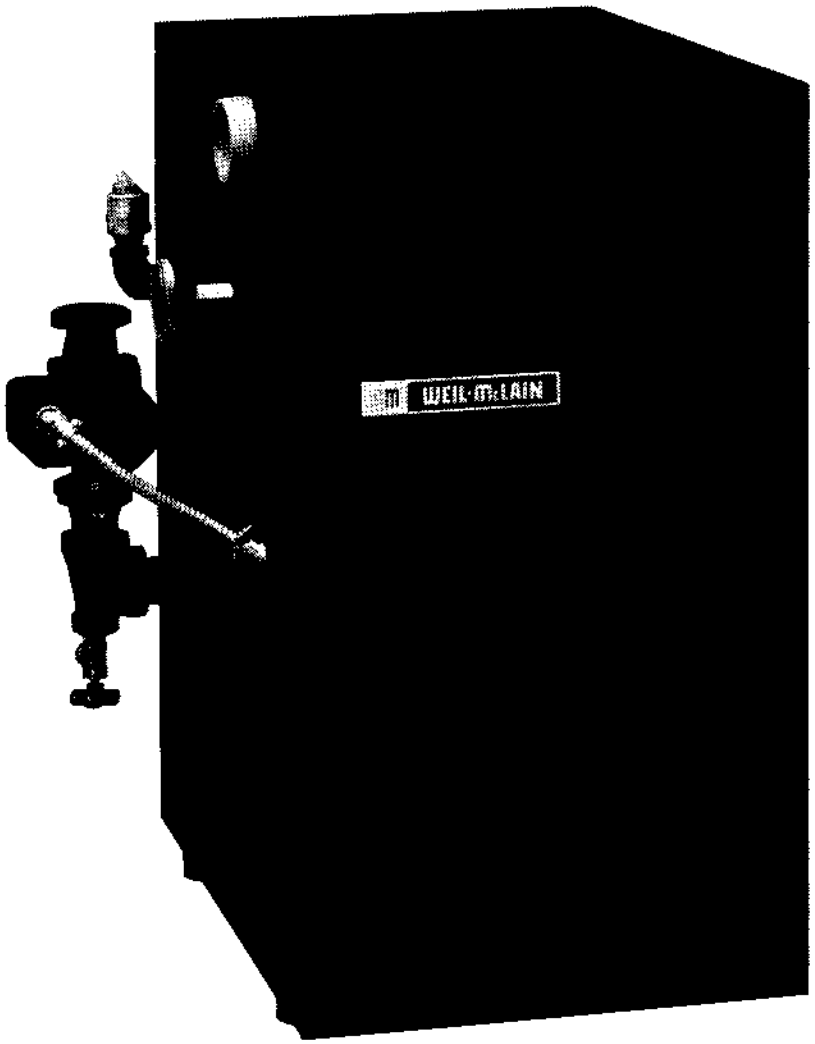
WEIL-McLAIN



AMERICA'S MOST COMPLETE LINE OF CAST IRON BOILERS
RESIDENTIAL... COMMERCIAL... INDUSTRIAL... INSTITUTIONAL

TYPE HE

SERIES 3

HIGH-EFFICIENCY GAS BOILER

NET LOAD RANGE

HOT WATER:
48,000 to
119,000 BTU/Hr.

Design certified by
American Gas Association

Net ratings are approved by
The Hydronics Institute

DOE

Heating capacities based on standard test procedures prescribed by the United States Department of Energy

Built in accordance with the requirements of the ASME Boiler and Pressure Vessel Code

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

TYPE HE
HIGH-EFFICIENCY GAS BOILER

WEIL-McLAIN
MICHIGAN CITY INDIANA

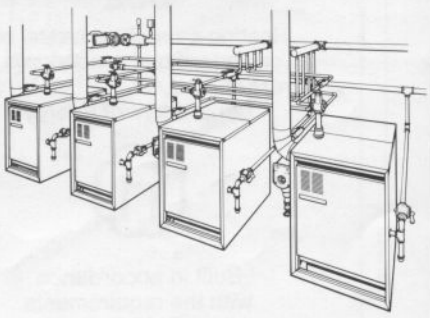
The Weil-McLain HE boiler represents a notable improvement in cast iron gas boiler design and engineering. The unit incorporates an induced draft combustion system, pilotless ignition, and other energy-saving features to attain over 82% seasonal operating efficiency. This compares to a typical installed boiler that may operate at only 60% seasonal efficiency. The HE boiler can pay for itself in fuel savings in a few short years!

