

## Commercial Electric Brute Horizontal and Vertical Square



**VERTICAL  
SQUARE  
MODELS  
200 GALS.  
TO 2500 GALS.**



**HORIZONTAL SQUARE MODELS  
150 GALS. TO 2500 GALS.**



**3 Year Limited Tank Warranties.**

For more information on warranty, please visit [www.bradfordwhite.com](http://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: 5,954,492; 5,761,379; 5,943,984; 5,081,696; 5,988,117; 6,142,216; 5,199,385; 5,574,822; 5,372,185; 5,485,879; 5,277,171; (B1)5,341,770; 5,660,165; 5,596,952; 5,682,666; 4,904,428; 5,023,031; 5,000,893; 4,669,448; 4,829,983; 4,808,356; 5,115,767; 5,092,519; 5,052,346; 4,416,222; 4,628,184; 4,861,968; 4,672,919; Re. 34,534; 7,270,087 B2. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 1,272,914; 1,280,043; 1,289,832; 2,045,862; 2,112,515; 2,108,186; 2,107,012; 2,092,105; 2,409,271.

# Commercial Electric Brute Water Heaters

## Standard Equipment Features:

**Energy-Saving Performance** - A heavy blanket of high-density fiberglass insulation is used to meet the demanding ASHRAE 90.1b 1992 standard for minimizing heat loss. This requirement, allowing a maximum 4 watts per square foot of tank surface energy loss, offers big savings and operating efficiency.

**Magnetic Contactors with Immersion Thermostats** - 120 volt control circuit with built in transformer. Elements are thermostatically controlled in 54KW (max) increments..

**Low Watt Density Incoloy Elements** - Incoloy elements are used by Bradford White because of their many superior characteristics to copper-sheathed elements in rigorous water heating applications. This tough alloy successfully resists the effects of prolonged high operating temperatures, hard water, acids, corrosion, and thermal shock. Their nominally higher initial cost is more than offset by much longer life expectancies and reduced service and replacement labor costs. Incoloy elements are designed to "burn in air" to prevent failures caused by water void.

**Internal Fusing** - All elements and circuits are fused in 48 amp. increments, providing complete electrical protection. Cartridge type fuses are rated at 200,000 ampere interrupting capacity.

**Glass-Lined Tank** - Vitreous glass is applied to the inside surface of the steel tank and fired to 1600°F. (All models are constructed in accordance with the ASME code and approved for 125 PSI working pressure.)

**Built-in Safety Drain Pan** - All models feature a built-in, sealed drain pan system...complete with a 3/4" drain connection. This assists in protecting against water damage from tank or component leakage. Not available on round models.

**Magnesium Tank Saver** - provides anodic protection against corrosion of the tank due to electrolysis.

**Galvanized Jacket** - The heavy 16-gauge steel jacket is galvanized on both sides and beautifully finished in durable acrylic enamel. This combines attractive appearance with maximum protection.

**Full-Length Hinged Door with Key Lock** - Quality requires full-length hinged doors for ease of inspection and maintenance. Key Door Lock provides additional safety and security at no extra charge.

**Temperature and Pressure Relief Valve** - Factory provided ASME rated relief valve protects against excessive temperature and/or pressure buildup within the tank.

**Terminal Block Connections** - Easy and safe wiring connections are made possible by factory installed terminal blocks.

**180°F Temperature Operation** - Every Electric Brute Heater is approved for 180°F operation for sanitizing and other high-temperature requirements.

**Hand Hole Cleanout** - Provides easy access to the heater interior for inspection and cleaning.

**UL Listed** - All models are listed by Underwriters Laboratories, Inc. as commercial electric water heaters. This assures competent design and proper testing.

**Three-Year Limited Warranty** - Provides warranty protection against tank failure resulting from defects in material and workmanship.

**Channel iron skid base** - Available for 250 gallons and larger.

## Optional Equipment Features:

**Low Water Cut Off** - Prevents energizing of the heater when not filled with water or upon low water condition.

**Pilot Lights** - Monitor on/off cycle for each contactor.

**Manual Limiting Switches** - With indicating lights - permits manual limitation of heating input by switching off current to each contactor.

**Solid State Modulating Control (Electronic Sequencer)** - Modulates power input and balances load to demand. Contactors are staged automatically and sequentially to equalize element usage. Unit reprograms to off position on power failure. (Available only for 36 KW or higher)

**Alarm Bell** - Warns of various control failures.

**Shunt Trip Disconnect†** - Provides maximum protection by interrupting all power to the system in the event of a control sensed malfunction or overcurrent.

