

**Please Read Disclaimer**

Please read all instructions before beginning installation. These guidelines are provided in good faith to help prevent any problems caused by errors in installation. The manufacturer of this product shall not be held responsible for installation actions taken or not taken. There are many details of installation that are assumed to be general construction knowledge to experienced installers; which are not included in these instructions. These installation guidelines are intended to be strictly recommendations and are not to serve as a step-by-step, fail-safe installation checklist. Selection of an experienced installer is the sole responsibility of the project owner and architect.

Protek Systems, Inc. does not accept any responsibility for job failure resulting from or associated with improper site environmental conditions and installation failure due to expansion contraction issues.

**Storage:**

Products must be stored flat in the original packaging. Do not stand on end or store other material on top of them. Store in a clean dry place where the temperature is maintained above 50°F.

**Before Installation:**

The temperature of the walls and the rooms should be maintained at a minimum of 70°F for at least 48 hours prior to installation. Allow material and adhesive to acclimate for at least 24 hours at a minimum temperature of 70°F but no more than 80°F before beginning the installation process.

**Surface Preparation for Wallcoverings:**

Remove any pre-existing wallcovering. For best results walls must be resurfaced if damaged. Remove any rough spots by sanding walls until smooth. Test for paint adhesion. Use a razor to score the surface of a 12" square area in a grid pattern. Try to remove the broken paint film by applying cellophane or masking tape; pull off sharply. If the paint comes off, the wall must be stripped prior to installation. Prime unfinished surfaces with a latex flat primer. Before applying adhesive, the walls and wallcovering sheets must be completely free of grease, dirt, etc. Wipe surfaces with a clean water-dampened rag to remove any dirt or debris.

**During Installation:**

Maintain a constant temperature and environment while installing. Temperature for the application surface and the room should be maintained at a minimum of 70°F and a maximum of 80°F, with the preferred temperature being 75°F during installation. If relative humidity is greater than 80%, do not install wallcoverings with adhesive because high humidity can significantly lengthen the curing time of adhesives.

**After Installation:**

Maintain temperature stability between 70°F and 80°F for 24 to 48 hours after installation.

**Reminder:**

Proper handling and installation is an important factor in assuring that your facility gains the maximum benefits of the product. Read and follow all the temperature, storage, and handling information completely for optimum final results.

**Recommended Tools:**

- Writing utensil
- Tape measure
- Level
- Clamps / guide
- Proper cutting tools
- Ear & eye protection
- Caulking gun
- Bracing
- Shims

**Cutting the Material:****Cutting Flat Sheet:**

- For thin gauges (20ga or less), compound-action snips or shears should work. Place the edge of the stainless steel sheet all the way inside the jaws of the shears and make the cut. Do not close the snips all the way. To make a uniform cut, close the shears halfway and then realign the stainless steel sheet at the inside of the jaws.
- For thicker gauges (20ga-16ga), a sheet metal nibbler or electric jigsaw with metal cutting blade is recommended. If using a jigsaw, work slowly and take frequent breaks from cutting.
- Anything thicker than 16ga should be cut with an angle grinder and abrasive cutoff wheel. Cutting with an angle grinder will produce a lot of sparks and smoke and should be done far away from flammable substances. Engage the motor before contacting the surface of the metal. Cut through the metal slowly and try to aim any sparks away from your body and face. The angle grinder cannot make curved cuts, so you will have to approximate curves with rough, angled cuts and then grind them into curves later.

**Cutting Fabricated Profiles:**

- For crash rails, corner guards, U-channels, door frame covers, or other profiles that may need to be cut to length, use a metal chop saw with abrasive cutoff wheel. Engage the motor before contacting the surface of the metal. Cut through the metal slowly and protect your body and face from flying sparks and debris.

**Drilling the Material:**

For small holes (1/8" or less), use a good quality high-speed steel bit and a variable drill with good torque. For anything larger than a 1/8" hole, use a step drill bit. Use lubricant and clamp the item securely. Use a punch and hammer to make a dimple where the hole is to be drilled. This will keep the drill bit from wandering.

**Warnings:**

Keep in mind that field cut edges of the steel will be sharp and need to be handled with care. Wearing gloves is a good idea when cutting and handling the steel. De-burr the edges with a file, grinding wheel, or other abrasive. Wear eye and hearing protection whenever appropriate.

Crash rails are typically supplied in stock lengths of 8'-0" or 10'-0" to be cut in the field to fit. There are (3) styles of mounting bracket:

- The wider 3" splice brackets are used where sections of rail butt together.
- The shorter 1 1/2" brackets with a wing on each side are used at the ends of each crash rail segment. The end plates fasten to the wing on the wall bracket.
- The flat 1 1/2" brackets without wings are used in all other locations along the length of the rail.

Carefully measure and mark all holes to be drilled to achieve a properly supported and level installation.

#### **Installation:**

- Determine the bottom of crash rail height on the wall or partition and snap a chalk line 1/16" below to locate the bottom of the mounting brackets.
- Measure and mark end points of the crash rail on the chalk line. Allow at least 2" nominal clearance from inside corners and at least 1" nominal clearance from all other terminations to allow for end plate attachment.
- Measure and cut crash rail covers to length for each crash rail segment. Take into account the thickness of each end plate.
- De-burr and clean any sharp edges on the crash rail covers as necessary.
- Install mounting brackets.
  - Determine where butt joints will occur and install a 3" splice bracket centered at those locations.
  - Locate end plate brackets 1/8" to 1/4" in from the end of the crash rail segment. If the end plate bracket is mounted outside of the crash rail cover, the end plates will not pull tight against the crash rail ends. If the end plate bracket is mounted too far inside of the cover, the screws that fasten the end plates to the bracket will not reach the mounting holes.
  - Space the standard mounting brackets 32" (maximum) on center.
  - If pre-drilling for wall fasteners is required (I.E. masonry) use holes in mounting brackets as a template for drill locations on the wall. Use caution when drilling mounting holes so bracket installation is plumb.
- Install crash rail by hooking the top edge of the rail over the top lip of the mounting brackets. The lower edge of the crash rail should rest on top of the bracket where the bracket extends outward from the wall.
- Install end plates at crash rail ends that have the end plate brackets wings already in place.
- Using a #11 drill, drill mounting holes in the bottom edge of the crash rail to align with mounting holes in brackets. Install stainless steel pop rivets through the bracket and crash rail.

IMPORTANT: crash rail must be held firmly against the wall while drilling an installing the rivet.