## Step-by-Step Installation Instructions (Part 1: Preparing at Pickup and Onsite Unloading)

1. **Product Pickup at Warehouse**
    - Installers will pick up **bundles of panels** prepared for each specific opening.
    - Each bundle will be:
        - Wrapped on **each end with protective plastic** to prevent damage to the panels.
2. **Arrival at Job Site**
    - Once on site, the installer team will:
        - **Unload each package** carefully.
        - Match each bundle to its corresponding opening, using the stickers and packing list for verification.
        - **Confirm they have all required components** (panels, posts, seals, accessories) before beginning work.
3. **Extra Panels and Accessories (For Rubicon Installation teams)**
    - Installers will bring **extra panels, posts, and accessories** to the job site as backup, in case **field modifications or adjustments** are needed during installation.
4. **Important Measurement Reminder**
    - Very carefully measure the placement of every post and ensure that sizing's for the panels is correct. DO NOT drill holes in any walls until you are sure of this
    - Installers must **carefully verify these adjustments** before proceeding, as they are critical to ensuring a watertight fit.

## Step-by-Step Installation Instructions (Part 2: Job Site Preparation and Required Equipment)

1. **Critical Importance of Job Site Preparation**
    - It is **absolutely critical** that the job site is fully prepared **before** and **throughout** the installation process.
    - The following must be strictly maintained:

        - Work areas must be **kept clean at all times** — installers must actively clear dust, mortar fragments, metal shavings, and other debris.
        - These contaminants will **naturally appear** as installation work progresses (especially when drilling or making adjustments).
2. **Why Cleanliness Matters**
    - The flood barrier system **relies heavily** on a **generous application of high-quality silicone** to provide:
        - Effective waterproofing
        - Strong bonding between components
    - However, the **effectiveness of the silicone sealant is significantly reduced** if applied over dust, debris, or contaminants.
    - **Even small amounts of dust** can compromise the waterproof seal, leading to possible system failure.
3. **Essential Cleaning Equipment (Must Have Onsite)**
   To maintain a clean and prepared work area, installers must have the following available at all times:
    - **Shop vacuum (shop vac)** — to remove dust and fine debris
    - **Blowers** — to clear away shavings and particles from tight or awkward areas
    - **Shop towels and rags** — for wiping down surfaces, tools, and panels
    - **Mineral oil** — for tool maintenance and cleaning where needed
4. **Full Tool List**
    - A **complete, detailed list of necessary tools** (including drills, levels, wrenches, sealant applicators, and other installation tools) must be prepared in advance and present on-site.
    - Installers must **verify all tools are available and functioning properly** before beginning work to avoid delays or incomplete installation.

## Step-by-Step Installation Instructions (Part 3: Necessary Power Tools)

A successful and efficient installation requires that the following **power tools** are present on-site and in good working condition. Installers must ensure that tools are fully charged, properly maintained, and ready for immediate use.

1. **Battery-Powered Rotary Hammer / Hammer Drill**
    - Used primarily for drilling the holes needed for sleeve anchors.
    - Also used with **chisel bits** when it is necessary to trim or remove sections of stucco.
    - Note: Battery models are excellent for flexibility but may not be ideal for large jobs due to battery drain.
2. **Corded Rotary Hammer / Hammer Drill**
    - Essential for **larger jobs** where a battery-powered tool would drain too quickly to be efficient.
    - Provides continuous power for drilling and chiseling work.
3. **Die Grinder**
    - Used to **cut the bolts** that secure the panels tightly against the wall.
    - Must be equipped with appropriate cutting discs or bits.

