Natures Composites

Sustainable Outdoor Living

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# MODERN HORIZONTAL SEMI-PRIVACY FULL SIZE GATE

## INSTALLATION GUIDE (11/25)

***Our products and/or processes are protected by the following patents, as well as other patents that are pending: US 11,053,707; US 12,110,703; US 12,084,880. For any further information or questions please visit www.naturescomposites.com or call us at (307) 338-2608***

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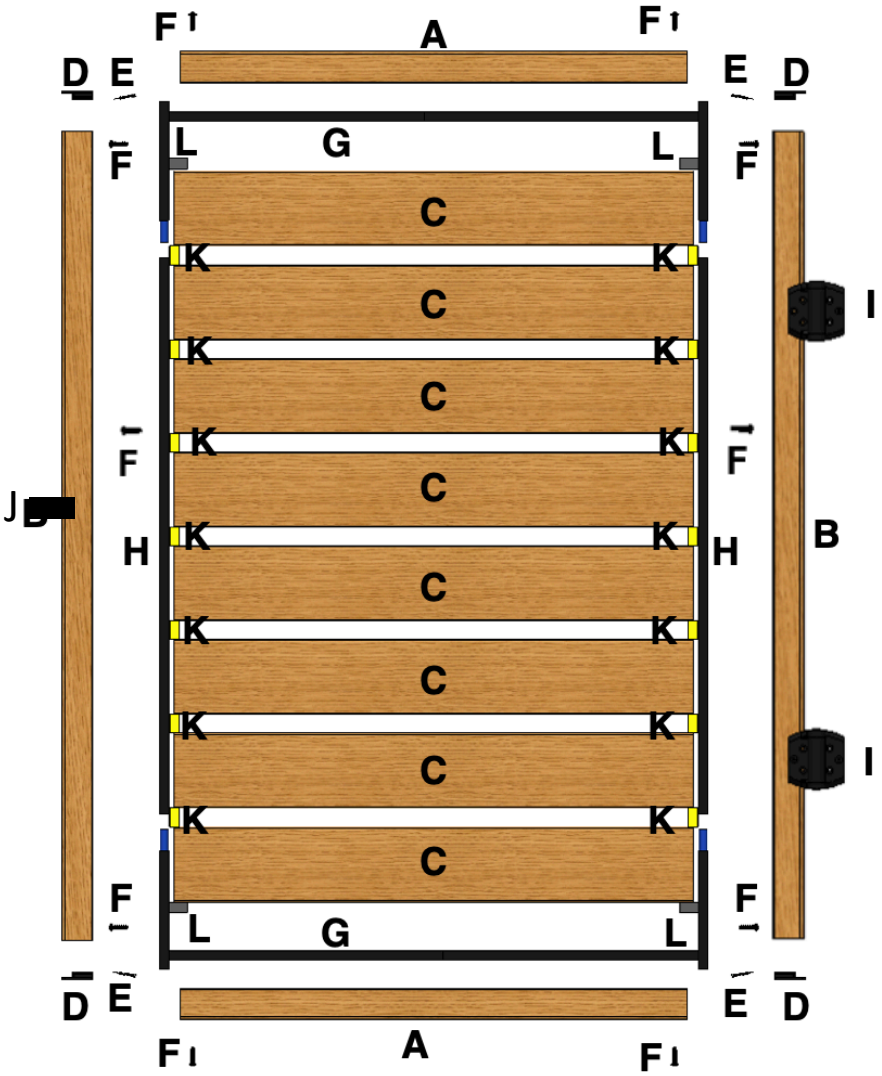
**Watch out for green boxes for our Frequently Asked Questions!**

## COMPONENTS

| ITEM | QTY | DESCRIPTION | NC PART |
|---|---|---|---|
| **Complete Product** | **1** | **Modern Horizontal Semi-Privacy Full Size Gate** | 100309TB60400 |
| **A** | 2 | Horizontal U-Post 40.5" | 300722XX0405 |
| **B** | 2 | Vertical U- Post 64.75" | 300722XX06475 |
| **C** | 8 | Square Edge Board 1x6-42" | 300341XX042 |
| **D** | 4 | Top Cap | 200721BK00000 |
| **E** | 8 | 1 3/4 Torx Composite - Top Cap Screw | ACSCR#10XI-3I 4RV- |
| **F** | 10 | Rounded Head Thread-Cutting Screws for Metal | AC90086A646 |
| **G** | 2 | Horizontal Upper/Lower Frame | AC GATE UPPER FRAME |
| **H** | 2 | Frame Extension (44.5") | METAL_GATE_FRAME EXT_FULLSIZE |
| **I** | 1 | Heavy Duty Hinge Set | TCHDMA1S3BT |
| **J** | 1 | Heavy Duty Latch Set | 210003 |
| **K** | 14 | Board Spacer | 200723XX00150 |
| **L** | 4 | Gate Frame Corner Spacer | 200723XX001 |
| **M** | 18 | VELCRO DOTS | VELCRO DOTS |

**MODERN HORIZONTAL SEMI-PRIVACY FULL SIZE GATE (6 ft H x 4 ft W) - *Nominal: 65 in. x 45.5 in.***

**please note hardware kit is included in-between U-Posts in box*




**Can I cut my gate to adjust the size?**
No! Our gates cannot be cut due to their metal inserts and structural design.

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## BEFORE YOU BEGIN

A. **Verify Underground Utilities**
Before starting, contact local utility companies or use utility location services to ensure the installation area is clear of underground lines and potential hazards (call 811).

