ArcticAnchor™

INSTALLATION GUIDE

Tile Series Rail System

Tile Bracket · TitanCore Rail · Joiners & End Caps

A snow retention system for synthetic, metal, shake, and rubber tile roofs. The bracket fastens down through the tile and into the structure beneath as the roof goes on, so the attachment stays concealed under the next course and the rail is carried above the roofline.

CONTENTS

TOOLS REQUIRED

Tape measure, marker, drill / driver, driver bit for #10 lag screws, reciprocating saw, hammer.

UV Stabilized

-30 Rated

Concealed Base

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™ Tile Series is built for roofs where snow retention is supported beneath the roofing material rather than mounted through the visible surface. It suits synthetic, metal, shake, and rubber tile roof systems, which all install the same way.

How the system goes together

A flat steel base fastens down through the tile and into the structure beneath with #10 structural lag screws. The upright carries a continuous TitanCore rail — a hollow triangular extrusion — through the matching slot in each bracket, joined section-to-section with friction-fit joiners and closed off with end caps.

NOTE · Score marks replace the chalk line

Every base carries **2" and 3" score marks**. Line the appropriate mark up with the base of the tile or the tile's own alignment marking and each bracket lands at the same depth automatically. There is no need to snap a separate line for the snow retention — the roof course is the reference.

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 roof covering — it is not a fixed number. Run your project through the calculator at **arcticanchors.com** and have the layout in hand before the first bracket goes in. 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 substrate is sound where brackets will land, and it is a continuous deck. **Batten roofs require confirmation from ArcticAnchor™ support before you install.**

— You have the bracket spacing and total bracket count from the ArcticAnchor™ calculator.

— Every bracket position clears the tile nail line by 1”–4” and sits at least 2” from the tile edges.

— You have confirmed which score mark suits this roof covering, and test-fitted one bracket under a course before committing to the run.

— The roofing is installed up to the course below the bracket line, and the next course has not yet gone on.

Tools and materials

Item	Used for	Notes
Measuring tape	Bracket layout and rail trim	25 ft minimum
Marker	Marking bracket positions	Use a marker that will not stain the roofing
Drill / driver	Driving the fasteners	Clutch setting, not impact mode
#10 lag screws	Fastening the base through the tile	Structural; min. 3 per bracket, must reach solid structure
Reciprocating saw	Trimming the final rail to length	Fit a metal-cutting blade
Hammer	Joiners and end caps	Dead-blow or rubber mallet preferred

SECTION 2

Lay Out the Bracket Positions

The roof course does most of the layout work for you. Pick the bracket course, set the first bracket carefully, and the score marks carry that position across the rest of the run.

1

Identify the bracket course

Brackets install on the **second or third row of tiles** up from the eave. Working off a course rather than a measured setback keeps the run level with the roof and gives the rail room behind it to hold accumulated snow and ice, without putting load on the very edge of the roof. Pick one course and use it across the whole run.

2

Choose your score mark

Test-fit one bracket under a course. Slide the base in and line the **2"** or **3" score mark** up with the base of the tile — 2" and 3" are the most common spacings for synthetic tile. Pick the mark that seats the upright cleanly clear of the course above, then use that same mark for every bracket on the roof.

3

Clear the nail line

The base must not land on the nails holding the tile down. Position each bracket so it sits **1”–4” clear of the nail line for the second row of tiles**, adjusting sideways within that window rather than moving the bracket up or down the slope — the score mark sets the depth and should not change from bracket to bracket.

4

Keep clear of the tile edges

The base also needs room either side. Hold a **minimum of 2 inches of spacing from the edges of the tiles** before installing, so the bracket is not bearing on a tile edge or sitting over a joint between tiles.

5

Mark out the full run

Mark where every bracket will land across the roof at the calculated spacing. Because the score mark sets the depth for you, only the horizontal positions need marking.

