

Summit

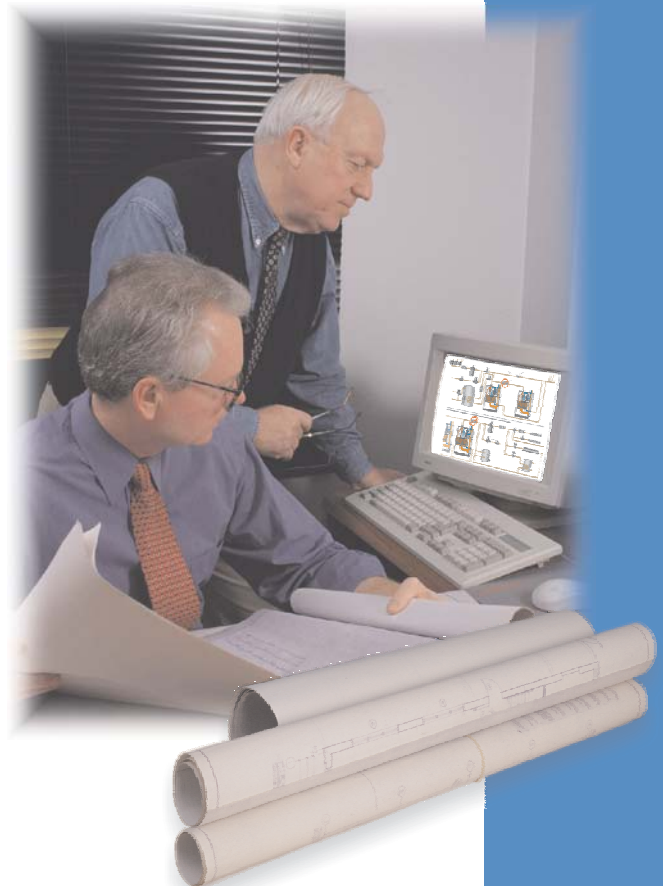
Gas-Fired Hydronic Boilers

Condensing and

Modulating for

Low NOx and

High Efficiency



LAARS
HEATING SYSTEMS

Get The Edge Over The Competition with The Summit

Solve installation problems and significantly reduce running costs with the Laars Summit.

The Summit is a low mass, condensing boiler that utilizes a stainless steel economizer tube to achieve operating efficiencies of up to 96%. Low mass eliminates standby and radiation losses typically suffered by storage type boilers because the Summit's heat exchanger heats up instantly upon demand.

Easy Installation, Anywhere!

The Summit has a direct vented, sealed combustion system and weighs just 275 lbs. (125 kg). It can be installed on combustible floors and requires just 1" (25mm) clearance from the jacket with no clearance needed for the venting which allows for easy installation just about anywhere.

Each boiler can be hand trucked and installed by one person with no special foundations or rigging. The Summit Condensing Boilers fit easily through standard door sizes.

Environmentally Friendly

You will be glad to know that the Summit has less than 14ppm of (NOx) in its exhaust.

Quality + Performance = Efficiency

Summits are tested to strict Quality Control standards with every single boiler being fired at the factory for approval before shipment.

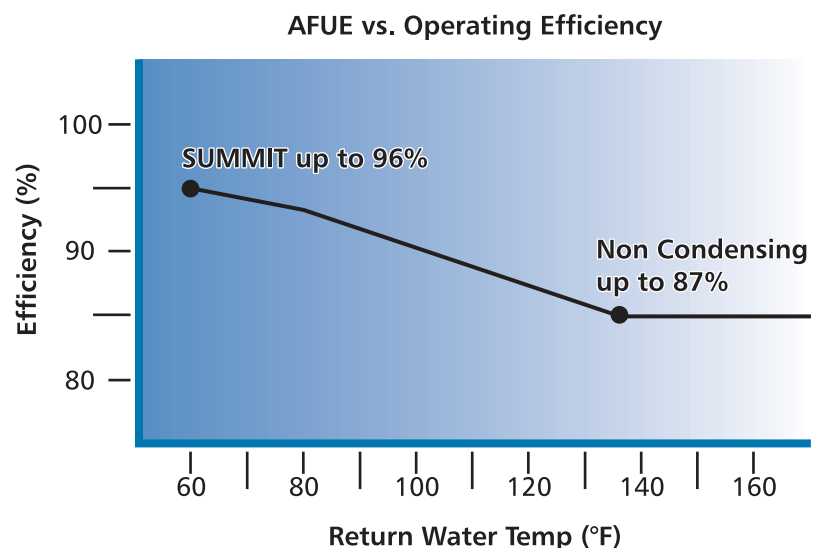
All around performance and flexibility make the Summit an important addition to your upcoming specifications and jobs.

