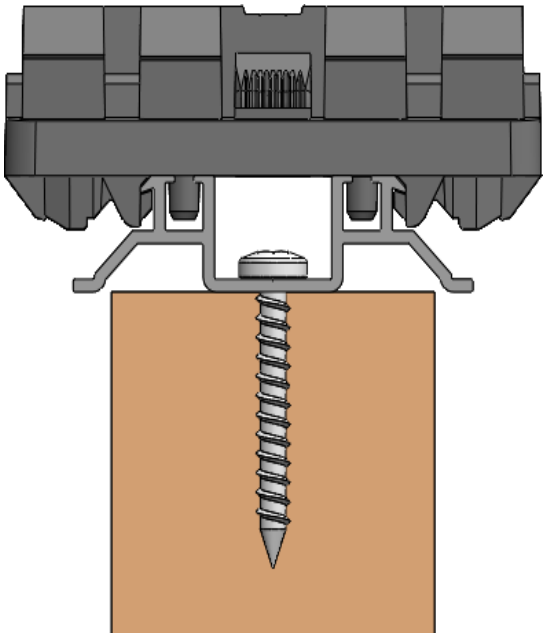
Grad™ for Decking



Please read in full prior to using Grad™ solutions.

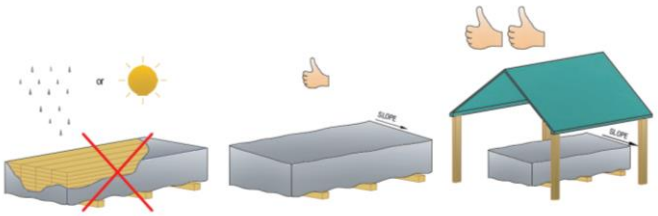
This version supersedes all previous versions.

February 2023

us.gradconcept.com

Transportation & Storage

- When transporting, the Grad ™ rails shall be secured in their original packaging and stored indoors before installation
- Grad™ rails can be stored outside for a brief period before installing
- Only material that is grooved to Grad's specifications can be used with Grad™ rails
- No heavy object should be placed on top of the rails to avoid damage.



Applications

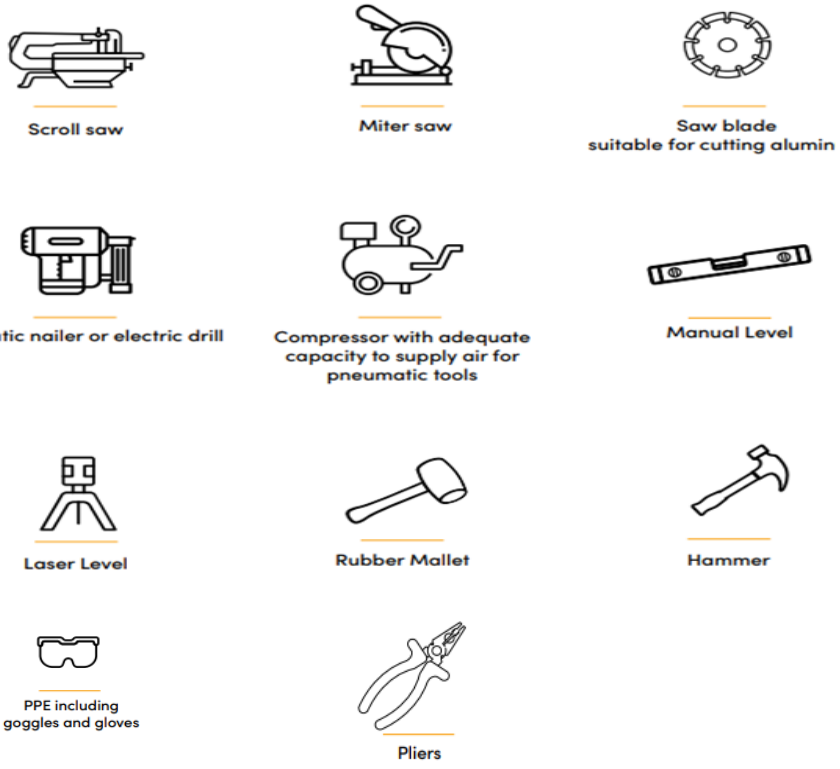
- The rails can be used for horizontal, vertical, and diagonal cladding applications
- Only use Grad® cladding as specified by the manufacturer

- **Safety guidelines**
- Wear protective clothing and safety equipment such as safety glasses, gloves, long
- sleeves, and a mask, particularly when cutting aluminum
- The installer is responsible for identifying and following all building codes and construction safety practices
- Grad™ accepts no liability or responsibility for the improper installation of this product
- Grad™ for cladding may not be suitable for every application, and it is the sole responsibility of the installer to be sure that Grad™ cladding is suitable for the intended application. All installations are unique, it is also the installer's responsibility to determine specific requirements for each cladding application.
- Grad™ Concept Inc. recommends customers to have all applications reviewed by a licensed architect, engineer, or local building official before installation.