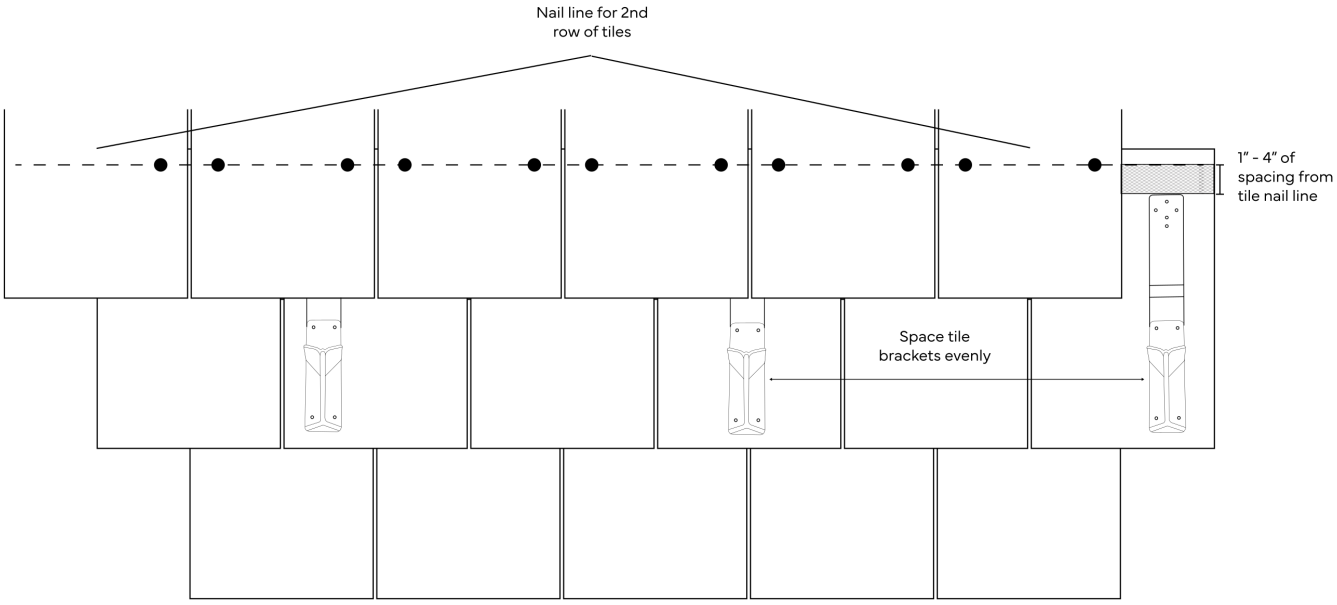

Figure 1 — Bracket spacing and nail line clearance. Brackets spaced evenly across the run, each set 1”–4” clear of the nail line for the second row of tiles.

SECTION 3

Set and Fasten the Brackets

Brackets go on as the roof goes on. Each one is fastened down before the next course of tiles is laid over it, so there is no lifting and no second alignment pass.

6 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.

7 Position the base

Set the flat steel base at the marked position with your chosen score mark lined up to the base of the course below, so the bracket sits at the same depth as every other one in the run. In most cases the base will land on top of a tile rather than on bare substrate — that is expected. The fasteners drive through the tile and on into the structure beneath it.

WARNING · Batten roofs — check before you install

These instructions assume the fasteners land in a continuous deck beneath the tile. On a **batten roof** there is an air gap under the covering, and a screw can pass through the tile and catch nothing. Do not install on a batten system until you have confirmed the attachment with **ArcticAnchor™ support** — a fastener that reaches only tile and air carries no load.

8 Fasten the base

Fasten the bracket into place using **#10 structural lag screws**, driven through the tile and into solid structure beneath. A **minimum of three screws per bracket** is required. You do not need to fill every hole in the base.

> **Use at least four screws per bracket** on any roof at **6/12 slope or steeper**, and/or in areas with a **ground snow load of 40 psf or more**.

Drive until the base pulls flat, then stop. Run the driver on a clutch setting rather than in impact mode.

