INTEX FS10 Estate Fence System Installation Instructions
Please Read Before Getting Started

Important Information about the Estate Fence System

The INTEX FS10 Estate Fence System is designed to accommodate several installation scenarios in a kitted system with hidden fastener features and minimal hardware required. The most predominant variable for which you will have to plan is often grade change, and how to follow it. There are two main methods to follow changing grade which are both outlined in this instruction. The first is racking, which allows the rail sections to angle slightly to follow the contour of the ground. The second is stepping, in which the rail sections are kept level and the post mortise positions are variable. Take care in selecting which method is best for your application.

Dark Paint Caution

If you choose to paint your INTEX Millwork Product, INTEX recommends the use of premium grade latex paints with solar reflective pigment. Preferably paints designed for use with PVC products. Please contact your local paint dealer for professional assistance. Due to the inherent expansion and contraction characteristics of PVC, INTEX PVC millwork products should only be painted colors with an LVR (light reflective value) greater than 55. Use of darker colors may cause damage due to excessive expansion/contraction and will void the product warranty.

Cleaning Products for INTEX Millwork Products

Cleaning all INTEX Millwork Products is easy and fast with most major household cleaners. There are many cleaners on the market and the glass cleaners seem to be the best candidate for keeping the finish looking great. The cleaning solution should be applied and immediately wiped dry. As with any cleaning material, the cleaning solution should not be left to stand on the components for an extended period of time.

INTEX recommends the following cleaners:
- Windex® 409 Glass and Surface Cleaner®
- Spic & Span Cinch® Fantastik All-Purpose®
- Fantastik Orange Action® Regency® (Glass and Surface)
- Clorox Clean-Up® Glass Plus®
- Fantastik Oxy Power Multi-Purpose Cleaner®

What to Avoid

Harsh cleaners with glycol ethers or ethanol type solvents and/or isopropyl alcohol are not recommended. Examples of these harmful cleaners are Goof Off®, Walmart “Great Value All Purpose Cleaner®” (glycol ether), 409 General Purpose® (2-Butoxyethanol) and Greased Lightning® (glycol ether), citrus cleaners, abrasive cleaners, and solvents such as acetone, paint remover and lacquer.
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#### Items Included in **Rail Sets**
- Routed Reinforced Top Rail x 1
- Routed Bottom Rail x 1
- Bottom Rail Reinforcement x 1

#### Items Included in **Gate Hardware**
- Strap Hinge Set with Mounting Hardware
  - x 1 for Single Panel Gates
  - x 2 for Double Panel Gates
- Twisted Ring Latch with Mounting Hardware x 1
- Gate Cane with Mounting Hardware x 2
  - (Double Gates Only)
- Gate Stop x 1

#### Items Included in **Posts**
- Pre-mortised Post x 1
- 2-3/4" Long Cortex Screw x 4
- PVC Matched Cortex Screw Plugs x 4
- Cortex Screw Driver Bit
- Gate Post Reinforcement Set x 1
  - (Only included in gate posts)

#### Items Included in **Picket Kits**
- Pointed Picket
  - Quantity varies per kit size

#### Items Included in **Gates**
- Single Gate Assembled Panel x 1
- or
- Double Gate Assembled Panel x 2
Level or Shallow Grade* Installation
* Up to 6” of rise between post centers; rail sections are level or racked to follow grade.

1. Determine Layout and Set Post Positions.
   a. Determine positions at which posts will be installed based on lengths of rail to be used. Note that INTEX Fence Rails are designed to be used at 4’, 6’, or 8’ post centers, but can be trimmed to accommodate shorter spans. Also note that INTEX Gates are sized by opening, NOT by post centers. Take this into account when determining post positions.
   b. Ensure that the post sites will allow posts to be buried 30” deep for a stable and secure installation.
   c. Mark positions as necessary using stakes or marking paint.

2. Install Posts.
   a. Using a shovel or post hole digger, dig a hole 36” deep and large enough to insert the post (roughly 9-12” in diameter).
   b. Fill the bottom of the hole with 6” of dry concrete mix so that the post will sit 30” deep measured from grade. Tip: a 30” burial will leave a 3” gap under the bottom rail once installation is completed. For a smaller gap, bury the post deeper respectively.
   c. Insert the post, paying attention that the orientation of the mortises is correct, and the post is plumb. A post level can be used to determine necessary adjustments. Braces can be used to keep the post in position once it is placed. Note: Make sure to note the position of the pre-drilled fastener locations (1/8” diameter pre-drilled holes) adjacent to the mortises. Ensure while installing posts that these fastener positions are on the same side of the fence line.
d. Fill around the post with mixed concrete at least 12” and allow to set per the concrete mix manufacturer’s instructions. **Note: For gate posts, lay down wet mix on top of the dry mix for the full remaining depth of the hole and then insert the post to ensure concrete can fill inside the post around the reinforcement.**

e. Continue installing the rest of the posts at determined positions. If desired, use a length of 2x4 or a rail section and a level to check level between successive posts as they are installed.

