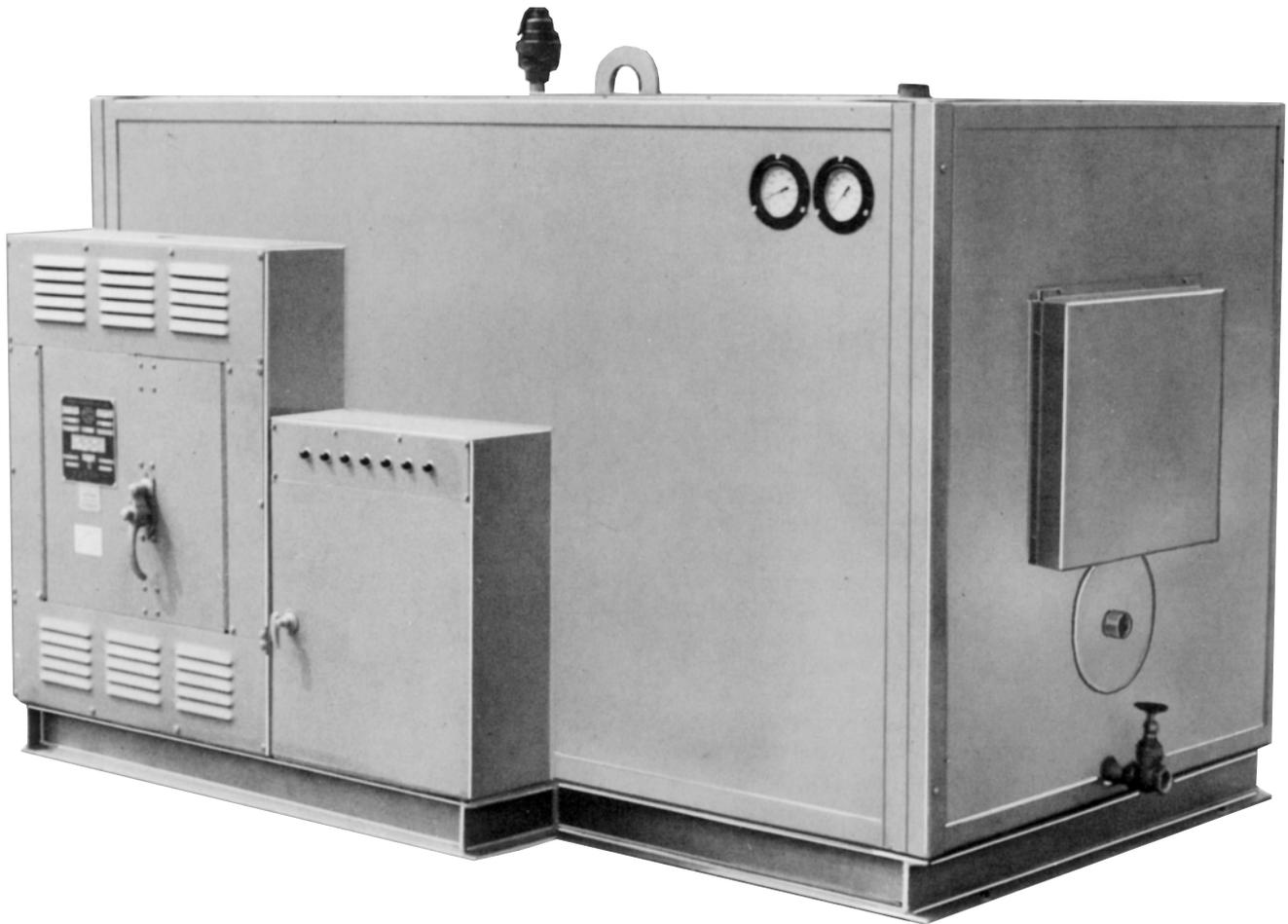


Electric Storage Water Heaters

Commercial/Industrial -- 15 kw and up
125 gallon to 8000 gallon capacity



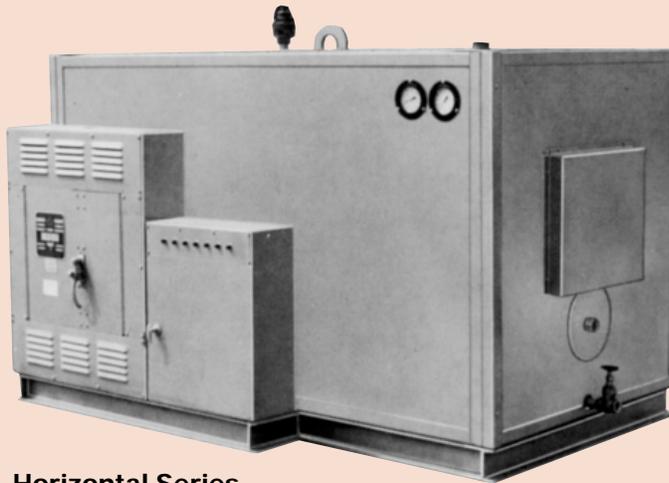
- Preassembled
- Prewired
- Automatic Operation
- Step Controlled by Modulating Sequencer

B **BRYAN BOILERS**



Bryan Electric Storage Water Heaters

Full Range of Capacities — Vertical or Horizontal Styles



Horizontal Series



Vertical Series

The Bryan Electric Storage Water Heaters have been designed to incorporate features found only in first-line quality units. In this way, we can assure customers of a long-life product with a minimum amount of service and maintenance. We start with an all-welded steel pressure vessel, each of which is built in accordance with National Board and A.S.M.E.'s Section IV with a design pressure of 125 psi as a standard minimum requirement. Units with design pressures