

HIGH-EFFICIENCY CAST IRON BOILER

Water | Natural or Propane Gas | 70-175 MBH | 4 sizes
Direct Exhaust or Direct Vent | Up to 91.9% AFUE[†]



[†]Model Dependent

**INDUSTRY-LEADING HIGH EFFICIENCY
CAST IRON BOILER AT 91% AFUE**

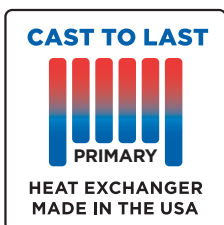
GV90+

Proven cast iron longevity extends service life.

Durable design with low maintenance.

Performance maximizes comfort and energy savings.

Ideal for high temperature applications, like baseboard, radiator and fan coil systems.



Now with built-in low water cut off



Fact: The majority of boiler installations today are for replacements of existing boilers on a prior designed high temperature water system, sending hot water out to a building's existing heat emitters, such as baseboards, radiators or fan coils.

Fact: Boiler efficiency is directly related to the operating water temperature of the home's heating system. As operating water temperature goes up, boiler efficiency goes down.

Typical cast iron boilers are designed to run on high temperature systems, and deliver standard efficiencies. But the GV90+ boiler is different, and specifically engineered to excel on high temperature systems, making it the best boiler choice to upgrade the efficiency of a baseboard, radiator or fan coil system.



The GV90+ is designed for homeowners who seek the perfect combination of ideal heating comfort, lower utility bills, peace-of-mind reliability and product longevity.

FEATURES THAT MAKE IT LAST

MAXIMUM HEAT EXCHANGER PERFORMANCE AND LONGEVITY

- Durable cast iron primary heat exchanger extends product life - it is not uncommon for cast iron boilers to last in excess of 40 years.
- Corrosion resistant stainless steel condensing secondary heat exchanger, increases efficiency up to 5% by recouping heat energy from exhaust normally wasted when vented from the building. The extra heat energy is then added and circulated through the baseboards or radiators to efficiently heat the home.

RELIABLE BOILER DESIGN

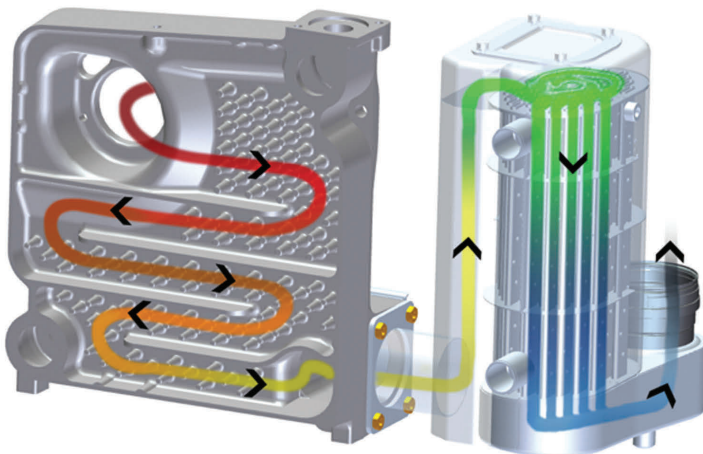
- Unlike most high efficiency boilers in the industry, the Weil-McLain GV90+ has extra-wide waterways (over 2") allowing sludge and debris, often present in older systems, to flow through easily. This limits scale build up, which reduces boiler efficiency, performance and can lead to premature boiler failure.
- Down-fired, counter flow boiler design improves boiler efficiency. The GV90+ offers (5) pass design in the primary heat exchanger and (2) pass design in the secondary heat exchanger maximizing heat transfer and optimizing boiler efficiency.

PROVEN CONTROL STRATEGY

- The control platform features error-proof, labeled, snap in connections. Tested at over 100,000 cycles, and boasting a failure rate of less than 1% over 20 years, it is sure to provide years of worry-free operation.
- Unlike traditional cast iron boilers, the GV90+ offers a unique control design allowing easy integration of outdoor reset to take advantage of low water temperatures and improve overall system energy cost savings.

SMART CIRCULATOR STRATEGY

- Built-in dual circulator strategy provides boiler protection - it can accept low return water temperatures (down to 60° F) with no additional mixing valves, pumps, wiring and installation labor - a savings of over \$500.
- The lower water temperature also allows homeowners the flexibility to add radiant heating for kitchens, baths or other living spaces without the added cost of special return temperature controls.



