



Tubing Installation

Using Pex Aluminum Pex:

Warmboard requires the use of Pex Aluminum Pex tubing. Pex Aluminum Pex does not require the use of silicon for installation into the Warmboard groove. You will find that Pex Aluminum Pex is easy to manipulate into the grooves because it holds its shape well. **It is important to use electrician nailing plates** on the turns to help hold the tube in while it establishes its memory. Once you are ready to begin finish floor installation, simply remove the plates and the Pex Aluminum Pex will stay in the groove.

As with all tubing installation, cleanliness of the grooves is very important. Please take extra care to make certain that the grooves are thoroughly cleaned prior to tubing installation.

Tubing should be installed as soon as possible after the sub-floor is fastened in place. Mount a coil of Warmboard-approved Pex Aluminum Pex tubing on the tubing un-coiler. Begin the first loop by measuring the length of leader necessary to reach from the bury point to the manifold, plus a few extra feet for margin of error. Mark the bury point on this leader. Mark its loop number and whether it is the supply or return. Tape the end of the tube to keep debris out of it. Guide the tube into the channels following the course indicated on the tubing plan. Roll the tubing into the channel with the weighted roller pressing it firmly into the channel, flush with the top surface.

As you roll the tubing in, check from time to time to ensure that the tubing is flush with the top surface. If it is flush you will barely be able to notice it as you walk on it. If it is not flush, you will notice it easily. If it is not flush there are usually two causes including:

- Excess panel adhesive squeezed up and remains at a seam between panels.
- Debris in the channel.

Both of these possibilities are unlikely if you have followed the steps above regarding channel preparation and cleanliness.

When you come to the end of the loop, measure out a similar amount of tubing for the other leader back to the manifold or boiler panel. Tape the end of the tube and mark it as a supply or return, then mark the leader with its loop number. Insert this leader into the bury hole. You may find that at the bury points there are slight bumps above flush as the supply and return leaders tend to spring up at those points. Use electrician cover plates to temporarily hold the leader flush.



(Note: if tubing damage occurs please see p.26)



Tubing Installation (con't)

A final and important step is to pressurize the loops. This will be helpful in the event that during subsequent construction, a tube is inadvertently damaged. If the tubes are left under pressure, any damage will be noticed quickly. If freezing is unlikely this can be done by attaching a temporary manifold to the loops and applying street water pressure to the system. If freezing is expected, then air pressure will accomplish the same purpose. Once this is done, carpenters can return to the site and begin framing walls and otherwise proceed with construction in the typical manner.



Job site considerations:

PEX tubing is especially tough once embedded in its channel. Normal construction activity will not damage it. Of course, care must be taken to avoid nailing a tube or using a sharp cutting tool directly on top of a tube. All tradespeople working on a Warmboard site must take note of the easily visible tubes and must exercise reasonable care to avoid puncturing a tube.

Weather is always a factor in construction. There are certain times of the year when it is difficult to install a Warmboard system. Good construction planning can avoid these problems to a great degree.

For the following reasons, it is best to plan a Warmboard installation for a dry day when the temperature will be above 40°F.

1. Pex-al-pex tubing becomes quite stiff and difficult to work with below 50°F. Below 40°F the coil will need to be kept warm immediately prior to installation.
2. The channels must be reasonably dry and clean immediately prior to installing the tubing into the channels. (Warmboard is typically fastened to the floor joists and the tubing is installed on the same day.)

Protecting Panels and Tubing:

Most Warmboard designs require the tubing to be installed before the walls. **We recommend installing the tubing, framing walls, and then covering the panels and tubing with masonite or plywood in high traffic areas.** Remove all the panel protection before installing finish floors.