

FETCO® User's Guide and Operator Instructions

CBS-1221 Plus Air Pot Brewer FETCO Commercial Beverage Equipment



CBS-1221 Air Pot Brewer, shown with 2.2 liter Air Pot (sold separately)



CONTACT INFORMATION

FETCO® FOOD EQUIPMENT TECHNOLOGIES COMPANY
600 ROSE ROAD
LAKE ZURICH • IL • 60047-0429 • USA
INTERNET: www.fetco.com



fetco.com

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PATENTS: <https://www.fetco.com/pl,pages,patents,74.html>

PHONE: (800) 338-2699 (US & CANADA)
(847) 719-3000 (All Countries)
FAX: (847) 719-3001
EMAIL: sales@fetco.com
orders@fetco.com (to order parts and equipment)
techsupport@fetco.com (all service queries)
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Coffee Brewer: CBS-1221

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Specifications and Requirements

Water Requirements:

CBS-1221: 20-75 psig, (138-517kPa) 1½gpm/(5.7lpm)

Water supplied to hot beverage equipment should be filtered

Water inlet fitting is a 1/4 inch male flare.

Brew Volume: Full Batch 2.20 liters (all 3 batches 2.2 liter)

User adjustable to up to 0.85 gallon/3.25 liters per brew

Total Brew Cycle—Factory default setting: 6 minutes=[4 minute brew time + 2.0 minute drip delay] (all recipes)

Brew-Process parameters are user controllable for:

Brew Volume, Brew Time, Prewet Percent and Prewet Delay, Drip Delay

Electrical: Supplied with 120V cord & plug

User adjustable to 220-240 volt terminal block

Tank Temperature, as set by factory:

200°F (93°C) inside water tank (at sea level)

Water supply: (Optimal) 100-150TDS

All beverage equipment must use filtered water.

Electrical Specifications for Domestic-dual voltage

| SKU Model description | Electrical Connection | Brew Basket | Heater Configuration | Voltage | KW | Amp Draw | Brew-Volume/Hour |
|--|------------------------------|----------------|--------------------------|--------------------|--------------------|------------------------|---|
| E1221US-1X117-LM001 Domestic-Dual Voltage | NEMA 15-5P Terminal Block | LM | 1 X 1.7 kW 1 X 3.0 kW | 100-120 200-240 | 1.3-1.8 2.2-3.1 | 12.3-14.7 10.9-13.0 | 4.4 gal/16.5 liters 6-7 gal/22-21 liters |
| E1221US-1X117-KM001 Domestic-Dual Voltage | NEMA 15-5P Terminal Block | LP | 1 X 1.7 kW 1 X 3.0 kW | 100-120 200-240 | 1.3-1.8 2.2-3.1 | 12.3-14.7 10.9-13.0 | 4.4 gal/16.5 liters 6-7 gal/22-21 liters |
| E1221US-1X117-MM001 Domestic-Dual Voltage | NEMA 15-5P Terminal Block | SM | 1 X 1.7 kW 1 X 3.0 kW | 100-120 200-240 | 1.3-1.8 2.2-3.1 | 12.3-14.7 10.9-13.0 | 4.4 gal/16.5 liters 6-7 gal/22-21 liters |
| E1221US-1X117-PM001 Domestic-Dual Voltage | NEMA 15-5P Terminal Block | SP | 1 X 1.7 kW 1 X 3.0 kW | 100-120 200-240 | 1.3-1.8 2.2-3.1 | 12.3-14.7 10.9-13.0 | 4.4 gal/16.5 liters 6-7 gal/22-21 liters |

Universal wiring, sold with 120 volt cord and plug. Brewers may be field converted to 200-240 volts-see page 12

Electrical Specifications, Domestic-single voltage 120 volt cord and plug

| SKU | Electrical Connection | Brew Basket | Heater Configuration | Voltage | KW | Amp Draw | Brew-Volume/Hour |
|---------------------|--------------------------|----------------|-------------------------|---------|---------|-------------|---------------------|
| -LM001 | NEMA 15-5P | LM | 1 X 1.7 kW | 100-120 | 1.3-1.8 | 12.3-14.7 | 4.4 gal/16.5 liters |
| E1221US-1A117-KM001 | NEMA 15-5P | LP | 1 X 1.7 kW | 100-120 | 1.3-1.8 | 12.3-14.7 | 4.4 gal/16.5 liters |
| E1221US-1A117-MM001 | NEMA 15-5P | SM | 1 X 1.7 kW | 100-120 | 1.3-1.8 | 12.3-14.7 | 4.4 gal/16.5 liters |
| E1221US-1A117-PM001 | NEMA 15-5P | SP | 1 X 1.7 kW | 100-120 | 1.3-1.8 | 12.3-14.7 | 4.4 gal/16.5 liters |

Electrical Specifications for International equipment Schuko cord and plug Note: All equipment operates either 50Hz or 60Hz

| SKU | Electrical Connection | Brew Basket | Heater Configuration | Voltage | KW | Amp Draw | Brew-Volume/Hour |
|----------------------|--------------------------|----------------|-------------------------|---------|---------|-------------|----------------------|
| -LM005 | Schuko plug | LM | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-Schuko | CEE 7-7 | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-KM005 | Schuko plug | LP | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-Schuko | CEE 7-7 | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-MM005 | Schuko plug | SM | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-Schuko | CEE 7-7 | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-PM005 | Schuko plug | SP | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-Schuko | CEE 7-7 | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |

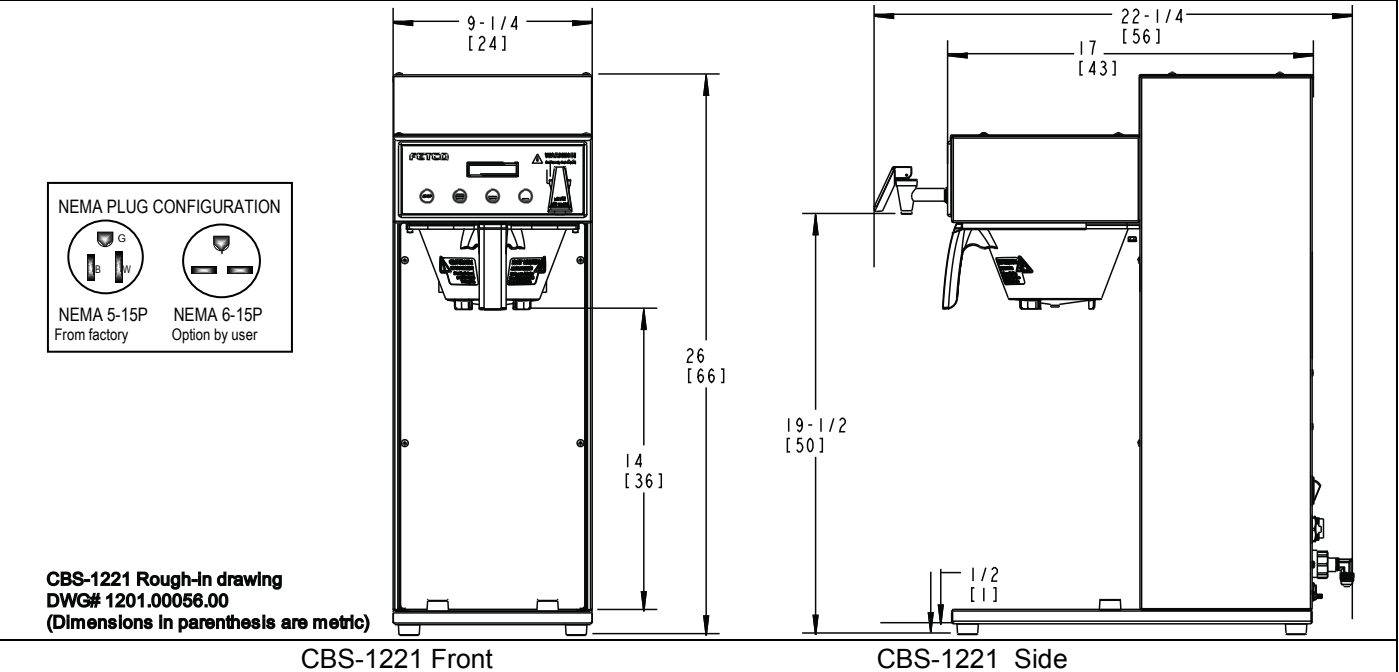
Electrical Specifications for International equipment UK cord and plug Note: All equipment operates either 50Hz or 60Hz

| SKU | Electrical Connection | Brew Basket | Heater Configuration | Voltage | KW | Amp Draw | Brew-Volume/Hour |
|-----------------------|--------------------------|----------------|-------------------------|---------|---------|-------------|----------------------|
| E1221IN-1B132-LM006 | UK Plug TypG | LM | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-UK Plug | BS 1363 A | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-KM006 | UK Plug TypG | LP | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-UK Plug | BS 1363 A | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-MM006 | UK Plug TypG | SM | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-UK Plug | BS 1363 A | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |
| E1221IN-1B132-PM006 | UK Plug TypG | SP | 1 X 3.0 kW | 230 | 2.8 | 12.4 | 7 gal/21 liters |
| International-UK Plug | BS 1363 A | | | 200-240 | 2.2-3.1 | 10.9-13.0 | 6-7 gal/22-21 liters |

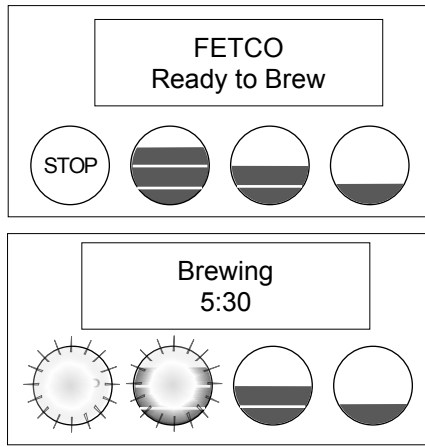
Weights and Capacities

| Dispenser Model | Height | Width | Depth | Water tank capacity | Empty Weight | Filled Weight | Shipping Weight | Shipping Dimensions |
|---|-----------------|--|---------------------|----------------------|------------------|--|--------------------|--------------------------------------|
| CBS-1221 Brewer | 26 in 660 mm | 9 1/4 in 240 mm | 22 1/4 in 560 mm | 2.7 gallon 10.1 L | 29bs. 13.1 kg | 52 lbs. 23.6 kg | 35 lbs. 15.9 kg | 31½" x 24¾" x 13" 800mmX629X330mm |
| Calibrated for 2.2 L/74 oz/0.58gal air pot | | Calibrated for 120g/4.2oz coffee dose Range: 100-140 gram 3.5-4 ounce dose (Dose size varies for brew basket size) | | | | Coffee Filter FETCO# F008 or 10⅝" X 4½" (Standard) FETCO# F002 or 13" X 5" (Gourmet) | | |

