

C Series Compact Package Boiler



C Series Compact Packaged Boiler

America's Boiler Company

The Burnham Commercial C Series compact packaged boiler was designed using our years of boiler experience and is sold and serviced through the largest and most experienced network of sales representatives in the country. With a complete commercial product offering and unmatched sales and technical support, it's no wonder why we are America's Boiler Company!



Packaged Boilers That Fit Through A Door

The C Series Firetube boiler is fully packaged and designed to provide maximum cost and energy efficiency. The C Series boiler fits through any standard 36" x 80" doorway, eliminating the need for any costly building alterations or difficult site assemblies. This convenient size allows for easier and less expensive retrofit or upgrade of an existing boiler room.

A forced-draft unit, the C Series avoids the expense of a tall stack and is much more economical to operate and install than atmospheric-fired boilers. The forced draft creates a more controlled combustion, and a more thorough mixture of fuel and air is achieved resulting in optimum efficiency.



Other design features help maintain this durability and economy over the years. While the original efficiency of some other boilers can decrease when outer wrappers develop air leaks and tubes cannot be cleaned thoroughly, the C Series overcomes these problems. Built to ASME standards, its outer shell of heavy welded steel boilerplate and extra heavy tube sheets assure the continued airtight conditions necessary for efficient combustion. Opening the front flue door allows convenient access to the firetubes. By brushing out all of the firetubes, the original efficiency of the boiler is restored in a matter of minutes. All tube ends are rolled in accordance with the ASME code and are inspected for hydraulic tightness by an independent insurance inspector, prior to shipping.

These installation, operation and maintenance features add up to real savings for you. Factory testing assures you that the boiler will deliver clean, quiet and reliable heat from the day it's installed.



Efficiencies and Features

C Series Anticipated Efficiencies

NATURAL GAS								
Boiler HP	25%		50%		75%		100%	
	10 psig	180°F Water	10 psig	180°F Water	10 psig	180°F Water	10 psig	180°F Water
20	83.2	85.3	83.5	85.3	83.2	84.8	82.6	84.1
30	83.7	85.7	83.8	85.4	83.4	84.9	82.7	84.1
40	83.9	85.8	83.9	85.5	83.4	84.9	82.7	84.1
50	84.1	86.0	84.1	85.7	83.7	85.1	83.0	84.4
60	84.3	86.1	84.3	85.9	84.0	85.4	83.4	84.8
70	84.4	86.1	84.3	85.8	83.9	85.3	83.3	84.7
80	84.4	86.2	84.3	85.9	83.9	85.4	83.3	84.7
90	84.6	86.3	84.6	86.1	84.3	85.7	83.8	85.2
100	84.7	86.4	84.8	86.3	84.6	86.0	84.2	85.6

#2 OIL								
Boiler HP	25%		50%		75%		100%	
	10 psig	180°F Water	10 psig	180°F Water	10 psig	180°F Water	10 psig	180°F Water
20	86.0	88.2	86.2	87.9	86.0	87.5	85.4	86.9
30	86.7	88.6	86.7	88.3	86.4	87.8	85.8	87.2
40	86.8	88.7	86.8	88.3	86.4	87.9	85.9	87.3
50	87.2	89.0	87.1	88.6	86.8	88.2	86.3	87.7
60	87.4	89.2	87.4	88.9	87.1	88.6	86.7	88.1
70	87.5	89.2	87.3	88.9	87.1	88.5	86.6	88.0
80	87.5	89.3	87.4	88.9	87.1	88.5	86.7	88.0
90	87.8	89.5	87.8	89.3	87.6	89.0	87.2	88.6
100	88.0	89.7	88.0	89.6	87.9	89.3	87.6	89.0

C Series Features

Boiler:

Three-pass firetube type, constructed with heavy steel, in accordance with requirements of the ASME Code. All units are registered with the National Board.

Water cooled sidewalls in the rear turnaround promote rapid internal circulation and reduce gas temperatures at the entrance to the second pass, reducing tube end stress. All tube ends are rolled and flared.

Easy-opening insulated front and rear flue doors with light weight non-refractory closure provide full access to all tubes. No elaborate seals are used. The C Series oversized furnace easily accommodates any burner.

Washouts are provided for easy inspection and cleaning of waterside surfaces.

All steam boilers are provided with a dry pan to ensure dry steam. A feedwater diffuser is provided on steam boilers. All water boilers are equipped with a dip tube at supply outlet and diffuser at return inlet.

The round vertical smoke outlet has room for an optional quadrant damper. All boilers are provided with lifting holes and an enameled steel jacket installed over fiberglass insulation.

The boiler is mounted on a heavy-duty structural steel base with extended skid and burner platform for protection of the burner during shipment and rigging.

Standard Trim and Controls:

Steam: 157 pump control/low water cut-off with alarm contacts—piped with quick opening blowoff valve. Gauge glass set with hand-operated gauge and try cocks. Steam pressure gauge—4 ½-inch dial. L404A operating pressuretrol, L404C manual reset high limit pressuretrol and appropriate firing rate control when required. Manual reset probe auxiliary low water cut-off.

ASME side outlet safety valve(s).

Water: 63M manual reset low water cut-off—piped with quick opening blowoff valve. Combination pressure/temperature gauge—3 ½ inch dial. L4006A operating aquastat and L4006E manual reset high limit aquastat and appropriate firing rate control when required.

ASME side outlet relief valve(s).

Ratings & Dimensions

C Series Ratings

BHP	A	B	C	Gross Output MBH	Gross Output Lbs/Hr	Net Rating Water MBH	Net Rating Steam MBH	Sq Ft Net Steam	Firing Rate MBH - Gas	Firing Rate GPH - #2 Oil
20	30	66-3/8	75-5/8	670	690	582	520	2,166	816	5.7
30	30	66-3/8	82-5/8	1,004	1,035	873	780	3,249	1,225	8.5
40	34-1/2	73-7/8	90-1/8	1,339	1,380	1,164	1,040	4,332	1,633	11.4
50	34-1/2	75-3/8	100-5/8	1,674	1,725	1,455	1,299	5,415	2,041	14.2
60	34-1/2	75-3/8	113-1/8	2,009	2,070	1,747	1,559	6,497	2,449	17.1
70	34-1/2	78-1/2	114-5/8	2,009	2,415	2,038	1,819	7,580	2,858	19.9
80	34-1/2	78-1/2	125-1/8	2,678	2,760	2,329	2,079	8,663	3,266	22.8
90	34-1/2	78-1/2	135-1/8	3,013	3,105	2,620	2,339	9,746	3,674	25.6
100	34-1/2	78-1/2	145-1/8	3,348	3,450	2,911	2,599	10,829	4,082	28.5

