

Commercial Immersion and Surface Mounted Electric Water Heater



Photo is of
M-II-50-kW-3SF

The Immersion and Surface Mounted Electric Models Feature:

- **Surface Mounted Thermostat Step Control (modulation)**—Can be accomplished by variable setting on thermostats (each element has an individual thermostat and high limit).
- **Immersion Thermostats**—Immersion type for accurate temperature control from up to 180°F (82°C) with manual reset high limit control.
- **3" (76mm) Non-CFC foam insulation**—Covers the sides and top of tank, reducing the amount of heat loss. This results in less energy consumption, improved operation efficiencies and jacket rigidity.
- **Factory Installed Hydrojet® Sediment Reduction System**—Cold water inlet sediment reducing device helps prevent sediment build up in the tank.
- **Vitraglas® Lining**—Bradford White tanks are lined with an exclusively engineered enamel formula that provides superior tank protection from the highly corrosive effects of hot water. This formula (Vitraglas®) is fused to the steel surface by firing at a temperature of over 1600°F (871°C).
- **Water Connections**—1½" NPT factory installed true dielectric fittings extend water heater life and eases installation.
- **Elements**—Screw in style. Surface mounted thermostat models have elements made of nickel chromium wire embedded in magnesium oxide, sheathed in copper and electroplated to minimize degradation of the anode. Incoloy sheathed elements are optional (Incoloy elements are standard for all 600 volt models). Immersion thermostat models have low watt density incoloy sheathed elements standard which resists burnout caused by dry fire or lime buildup.
- **Two Magnesium Anode Rods**—Provide added protection against corrosion for long trouble free service.
- **Hand Hole Cleanout**—Allows inspection of tank interior and facilitates the removal of sediment deposits.
- **ASME Construction Available.**
- **NSF Construction Available.**
- **Low Restriction Brass Drain Valve**—Durable tamper proof design.
- **T&P Relief Valve**—Installed.
- **Completely Pre-wired**—With pressure lug terminal block eliminating need for splicing or taping of wires.
- **Voltages Available**—208v, 240v, 277v, 380v, 415v, 480v and 600v.



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,682,666; 7,634,976; 5,660,165; 5,954,492; 6,056,542; 6,935,280; 5,372,185; 5,485,879; 5,574,822; 7,971,560; 7,992,526; 6,684,821; 6,442,178; 7,334,419; 7,866,168; 7,270,087; 7,007,748; 5,596,952; 6,142,216; 7,699,026; 5,341,770; 7,337,517; 7,665,211; 7,665,210; 7,063,132; 7,063,133; 7,559,293; 7,900,589; 5,943,984; 8,082,888; 5,988,117; 7,621,238; 7,650,859; 5,761,379; 7,409,925; 5,277,171; 8,146,772; 7,458,341; 2,262,174. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 2,314,845; 2,504,824; 2,108,186; 2,143,031; 2,409,271; 2,548,958; 2,112,515; 2,476,685; 2,239,007; 2,092,105; 2,107,012. Vitraglas® and Hydrojet® are registered trademarks of Bradford White® Corporation.

Commercial Electric Water Heater

Immersion and Surface Mounted Models

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed

Model Number	Capacity		A Height	B Jacket Dia.	C Height to T&P Conn.	D Floor to Hot Water Outlet	E Floor to Cold Water Inlet	F Floor to Top of Control Box	Approx. Shipping Weight lbs.	
	U.S. Gal.	Imp. Gal.	in.	in.	in.	in.	in.	in.	Std.	ASME
M-II-50(A)-kW-3SF	50	42	47 ³ / ₄	24	41	49 ¹ / ₄	6 ³ / ₄	46 ¹ / ₂	270	302
M-II-80(A)-kW-3SF	80	67	60 ¹ / ₄	26	52 ¹ / ₂	61 ³ / ₄	6 ³ / ₄	46 ¹ / ₂	335	378
M-II-120(A)-kW-3SF	119	100	64 ¹ / ₂	30 ¹ / ₄	55	66	6 ³ / ₄	50 ¹ / ₄	430	485

Model Number	Capacity		A Height	B Jacket Dia.	C Height to T&P Conn.	D Floor to Hot Water Outlet	E Floor to Cold Water Inlet	F Floor to Top of Control Box	Approx. Shipping Weight kg.	
	Liters		mm.	mm.	mm.	mm.	mm.	mm.	Std.	ASME
M-II-50(A)-kW-3SF	189		1213	610	1041	1251	178	1181	122	137
M-II-80(A)-kW-3SF	303		1530	660	1334	1568	178	1181	152	171
M-II-120(A)-kW-3SF	450		1638	768	1397	1676	178	1276	195	220

Model numbers shown are for Surface Mount thermostats.

For Immersion thermostat change suffix "SF" to "CF".

Voltage and phase must be specified when ordering.

Example: M-II-50-12-3SF, 240 Volt, 3 phase.

(A) ASME Construction available.

For ASME construction add "A" to the model number.

Example: M-II-50A-12-3SF.

