

KEWANEE TYPE C STEEL BOILER

PLAINTIFF'S
EXHIBIT
AS! 36

FOR OIL, GAS, STOKER or HAND FIRED COAL

Placed on the market in 1928 Type "C" is admittedly the largest selling boiler for heating bigger buildings.

Compact in design it meets the demands for a dependable heating boiler adapted to restricted space . . . *yet maintains full efficiency* whether "loafing" or pushed above rated capacity.

A quick steamer of sturdy steel construction; big, high firebox; longer gas travel; large water content in rapid circulation; extra steam space . . . PLUS

Kewanee Corrugated Crown Sheet

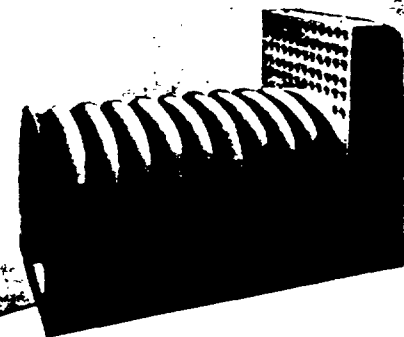
This exclusive Kewanee feature has definite advantages over conventional type construction.

Corrugations Add Strength, multiplying the stamina of a plain steel arch many times. Formed one at a time, the *same thickness of metal and full strength of plate* is maintained throughout the crown sheet.

More Effective Heating Surface facing the hottest part of the fire is provided by the corrugations.

Right Side Up—Self-Cleaning: No pockets for sediment to lodge or scale to form. The expanding and contracting action of the Crown Sheet tends to make it self-cleaning.

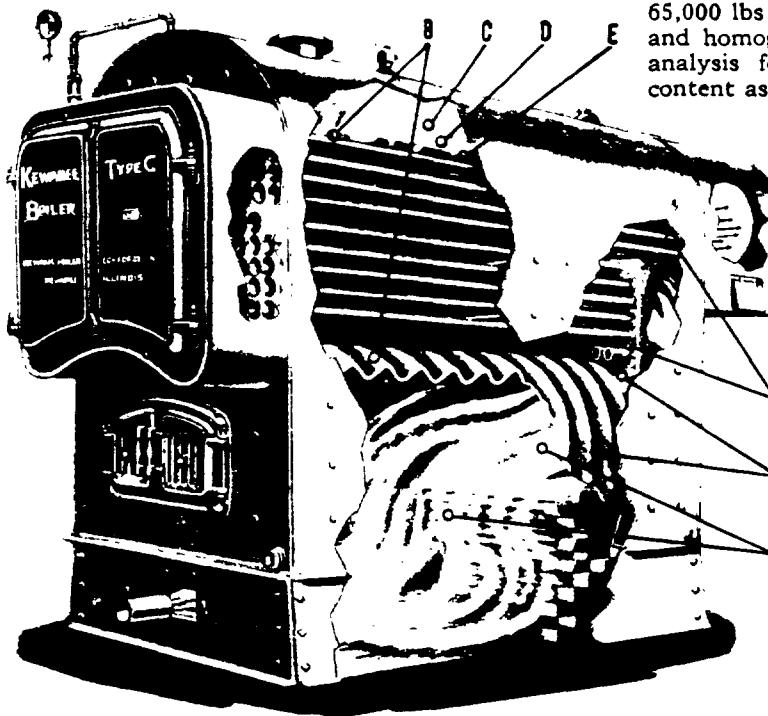
Hi-Firebox
Electric-Weld



Rear Combustion Chamber Simplified shape means fewer parts and shorter seams . . . the additional height assures more perfect combustion.

Characteristics

Design: Cut-away section shows the most effective heating surfaces directly face the hottest fire zones. Material: Flange steel plate with tensile strength of 53,000 to 65,000 lbs per sq. in. . . . tested for physical strength and homogeneous quality with high ductility, after analysis for chemical composition and low carbon content as required for sound fusion arc welds.



Construction: Exceeds every requirement of American Society of Mechanical Engineers . . . the highest authority.

A. Ample water volume in active circulation over all the hottest parts sweeps bubbles from the heating surfaces as fast as formed.

B. Circulation, though rapid, is so orderly that the water level remains steady even under fluctuating loads. No slugs of water are carried into steam mains.

C. Oversize steam space provides room for a large reserve supply of dry steam.

D. Steam Disengaging area at the water's surface is unbroken and extensive enough to prevent priming.

E. All flues, including the top rows, are under the water line . . . in effective use making steam.

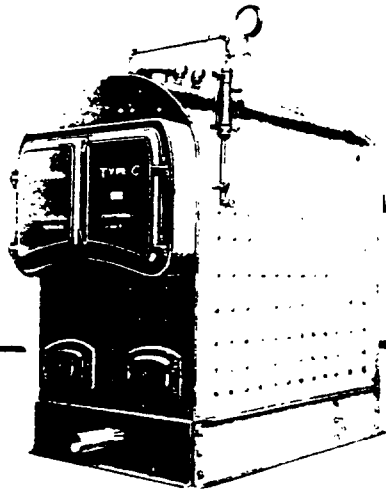
F. The Flues, grouped in Banks, permit free circulation of the water all around the wetted surface. This helps prevent sediment from lodging on the tubes. The double pass of gases through the entire length of tubes extracts all usable heat.

G. Extra width and height in Furnace and rear Combustion chamber, provide plenty of space and time for the hot gases to mix with air . . . an essential for complete burning of fuel.

KEWANEE

TYPE C STEEL BOILER

Setting Plans
Equipment and Trims



Hi-Firebox 7L73-7L90 for Oil, Gas or Stoker

Equipment all boilers—Steel base assembled with four cast iron corner posts, heavy steel flanged panels; insulated front double fluedoor with frame; firedoors with liner and frame(s); rear smokebox soot cleanout doors; washout plugs. Flue cleaner with handle.

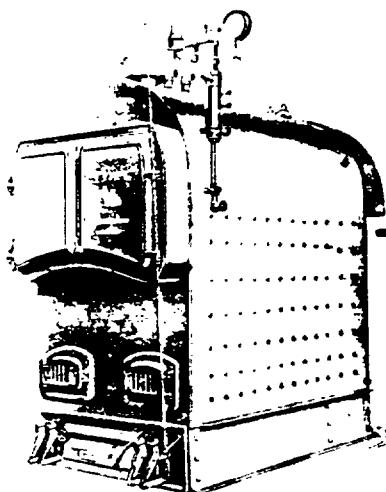
Trimnings for steam only—Safety valve(s); steam gauge with syphon and cock; water column with gauge glass and cocks.

Oil, Gas or Stoker—Front and rear base panels have 8' x 11' opening and cover plate.

Hand-Fired Coal—Base comes equipped also with heavy rocking or dumping grates and cast iron ash pit front fitted with shaker arms and draft pouch; rear steel panel has 8' x 11' cleanout opening and cover plate except 36" boilers; refractory bridgewall, except 27L73-74-75.

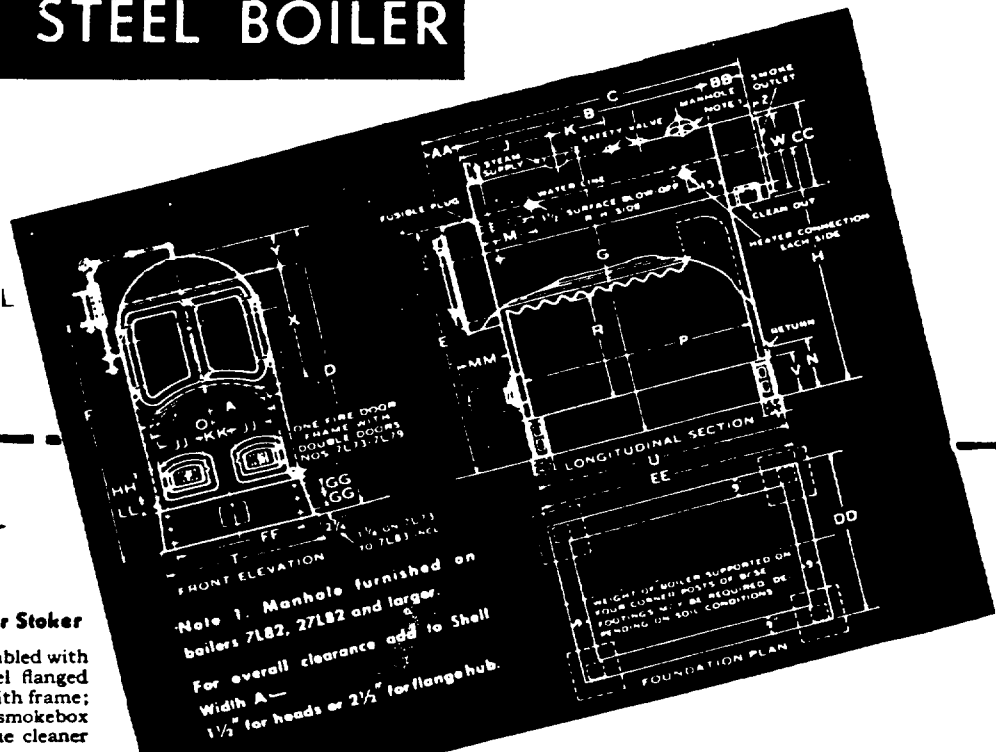
Steam Trim, Hand-Fired additional — Draft regulator complete.

Firing Tools—Hoe, poker, slice bar.



Hi-Firebox 27L73-27L90 with Grates for Hand-Fired Coal

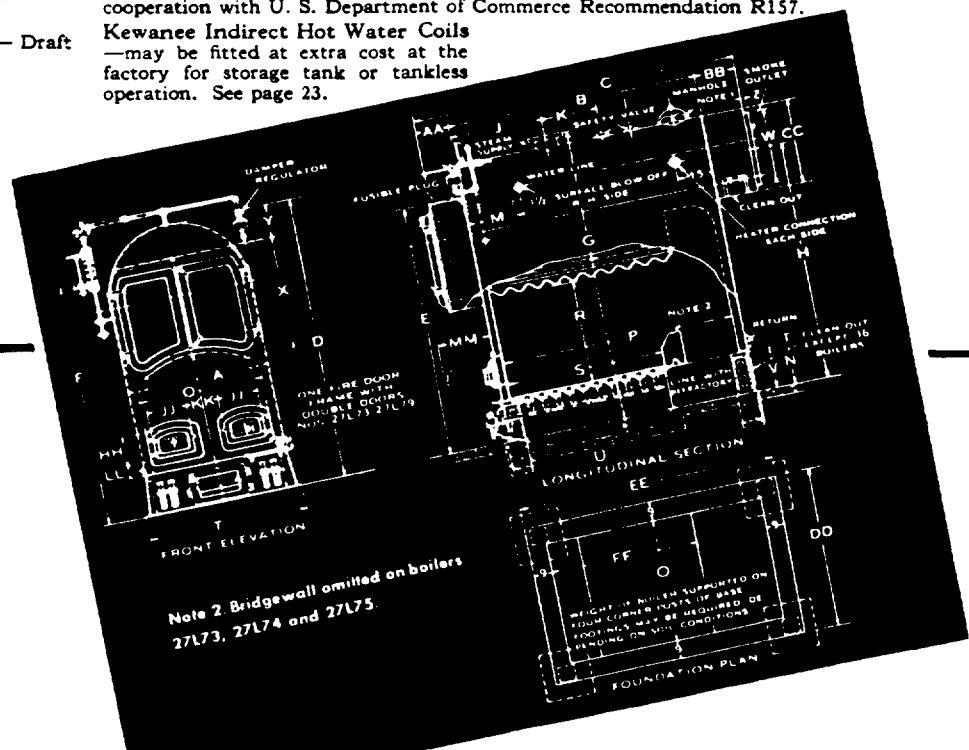
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The Kewanee Hi-Firebox Type "C" is built exactly right for oil, gas or stokers. The long water legs in 7L70 and 27L70 series provide essential height in the firebox to comply with SBI code furnace height requirements for mechanical firing, and for changing over hand-fired coal series to oil, gas or stoker using mechanical-fired ratings.

Type "C" welded Hi-Firebox Boilers have three-inch tubes. All conform to ASME boiler construction code for 15 lbs steam and 30 lbs water, and for rating with the Industry Standard Practice approved by the Steel Boiler Institute, Inc. in cooperation with U. S. Department of Commerce Recommendation R157.

Kewanee Indirect Hot Water Coils—may be fitted at extra cost at the factory for storage tank or tankless operation. See page 23.



HI-FIREBOX 7L73 to 7L90 TYPE "C" for Oil, Gas or Stoker

SPECIFICATIONS

applying ONLY to MECHANICALLY FIRED BOILERS:

Boiler Number	7L73	7L74	7L75	7L76	7L77	7L78	7L79	7L80	7L81	7L82	7L83	7L84	7L85	7L86	7L87	7L88	7L89	7L90
SBI Rating—Steam Radiation	sq ft 2680	3160	3650	4250	4860	5470	6080	6720	7390	8080	8790	9510	10240	11000	11820	12600	13400	14200
Water Radiation	sq ft 4280	5050	5840	6800	7770	8750	9720	10680	11660	12660	13680	14720	15780	16860	17960	19080	20220	21380
Btu per Hour	1000's 643	758	876	1020	1166	1313	1459	1606	1750	1900	2049	2199	2350	2500	2650	2800	2950	3100
SBI Net Rating—Steam	sq ft 2200	2600	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500
Water	sq ft 3520	4160	4800	5600	6400	7200	8000	8800	9600	10400	11200	12000	12800	13600	14400	15200	16000	16800
Btu per Hour	1000's 528	624	720	840	960	1080	1200	1320	1440	1560	1680	1800	1920	2040	2160	2280	2400	2520
Heating Surface (SBI min.)	sq ft 158	186	215	250	286	322	358	429	500	568	636	704	772	840	908	976	1044	1112
Furnace Volume (SBI min.)	cu ft 19.2	22.6	26.1	30.4	34.8	39.1	43.5	52.1	60.8	69.6	78.4	87.2	96.0	104.8	113.6	122.4	131.2	140.0
Furnace Height (SBI min.)	in. 28	29 1/2	30 1/2	31 1/2	32 1/2	33 1/2	34 1/2	35 1/2	36 1/2	37 1/2	38 1/2	39 1/2	40 1/2	41 1/2	42 1/2	43 1/2	44 1/2	45 1/2
Firebox Volume above Mud Ring	cu ft 25.5	28.2	31.0	35.9	40.8	45.7	50.6	55.5	60.4	65.3	70.2	75.1	80.0	84.9	89.8	94.7	99.6	104.5
FF—Bolt Centers in Front Plate	in. 31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2
GC—Bolt Centers in Front Plate	in. 4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
Shipping Weight	lbs 3100	3500	3900	4400	4900	5400	5900	6400	6900	7400	7900	8400	8900	9400	9900	10400	10900	11400

DATA and MEASUREMENTS

applying to BOTH MECHANICAL and HAND FIRED BOILERS

Boiler Number	For Oil, Gas, Stoker	For Hand-Fired Coal	27L73	27L74	27L75	27L76	27L77	27L78	27L79	27L80	27L81	27L82	27L83	27L84	27L85	27L86	27L87	27L88	27L89	27L90
A—Boiler Width	in.		36	36	36	36	42	42	42	48	48	48	54	54	54	60	60	60	66	66
B—Boiler Length	ft		4-2	4-8	5-2	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10
C—Boiler Length Overall	ft		5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2	5-10 1/2
D—Boiler Height Overall	ft		8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
E—Water Line Height	in.		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
F—Water Column Height	in.		71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
G—Steam Supply Height, Flange	in.		71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
H—Smoke Outlet Height above Floor	in.		70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2	70 1/2
I—Steam Supply Location	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
J—First Safety Valve Location	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
K—Surface Blow-Off Location	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
L—Return Height	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
O—Firebox Width	in.		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
P—Firebox Length	in.		40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2
R—Firebox Height	in.		40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2
T—Base Width	in.		40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2
U—Base Length	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
V—Base Height	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
W—Smoke Outlet Diameter	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
X—Front Smokebox Height	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Y—Front Smokebox Top to Boiler Top	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
AA—Front Smokebox Depth	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
BB—Rear Smokebox Depth	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
CC—Rear Smokebox Height	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
DD—Foundation Width	in.		40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2	40 1/2
EE—Foundation Length	in.		50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2	50 1/2
HH—Firedoor Height	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
II—Firedoor Width	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
KK—Space Between Firedoors	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
LL—Height Doors from Bottom Boiler	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
MM—Opened Firedoor to Boiler	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Branching Diameter—One Boiler	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Diameter	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Height, Mechanical	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Height, Hand-Fired	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Branching Diameter—Two Boilers	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Diameter	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Height, Mechanical	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Stack Height, Hand-Fired	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Safety Valve Capacity—Lb Steam			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Steam Supply Size	in.		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Return Size	in.		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Water Header Diameter	in.		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Outside Stack	in.		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

HI-FIREBOX 27L73 to 27L90 TYPE "C" with Grates for Hand Firing

SPECIFICATIONS

applying ONLY to Boilers for HAND FIRED COAL

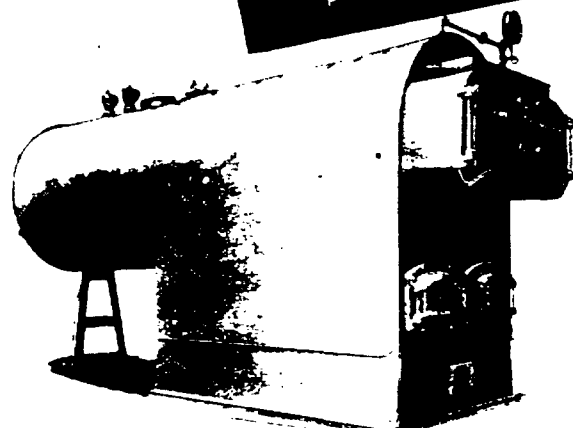
Boiler Number		27L73	27L74	27L75	27L76	27L77	27L78	27L79	27L80	27L81	27L82	27L83	27L84	27L85	27L86	27L87	27L88	27L89	27L90
SBI Rating—Steam Radiation	sq ft	2200	2600	3000	3500	4000	4500	5000	6000	7000	8500	10000	12500	15000	17500	20000	25000	30000	35000
Water Radiation	sq ft	3520	4160	4800	5600	6400	7200	8000	9600	11200	13600	16000	20000	24000	28000	32000	40000	48000	56000
Btu per Hour	1000's	528	624	720	840	960	1080	1200	1440	1680	2040	2400	3000	3600	4200	4800	6000	7200	8400
SBI Net Rating—Steam	sq ft	1830	2170	2500	2920	3330	3750	4170	5000	5830	7080	8330	10420	12500	14580	16670	20830	25000	29170
Water	sq ft	2930	3470	4000	4670	5330	6000	6670	8000	9330	11330	13330	16700	20000	23330	26670	33330	40000	46670
Btu per Hour	1000's	439	521	600	700	800	900	1000	1200	1400	1700	2000	2500	3000	3500	4000	5000	6000	7000
Heating Surface (SBI min.)	sq ft	158	186	215	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
Grate Area (SBI min.)	sq ft	8.9	9.7	10.5	11.4	12.2	13.4	14.5	16.4	18.1	20.5	22.5	25.6	28.4	30.9	33.2	37.4	41.2	44.7
S—Grate Length	in.	43	49	55	55	50	56	62	68	62	68	63	74	74	74	80	80	80	86
FF—Length of Ash Pit	in.	35 1/2	41 1/2	45	51	43	51	57	62	63	63	69	70	70	70	76 1/2	76 1/2	76 1/2	82 1/2
Shipping Weight	lbs	3600	4000	4500	5100	5600	6200	6700	7800	8800	10200	11500	13600	15700	17600	19500	23200	26700	30200

KEWANEE

"5000" Series BOILER

Welded Firebox Updraft type
15 sizes 3500 to 42,500 Sq Ft
for Coal, Oil or Gas

"5000" Series features increased heating surface, steam space, disengaging area, furnace volume and water content, yet takes up less floor space due to two-pass tubes.