up to 160 psi are available to meet specific requirements. A manhole is supplied with all tanks to allow for easy inspection and cleaning. The unit is then mounted on a unitary channel iron base to provide both the necessary support and added ease in shipping and handling.

Bryan offers a "full range" of capacities to satisfy most every requirement. We start with the small 125 gallon storage and go from there up to 8000 gallon storage. The recovery capacities offer the same "full range" feature going from 15 kw to 3000 kw in all common voltages.

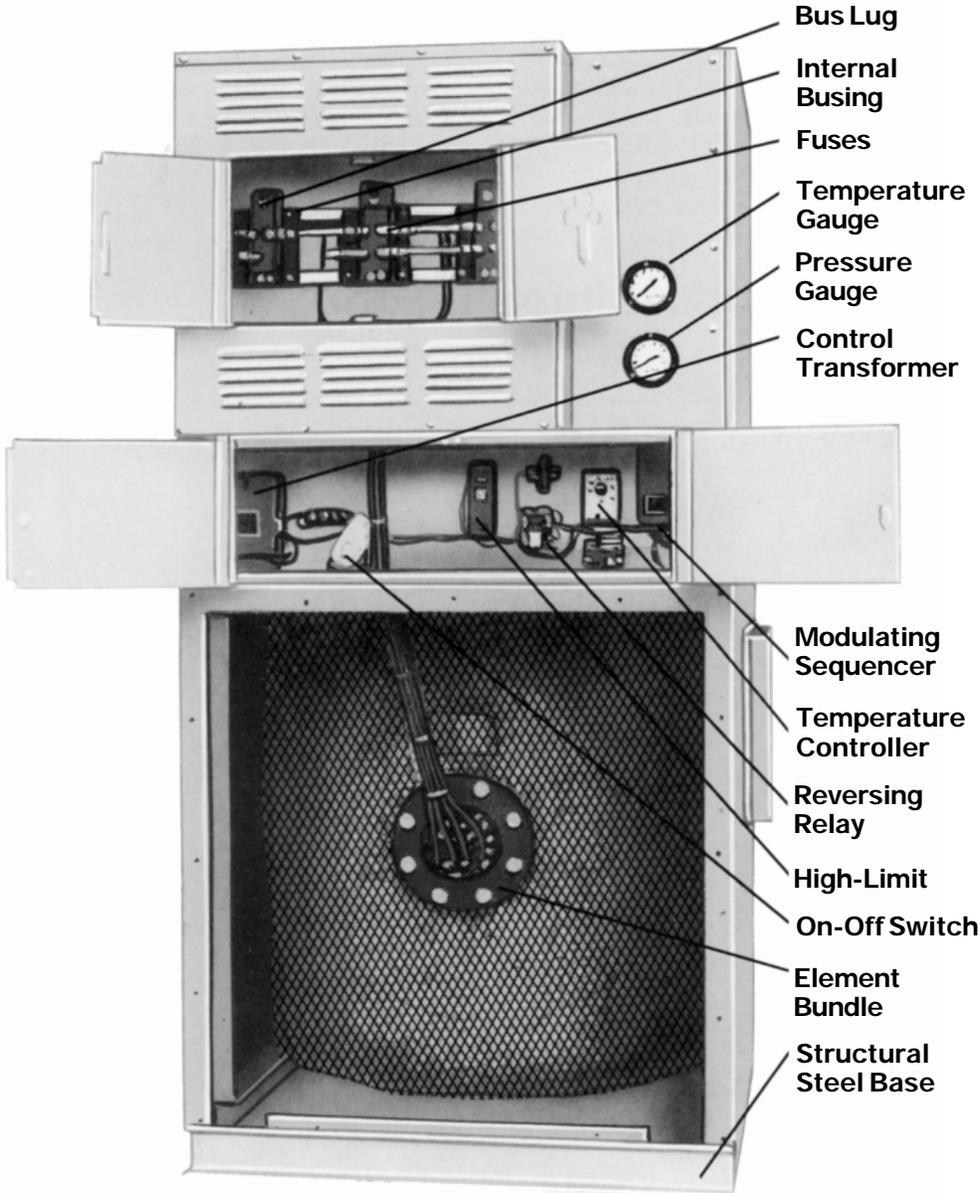
The heart of a Bryan Electric Storage Water Heater is the control center. We start with a temperature sensor, sensing the water temperature and reporting it back to the modulating step controller. The modulator then adjusts the kw input to provide a rate of recovery to coincide with the rate of hot water

