

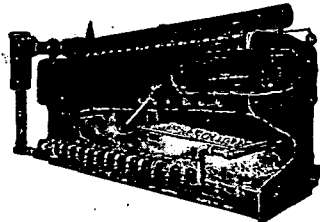
Boilers

Hart & Crouse Company

General Office: Utica, N. Y.

Branch Offices in Principal Cities

Manufacturers of Royal Boilers and Furnaces



ROYAL SMOKELESS BOILERS

Actual Steam Capacities—1670 to 16,600 Sq. Ft.

The Royal Smokeless Boiler is of the water tube down draft principle. This principle, originated by the Hart & Crouse Co. as applied to cast iron sectional boilers, has proved to be a most effective method of burning any grade of soft coal smokelessly independent of firing skill.

The large amount of heating surface in Royal Boilers is retained intact as originally designed. Consequently they produce results with efficiency and economy.

Royal Smokeless Boiler

Boiler No.	Actual Capacity Steam Sq. Ft.	Actual Capacity Water Sq. Ft.	Current Rating Steam Sq. Ft.	Current Rating Water Sq. Ft.	Heating Surface Sq. Ft.	Grate Area Sq. Ft.	Length of Sections Inches	Length of Boiler Inches	Flow Tapping No. and Size	Return Tapping No. and Size	Smoke Pipe Inches
338	1,670	2,680	4,800	7,900	179	14.23	50 1/2	66	1-5"	2-3"	18
339	1,965	3,140	5,400	8,900	200	17.00	56 1/2	72	1-5"	2-3"	18
340	2,370	3,800	6,000	9,900	220	19.65	63	78	1-5"	2-3"	18
341	2,680	4,290	6,600	10,900	240	22.50	69	84	1-6"	2-4"	18
342	2,975	4,760	7,200	11,900	262	22.50	75 1/2	90	1-6"	2-4"	18
343	3,280	5,250	7,800	12,900	283	25.10	81 1/2	96	1-6"	2-4"	18
344	3,585	5,740	8,400	14,200	316	25.10	87 1/2	102 1/2	1-6"	2-4"	18
345	3,890	6,225	9,200	15,200	337	28.00	94	109	1-6"	2-4"	21
346	4,200	6,720	10,000	16,500	360	28.00	100	115	1-6"	2-4"	21
347	4,500	7,200	11,000	18,150	378	28.00	106 1/2	121	1-6"	2-4"	21
409	4,250	6,800	9,000	14,850	324	24.00	65 1/2	93	1-8"	2-5"	21
410	4,750	7,600	10,000	16,500	359	27.50	72 1/2	100	1-8"	2-5"	21
411	5,250	8,400	11,000	18,150	394	31.66	79 1/2	108	1-8"	2-5"	21
412	5,750	9,200	12,000	19,800	427	31.66	86 1/2	114 1/2	1-8"	2-5"	21
413	6,250	10,000	13,000	21,450	461	31.66	93 1/2	121 1/2	1-8"	2-5"	21
414	6,750	10,800	14,000	23,100	496	35.50	101	129	1-8"	2-5"	24
415	7,250	11,600	15,000	24,750	531	35.50	108	136	1-8"	2-5"	24
416	7,775	12,450	16,000	26,400	565	35.50	115	143	1-8"	2-5"	24
548	7,400	11,850	14,000	23,100	511	37.50	83 1/2	120 1/2	1-8"	2-5"	24
549	8,470	13,550	15,800	26,070	573	45.00	93 1/2	130 1/2	1-8"	2-5"	24
550	9,480	15,170	17,600	29,040	642	45.00	104 1/2	141 1/2	1-10"	2-5"	24
551	10,200	16,330	19,400	32,010	710	45.00	114 1/2	151 1/2	1-10"	2-5"	24
552	11,250	18,000	21,000	34,650	773	52.50	124 1/2	161 1/2	1-10"	2-5"	24
553	12,200	19,550	23,000	38,280	841	52.50	135	170 1/2	1-10"	2-5"	24
554	13,000	20,800	25,000	41,250	909	52.50	145	182	1-10"	2-5"	24
555	13,900	22,250	26,800	44,220	978	52.50	153 1/2	192 1/2	1-10"	2-5"	24
556	14,800	23,700	28,800	47,520	1046	52.50	165 1/2	202 1/2	1-10"	2-5"	24
557	15,700	25,150	30,800	50,820	1114	52.50	176	213	1-10"	2-5"	24
558	16,600	26,550	32,600	53,790	1183	52.50	186 1/2	223 1/2	1-10"	2-5"	24
*54-8	7,400	11,850	14,000	23,100	511	37.50	83 1/2	98 1/2	3-6"	4-4"	24
54-9	8,470	13,550	15,800	26,070	573	45.00	93 1/2	108 1/2	4-6"	8-4"	24
54-10	9,480	15,170	17,600	29,040	642	45.00	104 1/2	119 1/2	4-6"	8-4"	24
54-11	10,200	16,330	19,400	32,010	710	45.00	114 1/2	129 1/2	5-6"	10-4"	24
54-12	11,250	18,000	21,000	34,650	773	52.50	124 1/2	139 1/2	5-6"	10-4"	24
54-13	12,200	19,550	23,000	38,280	841	52.50	135	150	5-6"	12-4"	24
54-14	13,000	20,800	25,000	41,250	909	52.50	145	160	6-6"	12-4"	24
54-15	13,900	22,250	26,800	44,220	978	52.50	153 1/2	170 1/2	6-6"	12-4"	24
54-16	14,800	23,700	28,800	47,520	1046	52.50	165 1/2	180 1/2	6-6"	12-4"	24
54-17	15,700	25,150	30,800	50,820	1114	52.50	176	191	6-6"	12-4"	24
54-18	16,600	26,550	32,600	53,790	1183	52.50	186 1/2	201 1/2	6-6"	12-4"	24