B. **Locate Property Lines**
Confirm the fence will be placed within your property boundaries to prevent encroachment and comply with any applicable legal requirements.

C. **Review Local Building Codes**
Check local building codes to ensure your installation complies with all requirements. Obtain any necessary permits prior to beginning the installation.

D. **Use Appropriate Safety Gear**
Wear protective equipment, including gloves, safety goggles, and work boots, to ensure a safe installation

## TOOLS REQUIRED

A. **Rubber mallet** (not included; used for securing angle brackets)

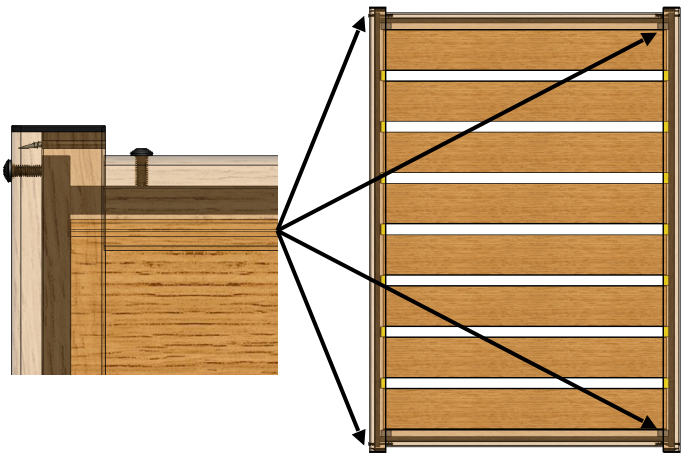
B. **#4 Phillips screwdriver**

C. **Power drill** (compatible with a #4 Phillips head screwdriver)

D. **Torx T20 Bit** (for fastening the top cap)

E. **Two 2x4** (6 ft long) wood lumber pieces as support

## GATE INSTALLATION SUMMARY



## TO ENSURE YOUR NC GATE OPERATES CORRECTLY FOLLOW THESE GUIDELINES

- This assembly requires an intermediate skill level. Prior experience with tools and assembly techniques is necessary.

- For the assembly of this gate, NC recommends to position components on a sturdy work table.

- NC Gates come in a fixed size of 45.5 inches wide by 65 inches tall and are not adjustable. Proper planning for the gate opening is essential to accommodate these exact dimensions.

- This full-size gate weights around 90 pounds, in order to work properly it requires strong support.**You must purchase our matching NC 5x5 Commercial Post to mount your gate, otherwise it will not hold over time. We recommend to reinforce the composite post by inserting a 4x4 treated lumber post for extra strength.**

- Post Installation Accuracy: NC recommends taking the time to position the posts where the gate will be hung with precision before securing them into the ground.

### How should I space my posts if I'm adding a gate?

To add a gate, you must use two NC 5x5 Commercial Posts—standard posts won't support the weight. The gate is 48" wide, and each post is 5" wide, so space them 58" apart (outside to outside) to ensure proper hinge and latch function. For added strength, insert a 4x4 treated wood post inside each composite post. For Full Size and Perimeter Gates with a 3.5" ground clearance, burial depth is 24". If you choose the 2" ground clearance option, burial depth increases to 25.5". For 2 or 3-board Ranch Rail Gates, burial depth is 16.5".

The following instructions outline the assembly process for the shown gate. You will find the CAD drawing exploded view with all components, followed by a fully assembled gate view in transparent format, allowing you to easily identify each part behind the composite U-Posts and boards.

1. **Assemble the Metal Frame:** Begin by assembling the metal frame according to the provided specifications.
2. **Position the Frame:** Place the assembled metal frame inside the composite U-Posts.
3. **Install the Boards & Spacers:** Insert the boards into the frame, ensuring they fit securely within the U-Posts.
4. **Secure the Gate:** Fasten the structure by installing four 3-inch screws—one at each corner.
5. **Attach Top Caps:** Slide the top caps onto each corner of the gate and secure them using the provided screws.

Once the gate is fully assembled, refer to the additional instructions for mounting the hardware and hanging the gate onto the posts.

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## Can my gate be Surface Mounted or only Buried?

Our gates are too heavy to be surface mounted. Please purchase and bury two of our NC 5x5 Comercial Grade Post to hang your gate.