The unit is available in four sizes with net I-B-R ratings from 48,000 to 119,000 BTU/Hr. It is designed for forced hot water heating systems in new homes ... or for replacement of older, inefficient heating equipment. The boiler is also ideally suited for individual metering in apartments and condominiums.

The HE boiler features high operating efficiency *without* compromising quality and dependability. Outstanding features include modern, compact design; proven combustion technology; standard, uncomplicated controls; direct venting; factory testing; and durable cast iron construction.

Most important, the HE is made by Weil-McLain, the leading name in cast iron boilers for over 100 years.

MULTIPLE BOILER SYSTEMS

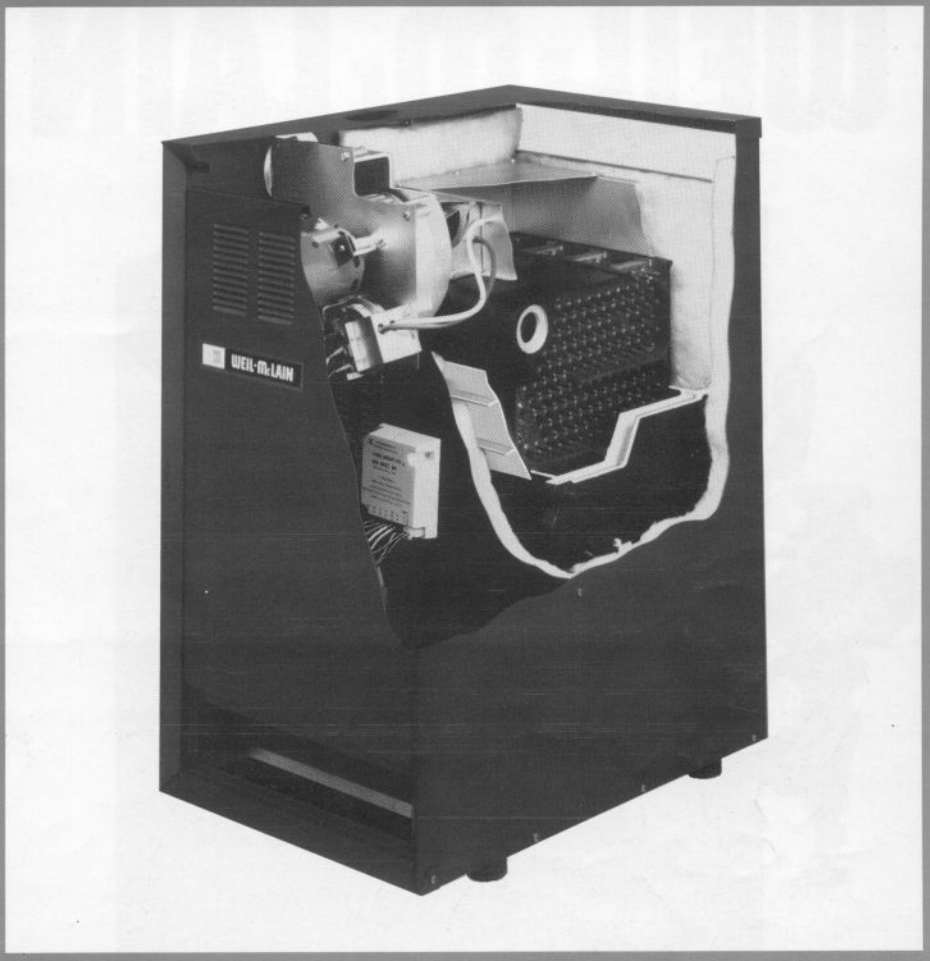


Two or more HE boilers can be used in place of one large-capacity boiler to meet the space heating requirements of larger buildings.

With multiple HE boilers, system operating efficiency is increased since the boilers can be sequenced so only those required to meet the heating load are fired. In addition, individual boilers may be isolated from the system if service is ever required and additional boilers may be added if heating requirements increase.