Rough-In Drawings



Starting The Brew

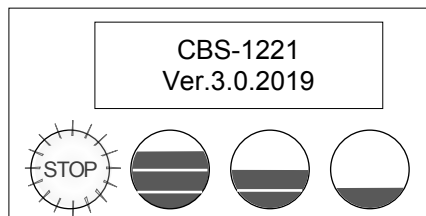


1. Turn the power switch "ON".
2. Prepare a brew basket with the correct size filter and appropriate amount of coffee.
3. Slide the brew basket completely into the rails.
4. Place a clean, empty, preheated dispenser under the brew basket.
5. Select a batch & hold the corresponding BREW button in for 1 second to start
6. -STOP button will illuminate, Brew Selector button will illuminate
-Countdown time will display. Default time setting is 6:00 (six minutes)
-Selected BREW button will slowly pulsate to indicate brew is in progress.
-All other BREW buttons for that brew head will be unlit.
7. When the brew cycle is finished, STOP button will extinguish and the BREW button will continue to pulsate to indicate DRIP will display to show the 2:00 (two minutes) drip delay setting.
This indicates that coffee may still be dripping from the brew basket
For safety- do not remove brew basket until drip-out is complete.

Enter Programming

There are 7 menu groups-A-F plus EXIT (G).

See the following pages for the batch parameter definitions and all settings for the brewer

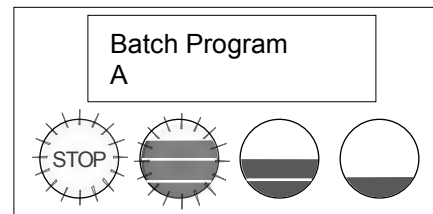
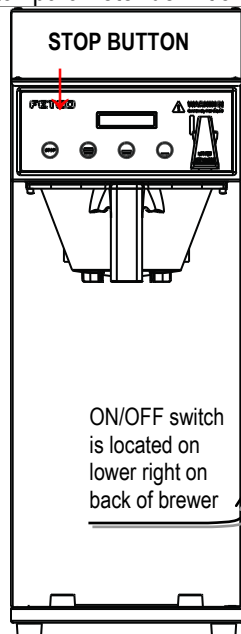


TO ENTER PROGRAMMING

- 1-Turn brewer "OFF" from power switch
- 2-Turn power switch to "ON"

...Screen will initialize and then display digital process notifications

- 3-After Initialization- "STOP" Lamp turns on
- 4-Quickly press "STOP" button (no need to hold)



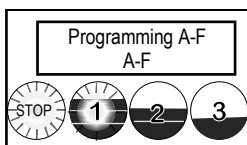
When brewer is In PROGRAMMING MODE
-the screen will display:

BATCH PRG
A (or B-F)

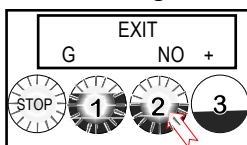
-Illuminated LED indicates active keypad positions

See the following pages for batch parameter definitions and all settings for the brewer

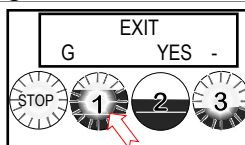
Exit Programming & Save Control Setting Changes



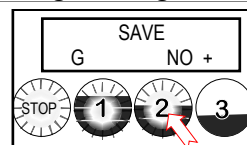
From any screen-
Press STOP button
until the EXIT ("G")
screen appears



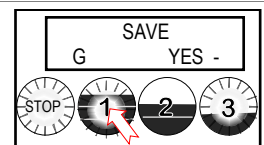
From the "G" screen
Press button **2** to
toggle to the EXIT-
YES screen



From EXIT screen
Press button **1** to
toggle to the SAVE
screen

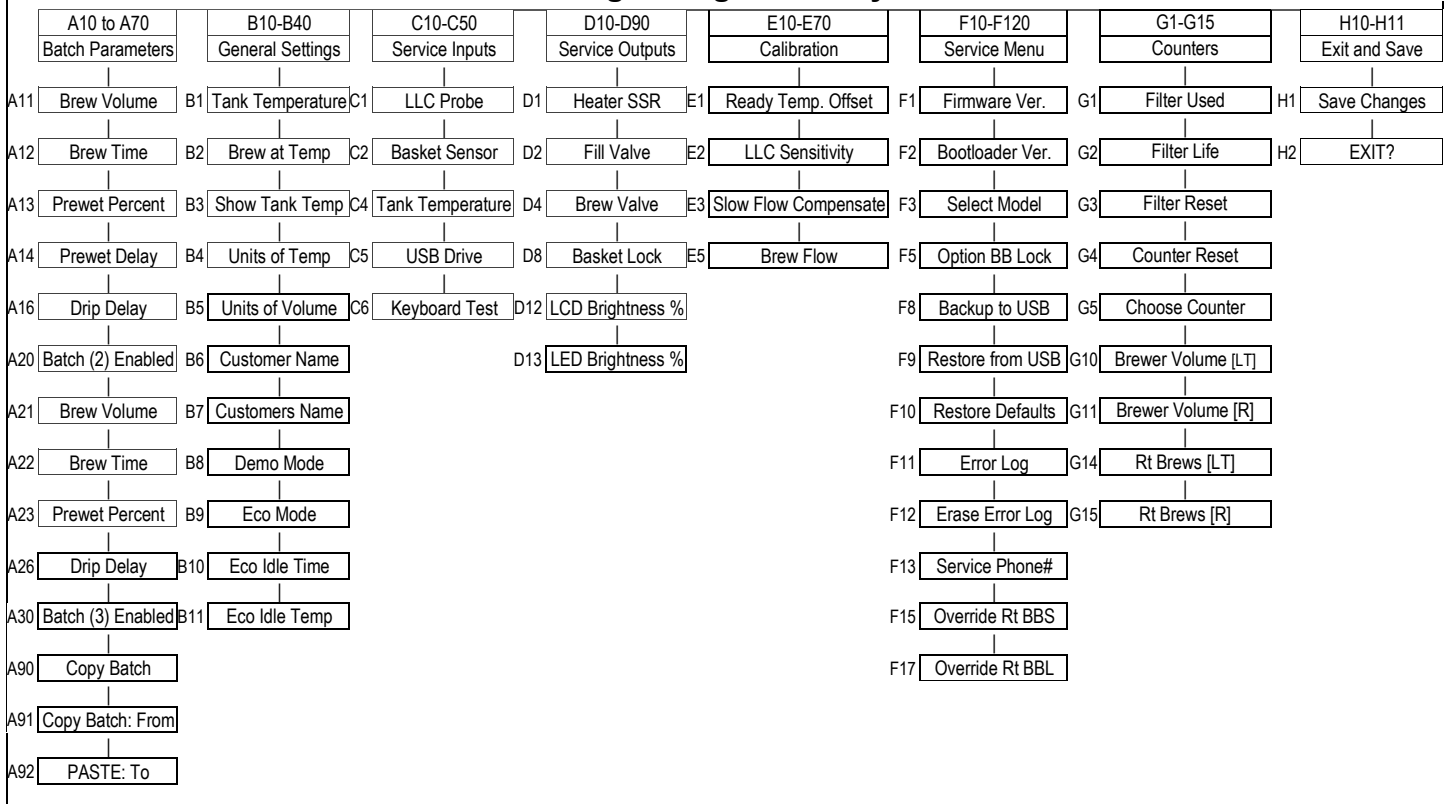


From SAVE screen
Press button **2** to
toggle to the SAVE-
YES screen



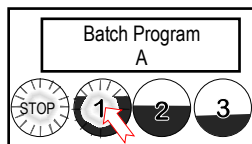
To SAVE and EXIT
Press button **1** to
SAVE your changes
and EXIT to
OPERATING MODE

Programing Menu Layout

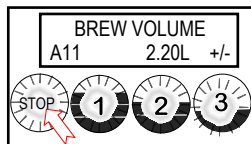


The A menus [A1-3] correspond to batch buttons [1-3] on the touch panel

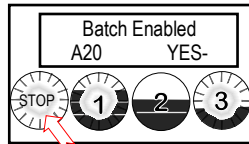
Access the A menus to PROGRAM & make changes to individual menu recipes. Menu settings can be copied
Menu position A1 is permanent. Menus A2, A3 can be removed by operator if desired



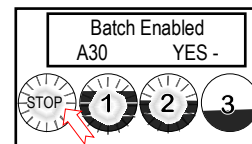
From A PRG screen
Press button 1 to go to the A menu access screen



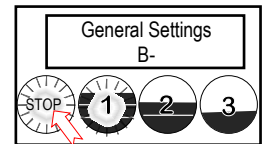
From A11 screen
Press **STOP** to scroll to A20.
(A1 is permanent)



From A20 screen
Press STOP to scroll to the third batch in the "A" menus. Make any changes as required



From A30 screen
Press STOP to scroll through COPY and further to remaining programming keys.



To continue
Press STOP to scroll through sections
See SAVE & EXIT in previous table

RECIPE Location map

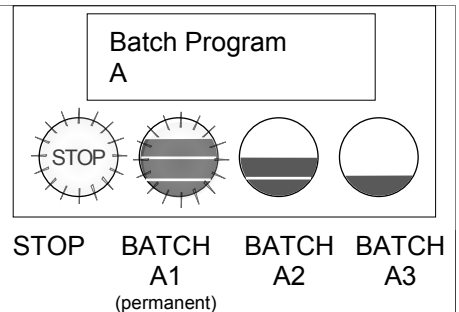
View and change settings for the brew recipes from the "A" screens with the controls in PROGRAMMING.

