

Tankless Electric Booster Heater

Available up to 54 KW in Single or Three Phase Voltages

The Hubbell Model JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style dish machines.

Features

■ Heavy Duty Construction

- ✓ Constructed with high grade materials to ensure long operating life
- ✓ Turn-Key package is simple to specify and easy to install and operate
- ✓ Factory wired electrical controls provide trouble-free installation and operation

■ Advanced Design

- ✓ Engineered specifically for use in commercial kitchens
- ✓ Wide selection of sizes to meet the needs of all dishmachine manufacturers
- ✓ Compact wall mount design saves precious floor space
- ✓ Digital display provides clear indication of set point temperature and fault conditions

■ High Efficiency

- ✓ On demand heating provides environmentally friendly low cost operation
- ✓ Instantaneous design essentially eliminates stand-by heat loss and significantly lowers operating costs compared to traditional tank type booster heaters
- ✓ Over 98% efficient and saves over 2300 kW hours per year compared to tank type booster heaters



SAVE ENERGY



SAVE SPACE



SAVE MONEY



Model JTX Tankless
Booster Heater



The Model JTX Tankless is a compact electric tankless booster heater easily installed and operated to provide hot water for sanitizing applications.

- ✓ Dish Machine Booster
- ✓ Hood Washing
- ✓ Pot Washers
- ✓ Point-of-Use Water Heating
- ✓ Three Compartment Sinks



lead-free

Products marked with the Lead-Free logo comply with the Safe Drinking Water Act (SDWA) requirements of a weighted average of less than 0.25% lead content on wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

Tankless Booster Heater For Commercial Kitchen Use

The Hubbell model JTX Tankless electric booster heater is a highly reliable and easily maintained heater designed for operation in your commercial kitchen. The Hubbell JTX Tankless heater is compact, extremely efficient, takes up no floor space, and reduces operating costs. Hubbell's vast experience, meticulous engineering, and advanced technology ensure that you can rely on the model JTX for your sanitizing rinse needs.

The Model JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style dish machines. The Hubbell JTX Tankless Booster Heater is the right choice for your booster heating requirements, as you will be providing your customer with a quality product that is long lasting, trouble-free and energy efficient.

