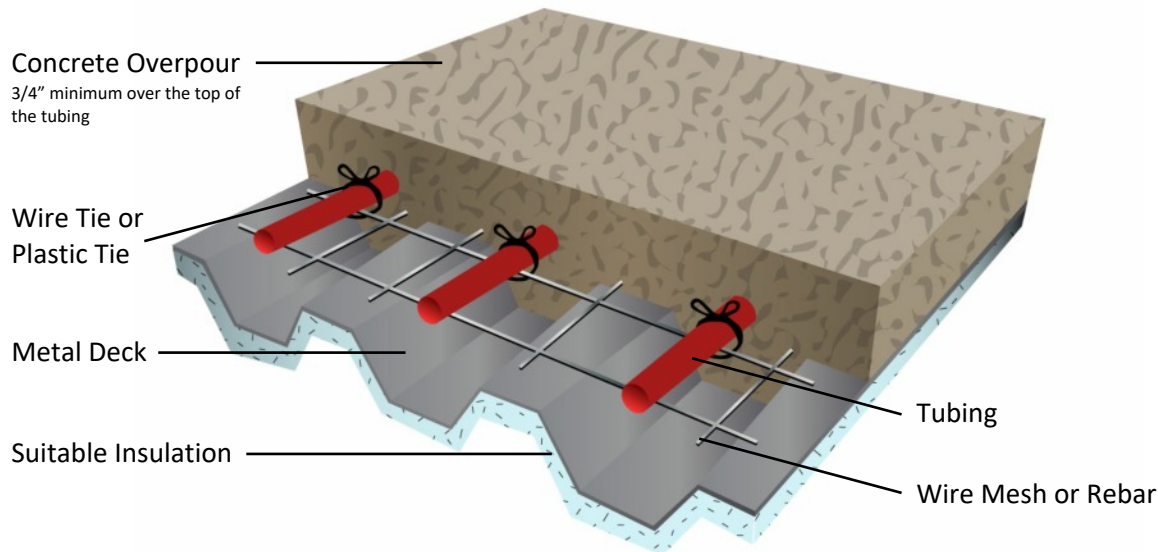


Radiant Heating on Metal Decking Installation Instructions



Poured-in-Place Slab Over Steel Decking

HOW:

- Place wire mesh or rebar over the steel deck. In some situations, secure the tubing to rebar that is chaired above the deck. Using Wire Ties or Plastic Ties, secure the tubing to the wire mesh or rebar. Place wire or plastic ties a minimum of every 12 - 18 inches along straight runs. At the 180-degree turns, tie the tubing at the top of the arc and once on each side, 12 inches from the top of the arc. This prevents the tubing from dislodging and/or floating up into the pour.
- Connect the tubing to the manifold, and pressure test to a minimum of 60 psi at least overnight to ensure system integrity. Keep the tubing under pressure until after the concrete is poured.
- Pour concrete over the tubing and decking. The illustration above shows spray-on insulation installed beneath the decking. The radiant floor heating design determines the amount of insulation that is required for proper operation.

WHERE:

Use this method primarily in commercial and industrial applications. With this method, the tubing is installed within the concrete pour, eliminating the need for a second or cap pour.

Caution: Metal decking must not extend outside conditioned space.

WHAT TO LOOK FOR:

Under-slab heat loss may be crucial to the performance of this radiant slab design. Complete under-slab insulation is recommended and essential when:

- The upper envelope heat load is high
- High R-value floor coverings are used
- The linear feet of perimeter is high in relationship to the gross floor area
- Ambient temperature below the decking is unconditioned