

# BURNHAM/JUBILEE PF-3



**CAST IRON  
OIL  
HYDRONIC UNIT**

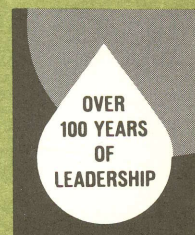
**Forced Draft**

**HOT WATER  
OR  
STEAM**

**Gross Outputs:  
300,000 to  
526,000 BTU/HR**

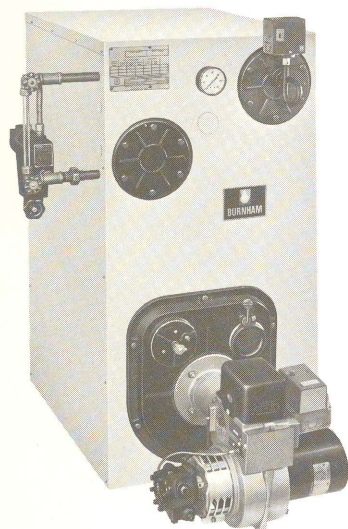


**THE NEWEST LOOK  
IN HYDRONICS**



**BURNHAM/HYDRONICS**





## The

**PF-3...** is an excellent heating unit for application in smaller apartment or commercial buildings. Designed specifically for light oil, forced draft firing this cast iron sectional unit is available either as a steam or hot water boiler and attains a combustion efficiency of over 83%.

Forced draft boilers, in addition to increased operating efficiencies, require much less space than conventional boilers of comparable rating and eliminate the need for external draft devices such as a high chimney or mechanical draft equipment—the PF-3 features: compact wet base design; no separate base or combustion chamber; and the provision for tankless heater in both steam and water boilers. The boiler also features a high efficiency burner and the use of an elastic sealant compound for sealing.

## STANDARD EQUIPMENT—PF-3 Forced Draft Boiler-Burner Unit

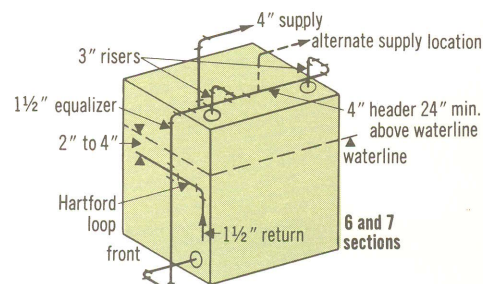
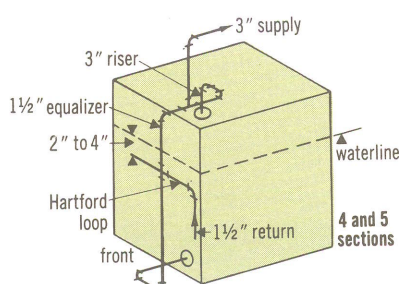
Description	Boiler Size	Water Boilers		Steam Boilers	
		Forced Circulation		with	less
		w/tankless heater	Less heater	tankless heater	heater
		Model No. Suffix			
		WT	W	ST	S
Sealed Section Ass'y w/Front Heater Section	All	X	X	X	X
Tankless Heater #226	PF-34	X		X	
Tankless Heater #232	PF-35	X		X	
Tankless Heater #445	PF-36	X		X	
Tankless Heater #445	PF-37	X		X	
Heater Opening Cover Plate—Tapped	All	X	X	X	X
Heater Opening Cover Plate—Untapped	All		X		X
Flush Jacket	All	X	X	X	X
Flange Mounted, Forced Draft LC oil burner—3450 RPM motor, two stage fuel unit, cad cell, R8184G cad cell relay (30 sec. timing), V4046B oil valve, electronic time delay—factory installed and wired					
LC-334B w/2.50-30°P nozzle installed	PF-34	X	X	X	X
LC-334B w/3.25-30°P nozzle installed	PF-35	X	X	X	X
LC-534B w/4.00-30°P nozzle installed	PF-36	X	X	X	X
LC-534B w/4.50-30°P nozzle installed	PF-37	X	X	X	X
R8124C High Limit, Low Limit and Circulator Control	All	X			
L4081B Temperature Limit and Circulator Control	All		X		
PA404A Pressure Limit Control	All			X	X
L4006A Operating Control	All			X	
T822D Thermostat	All	X	X	X	X
Boiler Drain Cock	All	X	X	X	X
A.S.M.E. Safety Relief Valve	All	X	X		
Altitude, Temperature and Pressure Gauge	All	X	X		
A.S.M.E. Safety Valve	All			X	X
Pressure and Vacuum Gauge	All			X	X
Gauge Glass and Fittings	All			X	X

