

BURNHAM®

Commercial Boilers

**HEAVY STEEL
CONSTRUCTION**

COMPACT,
EASY TO CLEAN

SAVE ON
INSTALLATION,
OPERATION &
MAINTENANCE

15 PSI STEAM,
30 OR 60 PSI
WATER

ECONOMICAL



Series 4FH

FORCED DRAFT FIREBOX BOILER

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The Versatile Boiler

The Burnham Commercial 4FH forced draft steel firebox boiler is a consistent sales leader in the heating industry. Its compact design saves on installation, operation and maintenance.

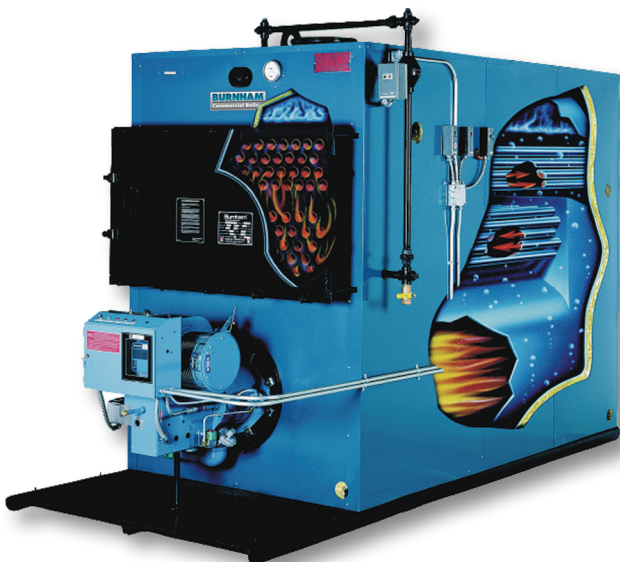
4FH Saves in Operation

- The furnace surrounds the flame with highly efficient waterbacked primary heat absorbing surfaces. This large combustion chamber is easy to fire and accommodates many forced draft burners without flame impingement or other critical firing problems.
- A dual fired burner allows you to burn the more economical fuel or the most readily available fuel at the flip of a switch and affords you leverage in negotiating fuel prices.
- The 4FH is an economical heat source, whether used singly or in multiples. In fact, 4FHs with modulating burners may be sequenced to operate in a step-fired system more cost effectively than a large number of space saver boilers when ongoing maintenance costs are considered.

4FH Saves on Maintenance

- Superior design makes the 4FH easy to clean and maintain—requiring no special tools, materials or skills.
- Opening the front flue door allows firetubes to be brushed out quickly, unlike the watertubes used in some boilers which can be virtually impossible to clean.
- Elaborate or expensive proprietary seals are not required to re-close the doors as with some boilers.
- As a wetback boiler, there is no delicate or expensive rear refractory to maintain.

*60-psi water boiler - consult factory for available sizes.



Standard Equipment

Boiler:

The boilers are a three-pass design constructed and stamped in accordance with ASME Section IV of the ASME Code for 15 psig steam or 30 psig water on any size boiler or 60 psig water on sizes 4FHW63 through 4FHW993. They are the sealed forced draft firing design with skid base and floor insulation. The flue outlet is a top outlet on sizes 4FH63 through 4FH345 and a rear outlet on sizes 4FH450 and larger. Optional outlets are available on all sizes. The boiler comes complete with a gas tight front flue cleanout door, rear observation port on sizes 4FH63 through 4FH345, or rear access door and observation port on sizes 4FH450 and larger and lifting lugs on sizes 4FH127 and larger. Optional access doors and lifting lugs are available for all sizes.

Jacket:

Rectangular type 1-inch fiberglass insulated jacket on sizes 4FH63 through 4FH345, 2-inch fiberglass insulated rectangular jacket on sizes 4FH450 through 4FH675 and 2-inch fiberglass wrap around jacket on sizes 4FH827 and larger.

Steam Trim:

The following trim is shop mounted and wired: MM157 combination pump control and LWCO with alarm contacts and quick opening blowoff valves, probe type manual reset auxiliary LWCO, operating pressuretrol, manual reset high limit pressuretrol and appropriate firing rate control when required.

