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HWB-2000 Series Hot Water Dispensers

Installation

(For Qualified Service Technicians Only)

Keys To A Successful Installation

Electrical:

- All FETCO dispensers require **NEUTRAL**. Ground is not an acceptable substitute. Installation without neutral may cause damage to the electronic components.
- The power connection to L1 on the terminal block must be at least 105 volts. Less than 105 volts will cause erratic behavior.
- The power switch has a built-in circuit breaker. To reset it, turn to the “off” position, and then back to the “on” position.
- The wiring diagram for the dispenser is located on the inside of the cover.

Plumbing:

- This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes.
- The water line must be flushed thoroughly prior to connecting it to the dispenser to prevent debris from contaminating the machine. An in-line water filter is strongly recommended.
- Verify that the water line will provide at least 2 gallons per minute before connecting it to the dispenser.

General:

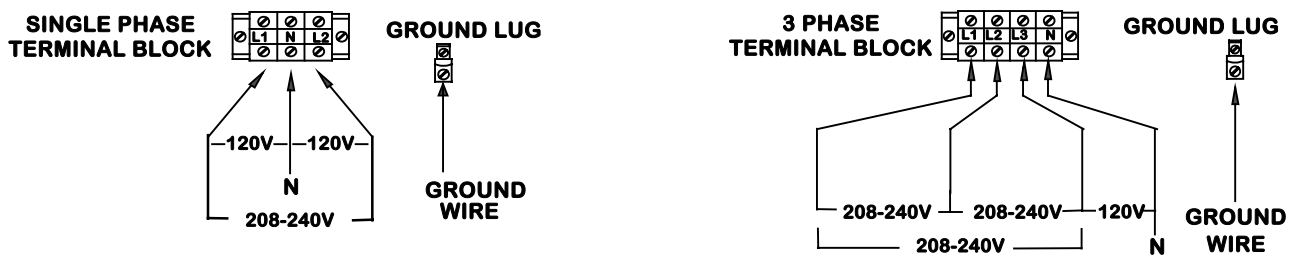
- Utilize only qualified beverage equipment service technicians for installation. A Service Company Directory may be found on our web site, <http://www.fetco.com>.
- Do not adjust the thermostat settings unless absolutely necessary. They are set at the factory for optimum performance.

Installation Check List

The installation must comply with applicable federal, state, and local codes having jurisdiction at your location. Check with your local inspectors to determine what codes will apply to the installation and operation of FETCO products.

1. Verify that the actual voltage at the electrical service connection is compatible with the specifications on the dispenser's serial number plate. Make sure the electrical service includes **neutral**. Ensure at this time that the circuit breaker to the dispenser and the power switch on the dispenser are in the off position
2. The temperature and the water tank fill level are pre-set at the factory. There is no need to turn off the heaters during the installation process. The heaters are disabled by the liquid level control board until water is sensed. The heating process will start automatically when the tank has filled with water
3. Place the dispenser on a suitable counter or stand.
4. When the dispenser is in position for use, level the dispenser front to back as well as side to side by adjusting the legs.
5. Remove the cover.

6. Water connection:
 - Water inlet is a 3/8 inch male flare fitting.
 - The dispenser can be connected to a cold or hot water line. Cold water is preferred for best flavor, but hot water will allow for faster recovery times. Use of an in-line water filter is strongly recommended.
 - Install a water shut off valve near the dispenser to facilitate service. If an in-line water filter is used, it should be installed after the water shut off valve and in a position to facilitate filter replacement.
 - Flush the water supply line and filter **before** connecting it to the dispenser.
 - Verify that the water line will provide at least 2 gallons per minute and that the water pressure is between 20 and 75 psig.
 - Use a wrench on the factory fitting when connecting the incoming water line. This will reduce stress on the internal connections and reduce the possibility of leaks developing after the installation has been completed.
7. Vent tube connection:
 - Vent tube connection is a 3/8 inch hose barb.
 - The end of the vent tube should be open to the air, not connected or submerged.
8. Power connection:
 - A fused disconnect switch or circuit breaker on the incoming power line must be conveniently located near the dispenser, and its location and markings known to the operators.
 - All dispensers require **neutral**. Damage to the dispenser may result if neutral is not present.
 - The body of the dispenser must be grounded to a suitable building ground. A ground lug is provided in the dispenser next to the power terminal block. Use only 10 gauge copper wire for grounding.
 - Electrical connections must be secured in-place within the unit to meet national and local standards.



