

## SimTek® MOLDED FENCE INSTALLATION GUIDELINE



# SimTek®

## **INSTALLATION** GUIDE

These instructions are designed to assist both professional installers and do-it-yourselfers of SimTek<sup>®</sup> decorative privacy fence. These instructions are detailed to ensure an excellent finished fence.

A quality finished fence is a result of a quality installation. The layout must be consistent with ground contours; posts must be appropriately spaced and properly anchored. Follow SimTek<sup>\*</sup> installation instructions carefully and your fence will be both structurally correct and a beautiful addition to your project or property.

Before any installation, check all local regulations regarding fencing, location of all buried utility lines (be sure to call underground (811) prior to digging), and correct property lines. Be certain that you are in compliance will all local codes, permits, county and state laws. Ensure that you have all the components needed to complete your fence configuration.

## TOOLS NEEDED

Tape Measure	Concrete
Level	Spray Paint
Auger or Post Hole Digger	Mallet or Hammer
Shovel	Fence String
Power Drill	Reciprocating saw
Circular Saw	

## **Step 1: Lay Out Fence Line**

- 1. Locate your property line and stretch a string between stakes from the beginning to the end of the fence to ensure posts will be set on a straight line.
- 2. Beginning at the corner or end post, mark the location of the post. Dig a hole for each post.

Panel Size		Line	Corner	End	Gate
6'x6'	Line	72″*	73″*	72″*	73″*
	Corner		74″*	73″*	74″*
4′x8′	Line	96″	97″	96″	97″
	Corner		98″	97″	98″

**Center to Center Post Dimensions** 



\*New updates for 2021

## **Step 2: Digging Holes**

- 1. If a laser transit is available, it will be an excellent tool to assist in determining grade and slope.
- 2. For a level ground installation, begin at a corner or an end post. This will give you a good starting point. If there is a slope, it is easier to begin at the top and work your way down hill.
- 3. Dig all post holes minimum 12" diameter by 30"- 36" deep for the six foot high panel and 24" deep for the 4ft high panels. Make sure to check local building codes to ensure required depths and diameters are met. Bell bottom of post holes.
- 4. Holes must be 72" apart, center to center for the six foot panel and 96" for the eight foot panel. DO NOT CUT THE STIFFENER UNLESS THE PANEL IS BEING CUT SHORTER.
- 5. Fence lines will rarely measure out to an exact number of full panels; therefore it will likely require cutting one or more panels to complete a fence. Depending on personal preference, you may wish to narrow the width of the last 2 to 3 panels or cut the first and last panels evenly so that there is not one very narrow panel. Panels can be cut with most circular saws, the steel stiffeners will require a metal cutting blade, and should be removed and cut separately from the panel.



- Tip
- Dig a hole 12" in diameter
- Bell the bottom of hole
- Holes should be a minimum of 24" deep for 4ft panels and 30"-36" deep for 6ft panel. However, please consult your local building codes
- Fill hole around post with concrete mix (sand, gravel, cement) approximately 2" - 4" below grade. Posts must have at least 18" of the post in concrete.



## **Step 3: Installing Fence Brackets**

If posts are to be installed in level ground attaching brackets in advance of post installation is easiest when using a measuring template for faster repetitive bracket installation. It is easier to change a bracket in the field if necessary than to install brackets once posts are installed in the ground.

When screwing the bracket to the post, use the hole that is as close to the top of the bracket, as you are able.

Installed brackets provide a leveling point on each post.

#### Distance from Top of Post to Support Bracket Surface

Panel Size	4'	6′	8′
Bracket Location	50″	74″	98″





Note: Brackets come packaged at the tip of the post during shipping. They must be removed and reattached in the channel of the post at the desired height during installation.

## Step 4: Post Spacing & Concrete Footings



## 8' High EcoStone Panel



6

## 6' High Ashland Panel



Notes: For a 6' installation, use our 102" posts which are designed to be 28"-30" in the ground and 72"-74" above ground. Cut the bottom of the post for shorter installations. NEVER cut the top of the post.

## 8' High Ashland Panel



## **Step 5: Setting Posts**

- 1. Set a post in the hole with concrete. Using a mallet or hammer, tap the post into the concrete until the top of the post meets the desired height.
- 2. Fill the remainder of the hole with concrete. Using a level, check two adjacent sides of the post. Two-way levels are useful. Adjust the post until it is both vertical and at the correct height.
- 3. If using a dry mix method, first place the post in the hole in the approximate position at the bottom of the hole. Pour the dry mix in the hole, positioning the post as soon as it is feasible.
- 4. Using the steel stiffener out of the panel is useful in checking that the panel will sit level. Posts should be set at 72" on center for the 6' tall, and 96" on center for the 4' and 8' tall fences. (Please see chart for Corner Post and Gate Post exceptions.)
- 5. Do not move the post which is now in position. Leave the panel stiffener in place for one hour minimum, as concrete begins to cure to keep the posts from moving. Check that the posts are still level and have not moved. Allow the concrete to cure for a minimum of 24 to 48 hours before installing panels.
- 6. For assistance call our customer service line at 1-866-648-9336.

