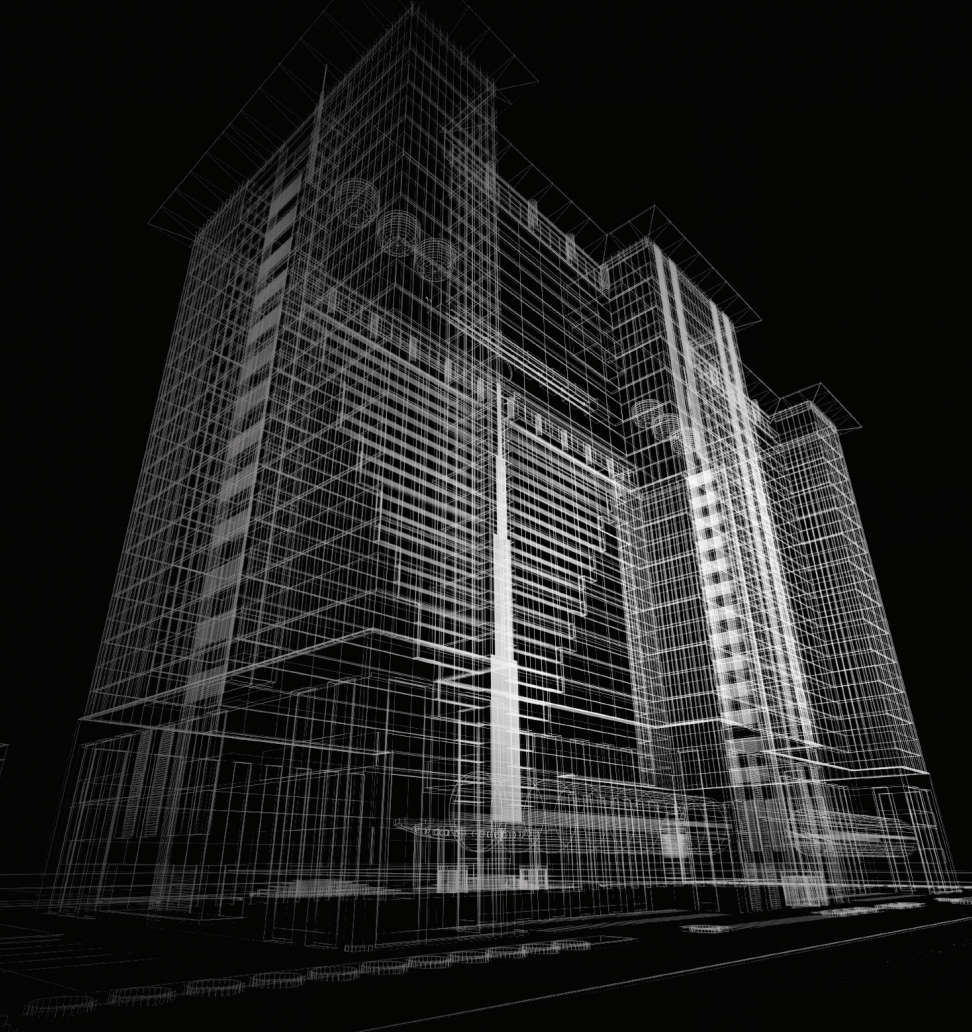


# **FUTERA<sup>III</sup>**

**MODULATION**

## Domestic Hot Water Heaters and Boilers



 **HEATNET<sup>®</sup> 3.0**

**RBI<sup>®</sup>**  
RELIABLE. BOLD. INNOVATIVE.



# FUTERA<sup>III</sup> MODULATION



## Full Modulation, High Efficiency Hot Water Supply and Hydronic Heating Boilers

The gas-fired Futera III brings the field-proven performance of Futera Series boilers and water heaters to even higher levels of efficiency and reliability. Featuring full modulation with 4:1 turndown, the Futera III supplies the precise amount of heat necessary to maintain desired building temperature by matching heating demand without over-firing and wasting energy.

