



SOLARIS

SETTING THE NEW STANDARD

Innovative Design at Work



- ULTRA LOW NOX
- UNMATCHED CONTROL SYSTEM
- UP TO 87% EFFICIENT
- CERTIFIED TO BTS-2000 TEST STANDARD

INNOVATIVE DESIGN AT WORK

The NEW Solaris Boiler and Water Heater (SOL)

Thermal Solutions' new high-efficiency Solaris is an affordable heating resource for a wide variety of commercial and institutional applications. Ideal for multiple unit operation, it is stackable and offers multiple venting options. In addition, its advanced control system provides infinite modulation, creating even greater efficiencies and smoother control over boiler and system output.



SBC Module



Honeywell® RM 7800



Unmatched Operating Controls

The Thermal Solutions Sage Boiler Control™ Module (SBC™) is truly the heart of the Solaris boiler and water heater. Operation is through simple menu selections and doesn't require special training or certification. The SBC offers boiler pump control, outdoor reset, lead/lag operation, inlet and outlet temperature sensors, boiler operating history and many other functions to stand alone or facilitate integration with your existing heating controls or building management system. Provides warm weather shutdown and domestic hot water priority.

Boiler Sequencing

The SBC module is capable of sequencing and modulating up to 8 boilers or water heaters without the need for a third party controller. Solaris boilers and water heaters communicate by plugging standard telephone cords into the provided ports on the controls. Once connected, the "networked" units can either operate independently or interface with a building management system.

Infinite Modulation — Load Matching

The Solaris control system uses fuel/air ratio controls to modulate the firing rate, providing BTS-2000 efficiencies as high as 87%. The PID logic of the Sage Boiler Control precisely matches boiler output to system demand to maximize system efficiency and minimize energy usage.

Non-proprietary Controls

The Solaris uses Honeywell® 7800 series flame safeguard controls and separate limit controls readily available at most HVAC supply houses. Additionally, Solaris uses an industry proven spark-to-pilot ignition, which is more reliable than the hot surface ignition system commonly used on other manufacturers' equipment.

Superb Serviceability

All critical components are fully accessible from the front and rear to make short work of service and maintenance calls. The Solaris service features include a slide-out control rack for easy access to wiring and a slide-out heat exchanger for less time-consuming service and repair. The burner section also slides out for ease of inspection and cleaning.

Stackable

The Solaris design saves space because it is stackable up to two high without the need for racks or other structural support.

Multiple Venting Options

The field adjustable tri-directional fittings of the air-intake and venting connections allow for easy installation of almost any venting situation. The unit is capable of using ducted combustion air, eliminating the need for wall louvers.

SOLARIS STANDARD FEATURES

SBC Module — Plug and play operating control featuring a 2-line, 16-character backlit display for single or multiple boiler applications, capable of peer-to-peer communication via standard phone cord.

Negative pressure jacket pre-heats combustion air minimizing stand-by loss

Tri-directional fitting for both air-intake and venting-field adjustable

Copper finned-tube heat exchanger

Non-proprietary flame safeguard control (CSD-1 compliant)

Spark-to-pilot ignition system

Operating and manual reset high-limit temperature controls standard

Minimal side clearances

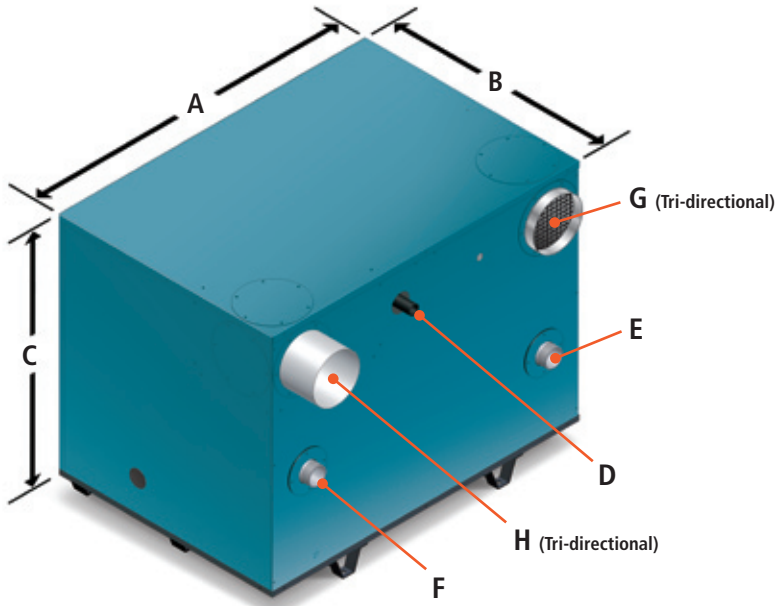
Variable-speed fan and fuel/air ratio gas valves track load with infinite modulation

Combustion chamber allows operation with jacket removed for ease of maintenance

- Air intake and exhaust connections both have field-selectable, tri-directional fittings
- NO_x less than 20 ppm
- CO less than 50 ppm
- Building management system (DDC) interface

- All rear connections
- Stackable without a rack or stand
- Quiet operation (<50 dB)
- All service access front and rear

Ratings and Dimensional Data



Rear



Front

	SOL-300	SOL-500	SOL-750	SOL-1000	SOL-1250	SOL-1500
Input: High Fire BTUH	300,000	500,000	750,000	1,000,000	1,250,000	1,500,000
Output: High Fire BTUH	252,000	420,000	637,500	850,000	1,062,500	1,275,000
Input: Mod Low Fire BTUH	100,000	166,666	250,000	333,333	416,666	500,000
Output: Mod Low Fire BTUH	86,000	143,333	217,500	290,000	362,500	435,000
Boiler Horsepower	7.5	12.5	19.0	25.2	31.7	38.1
Width: "A"	27.875" (706)	42.625" (1082)	41.375" (1052)	49.375" (1255)	61.625" (1565)	73.875" (1877)
Depth: "B"	28.125" (714)	28.125" (714)	31.75" (808)	31.75" (808)	31.75" (808)	31.75" (808)
Height: "C"	32.625" (828)	32.625" (828)	36.875" (937)	36.875" (937)	36.875" (937)	36.875" (937)
Gas Connection: "D" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT
Water Inlet: "E" NPT	2" NPT	2" NPT	3" NPT	3" NPT	3" NPT	3" NPT
Water Outlet: "F" NPT	2" NPT	2" NPT	3" NPT	3" NPT	3" NPT	3" NPT
Air Inlet Connection: "G"	4" (101)	6" (152)	8" (203)	8" (203)	10" (254)	10" (254)
Vent Connection: "H"	4" (101)	6" (152)	8" (203)	8" (203)	10" (254)	10" (254)
Shipping Weight: lbs.	340	370	570	620	690	810

Dimensions are inches (mm)

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