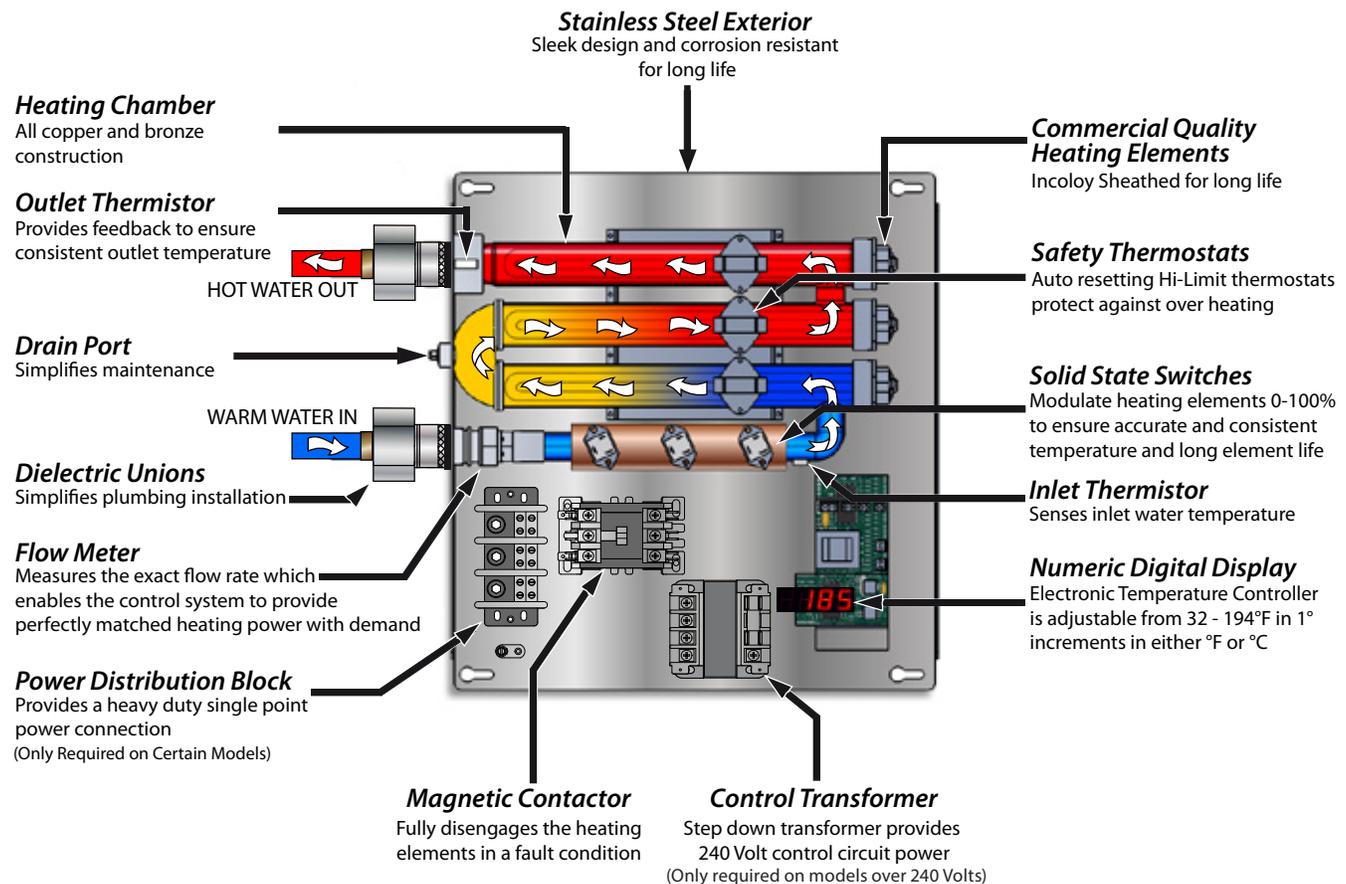
Hubbell Tankless Booster Features

How It Works

The Hubbell Model JTX electric tankless booster heater contains high powered heating elements that heat water only when there is demand from the dishwasher. When hot water is needed, a built in flow sensor measures the exact flow rate and that data combined with temperature readings at the heater's inlet and outlet are processed by the electronic temperature controller. This data is continuously transmitted to the temperature controller, which constantly calculates the precise amount of power (kW) needed to achieve the desired temperature. A zero cross over firing signal is sent to the heater's fast acting triacs in order to modulate the heating elements to the precise level needed to meet demand. The Hubbell tankless booster heater uses only as much power as is needed, while delivering accurate and consistent hot water temperature.

Note: The Hubbell Model JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style dish machines.

Heater Overview - 3 Element Model Shown



Tankless Booster Saves Money

Energy Savings: By heating water more efficiently... over 98% efficient... and essentially eliminating standby heat loss, the typical owner will save over 2300 kW-Hrs per year! Add to that the reduced maintenance costs of the Hubbell tankless booster compared to a tank type booster and the annual savings easily add up to over \$750 per year.

$$2300 \text{ kW-Hrs} \times \$0.16 \text{ per kWh} = \$368.00 \text{ Annual Energy Savings}$$

Space Saving: Free up floor space, improve the look and cleanliness of your kitchen, and improve the longevity of your booster when you mount the Hubbell tankless on the wall.

Tankless Model JTX Standard Specifications

Heating Chamber:	Copper and Bronze	Hi-Limit:	200°F (Fixed)
Capacities:	8 thru 54 kW	Design WP:	150 psi
Orientation:	Wall Mounted	Design TP:	225 psi
Voltages:	208 thru 600 Volt 50/60 Hz	Elements:	Incoloy 800
Phase:	1 Φ and 3 Φ (balanced)	Standby Power:	< 3 Watts
Power Factor:	0.999	Chamber Warranty:	5 Year
Thermal Efficiency:	98% +	Electrical Warranty:	1 Year
Inlet/Outlet Size:		Labor Warranty:	1 Year
JTX:	3/4" Dielectric Union Copper Sweat	Enclosure:	Stainless Steel Brushed Finish
JHX:	1" Dielectric Union Copper Sweat	Approvals:	cULus, UL EPH ANSI/NSF 5
Min/Max Flow:			
JTX:	0.2 GPM Min, 8.0 GPM Max		
JHX:	0.5 GPM Min, 40 GPM Max		
Thermostat Range:	32 -194°F / 0-90°C		

Technical Features

Temperature Controller

- A sophisticated electronic temperature controller with LED digital display provides the user interface. The temperature controller processes all flow and temperature data and calculates the precise amount of power needed to meet demand.

Operator Control Capabilities

✓	Power Limiting:	Allows the operator to reduce the power consumption by any percentage to provide installation and operational flexibility and savings.
✓	Diagnostics:	Display inlet and outlet temperatures, flow rate and error codes to assist in troubleshooting.
✓	Cost Calculator:	Determine the exact cost of operating the heater. Input your cost per kW-Hr and the controller displays total kW-Hrs consumed, total cost of operation, and total hot water usage (shown in gallons or liters).
✓	Temperature Control:	Set the digital display to the desired water temperature in °F or °C. Fully adjustable in 1° increments from 32-194°F (0-90°C). A user adjustable +/- 3° calibration feature provides additional control for superior accuracy.

Full Heater Modulation

- Each heating element is switched on/off using a fast acting solid state triac with zero cross over firing control. This switching schema provides full modulation of each heating element, ensuring that the precise amount of heat is added to meet demand. To improve operating efficiency and component longevity, each triac is mounted to a heat sink located on the incoming supply piping so that heat generated by the triac during the switching process is dissipated into the water.

Proper Power Integrity

- All Hubbell tankless water heaters, including all 3 phase models, are engineered to operate as a balanced load and operate at 0.999 Power Factor. All Hubbell 3 phase models are designed for 3 wire (3 live, 1 ground) and 4 wire power systems and draw equal current across all conductors to maintain the power integrity of the users electrical system. Hubbell does not recommend the use of heaters that operate as an unbalanced load, as is common with staged heaters designed for star systems (3 live, 1 neutral, 1 ground) that require use of the neutral leg. All load switching in Hubbell tankless models is performed as zero cross over, eliminating phase angle firing interference and associated EMI issues.

