# ICED TEA BREWERS



## Models:

FTC-3-N FTC-3.5-N FTC-5-N FTC-10-N

SHOWN: FTC-3.5-N WITH OPTIONAL ST. STEEL FUNNEL



#### **Cecilware Corporation**

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Operation Manual NM92A JULY 2009

MODEL NO.	VOLTS	PHASE	HZ	WATTS KW	NO. OF HEATERS	AMPS	RECEPTACLE NEMA NO.	POWER CORD	CIRCUIT BREAKER AMPS
FTC-3-N, FTC-3.5-N FTC-5-N,	120	1	60	1.75	1	15	5-15R	5-15P [2 WIRES+GND]	15A
FTC-5-N, FTC-10-N	240	1	60	2.80	1	12.5	6-20R	6-20P [2 WIRES+GND]	20A
FTC-10-N	240	1	60	5.60	2	25	6-30R	6-30P [2WIRES+GND]	30A

#### **ELECTRICAL SPECFICATIONS**

#### **OPERATING ENVIRONMENTAL TEMPERATURE:**

Do not store unit in temperatures of 32° F or below with tank filled with water. Make sure tank is drained and lines purged to avoid damage.

**NOTE**: The appliance is not suitable for unsupervised use by young children or aged or infirm persons, according to national standards. If the main power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

#### **UNPACKING AND ASSEMBLY:**

The machine is shipped with a set (4) adjustable leveling feet already mounted, (1) brew funnel, (1) brew-thru cover, and (1) water inlet fitting and (1) Operating and Service Manual.

#### WATER INLET CONNECTION:

HIGHLY RECOMMENDED: A water shut-off valve and a water filter, preferably a combination charcoal/ phosphate filter, to remove odors and inhibit lime and scale build up in the machine.

Note: In areas with extremely hard water, a water softener must be installed in order to prevent a malfunctioning of the equipment and in order not to void the warranty.

The tea dispenser is equipped with a ¼" flare water inlet fitting which is located in the back of the unit. Connect the ¼" dia. Copper waterline to the ¼" flare water inlet fitting of the valve.

This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes having jurisdiction. In addition:

- 1. A quick disconnect water connection or enough extra coiled tubing (at least 2x the depth of the unit) so that the machine can be moved for cleaning underneath.
- 2. An approved back flow prevention device, such as a double check valve to be installed between the machine and the water supply.
- 3. For use of machine outside the United States of America, connection to water supply mains should comply with the national "Model Water Byelaws".

The brewer must be connected to a cold water supply with an operating pressure of 20psi minimum and 90psi maximum from a  $\frac{1}{2}$  in. supply line. If pressure should exceed 90psi, install a pressure regulator to reduce the operating pressure to 50psi. Use  $\frac{1}{4}$  inch copper tubing for installation of less then 25 ft. and 3/8 copper tubing for more then 25ft from a  $\frac{1}{2}$  in cold water supply line.

Install the water inlet fitting provided onto the inlet valve located in the back of the unit. Do not over tighten.

Connect the  $\frac{1}{4}$ " copper waterline to the  $\frac{1}{4}$ " flare water inlet fitting on the valve.

**NOT RECOMMENDED!** The uses of a saddle valve to hook up the brewer since most of them restrict the water flow causing inconsistent brew batches.

<sup>\*</sup> Export 220 Volts, 2.40 KW

Note: In areas with extremely hard water, a Water Softener must be installed to prevent a malfunctioning of the equipment due to high lime and mineral buildup. Not doing so it will void the warranty.

COMPLIANCES! This equipment to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA) and of the Food and Drug Administration (FDA.)

#### INITIAL SET-UP.

- 1 .Make sure unit is disconnected from power source.
- 2..Remove top cover and make sure that heater switch is in the OFF position. This will prevent Heater Damage due to lack of water in the tank.
- 3. Plug the brewer into a power source.
- 4. Water will flow into the tank and will stop when the tank is fully primed (4-5 minutes)

Note: This process Is automatic and is controlled by the Level Control Board and the Level Control Sensor plugged into the top of the Tank.

- 5. Flip the Heater Toggle Switch to the ON position. This activates the heater. Allow 15-20 min. heat up time.
- 6. Unplug the brewer and Replace the top cover.
- 7. Re-connect the brewer and test run the unit by going through a Brew Cycle.

#### NOTE:

The machine is equipped with a Low Temperature Lockout system and will not brew until the hot water tank is filled with water and has reached the proper brew temperature of 197-203°F.

Insert the Brew Funnel and position empty Dispenser under it.

Go through one Brew cycle to make sure unit is operating properly.

Note: To test the brew cycle with cold water, flip Heater Switch to OFF position. This deactivates the temperature lockout and allows speedier testing.

