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Box 785 Sebastopol, CA 95473

PST: 800 . 466 . 1850 FAX: 707 . 861 . 3409

## INSTALLATION GUIDE FOR PEDESTRIAN GATES

Thank you for taking the time to read through the following pages. This is a joint effort of those in the shop who build the gate, and those in the field, you, who install the gate.

\* In-swinging gates are set to the that edge of the post or jambs near the property. Out-swinging gates to the edge toward the street.

Vocabulary:

*Jambs:* 1-1/2”T x 3-3/4” unless otherwise stipulated. These accompany those gates mounting to masonry/stucco/stone columns.

*Gate Stops:* 3/4”T x 1-1/2”W +\_. These mount to the posts or jambs as one of the last steps. The latch side Stop acts to actually stop the gate and not the latch’s horizontal drop bar. The hinge side Stop hides the light-line gap of the hinges. They should be screwed in place.

*Gate Stile:* The two long vertical frames of the gate itself.

*Gate Rail:* The horizontal gate frames

*Grade:* The ground

*Spring-point:* For gates with top rails that arch, that point on the upper left and upper right of the gate where the arch actually begins.

*Hardware: Strike Plate:* The plate that mounts to the post or jamb and that the latch’s horizontal drop bar falls into the secure the latch. Rocky Mountain strike plates are mortised flush into the side of the post or jamb. Coastal Bronze Thumblatch strike plates surface mount onto the face of the jamb or post.

*Drop Bar:* The horizontal bar that raises and lowers with the latch handle to engage or disengage with the strike plate.



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All hinges are surface-mounted. **Do NOT mortise in the hinges.** This is not a front door—we need light and air-flow accessing all edges of the gate and one of the many ingredients to the gate’s long lifeline. The vast majority of Prowell’s gates are hung with bronze 4” ball-bearing butt hinges.

Install the provided hinges to your gate by aligning them with the pre-set hinge holes in the edge of the gate. The ball-bearing hinges do not have removable pins, which is one of several reasons for their superior performance, and because of this you must set the gate on blocks that will bring it to the desired height-- normally 2" off the grade. On the post or jamb, scribe a pencil-line along the top of the upper hinge, and another scribe in from the edge of the post or jamb that is equal to the depth of the hinge setting on the gate. Re-position the gate at 90-degrees in the open position—supporting the gate with blocks and shims-- providing access to mark, pre-drill, and set only the top hinge screw of the top hinge in place.

The top hinge, with only one screw, has been allowed to pivot its alignment to the bottom screw and prevent binding. For the bottom hinge, mark that distance depth on the post with the same dimension as the top. Mark and pre-bore the top screw hole of this bottom hinge and set this hinge screw in place. The gate is now self-supporting, and evenly hung without binding or misaligned hinge settings. Go ahead and set all the hinge screws for all the hinges. You may as well congratulate yourself: You’ve managed to install the finest hinge available, supporting your proud gate, and now we have a synchronized team. And a fair amount of pride.

The net gate width is 5/8” less than the rough opening. This allows 5/16” for the surface-mounted hinges, and 3/8”+ for swing. If your gate has a flat strike plate, such as the Rocky Mountain latches, it is important to **recess or mortise this latch strike plate flush to the post** or jamb, otherwise you lose a portion of the swing clearance. If your gate has a Coastal Bronze Thumbatch, this strike plate surface mounts to the face of the post or



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edge of the jamb. Often, the gates will arrive slightly wide , requiring a little planning along this latch edge (*This occurs when we are provided a top and bottom width between posts or columns that are not equal, meaning the post or column is not plumb and we must build to the wider dimension*). The gates are pre-bored for their latches upon arrival, unless the latch was not ordered through Prowell Woodworks. Shipped gates will not arrive with the latches in place.

#### Pool Code Gates:

General Specs for nationwide codes and more information can be found on the web site under the Pool Gate link under the Site Map.

Pool Code gates must be 1) self-closing, 2) self latching, 3) out-swinging (away from the pool), and 4) a specified height for the latch, depending on local codes (usually between 48"- 60" from the grade). There are several self-closing mechanisms featured on the Product Specifications page of the web site. The Lockley T100 is probably the most functional and affordable.

