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ESTATE GATES

DISTINCT FROM FORGE TO FINISH.

INFINITY ALUMINUM®

INSTALLATION GUIDE

Revised 03/19

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PLEASE NOTE – All installations have a varying degree of 'uniqueness' to them. The following instructions are meant to be general guidelines. If you are installing your fence in a different manner or have any questions that this guide does not answer, please contact us via phone or email. You can also view helpful installation techniques in our Video Library and Blog within the Knowledge Center of our website (www.ironfenceshop.com).

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Before You Start

Before you get started with your installation, ensure you have done the following items first:

Mark Your Fence Layout

In preparation for installation and for permit approval purposes (if required), you will want to mark the outline of where the fence will be installed. This can be done with a string line, marking spray paint or flags. If you are installing over or on concrete, you can mark the outline with chalk.

Obtain a Fence Permit (if Required)

Call your local Building/ Engineering Department and ask if a permit needs to be obtained. Obtaining a fence permit typically requires filling out a form, paying a small fee and having a local inspector take a look at where your fence is going to be installed based on your marked layout.

Have Your Utilities Marked

Even if you are not required to obtain a fence permit, call to have your utilities marked. It is important to know what's buried below before you begin digging post holes. Simply dial '811' and they will get you in contact with your local utility provider to come out and mark any buried lines at no charge. They will typically come out within 24-48 hours and will mark any buried utilities with flags or spray paint. You can visit www.call811.com for more info on how the process works.

Gather the Required Tools

To install your Infinity Aluminum® fence, you will typically need the following tools:

- String Line
- Shovel and Post Hole Digger (manual or powered) for Post Holes
- Tub, Wheelbarrow or Powered Mixer for Concrete
- Measuring Tape
- Level
- Rubber Mallet and Regular Hammer
- Hacksaw or Sawzall for trimming panels (if necessary)
- High Speed and Quality Drill or Power Driver
- Center Punch
- Socket and/or wrench set for installing supplied gate hardware
- Caulk Gun

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Purchase Concrete and Miscellaneous Supplies

The following building materials will need to be purchased from your local hardware store unless they are noted as optional: **NOTE** – If you are using our specialized flange posts, you will not need to purchase concrete or gravel.

Concrete Mix

- Any standard concrete mix will work. You can utilize reinforced or fast setting concrete if you like, but it is not required.

- The number of concrete bags required will vary based on the size and length of post being buried. You can find concrete calculators online to help determine how many bags you will need. You will need to know the following to utilize the online calculators:

    - Size of your posts
    - Diameter of the hole (see pages 9-10)
    - Depth of the hole
    - Number of posts

Large Size Gravel (optional)

- While this is optional, adding gravel to the bottom of your post hole will allow for drainage of moisture and less chance of post heaving/ sinking due to freezing ground or excessive water. It is also beneficial to use if you accidentally over dig the depth of a post hole.

High Visibility Spray Paint

- This will be used when marking where to dig your post holes as you determine their location in the layout.

Steel Rebar or Wood Stakes

- These will be tapped in ground and your string line wrapped around them when marking your layout for installation.

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Determining Your Post Hole Placement

Run Your String Line

If you ran a string line when you marked the fence layout initially, you can skip this step. The purpose of the string line is to make sure all of your posts remain in a straight line as you install the fence.

- Purchase a string line that is bright and easily visible. This can commonly be found at any local hardware store, but any string that will be easily visible and able to pulled taught will work.

- When tapping your rebar in ground and running your string line, keep in mind that the string line should be the outside edge of your post and **NOT** the center of the fence line. For corners and ends, have the rebar be a foot or more outside the fence layout. This will ensure that the string is your guide and the rebar is not in your way when you dig the post hole.

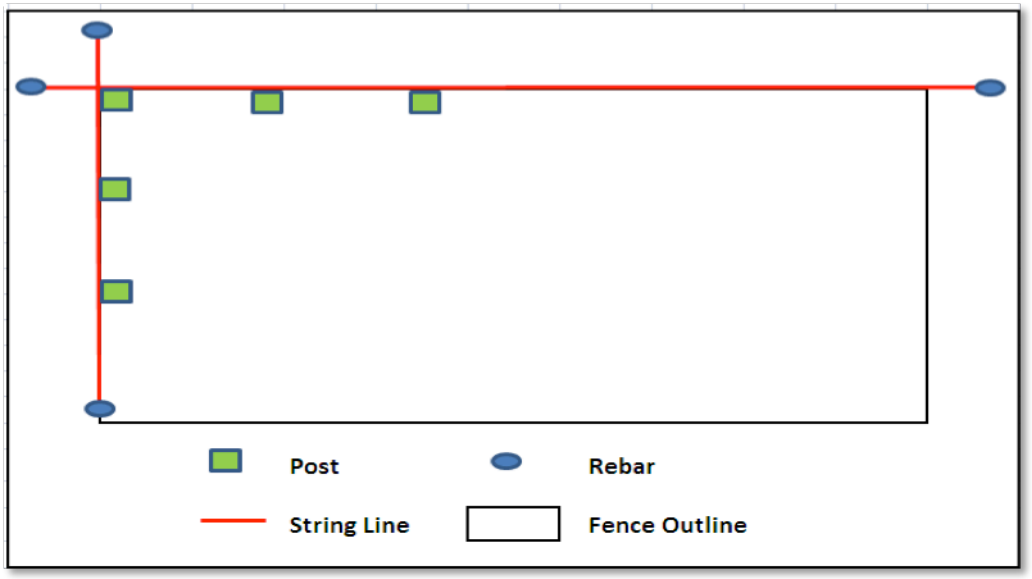

Figure 1 –Example of a String Line Layout

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Determining Post Spacing for Panels and Gates

Now that you have your string line run for guidance, you need to determine how far apart your posts will be spaced. This will vary based on whether a full fence panel, trimmed fence panel or gate is going in-between two posts. **NOTE – If you are utilizing our specialized flange posts, see the measurements discussed on pages 16-18.**

Fence Panel Post Spacing

Our Infinity Aluminum® fence panels come in 6' and 8' widths depending on the grade, but vary slightly due to different component sizes.

