FETCO USER'S GUIDE & OPERATOR INSTRUCTIONS

FETCO COFFEE BREWER: CBS-1150 EXTRACTOR® V+™

CBS-1151-XV+

CBS-1152-XV+

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Specifications and Requirements

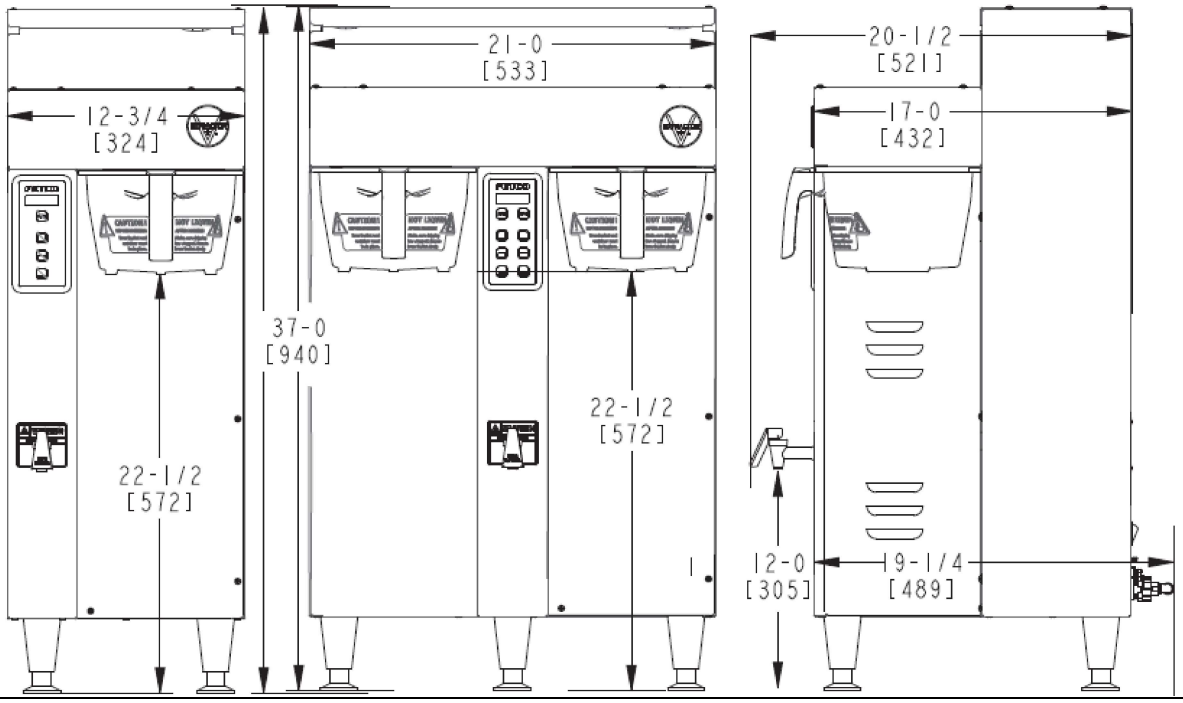
Water Requirements:
CBS-1150 XV+ 20-75 psig, (138-517kPa) 1½gpm/(5.7lpm)
Water supplied to hot beverage equipment should be filtered
Water supplied Hardness >100 TDS (5.5 grain)
Water inlet fitting: 3/8 inch male flare.
Brew Volume: Full Batch 1 ½ gallon/ 6 liters

Coffee Filter Size:
15" X 5 ½ "– standard FETCO # F001
Temperature, as set by factory:
200°F (93°C) inside water tank (at sea level)
Electrical: See electrical configuration chart.

Total Brew Cycle: Factory setting: 5.5 minutes consisting of 4 minute brew time + 1.5 minute drip delay
Brew-Process parameters are user controllable for:
Brew Volume, Brew Time, Prewet Percent and Prewet Delay, Drip Delay

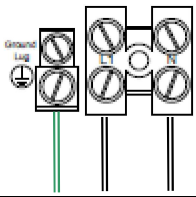
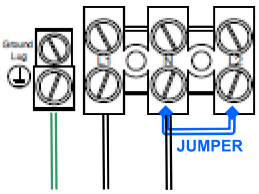
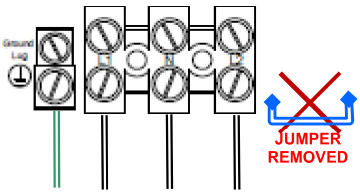
.

Rough-In Drawings



CBS-1151 XV+ Front | **CBS-1152 XV+ Front** | **CBS-1151 XV+ & CBS-1152 XV+ Side**

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

CBS-1151 XV+	CBS-1152 XV+ factory configuration 208-240 volt single phase	CBS-1152 XV+ *Field installed configuration 208-240 volt three phase connection
		
	Single phase—2 HEATER	**Three phase—3 HEATER**
	Field conversion is to be made only by licensed electrician. Disconnect equipment from power supply before service. Remove jumper between L2 and L3, and apply power to L3	

Electrical and Output Specifications for CBS-1151 XV+ Single 1½ Gallon-6 Liter Coffee Brewers

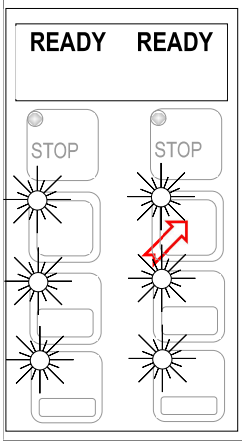
Configuration Codes	Heater Configuration	Voltage	Phase	Wires	Electrical Connection	KW	Maximum Amp Draw	Brew-Volume/Hour
Domestic USA and Canada		CBS-1151 XV+ Standard-Voltage With cUL/UL & NSF-4 Certification						
E115151	2 X 3.0 kW	208-240	1	2+G	Terminal Block	4.6-6.1	22.4-25.8	15.3 gal/58 liters
Domestic & International Versions		CBS-1151 XV+ With cUL/UL & NSF-4 Certification						
E115190	1 X 4.0 kW	200-240	1	2+G	Terminal Block	4.1	14.2-17.1	9.3 gal/35 liters
E115191	1 X 5.0 kW	200-240	1	2+G	Terminal Block	5.1	17.7-21.3	12.7 gal/48 liters
E115192	2 X 3.0 kW	200-240	1	2+G	Terminal Block	6.1	21.3-25.5	15.3 gal/58 liters
E115193	2 X 2.3 kW	200-240	1	2+G	Terminal Block	4.7-6.1	22.1-25.5	14.0 gal/53 liters
Export CBS-1151XV+		With cUL/UL & NSF-4 Certification						
E115180	1 X 5.0 kW	200-240	1	2+G	Terminal Block	3.6	17.7	11.6 gal/44liters
CE With Internal EMI Filter.		CBS-1151 XV+ With CE & NSF-4 certification. Not cUL or UL Listed						
(CE) E115162	2 X 2.3 kW	230/400	2	2L,N,PE	Terminal Block	5.6	12.4	14.0 gal/53 liters
(CE) E115161	2 X 3.0 kW	230/400	2	2L,N,PE	Terminal Block	6.1	21.3-25.5	15.3 gal/58 liters

.

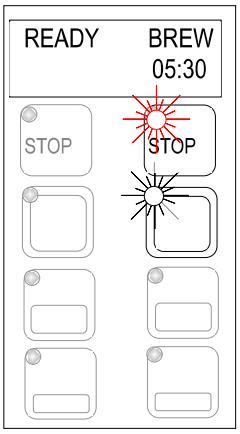
Electrical and Output Specifications-for CBS-1152 XV+ Twin 1½ Gallon-6 Liter Coffee Brewers

Configuration Codes	Heater Configuration	Voltage	Phase	Wires	Electrical Connection	KW	Maximum Amp Draw	Brew-Volume/Hour
USA and Canada		CBS-1152 XV+ Field Selectable Electrical With cUL/UL & NSF-4 Certification						
E115251 Selectable Sold as1 phase	2 X 3.0 kW	200-240	1	2+G	Terminal Block	4.6-6.1	22.4-25.8	15.3 gal/58 liters
	3 X 3.0 kW	200-240	3	3+G	Terminal Block	6.9-9.1	19.5-22.5	22.5 gal/85 liters
E115252 Selectable Sold as1 phase	2 X 5.0 kW	200-240	1	2+G	Terminal Block	7.6-10.1	36.9-42.5	25.3 gal/97 liters
	3 X 5.0 kW	200-240	3	3+G	Terminal Block	11.4-15.1	32.0-36.9	38.3 gal/145 liters
Domestic & International Versions		CBS-1152 XV+ Standard-Voltage With cUL/UL & NSF-4 Certification						
E115292	2 X 3.0 kW	200-240	1	2+G	Terminal Block	4.6-6.1	22.4-25.8	15.3 gal/58 liters
E115294	2 X 5.0 kW	200-240	1	2+G	Terminal Block	7.6-10.1	36.9-42.5	25.3 gal/97 liters
E115296	3 X 4.0 kW	240/415	3	4+G	Terminal Block	12.2	15.7-17.1	29.5 gal/112liters
E115290	3 X 3.0 kW	220/380 or 240/415	3	4+G	Terminal Block	9.1	11.8-12.9	22.5 gal/85 liters
E115291	3 X 5.0 kW	220/380 or 240/415	3	4+G	Terminal Block	15.1	19.5-21.4	38.3 gal/145 liters
Export		CBS-1152 XV+ With cUL/UL & NSF-4 Certification						
E115280	3 X 3.0 kW	200	3	3+G	Terminal Block	6.5	18.6	17 gal/64 liters
CE With Internal EMI Filter.		CBS-1152 XV+ With CE & NSF-4 Certification. Not cUL or UL Listed						
(CE) E115261	3 X 3.0 kW	230/400	3	3L,N,PE	Terminal Block	8.6	12.4	22.5 gal/85 liters
(CE) E115262	3 X 5.0 kW	230/400	3	3L,N,PE	Terminal Block	14.1	20.4	38.3 gal/145 liters

Starting The Brew



1. Turn the power switch “ON”. (Twin Shown)
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,
   -Countdown time will display,
   -Selected BREW button will flash to indicate brew is in progress.
   -All other BREW buttons for that brew head will extinguish.
7. When the brew cycle is finished,
STOP button will extinguish and the BREW button will continue to flash for the amount of time programmed into the 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.



Twin Brewer ready to brew. Pressing top right brew position **Brewing-see #6 above**

Enter Programming

Screens shown are for twin brewer. Single brewer will not have menu A4-A6.
There are five menu groups-A-E . See the following pages for the batch parameter definitions and all settings for the brewer

TO ENTER PROGAMMING

1-Turn brewer “OFF” from power switch
2-Turn power switch to “ON”

…Screen will initialize and then display digital process notifications

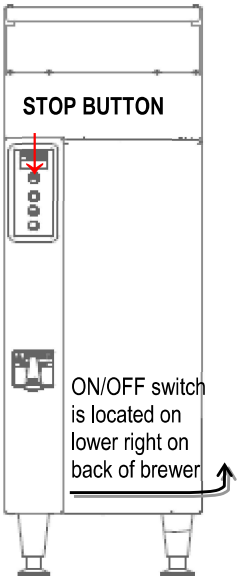
3-After Initialization-Red “STOP” Lamp turns on
4-Quickly hold down “STOP” button for 5 seconds

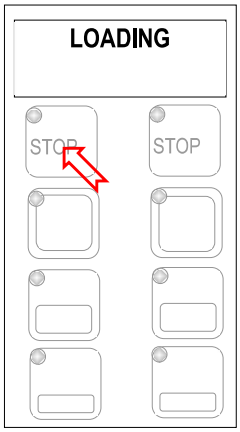
When brewer is In PROGRAMMING MODE
-the screen will display:

|BATCH PRG|
|A (or B-E) |

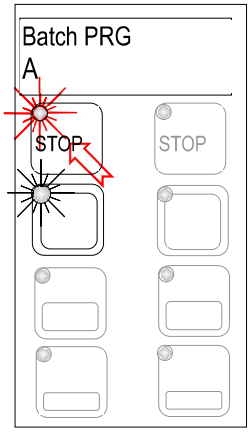
-Illuminated LED indicates active keypad positions

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



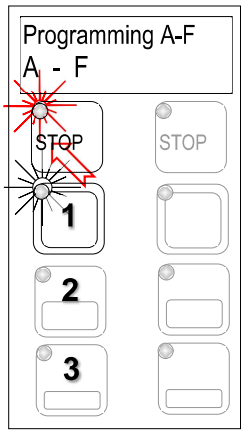


Turn power OFF
Turn power ON
Wait for red LED
PRESS STOP BUTTON
(no need to hold)

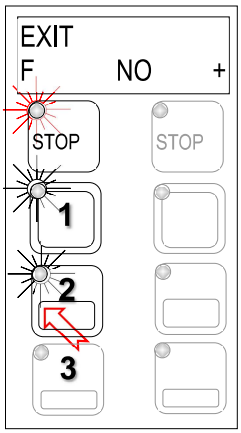


First screen will display
Batch PROGAMMING-A
Scroll through main menu topics A-F by pressing “STOP” button.