Key Factors to Review Before Installation

- The wall should have a plumb surface
- Dimensions (lengths, widths, heights)
- Obstacles
- Angles
- Wall and window layouts
- Clearances
- Max joist spans
- Load weight lb/sqft

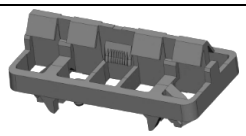
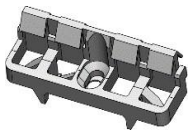
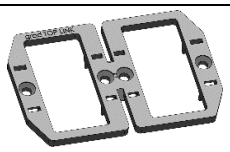
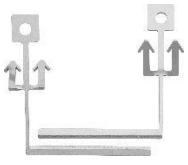
RECOMMENDED TOOLS & EQUIPMENT



Disclaimer

Although this guide was designed with as much precision as possible, in accordance with current practices for wood cladding, we are not liable for any errors or omissions that may arise from the use of this guide. All users of this guide fully assume all risks and responsibilities associated with it. This guide presents the best manufacturer installation practices. It supplements the codes and standards and manufacturer installation guides, but is not a replacement or substitute for these. As such, it is the installer's duty and responsibility to take all available documentation into account prior to completing work to ensure the validity of manufacturer warranties. To ensure simplification, the technical drawings in this guide do not show all construction details to meet requirements of codes and standards. Finally, do not hesitate to contact us should you have any doubt or should any queries arise regarding specific applications of the Grad rails that would not be covered in this guide

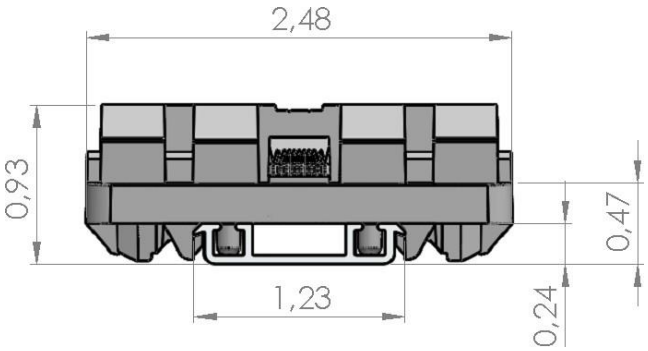
Accessories

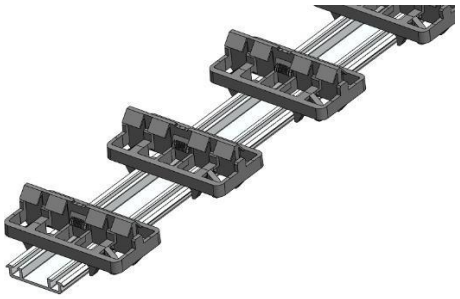
	Product reference	Description	Packing type	Raw material
	1483	Individual clip	Bag of 50 pcs	POM
	1485	Half clip – special for fascia use	Bag of 50 pcs	POM
	TBA	TOP LINK, linking piece to use between 2 rails 20 pc	Bag of 20 pcs	POM
	20356	Cushion clip	Bag of 20 pcs	POM
	T08162WPB Simpson Strong Tie (not supplied by Grad™)	Screws for fixing rails with a drill **#8 or #10 length : 1.5/8in**	Box of 4000 units	Type 316 Stainless Steel
	N10D5HDG-R Simpson Strong Tie (not supplied by Grad™)	Screws for fixing rails with a nail gun 0.148 x 1. 1/2in	Box of 600 pcs	Hot-Dip galvanized class D
	TBA	Rubber strip	1 Roll	Rubber
	TBA	Set of keys to dismantle deck boards	Bag of 20 keys	

Main Products

Note: Measurements are in inches

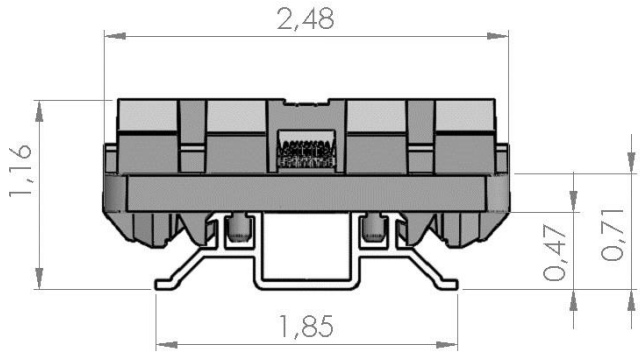
Mini rail:

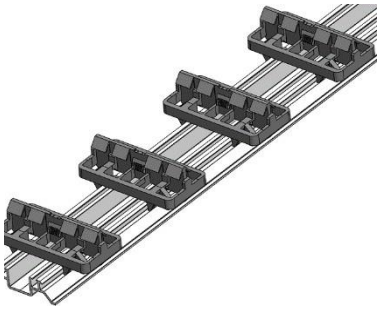




Boards cannot be removed with Grad® keys when Mini Rails are used.