- **6' Wide Traditional Grade Aluminum Fence Panels**:
  - Physically 72.5" wide, but that includes the 3/4"portion of the rail that slides inside the post.
  - 71" of fence panel will be visible between the posts when installed.
  - The 'on-center' post measurement is 72" when installed.

- **6' Wide Signature Grade Aluminum Fence Panels:**
  - Physically 73" wide, but that includes the 3/4"portion of the rail that slides inside the post.
  - 71.5" of fence panel will be visible between the posts when installed.
  - The 'on-center' post measurement is 74" when installed.

- **8' Wide Signature Grade Aluminum Fence Panels:**
  - Physically 95" wide, but that includes the 3/4"portion of the rail that slides inside the post.
  - 95" of fence panel will be visible between the posts when installed.
  - The 'on-center' post measurement is 96" when installed.

- The easiest way to determine where your post will go is to use the 'on center' measurement for your fence panel as noted below. This measurement is basically the dead center of where the post will be installed.

Traditional 6' Fence Panels – 72" on center post measurement

Signature 6' Fence Panels – 74" on center post measurement

Signature 8' Fence Panels – 96" on center post measurement

- Based on your 'on center' post measurement, begin marking your post holes in the grass (spray paint works for well for this). Start in a corner or at the end of a run. Mark the end or corner, measure out your 'on center' post measurement and mark again in the grass. Continue doing this until you have marked where all your post holes will need to be dug up in the layout.

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Walk and Driveway Gate Post Spacing

- Since gates come in multiple widths and with options for hinge and latch hardware, we will need to determine the 'on-center' post measurement for our gates individually. Before you can calculate the 'on-center' post measurement for the gate, you will need to note the following items:

    - The width of the gate
    - The width needed for the hinges
    - The width needed for the latch

- First, let's determine which style of hinge was supplied in your order. If you are unsure which hinge you have, you can refer to your itemized invoice or refer to Figure 3 below. Once you know which hinge your gate is utilizing, note the single (one leaf) or double (two leaf) gate width measurement in Figure 2 below:

Hinge Name	Use	Adjustable	Single Gate Width	Double Gate Width
5.5" J-Bolt Hinge	Walk Gates	Yes	3"	6"
7" J-Bolt Hinge	Driveway Gates	Yes	3" to 4"	6" to 8"
Self-Close Hinge*	Walk Gates	No	3/4"	1.5"

Figure 2 - Hinge Width Table

** NOTE – Covers all models of self-closing hinge.*

Figure 3 – 5.5" J-Bolt Hinge

7" J-Bolt Hinge

Self-Closing Hinge

- Next, let's determine which style of latch was supplied in your order. If you are unsure which latch you have, you can refer to your itemized invoice. Once you know which latch your gate is utilizing, note the width measurement in the Figure 4 below:

Latch Name	Key Lockable?	Target Width Between Post and Gate
Gravity Latch	No	3/4" to 1"
Safetech Cobra Latch	Yes	3/4" to 1.25"
Safetech Pool Latch	Yes	3/4"
OrnaMag Latch	Yes	5/16" to 1.44"
Locinox w/ Ext Kit	Yes	1/2"

Figure 4 - Latch Spacing Table

- Now that you have all of your width measurements (gate, hinges, latch), we are going to add all of those together plus the width of **ONE** post to get the 'on-center' post measurement:

Gate Width + Hinge Width + Latch Width + 1 Post Width = Gate Post On-Center

- Using that equation, let's calculate the gate post 'on-center' measurement for the following situation:
    - 48" Wide Single Gate (one leaf)
    - 3" for 5.5" J-Bolt Hinge
    - 1" for Gravity Latch
    - 2" Posts Being Used

48" Gate + 3" Hinge + 1" Latch + 2" Post = 54" On-Center for Gate Posts

- If you were installing a double walk gate or double driveway gate (two leafs make up the total width) then you would need to use double gate width hinge measurement in the Figure 2 table since you will have two sets of hinges instead of one. Let's look at that same equation with a double gate:
    - 10ft (120") Arched Double Driveway Gate (two 5' leafs)
    - 8" for 7" J-Bolt Hinges (4" each side of the gate)
    - 1" for Gravity Latch
    - 4" Posts Being Used

120" Gate + 8" Hinges + 1" Latch + 4" Post = 11'1" (133") On-Center for Gate Posts

- If the hinges or latch you are utilizing can work at multiple widths (adjustable), you want to utilize the middle number of the adjustment range so that you have left/ right adjustment available to you.

Digging Your Post Holes

- Once you have marked the 'on-center 'post spacing for your fence and gates posts throughout your entire layout, its time to start digging post holes. These instructions apply to either manually digging your post holes or using powered equipment.

- Begin with an end or corner post in your layout. The 'on-center' location you marked should be the center of your hole. Dig outwards from there. Your posthole should be situated so that when you place the post in the center, its outer edge is touching against the string line.

