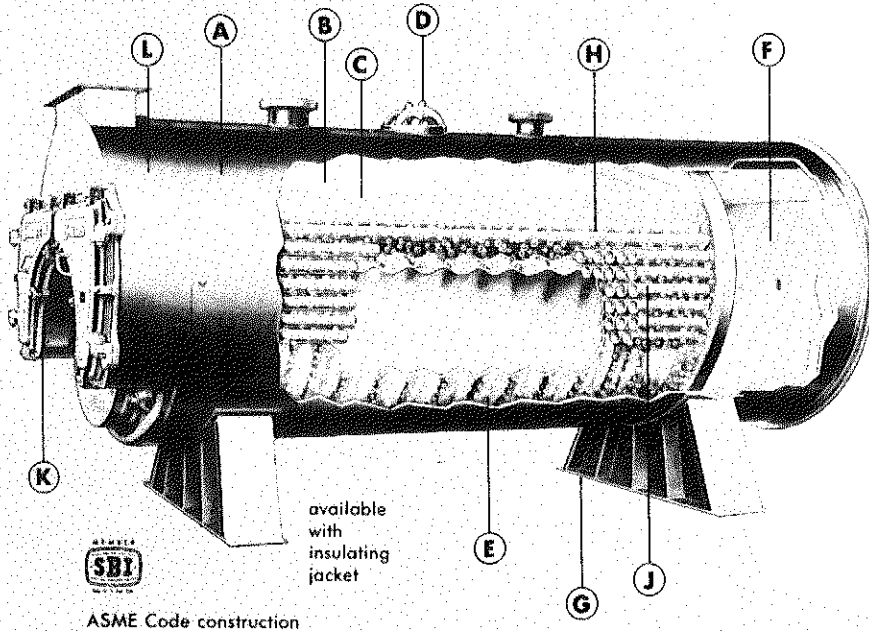


# HM-800 series

MARCH, 1958

52 to 651 horsepower . . . 125-150 lb wp or high temperature water above 250° F



The Kewanee high pressure scotch type boiler is built in a complete range of sizes ideally suited for hospitals, schools, office buildings, factories . . . any place where steam or high temperature water is used.

When sized on SBI rating the HM-800 is designed with a full 8.2 sq ft of heating surface per boiler horsepower. This ample amount of heating surface safely provides sufficient steam in reserve . . . lower fuel and maintenance costs, longer, more dependable boiler life. It means 50% or more extra power for pick up and the additional capacity requirements for any particular job. Certified ratings are based on 5.5 sq ft of heating surface.

ASME Code construction

- A Shell** is shaped from heavy flange steel with heads and furnace of firebox quality. All welds in accordance with ASME Code, x-rayed and stress relieved.
- B Ample steam space** insures dry steam. Water content is sufficient to hold water line steady.
- C Unbroken steam disengaging area** permits steam to rise without undue turbulence.
- D 11 x 15 in. manhole** and adequate washout openings give access to waterside.
- E Corrugated furnace** for extra strength and added heating surface next to the fire.
- F Rear combustion chamber** is heavily lined with refractory. Dry back design.

- G Sturdy steel saddle supports** simplify handling and installation. No special base is required.
- H Long gas travel**, through the lengthy combustion chamber, then back through the full length of the heavy gage 3" tubes, assures maximum transfer of heat to boiler water.
- J Rapid circulation** through the unobstructed waterways speedily sweeps the steam bubbles up without commotion . . . an important factor in making HM-800 a fast steamer.
- K Insulated cast iron flue doors**, gasketed for permanent gas-tight fit, provide easy access to fire tubes for cleaning and inspection. (Steel doors on HM-891, 892 and 893.)
- L Gas-tight smokebox** of heavy gage steel . . . welded in one piece to boiler shell. Rectangular smoke outlet located at top.