Cast iron boiler sections made with a portion of recycled metals



FEATURES THAT PROVIDE COMFORT

When matched with a Weil-McLain indirect-fired water heater, you will experience virtually limitless hot water for bathing, laundry, dish washing and cooking at a lower operating cost compared to most other alternatives. Our indirect-fired water heaters provide up to twice the peak flow of a tankless coil, 50% more than a comparable sized direct-fired gas water heater, and three times as much as an electric unit.

AQUA Plus®
5 Tank Sizes 35-105



FEATURES THAT PAY

Year after year, the heat recovery technology built into the GV90+ results in steady fuel savings for homeowners.

Annual estimated savings for every \$100 of fuel costs by increasing your heating equipment efficiency.

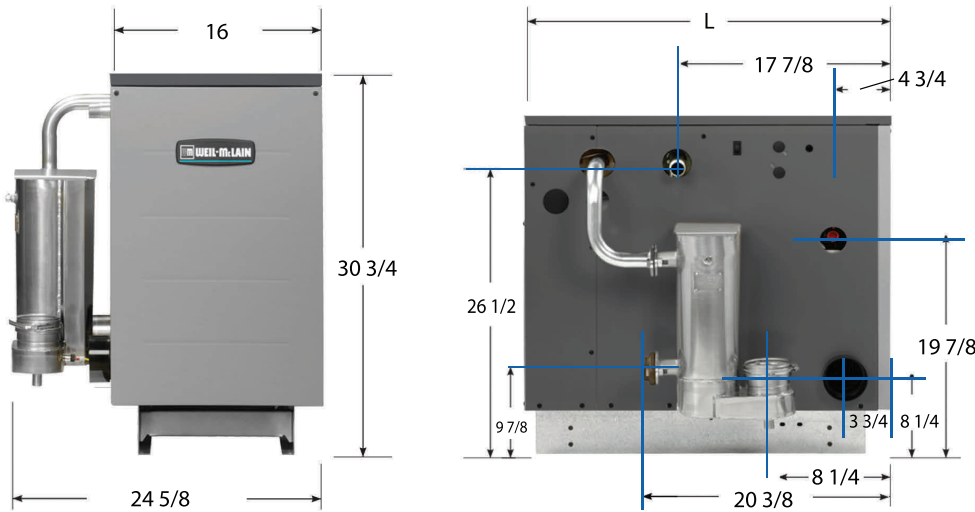
Assuming the same heat output. These are general estimations, actual results may vary.

Existing System AFUE	New / Upgraded System AFUE								
	55%	60%	65%	70%	75%	80%	85%	90%	95%
50%	\$ 9.09	\$16.67	\$23.08	\$28.57	\$33.33	\$37.50	\$41.18	\$44.44	\$47.37
55%	-----	\$ 8.33	\$15.38	\$21.43	\$26.67	\$31.25	\$35.29	\$38.89	\$42.11
60%	-----	-----	\$ 7.69	\$14.29	\$20.00	\$25.00	\$29.41	\$33.33	\$36.84
65%	-----	-----	-----	\$ 7.14	\$13.33	\$18.75	\$23.53	\$27.78	\$31.58
70%	-----	-----	-----	-----	\$ 6.67	\$12.50	\$17.65	\$22.22	\$26.32
75%	-----	-----	-----	-----	-----	\$ 6.25	\$11.76	\$16.67	\$21.05
80%	-----	-----	-----	-----	-----	-----	\$ 5.88	\$11.11	\$15.79
85%	-----	-----	-----	-----	-----	-----	-----	\$ 5.56	\$10.53
90%	-----	-----	-----	-----	-----	-----	-----	-----	\$ 5.26

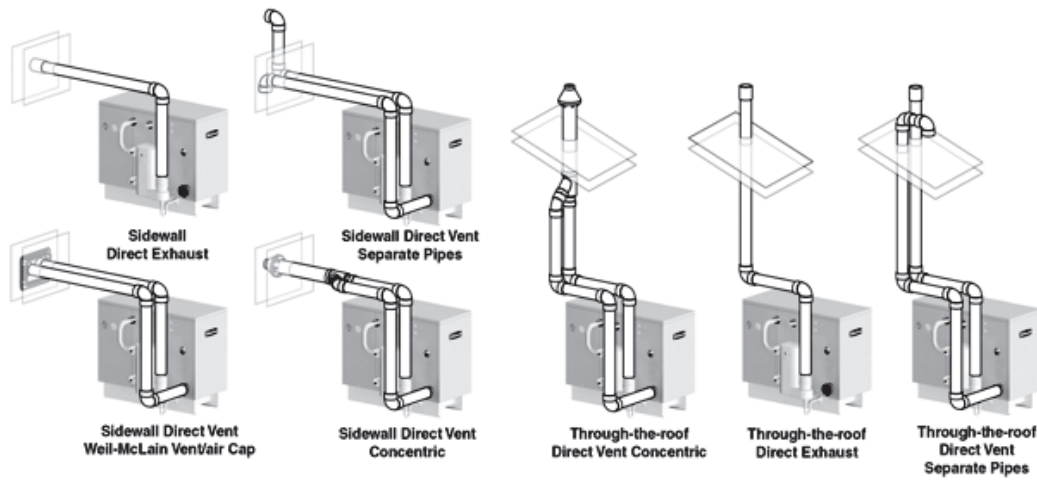
Source: "Furnaces and Boilers." Energy.gov. N.p., n.d. Web. 26 Apr. 2014.