Figure 6 - Post Hole Should be Positioned so That The Centered Post Will Contact Your String Line

- Be sure to dig your post hole as straight down as possible. If you live in an area that freezes heavily in the winter, digging a post hole that is wider at the top than the bottom can allow for heaving of the post in deep freeze conditions.

- The diameter of your post hole will vary based on the size of the gate.

    - **Driveway Gates**
        - If your driveway gate is **Classic** or **Smooth Top** style and has a 7ft wide or smaller leaf using a 4x4 post, you can use the rule of thumb that a post hole should be roughly three times the diameter of the post you are setting. So if you were setting a 4x4 post, the hole should be at ***MINIMUM*** 12" across (4x3 = 12). A wider hole will not hurt anything, but it will require more concrete.

- If your driveway gate is **Classic** or **Smooth Top** style and has an 8ft wide or larger leaf with a 4x4 post, you want a much wider diameter hole of 20 to 24 inches.

- If your driveway gate is **Classic**, **Rings Puppy Picket** or **Smooth Top** style and has a 6x6 post, you can use the rule of thumb that a post hole should be roughly three times the diameter of the post you are setting. So if you were setting a 6x6 post, the hole should be at ***MINIMUM*** 18" across (6x3 = 18). A wider hole will not hurt anything, but it will require more concrete.

- **Walk Gates**
  - The rule of thumb is that a post hole should be roughly three times the diameter of the post you are setting. So if you were setting a 2x2 post, the hole should be at ***MINIMUM*** 6" across (2x3 = 6). A wider hole will not hurt anything, but it will require more concrete.

- Before digging your post hole, be sure to account for the height of the post that needs to remain above ground. To determine how much post you need above ground vs buried in ground, take the following into consideration:
  - The height of your fence panels
  - How much of a gap you want under each panel for grass trimming/ landscaping (ideally 1-3")
  - The style of fence panel being used (flat top or finial tipped)

- **EXAMPLE** - Let's say we have a 4' tall fence panel style with finial tips on top, 6' long posts and we want a 2" gap at the bottom of the fence. You would set your post so that 4'2" was sticking up above ground and your post hole was 1'10" deep (4'2" above ground + 1'10" buried = 6' post length).

- Once you have determined the depth of your post holes, it's time to start digging. Be sure to check your post hole depth and width as you go. Keep loose dirt away from the top of your hole. You can utilize a flat object at the top of your post hole and a tape measurer to monitor the depth as you proceed.

- If you accidentally dig too deep, add gravel (not loose dirt) to the bottom of the hole. It can actually be beneficial to over dig your post hole by 2-3 inches and add gravel at the bottom, but it is not required. The gravel will allow for water to drain away and unlike loose dirt it will not compact over time. It also makes fine tuning your above ground post height much easier.

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Installing the Fence Panels and Posts

Your aluminum fence panels and posts will be installed together and set in concrete at the same time. Before you begin mixing concrete, you will want to familiarize yourself with the different post types and set them by the post holes in your layout.

NOTE – If your project requires our flange post inserts, wall brackets or swivel brackets; be sure to read all of the sections before marking or cutting anything. Installation measurements will differ if using any of those three specialized pieces of hardware.

Determining Post Type

- As you begin unpacking your aluminum posts, you will notice they have routed punches in different locations on the face of the post. The location of those punches will determine what kind of post it is and where it will be used in the layout. See Figure 7 for an example of what the routed post punch will look like.

Figure 7 - Routed Post Punches

- There are 5 types of aluminum fence posts determined by the locations of the routed post punches and the thickness of the post:

- **End Post** – Has one punched post face. Used where a fence terminates or ends.
- **Corner Post** – Has two adjacent punched post faces. Used where two fence panels come together at a 90-degree angle in the corner of a layout.
- **Line Post** – Has two perpendicular punched post faces. Used in the middle of a fence run with a panel on each side running in a straight line.
- **Gate End Post** – Has one punched post face. Same as an End post, but has thicker walls and will be noticeably heavier than the other posts. Used on each side of a gate
- **Blank Post** – Has no punched faces. Not typically used in most installations. Blank posts are normally only used in special situations such as severe grade where the fence panel will be secured with a bracket instead of sliding into a post. It is a noticeably heavier like the Gate End post.

- Figure 8 shows where the punches are located on each post type if you were looking down the top of a post.

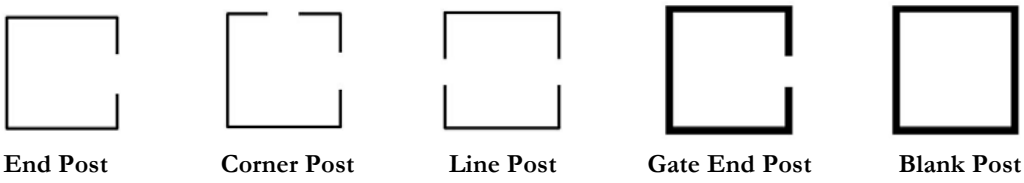

Figure 8- Post Punch Location By Type

- Once you have determined your post types, place them around your layout next to the post holes they correspond with (corner posts next to corner holes, line post next to line holes, etc.). This will help prevent accidentally using a post in an incorrect location (such as using an End post for a gate instead of a Gate End post).

Setting Your Fence Panels and Posts in Concrete (Standard Post Installation)

- With your posts located around the layout, begin mixing your concrete. We recommend following the manufacturer's mixing guidelines and NOT using the 'dry bag' method of placing dry concrete mix in the ground and pouring water on top.
- You want to mix your concrete to a thick consistency. The concrete should roughly have the consistency of chunky peanut butter so that it will hold the post upright in the hole without additional support.