The batch A1 position is permanent and cannot be disabled

To access programming steps A20 and A30

Batch programming steps A20 or A30 will not display from step A10
Programming for steps A20 and A30 are accessed from any step in A10 by pressing the STOP button (1x for A20;2x for A30).





DISPLAY
→



| A PROGRAM | | Menu Features: Batch Parameters | | | |
|--|--|---------------------------------|------------------------------------|--------------------|---|
| The settings below are shown for the top batch on a single brewer top left button on a twin brewer. See how to access all A menus on the previous page. Below are the brew settings for default A1 & A2 batches | | | | | |
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| A11 | Batch Volume | 2.20liters 0.58gal | 0.95 to 3.25L 0.25 to 0.85 gal | 0.05L 0.01G | Unit software is in liters; Can convert to gallon |
| A12 | Brew Time (MIN:SEC) | 3:30 minutes | 2:00 – 12:00 | 15 sec | Default total brew time is 6:00 minutes |
| A13 | Prewet Perc. | 0% | 0.00 – 25.0% | 1% | Percentage of total brew volume |
| A14 | Prewet Delay (Pause after prewet completes) | 0% [1:00 Min] | [0:10 – 5:00] | 10 sec | The time between prewetting and start of brew cycle. This feature appears ONLY if Prewet >0:00 |
| A16 | Drip Delay | 1:30 mm:ss | 0:30 – 6:00 min. | 10 sec | Time brew basket should remain in place during final drip-out →Drip delay remains “ON” for 2:00 minutes if STOP is pressed during brew † |
| To access programming steps A20 and A30 Batch programming steps A20 or A30 will not display from step A10 Programming for steps A20 and A30 are accessed from any step in A10 by pressing the STOP button (1x for A20;2x for A30). | | | | | |
| A20 | Batch Enabled A20 YES - NO + | YES (Active) | Middle and Bottom batches A2,A3 | Batch on or off | Batches may be individually enabled, rewritten or deactivated |
| A21 | Batch Volume | 1.90liters 0.58gal | 0.95 to 3.25L 0.25 to 0.85 gal | 0.05L 0.01G | Unit software is in liters; converts to gallon |
| A22 | Brew Time (MIN:SEC) | 3:00 minutes | 2:00 – 12:00 | 15 sec | Default total brew time is 6:00 minutes |
| A23 | Prewet Perc. | 0% | 0.00 – 25.0% | 1% | Percentage of total brew volume |
| A24 | Prewet Delay (Brew pause after prewet completes) | 0% [1:00 Min] | [0:10 – 5:00] | 10 sec | See Note A14 |
| A26 | Drip Delay | 1:30 mm:ss | 0:30 – 6:00 min. | 10 sec | →See Note A16 |
| A30 | Batch Enabled A30 YES - NO + | YES (Active) | Middle and Bottom batches A2,A3 | Batch on or off | Batches may be individually enabled, rewritten or deactivated |
| A90 Batch Copy | | | | | |
| A91 Batch Copy | Copy From Batch | 1 + | A91 1 (1-6) | | Select recipe to copy |
| A92 (PASTE TO) | Paste To Batch? | 1 + | A92.1 (1-6) | | Select where to paste |
| A11 Single Topmost Batch cannot be disabled. A21 & A31 middle and bottom batches may be disabled. † DRIP DELAY will not activate when STOP is pressed within 5 seconds of starting a brew time | | | | | |

| B GENERAL Brewer Operation Control Settings, Adjust Brew Flow Rate | | | | | |
|--|---------------------------------|--|------------------------------|----------------|--|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| B1 | Tank Temp. | 200°F-or-93°C NOTE: Units are Fahrenheit by default | 171° to 207°F 77° to 97°C | 1.0°F 0.5°C | Chart to correct for high altitude below |
| B2 | Brew at Temp. | "YES" | ON/OFF | YES/NO | SEE NOTE BELOW |
| B3 | Show Tank Temperature | YES | YES/NO | | To display HW tank temperature on screen |
| B4 | Units of Measure TEMPERATURE | ° Fahrenheit | Fahrenheit/Celsius | C/F | NOTE: Overwrites user settings (see page 9) |
| B5 | Units of Measure VOLUME | L LITERS | Gallons/Liters | L/Gal | NOTE: Overwrites user settings (see page 9) |
| B6 | Customer Name | Off | NO or YES | | For name on screen |
| B7 | Customer Name | (only if above is "ON") | Scroll with batch keys | A-Z;a-z;0-9 | 16 characters total |
| B8 | Demo Mode | DEMO ON/OFF | | | Demonstrates the controls for training. Disables all components in demo mode |
| B9 | Eco Mode | On | ON/OFF | YES/NO | If Selected: Lowers hot water tank temperature after preset time of inactivity |
| B10 | Eco Idle Time | 1Hr | 1-6 hours | 1 hour | Time of inactivity to go into ECO Mode |
| B11 | Eco Idle Temp | 170°F | 158-176°F | 1 degree | Temperature that hot water tank is lowered to |

BREW AT TEMPERATURE DEFINITIONS

| | | |
|--|--|--|
| DEFAULT: BREW AT TEMP: "ON" (FACTORY DEFAULT FOR BREWER) "BREW at TEMP: -Batch will not start if tank temperature is below set point. -Display will show "HEATING" and hot water tank temperature The "BREW START" entry buttons will not illuminate until the hot water tank reaches the selected temperature. Controls allow both sides of dual brewer to operate if one side has an ongoing brew started and the second side brew is selected. Notifications shown on screen: TEXT: HEATING →Tank above 87°C/189°F- will allow brew at low temperature. Coffee flavor may be affected TEXT: L. HEAT →Tank above 76°C/169°F- will allow brew at low temperature. Coffee flavor will be noticeably affected | | Hot water tank not at brew temp setpoint. <div> <div>HEATING 160°F</div> <div>     </div> </div> |
| Tank temp→ STOP is not lit → BREW START buttons not lit. and are disabled . Buttons will illuminate "READY" when hot water tank temperature is at setpoint | | |
| USER SELECTABLE OPTION: BREW AT TEMP: OFF (Not recommended) Unit will operate at reduced temperature Allows brewing at any temperature above 90°C/202°F | | |

| Chart to correct for altitude for boiling point in tank water temperature. | | | | | |
|---|------|--------------------------|----------------------|--------------------------|-----------------------|
| [ft] | [m] | Suggested Setting[°F] | Boiling point[°F] | Suggested Setting[°C] | Boiling point [°C] |
| 0 | 0 | 205 | 212.0 | 96 | 100.0 |
| 500 | 152 | 205 | 211.0 | 96 | 99.5 |
| 1000 | 305 | 200 | 210.1 | 93 | 98.9 |
| 2000 | 610 | 200 | 208.1 | 93 | 97.8 |
| 2500 | 762 | 200 | 207.2 | 93 | 97.3 |
| 3000 | 914 | 200 | 206.2 | 93 | 96.8 |
| 3500 | 1067 | 197 | 205.3 | 92 | 96.3 |
| 4000 | 1219 | 195 | 204.3 | 91 | 95.7 |
| 4500 | 1372 | 194 | 203.4 | 90 | 95.2 |
| 5000 | 1524 | 194 | 202.4 | 90 | 94.7 |
| 5500 | 1676 | 193 | 201.5 | 89 | 94.2 |
| 6000 | 1829 | 192 | 200.6 | 89 | 93.6 |
| 6500 | 1981 | 191 | 199.6 | 88 | 93.1 |
| 7000 | 2134 | 190 | 198.7 | 87 | 92.6 |
| 7500 | 2286 | 188 | 197.8 | 86 | 92.1 |
| 8000 | 2438 | 187 | 196.9 | 86 | 91.6 |
| 8500 | 2591 | 185 | 196.0 | 85 | 91.1 |


| C SERVICE INPUTS | | Brewer Sensors and Keypad | | | |
|------------------|----------------------|---------------------------|---|-------------------------|---------------------------------------|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| C1 | LLC Probe continuity | Direct read | Reading of tank water resistance in TDS | ≈850- LOW ≈1600-HIGH | Nominal values |
| C2 | Brew Basket Sensor | Direct read | YES or NO | | |
| C3 | Tank Temperature | Direct read | Hot water tank temperature | | Actual values |
| C4 | USB Drive | NO | | | |
| C6 | Keyboard Test | Calibrate | Checks buttons under membrane cover | YES/NO | Follow directions on the touch screen |

| D SERVICE OUTPUTS | | Test Valves and Heaters; Set screen brightness | | | |
|---|-----------------|--|--------------------------------------|----------------------|--|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| D1 | Heater SSR Test | Press button 2 to test (button 1 stops test) | Activates heater Default is 10 sec.. | Toggle +/- OFF or ON | Energizes Heater(s) WARNING! Service use only. |
| D2 | Fill Valve Test | Press button 2 to test (button 1 stops test) | Activates valve Default is 10 sec. | Toggle +/- OFF or ON | Press To Test |
| D4 | Brew Valve Test | (Press to test) | Activates valve Default is 10 sec. | Toggle +/- OFF or ON | Runs valve to verify flow. NOTE: Have container under brew basket. |
| D8 | Basket Lock | (Press to test) | | Toggle +/- OFF or ON | Press To Test |
| Single series displays right side only Left Valve display is only for twin side brewer. | | | | | |
| D12 | LCD Brightness | Brightness=90% | 20-100% | 5% | Adjust LCD screen brightness only-Not for LEDs under buttons |
| D13 | LED Brightness | Brightness=60% | 20-100% | 5% | Adjust LED button brightness only-Not for the screen display LCD |

| E CALIBRATION | | Brewer Sensors and Keypad | | | |
|---------------|----------------------------|-------------------------------------|---|----------------------|--|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| E1 | Ready Temp. Offset | -4°F -2°C | -2° to -9°F -1° to -5° C | 1°F 1°C | Compensates output to measured temperature |
| E2 | LLC Sensitivity | NORMAL ("NORMAL" for most water) | HIGH (Biased for reverse osmosis water or very pure water) | NORMAL HIGH | Liquid level control sensitivity. High, 1300Ω is for reverse osmosis water or very pure water. |
| E3 | Slow flow rate from supply | ON | OFF/ON | Toggle +/- YES or NO | Trims fill system for low supply or Flojet use |
| E5 | Brew valve flow rate: | 1.60L/0.42G | 1.30-1.90Liter 0.34-0.52G | 0.05L 0.013G | Adjusts flow rate |