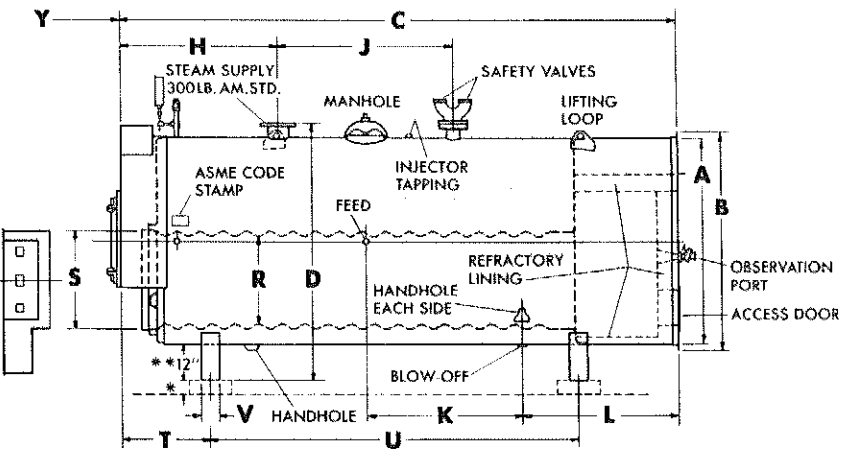
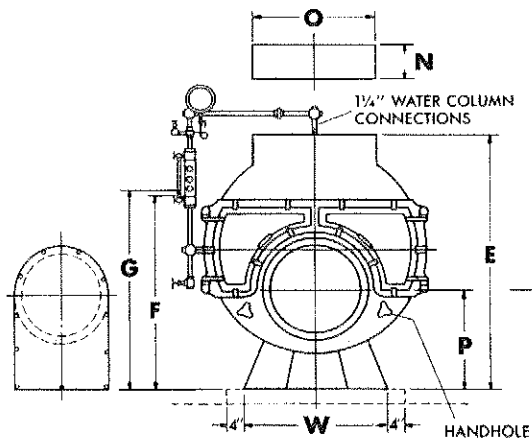
## ratings • mechanically fired—oil or gas

boiler number	HM-880	HM-881	HM-882	HM-883	HM-884	HM-885	HM-886	HM-887	HM-888	HM-889	HM-890	HM-891	HM-892	HM-893
SBI rating — horsepower . . . . .	52	61	74	87	109	130	152	174	217	261	304	347	390	434
— steam . . . . . sq ft	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500	48570	54640	60710
— water . . . . . sq ft	11660	13600	16520	19440	24280	29150	34000	38860	48570	58280	68000	77710	87420	97140
— MBtuh . . . . .	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200	11657	13114	14570
— steam per hour — 212° F . . . . . lb	1790	2100	2550	3000	3760	4490	5240	6000	7490	9000	10490	11970	13460	14970
certified output . . . . . hp	78	92	111	131	164	195	228	261	326	392	456	521	585	651
*firing rate — oil** . . . . . gph	22	26	31	37	46	54	64	73	91	110	127	146	164	182
— gas . . . . . MBtuh	3280	3830	4650	5460	6840	8200	9560	10920	13670	16400	19120	21900	24600	27300
heating surface (SBI min) . . . . . sq ft	429	500	608	715	893	1072	1250	1429	1786	2143	2500	2857	3214	3571
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	346.9	390.3	433.6
net furnace volume . . . . . cu ft	62.5	67.7	85.4	94.2	118.5	149.9	164.1	185.1	228.2	271.3	333.5	348.7	393.1	437.6
safety valve capacity . . . lb steam per hr	3432	4000	4864	5720	7144	8576	10000	11432	14288	17144	20000	22856	25712	28568

\*Firing rates calculated to develop boiler output of 150% of SBI rating.  
\*\*Based on 150,000 Btu oil.

**Standard equipment** — Gas-tight front steel smokebox; rear end cover plate with access panel and pyrex observation port. Rear combustion chamber refractory circle lining and rear wall, factory installed. Steel saddle supports. Flue cleaner and handle. Additional equipment, trim, furnace extensions and insulating jackets furnished at extra cost.

**Standard trim** — Safety valve(s) as required by ASME Code, steam gage with siphon and cock; water column with water gage and try cocks assembly. Chain operated water column trimmings on boilers HM-888 and larger. Globe and check valves for feed-line, quick action and slow action blow-off valves.



\*Additional height not by Kewanee Boiler Division.  
 \*\*Supports attached permanently to boiler when insulating jacket or piping is furnished.