Start rail:



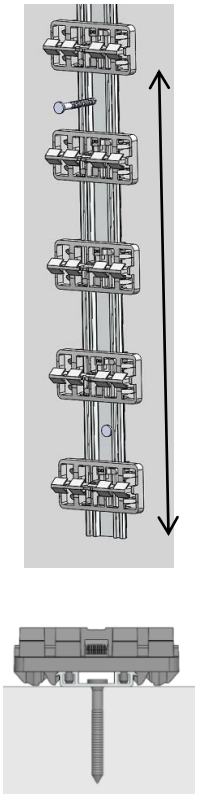


Boards can be removed with Grad® keys when used with Start Rails.

Understanding Grad™ Rails and Components

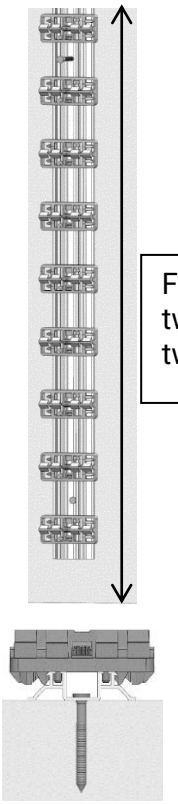
- **If attaching by nail use the recommended dimensions 0.148 x 1.5inch, refer to accessories page**
- **If attaching by screw use the recommended #8 or #10 screw, refer to accessories page**

Mini Rail:



Fasten between two clips every ten inches

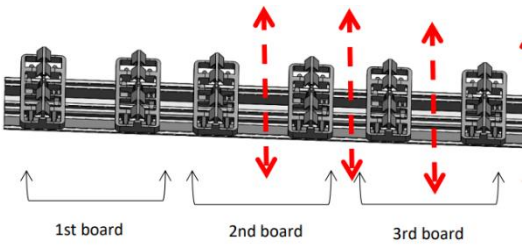
Start Rail:



Fasten between two clips every twenty inches

- **Always cut rails between two clips, to ensure there is enough space to attach boards properly**
- **Grad Keys can remove clips without causing damage if done properly**

Where to cut example below:

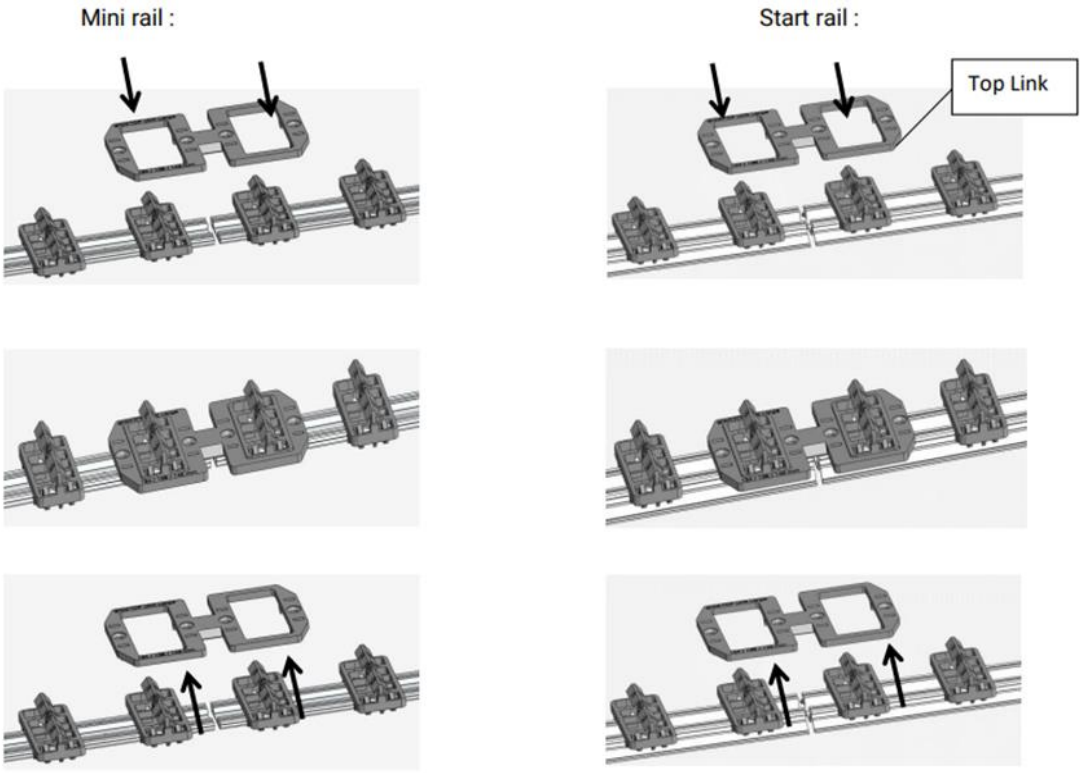


Remove clips with Grad key below:

Understanding Grad™ Rails and Components

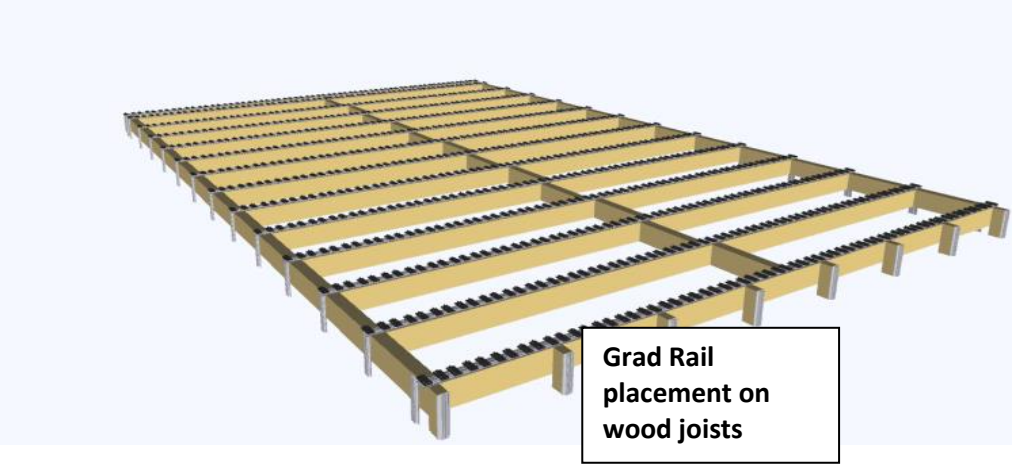
Top Links:

- Use top links as a guide to connect two rails properly, no need to fasten to rails
- Move to next joined railing section and align the same, using the same top link as guidance

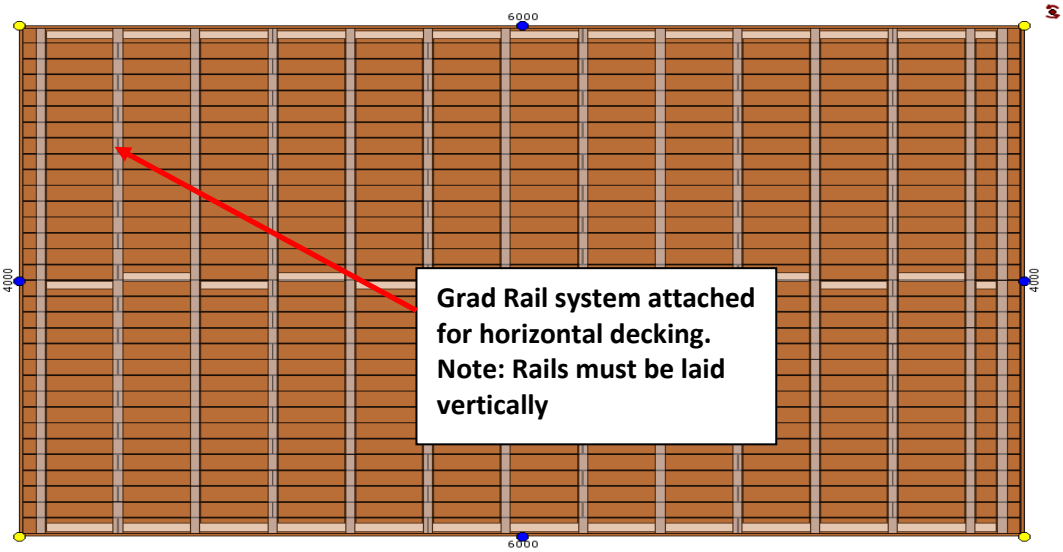


Understanding Grad™ Rails and Components

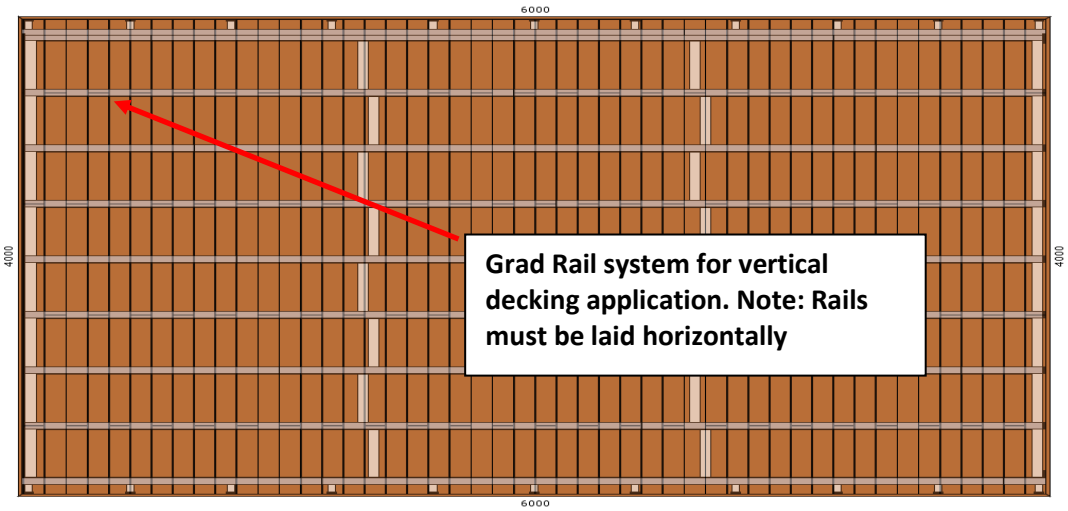
Standard Configurations: Grad Rails for decking frames/wood joists