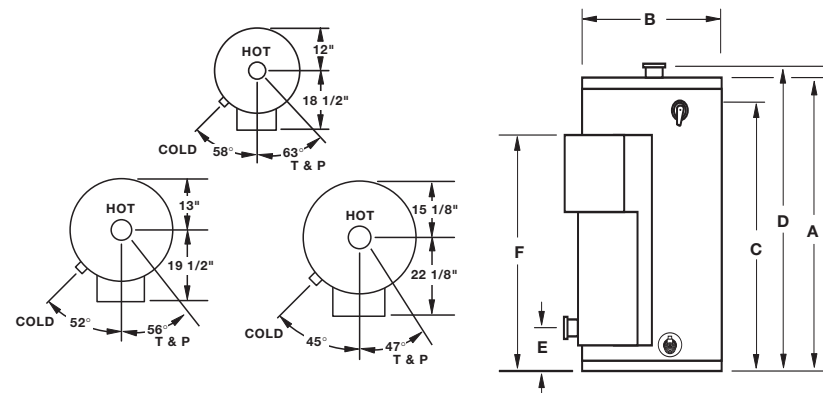
Number of Elements (Fused Models)*

Input kW	208V Phase			240V Phase			277V Phase			380V Phase			415V Phase			480V Phase			600V Phase		
	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3
6	3(2)	3	3(2)	3	3	3	3	3	3(2)	3	3	3	3	3	3(2)	3	3	3	3	3	3
9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
12	3	3	3(2)	3	3	3	3	3	3	3(2)	3	3	3	3	3	3	3	3	3	3	3
13.5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
24	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4
27	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
30	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
36	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
45	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
54	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Full Load Current Amperes (Fused Models)*

Input kW	208V Phase			240V Phase			277V Phase			380V Phase			415V Phase			480V Phase			600V Phase		
	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3
6	28.8	16.6	25.0	14.4	21.6	10.0	9.0	12.5	7.2	5.8											
9	43.2	25.0	37.2	21.6	32.4	14.0	13.0	18.7	10.8	8.7											
12	57.6	33.3	50.0	28.9	43.3	19.0	17.0	25.0	14.4	11.5											
13.5	64.9	37.5	56.2	32.5	48.7	21.0	19.0	28.1	16.2	13.0											
15	72.1	41.6	62.5	36.1	54.1	23.0	21.0	31.2	18.0	14.4											
18	86.5	50.0	72.0	43.4	64.0	28.0	25.0	37.5	21.6	17.3											
24	115.4	66.7	100.0	57.8	86.6	37.0	34.0	50.0	28.9	23.1											
27	129.8	75.0	112.5	65.0	97.4	41.0	38.0	56.2	32.5	26.0											
30	144.2	83.3	125.0	72.2	108.3	46.0	42.0	62.5	36.1	28.9											
36	173.0	100.0	150.0	86.7	129.9	55.0	50.0	75.0	43.3	34.6											
45	216.3	125.0	187.5	108.3	162.4	69.0	63.0	93.7	54.1	43.3											
54	259.6	150.0	225.0	130.0	194.9	83.0	75.0	112.5	65.0	52.0											

Units with amperage draw of 48 amps or more require factory installed internal fusing. *If the number of elements on non-fused models is different, it is located in parentheses (), following the amp draw.



kW Input	Recovery GPH Temperature Rise °F													
	40	50	60	70	80	90	100	120	140					
6	62	50	41	35	31	28	25	21	18					
9	93	74	62	53	47	42	37	31	27					
12	124	99	83	71	62	55	50	41	35					
13.5	140	112	93	80	70	62	56	47	40					
15	155	124	103	89	78	69	62	52	44					
18	186	149	124	106	93	83	74	62	53					
24	248	199	164	142	124	110	99	83	71					
27	279	223	186	160	140	124	112	93	80					
30	310	248	207	177	155	138	124	103	89					
36	372	298	248	213	186	165	149	124	106					
45	465	372	310	266	233	207	186	155	133					
54	558	447	372	319	279	248	223	186	160					

Optional surface thermostats ranging from 80°F to 140°F are available.

Sample Specification

The water heater shall be a Bradford White model with a rated storage capacity of not less than _____ gallons (_____ liters), a minimum kW input of _____ kW (_____ BTU/Hr.), a minimum recovery of _____ GPH (_____ LPH). The tank shall be Vitraglas® lined and have a bolted hand hole cleanout. The tank shall have _____ magnesium anode rods installed in separate tank head couplings. The heater shall have 3" Non-CFC foam insulation, and come equipped with an ASME rated T&P relief valve, a cold water inlet Hydrojet® Sediment Reduction System. It shall be design certified by ETL for 180°F (82°C) application, either with or without a separate storage tank, and comply with state and local codes and ordinances.

General

All electric water heaters are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). All models are design certified by ETL, for up to 180°F (82°C) application as an Automatic Storage Heater, and an Automatic Circulating Tank Heater. As an Automatic Storage Heater, all models are complete, self-contained water heating systems. It needs no separate storage tank, pump, wiring or elaborate piping network. When equipped with a mixing valve, it will supply 180°F (82°C) sanitizing and lower temperature general purpose hot water simultaneously. These models can be used either as a single unit or in multiples connected in series or parallel (recommended). **Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.**



Ambler, PA

For U.S. and Canada field service, contact your professional installer or local Bradford White sales representative.

Sales 800-523-2931 • Fax 215-641-1670 / Technical Support 800-334-3393 • Fax 269-795-1089 • Warranty 800-531-2111 • Fax 269-795-1089

International: Telephone 215-641-9400 • Telefax 215-641-9750 / www.bradfordwhite.com

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