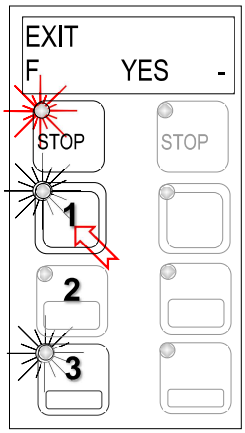
Exit Programming & Save Control Setting Changes



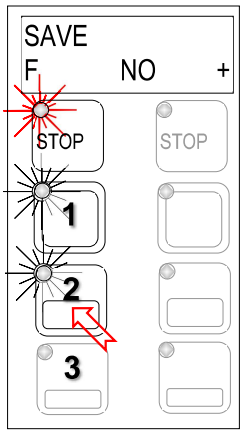
From any screen-
Press STOP button until the EXIT (“F”) screen appears



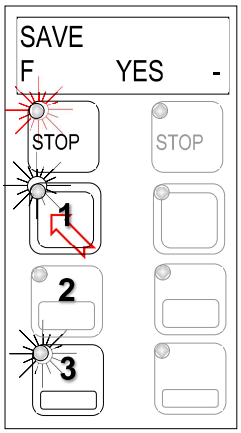
From the “F” screen
Press button **2** to toggle to the EXIT-**YES** screen



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

PROGRAMMING MENU LAYOUT

CBS XV+ Series

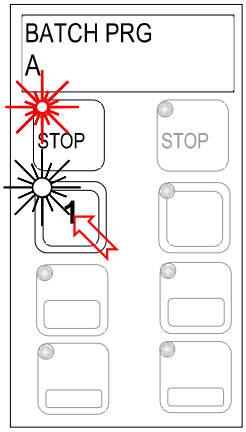
SINGLE	TWIN
A1 top	A1&A4
A2 center	A2&A5
A3 bottom	A3&A6

A1. to A7	B1.0 to B1.7	C1.0 to C1.3	D1.0 to D1.5	E1.0 to E1.8
PROGRAM	**GENERAL**	**INPUTS**	**OUTPUTS**	**OTHER**
A10 PERMANENT (Position A10&A40 are permanent)				
A11 Brew Volume	B1 Tank Temp	C1 LLC Probe	D1 Test Heater	E1 Display Firmware
A12 Brew Time	B2 [Brew at Temp]	C2 B. Basket Sensor	D2 Test Fill Valve	E2 Select Brewer Model
A13 Prewet Percent	B3 LLC Sensitivity	C3 Tank water temp.	D3 Test L. Brew Valve	E3 Display Errors
A_4 Prewet Delay (only when prewet % >0%)	B4 Temperature F/ C	C4 Keypad Test	D4 Test R. Brew Valve	E4 Clear Errors
A16 Drip Delay	B5 Volume unit G or L		D7 LCD Brightness	E5 Reload Defaults
A20 Batch ACT*IVATE*?	B6 Left Flow Rate			E6 Save through USB
A30 Batch ACT*IVATE*?	B7 Right Flow Rate			E7 Load through USB
A40 PERMANENT	B10 Slow Mains Flow			E8 Demo Mode
A50 Batch ACT*IVATE*?				
A60 Batch ACT*IVATE*?				
A70 Recipe Copy?				

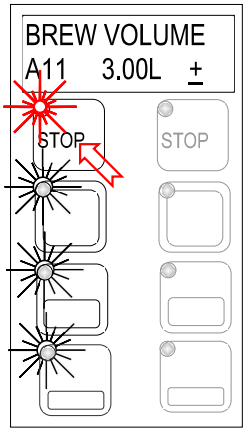
Top left A11 & top right A41 are permanent SEE BOX BELOW FOR ALL “A” MENUS

The A menus [A1-3 or A1-6] correspond to batch buttons [3 or 6] on the touch panel

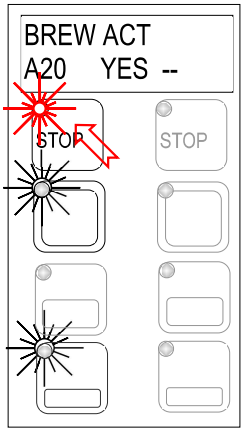
Access the A menus to PROGRAM & make changes to individual menu recipes. Menu settings can be copied
Menu positions A1 and A4 [top position] are permanent. Menus A2, A3, A5, A6 can be removed by operator if desired



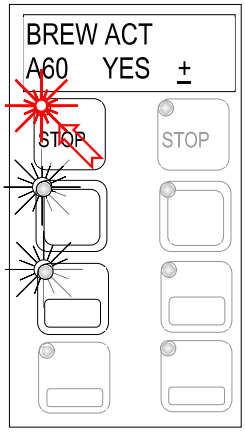
From A PRG screen
Press button 1 to go to the A menu access screen



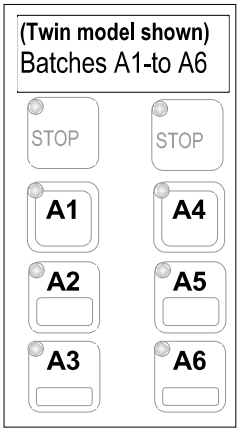
From A11 screen
Press **STOP** to scroll to A20.
(A1&A4 are permanent)



From A20 screen
Press STOP to scroll through the remaining (3 or 6) “A” menus. Make any changes as required



From A60 screen
Scroll out to remaining A10-to A70 programming keys.
See SAVE & EXIT in previous table



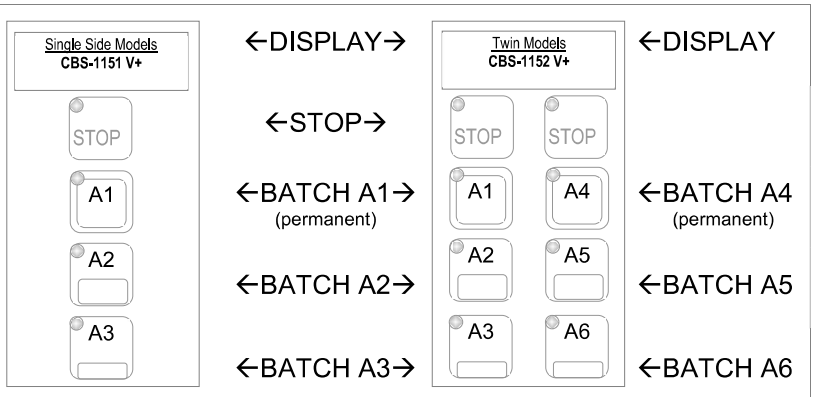
For single and twin
Position of batch buttons

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	1.5 gal 5.65 liters	0.50 to 2.00 gal 1.90 to 7.60L	0.01G 0.05L	Unit software is in liters; converts to gallon
A12	Brew Time (MIN:SEC)	4:00 minutes	2:00 – 12:00	0.30	Default total brew time is 5:30 minutes
A13	Prewet Perc.	0%	0.00 – 15.0%	1%	Percentage of total brew volume
A14	Prewet Delay (Pause after prewet completes)	0% [1:00 Min]	[0:10 – 5:00]	1:00 min	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.		Time brew basket should remain in place during final drip-out →Drip delay remains "ON" for 1:30 minutes if STOP is pressed during brew†
A20	BATCH ACT A20 YES **-** NO **+**	YES (Active)	Middle and Bottom batches A2,3,5,6	Batch on or off	Batches may be individually enabled, rewritten or deactivated
A21	Batch Volume	1.5 gal 5.65 liters	0.50 to 2.00 gal 1.90 to 7.60L	0.01G 0.05L	Unit software is in liters; converts to gallon
A22	Brew Time (MIN:SEC)	4:00 minutes	2:00 – 12:00	0.30	Default total brew time is 5:30 minutes
A23	Prewet Perc.	0%	0.00 – 15.0%	1%	Percentage of total brew volume
A24	Prewet Delay (Pause after prewet completes)	0% [1:00 Min]	[0:10 – 5:00]	1:00 min	The time between prewetting and start of brew cycle. **This feature appears ONLY if Prewet >0:00**
A26	Drip Delay	1:30 mm:ss	0:30 – 6:00 Min.		Time brew basket should remain in place during final drip-out →Drip delay remains "ON" for 1:30 minutes if STOP is pressed during brew†
Batch Copy	Copy From Batch	A71	A71 1 (1-6)		
	Copy To Batch?	A72	A72.1 (1-6)		
CBS-1151V+Topmost Batch cannot be disabled. CBS-1152V+Topmost Batch LEFT & RIGHT cannot be disabled. Middle and bottom batches may be disabled for single and twin brewer (CBS-1151 XV+ and CBS-1152 XV+) **† DRIP DELAY** will not activate when STOP is pressed within 5 seconds of starting a brew time					

RECIPE Location map

Viewing and changing settings for the brew recipes is from the "A" screens with the controls in PROGRAMMING.

The uppermost button positions are permanent and will not display programming step A_0. The table above shows in position A20 that a button position can be made active or inactive. Position A1 does not display this step



B GENERAL	Brewer Operation Control Settings, Adjust Brew Flow Rate				
POSITION	Program Items	Factory set Default	Programming Range	Increments	Notes
B1	Tank Temp.	93° C -or- 200°F NOTE: Equipment is metric by default	70° to 96°C 157°F to 205°F	0.5°C 1.0°F	See below for chart to correct for high altitude
B2	Brew at Temp.	"YES"	ON/OFF	YES/NO	**SEE NOTE BELOW**
B3	LLC Sensitivity	LOW	LOW is "normal" for most water "HIGH" for R.O.	LOW or HIGH	Liquid level control sensitivity. High,1300Ω is for reverse osmosis water or very pure water.
B4	Temperature Scale	°F Fahrenheit	Celsius Fahrenheit	**C/F**	**NOTE**: Overwrites user settings (see page 9)
B5	Volume Scale	G Gallons	Gallons/Liters	**L/Gal**	**NOTE**: Overwrites user settings (see page 9)
B6	LEFT brew valve F.R. is in Liters/Min	CBS-1152 3.40L/0.9G	2.9-3.9Liter 0.73-1.01Gallon	0.50L 0.01Gal	Adjusts flow rate
B7	RIGHT brew valve F.R. is in Liters/Min	CBS-1151&1152 3.40L/0.9G	2.9-3.9Liter 0.73-1.01Gallon	0.50L 0.01Gal	Adjusts flow rate
B10	Low flow rate from mains	NO	OFF/ON	Toggle +/- YES or NO	Trims fill system for low supply

Use this formula to compensate for minor discrepancies in actual volume versus programmed volume

$$\frac{\textbf{Measured Volume}}{\textbf{Programmed Volume}} \times \textbf{Current Setting} = \textbf{New Setting}$$

Use this formula to determine flow rate to compensate for minor discrepancies in actual volume versus programmed volume. Enter new setting in B6 or B7

Use the formula above to compensate and fine-tune brew volume. Brew valve and bypass valve flow rates are in liter/min. Enter the brew valve New Setting value into B6/B7 and save as in the "F" screen (Brew volume is set at position A11)
HINT: Set lower to increase volume, higher to decrease volume. TIP: Always check flow from supply for fouled water filter

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.

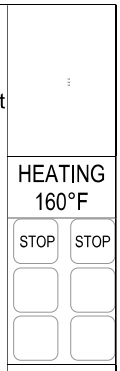
Notifications shown on screen:
TEXT: **HEATING**→Tank above 87°C/189°F-will allow brew at low temperature.
Coffee flavor may be affected
TEXT: **L. HEAT**→Tank above 76°C/169°F-will allow brew at low temperature.
Coffee flavor will be noticeably affected

Hot water tank not at brew temp setpoint.

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 cold temperature
Allows brewing at any temperature above 77°C/170°F
Below 70°C/170°F-the red colored ready lights switch turn off

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 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 resistivity 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	Keyboard Test	Calibrate	Checks buttons under membrane cover	YES/NO	Follow directions on the touch screen

D OUTPUTS	Test Valves and Heaters; Set screen brightness				
POSITION	Program Items	Factory set Default	Programming Range	Increments	Notes
D1	Heater Test	Press button 2 to test (button 1 stops test)	Activates valve 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
D3	Left Valve Test	Press button 2 to test (button 1 stops test)	Activates valve Default is 10 sec.	Toggle +/- OFF or ON	Runs valve to verify flow. NOTE: Have container under brew basket.
Single series displays LEFT side only RIGHT Valve display is only for CBS-1152 XV+ twin side brewer.					
D4	Right Valve Test	Press button 2 to test (button 1 stops test)	Activates valve Default is 10 sec.	Toggle +/- OFF or ON	Press To Test
D7	LCD Brightness	Brightness=8	0-15	1	Adjust LCD screen brightness only-Not for LEDs under buttons

E OTHER	Software & Code View and Settings				
POSITION	Program Items	Factory set Default	Programming Range	Increments	Notes
E1	Display Firmware	1.0.1744			Displays current version
E2	Select Model	CBS-1151 XV+ OR CBS-1152 XV+ Will need reboot	Scroll to brewer model Save&Exit	CBS_1131; CBS_1132; **CBS_1151; CBS_1152**	**NOTE**: Overwrites all user settings **(See page 9)**
E3	Display Errors	Lists up to six codes, in order	**1:** ; **2:** ;**3:**;**4:** ;**5:** ;**6:** 1=Newest/6=Oldest LAST six errors only	Newest=last Oldest=first	See Error Code Chart for references
E4	Reset Errors FACTORY USE ONLY	NO +		Toggle +/- YES or NO	NOTE: Always contact FETCO Technical Service for errors (800)338-2699
Resetting error codes should be after completing the service and factory diagnostics and correcting any brewer faults NOTE ☞Clear error codes by cycling the brewer "OFF" then "ON". See Page 9.					
E5	(Reload) DEFAULTS	Reset to default of base model	Will need reboot	Toggle +/- YES or NO	**COMPLETELY OVERWRITES ALL USER SETTINGS**
E6	USB Data Save	Save data to USB			
E7	Load From USB	Plug in USB flash-drive device.	Will need reboot		
E8	DEMO Mode	DEMO ON/OFF	Will need reboot		Demonstrates the controls for training. Brewer will not brew when in demo mode. Reset in E8 to "OFF" to exit

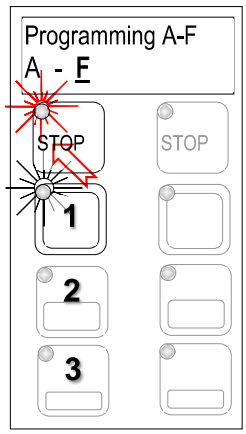
F SAVE & EXIT — Saving changes and exiting PROGRAMMING

The brewer will save changes only from the "F" menu. **DO NOT** reboot brewer or toggle ON/OFF-exit as below.
DO NOT attempt to save by rebooting (turning power OFF then ON). All changes made will be discarded and brewer will remain in the existing default settings

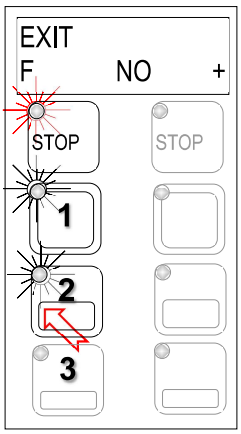
TO EXIT PROGRAMMING & HOW TO SAVE CONTROL SETTING CHANGES

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

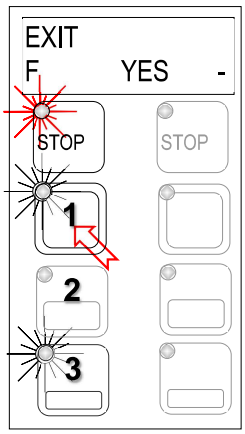
You may exit programming at any time. After programmed settings are saved, the brewer exits PROGRAMMING mode and returns to regular brew operations. Settings are saved only when brewer returns to OPERATING MODE



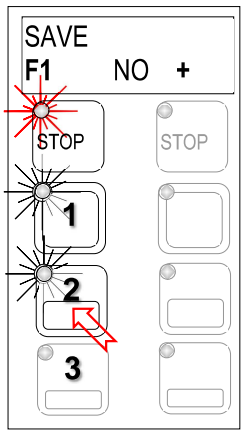
From any screen- Press STOP button until the EXIT ("F") screen appears



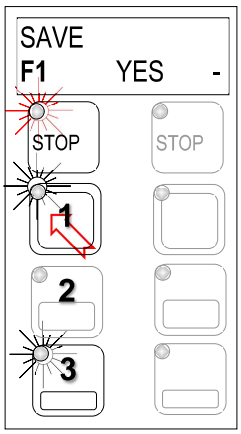
From the "F" screen Press button **2** to toggle to the EXIT-**YES** screen



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 (G gallons, L liters). **(SETTING B5)**
3) When setting brewer model →The software sets equipment to brewer defaults **(SETTING E2)**
4) When resetting (Reloading) DEFAULTS **(SETTING E5)**
5) When loading from USB (Reloads to defaults) **(SETTING E7)**

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 power 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 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: reassemble correctly
NO BSKT **Insert Brew Basket**		Brew basket must be in place **This is a SAFETY FEATURE**	Insert brew basket into brewer rails to enable brewer

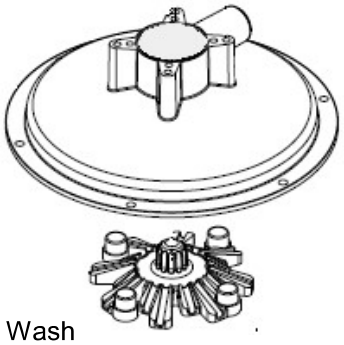
Operator Training

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 half way with hot water, and letting them stand for at least 5 minutes. Drain, and begin first brew
2. Make sure the dispenser is empty before brewing into it..
3. Show how to attach covers, close, and or secure the dispensers for transporting.
4. Do not remove the brew basket from a coffee brewer until it has stopped dripping.
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 used coffee filter and grinds 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 provides very hot water from the spray head, brew basket and faucet when it is pulled.
8. 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, do not remove brew basket during the brew.