Grad Rail placement on wood joists



Grad Rail system attached for horizontal decking. Note: Rails must be laid vertically

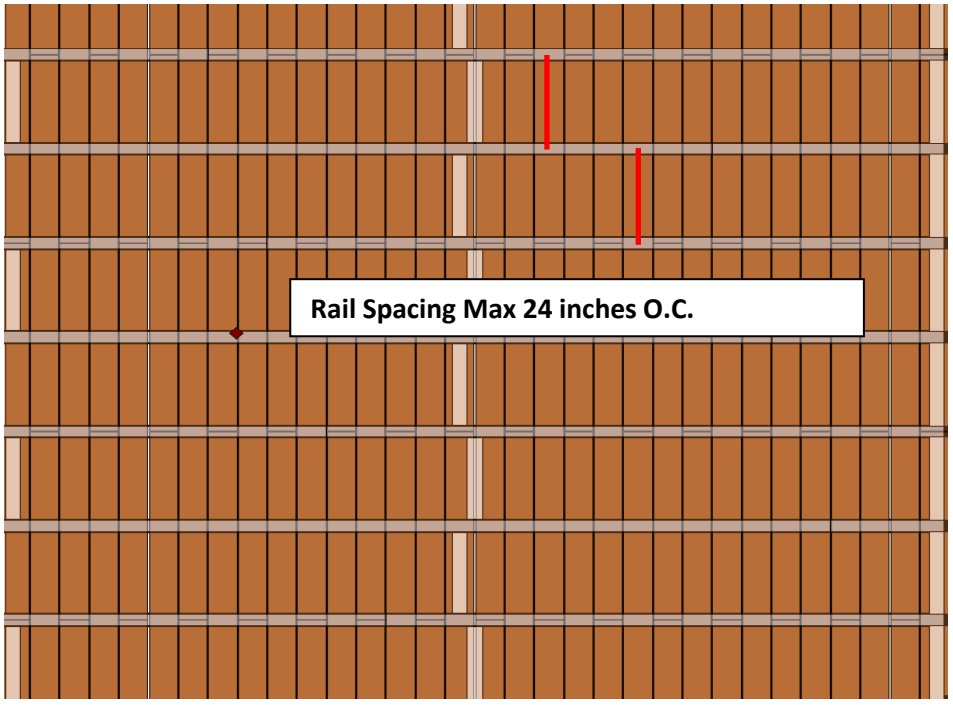


Grad Rail system for vertical decking application. Note: Rails must be laid horizontally

Standard Deck Installation

Important Steps to follow (grad rail horizontal joist application):

1) When using perimeter board, install before using Grad system. Refer to trim board manufacturing guidelines.
2) Make sure the joist/substrate is plumb and square, Grad™ recommends using a laser leveler or chalk.
3) Start with the outer most joist, then begin to move towards the building structure.
4) Place grad rail against the substrate, joist, concrete, or any solid flat surface.
5) Place the first rail at a maximum of four inches from the edge of the substrate.
6) Rails should be parallel, clips must be aligned properly to attach to the parallel clip, see illustration below.
7) Always cut the rails between two clips, do not cut through the clips. If needed use pliers to remove clip, then cut through the aluminum.
8) Rail span maximum is twenty-four inches. Please refer to the guidelines of the wood manufacturer to know which span to adopt with their material.



Standard Deck Installation

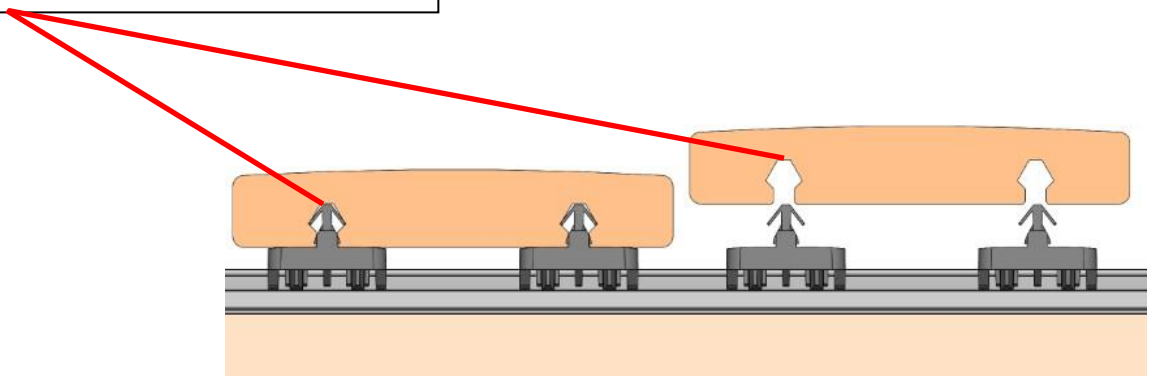
Important Steps to follow (grad rail horizontal joist application continued):

9) With rails leveled and applied against the joist, secure the first rail with recommended fastener.
10) Do not exceed twenty-four-inch rail span.
11) Continue fastening other rails from outer most joist, then move towards the building structure.

