

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

STEAM REQUIREMENT DATA

Use these charts to determine the steam flow rate requirements for any combination of Cleveland Kettles or any combination of Cleveland Kettles and/or Steamers.

Steam Flow Rate Requirements for Cleveland Kettles; lbs. per hour with 10-15 psig steam at the kettle

Capacity		Fast	Medium Speed	Stock
Gallon*	Liter	Cooking	Cooking	Kettle
5	17	11	9	6
10	42	22	18	11
25	95	55	44	28
40	151	88	70	44
60	227	132	105	66

*U.S. Gallons

The use of higher steam pressures (20-50 psig) will reduce heat up time 5 to 20%

Example: Select a gas-fired steam generator which will supply steam to a steam jacket kettle and a Convection Steamer.

First, determine the total steam flow requirement as illustrated below:

		Steam flow required – lbs. per hour
(1)	60 gallon kettle (medium speed cooking)	105
(1)	2 compartment Convection Steamer	60
	Total	165

Then run down the list of gas steam generator sizes until you find one rated at 165 lbs. per hour or more.

In this example the selection would be 300,000 BTU gas-fired steam generator. If, instead of a small self contained steam generator, this particular steamer combination was operated with steam from a direct connection to the building's steam mains, the steam flow requirement would be the same, plus 33% more. Therefore, there should be 220 lbs. per hour of steam available just for these two cookers. It is good practice to recommend 33% more steam flow to compensate for steam condensation in the supply piping.

Steam Flow Rate Requirements of Steamers: lbs. per hour

Cleveland Model (Series)	Rate required at start-up per compartment	Rate req'd during cooking per compartment
Convection Steamers	30	30
Pressure Steamers	30	15
ConvectionPro[®] XVI	75	75
SteamPro[®] XVI		
(Pressure Mode)	75	38
(Convection Mode)	75	75

Steam Flow Rating of Cleveland Steam Generators

Gas Input BTU per Hour	Steam Output lbs. per hour	Steam Generator
200,000	125	3.6
250,000	150	4.4
300,000	180	5.2
Electric KW Input		
24KW	70	2.0
36KW	120	3.5
48KW	150	4.4