Keep these instructions for training and future reference.

Installation Guide

(For Qualified Service Technicians Only)

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.

Electrical:

1. All FETCO 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 regards 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 for connections

Plumbing:

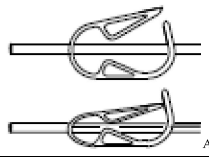
1. North America: All installations must comply with applicable federal, state, or local plumbing codes.
2. All Others: The water and waste piping and connections shall comply with the International Plumbing Code 2003, International Code Council (ICC), or to the Uniform Plumbing Code 2003 (IAPMO).
3. Use an inline water filter for all beverage equipment.
4. Install the filter unit after a water shutoff valve and in a position to facilitate filter replacement.
5. The water line and newly installed filter cartage must be flushed thoroughly prior to connecting it to the brewer to prevent debris from contaminating the machine.
6. 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.
7. 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 install has been completed
8. 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.

Tank Drain

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

1. Disconnect power and water to unit. DANGER: Insure 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 more than four 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. Multiple buckets may be needed during the draining, see tank volumes below.

Brewer	Hot Water Tank Capacity	OPEN Leave open for use PINCH SHUT To drain tank & service brewer	
CBS-1151 XV+ Single	6.3 gal 24 liter		
CBS-1152 XV+ Twin	11.5 gal 44 liter		

Layout of the brewer Operation and service

Brew basket sensor (internal)

Touch-screen (for brewer operation)

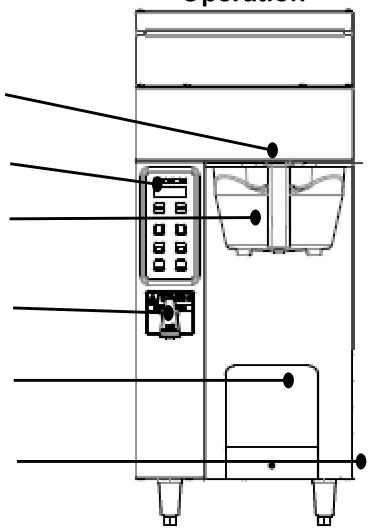
Brew basket

Hot Water Service Faucet

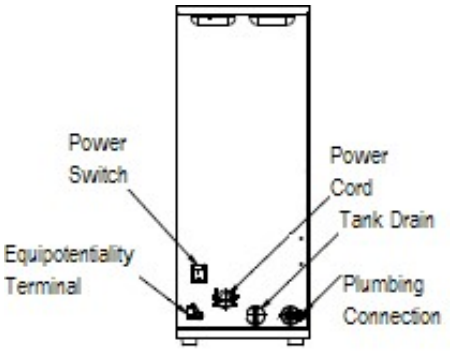
Airpot or Dispenser Locator

Main power switch

Operation



Service



Layout for installing brewer

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

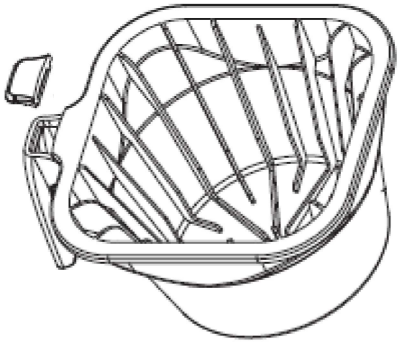
WARNING	**To reduce risk of electric shock or fire.**
	FETCO® Hot Beverage Equipment is for commercial use only.
	Do not remove or open cover. No user serviceable parts inside. Refer installation and service to qualified personnel.
	Caution, disconnect from power supply before servicing.
	GROUND: National 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.**

Brew Basket Parts

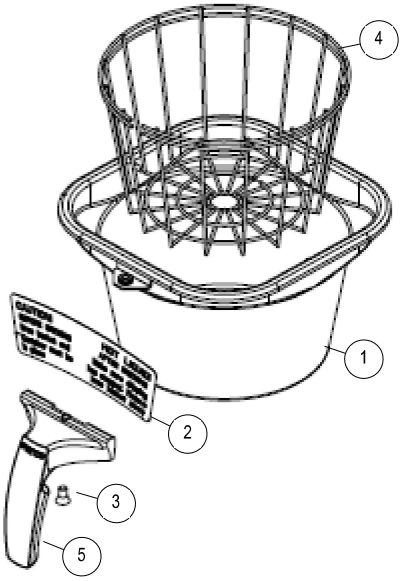
STANDARD Plastic Brew Basket	
Part Number B015280BN2 – Complete Plastic Brew Basket	CBS-1151 & CBS-1152 XV+

Brown colored insert is standard

Brew basket handle plug for polymeric brew baskets is available in optional colors.

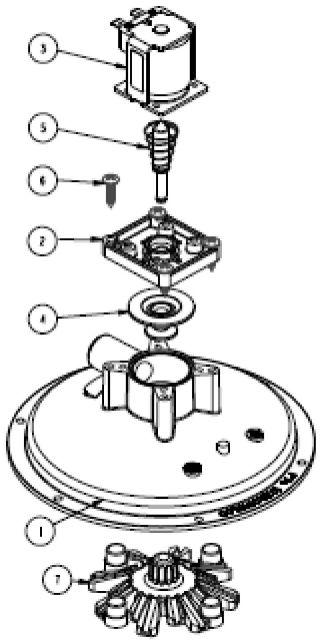


Part Number	Plug Insert color
1023.00195.00	BROWN PLUG, BB HANDLE
1023.00194.00	BLACK PLUG, BB HANDLE
1023.00190.00	RED PLUG, BB HANDLE
1023.00191.00	GREEN PLUG, BB HANDLE
1023.00192.00	ORANGE PLUG, BB HANDLE
1023.00180.00	BLUE PLUG, BB HANDLE

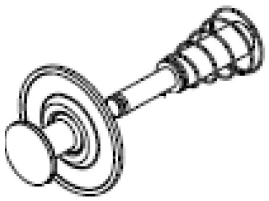


OPTIONAL Stainless Steel Brew Basket			
Ref#	Qty	Part Number	Description
←		B001280B1	COMPLETE STAINLESS STEEL BREW BASKET
1	1	1112.00058.00	BREW BASKET WELDMENT (CONE ONLY)
2	1	1046.00025.00	BREW BASKET WARNING LABEL
3	1	1082.00040.00	SCREW,1/4-20X.5,FL-HD,PH.,W/NYLON PATCH
4	1	1009.00005.00	WIRE BASKET
5	1	1102.00064.00	HANDLE W/MAGNET ASSEMBLY, BLACK
Optional colored handle		1102.00065.00	HANDLE W/MAGNET ASSEMBLY, RED
Optional colored handle		1102.00066.00	HANDLE W/MAGNET ASSEMBLY, GREEN
Optional colored handle		1102.00067.00	HANDLE W/MAGNET ASSEMBLY, ORANGE

1102.00223.01	Large Spray Assembly Parts	CBS-1151XV+ & CBS-1152 XV+



Ref	QTY	PART NO	DESCRIPTION
1	1	1102.00116.00	CSD LARGE SPRAY HOUSING
2	1	1023.00296.00	ADAPTER PLATE
3	1	1057.00072.00	COIL ASSEMBLY
4	1	1024.00038.00	LARGE BREW VALVE DIAPHRAGM
5	1	1102.00212.00	ASSEMBLY PLUNGER WITH 8.0 OZ SPRING 24 VDC
6	4	1082.00123.00	SCREW #8-15 X 0.75"TRUSS HEAD; SELF TAPPING
7	1	1102.00043.00	CASCADE SPRAY DOME CBS-2050/60'S



1000.00108.00 **Brew valve rebuild kit**

CONTAINS:

PLUNGER
SPRING
LARGE BREW VALVE DIAPHRAGM

Parts Diagram CBS-1151XV+

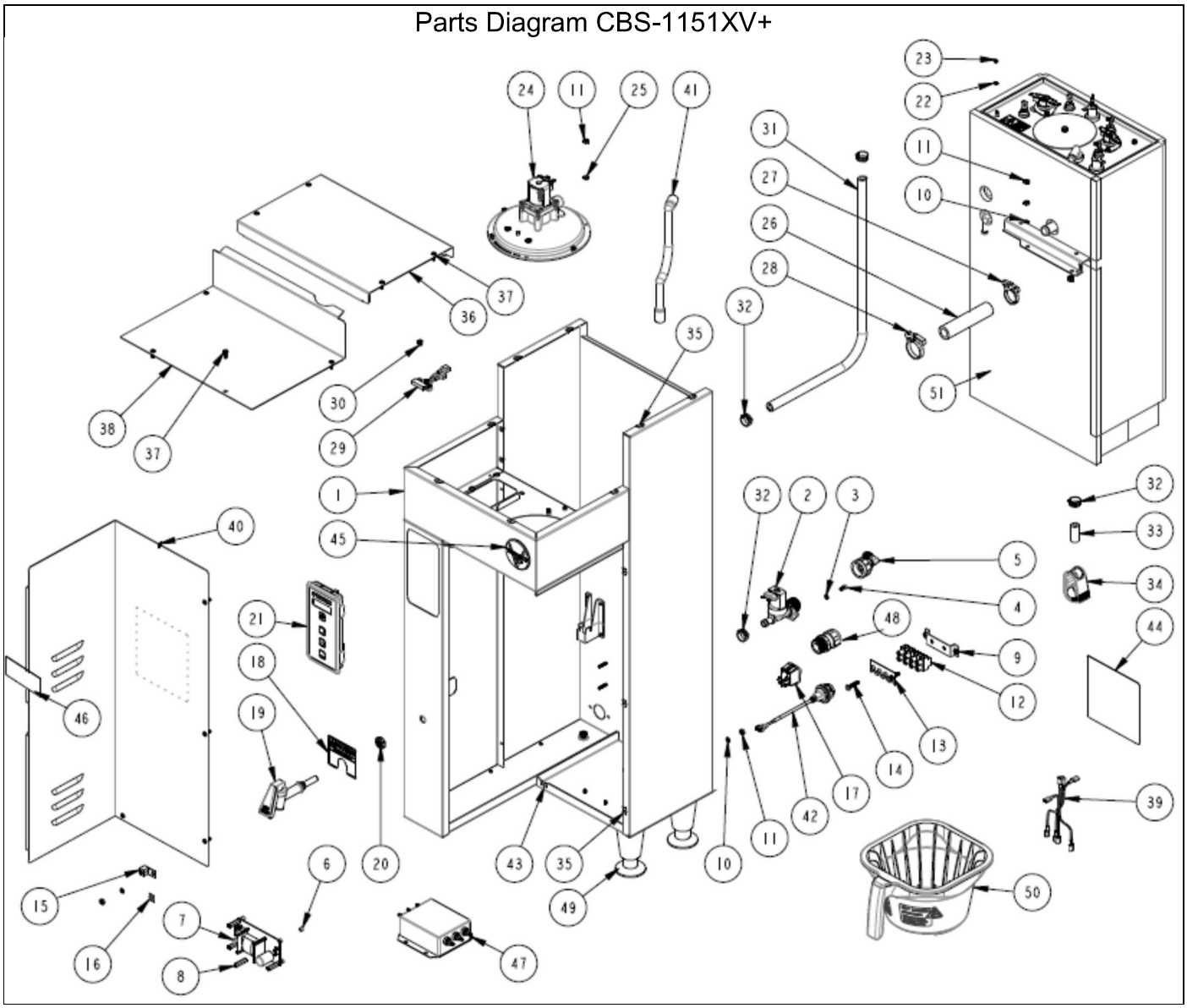


Table of Variables for CBS-1151XV+ Models			
SKU No.	TANK ASSY	WIRING DIAGRAM.	STRAIN RELIEF
E115151	1104.00061.01	1401.00147.00	1086.00008.00
E115161	1104.00061.01	1401.00159.00	1086.00031.00
E115162	1104.00096.01	1401.00159.00	1086.00031.00
E115180	1104.00095.01	1401.00152.00	1086.00008.00
E115190	1104.00097.01	1401.00153.00	1086.00008.00
E115191	1104.00095.01	1401.00153.00	1086.00008.00
E115192	1104.00061.01	1401.00154.00	1086.00008.00
E115193	1104.00096.01	1401.00154.00	1086.00008.00