These dependable, easy-to-service boilers feature rugged construction and sleek, stainless steel jacket design. Models range from 500 – 1999 MBH. If you're looking to maximize efficiency, reliability and flexibility in domestic hot water and hydronic heating applications, the Futera III is your heating solution.

### Standard Features

- 500 – 1999 MBH
- Finned Copper Tube Heat Exchanger, ASME 160 psi Max WP, 4-Pass Design
- Stainless Steel Jacket Panels
- Bronze Headers – Water Heaters
- Cast Iron Headers – Boilers
- Variable Speed Blower
- Digital Text Annunciator
- Mounted & Wired Flow Switch
- Flame Safeguard Control
- Quick-Release Service Latches
- Small Vent Sizes
- Seismic Restraint Base Assembly
- Heatnet Integrated Boiler Management System
- Modbus Protocol for BMS Communications
- Category II and IV



### Dependable, Efficient Performance

- High Efficiency, up to 88%
- Full Modulation with Smooth, 4:1 Turndown
- Sealed Combustion/Direct Vent
- Symmetrically Air/Fuel Coupled
- Commercial Quality Combustion Controls
- Linked Operating Control System for Multiple Unit Applications
- Gasketless Heat Exchanger Assembly

### Optional Features

- Cupro-Nickel Finned Tubes
- Freeze Protection Package
- BACnet or LonWorks Interface Module
- Honeywell Keyboard Display Module S7800
- Outdoor Sensor with Housing
- Outdoor Installation
- Category I (750 – 2000)







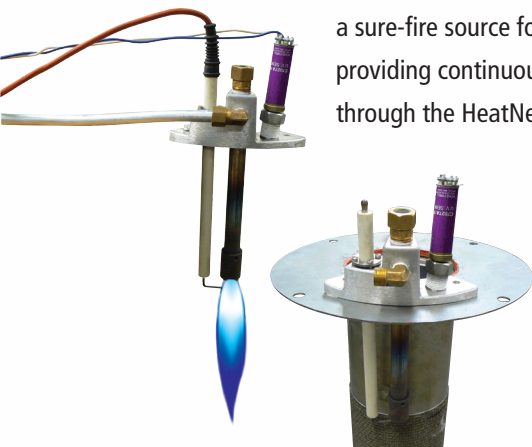
## Smart Service Design

Large capacity in a small footprint offers greater flexibility and ease of installation in a space-saving design that leaves more elbowroom in the mechanical room. The rugged framework base is designed to fit through a standard doorway. A variety of venting options provides added installation flexibility. Quick-release latches allow for easy access to all components to make short work of service and maintenance.

## The Turbo Pilot®: Reliability At Its Best

Futera's independent "Turbo-Pilot" system with UV detection is far more durable and reliable than any competitive ignition system available today.

At 8,000 btu's the "Turbo-Pilot" provides a sure-fire source for burner ignition while providing continuous performance feedback through the HeatNet control platform.



## Proven Pilot Ignition System

The Futera III modulation 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.

## Reliable Heat Exchanger

Quality components include a rugged, 4-pass design, heat exchanger that prevents rust and corrosion for the life of the heater. The unit is also equipped with heavy-duty drain valves. Finned tubes are industrial grade copper with fins and tubewalls formed as one, providing better heat transfer. Each tube is rolled into either all-bronze headers – standard on all Futera water heaters or cast iron headers – standard on all FIII boilers. The tubes are individually field replaceable. The gasketless heat exchanger is superior in design, durability and serviceability – each is hydrostatically tested, approved and stamped for 160 psi ASME operation.

