



Domestic Hot Water Heaters and Boilers





LOW NO_x, HIGH EFFICIENCY, HOT WATER SUPPLY AND HYDRONIC HEATING BOILERS

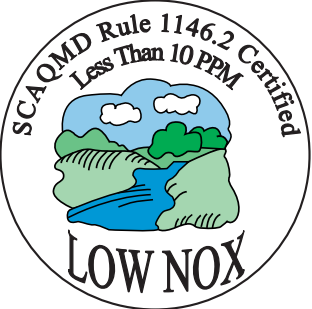
Futera II Series hot water supply boilers provide dependable performance with 85% efficiency, non-condensing with industry-leading NO_x levels of less than 10 ppm.

Quality components include a rugged heat exchanger that prevents rust and corrosion for the life of the heater. Finned tubes are industrial grade copper with fins and tubewalls formed as one, providing optimum heat transfer. Each tube is rolled into either all-bronze headers – standard on all Futera II water heaters or cast iron headers – standard on all Futera II boilers. The tubes are individually field replaceable. The heat exchanger is superior in design, durability and serviceability – each is hydrostatically tested, approved and stamped for 160 psi ASME operation.



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

Compact, low maintenance design and venting flexibility permit easy installation and service, making the Futera II the perfect choice for virtually any hot water supply application.





Advanced Diagnostic System

The Futera II features an easy-to-read LCD display that provides clear indication of inlet water temperature or setpoint in Fahrenheit or Celsius. The display also provides information for setting temperature control parameters. Advanced troubleshooting and self-diagnostic control provides a step-by-step cycle of operation. Each step is automatically tested and indicated, allowing for simplified and less costly troubleshooting.

RBI Temperature Controller

SP Setpoint or Target Temperature:

The Setpoint is the inlet water temperature that the operating control will try to match by staging the boiler between 'Off', 'Stage 1' and 'Stage 2.'

D1 Boiler Differential:

The Boiler Differential is centered around the setpoint so that when the sensor reads $\frac{1}{2}$ of D1 below the setpoint, Stage 1 will be energized. When the sensor reads a temperature $\frac{1}{2}$ of D1 above the setpoint, stage will turn off.

D2 Interstage Differential:

The Interstage Differential is the difference in temperature between Stage 1 being called on, and Stage 2 being called on.

Smart Service Design

A Honeywell RM Series Flame Safeguard, limit controls and terminal strips are neatly arranged and easily accessible in the front-facing panel.



Proven Pilot Ignition System

The Futera II Series uses a proven pilot with interrupted spark ignition and UV flame detection. The UV detector and igniter assembly provide highly reliable ignition and easy service. This important design feature provides long-life reliability. An observation port allows easy inspection of the flame at the top of the boiler.

HOURLY RECOVERY CAPACITY ΔT (GPH & LPH)

Model	Temperature											
	40° F	22° C	60° F	33° C	80° F	44° C	100° F	56° C	120° F	67° C	140° F	78° C
500	1,276	4,828	850	3,219	638	2,414	510	1,931	425	1,609	364	1,380
750	1,913	7,243	1,276	4,828	957	3,621	765	2,897	638	2,414	547	2,069
1000	2,551	9,657	1,701	6,438	1,276	4,828	1,020	3,863	850	3,219	729	2,759
1250	3,189	12,071	2,126	8,047	1,594	6,035	1,276	4,828	1,063	4,024	911	3,449
1500	3,827	14,485	2,551	9,657	1,913	7,243	1,531	5,794	1,276	4,828	1,093	4,139
1750	4,464	16,899	2,976	11,266	2,232	8,450	1,786	6,760	1,488	5,633	1,276	4,828
1950	4,974	18,831	3,316	12,554	2,487	9,415	1,990	7,532	1,658	6,277	1,421	5,380