Ref	Qty	Part Number	Description Drawing 1101.00342.00 CBS-1151XV+
1	1	1111.00088.00	WELDMENT, COMPLETE, CBS-1151 XV+
2	1	1057.00043.00	SOLENOID VALVE, 5.5L/min, 180 DEG, 24VDC
3	2	1083.00005.00	LOCKWASHER, M4 18-8 INTERNAL TOOTH
4	2	082.00010.00	SCREW, M4x10 ZINC-PLATED PAN HD. PHILLIPS MACHINE.
5	1	1102.00243.00	ADAPTER ASSY, 3/4" BSP x 1/4" NPT x 3/8" TUBE
6	8	1081.00006.00	SPACER, 6MM OD x 3.2MM ID x 5MM LG
7	1	1052.00001.00	POWER SUPPLY, 90-264VAC/24VDC, 1.8A
8	4	1029.00012.00	SPACER, .25" HEX X 1" LG, FEM #4-40 THREAD
9	1	1112.00268.00	WELDMENT, BRACKET TERMINAL BLOCK, 4 POLE
10	5	1083.00011.00	INTERNAL TOOTH LOCKWASHER, #8 SCREW SIZE,
11	13	1084.00006.00	NUT, 8-32 18-8 HEX MACHINE SCREW
12	1	1052.00023.00	EUROSTRIP HE16 TERMINAL BLOCK, 4 POLE, 63 AMP, 18-8 AWG
13	1	1052.00025.00	MARKING PLATE
14	2	1082.00082.00	SCREW, PHILLIP HD., 8-32 THREAD
15	1	1065.00009.00	GROUND LUG CONNECTOR, 14-2 AWG, ALUMINUM
16	1	1044.00012.00	LABEL GROUND, CE
17	1	1058.00024.00	SWITCH, POWER, DOUBLE POLE, 16A, 125/250 VAC
18	1	1046.00051.00	LABEL, "WARNING, EXTREMELY HOT WATER"
19	1	1071.00055.00	FAUCET, HOT WATER, PSC-BR-8, WITH FLAT AND STEM
20	1	1084.00048.00	JAM NUT, 1/2-20 UNF, NICKEL PLATED BRASS
21	1	1102.00375.00	ASSEMBLY, FRONT PANEL, CBS-1100 SINGLE
22	1	1083.00009.00	LOCKWASHER, #6 SCREW , INTERNAL TOOTH
23	1	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
24	1	1102.00223.01	SPRAY HOUSING, LARGE, 24 VDC, X
25	6	1083.00010.00	WASHER, #10 SCREW W/NEOPRENE-BONDED SEAL
26	1	1025.00021.00	TUBE, 31/32"OD X 5/8"ID X 4 1/4"LG, BREW
27	1	1086.00018.00	HEYCO HOSE CLAMP DIA. .875-1.00
28	1	1086.00017.00	HEYCO HOSE CLAMP DIA .1.031-1.187
29	1	1102.00113.00	SWITCH, REED, ASSEMBLY
30	1	1029.00006.00	NUT, FINGER, #4-40 NYLON
31	1	1025.00082.00	TUBE, 5/8"OD X 3/8"ID X 19.00"LG.
32	4	1086.00003.00	UNICLAMP, 15.9 HOSE OD CLAMP
33	1	1025.00058.00	TUBE, 9/16"OD X 5/16"ID X 25.00"LG
34	1	1086.00009.00	CLAMP, 3/4" MAX TUBE OD FLOW CONTROL
35	11	1084.00011.00	NUT, CLIP ON (J-NUT), #6-32, 22-20 GA.
36	1	1001.00362.00	COVER, TOP, CBS-1151
37	12	1082.00017.00	SCREW, TRUSS HD. PHIL. MACHINE, # 6-32 X 1/2 LG.
38	1	1001.00363.00	COVER, UPPER BASE, CBS-1151 XV+
39	1	1402.00097.01	HARNESS, LOW AMP, CBS-1151-XV+, UL
39	1	1402.00061.01	HARNESS HIGH AMP
39	1	1402.00050.01	HARNESS HIGH AMP CE
40	1	1112.00470.00	WELDMENT, RIGHT COVER, CBS-1150 XV+
41	1	1024.00098.00	VENT TUBE, XTS & XV+
42	1	1058.00055.00	USB CONNECTOR
43	1	1084.00024.00	NUT, CLIP ON (J-NUT), #6-32, 1050
44	1	1046.00035.00	LABEL, WARNING "TO REDUCE RISK OF ELECTRIC SHOCK OR FIRE"
45	1	1041.00031.00	LABEL, XV+ LOGO
46	1	1046.00003.00	LABEL, CSD WARNING, 1.5" X 5.0"
47	1	1052.00036.00	EMI FILTER
48	1	1086.00008.00	CORD STRAIN RELIEF-UL MODELS
48	1	1086.00031.00	CORD STRAIN RELIEF CE MODELS
49	4	1073.00007.00	LEG-FLANGE FOOT
50	1	B015280BN2	BREW BASKET-PLASTIC-STANDARD
50	1	B001280B1	BREW BASKET-STAINLESS STEEL- (OPTIONAL)
51	1	1104.00061.01	TANK ASSEMBLY, CBS1151 XV+ 2 X 3KW/240VAC
51	1	1104.00095.01	TANK ASSEMBLY, CBS1151 XV+ 5KW/240VAC
51	1	1104.00096.01	TANK ASSEMBLY, CBS1151 XV+ 2 X 2.3KW/240VAC
51	1	1104.00097.01	TANK ASSEMBLY, CBS1151 XV+ 4KW/240VAC

Parts Diagram CBS-1152XV+

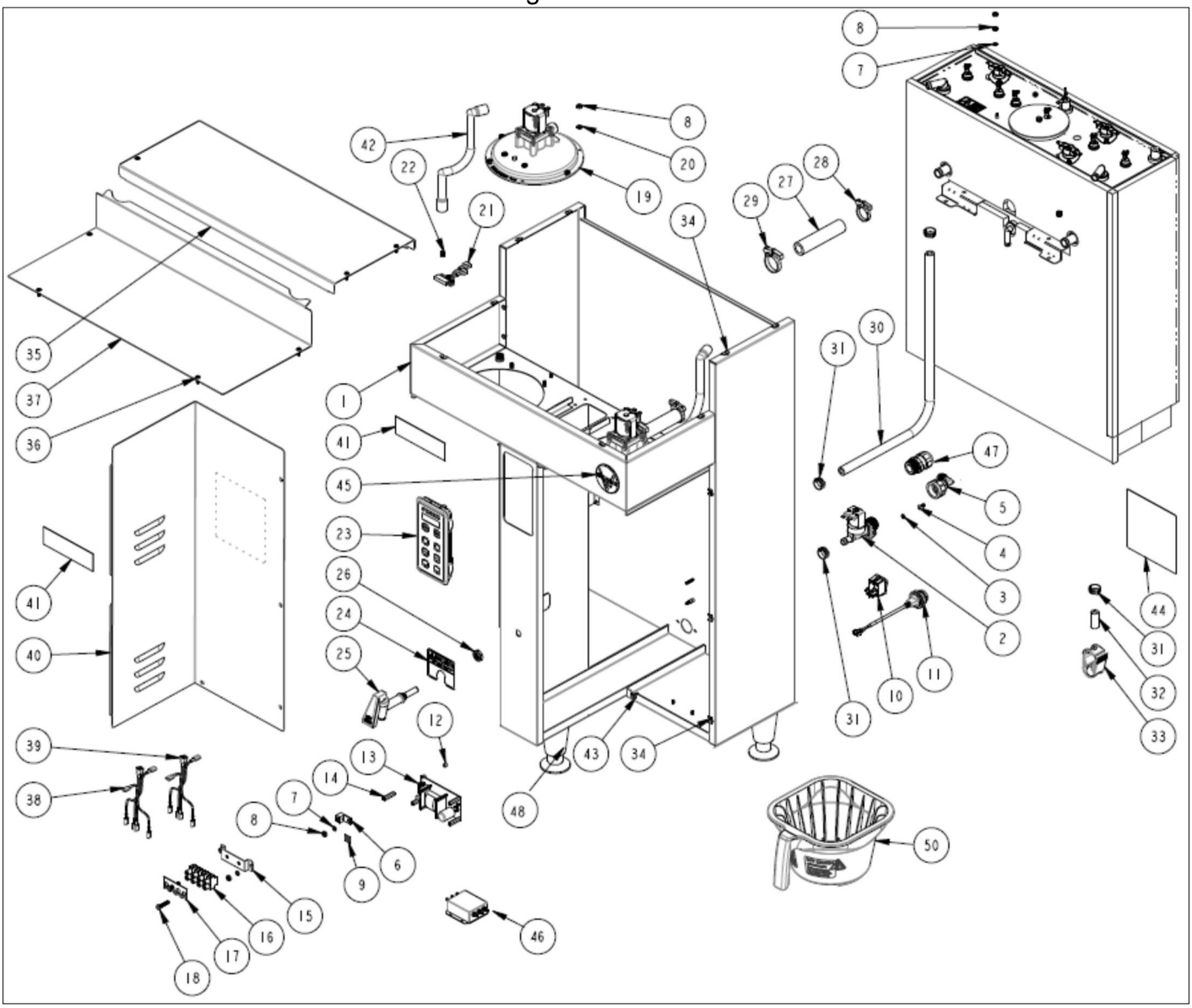
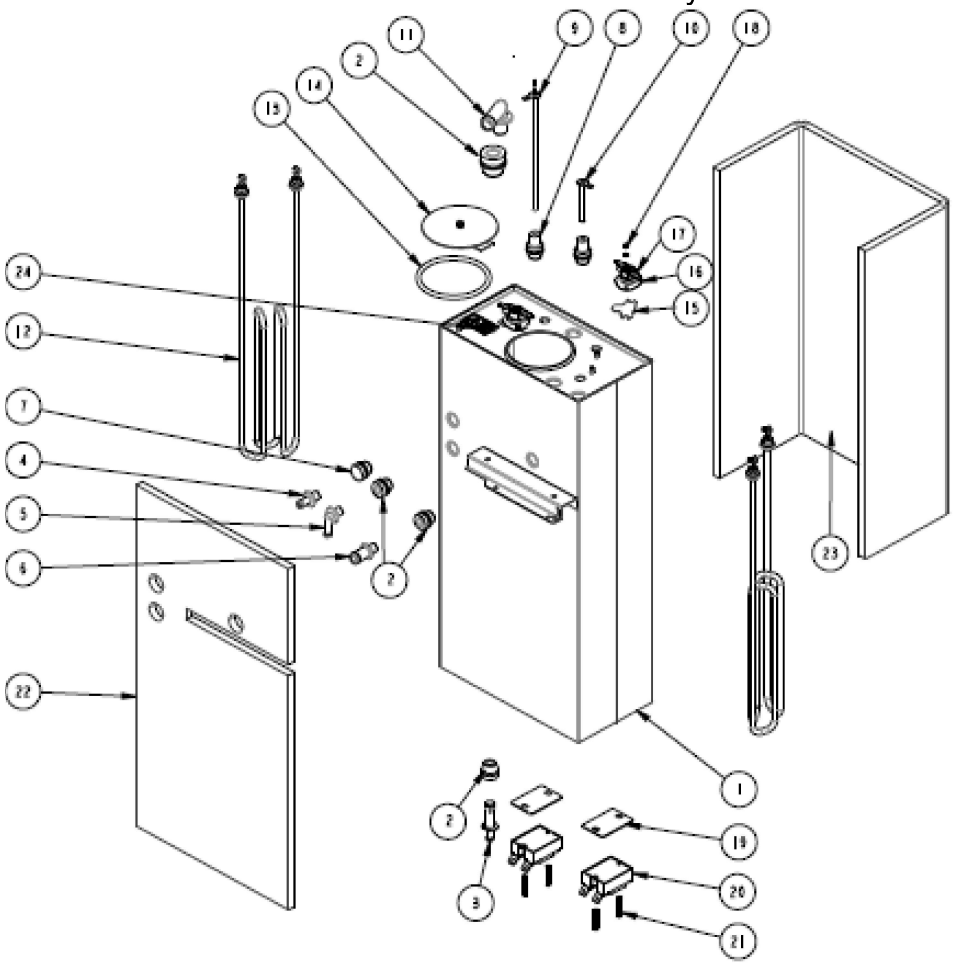


Table of Variables for CBS-1152XV+ Models			
SKU No.	TANK ASSY	WIRING DIAGRAM.	STRAIN RELIEF
E115251	1104.00062.01	1401.00148.00	1086.00008.00
E115252	1104.00074.01	1401.00148.00	1086.00008.00
E115261	1104.00062.01	1401.00160.00	1086.00031.00
E115262	1104.00074.01	1401.00160.00	1086.00031.00
E115280	1104.00062.01	1401.00148.00	1086.00008.00
E115290	1104.00062.01	1401.00156.00	1086.00008.00
E115291	1104.00074.01	1401.00156.00	1086.00008.00
E115292	1104.00080.01	1401.00155.00	1086.00008.00
E115294	1104.00081.01	1401.00155.00	1086.00008.00
E115296	1104.00075.01	1401.00156.00	1086.00008.00