| | | |
|--|--|--|
| Use this formula to compensate for minor discrepancies in actual volume versus programmed volume. See "PROGRAM" E4 & E5 For valve settings and calibration. Factory set brew valve flow rates are in liter/min | | |
| <div><div><div>ACTUAL VOLUME</div><div>PROGRAMMED VOLUME</div></div><div>x</div><div><div>CURRENT SETTING</div><div>=</div><div>NEW SETTING</div></div></div> | | <div>Default Brew Valve Flow Rate—CBS-1230 Brewers</div> <div><div><div>CBS-1220</div><div>Liters/minute</div><div>Range</div></div><div>Right Brew Valve FR1.801.50 L to 2.10 L</div></div> <div>Set FR lower to increase volume, set higher to decrease volume.</div> <div>Use the formula above to determine the correct setting</div> |

| F SERVICE MENU Software & Code View and Settings | | | | | |
|--|--------------------|---------------------------------|---|--|--|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| F1 | Display Firmware | 2.0a.201221 | | | Displays current version [12/2020] |
| F2 | Display Bootloader | 1.0.200930 | | | Displays current version [9/2020] |
| F3 | Select Model | CBS-1221 Will need reboot | Scroll to brewer model Save & Exit | CBS-1221 CBS-1231, CBS-1232 CBS-1241, CBS-1242 CBS-1251, CBS-1252 CBS-1261, CBS-1262 MBS-1231, MBS-1251 | NOTE: Overwrites all user settings (See below) |
| F5 | Option BB Lock | NO | NO or YES | | Apply to future upgrade kit |
| F8 | Backup to USB | NO | Follow prompts | Saves settings | Insert blank USB |
| F9 | Restore From USB | | Applies settings from USB | | Insert USB Will need reboot |
| F10 | Restore Defaults | NO | NO/YES | | Reset to factory |
| F11 | Error Log | Lists up to six codes, in order | 1: ; 2: ;3: ;4: ;5: ;6: 1=Newest/6=Oldest LAST six errors only | Newest=first Oldest=last | See Error Code Chart for references |
| F12 | Erase Error Log | NO + | | Toggle +/- YES or NO | FACTORY USE ONLY. DO NOT RESET |
| F13 | Service Phone # | | | | Set phone for brewer operator |
| F15 | Override Rt BBS | NO | NO/YES | Toggle +/- YES or NO | Disables brew basket sensor |
| F17 | Override Rt BBL | NO | NO/YES | Toggle +/- YES or NO | Disables brew basket lock |

| ERROR CODES | | | |
|---|---|--|--|
| DO NOT CLEAR ERROR CODES UNTIL ERROR IS IDENTIFIED AND/OR CORRECTED | | | |
| →Contact specialized personnel for error codes | | | |
| Code | Description | Possible Cause | Corrective Action |
| 001 | Software error-error on start up or corrupted software | Improper start-up or shutdown | Restart , if still fault: reload software |
| 050 | Short-circuit in temperature probe | Probe failure. | Replace probe. |
| 051 | Open temperature probe. | Bad probe connection, or probe failure. | Check all connections. Replace probe if necessary. |
| 100 | Initial Fill Error. Initial fill time took longer than expected after powering up. | Water supply flow rate is too low. | Watch for short potting during brew cycle. Investigate cause of low flow rate. (Clogged water filter...) |
| 101 | Error on refill-. Tank did not refill within expected time. | Water supply flow rate is too low. | Watch for short potting during brew cycle. Investigate cause of low flow rate. (Clogged water filter...) |
| 201 | Heater open, high limit thermostat, or Solid State Relay (SSR) fault | Failure of heating element, SSR, high limit or low voltage | Check and replace heating elements, SSRs, high limit devices if necessary. |
| 255 | Touch pad error | Usually from longer than 2 min contact. Or faulty reassembly after service | Restart , if still fault: reload software. If mechanical: replace module |
| NO BSKT <u>Insert Brew Basket</u> |  | Brew basket must be in place This is a SAFETY FEATURE | Insert brew basket into brewer rails to enable brewer |

| G Counters | | Brewer Usage, Water Filter Usage, and Statistics | | | |
|------------|--------------------|--|-----------------------------|----------------------|--|
| POSITION | Program Items | Factory set Default | Programming Range | Increments | Notes |
| G1 | Filter Used | 0L | | | Amount of water passed through external water filter |
| G2 | Filter Life | 10,000L | 5,000-15,000 liters | 100 liters | Expected life of filter |
| G3 | Filter Reset | NO | NO/YES | Toggle +/- YES or NO | Reset when replacing external water filter |
| G4 | Counter Reset | NO | NO/YES | Toggle +/- YES or NO | Reset when |
| G5 | Choose Counter | Basic | Basic, Advanced, Statistics | | Used to quantify brewer activity |
| G10 | Brewer Volume [LT] | 0L | Total throughput volume | | Lifetime counter, Not resettable |
| G11 | Brewer Volume [R] | 0L | Total throughput volume | | Owner counters resettable by G4 |
| G14 | Rt Brews [LT] | 65533L | Number of brews | | Lifetime counter, Not resettable |
| G15 | Rt Brews [R] | 0 | Number of brews | | Owner counters resettable by G4 |

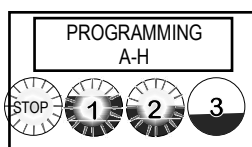
H SAVE & EXIT Saving changes and exiting PROGRAMMING

The brewer will save changes only from the “H” menu. **DO NOT** reboot brewer or toggle ON/OFF-exit as below.

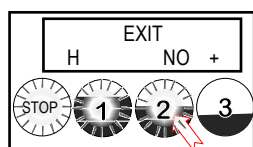
TO EXIT PROGRAMMING & HOW TO SAVE CONTROL SETTING CHANGES

HOW TO SAVE CHANGES AND EXIT-*The brewer is in PROGRAMMING mode.*

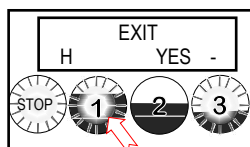
A convenient way to access the steps is to remember to scroll to EXIT→YES and to SAVE →YES



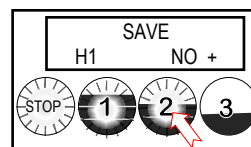
From any screen-Press STOP button until the EXIT (“H”) screen appears



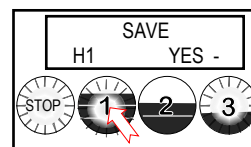
From the “H” screen Press button **2** to toggle to the EXIT-**YES** screen



From EXIT screen Press button **1** to toggle to the SAVE screen



From SAVE screen Press button **2** to toggle to the SAVE-**YES** screen



To SAVE and EXIT Press button **1** to SAVE your changes and EXIT to OPERATING MODE

NOTE: User Settings will be erased and overwritten to factory default settings by the following five programming changes

- 1) When setting or changing units of display for the tank temperature (F Fahrenheit or C Celsius). **(SETTING B4)**
- 2) When setting or changing units of display for the volume (L liters, G gallons). **(SETTING B5)**
- 3) When setting brewer model →The software sets equipment to brewer defaults **(SETTING F3)**
- 4) When loading from USB (Reprograms settings) **(SETTING F9)**
- 5) When restoring defaults (Reloads to defaults) **(SETTING E10)**

Operator Training

Review the operating procedures with whoever will be using the brewer.

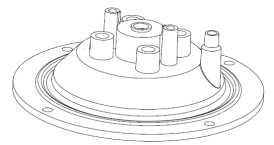
Pay particular attention to the following areas:

1. Always pre-heat the dispensers before the first use of each day by filling them halfway with hot water and letting them stand for at least 5 minutes.
2. Do not remove the brew basket from a coffee brewer until it has stopped dripping.
3. Make sure the dispenser is empty before brewing into it.
4. Show how to attach covers, close, and or secure the dispensers for transporting.
5. Show the location and operation of the water shut off valve as well as the circuit breaker for the brewer.
6. Steam from the tank will form condensation in the vent tubes. This condensation will drip into and then out of the brew baskets. Up to 1/4 cup/118cc discharging overnight is possible. Place an appropriate container under each brew basket when not in use.
7. We recommend leaving the power to the brewer on overnight. The water tank is well insulated and very little electricity is used to keep the tank hot. Leaving the brewer in the "ON" position will also avoid delays at the beginning of shifts for the brewer to reach operating temperature.

Cleaning & Maintenance

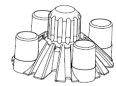
After Each Brew:

1. Dispose of grounds and rinse brew basket.
2. Never strike a brew basket or hit it against a hard surface.
This will damage the brew cone, and may damage the brew basket support rails
3. Rinse dispensers before reuse.



Every Day:

1. Wash brew basket with hot sudsy water.
2. Pull CSD from the spray head, it is magnetically attached. Use gloves or a heavy towel. →
Wash off any film and reattach. Use vinegar if limescale filming is present.
3. Clean dispensers with hot suds water and a brush, rinse and air dry.
4. Use only a soft cloth and hot suds on the outside to avoid scratches. Never use abrasives that will scratch surface.



Weekly

1. Use a commercial coffee dispenser cleaner such as URNEX™, TABZ™, DIP-IT™ or Squeak 'n Clean™.
2. Carefully Follow the instructions supplied with the cleaning product
3. Never use spray cleaners, solvent, solvent based cleaner or petroleum based polish anywhere on dispensers

Warning

1. Turn off power before any cleaning procedure, including wiping the exterior for appearance reasons.
2. Dry the exterior, especially the face panel, before turning on power.
3. Do not apply any type of spray cleaner on the face panel of this equipment.
4. Never use solvent or solvent-based cleaner or petroleum based polish anywhere on this equipment.
5. Dry the face of the touch pad before turning on power
6. Do not electrically energize this equipment or attempt operation without all covers in place and all screws fastened.
7. Unplug machine before disassembly or servicing.