The following trim is shipped loose for field mounting: 3.5-inch steam pressure gauge (on models 4FHL63 through 4FH675), 6-inch steam pressure gauge (on models 4FH827 and larger), ASME side outlet safety valve(s) and gauge glass set.

Water Trim:

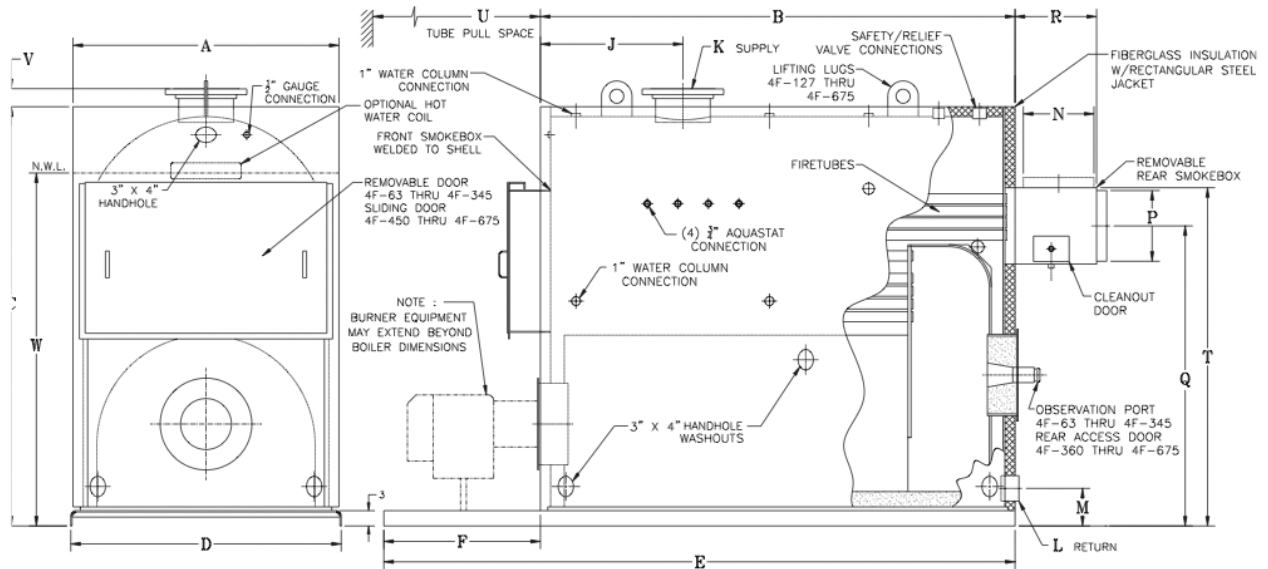
The following trims are shop mounted and wired: probe type LWCO (on 30 psig models 4FHW63 through 4FHW675) or MM63M manual reset LWCO with quick opening blowoff valve (on 30 psig models 4FHW827 and larger) or probe type LWCO (on 60 psi models 4FHW63 through 4FHW675) or MM150M manual reset LWCO with quick opening blowoff valve (on all 60 psi boilers on models 4FHW827 and larger), operating aquastat, manual reset high limit aquastat and appropriate firing rate control when required.

The following trims are shipped loose for field mounting: 3.5-inch theraltimeter (on models 4FHW63 through 4FHW675) or 5-inch thermometer and 6-inch pressure/altitude gauge (on models 4FHW827 and larger) and loose ASME side outlet relief valve(s).

Burner:

As selected for the fuel to be burned, mounted and wired. Refer to burner data sheets for details of burner equipment.