- Once your concrete is mixed, start on a corner or end in your layout and fill the post hole 1/2 way up. Take your post and push it into the concrete at the center of the post hole.

- Take one of your fence panels and insert the horizontal railing into the routed post punch. Push the fence railing in until the indentation stops the rail from going any further. Refer to Figures 9, 10 and 11.

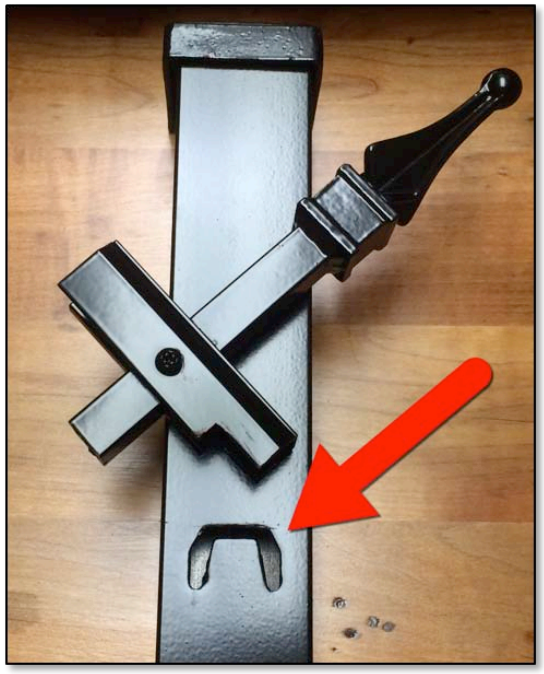

Figure 9 - The Fence Railing Will Insert Into the Routed Post Punch

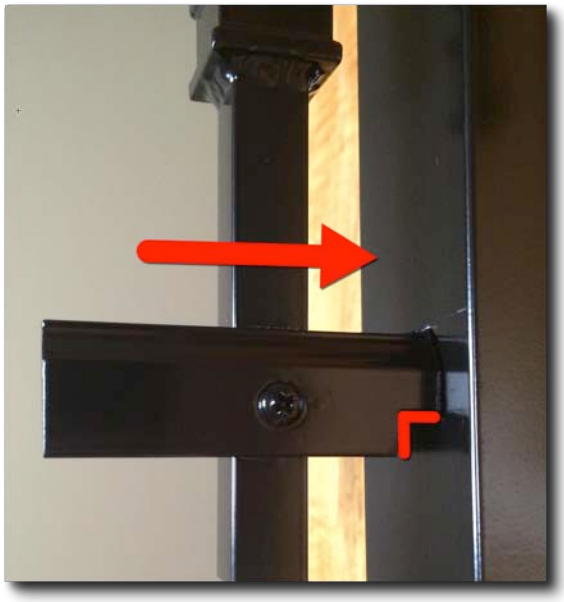

Figure 10 - Insert the Fence Rails Into the Post Until the Indentation Stops It From Going Further

Figure 11 - Example of a Fence Rail Fully Installed Into the Post

- **IMPORTANT** – The aluminum fence panels have screw heads visible on only one side of the fence railing. Make sure you orient the fence panels the same way throughout your installation so that all the screw heads either face inward or outward of your property.

- Once the fence panel is installed into the post finish filling the post hole with concrete. Stop about 2-3" from the top of the hole. This way you can back fill the remainder with dirt later on so grass can grow back.

- Move to the next post in line and repeat the same process of putting the post and concrete in the hole before inserting the other end of the fence panel rails into the next post. Make sure you don't forget about your under panel gap. You can place a piece of wood the same thickness as your gap under your fence pickets to keep it elevated to the proper height.

Figure 12 - Use a Piece of Wood Under Your Fence Panel to Preserve Your Desired Under Panel Gap

- Once you have both ends of a fence panel supported by a post, use your level to make sure its plumb on both faces of the post (inside and outside) and is contacting your string line.

- Continue this process until you have hung all of your fence panels.

- **IMPORTANT** – Make sure that you go back and check that everything is remaining level and plumb as you progress through the fence post and panel installation. Since it is installed while the concrete is still wet, any shaking or jostling of the fence could cause the posts to move slightly and no longer be level and plumb. While the concrete is still wet, use a rubber mallet to tap and adjust your posts in place if anything has shifted.

- Once your concrete has begin to set up, fill in the remaining 2-3 inches of your post holes with dirt. Mound the dirt above the yard line so that you do not end up with a depression around the post once the dirt settles.

- The final step will be to secure your fence panel rails to the post permanently using the supplied self-tapping screws. The number of self-tapping screws used per panel will be based on the number of horizontal rails on your fence panel. Each rail will have a screw drilled into both ends. So if you had a fence panel with 3 horizontal rails, you would need 6 self-tapping screws (2 per rail x 3 rails = 6).

- Place the self-tapping screw against the post in a position that is roughly a 1/2" up from the bottom of the rail and roughly 3/8" of an inch in from the edge of the post so the screw will go through the post and into the fence railing tying everything together.

- Slowly begin running the drill until it gets a bite into the metal then speed up the drill to drive the screw in. Be careful to not over tighten the screw and strip out the threads in the hole or damage the powder coat finish.

- If you are having difficulty getting the self-tapping screw to drill into the post, a small center punch tool can help. Put it against the post where you want the screw and give it a solid tap with a hammer. The indentation it leaves will help the self-tapping screw to bite into the post metal and begin drilling in. The final product should look like Figure 13.