## PART A: GATE ASSEMBLY INSTRUCTIONS

### 1. Metal Frame Assembly

**Assemble the Metal Frame**
Begin by assembling the metal frame, which serves as the structural backbone of the gate.

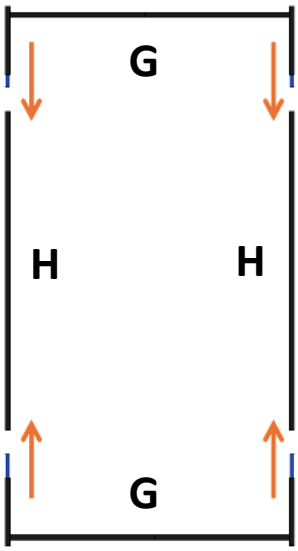
**1.1 Connect the Frame Components**

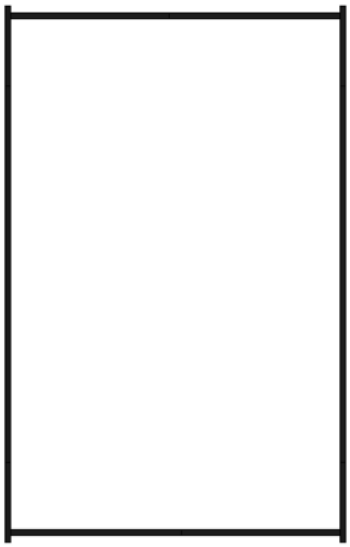
- Take **2 Horizontal Upper/Lower Frames (G)** and connect them with **2 Frame Extensions (H)**.
- Ensure the components are aligned properly for a seamless connection.

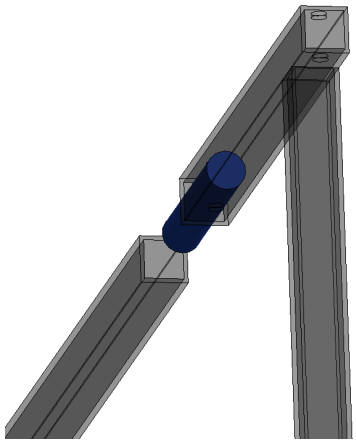
**Tips for a Secure Fit**:

- The fit between the metal frame parts (G and H) is designed to be tight to ensure structural stability.
- Use a **rubber mallet** to gently tap the components together, ensuring they are securely connected without damaging the frame.
    - Start with light taps and gradually increase force as needed until the parts are firmly joined.

Once the frame components are fully assembled, verify that all connections are tight and properly aligned before proceeding to the next step.



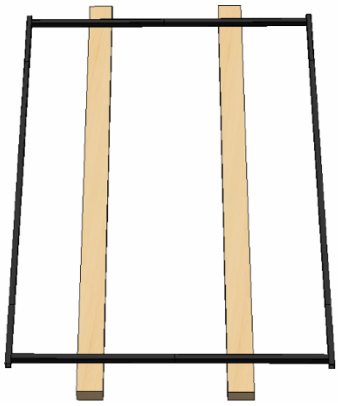



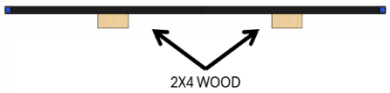


### 2. Install the Square Edge Boards and Spacers

**2.1 Prepare the Work Area**
To facilitate the assembly process, place the assembled frame on **two support structures**, such as **2x4 wood pieces**.

- This setup provides stability and elevates the frame just enough for easy access in the next step when the U-Posts are positioned.



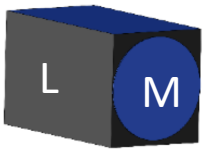


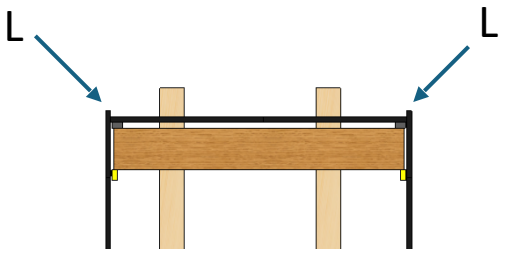

## Can I paint my gate?

No! Painting is not advisable. Our products come pre-finished with durable, lasting color and a textured, non-reflective surface. They're designed to maintain their appearance without the need for painting, staining, or sealing—just occasional cleaning with soap and warm water.

### 2.2 Insert 1" Spacer in the Corner of the Metal Frames

1. Attach two of the two-sided Velcro dots (M) to the unfinished sides of two 1" spacers (L) that will make contact with the two top corners of the metal frame (G).
2. Insert the 1" spacer (L) in each of the top corners of the metal frame.

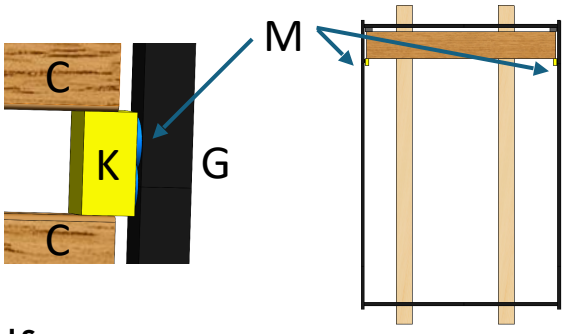



### 2.3 Insert 1.5" Spacers and Boards

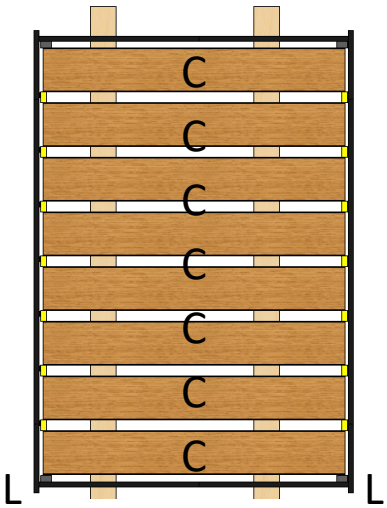
Now, we will repeat the process but with the 1.5" spacers that will create the semi-privacy look.