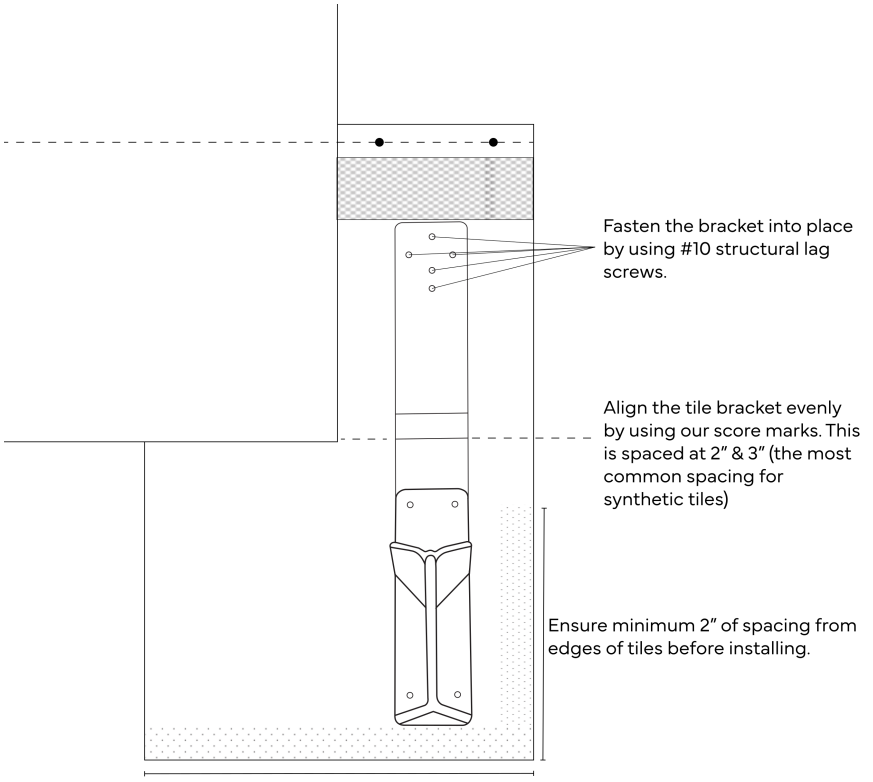

Figure 2 — Fastening the bracket. Align the base on the score marks, hold at least 2" clear of the tile edges, and fasten with #10 structural lag screws into solid structure.

> **NOTE · No torque spec — these are screws**
> These fasteners are not torqued to a figure. They are driven home until the base seats flat. Over-driving strips the substrate and costs you holding capacity.

9 Lay the next course and continue

With the bracket fastened, carry on installing the next course of tiles over the base. Work through every marked position the same way as the roof goes up. Sight down the run from one end as you go — misalignment shows up far more clearly by eye than it does on a tape.

SECTION 4

Install the TitanCore Rail

The rail threads through the triangular slot in each bracket and runs continuously across the roof. This is the same rail used across every ArcticAnchor™ Rail Series system.

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.

11 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.

12 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.

13 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 5

Finish and Verify

A last walk of the run once the rail is in.

14 Re-check the brackets and the roof covering

Threading and hammering the rail transmits movement into the brackets, so walk the run again once it is complete. Confirm every base is still pulled down tight and no bracket has shifted, and that the courses laid over the bases are sitting flat with nothing cracked, lifted, or left proud.

Final inspection checklist

Check	What to confirm
Bracket course	Every bracket on the same course — the 2nd or 3rd row up from the eave.
Score mark	The same score mark used on every bracket; uprights sit at a uniform depth.
Nail line	Every base 1”–4” clear of the tile nail line, none landing on a nail.
Tile edges	Every base at least 2" clear of the tile edges, none bearing on an edge or joint.
Alignment	Brackets are level and in a straight line; rail runs true with no visible bow.
Fasteners	Minimum three per bracket — four at 6/12+ slope or 40+ psf. Every screw into solid structure, every base pulled flat.
Batten roofs	Attachment confirmed with ArcticAnchor™ support before installing.
Roof covering	Courses laid over the bases sitting flat; nothing cracked, lifted, or proud.
Joints	Every joiner fully seated, rail ends flush with no gap, both end caps driven home.
Rail expansion	At least 1/4" of clearance left at the end of the rail run for thermal movement.
Site	Roof swept clear of offcuts, filings, and packaging before leaving.

NOTE · Seasonal maintenance

Inspect at the start of each snow season: bases still pulled down tight, courses still sitting flat over them, 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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