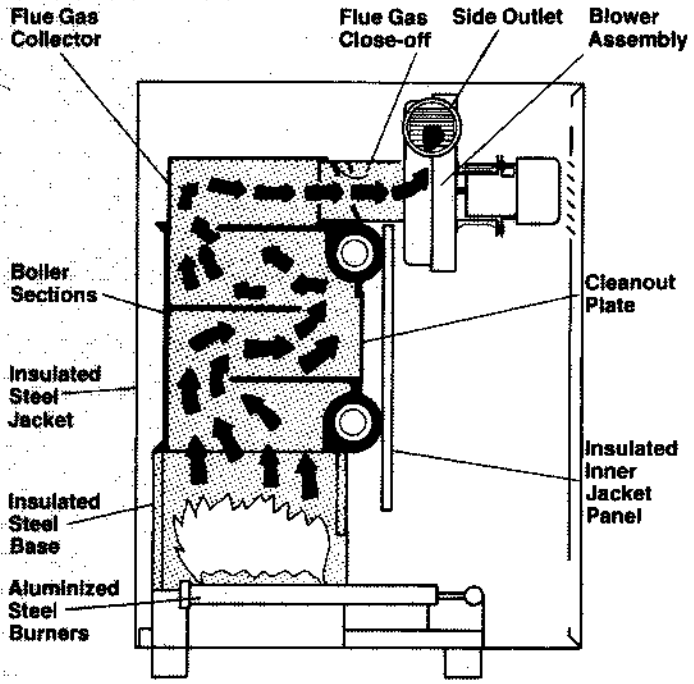
Contact the Weil-McLain Applications Engineering Department for information on multiple boiler systems.

DESIGN FEATURES



1. **82% OPERATING EFFICIENCY** can save 15% or more on annual gas consumption.
2. **INDUCED DRAFT COMBUSTION SYSTEM.** Power venting increases flue gas velocity through the boiler for greater heat transfer, higher efficiency. No automatic vent damper required.
3. **NO CHIMNEY REQUIRED.** HE boiler may be vented directly through an outside wall or through the roof. It also may be vented into a chimney.
4. **HOT SURFACE IGNITION SYSTEM** saves energy. No pilot required.
5. **COMPACT DESIGN** saves valuable living space. Boiler is only 32 inches high, 25 inches deep. Power venting eliminates the need for a draft hood.
6. **CONVENIENT SERVICING.** Accessible controls ... simplified wiring ... front cleanout plate ... vertical flueways.
7. **FACTORY-TESTED.** Each boiler is water and fire-tested before shipping to assure reliable operation. Factory assembly of all parts saves installation time and cost.
8. **INDUSTRY APPROVED.** Design certified by the American Gas Association for natural and propane gas. Built in accordance with the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. Heating capacities based on standard test procedures prescribed by the U.S. Department of Energy. Ratings approved by The Hydronics Institute.
9. **STEEL JACKET** finished in attractive blue enamel ... insulated to retain heat and clear of the floor to prevent rust.
10. **ALUMINIZED STEEL BURNERS** feature quiet ignition and extinction. Burners provide fixed primary air ... no adjustment required.
11. **CAST-IN AIR ELIMINATOR** saves the cost of a separate device.
12. **TOP-QUALITY ACCESSORY EQUIPMENT** for fully automatic, trouble-free operation. Available with Fill-Trol package.

HIGH EFFICIENCY

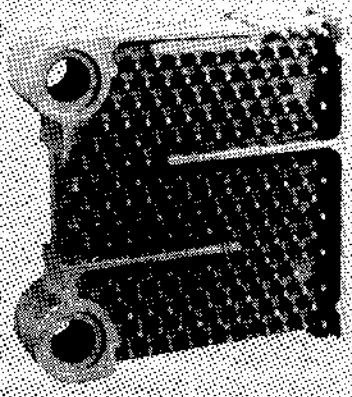


The induced draft combustion system increases flue gas velocity through the boiler sections, resulting in rapid heat transfer to the circulating water for higher efficiency and lower fuel consumption.

As shown in the diagram, gases are *pulled* through the boiler sections and flue gas collector and are discharged through the side outlet into the venting system.

The flue gas close-off automatically shuts when the blower fan is not operating. This exclusive feature retains heat in the boiler, increases efficiency, and eliminates the need for a mechanical vent damper.

CAST IRON CONSTRUCTION



Boiler sections are made of cast iron for strength and long life. It's not uncommon for Weil-McLain cast iron boilers to last 35 years or more.