CAUTION



Make sure post is straight, plumb, and evenly spaced





Note: All SimTek posts are reinforced with galvanized steel. If posts need to be cut, we suggest cutting them at the bottom tip. DO NOT cut the top of the post.

Cutting the top of the post will VOID the warranty

## **Step 6: Installing Fence Panels**

- 1. Panel support brackets must be attached to all posts.
- 2. Be certain steel stiffeners are inserted in the top and bottom rail of each panel; they come installed from the factory, but may have been removed to use as post spacers while installing posts.
- 3. EcoStone six foot panels are universal, with no front or back, and no top or bottom edge. This allows you to create a mixed design for a better aesthetic effect.
- 4. Ashland six foot panels have a top and bottom which can be identified by the black plug in the rail. Be sure to install panels with black plug on the bottom.
- 5. Lift the panel bottom edge to approximately 4' off the ground. Have one person flex the next post outward until the groove will receive the panel. Once the section is in the channel, ease the panel down onto the support brackets.
- 6. Install caps over the posts.
- 7. Caps are pressure fitted making securing them typically unnecessary; however, a 3" deck screw can be driven through the top of the cap into the middle of the post if desired.



DO NOT cut the steel stiffeners, unless you are cutting the panel to accomodate a narrower section.

NOTE: for 8' panel and gate install, see page 14.

## **Step 7: Securing Panels**

- 1. Panels must be attached to all six foot gate posts, end posts, and corner posts.
- 2. To prevent unauthorized panel removal, you can drive one fastener per panel through the panel edge into the post. You should only use one fastener per panel.
- 3. Caution: Never attach both sides of the panel to posts. Polyethylene has a degree of thermal expansion and contraction.











## **Step 8: Cutting Panels**

Where a narrower panel is required to finish a fence, panels can be cut to any desired length.

- 1. Remove steel stiffeners from panels. Determine the exact width between post channels. Mark and cut stiffeners to that width with a metal cutting blade.
- 2. Mark and cut the panel to the stiffener width, minus 1/2" to allow for thermal expansion and contraction of the panel. Make certain panels are cut accurately with edges parallel.
- 3. If a cut panel is used with an end, a corner, or a gate post, use the factory edge for attachment to the post.
- 4. For steeper slopes, panels can be cut so the step or drop in each section is 12" or less.



### Installing on a Retaining Wall

SimTek can be installed on top of a 10" minimum width poured concrete wall or on flat concrete using SimTek's Concrete Mounting Brackets. Concrete mounts are available for end, gate, line and corner posts along with post skirts for a clean look. Be sure concrete is structurally sound for installation of fence.

- Cut the post to the desired height. Post may need to be cut longer to accommodate changes in elevation. Always cut off the bottom of the post, retaining the factory finished post top.
- 2. Panel support brackets are unnecessary when using concrete shoes. The panels will sit directly on the wall or driveway surface.
- 3. Start at the corner or an end post position. Locate the concrete shoe an equal distance from the edges of the concrete.
- 4. Mark the position of the plate. Drill all four holes through the pre-drilled holes in the steel plate.
- 5. Next install all the concrete anchor bolts in the base plate bolt holes provided with a minimum tension and shear strength of at least 4,000 lbs. Position the bolts to fasten the mounting plate of the shoe.
- 6. Place the shoe over the bolt and attach the shoes to the concrete with specified fasteners





Minimum bolt size 1/2" by 4.5"

- 7. If the concrete is not level, washers may be placed over anchor bolts and before shoes are bolted down to serve as leveling devices.
- 8. Position the skirt covers over the shoes, covering the metal plates. Skirts must be inserted prior to posts being attached.
- 9. Attach the mounting brackets to the posts with fasteners in pre-drilled holes. For line posts, the upright straps will be inserted into the channels of the post on the outside of the plastic, but for end posts, corner posts, and gate posts the upright straps are inserted inside the steel in the center of the post. Each side of the strap gets three staggered screws installed from opposite sides of the post for line posts and three each for ends and corners.
- 10. With the first shoe anchored, and the post attached, determine and mark the next shoe position. Work from post to post for post spacing.
- 11. Mark and drill the holes for the next shoe.
- 12. Once all the shoes and posts are securely anchored to the wall and skirts are in place, insert the panels. Be certain that steel stiffeners are in both top and bottom rails of each panel.
- 13. Finally, place the caps on the post for a finished look.

