

Hart & Crouse Company

General Office: UTICA, N. Y.

Branch Offices in Principal Cities

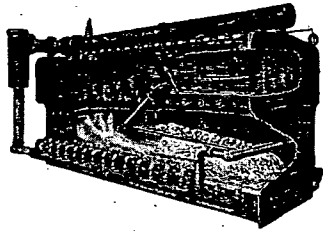
Manufacturers of Royal Boilers and Furnaces

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

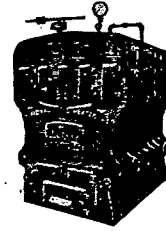
Boiler No.	Actual Capacity Steam Sq. Ft.	Actual Capacity Water Sq. Ft.	Current Rating Steam Sq. Ft.	Current Rating Water Sq. Ft.	Heating Surface Sq. Ft.	Grate Area Sq. Ft.	Length of Sections Inches	Length of Boiler Inches	Flow Tapping No. and Size	Return Tapping No. and Size	Smoke Pipe Inches
338	1,670	2,680	4,800	7,900	179	14.23	50 3/4	66	1-5"	2-3"	18
339	1,965	3,140	5,400	8,900	200	17.00	56 1/4	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 1/4	90	1-6"	2-4"	18
343	3,280	5,250	7,800	12,900	283	25.10	81 1/4	96	1-6"	2-4"	18
344	3,585	5,740	8,600	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 1/4	121	1-6"	2-4"	21
409	4,250	6,800	9,000	14,850	324	24.00	65 3/4	93	1-8"	2-5"	21
410	4,750	7,600	10,000	16,500	359	27.50	72 3/4	100	1-8"	2-5"	21
411	5,250	8,400	11,000	18,150	394	31.66	79 3/4	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	23,200	38,280	841	52.50	135	172	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	155 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	23,200	38,280	841	52.50	135	150	5-6"	10-4"	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	155 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.....	Inches 63	68	68*
Height of flow outlet (Header type).....	Inches 90	99	108
Height of flow outlet (Push Nipple type).....	Inches 89	97	108 1/2
Overall width.....	Inches 68	78	80 1/2
Width at base.....	Inches 40	52	62 1/2

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



Royal Sectional Boiler

ROYAL SECTIONAL BOILERS
Actual Steam Capacities—400 to 9,966 Sq. Ft.
Actual Water Capacities—667 to 16,000 Sq. Ft.

Additional Data

Series	22"	28"	36"	54"
Height of water line.....	Inches 46	54	63	68*
Height of flow outlet (Push Nipple type).....	Inches 36	65	75	89
Height of flow outlet (Header type).....	Inches 36	44	56	80 1/2
Width of boiler.....	Inches 32 3/4	38	45	62 1/2
Width at base.....	Inches 10	12	15	24

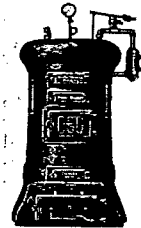
*Height to top of foundation. Add 2" for floor height.

