

IDEAL Type "A" Heat Machines

IDEAL Type "A" Boilers are made in three series, ranging in Steam from 450 to 6,500 sq. ft., and in Water from 750 to 11,000 sq. ft. They specially lend themselves to installation in battery form. IDEAL Boiler ratings conform with the rating formula of the A. S. H. & V. E.

Steam

Water

Boiler No.	8-Hour Rating Sq. Ft.	No. of Sections	Total Length Inches	Grate Area Sq. Ft.	*Safety Valve Size Inches	Boiler No.	8-Hour Ratings Sq. Ft.	No. of Sections	Total Length Inches	Grate Area Sq. Ft.
3-A-5	2600	5	38	8	1-2/2	3-A-50	4400	5	38	8
3-A-6	3250	6	46	10	1-3	3-A-60	5500	6	46	10
3-A-7	3900	7	54	12	1-3	3-A-70	6600	7	54	12
3-A-8	4550	8	62	14	2-2/2	3-A-80	7700	8	62	14
3-A-9	5200	9	70	16	2-2/2	3-A-90	8800	9	70	16
3-A-10	5850	10	78	18	1-3, 1-2/2	3-A-100	9900	10	78	18
3-A-11	6500	11	86	20	1-3, 1-2/2	3-A-110	11000	11	86	20

Height of Water Line, 49 in. Steam Boilers have one 8-in. Outlet, and one 5-in. Inlet. Water Boilers have one 8-in. outlet and two 8-in. inlets.

For list price, see Current Trade Discount sheet.

*Safety Valve sizes accord with A. S. M. E. boiler code.

Factors determining boiler capacities (derived from actual tests).

Number of Boiler—Steam or Water	5	6	7	8	9	10	11
Fuel available, lb.	578	722	866	1012	1156	1300	1445
Evaporative power, lb.	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Total steam from one fuel charge, lb.	5200	6500	7800	9110	10410	11700	13010
Chimney area (sea level), sq. in.	256	256	320	400	400	400	400
Chimney height*, ft.	40	45	45	50	50	55	60

*For additional chimney flue sizes, see page 36 of "Ideal Fitter."

For Smoke Pipe and other dimensions, see pages 37 of "Ideal Fitter."

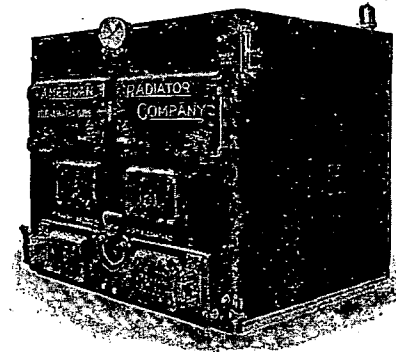
For good chimney construction and its influence on boiler selection, see pages 235 and 236 of "Ideal Fitter."

Height of boiler, 63 inches. Width of boiler, 76 1/2 inches.

For selection of proper size boiler, see pages 240-251 of "Ideal Fitter."

Ratings Developed When Available Fuel Is Burned in 8, 10 or 12 Hours

TIME	Steam Rating					Water Rating								
	5 Sec.	6 Sec.	7 Sec.	8 Sec.	9 Sec.	5 Sec.	6 Sec.	7 Sec.	8 Sec.	9 Sec.	10 Sec.	11 Sec.		
8 Hours	2600	3250	3900	4550	5200	5850	6500	4400	5500	6600	7700	8800	9900	11000
10 Hours	2080	2600	3120	3640	4160	4680	5200	3520	4400	5280	6160	7040	7920	8800
12 Hours	1735	2170	2600	3035	3470	3900	4335	2935	3670	4400	5135	5870	6600	7340



IDEAL Smokeless Water Tube Boilers

(Furnished With or Without Ideal Metallic Jacket)

IDEAL Smokeless Water Tube Boilers are made in series, ranging in Steam from 600 to 20,400 sq. ft., and in Water from 975 to 32,640 sq. ft. They specially lend themselves to installation in battery form. IDEAL Boiler ratings conform with the rating formula of the A. S. H. & V. E.

