



INSTALLATION GUIDE

Standing Seam Rail Series

Universal Clamp · TitanCore Rail · Ice Blockers

A non-penetrating snow retention system for standing seam metal roofs. The clamp attaches to the panel seam with set screws only — no holes are drilled through the roof panel, so panel warranties stay intact.

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TOOLS REQUIRED

Tape measure, level or chalk line, marker, drill / driver, 5 mm hex bit and extension, torque wrench reading in-lb, reciprocating saw, hammer, Phillips bit.

UV Stabilized

-30 Rated

Non-Penetrating

Fastest Installation

Read this guide completely before beginning. Clamp spacing is project-specific — confirm your layout with the project calculator at arcticanchors.com before you install.

SECTION 1

Before You Begin

The ArcticAnchor™ Standing Seam Rail Series is a non-penetrating snow retention system. It attaches to the panel seam with set screws only — no holes are drilled through the roof panel, so panel warranties stay intact.

How the system goes together

Universal clamps grip the standing seam and are set to a fixed torque. A continuous TitanCore rail — a hollow triangular extrusion — threads through the matching slot in each clamp, joined section-to-section with friction-fit joiners and closed off with end caps. Optional ice blockers sit between clamps to stop small ice and snow fragments from passing under the rail.

WARNING · Work safely at height

Roof work carries a serious fall risk. Use fall protection appropriate to the roof pitch and height, and follow all local occupational safety regulations. Never install on a wet, frosted, snow-covered, or icy roof. Rail sections are long and awkward — a two-person crew is recommended for the entire rail installation, and required for hammering joiners.

IMPORTANT · Spacing is calculated, not assumed

Clamp spacing depends on roof slope, snow load, rail span and panel rib spacing — it is not a fixed number. Run your project through the calculator at arcticanchors.com and have the layout in hand before the first mark goes on the roof. Installing to the wrong spacing can overload the system.

Pre-installation checks

- The roof is clean, dry, and clear of debris, fasteners, and offcuts.
- Panel seams are straight, undamaged, and free of dents or crimps where clamps will land.
- You have the clamp spacing and total clamp count from the ArcticAnchor™ calculator.
- You have measured the panel rib (seam-to-seam) spacing on the actual roof — clamps land on seams, so real-world on-centre spacing will be a multiple of that dimension.
- You have confirmed the eave line is straight; if it is not, plan to work from a chalk line rather than measuring off the edge at every clamp.

Tools and materials

Tool	Used for	Notes
Measuring tape	Eave setback, clamp layout, rail trim	25 ft minimum
Level or chalk line	Aligning clamps before torquing	Critical — see Section 4
Marker	Marking clamp base positions	Use a marker that will not stain the finish
Drill / driver	Snugging the set screws	Set to a medium torque / clutch setting
5 mm hex bit	Set screws and top bracket screws	The only bit size needed for the clamp
Bit extension	Reaching the set screws squarely	Strongly recommended
Torque wrench	Final torque of all set screws	Must read in-lb; set to 130 in-lb

Tool	Used for	Notes
Reciprocating saw	Trimming the final rail to length	Fit a metal-cutting blade
Hammer	Joiners and end caps	Dead-blow or rubber mallet preferred
Phillips bit	Securing ice blockers	Only if ice blockers are part of the project

SECTION 2

Lay Out the Clamp Positions

Everything downstream depends on this layout. Take the time to get the setback and the spacing right before a single clamp is fastened.

1 Confirm your spacing against the panel

Measure the rib spacing on the roof you are actually working on and reconcile it with the spacing your calculator layout calls for. Because every clamp must sit on a seam, your installed spacing is always a whole multiple of the rib spacing — round *down* to the nearest seam rather than up, so you never end up with clamps further apart than the calculated maximum.

2 Set the eave setback

The **eave setback** is the distance from the eave edge to the base of the clamp. Measure **10 – 12 inches** and mark it. This setback gives the rail system enough room behind it to hold accumulated snow and ice, and keeps the load off the very edge of the panel. Mark the base position of the clamp at that dimension.

