



Mountain Power Solutions LLC
 Specializing in Remote Power Engineering Applications
 382 Ridgway Dr. Grand Junction, CO 81507
 (970)208-5329

Load Calculator for Off-Grid & Backup Power Systems

AC Loads

	Load Description or Appliance	Quantity	Power Rating (W)*	Operating Time (hr/day)	Operating Days/ Week
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

* if Wattage is unknown, try to get the current rating (Amps) and Voltage rating (Volts) of the device

DC Loads (Please note that DC loads are unusual and are not as economical as they used to be for residential off-grid scenarios)

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	Load Description or Appliance	Quantity	Power Rating (W)*	Operating Time (hr/day)	Operating Days / week
1					
2					
3					
4					
5					

* if Wattage is unknown, try to get the current rating (Amps) and Voltage rating (Volts) of the device

Typical Wattages of Various Appliances

Here are some examples of the range of nameplate wattages for various household appliances:

- Coffee maker = 900–1200
- Clothes washer = 350–500
- Clothes dryer = 1800–5000
- Dishwasher = 1200–2400 (using the drying feature greatly increases energy consumption)
- Dehumidifier = 785
- Electric blanket- *Single/Double* = 60 / 100
- Fans
 - o Ceiling = 65–175
 - o Window = 55–250
 - o Furnace = 750
 - o Whole house = 240–750
- Hair dryer = 1200–1875
- Heater (*portable*) = 750–1500
- Clothes iron = 1000–1800
- Microwave oven = 750–1100
- Personal computer
 - o CPU - awake / asleep = 120 / 30 or less
 - o Monitor - awake / asleep = 150 / 30 or less
 - o Laptop = 50
- Radio (*stereo*) = 70–400
- Refrigerator (*frost-free, 16 cubic feet*) = 725

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Televisions (color)

o 19" = 65–110

o 27" = 113

o 36" = 133

o 53"-61" Projection = 170

o Flat screen = 120

Toaster = 800–1400

Toaster oven = 1225

VCR/DVD = 17–21 / 20–25

Vacuum cleaner = 1000–1440

Water heater (*40 gallon*) = 4500–5500

Water pump (*deep well*) = 250–1100

Water bed (*with heater, no cover*) = 120–30

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