Below is given a sample specification page of 79 in. pattern, for Bituminous and for Anthracite Fuels:

The National Boiler and Radiator Manufacturers Association's basis for rating steam and water heating boilers is the number of B.t.u. per hour delivered from the flow pipe—without driving or priming.

The number of B.t.u. delivered per hour divided by *240 is the commercial or catalog rating—in square feet of direct column STEAM radiation.

The number of B.t.u. delivered per hour divided by *150 is the commercial or catalog rating—in square feet of direct column WATER radiation.

The number of B.t.u. delivered per hour divided by **970 is the equivalent of the catalog rating in POUNDS OF STEAM per hour.

FOR BITUMINOUS FUEL

Boiler No. Steam	Rating, Sq. Ft. *Steam Radiation	Boiler No. Water	Rating, Sq. Ft. *Water Radiation	Rating, B.t.u. per hour	Rating, Lbs. Steam per hour	Arrangement of Sections	Grate Dimensions, Ins.	Grate Area, Sq. Ft.	Heating Surface Sq. Ft.
T-79-12	14400	T-79-120	23040	3456000	3600	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x42	22.96	701.17
13	15600	T-79-130	24960	3744000	3900	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x48	26.24	756.47
14	16800	T-79-140	26880	4032000	4200	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x54	29.52	811.77
15	18000	T-79-150	28800	4320000	4500	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x54	29.52	866.07
16	19200	T-79-160	30720	4608000	4800	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x60	32.80	921.37
17	20400	T-79-170	32640	4896000	5100	A-C-C-C-C-C-C-BW-C-DF-G-BH	79x60	32.80	954.67

SECTIONS—A—Front, C—Center, BW—Bridgwall, DF—Diving Flue, G—Open Center, BH—Back.

FOR ANTHRACITE FUEL

S-79-T-7	8400	W-79-T-7	13440	2018000	2100	A-5C-H	79x42	22.96	379.62
S-79-T-8	9600	W-79-T-8	15360	2310000	2400	A-6C-H	79x48	26.24	434.92
S-79-T-9	10800	W-79-T-9	17280	2590000	2700	A-7C-H	79x54	29.52	490.22
S-79-T-10	12000	W-79-T-10	19200	2880000	3000	A-8C-H	79x60	32.80	545.52
S-79-T-11	13200	W-79-T-11	21120	3168000	3300	A-7C-W-C-G-H	79x51	27.88	632.74
S-79-T-12	14400	W-79-T-12	23040	3456000	3600	A-8C-W-C-G-H	79x57	31.16	688.04
S-79-T-13	15600	W-79-T-13	24960	3744000	3900	A-8C-W-C-G-H	79x57	31.16	742.34
S-79-T-14	16800	W-79-T-14	26880	4032000	4200	A-9C-W-C-C-G-H	79x63	34.44	797.64
S-79-T-15	18000	W-79-T-15	28800	4320000	4500	A-9C-W-C-C-G-H	79x63	34.44	851.94
S-79-T-16	19200	W-79-T-16	30720	4608000	4800	A-10C-W-C-C-G-H	79x69	37.72	907.24
S-79-T-17	20400	W-79-T-17	32640	4896000	5100	A-10C-W-C-C-G-G-H	79x69	37.72	940.54

SECTIONS—A—Front Section, C—Center Section, W—Anthracite Bridgwall, G—Open Center Section, H—Anthracite Back Section.

*A. S. M. E. 1922 HEATING BOILER CODE, H-106, H-107.

**Latent Heat of Steam from and at 212° F.

For selection of proper size boiler, see pages 249-251 of "Ideal Fitter" catalog.

For complete descriptions, ask for Ideal Water Tube, Bituminous and Anthracite Boilers catalogs, also for "The Ideal Fitter" catalog.