

DELTA-TEMP™

Warm Water Irrigation Systems

If you're heating your greenhouse and not heating your irrigation water, you're wasting energy!

▶▶ **Delta T Solutions' DELTA-TEMP 1™ and DELTA-TEMP 2™** warm water irrigation packages were developed to heat irrigation water from a frigid 35°F up to 70°F to eliminate plant thermal shock, while saving the fuel required to heat the plant after watering with cold water.

DELTA-TEMP 1™ uses the copper-finned tube boiler to control a small buffer tank where irrigation water temperature is controlled by an all-brass tempering valve.

DELTA-TEMP 2™ uses a plate heat exchanger to transfer the heat from an existing steam or hot water boiler to a small buffer tank where the proper water temperature is maintained.

You save energy dollars because both systems allow instantaneous response without requiring large volumes of water. This means little to no radiation standby loss.

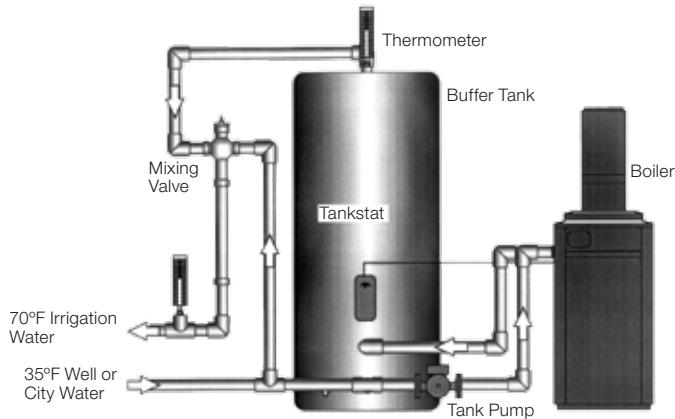
▶▶ **You can rely on DELTA-TEMP™ to:**

- Prevent thermal shock to plants
- Increase rooting and germination rate
- Increase nutrient mixing
- Prevent spotting and disease
- Reduce heating requirement when watering



DELTA-TEMP 1™

If you're heating with unit heaters or don't have enough boiler capacity, this system has all the equipment you need to provide warm water irrigation.



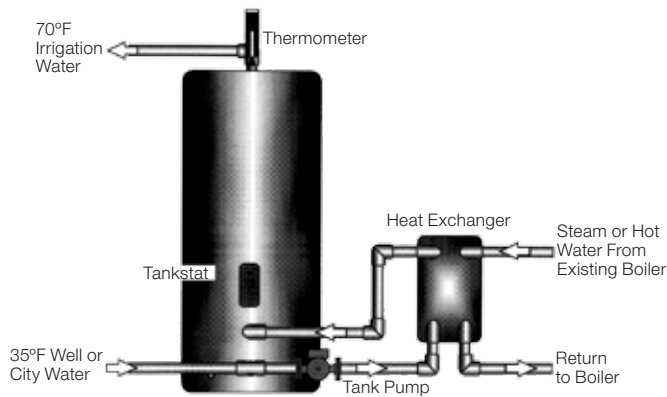
- Thermometer to indicate tank temperature.
- Storage tank shall be glass-lined and insulated with a metal jacket.
- Tankstat to control the firing of the boiler and control the recirculation pumps.

HOT WATER

- Heat exchanger shall be of brazed plate or plate and frame design using 316 stainless steel plates. Heat exchanger shall be sized using ____°F entering water temperature and ____°F leaving water on the boiler side.
- The warm water irrigation system is the DELTA-TEMP 2™

DELTA-TEMP 2™

If you have an existing boiler supplying steam or hot water, this system is just like adding an additional zone.



System Type Model Number	Flow Rate (GPM)	Temperature Rise	BTU/Hr required
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DELTA-TEMP 1™

DTI-5-30	5	30	74970
DTI-20-30	20	30	299880
DTI-40-30	40	30	599760
DTI-80-30	80	30	1199520

DELTA-TEMP 2™ Steam

DTIIS-5-30	5	30	74970
DTIIS-10-30	10	30	149940
DTIIS-20-30	20	30	299880
DTIIS-40-30	40	30	599760

DELTA-TEMP 2™ Water 180°F

DTIIW180-5-30	5	30	74970
DTIIW180-10-30	10	30	149940
DTIIW180-20-30	20	30	299880
DTIIW180-40-30	40	30	599760

DELTA-TEMP 2™ Water 140°F

DTIIW140-5-30	5	30	74970
DTIIW140-10-30	10	30	149940
DTIIW140-20-30	20	30	299880
DTIIW140-40-30	40	30	599760

STEAM

- Heat exchanger shall be of brazed plate or plate and frame design using 316 stainless steel plates.
- Heat exchanger shall be sized using 10 PSI steam.
- Steam valve to modulate the steam entering the heat exchanger.
- Tank pump with a stainless steel impeller and bronze fitted to be sized to circulate water from the tank to the heat exchanger.