Safety Notes

1. Professional installation is required. This appliance is manufactured only for commercial use
2. Operational requirements and maintenance for commercial cooking appliances differ from household appliances.
3. Operators must be trained for this equipment and must understand the use, maintenance and hazards.
4. Access to the service area is restricted to persons having safety/hygiene knowledge and practical experience of the coffee brewer. This appliance must be installed in locations where it can be overseen by adult trained personnel.
5. Do not attempt to move hot beverage equipment once it is filled. Drain equipment before moving.
6. FETCO commercial coffee brewers prepare large amounts of coffee or tea in a single batch using very hot water
7. Commercial coffee brewers provide very hot water from the spray head, brew basket and faucet when it is pulled.
8. Coffee brewers may continue to dispense very hot water from the mechanically operated faucet after the electronic touchpad is completely disabled by turning off the power switch on the lower back of the unit or unplugging the unit.
9. For safety, the brewer control locks the brew basket for 6.0 minutes after starting the brew.
10. Never attempt to defeat the factory set (default) time that the brew basket is locked for safety from start of brew.

Keep these instructions for training and future reference.

General:

1. If not installed correctly by qualified personnel, the brewer will not operate properly, and damage may result.
2. Utilize only qualified beverage equipment service technicians for service and installation.
3. Always have an empty dispenser under spray head of all coffee brewing equipment-including when at idle
4. Damages resulting from improper installation are not covered by the warranty and will void the warranty.

Below are the key points to consider before installation:

Electrical:

1. All CBS_Series brewers require **an electrical ground wire**. Installation without grounding is dangerous.
2. Note Equipotentiality Terminal, if present, (To identify the terminals which, when connected together, bring the various parts of equipment or of a system to the same potential, not necessarily being the earth (ground) potential, e.g. for local bonding.)
3. Verify voltages, polarity, circuits, and circuit breaker access before attaching equipment.
4. Brewers in this series wire differently in regard to a neutral wire. Review the wire diagrams.
5. The electrical diagram is located in the User's Guide and online at www.fetco.com.
6. Make sure of the tight grounding of the equipment and use the external ground bolt.
7. 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.

→See wiring diagrams on pages 12 and 17 for connections

Plumbing:

1. North America: All installations must comply with applicable federal, state, or local plumbing codes.
2. All Others: The water and waste piping and connections shall comply with the International Plumbing Code, International Code Council (ICC), or to the Uniform Plumbing Code (UPC).
3. Install a backflow prevention device. Most municipalities require a recognized backflow preventer
Usable on all hot beverage and cold beverage equipment is a WATTS® SD-2 or SD-3.
WATTS spring loaded double check valve models are accepted by most zoning authorities.
→The check valve should be as close to the water supply inlet of the beverage equipment as possible
4. All beverage equipment must use a water filter. A finishing carbon filter is preferred
5. Install the filter unit after a water shutoff valve and in a position to facilitate filter replacement.
6. The water line and newly installed filter cartridge must be flushed thoroughly prior to connecting it to the brewer to prevent debris from contaminating the machine
7. Verify that the water line will provide a flow rate of at least 1½gpm/(5.7lpm) per minute and the water pressure is between 20-75 psig (138-517kPa) before making any connections
8. Only use the supplied factory fitting to attach water supply line to brewer (shipped in brew basket)
9. The supplied fitting is a 1/4" flare/compression fitting for 1/4" supply line. Other adaptors may be substituted.
10. Hand tighten the factory fitting when connecting the stub on the brewer. This will reduce stress on the internal connections and reduce the possibility of leaks developing after the install has been completed

Tank Drain

The water tank must be drained before maintenance procedures, and when the unit is to be relocated or shipped.

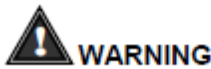
Drain is for service use only and must not be permanently connected. NOTE: Never plumb a water line to the drain.

1. Disconnect power and water to unit. DANGER: Ensure that all utility connections to the brewer are broken.
2. Move the unit near a sink or obtain a container large enough to hold four gallons of water.
→Note: The hot water tank may hold up to 2¾ gallons.
3. Remove the front panel and tank cover and allow the tank to cool to a safe temperature
4. The tank drain line and clamp are located inside-under the hot water tank. Pinch the drain line clamp to close
5. Locate the fill valve against the back wall, using pliers, loosen the hose clamp and move it back over the tube.
→Note Do not loosen the hose clamp to the bottom of the hot water tank
6. Crimp the tube an inch or two away from the drain plug to prevent water from flowing and pull it off the valve.
7. Pull the tube end out of the brewer and position over sink or bucket.
8. Release the crimped tube and hose clamp and allow the water to flow into the sink or container.
9. Reverse steps 4-8 when service is complete. Ensure pinch clamp is open and hose clamps are in place.

Installation safety and hygiene directions-For International and CE equipment

1. Access to the service area is restricted to persons having safety/hygiene knowledge and practical experience of the coffee brewer. This appliance must be installed in locations where it can be overseen by trained personnel.
2. For proper operation, this appliance must be installed indoors where the temperature is between 10°C/50°F to 35°C/95°F. Drain and remove all liquid from equipment and lines if exposed to freezing temperatures.
3. All commercial cooking equipment, including this unit, is not intended for use by children or persons with reduced physical, sensory, or mental capabilities. Ensure proper supervision of children and keep them away from the unit.
4. Children should be supervised to ensure that they do not play hot beverage equipment.
5. This unit must be installed and serviced by qualified personnel only.
6. Installation must conform to all local electrical and plumbing codes. Installation by unqualified personnel will void the unit warranty and may lead to electric shock or burn, as well as damage to unit and/or its surroundings.
7. If the power cord requires repair or replacement-it must be performed by the manufacturer or authorized service personnel with the specified cord only from the manufacturer in order to avoid a hazard.
8. Review the dimensions for the unit and verify that it will fit properly in the space intended for it. Verify that the counter or table will support the total weight of the brewer and dispensers when filled (See: Technical Data).
9. Place the brewer on the counter or stand. When the brewer is in position, level it front to back as well as side-to-side by adjusting the legs.
10. Brewers will need a sturdy supported surface for operation. Do not move brewers when filled.
11. Do not tilt appliance more than 10° to insure safe operation.
12. Unit is for protected indoor use only. Do not steam clean or use excessive water on unit.
13. This unit is not "jet-proof" construction. Do not pressure wash or use jet spray to clean this unit.
14. The unit is not waterproof-do not submerge or saturate with water.

**Equipment exposed to flood and contaminated must not be used due to electrical and food safety.
Do not operate if unit has been submerged or saturated with water.**



WARNING
All electrical connections must be in accordance with local electrical codes and any other applicable codes. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.

To prevent an electric shock hazard this device must be bonded to equipment in close proximity with an equipotential bonding conductor. This device is equipped with a bonding lug for this purpose and is marked with the following symbol



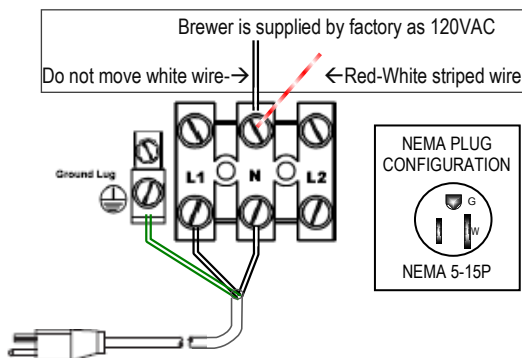
| | |
|---------------|---|
| | WARNING To reduce risk of electric shock or fire. |
| | FETCO® Hot Beverage Equipment is for commercial use only. |
| | Do not remove or open cover. No user serviceable parts inside. Refer installation and service to qualified personnel. |
| | Caution, disconnect from power supply before servicing. |
| | GROUND: National Electrical Code requires separate grounding wire. |
| | Use dedicated circuit with capacity rated by local code or National Electrical Code for the current draw of this equipment. Check serial number plate on right side for power requirements. |
| | Locate unit away from source of heat. Do not install or use near combustibles. |
| | THIS APPLIANCE IS ENERGIZED WHENEVER IT IS CONNECTED TO A POWER SOURCE |
| | FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, PROPERTY DAMAGE, FIRE, OR SHOCK HAZARD |
| Notice | This equipment must be installed with a backflow protection device to comply with federal, state or local municipality codes. |
| Notice | Read the user guide before installing and operating this unit. |

Labels and warnings for hot beverage equipment

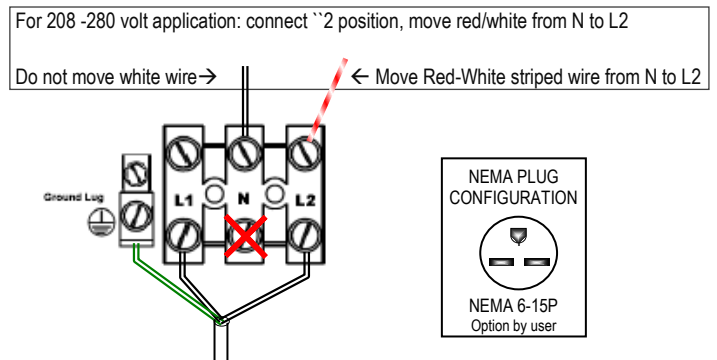
For BACK PANEL of equipment (1046.00035.00)