3. Attach one of the two-sided Velcro dots (M) to the unfinished side of the spacer (K) that will make contact with the metal frame (G).
4. Then, pace two spacers (K) under each side of the first board (C), ensuring they are securely attached to the metal frame and in contact with the board. Make sure there are no gaps between the spacers and the board.




### 2.4 Insert Additional Boards and Spacers

1. Repeat the process for the next 7 boards (C), alternating between inserting a board and attaching two spacers on each side to the metal frame at the contact points.
2. Ensure all boards and spacers are aligned properly and securely in place.




### 2.5 Insert the Final Board

The last board will be secured at the bottom by spacers and at the top by direct contact with the metal frame. Use a gentle side-to-side motion to guide the board into place without forcing it, ensuring it sits flush with the spacers and the metal frame.

**Finally, repeat steps 2.2 and insert the two remaining 1" spacers (L) in each of the corners of the metal frame.**

After all 8 boards and 14 spacers are installed, confirm that the frame, boards, and spacers remain stable on the support structures before proceeding to the next step.

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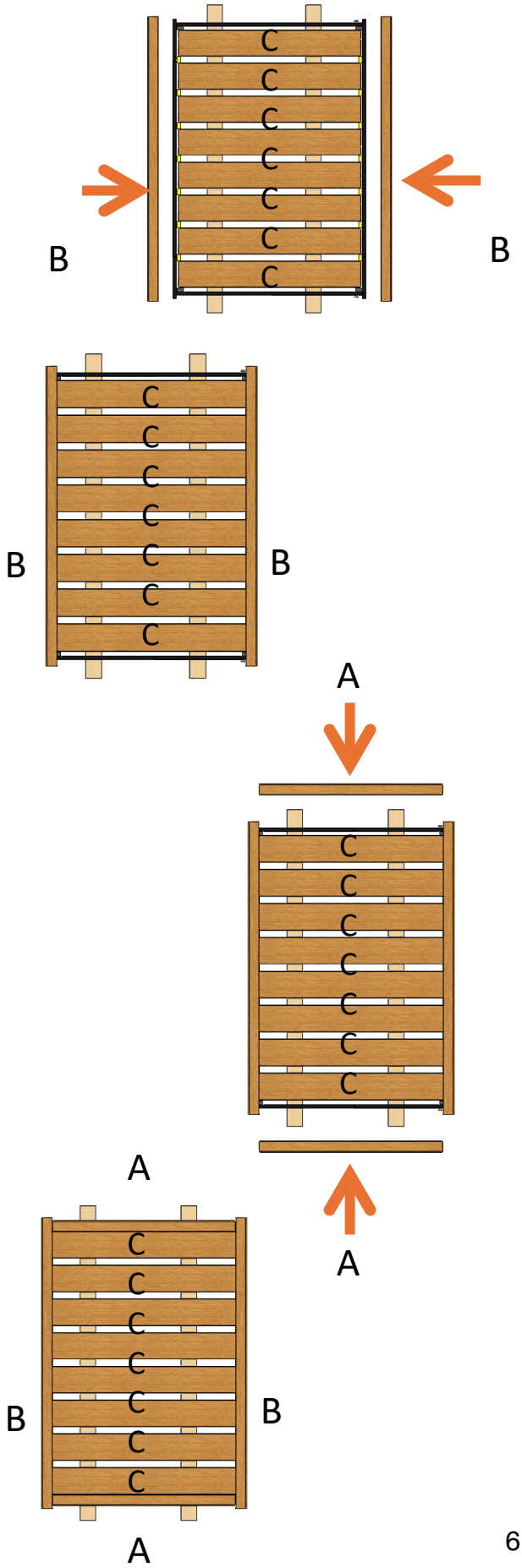
## 3. Position the Horizontal and Vertical U-Posts




### 3.1 Insert the Vertical U-Posts

1. Take the **2 Vertical U-Posts (B)** and insert them into the **metal frame and the Square Edge boards inside the frame**.
    - Align the channel of the Vertical U-Post (B) with the edge of the metal frame and the sides of the T&G boards. Slide the U-Post into place until it fits securely and is **all the way in**, ensuring that both the **Square Edge boards and the metal frame** are fully enclosed within the U-Post channel.
2. Repeat this process for the **opposite side**, ensuring the Square Edge boards and the metal frame are enclosed and aligned on both vertical edges.

**Note**: The length of the **Vertical U-Post (B)** should be equal on both the top and bottom relative to the metal frame. Ensure that the gaps at the top and bottom of the U-Post are identical to maintain proper alignment and aesthetic balance.