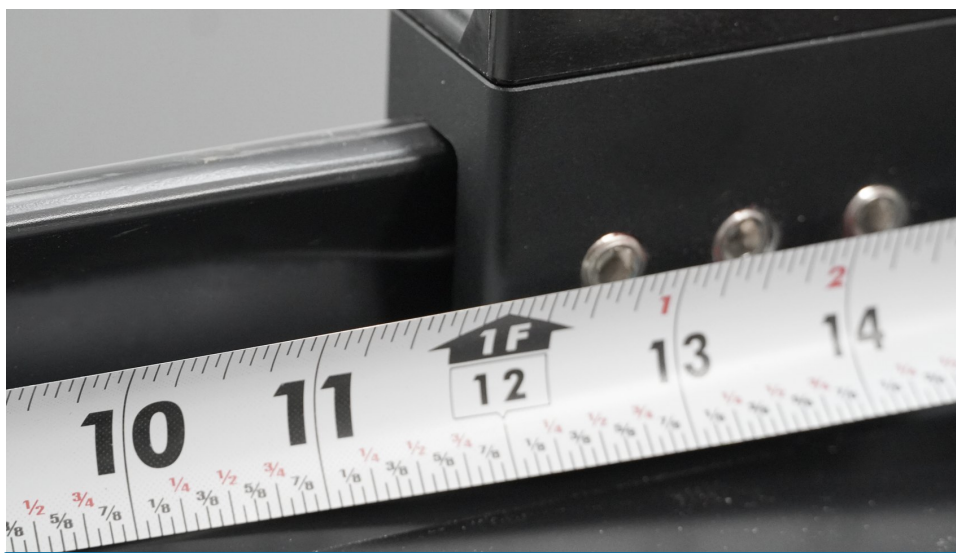


Figure 1 — Eave setback. Measure to the *base* of the clamp, not the top bracket, and keep the tape square to the eave so the setback is identical from one end of the roof to the other.

3 Mark out the full run

Working from your first mark, lay out the base position of every clamp across the roof at the calculated spacing. Snap a chalk line or use a level line so all the marks sit on a single straight reference — you will use this line again in Section 4 to align the clamps before torquing.

SECTION 3

Set the Universal Clamps

In this section the clamps are positioned and snugged — but not fully torqued. They must stay adjustable until the whole run is aligned.

4 Check the orientation before you fasten

The TitanCore rail is a triangular extrusion, and the slot in the top bracket only accepts it one way round. Set the clamp on the seam so the **flat face of the rail will face up-slope**, toward the ridge — that is the face the snow bears against. Confirm this on the first clamp and keep every clamp on the roof identical.

5 Reverse the top bracket if needed

By default the set screws fasten on one side of the seam. If your roof or working position requires fastening on the **left** side of the seam instead:

- Using a 5 mm hex bit, back out the top screws holding the bracket in place.
- Reverse the bracket.
- Re-tighten the top screws.

Decide this before you start the run and keep the orientation consistent across the whole roof.

6 Snug the clamp to the seam

Set your drill to a **medium torque setting** and, using a 5 mm hex bit on an extension, drive the set screws in this order:

MIDDLE → TOP → BOTTOM → MIDDLE again

Returning to the middle screw pulls the clamp square to the seam and evens out the grip. Drive only until the clamp is **secure but still adjustable** — full torque comes later.



Figure 2 — Driving the set screws. A 5 mm hex bit on an extension keeps the bit square to the screw, which prevents cam-out and uneven seating.

7

Repeat across the roof

Work through every marked position until all clamps are set. Do not fully torque any of them yet.

SECTION 4

Align, Then Torque

This is the point of no return. Alignment must be finished before the set screws are brought to final torque.

WARNING · Align before you torque — there is no second chance

Once the POM tips are fully torqued they bite into the seam and the clamps **cannot be adjusted**. Confirm every clamp is level and in line first. Anything that needs moving must be moved now.