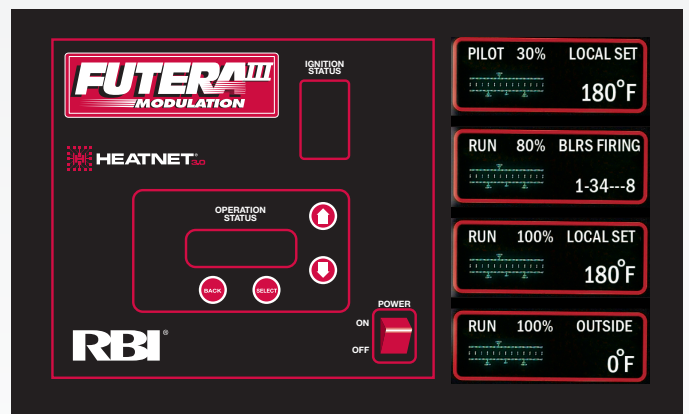
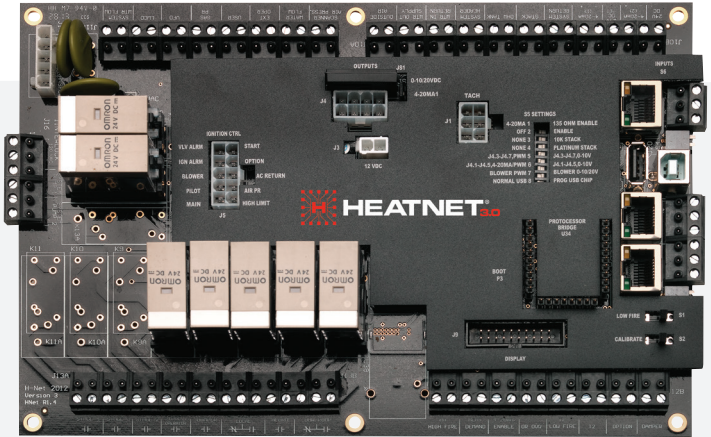




HeatNet controls are built into each Futera III boiler to enhance efficiency and provide constant communication with the Building Management System (BMS). 'On board' in every Futera III boiler, HeatNet eliminates the need for bulky, wall-mounted control panels. HeatNet maximizes operating efficiency and turndown rates to create substantial energy savings for Futera III boiler plants. The control provides flexible operation in a variety of set-up configurations – as a stand-alone boiler, a boiler in a Master/Member network using HeatNet protocol, or as a member in a system for up to 16 boilers.

HeatNet provides a higher level of control precision, repeatability and feedback with digital communications control, featuring four (4) temperature sensor inputs: outside air, supply (outlet) temperature, return (inlet) temperature and header temperature. HeatNet is fully compatible with Modbus Building Management System (BMS) protocol.

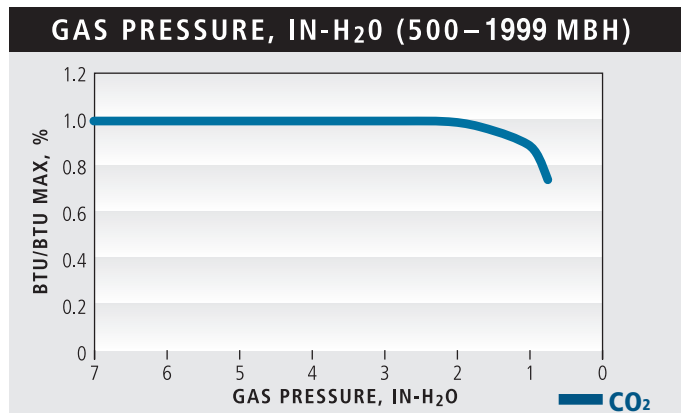
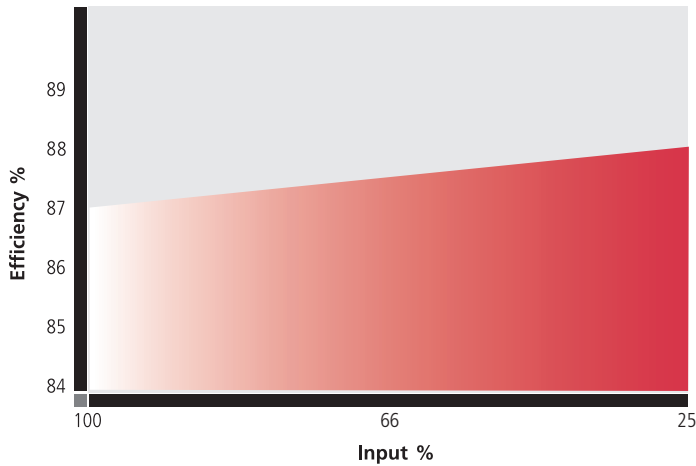
An optional 'ProtoCessor' board can also be installed for compatibility with BACnet and LonWorks BMS protocols with no redesign of the HeatNet control.



