

GENERAL INFORMATION



HT SERIES

Hydronic Toe Space Heaters
Under Cabinet Heaters



SAVE THESE INSTRUCTIONS

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Under Cabinet Heaters



tested to:  **UL** US1995 standards
LISTED



READ CAREFULLY - These instructions were written to help prevent difficulties that might arise during installation of this heater. Studying the instructions first may save you considerable time and money later. Observing the following procedures will cut the installation time to a minimum. King encourages you to save these instructions for future reference.

Thank you for buying this King HT series heater. It should provide years of trouble-free service and comfort to your home. Please inspect the package to ensure the heater coil and fan, with grill and screws are included.

Here are a few tips in getting the heater installed correctly!

1. **LOCATION:** This heater is intended to be installed under a kitchen or bathroom cabinet in the toe space area although other locations are possible.
2. **BATHROOMS:** Under the vanity is an ideal location for the HT Series. Placement should be off to one side or the other from where people will be standing at the sink as the heat discharged could cause discomfort or minor burns to skin if exposed for long periods of time.
3. **KITCHENS:** This heater is conveniently sized for placement under the kitchen sink cabinet. Placement should be off to one side or the other from where people will be standing at the sink, as the heat discharged could cause discomfort or minor burns to skin if exposed for long periods of time.
4. **LIVING ROOMS:** In the step or a deep wall is a good location for the HT Series. This style of heater has a higher sound rating than the standard H Series at high speed.
5. **MOUNTING:**
New construction: Place this heater on the floor where the cabinet will be over the top. Add underlayment under heater if that will be used on the floor in front of the cabinet. Take cover off and mount to the floor through the holes provided on the bottom side. Use only the screws holes in the front outlet by the grille so that you can remove them if you need to adjust the wall can forward or backward to match up with the toe board for the grille.

Rein del or cabinets in place: Cut the toe kick area the proper width to install in toe board.

INSTALLATION INSTRUCTIONS

Following are installation guidelines:

- Disconnect power at main panel.
- Make certain all wiring and plumbing is in accordance with all local codes.
- Ensure units are properly grounded.
- Heater voltage rating should be the same as supply load.

1. **To Install:** Take off cover of heater by removing screws on sides of unit. Locate the two front mounting slots and install screws into them. Do not completely secure it or screw it down solid until you find out where the toe kick panel is going to be. These slots will give you the adjustment if needed to match up with the kick board surface after the cabinet is installed.
2. **Plumbing:** Feed hot water lines to back of the heater providing enough PEX hose to service and remove interior in the future. Copper coils are manufactured to be used with potable water and pressures up to 125 psi. Coils have been checked at 300 psi at factory. Pressure test coils and system at this time before cabinets are in place.
3. **Electrical:** Wiring will be routed through the knockout on the side of the wall can. Provide a strain relief and comply with all local and national codes for plumbing and electrical work performed. Attach the wire leads to the power supply with approved wire nuts and attach groundwire to the wall can ground. A maximum of 15 Amp circuit can be run to the heater. Do not exceed 15 Amps for circuit protection. Test fan for proper operation before cabinets are installed.
4. **Motor Speed:** Select motor speed at this time. From the factory it will be wired to low speed. For higher output you can select high speed by relocation of the white wire on the terminal board from SL (Speed Low) to SH (Speed High). This will increase the air output of the motor.
5. **Thermostat Location:** One thermostat per zone should be used. Another zone is determined by a door or doorway and another thermostat should be used for that area. Do not put two thermostats in one zone.
6. **Thermostats:** For best performance and comfort a King hydronic 2 step thermostat should be used. This thermostat turns the pump on to preheat the coils, then a minute later turns the fan on to blow heat into the room. Models available are: HW, HWP, HWPT (120 Volt line powered) or HB, HBP (battery operated). These thermostats were specifically designed for use with the King hydronic fan-forced system. **Do not use electric heating thermostats!** *They will not control close enough to keep a comfortable temperature.* One HWPT120 should be used per household system if used on a potable water system. This thermostat has a timer that will circulate water in the system for 15 minutes every 24 hours to keep the system clear and comply with local codes.
7. **Grille:** Cut toe space of cabinet to fit over the heater. After the cabinets have been placed adjust the heater can to meet flush with the surface of the cabinets toe space by loosening the screws in the front of the can. Apply grille to the wall can.
8. **Run heater:** Pump water through the heater at full force to purge all air out of heaters in system. Turn up thermostats to verify fan and pump is operational.
9. **Coil Construction:** The Copper tube used in the Copper coils is Alloy 122 made to ASTM B-75 specifications.