#### Gate Stops:

It is the wood Gate Stops that actually stop the gate—and not the latch's horizontal drop bar. Every gate arrives with two gate stops. It's best to install the latch and strike plate first, and then the wood stops. This allows you to set the stop on the latch side to where there latch's drop bar is snug within the catch to avoid rattling. The hinge-side stop should be set perhaps 1/16" away from the edge of the gate to prevent binding. It is best that the Stops are **mounted with screws**, countersunk into the wood. Finish nails will loosen after repeated gate closings.



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### Latches:

Prowell defaults to Rocky Mountain and Coastal Bronze latches, although gate patrons are free to source this themselves. With one proviso: We do not warranty any gate that is utilizing standard door lockets. The swing clearance is too narrow and the gates stand a good chance of swelling and becoming wedged against the post or jamb. Shoving and yanking on a wedged gate for several months a year is not joinery-friendly.

Most latches are configured so that in-swing gates see the horizontal latch bar on the inside, or residence side of the gate. Out-swing gates have this horizontal latch bar on the street side, upon approaching the gate. Rocky Mountain latches are identical on both sides of the gate but for the horizontal latch bar. The Coastal Bronze Thumbatch has a handle on only the approach side of the gate and the drop bar on the other side.

### Gate Jambs:

Jambs accompany all gates that are mounted from masonry, brick, stucco, or stone columns and walls. These can be mounted with either masonry spread bolts or threaded rod embedded with epoxy. If possible, bore for these mounting bolts along the edge of the jambs that will be covered with the gate stops. The jambs are not pre-bored, to insure that the mounting bolts are not inadvertently aligned to mortar joints. The mounting bolt bores should be recessed so the nuts are flush or recessed from the surface. It is suggested for regions of warm humidity, such as the southeast states of Georgia, etc, that a weatherizing tape is applied to the back of the jambs ( after the mounting holes are drilled). This tape is to prevent decay from developing between the jamb and wall where there is no light or air and where moisture can collect. Required primarily for less decay - resistant woods than our high grade western cedar.

For Spread Bolts, set the jamb against the wall or column and mark the hole placement on the masonry by using a punch or drill. Set the jamb aside and drill out a hole into the



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masonry using a masonry bit approximately 2-1/2" deep (take a pencil and test the depth of the hole to insure you have reached the desired depth before setting the bolts). While boring, it helps to have a can of water nearby, cooling your bit frequently to prevent it from overheating and growing dull. Reset the jamb in place and insert the masonry bolts. Back off the nut to flush with the end of the bolt and tap the bolt lightly into place. Do this with all the bolts of a given jamb and then, using a ratchet, tighten the nut until the jamb is snug and firm. Do not over-tighten. The opposite end of the bolt expands within the hole. The bolt heads are hidden by the accompanying gate stops. Check to insure the jambs are plumb. If not, use shims where needed. (Note: Because every application may call for a specific type of masonry bolt and installers have their own preferences, Prowell does not provide the masonry mounting bolts).

Threaded Rod for Irregular Stone: The use of threaded rod is advisable when mounting jambs to an irregular stone cladding. This prevents the jambs from rocking on a high stone. Set the jambs in place, plumb, mark the stone and then make two marks on the stone to indicate where to bore for the rod. Remove the jambs and bore into the columns by choosing, if possible, a stable mortar joint. Set the threaded rod into the columns using an epoxy adhesive. The rod can be left proud, or extended of the column by as much as several inches. The jambs are then marked to correspond to the rod before being bored. First recessing for the wider washer/nut, and then bored through for the rod diameter.

Once this is done, you can apply the weatherizing tape to the back and cut away the tape that covers the holes you just bored. Fit the jamb over the threaded rod and thread the washers and nuts in place, adjusting to plumb as they are tightened. Cut the rod off flush to the jamb.



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--Those gates provided with jambs have the option of adjusting the jamb clearance by loosening the nuts on the threaded rod or masonry bolts and shimming between the jambs and masonry. Caulking or dry-packing the void.