Domestic Electrical Configurations

9. Turn on the incoming water supply line and inspect both inside and outside of the dispenser for leaks in all fittings and tubes.
10. Turn on the incoming power line and the dispenser's on/off switch.
 - Within 6 seconds, the hot water tank will begin filling until the water is sensed by the water probe at the top of the tank.
 - The heaters will be disabled until the water probe at the top of the tank senses water.
11. Review the programming instructions and make any necessary adjustments.
12. Re-attach the cover after one final inspection for leaks.

Operating Procedures

Turn the dispenser power switch to the on position. The power switch will illuminate to indicate that the dispenser has power and is operating.

When the ready light illuminates, the dispenser is fully up to temperature and ready to dispense hot water through the faucet. The amount of time required to gain full operating temperature will vary depending on the electrical configuration that was ordered, and the temperature of the incoming water.

Safety Precautions:

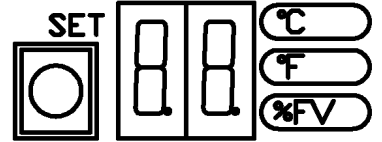
- Do not hang containers or any other object from the faucet or faucet guard.
- Do not disassemble the faucet without closing the shut-off valve located behind the faucet.

Programming Instructions

The display shows the current water tank temperature in ° Celsius when in normal operating mode.

Temperature may be set in either Celsius or Fahrenheit.

Service note: Whenever the digital temperature probe is replaced, it will be necessary to reprogram all settings on the control board.



- ▶ Remove the top cover of the unit.
The control board is located on the left side near the front.
- ▶ Turn the power switch **ON**.
- ▶ Press and hold the **SET** button for 3 seconds.
Temperature setting in °C will be displayed and °C indicator lamp will be lit.
To adjust, press and release **SET** quickly to advance one degree at a time.
Range: 82-98 °C
- ▶ Press and hold **SET** for 3 seconds.
Temperature setting in °F will be displayed and °F indicator lamp will be lit.
To adjust, press and release **SET** quickly to advance one degree at a time.
Range 180-208 °F
Only the last 2 digits of the temperature will be displayed.

Example: 185 °F is displayed as 85 205 °F is displayed as 05

- ▶ Press and hold **SET** for 3 seconds. The fill valve % will be displayed and the %FV indicator lamp will be lit.
To adjust, press and release **SET** quickly to advance one percent at a time.
Refer to the chart below for the proper setting for your model and voltage.
Range: 15% – 100%.
- ▶ The unit will automatically return to normal operating mode after 30 seconds without programming activity.

Select the model and actual voltage to determine the correct %FV setting for step 5.

| Model | Heater Configuration | Actual Voltage | Phase | %FV Setting |
|-------------|----------------------|----------------|-------|-------------|
| HWB-5 (-1) | 1 X 3000 watt | 120/208 | 1 ph. | 15 |
| | | 120/220 | 1 ph. | 15 |
| | | 120/240 | 1 ph. | 17 |
| HWB-10 (-1) | 2 X 3000 watt | 120/208 | 1 ph. | 25 |
| | | 120/220 | 1 ph. | 28 |
| | | 120/240 | 1 ph. | 33 |
| HWB-15 (-1) | 2 X 3000 watt | 120/208 | 1 ph. | 25 |
| | | 120/220 | 1 ph. | 28 |
| | | 120/240 | 1 ph. | 33 |
| HWB-15 (-2) | 3 X 3000 watt | 120/208 | 3 ph. | 37 |
| | | 120/220 | 3 ph. | 42 |
| | | 120/240 | 3 ph. | 50 |
| HWB-25 (-1) | 6 X 3000 watt | 120/208 | 3 ph. | 74 |
| | | 120/220 | 3 ph. | 83 |
| | | 120/240 | 3 ph. | 99 |
| HWB-25 (-2) | 6 X 4000 watt | 120/208 | 3 ph. | 99 |
| | | 120/220 | 3 ph. | 100 |
| | | 120/240 | 3 ph. | 100 |

TEMPERATURE CONVERSION

| °C | °F |
|------|-------|
| 82 | 180 |
| 83 | 181 |
| 83 | 182 |
| 84 | 183 |
| 84 | 184 |
| 85 | 185 |
| 85 | 186 |
| 86 | 187 |
| 87 | 188 |
| 87 | 189 |
| 88 | 190 |
| 88 | 191 |
| 89 | 192 |
| 89 | 193 |
| 90 | 194 |
| 90 | 195 |
| 91 | 196 |
| 92 | 197 |
| 92 | 198 |
| 93 | 199 |
| 93 | 200 |
| 94 | 201 |
| 94 | 202 |
| 95 | 203 |
| 95 | 204 |
| ▶ 96 | 205 ◀ |
| 97 | 206 |
| 97 | 207 |
| 98 | 208 |

▶ factory setting ◀
96°C / 205°F