### 3.2 Insert the Horizontal U-Posts

1. Take the **2 Horizontal U-Posts (A)** and prepare to insert them into the metal frame.
2. Adjust the **2 support structures (e.g., 2x4s)** to provide enough room for the first Horizontal U-Post (A) to fit into the frame.
    - Slide the first Horizontal U-Post (A) into the frame, ensuring that its channel fits snugly over the edge of the metal frame and secures the Square Edge boards in place.
    - Push the U-Post **all the way in**, ensuring that the **Square Edge boards and the metal frame** are fully enclosed within the U-Post channel.
3. Once the first Horizontal U-Post (A) is fully inserted, **carefully slide the the 2 support structures** to provide space for the second Horizontal U-Post (A). *Make sure to do this carefully to ensure that the assembled pieces remain in place during this process.*
4. Insert the second Horizontal U-Post (A) in the same manner, ensuring that its channel also fits securely into the metal frame and encloses the Square Edge boards.

**Key Notes**: Double-check that all U-Posts (both Vertical and Horizontal) are properly seated and aligned, fully enclosing the **Square Edge boards and the metal frame**. At this stage, the assembly should be secure, with no visible gaps or misalignment.

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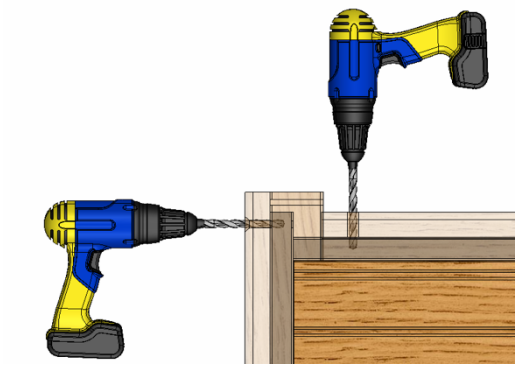


## 4. Secure the Gate

At this stage, you are ready to secure the gate by fastening the cutting screws through the pre-drilled holes on the horizontal and vertical U-Posts (B) into the metal frame. This process requires **10 pre-drilled holes (pre-drilled at factory - no need for you to do it) and 10 screws (F)** for a secure and stable assembly. Follow these steps:

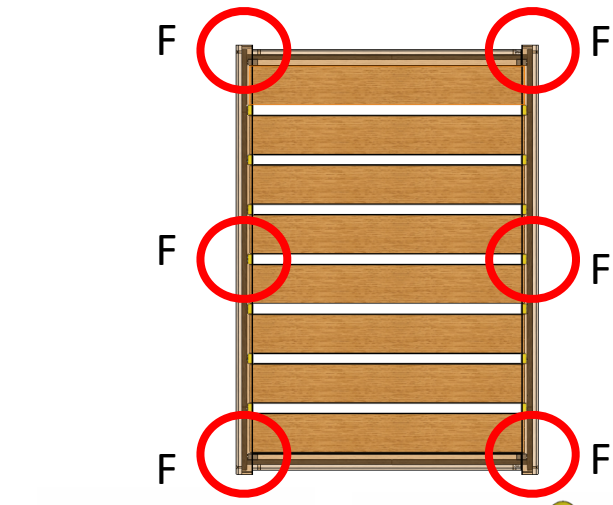
**4.1 Verify Alignment**
The alignment of the composite U-Posts (B) with the metal frame was completed in the previous step. Before proceeding, double-check to ensure that the alignment has not shifted. The factory pre-drilled holes on the U-Posts (B) must remain perfectly aligned with the metal frame beneath.

**4.2 Pre-Drill Holes into the Metal Frame**
Using a power drill and a 17/64-inch drill bit, pre-drill 10 holes into the metal frame at each location using the the factory pre-drilled holes in the U-Posts as a guide - this way the holes will align.

- Drill carefully through the composite U-Posts and into the metal frame to maintain accurate alignment.
- Tip: Keep the drill perpendicular to the surface to avoid misaligned holes and ensure a precise fit for the screws.

**4.3 Insert Cutting Screws**
Once the pre-drilling is complete, insert the cutting screws (F) into each pre-drilled hole on the composite U-Posts (B). **DO NOT OVER-TIGHTEN.** Use a power drill to drive the screws securely into the metal frame.