It can often help to sculpt the back of the jamb or chisel the high stones to gain a better seat between the jamb and stone surface.

If you have not yet built your irregular stone columns, it is best to plan on mounting the jambs directly to the column block core. This requires providing Prowell with a rough opening width dimension from one column block core to the other. Then determining the depth from the block to the proudest stone face. Prowell will call this out in the drawings, with jamb thickness that is 1/2" beyond this dimension to insure the gate swings unimpeded by high stones.

In the meantime, so the construction of your pillars can continue while waiting for the gate, the installer must use mock jambs (*Jambs are 3-1/2" wide for standard thickness gates and 4" width for gates of 2-1/4" thickness*). The mock jambs are temporarily fixed to the pillar core to allow setting the stone. Once the stone is set, the temporary jambs can be removed and when the gate arrives, installing the permanent Prowell jambs for a solid seating to the block core.

Electronic Released Gates: The Magna Lock F62 is the only reliable mechanism for allowing an expanding and contracting wood gate to open electronically. They are

expensive. They are ugly. And they are cumbersome. If you prefer, or are asked to install an electronic strike system, such as the Rofu, you must consider that the swing clearance for these is a maximum 1/4" and such that the gate may likely swell in the winter to where it will not close at all. (*Prowell does not warranty any gate equipped with this type of*



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*standard lockset, as the repeated pushing and pulling of a gate wedged to the jambs or posts is detrimental to the joinery.)*

Gate Posts: Your post height is best extended 3-3/4" beyond the height of the gate at the hinge and lock spring-points (The beginning of the arch on arched gates). Standard slip-over post caps, if used, are set by pre-drilling 1/8" holes on four sides and setting the cap to the post using a tube of construction adhesive or adhesive caulking, working the cap into place before screwing it to the post. Check to insure the cap is set squarely and not tilted. Four pre-drilled holes--on each side of the cap, and set with exterior screws to insure the cap will not cup or warp in years to come. Prowell does not include post caps. These can be purchased directly however through Nantucket Post Caps, and linked under the Site Map.

## **POST SETTING**

*(More information is available on setting posts by following the link on the web site titled "Setting Your Posts")*

Fenceline posts are set on a bed of 3-inches of gravel to allow better drainage beyond the vulnerable bottom-cut. Filling the posthole with pea gravel to two-thirds its depth allows further improved drainage while eliminating the need for post stakes. (The pea gravel also stabilizes the post while allowing for final adjustments in plumbing) The final 6-8 inch capping of concrete acts as a washer to create stability. Gate hinge posts, however, with the extra load of a hinged gate, should sit on a bed of gravel for drainage, but the entire posthole should be set with concrete. In the winter, when the post shrinks away from the concrete, moisture and rainfall will drain down the post and beyond the bottom of the post . Once again, a full diagram and description of this method is covered on the web site.



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### Post Caps

We do not offer standard posts caps. These can be sourced at almost any local lumber yard or online. The proportionate setting for caps is such that the post is cut 3-1/2 inches above the top rail of the gate, or the spring-point of arched gates. Post ends should be sealed with an emulsion end-grain sealer such as AnchorSeal. (This is particularly important when the fence panels and posts are painted a white or light color, as the tannins from the post-ends will bleed out onto the body of the posts) Undersides of post caps should be sealed prior to installation with whatever finish will eventually be applied to the exposed cap. If there is to be no finish, then the underside of the caps should not be sealed. The caps seat themselves on the posts without glues or adhesives, and are mounted by using screws and pre-boring holes that are slightly larger than the screws to allow the caps to breath. A square against the post and the bottom edges of the cap insure the cap sets level. Using finish nails may result in the caps warping, or curling.

Prowell Post Caps can be ordered off the web site and will arrive with four pre-bored holes.

### Mounting Gate to Gate Columns—See Columns

Finishing: See 'Finish' chapter, or follow the 'Pre-Finish Options' link on the web site. All install guides are available on the client Site Page as pdf downloads or by following the 'Regarding Installations' link on the web site