

BACK-UP GENERATOR WORKSHEET-LOAD CALCULATION - 2014 N.E.C (ART.220)

JOB/PROJECT ADDRESS		DATE		CONTRACTOR INFORMATION:	
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SPECIFY FUEL SOURCE:		NAT.GAS	OTHER:		
SPECIFY/VERIFY ELECTRIC SERVICE VOLTAGE:		120/240- SINGLE PHASE	OTHER:		
SPECIFY ELECTRIC SERVICE AMPERAGE:		100 AMP	200 AMP	400 AMP	800 AMP
NET SQUARE FOOTAGE (OF RESIDENCE):		1600	SQUARE FEET		

GENERAL LOADS:	QUANTITY:	RATING (LOAD)	FACTOR:	LOADS (VA)	LOADS (KW) (VA/1,000)
1 GENERAL LIGHTING & GENERAL USE RECEPTACLES	1600	3 VA/ft	100%	4800	4.8
2 BRANCH CIRCUITS (1500 VA/ft)					
2.1 SMALL APPLIANCE CIRCUITS (20 AMP)	2	1500	100%	3000	3
2.2 LAUNDRY CIRCUITS	1	1500	100%	1500	1.5
3 FIXED APPLIANCES		FULL CURRENT RATING			
3.1 WELL	1	800	100%	800	.8
3.2 SUMP PUMP			100%		
3.3 FREEZER	1	1500	100%	1500	1.5
3.4 MICROWAVES (BUILT-IN, NOT COUNTERTOP MODELS)	1	1000	100%	1000	1
3.5 DISPOSAL			100%		
3.6 DISHWASHER	1	1500	100%	1500	1.5
3.7 RANGE (SEE TABLE 220.55 FOR MULTIPLE COOKING APPLIANCES)	1	8000	100%	8000	8
3.8 WALL MOUNTED OVEN (BUILT-IN)			100%		
3.9 COUNTER MOUNTED COOKING SURFACE (BUILT-IN)			100%		
3.10 WATER HEATER	1	4500	100%	4500	4.5
3.11 CLOTHES DRYER	1	5000	100%	5000	5
3.12 GARAGE DOOR OPENER			100%		
3.13 SEPTIC SYSTEM PUMP/GRINDER			100%		
3.14 OTHER UNSPECIFIED LOADS (PLEASE SPECIFY / LIST BELOW)					
3.14.1 Fridge	1	1500	100%	1500	1.5
3.14.2			100%		
3.14.3			100%		
3.14.4			100%		
3.14.5			100%		
3.14.6			100%		
3.14.7			100%		
3.14.8			100%		
3.14.9			100%		
4 TOTAL GENERAL LOADS:				30800 VA	30.8 KW
5 HEAT - AIR CONDITIONING (AC) LOAD:					
5.1 A/C COOLING EQUIPMENT	1	3000	100%	3000	3
5.2 HEAT PUMP					
5.2.1 COMPRESSOR (IF NOT INCLUDED AS AC)			100%		
5.2.2 SUPPLEMENTAL ELECTRIC HEAT	1	10000	65%	6500	6.5
5.3 ELECTRICAL SPACE HEATING EQUIPMENT					
5.3.1 LESS THAN FOUR (4) SEPARATELY CONTROLLED UNITS			65%		
5.3.2 FOUR (4) OR MORE SEPARATELY CONTROLLED UNITS			40%		
5.4 SYSTEM WITH A CONTINUOUS NAMEPLATE LOAD			100%		
5.5 LARGEST HEAT / AC LOAD (VA) KW				6500	6.5
6 GENERAL LOADS					
6.1 1st 10 kW OF GENERAL LOADS @ 100% kW			100%	10	10 KW
6.2 REMAINING GENERAL LOADS @ 40% kW			40%	8.32	8.32 KW
6.3 CALCULATED GENERAL LOADS KW					18.32 KW
6.4 LARGEST HEAT / AC LOAD 100% KW					6.5 KW
7 TOTAL CALCULATED LOAD (NET GENERAL LOADS + HEAT/A/C LOAD)					24.82 KW

Whole Home = 26 KW

Recommended = 22 KW