Installing Boards to Grad Rail

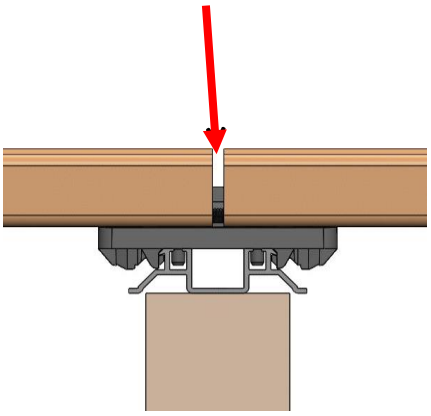
1) Install the first row of decking boards by pressing the board gently into the rail clips at outer most joist. Ensure the cut edge is at the right place on the joist that it is attached to. The use of a rubber mallet is fine, pressing by hand is usually enough pressure.
2) Complete the row with other boards.
3) Move your way across the deck frame until reaching the building structure.
   -Start the second row next to the first row, use the same steps.
4) Two boards are required to meet on one clip, board ends must rest on a clip. See page… for example
5) When board ends do not end on a joist, use a section of a rail, this is critical as mentioned above.

How boards should line in place with Grad Rails

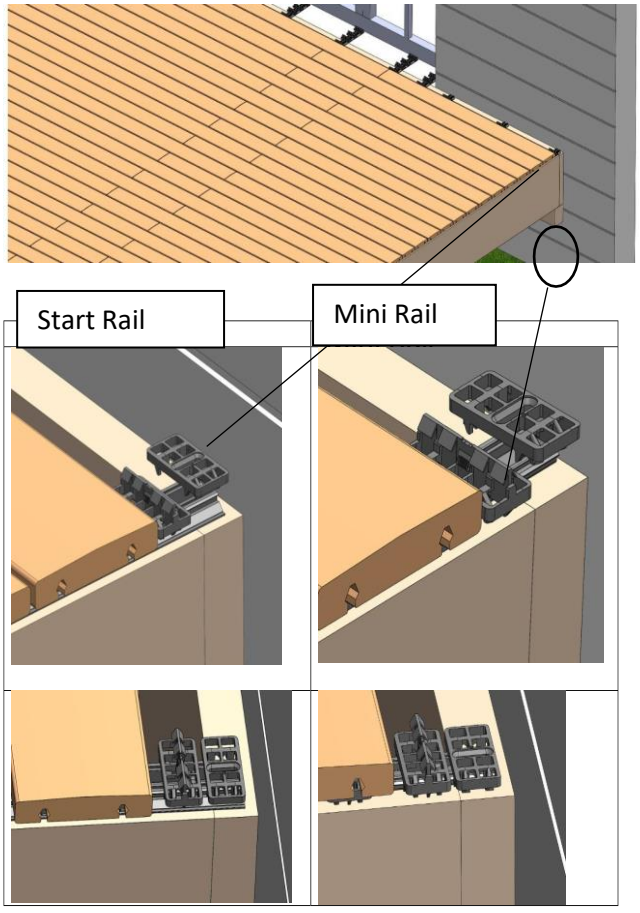


Installing Boards on Grad Rail Continued

Two boards must start and end at halfway point on the Grad clip. See below:



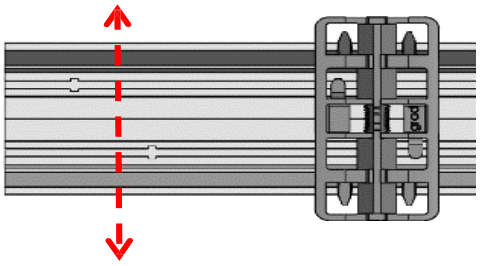
Tips on installing last deck boards against building structure



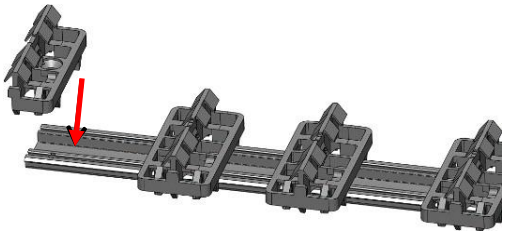
When the last board cannot use both grooves due to structure requirements, Grad provides "cushion" clips to ensure equal support underneath deck boards members. See example on left:

Adding Fascia Boarder

1) Measure the boarder height in which the fascia boards will be installed.
2) Divide this height by the width of the boards; this will give you the number of boards to enclose the boarder.
3) Cut the rails to match the coverage length.
4) Undo the first clip of each rail with either plyers or removal keys as needed.
   - If using full face boards only: the first clip is on either side of the rail.
   - If using a mix of boards: the first clip is where the first full face board should be located.
5) Cut the rail in between two punctuation holes.