Full Resource Staging

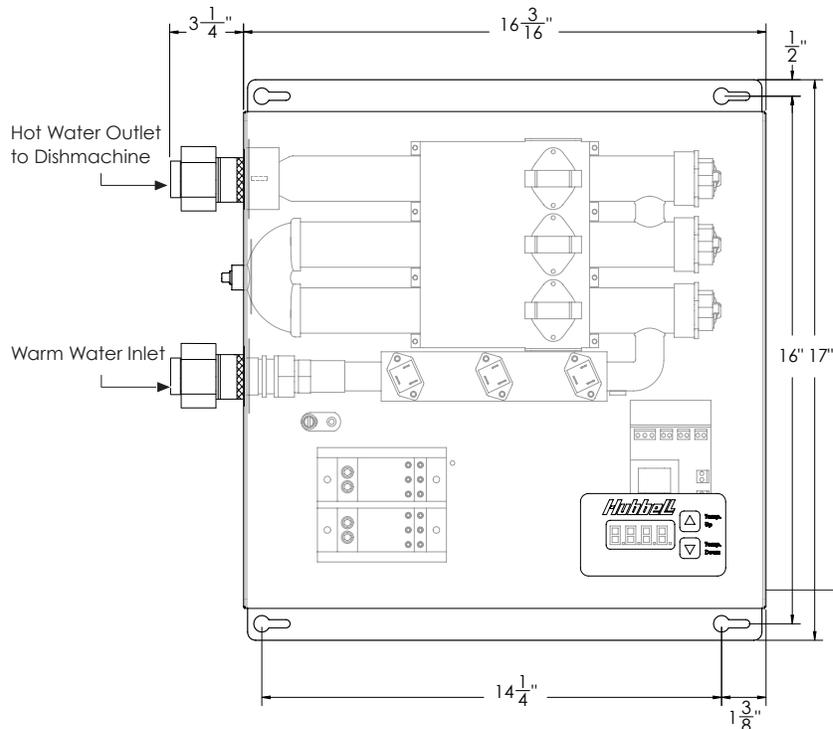
- The Hubbell tankless control schema ensures that usage is equalized across all heating circuits. To achieve this, once the controller has calculated the precise amount of kW required, all circuits are energized in a staggered fashion such that each circuit is proportionally and independently energized and then time staggered between circuits. This Full Resource Staging Schema reduces EMI output, increases component longevity, and provides highly accurate and consistent hot water temperatures. For three phase models, all circuits are fully modulated and synchronized to operate as a balanced load.

Building Management Integration

- **Remote Control:** Ability to remotely enable or inhibit the heating operation of the unit using one of the following two methods:
 1. Customer supplied 24VDC signal is user configured for either Inhibit Mode or Normal Operation Mode.
 2. Customer supplied volt free contact is user configured for either Inhibit Mode or Normal Operation Mode.
- **Priority Control:** An integrated SPDT potential free dry contact (NO/NC 10A @ 240VAC) energizes when the unit is heating and de-energizes when not heating. This feature is useful when it is desirable to give the water heater priority over another electrical load to ensure that both are not operational at the same time.

Outline Dimensions and Model Selection

8-27 KW Models (2 and 3 Element)

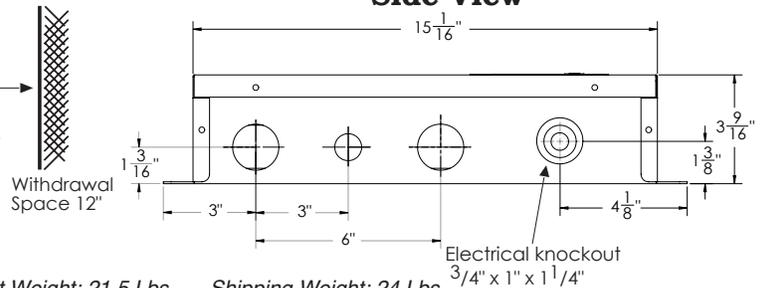


Base Model No.	KW	BTU/Hr Rating	KW Selection					
			3 Phase Voltages				1 Phase Voltages	
			208V	240V	480V	600V	208V	240V
JTX008	8	27,304					✓ (2)	
JTX011	11	37,543	✓ (3)					✓ (2)
JTX012	12	40,956	✓ (3)				✓ (2)	
JTX014	14	47,782		✓ (3)			✓ (2)	✓ (2)
JTX016	16	54,608	✓ (3)	✓ (3)			✓ (3)	✓ (2)
JTX018	18	61,434	✓ (3)		✓ (3)		✓ (3)	✓ (2)
JTX020	20	68,260	✓ (3)				✓ (3)	
JTX021	21	71,673		✓ (3)	✓ (3)	✓ (3)		✓ (3)
JTX024	24	81,912		✓ (3)	✓ (3)	✓ (3)		✓ (3)
JTX027	27	92,151		✓ (3)	✓ (3)	✓ (3)		✓ (3)

Note:

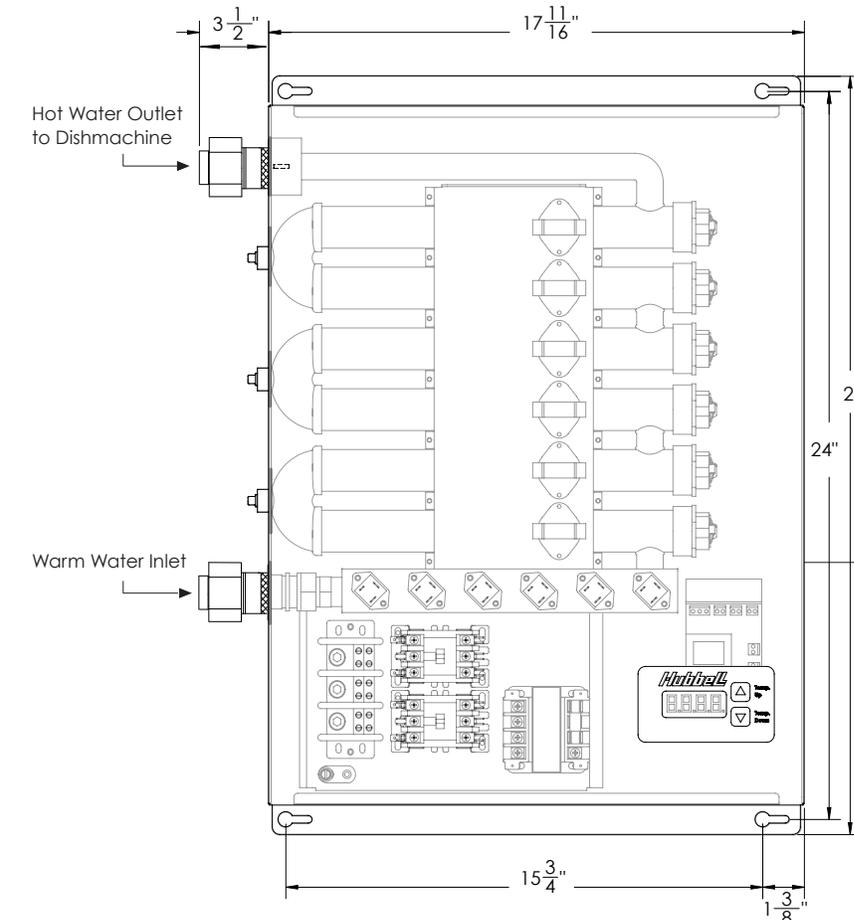
- Chart indicates three element (3) and two element (2) model types
- The Hubbell Model JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style machines.

Side View



Pressure Drop: 5 psi @ 5 GPM Dry Weight: 21 Lbs Wet Weight: 21.5 Lbs Shipping Weight: 24 Lbs

31-54 KW Models (6 Element)

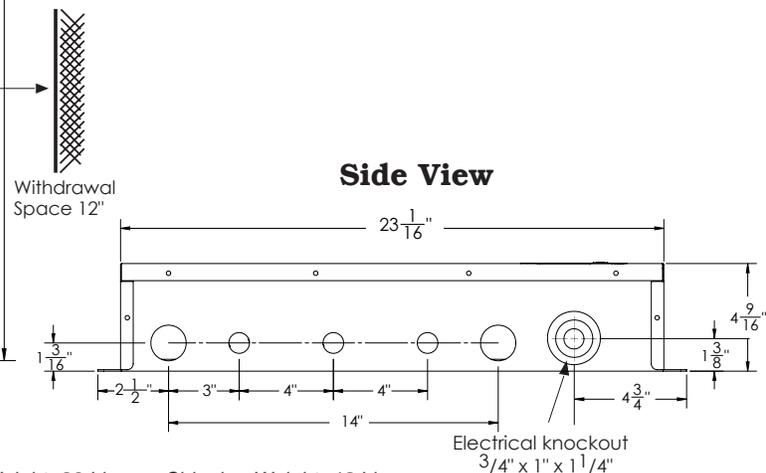


Base Model No.	KW	BTU/Hr Rating	KW Selection					
			3 Phase Voltages				1 Phase Voltages	
			208V	240V	480V	600V	208V	240V
JTX024	24	81,912	✓ (6)				✓ (6)	
JTX031	31	105,803	✓ (6)				✓ (6)	
JTX033	33	112,629		✓ (6)				✓ (6)
JTX036	36	122,868	✓ (6)		✓ (6)		✓ (6)	
JTX040	40	136,520	✓ (6)				✓ (6)	
JTX042	42	143,346		✓ (6)	✓ (6)	✓ (6)		✓ (6)
JTX048	48	163,824	✓ (6)	✓ (6)	✓ (6)	✓ (6)	✓ (6)	✓ (6)
JTX054	54	184,302		✓ (6)	✓ (6)	✓ (6)		✓ (6)

Note:

- All models shown in this chart are six element (6) model types
- The Hubbell Model JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style machines.
- Shaded models are factory supplied with a separate circuit breaker panel box

Side View



Pressure Drop: 6 psi @ 5 GPM Dry Weight: 38 Lbs Wet Weight: 39 Lbs Shipping Weight: 42 Lbs