## HM-800 series boilers

high pressure • oil or gas

## dimensions and data (feet—inches)

boiler number	HM-880	HM-881	HM-882	HM-883	HM-884	HM-885	HM-886	HM-887	HM-888	HM-889	HM-890	HM-891	HM-892	HM-893
A — boiler inside diameter	5-0	5-0	5-6	5-6	6-0	6-6	6-6	7-0	7-6	8-0	8-6	8-10	9-2	9-6
B — boiler width	5-5	5-5	5-11	5-11	6-5½	7-0	7-0	7-6	8-0	8-6	9-0	9-4	9-8	10-0
C — boiler length	11-7	12-9½	13-2	14-10	16-1	16-7	18-7	17-9	18-11	20-0	20-1	20-7	21-4	22-1
D — steam supply height	6-6	6-6	7-0½	7-0½	7-6½	8-0½	8-0½	8-6½	9-1½	9-7½	10-1½	10-6	10-10	11-2
E — smoke outlet height	6-5	6-5	6-11	6-11	7-5	7-11	7-11	8-5	8-11½	9-5½	9-11½	10-3	10-7	10-11
F — water column height	4-11	4-11	5-2½	5-2½	5-6½	5-10½	5-10½	6-2½	6-8	7-0½	7-6	7-11½	8-2½	8-5½
G — water line height	5-1	5-1	5-4½	5-4½	5-8½	6-0½	6-0½	6-4½	6-10	7-2½	7-8	8-1½	8-4½	8-7½
H — steam supply	3-1	3-7	3-8	4-2	4-9	4-10	5-4	5-5	5-5	5-6	5-7	5-8	6-0	6-0
J — safety valve*	4-3	4-4	4-5	5-0	5-0	5-0	6-6	5-6	6-6	7-0	7-0	7-0	7-0	7-0
K — feed water, each side	2-6	3-1	3-1	3-11	4-5	3-11	4-11	4-4	5-0	5-6	5-6	5-6	5-7	5-11
L — blow-off	4-0	4-0	4-3	4-3	4-5	5-4	5-4	5-6	5-6	5-6	5-6	5-11	6-3	6-8
N — smoke outlet — outside width	1-0¾	1-0¾	1-1¾	1-1¾	1-2¾	1-3¾	1-3¾	1-4¾	1-4¾	1-5¾	1-6¾	1-7¾	1-8¾	1-9¾
O — outside length	3-0¾	3-0¾	3-4¾	3-4¾	3-6¾	3-11¾	3-11¾	4-7¾	5-4¾	5-7¾	6-1¾	6-5¾	6-9¾	7-1¾
P — furnace — height	2-7½	2-7½	2-9	2-9	2-10½	3-0½	3-0½	3-2	3-3½	3-5½	3-7½	3-8½	3-10	3-10
R — i.d. corrugation	2-2¾	2-2¾	2-5¾	2-5¾	2-7¾	2-10¾	2-10¾	3-2	3-4¾	3-8	4-2	4-2	4-4	4-4
S — i.d. at front	2-5¾	2-5¾	2-8½	2-8½	2-10¾	3-1¾	3-1¾	3-5	3-7½	3-11	4-5	4-5	4-7	4-7
T — support — location	2-4	2-4	2-5	2-8	2-9	2-10	3-4	3-5	3-5	3-6	3-7	3-8	4-2	4-2
U — center to center	6-9	7-11	8-1	9-6	10-6	10-6	12-0	11-0	12-0	13-0	13-0	13-6	13-6	13-6
V — width	0-9	0-9	0-10	0-10	0-10	0-11	0-11	0-12	1-1	1-2	1-3	1-4	1-4	1-4
W — length	4-5	4-5	4-10	4-10	5-3	5-6	5-6	6-1	6-6	7-0	7-6	7-10	8-2	8-6
Y — tube replacement space — front	6-11	8-1½	8-2	9-10	10-9	10-8	12-8	11-7	12-7	13-6	13-5	13-9	13-11	13-11
breaching diameter — one boiler	1-11	2-0	2-2	2-4	2-6	2-7	2-9	2-11	3-3	3-5	3-7	3-10	4-0	4-2
stack — diameter	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-9	3-0	3-2	3-4	3-6	3-8	3-10
— height	35-0	40-0	40-0	45-0	50-0	50-0	55-0	50-0	55-0	55-0	55-0	55-0	60-0	65-0
breaching 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	5-0	5-3	5-6
stack — diameter	2-4	2-5	2-8	2-10	3-1	3-2	3-5	3-8	3-11	4-2	4-4	4-8	4-11	5-2
— height	40-0	45-0	45-0	50-0	55-0	55-0	60-0	55-0	60-0	60-0	60-0	60-0	65-0	70-0
steam supply size	4	4	6	6	6	6	6	6	8	8	8	10	10	10
blow-off size	2	2	2	2	2	2	2½	2½	2½	2½	2½	2½	2½	2½
feed water size	1¼	1¼	1½	1½	1½	1½	1½	1½	1½	1½	1½	2	2	2
outside surface to cover	180	200	230	260	305	340	380	390	440	500	530	560	620	690
approximate weight														
— 125 lb wp	10000	11100	13100	14000	17500	20800	21900	27100	32000	37900	41900	47300	51400	55500
— 150 lb wp	10400	11500	13900	15100	18700	22700	24900	28700	34500	40100	45100	49300	55800	60100

\*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.

Equipment shown subject to change without notice.

