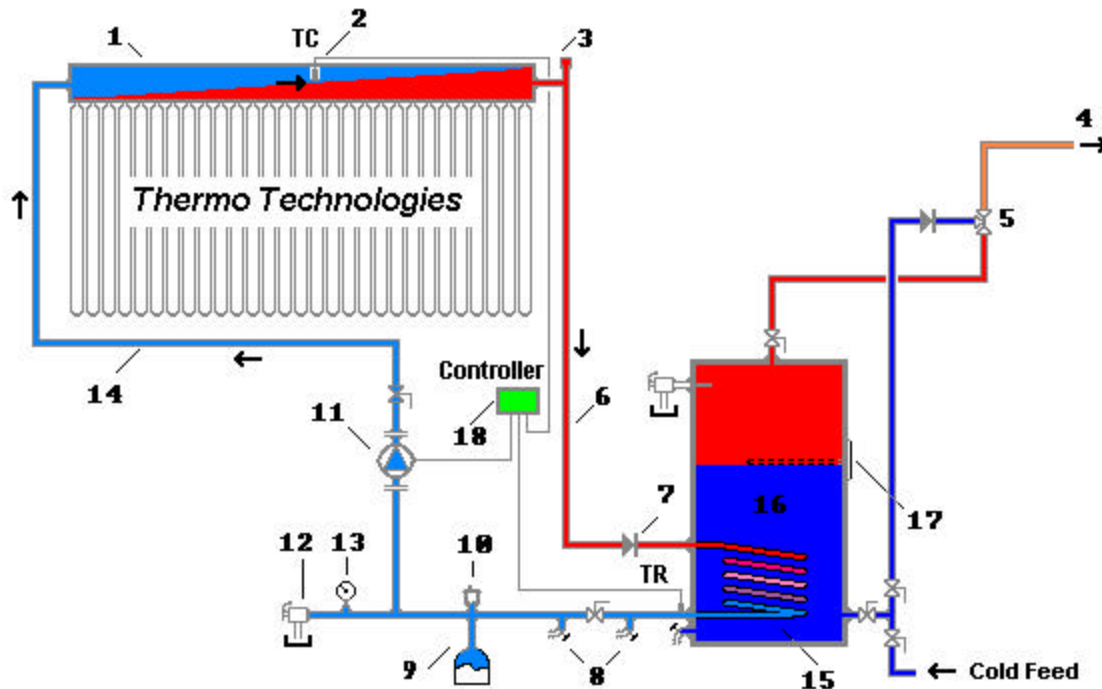


**Maryland Package** – Maryland Package is a complete solar water heating system for a family of four in Delaware, Maryland, and Virginia. Its Closed Loop Solar arrangement is the preferred option for extremely cold areas. The 80-gallon Rheem tank with an internal heat exchanger and a 4500-watt backup-heating element serves as hot water storage tank.



- |                      |                                       |  |                          |                      |
|----------------------|---------------------------------------|--|--------------------------|----------------------|
| 1. Collector         | 5. Tempering Valve                    | 9. Expansion Tank                              | 13. Pressure Gauge       | 17. Immersion Heater |
| 2. Collector Sensor  | 6. Collector Return                   | 10. Air Scoop & Air Vent                       | 14. Collector Supply     | 18. USDT 2001        |
| 3. Manual Air Valve  | 7. Check Valve                        | 11. Circulating Pump with flanges or couplings | 15. Heat Exchange Coil   | Controller           |
| 4. Hot Water to Taps | 8. Hose Bibs for Filling and Flushing | 12. Pressure Relief Valve                      | 16. Solar Hot Water Tank |                      |

## Operation

- The **USDT Controller (18)** will switch on the pump when the temperature at the collector sensor **TC** is higher than the return temperature **TR** by at least the pre-selected amount.
- The **pump** circulates a heat transfer fluid around the loop.
- **Heat** from the collector is transferred to the storage tank through the heat exchange coil.
- With the pump running, if delta T is less than preset value, the pump will switch off.
- When a preset tank temperature is reached at **TMAX**, the controller can switch off the pump.
- The **check valve** (non-return valve) prevents heat from the tank rising towards the collector should the tank be warmer (e.g. at night).