Heating Capacity and Amperage Chart

KW Rating	Heating Capability in GPH at °F Temperature Rise (°FΔT)										MAX Amps (at 100% heater output)					
	20° ΔT	30° ΔT	40° ΔT	60° ΔT	70° ΔT	80° ΔT	100° ΔT	110° ΔT	120° ΔT	140° ΔT	3 Phase Voltages				1 Phase Voltages	
											208V	240V	480V	600V	208V	240V
8	164	109	82	55	47	41	33	30	27	23	–	–	–	–	38	–
11	225	150	113	75	64	56	45	41	38	32	31	–	–	–	–	46
12	246	164	123	82	70	61	49	45	41	35	33	–	–	–	58	–
14	287	191	143	96	82	72	57	52	48	41	–	34	–	–	67	58
16	328	218	164	109	94	82	66	60	55	47	44	39	–	–	77	67
18	368	246	184	123	105	92	74	67	61	53	50	–	22	–	87	75
20	409	273	205	136	117	102	81	74	68	58	56	–	–	–	96	–
21	430	287	215	143	123	107	86	78	72	61	–	51	25	20	–	88
24	491	328	246	164	140	123	98	89	82	70	67	58	29	23	115	100
27	553	368	276	184	158	138	111	100	92	79	–	65	33	26	–	113
31	635	423	317	212	181	159	127	115	106	91	86	–	–	–	149	–
33	676	450	338	225	193	169	135	123	113	97	–	79	–	–	–	138
36	737	491	368	246	211	184	147	134	123	105	100	–	43	–	173	–
40	819	546	409	273	234	205	164	149	136	117	111	–	–	–	192	–
42	860	573	430	287	246	215	172	156	143	123	–	101	51	40	–	175
48	983	655	491	328	281	246	197	179	164	140	133	116	58	46	230	200
54	1105	737	553	368	316	276	221	201	184	158	–	130	65	52	–	225

Notes:

- Alternate voltages including 277, 380, 415, 440 and 575 volt available. Please consult factory for exact KW availability in these voltages.
- Unshaded flows specify Base Model JTX, shaded flows must specify Base Model JHX due to flows exceeding 8 GPM.
- The Hubbell Model JTX is designed for use with conveyor and flight type dish machines and is not intended for use with door style dish machines.

Sizing Formulas

Step 1 Solve for the unknown using formulas below.

Variables To Solve For:

KW Requirement:

$$\text{_____ GPH} \times \text{_____ } ^\circ\text{F}\Delta\text{T} \times 0.00244 = \text{_____ KW}$$

Temperature Rise:

$$\text{_____ KW} \times 410 \div \text{_____ GPH} = \text{_____ } ^\circ\text{F}\Delta\text{T}$$

Flow Rate:

$$\text{_____ KW} \times 410 \div \text{_____ } ^\circ\text{F}\Delta\text{T} = \text{_____ GPH}$$

Step 2

Choose the Tankless model with the KW rating which meets the peak demand (GPH) and required temperature rise (°FΔT) for your dishmachine.

Step 3

Choose the voltage and phase power supply available. Note the maximum amperage draw of the unit and verify availability.

Metric Conversions

Liters x 0.2641 = Gallons
 Gallons x 3.79 = Liters
 Gallons x 0.003785 = m³
 m³ x 264.2 = Gallons
 1°C ΔT = 1.8°F ΔT

°F = (°C x 1.8) + 32
 °C = (°F - 32) x 0.556
 psi x 0.06896 = Bar
 Bar x 14.5 = psi
 psi x 6.86 = kPa

kPa x 0.1456 = psi
 Kg/cm² x 14.28 = psi
 psi x 0.07 = Kg/cm²
 Lbs x 0.4536 = Kg
 Kg x 2.2 = Lbs

Voltage De-Rating Factors

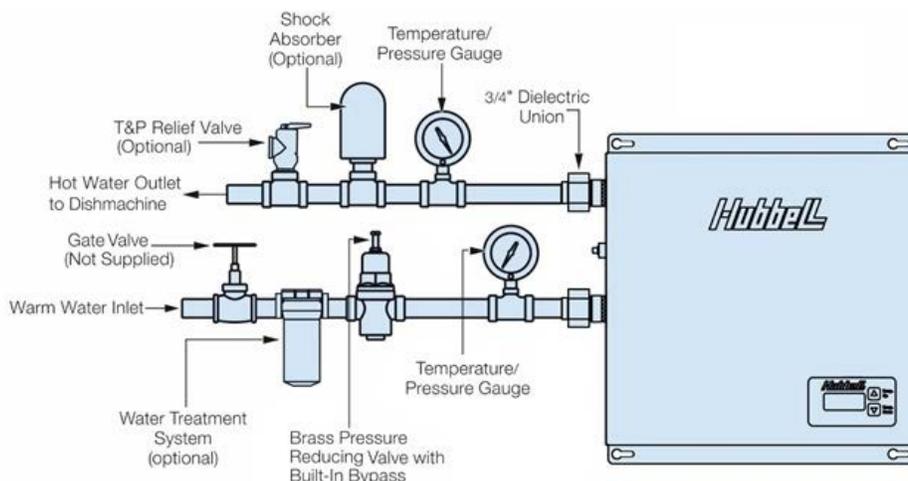
Rated Voltage	Applied Voltage	De-Rating Factor
600 V	575 V	92%
600 V	550 V	84%
480 V	460 V	92%
480 V	440 V	84%
240 V	230 V	92%
240 V	220 V	84%
240 V	208 V	75%