consumption. In this way you avoid constant peak power draws by the unit. As a safety factor we provide a high temperature limit control that will interrupt the control circuit and stop power to the elements. To avoid "shock loading" after power interruption, as may be experienced from a complete electric power failure, the modulating sequencer automatically recycles itself to the normal start position before energizing the elements once again.

The main power supply comes in as three or more wires which connect easily to the provided bus lugs. Internal busing is standard. No stone is left unturned. Our engineers insisted on maximum protection, thus "JKS" class fuses are standard on all branch circuits providing 200,000 amp short circuiting capacity offering the utmost in electrical protection.

During the final assembly of our heaters, we insulate the tank with 4" fiberglass insulation. The 16 gauge steel jacket is supported by angle iron reinforced corners to insure both a serviceable and attractive looking enclosure. A hammertone enamel is then applied. Every unit is prewired, completely assembled, and has been thoroughly tested. The heater is shipped as a complete packaged unit requiring only inlet and outlet water connections and electric service connections.

Quality Construction: Standard Features and Options



STANDARD EQUIPMENT ON BRYAN STORAGE WATER HEATER

U.L. listed
 ASME stamping
 Modulating Sequencer over 60 KW
 Pilot Lights (One per step)
 Pressure Gauge
 Temperature Gauge
 Temperature Controller
 High Limit Control
 4" Fiberglass Insulation
 Magnetic Contactors
 Internal Busing
 Bus Lugs
 "JKS" Fuses
 ASME Safety Relief Valve
 Control Transformer
 Power Interruption Relay
 Lift Lug
 Incoloy sheathed elements
 On-off Control Switch
 Low Water Cut-off
 Threaded Inlet and Outlet
 Key operated lock in handle of Power Panel
 125 psi Design Pressure
 Manhole
 16 gauge steel cabinet with reinforced corners and enamel finish
 Completely assembled and tested at factory

PROTECTIVE LININGS

1. **GALVANIZED**-The most common and well-known type of lining is hot-dip zinc. This is available for tanks up to a maximum of 48" in diameter
2. **PHENOLIC**-Our phenolic lining is an epoxy resin to a thickness of 5-8 mils with a Sward scale hardness of 30. This lining is unaffected by alcohol, ethyl, aromatic hydrocarbons, 10% solution of potassium hydroxide and concentrated hydrochloric acid (24 hour exposure).
3. **CEMENT**-Cement lining is available on all tank sizes. The cement is applied to a minimum of 1/2" thick, the mixture bonds itself directly to the metal forming a hard stone-like texture.
4. **PLAIN STEEL**-A plain steel tank has no protective lining.
5. **ANODES**-Magnesium anodes are available and recommended when water conditions warrant anodic protection for longer tank life.

