

BEFORE YOU BEGIN

READ THIS PRIOR TO STARTING THE INSTALLATION

For the purpose of clarity in communicating concepts, this guide is conceptual in nature, and may, therefore, omit certain components that are not necessary in communicating the concept at issue, but may be necessary or essential in the actual installation. The designer must rely on his or her knowledge of radiant panel heating, regional climate conditions, and the local administrative requirements to determine the suitability of any particular material or method described herein.

STORAGE AND HANDLING

MrPEX® tubing is delivered in cardboard boxes. Check boxes at delivery for any possible freight damage and report immediately. Store tubing indoors in original boxes, safe from, moisture, tampering and UV exposure.

ULTRA VIOLET LIGHT

All hydrocarbon based plastic and rubber materials will eventually degrade if exposed to the harmful rays of Ultra Violet (UV) light. UV rays are present in direct sunlight or from fluorescent light at close proximity. It is important to protect the tubing from UV damage. Do not install tubing which has been exposed to direct sunlight for more than 30 days.

THE DESIGN PROCESS

Radiant panel heating systems are integrated within the structure. They are embedded in floors, ceilings and walls in a manner that cannot effectively be changed at a later date. Therefore, it is extremely important, during the design process, to perform a thorough assessment of the building. Particular attention must be paid to the structural heat loss, potential use patterns, and thermodynamics of radiant panel performance in order to determine the suitability of the design. Radiant panel heating systems have very definite limits in terms of their maximum output capability, and their ability to meet a specific heating load. The designer must never allow the heating load to exceed these capabilities.

REVIEW YOUR DESIGN

Radiant floor heating systems rely on the tubing embedded in the structure to deliver adequate heat and to meet expected comfort needs of the customer. Therefore, it is essential that all design aspects, use patterns and customer expectations are taken in account and matched with the design prior to any tubing being installed. Once the tubing is installed, it can be costly if not impossible to change the layout or remove it.

Please review this installation guide and compare with the design of your project. Once review is finalized and approved, you can proceed to "Starting the Installation" in this guide.

VERIFY ORDER QUANTITIES

Once on the job site, make sure that you have all required and correct parts to complete the current installation phase.

TOOLS FOR THE JOB

The success and ease of your installation can be greatly contributed to having the correct tools available for your install. Below is a list of some of the most common tools needed.

- ☑ **Tube uncoiler** MrPEX® Part #8110720
- ☑ **Tube cutter** (for plastic tubing) MrPEX® Part #8120878 or 8120879
- ☑ **Tube reamer** (for PEX-AL-PEX) MrPEX® Part #8210872, 8210874, or 8220875
- ☑ **Tube fastening tools and clips/staples**
- ☑ **Wrenches or Press tools** (with correct inserts to meet your fitting selection)
- ☑ **Air compressor for pressure testing and Air Pressure Test Kit**
- ☑ **General tools such as cordless drill, screwdrivers, wire cutters etc..**

SITE SURVEY

Before unloading all your parts and equipment, complete a full "site survey." Walk-through all of the areas where you are to install the system.

CONSIDERATIONS BEFORE STARTING THE INSTALLATION

Mechanical Room

Locate the area where the mechanical equipment is to be located. Make sure that it is large enough and that all required utilities are present such as a drain, gas, electricity etc.. If not, discuss with general contractor/builder to have a licensed contractor complete the installation. Verify distance and path for routing the supply and return mains to remote manifolds and compare to design. Any discrepancies need to be addressed prior to installation.

Slab On Or Below Grade

Make sure the grade is evenly prepared to the correct depth, that vapor barrier is installed (if applicable), and take spot check measurements. This is to make sure that all the walls are still in the correct location. If insulation is to be installed by you, make sure the grade depth accommodates the thickness of the insulation. Review "Special Insulation Consideration" quick reference chart on page 10, to make sure adequate R-value is used. Also, follow local building codes or check with structural engineer for correct compressive strength (PSI) for your application.

Suspended Floors

Poured Underlayment

Make sure the subfloor is prepared as per underlayment contractor and to correct elevation and take spot check measurements. This is to make sure that all the walls are still in the correct location.

Duo-Track, Omega heat emission plates and Joist Heating

Make sure joist cavities are clear and free from obstruction and take spot check measurements. This is to verify the correct number of joist cavities and locations. If there are sharp objects such as nails coming through from above, remove prior to starting the installation. It is also a good idea to mark subfloor above with a caution such as "CAUTION! Radiant tubing Beneath this floor." Every MrPEX® PEXa tubing box includes a template for this.

RetroPanel

Make sure concrete floor is level and clean. Knock down or grind off any bumps or high spots that may interfere with the panels. If the floor is very uneven, skim-coat the floor with an approved self leveling product such as concrete or gypsum based underlayment. Consult with flooring specialist prior to application. Follow manufacturers recommendation.