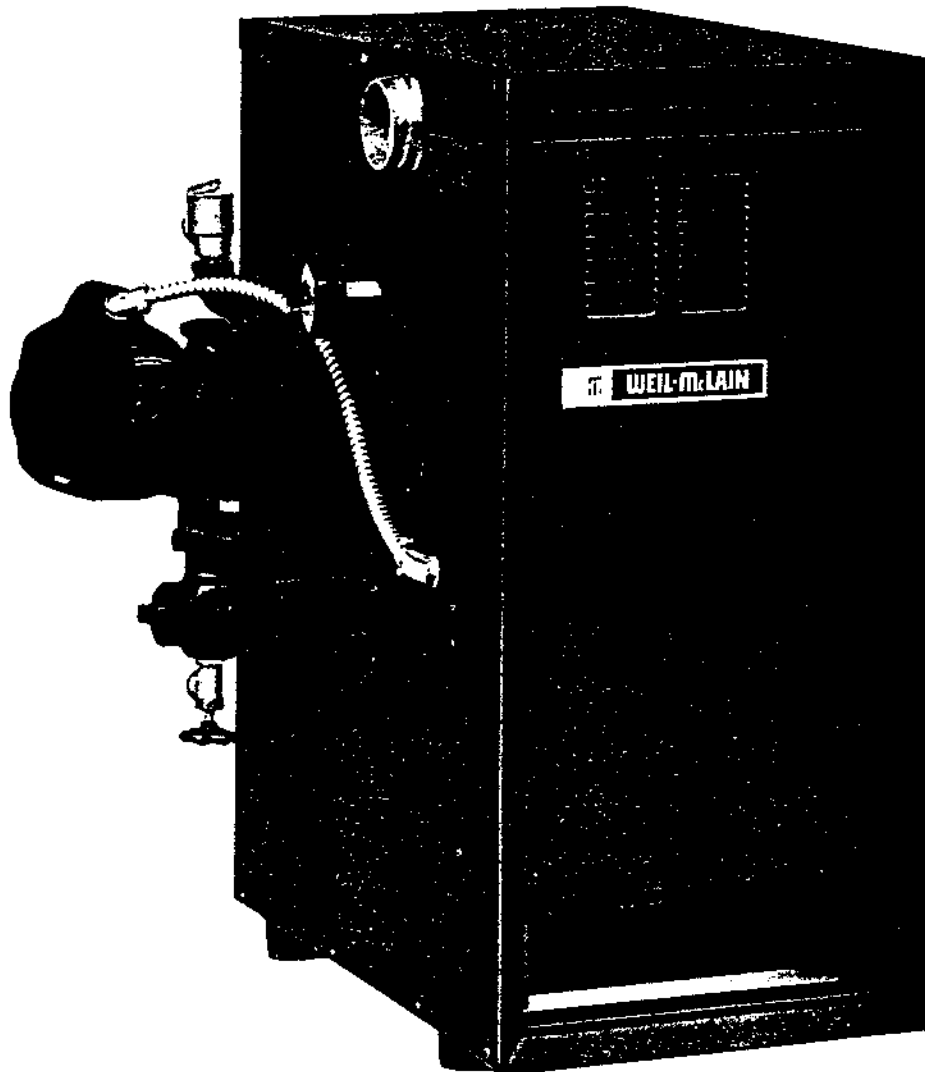


WEIL-McLAIN



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

TYPE HE

SERIES 2

HIGH-EFFICIENCY GAS BOILER

(PATENTS PENDING)

NET LOAD RANGE

HOT WATER:
47,800 to
119,100 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

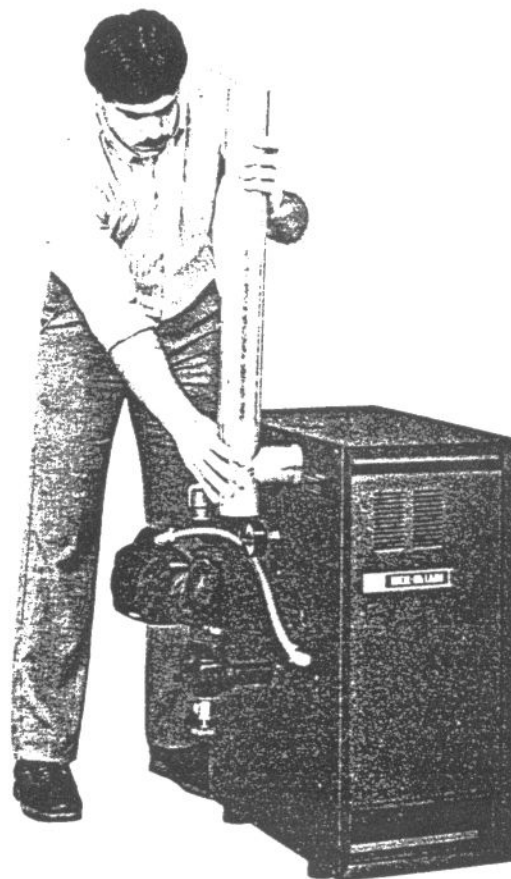
The Weil-McLain HE Boiler represents a notable improvement in cast iron gas boiler design and engineering. The unit incorporates an induced draft combustion system, intermittent electronic ignition, and other energy-saving features to attain over 82 percent seasonal operating efficiency. This compares to a typical installed boiler that may operate at only 60 percent 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 47,800 to 119,100 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, and multiple units may be used to heat commercial and institutional buildings.