KEWANEE ALL-WELD "5000" SERIES

OIL, GAS or STOKER Boilers 5176 to 5190—front and rear base panels have 8' x 11' opening and cover plate.

Hand-Fired COAL Boilers 5076 to 5090—Base assembly also includes heavy rocking or dumping grates shipped assembled (on 5076-5081) in base having front panel fitted with shaker arms and draft pouch.

Bridgwall omitted on 5076 to 5081.

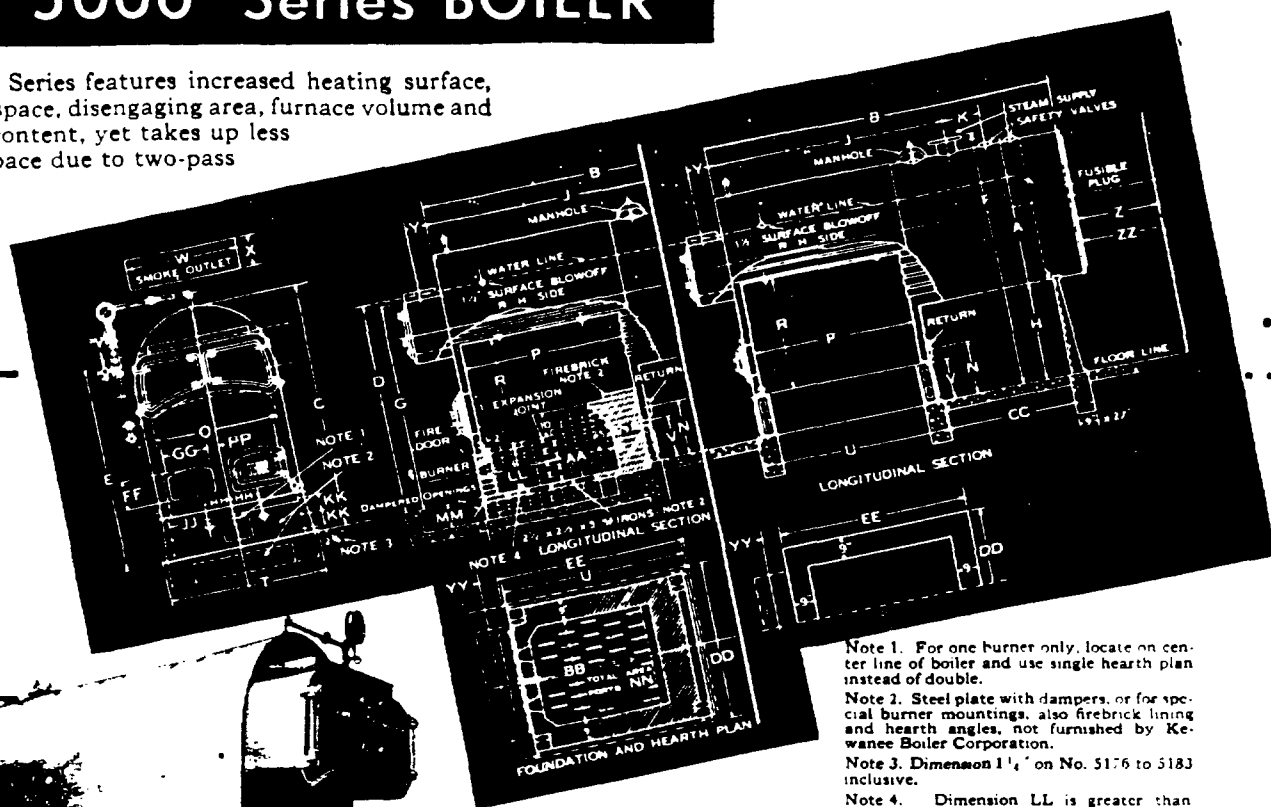
Steam Trim, Hand-Fired additional—Draft regulator complete.

Firing Tools—Hoe, poker and slice bar.

Footings may be required under base corner posts depending on soil conditions.

Equipment—Steel base shipped assembled with four cast iron corner posts; backstand, except sizes - 76 and 77; fire and flue doors with frames; cleanout plugs, manhole on 54" boilers and larger. Flue cleaner with handle.

Trimings for steam only—Steam gauge with syphon and cock; water column with gauge glass and cocks; safety valve(s). Steam Supply and Safety Valve located nearer front on sizes -76 to -84 and on -86.



Note 1. For one burner only, locate on center line of boiler and use single hearth plan instead of double.

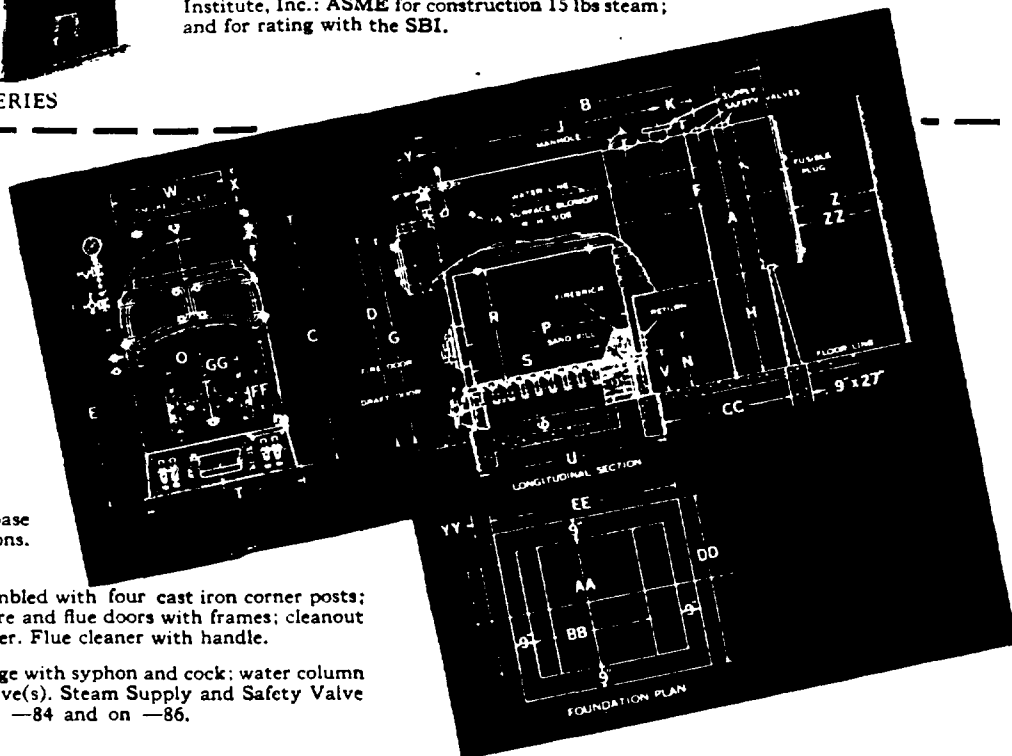
Note 2. Steel plate with dampers, or for special burner mountings, also firebrick lining and hearth angles, not furnished by Kewanee Boiler Corporation.

Note 3. Dimension 1' on No. 5176 to 5183 inclusive.

Note 4. Dimension LL is greater than height of base for boiler 5190.

Note 5. Represents distance below bottom of water leg that hearth must be set for SBI minimum furnace volume and height on stoker fired boilers 5185-5190. May be provided in base V, or if higher base is used raise water line D same amount, also heights C-E-G-F-N-H. Or extended water leg may be ordered.

This design conforms to boiler Codes of American Society of Mechanical Engineers and Steel Boiler Institute, Inc.: ASME for construction 15 lbs steam; and for rating with the SBI.



"5000" SERIES WELDED FIREBOX for Oil, Gas or Stoker

SPECIFICATIONS

applying ONLY to MECHANICALLY FIRED BOILERS

Boiler Number	5176	5177	5178	5179	5180	5181	5182	5183	5184	5185	5186	5187	5188	5189	5190
SBI Rating—Steam Radiation	sq ft 4250	4860	5470	6080	6790	7500	8210	8920	9630	10340	11050	11760	12470	13180	13890
Water Radiation	sq ft 6800	7770	8750	9720	10690	11660	12630	13600	14570	15540	16510	17480	18450	19420	20390
Btu per Hour	1000's 1020	1166	1313	1459	1605	1751	1897	2043	2189	2335	2481	2627	2773	2919	3065
SBI Net Rating—Steam	sq ft 3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500
Water	sq ft 5600	6400	7200	8000	8800	9600	10400	11200	12000	12800	13600	14400	15200	16000	16800
Btu per Hour	1000's 840	960	1080	1200	1320	1440	1560	1680	1800	1920	2040	2160	2280	2400	2520
Heating Surface (SBI min.)	sq ft 250	286	322	358	394	430	466	502	538	574	610	646	682	718	754
Furnace Volume (SBI min.)	cu ft 30	34	38	42	46	50	54	58	62	66	70	74	78	82	86
Furnace Height (SBI min.)	in 30	30 1/2	31 1/4	31 1/2	32	32 1/2	33	33 1/2	34	34 1/2	35	35 1/2	36	36 1/2	37
Net Furnace Volume, Oil-Gas	cu ft 49	56	63	70	77	84	91	98	105	112	119	126	133	140	147
Firebox Volume Above Mud Ring	cu ft 44	51	58	65	72	79	86	93	100	107	114	121	128	135	142
Added Furnace Height for Stoker (SBI min.)	in 11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Shipping Weight	lbs 4500	5000	5400	5800	6200	6600	7000	7400	7800	8200	8600	9000	9400	9800	10200

MEASUREMENTS

applying ONLY to OIL-GAS FIRED BOILERS

AA—Furnace Length	in 41	41	42	43	44	45	46	47	48	49	50	51	52	53	54
BB—Furnace Width	in 30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
HH—Burner Location	in 37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4	37 1/4
JJ—Bolt Centers in Plate	in 48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2
KK—Bolt Centers in Plate	in 14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
LL—Hearth to Bottom of Boiler	in 9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
MM—Pit Depth	in 6 1/2	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	13 1/4	14 1/4	15 1/4	16 1/4	17 1/4	18 1/4	19 1/4	20 1/4
NN—Total Area Ports or Openings	sq in 340	340	360	380	400	420	440	460	480	500	520	540	560	580	600
Size of Dampered Opening	in 6x11	6x12	6x14	6x16	7x16	7x18	7x22	7x24	7x26	7x28	7x30	7x32	7x34	7x36	7x38
Number of Fire Brick	340	340	360	380	400	420	440	460	480	500	520	540	560	580	600

DATA and DIMENSIONS

applying to BOTH MECHANICAL and HAND FIRED BOILERS

Boiler Number	5176	5177	5178	5179	5180	5181	5182	5183	5184	5185	5186	5187	5188	5189	5190
For Oil, Gas or Stoker	5076	5077	5078	5079	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089	5090
For Hand-Fired Coal	5076	5077	5078	5079	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089	5090
A—Boiler Diameter	in 42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
B—Boiler Length	ft 7-3	8-0	8-11	9-0	9-9	10-11	11-1	12-9	13-2 1/4	14-5 1/4	15-8 1/4	16-11 1/4	17-5 1/4	18-8 1/4	19-1 1/4
C—Boiler Height Overall	in 81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
D—Water Line	in 70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
E—Water Column Height	in 68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
F—Steam Supply Height, Flanged	in 85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
G—Breaching Connection Height	in 71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
H—Rear Stand Height	in 38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
I—Steam Supply Location	ft 1-4	1-4	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
J—Safety Valve Location	ft 1-5	1-5	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6
K—Return Height	in 18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
L—Firebox Width	in 36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2	36 1/2
M—Firebox Length	in 50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
N—Firebox Height	in 42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
O—Base Width	in 47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4
P—Base Length	in 60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q—Base Height	in 14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
R—Breaching Connection Length	in 32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
S—Breaching Connection Width	in 9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
T—Breaching Connection Location	in 6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4	6 1/4
YY—Breach, Conn. C.L. to Foundation	in 4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4
Z—Rear Door Clearance	in 4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4
ZZ—Space to Draw Long Tubes	in 5-6	6-7	7-2	8-1	9-0	10-0	10-0	10-0	10-0	10-0	10-0	10-0	10-0	10-0	10-0
CC—Rear Stand Location	in 30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
DD—Foundation Width	in 54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
EE—Foundation Length	in 61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
FF—GG—Fire Door Opening	in 13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4	13 1/4 x 27 1/4
Fire Door Style	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door	Single Frame & Double Door
PP—Centertine Boiler to Fire Door Opening	in 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 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4
Breaching Diameter, One Boiler	in 19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Stack Diameter	in 17 1/2	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Stack Height, Mechanical	ft 40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Stack Height, Hand-Fired	ft 50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Breaching Diameter, Two Boilers	in 23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Stack Diameter	in 21 1/2	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Stack Height, Mechanical	ft 50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Stack Height, Hand-Fired	ft 60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Safety Valve Capacity, Lb. Steam per Hour	1250	1430	1610	1790	1970	2150	2330	2510	2690	2870	3050	3230	3410	3590	3770
Steam Supply Size	in 6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Return Size	in 4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
*Outside Surface to Cover	sq ft 188	188	188	188	188	188	188	188	188	188	188	188	188	188	188

"5000" SERIES WELDED FIREBOX with Grates for Hand-Firing

SPECIFICATIONS

applying ONLY to Boilers for HAND FIRED COAL

Boiler Number	5076	5077	5078	5079	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089	5090
SBI Rating—Steam Radiation	sq ft 3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500
Water Radiation	sq ft 5600	6400	7200	8000	8800	9600	10400	11200	12000	12800	13600	14400	15200	16000	16800
Btu per Hour	1000's 840	960	1080	1200	1320	1440	1560	1680	1800	1920	2040	2160	2280	2400	2520
SBI Net Rating—Steam	sq ft 2920	3330	3750	4170	4590	5010	5430	5850	6270	6690	7110	7530	7950	8370	8790
Water	sq ft 4670	5330	6000	6670	7340	8010	8680	9350	10020	10690	11360	12030	12700	13370	14040
Btu per Hour	1000's 700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
Heating Surface (SBI min.)	sq ft 250	286	322	358	394	430	466	502	538	574	610	646	682	718	754
Grate Area (SBI min.)	sq ft 11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Shipping Weight	lbs 5100	5600	6100	6600	7100	7600	8100	8600	9100	9600	10100	10600	11100	11600	12100

MEASUREMENTS

applying ONLY to HAND FIRED BOILERS

S—Grate Length	in.	50	50	54	58	62	66	70	74	78	82	86	90	94	98
AA—Ash Pit Width	in.	34	34	36	38	40	42	44	46	48	50	52	54	56	58
BB—Ash Pit Length	in.	43	43	44	45	46	47	48	49	50	51	52	53	54	55
Number of Common Brick							175	175	185	195	205	215	225	240	240
Number of Fire Brick							35	50	40	40	40	40	85	110	110

KEWANEE

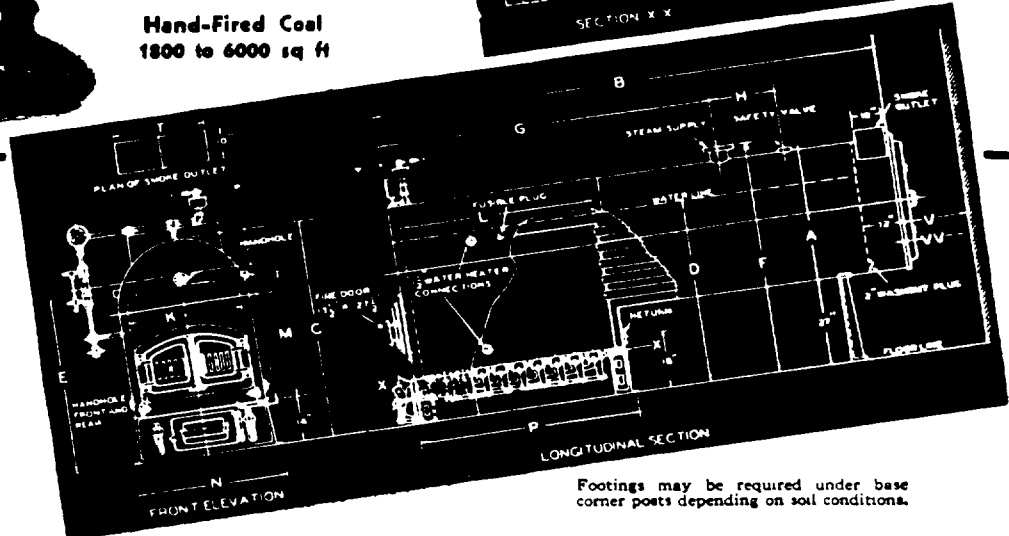
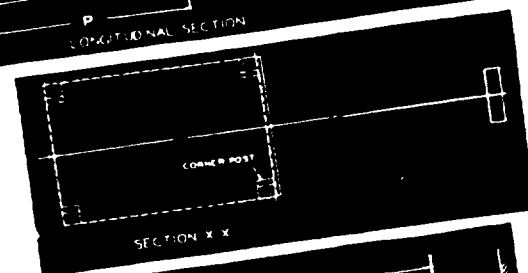
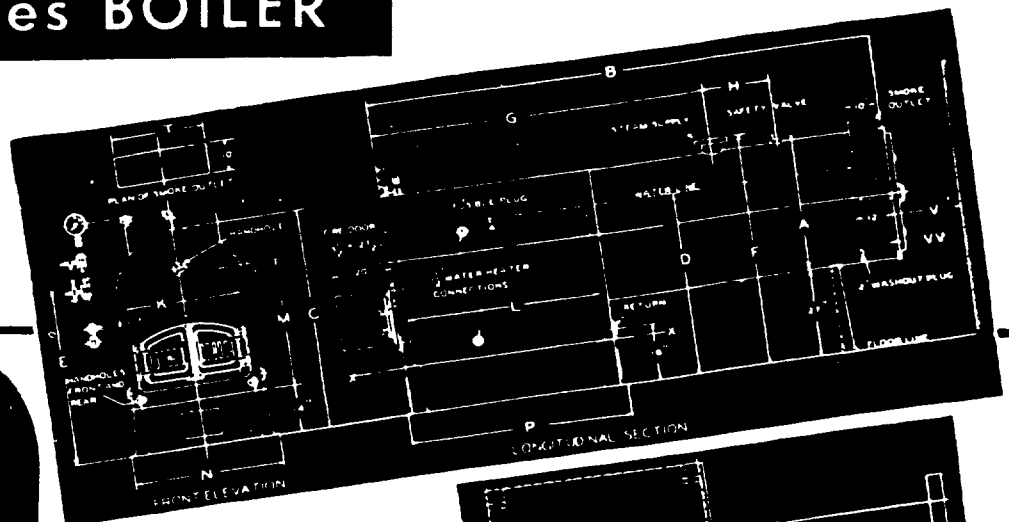
"P" Series BOILER

Welded Firebox Updraft Boiler
Single-Pass 3" Tubes
9 Ratings 1800 to 7290 Sq Ft

Kewanee "P" Series conforms to ASME Boiler Code for construction, 15 lbs steam, 30 lbs water, and with SBI rating code. All seams are welded. Smoke outlet is at rear. Portable P-18 to P-60 boilers are for mechanical or hand firing.



Oil, Gas or
Stoker Boilers
2190 to 7290 sq ft
Hand-Fired Coal
1800 to 6000 sq ft



Equipment—Steel base shipped assembled on four cast iron corner posts. front and rear panel have $8\frac{1}{2}'' \times 11\frac{1}{2}''$ opening and cover plate; backstand: single rear flue door and front fire door(s) with frame; cleanout plug and handholes. Flue cleaner with handle.

