DIRECT CIRCULATION DOMESTIC HOT WATER SUPPLY SYSTEMS

What systems?

- GLE Solar ICS collectors with special system design;
- Hot water inside the collector is pumped to circulate into the storage tank;
- No heat exchanger required; water is directly heated, so resulting in higher system efficiency and daily production.

Where to use?

- Excellent solar, or very good solar condition;
- Warm and light freezing climate zone;
- No shading condition around.

Which features?

- Regular electric heater can be used as the storage tank to provide lower system costs;
- Maximize the solar BTU production; overheat/freezing protection;
- SRCC OG-100, OG-300 and FSEC of collectors and systems certificated.
1. GLE Collector SHP609
2. Tekmar 152
3. Circulation pump
4. Dissipation device
5. Overheat protection loop
6. PVR
7. Storage tank 50 Gallon
8. Water heater 50 Gallon
9. Exp tank
10. Exp tank
11. Temp Mix Valve
12. Valve

GLE Direct Circulation Hot Water Supply System
- with storage tank,
- overheat/freezing protection
Notes:
1) All outside door pipe lines should be insulated if in freezing zone;
2) Overheat dissipation device can be bare U pipe buried underground or mechanical radiator in basement or above ground.
3) The temperature of Tekmar controller for circulation could be set as 120 degree.
4) The temperature of Tekmar controller for overheat protection could be set as 180 degree or above.
5) Heat tape lines in freezing climate.
1. GLE Collector SHP609
2. Tekmar 152
3. Circulation pump
4. Circulation pump
5. Dissipation device
6. PVR
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8. Tankless Heater
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GLE Solar Hot Water Supply System
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## Key Devices and Components List

<table>
<thead>
<tr>
<th>Order</th>
<th>Name</th>
<th>Description</th>
<th>Sizes</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solar collectors</td>
<td>GLE Solar ICS collectors</td>
<td>4 foot; 6 foot panel</td>
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<tr>
<td>2</td>
<td>Controller</td>
<td>Tekmar 152; 150; 155</td>
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<td></td>
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<tr>
<td>3</td>
<td>Circulation pump 1</td>
<td>Wilo Star 8 BS7</td>
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<tr>
<td>4</td>
<td>Circulation pump 2</td>
<td>Wilo</td>
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<tr>
<td>5</td>
<td>Dissipation Device</td>
<td>Pex pipe loop or mechanical radiator</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>PRV</td>
<td>Pressure relief valve</td>
<td>75 LB</td>
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<tr>
<td>7</td>
<td>Storage tank</td>
<td>Regular electric water heater as storage tank, Whirlpool</td>
<td>40 – 50 G</td>
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<tr>
<td>8</td>
<td>Water heater</td>
<td>Electric or gas based heater or tankless heater ECO</td>
<td>40 – 50 G</td>
<td></td>
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<tr>
<td>9</td>
<td>Expansion tank</td>
<td>Amtrol ST-8</td>
<td>3.2 Gallon</td>
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<td>10</td>
<td>Temperature mix valve</td>
<td>Honeywell RAM</td>
<td>120 set temperature</td>
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<tr>
<td>11</td>
<td>Ball valves</td>
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<td>12</td>
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