#### **Concrete Surface Mounting Brackets**

Use epoxy anchors instead of wedge anchors for gate shoe



## Installing on Sloping Terrain



**Caution**: SimTek Fence is not engineered for use as a retaining wall.

Installation on sloping terrain is similar to that on flat terrain. Professionals typically use a laser to shoot and obtain a grade.

- 1. Set the first post on the uphill side. Post placement is important! Posts are typically placed at the point where the slope changes, whether in a peak or a valley.
- 2. The panel support brackets should be preattached at 50" for 4ft, 74" for 6ft, and can receive the down hill side of the panel at that height. Once the slope and the drop per panel have been determined, the bracket on the uphill side should be adjusted to the proper height. Panels will always be set level even on a slope.
- 3. Set the second post and make any adjustments to bracket position.
- 4. Use a level on the stiffener, placed between the posts on the brackets, to ensure panels will be level when installed.
- 5. For more information see illustration A and B.





A 6' wide panel can be stepped as much as 12" per panel. For steeper elevations you can use our 142" long post. To reduce the gap under the panel, you can reduce the width of the panel and add additional post. For more details and instructions call 1-866-648-9336.

#### 1. Getting Started

- Be sure to call underground (811) prior to digging
- Determine gate location(s)
- Stake out the fence line
- Space and mark post hole locations for gate and sections (spacer bar/template may be useful)
- Start at an end, gate, or corner post and work outward to determine proper fence height relative to ground. If there is a slope it is easier to begin at the top end and work your way downhill

#### 2. Dig Holes

- Dig holes 48" deep
- Hole size for 5 x 5 posts = approximately 12"
- Clean holes and check for straight panels
- Bell the bottoms of the holes
- **3. Install fence brackets** (note brackets come attached to the tip of fence posts)
  - Determine height of bracket from top of post
  - Attach bracket to post with #14 hex washer head self-tapping screw
  - A template can speed attachment for level installations

#### 4. Cutting Down Posts (if required)

- Measure height from top of post
- Cut off bottom of post with metal cutting blade
- Never cut the top of the post

#### 5. Setting Post

- Insert post in hole
- Determine rough height
- Fill hole around post with concrete mix (sand, gravel and cement) approximately 2" or 4" below grade
- Tamp concrete in hole to eliminate air pockets
- Level and square post

#### 6. Spacing Posts

- Use steel stiffener from panel (95" 8')
- Place stiffener between posts
- Set post (leave spacer in place for one hour minimum)
- Set 3 to 4 posts with stiffeners as spacers, then advance them one at a time starting with the first stiffener

#### 7. Install Bottom Fence Panels

- Check to ensure top and bottom rails have stiffeners. They come installed, however, may have been removed to use as spacers when setting posts
- Lift panel and insert into post channels
- Ease panel down onto fence brackets
- Level panel

**NOTE:** Be certain that the 2" high rail is on top of the bottom panel

#### 8. Install top panel

- Lift panel and insert into post channels
- Ease panel down onto bottom panel

**NOTE:** Be certain the 2" high rail is on the bottom of the top panel

**Tip:** When installing panels, insert a short piece of 1-3/8" pipe into both ends of the panel to use as handles. 2x6 wood blocks can be used to support panel while lowering.

#### 9. Secure fence panels

- Panels must be attached to end and gate post with one fastener per panel
- To prevent unauthorized panel removal, you can attach one end of each panel into the post with one fastener
- Never attach both ends of a panel to posts

#### 10. Cutting panels (if required)

- Remove steel stiffeners from panel
- Determine distance between posts from inside of channel to inside of channel
- Cut stiffeners 1/4" shorter to allow for cut panel bracket
- Measure and mark panel ½" shorter than distance between posts from inside of channel to inside of channel (this is needed for expansion and contraction of panel)
- Cut panel
- A cut panel bracket is required on top and bottom cut panels.

