

80 Commercial Boiler Weil-McLain

Gas, Oil & Gas/Oil
Water or Steam
MBH: 346-1,674
Combustion Eff.: 85%



- ▶ **Weil-McLain captured seal design**
- ▶ **For Light Oil, Gas and Dual Fuel Combustion**
- ▶ **Packaged, Assembled Block or Knock-down**
- ▶ **Available for Water and Steam Heating Systems**
- ▶ **Available as Forced or Chimney draft venting**



 **WEIL-McLAIN**
www.weil-mclain.com

MADE IN THE
USA

Presenting

... the Weil-McLain Model 80 – commercial boiler-burner units for light oil, gas or gas/light oil firing, available with high-capacity tankless heaters, with the features installers have asked for – Outstanding performance...innovative design...easier to install and service...top or back venting...just a few of the advantages that make the Model 80 boiler the industry's best value. And best of all, the Model 80 boiler is made by Weil-McLain, America's leading name in cast iron boilers for over a century.



The Model 80 is available packaged or knockdown, for water or steam, with or without burner. Burners are ordered and shipped separately – to give you maximum flexibility.

Factory assembled available

In addition to individual sections, the Model 80 boiler is also available with factory assembled sections. Burner plate, flue collector and flue collar are also assembled. Individual sections as well as the assembled unit are hydrostatically tested before shipping.

Lifting cables are attached to the block so the assembled boiler can be lifted by crane or hoist. Steel skids on the bottom of the boiler permit moving the unit with pipe rollers.

The Model 80 boiler is also available as a factory fire-tested package unit. Consult a Weil-McLain representative for details.



Wide selection of burners

Burners for the Model 80 are designed and engineered to match the firing characteristics of the boiler. Major brands of advance-design burners are available for firing light oil, gas, or combination gas-light oil, including Beckett, Carlin, Riello, Gordon-Piatt, Power Flame, and Webster. All burners are flame-retention type, ensuring optimum control of the fuel and air mixture for outstanding operating performance and maximum efficiency.

Model 80 ratings are certified by I=B=R when used with burners listed on page 4.

All burners are certified by Underwriters Laboratories, and can be furnished with optional controls to meet all insurance specifications and state and local code requirements.

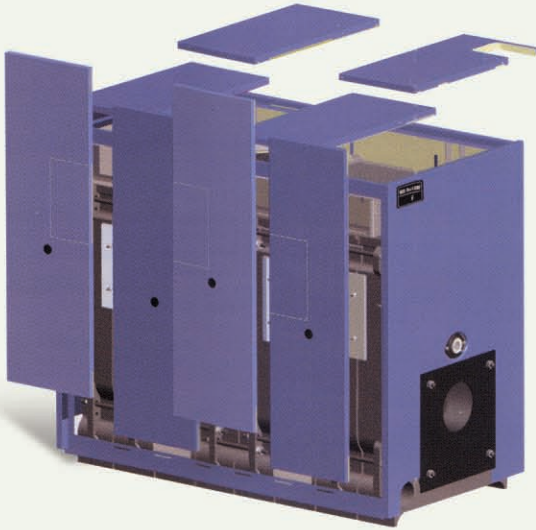
Refer to the Weil-McLain burner specification sheets for complete details or consult a Weil-McLain representative.

Unique, easy-access jacket for – no tools needed to remove panels

This is the product you've been asking for – a boiler with a sturdy jacket that is quick and simple to assemble.

The Model 80's unique jacket design does that and more.

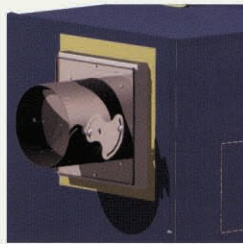
- Jacket support brackets slide onto section tie rods and secure with 5/8" nuts.
- Jacket assembly requires only 10 screws for smaller models and 16 screws for larger models.
- Jacket side panels require no screws – just slide onto upper support rail and into lower support channel.
- Jacket side panels are easy to handle – never wider than 24 inches.
- Jacket top panels just drop into place, secured in position by support rails and adjacent panels.
- Jacket trim gives a clean, finished look to the jacket corners.



Rear or top flue

Model 80 boilers are available with either rear flue or top flue. Save valuable floor space with the top flue option.

And the flexible design of the Model 80 allows simple field conversion of the flue location using a flue conversion kit.



Rear flue (standard)

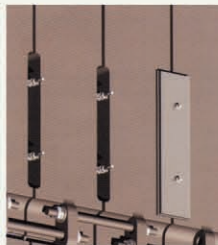


Top flue (optional)

Easy inspection and cleaning

The Model 80 boiler can be inspected by lifting off a jacket side panel and removing a cleanout plate.