WIRING METHODS: REFERENCE ONLY: SEE THE WIRING DIAGRAM AT BACK OF THIS GUIDE

CBS-1221 120-volt models with cord and plug



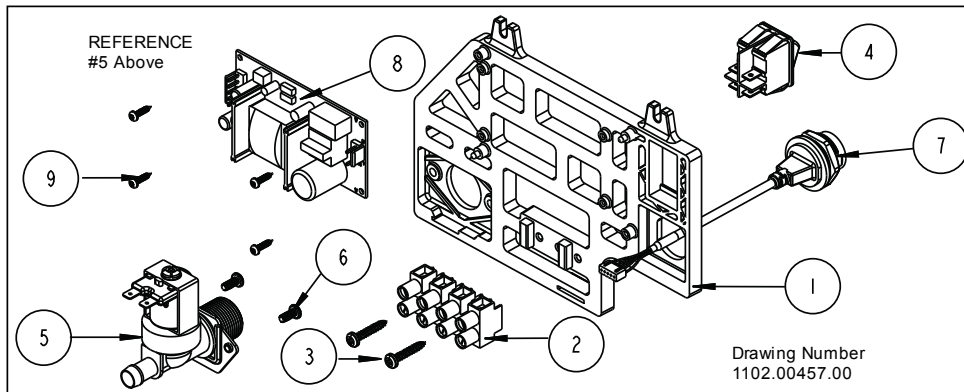
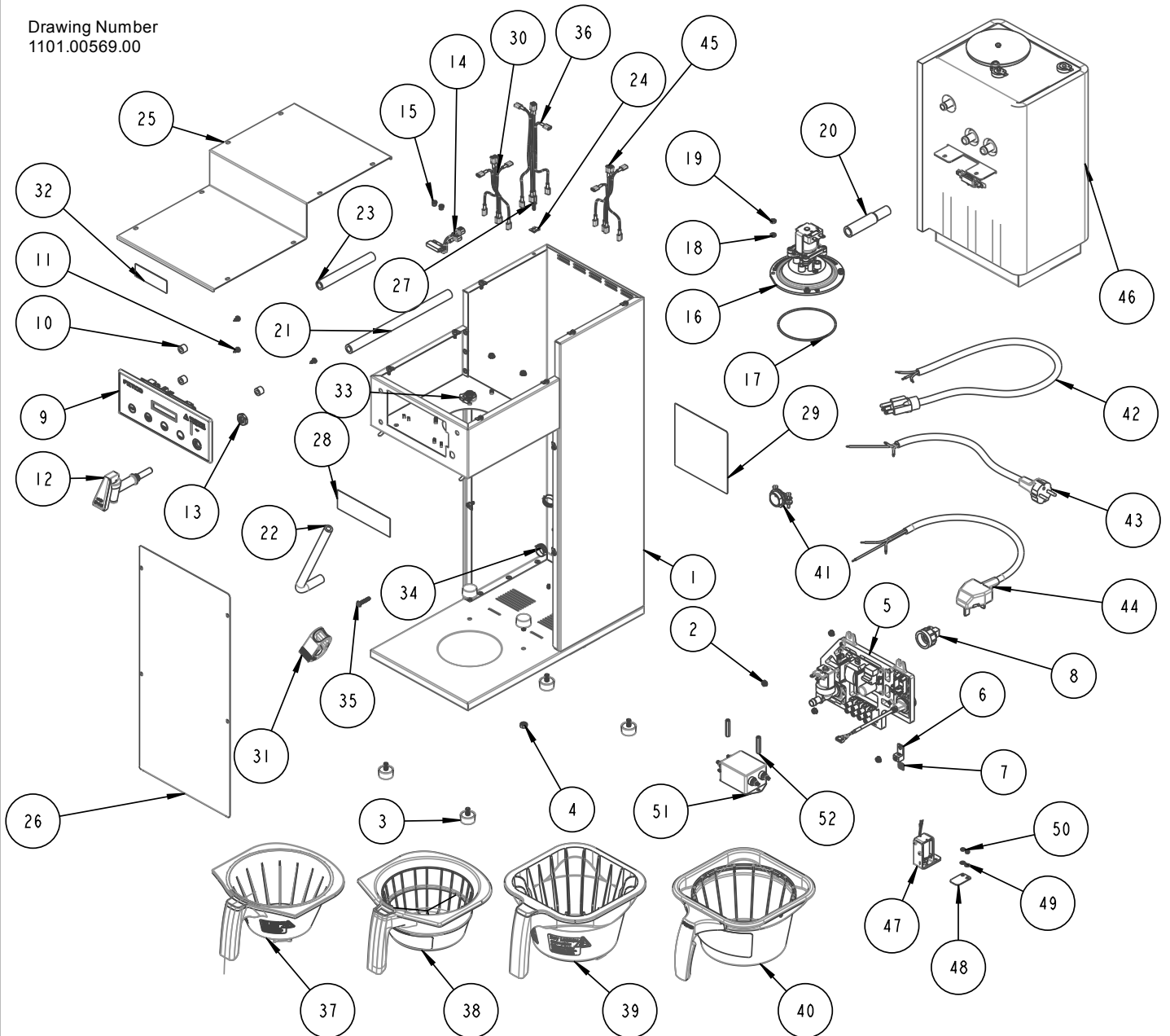
CBS-1221 models 200-240 volt L1, L2, G



Electrical installation, service and field conversion is to be made only by licensed electrician.
Disconnect equipment from power supply before service. Equipment may be powered even if power switch is "OFF"