Trimnings for Steam Only—Steam gauge with syphon and cock; water column with gauge glass and cocks; safety valve.

For Hand Firing—Base comes equipped also with heavy rocking or dumping grates and front panel is fitted with shaker arms and draft pouch.

Steam Trim Hand-Fired additional—Draft regulator complete.

Firing Tools—Hoe, poker, slice bar.

Footings may be required under base corner posts depending on soil conditions.

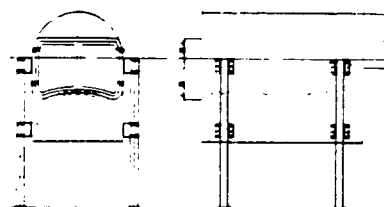
STRUCTURAL STEEL SUSPENSION and BOILER SUPPORT BRACKETS

For extra furnace height beyond the code standard as found within the boiler, our Kewanee structural steel suspension provides a solid setting independent of furnace brickwork. The gusset bearing plate brackets provide support for setting the boiler on a separate masonry base.

SPECIFICATIONS. Structural Steel Suspension for Setting Independent of Furnace Brickwork on Firebox Boilers Lo and Hi Pressures, and Type "C" Mechanically-Fired.

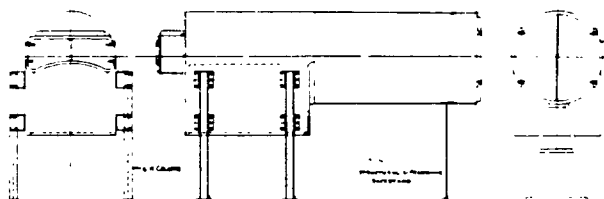
Suspension equipment shall consist of: four steel H-columns with bearing plates, one pair each side of boiler and eight pairs of steel forged brackets fastened to boiler shell by steel studs to safely carry the weight of boiler and to provide lateral stability, according to ASME boiler construction code. Each H-column shall be securely bolted to two pair of the boiler brackets. On Firebox Boilers the barrel shall be supported by an A-frame Backstand of steel members and bracing with top saddle and bottom bearing plates, welded into one unit.

All column and backstand bearing plates have bolt holes for anchoring to foundation. (anchor bolts not furnished by KBC).



Steel Suspension

for Type "C" and
Lo and Hi Pressure
Firebox Boilers



"P" SERIES WELDED SINGLE-PASS FIREBOX

SPECIFICATIONS

applying ONLY to OIL, GAS or STOKER

Boiler Number		P-18	P-22	P-26	P-30	P-35	P-40	P-45	P-50	P-60
SBI Rating—Steam Radiation	sq ft	2190	2680	3160	3650	4250	4860	5470	6080	7270
Water Radiation	sq ft	3500	4280	5050	5840	6800	7770	8750	9720	11660
Btu per Hour	1000's	526	643	758	876	1020	1166	1313	1459	1750
SBI Net Rating—Steam	sq ft	1800	2200	2600	3000	3500	4000	4500	5000	6000
Water	sq ft	2880	3520	4160	4800	5600	6400	7200	8000	9600
Btu per Hour	1000's	432	528	624	720	840	960	1080	1200	1440
Heating Surface (SBI min.)	sq ft	129	158	186	215	250	286	322	358	429
Furnace Volume (SBI min.)	cu ft	15.7	19.2	22.6	26.1	30.4	34.8	39.1	43.5	52.1
Furnace Height (SBI min.)	in.	26	28	29 1/4	29 1/2	30	30 1/2	31 1/2	32 1/4	32 1/2
Firebox Volume above Mud Ring	cu ft	24.0	27.8	31.6	35.4	40.0	44.2	48.3	52.4	57.5
Shipping Weight	lbs	2800	3070	3330	3650	4000	4390	4800	5080	5770

MEASUREMENTS

for BOTH MECHANICAL and HAND-FIRED BOILERS

Boiler Number (for Hand-Firing or Automatic)		P-18	P-22	P-26	P-30	P-35	P-40	P-45	P-50	P-60
A—Boiler Diameter	in.	36	36	36	36	36	42	42	42	42
B—Boiler Length	ft	7-7	9-0	10-4	11-4	12-11	11-0	12-4	13-7	15-8
C—Boiler Head Height Overall	in.	63	63	63	63	63	69	69	69	69
D—Water Line	in.	54	54	54	54	54	58	58	58	58
E—Water Column Height	in.	52	52	52	52	52	56	56	56	56
F—Steam Supply Height, Flanged	in.	67 1/4	67 1/4	67 1/4	67 1/4	67 1/4	73 1/4	73 1/4	73 1/4	74
G—Steam Supply Location	ft	5-2	5-10	7-0	7-4	8-0	7-4	8-0	9-0	10-0
H—Safety Valve Location	in.	12	12	12	16	18	12	16	21	16
K—Firebox Width	in.	31	31	31	31	31	37	37	37	37
L—Firebox Length	in.	38	44	50	50	56	50	56	62	68
M—Firebox Height	in.	37	37	37	37	37	41	41	41	41
N—Base Width	in.	41	41	41	41	41	47	47	47	47
P—Base Length	in.	47	53	59	59	65	59	65	71	77
T—Breaching Connection Length	in.	24	24	24	24	24	30	30	30	30
V—Rear Single Door Clearance, min.	in.	36	36	36	36	36	42	42	42	42
VV—Rear Space to Draw Tubes	ft	2-5	3-4	4-2	5-2	6-3	4-10	5-8	6-5	8-0
Breaching Diameter—One Boiler	in.	16	17	18	18	19	20	21	22	23
Stack Diameter	in.	14	15	16	16	17	18	19	20	21
Stack Height, Mechanical	ft	30	30	30	35	35	35	35	40	40
Stack Height, Hand-Fired	ft	35	35	35	40	40	40	40	45	45
Breaching Diameter—Two Boilers	in.	22	23	24	24	25	26	27	28	30
Stack Diameter	in.	20	21	22	22	23	24	25	26	28
Stack Height, Mechanical	ft	35	35	35	40	40	40	40	45	45
Stack Height, Hand-Fired	ft	40	40	40	45	45	45	45	50	50
Safety Valve Capacity	Lb. Steam per Hour	645	790	930	1075	1250	1430	1610	1790	2145
Steam Supply Size	in.	6	6	6	6	6	6	6	6	8
Return Size	in.	3	3	3	4	4	4	4	4	4
*Outside Surface to Cover	sq ft	88	95	106	116	132	130	144	158	182

*Front Head NOT included.

*Threaded outlet height 3" less

SPECIFICATIONS

applying ONLY to BOILERS with Grates for HAND-FIRING

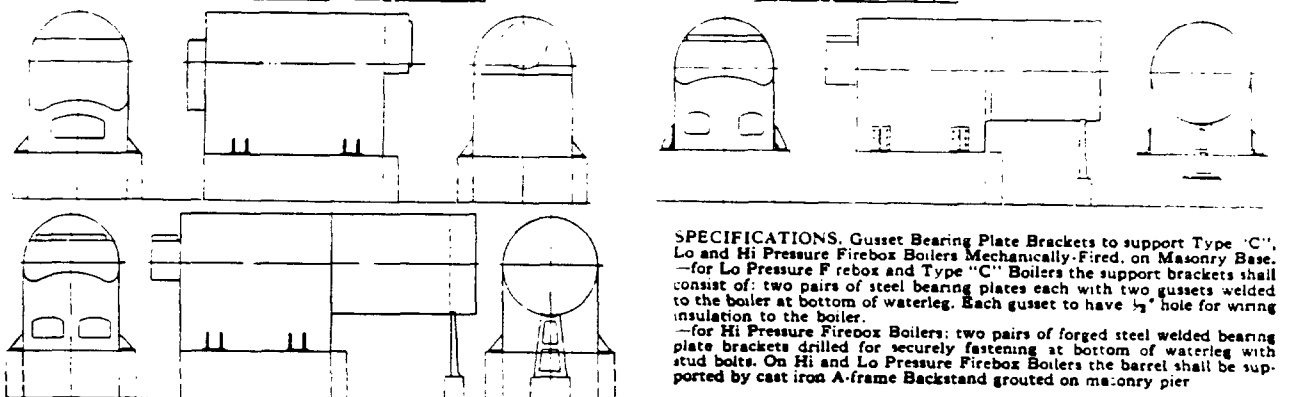
Boiler Number		P-18	P-22	P-26	P-30	P-35	P-40	P-45	P-50	P-60
SBI Rating—Steam Radiation	sq ft	1800	2200	2600	3000	3500	4000	4500	5000	6000
Water Radiation	sq ft	2880	3520	4160	4800	5600	6400	7200	8000	9600
Btu per Hour	1000's	432	528	624	720	840	960	1080	1200	1440
SBI Net Rating—Steam	sq ft	1500	1830	2170	2500	2920	3330	3750	4170	5000
Water	sq ft	2400	2930	3470	4000	4670	5330	6000	6670	8000
Btu per Hour	1000's	360	439	521	600	700	800	900	1000	1200
Heating Surface (SBI min.)	sq ft	129	158	186	215	250	286	322	358	429
Grate Area, SBI min.	sq ft	7.9	8.9	9.7	10.5	11.4	12.2	13.4	14.5	16.4
Shipping Weight	lbs	3240	3550	3900	4160	4550	5020	5500	5980	6940

Welded Bearing Plate and Gussets for Type "C" and Lo Pressure Firebox Boilers.

Bearing Plate Brackets

Brackets bolted to Boiler with studs

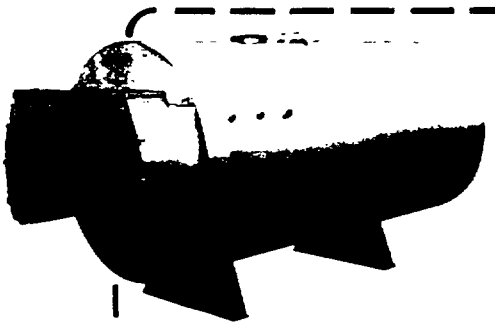
Forged Bearing Plate and Gusset Support Brackets for Hi Pressure Firebox Boilers.



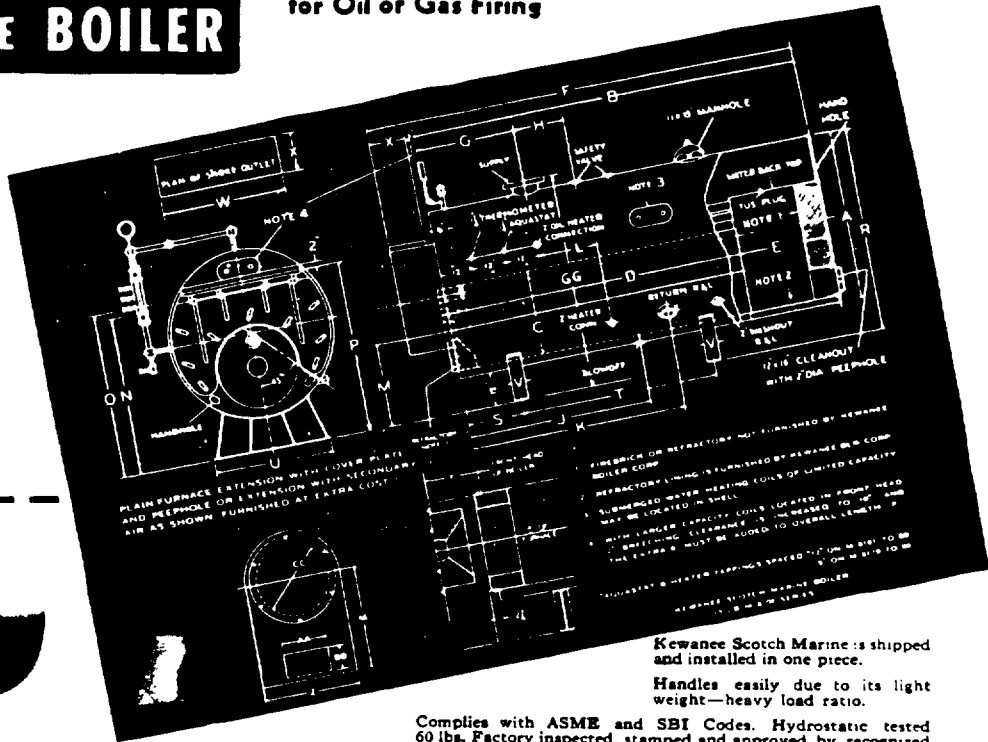
SPECIFICATIONS. Gusset Bearing Plate Brackets to support Type "C", Lo and Hi Pressure Firebox Boilers Mechanically-Fired, on Masonry Base. —for Lo Pressure Firebox and Type "C" Boilers the support brackets shall consist of: two pairs of steel bearing plates each with two gussets welded to the boiler at bottom of waterleg. Each gusset to have 1/2" hole for wiring insulation to the boiler. —for Hi Pressure Firebox Boilers: two pairs of forged steel welded bearing plate brackets drilled for securely fastening at bottom of waterleg with stud bolts. On Hi and Lo Pressure Firebox Boilers the barrel shall be supported by cast iron A-frame Backstand grouted on masonry pier

KEWANEE SCOTCH MARINE BOILER

Low in first cost to buy and install. Economical in floor space and fuel bills. Drum shape takes fewer stays and braces. Tubular furnace and return firetubes wholly submerged. Furnace volume increased in refractory lined combustion chamber, its wet top adds to heating surface and steam release area, improving the efficiency. No special setting needed. Less weight rests on foundation . . . and the low water line accommodates it to low ceilings.



M-8100 SERIES — a Serviceable Low Pressure Hi-Quality Welded Scotch Type for Oil or Gas Firing



Kewanee Scotch Marine is shipped and installed in one piece.

Handles easily due to its light weight—heavy load ratio.

Complies with ASME and SBI Codes. Hydrostatic tested 60 lbs. Factory inspected, stamped and approved by recognized Steam Boiler Inspection Insurance Co. for 15 lbs steam W. P.

Equipment—Furnace front cover plate and peephole, smokebox, rear end cover plate with cleanout door, washout plugs R & L; saddle supports, rear combustion chamber circle lining. Flue brush with handle.

Trimming—Safety valve(s), steam gauge and syphon, water column with gauge glass and cocks.

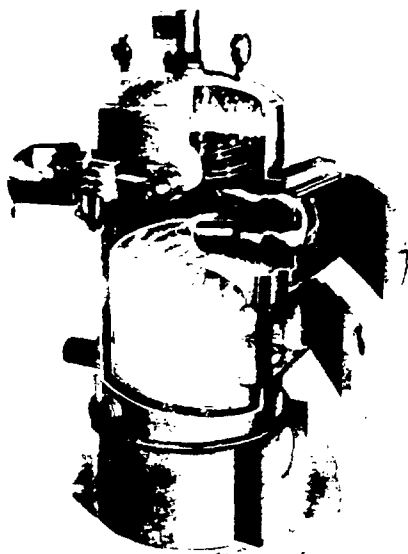
SPECIFICATIONS and MEASUREMENTS — 15 lbs S.W.P. 30 lbs Water Welded M-8100 Series Oil or Gas

Boiler Number	M-8178	M-8179	M-8180	M-8181	M-8182	M-8183	M-8184	M-8185	M-8186	M-8187	M-8188	M-8189	M-8190
SBI Rating—Steam Radiation sq ft	5470	6080	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500
Water Radiation sq ft	8750	9720	11660	13600	16520	19440	24280	29150	34000	38860	48570	58280	68000
Btu per Hour 1000's	1313	1459	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200
SBI Net Rating—Steam sq ft	4500	5000	6000	7000	8500	10000	12500	15000	17500	20000	25000	30000	35000
Water sq ft	7200	8000	9600	11200	13600	16000	20000	24000	28000	32000	40000	48000	56000
Btu per Hour 1000's	1080	1200	1440	1680	2040	2400	3000	3600	4200	4800	6000	7200	8400
Heating Surface (SBI Min.) sq ft	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
Furnace Volume (SBI Min.) cu ft	39.1	43.5	52.1	60.8	73.8	86.8	108.5	130.2	151.8	173.5	216.9	260.3	303.6
Net Furnace Volume cu ft	47.2	50.1	59.0	64.4	82.7	90.8	121.4	134.5	160.9	174.6	225.8	277.7	311.5
Safety Valve Capacity Lb Steam per Hr	1610	1790	2145	2500	3040	3575	4465	5360	6250	7145	8930	10715	12500
Breeching Diameter in.	22	22	24	24	28	28	31	31	35	35	39	41	43
Stack Diameter in.	19	20	21	22	24	24	26	28	29	31	33	36	38
Stack Height ft	35	40	35	40	40	45	45	50	50	55	60	60	60
Breeching Diameter, Two Boilers in.	27	28	30	31	34	36	40	41	44	47	50	54	56
Stack Diameter, Two Boilers in.	25	26	28	29	32	34	37	38	41	44	47	50	52
Stack Height, Two Boilers ft	45	50	45	50	50	55	55	60	60	65	70	70	70
Steam Supply Size in.	6	6	8	8	8	8	8	8	8	8	10	10	10
Return Size in.	4	4	4	4	4	4	4	4	4	4	6	6	6
Blow-Off Size in.	2	2	2	2	2	2	2	2	2½	2½	2½	2½	2½
Shipping Weight lbs	5700	6100	6900	7500	8400	9600	12700	14200	17400	19000	22500	25750	28100
A—Shell Diameter in.	54	54	60	60	66	66	72	72	78	78	84	90	96
B—Shell Length ft in.	9-2½	9-11	9-4	10-5½	10-7	11-11½	12-9	14-8	14-10½	16-6	18-2	18-8	18-0½
C—Furnace Diameter in.	27	27	30	30	33	33	36	36	39	39	42	45	48
D—Furnace Length ft in.	6-7	7-4	6-9	7-11	7-9	9-1	9-5	11-4	11-4	12-11	14-1	14-1	13-6
E—Combustion Chamber Length ft in.	33	33	33	33	36	36	42	42	45	45	51	57	57
F—Overall Length ft in.	10-4½	11-1	10-6	11-7½	11-11	13-3½	14-1	16-0	16-4½	18-0	19-8	20-4	19-8½
G—Steam Supply Location in.	27	30	27	33	33	36	36	42	42	48	60	60	60
GG—Steam Supply Height, Flanged in.	71	71	77½	77½	83½	83½	89½	89½	95½	95½	102	108	114
H—First Safety Valve Location in.	18	18	18	18	18	24	24	24	24	30	28	31	26
I—Blow-Off Location ft in.	3-0	3-6	3-3	4-0	3-9	4-6	4-6	5-6	5-6	6-6	7-0	7-0	7-0
K—Return Location ft in.	5-0	5-9	5-3	6-3	6-3	7-6	8-0	9-6	9-6	11-0	12-0	12-0	11-9
L—Oil Heater Connection in.	18	27	21	24	27	42	48	48	42	48	48	48	48
M—Furnace Height, Center in.	28½	28½	30½	30½	32½	32½	33½	33½	35½	35½	37	38½	40
N—Water Column Height in.	52½	52½	57	57	62	62	67½	67½	69½	69½	72½	78	84
O—Water Line Height in.	54½	54½	59	59	64	64	69½	69½	71½	71½	74½	80	86
P—Breeching Connection Height in.	54½	54½	59½	59½	64	64	69½	69½	71½	71½	73	79½	82½
R—Boiler Height Over Shell in.	66½	66½	72½	72½	78½	78½	84½	84½	90½	90½	97	103	108
S—Saddle Support Location in.	15	15	15	15	15	15	18	18	18	24	24	24	24
T—Saddle Support Center to Center ft in.	4-6	5-6	4-6	5-9	5-6	6-6	6-9	8-6	8-6	9-6	10-0	10-0	10-0
U—Saddle Support Length in.	36	36	40	40	44	44	48	48	52	52	56	60	64
V—Saddle Support Width in.	4	4	5	5	5	5	6	6	6	6	8	8	8
W—Breeching Connection Length in.	42	42	47	47	52	52	56	56	63	63	71	76	83
X—Breeching Connection Width in.	12	12	12	12	14	14	14	14	16	16	16	18	18
Y—Furnace Extension Length in.	15½	15½	16½	16½	16½	16½	22½	22½	23½	23½	23½	26½	26½
Z—Furnace Extension Width in.	27	27	30	30	33	33	36	36	39	39	42	45	45
AA—Secondary Air Opening Width in.	12½	12½	20½	20½	22	22	23½	23½	30½	30½	30½	30½	30½
BB—Secondary Air Opening Height in.	6½	6½	6½	6½	8½	8½	10½	10½	11½	11½	11½	11½	11½
CC—Furnace Extension Refract. Nozzle Dia. in.	20½	20½	23½	23½	26½	26½	29½	29½	32½	32½	35½	36½	39½
Outside Surface to Cover sq ft	135	145	150	170	185	215	240	290	310	345	415	450	495
Firebrick, Rear Wall No. required	150	150	180	180	230	230	270	270	320	320	370	430	480

*Threaded outlet height 3" less.