**Tip:** Pinning the cut panel bracket in place will help with installation

#### 11. Gate openings

- Post spacing is critical. The ideal spacing is 1" on latch post and 1-1/2" between hinge post.
- Hinges should be attached to a gate post

#### 12. Gate installation

- First, attach striker bar to gate using provide button head screws
- Thread the  $\frac{1}{2}$ " hinge rod into the upper and lower inserts in the metal gate frame leaving approximately 1-1/2" from the edge of the gate to the bracket
- Determine proper height for gate and block up gate square with fence
- Attach hinges to gate post with 2-1/2" self-tapping screws provided (do not over tighten screws as this can crush the internal foam and make an indentation in the post)
- Level the gate
- Align the latch with the striker bar and attach the latch to end post with 2-1/2" self-tapping screws provided.

#### 13. Install caps

 Install post caps (caps are pressure fit, however a 3" stainless steel deck screw can be driven through the top of the cap into the middle of the post if desired)

#### **1. Getting Started**

- Be sure to call underground (811) prior to digging
- Determine gate location(s)
- Stake out the fence line
- Space and mark post hole locations for gate and sections (spacer bar/template may be useful)
- Start at an end, gate, or corner post and work outward to determine proper fence height relative to ground. If there is a slope it is easier to begin at the top end and work your way downhill

#### 2. Dig Holes

- Dig holes 48" deep
- Hole size for 5 x 5 posts = approximately 12"
- Bell the bottom of holes
- Clean holes and check for straight panels
- **3. Install Panel Brackets** (note brackets come attached to the tip of fence posts)
  - Determine height of bracket from top of post
  - Attach bracket to post with #14 hex washer head self-tapping screw
  - A template can speed attachment for level installations

#### 4. Cutting Down Posts (if required)

- Measure height from top of post
- Cut off bottom of post with metal cutting blade
- Never cut the top of the post

#### 5. Setting Posts

- Insert post and hole
- Determine rough height
- Fill hole around post with concrete mix (sand, gravel and cement) approximately 2" or 4" below grade
- Tamp concrete in hole to eliminate air pockets
- Level and square post

#### 6. Spacing Posts

- Use steel stiffener from panel (95" 8')
- Place stiffener between posts
- Set post (leave spacer in place for one hour minimum)
- Set 3 to 4 posts with stiffeners as spacers, then advance them one at a time starting with the first stiffener

#### 7. Install Bottom Fence Panels

- Check to ensure top and bottom rails have stiffeners. They come installed, however may have been removed to use as spacers when setting posts
- Lift panel and insert into post channels
- Ease panel down onto panel brackets
- Level panel

**NOTE:** Be certain that the 2" high rail is on top of the bottom panel

#### 8. Install Top Panel

- Lift panel and insert into post channels
- Ease panel down onto bottom panel

**NOTE:** Be certain the 2" high rail is on the bottom of the top panel

**Tip:** When installing panels, insert a short piece of 1-3/8" pipe into both ends of the panel to use as handles. 2x6 wood blocks can be used to support panel while lowering.

#### 9. Secure Fence Panels

- Panels must be attached to end and gate post with one fastener per panel
- To prevent unauthorized panel removal, you can attach one end of each panel into the post with one fastener
- Never attach both ends of a panel to posts
- 10. Cutting Panels (if required)
  - Remove steel stiffeners from panel
  - Determine distance between posts from inside of channel to inside of channel
  - Cut stiffeners 1/4" shorter to allow for cut panel bracket
  - Measure and mark panel 1/4" shorter than distance between posts from inside of channel to inside of channel (this is needed for expansion and contraction of panel)
  - Cut panel
  - A cut panel bracket is required on top and bottom cut panels.

**Tip:** Pinning the cut panel bracket in place will help with installation ( $#12 \times 1''$  pan head screw is recommended)

#### 11. Gate Openings

- Post spacing is critical. The ideal spacing is 1" on latch post and 1-1/2" between hinge post
- Hinges should be attached to a gate post

#### 12. Gate Installation

- First, attach striker bar to gate using provide button head screws
- Thread the  $\frac{1}{2}$ " hinge rod into the upper and lower inserts in the metal gate frame leaving approximately 1-1/2" from the edge of the gate to the bracket.
- Determine proper height for gate and block up gate square with fence
- Attach hinges to gate post with 2-1/2" self-tapping screws provided (do not over tighten screws as this can crush the internal foam and make an indentation in the post
- Level the gate
- Align the latch with the striker bar and attach the latch to end post with 2-1/2" self-tapping screws provided.

#### 13. Install Caps

 Install post caps (caps are pressure fit, however a 3" stainless steel deck screw can be driven through the top of the cap into the middle of the post if desired)

## SimTek Gate Installation Guide

## **Gate Components and Tools Needed**

- Gate Post
- SimTek<sup>®</sup> Fence Gate
- End Post
- SimTek® Hinges
- Latch
- Striker Rod
- 2-1/2" Self-tapping Screws
- Button Head Screws
- Level and Power Drill
- Concrete

## Step 1: Set the Gate Post

Gate posts have extra steel reinforcement for strength and are different than all other posts. Before setting the post in the ground, make sure that a gate post (not an end post, or any other post) is used.

