

# STEAM BOILER SIZING GUIDE

Use this guide when calculating the correct size boiler you will need to power direct steam equipment.

- 1 Boiler Horsepower (BHP) = Approximately 33, 475 BTU
- 1 Boiler Horsepower (BHP) = Approximately 10 kW
- 1 Boiler Horsepower (BHP) = Approximately 34.5 LBS./Hour of steam

Actual steam output depends upon boiler efficiency.

## As a general rule:

- Blodgett Convection Steamers - require 30 LBS./hour of steam at start-up & operation or each steamer requires approximately 1 BHP per compartment
- Blodgett Steam Kettles - require approximately 1 BHP per 20 gallons to operate at medium heat.  
Example - 40 Gals = 2 BHP

STEAM FLOW RATE OF BLODGETT STEAM BOILERS		
Energy Input	Steam Output Lbs/Hour	Boiler Horsepower
140,000 BTU	100	209
200,000 BTU (24")	110	302
200,000 BTU (36")	138	4.0
250,000 BTU	155	4.5
300,000 BTU	183	5.3
24 kW	69	2.0
36 kW	107	3.1
42 kW	128	3.7
48 kW	148	4.3

STEAM FLOW RATE REQUIREMENTS OF BLODGETT DIRECT STEAM KETTLES (15 PSI AT THE KETTLE)							
Capacity		Fast Cook		Medium Cook		Stock Kettle	
Gallons	Litre	LBS/HR	KGS/HR	LBS/HR	KGS/HR	LBS/HR	KGS/HR
6	23	11	5	9	4	6	3
10	38	22	10	18	8	11	5
20	76	44	20	35	16	22	10
30	114	66	30	53	24	33	15
40	152	88	40	70	32	44	20
60	227	132	60	105	48	66	30
80	303	176	80	140	64	88	40
100	379	220	100	175	80	110	50

## SIZING EXAMPLE

Quantity (1) 40 Gallon Direct Steam Kettle (Cooking on medium heat)  
 Quantity (1) 6-Pan Convection Steamer (30 LBS./HR x 2 Compartments)

70 LBS./HR  
 60 LBS./HR

**Total Requirement:**  
 130/34.5 LBS./HR = 3.77 BHP - select boiler accordingly

**130 LBS./HR**

