

DELTA-TUBE™ HD

High Density Poly Tube

Warm Floor Heat

The DELTA-TUBE™ HD heating system heats the greenhouse from the floor level by running hot water through a grid of high quality polyethylene tubing that is installed into the concrete floor.

Using the concrete floor as a radiant surface, heat radiates from the floor into the house and directly to the plants instead of heating from the ceiling down. **DELTA-TUBE™ HD** tubing is resistant to most chemicals and does not rust, rot, pit or corrode through chemical reaction with the concrete.

This system is ideal for large ranges and excels in a retail greenhouse, eliminating unsightly and noisy unit heaters. Delta T Solutions provides a packaged heating system that supplies all the components. Each packaged system includes design drawings showing pipe sizes, locations and electrical diagrams showing control wiring.

Delta T can provide a range of polyethylene materials to meet any design criteria. Sizes of materials range 1/2", 5/8", 3/4" and types of materials from Virgin polyethylene to cross link polyethylene (PEX).

Placed on six and up to 12 inch centers, the tubing is installed directly into the concrete slab. Tubing material is usually attached to wire mesh or rebar prior to pouring the concrete.

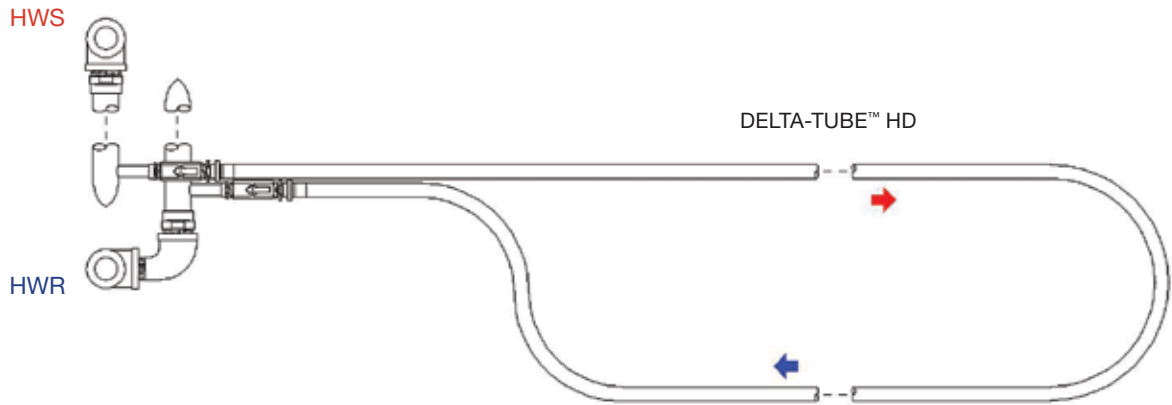
The **DELTA-TUBE™ HD** manifolds are all copper with a ball valve on both the supply and return of each loop run for service and additional control.



Delta T can also supply one steel manifold supported on the gable end wall, also with ball valves on the supply and return for loop isolation.

DELTA-TUBE™ HD

**1 1/4" Copper Manifold
with Ball Valves and
Fittings Installed**



The hydronic heating system is the DELTA-TUBE™ High density polyethylene system using 90°F to 135°F water temperature, and will consist of the following components:

Manifold types

- 1.25" Copper manifolds with ball valves and barbed adapters on each loop (supply and return).
- Manifold boxes to protect tubing and manifolds. Includes: aluminum manifold box cover, Manifold support rack, connecting piping, and isolation ball valves.
- Steel manifolds with welded adapters, ball valves and barbed adapters on each loop (supply and return). Welded steel pipe is included in the piping and fitting package.

High Density Polyethylene tube

- 1/2" - 0.622" ID High density polyethylene tubing shall be spaced on 12-inch centers and tied to the 6 x 6 wire mesh or rebar using wire ties provided.

- 3/4" - 0.824" ID High density polyethylene tubing shall be spaced on 12-inch centers and tied to the 6 x 6 wire mesh or rebar using wire ties provided.
- Stainless steel clamps to hold tubing to manifolds

Cross Link Polyethylene (PEX) tube

- 1/2" - 0.475" ID PEX tubing shall be spaced on 12-inch centers and tied to the 6 x 6 wire mesh or rebar using wire ties provided.
- 5/8" - 0.574" ID PEX tubing shall be spaced on 12-inch centers and tied to the 6 x 6 wire mesh or rebar using wire ties provided.
- 3/4" - 0.677" ID PEX tubing shall be spaced on 12-inch centers and tied to the 6 x 6 wire mesh or rebar using wire ties provided.
- Stainless steel crimp ring hold tubing to manifolds
- Wire ties and ratchet to attach tubing to wire mesh.
- Designed with no mechanical joints in concrete slab.
- The heating system shall be completely designed, specifying all equipment supplied by Delta T Solutions and by owner. Detail drawings shall be issued showing all equipment installation, pipe sizes and control wiring.