



Municipality of Anchorage



Policy M.02

Hydronic Radiant Tube Heating Systems

The following requirements are set forth for Hydronic Heating Panel Systems, (Radiant Panel). These requirements are the consensus results from a meeting held with manufacturers, designers, suppliers, contractors, installers and code officials in August 1996 in Anchorage, Alaska.

1. All pipe and/or tubing shall be installed in accordance with the attached table of Municipality of Anchorage minimum requirements, the manufacturer's installation instructions, and the International Mechanical Code, Chapter 12. If a conflict results between the aforementioned technical references, the manufacturer's installation instructions shall take precedence.
2. Pipe and/or tubing shall be tested per International Mechanical Code, Chapter 12, Section 1208 or by 60 psi air for 30 minutes.
3. Pipe and/or tubing shall not be covered before inspection and approval by the Administrative Authority.
4. PEX Tubing must meet all requirements of ASTM 876 and ASTM 877. (Standard Specifications for Crosslinked Polyethylene (PEX) Tubing).
5. PEX Tubing must be "listed" by a "third party listing agency" recognized by the Municipality of Anchorage Administrative Authority.
6. PEX Tubing shall be marked with ASTM 876/877 and shall also have the listing agency logo or mark on the tubing.

M.O.A. MINIMUM REQUIREMENTS FOR HYDRONIC HEATING (RADIANT) PANEL SYSTEMS

Areas of Concern

Application, Flooring Construction Method	Exterior Wall Maximum Tube Spacing O.C. *4	Interior Area Maximum Tube Spacing O.C.	Bathrooms, Kitchens Max Spacing O.C. *5	Non-Habitable Interior Area Max. Spacing O.C.	Snowmelt Concrete Max. Spacing O.C. *1
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Pex Tube Size _____

	3/8"	1/2-5/8"	3/8"	1/2-5/8"	3/8"	1/2-5/8"	3/8"	1/2-5/8"	1/2-5/8"
Concrete Slab 2 1/2-6" *1	6"	6"	6"	12"	6"	12"	9"	12"	10"
Lightweight Overpour 1 1/4 - 2" *3	6"	6"	6"	9"	6"	6"	9"	12"	n/a
Heat Emmis, Plates Joist Htg. "Staple Up" *1, *2	n/a	8"	n/a	8"	n/a	8"	n/a	8"	n/a
Radiant Ceiling/Wall *1, *2	n/a	12"	n/a	12"	n/a	12"	n/a	12"	n/a

Pex tubing sizes shown are I.D.

- Notes:
- * 1. If the seasonal high water table is within five feet of the slab, the underside of the slab shall be insulated with minimum R-8 rigid insulation. Perimeter foundation insulation is required in accordance with the adopted energy code.
 - * 2. Show load requirement and performance.
 - * 3. Building code requires ¾" minimum coverage over tubing.
 - * 4. Exterior wall area is: 1 ft. minimum out from inside wall edge.
 - * 5. Areas with reduced effective floor area.

Systems not installed in accordance with the above guidelines will be subject to proof of performance, i.e., room-by-room heat loss analysis and tube manufacturer's performance criteria.

Ron Thompson, Building Official
DATE: January 28, 2008
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