To clean the boiler, simply lift off a left side jacket panel and remove the cleanout plates. Replace the plates and jacket panel and continue down the boiler.



Steel flue collar

The Model 80 flue collar is made from heavy-gauge galvanized steel, designed and constructed for long and reliable life.

For maximum flexibility, the flue collar can be installed on either the top or rear of the boiler. (Specify location when ordering)



Hydro-wall design

The Model 80 boiler has a water-backed combustion area with water circulating completely around the firebox. The crown sheet, sidewalls, and heat pins on the flue passages enlarge prime heating surface for maximum operating efficiency.

In addition, Hydro-Wall design permits lower height, reduces heat loss through the bottom of the boiler, and allows installation on any floor.

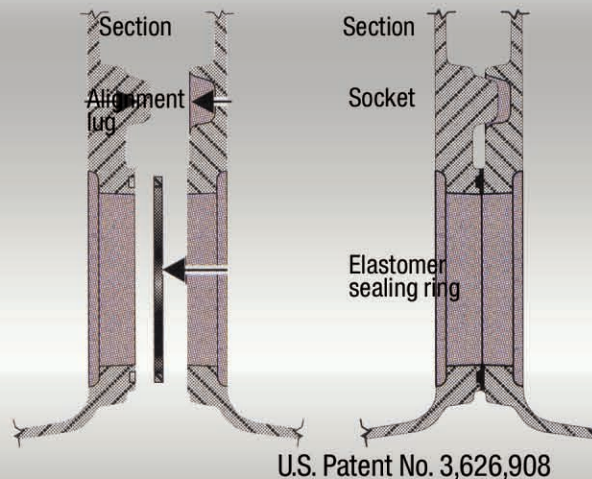
The cast iron sections are not face-ground; the tough outer skin is retained to protect against corrosion. Sealing rope between sections assures the gas-tight seal required for forced draft firing.



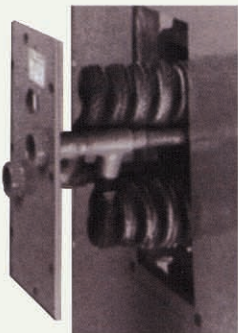
W-M captured seal

Boiler sections want room to move as they heat and cool. Modern elastomer seals provide the ultimate freedom for the cast iron to flex (unlike rigid metal push nipples), preventing leaks caused by expansion contraction.

The precision-machined port grooves secure the seals in place and protect them from contaminants in the water.



Multiple tankless heaters

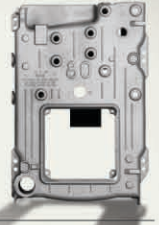


Model 80 tankless heaters (Number 78-24) have a continuous draw rating (40o to 140oF, with 200oF boiler water) of 6.5 GPM per heater. Replace intermediate sections with tankless heater sections to provide up to 4 tankless heaters, depending on boiler size. See page 4 for a complete listing for each boiler size. Multiple heaters are another feature of the Model 80 flexibility, allowing (1) Increased domestic water capacity; (2) Multiple domestic water supply temperatures; (3) Use of a tankless heater for snow melting.

80 Output 278-1348 MBH (8-40 HP)

- Top or Rear outlet flexibility
- Easy access jacket

Oil Gas
 Combustion 85% 82%
 Thermal 83% 80%



Ratings

Boiler Model	I=B=R			I=B=R Net Rating									
	Oil Input GPH	Gas Input MBH	Gross Output MBH	Boiler H.P.	Steam MBH	Steam Sq. Ft.	Water MBH	Flue Outlet Dia.	Net Firebox Volume Cu/Ft	Stack Gas Volume CFM	Positive Pressure in firebox	Water Boiler Content Gallons	Operating Weight Pounds
380	2.4	346	278	8.3	208	867	242	8	2.61	139	0.28	37.5	1170
480	3.4	491	396	11.8	297	1238	344	8	3.97	198	0.28	49	1411
580	4.45	639	515	15.4	386	1608	448	8	5.33	259	0.28	60.5	1752
680	5.5	787	634	18.9	476	1983	551	8	6.69	320	0.27	72	2093
780	6.5	935	753	22.5	565	2354	655	10	8.05	378	0.27	83.5	2434
880	7.5	1082	872	26	654	2725	758	10	9.41	436	0.27	95	2774
980	8.5	1230	991	29.6	743	3096	862	10	10.77	494	0.27	106.5	3115
1080	9.6	1378	1110	33.2	833	3471	965	10	12.13	558	0.26	118	3456
1180	10.6	1526	1229	36.7	922	3842	1069	10	13.49	616	0.26	129.5	3697
1280	11.6	1674	1348	40.3	1018	4242	1172	12	14.85	675	0.26	141	4038