Ref	Qty	Part Number	Description Drawing 1101.00339.00 CBS-1152 XV+
1	1	1111.00086.00	WELDMENT BODY COMPLETE, CBS-1152 XV+
2	1	1057.00043.00	SOLENOID VALVE, 5.5L/MIN, 180 DEG, 24VDC
3	2	1083.00005.00	LOCKWASHER, M4 18-8 INTERNAL TOOTH
4	2	1082.00010.00	SCREW, M4X10 ZINC-PLATED PAN HD. PHILLIPS MACHINE.
5	1	1102.00243.00	ADAPTER ASSY, 3/4" BSP X 1/4" NPT X 3/8" TUBE
6	1	1065.00009.00	GROUND LUG CONNECTOR, 14-2 AWG, ALUMINUM
7	5	1083.00011.00	LOCKWASHER, #8 SCREW SIZE, INTERNAL TOOTH
8	19	1084.00006.00	NUT, 8-32 18-8 HEX MACHINE SCREW
9	1	1044.00012.00	LABEL GROUND, CE
10	1	1058.00024.00	SWITCH, POWER, DOUBLE POLE, 16A, 125/250 VAC
11	1	1058.00055.00	USB CONNECTOR
12	8	1081.00006.00	SPACER, 6MM OD X 3.2MM ID X 5MM LG
13	1	1052.00001.00	POWER SUPPLY, 90-264VAC/24VDC, 1.8A
14	4	1029.00012.00	SPACER, .25" HEX X 1" LG, FEM #4-40 THREAD
15	1	1112.00268.00	WELDMENT, BRACKET TERMINAL BLOCK, 4 POLE
16	1	1102.00284.00	ASSEMBLY, TERMINAL BRACKET INTERNATIONAL VERSION
16	1	1052.00023.00	EUROSTRIP HE16 TERMINAL BLOCK, 4 POLE, 63 AMP, 18-8 AWG
17	1	1052.00025.00	PLATE, MARKING #BS1016E
18	2	1082.00082.00	SCREW, PHILLIP HD., 8-32 THREAD
19	2	1102.00223.01	SPRAY HOUSING, LARGE, 24 VDC
20	12	1083.00010.00	WASHER, #10 SCREW W/NEOPRENE-BONDED SEAL
21	2	1102.00113.00	SWITCH, REED, ASSEMBLY
22	4	1029.00006.00	NUT, FINGER, #4-40 NYLON
23	1	1102.00372.00	ASSEMBLY, FRONT PANEL, CBS-1100 TWIN
24	1	1046.00051.00"	LABEL, "WARNING, EXTREMELY HOT WATER
25	1	1071.00055.00	FAUCET, HOT WATER, PSC-BR-8, WITH FLAT AND STEM
26	1	1084.00048.00	JAM NUT, 1/2-20 UNF, NICKEL PLATED BRASS
27	2	1025.00021.00	TUBE, 31/32"OD X 5/8"ID X 4 1/4"LG, BREW
28	2	1086.00018.00	HEYCO HOSE CLAMP DIA. .875-1.00
29	2	1086.00017.00	HEYCO HOSE CLAMP DIA .1.031-1.187
30	1	1025.00082.00	TUBE, 5/8"OD X 3/8"ID X 19.00"LG.
31	4	1086.00003.00	UNICLAMP, 15.9 HOSE OD CLAMP
32	1	1025.00058.00	TUBE, 9/16"OD X 5/16"ID X 25.00"LG
33	1	1086.00009.00	CLAMP, 3/4" MAX TUBE OD FLOW CONTROL
34	11	1084.00011.00	NUT, CLIP ON (J-NUT), #6-32, 22-20 GA
35	1	1001.00372.00	COVER, TOP, CBS-1152 XV+
36	12	1082.00017.00	SCREW, TRUSS HD. PHILLIPS HEAD. MACHINE, # 6-32 X 1/2 LG.
37	1	1001.00352.00	COVER, UPPER BASE, CBS-1152 XV+
38	1	1402.00053.01	HARNESS, HIGH AMP, CBS-1151-XV+, UL
38	1	1402.00052.01	HARNESS, HIGH AMP, CBS-1151-XV+, UL CE ONLY
38	1	1402.00097.01	HARNESS, LOW AMP, CBS-1151-XV+, UL
39	1	1402.00097.02	HARNESS ADDITION, LOW AMP, CBS-1152-XV+, UL
40	1	1112.00470.00	WELDMENT, RIGHT COVER, CBS-1150 XV+
41	2	1046.00003.00	LABEL, CSD WARNING, 1.5" X 5.0"
42	2	1024.00098.00	VENT TUBE, XTS AND XV+
43	1	1084.00024.00.	NUT, CLIP ON (J-NUT), #6-32
44	1	1046.00035.00	LABEL, WARNING "TO REDUCE RISK OF ELECTRIC SHOCK OR FIRE"
45	1	1041.00031.00	LABEL, XV+ LOGO
46	1	1052.00036.00	EMI FILTER
47	1	1086.00008.00	CORD STRAIN RELIEF-UL MODELS
47	1	1086.00031.00	CORD STRAIN RELIEF CE MODELS
48	3	1073.00007.00	LEG-FLANGE FOOT
49	1	1104.00062.02	HOT WATER TANK 3X3KW/240VAC
49	1	1104.00074.02	HOT WATER TANK 3X5KW/240VAC
49	1	1104.00075.02	HOT WATER TANK 3X4KW/240VAC
49	1	1104.00080.02	HOT WATER TANK 2X3KW/240VAC
49	1	1104.00081.02	HOT WATER TANK 2X5KW/240VAC
50	2	B015280BN2	BREW BASKET-PLASTIC (STANDARD)
50	2	B001280B1	BREW BASKET-STAINLESS STEEL- (OPTIONAL)

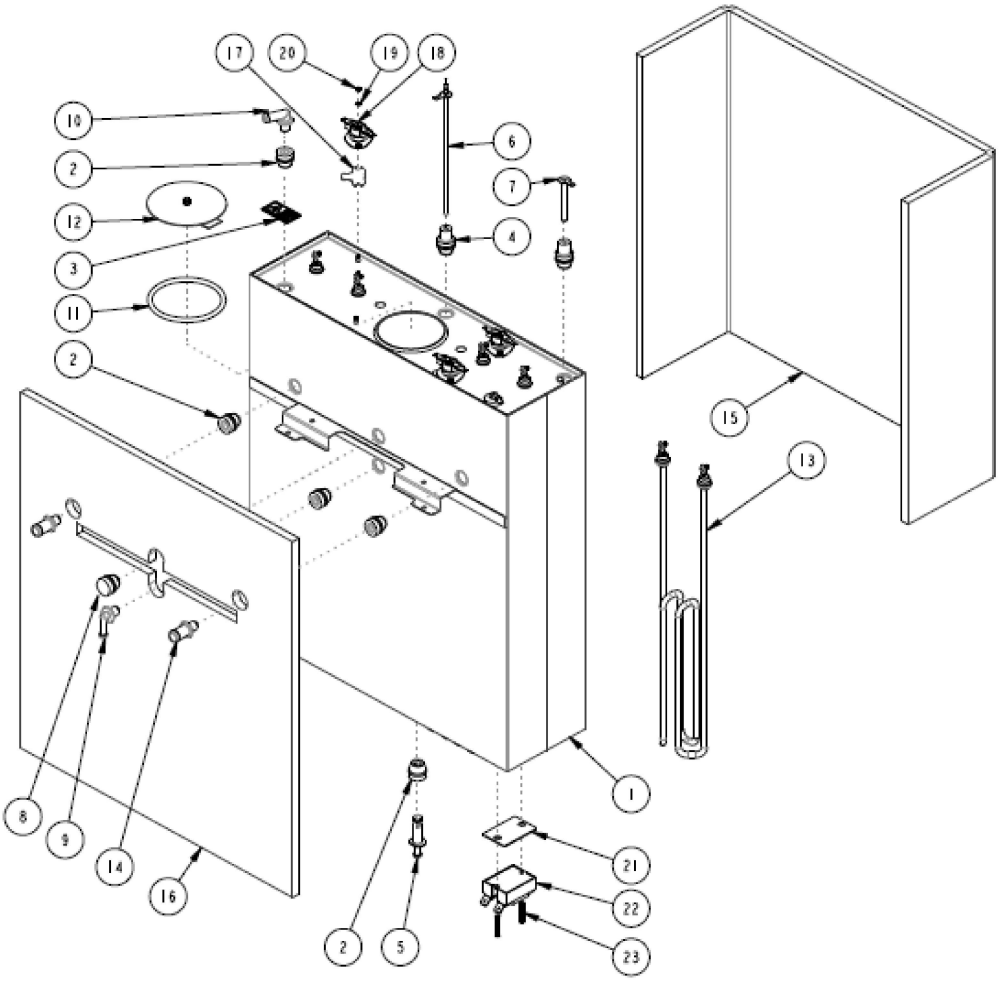
CBS-1151XV+ Tank Assembly



Complete CBS-1151 XV+ HOT WATER TANK ASSY, Part number 1104.00061.01

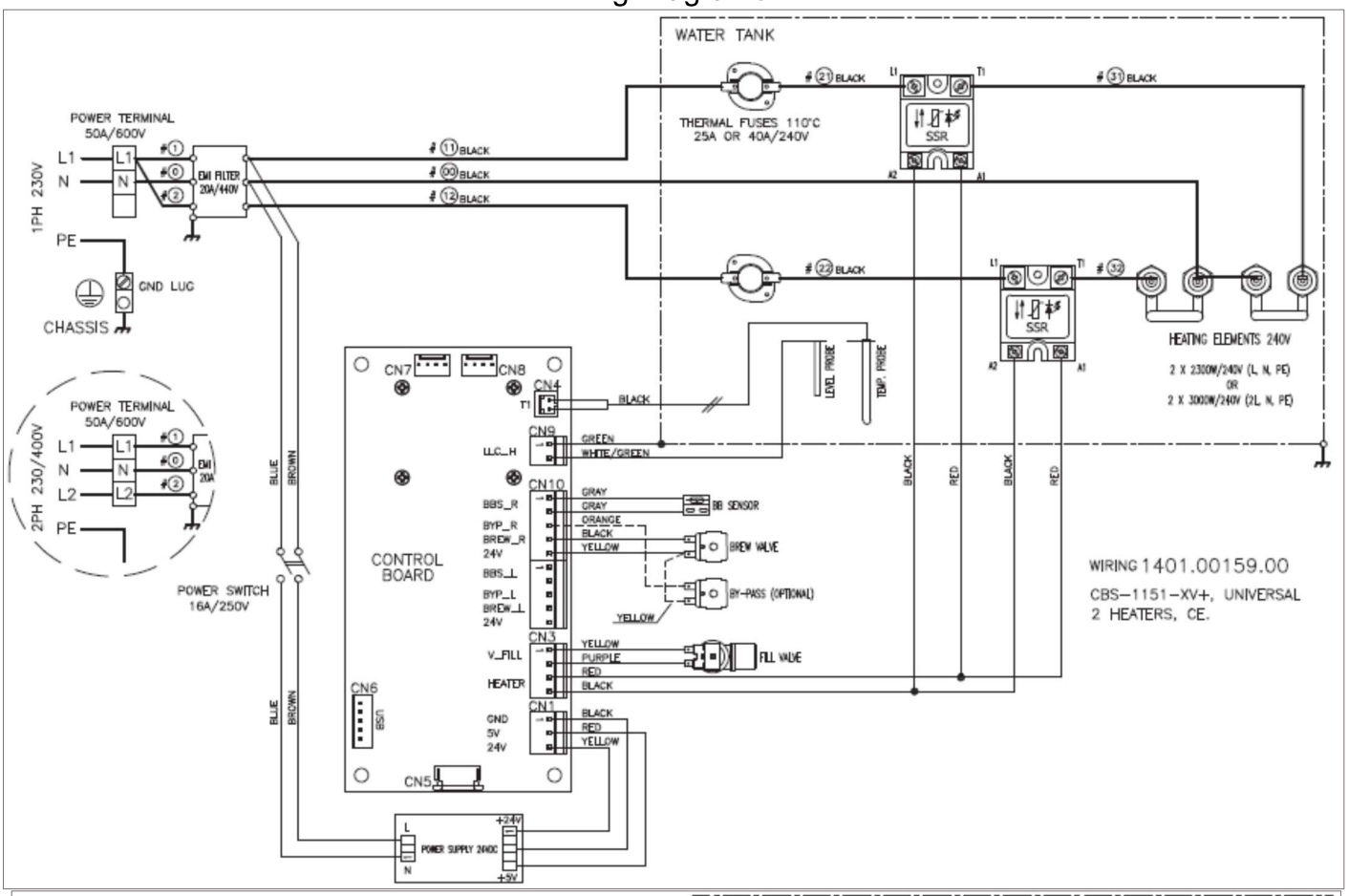
#	Qty	PART NO	DESCRIPTION
1	1	1114.00087.00	WELDMENT, TANK, CBS-1151XV+
2	4	1024.00050.00	GROMMET, SILICONE, 11.4mm ID
3	1	1023.00166.00	FITTING, COLD WATER INLET, GROMMET DESIGN
4	2	1023.00168.00	FITTING, HOT WATER, GROMMET DESIGN
5	1	1023.00183.00	FITTING, BYPASS
6	1	1023.00203.00	FITTING, BREW, GROMMET DESIGN
7	1	1024.00051.00	GROMMET, SILICONE PLUG
8	2	1024.00053.00	LEVEL AND TEMPERATURE PROBE GROMMET
9	1	1102.00161.00	PROBE ASSEMBLY, TEMPERATURE AND LLC, 8" LONG
10	1	1112.00019.00	PROBE WELDMENT, WATER LEVEL 2.600" LG
11	1	1023.00212.00	ELBOW FITTING
12	2	1107.00037.00	HEATER ASSEMBLY, IMMERSION 2300W/240VAC
12	2	1107.00005.00	HEATER ASSEMBLY, IMMERSION 3000W/240VAC
12	2	1107.00010.00	HEATER ASSEMBLY, IMMERSION 4000W/240VAC
12	2	1107.00032.00	HEATER ASSEMBLY, IMMERSION 5000W/240VAC
13	1	1024.00007.00	O-RING, DASH #344, TANK COVER
14	1	1102.00007.00	TANK COVER ASSEMBLY
15	2	1003.00005.00	BRACKET, SINGLE SHOT THERMOSTAT
16	2	1053.00003.00	THERMOSTAT, SINGLE SHOT, 240V/40A
17	4	1083.00009.00	LOCKWASHER, #6 SCREW , INTERNAL TOOTH
18	4	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
19	2	1003.00140.00	ALUMINUM BRACKET FOR SSR
20	2	1052.00033.00	RELAY, SOLID STATE, 50A/480VAC
21	4	1081.00042.00	STANDOFF, 1/4" HEX
22	1	1022.00068.00	INSULATION, TANK FRONT
23	1	1022.00069.00	INSULATION, TANK BACK
24	1	1044.00004.00	LABEL, DANGER, HIGH VOLTAGE