OPTIONAL EQUIPMENT AT EXTRA COST

Tank Circulator
 Magnesium Anodes
 160 psi Design Pressure
 Additional Steps
 Alarms on: High Temperature
 Low Water
 Low Temperature



Bryan Electric Storage Water Heaters

Model Number Designation — Nomenclature

EXAMPLE: 30 kW, 208 Volt, 1 Step, 250 Gallon, 36" Diameter, Vertical, Phenolic lining

[A] First locate the desired number of kilowatts, number of steps and proper voltage in "Recovery and Electrical Information" table. Copy the Model No. including the blanks.

=30 ___ J3T1- _____

[B] Determine the type of lining desired from list at right and fill in the blank following the kilowatts.

=30P ___ J3T1- _____

[C] Turn to the table of "Specifications" and select the desired storage capacity, vessel diameter and position configuration (H=horizontal or V=vertical). Use this information to fill in the blanks. See example.

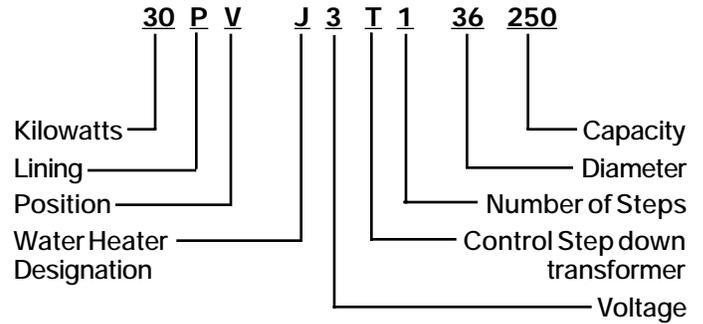
=30PV J3T1-36250

Recovery and Electrical Information

KW	MBH	GPH RECOVERY 100° F RISE	INLET OUTLET	NO. OF STEPS	VOLT	AMP	MODEL NO.
15	51	60	2	1	208	42	15 ___ J3T1- _____
					240	36	15 ___ J2T1- _____
					480	18	15 ___ J4T1- _____
30	103	120	2	1	208	83	30 ___ J3T1- _____
					240	72	30 ___ J2T1- _____
					480	36	30 ___ J4T1- _____
45	154	180	2	2	208	126	45 ___ J3T2- _____
					240	108	45 ___ J2T2- _____
					480	54	45 ___ J4T2- _____
60	205	240	2	2	208	167	60 ___ J3T2- _____
					240	145	60 ___ J2T2- _____
					480	73	60 ___ J4T2- _____
75	256	300	2	3	208	209	75 ___ J3T3- _____
					240	181	75 ___ J2T3- _____
					480	91	75 ___ J4T3- _____
90	307	360	2	3	208	250	90 ___ J3T3- _____
					240	217	90 ___ J2T3- _____
					480	108	90 ___ J4T3- _____
105	358	420	2	4	208	293	105 ___ J3T4- _____
					240	253	105 ___ J2T4- _____
					480	127	105 ___ J4T4- _____
120	409	480	2	4	208	334	120 ___ J3T4- _____
					240	289	120 ___ J2T4- _____
					480	145	120 ___ J4T4- _____
135	460	540	2	5	208	376	135 ___ J3T5- _____
					240	325	135 ___ J2T5- _____
					480	163	135 ___ J4T5- _____
150	511	600	2	5	208	419	150 ___ J3T5- _____
					240	361	150 ___ J2T5- _____
					480	181	150 ___ J4T5- _____
165	564	660	2	6	208	459	165 ___ J3T6- _____
					240	398	165 ___ J2T6- _____
					480	199	165 ___ J4T6- _____
180	615	720	2	6	208	501	180 ___ J3T6- _____
					240	434	180 ___ J2T6- _____
					480	217	180 ___ J4T6- _____

Linings Available:
 B = Black, uncoated
 P = Phenolic
 G = Galvanized (limited to tanks up to a maximum of 48" diameter)
 R = Cement

Voltage code:
 2 = 240/3/60
 3 = 208/3/60
 4 = 480/3/60
 8 = 460/3/60
 5 = 575/3/60



