



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

GLE Direct Circulation Hot Water Supply System

- with storage tank,
- overheat/freezing protection

2. Tekmar 152

Overheat protection loop

5. Dissipation device

4 Circulation pump

3. Circulation pump

6. PVR

12. Valve
Cold

Hot

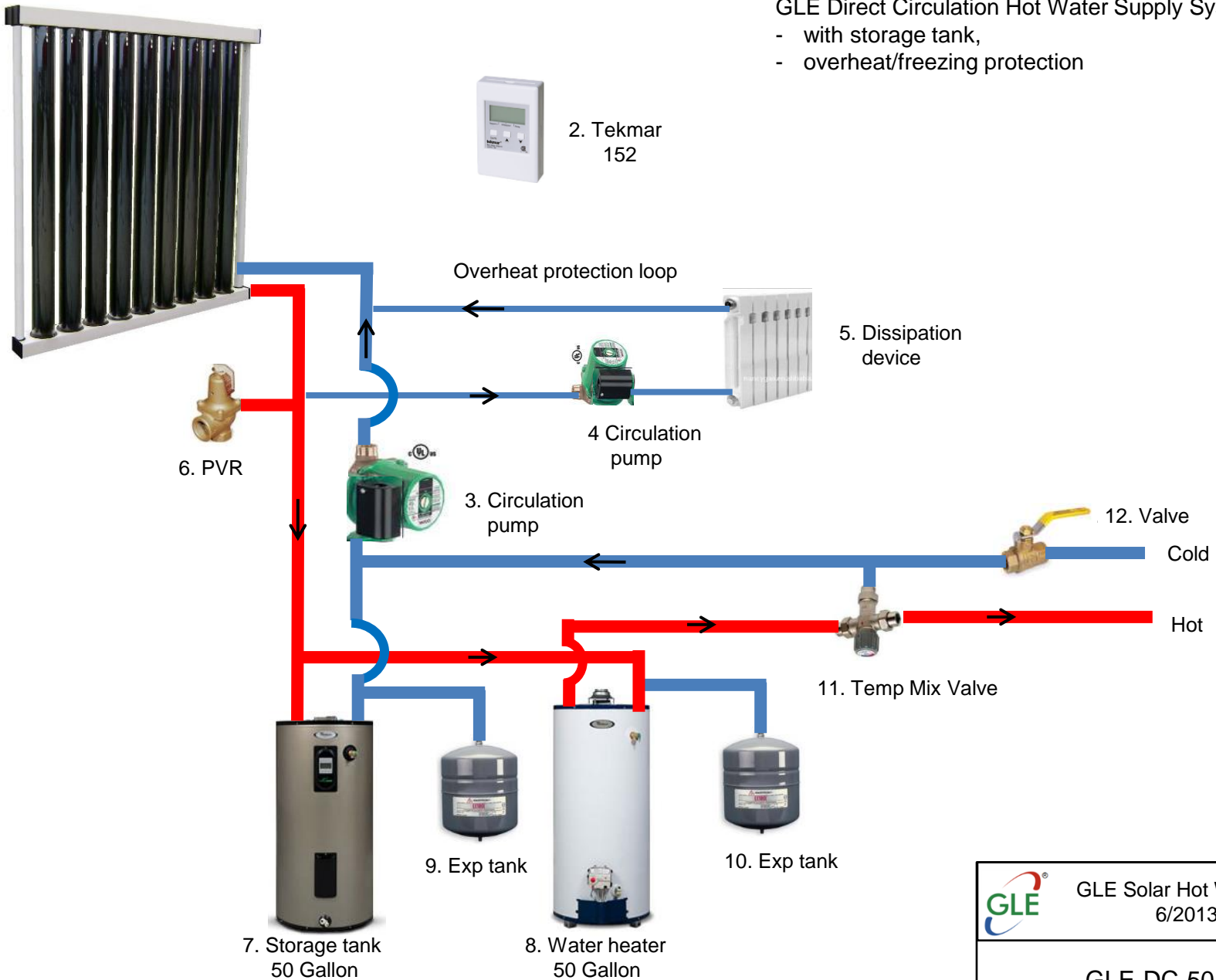
