



INSTALLATION GUIDE

Exposed Fastener Rail Series

Rail Bracket · TitanCore Rail · Ice Blockers

A snow retention system for exposed fastener metal roofs. The bracket mounts to the flat of the panel on a factory-applied butyl base and is fastened with neoprene-washer screws, sealing the attachment at both the base and the fastener head.

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TOOLS REQUIRED

Tape measure, level or chalk line, marker, drill / driver, 8 mm socket, reciprocating saw, hammer, Phillips bit.

UV Stabilized

-30 Rated

Butyl Sealed

Fastest Installation

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

SECTION 1

Before You Begin

The ArcticAnchor™ Exposed Fastener Rail Series is a snow retention system for through-fastened metal roof panels. Every bracket carries a factory-applied butyl seal with a peel-off liner, and the fasteners seal at the head, so the attachment is weathered at both surfaces.

How the system goes together

Rail brackets are set into the flat of the panel on their butyl base and fastened through the panel with neoprene-washer screws. A continuous TitanCore rail — a hollow triangular extrusion — threads through the matching slot in each bracket, joined section-to-section with friction-fit joiners and closed off with end caps. Optional ice blockers sit between brackets to stop small ice and snow fragments from passing under the rail.

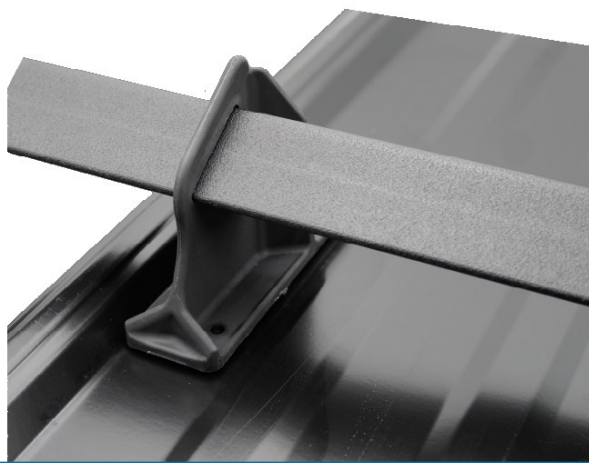


Figure 1 — The assembled system. The bracket seats in the flat of the panel and carries the TitanCore rail through the slot in the upright.

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

Bracket spacing depends on roof slope, snow load, rail span and panel profile — 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. The butyl will not bond to a dusty or damp panel.
- Panels are sound where brackets will land — no oil-canning, dents, or corrosion at the mounting points.
- Every bracket position falls on a **flat valley of the panel** with at least **1.4 inches** of flat width available. Brackets do not mount on or across a rib.
- You have the bracket spacing and total bracket count from the ArcticAnchor™ calculator.
- 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 bracket.

Tools and materials

Item	Used for	Notes
Measuring tape	Eave setback, bracket layout, rail trim	25 ft minimum
Level or chalk line	Aligning brackets before fastening	Critical — see Section 4
Marker	Marking bracket base positions	Use a marker that will not stain the finish
Drill / driver	Driving the panel fasteners	Clutch setting, not impact mode
8 mm socket	Driving the panel fasteners	The only driver size needed for the bracket
#10 x 1½" screws	Fastening brackets to the panel	Self-tapping, neoprene-washer head
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 Bracket Positions

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

1 Confirm your spacing against the panel

Measure the panel profile on the roof you are actually working on and reconcile it with the spacing your calculator layout calls for. Every bracket must land in a flat valley with at least **1.4 inches** of flat width, so adjust each position to the nearest suitable flat — and where you have to move one, move it *closer* to its neighbour rather than further away, so you never exceed the calculated maximum spacing.

2 Set the eave setback

The **eave setback** is the distance from the eave edge to the base of the bracket. 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 bracket at that dimension.



Figure 2 — Setting the eave setback. Measure from the eave edge to the base of the bracket, keeping the tape square to the eave so the setback is identical across the run.

3

Mark out the full run

Working from your first mark, lay out the base position of every bracket 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 check the run before fastening.

SECTION 3

Set the Brackets

The butyl base holds each bracket in position as soon as it is pressed down, so the whole run can be set and checked before any fastener is driven.

4

Check the orientation before you fasten

The TitanCore rail is a triangular extrusion, and the slot in the bracket only accepts it one way round. Set the bracket 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 bracket and keep every bracket on the roof identical.

IMPORTANT · The butyl grips on contact

Once a bracket is pressed onto the panel the butyl bonds to it. Lifting a bracket to reposition it contaminates the seal and it may not seat properly again. Check the mark before you press, not after.

5

Peel the liner and set the bracket

Peel the protective liner off the butyl base and place the base of the bracket on the marked point, centred in the flat of the panel. Press the bracket down lightly — the butyl will hold it in position on its own, which frees you up to set the whole run before committing to any fasteners.

6

Set the remaining brackets

Work through every marked position the same way until all brackets are set and holding. Do not drive any fasteners yet.