#### **Tea Brewing Procedures.**

The Brewers are Factory preset to deliver the correct amount of hot water for best extraction of Hot Tea Concentrate and Cold Water Dilution. See Flavor Chart. Different Tea Blends might require some secondary adjustments of Hot and Cold water ratios in order to achieve their desired flavor profiles. This is easily accomplished by adjusting the Cold and Hot Brew Timers located inside the top. See instructions under Adjustments (for qualified Service Personnel only)

#### **FLAVOR CHART**

MODEL	HOT WATER	COLD WATER	DELAY	TEA BAG SIZE
FTC-3-N, FTC-3.5-N	0.78 gal. [3 liters] in 3 minutes	2.75 gal. [10 liters]	1 ½ Min	3 oz
FTC-3-N, FTC-3,5-N (Special Order)	0.78 gal. [3 liters] in 3 minutes	2.75 gal. [10 liters]	5 Min	3 oz
FTC-5-N	1.30 gal. [5 liters] in 5 minutes	3.70 gal. [14 liters]	1 ½ Min	4 oz
FTC-10-N	2.6 gal. [10 liters] in 10 minutes	7.50 gal. [28 liters]	1 ½ Min	(2) 4 oz <u>or</u> (3) 3 oz

#### **Tea Brewing Instructions**

#### **CAUTION:**

Operate with care.

Tea Brewer dispenses HOT WATER and HOT TEA that can cause serious burns.

- 1. Start each brew cycle with a clean brew funnel and a clean empty tea dispenser.
- 2. Place a tea bag into the funnel and slide the funnel into the funnel rails until it stops.
- 3. When the Green Brew Switch Light comes on, press and release the Brew Button.

#### NOTE:

This tea brewer will not brew until the pre-set brew temperature (197-203° F) is reached.

- 4. Allow approximately 3 minutes for the tea concentrate to stop dripping from the Funnel tip.
- 5. Carefully remove Brew Funnel and discard the used tea bag ONLY AFTER all visible dripping has stopped.

## **ADJUSTMENTS**-TO BE PERFORMED BY QUALIFIED SERVICE PERSONNEL ONLY.

Caution

Brewer should be unplugged from electrical outlet before any service is performed.

The water flow rate coming from the hot water tank is constant/fixed at 0.75 gal/min. Increasing or decreasing the amount of hot water dispensed from tank can also be used to adjust the strength of the tea.

The Longer water flows - More water - Weaker tea; Less water flows - Less water - Stronger tea. The FTC Machine will complete a full cycle in approximately 5 TO 10 min.

HOT WATER TIMER ADJUSTMENT (mounted inside top housing).
 Controls the brewing time (min.) for brewing Coffee and Hot Tea Concentrate
 Factory set at 3 min. for brewing 3 liters [3/4 gal.] of Tea Concentrate.
 [later to be diluted with 2 1/4 gal. of cold water which makes up the
 total 3 gal. lced tea].

To increase or decrease dispensing time and volume of hot water dispensed, turn knob in the direction shown on timer.

Note: The brewing time, temperature, and amount of product used in the funnel effects the drink strength. See chart of Tea Flavors and Grams to be used.

COLD WATER TIMER ADJUSTMENT (mounted inside top housing).
 Controls the dispensing time (min.) for cold water dilution of iced tea.
 Factory set at 3 min. for dispensing 2 1/4 gal of cold water - dispensed & mixed with 3 liters [3/4 gal.] of hot tea concentrate previously brewed.
 To increase or decrease dispensing time and volume of Iced Tea dilution water dispensed, turn knob in the direction shown on timer.

#### TO RESET TO FACTORY SETTINGS:

- \*Push the Brew Button (HOT TEA), then adjust Timer to 3 or 5 min. [for 3 or 5 gal.] depending on the water pressure in the main water line.
- \*Adjust the Dispense Valve 1/4 turn at a time, if necessary, to increase or decrease the Hot Water Flow.
- \*Push the Brew Button (ICED TEA), then adjust the Timer to 3 min. or 5 min. [for 3 or 5 gal.] depending on the water pressure in the main water line.
- 3. DELAY TIMER ADJUSTMENT (located inside the unit, near the water inlet valve). Set Delay Timer knob approximately as shown in picture. This setting corresponds to a delay time of 1.5 minutes after the hot tea begins to dispense. If the water pressure requires a different setting on the Cold Water Timer, then the Delay Timer also needs to be adjusted so that it delays the Cold Water 1.5 minutes after the hot tea begins to dispense. SPECIAL ORDER

This setting corresponds to a delay time of 5 minutes after the hot tea finishes despensing.

If the water pressure is higher than 20 PSI, decrease the setting on the Cold Water Timer and Delay Timer. If the water pressure is lower than 20 PSI, increase only the setting on the Cold Water Timer to Max.

4. BREW AND DISPENSING CYCLE ADJUSTMENTS- FTC-10:

TO BE PERFORMED BY QUALIFIED SERVICE PERSONNEL ONLY.

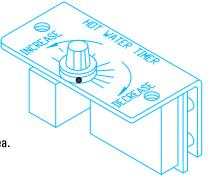
Caution: Brewer should be unplugged from electrical outlets before any service is performed.

