



Domestic Hot Water Heaters and Boilers



SPECTRUM
SERIES

RESIDENTIAL AND LIGHT COMMERCIAL GAS BOILERS, WATER HEATERS AND POOL HEATERS IN A COMPACT DESIGN.

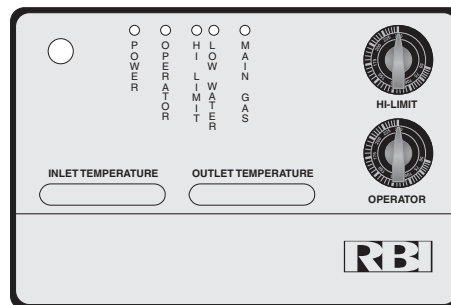
The Spectrum's unique design allows for both indoor or outdoor applications where a gas-fired boiler or water heater is needed. Its reversible, two or four pass heat exchanger is made of commercial grade 7/8" I.D. finned copper tube and because the fins are extruded from the tubing itself they ensure maximum heat transfer efficiency.

Spectrum series units can come with either cast iron headers for heating applications or with bronze headers for domestic hot water and pool heating applications. Also, all units have built-in draft hood which reduces the cost of installation and lowers the overall height of the unit.

The Spectrum series is simple to maintain with the quick and easy removal of all major components including burner tray, gas train and controls. With the self-diagnostic light package, one can quickly and easily make assessments of the unit.



Spectrum Series boilers and water heaters are also available with appealing, corrosion-resistant, brushed stainless steel jacket. Ideal for outdoor or indoor installation in corrosive or harsh environments such as coastal areas and processing applications requiring wash down.



SELF-DIAGNOSTIC LIGHT PACKAGE

STANDARD FEATURES

- Up to 83% efficiency
- Automatic reset high limit 100-200
- Manual reset high limit 250-400
- Operating control
- Mounted ASME relief valve (30# boilers, 125# water heaters)
- Built-in draft hood
- Stainless steel burners
- Light weight high temperature tile
- Standing pilot
- Inlet & outlet thermometers
- Mounted and wired flow switch
- Vent damper (100-250 MBH boilers only)
- Self diagnostic light package
- Pump control
- National board certified
- 160 psi heat exchanger
- Field reversible heat exchanger

OPTIONAL FEATURES

- Outdoor installation
- 4 Pass heat exchanger
- Cupro-nickel heat exchanger
- Low water cut-off (probe type)
- Spark ignition
- Induced draft (up to 100 ft. horizontal runs)
- Propane gas
- 2 stage firing
- Mechanical modulating firing mode
- Combustible floor pan



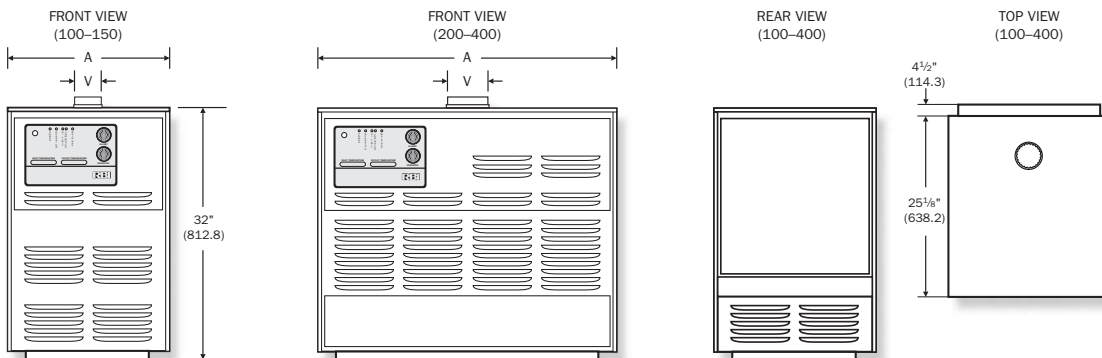
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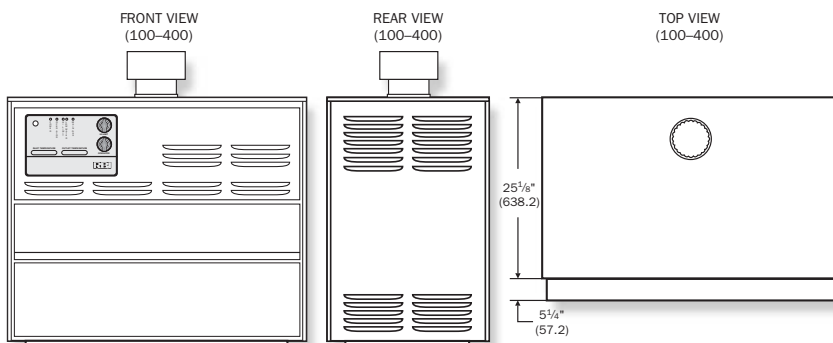
DIMENSIONS AND RATINGS															
Model	Input		Output		Net I=B=R Rating		AFUE%	Dim. A		Vent Dim. V		Connections		Shipping Weight	
	MBH	kW	MBH	kW	MBH	kW		In.	mm	In.	mm	Gas	Water	lbs.	kgs.
100	100	29	82	24	72	21	82.0	16 1/8	410	5	127	1/2	1 1/2	150	68
150	150	44	123	36	108	32	82.0	19 1/2	495	6	152	1/2	1 1/2	170	76
200	199	58	161	47	143	42	81.0	22 7/8	581	7	178	1/2	1 1/2	190	86
250	250	73	203	59	180	53	81.0	26 1/4	667	8	203	3/4	1 1/2	210	94
300	301	88	250	73	215	63	83.0(I)	29 5/8	753	8	203	3/4	1 1/2	230	104
350	350	103	291	85	250	73	83.0(I)	33	838	9	229	3/4	1 1/2	250	113
400	399	117	331	97	285	84	83.0(I)	35 3/8	899	10	254	3/4	1 1/2	270	123