## Space-saving Footprint

The compact footprint of Futera III boilers allows for multiple boiler installation while still conserving valuable boiler room space and maintaining ease of access for service and maintenance.





**The Futera III provides high tolerance for real world conditions as it maintains 100% full input down to 2"wc.**

## Symmetric Air/Fuel Coupling

The boiler will operate without producing dangerous emissions with the flue or air inlet significantly blocked. The Futera III will react to a change in air or fuel flow, from any cause, by reducing its input while maintaining high combustion quality. This feature, while providing a high degree of safety, reduces sensitivity to flue installation and allows use in areas of variable air inlet pressures with no degradation in performance.

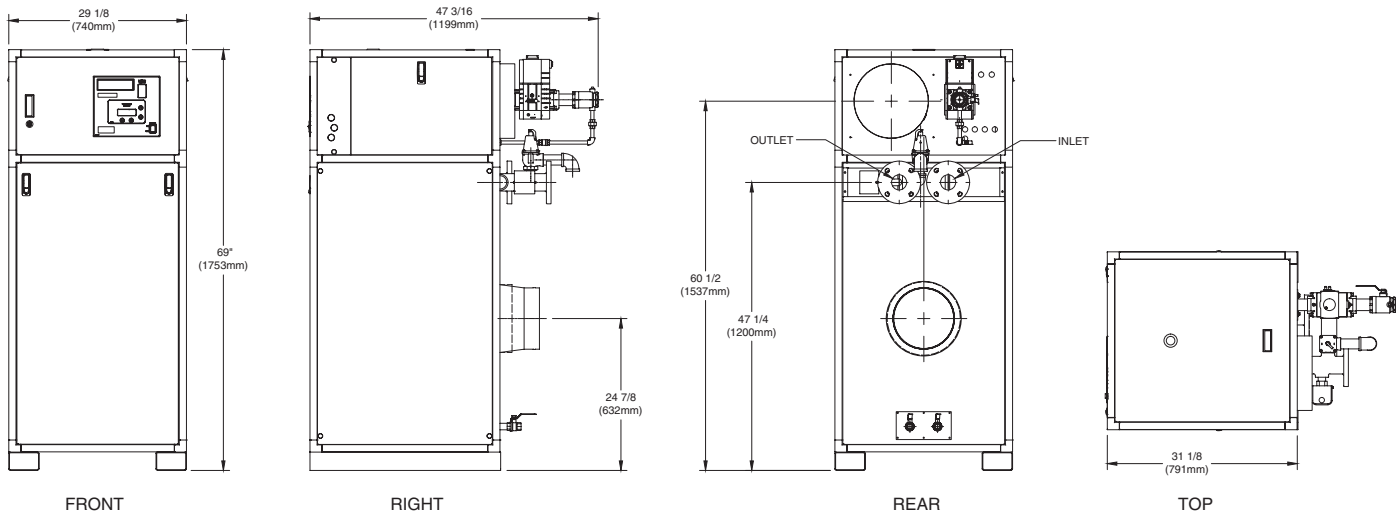
**Advanced gas train design monitors and regulates gas input based on combustion air pressure, which in turn provides highly repeatable air/fuel ratio throughout the operating range.**