Figure 13 - Self-Tapping Screw Installed Into Post and Rail

Installing Your Posts on a Surface (Specialized Flange Post Installation)

- If you are utilizing our specialized flange posts for installing the fence on top of a surface (such as a patio, pool deck or wall top) you will use the same post spacing as outlined on page 6. If you are using blank posts or mounting to a wall, BE SURE to account for the ¾" of rail that sticks out on the end. You will need to either trim that ¾" end off or account for it in your measurements.

- You will need to supply the hardware for attaching your flange posts to the surface. We do not supply that hardware. However, the options are all something you can find at your local home improvement store.

- To get the best recommendation from your local store, let them know what type of surface you are mounting the post to, how deep/ thick it is and how tall the fence is. They are likely going to recommend one of the following:

    - **Tapcon** – Good for wall tops or thinner surfaces
    - **Concrete Wedge Anchor** – Good for thicker concrete slabs (4in or thicker)
    - **Wood Lag** – Good for wood deck or patio surfaces

- The aluminum fence system utilizes a flange post insert. You will need to trim your posts to your desired height before inserting the flange.

- Before cutting your post, be sure to account for the height of the post with the height of the fence panel and the gap underneath. If you had a 6ft tall fence, 8.5ft post and wanted a three-inch gap under the gate, you would cut the post down to 6'3" before inserting the flange.

- Before you insert the flange, tighten the adjusting bolt until the two halves are almost touching or until there is some resistance when you try to insert the flange into the post.

Figure. 14 - Aluminum Flange Insert

- With the flange inserted into the post tighten it down until the flange cannot be pulled out of the bottom of the post.

- The holes on the aluminum flange inserts are 3/8". We recommend using 5/16" or 1/4" sized hardware. This will allow for a little wiggle room and easier installation while still fitting properly.

Installing Flange Posts to the Surface

- While at the store, you will need to make sure you get a good masonry drill bit that is sized the correct width and length to match your hardware. While you can use a standard drill, we recommend purchasing or renting a drill with a hammer-drill action. The hammer action will make drilling go much faster and smoother into concrete, brick or masonry work.

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- Set your posts around your layout at the proper spacing. For any ends near a wall, be sure to take into account the flange that sticks out on each side.

- As you set your posts, be sure to check they are standing level. You may need to shim under the flange to get the post level if your surface is not level. Metal washers make for good shims.

- With your posts laid out, use something to mark the holes on your surface that you will be drilling. It is best to proceed one post at a time.
- Move the post out of the way and drill your surface to the proper depth per the hardware you are utilizing. Be sure to vacuum out the hole before you install the hardware. You may want to set the post back in place as you drill each hole to ensure things are remaining lined up.

- With the holes drilled, set your post back in place and tighten it down with your hardware. Be sure to check for level on both the inner and outer face of the post after you tighten it down. Adjust as necessary.

- Install your fence panel in the punches, move to your next post and start the process again. Be sure to check the distance between each post as you move through the layout to ensure nothing has shifted. Remember that when spacing flange posts your on-center measurements may vary (see pages 6 and 16) based on your installation.

- **IMPORTANT** – The aluminum fence panels have screw heads visible on only one side of the fence railing. Make sure you orient the fence panels the same way throughout your installation so that all the screw heads either face inward or outward of your property.

Installing Aluminum Fence Panels with Optional Swivel or Wall Brackets

- If your project is utilizing wall or swivel brackets for installing the fence panels against a post or other surface, you will need to factor in the differences in post spacing and installation.

Wall Brackets

- If your project calls for the use of wall brackets, you will need to pay attention to the spacing between your posts or surfaces. Wall brackets are often used to attach the fence directly to your home or to pillars/ columns.

- The wall bracket will fit over the fence panel horizontal railing with the mounting tab typically facing down. You will need to provide the mounting screw from your local hardware or home store based on the material you are attaching to (brick, wood, stone, etc).

- On your fence panel, there is a 3/4" notched section on each end. Be sure to take this 3/4" on each side of the post into account when spacing your posts/ pillars. You can elect to trim that notched section off or leave it. Just be sure you measure out the actual length of rail (with or without the indentation) you are installing before determining your post spacing.

Figure 15 - Wall Bracket

Swivel Brackets

- Swivel brackets are used when a panel needs to be angled off of a post rather than installed directly into the punch. The swivel brackets will allow a wide range of motion with its spherical joint.

- The flat portion of the bracket goes against the post and the cup piece will have the panel rail inserted into it. Use the standard aluminum fence screws provided to attach it to the post.

- If your swivel bracket is going against a punched post, you should position the bracket to cover the punched hole on the post.

Figure 16 - Swivel Bracket

- Care will need to be taken to figure out the between post measurement with use of the swivel brackets. The 3/4" notched section of rail is usually trimmed off each end of the panel when using the swivel brackets. The amount of extra spacing required for the swivel bracket will depend on the angle you are installing the fence panel. Be sure to test out the angle and make your measurements before you dig any post holes. The swivel brackets can add anywhere from 3/4" to 1.25" to each **side** of the fence panel (1.5" to 2.5" if used on both sides).

Trimming a Fence Panel

- Its fairly typical that at least one fence panel will need to be trimmed for width in your layout. This could be due to gate placement or coming to the end of a run.

- Trimming fence panels for width is an easy process. We recommend using a simple hacksaw since it has the most control. You can also use power tools to cut the panel to width, but be sure to have another person hold both sides of your cut as violent shaking of the panel by power tools like reciprocating saws (sawzalls) could damage the panel.

- Determine the panel width you need. Measure along the horizontal rails and mark where the cut needs to be made. If your measurement lands on a picket, you may need to trim from both sides of the panel to line everything up.