4. **Miter Saw (with Suitable Metal Blade)**
    - Used for cutting aluminum **panels and posts** to the required lengths.
    - Should be mounted on a **stable miter saw stand** for safe and precise cutting.
5. **Skill Saw (Circular Saw)**
    - Used for cutting **lumber** and **PVC extensions** as needed on site.
6. **Utility Tool (Multi-Tool or Oscillating Tool)**
    - Used for **miscellaneous applications**, including fine cuts, trimming, or tight access adjustments.
7. **Cut-Off Tool (Concrete Cutter)**
    - Required when it is necessary to **cut into concrete** surfaces to install or surface-mount center posts.
8. **Electric Glue Guns (Two Units Recommended)**
    - Used for **applying silicone sealant** efficiently and evenly across necessary joints or surfaces.
9. **Impact Driver and Cordless Drill**
    - Essential for driving fasteners, screws, and bolts.
    - Cordless models provide flexibility in tight or awkward spaces.
    - WE Strongly recommend that you do not use impact drivers to fasten the screws that compress the panels or the bolts that attach the center posts to the base plates. There is a risk of cross threading and we suggest you avoid this risk.
10. **Multiple Batteries and Battery Chargers**
    - Sufficient **backup batteries** and **chargers** must be available to keep all battery-powered tools running without delays.
    - Installers should plan battery rotations and charging schedules on large jobs.
11. **Shop Vacuum (Shop Vac)**
    - Used to **clean up dust, debris, and shavings** at all stages of the installation.
12. **Blower**
    - Used to **clear work areas** quickly, especially from fine dust or metal particles, before applying sealants or setting panels.

## Step-by-Step Installation Instructions (Part 4: Other Necessary Equipment)

In addition to the essential power tools, installers must have the following **hand tools, materials, and equipment** available, on-site. These items are critical to ensure a smooth, professional, and complete installation.

1. **Hand Tools**
    - **Hammer** — for general fastening and tapping work.
    - **Chisel** — for trimming, shaping, or cleaning up surfaces (especially useful around stucco or masonry).
    - **Utility Blades / Knives** — for cutting packaging, tape, or other materials as needed.
    - **Tape Measures** — multiple, to ensure accurate measurements across various team members.
    - **Level** — for ensuring that panels, posts, and accessories are installed perfectly plumb and aligned.

- **Ladder(s)** — to access elevated areas or tall openings safely.
- **Drill Bits (Masonry)** — for drilling into concrete or block.
- **Drill Bits (Aluminum)** — for making adjustments or modifications to aluminum panels or posts.

2. **Hardware & Installation Materials**
   - **Butterfly Anchors** — for securing components where hollow wall fastening is required.
   - **Lag Screws** — heavy-duty fasteners for securing posts and brackets into solid substrates.
   - **PVC Trim Board** — used as spacers or shims where needed to ensure a snug, level fit.
3. **Worksite Equipment & Consumables**
   - **Extension Cords** — heavy-duty cords for powering tools and equipment across the job site.
   - **Buckets** — for mixing, carrying, or holding tools and materials.
   - **Trash Bags** — for collecting debris, packaging, and waste during the installation process.
   - **Shop Towels / Rags** — for cleaning hands, tools, and surfaces.
   - **Fold-Up Work Table** — portable table to provide a stable work surface for cutting, assembly, or preparation tasks.
4. **Specialty Products**
   - **SikaGrout® 110** — a grout product used where necessary to secure or level certain components.
   - **Sikaflex® NP 125** — a high-performance sealant used for waterproofing, bonding, or sealing applications.
   - **We recommend you carry some type of epoxy and epoxy sleeves, just in case you encounter hollow block or situations where the Simpson anchor just doesn't work**.

## Step-by-Step Installation Instructions (Part 5: Post Preparation and Placement)

1. **Prepare the Rubber Seals on Posts**
   - Before placing the posts at each entrance:
     - **Check the back rubber seals** (located on the rear edge of each post).
     - Using a **utility knife**, carefully **trim the rubber seal to 3/16 inch away from the edge**.
       - This prevents the rubber from compressing and sticking out, which would leave an **aesthetically unpleasing finish** once the installation is complete.
2. **Positioning the Posts at Each Doorway**
   - After trimming the rubber, **place the posts at each designated opening** (doorway, garage, or other entrance).
   - **Verify that the panels fit** by test-fitting them between the posts before making any permanent marks or drilling.
3. **Marking and Setting Up for Installation**
   - Once satisfied with the panel fit:

