EXCELL
RAILING SYSTEMS LTD.

# WELDED PICKET INSTALLATION INSTRUCTIONS

**Please Note:** Aluminum Railing is only as strong as what it is attached to. The installer must ensure that all mounting screws for post base plates and wall mounts are mounted into solid material with backing. Failure to fasten the mounting screws into solid material (deck joists or wall studs) will weaken the installation. Before you install any railings, review the deck layout drawing and your bill of materials required for the project. Double check there is no damage to the product from transportation and the quantities of all materials received are correct, against the packing slip supplied with the order.

**1)** If using bottom receiver clips on posts, determine which posts need receiver clips and where they should be placed on the post. Then using the "Rail Clip Jig" pre-drill and attach clips with #10 x1 ½" #8 head screws. If using bottom rail wall mount sleeves on posts, install them at step #15.

**2)** Based on your deck layout information, set posts on the deck in their approximate locations. Ensure mounting area has adequate solid backing. Do not screw posts down at this time.

**3)** Place top rail sleeves loosely on posts where required. Do not fasten sleeves to posts at this time. Note: Trimming down some posts may also be required to allow for sleeves, stair angles or deck irregularities.

**4)** The remaining posts without sleeves on them will require a Post Mount Plate, for level and stair rail to connect the post to the underside of top rail. This component part can now be attached to the top of the posts with #10 x ¾" or #10 x 1 ½" screws.

**5)** Stair posts need to be cut to size to fit the stair angle. This can be done by holding the stair panel at the required height, on the correct angle to one side of the post. Using a pencil, mark the post on the angle at the correct height. Keeping in mind the thickness of the post mount stair plate. Note: Measure twice, double-check and then cut once.

**6)** With all the posts and sleeves set in place. Check that the posts are relatively plum to the deck and square to the building. Some vinyl or rubber gasket can be used as shims under the base plates for these adjustments. Final adjustments can be made when the mounting screws are anchored.

**7)** To determine the length of the welded picket rail, inspect the sleeves to see how far the rail will enter inside the sleeves and attach to the posts. Measure, calculate and record the welded picket panel cut lengths from sleeve to sleeve for each run of railing. With all rail measurements recorded, calculate the cuts out of the supplied panel material from your order. Note: Cut the largest railing piece first, then progressing down to the smallest piece will maximize material usage. Read step #8 before cutting material.

**8)** Before cutting the welded picket rails to size, pay attention to the picket spacing in the rail and determine the application of the panel. Always try to keep the largest picket space possible at each end of the panel. At the same time trying to balance or match the picket spacing as close as possible to the railing it's attaching too.

**9)** When a railing section requires a mid post, count the amount of pickets in the rail and determine the center picket. The welded picket bottom rail should be cut on either side of the center picket, to allow enough room to insert the mid post into the rail. Do not cut the top rail. Break the loose picket free from the top rail and if required, grind or file the small weld flush that held the center picket to the top rail. This will allow the post mount plate to sit flat to the underside of the top rail. Note: During this process be very careful not to mark, scratch or damage the top rail.

**Continued next page...**

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**10)** Once all the rails have been cut to size, install and attach the mid posts into the rails where needed. Then slide the bottom support legs into the bottom rail where required and stand the panel up in place on the deck.

**11)** Join the railings together by sliding them into the top sleeves on the posts. Ensure there is a maximum and/or equal amount of top rail is inserted into each sleeve or wall mount. Do not screw together yet. Double check the bottom rail is snapped onto the receiver clip and is square and tight to the post. If using bottom wall mounts to attach to the posts, there should be approx. a 3/8" gap between the post and the bottom rail, to fit the wall mount. Do not attach sleeves yet.

**12)** Check for correct railing height, double check the railing is level and the posts are square and plum to the deck. When everything is adjusted and looks right, using #10 x ¾" self-tapping screws, attach sleeves to the welded picket panel from the underside of the top rail and then attach posts to sleeves from the outside of the deck.

**13)** Once all the welded picket rails and top sleeves are fastened into place, it's time to permanently screw down the posts to the deck. With posts set in their final locations, use a pencil and mark mounting holes location; remove the post and pre-drill holes in the deck.

**14)** Set the railing and posts back in place, put a little NP1 Urethane Sealant into the pre-drilled holes an a little on the threads of the screws. Just snug the screws down, and do not over tighten. As railing becomes secure, once again, double check railing is straight and level, and the posts are plum and square. Shimming under the post base plates with vinyl or rubber gasket maybe required for adjustment. Note: This is the same process for attaching the railing mounts to the building or wall.

**15)** If using bottom wall mounts to attach channel to the posts, there should be approximately a 3/8" gap between the post and the bottom channel. Place bottom rail wall mounts into place, attach it to the post and then to the bottom rail, using #10 x ¾" self-tapping screws.

**16)** Slide the support leg to the center of the picket rail between posts, pre-drill, seal and secure to the deck in the same manner as the posts. Note: Some smaller spaces between posts may not need a support leg.

**17)** Now that installation is complete, clean the railing of fingerprints and double check for scratches or scuffs. Most imperfections can be cleaned or rubbed away using Vim or car polish.

**18)** If touch up is required, make sure the surface is clean and free of all contaminants. When applying touch up paint, try to use as little as possible and only in the scratched spot. This will help avoid attraction to the defective area. Once dry, some car polish or rubbing compound may help blend the painted surface.

**19)** Once everything is complete have the owner inspect the installation for final approval.