1. DELAY TIMER - MOUNTED IN BACK, NEAR BASE, ABOVE WATER INLET VALVE. Set Delay Timer knob approximately as shown in picture.

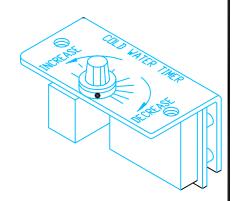
This setting corresponds to a delay time of 3 minutes after the hot tea begins to dispense.

#### NOTE:

THE BREWER IS FACTORY ADJUSTED TO DELIVER 3 GAL. OF CONCENTRATED TEA AND 7 GAL. DILUTED WATER FOR A TOTAL OF 10 GAL.



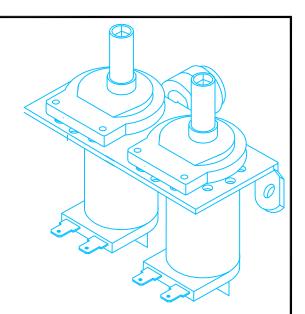
FOR TIMERS PART NUMBERS SEE PARTS LIST



#### 5. DUAL WATER INLET VALVE:

The Water Inlet Valve is located on the lower part of the main body with the threaded end protruding out of in the back.

The Water Inlet Valve allows water flow up to .87 gal./min. [gpm]. One side supplies water to the tank and one side supplies water directly to the Iced Tea dilution water nozzle. The time that each side draws water is controlled by the Hot Water timer and Cold Water Timer.



#### 6. DISPENSE VALVE:

Locate Dispense Valve, by removing the top lid of machine.

Looking down into the machine, the Dispense Valve is mounted on the tank.

FIXED FLOW: 1 LITER/ MINUTE [0.26 gal./ minute]

FTC-3-N, FTC-3.5-N 3 liters in 3 minutes [0.78 gal. in 3 minutes]
FTC-5-N 5 liters in 5 minutes [1.3 gal. in 5 minutes]
FTC-10-N 10 liters in 10 minutes [2.6 gal. in 10 minutes]

#### 7. THERMOSTAT ADJUSTMENT:

Locate Thermostat: Remove the top cover. Thermostat is mounted on top of tank. The thermostat is factory set to deliver hot brewing water at 195°F with the thermostat knob turned to full ON position. If adjustments should be necessary to increase or decrease the water TEMPERATURE, proceed as follows:

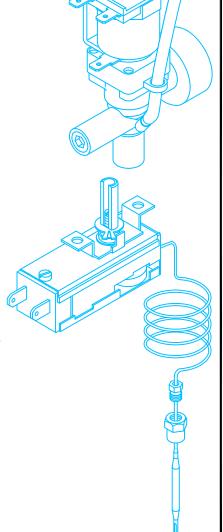
To INCREASE the water temperature,

Turn Thermostat Shaft to its maximum clockwise, CW, position.

Remove the knob and locate the Slotted Adjustment Screw inside the hollow thermostat shaft. Using a narrow-bladed screwdriver, engage slotted adjustment screw and turn it ¼ turn slowly counterclockwise, CCW.

Allow a few minutes for the temperature to reach set level. The Heater Light will go ON, indicating the heating element is activated, wait for it to go OFF, indicating that the water has reached new set temperature. Take a temperature reading and repeat if necessary.

To DECREASE the water temperature - simply turn the Thermostat Knob one notch counterclockwise CCW to the next lower dial setting.



#### CRITICAL COMPONENTS TESTS

#### A) Water Inlet Valve Test

Check hot water side, going to tank: Turn power off. If the water level rises inside the tank, the Water Inlet Valve is leaking. Disconnect wires from the Water Inlet Valve coil and connect a 2 wire line cord to the terminals. Plug it into electrical outlet. If water flows in and stops when you pull it out, the Valve is working fine. Repeat this test a few times. The problem may be in the Probe or Water Level Control Board. If water does not flow in when the cord is plugged into an electrical outlet, the Solenoid coil may be damaged, opened, or the valve may have an obstruction preventing the water from flowing in. Clean or replace it.

Check cold water side, going to dilution nozzle: Turn power off. If water keeps coming out of the dilution nozzle, the solenoid might be clogged or damaged.

A Check Valve should be provided and installed by the customer to prevent backflow. To check proper function of Check Valve, disconnect water line from the Check Valve, check for dripping from the disconnected end of the Check Valve. If it leaks replace it.

#### B) Probe Test

If lack of water persists, check the probe as follows:

Turn on the power and water supply. Check inside the tank to make sure the water is not touching the Probe. Pull wire and terminal out of the Probe rod. If water still does not flow after the wire is disconnected from the Probe, the problem may be in the Solid State Water Level Control Board. If water starts flowing into the tank, the Probe may be grounded, due to excessive liming. Check with Ohm meter. Clean or replace probe.