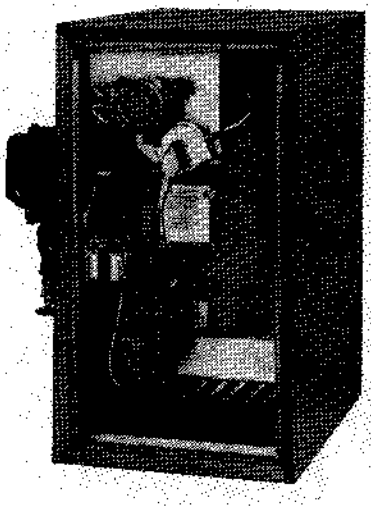
The integral baffles in the vertical flue passages increase flue gas velocity for greater heat transfer and improved efficiency.

A special high-temperature sealant between boiler sections assures a gastight assembly and consistently high efficiency. The flexible sealant allows for expansion and contraction, is impervious to heat and moisture, and will last the life of the boiler. A flexible elastomer sealing ring in each port opening assures a permanent, watertight seal.

STEEL BASE

The cast iron sections are mounted on a heavy steel base. The inner sides are insulated to protect the base from flame radiation and to retain heat in the combustion area for greater efficiency.

HOT SURFACE IGNITION



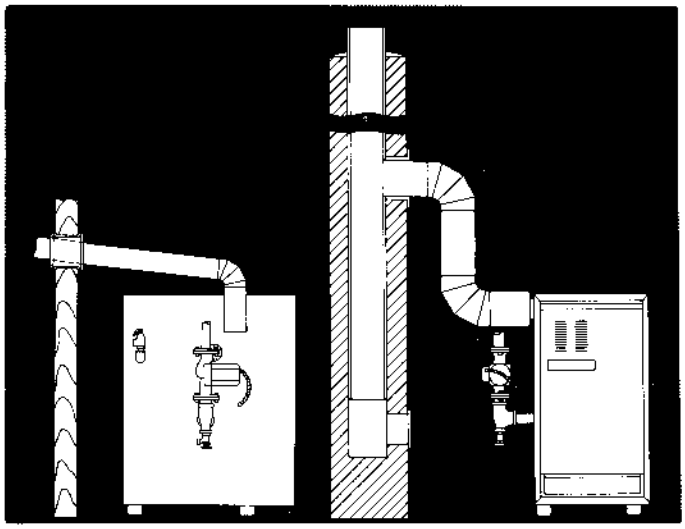
The HE features a hot surface ignition system—no pilot required.

When the thermostat calls for heat, the circulator and blower start. After the pressure switch proves safe airflow, the ignition control energizes the ignitor. After 45-second warm-up, the step-opening gas valve opens to the low-fire position and the ignitor lights the main burners. Flame is proven through flame rectification and the gas valve switches to the high-fire position.

When the thermostat is satisfied, burners, blower, and circulator stop. If boiler water temperature reaches the high-limit setting, the burners and blower stop, but the circulator runs as long as there is a call for heat. Burners and blower recycle as necessary.

The hot surface ignition system provides 100% non-recycling shutoff in the event of ignition failure. It is design certified by A.G.A. and all components are U.L.-Listed.

VENTING



Direct Venting Chimney Venting

The HE boiler may be vented directly through an outside wall or through the roof using standard 3-inch single-wall galvanized vent pipe. This feature is particularly valuable for new homes and apartments.

In addition, the boiler may be vented into a chimney inside the building, with or without other gas appliances, using single-wall galvanized vent pipe.

For extended runs through cold areas—or when venting into a chimney on an outside wall—Type 304 or 316 stainless steel vent pipe must be used. When venting into an outside chimney, the stainless steel vent pipe must run through the entire length of the chimney.

TYPE HE
HIGH-EFFICIENCY GAS BOILER

WEIL-McLAIN

RATINGS

DOE

Water Boiler Number	A.G.A. Input BTU/Hr.	DOE Heating Capacity BTU/Hr.†	Net I-B-R Ratings-Water BTU/Hr.*	DOE Seasonal Efficiency Percent (AFUE)	Chimney Size**
▲ HE-3	67,000	55,000	48,000	82.4	4" x 20'
▲ HE-4	100,000	82,000	71,000	82.3	5" x 20'
▲ HE-5	133,000	109,000	95,000	82.2	5" x 20'
▲ HE-6	167,000	137,000	119,000	82.2	5" x 20'

▲ Add "P-" to designator for boiler with Fill-Trol system (Example: P-HE-3).

