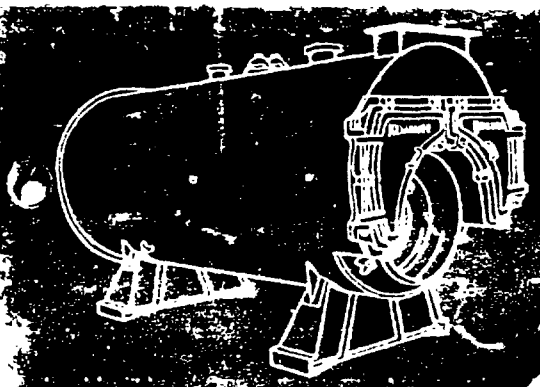
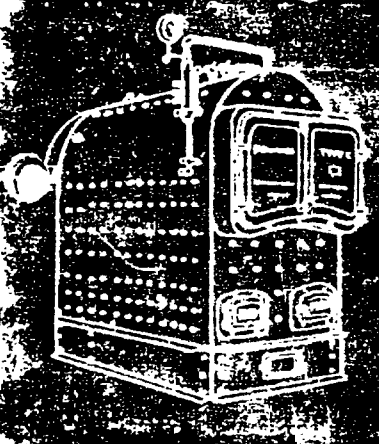
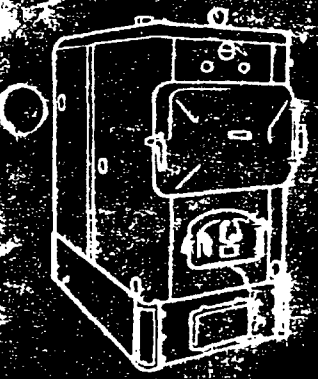
PLAINTIFF'S
EXHIBIT
ASI-26

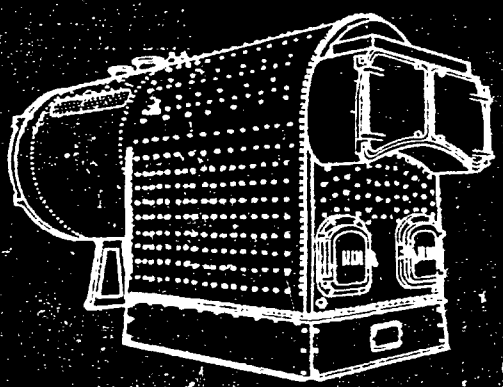






KEWANEE BOILERS

for heating, power and process steam



KEWANEE

more engineering

more material and labor

more experience

make the difference

more engineering: From the design stage, right through to the finished product, the skill and experience of Kewanee engineers is applied continually. First in the designing and proper proportioning of boilers to assure maximum steam production . . . then studying each step of their manufacture . . . and finally in numerous tests of the finished product to make certain it performs as planned.

more material goes into Kewanees to insure extra strength and the generous sizing of all parts that equips them to handle large overloads with efficiency. Even the Kewanee Boilers of compact design . . . intended for use when less floor space or head room is available . . . are never skimped in materials or measurements hence operate at full efficiency throughout their entire firing range.

more labor is put into Kewanees. Notice the smooth riveting, the carefully welded seams, the fine finish of all cast parts! This requires more labor but it *puts something extra* into the boilers that reflects quality.

more experience: Over 85 years of boiler building experience can't be matched by guesswork. When a Kewanee goes onto a job the owner gets all the "know how" Kewanee has accumulated during many years of fabricating boilers of steel.

These are things . . . some of them intangible . . . which make Kewanee Boilers different and better.

nationwide representation: There is a Kewanee representative as near as your telephone and every branch is staffed with men who know boilers and the many problems of generating steam. They are anxious to serve you. See back cover for listing of branch offices.

Copyright 1953 Kewanee-Ross Corporation



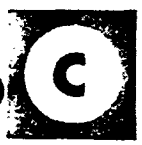
high pressure boilers

number of sizes	SBI hp rating from	SBI hp rating to	pressure	characteristics	series no.	page
15	30	304	125-150	riveted firebox	500	4-5
8	61	304	125-150	welded firebox	Hi-Test	6-7
6	7	36	125	scotch type	Scottie Jr.	8-9
13	39	304	125-150	scotch type	M-800	10-13



low pressure boilers

number of sizes	SBI rating—sq ft steam from	steam to	water from	water to	characteristics	series no.	page
13	5470	42500	8750	68000	scotch type	M-800	10-13
11	7290	42500	11660	68000	welded firebox	Type "C"	14-15
15	4250	42500	6800	68000	welded firebox	5000	16-17



residential boilers

number of sizes	SBI net rating—sq ft steam from	steam to	water from	water to	characteristics	series no.	page
12	900	5000	1440	8000	welded horizontal tube	Square-Heat	18-19
4	400	900	640	1440	welded horizontal tube	Round "R"	20-21
1			510	510	welded vertical tube	Cottage VT510	22
1			510	510	welded boiler-burner unit	Cottage VT510-U	23



water heating equipment

number of sizes	capacity—gal from	capacity—gal to	characteristics	series no.	page
5	165	700	welded	Tabasco	24
1	140	140	welded	Cottage VT510-DW	25
29	95	2240	welded	Storage Water Heater	26



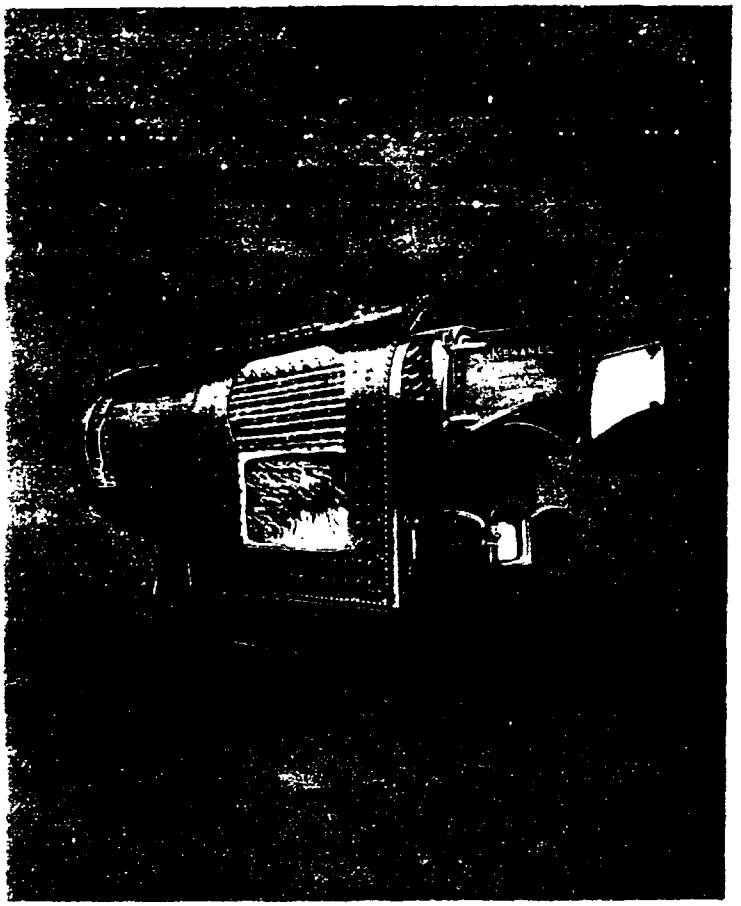
accessories

	characteristics	page
induced draft		27
water heating coils	storage tank & instantaneous—commercial boilers	28
water heating coils	storage tank & instantaneous—residential boilers	29
structural steel supports		30
safety valves	high pressure boilers	31



KEWANEE-ROSS CORPORATION
Division of American Radiator & Standard Sanitary Corporation
KEWANEE, ILLINOIS

KEWANEE



500 Series . . . heavy duty

15 sizes . . . 30 to 304 hp
125 and 150 lb swp

for heavy-duty service . . . providing heat for large apartments, schools, hospitals, office buildings and factories, or for power or process steam . . . Kewanee "500" is a real giant. It is strong, dependable and very efficient. A two-pass firebox type, it is the design which made the name Kewanee famous.

From top to bottom and from front to rear it is built with just one idea . . . to make it the most efficient, dependable and long lived boiler that can be constructed.

Big high fireboxes provide plenty of space and air for the fuel to combine with oxygen and burn, completing the process of combustion before the gases reach the return tubes. In the long travel of the hot gases through the firebox and the lower tubes, then through the upper tubes to the exit chamber, all usable heat is transferred to the boiler's water.

Water surrounds both upper and lower banks of tubes and all sides and top of the fire chamber so the transfer of heat is rapid and certain. Waterways are free of obstructions promoting rapid rise of the steam bubbles to the steam disengaging area and into the capacious steam chamber at the top of the boiler.

The use of 3 inch tubes permits more tubes and more heating surface further helping make the "500" a very fast and efficient steamer. And this efficiency is maintained even when the boiler is pushed to produce 50%, and more steam than is guaranteed by its rated capacity.

Both banks of tubes are easily accessible through the large doors at front and rear . . . manholes and hand holes provide access to the waterways.

Specifications and data are shown for mechanically-fired boilers. For information regarding hand-fired coal types consult the nearest Kewanee representative.

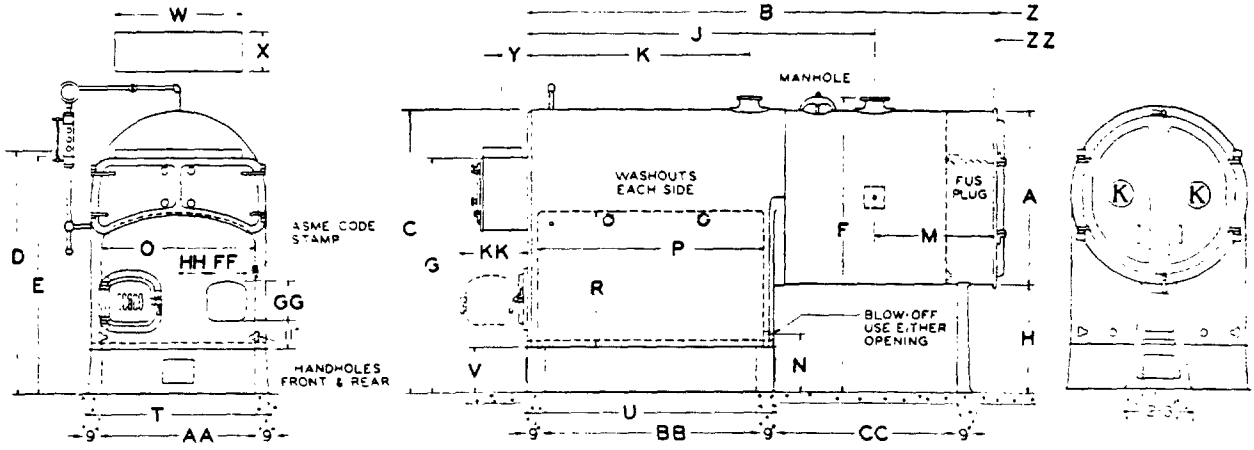
ratings • mechanically fired—oil, gas or coal

boiler number	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
rating—horsepower	30	35	39	44	52	61	74	87	109	130	152	174	217	261	304
—steam radiation sq ft	4250	4860	5470	6080	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500
—Btu per hour 1000's	1020	1166	1313	1459	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200
—steam per hour 212°F lb	1050	1200	1350	1500	1800	2100	2560	3010	3750	4510	5260	6010	7510	9010	10510
firing rate—oil gph*	13	15	16	18	22	26	31	37	46	54	64	73	91	110	127
—gas Btu per hr 1000's	1910	2180	2460	2740	3280	3830	4650	5460	6840	8200	9560	10920	13670	16400	19120
heating surface (SBI min) sq ft	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
furnace volume (SBI 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 min) ft-in	2-6	2-6½	2-7¼	2-7¾	2-8¾	2-10	2-11½	3-1½	3-4¼	3-7	3-10	4-0¾	4-6½	5-0¼	5-6
firebox vol 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 min) ft-in.														0-6	1-0
safety valve capacity															
—oil-gas fired lb steam per hr	2000	2288	2576	2864	3432	4000	4864	5720	7144	8576	10000	11432	14288	17144	20000
—stoker fired lb steam per hr	1750	2002	2254	2506	3003	3500	4256	5005	6251	7504	8750	10003	12502	15001	17500

*Fuel burning rates based on 150,000 Btu oil.
**Represents distance below bottom of water leg that hearth must be set for SBI minimum furnace volume and height.

Standard equipment—Front and rear base panels have 8½ x 11½ in. opening and cover plate. Flue cleaner and handle. Manhole furnished on 580 and larger. Baffle plate in rear combustion chamber furnished on 576 to 588.

Standard trim, steam only—Safety valve, steam gauge with syphon and cock; water column with water-gage glass and three gage cocks, chain operated on 586 and larger.



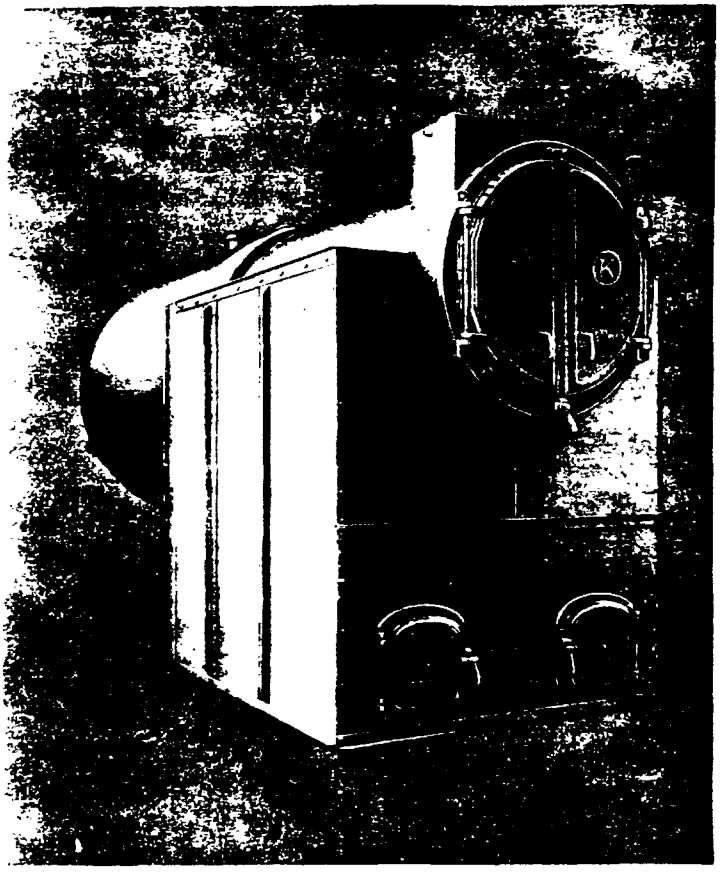
NOTE: Use dimension drawing on this attached fly-sheet. Do not use drawing printed beneath.

dimensi nnd data (feet—inches)

boiler number	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
A—boiler diameter	3-6	3-6	4-0	4-0	4-6	4-6	5-0	5-0	5-6	5-6	6-0	6-6	6-6	7-0	7-0
B—boiler length	8-7	9-6½	8-11½	9-8	9-2½	10-6	11-1	12-9	12-10	14-9	14-9	14-9	17-7½	17-9½	20-0½
C—boiler height	6-8½	6-8½	7-2½	7-2½	7-10½	7-10½	8-6	8-6	9-0	9-0	9-6	9-8	9-8	10-6	10-6
D—water line height	6-1	o-1	6-4	6-4	6-11	6-11	7-4	7-4	7-9	7-9	8-1½	8-4	8-4	9-0	9-0
E—water column height	5-11	5-11	6-2	6-2	6-9	6-9	7-2	7-2	7-7	7-7	7-11½	8-2	8-2	8-10	8-10
F—steam supply height	7-2	7-2	7-8	7-8	8-5	8-5	9-1	9-1	9-7	9-7	10-1	10-3	10-2½	11-0½	11-0½
G—smoke outlet height	5-11	5-11	6-2	6-2	6-9	6-9	7-3	7-3	7-7	7-7	8-1	8-2	8-2	9-0	9-0
H—rear stand height	3-2	3-2	3-2	3-2	3-4	3-4	3-5	3-5	3-5	3-5	3-5	3-1	3-1	3-5	3-5
J—steam supply	6-0	6-6	6-0	6-6	2-1½	2-1½	3-4	3-6	3-9	3-8	3-8	2-9½	12-6	12-6	13-3
*K—safety valve	4-5	4-5	4-5	4-5	4-5	4-11	6-4	6-11	6-11	7-3	7-3	7-7	14-8	14-8	16-5
M—feed water, each side	2-3	2-9	2-6	2-8	2-7	2-11	2-9	3-2	3-2	3-9	3-5	3-7	4-1	4-3	4-3
N—blow-off height	1-7	1-7	1-7	1-7	1-7	1-7	1-10	1-10	1-10	1-10	1-10	1-10	1-10	2-2	2-2
O—firebox—width	3-0	3-0	3-6	3-6	4-0	4-0	4-5	4-5	4-11	4-11	5-5	5-11	5-11	6-5	6-5
P— —length	4-2	4-2	4-2	4-2	4-2	4-8	6-0	6-10	6-10	7-2	7-2	7-6	8-6	8-6	9-0
R— —height	3-5½	3-5½	3-8	3-8	4-1	4-1	4-1	4-1	4-4	4-4	4-6½	4-7	4-7	4-9	4-9
T—base—width	3-11½	3-11½	4-5½	4-5½	4-11½	4-11½	5-6	5-6	6-0	6-0	6-6	7-0	7-0	7-6½	7-6½
U— —length	4-11½	4-11½	4-11½	4-11½	4-11½	5-5½	6-11	7-9	7-9	8-1	8-1	8-5	9-5	9-5	9-11
V— —height	1-2	1-2	1-2	1-2	1-2	1-2	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-9	1-9
W—smoke outlet—length	2-8	2-8	2-10	2-10	3-4	3-4	3-8	3-8	4-3	4-3	4-8	5-0	5-0	5-6	5-6
X— —width	0-9	0-9	0-11	0-11	1-0	1-0	1-2	1-2	1-3	1-3	1-7	1-6	1-6	1-10	1-10
Y— —location	0-6½	0-6½	0-7½	0-7½	0-8	0-8	0-9	0-9	0-9½	0-9½	0-11½	0-11	0-11	1-1	1-1
Z—rear door clearance, min	3-6	3-6	4-0	4-0	2-6	2-6	2-9	2-9	3-0	3-0	3-3	3-6	3-6	3-9	3-9
AA—foundation—width	3-0	3-0	3-6	3-6	4-0	4-0	4-5	4-5	4-11	4-11	5-5	5-11	5-11	6-5	6-5
BB— —length	3-6½	3-6½	3-6½	3-6½	3-6½	4-0½	5-6	6-4	6-4	6-8	6-8	7-0	8-0	8-0	8-6
CC—rear stand	2-9	3-8	3-0	3-8	3-3	4-0	3-0	3-10	4-0	5-6	5-6	5-2	6-10	6-8	7-3
FF x GG—firedoor opening in boiler width x height	one 2-3 x 1-1				two 1-3 x 1-3						two 1-6 x 1-4				
HH—centerline bir to firedoor opg					0-5¾	0-5¾	0-8	0-8	0-11	0-11	0-11	1-1¾	1-1¾	1-4¾	1-4¾
KK—opened firedoor to boiler	1-8	1-8	1-8	1-8	2-3	2-3	2-3	2-3	2-3	2-3	2-6	2-6	2-6	2-6	2-6
ZZ—tube replacement space	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
breeching diameter—one boiler	1-7	1-8	1-9	1-10	1-11	2-0	2-2	2-4	2-6	2-7	2-9	2-11	3-3	3-5	3-7
stack—diameter	1-5	1-6	1-7	1-8	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-9	3-0	3-2	3-4
—height	45-0	50-0	45-0	50-0	45-0	50-0	50-0	60-0	60-0	70-0	70-0	70-0	85-0	90-0	95-0
breeching diameter—two boilers	2-1	2-2	2-3	2-4	2-6	2-7	2-10	3-0	3-4	3-5	3-8	3-11	4-2	4-6	4-8
stack—diameter	1-11	2-0	2-1	2-2	2-4	2-5	2-8	2-10	3-1	3-2	3-5	3-8	3-11	4-2	4-6
—height	55-0	60-0	55-0	60-0	55-0	60-0	60-0	70-0	70-0	80-0	80-0	80-0	95-0	100-0	115-0
**steam supply size	0-4	0-4	0-4	0-4	0-4	0-4	0-6	0-6	0-6	0-6	0-6	0-6	0-8	0-8	0-8
blow-off size	0-1½	0-1½	0-1½	0-1½	0-2	0-2	0-2	0-2	0-2	0-2	0-2½	0-2½	0-2½	0-2½	0-2½
feed water size	0-1¼	0-1¼	0-1¼	0-1¼	0-1¼	0-1¼	0-1½	0-1½	0-1½	0-1½	0-1½	0-1½	0-1½	0-2	0-2
***outside surface to cover sq ft	130	140	150	160	180	195	225	255	285	320	340	360	415	455	505
approximate weight —125 lb swp. lb	7980	8510	9590	10100	11700	12760	14930	16530	19230	21940	24100	26840	31210	35200	38820
—150 lb swp. lb	8780	9360	10550	11110	12870	14030	16420	18180	21150	24130	26510	29520	34330	38500	42700

*For safety valves, see page 31. **300 lb American Standard Flange. ***Includes front head and smokebox.