- C) Solid State Water Level Control Board Test Check the Board as follows:
- 1. Make sure there is power input to the Board at the terminals 2 & 3 Your voltmeter should read 115 Volts or 220 Volts. It should read the same at terminals 1 & 3. This is the output power to electrify the coil of the Solenoid Valve to open it. The lack of voltage at terminals 2 & 4 will indicate that the Board is not working properly.
- 2. Make sure all wire connections to the Board are tight.
- 3. The grounding plate at the top, in the back of the board should be securely Grounded. The Board will not work or will work erratically, if it is not grounded properly. If after this, the Board is still failing to open the Water Inlet Valve, replace it.

#### D) Dual Probe Test

If lack of water persists, check the probe as follows:

Turn on the power and water supply. Check inside the tank to make sure the water is below the Probe. Pull the BLUE wire and terminal OFF the Probe rod. If water still does not flow after the wire is disconnected from the Probe, the problem may be in the Solid State Dual Level Control Board. If water starts flowing into the tank, the Probe may be grounded, due to excessive liming. Check with Ohm meter. Clean or replace probe.

#### E) <u>Dual Probe Liquid Level Controller Test</u>

Check the Controller as follows:

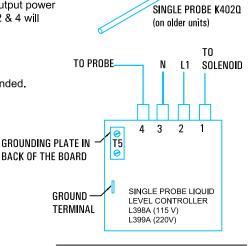
- 1. Make sure there is power input to the Controller at the terminals AC1 & AC2 Your voltmeter should read 115 Volts or 220 Volts. It should read the same at terminals AC1 & FILL when the water level is low. This is the output power to actuate the coil of the Solenoid Valve to open it. The lack of voltage at terminals AC1 & L-LEVEL or H-LEVEL indicates that the Controller is not working properly.
- 2. Make sure all wire connections are tight, including ground.
- 3. If after this, the Controller is still failing to open the Water Inlet Valve, replace it.

BACKFLOW PREVENTION
CHECK VALVE
PROVIDED AND INSTALLED
BY CUSTOMER

K491B

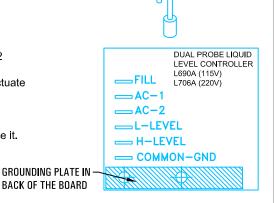
CD241 (115V)
CD244 (220V)

DUAL WATER INLET VALVE



BLUE

DUAL PROBE K6950 (on newer units)



#### **SANITIZING:**

All food dispensing units should be sanitized periodically. All parts to be sanitized must be cleaned first.

#### To prepare a sanitizing solution:

ADD 2 TSP. OF LIQUID CLOROX BLEACH (5.25% CONCENTRATION) TO 1 GALLON OF WATER AT ROOM TEMPERATURE (70° - 90°F).

Soak all parts for a minimum of 3 min. in the sanitizing solution.

Note: Always start with an unopened bottle of Clorox Bleach since the solution from an opened bottle has a short life span.

Let all sanitized parts drain and dry naturally. DO NOT WIPE THEM DRY.

Before using the sanitized unit (or parts) with food stuffs, rinse all parts thoroughly with water.

#### **CARE FOR STAINLESS STEEL:**

Stainless Steel surfaces that come in contact with food substances, MUST BE CLEANED EVERY DAY.

WHEN CLEANING STAINLESS STEEL, ONLY A pH NEUTRAL CLEANER IS TO BE USED.

Use nylon or brass brushes (not steel wire brushes) for removing food deposit.

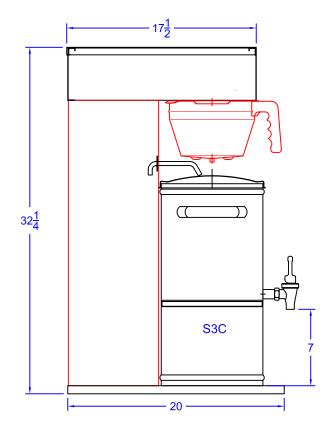
Many food products contain acids, alkalis, or other substances which corrode Stainless Steel.

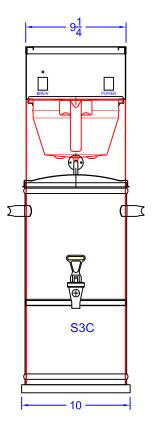
#### TROUBLESHOOTING GUIDE

WARNING: To reduce the risk of electrical shock unplug the dispenser power cord before repairing or replacing any internal components of the unit.. Before any attempt to replace a component be sure to check all electrical connections for proper contact