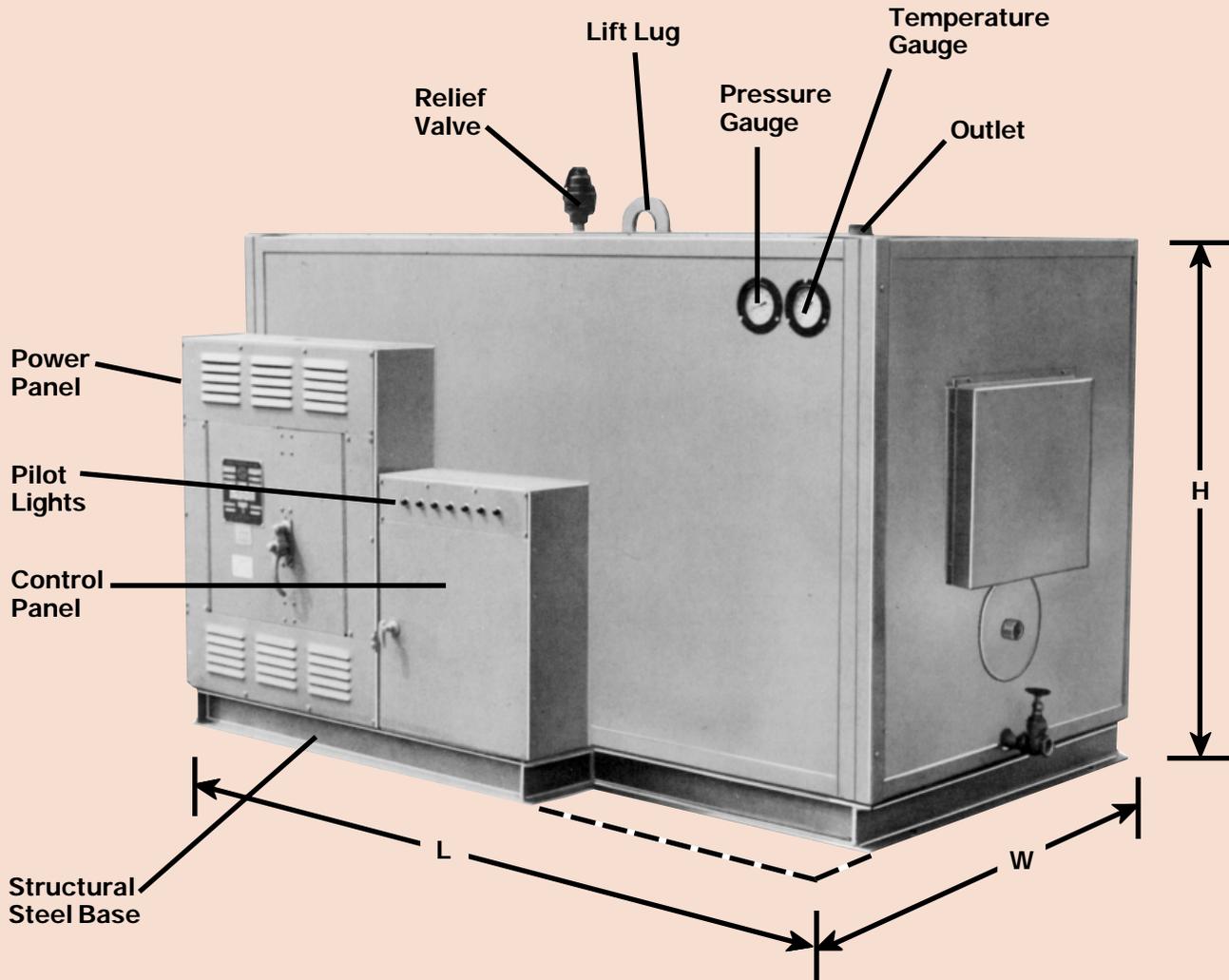
KW	MBH	GPH RECOVERY 100° F RISE	INLET OUTLET	NO. OF STEPS	VOLT	AMP	MODEL NO.
195	665	780	2	7	208	542	195 ___ J3T7- _____
					240	480	195 ___ J2T7- _____
					480	235	195 ___ J4T7- _____
210	715	840	2	7	208	585	210 ___ J3T7- _____
					240	506	210 ___ J2T7- _____
					480	253	210 ___ J4T7- _____
225	768	900	2	8	208	626	225 ___ J3T8- _____
					240	542	225 ___ J2T8- _____
					480	271	225 ___ J4T8- _____
240	818	960	2	8	208	668	240 ___ J3T8- _____
					240	579	240 ___ J2T8- _____
					480	289	240 ___ J4T8- _____
270	921	1080	3	9	208	752	270 ___ J3T9- _____
					240	651	270 ___ J2T9- _____
					480	325	270 ___ J4T9- _____
300	1024	1200	3	10	208	835	300 ___ J3T10- _____
					240	724	300 ___ J2T10- _____
					480	361	300 ___ J4T10- _____
330	1126	1320	3	6	208	917	330 ___ J3T6- _____
					240	795	330 ___ J2T6- _____
					480	397	330 ___ J4T6- _____
360	1228	1440	3	6	208	1000	360 ___ J3T6- _____
					240	867	360 ___ J2T6- _____
					480	434	360 ___ J4T6- _____
390	1331	1560	3	7	480	470	390 ___ J4T7- _____
420	1434	1680	3	7	480	507	420 ___ J4T7- _____
450	1535	1800	3	8	480	543	450 ___ J4T8- _____
480	1638	1920	3	8	480	578	480 ___ J4T8- _____
510	1741	2040	3	9	480	615	510 ___ J4T9- _____
540	1845	2160	3	9	480	651	540 ___ J4T9- _____
570	1947	2280	3	10	480	687	570 ___ J4T10- _____
600	2048	2400	3	10	480	724	600 ___ J4T10- _____
660	2250	2520	3	8	480	796	660 ___ J4T8- _____
720	2450	2880	3	8	480	866	720 ___ J4T8- _____
780	2650	3120	3	9	480	940	780 ___ J4T8- _____
840	2850	3320	3	10	480	1010	840 ___ J4T10- _____