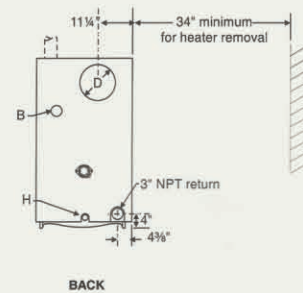
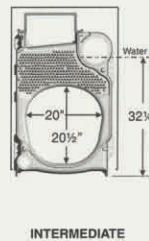
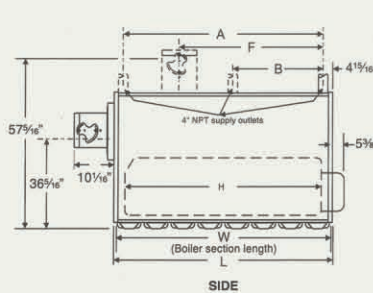
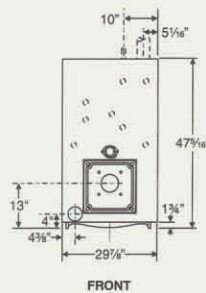
Notes

- Burner input based on maximum of 2,000 feet altitude. For higher altitudes consult local Weil-McLain representative.
- NO.2 fuel oil Commercial Standard Spec. CS75-56. Heat value of oil-140,000 Btu/Gal.
- Consult Weil-McLain Burner Specifications and Data Sheet for gas pressures required. Gross I=B=R ratings have been determined under the I=B=R provision forced draft boiler-burner units.

- 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 pickup. Water ratings are based on a piping and pickup allowance of 1.15. Steam ratings are based on the following allowances: 380 thru 1180 - 1.333; 1280 - 1.321. An additional allowance should be made for gravity hot water systems or for unusual piping and pickup loads. Consult local Weil-McLain representative.
- Stack gas volume at outlet temperature.
- With 0.10" W.C. positive pressure at flue collar.

Dimensions

Boiler Model	Supply Tappings Qty - Size		Return Tappings Qty - Size		Dimensions (Inches) - Reference Drawings						
	Water	Steam	Water	Steam	A	B	D	F	H	L	W
380	2 - 4"	2 - 4"	2 - 3"	2 - 3"	13-1/8	-	8	12-7/16	13-1/2	21-5/8	20-3/8
480	2 - 4"	2 - 4"	2 - 3"	2 - 3"	20-1/8	-	8	13-5/8	20-1/2	28-5/8	27-3/8
580	2 - 4"	2 - 4"	2 - 3"	2 - 3"	27-1/8	-	8	13-5/8	27-1/2	35-5/8	34-3/8
680	2 - 4"	2 - 4"	2 - 3"	2 - 3"	34-1/8	-	8	13-5/8	34-1/2	42-5/8	41-3/8
780	2 - 4"	2 - 4"	2 - 3"	2 - 3"	41-1/8	-	10	27-5/8	41-1/2	49-5/8	48-3/8
880	2 - 4"	2 - 4"	2 - 3"	2 - 3"	48-1/8	-	10	27-5/8	48-1/2	56-5/8	55-3/8
980	2 - 4"	2 - 4"	2 - 3"	2 - 3"	55-1/8	-	10	41-5/8	55-1/2	63-5/8	62-3/8
1080	2 - 4"	3 - 4"	2 - 3"	2 - 3"	62-1/8	27-9/16	10	41-5/8	62-1/2	70-5/8	69-3/8
1180	2 - 4"	3 - 4"	2 - 3"	2 - 3"	69-1/8	34-9/16	10	55-5/8	69-1/2	77-5/8	76-3/8
1280	2 - 4"	3 - 4"	2 - 3"	2 - 3"	76-1/8	34-9/16	12	55-5/8	76-1/2	84-5/8	83-3/8



Standard Equipment

All Boilers

- Cast iron sections
- Insulated steel jacket
- Flame retention burner (except H-80)
- Burner mounting plate with refractory (except H-80)
- Aluminized steel flue collector assembly
- Steel flue collar and breeching damper
- Observation ports on front and rear sections
- Refractory blanket and target wall in combustion area
- Side cleanout plates
- Flue brush

Water Boilers

- 30 PSIG ASME safety relief valve (sections tested for 80 PSIG maximum working pressure)
- Combination high limit/low limit control
- Combination pressure/temperature gauge
- Built-in air eliminator

Steam Boilers

- 15 PSIG ASME safety valve (side outlet)
- Low limit and high limit pressure controls
- Steam pressure gauge
- Gauge glass, gauge cocks and gauge guards

Optional Equipment

- Low water cut-offs (probe or float type)
- Tankless heaters
- Burner mounting plate (for H-80 boilers)
- Factory-assembled sections
- Fire-tested packaged boiler (with low water cut-off)



www.weil-mclain.com