

OVEN CURRENT DRAW CALCULATION

*Please note, the calculations only take into account heat input, blowers, and controls. If there are additional components on the oven such as hydraulics, actuators, conveyor drive systems, or vertical lift doors, these will not be taken into account. The values calculated should only serve as an estimate. Feel free to reach out to Grieve directly for any specific questions related to oven current draw at (847) 546-8225 or sales@grievcorp.com.

To estimate the amperage of the oven, you will need:

- Electric service (supply voltage and single or three-phase power)
- Heat input, if electric heat
- Size of powered exhaust system in CFM, if there is one
- Horsepower of motors (recirculating blower HP can be found on model specifications or quote)

Calculate heater current (electric ovens):

Single phase: Total heat input in Watts (kW x 1000)/voltage

Three phase: Total heat input in Watts (kW x 1000)/(Voltage x 1.732)

Exhaust motor size:

If you have a powered exhauster, refer to the following table to determine the horsepower of the exhauster motor:

Exhauster Size (CFM)	Motor Horsepower
80	1/8
130	1/3
325	1/3
650	1/2
975	1
1200	1-1/2
1500	2

Motor current:

Look up current draw of each motor according to its voltage and horsepower in the following table:

	Voltage	208	230	208	230	460	575
Horsepower	Phase	Single	Single	Three	Three	Three	Three
1/8		2	2	2	2	2	2
1/3		4	3.6	1.5	1.4	0.7	0.5
1/2		5.4	4.9	2.2	2	1	0.8
3/4		7.6	6.9	3.1	2.8	1.4	1.1
1				4	3.6	1.8	1.4
1-1/2				5.8	5.2	2.6	2.1
2				7.5	6.8	3.4	2.7
3				10.6	9.6	4.8	3.9
5				16.8	15.2	7.6	6.1
7-1/2				24.2	22	11	9
10				30.8	28	14	11
15				46.2	42.2	21	17
20				59.4	54	27	22
25				74.8	68	34	27

Add up total current:

Electric ovens: Add heater current, motor currents, and 5 Amps for control circuit. Multiply by 1.25 to estimate required breaker size.

Gas ovens: Add motor currents and add 10 Amps for gas combustion blower and controls. Multiply by 1.25 to estimate required breaker size.