When the actual supply voltage (applied voltage) is different than the design voltage (rated voltage) the resulting KW output will be affected. Please see the chart for typical voltage de-rating factors, or use the following formula.

$$\frac{\text{Applied Voltage}^2}{\text{Rated Voltage}^2} \times \text{Rated KW} = \text{KW output at applied voltage}$$

Installation Diagram

Typical JTX Plumbing Installation



Standard Accessories

- ✓ Two (2) T&P Gauges
- ✓ Two (2) Dielectric Unions
- ✓ One (1) Brass Pressure Reducing Valve with built-in bypass

Optional Accessories

- A. Inlet and Outlet Valve assemblies simplify installation by integrating unions, shut offs, drain ports and pressure relief valve.
- B. Water Treatment System: Provide superior mineral scale prevention and corrosion control by feeding a special blend of scale control compounds into the hot water stream before the booster. The in-line system includes a clear cartridge housing to allow an operator to view the cartridge and determine when it needs replacement without the need to open the system.
- C. Shock Absorber: Reduce the harmful pressures resulting from quick closing dishwasher solenoid valves by installing a shock absorber between the booster and the dishwasher.
- D. T&P Relief Valve for installation in the hot water outlet piping (May be required by local code)
- E. Remote Control Display allows heater to be installed in a remote location. The 3" x 5" NEMA 4 display enclosure can be located up to 250' from the heater and gives the operator full remote control a full remote control and monitoring capabilities.

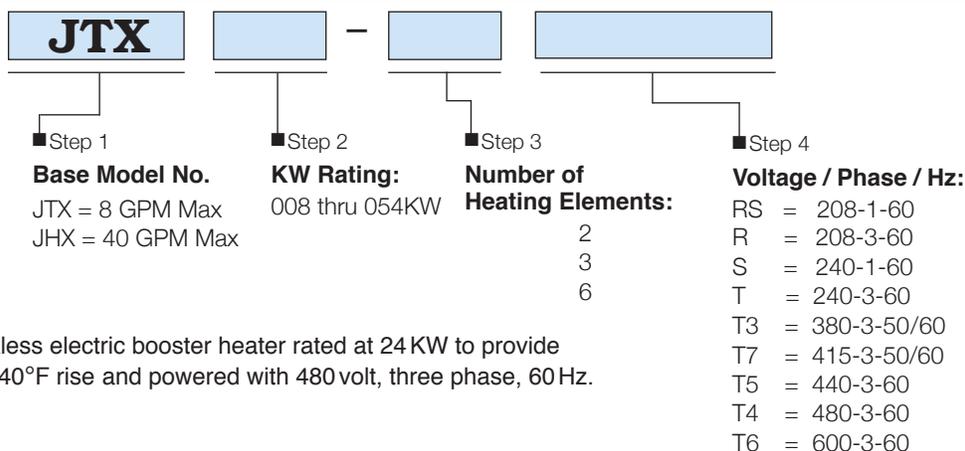
Please note: optional equipment may impact overall dimensions and weight. Please request submittal drawing from factory.

Other Applications

The Hubbell JTX is an excellent choice for other food service applications as well. Please contact the factory directly for more details.

- ✓ Hood Washing
- ✓ Pot Washers
- ✓ Three Compartment Sinks
- ✓ Point-of-Use Water Heating

Model Number Designation



Example: JTX024-3T4

A Hubbell tankless electric booster heater rated at 24 KW to provide 246 GPH at a 40°F rise and powered with 480 volt, three phase, 60 Hz.

Option Note

Any and all optional accessories for a tankless booster heater must be called out in the written specifications. A model number in and of itself does not reflect any optional accessories selected.



Tankless Booster Heater Dishmachine Sizing Chart

The Hubbell Model JTX tankless booster heater is designed for use with conveyor and flight type dishmachines. If the dishmachine is not listed, or if the application is other than a conveyor or flight type dishmachine, please contact the factory for assistance.