- Up to 96% efficient
- Low operating costs
- Low NOx levels
- One man installation
- Quiet operation, non-pulsing
- Direct vent
- Sealed combustion

AFUE vs. Operating Efficiency

The Annual Fuel Utilization (AFUE) test measures combustion efficiency by means of a fixed supply and return water temperature. This masks the true efficiency of a condensing boiler. The cooler the return water temperature, the higher the efficiency (up to 96% in the case of the Summit). If piped and controlled correctly, you can ensure the Summit always operates well above the AFUE standard.* This is not true of non condensing boilers, with the most efficient operating in the mid eighties.

*see diagram



Multiple Boiler System vs. a Single Full Load Boiler

Common practice dictates that a 1,000,000 BTU (2930 kW) heating load requires at least a 1,000,000 BTU output boiler. In this scenario, even the smallest call for heat from the system will cause the entire 1,000,000 BTUs to fire. This results in overkill on running costs. "Load matching" with multiple boilers is a highly effective way to reduce these costs. The same load applied with a multiple boiler system means the frequent small calls for heat would be satisfied with just one or two boilers. The result is big savings on running costs.

Further benefits can be seen when the boilers are sequentially fired, rotating the lead firing boiler and therefore, increasing component, boiler and system life.

When the highly efficient Summit is used in a multiple boiler system, savings are outstanding.



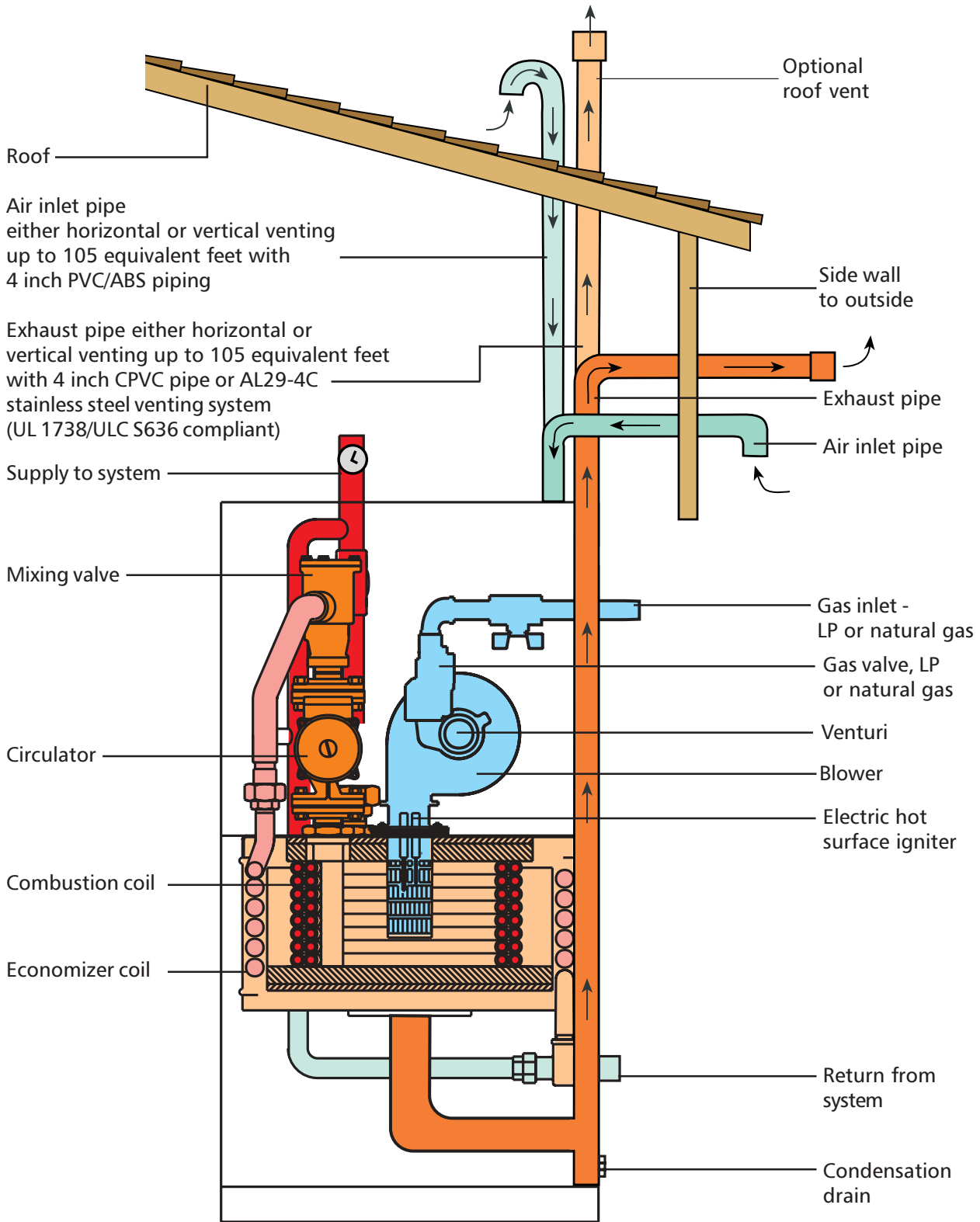
| Indoor Size | Fuel Type | Input | | Output | | Water Conn Size | NOx Levels (ppm) | Shipping Weight | |
|-------------|-----------|-----------|-------|---------|-------|-----------------|------------------|-----------------|-----|
| | | MBTU/h | kW | MBTU/h | kW | | | lbs. | kg |
| SMB-200 | NG/LP | 126-199.9 | 37-59 | 114-179 | 33-53 | 1¼ | 13.5 | 275 | 125 |
| SMB-250 | NG/LP | 126-257 | 37-75 | 114-231 | 33-68 | 1¼ | 13.5 | 275 | 125 |