(I) Combustion efficiency.

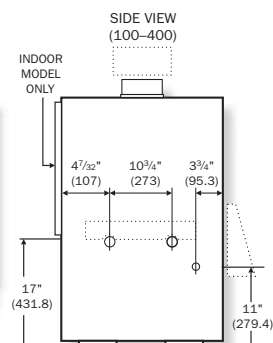
INDOOR UNITS



OUTDOOR UNITS



INDOOR & OUTDOOR UNITS (DOTTED FEATURES ON OUTDOOR MODEL ONLY)



HOURLY RECOVERY CAPACITY ΔT (GPH & LPH)

Model	Temperature Rise Across Heat Exchanger											
	40° F	22° C	60° F	33° C	80° F	44° C	100° F	56° C	120° F	67° C	140° F	78° C
100	246	932	164	621	123	466	98	373	82	311	70	266
150	369	1397	246	932	185	699	148	559	123	466	105	399
200	484	1831	323	1221	242	916	194	732	161	610	138	523
250	608	2301	405	1534	304	1150	243	920	203	767	174	657
300	750	2838	500	1892	375	1419	300	1135	250	946	214	811
350	872	3300	581	2200	436	1650	349	1320	291	1100	249	943
400	994	3762	663	2508	497	1881	398	1505	331	1254	284	1075

TEMPERATURE RISE/PRESSURE DROP – 2 PASS HEADERS

Model	$\Delta T = 10^\circ F$		$\Delta T = 5.5^\circ C$		$\Delta T = 20^\circ F$		$\Delta T = 11.1^\circ C$		$\Delta T = 30^\circ F$		$\Delta T = 16.7^\circ C$	
	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa
100	16.4	0.05	1.0	0.1	-	-	-	-	-	-	-	-
150	24.6	0.13	1.6	0.4	-	-	-	-	-	-	-	-
200	32.4	0.27	2.0	0.8	16.2	0.07	1.0	0.2	-	-	-	-
250	40.5	0.48	2.6	1.4	20.3	0.13	1.3	0.4	-	-	-	-
300	49.8	0.82	3.1	2.4	24.9	0.23	1.6	0.7	16.6	0.10	1.0	0.3
350	58.1	1.23	3.7	3.6	29.1	0.34	1.8	1.0	19.4	0.20	1.2	0.5
400	66.4	1.77	4.2	5.2	33.2	0.49	2.1	1.4	22.1	0.20	1.4	0.7

TEMPERATURE RISE/PRESSURE DROP – 4 PASS HEADERS

Model*	$\Delta T = 10^\circ F$		$\Delta T = 5.5^\circ C$		$\Delta T = 20^\circ F$		$\Delta T = 11.1^\circ C$		$\Delta T = 30^\circ F$		$\Delta T = 16.7^\circ C$	
	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa	Flow Rate gpm	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa
100	16.4	0.34	1.0	1.0	-	-	-	-	-	-	-	-
150	24.6	0.94	1.6	2.8	-	-	-	-	-	-	-	-
200	32.4	1.92	2.0	5.7	16.2	0.53	1.0	1.6	-	-	-	-
250	40.5	3.46	2.6	10.2	20.3	0.96	1.3	2.8	-	-	-	-
300	49.8*	5.89	3.1	17.3	24.9	1.63	1.6	4.8	16.6	0.80	1.0	2.3
350	-	-	-	-	29.1	2.47	1.8	7.3	19.4	1.20	1.2	3.4
400	-	-	-	-	33.2	3.54	2.1	10.4	22.1	1.70	1.4	4.9

*Flow exceeds recommended maximum use a greater temperature rise or consult manufacturer. Cupro-nickel heat exchanger should be considered.

NOTE: For normal water conditions and in closed loop systems, a temperature rise of 20° F is generally recommended. In open systems for areas experiencing some degree of heat exchanger scaling as a result of water hardness, a rise of 10° F should not be exceeded.



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In the interest of product improvement, RBI reserves the right to make changes without notice.

A MESTEK COMPANY www.rbiwaterheaters.com