

HEAT ADDED TO KITCHEN ATMOSPHERE (from Operating Equipment)

Project _____
 Item _____
 Quantity _____
 FCSI Section 11400 _____
 Approved _____
 Date _____

In creating and designing a kitchen facility, the designer/architect/engineer will need to know what values to use in calculating the H.V.A.C. and hood requirements of the overall kitchen.

The following information may be used to assist in the design effort. The figures are contingent upon many unknown factors so the final result will depend upon the use made of them by the designer. The values given are calculated and offered to assist in the design of air handling equipment.

Equipment	Gallon Capacity	*Latent Heat BTU/Hr.		**Sensible Heat BTU/Hr.
		Lid Closed	Lid Opened	
5 psi Pressure Steamer, 2 compartment portion only	-	-	-	8100
Convection Steamer, 2 compartment portion only	-	-	-	1800
Modular steam generator: Gas-Fired	-	-	-	8600
Electric or Steam Coil	-	-	-	3600
.....	-	-	-	8100
Self-generating Gas-Fired Kettles	40	12500	19800	4200
.....	60	16200	25700	5000
.....	80	20100	31800	8500
.....	100	23300	36900	9300
Self-generating Electric kettles or direct connect	6	-	4200	400
.....	12	-	7800	700
.....	25	7900	12500	960
.....	40	12500	19800	1700
.....	60	16200	25500	2500
.....	80	20100	31800	3500
.....	100	23300	36900	4300
.....	150	29600	46900	6200
Tilt Skillets: Electrically Heated	30	18200	28000	1100
.....	40	24100	38000	1500
Tilt Skillets: Gas-Fired	30	18200	28600	6100
.....	40	24100	38000	6500
Convvotherm Combi Ovents				
6.10, Electrically Heated			1.954	2.486
6.10, Gas Heated			1.988	2.530
6.20, Electrically Heated			3.807	4.568
6.20, Gas Heated			3.910	4.692
10.10, Electrically Heated			3.211	4.199
10.10, Gas Heated			3.308	4.326
10.20, Electrically Heated			6.073	8.629
10.20, Gas Heated			6.218	8.836
20.10, Electrically Heated			6.565	8.206
20.10, Gas Heated			6.742	8.428
20.20, Electrically Heated			11.409	13.039
20.20, Gas Heated			11.622	13.283

* Latent heat is the quantity of heat transferred to water to change it to steam

** Sensible heat is that energy perceived or sensed as emitting from the surfaces of the equipment itself.

NOTE: All heat losses are maximum values and were obtained assuming still air at 70° F. and 50% relative humidity. If the velocity of the air in the kitchen is greater than 1 Ft. per second, it is recommended that the heat values be increased by at least 25%. It was also assumed that the flue gases from gas-fired equipment are ducted outside and not vented into the kitchen.