KEWANEE



Hi-Test for power or industrial process steam

8 sizes . . . 61 to 304 hp
125 and 150 lb swp

The Kewanee Hi-Test Series is an excellent example of a modern all weld boiler. With fusion electric welding, joints of unquestioned strength are obtained, then X-Ray checked to be certain that the seams are perfect. The entire boiler is then placed in a huge Stress Relieving Furnace where the joints are thoroughly annealed then allowed to cool gradually, eliminating any possibility of locked-up stresses. This is the Number 1 Weld procedure followed in all welded Kewanees for high pressure.

The finished boiler is further subjected to hydrostatic test pressures equal to one and one-half times its allowable working pressure in accordance with ASME Code requirements. Each boiler is rigidly inspected . . during construction and when completed by a qualified inspector licensed by the National Board of Boiler and Pressure Vessel Inspectors to insure acceptance by any state or municipality.

Kewanee Hi-Test is in design. Two cylindrical shells of different diameters are joined with tube heads, with only a few diagonal head braces needed. The front and rear flue gas chambers are an integral part of the boiler shell, eliminating joints.

The metal casing on the front of the boiler, which forms the fire chamber, is designed for a refractory lining (not furnished as part of the boiler), making it entirely self-contained.

Hi-Test Kewanee may be fired from the front or rear with all fuels. For information on the Hi-Test for hand-firing, consult your local Kewanee representative.

Specifications and data are shown for mechanically-fired boilers. For information regarding hand fired coal types consult the nearest Kewanee representative.

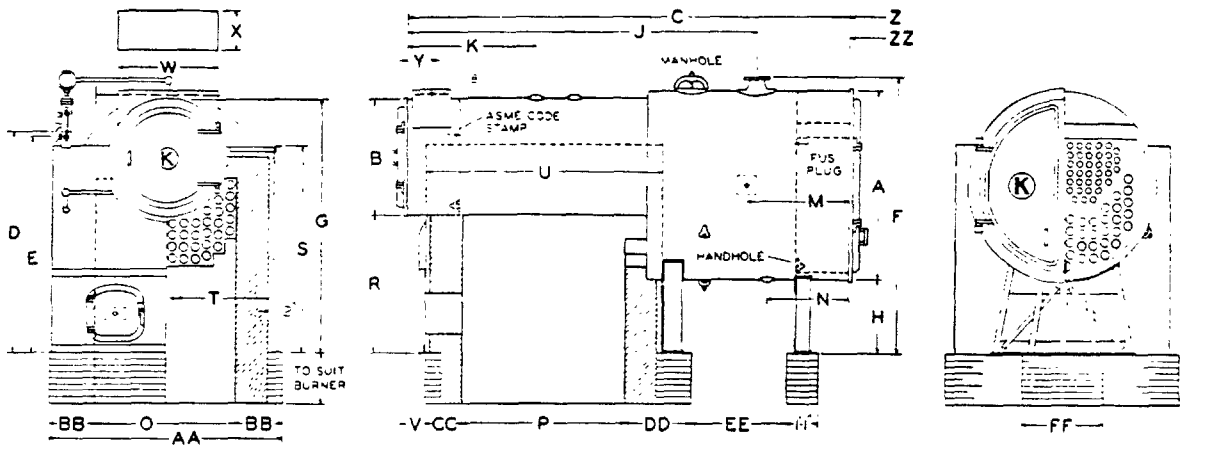
ratings • mechanically fired oil, gas or coal

boiler number		HT50	HT60	HT75	HT100	HT125	HT150	HT200	HT250
rating—horsepower		61	73	91	122	152	182	243	304
—Btu per hour	1000's	2040	2448	3060	4080	5100	6120	8160	10200
—steam per hour—212° F	....lb	2100	2520	3150	4200	5260	6310	8410	10510
firing rate—oil gph*		26	31	38	51	64	76	102	127
—gas Btu per hour ..	1000's	3800	4600	5700	7700	9600	11400	15300	19100
heating surface	sq ft	500	600	750	1000	1250	1500	2000	2500
furnace volume in casing	cu ft	82	101	117	155	198	233	300	349
safety valve capacity									
—oil-gas fired	lb steam per hr	4000	4800	6000	8000	10000	12000	16000	20000
—stoker fired	lb steam per hr	3500	4200	5250	7000	8750	10500	14000	17500

*Fuel burning rates based on 150,000 Btu oil.

Standard equipment—Standard steel casing extending to top of masonry base. No base front furnished. Damper in smoke outlet. Flue cleaners with handles.

Standard trim—Steam gage with siphon and cock; high and low water alarm column with inclined gage glass and chain operated gage valves; chain operated try cocks; safety valves as required by 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.

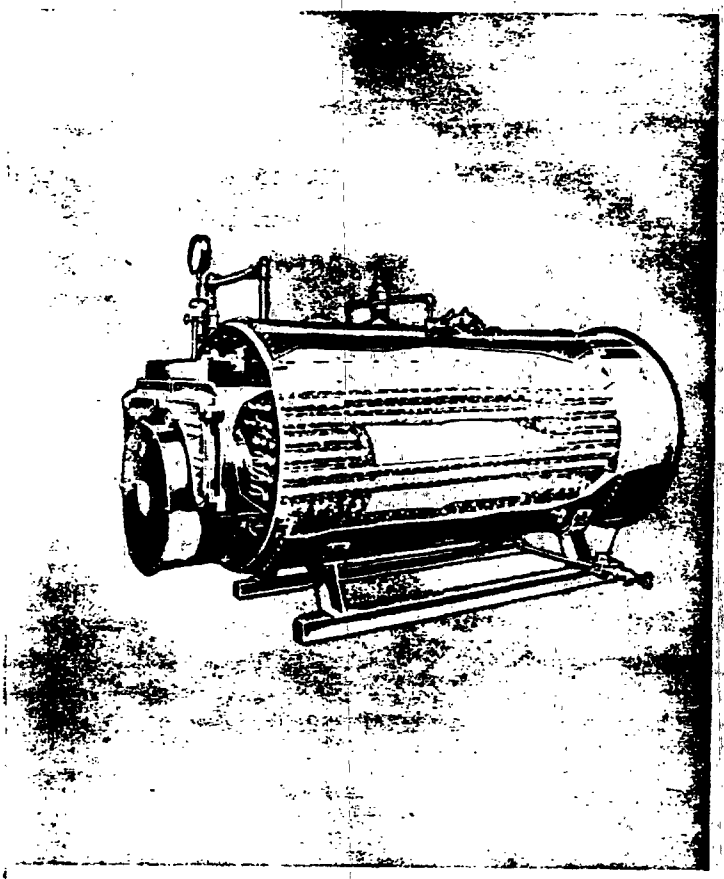


dimensions and data (feet—inches)

boiler number		HT50	HT60	HT75	HT100	HT125	HT150	HT200	HT250
A—cylinder diameter—rear		5-6	5-6	6-0	6-6	7-0	7-0	7-6	8-0
B— —front		3-6	3-6	3-6	4-0	4-6	4-6	5-0	5-6
C—boiler length		12-5	13-5	14-3	15-5	16-2	18-6	19-5	20-11
D—water line height		6-8	7-2	7-2	7-9	8-10	8-10	9-7	9-8
E—water column height		6-6	7-0	7-0	7-7	8-8	8-8	9-5	9-6
F—steam supply height		8-2	8-9	8-9	9-7	10-11	10-11	11-10	12-4
G—smoke outlet height		7-5	7-11	7-11	8-9	10-1	10-1	11-0	11-6
H—saddle height, front & rear		2-2	2-8	2-2	2-6	3-4	3-4	3-9	3-9
J—steam supply		10-1	10-8	11-3	12-2	12-5	14-9	15-8	15-6
*K—safety valve		4-5	4-6	4-6	4-6	5-0	5-3	6-6	7-0
M—feed water, each side		2-10	3-3	3-6	3-7	3-9	3-9	3-9	4-5
N—blow-off		2-8	2-8	2-8	2-10	3-0	3-0	3-0	3-0
O—furnace—width		4-0	4-0	4-5	4-11	5-5	5-5	6-0	6-6
P— —length		4-8	5-2	5-2	5-8	5-8	6-8	7-7	8-1
R— —height		3-10½	4-4½	4-4½	4-8½	5-6½	5-6½	6-0	6-6
S—furnace casing—height		5-11	6-5	6-7	7-3	8-4	8-4	9-4	9-7
T— —width		5-10	5-10	6-3	7-6	8-0	8-0	8-7	9-1
U— —length		6-6	7-0	7-4½	8-3	8-3	9-3	10-2	10-8
V—shell extension beyond casing		0-10	0-10	0-10	0-8	0-10	0-10	0-10	0-10
W—smoke outlet—length		3-0	3-0	3-0	3-6	3-10	3-10	4-6	5-0
X— —width		1-2	1-2	1-2	1-4	1-6	1-6	1-6	1-6
Y— —location		0-9	0-9	0-9	0-10	0-11	0-11	0-11	0-11
Z—rear door clearance, min.		3-0	3-0	3-3	3-6	3-9	3-9	4-0	4-3
AA—base—width		6-6	6-6	6-11	8-2	8-8	8-8	9-0	9-9
BB— —side wall thickness		1-3	1-3	1-3	1-7½	1-7½	1-7½	1-7½	1-7½
CC— —front wall thickness		0-11	0-11	0-11	1-3½	1-3½	1-3½	1-3½	1-3½
DD— —rear wall thickness		1-11	1-11	2-4	2-4	2-4	2-4	2-4	2-4
EE—rear brick pier		2-0	2-6	2-11	3-3	3-8	5-0	5-0	5-0
FF—rear brick pier width		2-8	2-8	2-8	3-0	3-6	3-6	4-0	4-6
ZZ—tube replacement space		7-7	8-7	9-5	10-1	10-4	12-8	13-7	15-1
breeching diameter—one boiler		2-0	2-2	2-5	2-7	2-9	3-0	3-5	3-7
stack—diameter		1-10	2-0	2-3	2-5	2-7	2-10	3-2	3-4
—height		45-0	50-0	55-0	60-0	65-0	70-0	80-0	95-0
breeching diameter—two boilers		2-7	2-10	3-2	3-5	3-8	4-0	4-6	4-8
stack—diameter		2-5	2-8	3-0	3-2	3-5	3-9	4-2	4-4
—height		55-0	60-0	65-0	70-0	75-0	80-0	90-0	105-0
**steam supply size		0-4	0-6	0-6	0-6	0-6	0-6	0-8	0-8
blow-off size		0-2	0-2	0-2	0-2	0-2½	0-2½	0-2½	0-2½
feed water size		0-1¼	0-1½	0-1½	0-1½	0-1½	0-1½	0-2	0-2
***firebrick in casing	no.	1300	1450	1700	2750	3250	3500	4900	5300
***2" insulation lining in furnace	sq ft	130	155	165	205	235	260	340	365
outside surface to cover	sq ft	115	145	165	200	250	300	325	350
approximate weight, boiler—125 lb swp.	lb	12470	14080	17405	21070	24630	28000	32000	36000
—150 lb swp.	lb	12570	14280	17805	21570	25330	28700	33000	37000

* For safety valves, see page 31. ** 300 lb American Standard Flange. *** No brickwork, furnace refractory or insulation included.

KEWANEE



Scottie Junior

6 sizes . . . 7 to 36 hp . . . 125 lb swp

Originally designed for ships with limited space and head room, Kewanee Scotch type boilers provide the solution for many power and industrial process steam problems.

Shell of flange quality steel with a tensile strength of 55,000 to 65,000 pounds per square inch. Longitudinal joint is riveted with double butt strap construction. Girth seams are riveted and caulked tight around the shell edges and at each end of the welded furnace. Solid through-stays complete front to rear plates.

Rear combustion chamber . . . with high temperature refractory lining installed at the factory.

Long gas travel to the rear through the furnace . . . then to the front through heavy 12 gage 3" fire tubes . . . transfers all usable heat to the water.

Longer furnace creates ideal flame conditions for automatic firing with any standard gun-type burner.

Mounted on skids . . . Scottie Jr. arrives mounted on substantial wood skids. No foundation is needed. Steel skids available at extra cost.

Heads, hot flanged of firebox quality steel and tube holes trepanned from solid plate.

Heavy cast iron doors precision ground for gas tight fit. Heavily insulated to prevent warping.

Threaded flange steam outlet assures tight fitting, trouble-proof connection with steam mains.

Large steam space assures ample reserve of steam. Unobstructed disengaging area at water line keeps the steam dry.

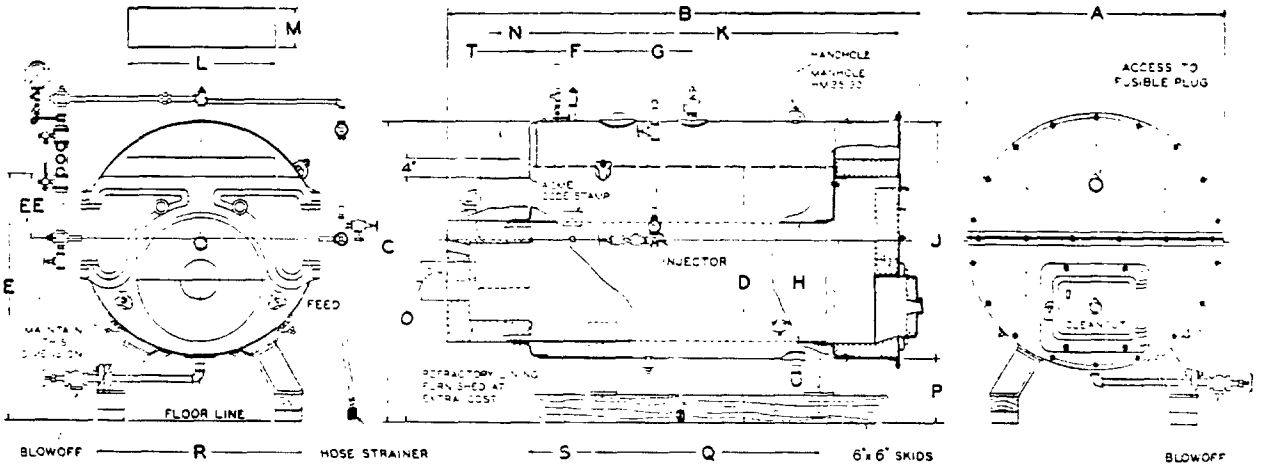
ratings • mechanically fired—oil or gas

boiler number		HM6	HM9	HM15	HM20	HM25	HM30
rating—horsepower		7	12	18	24	30	36
—Btu per hour	1000's	234	400	600	800	1020	1220
—steam per hour—212° F.	lb	242	410	620	830	1050	1260
certified output rating	hp	10.5	18	27	36	45	54
firing rate—oil gph*		3.5	5.8	8.7	11.5	14.4	17.3
—gas Btu per hour	1000's	480	810	1200	1620	2030	2430
heating surface	sq ft	60	99	150	200	250	320
furnace volume	cu ft	15.5	24.1	29.4	34.6	47.3	53.1
safety valve capacity	lb steam per hr	480	792	1200	1600	2000	2400

* Fuel burning rates based on 140,000 Btu oil.

Standard equipment—All boilers mounted on skids; manhole in HM25 & 30 refractory lined rear combustion chamber, rear end plate with cleanout door, ¾ in. fusible plug socket wrench, flue scraper with handle. Steel furnace extension with coverplate and peephole.

Standard trim, steam only—Water column with water gage glass and three gage cocks, steam gage, siphon and cock, safety valve; ¾ in. Penberthy injector; stop-off valves; piping and fittings for attaching trimmings to boiler. No trimmings furnished with hot water boilers.

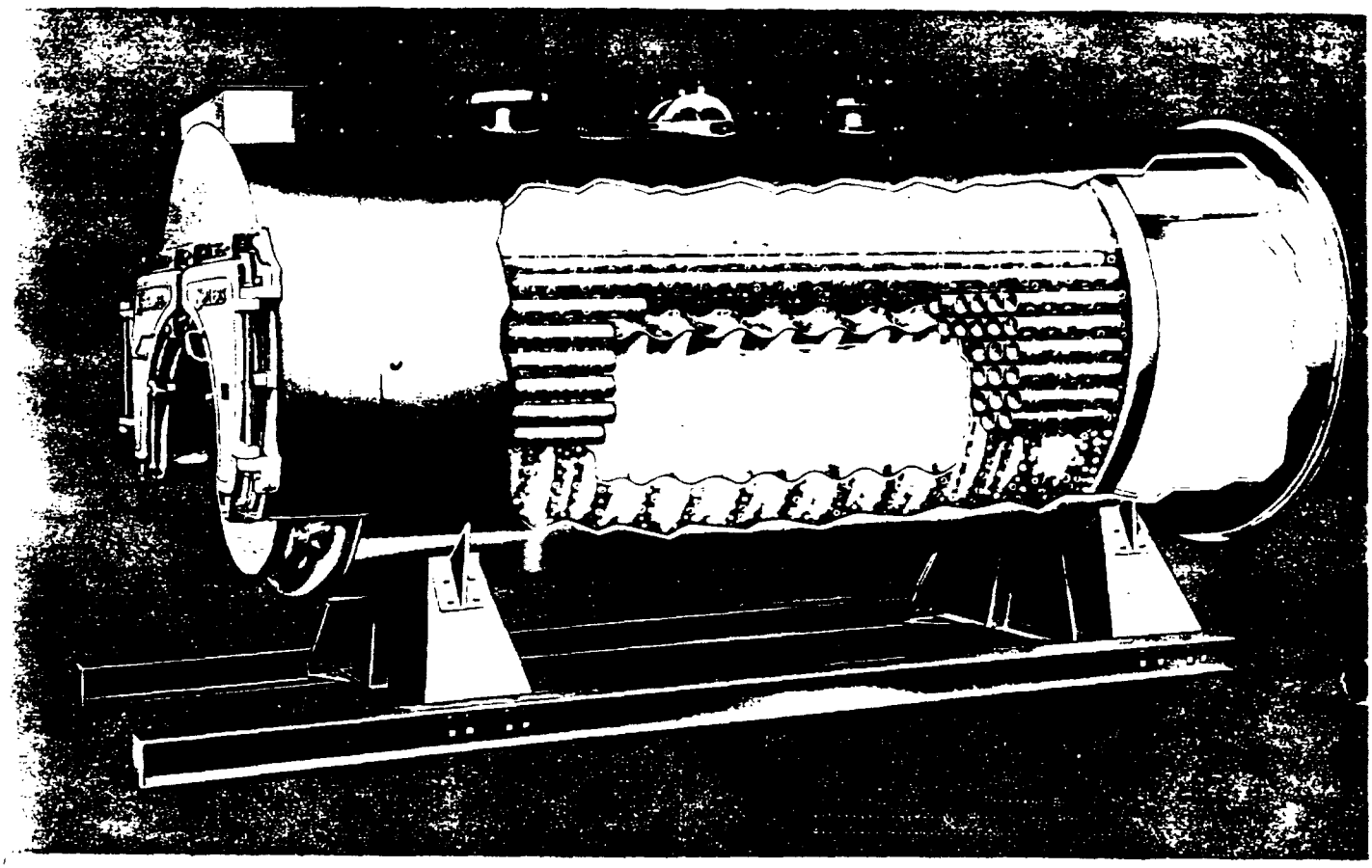


dimensions and data (feet - inches)

boiler number	HM6	HM9	HM15	HM20	HM25	HM30
A—boiler diameter overall	3-11	4-5	4-5	4-5	4-11	4-11
B—boiler length overall	6-10½	7-0½	8-9½	10-6½	10-7	12-0
C—boiler shell height	4-6½	5-2	5-2	5-2	5-7½	5-7½
D—water line height	3-10½	4-5	4-5	4-5	4-9½	4-9½
E—water column height	3-8½	4-3	4-3	4-3	4-7½	4-7½
EE—height from boiler CL	0-11¼	1-1¼	1-1¼	1-1¼	1-3	1-3
F—steam supply	1-1	1-2	1-6	2-0	1-6	2-0
*G—safety valve	1-3	1-3	1-3	1-4½	1-10½	1-5
H—furnace diameter	1-9	2-0	2-0	2-0	2-4	2-4
J—shell—diameter	3-6	4-0	4-0	4-0	4-6	4-6
K— —length	5-1	5-3	7-0	8-9	8-9	10-2
L—smoke outlet—length	2-0	2-6	2-6	2-6	3-2	3-2
M— —width	0-7	0-8	0-8	0-8	0-8	0-8
N— —CL to boiler	0-5½	0-6	0-6	0-6	0-7½	0-7½
O— —height	3-8	4-2	4-2	4-2	4-6½	4-6½
P—clearance beneath shell	1-0	1-1	1-1	1-1	1-1	1-1
Q—legs location	3-2½	3-3½	3-7	5-1	5-0	6-6
R—skids location	3-1½	3-5	3-6	3-6	3-9	3-9
S—CL front leg to front head	0-9	0-9	1-3	1-6	1-6	1-6
T—tube replacement space	3-4	3-6	5-3	7-0	6-11	8-4
breeching diameter	1-2	1-4	1-5	1-7	1-8	1-10
stack—diameter	1-0	1-2	1-3	1-5	1-6	1-8
—height**	20-0	20-0	25-0	25-0	25-0	30-0
steam supply size	0-2	0-2	0-2	0-2	0-2	0-3
blow-off size	0-1¼	0-1¼	0-1¼	0-1¼	0-1¼	0-1¼
draft loss through boiler inches of water	.04	.04	.07	.10	.10	.14
combustion gases at smoke outlet cfm at 600° F	260	430	650	860	1080	1300
outside surface to cover sq ft	57	67	90	111	125	145
approximate weight—on skids with regular fixtures lb	3400	4700	5600	6400	7800	9000