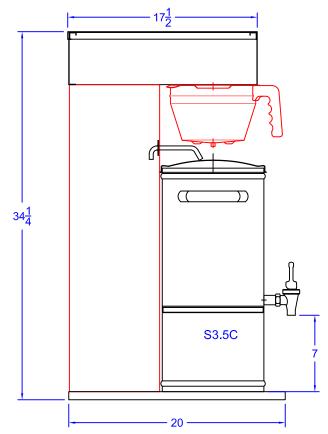
PROBLEM	PROBABLE CAUSE	REMEDY
Brewed Cold Tea.	a) Heater Switch OFF. b) Run out of hot water c) Thermostat is OFF. d) Loose electrical connection. e) Thermostat is defective. f) Hi-Limit Temperature Switch is tripped. g) Bad Heating Element or Heater is burned out. h) Bad low temperature cutout circuit. Contactor/Relay	a) Turn Heater Switch ON. b) Allow time for water in tank to heat after filling. c) Set Thermostat at 197°F [to max. position]. d) Check all electrical connections for contact. e) Replace Thermostat. f) Replace the Hi-limit Temperature Switch g) Replace Heater. h) Replace Contactor/ Relay.
Tea too weak.	a) Not enough Tea in the brew funnel. b) Water flow too low. c) Brew time is too short. d) Water is too cold.	a) Put more Tea in the brew funnel [see chart] b) Check flow [should be .26 gal /min.] Replace Dispense Valve. c) Adjust hot water timer to 3 min. max. d) Adjust Thermostat to 197°F [to max. position]
Tea too strong.	a) Too much tea in the brew funnel. b) Water flow is high c) Brew time is too long. d) Water is too hot.	a) Put less Tea in the brew funnel [see chart] b) Check flow [should be .26 gal /min.] Replace Dispense Valve. c) Adjust hot water timer to 3 min. 197°F [to max. position] d) Adjust Thermostat to 197°F [to max. position]
Water keeps dripping	a) Leaking Water Inlet Valve.     b) Clogged/ stuck Water Dispense Valve	a) Clean/check fittings of Water Inlet Valve.     Replace Water Inlet Valve if needed. See "Water Inlet Valve Test"     b) Clean/unclog Water Dispense Valve.     Replace Dispense Valve if defective.
No water is going into tank at all. or No water is coming from dilution nozzle	<ul> <li>a) Water Inlet Valve malfunction.</li> <li>b) Hi-Level Float Switch malfunction.</li> <li>c) Probe malfunction.</li> <li>d) Solid State Water Level Controls board malfunction.</li> <li>e) Timer malfunction.</li> </ul>	a) Check Water Inlet Valve. Replace if necessary. See "Water Inlet Valve Test" b) Test High-Level Float Switch. See "High-Level Float Test" c) Check Probe. Replace if necessary. d) Check The Water Level Controls. Replace if necessary. e) Check Timer: Time dispensing time vs. set time on Timer. Replace if necessary.
Water will not stop flowing into water tank.	a) Water Level Probe malfunction.     b) Solenoid (Water Inlet Valve) malfunction.     c) Solid State Water Level Control board malfunction.     d) Float Switch malfunction.	a) Check Level Control Probe. Replace if necessary. See "ProbeTest".     b) Check Solenoid. Replace if necessary.     c) Check The Water Level Controls. Replace if necessary.     d) Replace Float Switch.
Water is not heating up in the water tank.	a) Heater Switch is OFF. b) Thermostat is OFF. c) Loose connection on Thermostat. d) Hi-Limit Temperature Switch is tripped or it is defective. e) Heater is burned out or defective. h) Bad Low Temperature Cutout Circuit. Contactor/Relay.	a) Turn Heater Switch ON. b) Turn Thermostat ON. Turn Thermostat Knob Clockwise. c) Make sure all wires and ring terminals on the thermostat are tight. d) Reset the Hi-Limit Button, If heater still does not work, replace the Hi-limit Temperature Switch (see Item 6 in Tank ill.). e) Replace the Heater. h) Replace Contactor/Relay. See item 2 of Description of Components.