        - **Mark the exact placement** of each post on the surface.
        - **Important:** This step is ideally done with **two people** — one to hold and check the post and one to mark or adjust as needed.
4. **Aligning Posts Correctly**
    - Line up the posts in their final, correct position:
        - Whether **inside-mount** or **outside-mount**, ensure the alignment accounts for panel drop-in without additional cutting.
        - Use a **level** to check that the posts are **perfectly plumb** (vertically straight).
        - Confirm that the alignment will allow the panels to drop in smoothly **without the need for further field cutting** — cutting aluminum panels in the field wastes material and time and should be avoided.
5. **Drilling Pilot Holes for Sleeve Anchors**
    - Once the post position is 100% confirmed:
        - One person should continue to **hold the post steady and verify it is plumb**.
        - Use the **rotary hammer** with the appropriate drill bit (likely ½ inch, matching the sleeve anchor size) to **drill pilot holes** through the post holes into the mounting surface.
        - **Important:**
            - At this stage, you only need to **mark and drill the start of the holes** — you do **not** need to drill the full depth yet.
            - Remove the post and **mark the drill bit** (using tape or a stopper) to ensure you only drill to the necessary depth for the sleeve anchor (avoid over-drilling).
6. **Final Drilling and Cleaning**
    - Drill the holes to the **full, marked depth** required for inserting the sleeve anchors.
    - Once drilling is complete, use a **vacuum** to thoroughly **suck out all dust and debris** from each hole — a clean hole is essential for secure anchoring.
7. **Repeat for the Second Post (Opposite Side of the Door)**
    - Move to the post on the **opposite side of the opening**.
    - Again, verify:
        - Correct placement and alignment (check if the panels will fit; they should sit approximately **1.25 inch onto each post** on either side).
        - Post is plumb and level.
    - Follow the same procedure:
        - Drill pilot holes.
        - Remove the post.
        - Drill full-depth holes.
        - Clean the holes thoroughly.

## Step-by-Step Installation Instructions (Part 6: Applying Silicone and Placing the Post)

1. **Check Stucco Alignment and Wall Fit**

- With the drilled holes prepared, you are now ready to **place the post against the wall**.
- Carefully **check the interface** between the post and the stucco surface:
  - Ensure the stucco is **evenly applied** behind the post area.
  - Check for **substantial gaps** between the post and stucco.
- **If gaps are present**:
  - Trim the stucco **only behind the post area**, using a chisel or other appropriate tool.
  - **Important:** Any trimming must be **neatly concealed** — make sure it does not create visible gaps or an unsightly finish when the post is mounted.
  - **In some cases**, you may also need to trim the stucco at the bottom of the post to ensure a flush, even fit.

2. **Clean Work Area Thoroughly**
   - Once you are satisfied that the post will sit flush with the wall (no gaps, no interference):
     - Use a **shop vacuum** to **thoroughly clean the work area**, removing dust, debris, and stucco fragments both on the wall and on the back of the post.
3. **Apply Silicone Sealant (See Reference Photos)**
   - **Applying the silicone properly is critical.** Failure to do so can lead to product failure due to water intrusion or improper bonding.
   - Steps for applying silicone:
     - Run a **continuous bead of silicone** around the **perimeter of the back rubber** on the post, approximately **½ inch from the edge**.
     - Every **8 inches** from the top of the post, apply a **cross-bead of silicone across the width** of the post (**see photo reference** that will be attached to the final document).
     - Additionally, apply a **bead of silicone directly to the wall** where the wall and floor meet **behind the post** — this reinforces the seal at the joint between the horizontal and vertical surfaces.
4. **Carefully Place the Post**
   - Once all silicone has been applied:
     - **Carefully place the post** back against the wall, aligning it precisely over the drilled holes.
     - Press the post **firmly and evenly** against the wall to ensure full contact between the silicone and the wall surface.
5. **Prepare Sleeve Anchors**
   - With the post aligned and pressed in place, **retrieve the sleeve anchors** you will use for securing the post.
   - **Do not yet drive the anchors in** — first ensure the post is stable and fully positioned.

