



PalmSHIELD prides ourselves on having a reputation of being the most user-friendly louvered screen system to install. We have been working directly with installers for over a decade to improve our overall installation.

At the onset of your installation, you can look forward to:

- All of our panels and posts are predrilled and verified post-fabrication for alignment.
- Two common fasteners are used to attach the panels to the posts. Below is a simple description and photo identification. No fussing or fumbling through a wide variety of hardware.
- Our hinges are pre-mounted to the gate frames. The remaining half is packaged to be field welded to the steel gate post. You may request that we fully install your hinges if you are sure of site conditions.
- Our drop rods are all pre-mounted to the gate frames.
- Our internal locking devices are all pre-installed on the gate frames.
- With level PalmSHIELD systems, everything is self-aligning. Align the panel to the top of the posts and everything will line up.
- You will receive a system layout drawing that numbers all the posts and panels. The posts and panels are all labeled on the bottoms to coincide with the drawing.

Important items to review at the start of the installation

- Every PalmSHIELD installation was initiated with a fabrication drawing. This drawing is the basis for your installation. Please follow this drawing to the letter as there is no flexibility in the dimensions.
- Unless stated otherwise on your fabrication drawing, PalmSHIELD systems are to be installed level. As most systems are installed outdoors, most exterior paving is not level. If your surface is not level, you will need to verify and plan accordingly.
- Review the swing of your gate. Will it interfere with any other surface like raised equipment pads and curbing?

Hardware included with your PalmSHIELD system

1. 3/8" x 1 1/4" stainless steel cap bolt. This is for installing panels to steel posts. The steel posts are already tapped accordingly.

2. 5/6" x 1" stainless steel sheet metal screw. This is used for connecting the panels to the aluminum posts. All holes are pre-drilled.
3. Ball bearing. These are packaged separately. One ball bearing per hinge.
4. Drop rods. These are pre-installed on the gates.
5. Locking devices. These are pre-installed on the gates.
6. Hinges. Half of the hinge is pre-installed on the gate post. The other half is packaged to be field welded unless instructed otherwise.
7. Oil. This oil is to be placed on the tip of each sheet metal screw



Sheet Metal Screw

Cap bolt

Hardware not included.

- Post anchors are not included. Based on 4000 psi concrete, you may consider 5/8" x 6" epoxy anchors or 5/8" x 5 1/2" wedge anchors. PalmSHIELD is not responsible for determining anchor type or installations. This should be determined by qualified individual based on site conditions.
- Padlocks for locking devices.

#### Pre-installation Preparation

1. Using some form of marking chalk or tape, layout your system in accordance with your included fabrication drawings. If you do not have these drawings, please inquire with PalmSHIELD for a copy.
2. Layout each run from outside of post to outside of post.
3. Layout gate openings from inside of post to inside of post.
4. Layout the entire system prior to starting to insure it fits your space as you intended.
5. If concerned about changing elevations, identify the highest elevation on your site where the system is to be installed. This may be your benchmark for setting your posts. All of your posts will have to be installed to this elevation. A couple hints to make this easy.
  - a. Start at the highest elevation and level each panel as you go. OR
  - b. Run a string line along the installation. Set it flush at the point of highest elevation and then level it over the balance of the installation. OR
  - c. Use a site level and determine the change in elevation at each post.
  - d. As the elevation drops, you will have to either shim under your posts or install leveling nuts to your anchors.
6. If changing elevations are not an issue, start your PalmSHIELD system at a permanent structure such as building or wall. It is to start here and work out into space where you do not have to be concerned about ending gaps.

## Installation Steps

1. Verify your panels and posts compared to your fabrication drawings to assure every panel and posts was accurately fabricated. If you identify an error, please contact us as soon as possible and prior to any installation. PalmSHIELD will be responsible for fabrication errors but not installation costs as a result of these errors.
2. It is best to install your PalmSHIELD system in a post, panel, post, panel order. It is not advised to try to set all of the posts first and then come back and install the panels.
3. Using the post base plate template provided with your order,
  - a. use the template to align the first post to your site markings.
  - b. Make sure the post base plate runs parallel to the run and it is not twisted.
  - c. Mark the center of the anchor holes.
4. Set your anchors.
5. Select your first post based on the drawing. Posts are labeled in accordance with the drawing. You should verify if it is a corner, end, or gate post from the fabrication drawing. This can be identified based on the holes drilled in the post for attachment of the panels and gates.
6. Set your first post. Make sure your post is plumb in all directions.
7. Select your first panel. You will need to identify it based on your fabrication drawings. These are numbered in accordance with the drawings on the bottom of the panels.
8. Align the panel to the post. Make sure the louvers are facing in the correct direction and the panel is not upside down. Some louvers are installed with restricting visibility from looking down so check your fabrication drawings for louver alignment.
9. Align the top of panel to top of post so that it is flush. Use bar clamps to attach panel to post.
10. Use wood blocking to shim under panel to hold alignment and level.
11. Place one drop of oil on the tip of each sheet metal screw prior to installing. This will provide added lubrication and assist in threading.
12. If necessary, use a universal joint, install the stainless steel machine screws or bolts through the panels and into the posts. Do not over tighten. Aluminum is a soft metal. The stainless steel sheet metal screws will self-thread into the holes. However, if you over tighten or torque, you will quickly strip the aluminum. Use a screw gun with an adjustable clutch to better assure you do not strip.
13. Once the first panel is installed to the first post, select your second post based on your fabrication drawing. Repeat steps 5 – 9.
14. At gate opening, be sure to install gate posts as shown on the drawings. Be sure your openings (inside to inside of post) are accurate.
15. Gate installations will vary based on site conditions. You should consider the swing of the gate relative to the grade that it sweeps over and make sure that there is plenty of clearance. Look for steep rising slopes, adjoining equipment pads with a higher elevation and curbing.
16. Once you have determined the elevation of your gate, weld the remaining half of the gate hinge to the post. Align the gate hinge so the back of the barrel where it meets the plate is 3/8" in front of the post. In other words, there is a 3/8" gap between the barrel and the gate post.

17. Close the gate to the appropriate location. Lower the drop rod and mark the socket location. Repeat for the open position if necessary. For drop rod sockets, we recommend a 1 ½" hammer drill or core bit. You may have to trim the drop rod.
18. The internal locking device should not require any further installation. The keys are located in the hardware package.
19. PalmSHIELD includes touch-up paint. Closely inspect your installation for any chips or scratches. Hold the can 6" to 8" from the area to be painted and sweep across it until entirely covered. The paint will blend with the powder coated surface.

#### Tools Needed.

- At least six bar clamps with minimum of six inch jaw.
- Socket set
- Set of open end wrenches
- 1" universal joint (knuckled socket).
- Screw gun with clutch adjustment.
- Hammer drill bits for anchors. To be determined by contractor.
- 1 ½" hammer drill or core bit for drop rods (if required).
- Hammer drill bits.
- Level
- Marking tape or paint
- String line.
- Rubber mallet
- Welder (if required for gate installations on steel posts)