* For safety valves, see page 31. ** For pressure atomizing oil burner or power gas burner

KEWANEE



ratings • mechanically fired — oil or gas

boiler number—high pressure] —low pressure		HM-878 LM-878	HM-879 LM-879	HM-880 LM-880	HM-881 LM-881	HM-882 LM-882	HM-883 LM-883	HM-884 LM-884	HM-885 LM-885	HM-886 LM-886	HM-887 LM-887	HM-888 LM-888	HM-889 LM-889	HM-890 LM-890
SBI rating—horsepower		39	44	52	61	74	87	109	130	152	174	217	261	304
—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
—steam per hour—212° F	lb	1350	1500	1800	2100	2560	3010	3750	4510	5260	6010	7510	9010	10510
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
certified output rating	hp	59	66	78	92	111	131	164	195	228	261	326	392	456
firing rate—oil gph*		16	18	22	26	31	37	46	54	64	73	91	110	127
—gas Btu per hour	1000's	2460	2740	3280	3830	4650	5460	6840	8200	9560	10920	13670	16400	19120
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	45.8	48.4	57.9	62.4	79.8	87.5	110.2	141.1	153.7	174.0	217.0	262.9	308.8
safety valve capacity —over 15 lb swp	lb steam per hr	2576	2864	3432	4000	4864	5720	7144	8576	10000	11432	14288	17144	20000
—15 lb swp	lb steam per hr	1610	1790	2145	2500	3040	3575	4465	5360	6250	7145	8930	10715	12500

* Fuel burning rates based on 150,000 Btu oil.

Standard equipment (15-125-150 lb steam)—Steel saddle supports, refractory lined rear combustion chamber factory installed. Flue cleaner and handle. Washout plug socket wrench for 15 lb boilers only.

Standard trim (15-125-150 lb steam)—Safety valve(s) as required by ASME Code, steam gage with siphon and cock, water column with water gage glass and three gage cocks. Chain operated water gage valves and try cocks with boilers HM-884, LM-884 and larger.

Note—For 125 and 150 lb steam boilers Globe and check valves for feed line, quick action and slow action blow-off valves are furnished.

Standard equipment (water boilers)—Steel saddle supports, refractory lined rear combustion chamber factory installed. Flue cleaner and handle. Washout plug socket wrench.

Standard trim (water boilers)—None furnished.
Additional equipment or trim at extra cost.

a/b

M-800 series

- **high pressure units . . . 39 to 304 hp . . . 125 and 150 psi**
- **low pressure units . . . 15 psi steam or 30 psi water . . . 1,313,000 to 10,200,000 Btu**

The Scotch type Kewanee M-800 is decidedly Scotch in its ruggedness and extreme thriftiness when it comes to producing steam economically. Designed and built to generate steam with efficiency through its entire firing range, it can be pushed far above its rated capacity without interrupting its usual economical operation.

The M-800 is designed on 8.2 square feet of heating surface for each horsepower of its rated capacity. This proper proportioning of primary and secondary heating surfaces to the volume of water in the boiler comes only as a result of many years of experience and continual testing to find out just what is right.

1 **Shell** is shaped from heavy flange steel with heads and furnace of firebox quality. All welds in accordance with ASME Code. Boilers for 125 and 150 psi stress relieved.

2 **Large steam chamber** provides reserve for emergency demands

3 **Unbroken steam disengaging area** permits steam to rise without undue turbulence.

4 **11 x 15 in. manhole** and washout openings give access to waterside.

5 **Corrugated furnace** for extra strength and added heating surface next to the fire. Its generous size provides plenty of space for the burning fuel to mix with the air and burn completely. Low pressure boilers provided with plain circular furnace.

6 **Heavy gage 3 in. tubes** expanded into holes with ends firmly rolled and beaded.

7 **Rear combustion chamber** is heavily lined with refractory. Boilers for high pressure incorporate arch baffle design. Low pressure boilers designed with water back and sectional rear cover plate with observation port and access plug to fusible plug.

8 **Sturdy steel saddle supports** simplify handling and installation. No special base is required.

9 **Long gas travel** the length of the fire chamber and into the rear combustion chamber then forward through the long tubes gives the water in the boiler a chance to absorb all the heat . . . stepping up the transfer of heat without wasting it.

10 **Rapid circulation** through the unobstructed waterways speedily sweeps the steam bubbles up without commotion . . . an important factor in making M-800 a fast steamer

11 **Substantial hinged flue doors,** gasketed for permanent gas-tight fit. Provide easy access to fire tubes for cleaning and inspection.

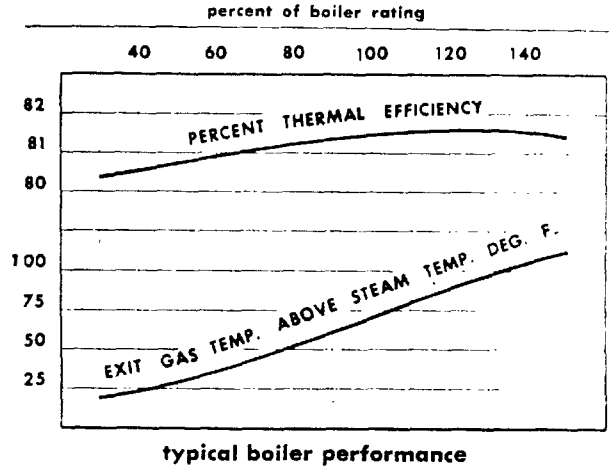
12 **Gas tight smokebox** of heavy gage steel . . . welded in one piece to boiler shell. Rectangular smoke outlet located at top.

certified high efficiency

Teamed with any good oil, gas or combination oil-gas burner, Kewanee M-800 performs "on the job" with overall efficiencies of 80% and more. And this efficiency remains practically constant whether the boiler is being operated at 50% or 150% of its rated capacity.

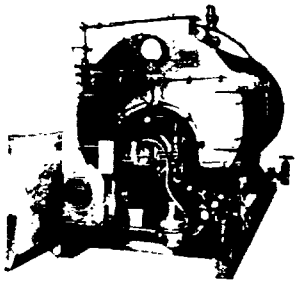
Such efficiency figures are confirmed by certified performance tests in which the total amount of the heat in the oil or gas put into the burner and the amount of water evaporated into steam are carefully measured and converted into a figure showing the overall operating efficiency.

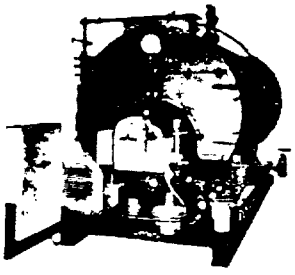
A chart of typical boiler performance appears at the right.



typical boiler performance

KEWANEE®





M-800 series

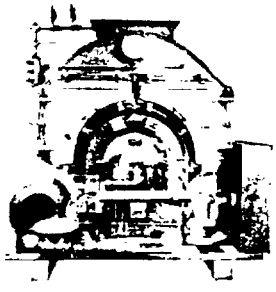
. . . a great teammate for any quality oil, gas or combination oil-gas burner

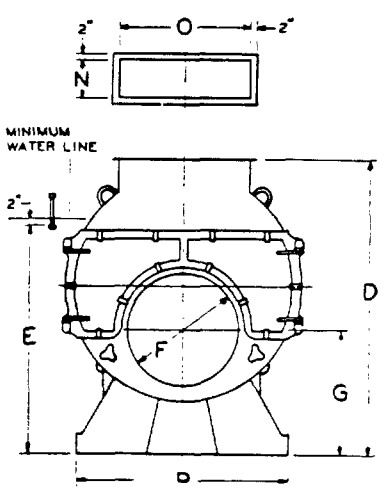
The Kewanee M-800 Boiler is ideal for use with any quality oil, gas or combination oil-gas burner to form a complete Boiler-Burner Unit.

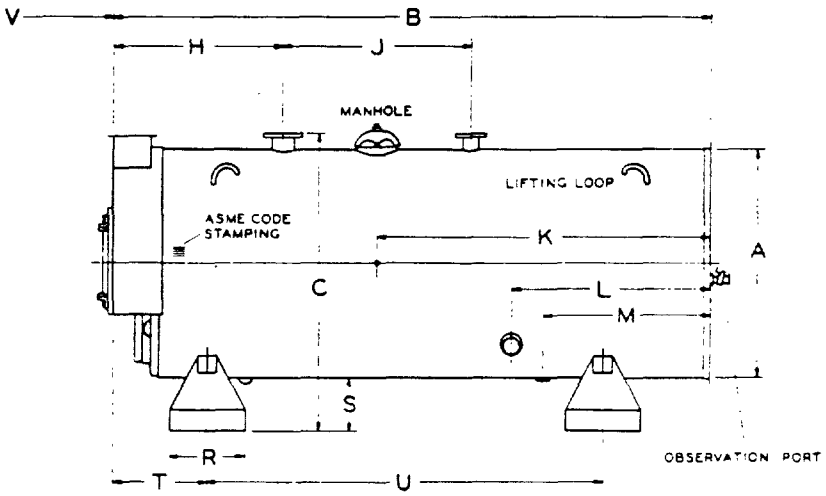
A few of the many features which make this boiler so adaptable to Boiler-Burner Units are . . .

- complete range of sizes for both high and low pressures
- unusual strength and dependability
- ability to produce far above rated capacities at highest efficiencies
- greater heating surface
- ease of cleaning and inspection
- steel skids that eliminate special base construction
- only two or three matching connections to make in mounting burners to boiler frame

Three Boiler Burner Units developed using the M-800 Series are shown at left. For additional information on these units, write for separate catalogs.





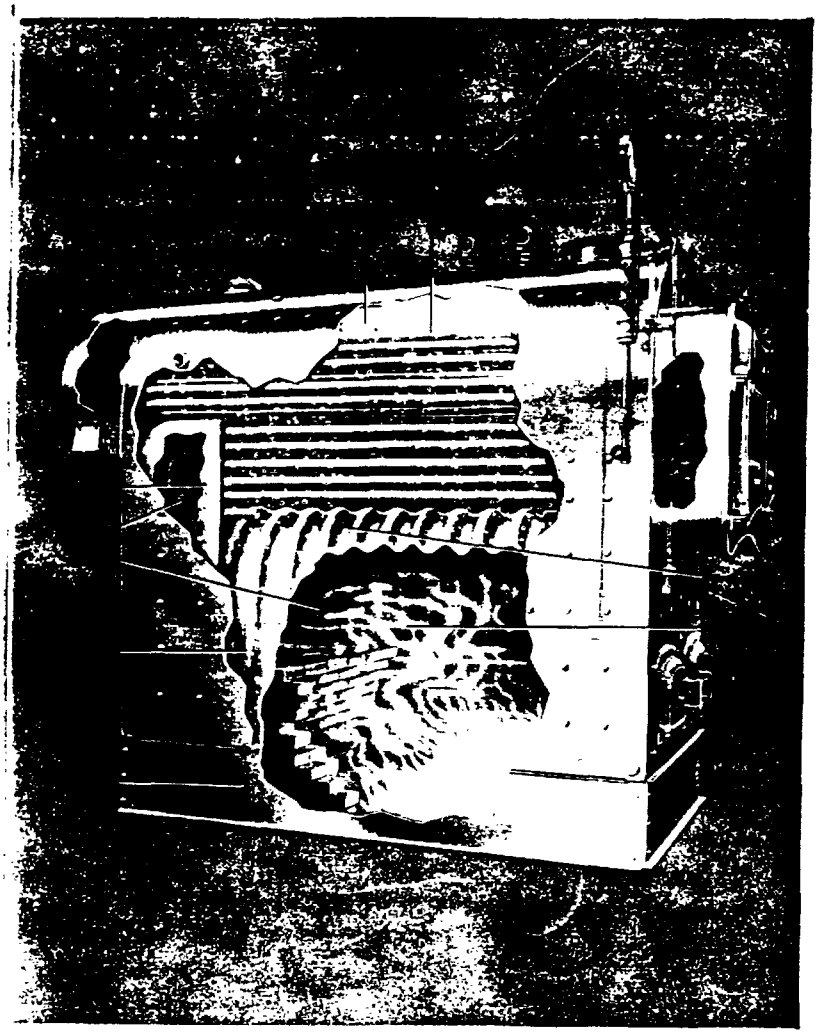


dimensions and data (feet—inches)

boiler number—high pressure —low pressure	HM-878 LM-878	HM-879 LM-879	HM-880 LM-880	HM-881 LM-881	HM-882 LM-882	HM-883 LM-883	HM-884 LM-884	HM-885 LM-885	HM-886 LM-886	HM-887 LM-887	HM-888 LM-888	HM-889 LM-889	HM-890 LM-890
A—boiler diameter	4-6	4-6	5-0	5-0	5-6	5-6	6-0	6-6	6-6	7-0	7-6	8-0	8-6
B—boiler length	11-8	12-7	11-7	12-9½	13-2	14-10	16-1	16-7	18-7	17-9	18-11	20-0	20-1
C—steam supply height	6-6	6-6	7-0	7-0	7-6½	7-6½	8-0½	8-6½	8-6½	9-0½	9-7½	10-4½	10-10½
D—smoke outlet height	6-4	6-4	6-10	6-10	7-4	7-4	7-10	8-4	8-4	8-10	9-4	10-1	10-7
E—water column height	5-1	5-1	5-6	5-6	5-9½	5-9½	6-1½	6-5½	6-5½	6-9½	7-3	7-10½	8-4
F—furnace o. d. at front	2-3½	2-3½	2-6½	2-6½	2-9½	2-9½	2-11½	3-2½	3-2½	3-6	3-8½	4-1	4-5
G—furnace height	3-0	3-0	3-1½	3-1½	3-3	3-3	3-5	3-6½	3-6½	3-8	3-9½	4-2½	4-4½
H—steam supply	3-0	3-6	3-1	3-7	3-8	4-2	4-9	4-10	5-4	5-5	5-5	5-6	5-7
*J—safety valve	3-6	4-3	4-3	4-4	4-5	5-0	5-0	5-0	6-6	5-6	5-6	7-0	7-0
K—feed water, each side	6-7	7-1	6-6	7-1	7-4	8-2	8-10	9-3	10-3	9-10	10-6	11-0	11-3
L—return 15 lb swp, each side	4-4	4-4	4-4	4-4	4-9	4-9	5-3	5-8	6-2	6-3	6-5	6-7	6-7
M—blow-off	4-0	4-0	4-0	4-0	4-3	4-3	4-5	5-4	5-4	5-6	5-6	5-6	5-6
N—smoke outlet—width	0-11	0-11	1-0	1-0	1-1	1-1	1-2	1-3	1-3	1-4	1-4	1-5	1-5
O— —length	2-5	2-5	3-0	3-0	3-4	3-4	3-6	3-11	3-11	4-7	5-4	5-7	6-1
P—support—length	3-11½	3-11½	4-5½	4-5½	5-1½	5-1½	5-7½	6-1	6-1	6-6½	7-0½	7-6	7-5
R— —width	1-4	1-4	1-5	1-5	1-6	1-6	1-7	1-8	1-8	1-10	1-10	2-0	2-0
S— —height	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-9	1-9
T— —location	2-3	2-3	2-4	2-4	2-5	2-8	2-9	2-10	3-4	3-5	3-5	3-6	3-7
U— —center to center	6-11	7-10	6-9	7-11	8-1	9-6	10-6	10-6	12-0	11-3	12-0	12-3	13-0
V—tube replacement space	7-2	8-1	6-11	8-1½	8-2	9-10	10-9	10-8	12-8	11-7	12-7	13-5	13-5
breeching diameter—one boiler	1-9	1-10	1-11	2-0	2-2	2-4	2-6	2-7	2-9	2-11	3-3	3-5	3-7
stack—diameter	1-7	1-8	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-9	3-0	3-2	3-4
—height	40-0	40-0	35-0	40-0	40-0	45-0	50-0	50-0	55-0	50-0	55-0	55-0	55-0
breeching diameter—two boilers	2-3	2-4	2-6	2-7	2-10	3-0	3-4	3-5	3-8	3-11	4-2	4-6	4-8
stack—diameter	2-1	2-2	2-4	2-5	2-8	2-10	3-1	3-2	3-5	3-8	3-11	4-2	4-4
—height	45-0	45-0	40-0	45-0	45-0	50-0	55-0	55-0	60-0	55-0	60-0	60-0	60-0
steam supply size—15 lb swp**	0-6	0-6	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-10	0-10	0-10
—over 15 lb swp***	0-4	0-4	0-4	0-4	0-6	0-6	0-6	0-6	0-6	0-6	0-8	0-8	0-8
blow-off size	0-1½	0-1½	0-2	0-2	0-2	0-2	0-2	0-2	0-2½	0-2½	0-2½	0-2½	0-2½
return size 15 lb swp	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-6*	0-6*	0-6*
feed water size	0-1¼	0-1¼	0-1¼	0-1¼	0-1½	0-1½	0-1½	0-1½	0-1½	0-1½	0-1½	0-2	0-2
outside surface to cover sq ft	155	180	180	200	230	260	305	340	380	390	440	500	550
approximate weight													
— 15 lb swp lb	7000	7400	8200	8800	11300	12400	14800	17400	19200	22400	26600	31300	35000
—125 lb swp lb	7600	8000	10000	11100	13100	14000	17500	20800	21900	27100	32000	37200	41900
—150 lb swp lb	8200	8700	10400	11500	13900	15100	18700	22700	24900	28700	34500	43100	45100

* For safety valves, see page 31. ** 150 lb American Standard Flange. *** 300 lb American Standard Flange.
Low pressure boilers furnished with openings for oil heater and temperature control.
High pressure boilers furnished with openings for oil heater and injector.
Overall height is increased 1½ in. when steel skids are furnished.

KEWANEE



type "C" 15 psi steam or 30 psi water
1,750,000 to 10,200,000 Btu

Kewanee Type "C", with its corrugated Crown Sheet, has become America's most popular boiler for heating large buildings. It fills a definite need for a completely dependable, fast-steaming boiler designed for restricted space. The following features tell why.

A **Capacious steam space** provides room for large reserve.