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## Step-by-Step Installation Instructions (Part 7: Cleaning Work Area Before Final Sealing)

1. **Clean Up Dust and Debris from Sleeve Anchor Trimming**
    - After cutting the bolts on the sleeve anchors to the appropriate length:
        - Carefully **inspect the work area** for any dust, metal shavings, or debris that has been generated during the cutting process.
        - Use a **shop vacuum (shop vac)** to thoroughly vacuum the surrounding area, including:
            - The base of the posts
            - The immediate floor area
            - Any gaps or crevices where dust may have settled
        - Follow up with **shop towels or rags** to wipe down the posts, anchors, and adjacent surfaces, ensuring that **all surfaces are clean, dry, and free of dust**.
2. **Why This Cleaning Step Is Critical**
    - This detailed cleaning is **essential** because the next step involves applying silicone to **finish sealing the post**.
    - If dust or debris remains on or around the post, it can compromise the bond and effectiveness of the silicone, potentially leading to leaks or failure of the waterproofing system.

## Step-by-Step Installation Instructions (Part 8: Final Silicone Sealing of Posts)

1. **Apply Final Bead of Silicone**
    - With the work area now completely clean and the posts securely anchored:
        - Retrieve the **silicone gun** and begin applying a **generous, continuous bead of silicone** around the **entire perimeter of the post**.
        - **Special attention areas:**
            - The **bottom of the post** (where it meets the floor or ground surface)
            - The **inside of the opening** (where the post meets the wall on the inner face)
            - The **outside of the opening** (where the post meets the wall on the outer face)
        - The goal is to **eliminate any micro gaps** where water could potentially penetrate — careful attention here is critical to ensuring a watertight, professional installation.
2. **Ensure Even and Neat Application**
    - As you apply the silicone:
        - Make sure the bead is **evenly applied**, with no thin spots, skips, or excess buildup.
        - **Smooth and tidy** the silicone as needed using a gloved finger, finishing tool, or other suitable method to achieve a **clean, professional finish**.
3. **Clean Excess Silicone**
    - Use **mineral spirits** and clean rags or shop towels to carefully wipe away any excess silicone from the surrounding surfaces.
    - Ensure no smudges, streaks, or residue are left behind on the wall, floor, or post surfaces.

4. **Final Check Before Leaving the Worksite**
    - **Before completing the job and leaving the site**, perform a **final inspection**:
        - Check the silicone application on **each and every post** to ensure:
            - The entire perimeter has been properly sealed.
            - No gaps or missed sections are present.
            - The finish is neat, clean, and consistent across all installed posts.

## Step-by-Step Installation Instructions (Part 9: Installing Panels and Final Handover)

1. **Repeat the Post Installation Process for Every Opening**
    - The entire process described previously — including post preparation, alignment, drilling, silicone sealing, and final checks — must be **repeated for each and every opening** where a flood barrier is being installed.
    - Ensure that **all posts across the job site** are securely anchored, properly sealed, and fully inspected before moving on to panel placement.
2. **Organize and Deliver Panels to Each Opening**
    - Once all posts are installed:
        - Begin **carrying the panels** to their corresponding openings, using the packaging stickers and packing list to ensure the correct match.
        - **Start with the bottom panel** at each opening — this is the foundation for stacking the remaining panels securely.
        - Continue placing **each successive panel** in order, working your way up until the full system height is reached and the flood barrier assembly is complete.
3. **Ensure Compression Channels and Bolts Are Installed**
    - As the panels are stacked into place, make sure the **compression channel** and **bolts** are properly installed to secure the system.
    - Confirm that all fasteners are tightened as required, and that the system is fully locked into its designed position.
4. **Label Panels and Openings for Homeowner Reference**
    - Once assembly is complete, **label every individual panel and opening** with clear, durable stickers.
        - These labels should help the homeowner easily identify **which part belongs to which opening** in the future.
        - Proper labeling reduces confusion and makes future installation or removal much simpler for the client.
5. **Demonstrate the System to the Homeowner**
    - Conduct a **complete walkthrough** with the homeowner, showing them:
        - How the flood barrier system works.
        - How the panels are installed and removed.
        - How the labeled parts match each opening.
    - Address any questions or concerns the homeowner may have, and ensure they are fully satisfied with the product and installation.
6. **Disassemble and Store Panels After Demonstration**
    - Once the demonstration is complete:

- **Carefully remove the panels** from each opening.
- Stack them neatly and securely **in the storage location directed by the homeowner**.
- Ensure the panels are protected from damage, properly organized, and ready for the homeowner's use when needed.

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