Bryan Electric Storage Water Heaters

Dimensions

Horizontal Series



Specifications

Storage Capacity Gallons	Approximate		Kilowatt Range	Dimensions (inches) **						Model No.
	Weight (lbs) *	Vessel Diameter		Horizontal			Vertical			
				L	H	W	L	H	W	
125	1100	30	15-150	64	46	48	37	64	48	___ HJ ___ T ___ -30125 ___ VJ ___ T ___ -30125
150	1250	30	15-150	72	46	48	37	72	48	___ HJ ___ T ___ -30150 ___ VJ ___ T ___ -30150
200	1550	30	15-240	88	46	48	37	88	48	___ HJ ___ T ___ -30200 ___ VJ ___ T ___ -30200
200	1550	36	15-240	69	52	54	43	69	54	___ HJ ___ T ___ -36200 ___ VJ ___ T ___ -36200
250	1700	30	15-240	106	46	48	37	106	48	___ HJ ___ T ___ -30250 ___ VJ ___ T ___ -30250
250	1700	36	15-240	81	52	54	43	81	54	___ HJ ___ T ___ -36250 ___ VJ ___ T ___ -36250
250	1700	42	15-360	66	58	60	50	66	60	___ HJ ___ T ___ -42250 ___ VJ ___ T ___ -42250
300	2000	36	15-240	93	52	54	43	93	54	___ HJ ___ T ___ -36300 ___ VJ ___ T ___ -36300
300	2000	42	15-360	75	58	60	50	75	60	___ HJ ___ T ___ -42300 ___ VJ ___ T ___ -42300
400	2400	42	60-360	93	58	60	50	93	60	___ HJ ___ T ___ -42400 ___ VJ ___ T ___ -42400
400	2400	48	60-480	76	64	66	55	76	66	___ HJ ___ T ___ -48400 ___ VJ ___ T ___ -48400
500	2700	42	60-360	109	58	60	50	109	60	___ HJ ___ T ___ -42500 ___ VJ ___ T ___ -42500
500	2700	48	60-480	90	64	66	55	90	66	___ HJ ___ T ___ -48500 ___ VJ ___ T ___ -48500
500	270	54	60-600	78	70	72	61	78	72	___ HJ ___ T ___ -54500 ___ VJ ___ T ___ -54500
600	3200	42	60-360	126	58	60	50	126	60	___ HJ ___ T ___ -42600 ___ VJ ___ T ___ -42600
600	3200	48	60-480	102	64	66	55	102	66	___ HJ ___ T ___ -48600 ___ VJ ___ T ___ -48600
600	3200	54	60-600	88	70	72	61	104	72	___ HJ ___ T ___ -54600 ___ VJ ___ T ___ -54600
600	3200	60	60-720	76	76	78	67	76	78	___ HJ ___ T ___ -60600 ___ VJ ___ T ___ -60600
750	3700	48	60-480	122	64	66	55	122	66	___ HJ ___ T ___ -48750 ___ VJ ___ T ___ -48750
750	3700	54	60-600	104	70	72	61	104	72	___ HJ ___ T ___ -54750 ___ VJ ___ T ___ -54750
750	3700	60	60-720	90	76	78	67	90	78	___ HJ ___ T ___ -60750 ___ VJ ___ T ___ -60750
1000	4400	48	60-480	156	64	66	55	156	66	___ HJ ___ T ___ -481000 ___ VJ ___ T ___ -481000
1000	4400	54	60-600	128	70	72	61	128	72	___ HJ ___ T ___ -541000 ___ VJ ___ T ___ -541000
1000	4400	60	60-720	110	76	78	67	110	78	___ HJ ___ T ___ -601000 ___ VJ ___ T ___ -601000
1000	4400	72	60-840	88	88	92	79	88	92	___ HJ ___ T ___ -721000 ___ VJ ___ T ___ -721000