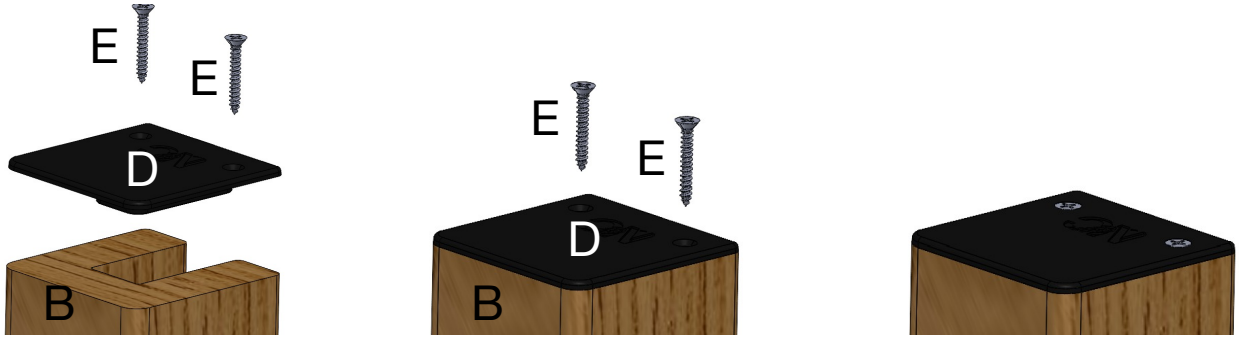
**4.4 Check Stability**
After securing all 10 screws, verify the gate's stability. Ensure that all screws are tightened and that the U-Posts are firmly and uniformly attached to the metal frame.




**Why should I not over-tighten my screws?**
Our screws are self tapping and if you over-tighten it will strip the screw (cut into the metal) and could potentially lead to failure.

## 5. Top Cap Installation

1. Slide the Top Cap into the Top Cap Routed space on the top of the U-Channel post.
2. Fasten the two **Top Caps (D)** using two **1-5/8 Torx Composite Screws (E)** each with a **Torx T20 Bit** and power tool. You can find both in the same plastic bag.
3. Repeat steps for all four top and bottom grooves on two U-Channel Posts (B).



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## PART B: HANGING THE MODERN GATE

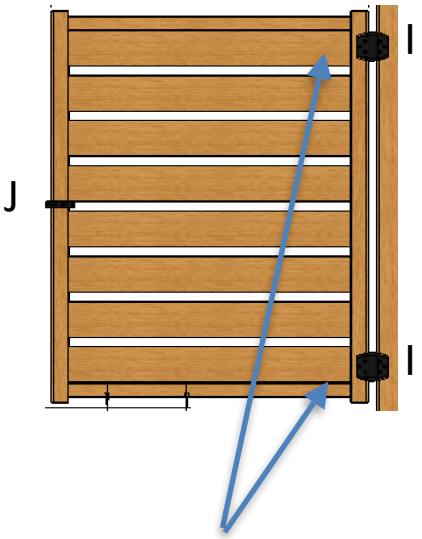
### Premium Hardware for Optimal Performance

NC gates are crafted for durability, with the semi-privacy full-size gate weighing approximately 90 pounds. Proper installation is essential to ensure smooth functionality and longevity in your chosen location.

### Hinge Installation Note

The NC Gate requires the hinges to be secured into the gate through the composite material and into the metal frame to properly support the gate's weight and ensure optimal functionality.

**Pre-Drill for the Gate Side:** Pre-drill holes using a 5/32" drill bit for the hinge screws. On the gate, the hinge screws must penetrate the composite U-Post and the metal frame.
Ensure proper alignment so the screws securely fasten into the metal frame; 4 of the 6 screws on the gate side will anchor into the metal frame for stability.
**Pre-Drill for the Post Side:**
If using an NC 5x5 Commercial Post, pre-drill the holes using the same 5/32" drill bit.Insert a 4x4 post insert inside the 5x5 post for additional reinforcement. Ensure the hinge screws penetrate both the 5x5 post and the 4x4 post insert for a secure connection.




Hinges position should be installed as shown in drawing [2.5 inches from the top and bottom]

**STOP! Have you attached all screws to the hinges?**
Your D&D kit package comes with 12 screws. Once you pre-drill your holes (see instructions left), you must attach all 12 screws, **including inserting two screws into the leg side of each hinge into order to penetrate the internal steel frame. If you do not do this your gate will sag.**

### D&D Manuals

To provide a reliable and hassle-free experience, NC has partnered with D&D Technologies, the premier gate hardware manufacturer. Every NC gate kit includes a pair of D&D hinges and a latch, selected specifically to support the weight and design of our gates. This premium hardware is engineered to deliver optimal operation, ensuring that your gate functions smoothly and securely over time.

For further installation instructions, please refer to the provided link for the specific D&D hinge and latch model included in the gate kit (www.us.ddtech.com) ***Please note D&D recommends a different positioning, please use NC recommendation (see image above).**

*Note: For the hinge screws, the pre-drilled hole needs to go through the composite material and penetrate through the internal metal frame.*

Download Hinge, SKU# TCHDMA1S3BT: https://us.ddtech.com/products/truclose-multi-adjust-heavy-duty-series-3?variant=43821580943517

Download Latch, part # 210003, instructions here: https://us.ddtech.com/products/wood-hardware-standard-post-latch