B **Expansive steam disengaging area** is unbroken, eliminating turbulence at the water line and keeping wet steam from the mains.

C **Rear combustion chamber,** an integral part of the firebox, converts any unburned fuel into heat before reaching firetubes.

D **Crown sheet** of heavy flange steel is formed with massive corrugations, adding strength and practically doubling the heating surface over the hottest part of the fire.

E **Wider, larger combustion chamber** provides sufficient air and space to completely burn all the fuel.

F **Long gas travel** through the firebox and rear combustion chamber then forward through the lower tubes then again to the rear through the upper tubes, holds the gases in the boiler until all usable heat is picked up by the boiler's water.

G **Rapid circulation** of water up from the large water legs at sides, front and rear and between the widely spaced firetubes prevents sediment from lodging and permits steam bubbles to be swept up quickly . . . an important factor that makes the Type "C" a very quick "steamer."

H **Heavy steel base** assembled with 4 staunch cast iron posts.

J **Cast doors** are extra heavy, and insulated to keep heat inside the boiler.

Specifications and data are shown for mechanically-fired ... For information regarding hand-fired ... call or write the nearest Kewanee ...

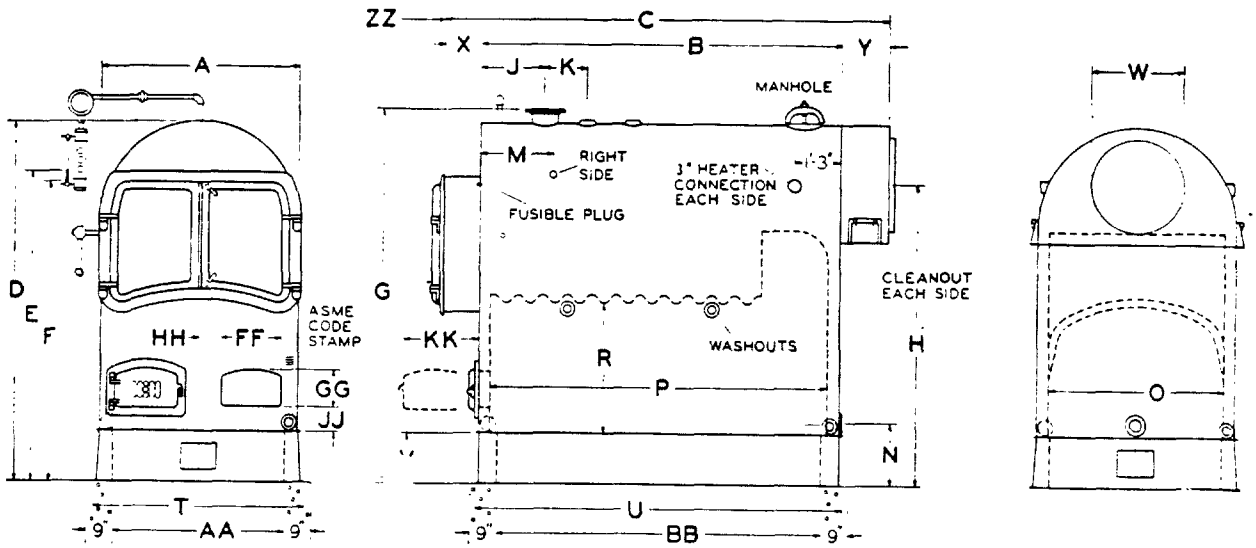
ratings • mechanically fired — oil, gas or coal

boiler number		7L80	7L81	7L82	7L83	7L84	7L85	7L86	7L87	7L88	7L89	7L90
SBI rating—steam radiation	sq ft	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500
—water radiation	sq ft	11660	13600	16520	19440	24280	29150	34000	38860	48570	58280	68000
—Btu per hour	1000's	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200
—steam per hour—212° F	lb	1800	2100	2560	3010	3750	4510	5260	6010	7510	9013	10513
SBI net rating—steam	sq ft	6000	7000	8500	10000	12500	15000	17500	20000	25000	30000	35000
—water	sq ft	9600	11200	13600	16000	20000	24000	28000	32000	40000	48000	56000
—Btu per hour	1000's	1440	1680	2040	2400	3000	3600	4200	4800	6000	7200	8400
firing rate—oil gph*		22	26	31	37	46	54	64	73	91	110	127
—gas Btu per hour	1000's	3280	3830	4650	5460	6840	8200	9560	10920	13670	16400	19120
heating surface (SBI min)	sq ft	429	500	608	715	893	1072	1250	1429	1786	2143	2500
furnace volume (SBI min)	cu ft	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 min)	ft-in.	2-8¾	2-10	2-11½	3-1½	3-4¼	3-7	3-10	4-0¾	4-6½	5-0½	5-6
firebox volume above mud ring	cu ft	67.4	77.8	90.5	104.4	129.4	168.4	193.7	218.3	302.2	377.4	433.1
safety valve capacity	lb steam per hr	2145	2500	3040	3575	4465	5360	6250	7145	8930	10715	12500

*Fuel burning rates based on 150,000 Btu oil.

Standard equipment—Front and rear base panels have 8½ x 11½ in. cleanout opening. Washout plug socket wrench with extra set of gaskets; flue cleaner with handle. Manhole furnished on boilers 7L82 and larger.

Standard trim, steam only—Safety valve, steam gage with siphon and cocks; water column with water-gage glass and three gage cocks, chain operated on 7L86 and larger.



dimensions and data (feet—inches)

boiler number	7L80	7L81	7L82	7L83	7L84	7L85	7L86	7L87	7L88	7L89	7L90
A—boiler width	4-0	4-0	4-6	4-6	5-0	5-6	6-0	6-0	6-6	7-0	7-6
B—boiler shell length	7-2½	8-5	7-8	8-11½	9-2½	9-11½	9-3½	10-6½	11-11½	11-4½	13-1½
C—boiler length overall	9-4½	10-7	9-11	11-2½	11-6½	12-3½	12-1½	13-4½	14-9½	14-2½	16-1½
D—boiler height	7-8½	7-8½	8-10	8-10	9-7½	10-0½	10-10½	10-10½	11-6	13-6½	13-6½
E—water line height	6-7½	6-7½	7-7	7-7	8-4½	8-7	9-5	9-5	9-11	11-9½	11-9½
F—water column height	6-4	6-4	7-3½	7-3½	8-1	8-3½	9-1½	9-1½	9-7½	11-6	11-6
G—steam supply height	8-1	8-1	9-2½	9-2½	10-0	10-4½	11-2½	11-2½	11-11	13-11½	13-11½
H—smoke outlet height	6-4½	6-4½	7-4	7-4	8-0½	8-3½	9-0½	9-0½	9-7½	11-5½	11-5½
J—steam supply	1-6	1-6	1-6	1-9	1-9	1-9	1-9	1-9	1-9	1-9	2-0
K—safety valve	1-2	1-2	1-2	1-2	1-2	1-2	1-4	1-4	1-4	1-4	1-4
M—1½ in. surface blow-off	1-0	1-0	1-6	2-0	2-0	2-0	2-0	2-0	2-0	2-0	2-0
N—return height	1-6	1-6	1-6	1-6	1-9	1-9	1-9	1-9	1-11	2-3	2-3
O—firebox—width	3-6	3-6	3-11½	3-11½	4-4½	4-10½	5-5	5-5	5-10	6-4	6-4
P— —length	6-8	7-10½	7-1½	8-5	8-7	9-4	8-8	9-11	11-4	12-8½	12-5½
R— —height	2-10	2-10	3-1½	3-1½	3-4¼	3-7	4-0¾	4-0¾	4-6½	5-6	5-6
T—base—width	4-5½	4-5½	4-11½	4-11½	5-6	6-0	6-6	6-6	7-0	7-6½	7-6½
U— —length	7-4½	8-7	7-10	9-1½	9-5	10-2	9-6	10-9	12-2	11-7	13-4
V— —height	1-2	1-2	1-2	1-2	1-5	1-5	1-5	1-5	1-5	1-9	1-9
W—smoke outlet diameter	2-0	2-0	2-4	2-4	2-6	2-7	2-11	2-11	3-3	3-5	3-7
X—front smokebox depth	0-11	0-11	1-0	1-0	1-0	1-0	1-2	1-2	1-2	1-2	1-2
Y—rear smokebox depth	1-3	1-3	1-3	1-3	1-4	1-4	1-8	1-8	1-8	1-8	1-8
AA—foundation—width	3-6	3-6	3-11½	3-11½	4-4½	4-10½	5-5	5-5	5-10	6-4	6-4
BB— —length	6-0	7-2½	6-6	7-9	8-0½	8-9½	8-1½	9-4½	10-9½	10-2½	11-11½
FF x GG—firedoor opening in boiler width x height	1-4 x 0-11				1-8 x 1-0		1-11 x 1-3				
HH—centerline blr to firedoor apg	0-3½	0-3½	0-6	0-6	0-4½	0-7½	0-6½	0-6½	0-10	1-1	1-1
JJ—height doors from bottom boiler	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-10	0-10	0-10
KK—opened firedoor to boiler	1-10½	1-10½	1-10½	1-10½	2-2½	2-2½	2-5½	2-5½	2-5½	2-5½	2-5½
ZZ—tube replacement space	6-5	7-7	6-10	8-1	8-4	9-1	8-3	9-6	10-11	10-4	12-1
breeching diameter—one boiler	2-0	2-0	2-4	2-4	2-6	2-7	2-11	2-11	3-3	3-5	3-7
stack—diameter	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-9	3-0	3-2	3-4
—height	50-0	60-0	55-0	65-0	65-0	70-0	65-0	75-0	90-0	80-0	100-0
breeching diameter—two boilers	2-6	2-7	2-10	3-0	3-4	3-5	3-8	3-11	4-2	4-6	4-8
stack—diameter	2-4	2-5	2-8	2-10	3-1	3-2	3-5	3-8	3-11	4-2	4-4
—height	60-0	70-0	65-0	75-0	75-0	80-0	75-0	85-0	100-0	90-0	110-0
*steam supply size	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-10	0-10	0-10
return size	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-6"	0-6"	0-6"
**outside surface to cover sq ft	153	170	192	214	240	275	297	322	387	440	476
approximate weight lb	6700	7600	8800	10000	11800	13600	15300	17000	20100	23200	26100

*150 lb American Standard Flange. **Includes front head and smokebox.

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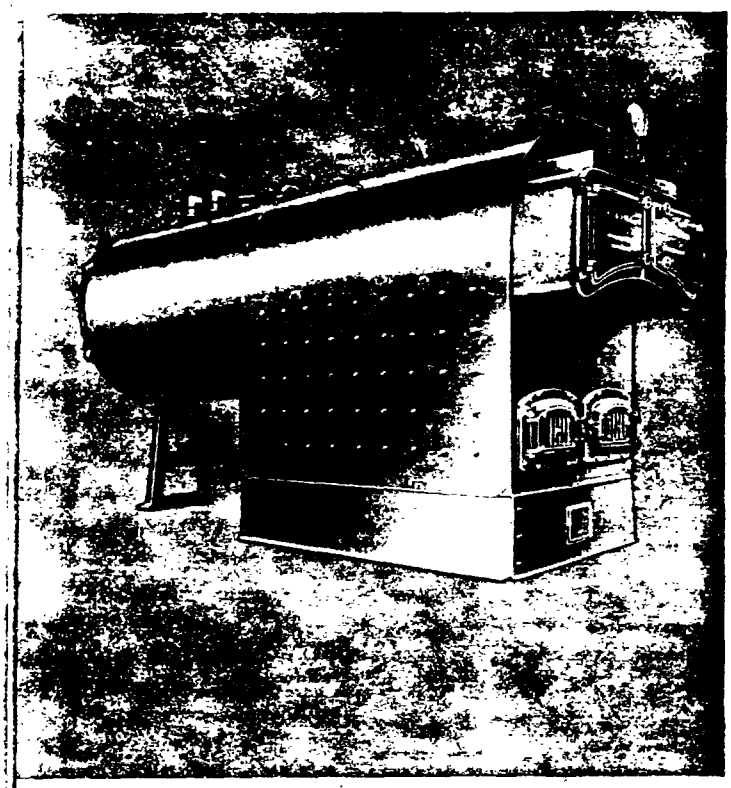


5000 series

15 psi steam or 30 psi water

15 sizes . . . 1,020,000 to 10,200,000 Btu

The Kewanee "5000" low pressure series is rapidly growing in popularity for heating large buildings when specifications or restricted budgets require an economical boiler of unquestioned durability and efficiency.

"5000" is an electric welded series, in the fabrication of which all modern practices and improvements in welding have been combined to produce a completely dependable product . . . a boiler worthy of the name Kewanee.

In design the "5000" is similar to that of the famous heavy-duty Kewanee "500" and has all those outstanding characteristics which for some 85 years have made Kewanee Boilers different and better.

Extra large and *extra high fireboxes* provide ample space and air in which the burning fuel can mix with oxygen to complete the combustion process without waste of fuel. *Longer travel of gases* . . . from the fire chamber through the lower bank of tubes then through the upper tubes to the exit chamber at the front . . . gives the boiler's water a chance to absorb and use all the heat that is created in the firebox.

Circulation is rapid through generously sized water legs and between the well-spaced fire tubes, sweeping the myriad of steam bubbles up into the capacious steam chamber without undue commotion. The disengaging areas at the water line are unbroken insuring a constant supply of dry steam.

As is true with all Kewanee Boilers the "5000" can be fired to produce 50% and more than its rated capacity and continue to operate at full efficiency.

Specifications and data are shown for mechanically-fired boilers. For information regarding hand-fired coal types consult the nearest Kewanee representative.

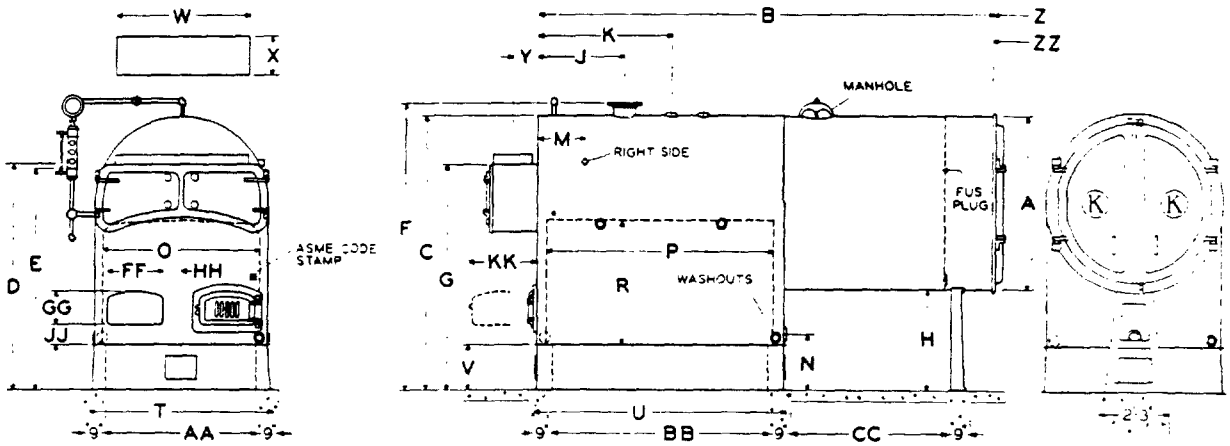
ratings • mechanically fired—oil, gas or coal

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	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500
—water radiation	sq ft	6800	7770	8750	9720	11660	13600	16520	19440	24280	29150	34000	38860	48570	58280	68000
—Btu per hour	1000's	1020	1166	1313	1459	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200
—steam per hour—212 F.	lb	1050	1200	1350	1500	1800	2100	2560	3010	3750	4510	5260	6010	7510	9010	10510
SBI net rating—steam	sq ft	3500	4000	4500	5000	6000	7000	8500	10000	12500	15000	17500	20000	25000	30000	35000
—water	sq ft	5600	6400	7200	8000	9600	11200	13600	16000	20000	24000	28000	32000	40000	48000	56000
—Btu per hour	1000's	840	960	1080	1200	1440	1680	2040	2400	3000	3600	4200	4800	6000	7200	8400
firing rate—oil gph*		13	15	16	18	22	26	31	37	46	54	64	73	91	110	127
—gas Btu per hour	1000's	1910	2180	2460	2740	3280	3830	4650	5460	6840	8200	9560	10920	13670	16400	19100
heating surface (SBI min)	sq ft	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500
furnace volume (SBI 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 min)	ft-in.	2-6	2-6½	2-7¼	2-7¾	2-8¾	2-10	2-11½	3-1½	3-4¼	3-7	3-10	4-0¾	4-6½	5-0½	5-6
firebox volume above mud ring	cu ft	44.3	44.3	49.6	54.5	60.2	66.6	90.6	103.2	117.5	123.4	137.5	144.0	197.1	222.0	235.2
additional furnace height for stoker (SBI min)**	ft-in.										0-3	0-5	0-10	0-6	0-10	1-4
safety valve capacity	lb steam per hr	1250	1430	1610	1790	2145	2500	3040	3575	4465	5360	6250	7145	8930	10715	12500

* Fuel burning rates based on 150,000 Btu oil. ** Represents distance below bottom of water leg that hearth must be set for SBI minimum furnace volume and height.

Standard equipment—Front and rear base panels have 8½ x 11½ in. opening and cover plate, backstand except 5176-77, flue cleaner and handle. Manhole furnished on 5182 and larger. Washout plug socket wrench with extra set of gaskets.

Standard trim, steam only—Safety valve, steam gage with siphon and cork, water column with water-gage glass and three gage cocks, chain operated on 5188 and larger.