*Push Nipple Type.

Additional Data

Series	33"	40"	54"
Height of water line.....	63	68	68"
Height of flow outlet (Header type).....	90	99	108"
Height of flow outlet (Push Nipple type).....	89	89	89"
Overall width.....	68	78	97"
Width at base.....	40	52	62 1/2"

*Height from top of foundation. Add 2" for floor height.

Hart & Crouse Company



Royal New Method Smokeless Boiler

ROYAL NEW METHOD SMOKELESS BOILERS (UP-DRAFT TYPE)

Actual Steam Capacities—730 to 15,732 Sq. Ft.

Actual Water Capacities—1200 to 25,966 Sq. Ft.

Additional Data

Series	34	41	52	68
Height of Water Line.....	46	54	62	68"
Height of Flow Outlet.....	56	65	75	89"
Width of Boiler.....	36	44	56	80 1/2"
Width at Base.....	32 1/4	38	45	62 1/2"

*Height to top of foundation. Add 2 in. for floor height.

Boiler No.	Actual Capacity Steam Sq. Ft.	Actual Capacity Water Sq. Ft.	Current Rating Steam Sq. Ft.	Current Rating Water Sq. Ft.	Grate Area Sq. Ft.	Length of Sections Inches	Length of Boiler Inches	Steam Flows No. and Size	Steam Returns No. and Size	Water Flows No. and Size	Water Returns No. and Size
634	730	1200	1500	2450	4.43	39	49	2-4"	4-3"	2-4"	4-3"
734	870	1430	1800	2950	5.50	46	56	2-4"	4-3"	2-4"	4-3"
834	1010	1660	2100	3450	6.57	53	63	2-4"	4-3"	2-4"	4-3"
934	1150	1890	2400	3950	7.64	60	70	2-4"	4-3"	2-4"	4-3"
1034	1290	2120	2700	4450	8.71	67	77	2-4"	4-3"	2-4"	4-3"
741	1496	2468	2950	4850	7.98	52	63	2-5"	4-4"	2-5"	4-4"
841	1738	2866	3400	5600	9.54	60	71	2-5"	4-4"	2-5"	4-4"
941	1980	3264	3850	6350	11.10	68	79	2-5"	4-4"	2-5"	4-4"
1041	2200	3662	4300	7100	12.66	76	87	2-5"	4-4"	2-5"	4-4"
1141	2442	4060	4750	7850	14.22	84	95	2-5"	4-4"	2-5"	4-4"
752	2544	4195	5100	8400	11.50	59	73	2-6"	4-4"	2-6"	4-4"
852	2940	4848	5900	9725	13.75	68	82	2-6"	4-4"	2-6"	4-4"
952	3336	5501	6700	11,050	16.00	77	91	2-6"	4-4"	2-6"	4-4"
1052	3732	6154	7500	12,375	18.25	86	100	2-6"	4-4"	2-6"	4-4"