Dishmachine Make & Model Number	Hubbell Tankless Minimum KW	
	40°F Rise	70°F Rise
ADAMATION		
CSL-1390, CA-2, CA-3, CA-4, SLAP 44	39	72
CA, CA-1	54	90
AMERICAN DISH SERVICE		
ACD-44, ADC-66	12	24
BLAKESLEE		
Series "R" & "F" -CC, -EE, -LL, -MM, -LLL, -MMM, -PCC, -PEE, -PLL, -PMM (multi-tank) with suffix "LC"	13	24
Series XF-EE, XF-LL	17	30
Series XF-LL, XF-PLL, XF-MM, XF-PMM, XF-EEE, XF-LLL, XF-MMM (Multi-tank) with suffix "LC"	17	30
DD-8	18	30
Series F-E, FA-EE, FA-PEE, FA-LL, FA-PLL, FA-MM, FA-PMM, F-EEE, FA-EEE, FA-LLL, FA-MMM, F-PE	30	54
Series R-L, R-PL, R-M, R-PM, F-L, F-PL, F-M, F-PM (single tank)	36	54
Series R-E, R-PE, XF-PEE, XF-PLL, XF-PMM, XF-EEE, XF-LLL, XF-MMM (multi tank)	45	60
NOTE: FA (Flight-A-Round) and RA (Rack-A-Round) use comparable "F" listing.		
CHAMPION		
44DR, 66DRPW, 80DRHDFW, 70DRFFPW	12	24
66 WSPW, 44-WS, 66-WS, 64, 90FFPW, 100HDPW, 86PW, 84, 106PW, 120HDPW, 110FFPW	13	24
UC-CW6-WS	24	36
US-CW8-WS	24	39
44, 66 PW, 70FFPW, 80HDPW, 54, 76PW, 80FFPW, 90HDPW	24	45
40-KB, 44-KB-2-2, 40-KFWB, 40-KPRB, 40-KPRB-2-2, 40PRB-2-3, 60-KB, 60-KB-2-2, 60-KFWB, 60-KFWB-2-2, 60-KPRB, 60-KPRB-2-3, 64KB, 64-KB Corner, 64-KPRB Corner, 64-KPRB, 64-KPRB Corner, 64 Modular, 86 Modular	30	54
44-KB, 44-KB Corner, 44-KPRB, 44-KPRB Corner, 54-KB, 54-KB Corner, 54-KPRB, 54-KPRB Corner, 44 Modular, 66 PW Modular, UC** Series 6' Center, UC-C4	36	57
CMA DISH MACHINES		
CMA-44H with tank heater, CMA-66H	36	45
HOBART		
Opti-Rinse Models: C44A, CRS-66A, CCS-66A, CPW-80A, C54A, CRS-76A, CCS-76A, CPW-90A, C64A, CRS-86A, CCS-86A, CPW-100A, C88A, CRS-110A, CCS-110A, CPW-124A	15	27
C-54A, CRS-76A, CPW-90A, CCS-76A	39	72
C-44A, CRS-66A, CCS-66A, CPW-80A, C-64A, CRS-86A, CCS-86A CPW-100A	30	54
C-88A, CRS-110A, CPW-124A, CCS-110A	36	54
Opti-Rinse Models: C44AW, CRS-66AW, CCS-66AW, CPW-80AW	9	15
C-44AW, CRS-66AW, CPW-80AW, CCS-66AW	12	24
C-44, CRS-66, CPW-80	36	54
C-54, CRS-76, CPW-90	54	78
C-64W, CRS-86W, CPW-100W, C-88W, CRS-110W, CPW-124W, CCS-86W	24	36
C-64, CRS-86, CPW-100	45	72
CL44e, CLPS66e, CLCS66e	15	24
CL54e, CLPS76e, CLCS76e	15	27
CL64e, CLPS86e, CLCS86e	15	27
FT800W, FT-900W	24	39
FT-600, FT-700	54	78
FT800	39	78
Opti-Rise FT800	36	57
FT-900	36	58
FT800S, FT-900S	39	72

NOTE 1. FRC and FR (Fast Rack Series) use comparable "C" line listing.

NOTE 2. C models with serial no. 85-1041605 or greater use Opti-Rinse

- All sizing shown are that of the dishmachine manufacturers. Hubbell is not responsible for incorrect sizing applications.
- For outdated models or dishmachines not listed consult Hubbell for recommended tankless booster size.
- This selector chart is based upon 40°F and 70°F temperature rises, and 20psi flow.
- All booster heaters are rated at 100% of the capacity of the dishwasher as recommended by the National Sanitation Foundation.
- The JTX is designed for use with conveyor and flight type dish machines. This product is not intended for use with door style type dish machines.