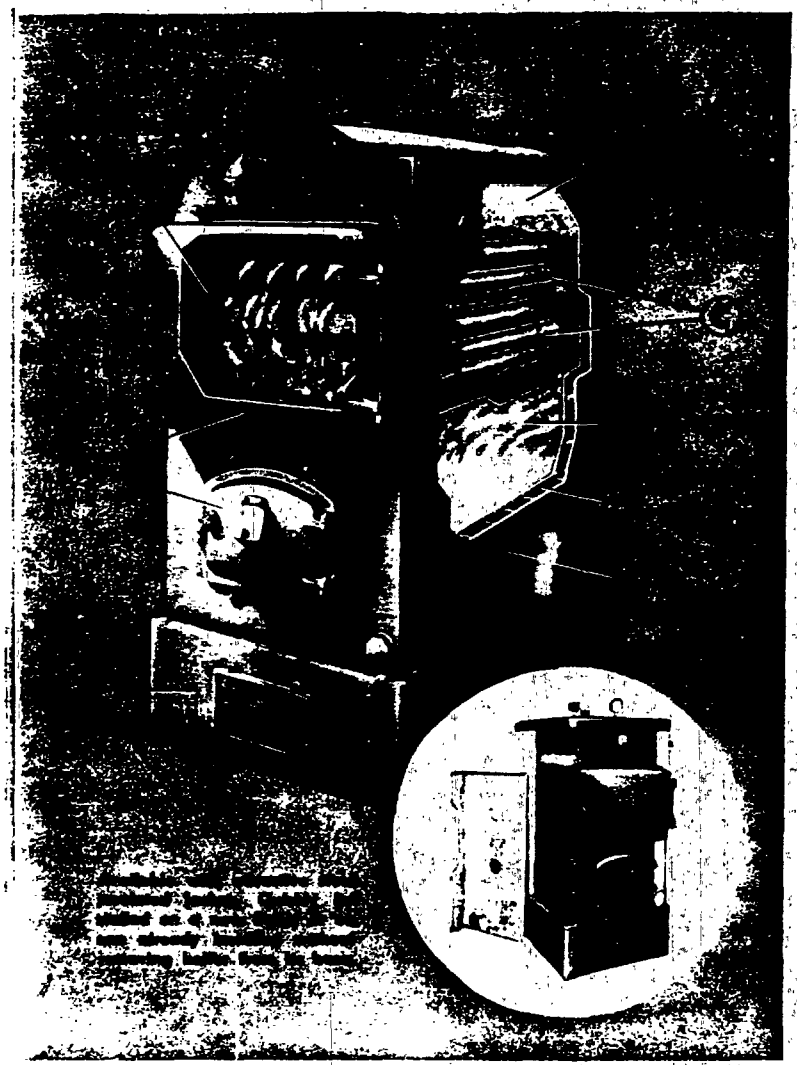
NOTE: *Use dimension drawing on this attached fly-sheet. Do not use drawing printed beneath.*

dimensions and data (feet—inches)

boiler number	5176	5177	5178	5179	5180	5181	5182	5183	5184	5185	5186	5187	5188	5189	5190
A—boiler diameter	3-6	3-6	3-6	3-6	4-0	4-0	4-6	4-6	5-0	5-0	5-6	5-6	6-0	6-6	6-6
B—boiler length	7-3	8-0	8-11	9-10	9-9	11-1	11-1	12-9	13-2½	15-3	14-5½	16-0½	16-8½	17-5½	19-8½
C—boiler height	6-9	6-9	6-9	6-9	7-2½	7-2½	7-8½	7-8½	8-4½	8-4½	8-9	8-9	9-3	9-9	9-9
D—water line height	5-10	5-10	5-10	5-10	6-1½	6-1½	6-5½	6-5½	7-0	7-0	7-2	7-2	7-9	8-0	8-0
E—water column height	5-8	5-8	5-8	5-8	5-11½	5-11½	6-3½	6-3½	6-10	6-10	7-0	7-0	7-7	7-10	7-10
F—steam supply height	7-1	7-1	7-1	7-1	7-7	7-7	8-1	8-1	8-9	8-9	9-1	9-1	9-7½	10-1½	10-1½
G—smoke outlet height	5-11	5-11	5-11	5-11	6-2	6-2	6-7	6-7	7-1½	7-1½	7-3½	7-3½	7-9½	8-2½	8-2½
H—rear stand height	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-4	3-4	3-2	3-2	3-2	3-2	3-2
J—steam supply	1-4	1-4	1-5	1-5	1-5	1-5	2-0	2-6	2-6	10-9	2-9	11-0	12-0	12-3	13-0
K—safety valve	2-9	2-9	2-11	2-11	2-11	2-9	3-6	4-0	4-0	12-3	4-3	5-3	6-3	6-11	5-7
M—1½ in surface blow-off	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	2-0	2-0	2-0
N—return height	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-9	1-9	1-9	1-9	1-11	1-11	1-11
O—fireback—width	3-0½	3-0½	3-0½	3-0½	3-6½	3-6½	4-0½	4-0½	4-5½	4-5½	4-11½	4-11½	5-5½	5-11½	5-11½
P— —length	4-2	4-2	4-8	5-2	4-8	5-2	6-0	6-10	6-10	7-2	7-2	7-6	8-6	8-6	9-0
R— —height	3-6	3-6	3-6	3-6	3-8	3-8	3-10	3-10	3-11	3-11	3-11½	3-11½	4-2½	4-5½	4-5½
T—base—width	3-11½	3-11½	3-11½	3-11½	4-5½	4-5½	4-11½	4-11½	5-6	5-6	6-0	6-0	6-6	7-0	7-0
U— —length	5-0	5-0	5-6	6-0	5-6	6-0	6-10	7-8	7-9	8-1	8-1	8-5½	9-5½	9-5½	9-11½
V— —height	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-5	1-5	1-5	1-5	1-5	1-5	1-5
W—smoke outlet—length	2-8	2-8	2-8	2-8	2-10	2-10	3-4	3-4	3-8	3-8	4-3	4-3	4-6	5-0	5-0
X— —width	0-9	0-9	0-9	0-9	0-11	0-11	1-0	1-0	1-2	1-2	1-3	1-3	1-7	1-6	1-6
Y— —location	0-6½	0-6½	0-6½	0-6½	0-7½	0-7½	0-8	0-8	0-9	0-9	0-9½	0-9½	0-11½	0-11	0-11
Z—rear door clearance, min	3-6	3-6	3-6	3-6	4-0	4-0	2-6	2-6	2-9	2-9	3-0	3-0	3-3	3-5	3-5
AA—foundation—width	3-0	3-0	3-0	3-0	3-6	3-6	3-11½	3-11½	4-4½	4-4½	4-10½	4-10½	5-4	5-10	5-10
BB— —length	3-7	3-7	4-1	4-7	4-1	4-7	5-5	6-3	6-4	6-8	6-8	7-2½	8-2½	8-2½	8-2½
CC—rear stand			2-6	2-11	3-3	4-0	3-2	4-0	4-3	6-0	5-0	6-3	6-0	6-6	8-2
Firedoor style	single frame & double drs				right and left single frame and door										
EE x GG—firedoor opening in boiler width x height	one 2-3½ x 1-1½				two 1-4 x 2-11				two 1-8 x 1-0				two 1-11 x 2-3		
HH—centerline bir to firedoor opg	0-8½	0-8½	0-8½	0-8½	0-3½	0-3½	0-6	0-6	0-4½	0-4½	0-7½	0-7½	0-6½	0-10	0-10
JJ—height doors from bottom boiler	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-10	0-10
KK—opened firedoor to boiler	1-8	1-8	1-8	1-8	1-10½	1-10½	1-10½	1-10½	2-2½	2-2½	2-2½	2-2½	2-5½	2-5½	2-5½
ZZ—tube replacement space	5-6	6-3	7-2	8-1	7-8	9-0	9-0	10-8	10-9½	12-10	11-8½	13-3½	13-7½	14-4½	16-7½
breeching diameter—one boiler	1-7	1-8	1-9	1-10	1-11	2-0	2-2	2-4	2-6	2-7	2-9	2-11	3-3	3-5	3-7
stack—diameter	1-5	1-6	1-7	1-8	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-9	3-0	3-2	3-4
—height	40-0	40-0	45-0	50-0	50-0	55-0	50-0	60-0	65-0	80-0	70-0	85-0	85-0	90-0	105-0
breeching diameter—two boilers	2-1	2-2	2-3	2-4	2-6	2-7	2-10	3-0	3-4	3-5	3-8	3-11	4-2	4-6	4-8
stack—diameter	1-11	2-0	2-1	2-2	2-4	2-5	2-8	2-10	3-1	3-2	3-5	3-8	3-11	4-2	4-4
—height	50-0	50-0	55-0	60-0	60-0	65-0	60-0	70-0	75-0	90-0	80-0	95-0	95-0	100-0	115
*steam supply size	0-6	0-6	0-6	0-6	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-8	0-10	0-10	0-10
return size	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-6*	0-6*	0-6*
**outside surface to cover sq ft	115	125	135	145	160	180	202	227	257	290	305	332	375	420	496
approximate weight lb	4500	5000	5400	5800	6600	7400	8500	9600	11100	12800	14400	16000	19200	22300	25000

* 150 lb American Standard Flange. ** Includes front head and smokebox.

KEWANEE



Square-Heat type "R" boiler

12 sizes . . . 216,000 to 1,200,000 Btu
900 to 5000 sq ft steam
1440 to 8000 sq ft water

Never before has a boiler been built with the versatility of Kewanee Square-Heat. It is ideal for medium size buildings of all types or for small factories. It burns any fuel and a change from one to another, or from mechanical to hand firing, or back again, can be made quickly and inexpensively.

These features indicate why Square-Heat packs so much heat generating ability in comparatively small space.

A **Large, high steam space** assures ample reserve of dry steam.

B **Reversible smoke box** may be used with either top or rear smoke outlet.

C **Longer gas travel** . . . to the rear, then to the front, and to the rear again gets all the heat into the boiler's water.

D **Spinner blades** in oil or gas boilers (3R1 to 8) swirl hot gases against tube walls assuring maximum heat transfer.

E **Insulated, sturdy cast doors** are precision ground for permanent gas tight fit. Observation opening has adjustable hinged cover for secondary overfire air.

F **Large, high firebox** provides ample space and air for complete, economical burning of the fuel.

G **Rapid circulation** in wide free waterways sweeps steam bubbles up, without commotion, to unbroken release area at water line.

H **Shell** of extra heavy high quality steel adds strength.

J **Extra substantial steel base** can be reversed for firing from rear.

Extra high bases (20 and 30 in.) for mechanical firing instead of standard 14 in. base are available, if specified, at extra cost.

Specifications and data are shown for mechanical firing. For information regarding hand-fired coal sizes consult the nearest Kewanee representative.

ratings • mechanically fired — oil, gas or coal

boiler number		3R1	3R2	3R3	3R4	3R5	3R6	3R7	3R8	3R9	3R10	3R11	3R12
SBI net rating—steam	sq ft	900	1100	1300	1500	1800	2200	2600	3000	3500	4000	4500	5000
—water	sq ft	1440	1760	2080	2400	2880	3520	4160	4800	5600	6400	7200	8000
—Btu per hour	1000's	216	264	312	360	432	528	624	720	840	960	1080	1200
firing rate—oil gph*		3.0	3.7	4.3	5.0	6.0	7.3	8.7	10.0	11.7	13.3	15.0	16.7
—gas Btu per hour	1000's	405	495	585	675	810	990	1170	1350	1575	1800	2025	2250
—stoker**	lb per hr	36	44	52	60	72	88	104	120	140	160	180	200
heating surface (SBI min)	sq ft	53	65	77	88	106	129	153	177	206	236	265	294
furnace volume (SBI min)	cu ft	8.2	10.0	11.8	13.6	16.4	20.0	23.6	27.3	31.8	36.3	40.9	45.4
safety valve capacity	lb steam per hr	265	325	385	440	530	645	765	885	1030	1180	1325	1470

* Fuel burning rates based on 140,000 Btu oil. ** Based on coal having 12,000 Btu per lb as fired.

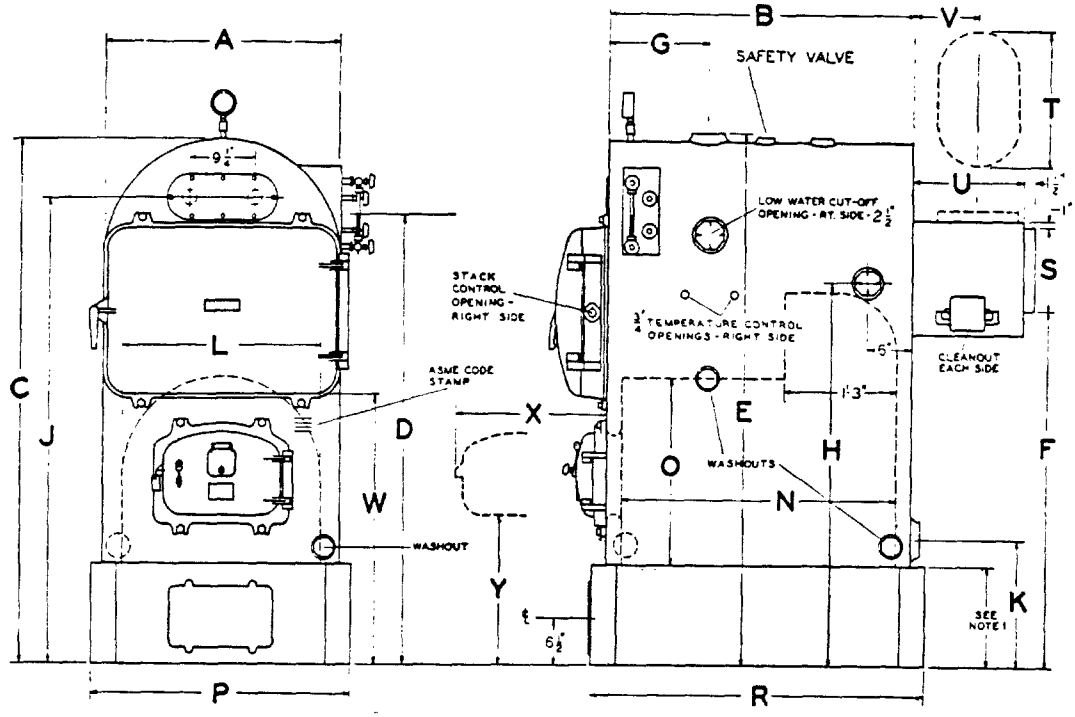
Note 1—Standard base is 14 in. high. Bases of 20 and 30 in. height available for mechanical firing at additional cost.

Note 2—Boiler ratings do not include allowance for heating domestic water by indirect coils. When the hot water demand is added to the heating load for more than ten minutes in any hour, an allowance of 4 sq ft of steam radiation or 6.4 sq ft of water radiation must be added for each gallon of water heated.

Standard equipment—6 cleanout plugs, 3R1 to 3R11. 8 cleanout plugs, 3R12. Socket wrench with extra set of gaskets. Steel base complete with 8 x 14 in. covered opening. Flue and soot scrapers with handles. Spinner blades for 3R1 to 3R8 Oil or Gas boilers only.

Standard trim, steam—Water gage, two compression gage cocks, steam gage, pop safety valve.

Water—Combination altitude gage and thermometer only.



dimensions and data (feet—inches)

boiler number	3R1	3R2	3R3	3R4	3R5	3R6	3R7	3R8	3R9	3R10	3R11	3R12
A—boiler width overall	2-6	2-6	2-6	2-6	2-10	2-10	2-10	2-10	3-5	3-5	3-5	3-5
—jacket width	2-7½	2-7½	2-7½	2-7½	3-0	3-0	3-0	3-0	3-7	3-7	3-7	3-7
B—boiler length	2-6½	3-0½	3-6½	4-0½	3-6½	4-2½	4-10	5-7	4-8	5-4	6-0	6-7
—jacket length	2-9½	3-3½	3-9½	4-3½	3-9½	4-5½	5-1	5-10	4-11	5-7	6-3	6-10
C—boiler height	5-6	5-6	5-6	5-6	6-1	6-1	6-1	6-1	6-10	6-10	6-10	6-10
—jacket height from floor	5-6½	5-6½	5-6½	5-6½	6-2	6-2	6-2	6-2	6-10½	6-10½	6-10½	6-10½
D—water line height	4-7½	4-7½	4-7½	4-7½	5-2½	5-2½	5-2½	5-2½	5-10½	5-10½	5-10½	5-10½
E—steam or water supply height	5-6½	5-6½	5-6½	5-6½	6-2	6-2	6-2	6-2	7-2	7-2	7-2	7-2
F—smoke outlet height	3-8½	3-8½	3-8½	3-8½	4-1	4-1	4-1	4-1	4-6½	4-6½	4-6½	4-6½
G—steam or water supply	0-10	1-0	1-2	1-4	1-2	1-5	1-7	1-10	1-4	1-6	1-8	2-0
H—heater connection height, each side	4-0½	4-0½	4-0½	4-0½	4-5½	4-5½	4-5½	4-5½	4-10½	4-10½	4-10½	4-10½
J—coil connection height	4-9½	4-9½	4-9½	4-9½	5-4½	5-4½	5-4½	5-4½	6-0½	6-0½	6-0½	6-0½
K—return height	1-5½	1-5½	1-5½	1-5½	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6
L—firebox—width	2-0	2-0	2-0	2-0	2-4	2-4	2-4	2-4	2-11	2-11	2-11	2-11
N— —length	2-1½	2-7½	3-1½	3-7½	3-1½	3-9	4-5	5-2	4-3	4-11	5-6½	6-2
O— —height	1-9½	1-9½	1-9½	1-9½	2-2	2-2	2-2	2-2	2-7	2-7	2-7	2-7
P—base—width x 14 in. high	2-8½	2-8½	2-8½	2-8½	3-0½	3-0½	3-0½	3-0½	3-8	3-8	3-8	3-8
R— —length	2-10½	3-4½	3-10½	4-4½	3-10½	4-6½	5-2	5-11	5-0	5-8	6-3½	6-11
S—smoke outlet—width	0-9	0-9	0-9	0-9	0-11½	0-11½	0-11½	0-11½	1-1½	1-1½	1-1½	1-1½
T— —length	1-4¾	1-4¾	1-4¾	1-4¾	1-9½	1-9½	1-9½	1-9½	1-11½	1-11½	1-11½	1-11½
U—smokebox overall	1-1	1-1	1-1	1-1	1-3½	1-3½	1-3½	1-3½	1-6½	1-6½	1-6½	1-6½
V—smoke outlet location	0-7½	0-7½	0-7½	0-7½	0-8¾	0-8¾	0-8¾	0-8¾	0-10¾	0-10¾	0-10¾	0-10¾
W—floor to bottom of firedoor	2-10	2-10	2-10	2-10	3-2	3-2	3-2	3-2	3-7½	3-7½	3-7½	3-7½
X—opened firedoor to boiler	1-9½	1-9½	1-9½	1-9½	1-9½	1-9½	1-9½	1-9½	2-3	2-3	2-3	2-3
Y—floor to bottom of firedoor	1-7½	1-7½	1-7½	1-7½	1-9	1-9	1-9	1-9	1-9½	1-9½	1-9½	1-9½
—firedoor opening in boiler—width	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-8	1-8	1-8	1-8
—height	0-11	0-11	0-11	0-11	0-11	0-11	0-11	0-11	1-0	1-0	1-0	1-0
breeching diameter (when flattened, fits oval smoke neck)	1-2	1-2	1-2	1-2	1-6	1-6	1-6	1-6	1-8	1-8	1-8	1-8
chimney—diameter	0-10	0-11	1-0	1-0	1-1	1-2	1-3	1-4	1-4	1-5	1-6	1-6
—height	30-0	35-0	35-0	40-0	35-0	40-0	40-0	45-0	35-0	40-0	45-0	50-0
steam supply size	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-6*	0-6*	0-6*	0-6*
return size	0-3	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4
heater connection size	0-2½	0-2½	0-2½	0-2½	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3
outside surface to cover, unjacketed. sq ft	38	43	48	53	58	65	73	82	82	90	99	107
approximate weight, unjacketed lb	11500	1650	1800	1950	2250	2475	2725	3000	3375	3650	3850	4200

*150 lb American Standard Flange. Eight ⅞ in. bolts, 9½ in. bolt circle.

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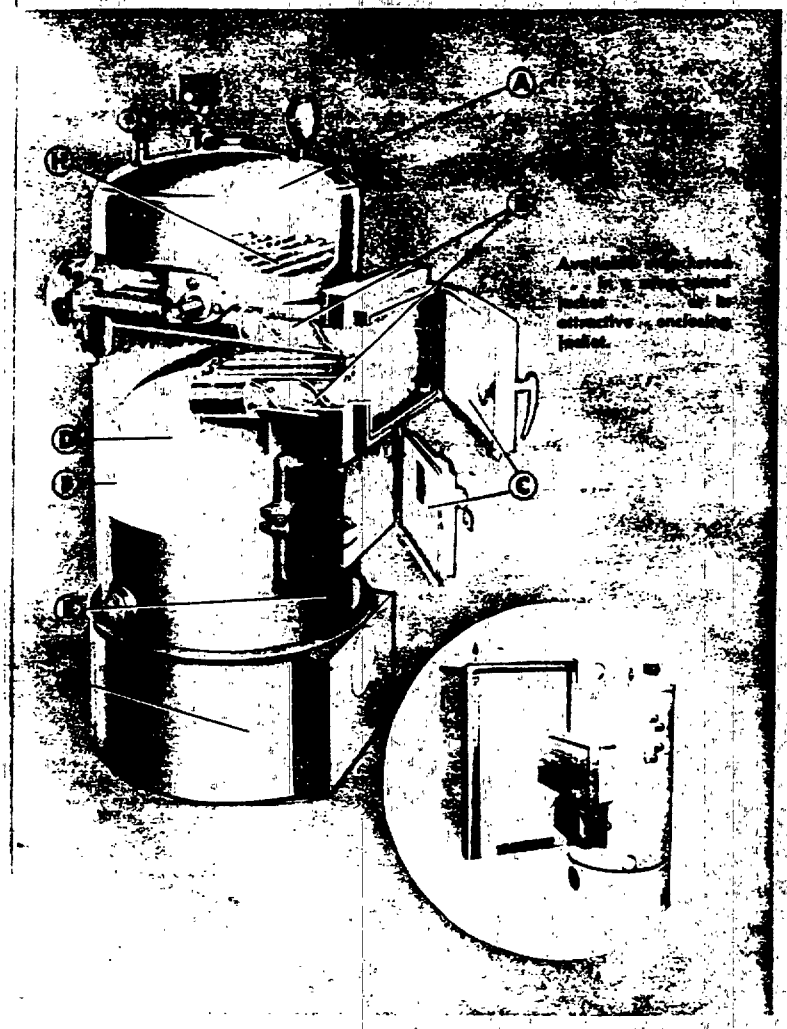


Round type "R"

4 sizes . . . 96,000 to 216,000 Btu
400 to 900 sq ft steam
640 to 1440 sq ft water

Higher comfort standards for homes [illegible] with modern designs featuring enlarged window areas and in ranch types, flat roof and wall areas [illegible] impose a tougher heating problem on the boiler. This problem is met completely by Kewanee Round "R."