1152	4128	6807	8300	13,700	20.50	95	109	2-6"	4-4"	2-6"	4-4"
1252	4524	7460	9100	15,025	22.75	104	118	2-6"	4-4"	2-6"	4-4"
1352	4920	8113	9900	16,350	25.00	113	127	2-6"	4-4"	2-6"	4-4"
1452	5316	8766	10,700	17,675	27.25	122	136	2-6"	4-4"	2-6"	4-4"
1552	5712	9419	11,500	19,000	29.50	131	145	2-6"	4-4"	2-6"	4-4"
768	6017	9928	12,200	20,125	18.75	73	88	3-6"	6-4"	3-6"	6-4"
868	6895	11,386	14,000	23,100	22.50	83 1/2	98 1/2	3-6"	6-4"	3-6"	6-4"
968	7779	12,844	15,800	26,075	26.25	93 1/2	108 1/2	3-6"	6-4"	3-6"	6-4"
1068	8663	14,302	17,600	29,050	30.00	104 1/2	119 1/2	3-6"	6-4"	3-6"	6-4"
1168	9547	15,760	19,400	32,025	33.75	114 1/2	129 1/2	3-6"	6-4"	3-6"	6-4"
1268	10,431	17,218	21,200	35,000	37.50	124 1/2	139 1/2	3-6"	6-4"	3-6"	6-4"
1368	11,315	18,676	23,000	37,975	41.25	135	150	3-6"	6-4"	3-6"	6-4"
1468	12,199	20,134	24,800	40,950	45.00	145	160	3-6"	6-4"	3-6"	6-4"
1568	13,083	21,592	26,600	43,925	48.75	155 1/2	170 1/2	3-6"	6-4"	3-6"	6-4"
1668	13,967	23,050	28,400	46,900	52.50	165 1/2	180 1/2	3-6"	6-4"	3-6"	6-4"
1768	14,848	24,508	30,200	49,875	56.25	176	191	3-6"	6-4"	3-6"	6-4"
1868	15,732	25,966	32,000	52,850	60.00	186 1/2	201 1/2	3-6"	6-4"	3-6"	6-4"

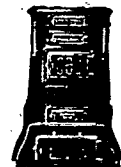
All of the above boilers are available in Hard Coal Type.

ROYAL ROUND BOILERS

Steam No.	Actual Capacity Sq. Ft.	Current Rating Sq. Ft.	Water No.	Actual Capacity Sq. Ft.	Current Rating Sq. Ft.
1035	178	425	1134	284	700
1045	244	625	1144	390	1030
1055	325	825	1154	520	1360
1065	415	1025	1164	664	1700
1075	525	1250	1174	840	2060
1037	200	475	1136	320	780
1047	280	700	1146	450	1150
1057	375	925	1156	600	1525
1067	485	1150	1166	768	1900
1077	625	1400	1176	1000	2300
1039	218	525	1138	339	870
1049	300	775	1148	480	1275
1059	425	1025	1158	680	1700
1069	575	1275	1168	920	2100
1079	700	1600	1178	1120	2640



Royal Round Steam Boiler



Royal Round Water Boiler