

## AUXILIARY HOT WATER HEAT

### OPTIONAL HOT WATER HEATING OPTIONS

Desert Aire provides auxiliary heating options for its VerticalAire™ Series product line that are sized to meet the winter heating requirements of the outside air.

These heating elements are utilized when the outside air temperature for a DOAS unit or mixed air temperature for a HOAS unit drops below the low economizer set point. The heaters are not allowed to operate when the unit is in the cooling or dehumidification mode. Desert Aire sizes the heating elements to precisely match the load requirement of the system. The heaters are automatically controlled by the unit's microprocessor to maintain an exact leaving air temperature. A customer supplied hot water control valve is modulated from the controller with a 0 to 10 VDC direct acting signal. Please refer to figure 1 for a typical installation.

#### HWC Design Inputs

The coil is selected for each customer's particular application based on the following criteria:

- Entering water temperature (EWT), typically between 140° F and 180° F
- Leaving water temperature (LWT), typically 20 degrees less than the EWT
- MBH capacity desired
- Entering air temperature (EAT), winter design for your area
- Leaving air temperature (LAT), typically neutral to a maximum of 100° F
- GPM flow rate desired
- If there are fluid pressure drop restrictions to be aware of.
- Type and concentration of glycol used

For freeze protection Desert Aire uses a capillary type temperature sensor which is attached across the downstream face of the coil. Freezestat is set at 38 deg F with an auto reset switch. If engaged the unit controls would respond by closing the outdoor air damper, open the return air damper (if applicable), de-energize the fan, open the hot water coil valve 100%, and log the alarm on the controller.

To size the control valve, please provide a qualified vendor the water temperature, flow rate (gpm) and the requirement for a 0 to 10VDC signal and they will select the appropriate valve to purchase.

Optional ElectroFin coil coating for sea coast construction is available.

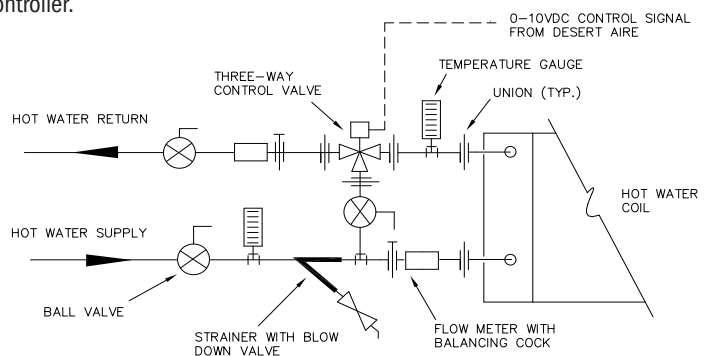


Figure 1 - Hot Water Piping Detail

### OPTIMIZING SOLUTIONS THROUGH SUPERIOR DEHUMIDIFICATION TECHNOLOGY

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**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)