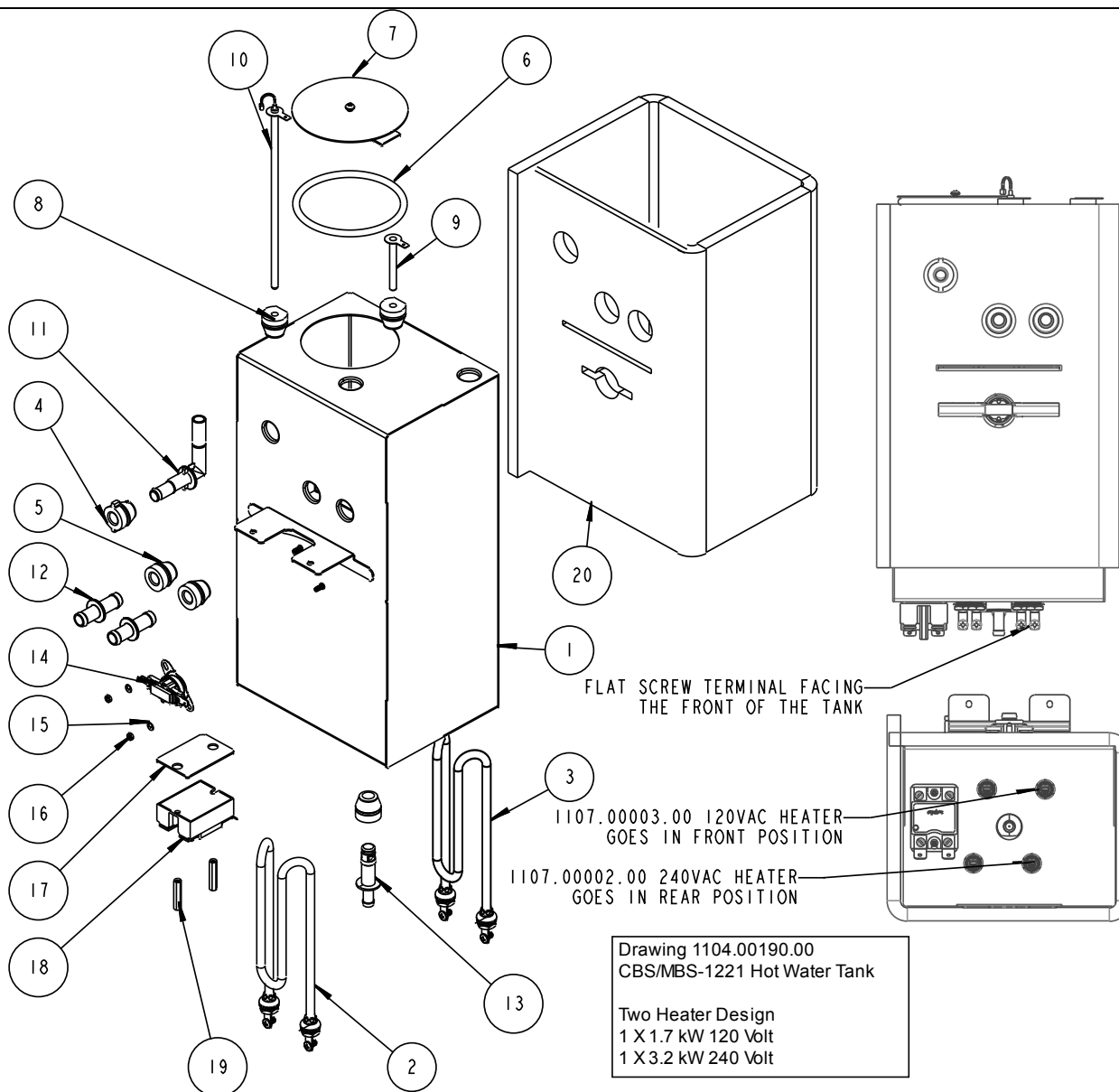
Parts Diagrams

Drawing Number
1101.00569.00

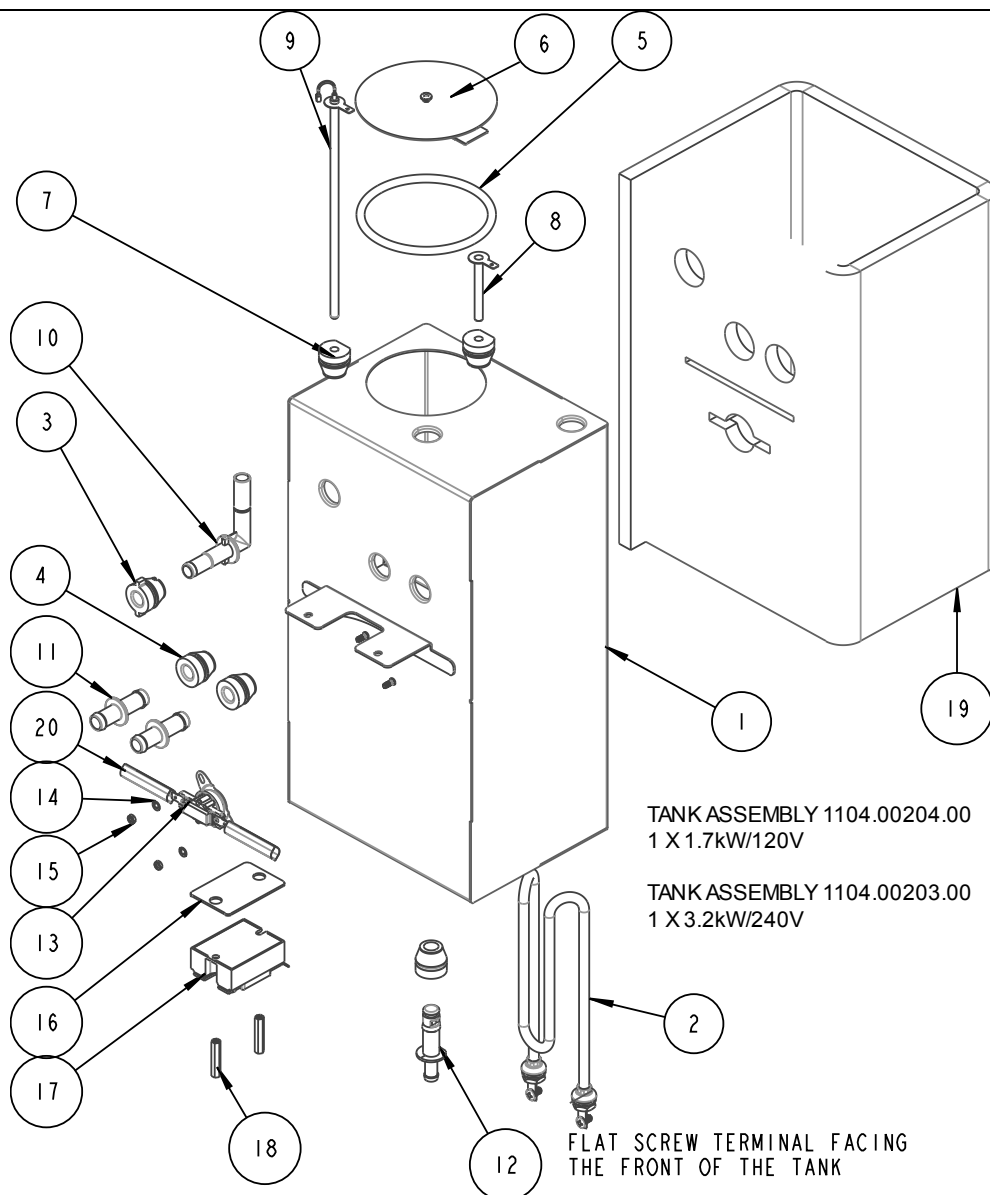


Drawing Number
1102.00457.00

| ITEM | Qty | PART NO | DESCRIPTION | Drawing number 1101.00569.00 |
|------|-----|----------------|--|------------------------------|
| 1 | 1 | 1111.00105.00 | WELDMENT BODY, CBS-1221 | |
| 2 | 7 | 1084.00051.00 | NUT, HEX LOCKWASHER, #8-32, 18-8 ST. STL. | |
| 3 | 6 | 1073.00021.00 | FOOT, RUBBER, 1/4-20 | |
| 4 | 2 | 1084.00017.00 | NUT, HEX, 1/4"-20 | |
| 5 | 1 | 1102.00457.00 | ELECTRICAL COMPONENT LATTICE, CBS-1200 | |
| 5REF | 1 | Reference | ELECTRICAL COMPONENT LATTICE, CBS-1200 | |
| 5-1 | 1 | 1023.00360.00 | ELECTRICAL MOUNTING LATTICE, AIR POT | |
| 5-2 | 1 | 1052.00023.00 | EUROSTRIP HE16 TERM. BLOCK, 4 POLE, 63 AMP, 18-8 AWG | |
| 5-3 | 2 | 1082.00056.00 | SCREW, #8-11 X 1" PAN HD PHIL, THREAD FORMING | |
| 5-4 | 1 | 1058.00024.00 | SWITCH, POWER, DOUBLE POLE, 16A, 125/250 VAC | |
| 5-5 | 1 | 1057.00043.00 | SOLENOID VALVE, 5.5L/min, 180 DEG, 24VDC | |
| 5-6 | 2 | 1082.00010.00 | SCREW, PAN HD. PHIL. MACH., M4x10 ZINC-PLATED | |
| 5-7 | 1 | 1058.00055.00 | USB CONNECTOR | |
| 5-8 | 1 | 1052.00001.00 | POWER SUPPLY, 90-264VAC/24VDC, 1.8A | |
| 6 | 1 | 1065.00009.00 | GROUND LUG CONNECTOR, 14-2 AWG, ALUMINUM | |
| 7 | 1 | 1044.00012.00 | LABEL GROUND, CE | |
| 8 | 1 | 1102.00164.00 | ADAPTER ASSY, 3/4" BSP X 1/4 SAE FLARE | |
| 9 | 1 | 1102.00453.00 | ASSEMBLY, FRONT PANEL, CBS-1220 | |
| 10 | 3 | 1023.00361.00 | SPACER, UNTHREADED, 1/2"OD X 3/8" LONG | |
| 11 | 3 | 1082.00115.00 | SCREW, #6 x 3/8" LG., SLOTTED HEX HD. WASHER | |
| 12 | 1 | 1071.00055.00 | FAUCET, HOT WATER, PSC-BR-8, WITH FLAT AND STEM | |
| 13 | 1 | 1084.00048.00 | JAM NUT, 1/2-20 UNF, NICKEL PLATED BRASS | |
| 14 | 1 | 1102.00113.00 | SWITCH, REED, ASSEMBLY | |
| 15 | 2 | 1029.00006.00 | NUT, FINGER KNURLED, #4-40 | |
| 16 | 1 | 1102.00203.01 | ASSEMBLY, SPRAY HOUSING, DSVP11 DESIGN, NO VENT (Expanded Drawing) | |
| 17 | 1 | 1024.00063.00 | O-RING, 3 15/16" x 3/32" CS, DASH # 154, BUNA-N, DURO-A50 | |
| 18 | 4 | 1083.00010.00 | WASHER, #10 SCREW W/NEOPRENE-BONDED SEAL | |
| 19 | 4 | 1084.00006.00 | NUT, 8-32 18-8 HEX MACHINE SCREW | |
| 20 | 1 | 1024.00065.00 | CONNECTOR, SILICONE, TANK TO BREW VALVE | |
| 21 | 1 | 1025.00039.00 | TUBE, 5/8" OD X 3/8 ID X 10" LG, DRAIN | |
| 22 | 1 | 1025.00058.00 | TUBE, 9/16"OD X 5/16"ID X 25.00"LG | |
| 23 | 1 | 1025.00046.00 | TUBE, 5/8" OD X 3/8" ID X 5.0" LG, DOUBLE VALVE | |
| 24 | 12 | 1084.00011.00 | NUT, CLIP ON (J-NUT), #6-32, 22-20 GA., BLK-PH FINISH | |
| 25 | 1 | 1001.00425.00 | TOP COVER, CBS-1221 | |
| 26 | 1 | 1001.00426.00 | FRONT COVER, CBS-1221 | |
| 27 | 12 | 1082.00017.00 | SCREW, TRUSS HD. PHIL. MACHINE, # 6-32 X 1/2 LG. | |
| 28 | 1 | 1046.00003.00" | LABEL, CSD WARNING, 1.5" X 5.0 | |
| 29 | 1 | 1046.00035.00 | LABEL, WARNING "TO REDUCE RISK OF ELECTRIC SHOCK OR FIRE" | |
| 30 | 1 | 1402.00097.01 | HARNESS, LOW AMP, CBS-1151-XV+, UL | |
| 31 | 1 | 1086.00009.00 | CLAMP, 3/4" MAX TUBE OD FLOW CONTROL | |
| 32 | 1 | 1041.00033.00 | BLACK EXTRACTOR PLUS LABEL, LASER ENGRAVED | |
| 33 | 1 | 1086.00002.00 | CLAMP, HOSE, SIZE "G" NYLON | |
| 34 | 3 | 1086.00003.00 | UNICLAMP, 15.9 HOSE OD CLAMP | |
| 35 | 1 | 1082.00082.00 | SCREW, PHILLIP HD., 8-32 THREAD | |
| 36 | 1 | 1402.00113.00 | WIRE HARNESS ADDITION, POWER SUPPLY GROUND | |
| 37 | 1 | B024230BN2 | BREW BASKET ASSY, BLACK, 9-3/4" X 4-1/2", .230" DIA. HOLE, BROWN PLUG | |
| 38 | 1 | B025230B1 | BREW BASKET ASSY, METAL, 9-3/4" X 4-1/2", .230" DIA HOLE, BLACK HANDLE | |
| 39 | 1 | B014218BN2 | BB ASSY, 13" X 5", in .218" HOLE, BRN PLUG | |
| 40 | 1 | B003218B1 | BREW BASKET ASSY, 13" X 5", .218 DIA HOLE, BLACK | |
| 41 | 1 | 1086.00008.00 | CONNECTOR, CLAMP, NON-METALLIC CABLE, 3/4" | |
| 42 | 1 | 1063.00016.00 | POWER CORD, 120VAC W/NEMA 5-15P PLUG | |
| 43 | 1 | 1063.00030.00 | CORD PWR, 16A/250VAC, EU1-16P PLUG, W/O CONNECTORS, CE | |
| 44 | 1 | 1063.00034.00 | CORD, POWER, 13A 250VAC, 2.5M LG., UK | |
| 45 | 1 | 1402.00110.00 | WIRE HARNESS, CBS-1221, HIGH AMP | |
| 46 | 1 | 1104.00190.00 | TANK ASSEMBLY, CBS/MBS-1221, 1.7kW/120VAC OR 3.2kW/240VAC | |
| 46 | 1 | 1104.00203.00 | TANK ASSEMBLY, CBS-1221, 3.2kW/240VAC | |
| 46 | 1 | 1104.00204.00 | TANK ASSEMBLY, CBS-1221, 1.7kW/120VAC | |
| 47 | 1 | 1102.00219.00 | ASSEMBLY, BB LOCKER, 24VDC | |
| 48 | 1 | 1003.00259.00 | BRACKET, BREW BASKET LOCK COVER | |
| 49 | 2 | 1083.00011.00 | WASHER, #8 SCREW SIZE, INTERNAL TOOTH LOCK | |
| 50 | 2 | 1084.00010.00 | NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED | |
| 51 | 1 | 1052.00029.00 | EMI FILTER, TWO LINE 20A, 120/250VAC | |
| 52 | 2 | 1081.00061.00 | STANDOFF, 1/4 HEX x 1 1/4 LG., #6-32 THREAD | |



