State of California
Department of Housing and Community Development
Division of Codes and Standards

Manufactured Home Electrical Load Worksheet

Title 24. Housing and Urban Development Section 3280.811

NOTE: 1 WATT = 1 VOLT-AMPERE

DTN_____ Existing Home Amps_____

Section A. Lighting: Length of home times width of home (outside dimensions) = square foot, times 3 watts per square foot

Length_____ X Width_____ x 3 watts..... = _____ watts

Section B. Small Appliances: Enter number of 20-amp small appliance (exclude laundry) circuits, times 1,500 watts

Number of circuits_____ X 1,500 watts..... = _____ watts

Section C. Laundry: Include 1,500 watt minimum if installed..... = _____ watts

Section D. Total (sum of Sections A, B, and C)..... = _____ watts

Section E. First 3,000 watts at 100 percent..... = _____ watts

Section F. Total from Section D _____ minus 3,000 = _____ watts multiplied by 35 percent (.35)..... = _____ watts

Section G. Net computed load (sum of Section E and Section F)..... = _____ watts

Section H. Total from Section G _____ watts divided by 240 volts..... = _____ amps per leg

LOADS IN AMPS – PART 1	LEG A	LEG B
1. Lighting & small appliances (Section H above)		
2. Bath fan 1		
3. Bath fan 2		
4. Range hood		
5. Freestanding electric range ***		
6. Electric furnace *		
7. Electric space heater		
8. Exhaust fans		
9. Air conditioner *		
10. Gas furnace blower motor *		
11. Other		
12. Add 25 percent of the largest motor from Line 6, 7, 8, 9, or 10 above		
SUBTOTAL		

LOADS IN AMPS – PART 2	LEG A	LEG B
13. Disposal		
14. Electric water heater		
15. Dishwasher		
16. Electric wall mounted oven		
17. Electric cooktop		
18. Electric clothes dryer **		
19. Other		
SUBTOTAL		
20. If 4 or more appliances are used in Part 2, use 75 percent of Part 2 subtotal		
TOTAL LOAD IN AMPS (combine Parts 1 and 2)		

- 1 kW = 1,000 watts; 1 volt ampere = 1 watt; watts divided by volts = amps
- Use nameplate ratings on fixtures / appliances for load values.
- Determine values for freestanding range based on name plate rating and table below (a reduction is allowed).
- If de-amping an MH-unit a permit from HCD is required. Use an HCD MH 415 application, include $238 in fees, complete and attach this form and indicate on the HCD MH 415 what electrical loads will be reduced or eliminated to reduce the loads to the desired level.
- A 15-amp evaporative cooler circuit must be included in the calculations if the home is de-amped to 50 amps.

* Omit smaller of air conditioning and heating ampere load.
** If home is wired for electric dryer but the dryer is not installed, use 21-amp value.
*** Derive amps for free-standing range (as distinguished from separate oven and cooking units) by dividing values below by 240 volts.

FREESTANDING RANGE REDUCTION TABLE

Nameplate Rating (in watts)	Use (in watts)
10,000 or less	80 percent of rating
10,001 to 12,500	8,000
12,501 to 13,500	8,400
13,501 to 14,500	8,800
14,501 to 15,500	9,200
15,501 to 16,500	9,600
16,501 to 17,500	10,000

EXAMPLE

A 24 x 60 MH-unit is equipped with the following equipment. Calculate all loads and "balance" the 120 v load.

Two small appliance circuits
Two bath fans: 1 rated 1.2 amp/120 v, 1 rated 1.7 amp/120 v
Freestanding electric range: 13.2 kW/240 v
Electric Furnace: 10.5 kW/240 v (motor load 4.0 amp included)
Air conditioner: 24 amp/240 v (motor load 8.0 amp included)
Electric water heater: Upper element 4500 watts/240 v; Lower element 4500 watts/240
One laundry circuit
Range hood: 1.9 amp/120 v
Disposal: 7.3 amp/120 v
Dishwasher: 8.7 amp/120 v
Dryer Circuit: 21 amp/240 v

Section A. Lighting: Length of home times width of home (outside dimensions) = square foot, times 3 watts per square foot

Length 60 X Width 24 x 3 watts..... = 4,320 watts

Section B. Small Appliances: Enter number of 20-amp small appliance (exclude laundry) circuits, times 1,500 watts

Number of circuits 2 X 1,500 watts..... = 3,000 watts

Section C. Laundry: Include 1,500 watt minimum if installed..... = 1,500 watts

Section D. Total (sum of Sections A, B, and C)..... = 8,820 watts

Section E. First 3,000 watts at 100 percent..... = 3,000 watts

Section F. Total from Section D 8,820 minus 3,000 = 5,820 watts multiplied by 35 percent (.35)..... = 2,037 watts

Section G. Net computed load (sum of Section E and Section F)..... = 5,037 watts

Section H. Total from Section G 5,037 watts divided by 240 volts..... = 20.9 amps per leg

LOADS IN AMPS – PART 1	LEG A	LEG B
1. Lighting & small appliances (Section H above) (20.9 amps)	20.9	20.9
2. Bath fan 1 (1.2 amps)	1.2	
3. Bath fan 2 (1.7 amps)		1.7
4. Range hood (1.9 amps)	1.9	
5. Freestanding electric range (13.2 kW or 13,200 watts)	35.0	35.0
6. Electric furnace (10.5 kW or 10,500 watts)	43.7	43.7
7. Electric space heater (n/a)		
8. Exhaust fans (n/a)		
9. Air conditioner (24.0 amps, omit smaller load than furnace)		
10. Gas furnace blower motor (n/a)		
11. Other		
12. Add 25 percent of the largest motor from Line 6, 7, 8, 9, or 10 above	2.0	2.0
SUBTOTAL	**104.7**	**103.3**
LOADS IN AMPS – PART 2	**LEG A**	**LEG B**
13. Disposal (7.3 amps)	7.3	
14. Electric water heater (9,000 watts, combine upper and lower elements)	37.5	37.5
15. Dishwasher (8.7 amps)		8.7
16. Electric wall mounted oven (n/a)		
17. Electric cooktop (n/a)		
18. Electric clothes dryer (21 amp circuit)	21.0	21.0
19. Other (n/a)		
SUBTOTAL	**(65.8)**	**(67.2)**
20. If 4 or more appliances are used in Part 2, use 75 percent of Part 2 subtotal	65.8 x 75% = 49.4	67.2 x 75% - 50.4
TOTAL LOAD IN AMPS (combine Parts 1 and 2)		

- All loads for this example must be converted to amps.
- Voltages for equipment in this example are 120 v or 240 v.
- The electric range load is 13.2 kW (13200 watts) using the freestanding electric range reduction table, a 13,200 watt load reduces to 8,400 watts. 8400 watts divided by 240 volts = 35 amps.
- If the home is equipped with air conditioning, omit the smaller of either the heating (gas or electric) load or the a/c load. In this example, the heating load is 43.8 amps and the a/c load is 24 amps, hence the a/c load is omitted from the calculations.