Series 4FH MODELS 63 – 675

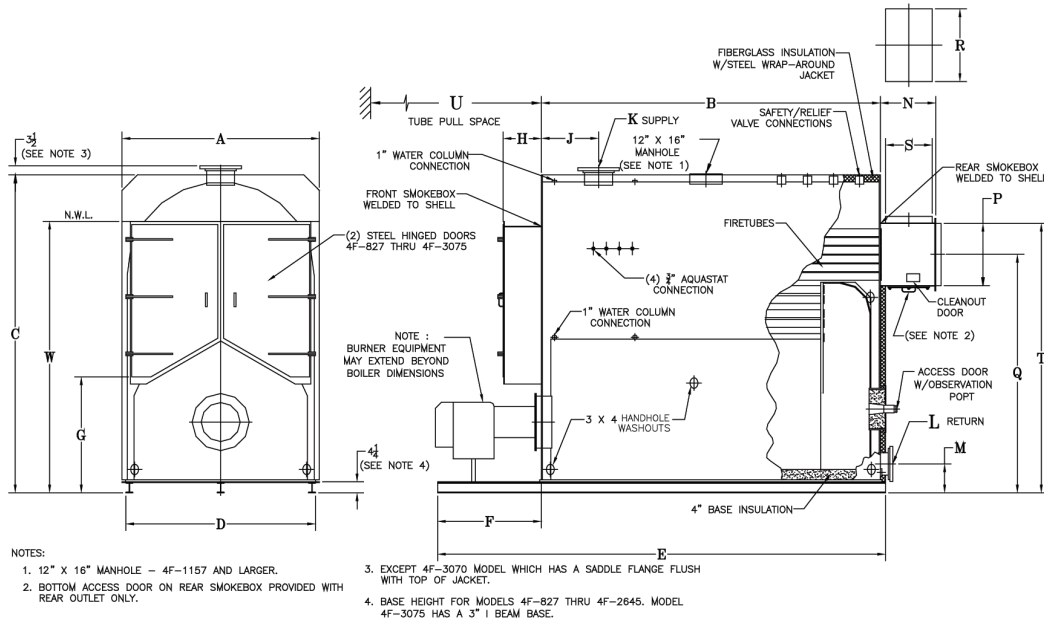


DIMENSIONS (INCHES)

4FH Boiler Models	63	78	92	107	127	154	180	209	240	277	311	345	360	450	563	675
A - Boiler Width	31	31	31	31	36-3/8	36-3/8	36-3/8	36-3/8	45-1/8	45-1/8	45-1/8	45-1/8	52-3/4	52-3/4	56-1/2	56-1/2
B - Boiler Length	32	39	45-1/2	52-1/2	44-1/2	53	61	70	57	65	72-1/2	80	80-7/4	93-1/4	104-3/8	122-1/4
C - Boiler Height	55-1/4	55-1/4	55-1/4	55-1/4	63-5/8	63-5/8	63-5/8	63-5/8	70-5/8	70-5/8	70-5/8	70-5/8	82-7/16	82-7/16	85-3/16	85-3/16
D - Base Width	33-1/4	33-1/4	33-1/4	33-1/4	38-5/8	38-5/8	38-5/8	38-5/8	47-3/8	47-3/8	47-3/8	47-3/8	53-1/8	53-1/8	57	57
E - Base Length	47-1/2	54-1/2	65	72	64	72-1/2	80-1/2	92-1/2	79-1/2	87-1/2	95	102-1/2	107-1/2	124	135-1/8	153
F - Base Extension	15-1/2	15-1/2	19-1/2	19-1/2	19-1/2	19-1/2	19-1/2	22-1/2	22-1/2	22-1/2	22-1/2	26-3/4	30-3/4	30-3/4	30-3/4	30-3/4
G - Front Smoke Box Height	27-5/16	27-5/16	27-5/16	27-5/16	29-7/16	29-7/16	29-7/16	29-7/16	35-1/8	35-1/8	35-1/8	35-1/8	38-1/2	38-1/2	41-9/16	41-9/16
H - Front Smoke Box Depth	5-1/2	5-1/2	5-1/2	5-1/2	6-1/2	6-1/2	6-1/2	6-1/2	7-1/2	7-1/2	7-1/2	7-1/2	6-1/2	6-1/2	7-1/2	7-1/2
J - Supply Location	13	13	13	13	16	16	16	16	19	19	19	19	28	28	28	28
*K - Supply Size	4	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10
*L - Return Size - Steam	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
M - Return Location	6-1/2	6-1/2	6-1/2	6-1/2	7	7	7	7	7	7	7	7	7-3/8	7-3/8	7-3/8	7-3/8
N - Top Vent Collar Diameter	7	7	7	7	10	10	10	10	12	12	12	12	—	—	—	—
P - Rear Vent Collar Diameter	—	—	—	—	—	—	—	—	—	—	—	—	14	14	18	18
Q - Rear Vent Collar Height	38	38	38	38	46-1/2	46-1/2	46-1/2	46-1/2	52	52	52	52	58-13/16	58-13/16	59-5/8	59-5/8
R - Smoke Box Depth	9	9	9	9	12	12	12	12	14	14	14	14	16	16	20	20
T - Top Vent Collar Height	42-1/2	42-1/2	42-1/2	42-1/2	52-1/2	52-1/2	52-1/2	52-1/2	59-1/4	59-1/4	59-1/4	59-1/4	66-5/16	66-5/16	69-1/8	69-1/8
U - Tube Pull Space	32	39	45-1/2	52-1/2	44-1/2	53	61	70	57	65	72-1/2	80	81-1/2	94	105	123
V - Supply Fitting Height	1-1/2	1-1/2	1-1/2	1-1/2	3-1/4	3-1/4	3-1/4	3-1/4	3-1/4	3-1/4	3-1/4	3-1/4	3-3/8	3-3/8	3-7/16	3-7/16
W - Normal Water Line Height	43-3/4	43-3/4	43-3/4	43-3/4	51-1/2	51-1/2	51-1/2	51-1/2	58	58	58	58	69-3/16	69-3/16	72	72