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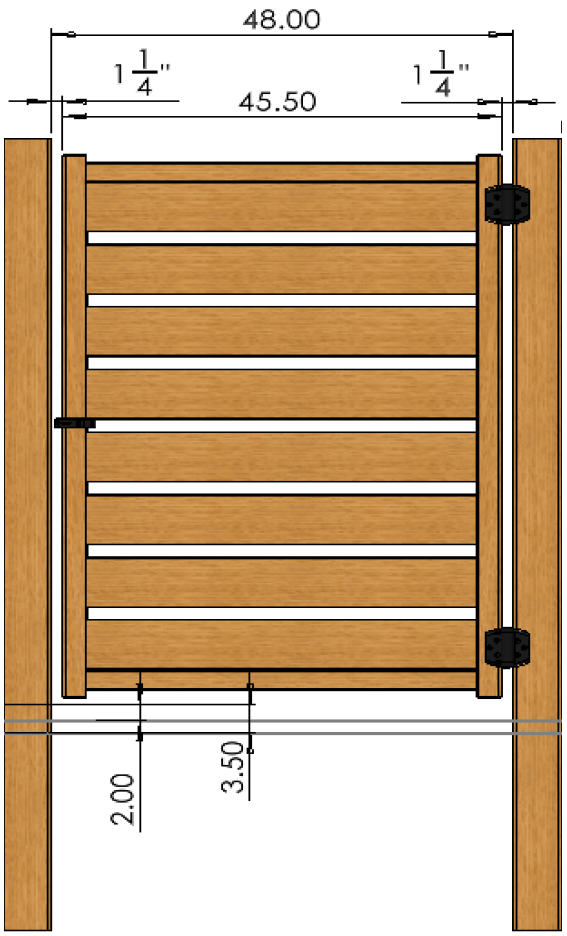
## Gate Opening Requirements

To properly accommodate the NC gate width and required hardware spacing, the opening between posts should measure 48 inches. This allows the 45.5-inch-wide gate plus 1.25-inch clearance on each side, as needed for the D&D hinges. To add a gate, you must use two NC 5x5 Commercial Posts–standard posts will not support the weight. Since the gate is 48" wide, and each 5x5 post is 5.5" wide, so space them 58" apart (outside to outside). This ensures proper hinge and latch function.

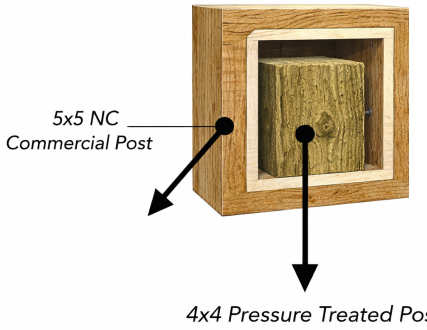



**Proper Support for Your Gate**

For optimal performance and durability, it's important to understand that our full-size NC gate weighs approximately 90 pounds. Due to this weight, it needs robust support to ensure smooth operation and prevent sagging over time.

NC offers a 5x5 Commercial Grade Composite Post that matches the gate's color and material, offering a cohesive, seamless look.

- NC 5x5 Commercial post dimension.
    - Outside dimensions 5X5. inches.
    - Inside dimensions 3.87 inches (3 7/8").




The NC 5X5 NC post when used as support of a full size gate should be reinforced inserting a 4x4 treated wood post inside the composite post. This added reinforcement greatly increases the strength and durability of the post.

- Commercial 4x4 treated wood post dimension is 3.5 X 3.5"
    - This lumber post will fit inside our 5X5 NC Commercial post.

**Post Burial Recommendations**

Select the Correct Post Length: For full-size gates, choose a post length suitable for your local soil and engineering conditions. NC offers 5x5 Commercial Posts in lengths of 94", 108", and 132" to meet different installation needs. Consult your contractor for guidance on the appropriate post length.

Burial Depth and Concrete Requirements: To ensure stability, we recommend burying at least 1/3 of the post length in the ground. For example, a 94" post should be buried 31 inches deep. Use a minimum of 80-100 pounds of concrete per post to provide a solid foundation. **Make sure your post is plumb.**

**We do not recommend using these gates as a double gates as they are too heavy. If you would like to create a double gate, please call the number below for a custom solution.**

