

RUNNING (Rated) Watts vs. SURGE (Starting) Watts

- ✓ **RUNNING** (rated) watts produced by a generator represents the amount of continuous power output
- ✓ **SURGE** (starting) watts produced by a generator represents the amount of temporary bursts of power output required by common tools and appliances for 2-3 seconds during start up.

Generator Energy Conversions

- ✓ **Volts x Amps = Watts**
- ✓ **Amps / Watts = Volts**
- ✓ **Watts / Volts = Amps**

When calculating power requirements use the following:

Generator Wattage Selection Guide

- Using the Generator Wattage Reference Chart, select the items you wish to power at the same time. Write the corresponding **RUNNING** (Rated) watts and **SURGE** (Starting) Watts in the designated wattage worksheet columns below.
- Add up the **RUNNING** Watts of the items you wish to power at the same time and enter the total in the **Total Running Watts** space (A).
- Select the individual tool or appliance with the highest number of **SURGE** (Starting) watts. Enter this number in the Total **SURGE** Watt space (B). Add the numbers in Spaces (A) & (B). Write your **Total Watts Required** in space (C).

EXAMPLE ONLY

TOOL OR APPLIANCE	RUNNING WATTS	SURGE WATTS
1. Refrigerator	200	1200
2. Television	300	300
3. Lights (7 x 75 watts)	525	525
4. Furnace Fan 1/4HP	600	1000
5. Microwave - 800 watt	1300	1400
6. Radio	200	200
7. Laptop Computer	250	250
8		
9		
10		

(A)	+	(B)
3375		1400
Total RUNNING WATTS		Highest SURGE WATT Item

(A) + (B) = Total Watts Required

(C)
4775

Using the example above, you should purchase a generator with a SURGE (Starting) Watts rating of 4775 Watts or

YOUR GENERATOR POWER NEEDS

TOOL OR APPLIANCE	RUNNING WATTS	SURGE WATTS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

(A)	+	(B)
Total RUNNING WATTS		Highest SURGE WATT Item

(A) + (B) = Total Watts Required

(C)

Complete the chart above using the Wattage Selection Guide Instructions to determine the Generator wattage requirements for your applications.

HOME

HEATING & COOLING

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Air Conditioner-Window 10,000 BTU	1500	2200
Air Conditioner-Window 13,000 BTU	1800	2800
Air Conditioner-Central 10,000 BTU	1500	3000
Air Conditioner-Central 24,000 BTU	3800	5000
Air Conditioner-Central 40,000 BTU	6000	6700
Fan - Box Type - 20"	120	180
Fan - Ceiling Type	800	1200
Furnace Fan-(Gas or Fuel Oil)-1/4HP	600	1000
Furnace Fan-(Gas or Fuel Oil)-1/2HP	875	2350
Radiant Heater	1300	1300

HOUSEHOLD - GENERAL

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Cell Phone Charger	25	25
Gaming Systems - XBOX, Playstation	40	40
DVD Player	350	350
Electric Blanket	150	150
Garage Door Opener	700	1400
Hair Dryer	1800	1900
Hot Water Heater - Electric	4500	4500
Incandescent Light -75 W	75	75
Radio	200	200
Sump Pump 1/2HP	1050	2150
Satellite Receiver	250	250
Security System	500	500
Television	300	300
VCR	100	100

KITCHEN & LAUNDRY

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Blender	400	850
Coffee Maker	600	600
Deep Freezer	500	1500
Dryer Electric	5400	6750
Dryer Natural Gas	700	2000
Dishwasher	250	550
Frying pan	1500	1500
Microwave Oven 650 watt	1000	1200
Microwave Oven 1000 watt	1500	1750
Refrigerator or Freezer	200	1200
Slow Cooker	200	200
Toaster Oven	1200	1200
Washing Machine	1200	1200

FARM & SHOP

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Air Compressor 2HP	2000	3900
Battery Charger - 15 Amp	380	380
Battery Charger-60A +250A	1500/5800	1500/5800
Battery Charger-100A +300A	2400/7800	2400/7800
Cooler - Walk In	1100	1800
Electric Fencing - 25 miles	250	250
Milker - 2HP	1000	2300
Space Heater(Gas)50,000 BTU	400	600
Space Heater(Gas)90,000 BTU	500	750
Space Heater(Gas)150,000 BTU	600	1000
Welder - 200 Amp AC	9000	9000

JOB SITE

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Air Compressor 1 HP	1600	4500
Belt Sander	1200	2400
Circular Saw 7-1/4 inch	1400	2300
Concrete Vibrator 2HP	1560	1560
Concrete Mixer - 1HP	1000	3000
Demolition Hammer	1260	1260
Drain Cleaner	250	250
Drill 1/2 inch, 5.4 Amp	900	900
Miter Saw - 10 inch	1800	1800
Paint Sprayer - Airless	600	1200
Planer / Jointer - 6 inch	1800	1800
Rotary Hammer Drill	1200	3000
Table Saw - 10 inch	1800	4500
Work Light - Halogen 1000W	1000	1000

OFFICE

	RUNNING (Rated) Watts	SURGE (Starting) Watts
Desktop Computer	800	800
Fax Machine	800	800
Laptop Computer	250	250
Monitor - LCD	30	30
Printer	600	600

RECREATIONAL

	RUNNING (Rated) Watts	SURGE (Starting) Watts
CD/DVD Player	100	100
Cell Phone Charger	25	25
Grill - Electric	1650	1650
Inflator Pump Rafts/Mattress	50	150
Lighting-Outdoor String Type	250	250
TV Portable - 13 inch	150	150