SECTION 4

Align, Then Fasten

Check the whole run before the first screw goes in. Once a bracket is fastened through the panel, moving it means a hole to repair.

7

Check the full run

Sight down the run against your chalk or level line. Every bracket should sit at the same setback from the eave, read level across the roof, and be evenly spaced. Misalignment shows up far more clearly by eye than it does on a tape. Correct anything out of line now.

8

Fasten the bracket to the panel

Fasten each bracket to the roof with **#10 × 1½" neoprene-washer self-tapping screws**, driven with an **8 mm socket**. Work the corners in a crossing pattern so the bracket pulls down evenly onto its butyl base:

BOTTOM LEFT → TOP RIGHT → BOTTOM RIGHT → TOP LEFT

The centre screw position is used **only on double rail brackets**. On a single rail bracket, leave it empty.



Figure 3 — Driving the fasteners. An 8 mm socket on a driver set to a clutch setting, not impact mode.



Figure 4 — Seating the washer. Drive until the washer is visibly compressed and the base is pulled flat, then stop.

NOTE · No torque spec — these are screws

These fasteners are not torqued to a figure. Drive each screw until the neoprene washer is visibly compressed and the bracket is pulled flat to the panel, then stop. Over-driving distorts the washer and the panel and will cost you the seal.

9

Confirm the weather seal

Before moving on, check both sealing surfaces on every bracket:

- The butyl has squeezed out and is pressed evenly around the full perimeter of the bracket base, with no gaps or lifted edges.
- Each neoprene washer is compressed and pressed out around the head of the fastener, forming a continuous seal at the penetration.

Both surfaces have to seal. A bracket with good butyl and a loose washer will still leak at the fastener.

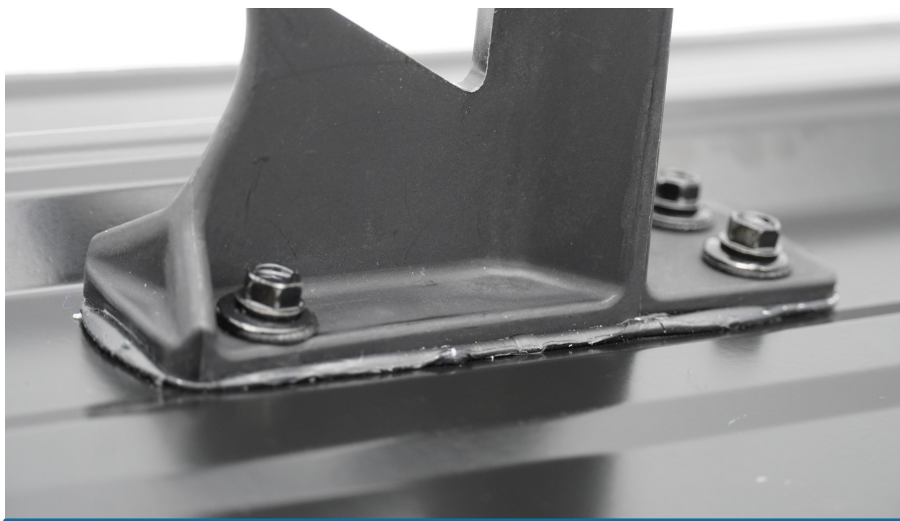


Figure 5 — A correctly sealed base. Butyl squeezed out evenly around the full perimeter of the base, with every washer compressed against the panel.

SECTION 5

Install the TitanCore Rail

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

10

Start at the end of the run

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



Figure 6 — Rail seated in the brackets. The rail runs continuously through the slot in each upright, carried above the panel across the whole 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 brackets 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 bracket, 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 bracket 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

Re-check the brackets and seals

Threading and hammering the rail transmits movement into the brackets, so walk the run again once it is complete. Confirm every fastener is still snug with its washer compressed, and that no bracket has been rocked off its butyl base. Re-seat and re-drive anything that has moved.

16

Secure the ice blockers

If ice blockers are part of this project:

- Measure the centre distance between each pair of brackets 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 bracket sits 10–12" from the eave, consistent across the run.
Placement	Every bracket centred in a flat valley, none on or across a rib.
Alignment	Brackets are level and in a straight line; rail runs true with no visible bow.
Fasteners	Four screws per bracket driven in the crossing pattern; centre screw only on double rail brackets.
Butyl seal	Butyl pressed evenly around the full perimeter of every bracket base, no gaps or lifted edges.
Washers	Every neoprene washer compressed and sealed around the fastener head; none distorted by over-driving.
Panel	No dishing, dimpling, or distortion of the panel around any fastener.
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 brackets, both screws tight (if specified).
Site	Roof swept clear of offcuts, filings, packaging, and butyl liners before leaving.

NOTE · Seasonal maintenance

Inspect at the start of each snow season: fasteners still snug with washers sealed, butyl still bonded around every bracket base, 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

ArcticAnchor™