

  
**Tech Bulletin**

## Mounting to Waterproof Decks

**Mounting the rail** – We believe that the most important element in preventing water infiltration is securing the railing to a solid surface. The system is only as good as what we mount to.

For example, when we mount our post onto concrete and apply a standard load to the top of the post there is virtually no deflection. Structurally the post is solid. This means that if the post is mounting on a deck, any load applied to the post is transferred directly to the connection to the deck. If there is inadequate blocking then there will be flexing at that connection and you have the possibility of breaking any/all the seals.

**Screws** – We typically use a #14 x 3” stainless steel pan head square drive screw. We believe that one of the *most* important prevention steps is the mounting of the railing into 3” of solid blocking. Without solid blocking, all other waterproofing steps can be rendered worthless as all of these depend on maintaining a seal. If the base plate is not securely anchored to prevent any “rocking”, that seal has a much higher possibility of being broken

**Screw Caulking** – The holes for the screws are predrilled with a 3/16” drill bit to about 2” in depth. We then dip the screw into polyurethane sealant filling the threads with sealant before installing the screws. This provides more seal between the wood and screw threads. It also fills the hole in the base plate with sealant and seals around the top shank of the screw and screw head.

**Washer/Gasket** – We use a special stainless steel washer that has a bit of a crown at the hole. There is neoprene that is adhered to one side of this washer. It is placed on the screw and as the screw is cinched down this washer flattens out and forms a seal.

**Base Plate Gasket** – We use an EPDM gasket under the base plate. This gasket is sized to be 1/8” less than the base plate. This under sizing provides a “channel” under the base plate to act a “key” if you choose to apply sealant around the base plate. The gasket also provides additional sealing around the screw.

For the slope of the waterproof deck, we have a special wedge shape gasket that will adjust for a 1/4” per foot slope. This eliminates the use of any shims to level the post.

The gaskets work best on a smoother surface like metal flashing or a nontextured waterproof surface where compressing the gasket will fill in voids.

**Base Plate Caulking** – Typically we do not caulk around the base plate as we believe that the steps taken above provide adequate protection. In addition if some how moisture did make it below the base plate, a bead of caulk would seal in the moisture. Sealed moisture is the worst condition you could create regarding structural damage.

**Mounting pedestal** – An additional safety option is to use a 1/2” composite board pedestal base under the base plate and gasket. In the best situation, this is applied to the deck surface at the post position before the final coat of waterproofing. The bottom is covered with polyurethane and it is adhered to the deck surface. It is then drilled for the screws and you create a “sandwich” of post base, gasket, composite pedestal, polyurethane and deck coating. What this creates is a raised platform for the base plate so that water running by will not pool around the base plate.