11. Temp Mix Valve


9. Exp tank

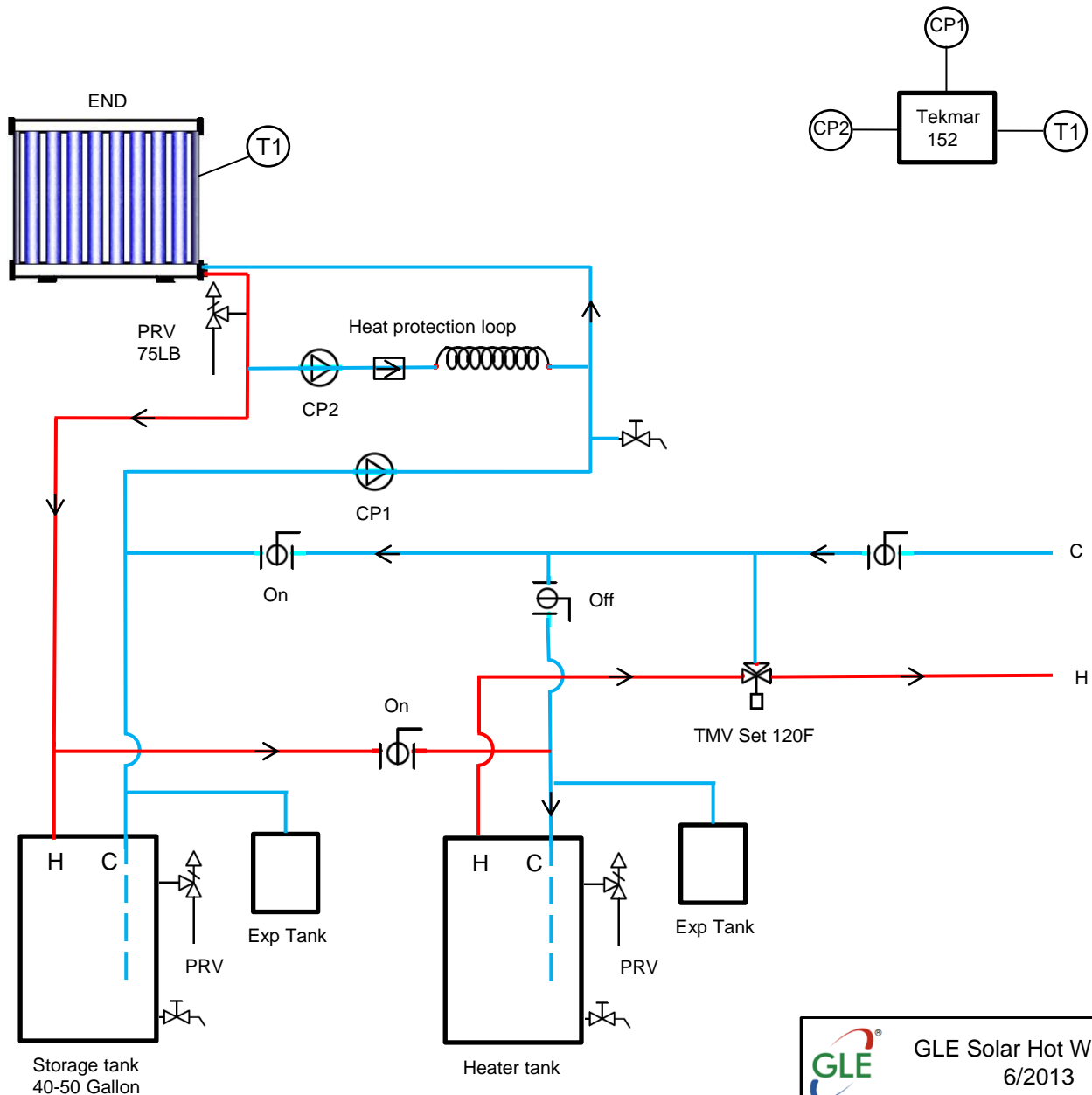
10. Exp tank

7. Storage tank
50 Gallon

8. Water heater
50 Gallon

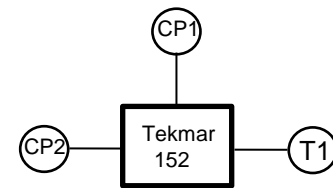


	GLE Solar Hot Water Supply 6/2013
	GLE-DC-50-G



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