## Tankless Heater Ratings and Data

Heater No.	For use in Boilers:	† Rating (GPM)	Pressure Drop (PSI)	Heat Connection Size (NPT)
226	all	6	23	1/2
232	PF-35, PF-36, PF-37	7.5	36	1/2
445	PF-36, PF-37	9	37	3/4

† Continuous Draw—water heated 40°F to 140°F with 200°F boiler water temperature.

## minimum piping recommendations - steam boilers





# RATINGS (STEAM AND WATER)

# JUBILEE PF-3



No. of Secs.	Model No.	Forced Draft Burner Mod. and Spec. No.	I=B=R Burner Capacity Light Oil (GPH)	Nozzle* GPH Angle Type	Boiler HP	I=B=R Ratings				Net Water Rating (Sq. Ft.)	I=B=R Vent Diam. (in.w.c.)	Heating Surface (Ft. <sup>2</sup> )	Net Firebox Volume (Ft. <sup>3</sup> )	Pressure in Firebox (in.w.c.)	Assembled Section Wt. (lbs.)	Water Content Full (lbs.)
						Gross Output (MBH)	Net Steam (MBH)	Net Steam (Sq. Ft.)	Net Water (MBH)							
3	PF-34	LC-334-B 1254	2.65	2.50-30°-P	9.0	300	225.1	938	260.9	1740	8	35.35	2.40	+ 0.37	800	276
4	PF-35	LC-334-B 1255	3.30	3.25-30°-P	11.2	375	281.3	1172	326.1	2175	8	46.24	3.23	+ 0.37	1000	335
5	PF-36	LC-534-B 1256	3.95	4.00-30°-P	13.4	450	337.6	1407	391.3	2610	8	57.13	4.05	+ 0.37	1200	402
6	PF-37	LC-534-B 1257	4.60	4.50-30°-P	15.7	526	394.6	1644	457.4	3050	8	68.02	4.87	+ 0.35	1400	465

▲ I=B=R Net Ratings shown are based on a piping and pickup allowance of 1.333 for steam, and 1.15 for water.

Consult manufacturer for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

Net Ratings for water, square feet, are based on 170°F average water temperatures in radiators.

For higher water temperatures, select boiler on basis of I=B=R Net Ratings, MBH.

The I=B=R burner capacity in GPH is based on oil having a heat value of 140,000 BTU per gallon.

▼ PF-3 boiler ratings are based on 12 1/4% CO<sub>2</sub> + .10" water column pressure at boiler flue outlet.

● Vent sizes are selected in accordance with the Hydronics Institute Testing and Rating Standard for cast iron and steel heating boilers.