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.

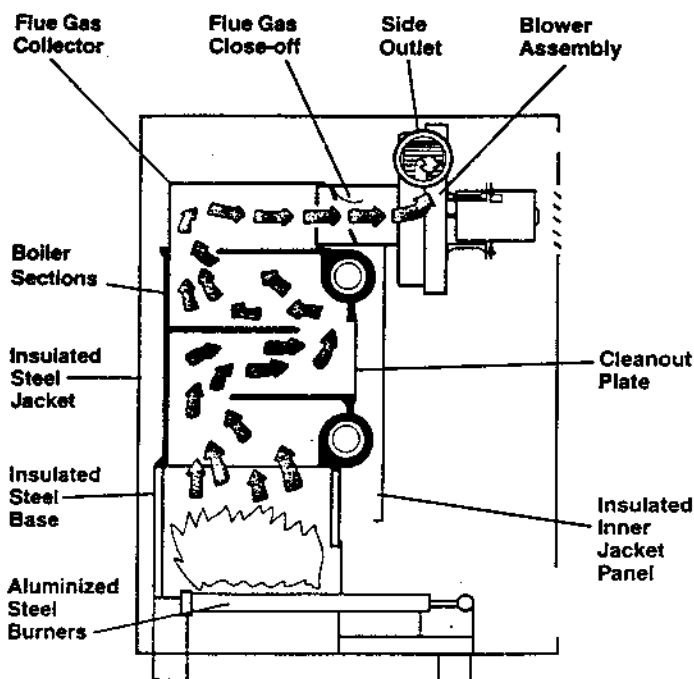
Most importantly, the HE is made by Weil-McLain, the leading name in cast iron boilers for over 100 years.

DESIGN FEATURES



- 1 HIGH-OPERATING EFFICIENCY** saves energy. HE Boiler operates at 82 percent seasonal efficiency. Can save 15 percent 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 an existing chimney.
- 4 INTERMITTENT ELECTRONIC IGNITION SYSTEM** reduces gas consumption since the pilot is on only when heat is required.
- 5 COMPACT DESIGN** saves valuable living space. Boiler is only 32 inches high, 25 inches deep. May be installed in a closet or under a kitchen counter. Power venting eliminates the need for a draft hood.
- 6 EASY SERVICING.** Accessible controls...simplified wiring...front cleanout plates...vertical flueways.
- 7 INDUSTRY APPROVED.** Design certified by the American Gas Association for natural 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 U.S. Department of Energy. Ratings approved by The Hydronics Institute.
- 8 FACTORY-TESTED.** Each boiler is test-fired before shipping to assure safe, reliable operation. Factory assembly of all parts saves installation time and cost.
- 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

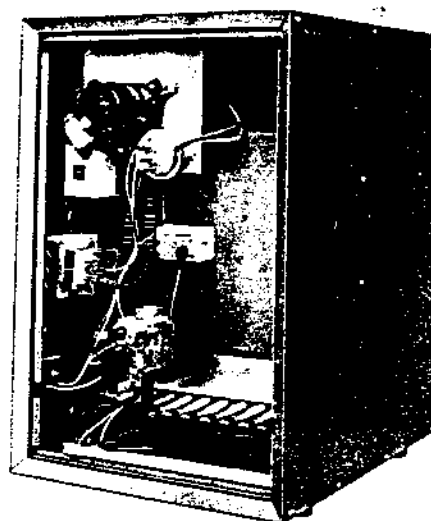


The induced draft combustion system increases flue gas velocity through the boiler sections, resulting in rapid heat transfer to the circulating water for higher efficiency and lower fuel consumption.

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

The flexible 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.

DEPENDABLE OPERATION



When the thermostat calls for heat, the circulator and blower fan start. After the pressure switch proves air flow, the pre-purge timer is energized; following 30-second pre-purge, an electric spark ignites the pilot. When pilot flame is proven, the main gas valve opens to ignite the main burners.

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

VENTING

CAST IRON CONSTRUCTION

Boiler sections are made of cast iron for extra 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.