- An optimal cut will be one that you can make up against a picket. This preserves the spacing between the pickets and gives a cleaner look to the installation. If your cut needs to be tighter, make sure you at least have 1.5" of rail sticking out from a picket. After marking the location, use your selected tool and cut through the horizontal rail.

- Before you can install the cut end of the rail, you will need to notch the lower corner of the rail so it can fit inside the post punch. You need to notch a 1/4" tall x 3/4" deep section of the rail out.

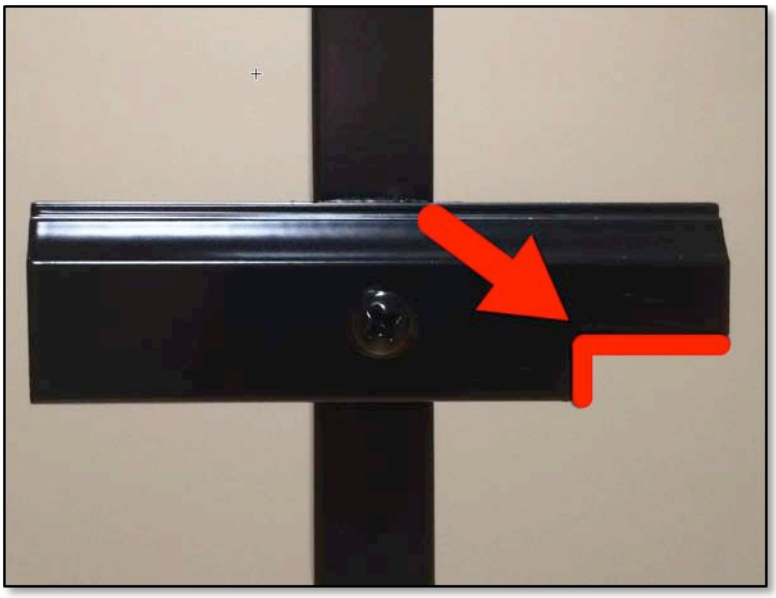


Figure 17 - Notch Lower Portion of the Cut Rail 3/4" x 1/4"

- The notch can be made with a hacksaw or Dremel type tool. Be sure to file or grind down any burrs or edges from the cuts. Test fit the rail into the post. If it fits, apply touch-up paint to the bare metal and install the panel after it dries. Final installation of the cut panel will be the same as a regular full size panel.

Installing Fence Panels in a Sloped Yard

- There is usually some slope to a yard that may need to be compensated for during installation. While there is no reason that the yard needs to be totally level underneath the fence, you may want to adjust the fence installation so that its aesthetically pleasing to you or tight enough at the bottom to keep animals in or out of the yard.

- The aluminum fence panels can be 'racked' to follow grade. What this entails is essentially pushing down on one end of the fence panel and up at the other end. This will angle the rails so they are no longer perpendicular to the pickets, but instead angled while the fence panel pickets remain upright.

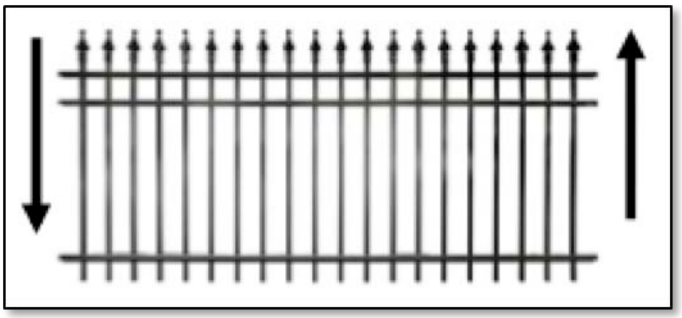


Figure 18 - To Rack a Fence Panel, Push Up on One End and Down on the Other

- If you need to rack a fence panel, it should be done as you install the fence panels and posts, but BEFORE you put the self-tapping screw through the post into the rail.

- The aluminum fence panels will rack between 8"-10" per panel. So for every 6' or 8' fence panel width, you will be able to compensate for a rise or drop of 8"-10".

Figure 19 - Aluminum Fence Panels Racked to Follow Grade Down

- If you have more than 8"-10" of drop per 6' or 8' fence panel you will need to address it in one of the following ways:
    - Leave a larger gap under the fence.
    - Backfill the area with soil or landscaping stones.
    - Utilize specialized swivel brackets to mount the fence panel outside of the post punch.

Installing The Post Caps

- This step can be done before or after installing the fence and gates. Part of your order in the install kit is a tube of exterior rated adhesive. You will need a caulk gun to apply the adhesive.

- Some of our cast post caps still have a small hole on them as shown in figure 20. We no longer utilize that method of installation for the post caps. That small hole will not be used. Screws were not provided in your order to secure the caps in that manner.

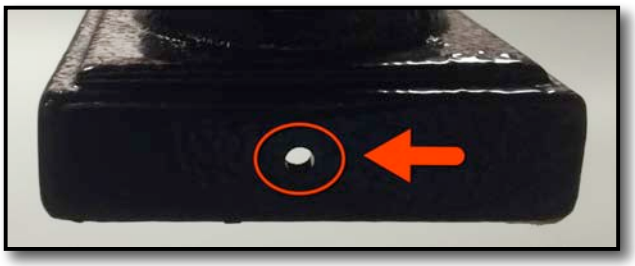


Figure 20- This Hole in the Casting is not Used for Installation

- With the caulk gun, apply a bead of the adhesive on the underside inner lip of the cap on all 4 sides as shown in figure 21. You want the adhesive oriented so that when you press the cap on the post, the adhesive will smear and make contact with the post.