KEWANEE TYPE R STEEL BOILERS

ROUND "R"

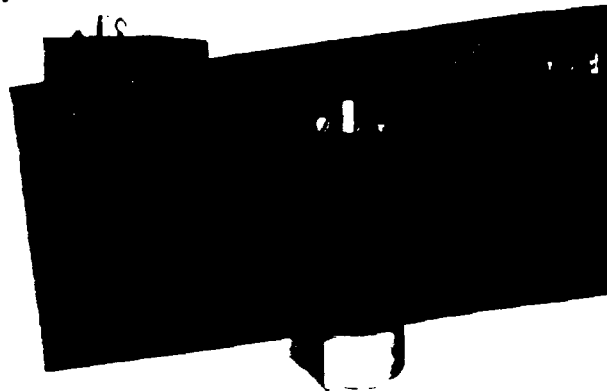


The first essential for dependable and economical heat is a *good boiler*. That's true whether it's fired by hand or mechanically with oil, gas or coal and *regardless of the type of Heating system* . . . Radiant Baseboard, Wall, Floor or Ceiling Coils or Convectional Radiation.

Type "R" Boilers . . . Square and Round . . . bring to medium and small buildings and homes, *all that extra dependability and economy* which for over 80 years have made the larger Kewanee's the biggest thing on the heating job.

Kewanee Round Type "R" . . . is an efficient, economical and dependable steel boiler for homes and small buildings using any fuel.

To convert from oil-gas-stoker to hand-fired coal merely substitute base with grates.

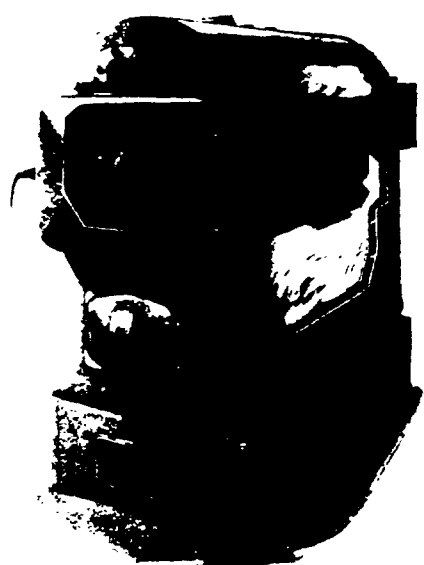


Enclosing jackets in attractive two-tone green, with insulating blanket.

Cut-away view shows the big, high firebox, long gas travel, unimpeded waterways and generous steam space . . . all contributing to its high "on the job" efficiency.

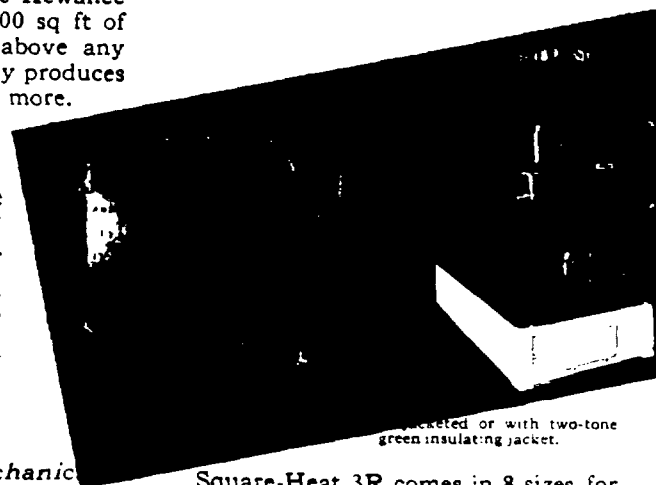
Sturdy Steel Construction, high fireboxes, longer gas travel, ample water content and extra steam space characterize these Kewanee "R" Series. There are 13 sizes for heating 275 to 3000 sq ft of steam radiation with ample reserve capacity, far above any boiler code. Even in sub-zero weather a Kewanee merrily produces heat a-plenty while maintaining efficiencies of 80% and more.

Kewanee Round "R" comes in 5 sizes for heating 275 to 900 sq ft of steam radiation, mechanically fired; or 330 to 570 sq ft with hand-fired coal.



Kewanee Square Heat Type "R" is an ideal, husky and economical steel boiler for heating medium size buildings using any fuel.

Switch from Mechanic Hand Firing without moving the square boiler off its base corner posts. Just put in the grates and front panel with rocker arms. Changing back is equally simple and inexpensive.



Jacketed or with two-tone green insulating jacket.

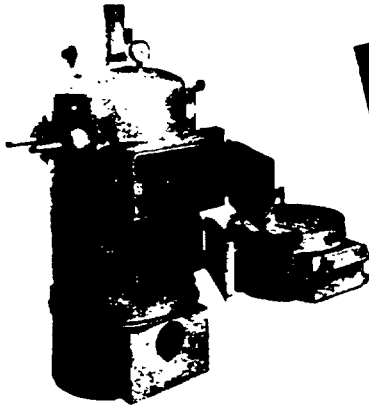
Square-Heat 3R comes in 8 sizes for 900 to 3000 sq ft steam radiation, mechanically fired, or 740 to 2480 sq ft with hand-fired coal.

**ROUND & SQUARE "R" DATA
DETAILS ON PAGES 12 & 13
HOT WATER COILS PAGE 14**

SQUARE-HEAT "R"

KEWANEE ROUND "R"

Jacketed and Unjacketed
Round and Square "R" Boilers

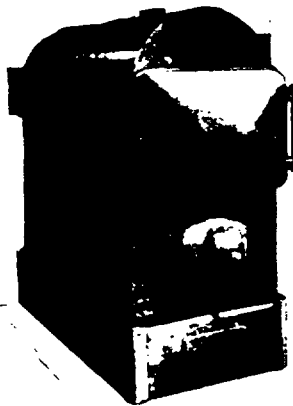


Equipment—Base, Draft Pouch; Grate Assembly; Fire and Flue Doors with Frames; Smoke hood or Draft Adjuster; Cleanout Doors; Washout Plugs; Spinner Blades for Oil or Gas boilers.

Trims to Suit—Steam Gauge or Altitude Gauge and Thermometer; Water Gauge, Glass, Gauge Cocks; Safety Valve; Arco Regulator. Tools—Poker, Soot and Flue Scrapers.

All Kewanee Type "R" Boilers (Round and Square) follow to the last detail all steel boiler Code requirements of the American Society of Mechanical Engineers and the Steel Boiler Institute, Inc.

... furthermore the name Kewanee is a guarantee of design, material and construction well above any code requirements.



Equipment, Hand-Fired Coal—Firedoor, Flue Cleanout Door, Steel Smokebox. Six Cleanout plugs. Steel Base, rear and side panels, cast iron front panel complete with Ash Pit Door, Side Draft Pouch, Rocking Grates with removable Bars, Lever, and shaker Arm with Handle.

Oil, Gas or Stoker—Furnace Door, Flue Cleanout Door, Steel Smokebox. Six Cleanout Plugs. Steel Base complete with Front Plate, Spinner Blades for Oil and Gas.

Trimings, Steam Boiler, Hand-Fired Coal—Water Gauge, two compression Gauge Cocks, Steam Gauge, Pop Safety Valve, Automatic Arco Draft Regulator with Lever, Weight, Chain and Pulleys.

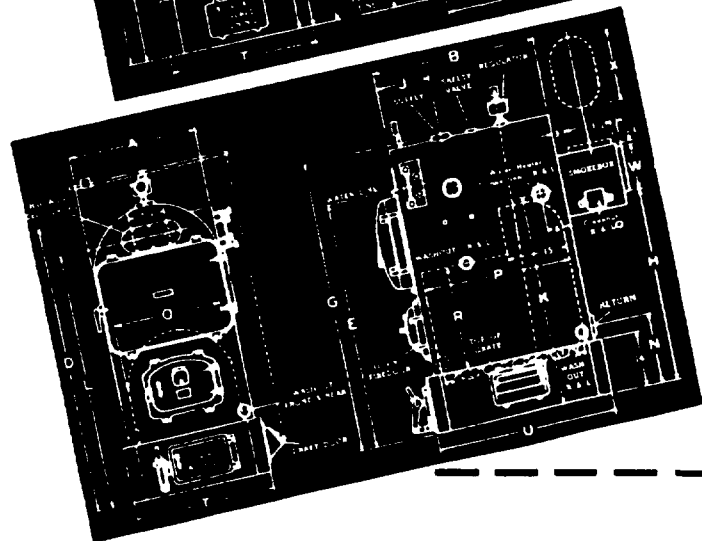
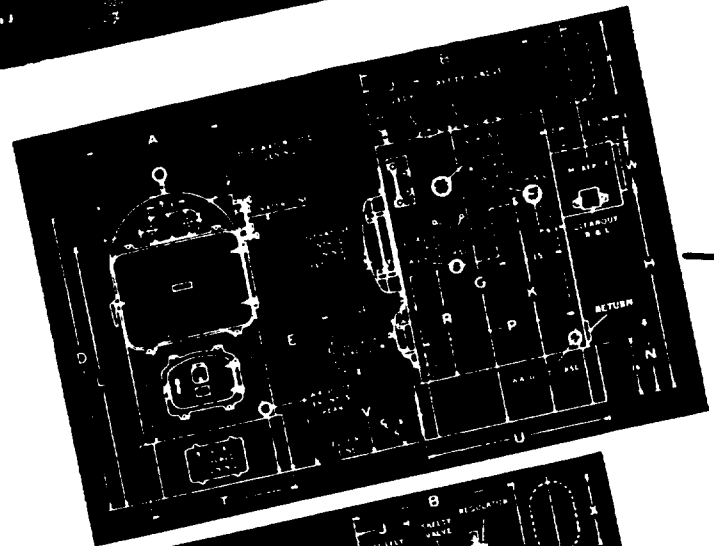
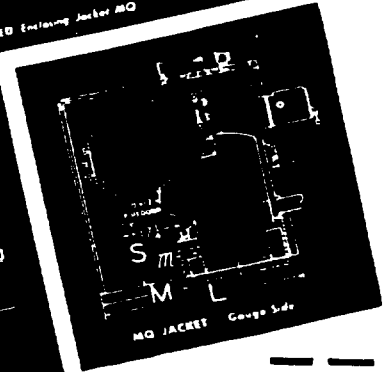
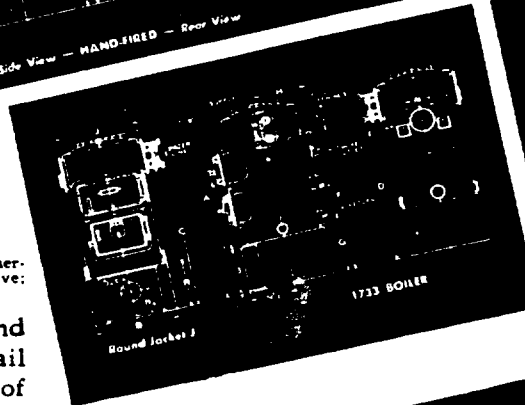
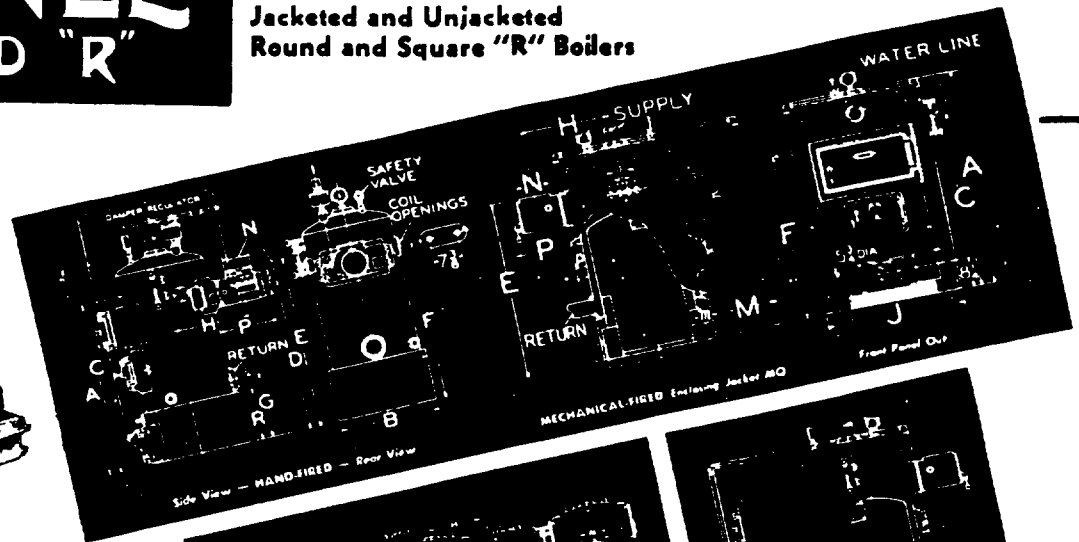
Water Boiler—Combination Altitude Gauge and Thermometer, Hot Water Regulator with Lever, Weight, Chain and Pulleys.

Steam Boiler, Oil, Gas or Stoker—Water Gauge, two compression Gauge Cocks, Steam Gauge, Pop Safety Valve.

Water Boiler—Combination Altitude Gauge and Thermometer only.

Tools, For Hand-Firing—Hoe, Poker, Flue and Soot Scrapers with Handles.

For Oil, Gas, Stoker—Flue and Soot Scrapers with Handles.



KEWANEE SQUARE-HEAT Type "R"

ROUND "R" — RATINGS — SPECIFICATIONS — MEASUREMENTS

Kewanee Welded Round "R" Steel Heating Boiler	MECHANICAL FIRING										HAND-FIRED COAL					
	Oil or Gas					Stoker					Bituminous			Anthracite		
	1733	1734	1735	1736	1737	0733	0734	0735	0736		734	735	736	2734	2735	2736
Number Unjacketed Square Jacket Round Jacket	1733MQ	1734MQ	1735MQ	1736MQ	1737MQ	0733J	0734J	0735J	0736J		734J	735J	736J	2734J	2735J	2736J
SBI Net Rating - Connected Radiation plus Hot Water Load																
Steam or Vapor	275	400	550	700	900	275	400	550	700		330	450	570	330	450	570
Water	440	640	880	1120	1440	440	640	880	1120		530	720	910	530	720	910
Btu per Hour	66	96	132	168	216	66	96	132	168		79	108	137	79	108	137
Fuel Burning Rates																
Oil	1.1	1.4	1.8	2.3	3.0											
Gas Input	124	180	248	315	405											
Stoker Coal						11	16	22	28							
Heating Surface	16	24	32	41	53	16	24	32	41		24	32	41	24	32	41
Furnace Volume	3.1	4.4	6.4	8.9	8.9											
Firebox Volume						2.5	3.7	5.4	7.4		3.7	5.4	7.4	3.7	5.4	7.4
Graze Area											2.2	2.9	3.7	2.2	2.9	3.7
Boiler Shell—Diameter	21	23½	27½	30½	30½	21	23½	27½	30½		23½	27½	30½	23½	27½	30½
Height	40	42½	46	48½	48½	40	42½	46	48½		42½	46	48½	42½	46	48½
Firebox—Inside Diameter	17	20	23	26	26	17	20	23	26		20	23	26	20	23	26
Average Height	17	22	24	26	26	17	22	24	26		22	24	26	22	24	26
Supply and Return Size	3	3	3	3	3	3	3	3	3		3	3	3	3	3	3
Safety Valve Size	½	½	1	1	1	½	½	1	1		½	1	1	½	1	1
A—Height Overall Boiler, Base, Jacket	54	54½	58	60½	60½	54	54½	58	60½		56½	60	62½	56½	60	62½
C—Water Line	46	44	47	49	49	46	44	47	49		46	49	51	46	49	51
N—Smoke Outlet Diameter	7	7	9	9	9	7	7	9	9		7	9	9	7	9	9
Chimney—Size	8x8	8x8	8x12	8x12	10x10	8x8	8x8	8x12	8x12		8x8	8x12	8x12	8x8	8x12	8x12
Chimney—Height	30	30	30	35	40	30	30	30	35		30	30	35	30	30	35
D—Smoke Outlet—Height End	39					39					41½	44½	46½	41½	44½	46½
E—Smoke Outlet—Height Top	43½	43½	47½	49½	49½	43½	43½	47½	49½		43½	43½	47½	43½	43½	47½
F—Smoke Outlet—To Boiler Centers	21½	20½	24	25½	25½	21½	20½	24	25½		20½	24½	25½	20½	24½	25½
G—Water Coil Connection*** Height	43	41½	44½	46½	46½	43	41½	44½	46½		43½	46½	48½	43½	46½	48½
C—Return Height	17	15½	15½	15½	15½	17	15½	15½	15½		17½	17½	17½	17½	17½	17½
B—Base—Diameter	23	26	29½	32½	32½	23	26	29½	32½		26	28½	32	26	28½	32
R—Base—Height	14	12	12	12	12	14	12	12	12		14	14	14	14	14	14
m—Base—Front to Firebox	4	3½	4	4	4	4	3½	4	4							
S—Floor to Boiler Door Opening	21	19½	20	20½	20½	21	19½	20	20½		21½	22	22½	21½	22	22½
Clear Opening in Base Front, h x w	12½ x 14½	10½ x 14½	10½ x 14½	10½ x 14½	10½ x 14½	12½ x 14½	10½ x 14½	10½ x 14½	10½ x 14½		9½ x 15½	9½ x 15½	9½ x 15½	9½ x 15½	9½ x 15½	9½ x 15½
J—Square Jacket—Width	25½	27	31	34	34	25½	27	31	34		25½	27	31	25½	27	31
Round Jacket—Diameter	25½	27	31	34	34	25½	27	31	34		25½	27	31	25½	27	31
L—Square Jacket—Length	44½	44½	49	52½	59	44½	44½	49	52½		44½	44½	49	44½	44½	49
M—Square Jacket—Front Clearance	19	17½	18	18½	23	19	17½	18	18½		19	18	17	19	18	17
P—Rear Clearance—Boiler to Wall	21½	17	19	18½	18½	21½	17	19	18½		15	18	17	15	18	17
Q—Rear Clearance—Boiler to MQ Jacket	21½	17	19	18½	18½	21½	17	19	18½		15	18	17	15	18	17
Outside Surface to Cover, Unjacketed	17	24	35	41	47	17	24	35	41		24	35	41	24	35	41
Shipping Weight—Unjacketed	600	800	920	1130	1400	600	800	920	1130		880	1040	1280	880	1040	1280
Jacketed MQ	800	1100	1200	1450	1700											
Jacketed J	835	960	1175			630	835	960	1175		915	1060	1325	915	1060	1325

*Boiler CL to Smoke Outlet End on 1733-0733 only.

