




Domestic Hot Water Heaters and Boilers





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 3:1 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
- Variable speed blower
- Diagnostic annunciator
- Mounted & wired flow switch
- Flame safeguard control
- Quick-release latches
- Small vent sizes
- No air adjustment
- Rugged framework base
- Mounted pressure relief valve
- CSD-1 and FM compliant gas train

DEPENDABLE, EFFICIENT PERFORMANCE

- High efficiency, up to 88%
- Full modulation with smooth, 3:1 turndown
- Sealed combustion/direct vent
- Symmetrically air/fuel coupled
- Commercial quality combustion controls
- Gasketless heat exchanger assembly

OPTIONAL FEATURES

- Cupro-Nickel Finned Tubes
- Freeze protection package





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.

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.



The metal fiber burner delivers excellent performance using the latest in fiber technology. The robust, pre-mix burner allows seamless modulating turndown. The burner ensures ultra-low emission levels, noise-free with extremely high efficiency. Ignition components can be easily removed, serviced and reinstalled without removal of the burner assembly.

Reliable Heat Exchanger

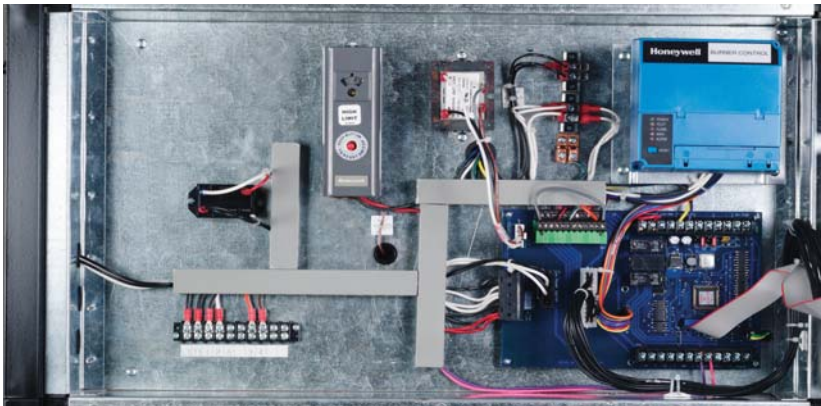
Quality components include a rugged, 4-pass design, heat exchanger with bronze headers and fittings that prevent rust and corrosion for the life of the heater. The unit is also equipped with heavy-duty drain valves. Finned tubes are industrial grade copper with fins and tubewalls formed as one, providing better heat transfer. Each tube is rolled into all-bronze headers – standard on all Futera 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.



→ Pharmacy → Emergency

Advanced Control Technology

Modulating control technology provides diagnostics, repeatable accuracy and reliability for added safety and efficiency.



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

SERVICEABILITY

- Easy access to all components
- Monitored interlocks with rapid diagnostic text display
- Honeywell Flame Safeguard control with UV flame detector
- Digital PID controller with touchpad interface



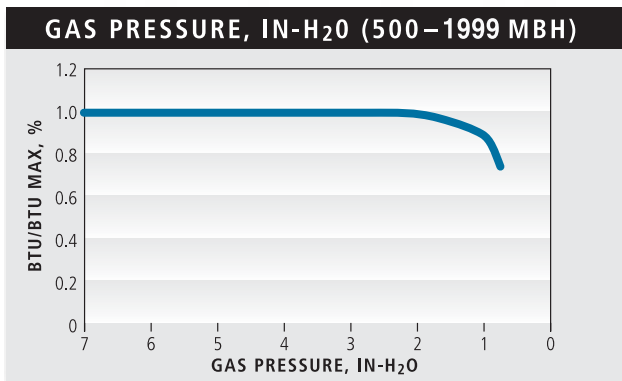
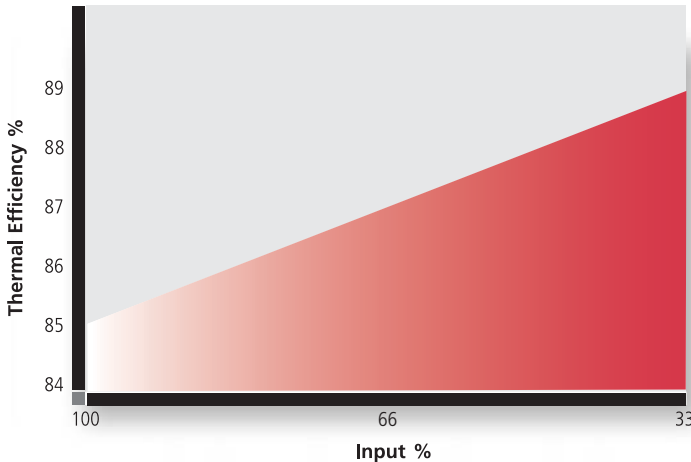
Space-saving Footprint

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.