Sturdily built of heavy steel plate it stays [illegible] many extra years. Features unusual dependability [illegible] economy [illegible] with a capacity to handle large [illegible]

1. **Capacious steam space** holds a [illegible] reserve of steam for unusual demands [illegible] one size in Round "R" can be fired above its rated capacity and continue to operate with efficiency.
2. **Two-pass tubes** provide longer travel [illegible] the hot gases retaining them in the boiler until [illegible] heat is transferred to the water. **Spinner Blades** swirl gases against tube walls assuring maximum heat transfer.
3. **Well insulated sturdy cast iron doors.** Flue door and frame are precision ground and sealed with asbestos rope gasket for a permanent gas tight fit.
4. **Large, high firebox** provides sufficient space for gases to mix with oxygen and burn completely.
5. **Shell,** of extra heavy steel boiler plate, is everlastingly welded into one piece, ready to set on its base.
6. **Wide, free waterways** assure rapid circulation, sweeping steam bubbles quickly and without [illegible] up to the unobstructed release area at the water line.
7. **Heavy steel base** can take it. With Round Jacket, base may be swung around to fire from front, rear, side or any angle.
8. **Domestic hot water coil,** brazed in bronze fittings and mounted on steel plate with locknuts and rubber gaskets, provides ample hot water for kitchen laundry and bath.

[illegible]

ratings • mechanically fired — oil, gas or coal

boiler number		1734	1735	1736	1737
SBI net rating (connected radiation plus hot water load)					
—steam or vapor	sq ft	400	550	700	900
—water	sq ft	640	880	1120	1440
—Btu per hour	1000's	96	132	168	216
firing rate—oil gph*		1.4	1.8	2.3	3.0
—gas Btu per hour	1000's	180	248	315	405
—stoker**	lb per hr	15	22	28	[illegible]
heating surface	sq ft	24	32	41	53
furnace volume	cu ft	4.4	6.4	8.9	8.9
firebox volume, for stoker firing	cu ft	3.7	5.4	7.4	[illegible]
safety valve capacity	lb steam per hr	120	160	205	[illegible]

* Fuel burning rates based on 140,000 Btu oil.

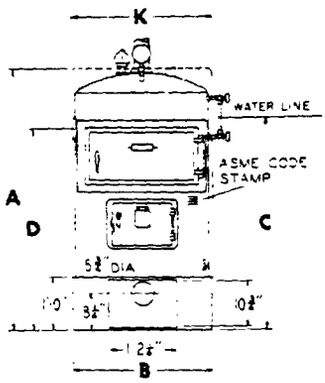
** Based on coal having 12,000 Btu per lb as fired.

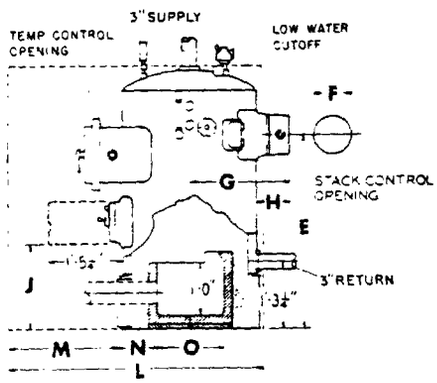
1737 not furnished for stoker firing

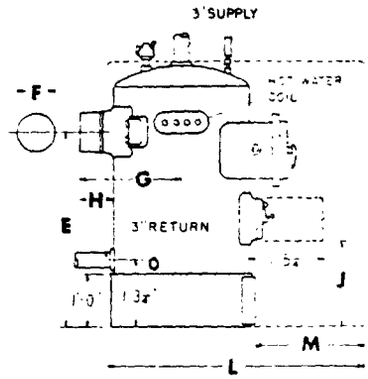
Standard equipment—Spinner blades for oil or gas. Soot and flue scrapers.

Standard trim, steam—Compound steam and vacuum gage, water gage, two gage cocks, ¾ in. safety valve. The extra 1½ in. tapping in top of boiler may be used for pressure control.

Water—Combination altitude gage and thermometer.







dimensions and data (feet - inches)

boiler number — unjacketed / square jacket (oil or gas only) / round jacket	1734 / 1734MQ / 1734J	1735 / 1735MQ / 1735J	1736 / 1736MQ / 1736J	1737 / 1737MQ
boiler diameter	2-1 ¾	2-3½	2-6½	2-6½
firebox—inside diameter	1-8	1-11	2-2	2-2
—average height	1-10	2-0	2-2	2-2
A—height overall	4-6½	4-10	5-0½	5-0½
B—base diameter	2-2	2-5½	2-8½	2-8½
C—water line height	3-8	3-11	4-1	4-1
D—water coil connection height*	3-5½	3-8½	3-10½	3-10½
E—smoke outlet—height	3-3½	3-6½	3-8½	3-8½
F— —diameter	0-7	0-9	0-9	0-9
G— —to boiler center	1-6¾	1-9½	2-1	2-1
H—rear clearance—boiler to wall	0-6¾	0-7¾	0-7¾	0-7¾
J—Floor to bottom of firedoor	1-7½	1-8	1-8½	1-8½
K—round jacket diameter	2-1¾	2-5¼	2-8¼	
—square jacket—width	2-11	3-0	3-6	3-6
L— —length	3-8½	4-1	4-11	4-11
M— —front clearance	1-5½	1-6	2-1	2-1
N—minimum burner tube length	0-8	0-8	0-9	0-9
O—combustion chamber—length, inside	0-11	1-3½	1-3½	1-3½
—width, inside	0-10½	0-10½	1-3	1-3
chimney—size	0-8 x 0-8	0-8 x 1-0	0-8 x 1-0	0-13 x 0-13
—height	30-0	30-0	35-0	40-0
outside surface to cover, unjacketed — sq ft	24	35	41	47
approximate weight—unjacketed — lb	800	920	1130	1430
—jacketed MQ — lb	1100	1290	1450	1700
—jacketed J — lb	835	960	1175	

* Coil connection sizes: 1 in. pipe for two outlets, ¾ in. pipe for four outlets.

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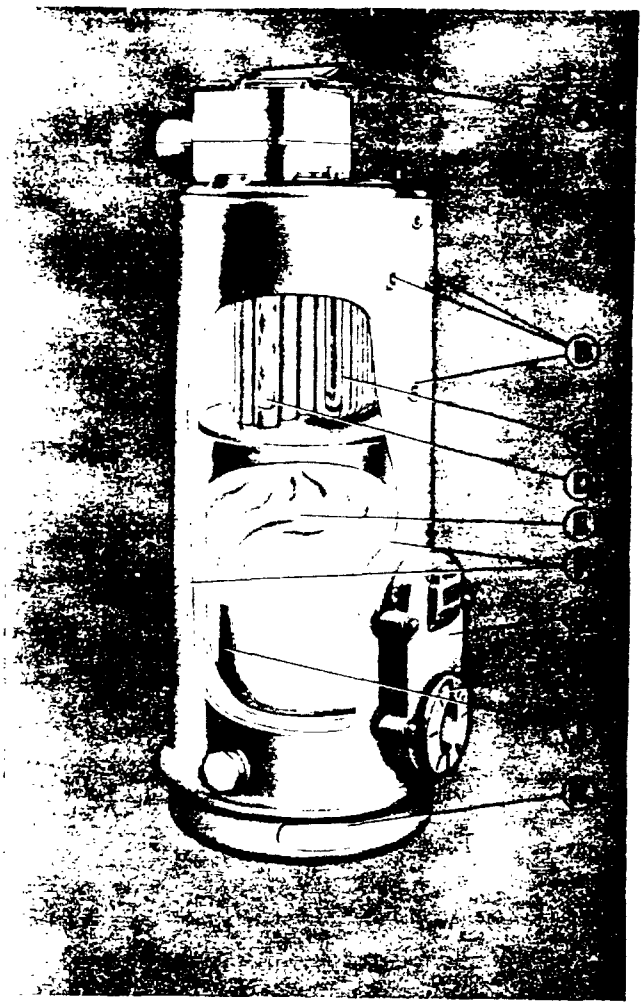


VT510 Cottage Boiler

. . . oil or gas

77,000 Btu . . . 510 sq ft water

The Cottage Boiler is Kewanee's answer to the long standing need for a *quality steel boiler* for small homes. It provides *completely automatic forced hot water heat* . . . with ample domestic hot water for kitchen, laundry and bath . . . at a price within the reach of modest budgets. In its attractive steel jacket it occupies a space only 23 x 23 in. Though rated at 77,000 Btu, it is capable of carrying 50% more than its rated capacity.

features

A **Hinged double cover** on smokehood provides easy access to tubes for cleaning.

B **Tappings** in boiler shell provide for all automatic controls.

C **Domestic hot water coil** made in one unit, either for close or storage tank type, easily inserted any time through top head.

D **Vertical tubes with spin** scrub hot flue gases against tube walls thus assuring greater heat transfer without choking the draft.

E **High firebox** permits thorough combustion of fuel and rapid heat transfer.

F **Heavy gage welded steel construction** hydrostatically tested at 150 lbs. for maximum water working pressure of 100 lbs.

G **Sturdy cast iron fire-cover plate** with free swinging puff-back safety swivel for observing flame. Refractory lined to prevent warping.

H **Universal flange** fits practically any flange mounted oil burner. Square mounting may be provided for gas burners.

J **Stainless steel combustion chamber** souped-up combustion of oil. Installed easily through firedoor opening.

K **Insulation refractory fill-in** keeps floor cool and boiler heat inside.

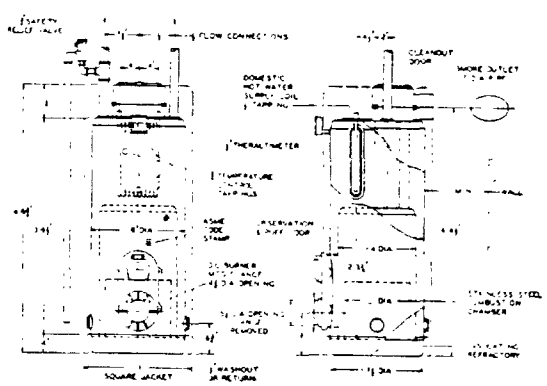
Standard equipment—Burner mounting flange; spinner blades in the heavy gage tubes. Flue scraper.

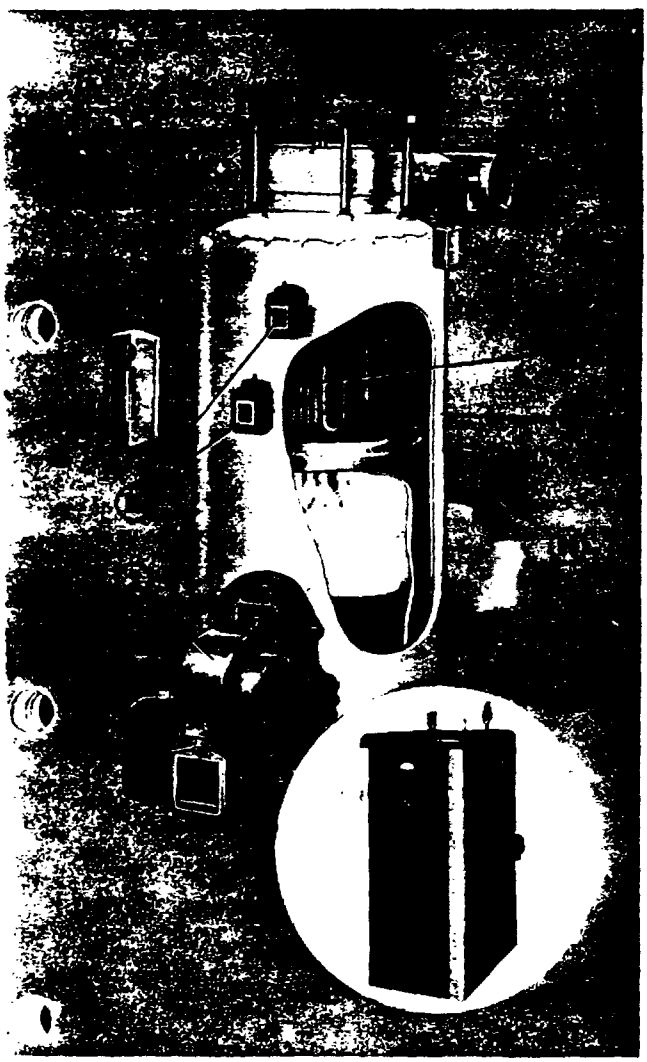
Standard trim—Combination altitude gage and thermometer. Stainless steel combustion chamber for oil-firing supplied at extra cost.

ratings and dimensions (feet-inches)

boiler number		VT510
SBI net rating (connected radiation plus hot water load)		
—water	sq ft	510
—Btu per hour	1000's	77
firing rate—oil gph*		1.1
—gas Btu per hour	1000's	144
heating surface	sq ft	19
firebox volume	cu ft	2.9
chimney—size		0-8 x 0-8
—height above CL smoke outlet		12-0
smoke outlet to boiler center		0-11¾
water coil connection height**		4-3¼
flow connection height		4-1¾
base—diameter top ring door clearance		1-10
approx. weight, jacketed M	lb	650

*Fuel burning rate based on 140,000 Btu oil.
**Coil connection sizes: ½ in. tankless, ¾ in. for storage tank.





VT510-U Cottage Boiler-Burner Unit

oil fired only

Now the very efficient Kewanee Cottage Boiler (described on opposite page) is available as a Boiler-Burner Unit complete with an *all-star cast of accessories*. Built, assembled, tested and substantially crated at the factory, this complete unit can be moved onto the job and installed with minimum time and labor.

The boiler and burner, all controls, pump, safety and relief valve, etc., are quality products . . . all having "won their spurs" on thousands of installations.

Standard equipment includes:

A **Air relief fitting** eliminates any accumulation of air in the boiler or system.

B **Water relief valve** is ASME rated to open at a pressure of 50 lb. . . . an important safety factor.

C **Draft control** equalizes variations in draft and saves fuel.

D **Stack control** a safety switch that shuts off burner in case of ignition or flame failure and prevents operation until manually set.

E **Theraltimeter** . . . a combination altitude, pressure and temperature gage.

F **Domestic hot water coil** for tankless operation raises the temperature of 180 gallons of water 100° per hour.

G **Blanket insulation** one inch thick conserves heat.

H **Circulating pump** is precision built with oil lubricated bearings and thermal overload equipment. Silent in operation.

J **Oil burner** operates smoothly and quietly while providing perfect combustion of the fuel.

K **High and low limit operating controls** operate the burner in accordance with the temperature of the boiler's water. A visible scale and external adjustment makes regulation easy.

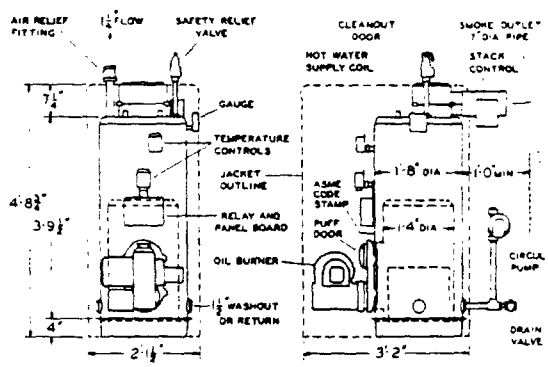
L **Room thermostat** either line voltage or low voltage with relay furnished when specified.

Jacket: Attractive steel jacket in two-tone green enamel completely encloses the boiler, burner and all controls. It occupies a space of only 25½ x 38 inches and is less than 5 feet in height. The minimum of 12 inches needed between back of boiler and wall permits installation almost any place.

ratings and dimensions (feet—inches)

boiler number		VT510-U
SBI net rating (connected radiation plus hot water load)		
—water	sq ft	510
—Btu per hour	1000's	77
firing rate—oil gph*		1.1
heating surface	sq ft	19
firebox volume	cu ft	2.9
chimney—size		0-8 x 0-8
—height above CL smoke outlet		12-0
water coil connection size		0-0½

*Fuel burning rate based on 140,000 Btu oil.



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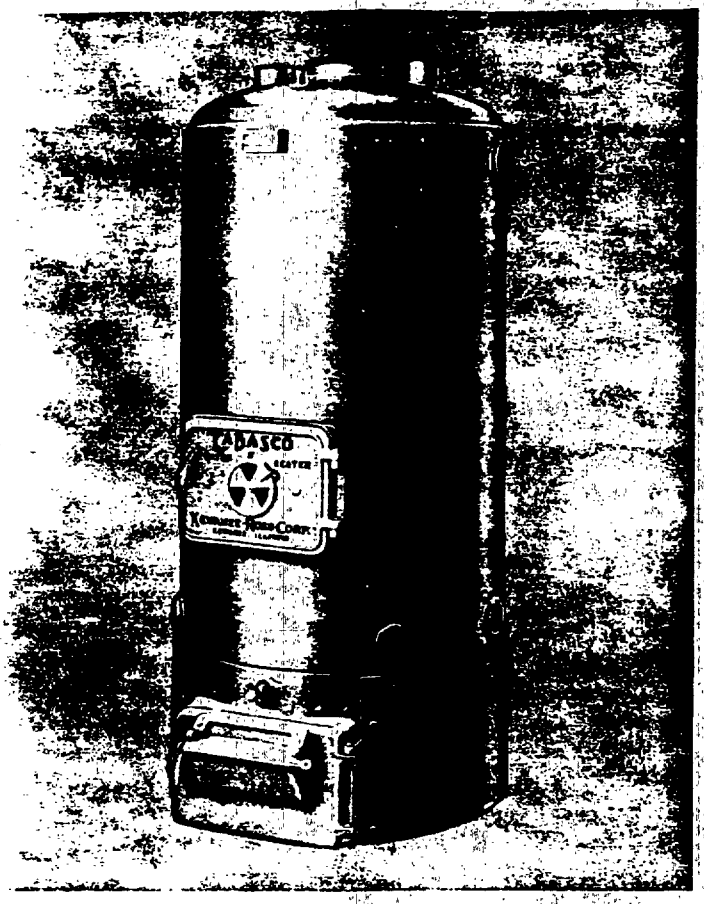


Tabasco . . . a direct-fired water heater

oil, gas or hand-fired coal

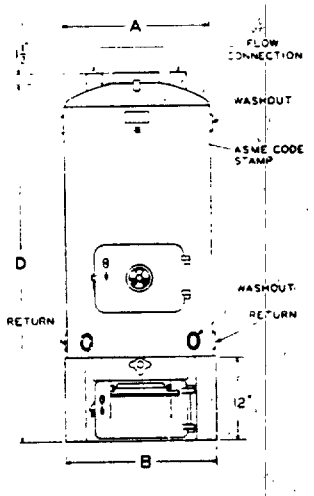
5 sizes . . . . 165 to 700 gph, 50° rise

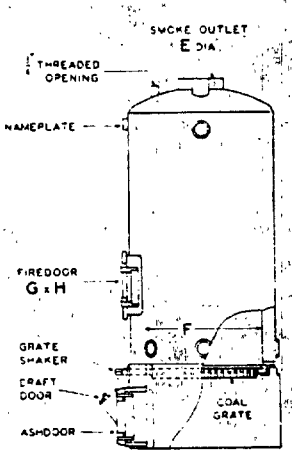
While many water heaters are rated on their ability to raise water temperature 25° per hour, Tabasco ratings are based on a rise of 50° . . . so they do twice the job.

Built of rugged steel plate, heavier than code requirements, and constructed for 100 lb working pressure (hydrostatic test pressure of 150 lb) Tabasco Water Heaters are amply strong to stand the high pressures of city water mains.

With most of its primary heating surface directly over the fire, Tabasco is a fast heater while being economical in its use of fuel.

All cast parts are unusually heavy. And if hand-fired coal is used the furnace door is large enough so a regular scoop shovel can be used. As many thousands of installations prove, a Kewanee Tabasco truly "stands the gaff," even when roughly used.