**Allows for Smoke Outlet Elbow. Boiler 1733-0733 only.

***Coil Connection Sizes: 1" Pipe for two Outlets, ½" Pipe for four Outlets.

Fuel burning rates above based on boiler output 150% SBI Net Rating. Oil 140,000 Btu per gal., Coal 12,000 Btu per lb., as fired.

STEAM WORKING PRESSURE 15 POUNDS SQ. IN. HOT WATER WORKING PRESSURE 30 POUNDS. HYDROSTATIC TEST 60 POUNDS

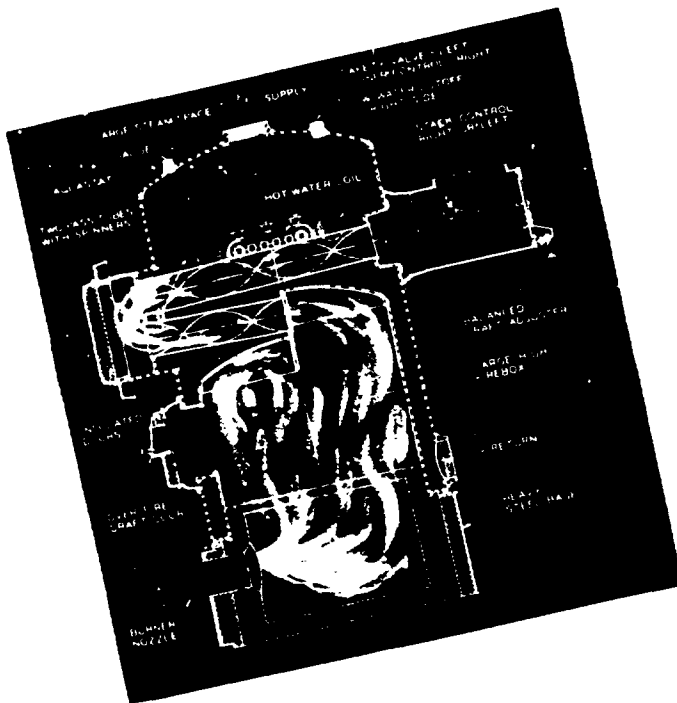
SQUARE-HEAT Type "R" — RATINGS — SPECIFICATIONS — MEASUREMENTS

Kewanee Welded Square "R"		OIL, GAS OR STOKER								HAND-FIRED COAL							
Boiler Number, Unjacketed or Jacketed...		3R1	3R2	3R3	3R4	3R5	3R6	3R7	3R8	3R1	3R2	3R3	3R4	3R5	3R6	3R7	3R8
SBI Net Rating—Steam	sq ft	900	1100	1300	1500	1800	2200	2600	3000	740	910	1080	1230	1480	1810	2140	2480
Water	sq ft	1440	1760	2080	2400	2880	3520	4160	4800	1180	1450	1720	1970	2370	2890	3430	3970
Btu per Hour	1000's	216	264	312	360	432	528	624	720	178	218	261	295	355	434	514	595
Heating Surface (SBI min.)	sq ft	53	65	77	88	106	129	153	177	53	65	77	88	106	129	153	177
Furnace Volume (SBI min.)	cu ft	8.2	10.0	11.8	13.6	16.4	20.0	23.6	27.3	4.2	4.9	5.7	6.3	7.2	8.4	9.4	10.5
Graze Area (SBI min.)	sq ft									4.2	4.9	5.7	6.3	7.2	8.4	9.4	10.5
Safety Valve Capacity—Lb Steam per Hr		265	325	385	440	530	645	765	885	265	325	385	440	530	645	765	885
Breaching Diameter (When Flattened, its oval smoke neck)	in.	12	12	14	14	16	16	18	18	12	12	14	14	16	16	18	18
Chimney Diameter	in.	10	11	12	12	13	14	15	16	10	11	12	12	13	14	15	16
Chimney Height	ft	30	35	35	40	35	40	40	45	35	40	40	45	40	45	50	55
Steam Supply Size	in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Return Size	in.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Water Heater Connection Size, R&L	in.	2½	2½	2½	2½	3	3	3	3	2½	2½	2½	2½	3	3	3	3
Shipping Weight—No Jacket	lbs	1508	1658	1808	1950	2250	2475	2725	3008	1775	1975	2175	2350	2600	2900	3200	3500
Jacketed	lbs	1600	1770	1930	2090	2410	2655	2925	3220	1875	2095	2305	2490	2760	3080	3400	3720
A—Boiler Shell Width	in.	29	29	29	29	33	33	33	33	29	29	29	29	33	33	33	33
Boiler Shell Width Overall	in.	30	30	30	30	34	34	34	34	30	30	30	30	34	34	34	34
Boiler Jacket Width Overall	in.	31½	31½	31½	31½	36	36	36	36	31½	31½	31½	31½	36	36	36	36
B—Boiler Shell Length	in.	30½	36½	42½	48½	42½	50½	58	67	30½	36½	42½	48½	42½	50½	58	67
Boiler Jacket Length	in.	33½	39½	45½	51½	45½	53½	61½	70	33½	39½	45½	51½	45½	53½	61½	70
D—Boiler Height Overall																	
Floor to Top of Shell	in.	65	65	65	65	72½	72½	72½	72½	65	65	65	65	72½	72½	72½	72½
Floor to Top of Jacket	in.	66½	66½	66½	66½	74	74	74	74	66½	66½	66½	66½	74	74	74	74
E—Water Line Height	in.	55½	55½	55½	55½	62½	62½	62½	62½	55½	55½	55½	55½	62½	62½	62½	62½
C—Steam or Water Supply Height	in.	66½	66½	66½	66½	74	74	74	74	66½	66½	66½	66½	74	74	74	74
H—Smoke Outlet Height above Floor	in.	44½	44½	44½	44½	49	49	49	49	44½	44½	44½	44½	49	49	49	49
J—Steam or Water Supply Location	in.	10	12	14	16	14	17	19	22	10	12	14	16	14	17	19	22
K—Heater Connection from Floor	in.	48½	48½	48½	48½	53½	53½	53½	53½	48½	48½	48½	48½	53½	53½	53½	53½
L—Coil Conn. Height above Floor	in.	57½	57½	57½	57½	64½	64½	64½	64½	57½	57½	57½	57½	64½	64½	64½	64½
N—Return Height	in.	17½	17½	17½	17½	18	18	18	18	17½	17½	17½	17½	18	18	18	18
O—Firebox Width	in.	24	24	24	24	28	28	28	28	24	24	24	24	28	28	28	28
P—Firebox Length	in.	25½	31½	37½	43½	37½	45	53	62	25½	31½	37½	43½	37½	45	53	62
R—Firebox Height	in.	21½	21½	21½	21½	26	26	26	26	21½	21½	21½	21½	26	26	26	26
T—Base Width a 14" High	in.	32½	32½	32½	32½	36½	36½	36½	36½	32½	32½	32½	32½	36½	36½	36½	36½
U—Base Length	in.	34½	40½	46½	52½	46½	54½	62	71	34½	40½	46½	52½	46½	54½	62	71
V—Floor to Bottom of Firebox	in.	19½	19½	19½	19½	21	21	21	21	19½	19½	19½	19½	21	21	21	21
W—Breaching Connection Width	in.	9	9	9	9	11½	11½	11½	11½	9	9	9	9	11½	11½	11½	11½
X—Breaching Connection Length	in.	13½	13½	16½	16½	18½	18½	21½	21½	13½	13½	16½	16½	18½	18½	21½	21½
Outside Surface to Cover, Unjacketed	sq ft	38	43	48	53	58	65	73	82	38	43	48	53	58	65	73	82

KEWANEE

Type "R" ... Square and Round

CONSTRUCTION FEATURES



Cross section shows Kewanee Round "R". The Square "R" is similar in principle but larger for greater capacity.

All Type "R" Boilers are skillfully fashioned of heavy steel plate in the Kewanee plant with the same craftsmanship and care which, since 1868, have characterized the bigger Kewanee's.

Shell—steel plate extra heavy—takes up temperature stresses—adds years of life—welded in one piece ready to set on base.

Steam Space—large for plentiful reserve supply, and high for dry steam always.

Free Waterways—rapid circulation sweeps steam bubbles up without commotion to the unbroken release area at water line, keeping it steady.

Large High Firebox—all primary heating surface closely faces the radiant fire with a consequent high-rate of heat transfer resulting in characteristically quick pick-up and rapid steaming. Code ratios maintained in the furnace volume and height give assurance that the fuel will be completely burned.

Two Pass Tubes—save fuel; a plus value in secondary heating surface; easy to clean—carry all the flue gases without choking up—walls extra thick for lasting qualities.

Spinner Blades—on oil-gas boilers rotate the hot gases to scrub the tube walls so every available heat unit is transferred to boiler water.

Man-size Doors—large enough for inspection or firing but insulated to prevent loss from radiated heat. Door and frame castings are rugged for hard usage.

Heavy Steel Base—extra substantial.

Controls—tapping provided for all essential safety devices and automatic firing controls—washout plugs conveniently located so the water-wetted surfaces can be kept free from scale and sludge.

Domestic Hot Water—The copper coil is brazed in bronze fittings, mounted on steel plate with locknuts and rubber gaskets.

HOT WATER COILS — —

YEAR 'ROUND DOMESTIC HOT WATER

KEWANEE INDIRECT HOT WATER HEATING COILS fitted at extra cost.
For Storage Tank Operation For Instantaneous Flow

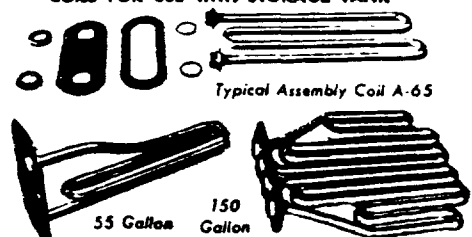
Boiler Number Round "R"	Coil No. and Max. Size	Rated Capacity Gals. Heated 40°-140° 3 Hrs in Boiler Water		Surface Sq Ft	Coil No. and Max. Size	Rated Capacity Gals. Heated 40°-140° in 100° Boiler Water		Surface Sq Ft
		212° F.	180° F.			1 Hr	1 Min.	
1733, 0733	T55	55	35	1.9	EN135	135	2.3	9.0
734, 35, 36, 1737	A65	65	40	2.0	EN34	170	2.9	11.4
734, 35, 36, 1737	C150	150	90	5.0	EN35	210	3.5	14.0
735, 36, 1737					EN36	250	4.2	16.5
736, 1737	D200	200	120	6.6				
Square-Heat								
	SR6-24	90	55	3.0				
	SR8-24	120	70	3.9				
	DR6-24	180	110	6.0	TON-1	220	3.7	14.7
3R1	DR8-24	240	145	7.7	QON-1	250	4.7	18.7
3R2	DR8-30	320	190	9.9	QON-2	350	5.8	23.4
3R3, 5	DR8-36	400	240	11.9	QON-3	420	7.0	28.0
3R4, 6	DR8-42	480	290	14.0	QON-4	470	8.2	32.6
3R7	DR8-48	560	335	16.1	QON-7	600	10.0	40.0
	DR8-54	640	385	18.2				
3R8	DR8-60	720	430	20.3	QON-8	700	11.7	46.7

Coils listed above are maximum length for each boiler. Smaller sizes may be substituted for less hot water capacity. Inlet and Outlet same size iron pipe tap, 1" on TON and 1 1/4" on QON tankless, also 1 1/4" on DR6 and DR8 storage tank coils and 1" on SR6 and SR8.

Storage R Boilers have tapping each side for external Water Heater, also on right side for Low Water Cut-off with Plug. For Coil illustrations see page 23. Round "R" Coils for 2734, 5, 6; 1734, 5, 6; 0734, 5, 6 same as 734, 5, 6.

ROUND "R"

COILS FOR USE WITH STORAGE TANK



TANKLESS COILS FOR INSTANTANEOUS FLOW



Every Kewanee Type "R" provides for easy installation of Coils for Domestic Hot Water (either tankless or storage tank types) which may be fitted at any time by removing the coil opening cover plate and bolting coil in place.

KEWANEE

HIGH-PRESSURE STEEL BOILERS

Firetube boilers produced on a tonnage basis at Kewanee are designed in four fundamental styles for high pressure: Updraft Firebox, both with two-pass and with single-pass tubes; also Scotch portable return tubular; and Hi-Test Weld double-return tubular with firebox for refractory lining . . . for 100 to 150 pounds steam at lifetime par efficiencies.

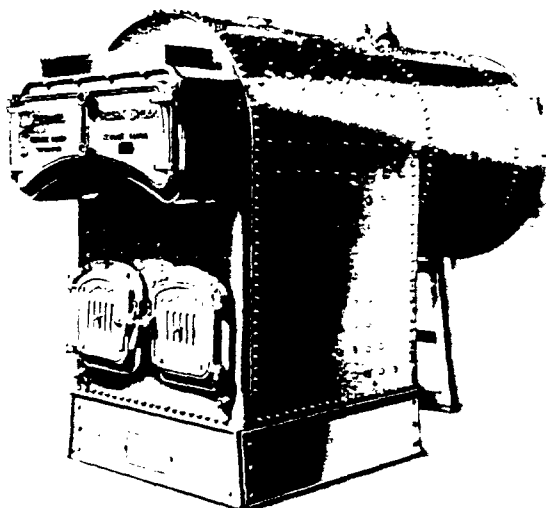
The overall range of rated loadings is 6 to 304 horsepower or a steam radiation equivalent of 840 to 42,500 sq. ft. or a capacity rating of 207 to 10,510 pounds of steam per hour.

"500" SERIES Heavy Duty Firebox

A rugged dependable riveted boiler for steam working pressures 100, 125, 150 lbs.

Two-pass 3" tubes save floor space and give extra economies even with overloads 50% above the 25 to 304 horsepower ratings, whether fired by hand or mechanically.

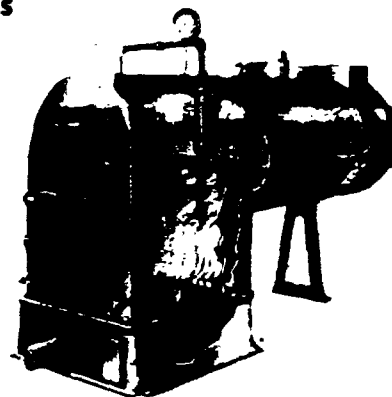
DATA ON PAGES 16 and 17



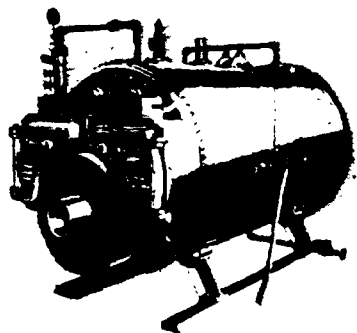
TYPE "K" Riveted Firebox Boiler

For working steam pressures 100, 125, 150 lbs. Comes in 8 sizes 10 to 44 horsepower only. Single-pass tubes take the smokebox outlet to rear. The straight-up boiler front with big firedoor and extra clearance make it convenient to fire and handle. The water line is lower and the boiler requires less head room.

DATA ON PAGES 18 and 19



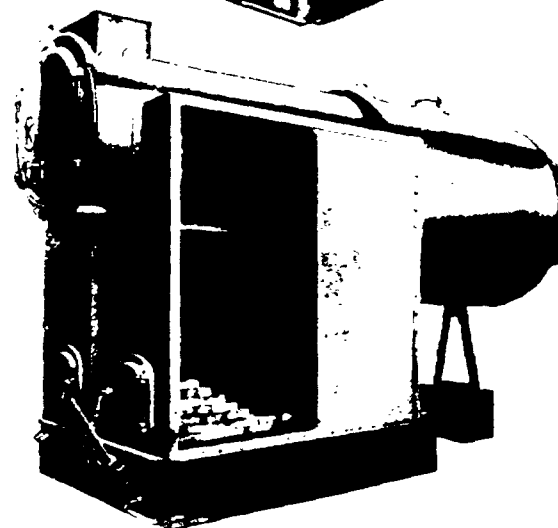
Easy conversion from mechanical to hand-firing, vice-versa or back again from one fuel to another, an important feature of all Kewanee Boilers.



SCOTTIE JUNIOR

An exceedingly popular and useful boiler . . . Kewanee's portable adaptation of the Scotch Marine type for working pressures up to 125 pounds. 6 sizes, 6 to 36 hp. Truly trouble-free and easy to handle with every part accessible. Economical in operation with coal, oil or gas.

DATA ON PAGES 20 and 21



HI - TEST No. 1 WELD

Two-pass portable ALL-WELD boiler for 125 and 150 lbs working pressures. Six sizes 50 to 180 hp. A quick steaming, simple and practical boiler with firebox for heat-holding refractory lining. All joints Fusion Welded, X-Ray checked, Stress Relieved . . . compact yet delivers a full load and more at "top" efficiency.

DATA ON PAGES 20 and 21

KEWANEЕ

"500" Series BOILER

Hi Pressure Riveted Firebox Boiler
Two-Pass 3" Tubes . . . 25 to 304 hp

"500" Series 100-150 psi
gives maximum working
economy with minimum
upkeep using any fuel.

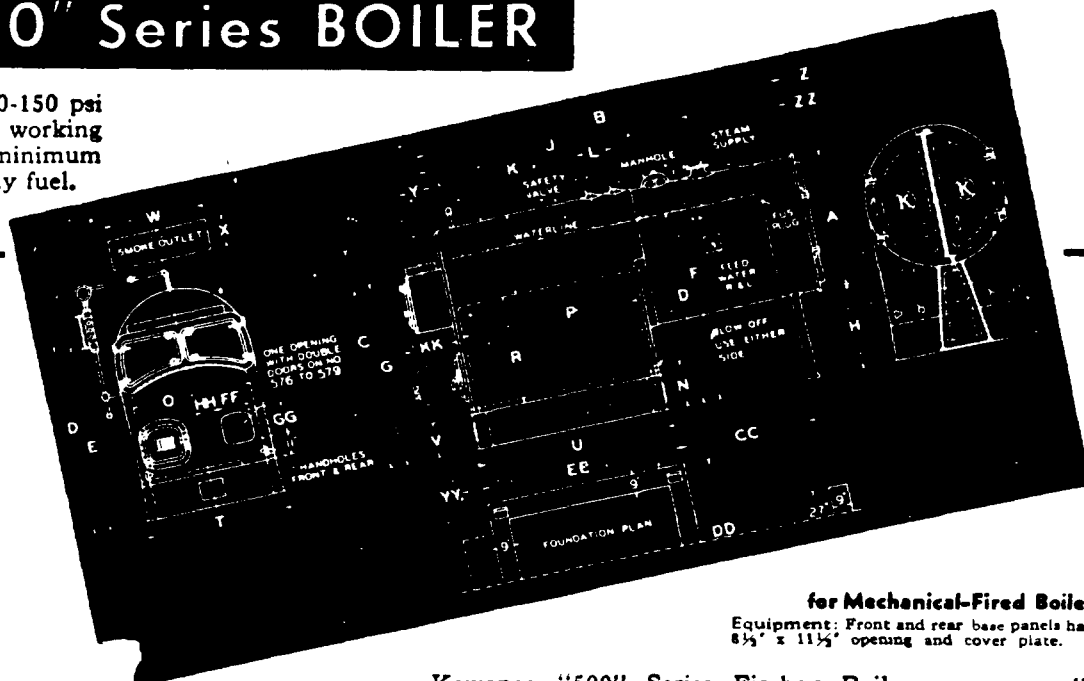
Note the high fire-
box, long travel of
gases, unimpeded
waterways and gen-
erous steam space...
all contributing to
the unusually high
efficiency of this
outstanding boiler.



"500" Series Boiler

Steel base shipped assembled with four cast iron corner posts;
backstand; fire and flue doors; flue cleaner and handle. Manhole
furnished on 580 and larger.

