General Installation Notes
Overfloor System

General Guidelines

- Be sure to cover the ends of the Radiantmax BPEX tube with tape to prevent debris form getting in the tube.

- Locate and temporarily mount the remote manifold(s). If one or more of the remote manifolds will be located within a stud cavity, it is important to make accurate measurements when fixing the manifold's location.

- All loops of tubing begin and end at the remote manifold and are installed one manifold at a time. The pipe ends should be organized according to the piping layout usually in supply/return order for every loop. Indicate supply and return side of each loop. This can be done with colored tape or a marker.

- When installing tube to the remote manifold, wet the "O" ring on the manifold prior to sliding the tube on. Be sure to bevel the inside edge of the tube before sliding it on the manifold. Roll out the coil of tubing like rolling a "tire" following the layout pattern. Be sure to allow enough tube to return to the manifold.

Overfloor System Installation

- Essentially you will need the components to be successful at this installation:
  1. Radiantmax Overfloor Kit
     - ½" Radiantmax BPex tubing
     - Radiantmax copper manifold sets
     - Radiantmax split ring hanger brackets
     - Radiantmax tubing cutter
     - Radiantmax Heat Transfer Plates
     - Radiantmax general tubing diagrams
     - See the attached Radiantmax Overfloor Diagram
  2. 5/8" thick spacer material (this can be OSB or particle board and is the customers choice)
     - In most cases your lumber supplier can rip this spacer material into 8' x 7" strips to eliminate the labor on the job site

Step 1: Prepare your subfloor surface:

- Ensure your work area is clean and free from obstructions, dirt and moisture
- For hardwood installations ensure that your hardwood installation runs perpendicular to your Overfloor tubing installation.

Step 2: Installing 1st row of spacer material:

Place your first row of spacer material against the outside wall where you want to begin your tubing layout. Attach this spacer to the subfloor. When you reach the end of the wall leave 12" of space between the end of the wall and the spacer material.

Step 3: Installing remaining spacer material:

Place your second row of spacer material 1" away from the first row. This can easily and quickly be measured by using a 1" wood block. Before attaching to the subfloor verify the tube channel of the aluminum heat transfer plate fits into the area between your spacer boards.

Step 4: Continue step three until the entire room has been completed.

Step 5: Installing Radiantmax Heat Transfer Plates:

Attach the Radiantmax Heat Transfer plates to the top surface of the spacer material. Ensure that each tube channel fits easily into the area between the spacers. **DO NOT DEFORM THE HEAT TRANSFER TUBE CHANNEL IN ANY WAY**. The aluminum plates can be attached using simple staples, which go flush to the surface.

- **Staple the heat transfer plate down the center only.**
- When you reach the end of a run, ensure that your heat transfer plate is 12" away from the end of the wall you are approaching. The aluminum plates can be scored

and snapped using a standard carpet blade to allow for the proper length.

Step 6: Installing Radiantmax Bpex Tubing:

Once all heat transfer plates have been installed you can begin installing the Radiantmax BPex tubing. This should be done in a similar format to our tubing layout guides.

- No single loop should extend beyond 300'.
- When you reach a wall at which you turn, use a 6" bend for the tube and this will place your tube 6" away from the wall.
- When installing the tube into the heat transfer plate ensure a snug fit and you can use a rubber mallet to assist with the installation. Do not use any tools, which can damage the BPEX tubing.
- Once all tubing has been installed, staple each heat transfer plate to the floor on the outside edges.

- When all loops have been installed, prepare the manifold(s) for pressure testing. Install a pressure test gauge in one end of either the supply or return manifold and a Schrader air valve in the other end. Plug the unused manifold ends. Air test gauge can be filled to any pressure. 50 psi is enough for a test and easy to remember. Use a soap bubble solution to check for leaks at the manifold connections. Leave the loops pressurized for at least 24 hours. Air pressure will vary due to outdoor air temperature. Do not be alarmed if pressure in tubing has decreased the morning after installation. There should however still be air in tubing. If you feel you have a leak, check the manifold first. Leave air in tubing during flooring installation.

Hardwood floor installation:

- Ensure that your planks run perpendicular to the tubing
- Do not nail through tubing

Carpet & Linoleum instillation

- At the end of the tubing runs where there is no heat transfer plate, level the floor using a sand mix floor leveler. This provides a good thermal mass in addition to providing a smooth surface.
- Cover the entire floor with a luon sheet material or similar product to ensure a uniform surface.
- Follow standard carpet/linoleum installation ensuring you do not nail through any tubing.

Tile installation:

- At the end of the tubing runs where there is no heat transfer plate, level the floor using a sand mix floor leveler. This provides a good thermal mass in addition to providing a smooth surface.
- Cover the entire floor with a masonry board or similar product to ensure a uniform surface.
- Follow standard tile installation ensuring you do not damage any tubing.