

GENERATORS

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Choose a higher-wattage generator if you need to power more items at one time. * Refrigerators, heaters, and microwaves require 1-3X more starting power.

Select the items you wish to power at the same time. Use the chart on the opposite page & fill in the <u>running watts and starting</u> <u>watts</u> requirements on the "Your Power Needs" worksheet below.



Add the Running Watts of the items you wish to power. Enter this number in the Total Running Watts column.



Select the one individual item with the highest number of starting watts. Take this one number, add it to your Total Running Watts, and enter it in the Total Starting Watts box.

RUNNING = (rated) watts produced by a generator represents the amount of <u>continuous</u> 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.

EXAMPLE YOUR POWER NEEDS RUNNING ADDITIONAL * RUNNING ADDITIONAL * TOOL OR APPLIANCE TOOL OR APPLIANCE WATTS STARTING WATTS WATTS STARTING WATTS 1. 1. Refrigerator/Freezer 700 2200 2. 2. 1/2 HP Furnace Fan 800 2350 HIGHEST 3. 3. Television STARTING 500 0 WATTS 4. Window AC 4. 1200 1800 5. 5. Sump Pump - 1/2 HP 1050 2200 6. 6. 7. 7. 4250 TOTAL TOTAL RUNNING 4250 RUNNING WATTS WATTS With this example you need a HIGHEST I need a generator that produces HIGHEST 2350 + STARTING WATTS STARTING WATTS generator that produces at least at least ____ total running watts 4250 total running watts and TOTAL STARTING TOTAL STARTING and total starting watts. 6600 total starting watts. 6600 _ WATTS NEEDED WATTS NEEDED

FREQUENTLY ASKED QUESTIONS

How many watts does it take to power basic items in an average size house?

In a typical home, essential items will average 5000 – 7500 watts of power to run.

What is the difference between running watts and starting watts?

Running, or rated watts are the continuous watts needed to keep items running. Starting watts are extra watts needed for two to three seconds to start motor-driven products like a refrigerator or circular saw, this is the maximum wattage the generator can produce.

Why is only one starting watt item used to calculate your total starting watt requirement?

Unlike running watts, starting watts are only needed during the first few seconds of operation. In most cases, only one item will start or cycle at the same time, therefore this is the most accurate estimate.

What if I can't determine the running or the starting watt requirement for a tool or appliance?

You may estimate using one of the following equations:

Volts x Amps = Watts Amps / Watts = Volts Watts / Volts = Amps

IMPORTANT

* Only motor - driven items will require starting watts. Many devises need 1 - 3 X the running/rated watts additional power to start up (Maximum Output Watts), and then require less power (Rated Watts) to run continually. For example, a refrigerator requires 2200 starting wattage with a 700 running wattage, so you would need a generator with at least 2200 watt maximum output to run ONLY a refrigerator.





GENERATORS

Generator Purchase Decision Guide

	TOOL OR APPLIANCE	ESTIMATED RUNNING WATTS	ADDITIONAL STARTING WATTS	TOOL OR APPLIANCE	ESTIMATED RUNNING WATTS	ADDITIONAL STARTING WATTS
Recreatio	nal Use					
	Tailgating/Camping:			Outdoor Light String	250	0
	Electric Grill	1650	0	Cell Phone Battery Charger	25	0
	AM/FM Radio	100	0	Inflator Pump	50	150
	Box Fan – 20"	200	0			