Trimming. Steam
only: Safety valve; steam
gauge, syphon and cock;
water column, gauge glass
and cocks.



for Mechanical-Fired Boilers

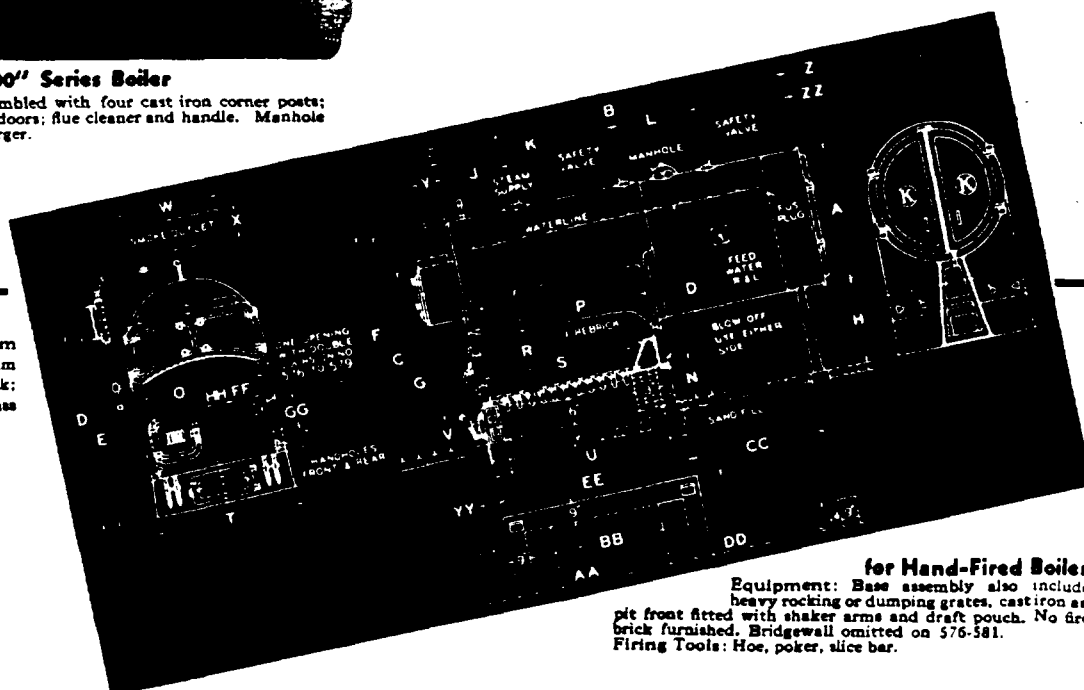
Equipment: Front and rear base panels have
8 1/2' x 11 1/2' opening and cover plate.

Kewanee "500" Series Firebox Boilers are generally
selected for their ruggedness in larger operations involving
loadings up to 300 horsepower per unit with steam working
pressure as high as 100, 125 or 150 pounds per square inch.

The Firebox type boiler has always been used for High
Pressure Steam. In its original purpose on locomotives the
record covers well over a century of continuous service.

And today the firebox boiler is found generating steam at
the higher pressures used on the giant locomotives develop-
ing several thousand horsepower.

In other firebox boiler series built by Kewanee for the
Oil Fields steam pressures run as high as 350 lbs.



for Hand-Fired Boilers

Equipment: Base assembly also includes
heavy rocking or dumping grates, cast iron ash
pit front fitted with shaker arms and draft pouch. No fire-
brick furnished. Bridgwall omitted on 576-581.
Firing Tools: Hoe, poker, slice bar.

"500" SERIES HIGH PRESSURE RIVETED FIREBOX

SPECIFICATIONS

applying ONLY to OIL, GAS or STOKER BOILERS

Boiler Number	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
Rating—Steam Radiation..... sq ft	4250	4860	5470	6080	7290	8500	10330	12150	15180	18220	21250	24240	30360	36430	42500
—Horsepower.....	30	35	39	44	52	61	74	87	109	130	152	174	217	261	304
—Thousands of Btu per Hour.....	1020	1166	1313	1459	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200
—Pounds of Steam per Hour.....	1050	1200	1350	1500	1800	2100	2560	3010	3750	4510	5260	6010	7510	9010	10510
Heating Surface (SBI Code min.) sq ft	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
Furnace Volume (SBI Code min.) cu ft	30.4	34.8	39.1	43.5	52.1	60.8	73.8	86.8	108.5	130.2	151.8	173.5	216.9	260.3	303.6
Furnace Height (SBI Code min.) in.	30	30½	31¼	31½	32¼	34	35½	37½	40¼	43	46	48¼	54¼	60¼	66
Firebox Volume above Mud Ring cu ft	39.6	39.6	48.5	48.5	62.1	69.6	97.0	110.4	130.9	137.2	160.2	183.2	207.8	231.9	245.5
*Additional Furnace Height for Stoker SBI Code min. in.														6	13
Shipping Weight—100 Lb. W.P. lbs	6940	7400	8340	8780	10180	11100	12980	14380	16720	19080	20960	23340	27140	30440	33760
125 Lb. W.P. lbs	7980	8510	9590	10100	11700	12760	14930	16530	19230	21940	24100	26640	31210	35000	38820
150 Lb. W.P. lbs	8780	9360	10550	11110	12870	14030	16420	18180	21150	24130	26510	29520	34330	38500	42700

*Represents distance below bottom of Water Leg that hearth must be set for SBI minimum furnace volume and height.

MEASUREMENTS

applying to BOTH MECHANICAL and HAND-FIRED BOILERS

Boiler Number	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
A—Boiler Diameter.....	in. 42	42	48	48	54	54	60	60	66	66	72	78	78	84	84
B—Boiler Length.....	ft. 8-7	9-6¼	8-11¼	9-8	9-2¼	10-6	11-1	12-9	12-10	14-9	14-9	17-7¼	17-9¼	20-0¼	20-0¼
C—Boiler Head Height.....	in. 80¼	80¼	86¼	86¼	94¼	94¼	102	102	108	108	114	116	116	126	126
D—Water Line.....	in. 73	73	78	78	83	83	88	88	93	93	97½	100	100	108	108
E—Water Column Height.....	in. 71	71	74	74	81	81	86	86	91	91	95½	98	98	106	106
F—Steam Supply Hgt. Threaded Flange.....	in. 81½	81½	87½	87½	96	96	103½	103½	109½	109	115	117½	117½	127½	127½
—Steam Supply Hgt. Flanged Nozzle.....	in. 85	85	91	91	99¼	99¼	107	107	113	113¼	118¼	121	122¼	132¼	132¼
G—Breaching Connection Height.....	in. 71	71	74	74	81	81	87	87	91	91	97	98	98	108	108
H—Rear Stand Height.....	in. 38	38	38	38	40	40	41	41	41	41	41	37	37	41	41
J—Steam Supply Location.....	ft. in. 6-0	6-6	6-0	6-6	2-1¼	2-1¼	3-0¼	3-5¼	3-5¼	11-0	11-0	2-10	12-6	12-6	13-3
K—Safety Valve, 100 Lb. W.P. ft in. 1st Location, 125-150 Lb. W.P. ft in. 2nd Location, 125-150 Lb. W.P. in.	2-9¼	2-9¼	2-9¼	3-0¼	4-5	4-11	6-3¼	7-2	7-2	6-4	7-6	11-0	14-8	14-8	16-5
L—Safety Valve, 100 Lb. W.P. in. 1st Location, 125-150 Lb. W.P. in. 2nd Location, 125-150 Lb. W.P. in.	10½	10½	11	16½	37	39	35¼	6-10¼	6-11	7-3	7-3	11-6	14-8	14-8	16-5
	11	11	11	11	35¼	39	11¼				59¼	12			
										(on application)				(on application)	
N—Blow-Off Height.....	in. 19	19	19	19	19	19	22	22	22	22	22	22	22	2	26
O—Firebox Width.....	in. 36	36	42	42	48	48	53	53	59	59	65	71	71	71	77
P—Firebox Length.....	in. 50	50	50	50	50	56	72	82	82	82	86	90	102	102	108
R—Firebox Height.....	in. 41¼	41¼	44	44	49	49	49	49	52	52	54¾	55	55	55	57
T—Base Width.....	in. 47¼	47¼	53¼	53¼	59¼	59¼	66	66	72	72	78	84	84	90¼	90¼
U—Base Length.....	in. 59¼	59¼	59¼	59¼	59¼	65¼	83	93	93	97	97	101	113	113	119
V—Base Height.....	in. 17	17	17	17	17	17	17	17	17	17	17	17	17	21	21
W—Breaching Connection Length.....	in. 32	32	34	34	40	40	44	44	51	51	54	60	60	64	64
X—Breaching Connection Width.....	in. 9	9	11	11	12	12	14	14	15	15	19	18	18	22	22
Y—Breaching Conn. C.I. to Blr.....	in. 6¼	6¼	7¼	7¼	8	8	9	9	9¼	9¼	11¼	11	11	13	13
YY—Breaching Conn. C.I. to Found.....	in. 4¼	4¼	5¼	5¼	6	6	7	7	7¼	7¼	9¼	9	9	11	11
Z—Rear Door Clearance, Min.....	in. 42	42	48	48	50	50	53	53	56	56	59	62	62	64	64
ZZ—Space to Draw Long Tubes, ft in.	6-10	7-9	6-10	7-7	6-9	8-1	8-4	10-0	10-1	12-0	11-8	11-4	14-2	14-0	16-3
CC—Rear Stand Location.....	in. 33	44	36	44	39	48	36	46	46	66	66	62	82	80	84
DD—Foundation Width.....	in. 34	34	36	40	66	66	71	71	77	77	83	89	89	95	95
EE—Foundation Length.....	in. 60¼	60¼	60¼	60¼	60¼	66¼	84	94	94	98	98	102	114	114	120
FF & GG—Firebox Opening in Boiler Width & Height.....	Firebox Overlap														
HH—Centerline Blr. to Firebox Opp. in.	Edge of Opening in Boiler 2' All Around														
KK—Opened Firebox to Boiler.....	Two 15 x 15														
	Two 18 x 16														
	Two 18 x 16														
	Two 18 x 16														
Breaching Diameter..... One Boiler.....	in. 19	20	21	22	23	24	26	28	30	31	33	35	39	41	43
Stack Diameter.....	in. 17	18	19	20	21	22	24	26	28	29	31	33	36	38	40
Stack Height, Mechanical.....	ft. 45	50	45	50	45	50	50	60	60	70	70	70	85	90	105
Stack Height, Hand-Fired.....	ft. 55	60	55	60	60	65	60	70	70	80	80	85	95	100	110
Breaching Diameter, Two Boilers.....	in. 25	26	27	28	30	31	34	36	40	41	44	47	50	54	56
Stack Diameter.....	in. 23	24	25	26	28	29	32	34	37	38	41	44	47	50	52
Stack Height, Mechanical.....	ft. 55	60	55	60	55	60	60	70	70	80	80	80	95	100	115
Stack Height, Hand-Fired.....	ft. 65	70	65	70	70	75	70	80	80	90	90	95	105	110	120
Steam Supply Size.....	in. 4	4	4	4	4	4	6	6	6	6	6	6	8	8	8
Blow-Off Size.....	in. 2	2	2	2	2	2	2½	2½	2½	2½	2½	2½	2½	2½	2½
Feed Water Conn. Size R. & L. in.	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½
Safety Valve Boiler 100 Lb. W.P. in. Opening.....	2-2	2-2	2-2	2-2½	2-2½	2-2½	2-2½	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3
Openings 125 Lb. W.P. in.	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
Verify all sizes 150 Lb. W.P. in.	2-1½	2-1½	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
*Outside Surface to Cover..... sq ft	115	125	130	140	155	170	195	225	245	280	295	310	365	400	450

*Front Smokebox and Front Head below Smokebox NOT included.

SPECIFICATIONS

applying ONLY to BOILERS with Grates for HAND FIRING

Boiler Number	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
Rating—Steam Radiation..... sq ft	3500	4000	4500	5000	6000	7000	8500	10000	12500	15000	17500	20000	25000	30000	35000
—Horsepower.....	25	29	32	36	43	50	61	72	89	107	125	143	179	214	250
—Thousands of Btu per Hour.....	840	960	1080	1200	1440	1680	2040	2400	3000	3600	4200	4800	6000	7200	8400
—Pounds of Steam per Hour.....	865	990	1110	1240	1480	1730	2100	2470	3090	3710	4330	4950	6180	7420	8660
Heating Surface (SBI Code min.) Sq ft	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
Grate Area (SBI Code min.) Sq ft	11.4	12.2	13.4	14.5	16.4	18.1	20.5	22.5	25.6	28.4	30.9	33.2	37.4	41.2	44.7
S—Grate Length..... in.	50	50	50	50	50	56	61	61	67	73	73	67	79	79	85
AA—Ash Pit Width..... in.	36	36	42	42	48	48	53	53	59	59	65	71	71	77	77
BB—Ash Pit Length..... in.	42¼	42¼	42¼	42¼	42¼	48¼	56	56	62	68	68	62	74	74	80
Number of Common Brck.....	No Bridgwall Required						185	185	200	200	220	240	240	315	315
Number of Fire Brck.....							48	95	80	60	68	150	150	160	160
Shipping Weight—100 Lb. W.P. lbs	7500	8000	9000	9500	11000	12000	14000	15500	18000	20500	22500	25000	29000	32500	36000
125 Lb. W.P. lbs	8500	9000	10500	11000	12500	14000	16000	18000	20500	23500	26000	29000	33500	37500	41500
150 Lb. W.P. lbs	9500	10000	11500	12000	14000	15500	17500	20000	22500	26000	28500	32000	37000	41000	45500

KEWANEE

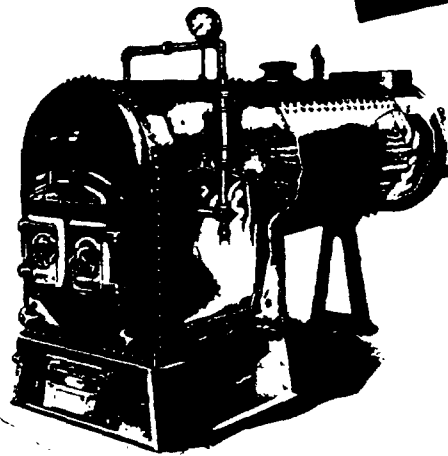
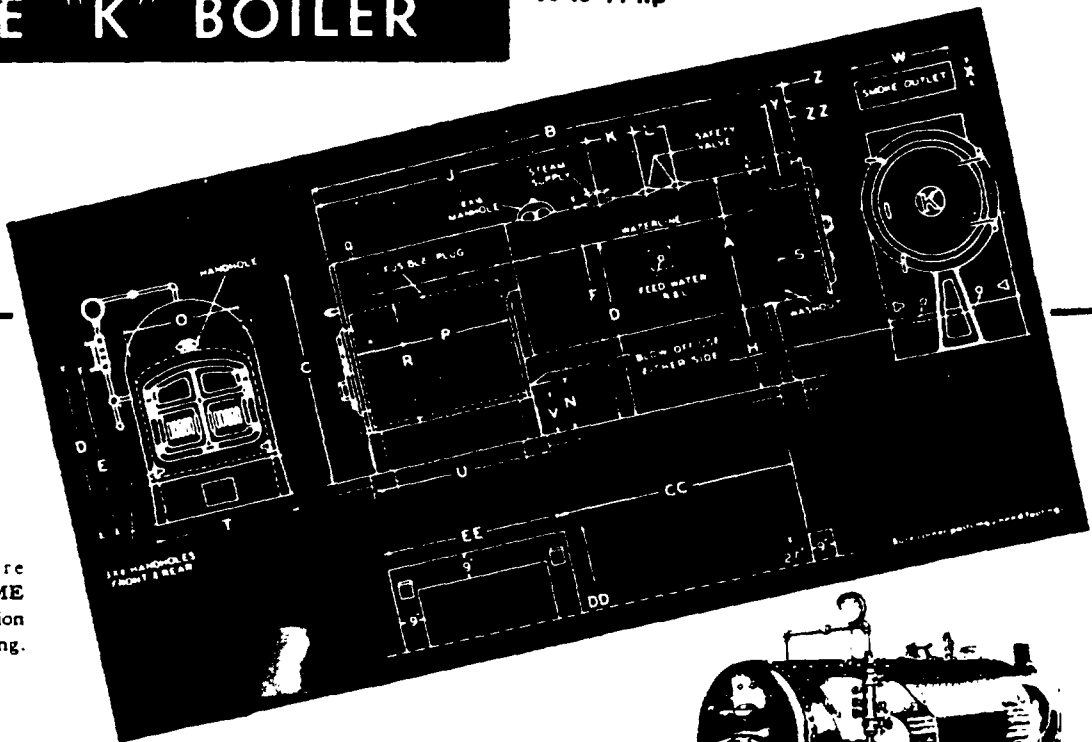
TYPE "K" BOILER

Hi Pressure Riveted Firebox Boiler
Single-Pass 3" Tubes
10 to 44 hp

Type "K" is the portable version of Kewanee's original brickset Firebox Boiler recognized as standard in the trade since its inception.

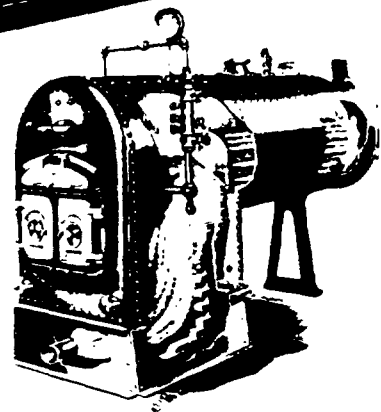
Type "K" provides a dependable, economical boiler for hi-pressure steam fired mechanically or by hand.

All Kewanee Hi-Pressure boilers conform to ASME Power Code for Construction and to SBI Code for Rating.



The firebox has the volume and height necessary for complete combustion. Heating surfaces, fire tube area, water content and steam space are perfectly co-related for efficient operation and unusual economy.

Note unobstructed access to tubes featuring *lower water line*. This design takes less head room, has *one bank of tubes only*.



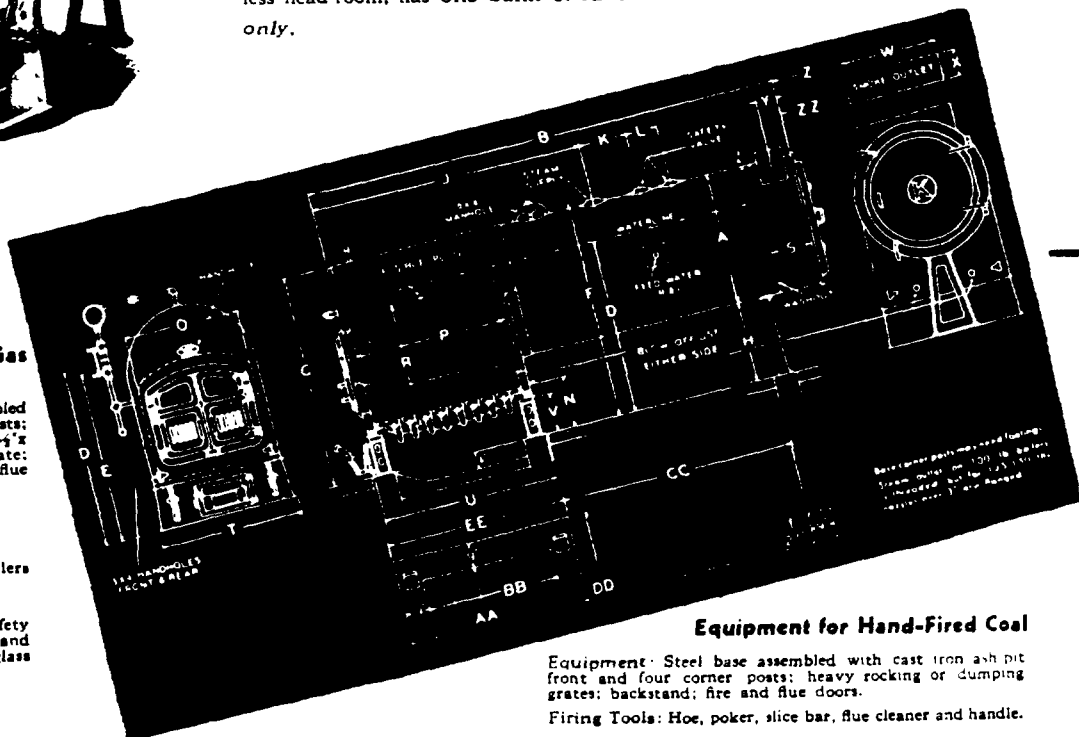
Equipment for Oil, Gas or Stoker

Equipment: Steel base assembled with four cast iron corner posts; front and rear panels have 8 1/2" x 11 1/4" opening and cover plate; backstand; fire and flue doors; flue cleaner and handle.