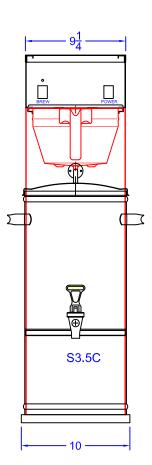
# FTC-3-N

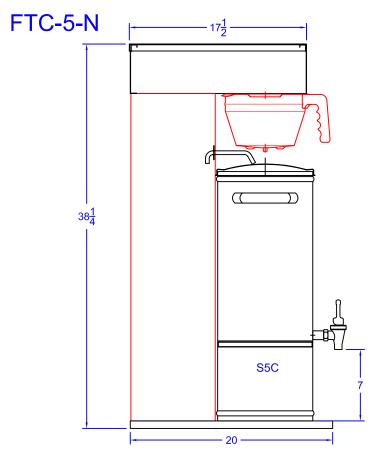


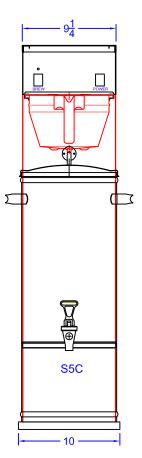


# FTC-3.5-N

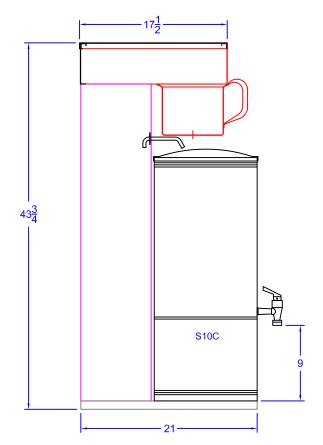


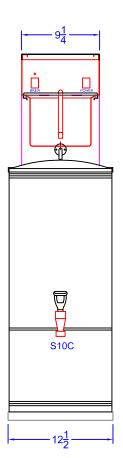




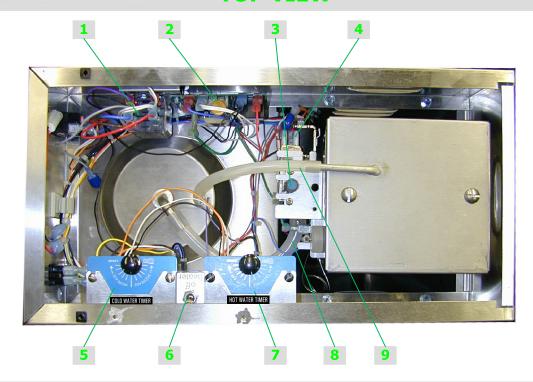


# FTC-10-N





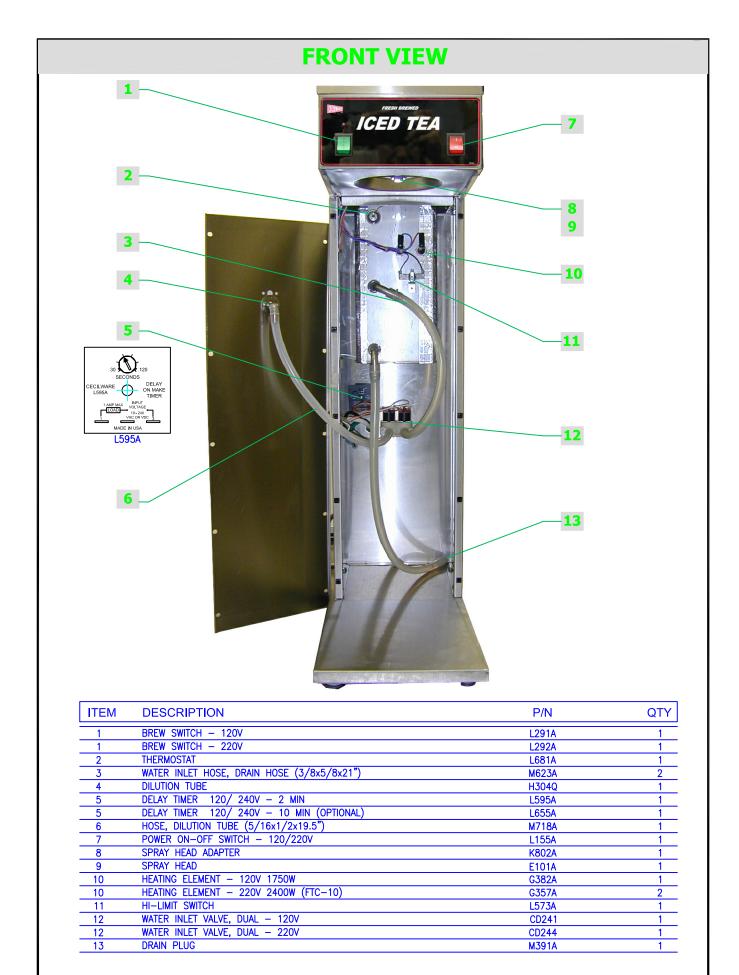
# **TOP VIEW**

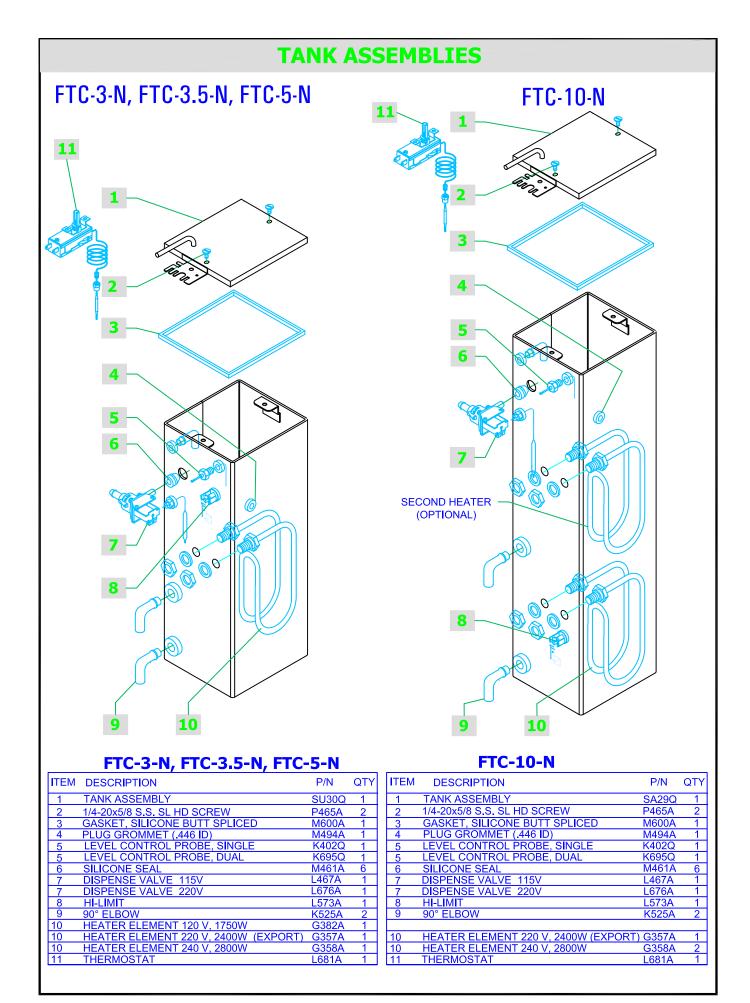


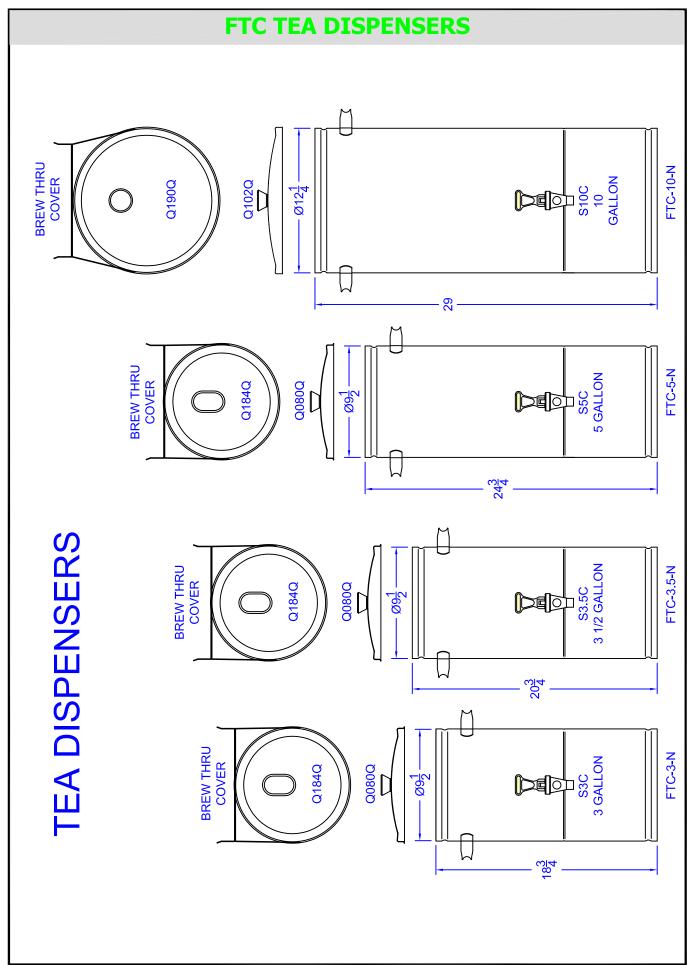
## **BREW FUNNELS**

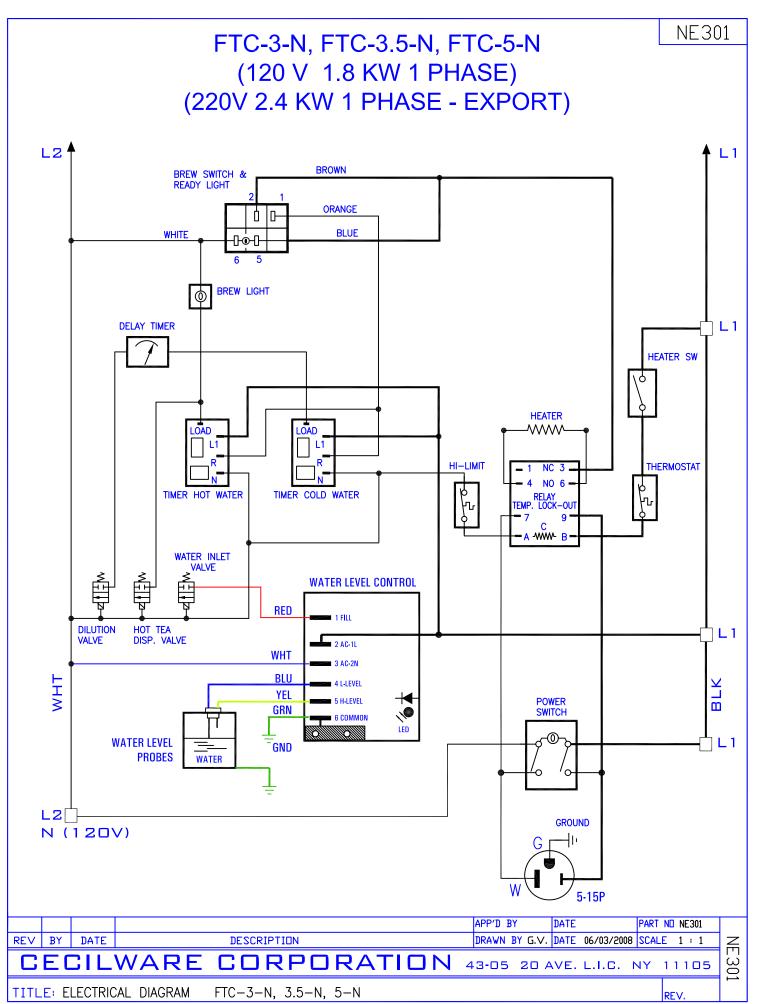


