

## WATER FLOW REQUIREMENTS

2,000,000 BTU  
Fire Tube Boiler SPECS

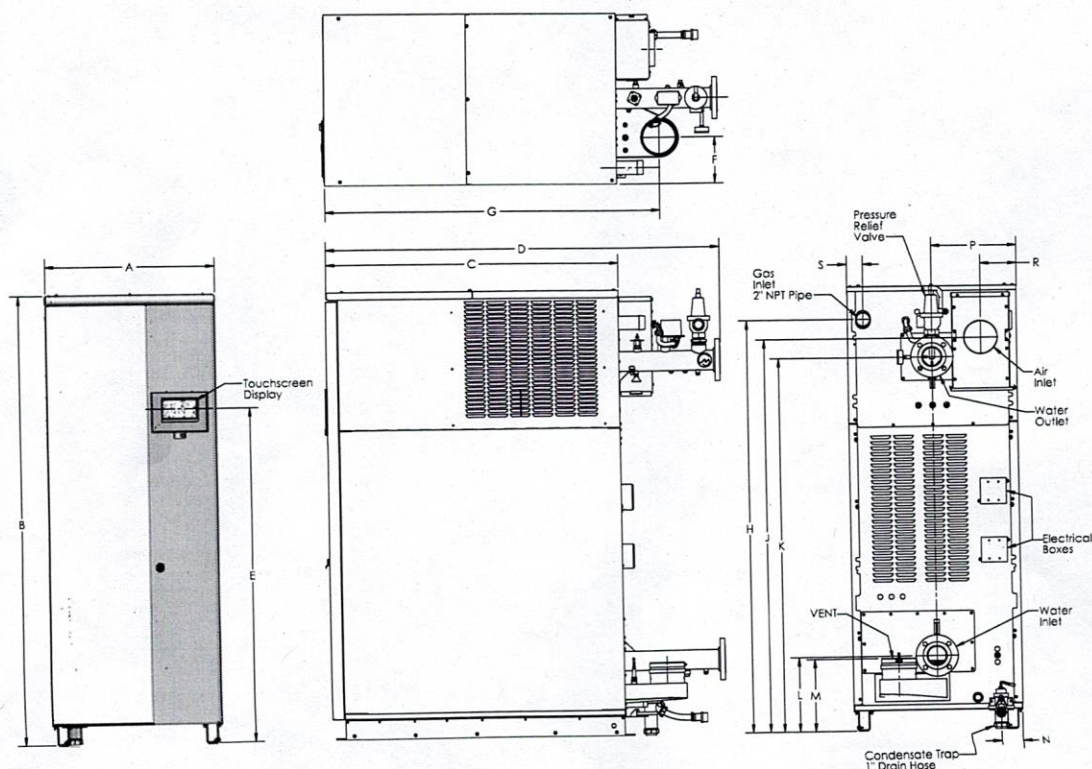
Model	Temperature Rise																							
	20°F (11°C)				30°F (17°C)				40°F (22°C)				50°F (28°C)				60°F (33°C)				70°F (39°C)			
	Water Flow		Headloss*		Water Flow		Headloss*		Water Flow		Headloss*		Water Flow		Headloss*		Water Flow		Headloss*		Water Flow		Headloss*	
	gpm	l/m	ft	m	gpm	l/m	ft	m	gpm	l/m	ft	m	gpm	l/m	ft	m	gpm	l/m	ft	m	gpm	l/m	ft	m
1000	95	360	1.9	0.6	63	240	1.1	0.3	48	180	0.7	0.2	38	144	0.5	0.2	32	121	0.4	0.1	27	102	0.3	0.1
1500	142	538	3.4	1.0	95	360	1.6	0.5	71	270	0.9	0.3	57	216	0.6	0.2	48	182	0.5	0.2	41	155	0.3	0.1
2000	190	719	4.5	1.4	127	480	2.1	0.6	95	360	1.2	0.4	76	288	0.8	0.2	63	239	0.6	0.2	54	204	0.4	0.1
3000	285	1079	7.0	2.1	190	719	3.5	1.1	142	538	2.1	0.6	114	432	1.4	0.4	95	360	1.0	0.3	81	307	0.8	0.2

\*Headloss is for boiler only (no piping)

## DIMENSIONAL DATA

Model	"A"		"B"		"C"		"D"		"E"		"F"		"G"		"H"	
	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)
1000	30.2	(76.7)	80.0	(203)	52.4	(133)	70.5	(179)	60.0	(152)	8.2	(20.9)	60.0	(152)	74.2	(188)
1500	30.2	(76.7)	80.0	(203)	52.4	(133)	70.5	(179)	60.0	(152)	7.8	(19.7)	60.3	(153)	74.2	(188)
2000	34.6	(87.9)	80.0	(203)	56.3	(143)	73.3	(189)	60.0	(152)	9.1	(23.0)	63.1	(160)	73.6	(187)
3000	34.6	(87.9)	80.0	(203)	56.3	(143)	75.5	(192)	60.0	(152)	8.4	(21.4)	65.4	(166)	73.6	(187)

