

Remember that although the voltages shown in the tables in Article 430 indicate that motors are rated for 115,230 and 460 Volts, Section 220.5(A) requires nominal voltages of 120, 240 and 480 Volts to be used for load calculations.

Step 9: 220.14(A) Other Loads – EVSE

40	A X	240	V X	1	(#)	=	9600	VA
	A X		V X		(#)	=	0	VA
						=	9600	VA

Sum of Calculated Loads

Lighting, Sm. Appliance, Laundry (Step 3)	=	6,234	VA
Fastened in Place Appliances (Step 4)	=	3,525	VA
Clothes Dryer (Step 5)	=	5,000	VA
Cooking Equipment (Step 6)	=	4,000	VA
Noncoincident Heat – A/C (Step 7)	=	9600	VA
25% of Largest Motor (Step 8)	=	900	VA
Other Loads – (Step 9)	=	9600	VA
Total Calculated Load	=	38,859	VA

Step 10: Table 310.15 (B)(6) – Size the service and conductors.

$38,859 \text{ VA} / 240\text{V} = 161.9125 \text{ Amps}$

Conductor Size _____ CU _____ AL

Step 11: Grounding Electrode Conductor – Table 250.66

GEC Size _____ CU _____ AL