Dishmachine Make & Model Number	Hubbell Tankless Minimum KW	
	40°F Rise	70°F Rise
INSINGER		
Admiral 44, 66	15	27
Admiral 44-4, 66-4	24	36
135-20, 185-20, 250-20, 60-20, 85-20, R-106-2	24	45
Speeder 64, 86-3, Century (all), Super 106-2	24	45
Trac 878	24	36
Century 14, Clipper RC-##-RPW-W	24	39
Clipper (all), R106-2, Super 106-2, Trac 321, Trac 321-2/RPW	27	45
Defender-(1)	30	54
Defender	36	54
Master (all)	36	57
JACKSON		
44CE, 66 CERPW	30	54
54CE, 76 CERPW	36	60
64CE, 86 CERPW	27	39
TS-44, TS-66	24	36
AJ-44, AJ-66, AJ-80, WH-44, ES-4400, ES-6600 (ECOLAB/JACKSON)	24	45
AJ-54, AJ-76, AJ-90	30	54
AJ-64, AJ-86, AJ-100	24	39
NOTE 1: Model 44CE with serial no.1999 or below requires larger booster than listed.		
MEIKO		
K-44, K-66, K-80	24	36
K-54, K-76, K-90, K-64, K-86, K-100	24	45
STERO		
SCT-44-10-LW, SCT-44-LW, SCT-66S-LW, SCT-76S-LW, SCT-76SC-LW, SCT-90S-LW	12	24
SC-1-2-4-LW, SC-1-6-4-LW, SC-2-4-LW, SC-5-2-4-LW, SC-5-6-4-LW, SC-6-4-LW	24	45
SCT-64, SCT-86S, SCT-94S, SCT-94SC	24	39
SCT-108S, SCT-108SC, SCT-76, SCT-94SM	27	54
SC-6-4, SCT-44, SCT-44-10, SCT-66S, SCT-76S, SCT-76SC, SCT-90S	30	54
SCT-120S, SCT-120SC, SCT-120SM, SCT-150SM	36	57
STW-110, SC-1-2-7-4, SC-1-6-3-4, SC-1-6-7-4, SC-2-7-4, SC-5-2-7-4, SC-5-6-3-4, SC-5-6-7-4, SC-6-3-4, SC-6-7-4	39	72
SC-1-2-4, SC-1-6-4, SC-2-4, SC-5-2-4, SC-5-6-4	45	72
SCT-44-10-SC-1-3-4, SCT-44-10-3-4, SCT-44-SC-1-3-4, SCT-44-SC-3-4, SCT-54-SC-1-3-4, SCT-54-SC-3-4, SCT-76S-SC-3-4	45	72
STPC (Four Tank)	24	39
STPCW (Four Tank)	24	45
STPC	27	54
STPCW	36	60
SCBT	45	72
SCT-54, SCT-76SM	36	58
SCT-76, SCT-80, SCT-94, SCT-108, SCT-120	45	58
STBUW-14	58	108
SC-2-3-4, SC-5-2-3-4	30	54
SC20-2	12	24
SC-2-8, SC-2-9, SC-1-2-8, SC-5-6-8, SC-6-8, SC-6-9, SC-1-6-8, SC-5-6-9, SC-5-2-9, SC-1-6-9, SC-5-2-8	18	36

Master Specification: Model JTX/JHX Tankless Booster

JOB NAME _____

CONSULTANT / SPECIFIER _____

REPRESENTATIVE _____

DEALER / SERVICE AGENT _____

GENERAL

Provide a quantity of _____ instantaneous high efficiency electric tankless booster heater(s) Model No. _____ as manufactured by HUBBELL Electric Heater Co., Stratford, CT. The entire unit is packaged ready for plumbing and electrical service connections and shall bear the cULus listing mark certifying the entire unit to UL499, UL EPH Sanitation listed to ANSI/NSF Standard 5 and CSA C22.2 No. 64-M91 (single phase units) and CSA C22.2 No. 88 (three phase units).

HEATING CHAMBER

The heating chamber shall be all sil-brazed copper and bronze construction. A plastic heating chamber shall not be acceptable. The heating chamber of the booster heater shall be rated for a maximum allowable working pressure of 150 psi. The heating chamber and all electrical controls shall be completely enclosed in a stainless steel case.

HEATING CAPACITY

The tankless booster heater shall be rated at _____ KW which will heat _____ GPH of water at _____ °F rise (_____ ° to _____ °F). Heaters that restrict hot water flow in any way shall not be acceptable.

ELECTRICAL

The tankless booster heater shall be designed to operate at _____ volts, _____ phase, 50/60Hz balanced power and shall draw equal amperage across all phases at all times. For 3 phase heaters, power shall be a 3 wire (3 live, 1 ground) or a 4 wire (3 live, 1 neutral, 1 ground) system that does not require a neutral leg. The heater will draw _____ amps only when operating at full power. The immersion heating elements shall be high quality incoloy sheathed and sized to obtain the rated capacity. Heating elements with copper sheathing or open nichrome wire type shall not be considered equivalent and shall not be acceptable. Each element is to be operated using zero cross over solid state controls. The heating elements shall be fully modulated from 0-100% to provide precise temperature control through the full range of flows. A Hi-Limit thermostat with automatic reset shall be factory installed to disconnect each heating element in the event of an over-temperature condition. An electronic digital display temperature controller shall be user adjustable in 1° increments in either °F or °C and shall display flow rate, outlet temperature, inlet temperature and provide error indication. A turbine-type flow meter shall be factory installed to provide precise temperature control for water flows as low as 0.2 GPM up to a maximum flow of 8 GPM (40 GPM for JHX). Heaters that utilize on/off flow switch technology or restrict flow shall not be acceptable.

WARRANTY

Hubbell shall warranty all electrical components against defects in workmanship and material including labor for a period of one (1) year from date of start-up, and the heating chamber (no labor) for a full five (5) years from date of start-up, provided that the unit is started within three (3) months of date of shipment and installed and operated within the scope of the heater's design and operating capability. Each heater shall be shipped with a complete set of installation and operating instructions including spare parts list. All fabrication and assembly shall be performed in the U.S.A.

OPTIONS

In addition, the tankless booster heater shall be supplied with the following options:

Option _____

Option _____

Option _____



Committed to continuous improvement...

Continuing research results in product improvement; therefore specifications are subject to change without notice. For the most updated information, consult the factory directly.

