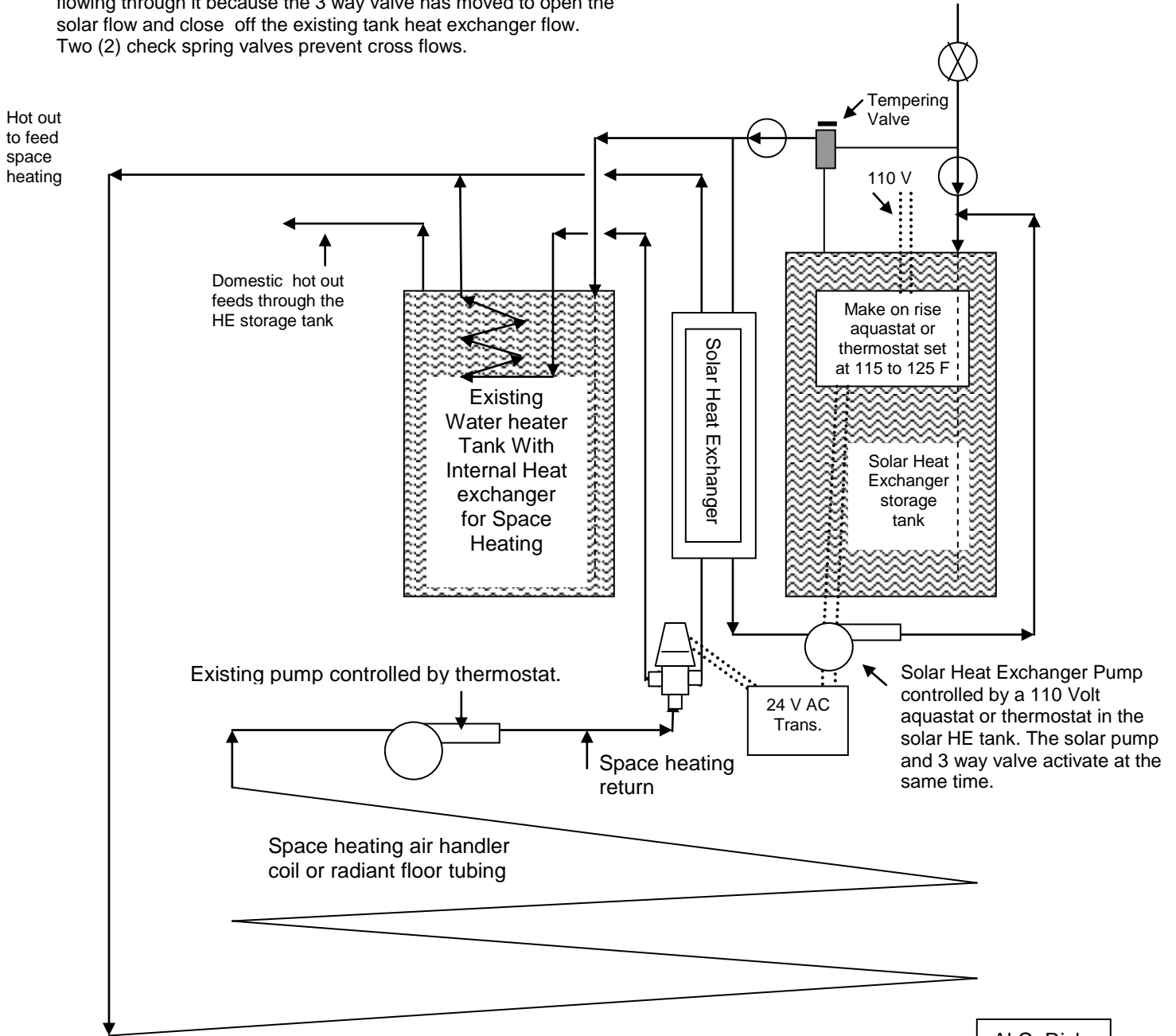


SolarRoofs.com Space Heating diverting valve to bypass backup system

Overview: This setup uses a 24 volt Taco model 569 transformer to power a Taco IS 100-3.2A 3 Way Zone valve to completely bypass the existing water heater or boiler heat exchanger used to heat an air, or a radiant floor, space heating system and domestic water. See Taco diagram for 3 way models.

Operation is a simple make on rise 110 V aquastat or thermostat, set to make at 115 F to 125 F, connected to the solar heat exchanger pump and the 24 volt transformer feeding terminals 1 and 2 on the zone valve.

When the solar tank aquastat makes on rise, the solar pump turns on heating the solar heat exchanger which now has space heating water flowing through it because the 3 way valve has moved to open the solar flow and close off the existing tank heat exchanger flow. Two (2) check spring valves prevent cross flows.



Note on operation of 3 way valve: The Taco IS 100-3.2A 3 Way Zone valve's output, called "Main" is always open, the "Bypass", bottom, is normally open but closes upon activation when "Unit" opens causing flow to be straight through for solar operation to bypass the backup. "Bypass" is then the default when enough solar heat is NOT available.

Al C. Rich
05/26/07