* Add 150 lb. for each additional 120 kw or fraction thereof over 120 kw.

* Add 20% to weight for cement lining.

** Dimensions may vary depending on "KW" installed which governs the size of the power panel.

Note: Dimensions and specifications subject to change without notice. Consult factory for certified dimensions.

Sample Specification

Electric Storage Water Heater

GENERAL — Provide package type Electric Storage Water Heater, Model No. _____, as manufactured by Bryan Steam Corp., Peru, Indiana, a size of _____kw, at _____volts, and storage capacity of _____gallons. The pressure vessel and integral electric panels shall be mounted on a unitary structural steel frame with proper supports. The vessel will be insulated with 4 inches of fiberglass insulation, enclosed in a metal jacket, and painted with hammertone enamel.

PRESSURE VESSEL — The pressure vessel shall be of all-welded steel construction with a _____ lining, designed for a working pressure of _____psi in accordance with ASME Boiler and Pressure Vessel Code and stamped with the appropriate ASME symbol. The vessel shall be supplied with a manhole to provide access for inspection and cleaning.

CONTROLS — A temperature actuated modulating step controller shall be provided with _____ number of steps. The temperature sensor for the step controller shall be located near the outlet. A high temperature limit control and reversing relay shall be provided. All control circuits shall be 120 volt, single phase, 60 Hz to be supplied by a step down transformer of proper size. An indicator light shall be

provided for each step of the step controller. Each unit shall have a panel mounted dial type thermometer, a panel mounted pressure gauge and a ASME safety relief valve.

ELECTRICAL — The entire unit shall bear the Underwriter's Laboratories Label. All work performed at the factory and on the job site shall comply with the National Electrical Code and all other rules and regulations of public administrative authorities having jurisdiction. The main busing at each panel shall be equipped with lugs of proper size of incoming copper cable. Fuses shall be class "J" (silver link, sand filled type). Fuses shall be provided so that all branch circuits are protected.

ELEMENTS — The Water heater shall be equipped with immersion type heating elements mounted in standard 150 lb. A.N.S.I. flanges. Each element shall be mechanically mounted and field replaceable without welding or brazing. Elements shall be 5 kw or 10 kw each, incoloy sheath and have maximum watt density of 75 watts per square inch. Elements shall be rated for voltage specified. Unit shall be preassembled, prewired and tested at the factory.



Bryan Steam Corporation — Since 1916
P.O.Box 27, Peru, Indiana 46970-0027 U.S.A.
Phone: 765-473-6651 • Internet: www.bryanboilers.com
Fax: 765-473-3074 • E-mail: bryanboilers@iquest.net