**Low or High Pressure Switch** - Turns off control circuit when water pressure drops below a set minimum, or above a set maximum.

**Time Clock†** - To control off/on cycles of the heater as programmed by the owner or electric utility requirements. (7 day or 24 hour).

**Safety Door Interlock** - Prevents opening of access door while heater is energized.

**Temperature and Pressure Gauges** - Jacket mounted for convenient viewing.

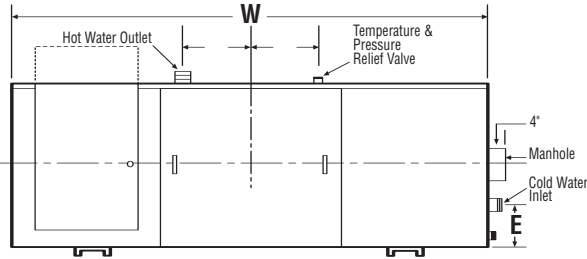
**Man Hole** - Provides means to easily remove sediment from the heater; optional on 250 gallon and larger.

**Working pressure** - 150 PSI ASME construction.

†Separate mounting - Field Installed.

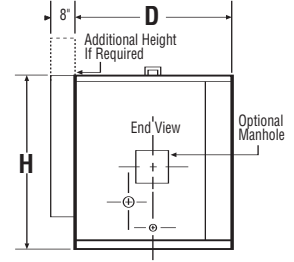
# Commercial Electric Brute Water Heaters

## Horizontal Models

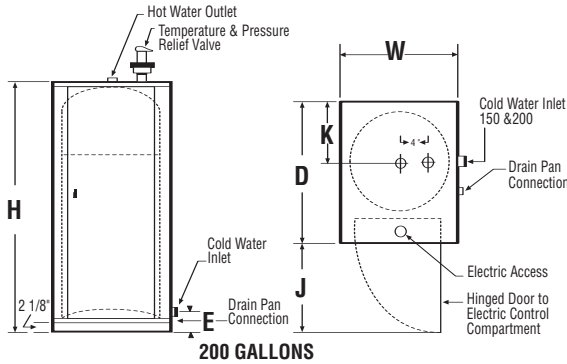


### 200-2,500 GALLONS

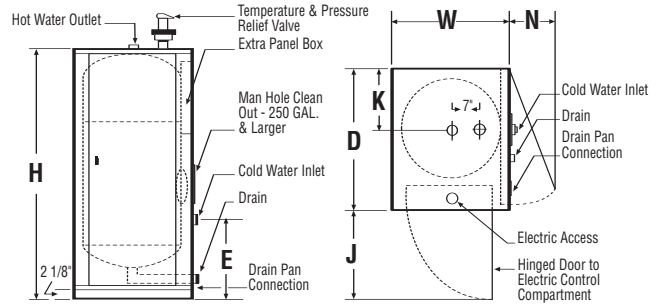
Extra panel box may be necessary for higher than 72 kW. Consult Factory



## Vertical Models



200 GALLONS



250-2,500 GALLONS

EXTRA PANEL BOX-(250-1,000 GAL. only) on 72kW and above on 208V and 144kW and above on 480V.