*3" and 4" are IPS female thread, 6" and larger are flanged. 150# bolt pattern. Specifications and dimensions data subject to change without notice.

Series 4FH MODELS 827 – 3075



DIMENSIONS (INCHES)

4FH Boiler Models	827	993	1157	1323	1654	1985	2315	2645	3075
A - Boiler Width	64	64	70	70	76	82	82	82	96
B - Boiler Length	106-1/4	129	116-1/2	136	130-1/2	128	148	163	163
C - Boiler Height	95-3/16	95-3/16	106-3/4	106-3/4	122-3/8	142-3/8	142-3/8	142-3/8	151-1/2
D - Base Width	61	61	67	67	73	79	79	79	93
E - Base Length	138-1/4	161	158-1/2	178	172-1/2	170	190	205	213
F - Base Extension	30	30	40	40	40	40	40	40	48
G - Front Smoke Box Height	29-1/8	29-1/8	33-11/16	33-11/16	41-7/8	55-1/8	55-1/8	55-1/8	69-3/4
H - Front Smoke Box Depth	12-3/4	12-3/4	13-1/2	13-1/2	14-1/2	15-1/2	15-1/2	15-1/2	16-1/2
J - Supply Location	22	22	22	22	22	22	22	22	68
*K - Supply Size	8	8	8	8	10	12	12	12	12
*L - Return Size - Steam	4	4	4	6	6	6	6	6	6
Return Size - Water	6	6	6	8	8	8	8	8	8
M - Return Location	10-1/4	10-1/4	11-1/8	11-1/8	11-1/8	11-1/2	11-1/2	11-1/2	10-1/2
N - Rear Smoke Box Depth	19-3/8	19-3/8	19-3/8	19-3/8	21-3/8	23-3/8	23-3/8	23-3/8	23-3/8
P - Rear Vent Collar Diameter	20	20	22	22	24	28	28	28	30
Q - Rear Vent Collar Height	66-3/16	66-3/16	76-13/16	76-13/16	90-11/16	106-5/16	106-5/16	106-5/16	110-1/2
R - Top Vent Collar Width	22	22	26	26	28	34	34	34	44
S - Top Vent Collar Depth	16	16	16	16	18	20	20	20	20
T - Top Vent Collar Height	76-1/8	76-1/8	87-3/4	87-3/4	102-5/8	120-1/4	120-1/4	120-1/4	123-15/16
U - Tube Pull Space	108	131	118-1/2	138	132-1/2	130	150	165	165
W - Normal Water Line Height	78-1/4	78-1/4	89-3/4	89-3/4	104-1/2	118-1/2	118-1/2	118-1/2	126

*4" are IPS female thread, 6" and larger are flanged. 150# bolt pattern. Specifications and dimensions data subject to change without notice.