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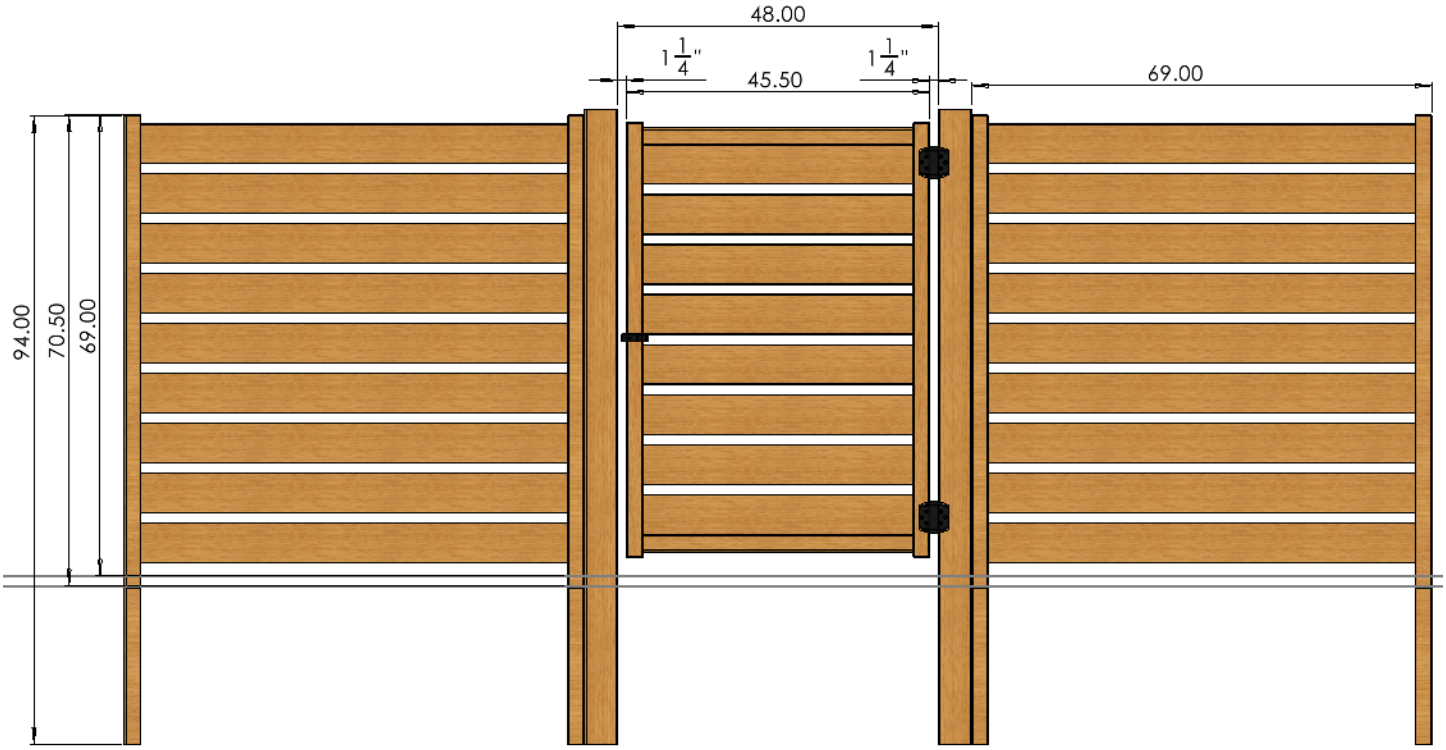
## PART C: INSTALLING GATE WITH NC MODERN FENCE SYSTEM

**Can I make a double gate with this model?**
No! Our gates are too heavy to be made into double gates and must be supported by two 5x5 NC commercial grade posts with an 4x4 pressure treated lumber insert in order to hang the gate.



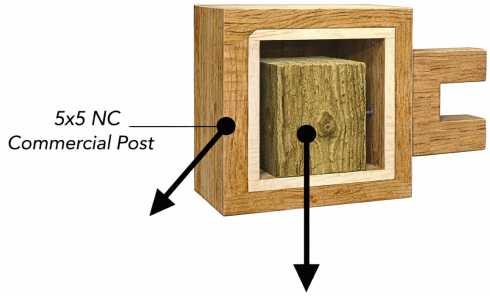
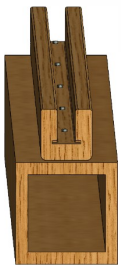
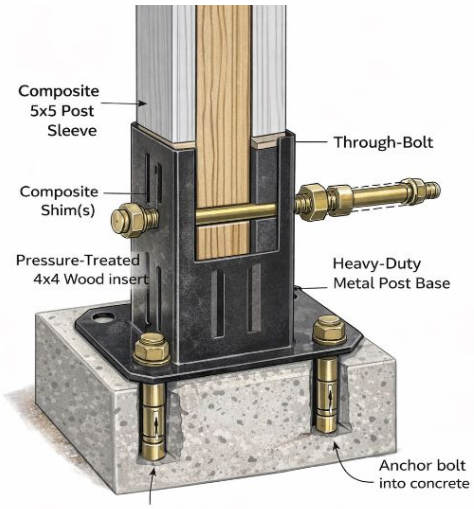

### 1. Screw the U-Channel Fence Post to the 5x5 Post

You must attach the NC U-Channel Fence Post to an NC Commercial-Grade 5×5 Post (sold separately). The gate must never be hung directly from the U-Post, as the gate is too heavy and must be supported by a 5×5 NC Commercial-Grade Post.

1.1 Insert a pressure-treated 4×4 wood post inside the NC Commercial-Grade 5×5 composite post to provide structural reinforcement for the gate hardware.

1.2 Position the U-Post against the 5×5 post and secure it with screws. Fasteners must pass through the U-Post, composite post, and wood insert to lock the entire assembly together. The post must be fully rigid with no movement, as any play will transfer to the gate and cause sagging.

1.3 Bury the assembled posts together according to the standard post installation instructions.

1.4 Attach the gate using the included hinges and latch.

*Surface Mount Option:* Secure the post with a metal bracket designed for a nominal 4×4 post (such as the E-Z Base Post Base). Insert the pressure-treated 4×4 wood post inside the composite post in the bracket area. If any gap remains between the bracket and the composite post, use composite shims to eliminate the gap and ensure a tight fit before fastening.