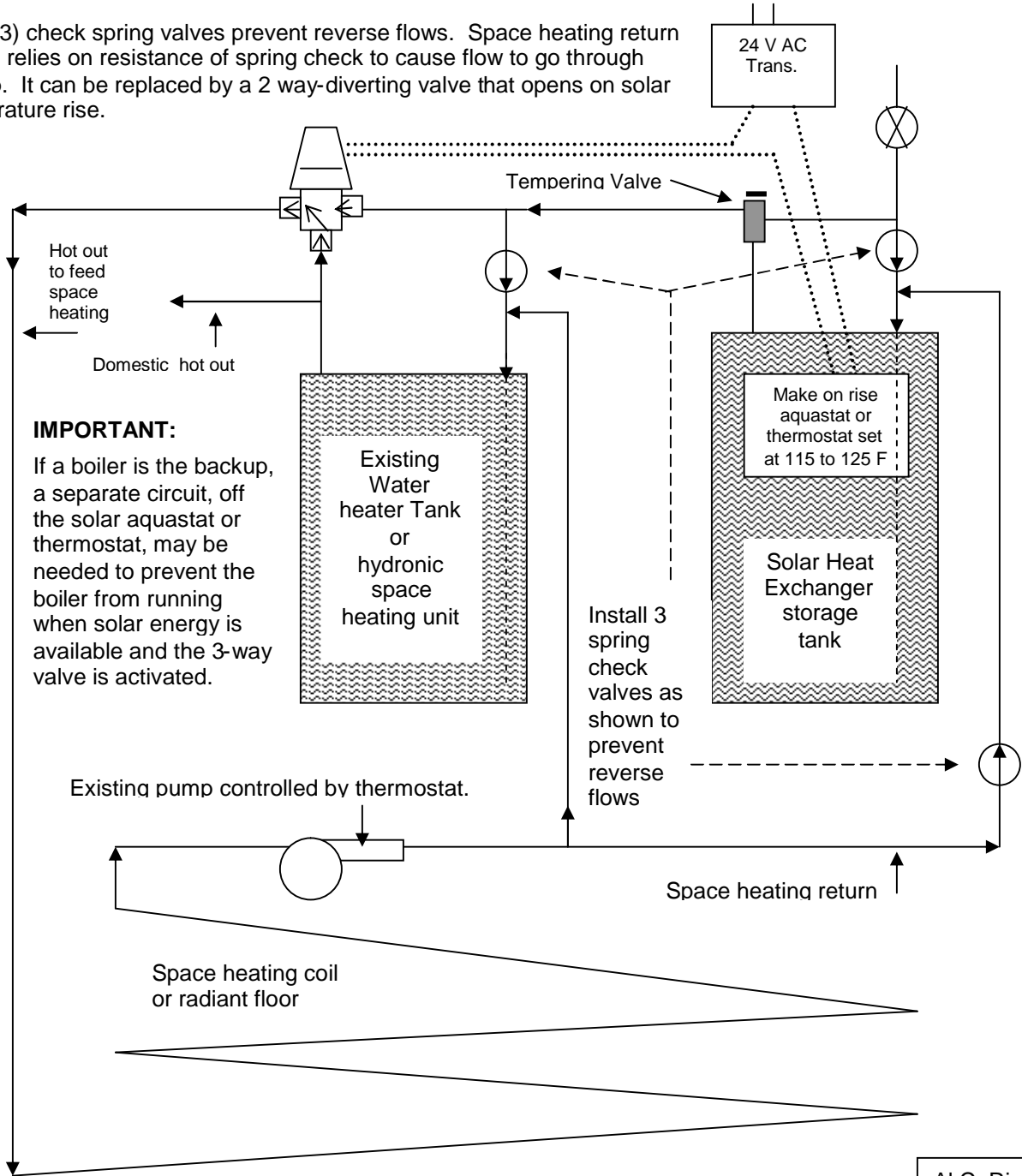


SolarRoofs.com Space Heating diverting valve to bypass backup system

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 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 aquastat or thermostat, set to make at 115 F to 125 F, connected to terminals 1 and 2 on the zone valve.

Three (3) check spring valves prevent reverse flows. Space heating return Bypass relies on resistance of spring check to cause flow to go through Backup. It can be replaced by a 2 way-diverting valve that opens on solar Temperature rise.



IMPORTANT:

If a boiler is the backup, a separate circuit, off the solar aquastat or thermostat, may be needed to prevent the boiler from running when solar energy is available and the 3-way valve is activated.

Install 3 spring check valves as shown to prevent reverse 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 in NOT available.

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