Stainless Steel Economizer Coil

The stainless steel economizer coil that encompasses the finned copper heat exchanger serves two purposes. It squeezes the last drop of energy out of the flue gases as they leave the primary heat exchanger and it provides an appropriate place for condensation to occur. While condensing enables a highly efficient heat transfer, equipment should never be designed to allow condensation to occur on the primary heat exchanger. This causes scaling and leads to continual replacement of the coil. The Summit's economizer coil eliminates this threat while maintaining the high efficiencies only available in condensing boilers.



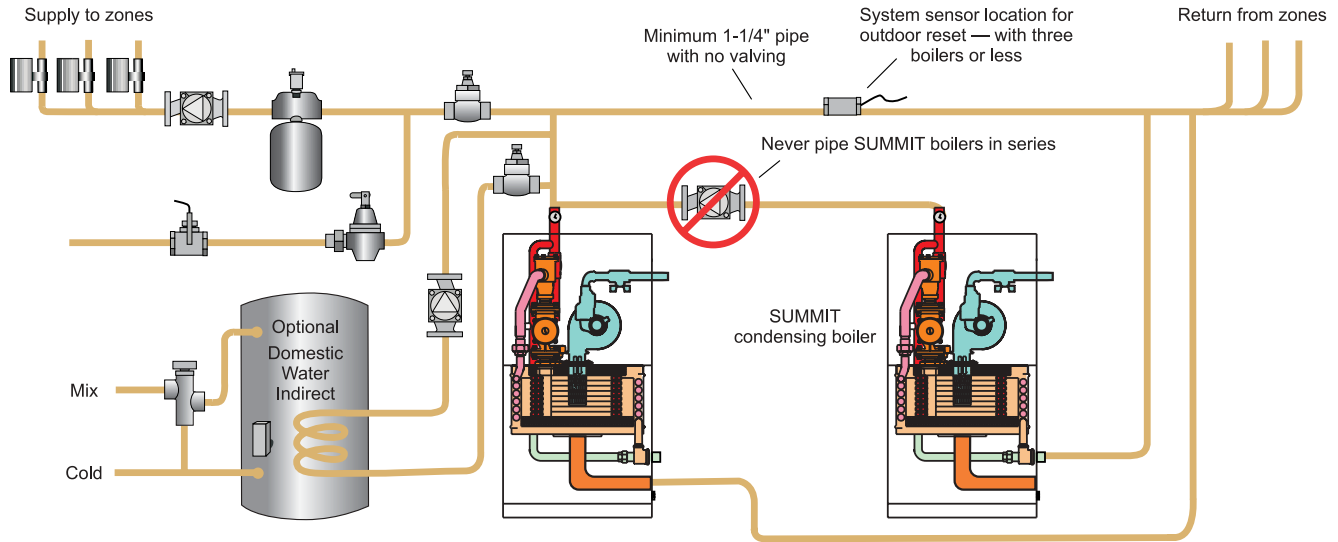
Stainless steel economizer coil — every condensing boiler should have one.