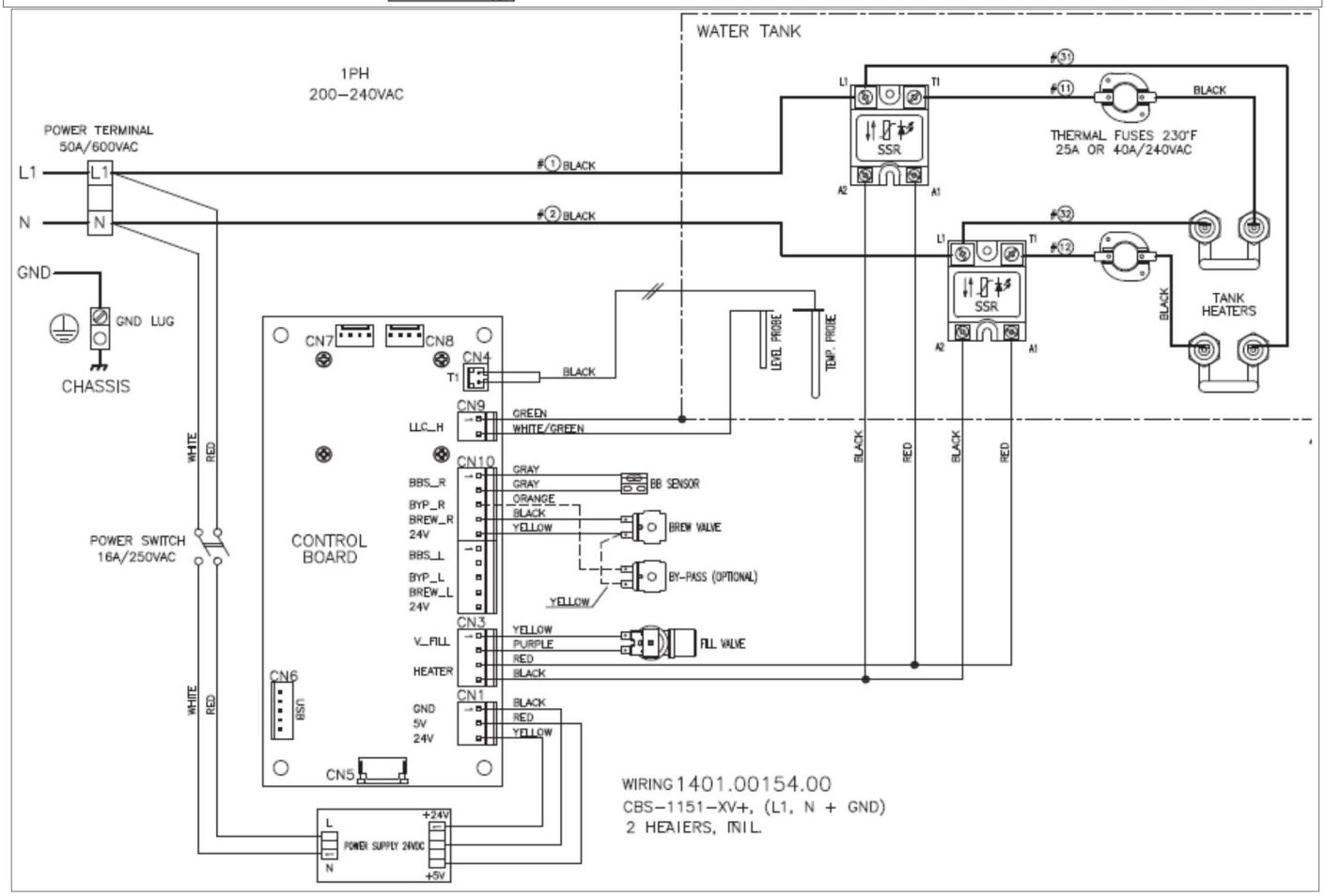
CBS-1152XV+ Tank Assembly

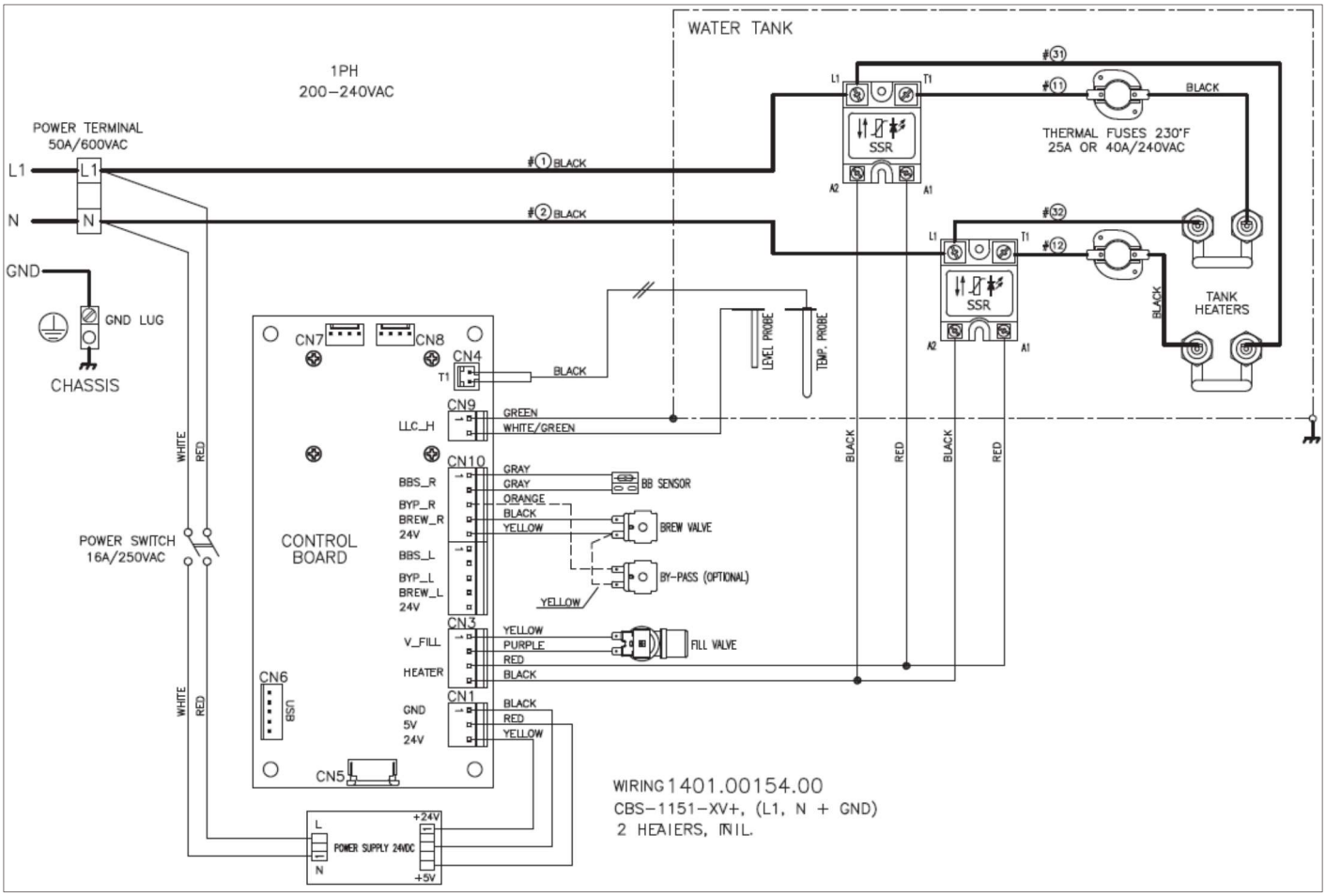


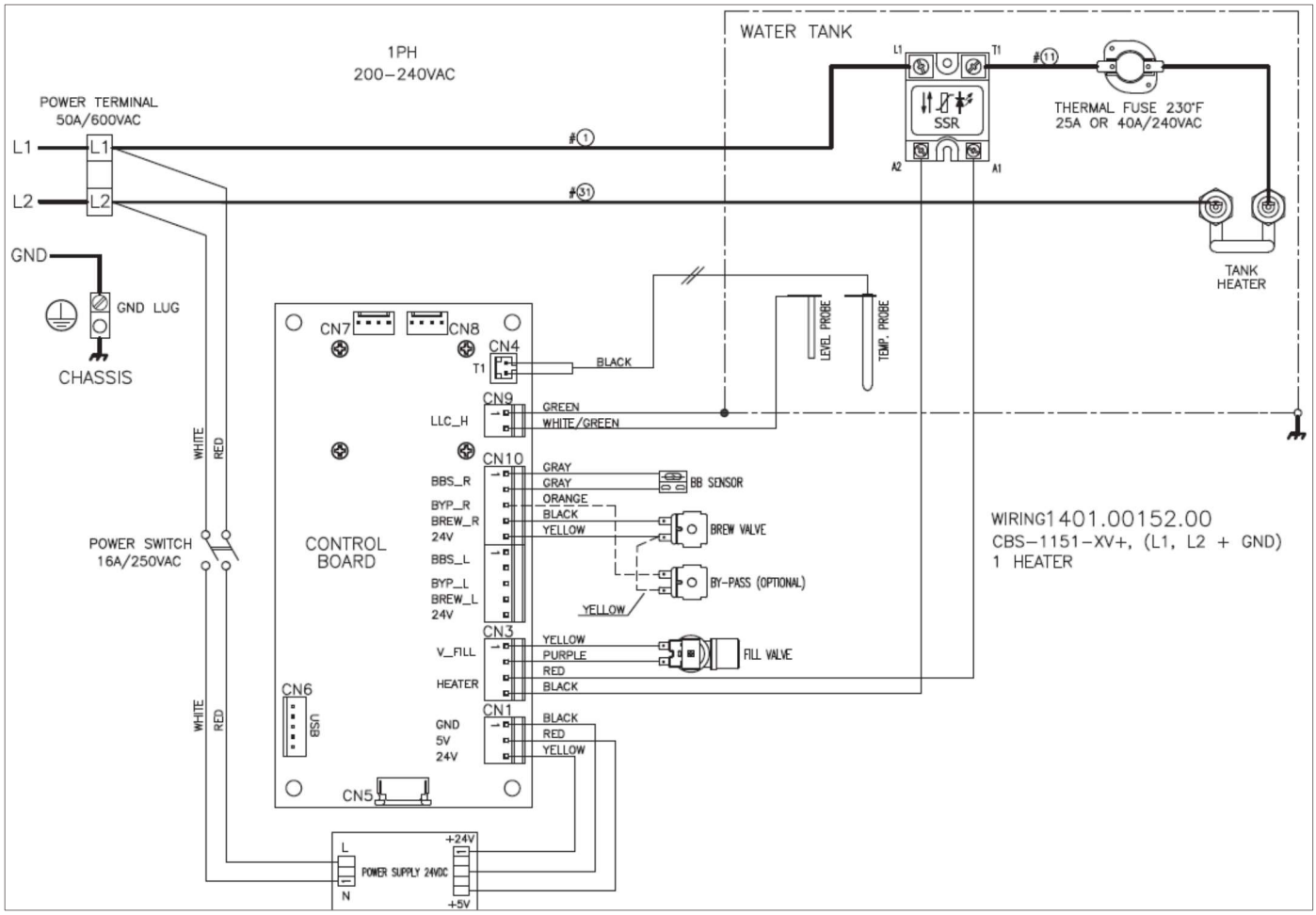
Complete CBS-1152 XV+ HOT WATER TANK ASSY Part Number 1104.00062.01

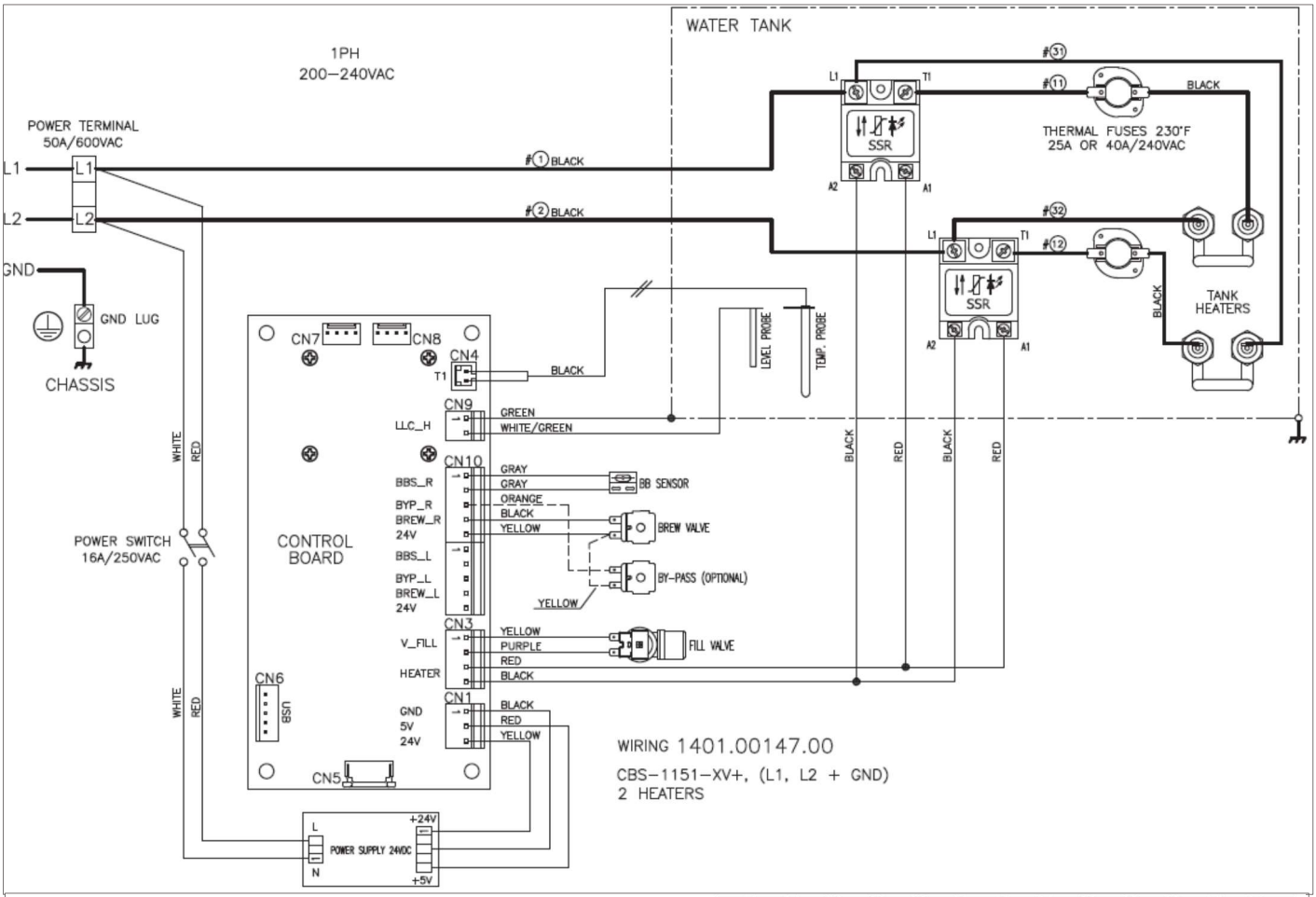
#	Qty	PART NO	DESCRIPTION
1	1	1114.00091.00	WELDMENT, TANK CBS-1152
2	6	1024.00050.00	GROMMET, SILICONE, 11.4MM ID
3	1	1044.00004.00	LABEL, DANGER, HIGH VOLTAGE
4	2	1024.00053.00	LEVEL AND TEMPERATURE PROBE GROMMET
5	1	1023.00166.00	FITTING, COLD WATER INLET, GROMMET DESIGN
6	1	1102.00161.00	PROBE ASSEMBLY, TEMPERATURE. AND LLC, 8" LONG
7	1	1112.00019.00	PROBE WELDMENT, WATER LEVEL
8	1	1024.00051.00	GROMMET, SILICONE, PLUG
9	1	1023.00183.00	FITTING, BYPASS
10	2	1023.00212.00	FITTING ELBOW
11	1	1024.00007.00	O-RING, DASH #344, TANK COVER
12	1	1102.00007.00	TANK COVER ASSEMBLY
13	3	1107.00005.00	HEATER ASSEMBLY, IMMERSION 3KW/240VAC
13	3	1107.00010.00	HEATER ASSEMBLY, IMMERSION 4KW/240VAC
13	3	1107.00032.00	HEATER ASSEMBLY, IMMERSION 5KW/240VAC
14	2	1023.00203.00	FITTING, BREW, GROMMET DESIGN
15	1	1022.00071.00	INSULATION, TANK BACK
16	1	1022.00070.00	INSULATION, TANK FRONT
17	3	1003.00005.00	BRACKET, SINGLE SHOT THERMOSTAT
18	3	1053.00003.00	THERMOSTAT, SINGLE SHOT, 240V/40A
19	7	1083.00009.00	LOCKWASHER, #6 SCREW , INTL TOOTH
20	6	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
21	3	1003.00140.00	ALUMINUM BRACKET FOR SSR
22	3	1052.00033.00	RELAY, SOLID STATE, 50A/480VAC
23	6	1081.00042.00	STANDOFF, 1/4" HEX