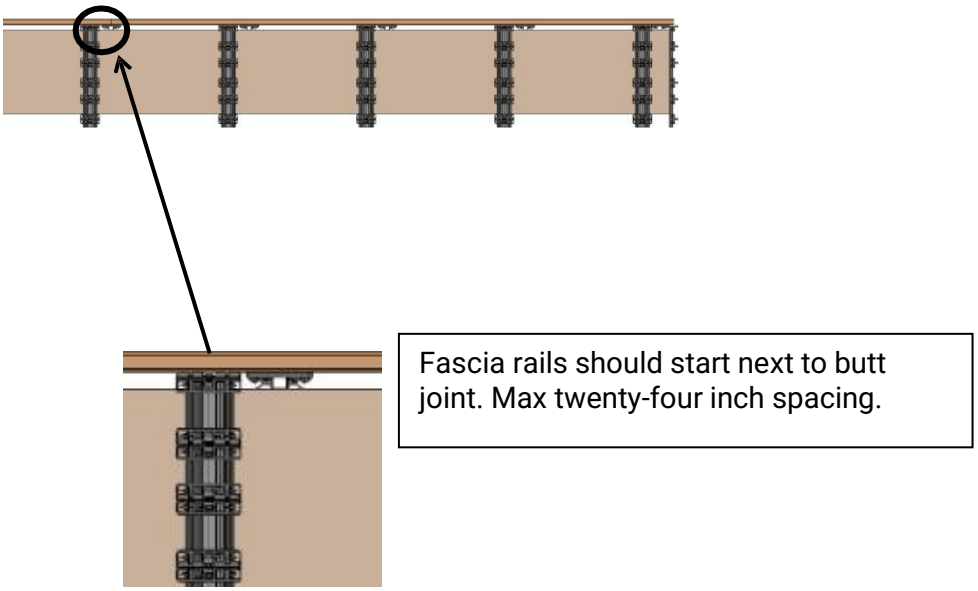


6) Add a half-clip by positioning it into the punctuation hole.



7) Rails should be parallel; clips must be aligned properly to attach to the parallel clip. Rail span should not exceed twenty-four inches.

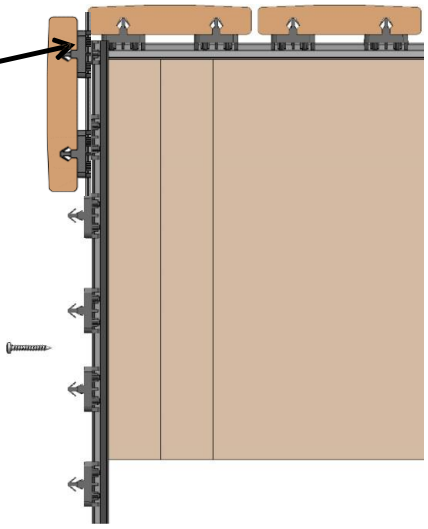
Adding Fascia Boarder Continued



Fascia rails should start next to butt joint. Max twenty-four inch spacing.

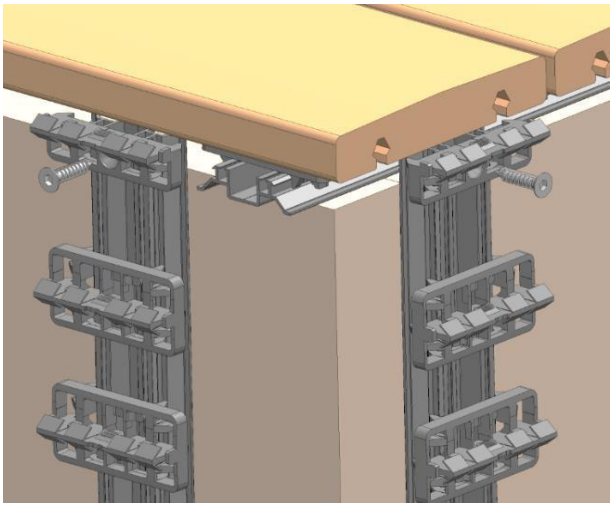
8) Secure the rails onto decking from with the recommended nail or screw size.
   - Grad Start Rail fasten every twenty inches, min two fasteners per rail.
   - Grad Mini Rail fasten every ten inches, min two fasteners per rail.

