



CLOSE LOOP DOMESTIC HOT WATER SUPPLY SYSTEMS

What systems?

- GLE Solar ICS collectors with special system design;
- Close loop system with heat exchanger storage tank;
- Large storage capacity; water is directly heated inside collector reservoirs, less pump on time.

Where to use?

- Excellent solar, or good solar condition;
- Warm or cold climate zone;
- Winter time, freezing conditions.

Which features?

- Heat exchanger storage tank is needed;
- High efficiency; overheat/freezing protection;
- SRCC OG-100, OG-300 and FSEC of collectors and systems certificated.



1. GLE Collector SHP609

GLE Close Loop Hot Water Supply System

- with heat exchanger storage tank,
- overheat/freezing protection

2. Tekmar 152

Overheat protection loop

5. Dissipation device

4 Circulation pump

3. Circulation pump

6. PVR

6.

Cold

Hot


11. Temp Mix Valve

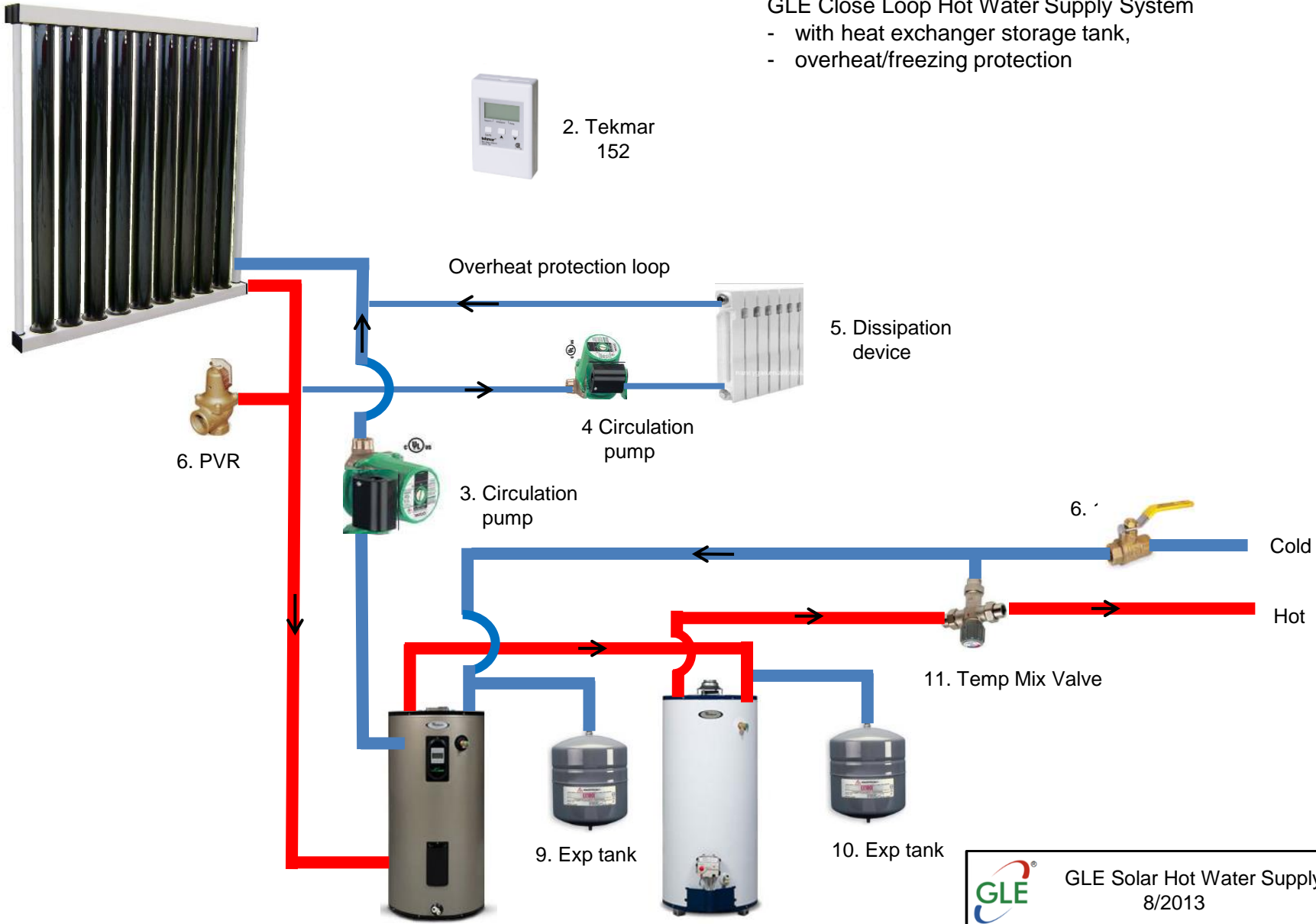
9. Exp tank

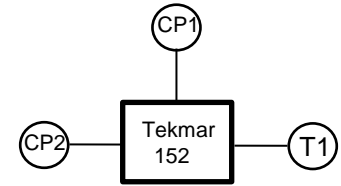
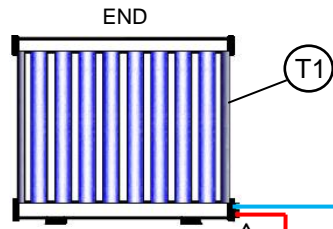
10. Exp tank