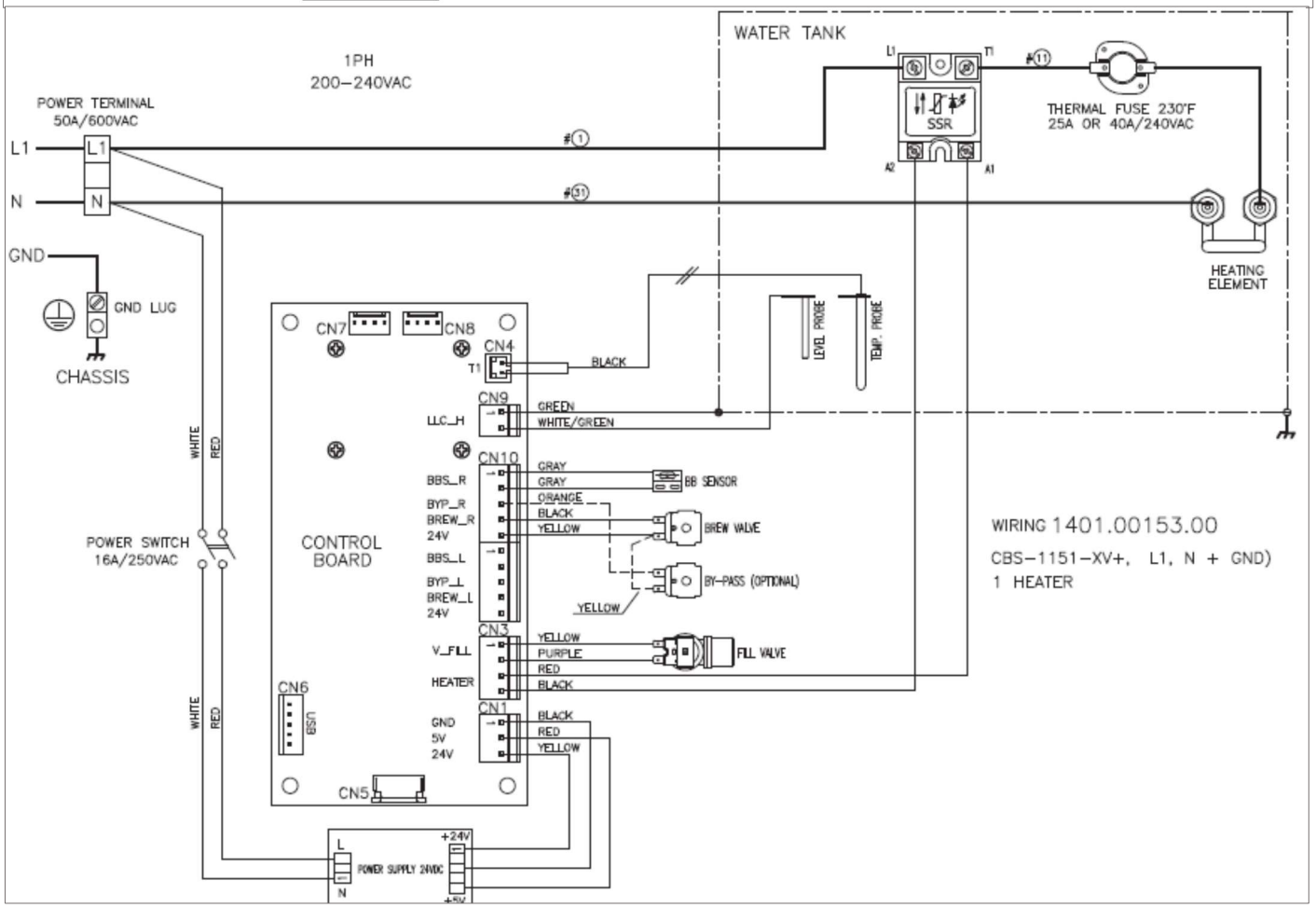

WATER TANK
POWER TERMINAL
50A/600V
1PH 230V
L1
N
PE
GND LUG
CHASSIS
EMI FILTER
20A/440V
THERMAL FUSES 110°C
25A OR 40A/240V
SSR
HEATING ELEMENTS 240V
2 X 2300W/240V (L N PE)
OR
2 X 3000W/240V (2L N PE)
POWER TERMINAL
50A/600V
2PH 230/400V
L2
EMI
20A
POWER SWITCH
16A/250V
CONTROL
BOARD
CN7
CN8
CN4
CN9
CN10
CN3
CN6
CN1
CN5
LEVEL PROBE
TEMP. PROBE
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
FILL VALVE
POWER SUPPLY 24VDC
WIRING 1401.00159.00
CBS-1151-XV+, UNIVERSAL
2 HEATERS, CE.

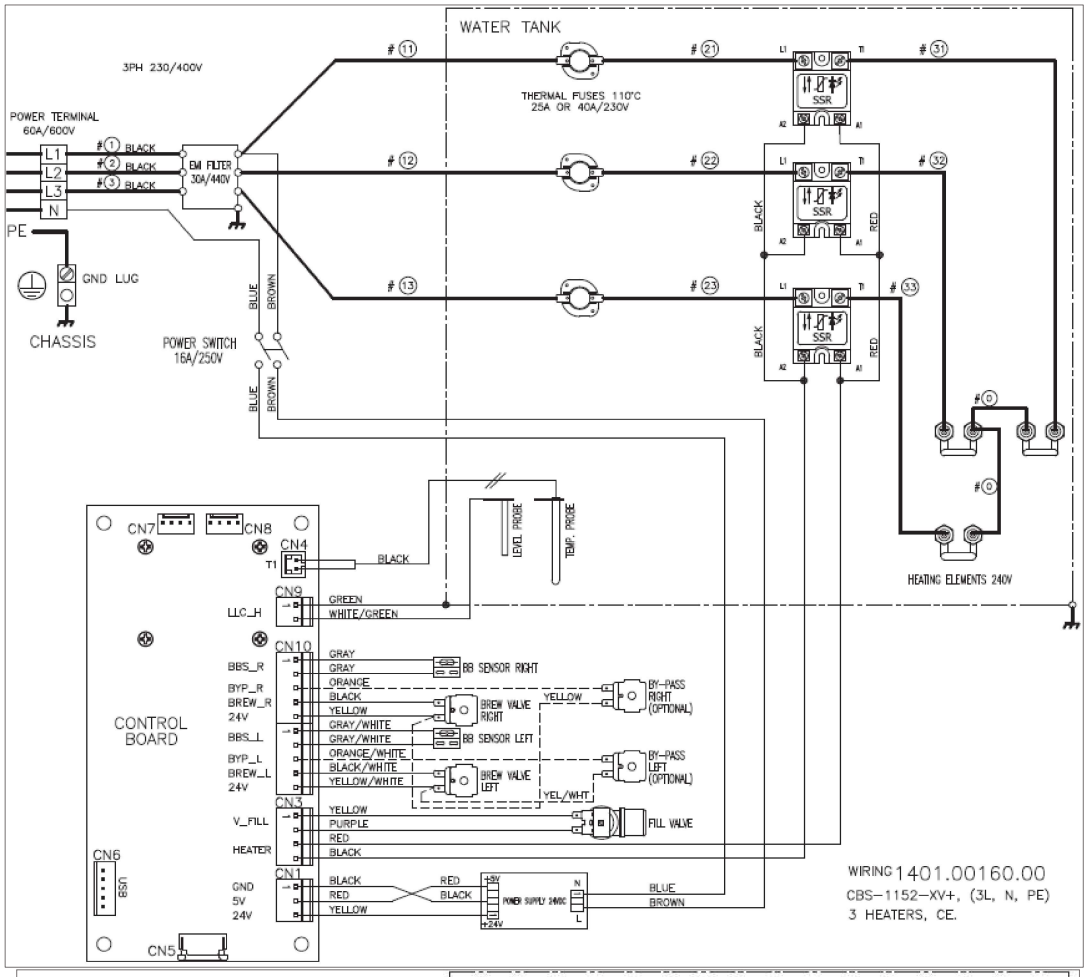

WATER TANK
1PH
200-240VAC
POWER TERMINAL
50A/600VAC
L1
N
GND
GND LUG
CHASSIS
THERMAL FUSES 230°F
25A OR 40A/240VAC
SSR
TANK
HEATERS
POWER SWITCH
16A/250VAC
CONTROL
BOARD
CN7
CN8
CN4
CN9
CN10
CN3
CN6
CN1
CN5
LEVEL PROBE
TEMP. PROBE
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
FILL VALVE
POWER SUPPLY 24VDC
WIRING 1401.00154.00
CBS-1151-XV+, (L1, N + GND)
2 HEAIERS, INIL.

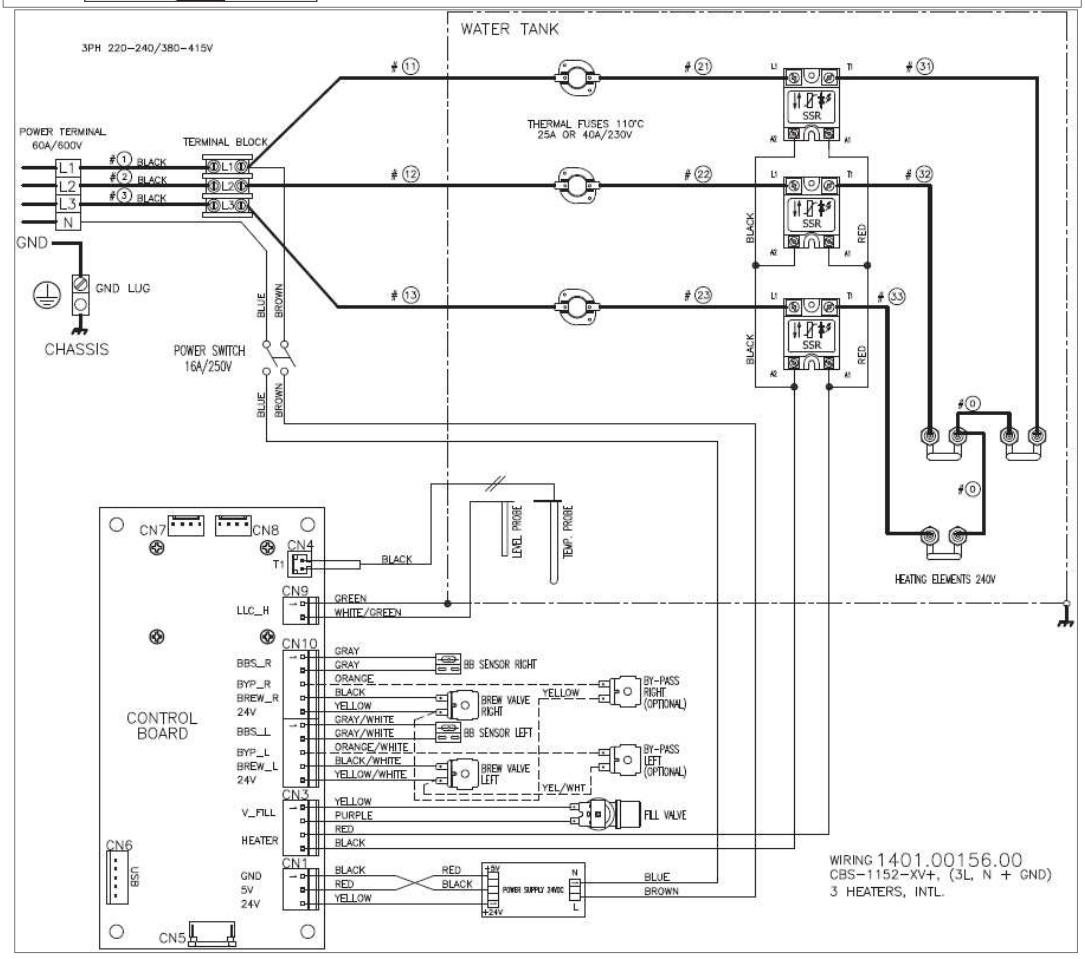

WATER TANK
1PH
200–240VAC
POWER TERMINAL
50A/600VAC
L1
N
GND
GND LUG
CHASSIS
#1 BLACK
#2 BLACK
#31
#11
BLACK
THERMAL FUSES 230°F
25A OR 40A/240VAC
SSR
#32
#12
TANK
HEATERS
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
GRAY
GRAY
ORANGE
BLACK
YELLOW
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
YELLOW
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
CN5
CONTROL
BOARD
POWER SWITCH
16A/250VAC
WHITE
RED
BLACK
RED
L
N
POWER SUPPLY 24VDC
+24V
+5V
WIRING 1401.00154.00
CBS–1151–XV+, (L1, N + GND)
2 HEAIERS, INIL.