For All Boilers

Manhole furnished on boilers 8K and larger.

Trimming, Steam Only: Safety valve; steam gauge, syphon and cock; water column, gauge glass and cocks.



Equipment for Hand-Fired Coal

Equipment: Steel base assembled with cast iron ash pit front and four corner posts; heavy rocking or dumping grates; backstand; fire and flue doors.

Firing Tools: Hoe, poker, slice bar, flue cleaner and handle.

TYPE "K" HIGH PRESSURE RIVETED FIREBOX

SPECIFICATIONS

applying ONLY to OIL, GAS or STOKER BOILERS

Boiler Number		4K	5K	6K	8K	9K	10K	11K	12K
Rating—Steam Radiation	sq ft	2020	2190	2680	3650	4250	4860	5470	6080
—Horsepower		14	16	19	26	30	35	39	44
—Thousands of Btu per Hour		485	526	643	876	1020	1166	1313	1459
—Pounds of Steam per Hour		500	540	665	905	1050	1200	1350	1500
Heating Surface (SBI Code Min.)	sq ft	119	129	158	215	250	286	322	358
Furnace Volume (SBI Code Min.)	cu ft	14.6	15.7	19.2	26.1	30.4	34.8	39.1	43.5
Furnace Height (SBI Code Min.)	in.		26	28	29½	30	30½	31½	31½
Firebox Volume above Mud Ring	cu ft	19.2	22.6	26.3	34.5	39.2	42.5	48.4	54.3
Shipping Weight—100 Lb. W.P.	lbs	3860	4100	5060	5980	6940	7400	8340	8780
125 Lb. W.P.	lbs	4440	4710	5820	6880	7980	8510	9590	10100
150 Lb. W.P.	lbs	4880	5180	6400	7570	8780	9360	10530	11110

MEASUREMENTS

applying to BOTH MECHANICAL and HAND-FIRED BOILERS

Boiler Number		4K	5K	6K	8K	9K	10K	11K	12K
A—Boiler Diameter	in.	36	36	36	42	42	48	48	48
B—Boiler Length	ft in.	8-10	10-4	11-10	11-10½	12-7½	11-10½	13-4½	14-10½
C—Boiler Head Height	in.	65½	65½	65½	71½	71½	77½	77½	77½
D—Water Line	in.	57	57	57	60½	60½	63	63	63
E—Water Column Height	in.	55½	55½	55½	59	59	61½	61½	61½
F—Supply Height Threaded Flange	in.	66½	66½	66½	72½	72½	78½	78½	78½
Supply Height Flanged Nozzle	in.	70	70	70	76	76	82	82	82
H—Rear Stand Height	in.	29	29	29	29	29	29	29	29
J—Steam Supply Location	ft in.	4-11	5-11	6-11	7-0	7-6	7-0	8-0	8-6
K—Safety Valve, 100 Lb. W.P.	in.	15	18	18	15	15	16	18	18
1st Location, 125-150 Lb. W.P.	in.	15	18	18	15	15	16	18	18
L—Safety Valve, 100 Lb. W.P.	in.			12	12	12	12	12	12
2nd Location, 125-150 Lb. W.P.	in.			12	12	12	12	12	12
N—Blow-Off Height	in.	19	19	19	19	19	19	19	19
O—Firebox Width	in.	30	30	30	36	36	42	42	42
P—Firebox Length	in.	32	38	44	44	50	44	50	56
R—Firebox Height	in.	38	38	38	41½	41½	44	44	44
S—Rear Smokebox Depth	in.	16	16	16	16	16	16	16	16
T—Base Width	in.	41½	41½	41½	47½	47½	53½	53½	53½
U—Base Length	in.	41	47	53½	53½	59½	53½	59½	65½
V—Base Height	in.	14	14	14	14	14	14	14	14
W—Breaching Connection Length	in.	24	24	24	30	30	36	36	36
X—Breaching Connection Width	in.	10	10	10	10	10	10	10	10
Y—Breaching Conn. C.L. to Shell End	in.	8	8	8	8	8	8	8	8
Z—Rear Single Door Clearance, Min.	in.	36	36	36	42	42	48	48	48
ZZ—Space to Draw Long Tubes	ft in.	3-6	4-6	5-6	5-0	6-0	5-6	6-6	7-6
CC—Rear Stand Location	in.	36	40	60	54	66	60	72	84
DD—Foundation Width	in.	48	48	48	54	54	60	60	60
EE—Foundation Length	in.	42½	48½	54½	54½	60½	54½	60½	66½
Breaching Diameter, One Boiler	in.	16	16	17	18	19	20	21	22
Stack Diameter	in.	14	14	15	16	17	18	19	20
Stack Height, Mechanical	ft	30	30	35	35	35	35	40	40
Stack Height, Hand-Fired	ft	35	35	40	40	40	40	45	45
Breaching Diameter, Two Boilers	in.	22	22	23	24	25	26	27	28
Stack Diameter	in.	20	20	21	22	23	24	25	26
Stack Height, Mechanical	ft	40	40	45	45	45	45	50	50
Stack Height, Hand-Fired	ft	40	40	45	45	45	45	50	50
Steam Supply Size	in.	4	4	4	4	4	4	4	4
Blow-Off Size	in.	1½	1½	1½	2	2	2	2	2
Feed Water Connection Size, R. & L.	in.	1½	1½	1½	1½	1½	1½	1½	1½
Safety Valve Boilers Opening (100 Lb. W.P.)	in.	2	2½	2-2	2-2	2-2	2-2	2-2	2-2½
Verdy, A.R. Size	in.	1½	2	2-2	2-2	2-2	2-1½	2-2	2-2
*Outside Surface to Center	in.	91	106	120	133	149	152	177	197

*Front Head NOT included

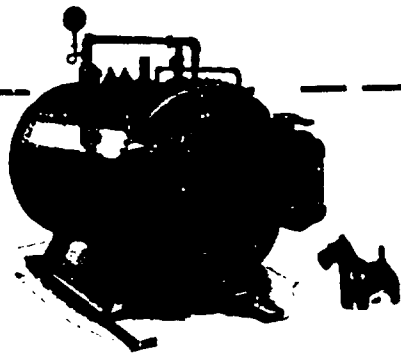
SPECIFICATIONS

applying ONLY to BOILERS with Grates for HAND-FIRING

Boiler Number		4K	5K	6K	8K	9K	10K	11K	12K
Rating—Steam Radiation	sq ft	1380	1800	2200	3000	3500	4000	4500	5000
—Horsepower		10	13	16	22	25	29	32	36
—Thousands of Btu per Hour		331	432	528	720	840	960	1080	1200
—Pounds of Steam per Hour		340	445	545	740	865	990	1110	1240
Heating Surface (SBI Code Min.)	sq ft	119	129	158	215	250	286	322	358
Grate Area (SBI Code Min.)	sq ft	6.8	7.9	8.9	10.5	11.4	12.2	13.4	14.5
AA—Ash Pit Width	in.	30	30	30	36	36	42	42	42
BB—Ash Pit Length	in.	24½	30½	36½	36½	42½	36½	42½	48½
Shipping Weight—100 Lb. W.P.	lbs	4200	4500	5500	6500	7500	8000	9000	9500
125 Lb. W.P.	lbs	4800	5000	6000	7000	8000	9000	10500	11000
150 Lb. W.P.	lbs	5300	5500	7000	8500	9500	10000	11500	12000

KEWANEE

SCOTTIE JUNIOR

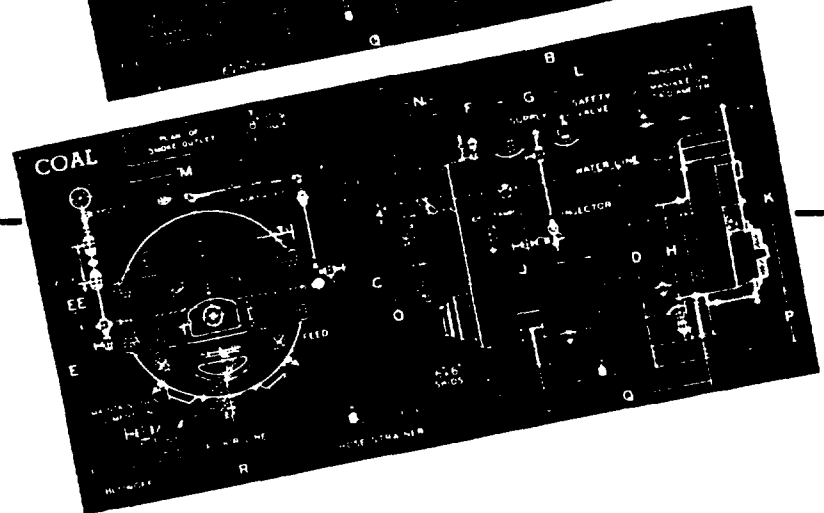
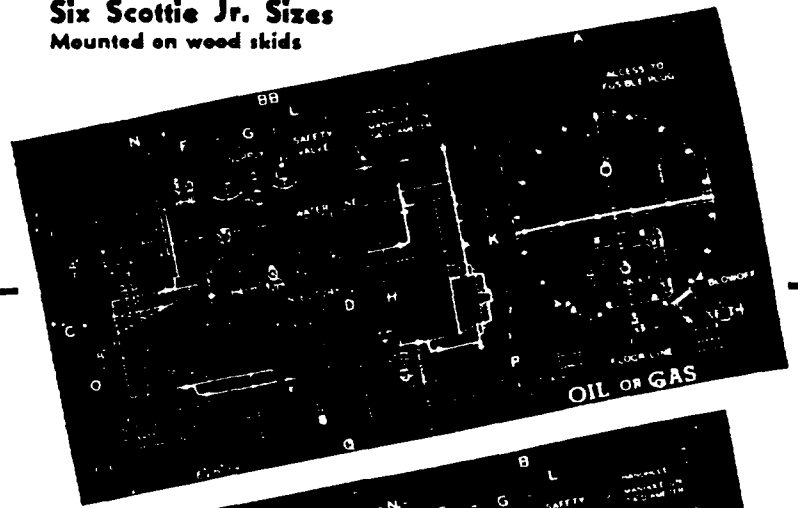


Kewanee HM Series for 6 to 36 hp at 125 lb steam working pressure. Hydrostatic test 187½ lb.

Eight decades of commercially successful usage are back of Scotch Marine type boilers. They are not to be out-performed by any more complex designs.

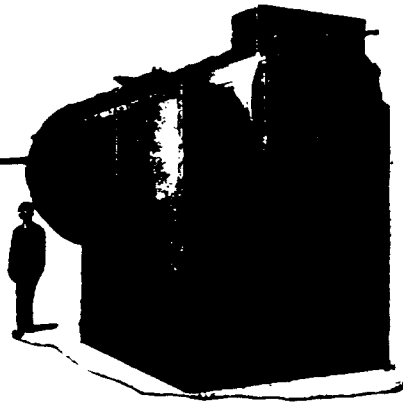
Specifications: Shell flange steel, 55,000 to 65,000 lbs sq in tensile strength. Longitudinal Joint double riveted with double butt strap reinforcement. Heads hot-flanged in homogeneous steel. Tubes high quality seamless steel. Furnace firebox steel welded joint stress relieved. All Castings and equipment extra substantial.

Six Scottie Jr. Sizes
Mounted on wood skids



KEWANEE

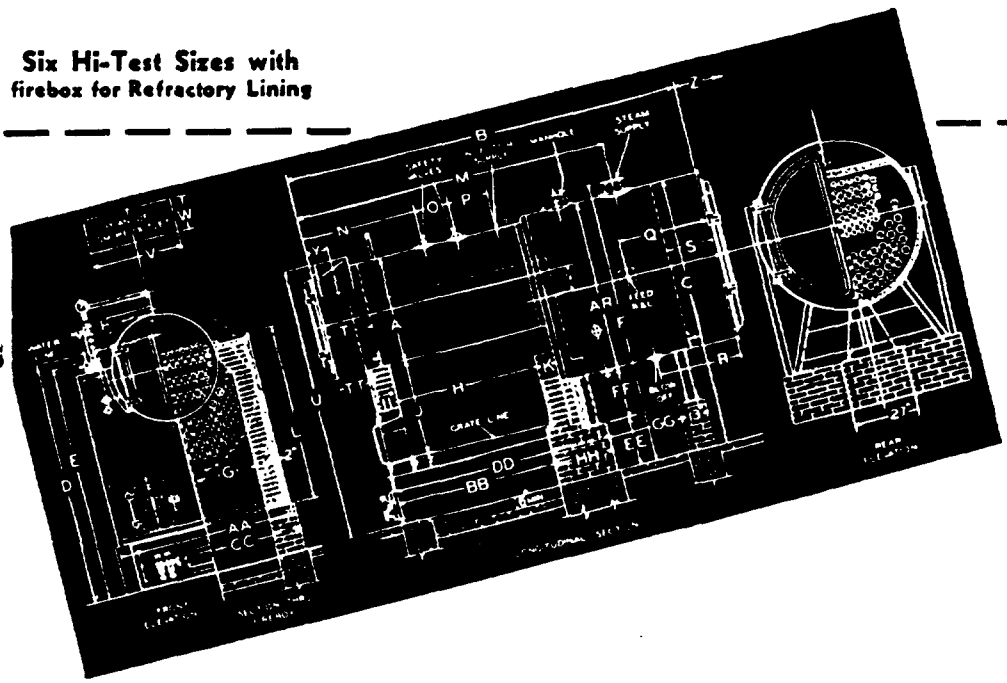
HI-TEST BOILER



Six Hi-Test Sizes with
firebox for Refractory Lining

Kewanee HT Series portable for 50 to 180 hp at 125 and 150 lb steam working pressures. Hydrostatic test one and a half times maximum allowable working pressure.

No. 1 Weld Hi-Test: All seams fabricated by highly qualified welders, exograph inspected, and test coupon recorded, then thoroughly annealed to insure relief of locked up stresses by raising the temperature of the bare boiler in a modern Stress Normalizing Furnace, holding it at a temperature of 1200° then allowing to cool gradually.



SCOTCH TYPE Return Tube High Pressure Riveted Boiler

SPECIFICATIONS and MEASUREMENTS 135 lb Steam MECHANICAL or HAND-FIRED — ASME Code

Boiler Number.	HM6	HM9	HM15	HM20	HM25	HM30	Boiler Number.	HM6	HM9	HM15	HM20	HM25	HM30	
Rating, Mechanical-Fired							Heating Surface	sq ft	60	99	150	200	250	300
—Horsepower	7	12	18	24	30	36	Grate Area	sq ft	3 5	4	6	8	10	12
—Thousands of Btu per Hour	234	400	600	800	1020	1200	Furnace Volume	cu ft	15 5	24 1	29 4	34 6	47 3	53 1
—Pounds of Steam per Hour	242	410	620	830	1050	1240	Steam Supply Size	in.	2	2	2	2	2	3
Rating, Hand-Fired							Blow-off Size	in.	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
—Horsepower	6	9 9	15	20	25	30	Safety Valve Size—	in.	3/4	1	1 1/2	1 1/2	2	2 1/2
—Thousands of Btu per Hour	200	331	500	670	840	1020	Coal, Hand-Fired	in.	1	1 1/2	2	2 1/2	2 1/2	2 1/2
—Pounds of Steam per Hour	207	342	520	640	865	1050	Oil or Gas	in.	1	1 1/2	2	2 1/2	2 1/2	2 1/2
Stoker							Stoker	in.	1	1 1/2	2	2 1/2	2 1/2	2 1/2
A—Boiler Width Overall	in. 47	53	53	53	59	59	Fire Door Ops. Width	in.	15	16	16	16	18	18
B—Length Overall	in. 77 1/2	80	101	122	123	140	Height	in.	10	11	11	11	12	12
BB—Length Overall, Oil-Gas	in. 82 1/2	84 1/2	105 1/2	126 1/2	127	144	Ash Door Ops. Wdt. x Hgt.	in.	15x6 1/2	16x6 1/2	16x6 1/2	16x6 1/2	18x7 1/2	18x7 1/2
C—Height Overall Shell	in. 54 1/2	62	62	62	67 1/2	67 1/2	Breeching Diameter	in.	14	16	17	19	20	22
D—Water Line	in. 46 1/2	53	53	53	57 1/2	57 1/2	Stack Diameter	in.	12	14	15	17	18	20
E—Water Column Height	in. 44 1/2	51	51	51	55 1/2	55 1/2	Height, Hand Fired	ft	30	35	40	40	40	45
EE—Height of Boiler CL	in. 11 1/2	13 1/2	13 1/2	13 1/2	15	15	Outside Surface to Cover	sq ft	57	67	90	111	125	145
F—Steam Supply Location	in. 13	14	18	24	18	24	Shipping Weight—On Skids with		1700	4800	6300	7000	7800	8500
G—Safety Valve Location	in. 15	15	15	16 1/2	22 1/2	16 1/2	Regular Fixtures, Less Stack lbs							
K—Shell Diameter	in. 42	48	48	48	54	54	Plate Thickness—Shell	in.	3/8	3/8	3/8	3/8	3/8	3/8
L—Length	in. 61	63	84	105	105	122	Heads	in.	3/8	3/8	3/8	3/8	3/8	3/8
H—Furnace Diameter	in. 21	24	24	24	28	28	Furnace	in.	3/8	3/8	3/8	3/8	3/8	3/8
J—Grate Length	in. 24	24	36	48	54	60	Return Tubes—Number		16	28	28	28	36	36
M—Breeching Connection	in. 24	30	30	30	36	36	Diameter	in.	3	3	3	3	3	3
N—Location	in. 5 1/2	6	6	6	7 1/2	7 1/2	Length	in.	40	42	63	64	41	100
O—Height	in. 44 1/2	50	50	50	54 1/2	54 1/2	Steel Smoke Stack—Gauge No.		14	14	14	14	12	12
P—Clearance Beneath Shell	in. 12	13 1/2	13 1/2	13 1/2	13	13	at extra cost		12	14	15	17	18	20
Q—Legs Location	in. 38 1/2	39 1/2	43	61	60	77	Diam.	ft	10	35	40	40	40	45
R—Skids Location	in. 37 1/2	42	42	42	45	49	Length	ft	30	35	40	40	40	45
							Weight lbs		350	450	550	650	1000	1200

EQUIPMENT—All boilers mounted on skids; and equipped with smokebox with damper; insulated flue doors; refractory lined rear combustion chamber; rear end plate with cleanout door; handholes; manhole in 54" boilers only; 3/4" fusible plug socket wrench; flue scraper with handle.

COAL Hand-Fired—Cast iron furnace front with fire door and liner; ash door with ratchet draft door; stationary grates and supports; refractory brick wall; hoe, poker.

OIL or GAS Fired—Steel furnace extension with coverplate and peephole.

STOKER Fired—Furnace front with doors NOT furnished by Kewanee Boiler Corporation.