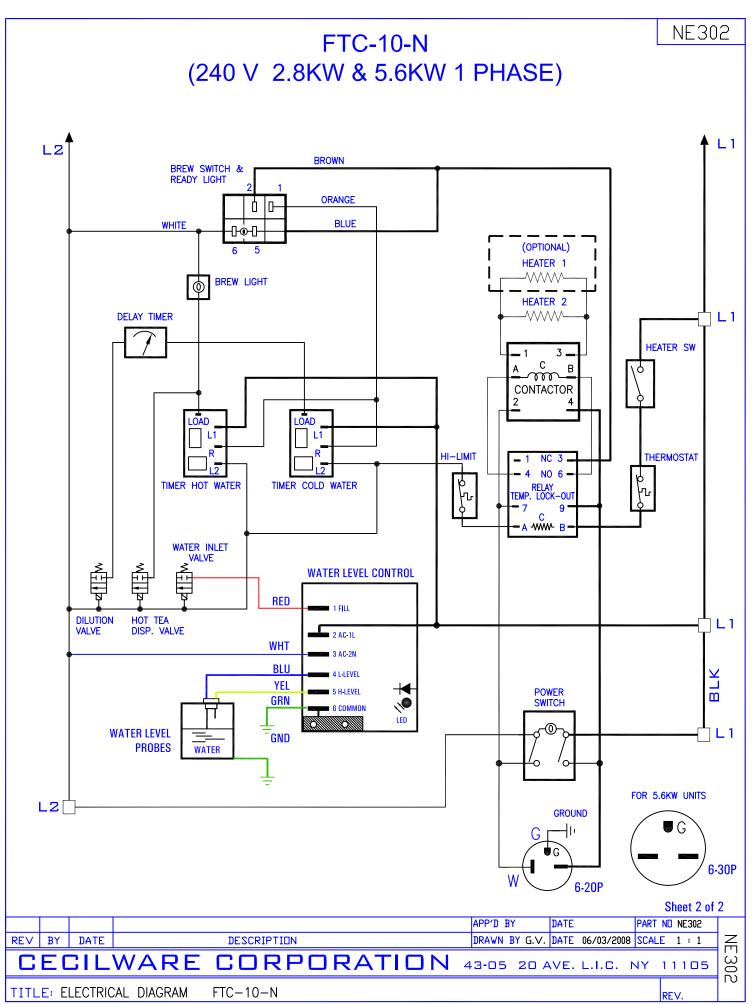
ITEM	DESCRIPTION	FTC-3-N, 3.5-N, 5-N	FTC-10-N	QTY
1	RELAY, TEMPERATURE LOCK-OUT 120V	L539A	L539A	1
1	RELAY, TEMPERATURE LOCK-OUT 240V	L538A	L538A	1
2	WATER LEVEL CONTROL 120V - 1 SEC. DELAY	L566A	L566A	1
2	WATER LEVEL CONTROL 240V - 1 SEC. DELAY	L599A	L599A	1
3	THERMOSTAT	L681A	L681A	1
4	DISPENSE VALVE 120V	L467A	L467A	1
4	DISPENSE VALVE 240V	L676A	L676A	1
5	COLD WATER TIMER 120V, BLUE	L264A (6 MIN) / L201A (OPT. 12 MIN)	L201A (12 MI	l) 1
5	COLD WATER TIMER 240V, BLUE	L263A (6 MIN) / L202A (OPT. 12 MIN)	L202A (12 MII	l) 1
6	HEATER ON-OFF SWITCH 120V	L069A	L299A	1
6	HEATER ON-OFF SWITCH 240V	L299A	L299A	1
7	HOT WATER TIMER 120V, BLACK - 4 MIN	L265A	L265A	1
7	HOT WATER TIMER 240V, BLACK - 4 MIN	L265E	L265E	1
8	HOSE, SPRAY HEAD (5/16x1/2x7.5")	M720A	M720A	1
9	BREATHER HOSE (5MMx7MMx7.5")	M719A	M719A	1
10	BREW FUNNEL ASSY. (STANDARD)	V211R		-
11	BREW FUNNEL ASSY. S.S. (OPTIONAL)	V276Q		_
12	BREW FUNNEL ASSY. S.S. (STANDARD)		Q196Q	1











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