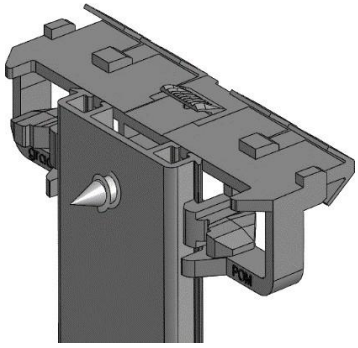
Example: Grad Rail fascia boards fastened to properly align with deck boards.

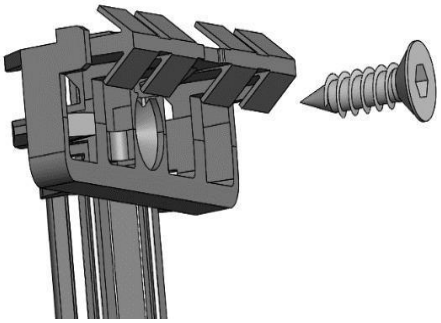


Adding Fascia Boarder Continued

9) Place screws through the loop of the half clip as indicated.



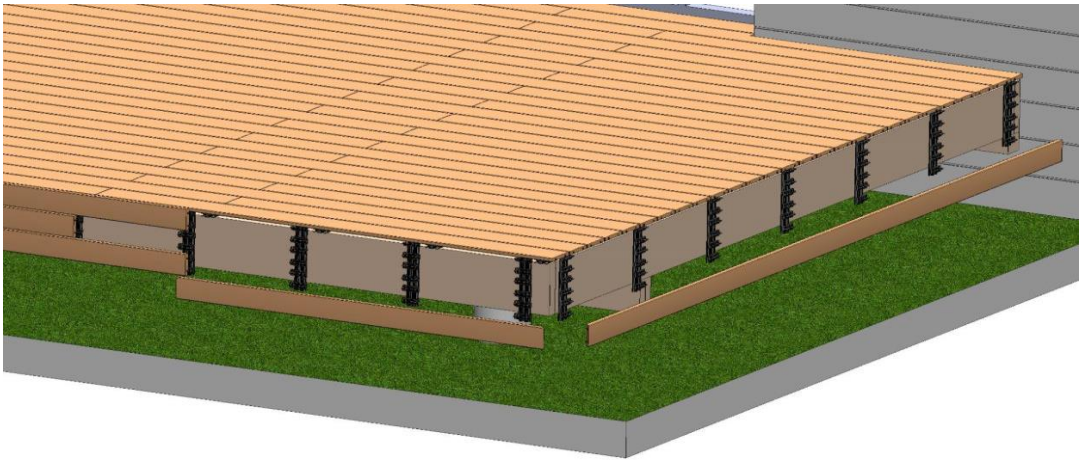




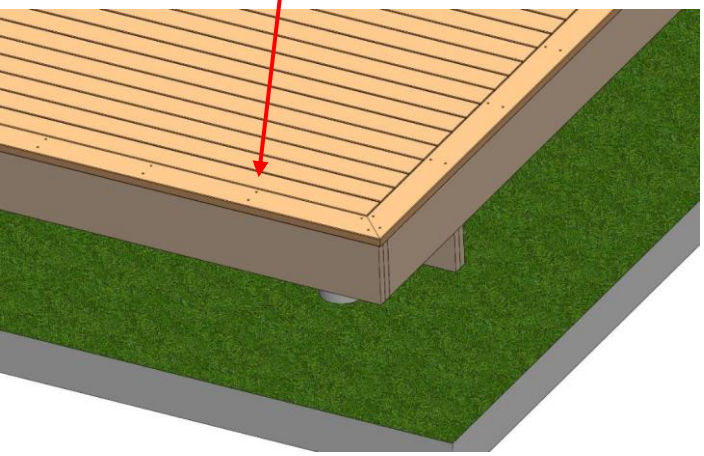
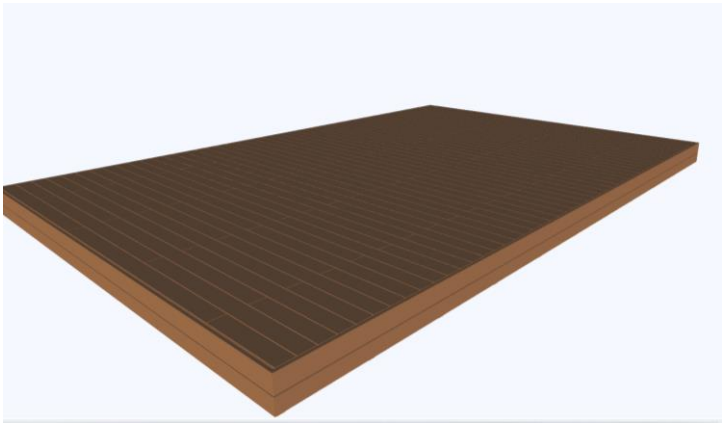
10) Cut angles at the end of each board for a smooth finish of the skirting.

Adding Fascia Boarder Continued

11) Click fascia boards into place on Grad Rail.



Completed Grad deck system with nailed perimeter boarders.



Completed Grad deck system with full "click" fascia boarders.