



CBS-1231 & CBS-1232 Extractor Plus Brewing System

FETCO PLUS® Commercial Beverage Equipment



CBS-1232 & CBS-1232 3.0-4.0 Extractor Plus Brewers, shown with 2.2 liter Air Pot (sold separately)



CONTACT INFORMATION

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

Coffee Brewer: CBS-1230 series

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Specifications and Requirements

Water Requirements:

CBS-1231 &1232: 20-75 psig, (138-517kPa) 11/2gpm/(5.7lpm)

Water inlet fitting is a 3/8 inch male flare.

Brewer supplied with inlet valve adaptor for BSP to SAE

Brew Volume: Full Batch 3.8 liters; second batch 2.9 liter) User adjustable from 0.95 liter to 4.75 liters per brew

Tank Temperature, as set by factory: 200°F (93°C) inside water tank (at sea level)

Electrical: See electrical configuration chart. 120

Volt; 208-240 Volt; 230 Volt and user configurable

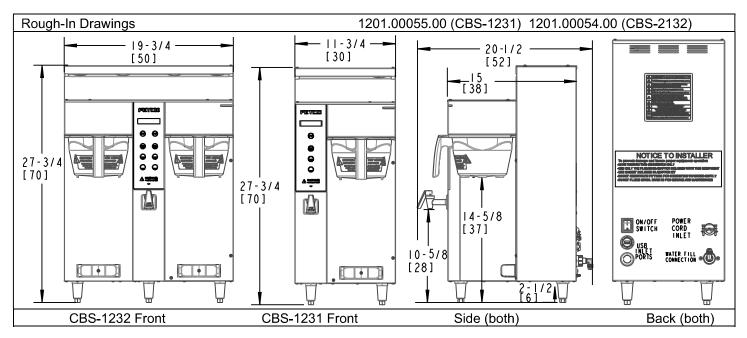
Water supply: (Optimal) 100-150TDS All beverage equipment must use filtered water.

Total Brew Cycle—Factory default setting: First batch: 5:30 minutes=[4 minute brew time + 1.30 minute drip delay] Second batch: 5:00 minutes=[3:30 minute brew time + 1:30 minute drip delay]

Brew-Process parameters are user controllable for:

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

Weights and	Weights and Capacities									
Model	Height	Width	Depth	Water tank capacity	Empty Weight	Filled Weight	Shipping Weight	Shipping Dimensions		
CBS-1231	27 3/4 in	11 3/4 in	20½ in	3.3 gallon	29 lbs	55 lbs	41 lbs	30" x 17" x 22"		
Brewer	700 mm	300 mm	520 mm	12.4 L	13.2 kg	25.0 kg	18.6 kg	76.2 x 43.2 x 55.9 cm		
CBS-1232	27 3/4 in	19 ¾ in	20½ in	6.0 gallon	47 lbs	92 lbs	55 lbs	30" x 23" x 25"		
Brewer	700 mm	500 mm	520 mm	22.4 L	21.3 kg	41.7 kg	25.0 kg	76.2 x 58.4 x 63.5 cm		
Calibrated for 3.8 L/1.0 gal brew Basket 13" X 5" Coffee Filter 13" X 5 or FETCO# F002"							1" legs standard 2.5" legs optional			



EXAMPLE	: SKL	J E12	31US	-1X1	17-PM	001		SKU NU	MBER I	DEN	TIFIC	ATION P	(EY			
Product Line	<u>Le</u>	<u>vel</u>	<u>Far</u>	<u>nily</u>	Regio	on ID	<u>Phase</u>	Voltage Range	# Heaters		<u>ividual</u> r Wattage	Brew Basket	Hot Water Faucet	Bypass	Brew Basket Locks	Power Cord
E	1	2	3	1	U	S	1	Α	1	1	5	Р	М	0	0	1
E=extractor						Jnited ites	1	A = 100-120	1		1.5	P=plastic	M=manual	1=Yes	1=Yes	0=Terminal Block
	12=F Ser		_	1= e side	IN Interna	l = ational	2	B = 200-240	2		1.7	M=metal	A=automatic	0=no	0=no	1= NEMA 5-15P
			32 dual	2= side	CE =	= CE	3	C = 380-415	3		2.3		N=None			2=NEMA 5-20P
					NM =	NOM	U = 1 or 3	D = 440-480			3.0					3=NEMA 6-15P
											4.0					4=NEMA 6-30P
								X=120 or 240 Dual Voltage			5.0					5=CEE 7/7 Schuko
																6=UK1-13P
																7= AUSTRALIAN