3. Prepare Rail Sections.

a. Ensure installation spans are suitable for rail lengths being used. Rails can be used out of the box for 4’, 6’, and 8’ post centers. For post centers that are shorter than or in between these standards, rails may need to be trimmed. **Note: In the case of installing to a corner post, rails will also need to be miter trimmed to avoid interference between rails inside the post.**

b. *(Optional)* To trim rails, measure the opening between posts. Rail lengths should measure 3-1/2” longer than this opening. Mark and trim the rails to the appropriate length using a chop saw or reciprocating saw. Take care to trim from either end so that the routed hole pattern is spaced evenly from either post face and that the top and bottom rail are trimmed equally.

c. Remove the bottom rail aluminum reinforcement and drill 1/4” diameter holes in the bottom at several positions along the length for drainage. Replace the reinforcement in the rail once complete.
4. Insert Rail Sections.

   a. Orient bottom rails as shown. Note that the locking flange on the bottom rail aluminum reinforcement is on the opposite side of the pre-drilled fastener position on the post.

   b. Insert the bottom rail into one mortise deep enough that the far end can swing clear of the opposite post. Then swing the far end into position and insert it into the mortise in the opposite post.

   c. Roughly center the rail so that the reveals between the routed holes and the posts on either end are equal.

   d. Repeat this process for the top rail in the respective mortises. Note that the top rail does not need to be oriented in a specific direction.

5. Install Pickets.

   a. Unpack and lay out picket kit for the respective section size being installed. For styles S2, S3, and S4 fence sections, you may want to lay the pickets out in order before installing to avoid placing varied length pickets in the wrong positions. If rail sections were trimmed, some pickets will need to be omitted.

   b. Determine the orientation in which to install pickets. The ‘notch’ or ‘rabbet’ on the bottom of the picket should be on the same side as the bottom rail reinforcement locking flange as shown.

   c. Slide pickets through the top rail routed holes, through the bottom rail routed holes, and press until you hear them snap into the bottom reinforcement. Continue for each picket in the section.

6. Fasten Section in Place.

   a. Once all pickets are in place, adjust the positions of the rails so that the end pickets are evenly spaced from either post and the pickets are vertical and plumb.

   b. Locate the 4 pre-drilled locations on the posts to determine drilling and fastener locations.

   c. Using a 1/8” or 3/16” drill bit, drill through all 4 locations 3” deep. The holes should extend through one side of the aluminum reinforcement on both the top and bottom rail.

   d. Using the Cortex driver bit, drive Cortex screws into each of the 4 locations. The screws will bury themselves in the post wall, and the bushing on the driver bit will set the depth and prevent them from going too deep.
e. Check that the rails are secure and in the correct positions before applying Cortex plugs to the fastener holes.

f. Apply plugs by placing them in the hold with the trim side facing out and gently tap them until the plug is flush with the post face. Use care when tapping (you may way to use a PVC or wood block rather than a hammer) to ensure you do not mar the face of the post.

7. Install Post Cap.
   a. Run a bead of latex caulk around the top surface of the post.
   b. Seat the post cap firmly around the top of the post and allow to caulk to set.

Steep Grade* or Stepped Installation Using Adjustable Posts (Patent Pending)

* Up to 12” of rise between post centers while maintaining level rail sections.

Before reading this section, familiarize yourself with the “Level or Shallow Grade Installation” section as the stepped installation is performed in a similar fashion. In many cases, a combination of level and adjustable posts can be used to effectively follow varying grade changes along a fence line.

1. Determine Layout and Set Post Positions.
   a. Determine post positions similarly to a level installation but ensure that grade change is taken into account when setting position. Post centers should be measured straight and level regardless of the slope of the ground.

   b. Adjustable posts are longer than standard posts by 12”. This is so that 30” burial can still be achieved even at maximum grade change. Ensure that this is considered - shallower grades than 12” will require either burying the post deeper or trimming the bottom of the post. This is described in greater detail in the next sections.
2. Determine Setup for First Post and Install.

   a. Begin the run at the highest point. When using adjustable posts, it is most effective and requires the least measurement to work downhill. *Tip: The first and uppermost post should be a standard post. All successive posts after this requiring a stepped condition will be adjustable posts.*

   b. Install the first post as described in sections 2.a. through 2.d. from "Level or Shallow Grade Installation." *Tip: Consider burying the uphill post deeper to create a smaller reveal under the rail. This will help ensure the reveal on the next successive downhill post does not get too large.*

3. Prepare Adjustable Post.

   a. Measure the grade change from the previous post to the next successive post position.