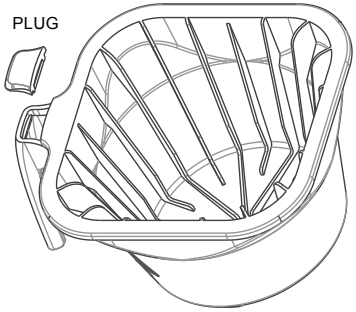
| ITEM | Qty | PART NO | DESCRIPTION |
|--|-----|---------------|--|
| Hot Water Tank CBS-1221 Drawing number 1104.00190.00 | | | |
| 1 | 1 | 1114.00167.00 | WELDMENT, TANK, CBS-1221, 2 HEATERS |
| 2 | 1 | 1107.00003.00 | HEATER ASSY, IMMERSION 1700W/120VAC |
| 3 | 1 | 1107.00002.00 | HEATER ASSY, IMMERSION 3000W/240VAC |
| 4 | 1 | 1024.00111.00 | GROMMET, SILICONE, W/ POSITION TABS |
| 5 | 3 | 1024.00050.00 | GROMMET, SILICONE, 11.4mm ID |
| 6 | 1 | 1024.00007.00 | O-RING, DASH #344, TANK COVER |
| 7 | 1 | 1102.00207.00 | TANK COVER ASSEMBLY, TBS-2121 |
| 8 | 3 | 1024.00062.00 | GROMMET, SHORT, SILICONE, LEVEL AND TEMP PROBE |
| 9 | 1 | 1112.00002.00 | PROBE WELDMENT, WATER LEVEL 2.25" LG |
| 10 | 1 | 1102.00161.00 | PROBE ASSEMBLY, TEMP. AND LLC, 8" LONG |
| 11 | 1 | 1023.00362.00 | FITTING VENT, ELBOW, .375" X .375", SELF POSITIONING |
| 12 | 2 | 1023.00167.00 | FITTING, STRAIGHT, GROMMET, .500" |
| 13 | 1 | 1023.00166.00 | FITTING, COLD WATER INLET, GROMMET DESIGN |
| 14 | 1 | 1053.00051.00 | THERMOSTAT, SINGLE SHOT, 240V/25A |
| 15 | 2 | 1083.00009.00 | WASHER, #6 SCREW, INTL TOOTH LOCKWASHER |
| 16 | 2 | 1084.00010.00 | NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED |
| 17 | 1 | 1003.00140.00 | ALUMINUM BRACKET FOR SSR |
| 18 | 1 | 1052.00033.00 | RELAY, SOLID STATE, 50A/480VAC, W/BUILD IN VARISTOR |
| 19 | 2 | 1081.00042.00 | STANDOFF, 1/4" HEX |
| 20 | 1 | 1022.00112.00 | TANK INSULATION, CBS-1221 |



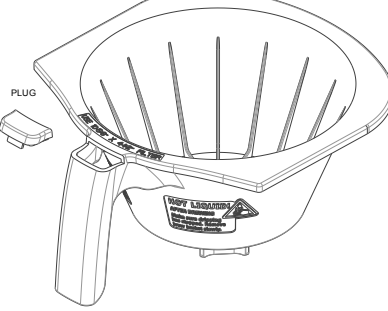
| ITEM | Qty | PART NO | DESCRIPTION |
|------|-----|----------------------|--|
| 1 | 1 | 1114.00173.00 | WELDMENT, TANK, CBS/MBS-1221, ONE HEATER |
| 2 | 1 | 1107.00002.00 | HEATER ASSY, IMMERSION 3000W/240VAC (1104.00203.00) |
| 2 | 1 | 1107.00003.00 | HEATER ASSY, IMMERSION 1700W/120VAC (1103.00304.00) |
| 3 | 1 | 1024.00111.00 | GROMMET, SILICONE, W/ POSITION TABS |
| 4 | 3 | 1024.00050.00 | GROMMET, SILICONE, 11.4mm ID |
| 5 | 1 | 1024.00007.00 | O-RING, DASH #344, TANK COVER |
| 6 | 1 | 1102.00207.00 | TANK COVER ASSEMBLY, TBS-2121 |
| 7 | 2 | 1024.00062.00 | GROMMET, SHORT, SILICONE, LEVEL AND TEMP PROBE |
| 8 | 1 | 1112.00002.00 | PROBE WELDMENT, WATER LEVEL 2.25" LG |
| 9 | 1 | 1102.00161.00 | PROBE ASSEMBLY, TEMP. AND LLC, 8" LONG |
| 10 | 1 | 1023.00362.00 | FITTING VENT, ELBOW, .375" X .375", SELF POSITIONING |
| 11 | 2 | 1023.00167.00 | FITTING, STRAIGHT, GROMMET, .500" |
| 12 | 1 | 1023.00166.00 | FITTING, COLD WATER INLET, GROMMET DESIGN |
| 13 | 1 | 1053.00051.00 | THERMOSTAT, SINGLE SHOT, 240V/25A |
| 14 | 2 | 1083.00009.00 | WASHER, #6 SCREW, INTL TOOTH LOCKWASHER |
| 15 | 2 | 1084.00010.00 | NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED |
| 16 | 1 | 1003.00140.00 | ALUMINUM BRACKET FOR SSR |
| 17 | 1 | 1052.00033.00 | RELAY, SOLID STATE, 50A/480VAC, W/BUILD IN VARISTOR |
| 18 | 2 | 1081.00042.00 | STANDOFF, 1/4" HEX |
| 19 | 1 | 1022.00112.00 | TANK INSULATION, CBS-1221 |
| 20 | 2 | 1022.00032.00 | SLEEVE, Ø.50 x 2.0" LG. x 1.50" SLOT |

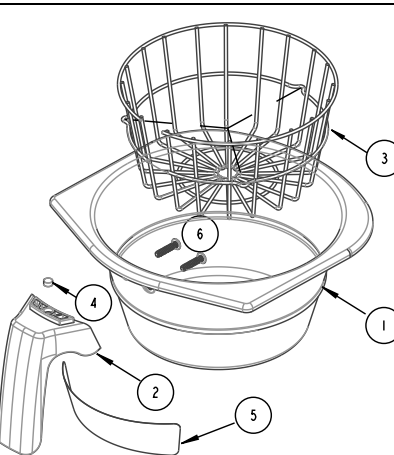
| Spray Housing Assembly Parts | | | CBS-1221/TBS-1221/MBS-1221 | |
|------------------------------|-----|--|---|--|
| | Ref | PART NO | DESCRIPTION | |
| | 1 | 1102.00203.00 | Complete Spray Housing | |
| | 2 | 1102.00019.00 | Replacement, Cascade Spray Dome | |
| | 3 | #3 Contained in KIT 1000.00097.00 | Valve Diaphragm | |
| | | | Adapter Plate, Spacer | |
| | | | Plunger, Dispense Valve 24VDC | |
| | | | Spring, Dispense Valve 24VDC | |
| | | | Coil And Frame Assembly DSV11 24VDC | |
| | | | Screw, #6-20 X 1/2", Phil | |
| | 4 | #4 Contained in KIT 1000.00096.00 1102.00020.00 | Spray Housing Assy CSD DESIGN | |
| | | | O-Ring, AS568A-019, BUNA-N | |
| | | | Assembly, Cascade Spray Dome | |
| | | | Adapter, Spray HSG, DSV11 VALVE | |
| | | | Screw, M3.9X13, Cheese PH | |
| | 5 | <u>Valve rebuild kit</u> 1000.00098.00 | <u>Kit Contains:</u> Spring Diaphragm Plunger | |
| | | | | |

Brew Basket Parts

| | | | |
|---|--|---|--|
|  | Part Number B014218BN2 Large Plastic Brew Basket | | |
| | 1023.00195.00 | BROWN PLUG, BB HANDLE (STANDARD) | |
| | 1023.00194.00 | BLACK PLUG, BB HANDLE (OPTIONAL) | |
| | 1023.00190.00 | RED PLUG, BB HANDLE (OPTIONAL) | |
| | 1023.00191.00 | GREEN PLUG, BB HANDLE (OPTIONAL) | |
| | 1023.00192.00 | ORANGE PLUG, BB HANDLE (OPTIONAL) | |
| | 1023.00180.00 | BLUE PLUG, BB HANDLE (OPTIONAL) | |

| Part Number B003218B1 Large Stainless Steel Brew Basket | | | |
|---|-----|---------------|--|
| Ref# | Qty | Part Number | Description |
| | | B003218B1 | Complete Stainless Steel Brew Basket |
| 1 | 1 | 1112.00128.00 | BB WELDMENT 13" X 5", .218 DIA HOLE |
| 2 | 1 | 1046.00025.00 | BREW BASKET WARNING LABEL |
| 3 | 1 | 1082.00040.00 | SCREW, 1/4-20 X .5, FL HD, PH., W/NYLN |
| 4 | 1 | 1009.00006.00 | WIRE BASKET |
| 5 | 1 | 1102.00064.00 | HANDLE W/MAGNET ASY, BLACK |
| Optional colored handle | | 1102.00065.00 | HANDLE W/MAGNET ASY, RED |
| Optional colored handle | | 1102.00066.00 | HANDLE W/MAGNET ASY, GREEN |
| Optional colored handle | | 1102.00067.00 | HANDLE W/MAGNET ASY, ORANGE |

| | | | |
|---|---|--|---|
|  | Part Number B024230BN2 Standard Plastic Brew Basket | | |
| | Part Number | | Description |
| | B024230BN2 | | Complete Standard Plastic Brew Basket |
| | 1023.00359.00 | | PLUG, FOR AIR POT BREW BASKET ONLY, BROWN |



| Part Number B025230B1 Standard Stainless Steel Brew Basket | | | |
|--|-----|---------------|---------------------------------------|
| Ref | Qty | Part Number | Description |
| | | B025230B1 | Complete Stainless Steel Brew Basket |
| 1 | 1 | 1004.00053.00 | BREW CONE, CBS-1221, 8" W/ .230" HOLE |
| 2 | 1 | 1023.00358.00 | HANDLE, BREW BASKET, |
| 3 | 1 | 1009.00014.00 | WIRE BASKET, CBS-1221, 8" BREW BASKET |
| 4 | 1 | 1057.00016.00 | MAGNET, NEODYMIUM, 25"OD x .125"THK. |
| 5 | 1 | 1046.00061.00 | LABEL, BREW BASKET WARNING, AIR POT |
| 6 | 2 | 1082.00123.00 | SCREW, ROUND HD. PHIL. |

Wiring Diagram