7. Heat exchanger storage tank 50 Gallon

8. Water heater 50 Gallon

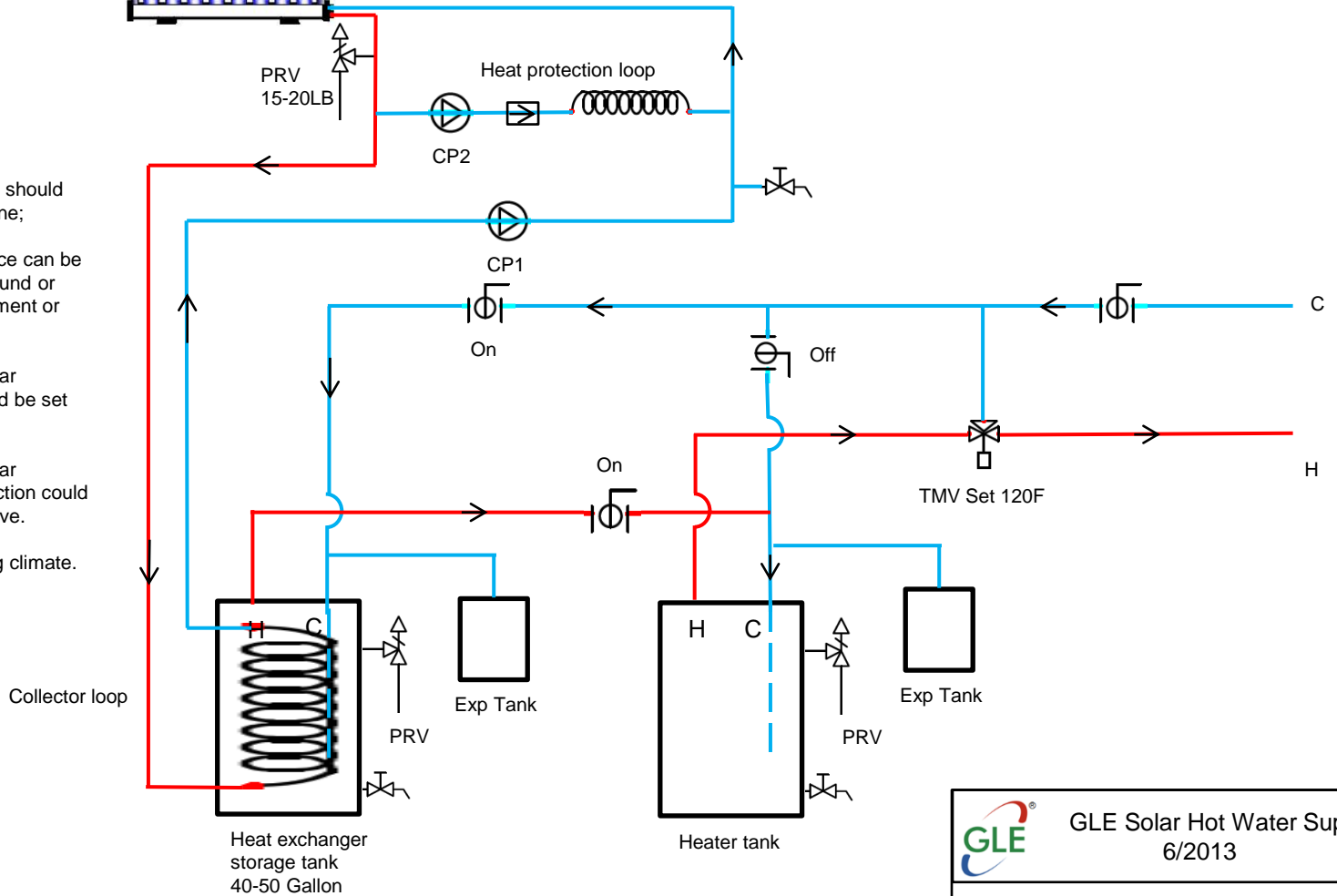
	GLE Solar Hot Water Supply 8/2013
	GLE-CL-50-G






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.



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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	Heat exchanger storage tank		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				

GLE Solar ICS Collector versus Normal Heat Pipe Evacuated Collector- A Systems Comparison

Order	Comparison items	Heat Pipe evacuated collector	GLE Solar ICS collector/systems
1	Totally installed system costs	\$8,000	\$4,000
2	Possible daily solar hours	6	12
3	Pump daily operation time	All time on/ 6 hours	No pump/0.5 hour
4	Additional storage capacity	0	35 Gallon
5	Orientation	South	South, East/West
6	Installation	40 degree tilted	Vertical installation
7	Heat exchanger tank	Yes	No heat exchanger/no storage tank
8	System architecture	Close loop	Direct flow/Direct circulation/Close loop
9	Location installation	On roof	On ground/on flat roof
10	System efficiency	OK	High