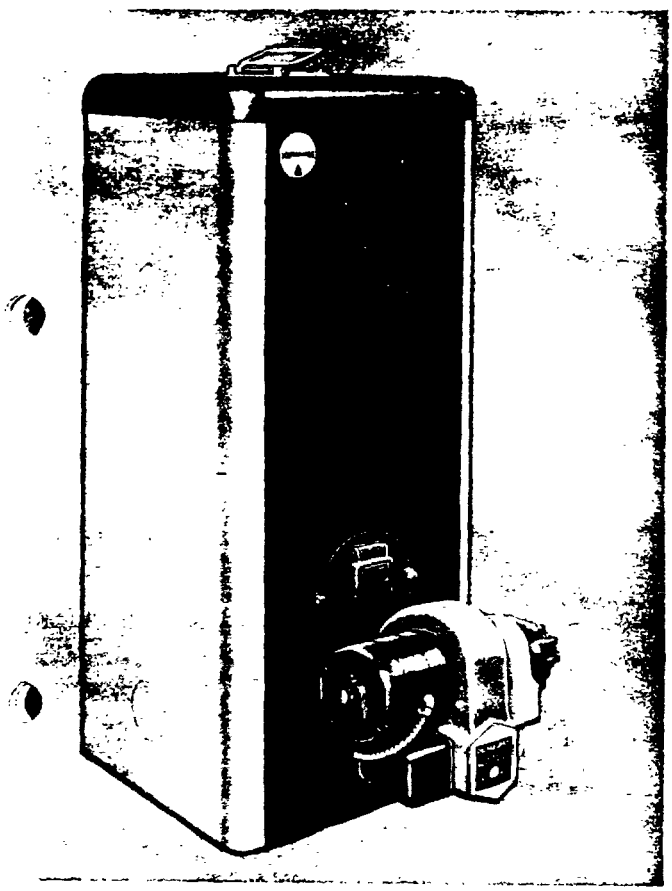
ratings

heater number		018	022	027	030	032
capacity hot water 50° rise	gph	165	250	400	550	700
firing rate—oil gph*		.7	1.1	1.7	2.3	3.0
—gas Btu per hour	1000's	98	154	238	322	420
grate area	sq ft	0.96	1.25	2.1	3.2	3.2

*Fuel burning rates based on 140,000 Btu oil.

dimensions and data (feet-inches)

A—shell diameter		1-6	1-9	2-1	2-7	2-7
B—base diameter		1-7	1-10	2-2	2-8	2-8
D—heater height		4-0	4-0	5-0	4-10	5-6
E—smoke outlet diameter		0-6	0-6	0-8	0-8	0-8
F—firepot diameter		1-1¼	1-4	1-8	2-0¼	2-0¼
G—firedoor opening in heater—width		0-8½	0-8½	1-0¾	1-0¾	1-0¾
H—" —height		0-8	0-8	0-9	0-9	0-9
flow size		0-1½	0-1½	0-2	0-2½	0-2½
return size		0-1½	0-1½	0-2	0-2½	0-2½
cleanout plug size		0-1½	0-1½	0-2	0-2	0-2
outside surface to cover	sq ft	14	17	27	32	38
approximate weight—heater shell	lb	290	350	620	800	980
—base and castings	lb	140	180	220	300	290
—total	lb	430	530	840	1100	1270



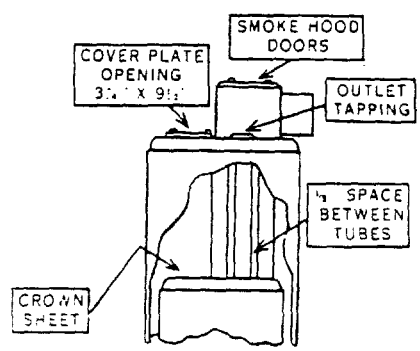
Cottage VT510-DW
. . . direct-fired water heater

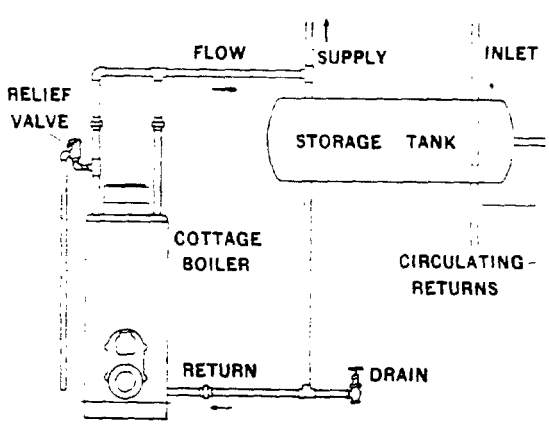
140 gallons . . . 100° rise

For an abundance of hot water *fast* the Kewanee Cottage Boiler used as a direct-fired water heater provides a most unusual performance. Teamed with any good oil or gas burner it operates with a surprising economy in the use of fuel, yet it requires very little floor space.

Enclosed in an attractive steel jacket it is only 23 x 23 in. and less than 5 ft high. Built according to ASME code it is tested with 150 lb hydrostatic pressure for working pressures up to 100 lb.

Easy to clean: Simply remove the 8 bolts, remove the cover plate and tubes can be reached for scale removal . . . also the top of firebox. An important feature in localities where water conditions are adverse.





typical piping connections (diagram at left)

For most favorable circulating conditions storage tank should be placed as high above the heater as headroom permits.

Cold water supply should enter storage tank through pipe extended to within 6 in. of bottom.

Return circulating line between tank and heater should connect to bottom of tank opposite cold water inlet.

Hot water flow line should connect at either end or top of tank. Return may connect to the back of the heater or to any other of the bottom openings.

ratings

boiler number	capacity		firing rate	
	100° rise gph	100° rise 3 hr	oil gph*	gas btu per hr
VT510-DW	140	420	1.1	144 200

*Fuel burning rates based on 140,000 Btu oil.

dimensions (feet—inches)

boiler number	hght	lgth	width	supply	return	smoke outlet dia	chimney	
							size	hght
VT510-DW	4-8¾	1-11	1-11	0-1½	0-1½	0-7	0-8 x 0-8	16-0

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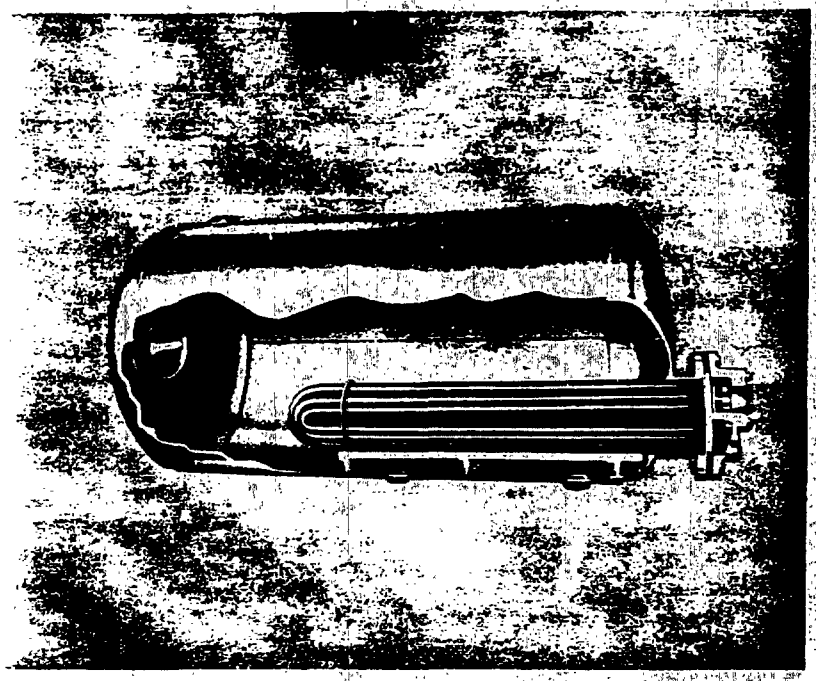


storage water heaters

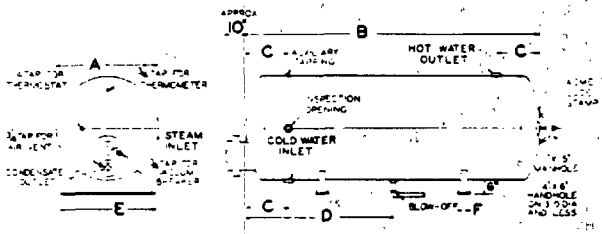
. . . 50 to 6000 gph

Where varying quantities of hot water are used at irregular intervals . . . and exhaust or live steam is available, Kewanee Storage Water Heaters provide a very useful service. With heating coils capable of heating 50 to 6000 gallons of water per hour (raising temperatures from 40° up to 180°) and storage tanks [illegible] gallons capacity, water can be heated and accumulated, insuring an ample supply at any time, without creating an overload on the boilers or other steam [illegible].

The heating element is constructed of heavy [illegible] copper tubing bent into a U shape, which takes care of any expansion of the tubes in service. Tubes are [illegible] rolled into the tube sheet and held in place by [illegible] support plates to prevent vibration and wear. Steam [illegible] are of heavy design, accurately machined, and there are no internal gaskets or joint to leak.

The very wide range of capacities of tanks and heating coils makes it possible to fit almost any operating condition with one of these standard units.

capacities and dimensions



coil data (feet - inches)

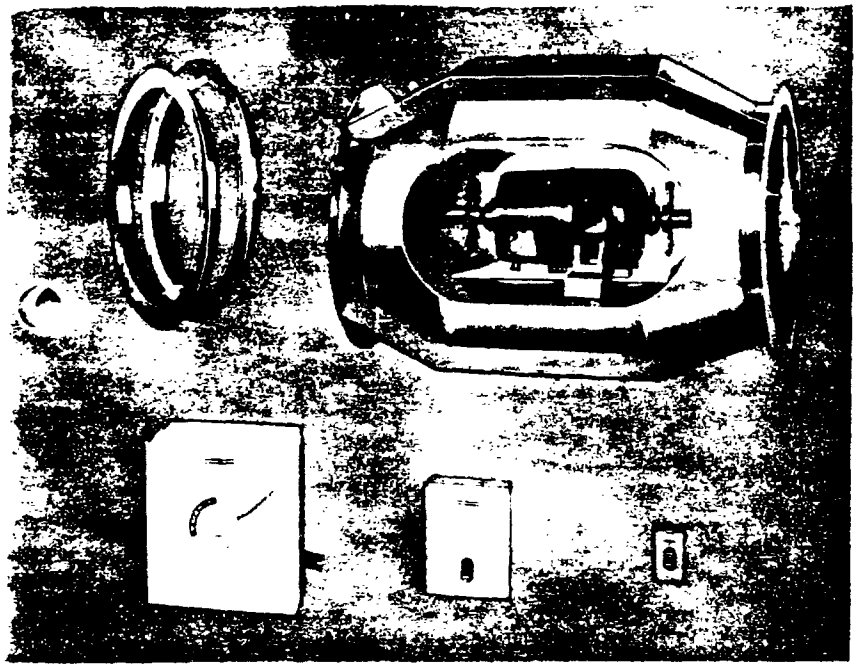
heating coil size and no.	heating cap. GPH 40° to 180°F with steam at atmospheric pressure	heating surface sq ft	horizontal tank min. length	steam inlet	steam outlet
A—2.5	50	2.5	1-6	0-2	0-1
A—5	100	5	2-6	0-2	0-1
A—10	200	10	5-6	0-2	0-1
B—15	300	15	4-8	0-2½	0-1¼
B—20	400	20	4-4	0-2½	0-1¼
B—25	500	25	5-6	0-2½	0-1¼
C—30	600	30	5-0	0-4	0-2
C—40	800	40	5-0	0-4	0-2
D—50	1000	50	5-0	0-5	0-2½
D—75	1500	75	6-6	0-5	0-2½
D—100	2000	100	8-6	0-5	0-2½
E—150	3000	150	7-6	0-8	0-4
E—200	4000	200	9-6	0-8	0-4
E—250	5000	250	9-6	0-8	0-4
F—300	6000	300	8-6	0-10	0-5

Openings 2½ in. and smaller are pipe thread.
Larger openings furnished with companion flange.

tank data (feet - inches)

tank htr no.	stge. cap. gal.	tank size A x B dia	lgth	C	D	E	F	water inlet & outlet	blow-off	auxil. tap size
2404	95	2-0 x	4-0	1-2	2-0	2-0	0-5¼	0-2½	0-1½	0-1
2405	118	2-0 x	5-0	1-2	2-6	2-0	0-5¼	0-2½	0-1½	0-1
2406	141	2-0 x	6-0	1-2	3-0	2-0	0-5¼	0-2½	0-1½	0-1
2407	164	2-0 x	7-0	1-2	3-6	2-0	0-5¼	0-2½	0-1½	0-1
3005	180	2-6 x	5-0	1-4	2-6	2-6	0-5¼	0-2½	0-1½	0-1
3006	215	2-6 x	6-0	1-4	3-0	2-6	0-5¼	0-2½	0-1½	0-1
3007	255	2-6 x	7-0	1-4	3-6	2-6	0-5¼	0-2½	0-1½	0-1
3008	285	2-6 x	8-0	1-4	4-0	2-6	0-5¼	0-2½	0-1½	0-1
3606	310	3-0 x	6-0	1-4	3-0	3-0	0-5¾	0-3	0-1½	0-1
3607	365	3-0 x	7-0	1-4	3-6	3-0	0-5¾	0-3	0-1½	0-1
3608	415	3-0 x	8-0	1-4	4-0	3-0	0-5¾	0-3	0-1½	0-1
3609	475	3-0 x	9-0	1-4	4-6	3-0	0-5¾	0-3	0-1½	0-1
3610	500	3-0 x	10-0	1-4	5-0	3-0	0-5¾	0-3	0-1½	0-1
4207	500	3-6 x	7-0	1-4	3-6	3-6	0-6¾	0-3	0-2	0-1½
4208	575	3-6 x	8-0	1-4	4-0	3-6	0-6¾	0-3	0-2	0-1½
4209	650	3-6 x	9-0	1-4	4-6	3-6	0-6¾	0-3	0-2	0-1½
4210	720	3-6 x	10-0	1-4	5-0	3-6	0-6¾	0-3	0-2	0-1½
4212	860	3-6 x	12-0	1-4	6-0	3-6	0-6¾	0-3	0-2	0-1½
4214	1000	3-6 x	14-0	1-4	7-0	3-6	0-6¾	0-3	0-2	0-1½
4810	940	4-0 x	10-0	1-6	5-0	4-0	0-6¾	0-4	0-2½	0-1½
4812	1125	4-0 x	12-0	1-6	6-0	4-0	0-6¾	0-4	0-2½	0-1½
4814	1300	4-0 x	14-0	1-6	7-0	4-0	0-6¾	0-4	0-2½	0-1½
5410	1190	4-6 x	10-0	1-6	5-0	3-6	0-6	0-4	0-2½	0-1½
5412	1425	4-6 x	12-0	1-6	6-0	3-6	0-6	0-4	0-2½	0-1½
5414	1665	4-6 x	14-0	1-6	7-0	3-6	0-6	0-4	0-2½	0-1½
6010	1400	5-0 x	10-0	1-8	5-0	3-6	0-6	0-4	0-2½	0-1½
6012	1700	5-0 x	12-0	1-8	6-0	3-6	0-6	0-4	0-2½	0-1½
6014	2000	5-0 x	14-0	1-8	7-0	3-6	0-6	0-4	0-2½	0-1½
6016	2240	5-0 x	16-0	1-8	8-0	3-6	0-6	0-4	0-2½	0-1½

Shell openings ASME code over 125 lb swp and over 3 in. diameter are flanged nozzles.



fans for every size boiler

When you are up against a difficult stack problem, your Kewanee Boiler can be furnished with complete induced draft equipment. These units are designed to provide constant (although adjustable) predetermined draft for boilers, both high and low pressure, and will withstand flue gas temperatures up to 650° F. within maximum room temperature of 125° F.

Designed as a "straight through" unit, these induced draft fans are easily installed and can be mounted in any position as a flanged section of breeching or stack.

Not only are these units low in first cost and require minimum maintenance, but permit maximum boiler efficiency at all loads, regardless of weather conditions.

For further information and complete data on induced draft fans for Kewanee Boilers, consult your nearest Kewanee Sales Office.

Illustration at left shows (top) two-stage induced draft bifurcator with 3-phase variable-speed motor and companion flanges, (bottom) nine-step speed controller, magnetic starter and push-button station.

typical installations



Photo courtesy of Minneapolis-Moline Company, Kansas City, Kansas

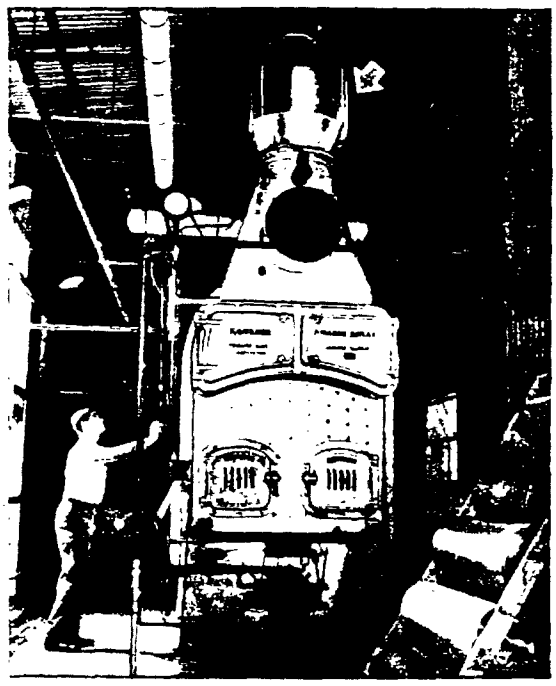
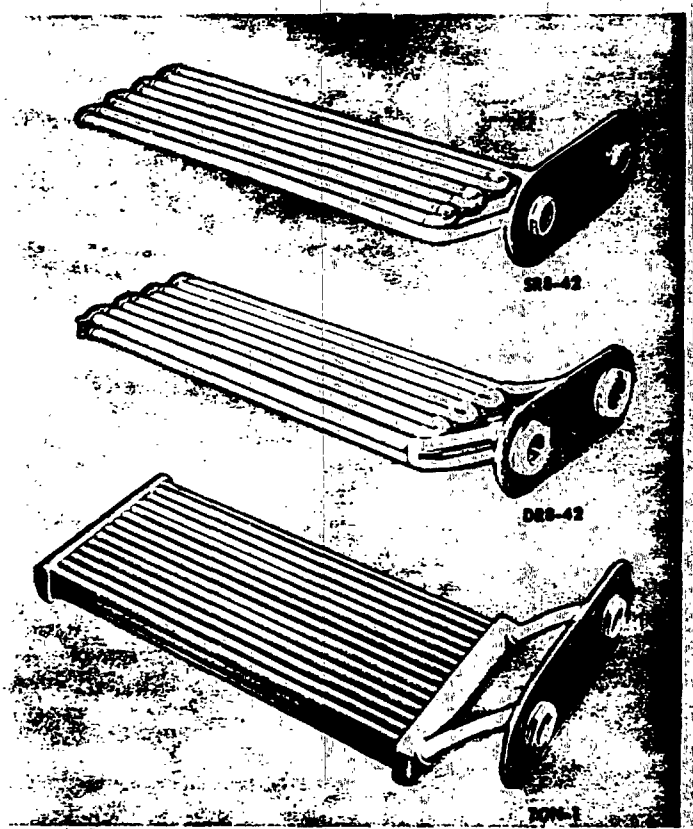


Photo courtesy of Nutrena Mills, Inc., Wichita Falls, Texas

KEWANEE



indirect hot water heating coils for commercial firebox and scotch type boilers

Kewanee boilers are all built to accommodate indirect water heating coils . . . either storage or instantaneous type . . . which can be installed at the factory, or after the boiler is on the job.

Copper tubing of generous size, brazed into bronze fittings . . . ends tapped with standard pipe threads . . . locknuts and ring gaskets . . . boiler steel mounting plate . . . full face sheet rubber gaskets . . . make these coils efficient and long lasting.