■ "W" suffix denotes forced circulation water unit w/o tankless heater

"WT" suffix denotes forced circulation water unit w/ tankless heater

"S" suffix denotes steam unit w/o tankless heater

"ST" suffix denotes steam unit w/ tankless heater

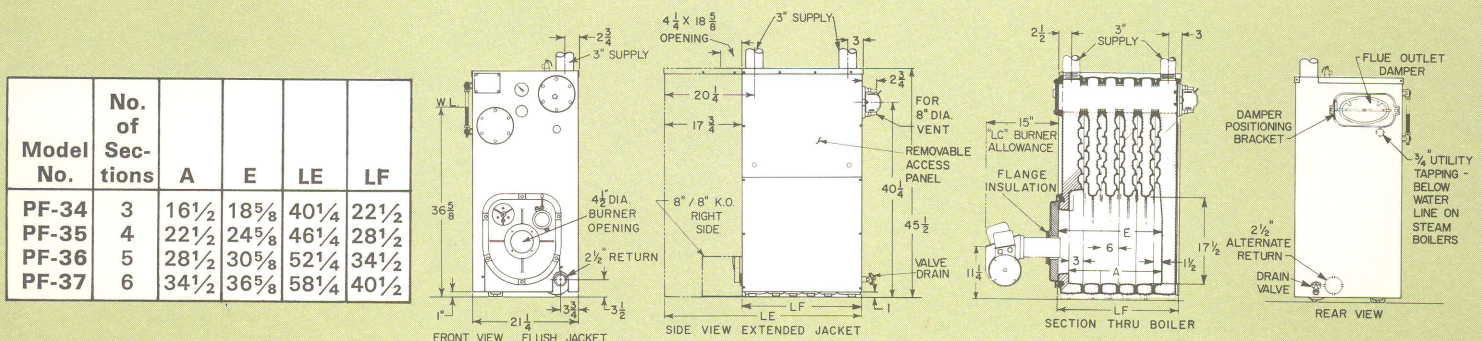
\* Indicates nozzle installed in burner

P designates Hago extra solid type nozzle

Note:

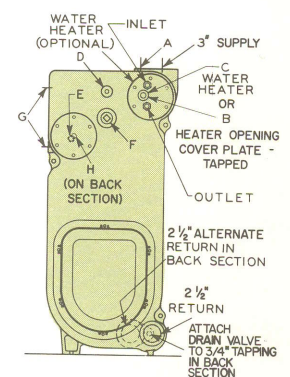
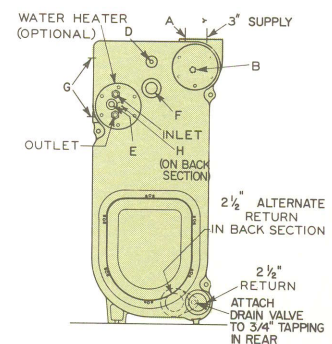
Special Equipment Required For N.Y.C.

## Table of Dimensions



## Control Tappings— All Purpose Boiler

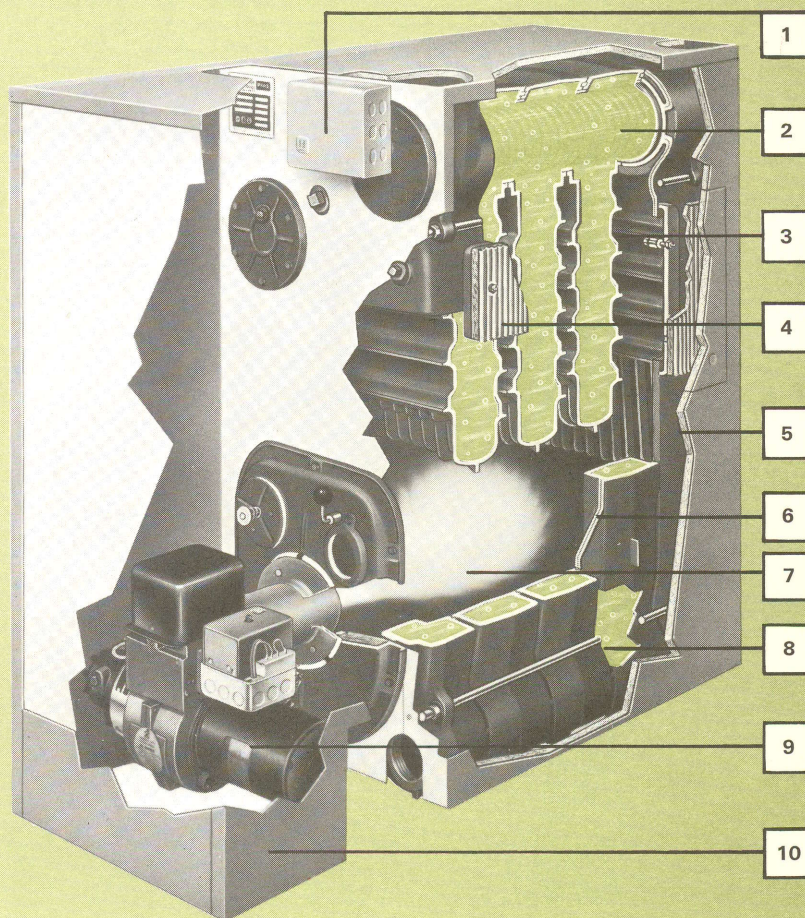
Location On Boiler	Size (Inches)	Water Control Used	Steam Control Used
A	1	Safety Relief Valve	Safety Valve
B	3/4	Limit Control or Combination High Limit and Circulator Control (for installations without tankless water heater)	Bush to 1/4" Pressuretrol —or Optional Controls
C	3/4	Combination High Limit, Low Limit and Circulator Control (for installations with tankless heater)	—
D	1/4	Combination Pressure and Temperature Gauge	Steam Pressure Gauge
E	3/4	Auxiliary Limit Control (when needed — requires additional tapped heater opening cover plate for installations without tankless heater)	Operating Control (for installations with tankless heater)—or optional controls (requires additional tapped heater opening cover plate for installations without tankless heater)
F	1 1/2	Not used	Blowoff
G	1/2	Not used	Gauge Glass and Low Water Cut-Off
H	3/4	Auxiliary Tapping	Auxiliary Tapping—Below Normal Water Line