- You want enough adhesive on the surface to make sure it will contact the post, but not so much it spills out when you install the cap. If your cast iron cap has the screw hole in the base, be sure to not put adhesive over or near the hole so that it does not come out of that hole when you press the cap on.

- If your cast caps do have the hole, be sure you orient all your caps on the posts so that the hole is facing in the same direction.

Figure. 21 - Apply Under the Cap

- We do our best to estimate how many tubes of adhesive will be needed for your project. If you find yourself needing more, any exterior rated adhesive that will bond with metal will work. These can be found easily at any hardware or home improvement store. Just make sure they are exterior rated.

- Curing time for the adhesive will vary depending on the temperature when it was applied. It could dry in a couple hours or may take a couple days. Be sure to wipe any excess adhesive off your post and cap before it dries.

Installing Walk Gates and Driveway Gates

- **IMPORTANT** – Gates can exert a lot of leverage force on concrete post footings. Make sure your post have fully dried and cured before hanging your gates. Consult the concrete manufacturer for drying/ curing time required before use.

- **NOTE** - The following steps cover installing a walk or driveway gate utilizing our gate hardware and installing the gate on posts. If you are utilizing other gate hardware or mounting the gate to a surface other than our posts (such as a wood post or masonry pillar), please consult your Iron Fence Shop® salesperson for assistance on installation.

Determine Your Gate Hardware

We offer several options in hinges and latches for our walk and driveway gates. Consult figures 22 and 23 below to determine which hinges and latches you are utilizing:

Gate Hinges

5.5" J-Bolt Hinge

7" J-Bolt Hinge

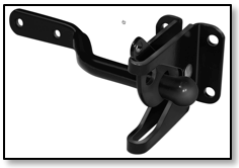
Self-Closing Hinge

Figure 22

Gate Latches

Locinox

Safetech Cobra



Gravity Latch

Safetech Pool

OrnaMag

Figure 23

Install the Gate Hinges

- There is no standard spacing for where the hinges need to be mounted vertically on the gate frame and post. You generally want to install them a third of the way from the top and bottom of the gate frame so that they are not too far inward or outward.

- When determining hinge placement on the gate frame and post, be sure to account for the gap at the bottom of the gate. There is no standard bottom gap height, but you want to ensure the gate can freely swing all the way open and shut without contacting the ground.

- So long as the area around the gate is flat, most installations will match the bottom gate gap with the bottom gap of the fence panels. So if your fence panels are mounted 2" off the ground, you can mount your gates with the same bottom gap.

- Make sure that your chosen hinge mounting location will not interfere or come in contact with any horizontal rails or decorative features of the gate.

J-Bolt Hinges (5.5" and 7")

- Installation of the j-bolt hinges is the same whether you are using the 5.5" for a walk gate or the larger 7" version for a driveway gate.

- The flat plate part mounts against the post and the threaded J-portion with the two adjusting nuts will be mounted through a hole you drill in the gate frame (see Figure 24)

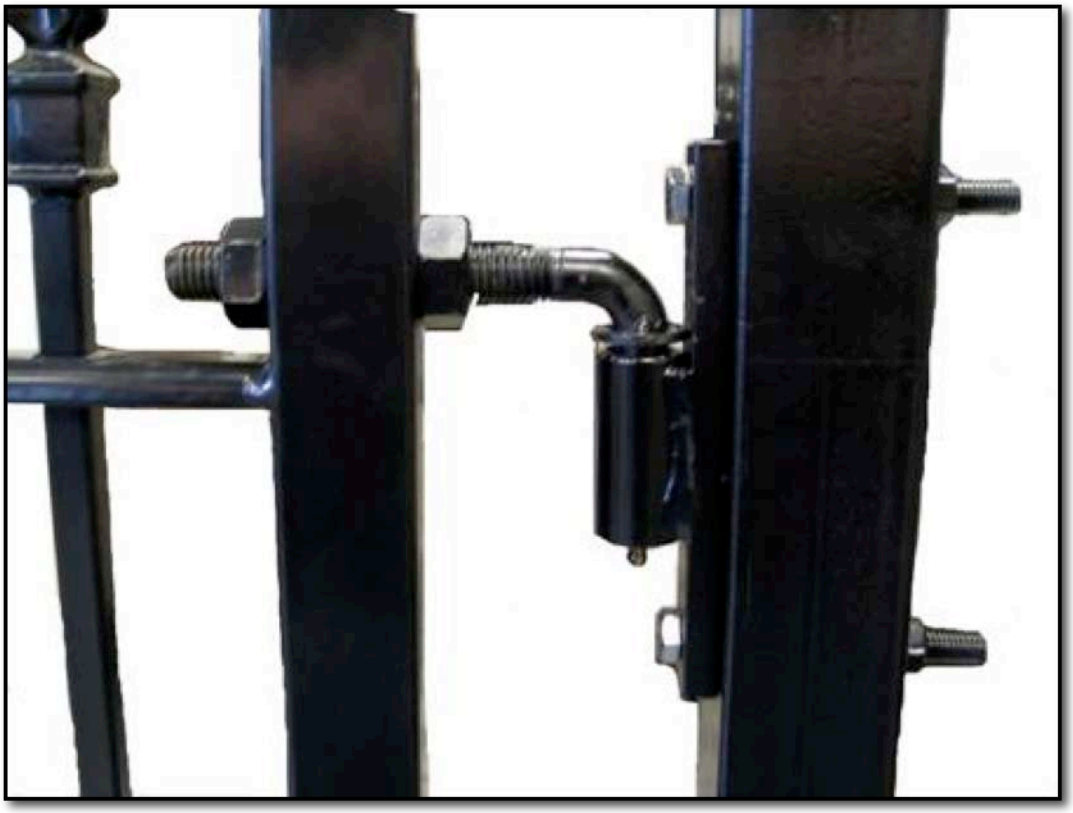


Figure 24 – An Installed J-Bolt Hinge. The Gate is on the Left and the Post is on the Right Side

- Determine the mounting location of your J-bolt hinge in relation to both the post and gate frame. Mark your post and gate frame for drilling. Be sure to measure and line up your drilling points as both the gate frame and post will be drilled on two sides of the post and the holes need to be level.