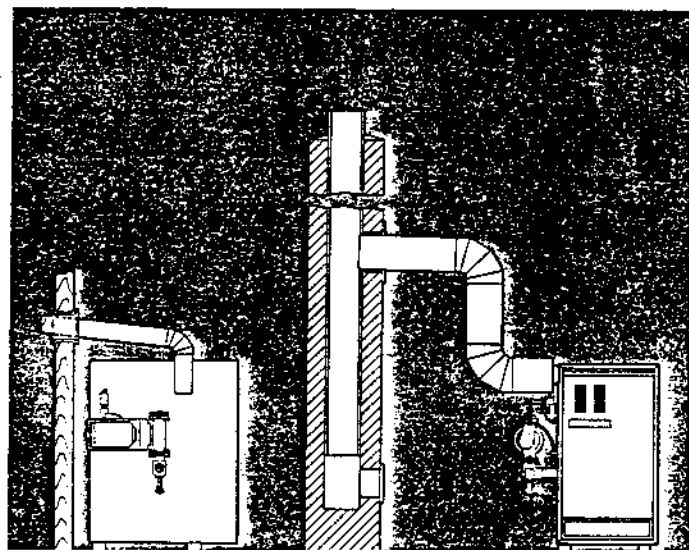
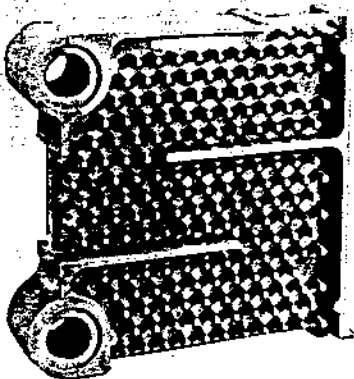


Figure 1

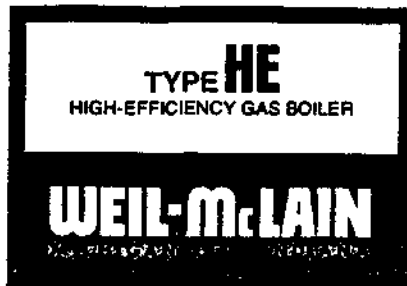
Figure 2

The HE Boiler may be vented directly through an outside wall (Figure 1) or through the roof using standard 3-inch galvanized vent pipe. This feature is particularly valuable for new homes and apartments.

In addition, the boiler may be vented into an inside chimney (Figure 2) with or without other gas appliances, again using standard vent pipe.

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.



RATINGS



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 (AFUE)	Chimney Size**
▲ HE-3	67,000	55,000	47,800	82.4	4" I.D. x 20'
▲ HE-4	100,000	82,000	71,300	82.3	5" I.D. x 20'
▲ HE-5	133,000	109,000	94,800	82.2	5" I.D. x 20'
▲ HE-6	167,000	137,000	119,100	82.2	5" I.D. 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.

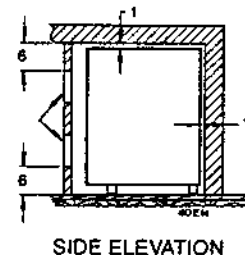
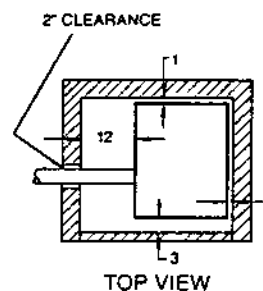
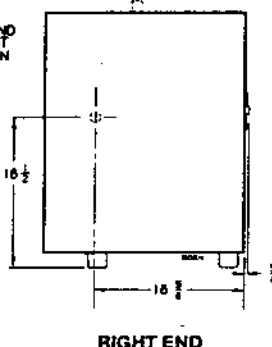
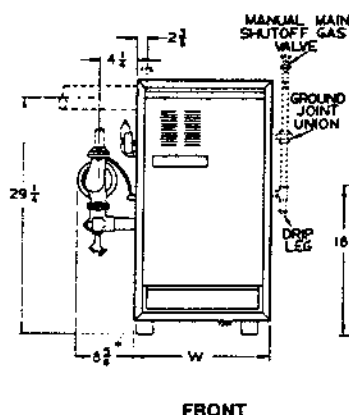
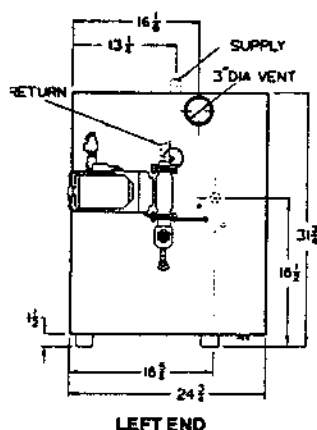
** Net I-B-R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pick-up. Ratings are based on a piping and pick-up allowance of 1.15. An additional allowance should be made for unusual piping and pick-up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

*** 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" dia. 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 propane gas or millivolt systems. A.G.A. design certified for installation on combustible flooring. Tested for 50 P.S.I. working pressure.

DIMENSIONS



MINIMUM CLEARANCE FOR CLOSET INSTALLATION

*With Fill-Trol tank, add 4 1/4" (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	1 1/4"	1"	11 1/4"	1/2"	28	34	35	205
HE-4	1 1/4"	1"	14 1/4"	1/2"	28	34	35	250
HE-5	1 1/4"	1"	17 1/4"	1/2"	28	34	35	295
HE-6	1 1/4"	1"	20 1/4"	1/2"	28	34	35	340

* 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 Gas Control Valve (Includes main valve, redundant valve, pressure regulator, pilot filter, and manual main shutoff valve) for 24 Volt
Intermittent Electronic Ignition Pilot System
Pressure Switch
30-Second Pre-purge Timer
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 P.S.I. 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

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

WEIL-McLAIN

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