TEMPERATURE RISE/PRESSURE DROP

Model	Temperature Rise Across Heat Exchanger															
	20° F		11.1° C		25° F		13.9° C		30° F		16.7° C		35° F		19.4° 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	Flow Rate GPM	Pres. Drop Ft.	Flow Rate l/s	Pres. Drop kPa
500	42.5	.53	2.7	1.5	34.0	0.35	2.1	1.0	—	—	—	—	—	—	—	—
750	63.8	1.57	4.0	4.6	51.0	1.04	3.2	3.1	42.5	0.70	2.7	2.2	36.4	0.60	2.3	1.6
1000	85.0	3.44	5.4	10.1	68.0	2.27	4.3	6.7	56.7	1.60	3.6	4.8	48.6	1.20	3.1	3.6
1250	106.3	2.11	6.7	6.2	85.0	1.40	5.4	4.1	70.8	1.00	4.5	2.9	60.7	0.70	3.8	2.2
1500	127.5	3.57	8.0	10.5	102.0	2.36	6.4	7.0	85.0	1.70	5.4	5.0	72.9	1.30	4.6	3.7
1750	—	—	—	—	119.0	3.67	7.5	10.8	99.2	2.60	6.3	7.7	85.0	2.00	5.4	5.8
1950	—	—	—	—	132.6	5.14	8.4	15.1	110.5	3.70	7.0	10.8	94.7	2.80	6.0	8.1

FUTERA II RATINGS

Model	Input		Output		Net I=B=R		NOx PPM	AMP DRAW	Shipping Weight	
	MBH	KW	MBH	KW	MBH	KW			Lbs.	Kgs.
500	500	147	425	125	366	107	9.3	5.9	545	247
750	750	220	638	187	550	161	8.8	5.9	590	268
1000	1000	293	850	249	733	215	8.0	5.9	670	304
1250	1250	366	1063	311	915	268	8.9	8.7	815	370
1500	1500	440	1275	374	1099	322	9.3	8.7	855	388
1750	1750	513	1488	436	1283	376	9.1	10.7	880	399
1950	1950	571	1658	486	1429	419	9.1	10.7	930	422

NOTE: Certified South Coast Air
Quality Management District
(SCAQMD) Protocol Rule
1146.2; Ventura County
APCD Rule 74.11.1