WATER TEMPERATURE AND AIR FLOW RATES

UPC #093319	MODEL	FT. OF WATER PRESSURE DROP @ 2 GPM	AMPS	RPM	CFM	BTUH@2GPM	120°	140°	160°	180°	200°
21120	HT412 2/3-AS/FS-GW	.36	.54	2000	83	High Speed	1,700	2,500	3,400	4,600	5,200
		.36	.51	1800	76	Low Speed	1,600	2,400	3,200	4,000	5,000
21122	HT612 4/5-AS/FS-GW	.54	.54	2000	83	High Speed	2,800	4,000	5,100	6,900	8,200
		.54	.51	1800	76	Low Speed	2,400	3,250	4,350	6,000	6,500
21126	HT812 5/7-AS/FS-GW	.72	.54	2000	83	High Speed	3,675	5,000	6,600	7,500	9,950
		.72	.51	1800	76	Low Speed	3,200	4,300	5,400	7,000	8,400

Electrical Circuit Sizing
Maximum 15 Amps
circuit breaker or fusing



CAUTION

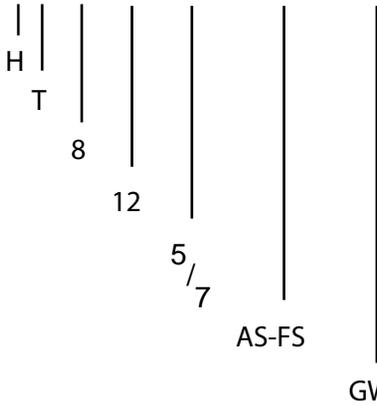
The heater should not be covered or blocked in any manner.

INSTALLATION INSTRUCTIONS

One year warranty from date of installation

Specifications:

HT Model Number Legend
HT 8 12 5/7 AS-FS GW

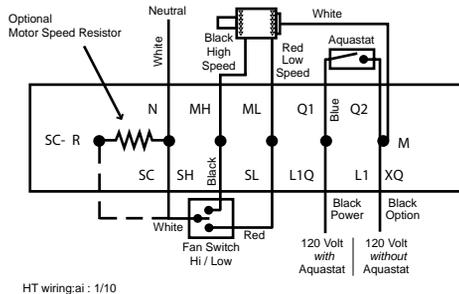


Electrical Circuit Sizing
Maximum 15 Amps
circuit breaker or fusing

- H** Series Hot Water
- T** Toe Space
- Number of copper tubes in coil
- Voltage **120**
- 5000** BTU heat output @ 140 Degree water input
- 7000** BTU heat output @ 160 Degree water input
- A**qua **S**tat / **F**an **S**witch
- G**rille **W**hite or **B**lack color

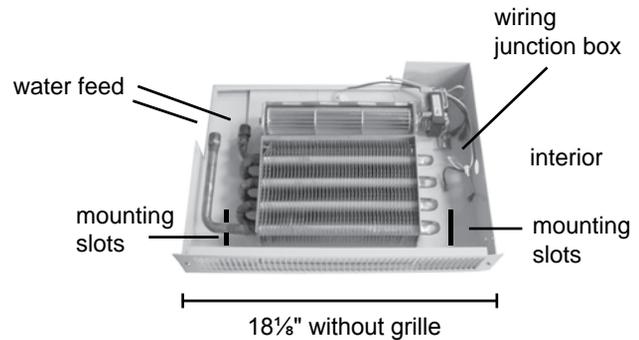
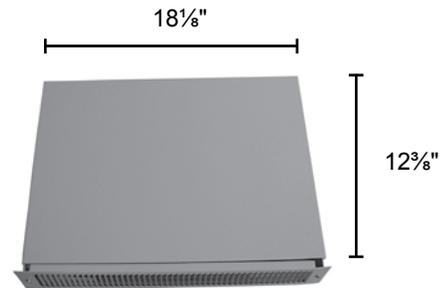
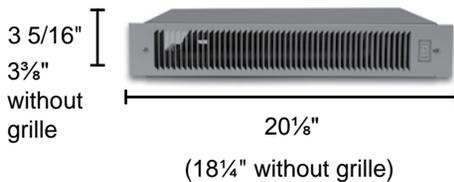
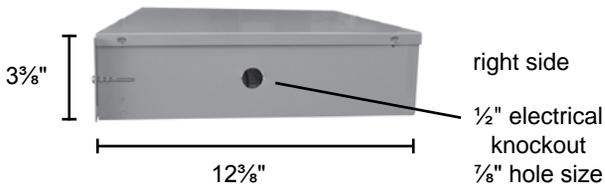
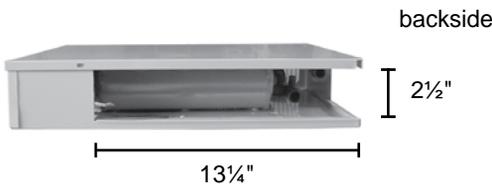