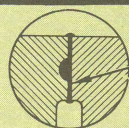


# TEN OUTSTANDING / JUBILEE PF-3 FEATURES

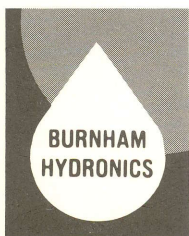
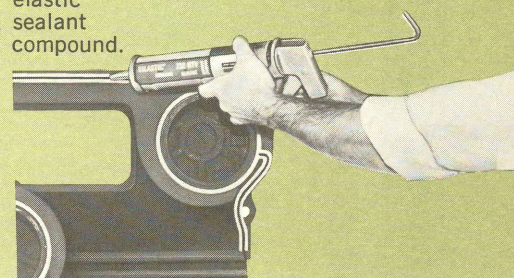
1. **Controls**—mounted on front of boiler for ease of service and adjustment.
2. **Water Heater**—large, copper coil tankless type. Two locations—both 5" nipple ports can be utilized on water boilers to improve the domestic hot water draw; steam boilers utilize lower nipple port only.
3. **Cast Iron Sections**—factory assembled sealed and water pressure tested.
4. **Side Cleanout Openings**—permits cleaning of all flue surfaces from right side without dismantling jacket or disturbing burner, controls or accessories.
5. **Insulated Jacket**—heavy glass fiber insulation prevents wasteful heat loss, keeps jacket cool.
6. **Elastic Sealant**—effectively seals sections for pressure firing.
7. **No Combustion Chamber**—more primary heating surface is exposed to the radiant heat from the flame for increased combustion efficiency.
8. **Wet Base Construction**—besides providing extra primary heating surface, water backed combustion area eliminates base burnouts.
9. **Oil Burner**—flange mounted, 3450 RPM burner engineered to provide clean and efficient combustion.
10. **Optional Jacket Extension (acoustically treated)**—matches jacket and has a removable front panel for ready access to burner and control; provides ample air for combustion and circulation.



**Elastic Sealant . . .** It is imperative that forced draft boilers be absolutely gastight. This quality is attained with the PF-3 by sealing all section joints and canopy connections with elastic compound. (Covered by Patent No. 3,533,379.) The elastic sealant requires less installation time than other gasketing methods and provides a superior gastight seal, which will maintain its integrity over the years.



elastic  
sealant  
compound.



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