- 1. Dig a hole 12" in diameter by 30" to 36" deep in the ground.
- 2. The flat surface (without a channel) must be in position to receive the gate and gate hardware.
- 3. Post spacing is critical. The ideal spacing is to have a 1" gap between the latch post and the striker bar side of the gate and 1-1/2" for the hinge side. The extra gap on the hinge side is to allow for thermal expansion and contraction.
- 4. Set the post utilizing the same method as for other posts and fill the hole with concrete. Allow the concrete to cure for 48 to 72 hours.



(Hinges are attached to this post)



**End Post** (The latch is attached to this post)



## Step 2: Gate Openings

All gates require about a 1-1/2" gap between the gate and the gate post, and about a 1" gap between the gate and the end post or between the two gates when using double gates. For a single gate, use one gate post and one end post. For double gates, use two gate posts.



Gate Width	Single Opening	Double Drive w/3' Gate	Double Drive w/4' Gate	Double Drive w/5' Gate	Double Drive w/6' Gate	
3ft Wide Gate	38.5″	76.0″	88.0″	100.0″	111.O″	
4ft Wide Gate	50.5″	88.0″	100.0″	112.0″	123.0″	
5ft Wide Gate	62.5″	100.0″	112.0″	124.0″	135.0″	
6ft Wide Gate	73.5″	111.0″	123.0″	135.0″	146.0″	

## **Step 3: Gate Hardware Installation**

- 1. First, attach the striker rod to the gate by using the provided button head screws.
- 2. Thread the 1/2" hinge rod into the upper and lower inserts in the gate metal frame leaving about 1-1/2" from the edge of the gate to the bracket (this can be re-adjusted later)
- 3. Next hold the gate and its hinges against the gate post at the proper position and height. Drill the provided 2-1/2" self-tapping screws into the gate post.



**DO NOT** over tighten the screws because it can crush the internal foam, making an indentation in the post.

- 4. Level the gate. The standard height should be level with the top of the fence panel. Six foot high gates are designed with a 2" gap at the bottom to facilitate an unobstructed swing. If you desire a gap smaller than 2", you may lower the gate relative to the fence panels.
- 5. Finally, align the latch with the striker rod and attach the latch to the end post by using the supplied 2-1/2" self-tapping screws.









## Step 4: Gate Hardware Installation (continued)

## Latch for Single Gates

This latch is made for a single gate installation. The triangular metal piece (C) is optional if the gate needs to be locked from the inside.

The paddle (A) can be reversed by removing the spring and the bolt holding the paddle to the rectangular piece (B).



#### Latch for Double Drive Gates

This double latch consists of the rectangular piece (B) and a shorter paddle (D). This can be achieved by removing paddle (A) and replacing it with paddle (D).

On a double drive gate, the latch should be attached to one gate and the striker rod to the other, using the button head screws for both.



## **Striker Rod**

First, identify the swing position gate. The swing position gate will be the gate that is most commonly used as a walk-access when only opening one of the two gates. This gate will have the striker rod attached to it. Using two supplied button head bolts, attach the striker rod to the swing position gate through the oval slots in the striker rod (see illustration E). Tighten the button head screws by using an Allen wrench.



#### **Drop Rod**

Use the self-tapping screws and the supplied bracket to fasten the drop rod to the bottom corner of the gate. Roll pins may be removed and re-inserted in order to thread the drop rod into the bracket





## **Step 5: Finished Gates**

#### **EcoStone Gates**





Gate Sizes	Model	Description	Actual Dimensions	Weight
	GT72X36	EcoStone Gate 6' high x 3' wide	69.5" high x 36" wide	55 lbs
	GT72X48	EcoStone Gate 6' high x 4' wide	69.5" high x 48" wide	67 lbs
	GT72X60	EcoStone Gate 6' high x 5' wide	69.5" high x 60" wide	80 lbs
	GT72X72	EcoStone Gate 6' high x 6' wide	69.5" high x 71" wide	87 lbs

#### **Ashland Gates**



WT72X48	Ashland Gate 6' high x 4' wide	69.5" high x 48" wide	67 lbs
WT72X60	Ashland Gate 6' high x 5' wide	69.5" high x 60" wide	80 lbs
WT72X72	Ashland Gate 6' high x 6' wide	69.5" high x 71" wide	87 lbs



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