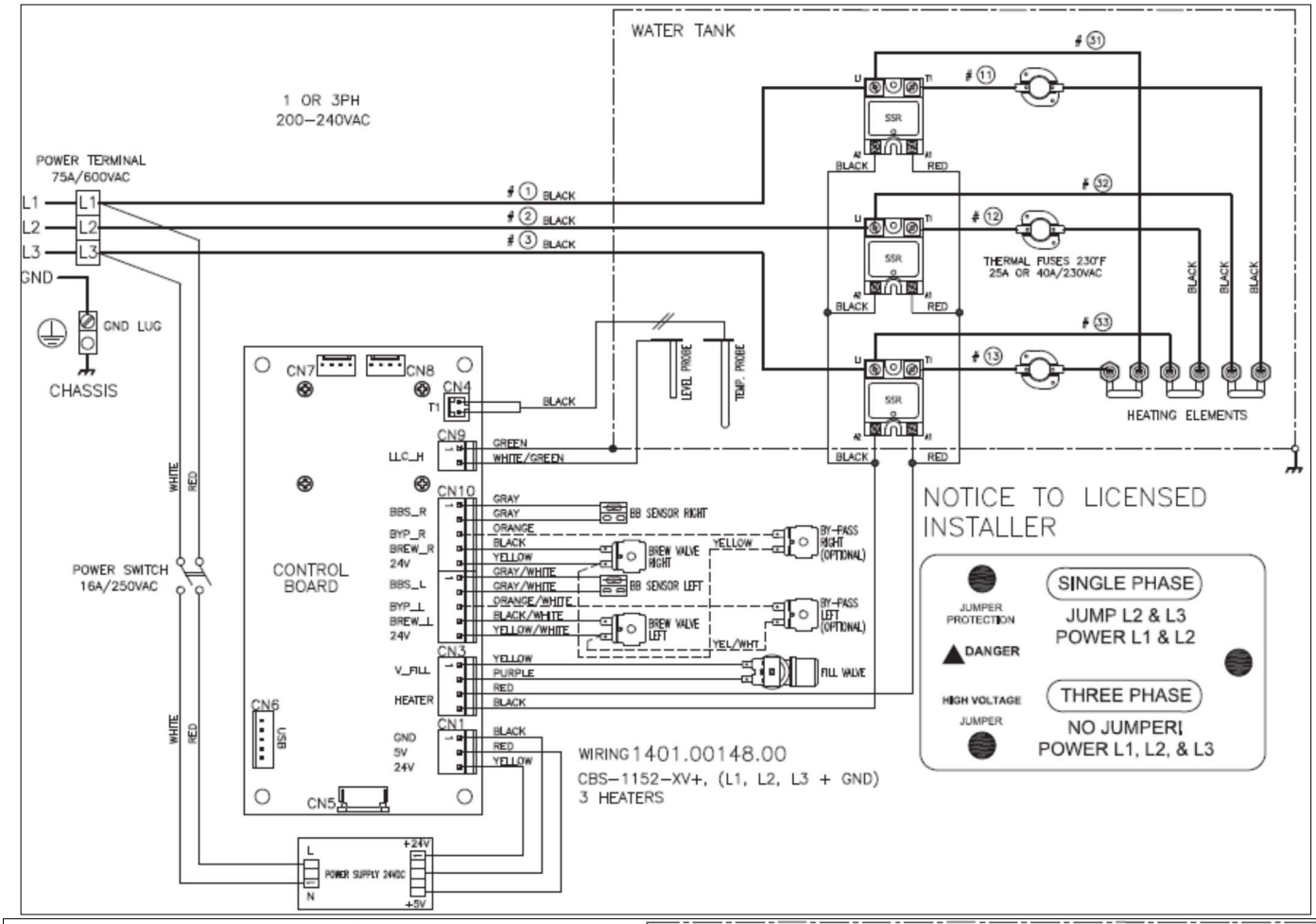

WATER TANK
1PH
200–240VAC
POWER TERMINAL
50A/600VAC
L1
L2
GND
GND LUG
CHASSIS
#1
#31
#11
THERMAL FUSE 230°F
25A OR 40A/240VAC
SSR
TANK
HEATER
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
GRAY
GRAY
ORANGE
BLACK
YELLOW
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
YELLOW
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
CN5
CONTROL
BOARD
POWER SWITCH
16A/250VAC
WHITE
RED
L
N
POWER SUPPLY 24VDC
+24V
+5V
WIRING 1401.00152.00
CBS–1151–XV+, (L1, L2 + GND)
1 HEATER

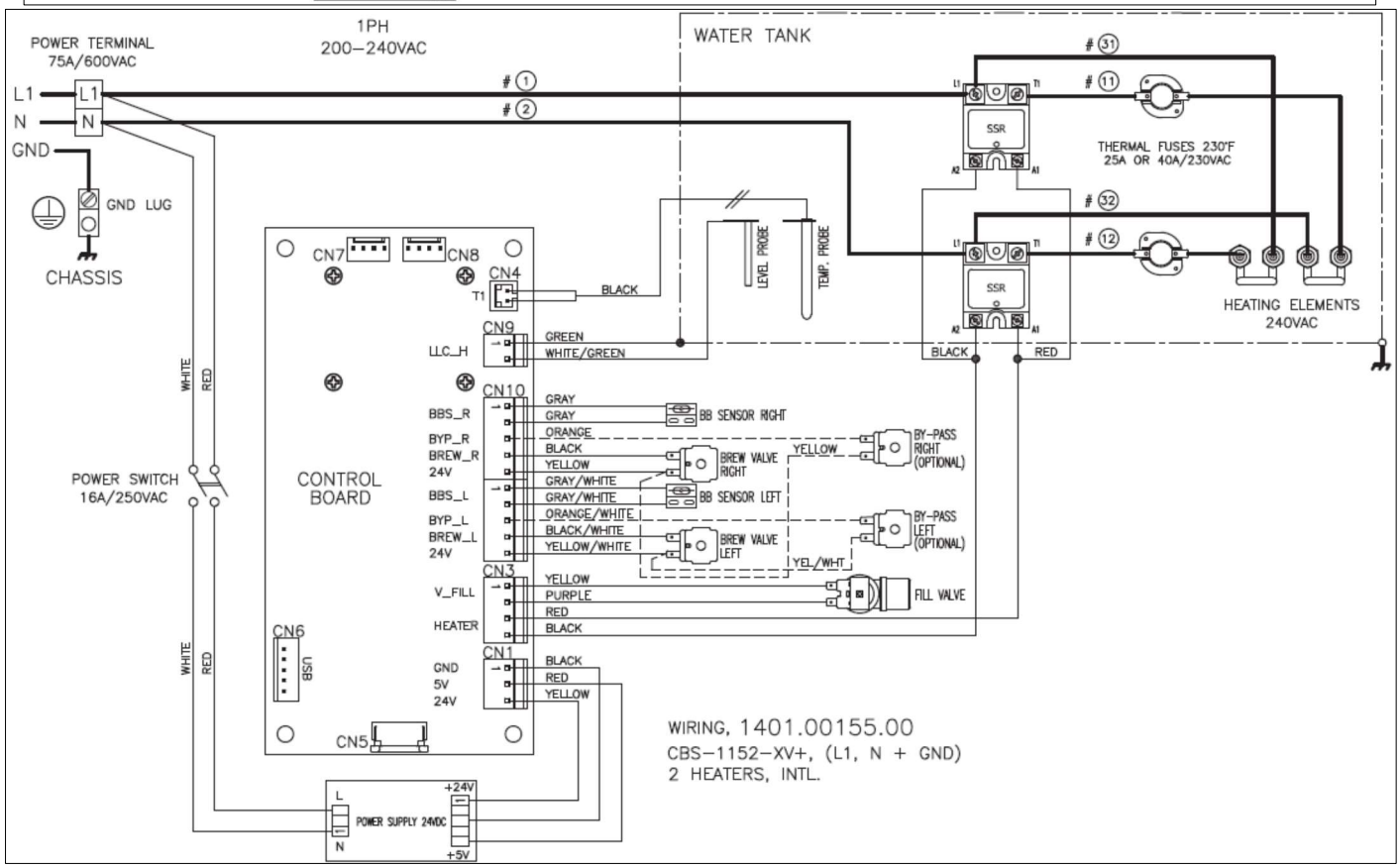

WATER TANK
1PH
200–240VAC
POWER TERMINAL
50A/600VAC
L1
L2
GND
GND LUG
CHASSIS
#1 BLACK
#2 BLACK
#31
#11
BLACK
THERMAL FUSES 230°F
25A OR 40A/240VAC
SSR
#32
#12
TANK
HEATERS
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
24V
GRAY
GRAY
ORANGE
BLACK
YELLOW
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
YELLOW
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
CN5
POWER SWITCH
16A/250VAC
CONTROL
BOARD
WHITE
RED
POWER SUPPLY 24VDC
+24V
+5V
WIRING 1401.00147.00
CBS–1151–XV+, (L1, L2 + GND)
2 HEATERS


WATER TANK
1PH
200–240VAC
POWER TERMINAL
50A/600VAC
L1
N
GND
GND LUG
CHASSIS
#1
#31
#11
THERMAL FUSE 230°F
25A OR 40A/240VAC
SSR
HEATING
ELEMENT
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
24V
GRAY
GRAY
ORANGE
BLACK
YELLOW
BB SENSOR
BREW VALVE
BY-PASS (OPTIONAL)
YELLOW
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
CN5
POWER SWITCH
16A/250VAC
CONTROL
BOARD
WHITE
RED
POWER SUPPLY 24VDC
+24V
+5V
WIRING 1401.00153.00
CBS–1151–XV+, L1, N + GND)
1 HEATER


WATER TANK
3PH 230/400V
POWER TERMINAL
60A/600V
L1
L2
L3
N
PE
#1 BLACK
#2 BLACK
#3 BLACK
EMI FILTER
30A/440V
GND LUG
CHASSIS
POWER SWITCH
16A/250V
BLUE
BROWN
#11
#12
#13
#21
#22
#23
#31
#32
#33
#0
THERMAL FUSES 110°C
25A OR 40A/230V
SSR
BLACK
RED
HEATING ELEMENTS 240V
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
GRAY
GRAY
ORANGE
BLACK
YELLOW
GRAY/WHITE
ORANGE/WHITE
BLACK/WHITE
YELLOW/WHITE
BB SENSOR RIGHT
BREW VALVE RIGHT
BB SENSOR LEFT
BREW VALVE LEFT
BY-PASS RIGHT (OPTIONAL)
BY-PASS LEFT (OPTIONAL)
YELLOW
YEL/WHT
CONTROL BOARD
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
+5V
+24V
N
L
POWER SUPPLY 240DC
BLUE
BROWN
CN5
WIRING 1401.00160.00
CBS-1152-XV+, (3L, N, PE)
3 HEATERS, CE.


WATER TANK
3PH 220-240/380-415V
POWER TERMINAL
60A/600V
TERMINAL BLOCK
L1
L2
L3
N
GND
#1 BLACK
#2 BLACK
#3 BLACK
GND LUG
CHASSIS
POWER SWITCH
16A/250V
BLUE
BROWN
#11
#12
#13
#21
#22
#23
#31
#32
#33
#0
THERMAL FUSES 110°C
25A OR 40A/230V
SSR
BLACK
RED
HEATING ELEMENTS 240V
CN7
CN8
CN4
T1
BLACK
LEVEL PROBE
TEMP. PROBE
CN9
LLC_H
GREEN
WHITE/GREEN
CN10
BBS_R
BYP_R
BREW_R
24V
BBS_L
BYP_L
BREW_L
GRAY
GRAY
ORANGE
BLACK
YELLOW
GRAY/WHITE
ORANGE/WHITE
BLACK/WHITE
YELLOW/WHITE
BB SENSOR RIGHT
BREW VALVE RIGHT
BB SENSOR LEFT
BREW VALVE LEFT
BY-PASS RIGHT (OPTIONAL)
BY-PASS LEFT (OPTIONAL)
YELLOW
YEL/WHT
CONTROL BOARD
CN3
V_FILL
HEATER
YELLOW
PURPLE
RED
BLACK
FILL VALVE
CN6
USB
CN1
GND
5V
24V
BLACK
RED
YELLOW
+5V
+24V
N
L
POWER SUPPLY 240DC
BLUE
BROWN
CN5
WIRING 1401.00156.00
CBS-1152-XV+, (3L, N + GND)
3 HEATERS, INTL.


WATER TANK
1 OR 3PH
200–240VAC
POWER TERMINAL
75A/600VAC
L1
L2
L3
GND
GND LUG
CHASSIS
1 BLACK
2 BLACK
3 BLACK
31
11
32
12
33
13
SSR
THERMAL FUSES 230°F
25A OR 40A/230VAC
HEATING ELEMENTS
CN7
CN8
CN4
CN9
CN10
CN3
CN6
CN1
CN5
CONTROL BOARD
LEVEL PROBE
TEMP. PROBE
LLC_H
BBS_R
BYP_R
BREW_R
BBS_L
BYP_L
BREW_L
V_FILL
HEATER
GND
5V
24V
USB
BB SENSOR RIGHT
BB SENSOR LEFT
BREW VALVE RIGHT
BREW VALVE LEFT
BY-PASS RIGHT (OPTIONAL)
BY-PASS LEFT (OPTIONAL)
FILL VALVE
POWER SWITCH
16A/250VAC
POWER SUPPLY 24VDC
+24V
+5V
NOTICE TO LICENSED INSTALLER
JUMPER PROTECTION
DANGER
HIGH VOLTAGE JUMPER
SINGLE PHASE
JUMP L2 & L3
POWER L1 & L2
THREE PHASE
NO JUMPER!
POWER L1, L2, & L3
WIRING 1401.00148.00
CBS–1152–XV+, (L1, L2, L3 + GND)
3 HEATERS


1PH
200–240VAC
POWER TERMINAL
75A/600VAC
L1
N
GND
GND LUG
CHASSIS
WATER TANK
1
2
31
11
32
12
SSR
THERMAL FUSES 230°F
25A OR 40A/230VAC
HEATING ELEMENTS
240VAC
CN7
CN8
CN4
CN9
CN10
CN3
CN6
CN1
CN5
CONTROL BOARD
LEVEL PROBE
TEMP. PROBE
BLACK
GREEN
WHITE/GREEN
LLC_H
GRAY
BBS_R
BYP_R
BREW_R
BBS_L
BYP_L
BREW_L
V_FILL
HEATER
GND
5V
24V
USB
BB SENSOR RIGHT
BB SENSOR LEFT
BREW VALVE RIGHT
BREW VALVE LEFT
BY-PASS RIGHT (OPTIONAL)
BY-PASS LEFT (OPTIONAL)
FILL VALVE
POWER SWITCH
16A/250VAC
POWER SUPPLY 24VDC
+24V
+5V
WIRING, 1401.00155.00
CBS–1152–XV+, (L1, N + GND)
2 HEATERS, INTL.

End of section notes

End of section notes