Call, fax or write us today for more information about the Summit, or to speak with a representative.

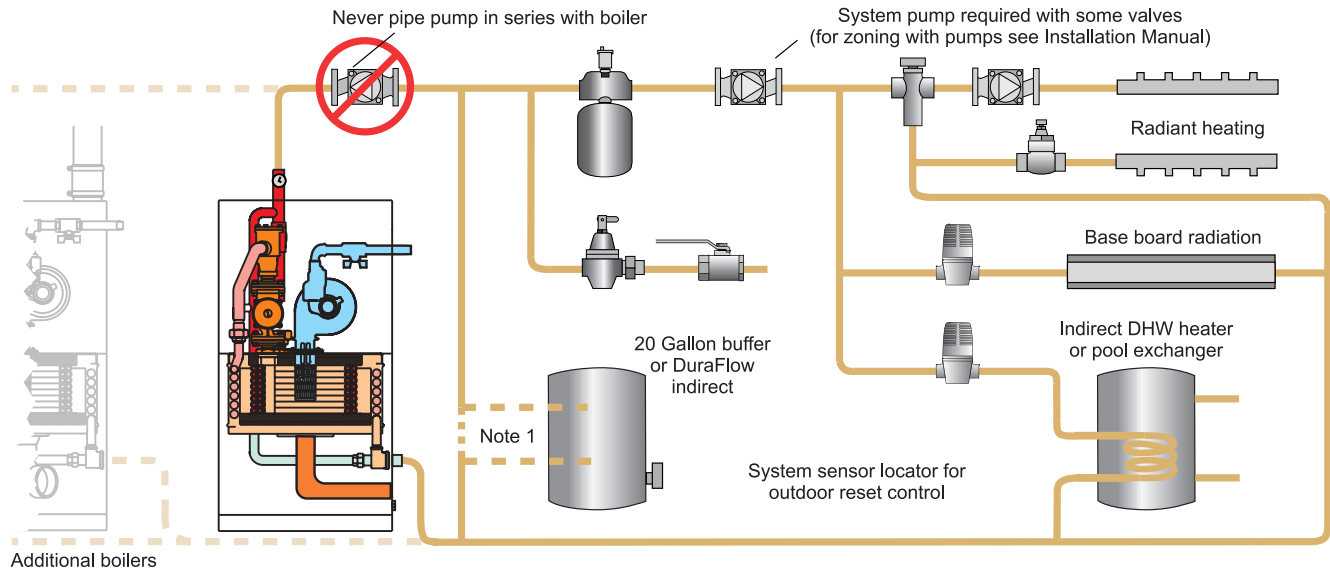
The Summit Condensing Boiler has a 10 year limited warranty.

Primary Secondary Piping



For maximum condensing efficiency, connect all boiler returns to primary return before rejoining boiler outlets.

Buffering Multiple Zone Systems



Note 1: Systems with more than three zones per boiler REQUIRE 20 gallon buffer tank in place.

Obtaining optimum performance from Summit low mass, condensing boilers

- When feasible, install the optional outdoor temperature thermistor to reduce system return temperatures for maximum condensing operation.
- Low mass boilers must always be cycled from an external control, thermostat or zone control.
- For domestic priority, connect indirect into supply and return common headers, not as zone on primary loop.
- Summits are provided with internal pump for injection into primary loop. Never pipe external pump in series with unit.
- When connecting to radiant floor low temperature systems only, replace tempering valve with buffer/tempering tank.

