

## STEAM OUTPUT AND BTU INPUT FOR HBC HYBRID BOILERS W/ WOODY BIOMASS FUEL

BOILER STEAM OUTPUT (Per Hour)							FUEL INPUT REQUIREMENTS							
							8% M.C. ~80% Eff.		20% M.C. ~76% Eff.		35% M.C. ~73% Eff.		50% M.C. ~70% Eff.	
BHP	LBS	KG	MBTU x1000	Gcal	THER M	KW	8000 BTU/LB	4445 Kcal/kg	6956 BTU/LB	3865 Kcal/kg	5652 BTU/LB	3140 Kcal/kg	4347 BTU/LB	2415 Kcal/kg
100	3,450	1,565	3,348	0.84	3,532	980	4,184,400	1,054,500	4,404,600	1,110,000	4,585,600	1,155,600	4,782,100	1,205,100
125	4,313	1,956	4,184	1.05	4,415	1,225	5,230,500	1,318,125	5,505,750	1,387,500	5,732,000	1,444,500	5,977,625	1,506,375
150	5,175	2,348	5,021	1.27	5,298	1,470	6,276,600	1,581,750	6,606,900	1,665,000	6,878,400	1,733,400	7,173,150	1,807,650
200	6,900	3,130	6,695	1.69	7,064	1,961	8,368,800	2,109,000	8,809,200	2,220,000	9,171,200	2,311,200	9,564,200	2,410,200
250	8,625	3,913	8,369	2.11	8,830	2,451	10,461,000	2,636,250	11,011,500	2,775,000	11,464,000	2,889,000	11,955,250	3,012,750
300	10,350	4,695	10,043	2.53	10,595	2,941	12,553,200	3,163,500	13,213,800	3,330,000	13,756,800	3,466,800	14,346,300	3,615,300
320	11,040	5,008	10,712	2.70	11,302	3,137	13,390,080	3,374,400	14,094,720	3,552,000	14,673,920	3,697,920	15,302,720	3,856,320
400	13,800	6,260	13,390	3.37	14,127	3,921	16,737,600	4,218,000	17,618,400	4,440,000	18,342,400	4,622,400	19,128,400	4,820,400
500	17,250	7,825	16,738	4.22	17,659	4,902	20,922,000	5,272,500	22,023,000	5,550,000	22,928,000	5,778,000	23,910,500	6,025,500
600	20,700	9,390	20,085	5.06	21,191	5,882	25,106,400	6,327,000	26,427,600	6,660,000	27,513,600	6,933,600	28,692,600	7,230,600
639	22,046	10,000	21,391	5.39	22,568	6,264	26,738,316	6,738,255	28,145,394	7,092,900	29,301,984	7,384,284	30,557,619	7,700,589
700	24,150	10,955	23,433	5.90	24,723	6,862	29,290,800	7,381,500	30,832,200	7,770,000	32,099,200	8,089,200	33,474,700	8,435,700
750	25,875	11,738	25,106	6.33	26,489	7,352	31,383,000	7,908,750	33,034,500	8,325,000	34,392,000	8,667,000	35,865,750	9,038,250
800	27,600	12,520	26,780	6.75	28,254	7,842	33,475,200	8,436,000	35,236,800	8,880,000	36,684,800	9,244,800	38,256,800	9,640,800
900	31,050	14,085	30,128	7.59	31,786	8,823	37,659,600	9,490,500	39,641,400	9,990,000	41,270,400	10,400,400	43,038,900	10,845,900
958	33,051	14,993	32,069	8.08	33,835	9,391	40,086,552	10,102,110	42,196,068	10,633,800	43,930,048	11,070,648	45,812,518	11,544,858
1000	34,500	15,650	33,475	8.44	35,318	9,803	41,844,000	10,545,000	44,046,000	11,100,000	45,856,000	11,556,000	47,821,000	12,051,000
1160	40,020	18,154	38,831	9.79	40,969	11,371	48,539,040	12,232,200	51,093,360	12,876,000	53,192,960	13,404,960	55,472,360	13,979,160
1200	41,400	18,780	40,170	10.12	42,382	11,764	50,212,800	12,654,000	52,855,200	13,320,000	55,027,200	13,867,200	57,385,200	14,461,200
1277.95	44,089	20,000	42,779	10.78	45,135	12,528	53,474,540	13,475,983	56,288,586	14,185,245	58,601,675	14,767,990	61,112,847	15,400,575
1300	44,850	20,345	43,518	10.97	45,913	12,744	54,397,200	13,708,500	57,259,800	14,430,000	59,612,800	15,022,800	62,167,300	15,666,300
1400	48,300	21,910	46,865	11.81	49,445	13,724	58,581,600	14,763,000	61,664,400	15,540,000	64,198,400	16,178,400	66,949,400	16,871,400
1500	51,750	23,475	50,213	12.65	52,977	14,705	62,766,000	15,817,500	66,069,000	16,650,000	68,784,000	17,334,000	71,731,500	18,076,500
1600	55,200	25,040	53,560	13.50	56,509	15,685	66,950,400	16,872,000	70,473,600	17,760,000	73,369,600	18,489,600	76,513,600	19,281,600
1800	62,100	28,170	60,255	15.18	63,572	17,645	75,319,200	18,981,000	79,282,800	19,980,000	82,540,800	20,800,800	86,077,800	21,691,800

Provided by Gene Zebley, Energy System Sales  
 Hurst Boiler and Welding Co., Inc.  
 100 Boilermaker Lane  
 Coolidge, GA 31738 USA  
 Phone: (229) 346-3972  
 Fax: (229) 346-3874  
 Email: [boilrmkr@surfsouth.com](mailto:boilrmkr@surfsouth.com) / [gzebley@hurstboiler.com](mailto:gzebley@hurstboiler.com)  
 Web Site: [www.hurstboiler.com](http://www.hurstboiler.com)