GLE Circulation Hot Water Supply System

- with storage tank,
- Tankless water heater
- overheat/freezing protection

2. Tekmar 152

Overheat protection loop

5. Dissipation device

4 Circulation pump

3. Circulation pump

6. PVR

11. Valve
Cold

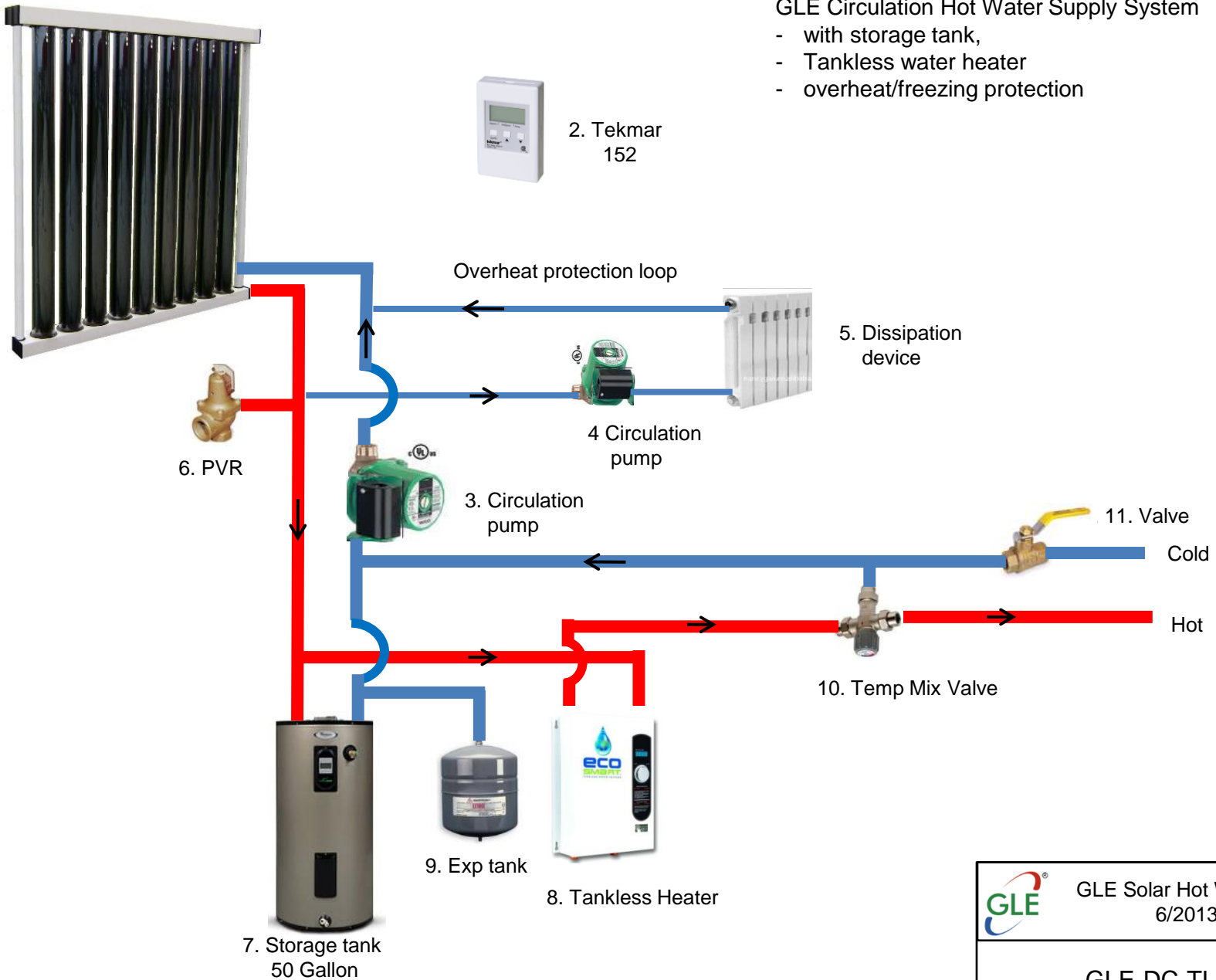
10. Temp Mix Valve

Hot

9. Exp tank