FUTERA II SERIES

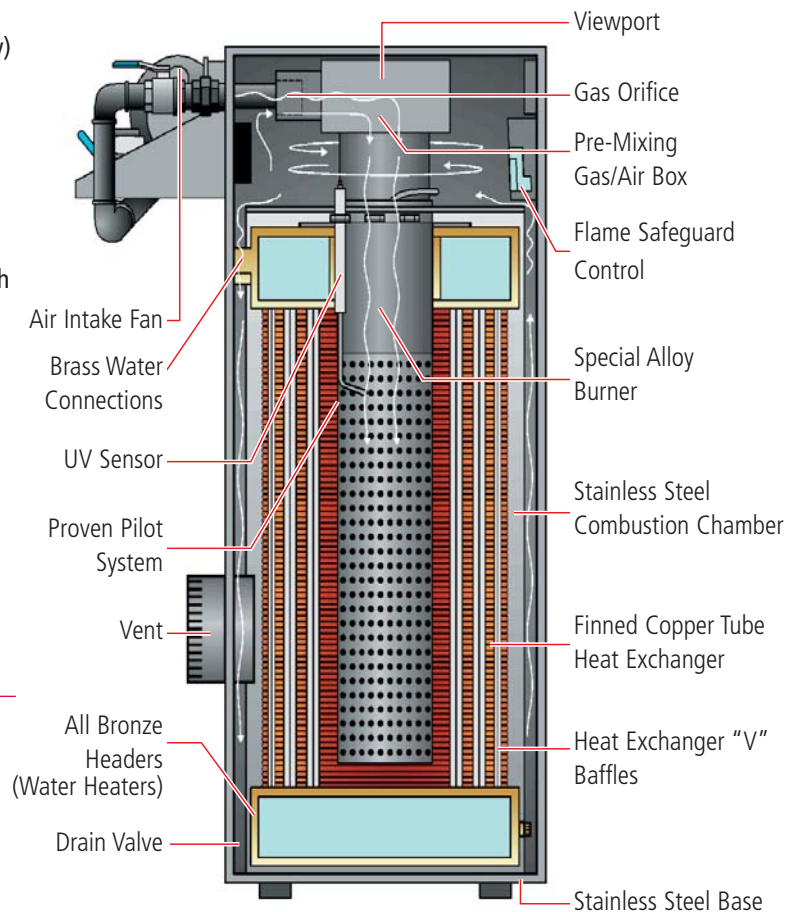


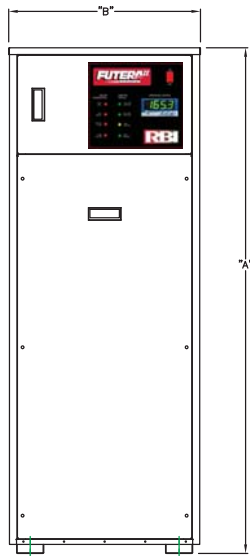
STANDARD FEATURES

- Flame safeguard control
- 85% efficient
- Bronze Headers – Water Heaters
- Cast Iron Headers – Boilers
- Finned copper tube heat exchanger, ASME 160 psi max WP, 4-pass design
- Gasketless heat exchanger assembly
- Stainless steel combustion chamber
- 2-stage digital operator
- Special alloy burner
- Less than 10 ppm NOx
- SCAQMD Rule 1146.2
- Compact, low maintenance design
- Venting flexibility
- CSA Design Certified & Listed (formally) AGA/CGA
- Proven pilot (UV flame detection)
- Factory installed ASME relief valve
- Outlet thermometer
- High limit control with manual reset
- Factory mounted and wired flow switch
- Low air pressure switch
- Easy access to all components
- 5-year limited heat exchanger warranty on water heaters, 10-year on boilers
- Heat exchanger drain
- National Board Certified
- Pump delay relay
- CSD-1 and FM compliant gas train

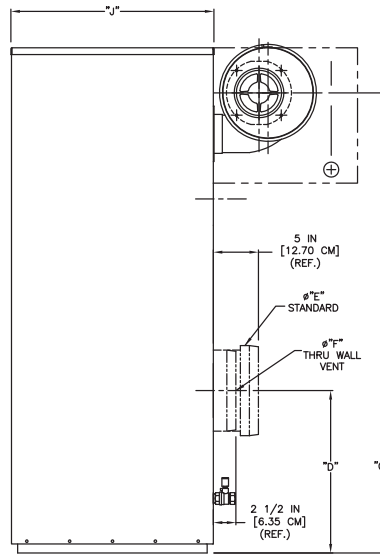
OPTIONAL EQUIPMENT

- Cupro-nickel finned-tubes
- Outdoor installation
- Thru-wall venting
- Direct venting
- Stainless steel jacket
- Barometric damper
- On-Off firing
- Freeze protection package

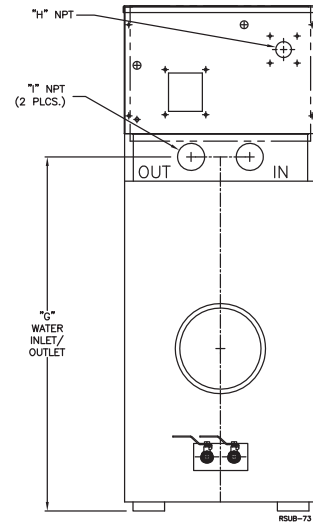




FRONT VIEW



RIGHT SIDE VIEW



REAR VIEW

FUTERA II DIMENSIONS

Model	A		B		C		D		E		F		G		H		I		J	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	in.	in.	in.	in.	mm
500	43	1092	21 1/4	540	37 1/2	953	11 3/4	298	8	203	6	152	26 1/4	667	1	2	22 1/2	572		
750	49 9/16	1259	21 1/4	540	43 3/4	1111	14 3/4	375	10	254	8	203	33	838	1	2	22 1/2	572		
1000	56 1/16	1424	21 1/4	540	51	1295	18	457	10	254	9	229	39 1/4	997	1 1/4	2	22 1/2	572		
1250	51	1295	25 1/2	648	44	1118	17	432	12	305	10	254	32	813	1 1/4	2 1/2	27 1/2	699		
1500	55 1/2	1410	25 1/2	648	49	1245	19	483	12	305	10	254	36 1/2	927	1 1/4	2 1/2	27 1/2	699		
1750	60	1524	25 1/2	648	53 1/4	1353	21	533	14	356	12	305	41	1041	1 1/2	2 1/2	27 1/2	699		
1950	64 1/2	1638	25 1/2	648	57 3/4	1467	23 3/4	603	14	356	12	305	45 1/2	1156	1 1/2	2 1/2	27 1/2	699		



MEA-449-99E

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

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