

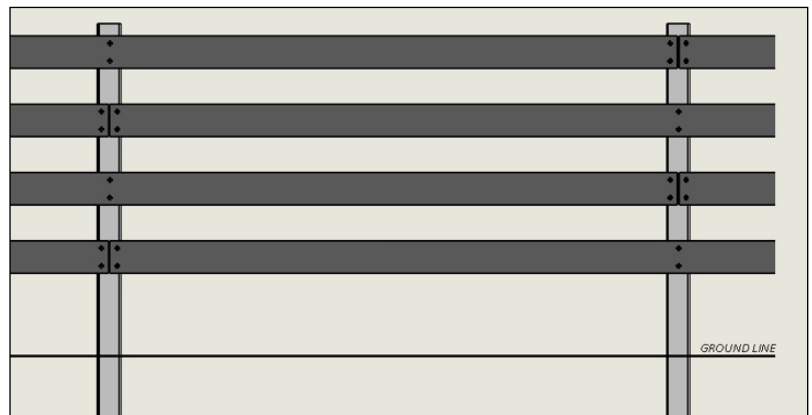


### HOW TO INSTALL RANCH RAIL

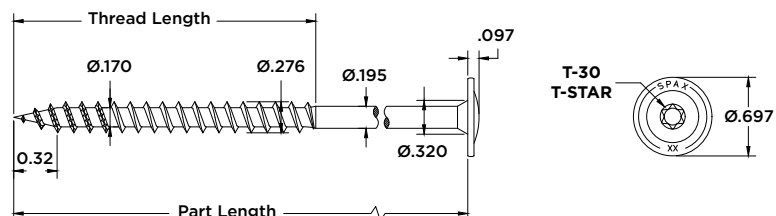
1. Store product on flat ground.
2. Plan your installation. Posts should be installed at a maximum of 8' on center. Consider less if the terrain is not level or for stiffer performance when side loaded. Rails are lightly over 16 feet long to allow for installation over two bays and for field trimming. The extra length over 16 feet is not intended to allow for post spacing greater than 8 feet on center.
3. Install posts as you would wooden posts.

4. Install rails in a similar fashion to wooden rails. Stagger joints. In the first bay, install two ~8' rails and two ~16' rails. **(Figure A)**
5. SPAX® ¼" x 3" long T-Star Washer Head Powerlags® are recommended which are available in black, and do not require pre-drilling. Alternatives should feature a wide, low-profile head, ¼" x 2-1/2" long, minimum, but may require pre-drilling.

**Figure A**



**SPAX's ¼" x 3" long T-Star Washer Head Powerlags®**

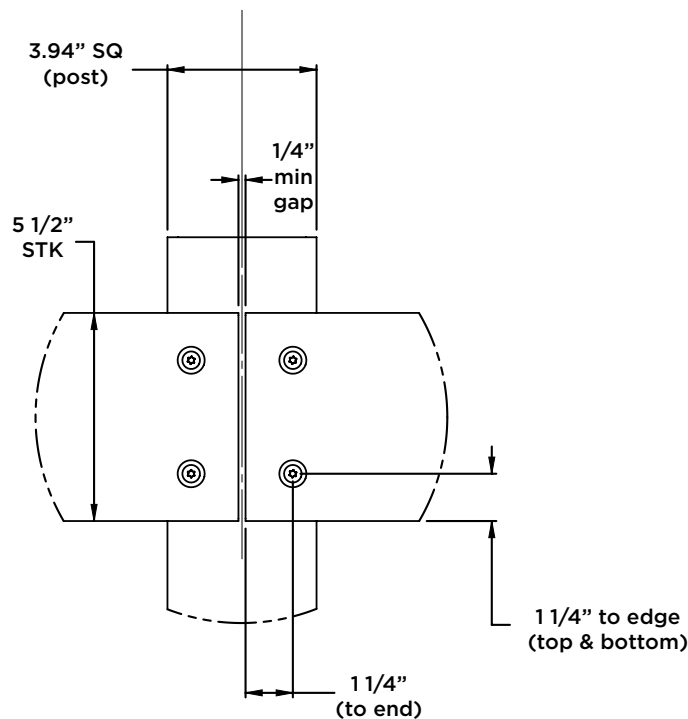


6. Trim one end of the rail square with a circular saw,. Trim the other end to 1/4" shorter than the center-to-center distance between the two installed posts.
7. When installing an ~8' rail over a single bay; drill two 1/2" holes at one end of the rail, per the below detail.
8. The center of the fastener holes should be 1-1/4" from the ends of the rail and at least 1-1/4" from the top and bottom edge of the rail. It is important not to position the fasteners too close to the ends or edges of the rail. Use the Hole & Gap Template Tool (**Figure B**) provided with your order to mark hole positions.
9. Position and fasten the rails allowing 1/4" gap between rails, butt to butt (**Figure C**). Use the Hole & Gap Template Tool to assist in correctly position the rails with the correct distance between the rails.
10. At the mid-point of the ~16' rails, or at one end of the ~8' rails drive the SPAX fasteners through the rail and into the post.
11. At both ends of the ~16' rails, or one end of the 8' rail, fasten through the 1/2" holes, snug the fastener, but do not overtighten allowing the rail to slightly move as temperatures change.
12. To allow for thermal expansion and contraction (TEC) of the rails, one post every 120 feet of fence line must have the rails attached per the following instructions. The "TEC" Posts provide a socket for the rails to be constrained within but allows for their thermal expansion and contraction.