Inlet water temperature range: 100 to 200 Degree F
Air Delivery: 30 to 50 CFM
CFM High Speed: 50 Motor Amps .48 @ 120 Volt
CFM Low Speed: 30 Motor Amps .40 @ 120 Volt
Power Supply: 110 to 125 Volt AC 50/60 cycle



- LEGEND**
- SC** - switch common
 - SC-R** - switch common 2/3 & 3/4
 - SH** - switch high speed
 - SL** - switch low speed
 - MH** - motor high lead
 - ML** - motor low lead
 - M** - motor common
 - Q1** - aqua switch
 - Q2** - aqua switch
 - L1Q** - power lead with aquastat
 - L1XQ** - power lead without aquastat

N - neutral lead



PRODUCT SELECTION

HT SERIES HYDRONIC FAN COIL HEATER

UPC #093319	MODEL NUMBER*	BTU 140 / 160°	VOLTS	CAN SIZE H x W x D	GRILLE SIZE H x W x D
21120	HT412 2/3-AS/FS-GW	2,500 / 3,400	120	3 ³ / ₈ " x 18 ¹ / ₄ " x 13 ¹ / ₂ "	3 ³ / ₈ " x 20" x 3 ³ / ₄ "
21122	HT612 4/5-AS/FS-GW	4,000 / 5,100	120	3 ³ / ₈ " x 18 ¹ / ₄ " x 13 ¹ / ₂ "	3 ³ / ₈ " x 20" x 3 ³ / ₄ "
21126	HT812 5/7-AS/FS-GW	5,000 / 6,600	120	3 ³ / ₈ " x 18 ¹ / ₄ " x 13 ¹ / ₂ "	3 ³ / ₈ " x 20" x 3 ³ / ₄ "

* Aqua Stat not required when using a King hydronic thermostat. In-built Aqua Stat is available by special order only, consult factory for price and availability.

HYDRONIC THERMOSTATS

ELECTRONIC LINE POWERED 2-STEP HYDRONIC FAN COIL THERMOSTATS

UPC #093319	MODEL NUMBER	DESCRIPTION	WT. (lbs.)	LIST PRICE
19048	HW120	120V 12AMP ELECTRONIC, 2 STEP - 3 WIRE	.7	\$109.45
19047	HWP120	120V 12AMP ENERGY STAR 2 STEP - 3 WIRE		\$138.46
19049	HWPT120	120V 12AMP ELECTRONIC 2 STEP, WITH PUMP TIMER		\$155.54

ELECTRONIC BATTERY POWERED 2 STEP HYDRONIC FAN COIL THERMOSTATS

UPC #093319	MODEL NUMBER	DESCRIPTION	WT. (lbs.)	LIST PRICE
19050	HB	240/208V 12AMP SINGLE POLE, 2 STEP HYDRONIC, 3-WIRE	.7	\$99.83
19051	HBP	120/208/240V SINGLE POLE, 7-DAY PROGRAMMABLE THERMOSTAT		\$122.43

Line Power Operated



HW120
Part # 19048
120V, 12.5 Amps



HWP120
Part # 19047
120V, 12.5 Amps
Programmable

HWPT120
Part # 19049
120V, 12.5 Amps
with timer
Programmable



Battery Operated



HB
Part # 19050
208 / 240V, 16 Amps



HBP
Part # 19051
120 / 208 / 240V, 16 Amps
Programmable