Storm / Emergency Use



Light Bulb – 60 Watt 60 0 Light Bulb – 75 Watt 75 0 Refrigerator/ Freezer 700 2200 Sump Pump – 1/3 HP 800 1300 Sump Pump – 1/2 HP 1050 2200 Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling:	Essentials:		
Light Bulb – 75 Watt 75 0 Refrigerator/ Freezer 700 2200 Sump Pump – 1/3 HP 800 1300 Sump Pump – 1/2 HP 1050 2200 Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling: Space Heater 1800 0 Humidifier – 13 Gal 175 0 1400 Furnace Fan Blower – 1/2 HP 800 2350 1400 Window AC – 10,000 BTU 1200 1800 0 Window AC – 12,000 BTU 3250 3950 3950 Central AC – 10,000 BTU 1500 3000 3000 Central AC – 24,000 BTU 3800 4950 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: Iron 1200 0 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 1350 1350 1350 1350	Light Bulb – 60 Watt	60	0
Refrigerator/ Freezer 700 2200 Sump Pump – 1/3 HP 800 1300 Sump Pump – 1/2 HP 1050 2200 Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling:	Light Bulb – 75 Watt	75	0
Sump Pump – 1/3 HP 800 1300 Sump Pump – 1/2 HP 1050 2200 Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling:	Refrigerator/ Freezer	700	2200
Sump Pump – 1/2 HP 1050 2200 Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling:	Sump Pump – 1/3 HP	800	1300
Water Well Pump – 1/3 HP 1000 2200 Electric Water Heater 4000 0 Heating/Cooling: 5pace Heater 1800 0 Humidifier – 13 Gal 175 0 1 Furnace Fan Blower – 1/2 HP 800 2350 Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Sump Pump – 1/2 HP	1050	2200
Electric Water Heater 4000 0 Heating/Cooling: Space Heater 1800 0 Humidifier – 13 Gal 175 0 Furnace Fan Blower – 1/2 HP 800 2350 Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Water Well Pump – 1/3 HP	1000	2200
Heating/Cooling: Space Heater 1800 0 Humidifier – 13 Gal 175 0 Furnace Fan Blower – 1/2 HP 800 2350 Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1 1 Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Electric Water Heater	4000	0
Space Heater 1800 0 Humidifier – 13 Gal 175 0 Furnace Fan Blower – 1/2 HP 800 2350 Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1 1 Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Heating/Cooling:		
Humidifier 13 Gal 175 0 Furnace Fan Blower 1/2 HP 800 2350 Furnace Fan Blower 1/3 HP 700 1400 Window AC 10,000 BTU 1200 1800 Window AC 12,000 BTU 3250 3950 Central AC 10,000 BTU 1500 3000 Central AC 24,000 BTU 3800 4950 Central AC 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1 1 2250 Clothes Dryer Electric 5400 1350 Clothes Dryer Gas 700 1800	Space Heater	1800	0
Furnace Fan Blower – 1/2 HP 800 2350 Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1200 0 Vashing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Humidifier – 13 Gal	175	0
Furnace Fan Blower – 1/3 HP 700 1400 Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1200 0 Vashing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Furnace Fan Blower – 1/2 HP	800	2350
Window AC – 10,000 BTU 1200 1800 Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Furnace Fan Blower – 1/3 HP	700	1400
Window AC – 12,000 BTU 3250 3950 Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Window AC – 10,000 BTU	1200	1800
Central AC – 10,000 BTU 1500 3000 Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Window AC – 12,000 BTU	3250	3950
Central AC – 24,000 BTU 3800 4950 Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Central AC – 10,000 BTU	1500	3000
Central AC – 40,000 BTU 6000 6700 Heat Pump 4700 4500 Laundry Room: 1200 0 Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Central AC – 24,000 BTU	3800	4950
Heat Pump 4700 4500 Laundry Room:	Central AC – 40,000 BTU	6000	6700
Laundry Room: Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Heat Pump	4700	4500
Iron 1200 0 Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Laundry Room:		
Washing Machine 1150 2250 Clothes Dryer – Electric 5400 1350 Clothes Dryer – Gas 700 1800	Iron	1200	0
Clothes Dryer – Electric54001350Clothes Dryer – Gas7001800	Washing Machine	1150	2250
Clothes Dryer – Gas 700 1800	Clothes Dryer – Electric	5400	1350
	Clothes Dryer – Gas	700	1800

Kitchen:			
Microwave Oven - 625 Watts	625	0	
Microwave Oven – 1000 Watts	1000	0	
Coffee Maker	1000	0	
Electric Stove – 8" Element	2100	0	
Dishwasher – Hot Dry	1500	1500	
Food Processor	400	0	
Toaster Oven	1200	0	
Toaster	850	0	
Electric Can Opener	168	0	
Family Room:			
VCR	100	0	
Stereo Receiver	450	0	
Other:			
Security System	500	0	
Garage Door Opener – 1/2 HP	875	2350	
Curling Iron	1500	0	
Hair Dryer – 1250 Watt	1250	0	

Jobsite

	DIY/Jobsite:			Hammer Drill	1000	3000	
	Quartz Halogen Work Light, 300	300	0	Circular Saw – 7-1/4"	1400	2300	-
	Quartz Halogen Work Light, 500	500	0	Miter Saw – 10"	1800	1800	
f i i i i i i i i i i i i i i i i i i i	Quartz Halogen Work Light, 1,000	1000	0	Planer/Jointer – 6"	1800	1800	
	Airless Sprayer – 1/3 HP	600	1200	Table Saw/Radial Arm Saw – 10"	2000	2000	
	Reciprocating Saw	960	960	Belt Sander	1200	2400	
	Electric Drill – 3/8", 4 Amps	440	600	Air Compressor – 1/4 HP	970	1600	
	Electric Drill – 1/2", 5.4 Amps	600	900	Air Compressor – 1 HP	1600	4500	

The above are estimates only. Check your tool or appliance for exact wattage requirements. The wattages listed in our reference guide are based on estimated wattage requirements. For exact wattages, check the data plate or owner's manual on the item you wish to power.

CAUTION:

Operating voltage and frequency requirement of all electronic equipment should be checked prior to plugging them into this generator. Damage may result if the equipment is not designed to operate within a +/- 10% voltage variation, and +/- 3 hz frequency variation from the generator name plate ratings.