- Use the supplied drill bit (or a quality cobalt tip) to drill your holes in the post first. Clean any burrs in the hole and apply a small amount of touch-up paint to the hole.

- Mount the flat portion of the j-bolt against the post using the supplied hinge hardware kit bolts. These will be the silver bolts of varying length in the clear bag. (**NOTE** – You will not use all of the bolts in the bag. There are enough bolts for a set [two] of the j-bolt hinges and in every length to accommodate post sizes from 2" up to 6").

- When installing the j-bolt hardware, put a small smear of grease on the underside of the bolt and washer that will make contact with the post. The grease will lubricate the contact points on the hardware and post so that the post finish is not marred or stripped when the hardware is tightened down.

- With the j-bolt hinge mounted on the post, lift your gate up to ensure your marked location on the gate frame still lines up with the bottom gap and top of gate as you planned. If everything looks good, drill the gate frame. Clean up any burrs and put a shot of touch-up paint in the hole.

- Take the outer (at the end of the threads) adjusting nut off the threaded portion of the j-bolt. Feed the thread through the hole you just drilled in the gate frame and then re-thread the nut on the outside to secure the threaded portion to the gate frame. Use the two adjusting nuts to move the gate frame left/ right if adjustments are necessary.

- **NOTE** – If you are installing a larger gate, the threaded portion of the j-bolt and the backing plate will separate so that you can install them separately. You would then lift the gate up and insert the male portion of the j-bolt hinge back into the female portion. Just be careful not to lose the ball bearing that is down in the grease of the mounting point.

Figure 25 - The J-Bolts Will Separate at the Swivel Point

Install the Gate Latch

- There is no specific place you need to mount the latch on your gate. Most latches are normally mounted in the 40-42" height range.

Safetech Cobra Latches

- See the installation instructions included with the latch

Safetech Pool Latch

- See the installation instructions included with the latch

Locinox Latch

- See the installation instructions included with the latch

OrnaMag Latch

- See the installation instructions included with the latch

Gravity Latch

- The clasp portion will go on the post (in a double gate setup it will go on the adjoining gate half in the center) with the larger padlock hole facing the bottom. Use the smaller supplied self -tapping screws to mount the clasp portion to the post.

- The latch will install as shown in Figure 26. The arm will go on your gate frame while the clasp or catch goes on your post.

- Line it up to intercept the clasp and affix to the gate frame using the smaller self-tapping screws provided. The arm will be close to the edge on the Traditional grade 1.5" gate frames, but they will fit. If you are concerned about fitment, you can pre-drill a smaller pilot hole to locate the self-tapping screw when attach the arm.

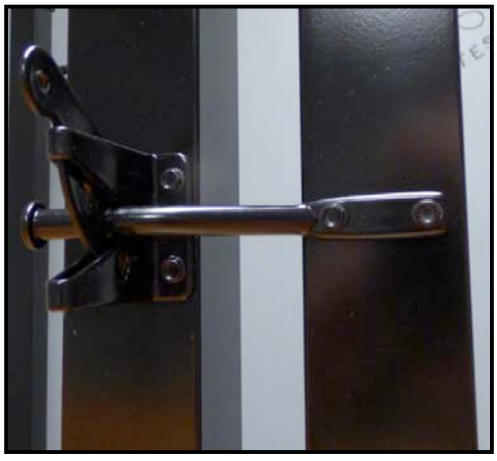


Figure 26 - Latch on Post (left) Arm on Gate (right)

Drop Rod (Double Gates Only)

- If you have a double gate to be manually opened, you will need to install a drop rod on one or both leafs to keep it the gate stationary in the center. Do not rely on a latch alone to hold a double gate shut.

- Mount the drop rod brackets on the inside (property side) of the gate frame using the supplied hardware. Install the brackets so that the curved part of the drop rod can rest on the top bracket with the rod also in full contact with the ground.

- If you are mounting over grass drive a small piece of pipe one size larger than the drop rod into the ground as a more solid stop for the rod.

- If the drop rod is being installed over concrete, you will need to drill out a small hole in the concrete with a masonry bit to give the drop rod a place to catch. You can also epoxy a small piece of pipe in the hole that the rod will fit into to prevent the concrete chipping around the hole from use.

Project Completion and Maintenance on Your Fence and Gates

- Be sure to fill out your warranty sheet and email or mail it in to us.

- After installation, go back and touch up any scuffs or scratches that occurred in shipping or installation using the supplied touch-up paint. If you only need to make minor touch-ups and are concerned about over spray from the can, you can simply spray some of the paint into the cap of the can (or similar plastic container) and use a small brush or Q-tip for more precise touch-ups.

- Inspect your fence yearly for any damage that went to bare metal. If you find areas with damaged finish down to bare metal, simply use a wire brush to clean the area of dust/ dirt and then use satin black paint to touch the area up.

- If you have gates, grease or oil the hinges as needed. Key lockable latches may require a shot of graphite every couple of years to ensure continued smooth operation.