Boiler No.	Actual Capacity Steam Sq. Ft.	Actual Capacity Water Sq. Ft.	Current Rating Steam Sq. Ft.	Current Rating Water Sq. Ft.	Max. 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
22-4	400	667	800	1,300	3.36	25	34	2-4"	4-3"	2-4"	4-4"
22-5	533	867	1,000	1,650	4.43	32	41	2-4"	4-3"	2-4"	4-4"
22-6	667	1,100	1,200	2,000	5.50	39	48	2-4"	4-3"	2-4"	4-4"
22-7	800	1,330	1,600	2,350	6.57	46	55	2-4"	4-3"	2-4"	4-4"
28-5	867	1,433	1,700	2,800	6.42	36	46 1/4	2-5"	4-4"	2-4"	4-4"
28-6	1,083	1,783	2,100	3,450	7.98	44	54 1/4	2-5"	4-4"	2-4"	4-4"
28-7	1,300	2,133	2,500	4,125	9.54	52	62 1/4	2-5"	4-4"	3-4"	6-4"
28-8	1,517	2,483	2,900	4,775	11.10	60	70 1/4	2-5"	4-4"	3-4"	6-4"
36-5	1,400	2,310	2,925	4,825	9.25	41	52	2-6"	4-4"	2-6"	4-4"
36-6	1,750	2,883	3,650	6,025	11.50	50	61	2-6"	4-4"	2-6"	4-4"
36-7	2,100	3,467	4,375	7,200	13.75	59	70	2-6"	4-4"	2-6"	4-4"
36-8	2,450	4,038	5,100	8,400	16.00	68	79	2-6"	4-4"	2-6"	4-4"
36-9	2,800	4,617	5,825	9,600	18.25	77	88	2-6"	4-4"	2-6"	4-4"
36-10	3,150	5,200	6,500	10,800	20.50	86	97	2-6"	4-4"	2-6"	4-4"
36-11	3,500	5,783	7,275	12,000	22.75	95	106	2-6"	4-4"	2-6"	4-4"
36-12	3,850	6,367	8,000	13,200	25.00	104	115	2-6"	4-4"	2-6"	4-4"
554-A	4,233	6,900	8,600	14,190	15.00	53	68	2-6"	4-4"	2-6"	4-4"
564	4,900	7,567	10,400	17,160	18.75	63	78	3-6"	6-4"	3-6"	6-4"
574	5,567	8,333	12,200	19,520	22.50	73	88	3-6"	6-4"	3-6"	6-4"
584	6,233	9,335	14,000	23,100	26.25	83 1/2	98 1/2	4-6"	8-4"	4-6"	8-4"
594	6,767	10,000	15,800	26,070	30.00	93 1/2	108 1/2	4-6"	8-4"	4-6"	8-4"
604	7,300	11,000	17,600	29,040	33.75	104 1/2	119 1/2	4-6"	8-4"	4-6"	8-4"
614	7,833	12,000	19,400	32,010	37.50	114 1/2	129 1/2	5-6"	10-4"	5-6"	10-4"
624	8,367	13,000	21,000	34,650	41.25	124 1/2	139 1/2	5-6"	10-4"	5-6"	10-4"
634	8,900	14,000	23,200	38,280	45.00	135	150	5-6"	10-4"	5-6"	10-4"
644	9,433	15,000	25,000	41,250	45.00	145	160	6-6"	12-4"	6-6"	12-4"
654	9,966	16,000	26,800	44,220	45.00	155 1/2	170 1/2	6-6"	12-4"	6-6"	12-4"
*854	4,233	6,900	8,600	14,190	15.00	53	90	1-8"	2-5"	1-8"	2-6"
864	4,900	7,567	10,400	17,160	18.75	63	100	1-8"	2-5"	1-8"	2-6"
874	5,567	8,333	12,200	19,520	22.50	73	110	1-8"	2-5"	1-8"	2-6"
884	6,233	9,335	14,000	23,100	26.25	83 1/2	120 1/2	1-8"	2-5"	1-8"	2-6"
894	6,767	10,000	15,800	26,070	30.00	93 1/2	130 1/2	1-8"	2-5"	1-10"	3-6"
703	7,300	11,000	17,600	29,040	33.75	104 1/2	141 1/2	1-10"	2-5"	1-10"	3-6"
713	7,833	12,000	19,400	32,010	37.50	114 1/2	151 1/2	1-10"	2-5"	1-10"	3-6"
723	8,367	13,000	21,000	34,650	41.25	124 1/2	161 1/2	1-10"	2-5"	1-10"	3-6"
733	8,900	14,000	23,200	38,280	45.00	135	172	1-10"	2-5"	1-10"	3-6"
743	9,433	15,000	25,000	41,250	45.00	145	182	1-10"	2-5"	1-10"	3-6"
753	9,966	16,000	26,800	44,220	45.00	155 1/2	192 1/2	1-10"	2-5"	1-10"	3-6"

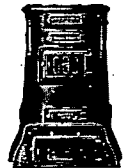
*Header Type.

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
1087	200	475	1186	320	780
1047	280	700	1146	450	1150
1057	375	925	1156	600	1525
1067	480	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