

**78  
Boiler-Burner  
Units**

**For Light Oil, Gas  
and Gas-Light Oil**

**RATINGS**

**DIMENSIONS**



**Hot Water or Steam  
10 sizes:  
Water  
242,000 to  
1,193,000 BTU/Hr.  
Steam  
871 to 4,329  
Sq. Ft.**

**REPAIR PARTS**

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***Product Features:***

**Installation Flexibility**

Available in individual sections... with factory-assembled sections... or as fire-tested packaged units.

**Fuel Flexibility**

Available with all leading brands of power burners for light, oil, gas, or combination gas-light oil.

**High Efficiency**

Combustion efficiency exceeds requirements of ASHRAE 90.1.

**Pressurized For Forced Draft Venting**

Requires only a 3-foot vent above the roof... or use natural or balanced draft for chimney venting.

**Compact Design**

Saves valuable space... boiler is only 49 / inches high, 28 / inches wide.

**Hydro-Wall Design**

Water circulates completely around the combustion area.

**Faster Section Assembly**

With modern elastomer sealing rings, rope seal and short draw rods.

**Large Steaming Area**

Assures rapid generation of dry steam.

**Multiple Tankless Heaters**

Up to 4 heaters can be installed on the left side of the two largest boilers.

**Aluminized Steel Flue Collector**

Comes in 2 modules on larger boilers for easier assembly.

**Simplified Piping**

Reduces installation time... largest steam boilers require only three risers.

**5-Year Homeowner Protection Plan:**

**Optional** plan covers boiler parts, supplied by Weil-McLain, and labor for all eligible repairs. Available through participating installers.

# RATINGS

## 78 Boiler





















Boiler Unit Number Steam or Water	I-B-R Burner Capacity <sup>4</sup>		Gross I-B-R Output MBH <sup>8,7</sup>	Net I-B-R Ratings			Boiler HP	Net Firebox Volume Cu. Ft.	Stack Gas Volume CFM <sup>10</sup>	Draft Loss Thru Boiler H <sub>2</sub> O <sup>11</sup>	Approx. Shipping Wt. (Lbs.) Package Boiler w/out Burner	Boiler Water Content Gals. (water boiler)	I-B-R Vent Dia. - Inches		
	Light Oil GPH <sup>5</sup>	Gas MBH <sup>6,7</sup>		Steam Sq. Ft.	Steam MBH <sup>7</sup>	Water MBH <sup>7</sup>							Forced Draft	Natural or Balanced Draft <sup>12</sup>	
														Round	Rectangular
<b>1-378-2F3</b>	2.40	346	278	871	209	242	8.3	2.61	139	.12	1355	37.5	6	8	8 x 12
<b>1-478-2F3</b>	3.40	494	400	1250	300	348	11.9	3.97	198	.12	1615	49.0	7	10	8 x 12
<b>1-578-2F3</b>	4.45	641	521	1629	391	453	15.6	5.33	259	.11	1875	60.5	8	10	12 x 12
<b>1-678-2F3</b>	5.50	789	643	2008	482	559	19.2	6.69	320	.11	2130	72.0	8	11	12 x 16
<b>1-778-2F3</b>	6.50	937	764	2388	573	664	22.8	8.05	378	.11	2390	83.5	9	12	12 x 16
<b>1-878-2F3</b>	7.50	1084	886	2771	665	770	26.4	9.41	436	.10	2650	95.0	10	15	12 x 16
<b>1-978-2F3</b>	8.50	1232	1007	3146	755	876	30.1	10.77	494	.10	2910	106.5	10	15	16 x 16
<b>1-1078-2F3</b>	9.60	1379	1129	3529	847	982	33.7	12.13	558	.10	3165	118.0	10	15	16 x 16
<b>1-1178-2F3</b>	10.60	1527	1250	3908	938	1087	37.3	13.49	616	.09	3425	129.5	10	15	16 x 16
<b>1-1278-2F3</b>	11.60	1674	1372	4329	1039	1193	41.0	14.85	675	.09	3680	141.0	12	15	20 x 16

1. Substitute "BL" for light oil, "BG" for gas, "BGL" for gas-light oil, or "H" for boiler only for use with approved burners. Add prefix "A" to designator for factory-assembled 78 (example ABL-478). Substitute "P" for "B" for fire-tested package unit (example PL-478).
2. Substitute "S" for steam, "W" for water.
3. For T-Intermediate section(s) and tankless heater(s) add suffix "(number required) TIH"; for T-Intermediate section(s) with cover plate(s) only add suffix "(number required) TIP".
4. Burner input based on maximum of 2,000 ft. altitude - for higher altitudes consult Weil-McLain representative.
5. No. 2 Fuel oil - Commercial Standard Spec. CS75-56. Heat value of oil - 140,000 BTU/G.
6. Consult Burner Specification Sheets for gas pressure required.
7. MBH refers to thousands of BTU per hour.
8. Gross I-B-R ratings have been determined under the I-B-R provision governing forced draft boiler-burner units.
9. 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: 378 through 1178 - 1.333; 1278 - 1.321. An additional allowance should be made for gravity hot water systems or for unusual piping and pickup loads. Consult Weil-McLain representative.
10. Stack gas volume at outlet temperature.
11. For natural draft: Draft overfire must be added to obtain draft required at flue collar. For forced draft: Add .10" W.C. for overfire pressure.
12. Minimum chimney height 15 feet.

**NOTE:** Water boilers available upon special request at 80 PSI working pressure.

# DIMENSIONS

## 78 Boiler

Click Icon to see the drawing		Boiler No.	Supply Tappings No. & Size		Return Tappings No. & Size Steam & Water
Steam	Water		Steam	Water	
		<b>378</b>	2 - 4"	2 - 4"	2 - 3"
		<b>478</b>	2 - 4"	2 - 4"	2 - 3"
		<b>578</b>	2 - 4"	2 - 4"	2 - 3"
		<b>678</b>	2 - 4"	2 - 4"	2 - 3"
		<b>778</b>	2 - 4"	2 - 4"	2 - 3"
		<b>878</b>	2 - 4"	2 - 4"	2 - 3"
		<b>978</b>	2 - 4"	2 - 4"	2 - 3"
		<b>1078</b>	3 - 4"	2 - 4"	2 - 3"
		<b>1178</b>	3 - 4"	2 - 4"	2 - 3"
		<b>1278</b>	3 - 4"	2 - 4"	2 - 3"

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