   b. Determine hole depth based on this measurement. This is calculated with the following:

   \[ 42'' - \text{Grade Change} = \text{Hole Depth} \]

   *Note that this hole depth is to the bottom of the post; additional depth is needed if more concrete is to be added.*

   c. Dig the appropriate hole and set the adjustable post in position. Ensure the adjustable or ‘loose’ face of the adjustable post is facing downhill. Use a straight edge or rail section to set in the fixed mortises of both posts, checking for level. The adjustable post may need to be shifted slightly up or down to be properly leveled. *Tip: As an alternative to digging a deeper hole, it is also possible to instead trim the adjustable post length. The amount to trim from the bottom would be given by: 12'' - Grade Change = Trim Amount.*

   d. Once the hole is at the adequate depth, the position for the adjustable or ‘loose’ face of the post can be determined. Slide the adjustable side up until the reveal between the bottom mortise location and the grade is 3'' (or the desired reveal for the particular installation.)

   e. Mark the loose face where it intersects with the top of the post and remove the post from the hole.

   f. Trim the loose face at the mark.

   g. Run a bead of the supplied glue along both locking miter grooves in the main post body. Glue the smaller trimmed piece in place at the bottom of the post, and the trimmed section with the mortises above it as pictured.
4. Install Adjustable Post and Rail.

   a. Once the glue has set, install the adjustable post as described in sections 2.a. through 2.d. from “Level or Shallow Grade Installation.”

   b. Install the rail and pickets as described in sections 3.a. through 6.f. from “Level or Shallow Grade Installation.”

Note: In continuing a run of stepped adjustable posts, be aware that pre-drilled holes are NOT present adjacent to the loose face mortises due to the adjustable nature of the post. Fastener placement will need to be determined after the Rail Sections have been inserted.

Gate Installation

INTEX FS10 Estate gates are shipped fully assembled with pre-drilled hole locations for hardware attachment where possible. Hardware packs have been designed to accompany gates based on size, style, and handedness. Depending on the handedness of the gate to be installed, some imagery may be a mirrored version of your scenario.

1. Install Gate Post(s).

   a. Refer to sections 1.a. through 2.e. to install gate posts at their determined locations. Ensure that the gate post reinforcement is oriented properly in accordance with the below image. Also bear in mind that gate sizes are determined by opening size, NOT post centers.
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2. Attach Hardware to Assembled Gate.

Important Note about Gate Hardware – Due to the aluminum reinforced frames inside both the assembled gates and gate posts, it will be necessary to pre-drill for all small hardware fastener locations at the appropriate size. Refer to the chart below for appropriate pre-drilling sizes for all included fasteners. Larger pre-drilled holes for strap hinge carriage bolts and ring latches are already provided.

<table>
<thead>
<tr>
<th>Fastener</th>
<th>Pre-Drill Hole Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8 Screw</td>
<td>1/8”</td>
</tr>
<tr>
<td>#12 Screw</td>
<td>3/16”</td>
</tr>
</tbody>
</table>

a. Locate and attach the strap hinges to the assembled gate. Refer to the strap hinge manufacturer’s included instructions for further detail. *Tip: Before attaching, ensure the straps are on the correct side of the gate based on installation handedness. Also ensure straps are in the correct vertical positions – in cases that use two differently sized strap hinges, the larger strap is always attached on the bottom of the gate.*

b. Locate and attach the Twisted Ring Latch to the assembled gate. Refer to the latch manufacturer’s instructions for further detail. *Tip: This step can also be performed after the gate is hung on the post. This may be preferable based on your application.*

c. Double Gates Only – Locate and attach the gate cane to the assembled gate. Refer to the cane manufacturer’s instructions for further detail. *Tip: This step can also be performed after the gate is hung on the post. This may be preferable based on your application.*

3. Block Gate in Position.

a. With all hardware attached, block the gate in the opening in accordance with the image below, depending on whether it is a single or double panel gate. Note that the designed gap underneath the gate is 3”, but this can be modified depending on the desired reveal per the installation scenario.

![Diagram of Single Panel Gate with 3" Reveal](image1)

![Diagram of Double Panel Gate with 3" Reveal](image2)
4. Mount Gates and Attach Gate Stop.

   a. Follow the strap hinge manufacturer’s instructions to attach gate to gate post via strap hinges.

   b. Locate and attach the gate stop to the post or double panel gate depending on scenario. Refer to the gate stop manufacturer’s instructions for further detail.

5. Remove Blocking and Verify Gate Function.

   a. Remove all blocking and check that the gate has full range of motion and latches properly. Some attachments may need to be loosened or adjusted if motion is tight or resistant.
Nothing adds distinction and definition to homes and outdoor living spaces like a stylish exterior railing. INTEX Millwork Solutions railings come in a variety of styles to compliment any architecture and budget.