## Horizontal Square Electric Models

DIMENSIONS IN INCHES

ELECTRIC

Model Number	Gal. Cap.	Max. kW Load	W	D	H	E	Water Conn. Inlet	Water Conn. Outlet	Approx. Shipping Weight (lbs)
H-200-(kW)	200	180	84 <sup>1</sup> / <sub>2</sub>	34 <sup>1</sup> / <sub>4</sub>	37	12	2	2	1000
H-250-(kW)	250	225	90 <sup>1</sup> / <sub>4</sub>	36 <sup>1</sup> / <sub>4</sub>	39	12	2	2	1280
H-300-(kW)	300	270	78 <sup>3</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>4</sub>	45 <sup>1</sup> / <sub>2</sub>	14 <sup>3</sup> / <sub>4</sub>	2	2	1430
H-400-(kW)	400	360	102 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>4</sub>	45 <sup>1</sup> / <sub>2</sub>	14 <sup>3</sup> / <sub>4</sub>	2	2	2030
H-500-(kW)	500	450	90 <sup>3</sup> / <sub>4</sub>	48 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>2</sub>	15	2	2	2600
H-600-(kW)	600	540	114 <sup>1</sup> / <sub>8</sub>	48 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>2</sub>	15	2 <sup>1</sup> / <sub>2</sub>	2	3150
H-800-(kW)	800	720	124 <sup>1</sup> / <sub>4</sub>	54 <sup>1</sup> / <sub>4</sub>	57 <sup>1</sup> / <sub>2</sub>	12 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2	4300
H-1000-(kW)	1000	900	138 <sup>1</sup> / <sub>4</sub>	54 <sup>1</sup> / <sub>4</sub>	57 <sup>1</sup> / <sub>2</sub>	12 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2	4800
H-1250-(kW)	1250	900	130 <sup>1</sup> / <sub>4</sub>	60 <sup>1</sup> / <sub>4</sub>	63 <sup>1</sup> / <sub>2</sub>	13	3	3	5600
H-1500-(kW)	1500	900	126 <sup>1</sup> / <sub>4</sub>	66 <sup>1</sup> / <sub>4</sub>	72 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	3	3	6200
H-2000-(kW)	2000	900	138 <sup>1</sup> / <sub>4</sub>	72 <sup>1</sup> / <sub>4</sub>	75 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	3	3	8000
H-2500-(kW)	2500	900	144 <sup>1</sup> / <sub>4</sub>	78 <sup>1</sup> / <sub>4</sub>	81 <sup>1</sup> / <sub>2</sub>	13 <sup>3</sup> / <sub>4</sub>	3	3	8600

## Vertical Square Electric Models

DIMENSIONS IN INCHES

ELECTRIC

Model Number	Gal. Cap.	Max. kW Load	W	D	H	E	J	K	N	Water Connections	Approx. Shipping Weight (lbs)
V-200-(kW)	200	180	32	38 <sup>3</sup> / <sub>4</sub>	78	7 <sup>3</sup> / <sub>4</sub>	25 <sup>3</sup> / <sub>4</sub>	17	—	1 <sup>1</sup> / <sub>2</sub>	900
V-250-(kW)	250	225	34	40 <sup>3</sup> / <sub>8</sub>	92	19 <sup>1</sup> / <sub>2</sub>	24	20 <sup>3</sup> / <sub>16</sub>	24	1 <sup>1</sup> / <sub>2</sub>	1050
V-300-(kW)	300	270	40	46 <sup>3</sup> / <sub>8</sub>	80	21	30	23 <sup>3</sup> / <sub>16</sub>	30	2	1150
V-400-(kW)	400	360	46	46 <sup>3</sup> / <sub>8</sub>	80	22 <sup>1</sup> / <sub>2</sub>	30	23 <sup>3</sup> / <sub>16</sub>	30	2	1300
V-500-(kW)	500	450	46	52 <sup>3</sup> / <sub>8</sub>	92	22 <sup>1</sup> / <sub>2</sub>	36	26 <sup>3</sup> / <sub>16</sub>	36	2	1500
V-600-(kW)	600	540	54	60 <sup>3</sup> / <sub>4</sub>	92	24 <sup>1</sup> / <sub>2</sub>	36	26 <sup>3</sup> / <sub>16</sub>	36	2 <sup>1</sup> / <sub>2</sub>	1750
V-800-(kW)	800	720	54	58 <sup>3</sup> / <sub>8</sub>	104	24 <sup>1</sup> / <sub>2</sub>	42	29 <sup>3</sup> / <sub>16</sub>	42	2 <sup>1</sup> / <sub>2</sub>	2000
V-1000-(kW)	1000	900	54	58 <sup>3</sup> / <sub>8</sub>	128	24 <sup>1</sup> / <sub>2</sub>	42	29 <sup>3</sup> / <sub>16</sub>	42	2 <sup>1</sup> / <sub>2</sub>	2300
V-1250-(kW)	1250	900	64 <sup>1</sup> / <sub>2</sub>	64 <sup>1</sup> / <sub>2</sub>	132 <sup>1</sup> / <sub>2</sub>	23 <sup>1</sup> / <sub>4</sub>	48	32 <sup>3</sup> / <sub>16</sub>	48	3	5600
V-1500-(kW)	1500	900	70 <sup>1</sup> / <sub>2</sub>	70 <sup>1</sup> / <sub>2</sub>	128 <sup>1</sup> / <sub>2</sub>	25 <sup>1</sup> / <sub>4</sub>	46	35 <sup>3</sup> / <sub>16</sub>	46	3	6200
V-2000-(kW)	2000	900	76 <sup>1</sup> / <sub>2</sub>	76 <sup>1</sup> / <sub>2</sub>	140 <sup>1</sup> / <sub>2</sub>	27 <sup>1</sup> / <sub>4</sub>	60	38 <sup>3</sup> / <sub>16</sub>	60	3	8000
V-2500-(kW)	2500	900	82 <sup>1</sup> / <sub>2</sub>	82 <sup>1</sup> / <sub>2</sub>	146 <sup>1</sup> / <sub>2</sub>	29	66	41 <sup>3</sup> / <sub>16</sub>	66	3	8600