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

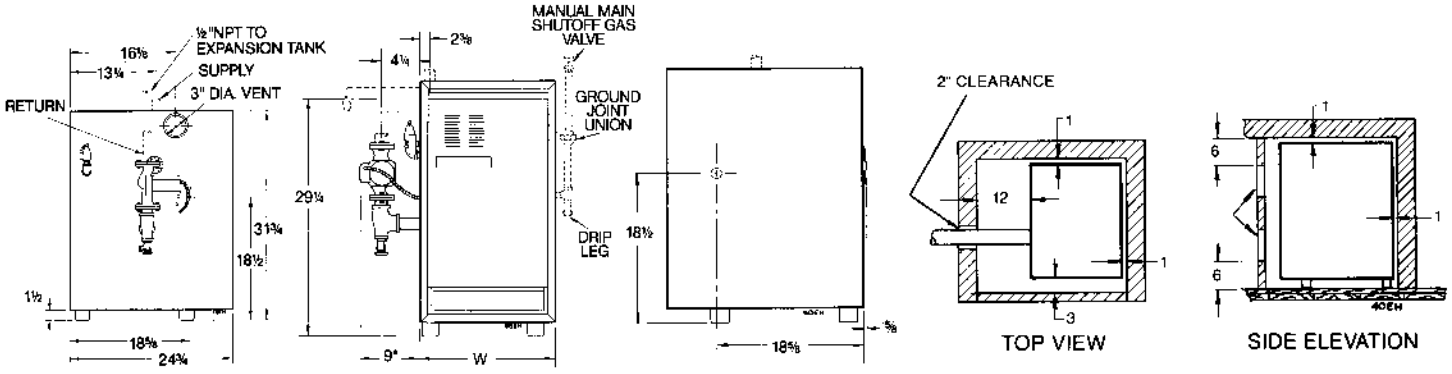
* Net I-B-R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pick-up. Ratings are based on a piping and pick-up allowance of 1.15. An additional allowance should be made for unusual piping and pick-up loads.

** In special cases where surrounding conditions permit, chimney height may be reduced to 10 feet. HE boiler may also be vented directly outside using 3-inch-diameter galvanized vent pipe.

NOTE: HE boilers for residential radiant panel systems, converted gravity heating systems, or other low-water temperature applications should be installed with by-pass piping equal to the supply and return size, with balancing valves to avoid excessive flue gas condensation due to lower operating water temperatures.

NOTE: HE boilers not available for millivolt systems. A.G.A. design certified for installation on combustible flooring. Tested for 50 PSI working pressure. Available for natural and propane gas.

DIMENSIONS



*With Fill-Trol tank, add 4¼" (HE-6 only).

Water Boiler Number	Supply (NPT)	Return (in circulator)	Boiler Width W	Natural Gas Connection Size*	Crate Dimensions (outside measurements-in.)			Approx. Shipping Wt.-Lbs.
					Length	Width	Height	
HE-3	1¼"	1"	11¼"	½"	28	34	35	195
HE-4	1¼"	1"	14¼"	½"	28	34	35	240
HE-5	1¼"	1"	17¼"	½"	28	34	35	280
HE-6	1¼"	1"	20¼"	½"	28	34	35	325

*Gas piping from meter to boiler to be sized according to local utility requirements.

STANDARD EQUIPMENT

Insulated Steel Jacket
Flue Gas Collector Assembly with Close-off
Blower and Motor Assembly
Aluminized Steel Burners
Combination Step-Opening Gas Control Valve (includes main valve, redundant valve, pressure regulator, pilot filter, and manual main shutoff valve) for 24 Volt
Hot Surface Ignition System
Pressure Switch
Electrical Junction Box
Combination Relay Receptacle and 40 VA Transformer
Plug-in Circulator Relay
High-Limit Temperature Control
Circulator—1-Inch, All Sizes
Built-in Air Eliminator
30 PSI ASME Safety Relief Valve
Combination Pressure-Temperature Gauge
Drain Valve
Fill-Trol System (compression tank, fill and check valve, automatic air vent, and fittings—#109 Sizes 3 through 5; #110 Size 6) for P-HE Only—Shipped in Separate Carton

In the interest of continual improvement in products and performance, Weil-McLain reserves the right to change specifications without notice.

WEIL-McLAIN Michigan City, Indiana 46360

A Division of The Marley Company

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Form No. C-669R4(789)

Litho in U.S.A.