

SOLAR WATER HEATING CALCULATION FORM (Page 1 of 2) CF-SR

Project Title	Date
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CF-SR- Solar Water Heating Calculation Form	OG-300
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Property Name:	Building Type: (Single Family, Multi-family):
Total Conditioned Floor Area (CFA)ft ² :	Climate zone (1-16):

INPUTS FOR SYSTEMS SRCC OG-300:

1. Enter Solar Energy Factor of OG-300 solar water heating system as listed in SRCC directory	
2. Enter Energy Factor of Water Heater (enter .6 for gas .9 for electric)	
3. Constant – 4,1045 (amount of energy used in SRCC test)	41045
4. Constant – 3,500 average parasitic loss value in SRCC test	3500
5. Gallons per day use value calculated as (21.5 * .0014 * CFA)	
6. Constant – 64.3 gallons used in SRCC test method	64.3
7. Hot water supply temperature 135 degrees	135
8. Environmental temperature (Enter value from Table 1 based on entry on Climate Zone)	
9. Difference in supply and inlet water (subtract line 9 from line 8)	
10. Constant - 1500 Solar radiation value used in SRCC test	1500
11. Solar radiation level from Table 1 below	
12. Energy for circulation. (enter 0.9 of forced re-circulation and 1 for all other systems)	

CALCULATION FOR SYSTEM

13. Multiply line 2 by line 3	
14. Divide line 13 by line 1	
15. Divide line 5 by line 6	
16. Divide the result in line 9 by 77	
17. Subtract 1 by line 2	
18. Multiply lines 14, 15 and 16	
19. Multiply line 4 by line 5 by line 17	
20. Add line 18 to line 19	
21. Divide line 20 by line 3	
22. Divide line 10 by line 11	
23. Multiply line 21 by line 22 and divide by line 12	
24. Subtract 1 by line 23	

Solar Fraction

Table 1

Climate Zone	Water Temperature	Solar Radiation
1	53.90	1220
2	57.52	1220
3	57.69	1533
4	59.12	1601
5	57.93	1602
6	61.55	1599
7	62.63	1586
8	62.97	1682
9	63.76	1685

Climate Zone	Water Temperature	Solar Radiation
10	63.76	1612
11	61.00	1580
12	59.65	1670
13	63.99	1726
14	61.48	1827
15	73.55	1884
16	50.54	1513