Model	"J"		"K"		"L"		"M"		"N"		"P"		"R"		"S"	
	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)	in	(cm)
1000	70.8	(180)	67.3	(171)	13.4	(34.0)	13.0	(33.1)	3.8	(9.6)	15.1	(38.4)	6.4	(16.3)	2.9	(7.3)
1500	70.8	(180)	67.3	(171)	13.4	(34.0)	13.0	(33.1)	3.8	(9.6)	15.1	(38.4)	6.4	(16.3)	2.7	(6.9)
2000	72.0	(183)	67.3	(171)	13.4	(34.0)	13.0	(33.1)	3.8	(9.6)	17.3	(44.0)	8.2	(20.9)	3.8	(9.5)
3000	72.0	(183)	68.4	(174)	14.4	(36.6)	14.0	(35.5)	3.8	(9.6)	17.3	(44.0)	8.2	(20.9)	3.6	(9.1)





## SIZING DATA

Model	Minimum Input Rate		Maximum Input Rate		Minimum Output Rate		Maximum Output Rate		Thermal Efficiency	Combustion Efficiency	Modulation Turndown Ratio
	MBH	kw	MBH	kw	MBH	kw	MBH	kw	%	%	
1000	65	19.1	999	293	62	18.1	950	278	95.8	96.1	15:1
1500	75	22.0	1500	440	71	20.8	1425	418	95.9	96.3	20:1
2000	100	29.3	1999	586	95	27.8	1900	557	95.4	95.5	20:1
3000	150	44.0	3000	879	143	41.9	2850	835	95.9	95.9	20:1

Model	Product Weight		Operating Weight		Shipping Weight		Water Content	
	lbs	kg	lbs	kg	lbs	kg	gal	l
1000	1300	590	1934	878	1450	658	76	288
1500	1450	658	2292	1041	1600	726	101	382
2000	1750	795	2717	1234	1950	885	116	439
3000	2050	931	3292	1495	2250	1022	149	564

## ELECTRICAL DATA

Voltage	1000			1500			2000			3000		
	Current			Current			Current			Current		
	FLA	MCA	MOP	FLA	MCA	MOP	FLA	MCA	MOP	FLA	MCA	MOP
120V, 1 phase	5.0	6.2	15.0	6.2	7.8	15.0	7.8	9.7	20.0	N/A	N/A	N/A
208V, 1 phase	2.9	3.6	15.0	3.6	4.5	15.0	4.5	5.6	15.0	N/A	N/A	N/A
220/240V, 1 phase	2.7	3.4	15.0	3.4	4.2	15.0	4.3	5.3	15.0	N/A	N/A	N/A
208V, 3 phase	N/A	N/A	N/A	N/A	N/A	N/A	3.3	4.1	15.0	4.5	5.6	15.0
480V, 3 phase	N/A	N/A	N/A	N/A	N/A	N/A	1.5	1.9	15.0	2.1	2.6	15.0
600V, 3 phase	N/A	N/A	N/A	N/A	N/A	N/A	1.1	1.4	15.0	1.4	1.8	15.0

FLA - Full Load Amperage | MCA - Minimum Circuit Ampacity | MOP - Maximum Over-current Protection

## VENTING DATA

Model	Vent / Air Connector Size		Air Pipe Size		Maximum Ducted Air Pipe Length		Category IV Vent Pipe Size		Maximum Category IV Vent Pipe Length		Typical Category II Vent Pipe Size***	
	inches	cm	inches	cm	ft*	m	inches	cm	ft*	m	inches	cm
1000	6	15	6	15	100	30.5	6	15	100	30.5	12	30
1500	8	20	8	20	100	30.5	8	20	100	30.5	14	36
2000	8	20	8	20	100	30.5	8	20	100	30.5	18	46
3000	10	25	10	25	100	30.5	10	25	100	30.5	22	56

\*Equivalent Feet: Equivalent Feet: To calculate maximum equivalent length, measure the linear feet of the pipe and add 5 feet (1.5m) for each elbow used.

\*\*\*Category II: Category II pipe size may vary. Draft must remain between -0.01 and -0.001" w.c..

Notes:

1. Installations in the U.S. require exhaust vent pipe that is CPVC complying with ANSI/ASTM D1785 F441, stainless steel complying with UL1735, or polypropylene complying with ULC S636.
2. Installations in Canada require exhaust vent pipe that is certified to ULC S636.
3. Intake (air) pipe must be PVC or CPVC that complies with ANSI/ASTM D1785 F441, ABS that complies with ANSI/ASTM D1527, stainless steel, or galvanized material.