In tables below the symbol SR6-24 means a single row of 6 pipes 24 inches long . . . DR8-42 a double row of 8 pipes 42 inches long.

capacities

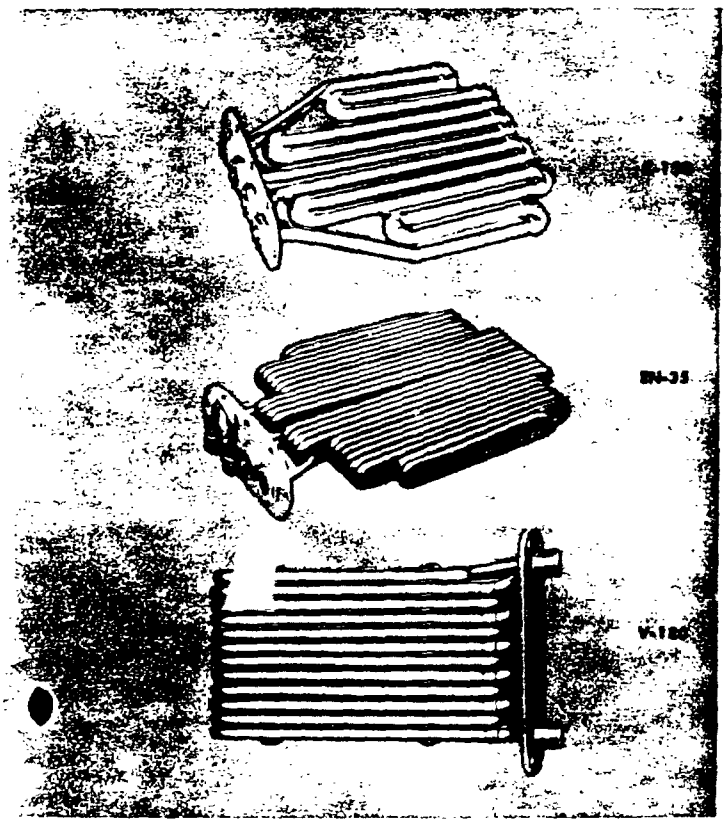
storage tank operation

boiler number	coil no. and max size	rated capacity total gal. heated 40 -140° 3 hrs in boiler water 212° F	180° F	total surface sq ft
	SR6-24	90	55	3.0
	SR8-24	120	70	3.9
	DR6-24	180	110	6.0
	DR8-24	240	145	7.7
5176-78	DR8-30	320	190	9.9
5179	2 DR8-30	640	380	19.8
	DR8-36	400	240	11.9
5180,81	2 DR8-36	800	480	23.8
	DR8-42	480	290	14.0
5182,83	2 DR8-42	960	580	28.0
	DR8-48	560	335	16.1
5184	2 DR8-48	1120	670	32.2
5185	3 DR8-48	1680	1005	48.3
	DR8-54	640	385	18.2
5186-88	3 DR8-54	1920	1155	54.6
	DR8-60	720	430	20.3
5189,90	3 DR8-60	2160	1290	60.9
	DR8-66	800	480	22.4
	DR8-72	880	530	24.5
	DR8-78	960	575	26.6
7L80	2 DR8-78	1920	1150	53.2
	DR8-84	1040	625	28.7
7L82	2 DR8-84	2080	1250	57.4
	DR8-90	1120	670	30.8
	DR8-96	1200	720	32.9
7L81	2 DR8-96	2400	1440	65.8
	DR8-102	1280	770	35.0
7L83,84	2 DR8-102	2560	1540	70.0
7L86	3 DR8-102	3840	2310	105.0
	DR8-108	1360	815	37.1
	DR8-114	1440	865	39.2
7L85	2 DR8-114	2880	1730	78.4
	DR8-120	1520	910	40.3
7L87-90	3 DR8-120	4560	2730	120.9

instantaneous flow

boiler number	coil no. and max size	rated capacity total gal. heated 40 -140° in 180° boiler water 1 hr	1 min	total surface sq ft
	TON-1	220	3.7	4.7
	QON-1	280	4.7	8.7
5176-78	QON-2	330	5.8	23.4
5179-81	2 QON-2	700	11.6	46.8
	QON-3	420	7.0	28.0
	QON-4	490	8.2	32.5
5182-85	3 QON-4	1470	24.6	97.8
	QON-7	600	10.0	40.0
5186-88	3 QON-7	1800	30.0	120.0
	QON-8	700	11.7	46.7
7L80-85	2 QON-8	1400	23.4	93.4
7L86-90	3 QON-8	2100	35.1	140.1
5189,90	3 QON-8	2100	35.1	140.1

Information on coils for LM-800 boilers on application.
Any coil shorter than the maximum lengths listed above may be substituted in each boiler where less hot water capacity is required.
Coil inlet and outlet same size iron pipe tap, 1 in. on TON and 1¼ in. on QON instantaneous, also 1¼ in. on DR and 1 in. on SR storage tank coils.



indirect hot water heating coils for residential boilers

Kewanee boilers for home heating can be equipped with indirect water heating coils (storage tank or instantaneous type) either at the factory or after the boiler is installed and in use.

All are made with openings to accommodate the hot water coils and it is necessary to remove only the tapping plate, insert the coil, and bolt it into place.

Kewanee coils for domestic hot water are substantially built for long, trouble-free use and efficient operation. The copper tubing is brazed into bronze fittings mounted on a steel mounting plate with locknuts and gasket. Coil ends are tapped to receive standard pipe thread.

capacities

storage tank operation

boiler number	coil no. and max size	rated capacity gallons heated 40°-140° 3 hrs in boiler water 212 F	180 F	surface sq ft
Square-Heat type "R" boiler				
	SR6-24	90	55	3.0
	SR8-24	120	70	3.9
	DR6-24	180	110	6.0
3R1	DR8-24	240	145	7.7
3R2	DR8-30	320	190	9.9
3R3, 5	DR8-36	400	240	11.9
3R4, 6	DR8-42	480	290	14.0
3R9	DR8-48	560	335	16.1
3R7	DR8-54	640	385	18.2
3R10	DR8-60	720	430	20.3
3R8	DR8-60	720	430	20.3
3R11	DR8-66	800	480	22.4
3R12	DR8-72	880	530	24.5
Round type "R" boiler				
1734, 1735, 1736, 1737	A65	65	40	2.0
1734, 1735, 1736, 1737	C150	150	90	5.0
1735, 1736, 1737				
1736, 1737	D200	200	120	6.6
Cottage boiler				
VT510	V-55	55	35	1.9

instantaneous flow

coil no. and max size	rated capacity gallons heated 40°-140° in 180° boiler water 1 hr	1 min	surface sq ft
TON-1	220	3.7	14.7
QON-1	280	4.7	18.7
QON-2	350	5.8	23.4
QON-3	420	7.0	28.0
QON-4	490	8.2	32.6
QON-4	490	8.2	32.6
QON-7	600	10.0	40.0
QON-7	600	10.0	40.0
QON-8	700	11.7	46.7
QON-8	700	11.7	46.7
QON-8	700	11.7	46.7
EN34	170	2.9	11.4
EN35	210	3.5	14.0
EN36	250	4.2	16.5
V-180	180	3.0	10.75

Any coil shorter than the maximum lengths listed at left may be substituted in each boiler where less hot water capacity is required.

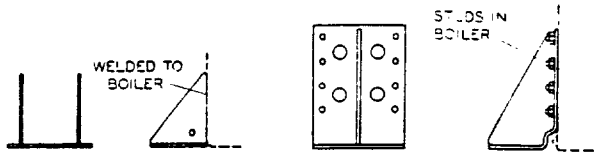
Coil inlet and outlet same size iron pipe tap, 1 in. on TON and 1¼ in. on QON instantaneous, also 1¼ in. on DR and 1 in. on SR storage tank coils.

Square-heat boilers have tapping each side for external water heater, also on right side for low water cut-off with plug.

KEWANEE

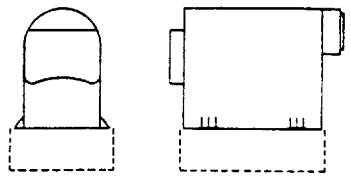
boiler support brackets and structural steel suspension

For extra furnace height (beyond the code standards), Kewanee structural steel suspension offers a solid setting independent of furnace brickwork. The gusset bearing plate brackets give support for setting the boiler on a separate masonry base.



BRACKET · LOW PRESSURE BOILERS

BRACKET · HIGH PRESSURE BOILERS



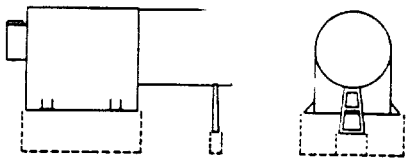
BEARING BRACKETS · TYPE C BOILERS

specifications
boiler support brackets

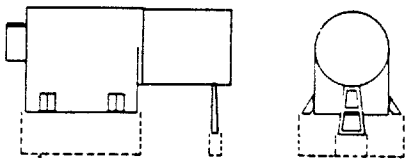
For low pressure firebox and Type "C" boilers the support brackets shall consist of two pairs of steel bearing plates, each with two gussets welded to the boiler at the bottom of the waterleg. Each gusset to have a $\frac{1}{2}$ in. hole for wiring insulation to the boiler.

For high pressure firebox boilers, two pairs of forged steel welded bearing plate brackets drilled for secure fastening at bottom of the waterleg with stud bolts.

On high and low pressure firebox boilers the barrel shall be supported by a cast iron "A" frame backstand grouted on masonry pier.



BEARING BRACKETS · LOW PRESSURE BOILERS

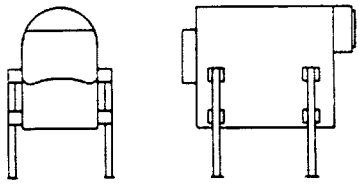


BEARING BRACKETS · HIGH PRESSURE BOILERS

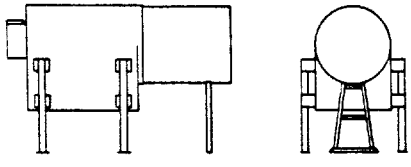
specifications
structural steel suspension

Suspension shall consist of four steel H-columns with bearing plates, one pair each side of boiler and eight pairs of forged steel brackets fastened to boiler safely and to provide lateral stability according to ASME construction code. Each H-column shall be securely bolted to two pairs of 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.

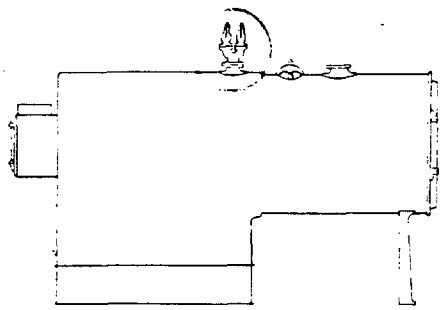
All column and backstand bearing plates have bolt holes for anchoring to foundation. (Anchor bolts not furnished by Kewanee.)



SUPPORTING COLUMNS · TYPE C



SUPPORTING COLUMNS & BACKSTAND



safety valves

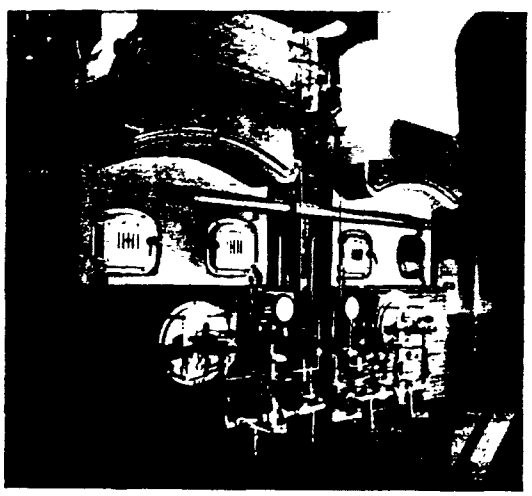
boilers over 15 lb swp

Number and size varies with valve setting. All boilers having 500 sq ft or less of heating surface furnished with one valve. Boilers having more than 500 sq ft of heating surface furnished with two or more valves. Manufacturer reserves right to use separate outlets or yokes as conditions require.

boilers 15 lb swp

One or more valves furnished depending on required capacity.

typical boiler installations



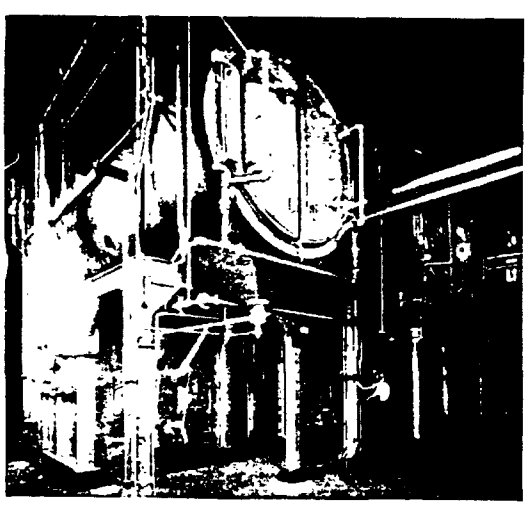
Left

Dr. Pepper Company
Dallas, Texas
Two Kewanee "500" series high pressure boilers



Right

Hotel Mead
Wisconsin Rapids, Wis.
Three Kewanee Square-Heat type "R" boilers



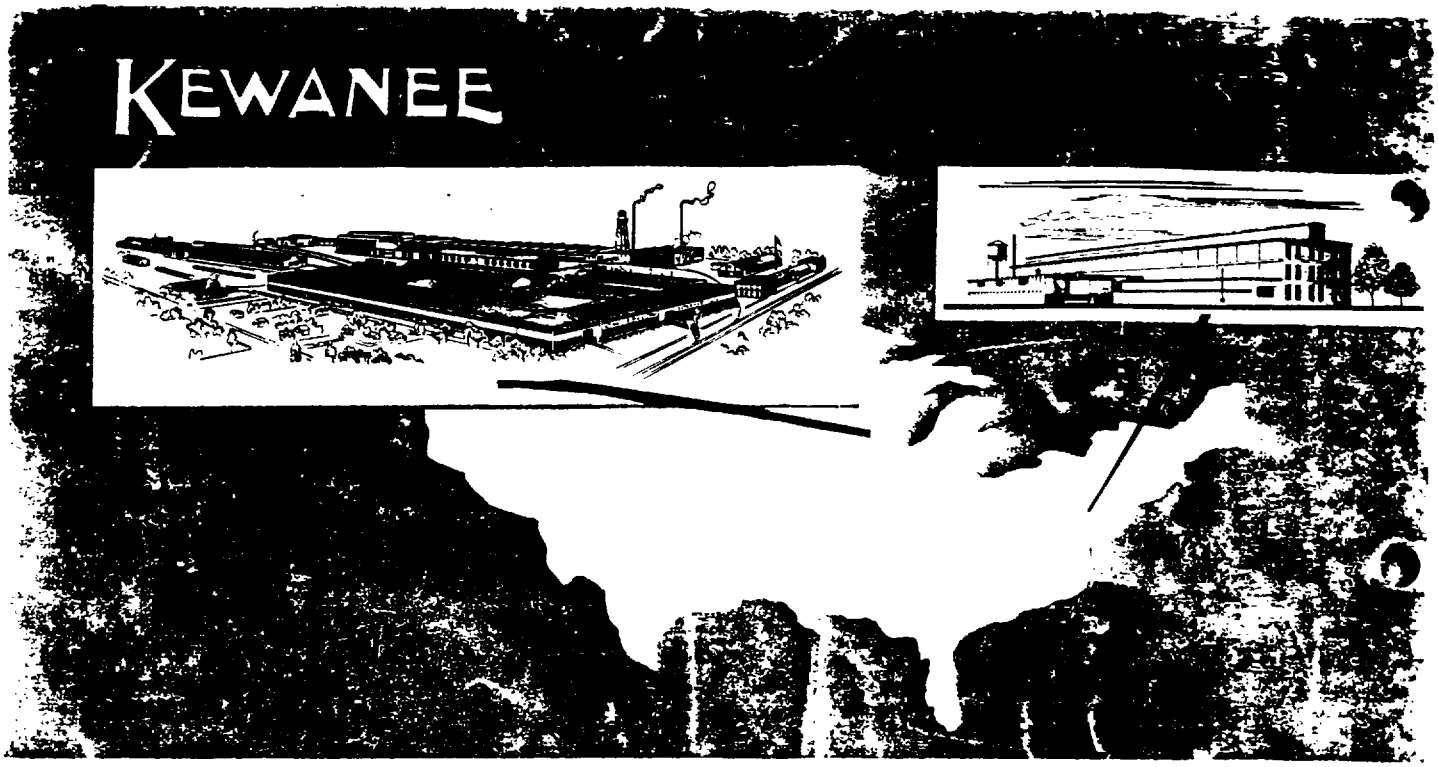
Left

Saint Mary's Hospital
La Salle, Illinois
Three Kewanee Hi-test boilers



Right

Ohio Farm Bureau Office Building
Columbus, Ohio
Three Kewanee type "C" boilers



branch offices • Kewanee Boiler Division

	phone no.
APPLETON, WIS. P. O. Box 355	3-3132
ARDMORE, PA. Suburban Square Building	Midway 2-8170
ATLANTA, GA. 955 W. Marietta St., N.W.	Elgin 1228
BALTIMORE, MD. 2301 N. Charles St.	Belmont 5-4161
BIRMINGHAM, ALA. 2224 Comer Building	3-4645
BOSTON, MASS. 127 Federal Street	Liberty 2-3311
BUTTE, MONT. 909 E. Second Street	5457
CAPE ELIZABETH, ME. 46 Forest	Portland 2-7673
CHATTANOOGA, TENN. 720 James Building	6-6657
CHICAGO, ILLINOIS 549 W. Washington Blvd.	Central 6-7525
CINCINNATI, OHIO 2107 Central Avenue	Garfield 5252
CLEVELAND, OHIO 1401 Prospect Avenue	Cherry 1-6911
COLUMBUS, OHIO 20 S. Third Street	Main 3544
DALLAS, TEXAS 4411 Belmont Avenue	Victor 0177
DENVER, COLO. 1228 California Street	Tabor 4505
DES MOINES, IOWA 407 Hubbell Building	3-7817
DETROIT, MICH. 12950 Hamilton Avenue	Townsend 8-0684
EL PASO, TEXAS 600 W. Paisano Drive	3-1405
GRAND RAPIDS, MICH. 331 Ottawa Avenue, N.W.	9-2352
GREEN BAY, WIS. P. O. Box 324	Depere 126
GREENSBORO, N. C. 211 W. Sycamore Street	3-2526
GREENVILLE, S. C. 104 E. Stone Avenue	3-7488
HOUSTON, TEXAS 1309 Anita Street	Keystone 7431
INDIANAPOLIS, IND. 31 E. Georgia Street	Imperial 6576
KANSAS CITY, MO. 2014 Wyandotte Street	Harrison 0696
KEWANEE, ILLINOIS 101 Franklin Street	4481
KINGSTON, PA. 303 Market Street	Butler 7-4117
LOS ANGELES, CALIF. 320 Crocker Street	Michigan 2363
LOUISVILLE, KY 300 W. Main Street	Jackson 5541
MADISON, WIS. 416 W. Johnson Street	5-2102
MEMPHIS, TENN. 668 S. Main Street	8-0339
MILWAUKEE, WIS. 312 E. Wisconsin Avenue	Broadway 1-1840
MINNEAPOLIS, MINN. 300 Builders Exchange Building	Fillmore 6741
NEW HAVEN, CONN. 902 Chapel Street	Locust 2-8085
NEW ORLEANS, LA. 816 Howard Avenue	Tulane 7105
NEW YORK, N. Y. 40 West 40th Street	Oxford 5-1970
OKLAHOMA CITY, OKLA. 120 East Main Street	Forrest 5-7301
OMAHA, NEBR. 408 South 19th St.	Jackson 7636
PITTSBURGH, PA. 1005 Empire Bldg.	Grant 1-6425
PORTLAND, ORE. 432 Pacific Bldg.	Beacon 6197
RICHMOND, VA. Bellevue Station	6-2337
ROANOKE, VA. Grandin Road Station	2-6548
SAGINAW, MICH. 2340 Mershon Street	2-4147
ST. LOUIS, MO. 2835 Washington Blvd.	Franklin 3406
SALT LAKE CITY, UTAH 204 Dooly Building	4-6421
SAN ANTONIO, TEXAS 109 Barrera Street	Fannin 7229
SAN FRANCISCO, CALIF. 637 Minna Street	Market 1-3612
SCHENECTADY, N. Y. 277 State Street	4-7822
SEATTLE, WASH. 72 Vine Street	Eliot 0230
SPOKANE, WASH. 2932 E. Trent Ave.	Lakeview 1539
TAMPA, FLA. 2925 W. Hillsboro Ave.	33-8171
TOLEDO, OHIO 702 Madison Avenue	Garfield 8359
TULSA, OKLA. 15 West 10th Street	2-1033
WASHINGTON, D. C. 15th & H Streets	Executive 3-4044
WICHITA, KANS. 811 E. Boyley Street	2-3484

KEWANEE-ROSS CORPORATION

Division of American Radiator & Standard Sanitary Corporation

KEWANEE, ILLINOIS