**Figure B**



**Figure C**



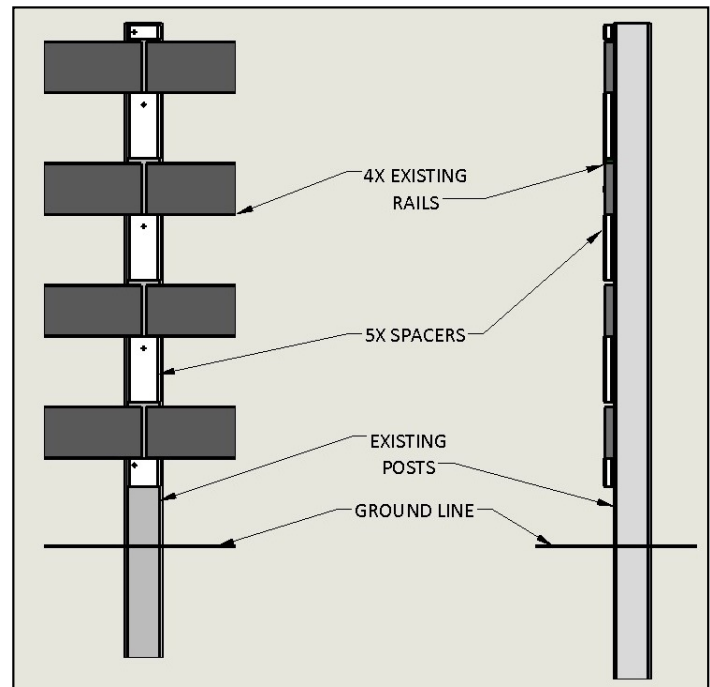
**Figure D**

13. As at all posts, cut rails to allow  $\frac{1}{4}$ " between the rails. Fasten the 1.0"x3.5" spacers (supplied by Tangent) to the post as detailed below using a 2-3/4" stainless-steel composite deck screw. **(Figure D)**

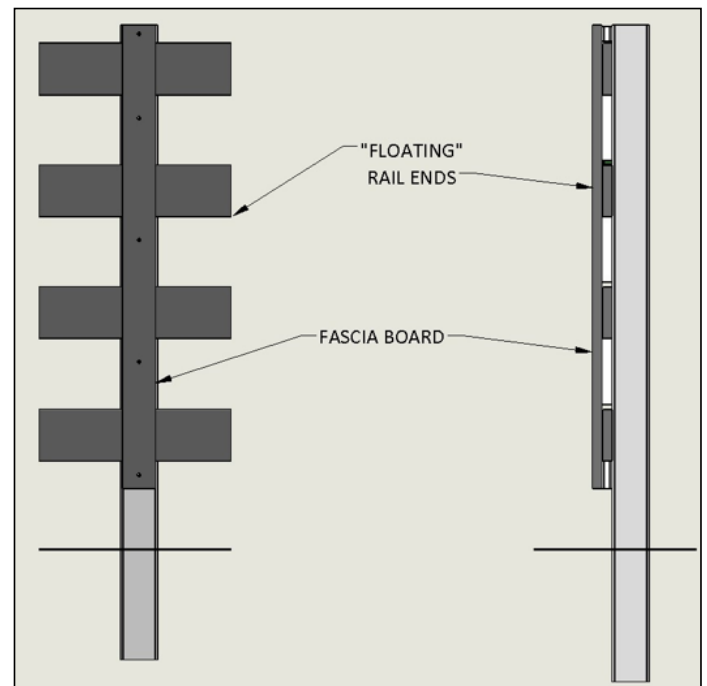
14. Trim the 1.0"x4.0" fascia board (supplied by Tangent) to the correct length and attach with SPAX's  $\frac{1}{4}$ " x 3" long T-Star Washer Head Powerlags® positioned as detailed on the drawing below. **(Figure E)**

15. At each TEC 120 post confirm all eight rail ends are free to slightly move, by jostling them up and down within the socket created by the spacers and fascia board. With correct installation, one side of the fence line should be completely separated from the other side of the fence line on the other side of the TEC 120 Post.

16. Repeat... Plan how to spend your time and money when not maintaining your fence!



**Figure E**



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