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



## Futera III 2000



**Models**  
**MB = Boiler**  
**MW = Water Heater**

### Futera III Series — Dimensions and Ratings\*

Size	Input		Boiler Output		Unit Depth		Unit Width		Unit Height		Flue Vent <sup>(1)</sup>			Air Intake In.	Connections		Shipping Weight	
	MBH	kW	MBH	kW	In.	mm	In.	mm	In.	mm	(Cat I) Negative	(Cat II) Negative	(Cat IV) Positive		Gas In.	Water In.	lbs.	kgs.
500	500	147	428	125	39	991	25-1/8	638	48-1/2	1,231	N/A	6"	5"	8	1	2	600	272
750	750	220	641	188	39	991	25-1/8	638	55	1,397	8"	6"	5"	8	1	2	695	315
1000	1,000	293	853	250	39	991	25-1/8	638	61-1/2	1,562	9"	7"	6"	8	1	2	735	333
1250	1,250	366	1,066	312	44	1,118	29-1/8	740	55-1/2	1,409	10"	8"	6"	10	1	2-1/2	850	386
1500	1,500	440	1,278	374	46-13/16	1,189	29-1/8	740	60	1,524	10"	8"	8"	10	1-1/4	2-1/2	927	421
1750	1,750	513	1,491	437	47-3/16	1,199	29-1/8	740	64-1/2	1,638	12"	10"	10"	12	1-1/2	2-1/2	928	421
2000	2,000	586	1,704	499	47-3/16	1,199	29-1/8	740	69	1,752	12"	10"	10"	12	1-1/2	2-1/2	1100	499

\* Ratings reflect boilers only. For boiler efficiency information please visit [www.ahridirectory.org](http://www.ahridirectory.org).

<sup>(1)</sup> Diameters may vary based on system design.

### Futera III Series Boilers — Temperature Rise/Pressure Drop

Size	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 ΔL/s	Pres Drop kPa	Flow Rate GPM	Pres Drop Ft	Flow Rate ΔL/s	Pres Drop kPa	Flow Rate GPM	Pres Drop Ft	Flow Rate ΔL/s	Pres Drop kPa	Flow Rate GPM	Pres Drop Ft	Flow Rate ΔL/s	Pres Drop kPa
500	42.8	0.53	2.7	1.6	34.2	0.35	2.2	1.0	-	-	-	-	-	-	-	-
750	64.1	1.58	4.0	4.7	51.2	1.04	3.2	3.1	42.7	0.75	2.7	2.2	36.6	0.56	2.3	1.7
1000	85.3	3.46	5.4	10.2	68.2	2.29	4.3	6.7	56.9	1.63	3.6	4.8	48.7	1.23	3.1	3.6
1250	107.0	2.14	6.8	6.3	85.6	1.42	5.4	4.2	71.3	1.01	4.5	3.0	61.1	0.76	3.9	2.2
1500	127.8	3.58	8.1	10.6	102.2	2.37	6.5	7.0	85.2	1.69	5.4	5.0	73.0	1.27	4.6	3.7
1750	-	-	-	-	119.3	3.69	7.5	10.9	99.4	2.63	6.3	7.8	85.2	1.98	5.4	5.8
2000	-	-	-	-	136.3	5.41	8.6	15.9	113.6	3.86	7.2	11.4	97.4	2.90	6.1	8.5

### Futera III Series Water Heaters — Hourly Recovery Capacity ΔT (GPH & LPH)\*\*

Size	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	1,230	4,651	820	3,101	615	2,326	492	1,861	410	1,550	352	1,329
750	1,873	7,079	1,248	4,719	936	3,539	749	2,832	624	2,360	535	2,023
1000	2,491	9,416	1,661	6,277	1,245	4,708	996	3,766	830	3,139	712	2,690
1250	3,102	11,727	2,068	7,818	1,551	5,864	1,241	4,691	1,034	3,909	886	3,351
1500	3,714	14,039	2,476	9,359	1,857	7,019	1,486	5,616	1,238	4,680	1,061	4,011
1750	4,317	16,319	2,878	10,879	2,159	8,160	1,727	6,528	1,439	5,440	1,233	4,663
2000	4,922	18,605	3,281	12,403	2,461	9,303	1,969	7,442	1,641	6,202	1,406	5,316

\*\* For water heater efficiency information please visit [www.ahridirectory.org](http://www.ahridirectory.org).

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