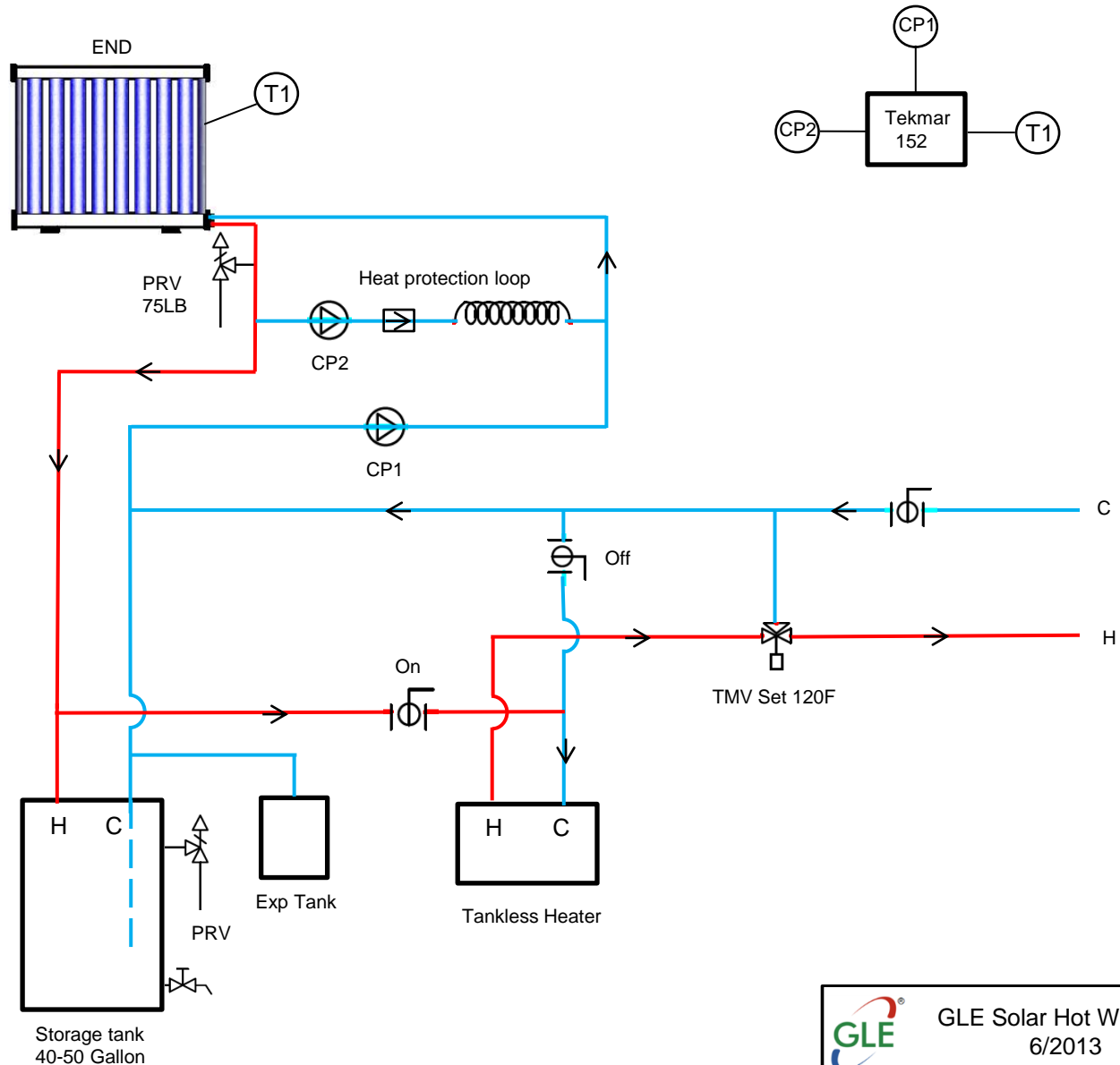
8. Tankless Heater

7. Storage tank
50 Gallon



GLE Solar Hot Water Supply
6/2013

GLE-DC-TL



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5) Heat tape lines in freezing climate.

Key Devices and Components List

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