit. Do not over-torque

Grounding – Ilsco SGB-4 *(4N·m, 2.9ft·lb)*

- As per diagram, use SGB-4 to bond one rail per row of modules. System grounding must be in accordance with the National Electrical Code, ANSI/NFPA 70.

SOLAR MODULE

LEGEND

▣	MODULE CLAMP	○	GROUNDING LUG
▭	RAIL	⏚	MIN. 10 AWG COPPER WIRE
∿	SPLICE LOCATION		