Summit Specifications

Suggested Specifications for Summit

Boiler(s) shall be high efficiency condensing models SMB-200/250. Unit(s) shall be gas-fired design certified and be capable of providing rated capacities at 160°F - 200°F (71°C - 93°C) discharge temperature. Boiler(s) to comply with American National Standard for gas-fired boilers (ANSI Z21.13 - latest edition).

Unit(s) shall have corrosion resistant waterways comprised of a primary SB359 copper finned tube heat exchanger with a stainless steel secondary economizer heat exchanger constructed of type 304L stainless steel.

Unit(s) shall feature hot surface ignition with integral diagnostic burner control. Unit(s) shall be equipped with a factory wired and mounted 115v/24v

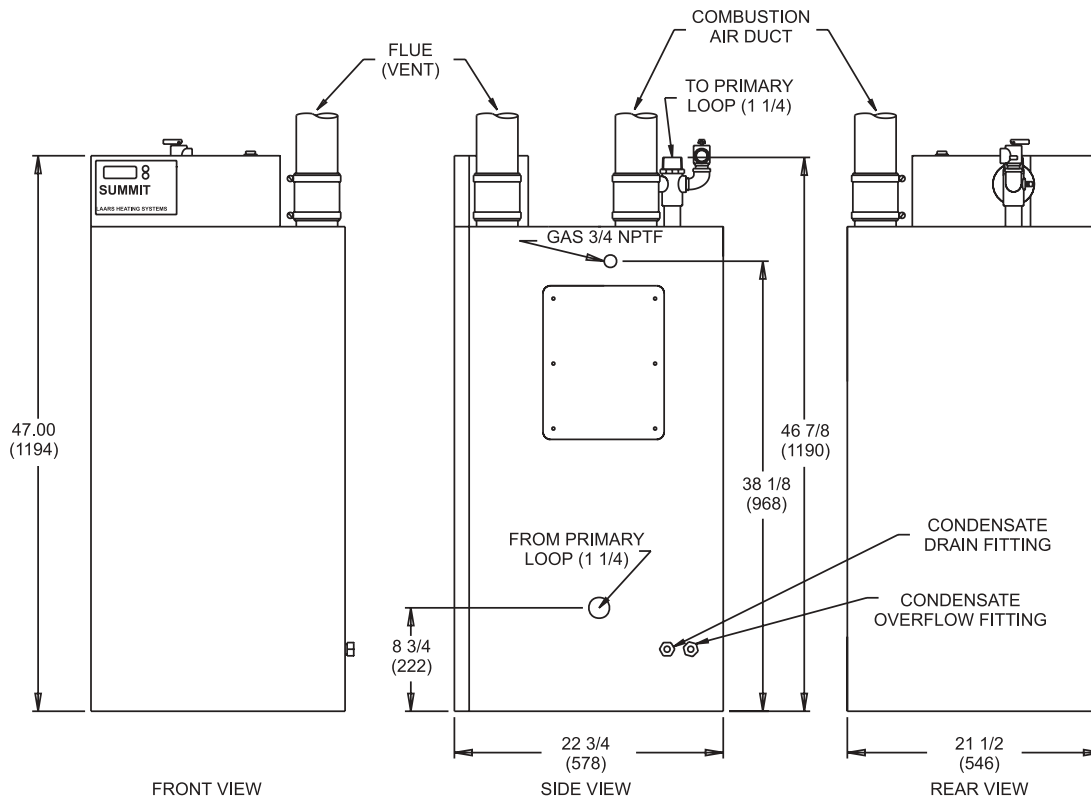
transformer, manual reset high limit, on/off switch, and negative redundant gas valve.

Unit(s) shall feature factory piped internal mixing valve and an internal circulating pump which shall have a cast iron body with stainless steel impeller capable of circulation to the primary circuit.

Unit(s) shall be suitable for installation on combustible flooring with a minimum clearance of one inch (25mm) on all sides, and zero clearance for venting.

Outer jacket shall be finished with a textured epoxy finish.

Unit(s) shall be covered by a ten (10) year limited manufacturer's warranty.



Dimensions shown in inches (mm)



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