8

Align and level every clamp

Check the full run against your chalk or level line. Every clamp should sit at the same setback from the eave and read level across the roof. Nudge any clamp that is high, low, or out of line while the set screws are still only snug. Sight down the run from one end — misalignment shows up far more clearly by eye than it does on a tape.

9

Torque all fasteners to 130 in-lb

With the run aligned, bring every clamp to final torque using a torque wrench set to **130 in-lb**. Use the same sequence as before:

MIDDLE → TOP → BOTTOM → MIDDLE again · all three fasteners at 130 in-lb

All three set screws must reach 130 in-lb. Under-torqued fasteners will not develop full holding capacity; over-torquing can damage the seam and the POM tip.



Figure 3 — Final torque. Confirmed at 130.0 in-lb. A wrench that reads in inch-pounds is required — a standard foot-pound wrench does not resolve this range accurately.

SECTION 5

Install the TitanCore Rail

The rail threads through the triangular slot in each clamp and runs continuously across the roof.

10 Start at the end of the run

Begin at the furthest clamp on either end of the roof and slide the TitanCore rail through the triangular slots, feeding it clamp to clamp along the run.

11 Drop in ice blockers as you go

If ice blockers are part of this project: place an ice blocker between each pair of clamps as you thread the rail through. They cannot be added once the run is complete. Leave them loose for now — they get fastened at the very end.

12 Join rail sections with friction-fit joiners

When you reach the end of a rail section:

- Insert a friction-fit joiner into the open end of the installed rail and hammer it until it sits flush.
- Insert the end of the new rail section onto the exposed half of the joiner.
- Hammer the new rail home until it also sits flush against the joint.

Use two people for this step — one to steady and feed the rail, one to strike. Support the rail near the joint so the blow drives the joint together rather than flexing the rail.

13 Trim the final section

Continue sliding rail until you reach the last clamp, then **stop before inserting the final section** — it will almost always need trimming. Measure the remaining run, mark the cut, and cut the rail with a reciprocating saw fitted with a metal-cutting blade.

Leave at least **1/4 inch** of clearance at the end of the run to allow for thermal expansion and for movement under load. A rail cut hard against a fixed stop will bind, bow, or push against the end clamp as temperatures swing.

Deburr the cut end, then slide the final section into place.

14 Fit the end caps

Using a hammer, insert and seat the end caps at both ends of the run until they are fully secured.

SECTION 6

Finish and Verify

Final verification and, where specified, ice blocker installation.

15 Spot-check the torque

Return to the clamps and spot-check a sample across the run with your torque wrench, confirming the **centre fastener** still reads **130 in-lb**. Threading and hammering the rail can transmit movement into the clamps, so this check catches anything that has shifted. Re-torque any clamp that reads low, and check its neighbours if you find one.

16 Secure the ice blockers

If ice blockers are part of this project:

- Measure the centre distance between each pair of clamps and mark the midpoint on the panel.
- Slide the blocker along the rail to that mark.
- Using a Phillips bit, tighten the two screws to lock the blocker onto the rail.

Work along the run so the blockers stay evenly spaced and visually consistent from the ground.

Final inspection checklist

Check	What to confirm
Setback	Every clamp sits 10–12" from the eave, consistent across the run.
Alignment	Clamps are level and in a straight line; rail runs true with no visible bow.
Torque	All three set screws on every clamp at 130 in-lb; spot-checks pass on the centre fastener.
Seams	No penetration or tearing of the panel seam. Dimpling and crimping under the set screws is normal and expected.
Joints	Every joiner fully seated, rail ends flush with no gap, both end caps driven home.
Expansion	At least 1/4" of clearance remains at the end of the run.
Ice blockers	Centred between clamps, both screws tight (if specified).
Site	Roof swept clear of offcuts, filings, and packaging before leaving.

NOTE · Seasonal maintenance

Inspect at the start of each snow season: clamps still at 130 in-lb, rail joints still flush, and no debris packed in behind the rail where it would block meltwater drainage.

Questions during installation?

Project calculator, spacing tables and product support: arcticanchors.com

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