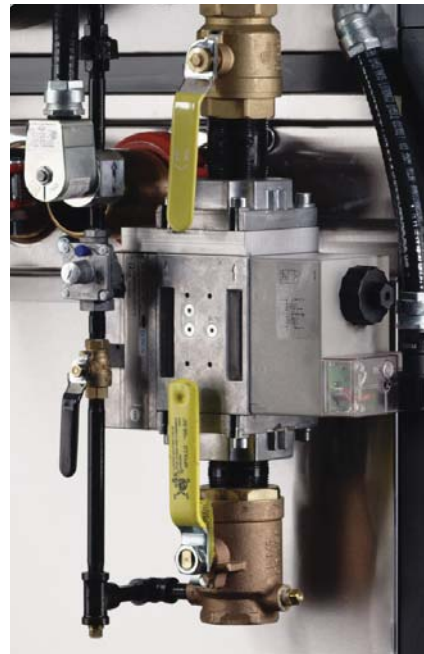
Symmetric Air/Fuel Coupling

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.



—CO₂

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



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

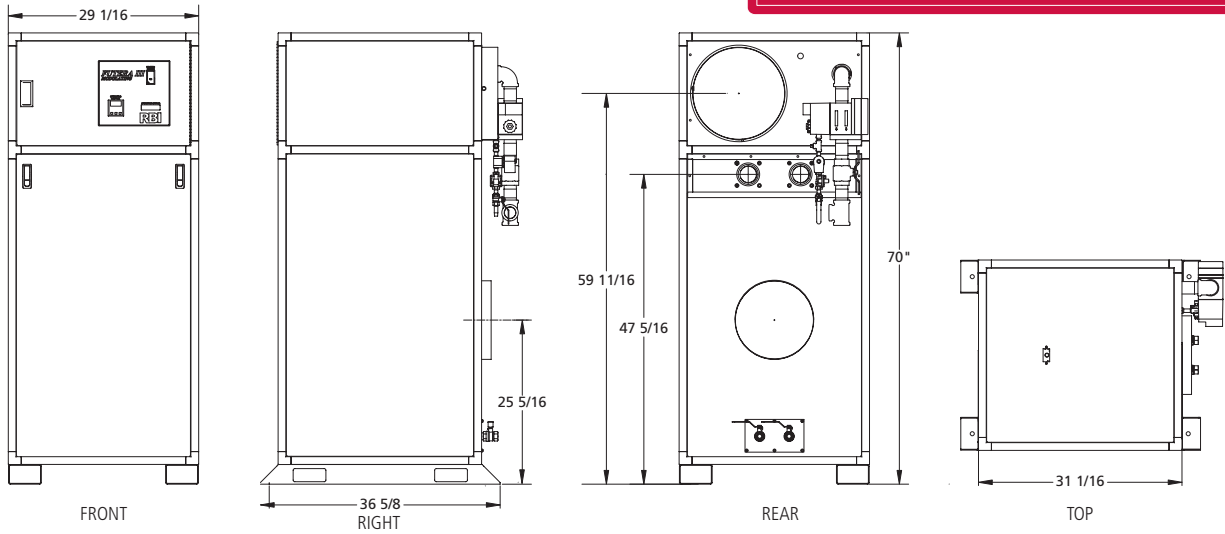


1300 Midway Blvd., Mississauga, Ontario L5T 2G8
Tel. (905) 670-5888 Fax (905) 670-5782

260 North Elm Street, Westfield, MA 01085
Tel. (413) 568-9571 Fax (413) 568-9613



FUTERA III 2000



DIMENSIONS & RATINGS

Model	Flue Vent				Air Intake		Connections		Weight			
	Input		Output		(Cat II) Negative	(Cat IV) Positive (Up to 60')	For Vertical	For Horizontal (Up to 60')	Gas	Water	Lbs	Kg
	MBH	kW	MBH	kW								
500	500	147	425	125	6"	5"	8"	6"	1"	2"	421	191
750	750	220	638	187	6"	5"	8"	6"	1"	2"	550	250
1000	1,000	293	850	249	7"	6"	8"	6"	1 1/4"	2"	560	254
1250	1,250	366	1,063	311	8"	6"	10"	8"	1 1/4"	2 1/2"	615	280
1500	1,500	440	1,275	374	8"	8"	10"	10"	1 1/4"	2 1/2"	678	308
1750	1,750	513	1,488	436	10"	10"	12"	12"	1 1/2"	2 1/2"	738	323
2000	1,999	586	1,699	498	10"	10"	12"	12"	1 1/2"	2 1/2"	817	343

HOURLY RECOVERY CAPACITY ΔT (GPH & LPH)

Model	Temperature Rise											
	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
2000	5,099	19,304	3,400	12,869	2,550	9,652	2,040	7,721	1,700	6,435	1,457	5,515

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	0.53	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	0.74	2.7	2.2	36.4	0.56	2.3	1.6
1000	85.0	3.44	5.4	10.1	68.0	2.27	4.3	6.7	56.7	1.62	3.6	4.8	48.6	1.22	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	0.75	3.8	2.2
1500	127.5	3.57	8.0	10.5	102.0	2.36	6.4	7.0	85.0	1.68	5.4	5.0	72.9	1.27	4.6	3.7
1750	—	—	—	—	119.0	3.67	7.5	10.8	99.2	2.62	6.3	7.7	85.0	1.97	5.4	5.8
2000	—	—	—	—	136.0	5.39	8.6	15.9	113.3	3.84	7.2	11.3	97.1	2.89	6.1	8.5