

**Part 1 General**

**1.1 IN-FLOOR HEATING SYSTEM**

- .1 Provide a complete in-floor heating system as shown on the plans and as specified. Length of loops, pipe sizing and spacing to be determined by HeatLink FloorHeat systems. Call 1-800-661-5332 in Canada or 1-800-968-8905 in the USA for complete material package and layout instructions.
- .2 Piping installed in the slab shall be HeatLink polyethylene (PEX) complete with U.V. (ultra violet) protection cross linked piping installed in loops at 6" centers. PEX pipe to have an operating temperature of 95°C (203°F) and operating pressure of 6 BAR (90 psi). In-floor heating piping to be placed on top of ground barrier insulation with HeatLink pipe racking and styrofoam staples to be used as a clipping element to ensure even spacing and height regulation. The installation shall be in strict accordance with the manufacturer's instructions.
- .3 System to be controlled with an injection control slab sensor controller.
- .4 Ensure that a minimal bending radius of 6D is obtained (i.e., 125 mm (5") radius for 20 mm and 5/8" nominal piping, 150 mm (6") radius for 25 mm (1" O.D.) piping and 250 mm (10") radius for 40 mm (1-1/2" O.D.) piping.
- .5 Piping to have a fully enclosed protective conduit elbow where pipes penetrate the concrete flooring.
- .6 Provide a 300 mm (1 ft.) protective sleeve where PEX pipe crosses expansion joints.
- .7 If in-slab repair joints are made, only brass insert compression coupling approved by the manufacturer are to be used. Wrap all couplings with PVC tape or compatible material prior to topping pour to prevent any possible corrosion.

**1.2 HYDROSTATIC TESTING**

- .1 Pressure test HeatLink FloorHeat PEX lines by using 80 to 100 psi for a minimum of 24 hours prior to and during concrete pour.

**1.3 MANIFOLD/HEADER**

- .1 Provide HeatLink in-floor heating flow balancing manifolds (to be assembled with manual air vent, drain and refill cock; supply module with built-in shut off valve and return module with manual flow regulating and balancing valve).
- .2 All loop numbers to be marked on PEX pipe wall before connecting to manifold. (If a flow balancing manifold has been specified, then an area identification plus loop number is to be printed and placed on each individual module in the manifold tag slot with the identification tags provided.) All loops must be identified to allow for future balancing.
- .3 Manifolds to be placed in an accessible manifold housing. Housing to be either built on site as part of the framed wall structure or alternatively a pre-manufactured metal access box is to be provided. In both cases doors are to be hinged to allow for simple access.

- .4 Manifolds to be protected during construction from dirt, dust or concrete during the pour (e.g. by using a plastic wrap).

#### **1.4 SYSTEM START-UP**

- .1 Thoroughly clean, degrease and flush the new system before heating water is added.

#### **1.5 TESTING, BALANCING AND WARRANTIES**

- .1 Contractor is responsible to make all necessary adjustments to in-floor heating equipment and controls and shall ensure system is tested, balanced and operating.
- .2 All maintenance data and instructions on control unit operation are to be provided on site complete with a copy of piping layout. Data shall be neatly assembled and placed in a binder.
- .3 All in-slab material are to have a 25 year manufacturer's guarantee.

**END OF SECTION**