TRIMMINGS, all steam boilers—Water column with gauge glass, cocks, guards, three try-cocks; steam gauge, syphon and cock; safety valve, 1/2" Penberthy injector; blow-off valve; piping and fittings for attaching trimmings to boiler.

No trimmings furnished with hot water boilers.

No mechanical firing equipment included and no damper in smokebox outlet.

HI-TEST No. 1 WELD Two-Pass Tubular for High Pressure Steam

SPECIFICATIONS and SETTING MEASUREMENTS MECHANICAL or HAND-FIRED — ASME Code

Boiler Number	HT50	HT60	HT75	HT100	HT125	HT150	Boiler Number	HT50	HT60	HT75	HT100	HT125	HT150	
A—Cylinder Diam., Front	in. 42	42	42	48	54	54	Rating, Mechanical Fired							
AR—Cylinder Diam., Rear	in. 66	66	72	78	84	84	—Horsepower	60	72	90	120	150	180	
B—Boiler Length	ft. 12.5	13.5	14.3	15.5	16.2	18.6	—Thousands of Btu per Hour	2010	2400	3010	4020	5020	6030	
C—Boiler Height	in. 107	113	116	126	142	142	—Pounds of Steam per Hour	2070	2470	3110	4140	5180	6210	
D—Water Line Height	in. 95	101	104	117	124	124	Rating, Hand-Fired							
E—Water Column Height	in. 93	99	102	109	122	122	—Horsepower	50	60	75	100	125	150	
F—Steam Nozzle Height	in. 113	119	122	132	149	149	—Thousands of Btu per Hour	1640	2010	2510	3350	4200	5020	
X—Cylinders—Ctr. to Ctr.	in. 8 1/2	8 1/2	11 1/2	11 1/2	11 1/2	11 1/2	—Pounds of Steam per Hour	1730	2070	2590	3450	4330	5180	
G—Furnace Width	in. 48	48	53	59	65	65	Heating Surface	sq ft	500	600	750	1000	1250	1500
H—Furnace Length	in. 56	62	62	68	68	80	Grate Area	sq ft	18 3/4	20 3/4	22 5/8	27 5/8	30 2/3	35 7/8
J—Furn. Hgt. above Grates	in. 40	46	46	50	60	60	Furnace Vol. above Grates	cu ft	72	90	105	140	181	213
K—Bridge Wall Width	in. 4 1/2	4 1/2	9	9	9	9	Steam Supply Size	in.	4	4	4	5	6	6
L—Furnace Casing Height above Base	in. 71	77	79	87	100	100	Blow-off Size	in.	2	2	2	2	2 1/2	2 1/2
M—Steam Supply Location	in. 121	128	135	146	149	177	Feed Water Size	in.	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
N—Safety Valve Location	in. 53	54	54	54	60	63	Injector Supply Size	in.	1	1	1 1/2	1 1/2	1 1/2	1 1/2
O—Safety Valve Location	in. 10	14	16	16	16	16	Safety Valve Boiler Openings							
P—Injector Steam Supply Location	in. 10	11	13	20	17	26	No.—Size—125 Lb.	in.	2-2 1/2	2-2 1/2	2-3	2-3	2-3	2-3
Q—Feed Water Location	in. 34	39	42	43	45	45	150 Lb.	in.	2-2 1/2	2-2 1/2	2-3	2-3	2-3	2-3
R—Blow-Off Location	in. 32	32	32	34	36	36	Verify all Sizes							
S—Rear Flue Gas Chamber Depth	in. 20	20	20	22	24	24	Breeching Diameter	in.	24	26	29	31	33	36
T—Front Flue Gas Chamber Depth	in. 20	20	20	22	24	24	Stack Diameter	in.	22	24	27	29	31	34
TT—Shell Ext. Beyond Cap	in. 10	10	10	12	14	15	Stack Height—Hand Fired	ft	35	60	65	70	75	80
U—Breeching Conn., Hgt.	in. 108	114	117	127	143	143	Mech. Fired	ft	45	50	55	60	65	70
V—Length	in. 36	36	36	42	46	46	Breeching Diam., Two Blrs.	in.	31	34	38	41	44	48
W—Width	in. 14	14	14	16	18	18	Stack Diameter, Two Blrs.	in.	29	32	36	38	41	45
Y—Locs.	in. 9	9	9	10	11	11	Stack Height, Two Blrs.	ft	65	70	75	80	85	90
Z—Rear Flue Door Clearance	in. 36	36	39	42	45	45	Hand Fired	ft	55	60	65	70	75	80
AA—Furnace Casing Width, Inside	in. 70	70	75	90	96	96	Mech. Fired	ft	55	60	65	70	75	80
BB—Furnace Length	in. 64	70	70	76	76	86	***Firebrk above Base Line No.		1300	1450	1700	2750	3250	3500
CC—Base Width	in. 78	78	83	98	104	104	***Com. Brk. in Base & Pier No.		800	850	1100	1450	1500	1550
DD—Length	in. 90	96	101	107	107	119	***2 in. Insulation Lining in Furnace	sq ft	130	155	165	205	235	260
EE—Height	in. 15	15	18	18	18	18	Outside Surf. to Cover	sq ft	115	145	165	200	250	300
FF—Saddle Hgt., Frt. & Rear	in. 28	32	28	30	40	40	Approx. Ship. Weight, Boiler							
GG—Rear Brick Pier Locs.	in. 24	32	36	40	42	57	Hand-Fired, 125 Lb.	lbs	13660	15380	18870	22920	26720	30200
HH—Base Rear Wall Thick.	in. 26	26	31	31	31	31	150 Lb.	lbs	13760	15580	19270	23420	27420	30400
							Mech-Fired, 125 Lb.	lbs	12470	14080	17405	21070	24630	28000
							150 Lb.	lbs	12570	14280	17805	21570	25330	28700

*Flanged Steel Nozzle ASA 300 lb extra heavy drilling; Steam supply, blow-off and safety valve sizes given are openings regularly found on boilers in stock.

EQUIPMENT—Standard for Coal, Oil, Gas and Stoker—Boiler shell with damper in outlet; flue gas chambers—rear with insulation lining, insulated doors and frames; front with insulated doors and frame; rear and center saddles; fire doors and frames, steel casing extending to top of masonry base.

COAL Hand-Fired—Base front with ash doors; dead plate; stationary grates.

OIL, GAS, STOKER Fired—No base front furnished. Special base fronts at extra cost.

***No Brickwork, Furnace Refractory or Insulation included.

FIRE TOOLS for Coal, Hand-Fired—Hoe, poker, slice bar, flue cleaners with handles.

For OIL, GAS, STOKER—Flue cleaners with handles only.

TRIMMINGS for Coal, Stoker, Oil, Gas—Steam gauge with syphon and cock; extra heavy water column with water gauge cocks, try-cocks; safety valves per ASME code; blow-off valve and cock; globe and check valve for feed pipe. No other accessories or piping. Special trimmings furnished at additional cost.

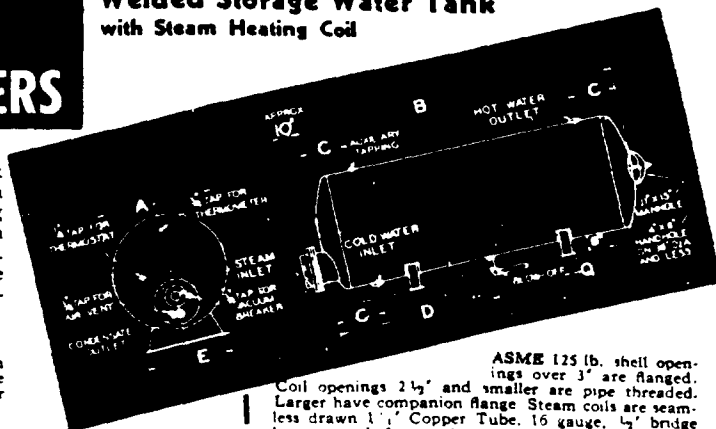
KEWANEE STORAGE WATER HEATERS



Kewanee Storage Tank Heaters consist of a tubular U-Bend heating element inserted in a storage water tank. Steam passing thru the tube raises the temperature of the water circulating around them.

Wherever quantities of hot water are needed and live or exhaust steam is available these thoroughly dependable steel units will serve with storage water capacities 95 to 2240 gallons. Steam Coils heat 50 to 6000 gals. per hour from 40° to 180° F.

Welded Storage Water Tank with Steam Heating Coil



ASME 125 lb. shell openings over 3" are flanged. Larger have companion flange. Steam coils are seamless drawn 1" Copper Tube, 16 gauge, 1/4" bridge between coils for circulation and cleaning.

TANKS

Tank Htr. No.	Strge. Cap. Gals.	Tank Size Dia. Lth.	Water Inlet	Blow-Off	Auxil. Tap Size	Tank Htr. No.	Strge. Cap. Gals.	Tank Size Dia. Lth.	Water Inlet	Blow-Off	Auxil. Tap Size
2404	95	24 x 48	2 1/2	1 1/2	1	4209	950	42 x 108	3	2	1 1/2
2405	118	24 x 60	2 1/2	1 1/2	1	4210	720	42 x 120	3	2	1 1/2
2406	141	24 x 72	2 1/2	1 1/2	1	4212	860	42 x 144	3	2	1 1/2
2407	164	24 x 84	2 1/2	1 1/2	1	4214	1000	42 x 168	3	2	1 1/2
3005	180	30 x 60	2 1/2	1 1/2	1	4810	940	48 x 120	4	2 1/2	1 1/2
3006	215	30 x 72	2 1/2	1 1/2	1	4812	1125	48 x 144	4	2 1/2	1 1/2
3007	255	30 x 84	2 1/2	1 1/2	1	4814	1300	48 x 168	4	2 1/2	1 1/2
3008	285	30 x 96	2 1/2	1 1/2	1	5410	1190	54 x 120	4	2 1/2	1 1/2
3606	310	36 x 72	3	1 1/2	1	5412	1425	54 x 144	4	2 1/2	1 1/2
3607	365	36 x 84	3	1 1/2	1	5414	1665	54 x 168	4	2 1/2	1 1/2
3608	415	36 x 96	3	1 1/2	1	6010	1400	60 x 120	4	2 1/2	1 1/2
3609	475	36 x 108	3	1 1/2	1	6012	1700	60 x 144	4	2 1/2	1 1/2
3610	500	36 x 120	3	1 1/2	1	6014	2000	60 x 168	4	2 1/2	1 1/2
4207	500	42 x 84	3	2	1 1/2	6016	2240	60 x 192	4	2 1/2	1 1/2
4208	575	42 x 96	3	2	1 1/2						

COILS

Heating Coil Size and No.	Heating Cap. G.P.H. with Steam at Atmospheric Pressure	Heating Surface in Sq. Ft.	Horizontal Tank Min. Length	Steam Inlet	Steam Outlet
A-2.5	50	2.5	18	3	1
A-5	100	5	30	2	1
A-10	200	10	66	2	1
B-15	300	15	56	2 1/2	1 1/2
B-20	400	20	52	2 1/2	1 1/2
B-25	500	25	66	2 1/2	1 1/2
C-30	600	30	60	4	2
C-40	800	40	60	4	2
D-50	1000	50	60	5	2 1/2
D-75	1500	75	78	5	2 1/2
D-100	2000	100	102	5	2 1/2
E-150	3000	150	90	8	4
E-200	4000	200	114	8	4
E-250	5000	250	114	8	4
F-300	6000	300	102	10	5

KEWANEE TABASCO HOT WATER HEATERS

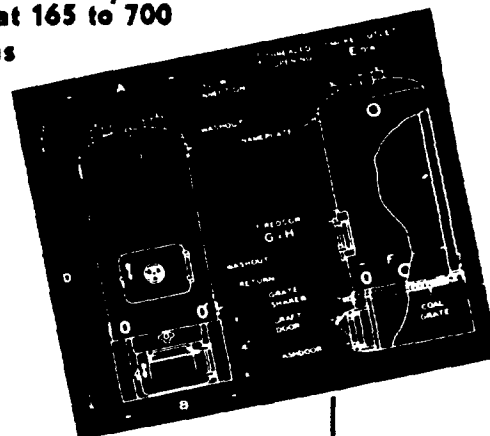


Tabasco Hot Water Supply Heaters have been in production since 1894. They have always been built in the same plant at Kewanee with the same expert care and of the same materials as Kewanee Steel Heating Boilers.

The tables below list the All-Weld Tabasco Water Supply Heater for extra heavy service. 5 sizes to heat 165 to 700 gallons of water per hour—50° rise. Built of steel for longer life . . . amply strong for higher pressures from city water mains. Easy to fire and easy on the fuel bill.

Tabasco Water Heaters are built for 100 pounds working pressure with 150 pounds hydrostatic test. The water temperature raise 50° per hour is double the usual 25° rating.

To Heat 165 to 700
Gallons



Improved BASE and ROCKING GRATE

Height is maintained to give ample clearance below grates. Heater shell rests on cast ring attached to circular side rolled from steel plate. All castings extra substantial. Heavy rocking grate bars work in lugs, easily removable. Rugged ash door for rough usage yet provides easy access for cleaning out. Draft opening is fitted with balanced flap connecting to regulator for automatic draft control.

SPECIFICATIONS

Heater Number	018	022	027	030	032
Code	TWTHB	TWTHD	TWTHG	TWTHH	TWTHJ
Capacity Hot Water 50° Rise Gals. per Hour	165	250	400	550	700
Test Pressure lbs	150	150	150	150	150
Water Working Pressure lbs	100	100	100	100	100
Size of Heater—Shell Diameter x Height in.	18x36	21x36	25x48	31x46	31x54
Total Height—Heater & Base in.	50	50	62	60	68
Fire Pot Diameter in.	13 1/4	16	20	24 1/4	24 1/4
Size Flow in.	2-1 1/2	2-1 1/2	2-2	2-2 1/4	2-2 1/4
Size Return in.	2-1 1/2	2-1 1/2	2-2	2-2 1/4	2-2 1/4
Size Cleanout Plugs in.	5-1 1/2	5-1 1/2	5-2	5-2	5-2
Smoke Outlet Diameter in.	6	6	8	8	8

MEASUREMENTS

Heater Number	018	022	027	030	032
A—Outside Diameter in.	18	21	25	31	31
B—Base Diameter in.	19	22	26	32	32
C—Total Hgt., Htr. & Base in.	50	50	62	60	68
D—Smoke Outlet Diam. in.	6	6	8	8	8
E—Grate Diameter in.	13 1/4	16	20	24 1/4	24 1/4
G x H—Firedoor Opening Hgt. x Width In Shell in.	8x8 1/2	8x8 1/2	9x12 1/2	9x12 1/2	9x12 1/2
Shell Height in.	36	36	48	46	54
Grate Area sq ft	0.96	1.25	2.1	3.2	3.2
Outside Surf. to Cover sq ft	14	17	27	32	36
Shpg. Wgt.—Heater Shell lbs	290	350	620	800	980
Base & Cstgs lbs	140	180	220	300	290
Total lbs	430	530	840	1100	1270

All above capacity ratings are based on raising temperature of water 50 degrees in one hour.

KEWANEE

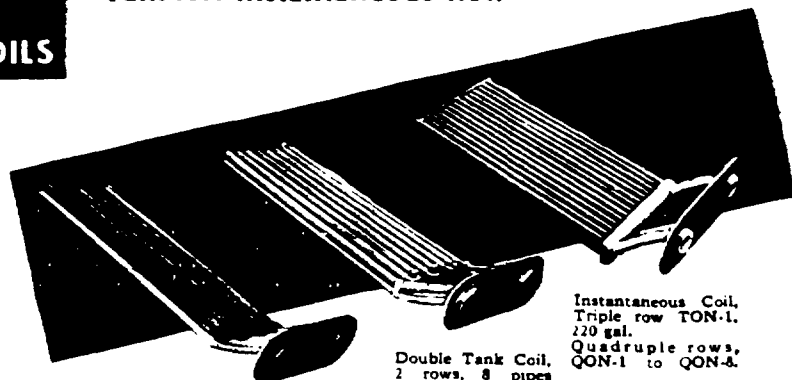
INDIRECT HOT WATER HEATING COILS

All Kewanee Boilers are built so that indirect water heating coils may be installed, quickly and inexpensively either at the factory or after the boiler is on the job.

Note substantial fittings and generous size of piping . . . copper tubing brazed into bronze fittings . . . ends tapped standard pipe thread . . . locknuts and ring gaskets . . . boiler steel mounting plate . . . full face sheet rubber gaskets.

Coil number SR6-24 means Single row or 6 pipes 24' long.
DR8-42 means Double rows of 8 pipes 42' long.

Storage Tank operation or Tankless Instantaneous flow



Instantaneous Coil, Triple row TON-1, 220 gal. Quadruple rows, QON-1 to QON-8.

STORAGE TANK COILS

Storage Tank Coil Size 40°-140° Rise in 3 Hours	Total Gals. with Boiler Water	Boilers
SR6-24	90 55	
SR8-24	120 70	
DR6-24	180 110	
DR8-24	240 145	
DR8-30	320 190	5076-78
2 DR8-30	640 380	5079
DR8-36	400 240	
2 DR8-36	800 480	5080, 81 M-8175
3 DR8-36	1200 720	M-8176, 77
DR8-42	480 290	7L73
2 DR8-42	960 580	5082, 83 M-8178, 79
DR8-48	560 335	7L74
2 DR8-48	1120 670	5084 M-8180
3 DR8-48	1680 1005	5085 M-8181-83
DR8-54	640 385	7L75
3 DR8-54	1920 1155	5086-88 M-8184, 85
DR8-60	720 430	
3 DR8-60	2160 1290	5089, 90 M-8186, 87
DR8-66	800 480	7L76
2 DR8-66	1600 960	7L77
3 DR8-66	2400 1440	M-8188

TANKLESS COILS

Storage Tank Coil Size 40°-140° Rise in 3 Hours	Total Gals. with Boiler Water	Boilers	Tankless Coil Size 40°-140° Rise	Total Gallons in 180° Boiler Wtr.	Boilers
DR8-72	880 530		TON-1	220 3 7	
2 DR8-72	1760 1060	7L78	QON-1	280 4 7	
3 DR8-72	2640 1590	M-8189			
DR8-78	960 575		QON-2	350 5 8	5076-78
2 DR8-78	1920 1150	7L79, 80	2 QON-2	700 11 6	5079-81
3 DR8-78	2880 1725	M-8190	QON-3	420 7 0	
DR8-84	1040 625		2 QON-3	840 14 0	M-8175
2 DR8-84	2080 1250	7L82	3 QON-3	1260 21 0	M-8176, 77
DR8-90	1120 670		QON-4	490	7L73, 74
DR8-96	1200 720		2 QON-4	980	M-8178-81
2 DR8-96	2400 1440	7L81	3 QON-4	1470	5082-85
DR8-102	1280 770		QON-7	600 10 0	7L75
2 DR8-102	2560 1540	7L83, 84	3 QON-7	1800 30 0	5086-88 M-8182-85
3 DR8-102	3840 2310	7L86	QON-8	700 11 7	7L76
DR8-108	1360 815		2 QON-8	1400 23 4	7L77-85
DR8-114	1440 865		3 QON-8	2100 35 1	7L86-90 5089, 90 M-8186-90
2 DR8-114	2880 1730	7L85			
DR8-120	1520 910				
3 DR8-120	4560 2730	7L87-90			

27L70 and 5100 boilers take same coil sizes shown for 7L70 and 5000 series. Any coils shorter than maximum lengths listed may be substituted in same boiler for smaller hot water need. Coil Inlet and Outlet same size iron pipe tap, 1" on TON and 1 1/4" on QON tankless, also 1 1/4" on Storage tank DR coils, and 1" on SR coils.

TANK AND TANKLESS COIL SIZES FOR SQUARE-HEAT AND ROUND R BOILERS LISTED ON PAGE 14