- Exceeds ENERGY STAR® requirements with a 91% rating efficiency
- Eligible for most utility rebate programs — check your local area for details and current rebate amounts
- GV90+ is the first cast iron gas boiler vented with PVC — saving 90% over the cost of stainless steel venting material per foot, resulting in lower installation costs for homeowners

DIMENSIONS



INSTALLATION FLEXIBILITY WITH MULTIPLE VENTING OPTIONS



RATINGS

Model	Input MBH	DOE Heating Capacity MBH ¹	Net Water Rating MBH ²	AFUE	Vent Material	Vent Diameter ³	Venting Length of 3" Pipe	Boiler Water Content (Gal.)	Length (L)	Supply Tapping	Return Tapping	Gas Connection Size	Minimum Recommended Pipe Size	Approx. Shipping Weight (Lbs.)
GV90+3	70	65	56	91.9%	PVC, PP, CPVC, SS	3"	100'	3.8	30 3/4"	1"	1"	1/2"	1"	313
GV90+4	105	97	84	91.2%	PVC, PP, CPVC, SS	3"	100'	4.7	30 3/4"	1"	1"	1/2"	1"	353
GV90+5	140	130	113	91.4%	PVC, PP, CPVC, SS	3"	100'	6.0	37 3/4"	1"	1"	1/2"	1 1/4"	423
GV90+6	175	161	140	91.0%	PVC, PP, CPVC, SS	3"	100'	6.9	37 3/4"	1"	1"	1/2"	1 1/4"	464

Notes:

¹Based on standard test procedures prescribed by the United States Department of Energy.

²Net AHRI ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing needs to be added for normal piping and pick-up. Ratings are based on a piping and pick-up allowance of 1.15. An additional allowance should be made for unusual piping and pick-up loads.

³GV90+ boilers must be vented directly to the outside.

STANDARD EQUIPMENT:

BOILER

- Control Module with Indicator Lights
- Integrated low-water cutoff, with test button
- Insulated Extended Steel Jacket
- Cast Iron Sections with Built-in Air Separator
- Stainless Steel Secondary Heat Exchanger with Air Separator
- Steel Base
- Blower Assembly with Observation Port
- Gas/Air Manifold Assembly
- Gas/Air Orifice Plate for Natural Gas (separate plate furnished for conversion to propane)
- Stainless Steel Burner Cone and Ring Assembly
- Negative Regulation Gas Valve
- Hot Surface Ignition System
- Air Pressure Switch
- System Circulator*
- Built-in-Bypass Circulator System with Sensor for Temperature Control*
- Condensate Drain Trap
- Sidewall Vent Termination Kit**
- 40VA Transformer
- Electrical Junction Box
- 30 PSI ASME Relief Valve (boiler sections & secondary heat exchanger tested for 50 PSI working pressure)
- Water Temperature Limit Switch
- Section Block Temperature Limit Switch
- Combination Pressure-Temperature Gauge
- Drain Valve

ADDITIONAL EQUIPMENT:

- Concentric Vent Kit
- Condensate Neutralizer Kit
- Expansion Tank Package. #109-sizes 3 through 5; #110-size 6. Shipped in separate carton.
- High Altitude Kit
- Outdoor Temperature Sensor
- Zone Interface Harness
- Water Treatment - Inhibitor & Test Kit

LIMITED TRANSFERABLE WARRANTY:

- Residential: 20 Years Primary Heat Exchanger; 5 Years Secondary Heat Exchanger; 2 Years Parts
- Commercial: 10 Years Primary Heat Exchanger; 5 Years Secondary Heat Exchanger; 1 Years Parts

*Circulators supplied with boiler cannot be removed and cannot be used as a zone circulator in multiple zone systems.

** Only includes inside and outside metal termination plates and hardware (does not include plastic cap).