# Commercial Electric Brute Water Heaters

## Standard kW Input and Amperage - Vertical and Horizontal Square

kW	GPH Recovery 100°F Rise	BTU/Hr. Equivalent	Maximum Number of Elements	kW Size of Element	Contactor Option		Amperage Draw						
					No. of Contactors 208/240 380/415/480	Suggested Control Steps 208/240 380/415/480	Single Phase		Three Phase				
							208V	240V	208V	240V	380V	415V	480V
15	62	51,180	1	15	1/1	—	72	63	42	36	23	21	18
18	74	61,416	1	18	2/1	—	87	75	50	43	28	25	22
30	123	102,360	2	15	2/1	—	144	125	83	72	46	42	36
36	148	122,832	2	18	4/2	4/2	173	150	100	87	55	50	43
45	185	153,540	3	15	3/2	3/2	216	188	125	108	69	63	54
54	221	184,248	3	18	6/2	3/2	260	225	150	130	83	75	65
60	246	204,720	4	15	12/6	4/3	289	250	167	144	91	83	73
72	295	245,664	4	18	8/4	4/4	—	—	200	173	110	100	87
90	369	307,080	5	18	6/3	3/3	—	—	250	216	137	125	108
108	443	368,496	6	18	12/4	4/4	—	—	300	260	165	150	130
120	492	409,440	8	15	8/4	4/4	—	—	333	289	183	167	144
135	554	460,620	9	15	9/6	4/4	—	—	375	325	206	188	162
144	596	491,328	8	18	16/8	4/4	—	—	400	346	219	200	173
162	664	552,744	9	18	18/6	8/6	—	—	450	389	247	225	195
180	738	614,160	10	18	20/10	8/8	—	—	500	433	274	250	217
216	886	736,992	12	18	24/8	8/8	—	—	600	519	329	300	260
234	959	798,408	13	18	26/13	8/8	—	—	650	563	356	325	282
252	1033	859,824	14	18	28/14	8/8	—	—	700	606	383	350	303
270	1107	921,240	15	18	30/10	12/10	—	—	750	649	411	376	325
288	1181	982,656	16	18	32/16	12/12	—	—	800	692	438	401	347
306	1255	1,044,072	17	18	34/17	12/12	—	—	850	736	465	426	368
324	1328	1,105,488	18	18	36/12	12/12	—	—	900	779	493	451	390
342	1402	1,166,904	19	18	38/19	12/12	—	—	949	823	520	476	411
360	1476	1,228,320	20	18	40/20	12/12	—	—	999	866	547	501	433
432	1771	1,473,984	24	18	48/16	16/16	—	—	1200	1040	657	601	520

For kW inputs not shown above consult factory.

### Typical Specifications

WATER HEATER(s) shall be Bradford White Brute Series model number \_\_\_\_\_ with \_\_\_\_\_ gallons storage capacity, rated at \_\_\_\_\_ kilowatts, \_\_\_\_\_ volts, \_\_\_\_\_ phase. Heater to be completely insulated and jacketed for horizontal or vertical installation. The jacket shall be rectangular 16-gauge galvanized steel with acrylic enamel finish. Jacket shall have a full-length hinged access door with key lock. Tank insulation shall be high-density fiberglass sufficient to meet ASHRAE 90.1b current standard of 4 watts per square foot of tank surface maximum energy loss. Key Lock Door provides additional safety and security.

Tank construction shall be of 300 pound test, 125 pound working pressure and be ASME stamped and National Board listed. All tanks are to be lined with vitreous glass, fired at 1,600°F. by a process which provides a molecular interchange of glass and steel. Man hole cleanout shall be standard on 500 through 1500 gallon models.

The Vertical and Horizontal Square heater shall include the following standard features: magnetic contactors with immersion thermostats, internal fusing for control and load circuits, built-in safety drain pan with piping connections, low-watt density Incoloy sheath elements, ASME rated temperature and pressure relief valve, terminal block wiring, 180°F. water temperature approval, UL listing, 3-year limited warranty.

**Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.**



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](http://www.bradfordwhite.com)

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**Built to be the Best™**

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