Electrical and Output Specifications

CBS-1231PLUS Single 3.0-4.0 Liter Coffee Brewers Field configurable Domestic								
Electrical and Output Specifications Brewer has factory installed cord and plug & terminal block 50Hz or 60Hz								
SKU	Voltage	Heater	Wires	KW	Electrical	Dhaca	Amp Draw	Brew-Volume per hour
SKO	voltage	Configuration	VVIIES	rvv	Connection	riiase	Amp Draw	per hour
E1231US-1X117-PM001	120	1 X 1.7 kW	2+G	1.7	NEMA 15-5P	1	14.7	3.9 gal/14.8 L
Domestic-Dual Voltage 208-240 2 X 1.7 kW 2+G 2.6-3.4 Terminal Block 1 12.8-14.7 5.8 gal/22 L								
Flectrical Specifications, Domestic Single brewer-single voltage 120 volt cord and plug single phase 50Hz or 60Hz								

CBS-1231PLUS Single 3.0-4.0 Liter Coffee Brewers Domestic models									
Electrical and Output Specifications All brewers have factory installed cord and plug 50Hz or 60Hz									
SKU	Voltage	Heater	Wires	KW	Electrical	Phase	Amp Draw	Brew-Volume	
SKU	voltage	Configuration	VVIIES	1744	Connection	Filase	Amp blaw	per hour	
E1231US-1A115-PM001	120	1 X 1.5 kW	2+G	1.5	NEMA 15-5P	1	13.0	4.0 gal/15.1 L	
E1231US-1A123-PM002 120 1 X 2.3 kW 2+G 2.3 NEMA 5-20P 1 19.7 5.8 gal/22 L									
E1231US-1A123-MM112	120	1 X 2.3 kW	2+G	2.3	NEMA 5-20P	1	19.7	5.8 gal/22 L	

CBS-1231PLUS Single 3.0-4.0 Liter Coffee Brewers Field configurable International										
Electrical and Output Specifications Brewer has factory installed cord and plug & terminal block 50Hz or 60Hz										
SKU	SKU Voltage Heater Configuration Wires KW Electrical Connection Phase Amp Draw per hour									
E1231NM-1X123-PM002	E1231NM-1X123-PM002 120 1 X 2.3 kW 2+G 2.3 NEMA 5-20P 1 19.7 6.1 gal/23.2 L									
Dual Voltage	208-240	2 X 2.3 kW	2+G	4.6	Terminal Block	1	17.1-19.7	7.6 gal/30 L		

CBS-1231PLUS Single 3.0-4.0 Liter Coffee Brewers International models Electrical and Output Specifications All brewers have terminal block electrical utility connection 50Hz or 60Hz								
	Voltage	Heater		KW	Electrical			Draw Valuras
SKU Voltage Configuration Wires KW Connection Phase Amp Draw per hour								
E1231NM-1A123-PM002	120	1 X 2.3 kW	2+G	2.3	NEMA 5-20P	1	19.7	5.8 gal/22 L
E1231NM-1B130-PM003	208-240	1 X 3.0 kW	2+G	2.3-3.0	NEMA 6-15P	1	11.3-13.0	7.9 gal/30.0 L
E1231IN-1B123-PM000	200-240	1 X 2.3 kW	2+G	1.6-2.3	Terminal Block	1	8.5-10.1	5.8 gal/22 L
E1231IN-1B130-PM000	200-240	1 X 3.0 kW	2+G	2.1-3.0	Terminal Block	1	10.9-13.0	7.7 gal/29.1 L

CBS-1232PLUS Dual 3.0-4.0 Liter Coffee Brewers Domestic models								
Electrical and Output Specifications All brewers have terminal block electrical utility connection 50Hz or 60Hz								
SKU	Voltage	Heater	Wires	KW	Electrical	Phase	Amp Draw	Brew-Volume per hour
SKU	voltage	Configuration	vviies	1744	Connection	riiase	Amp blaw	per hour
E1232US-1B223-PM000	208-240	2 X 2.3 kW	2+G	3.5-4.6	Terminal Block	1	17.1-19.7	11.0 gal/42.0 L
E1232US-1B230-MM110	208-240	2 X 3.0 kW	2+G	4.5-6.0	Terminal Block	1	22.2-25.5	14.3 gal/54 L
E1232US-1B230-PM000	208-240	2 X 3.0 kW	2+G	4.5-6.0	Terminal Block	1	22.2-25.5	14.3 gal/54 L

CBS-1232PLUS Dual 3.0-4.0 Liter Coffee Brewers International models Electrical and Output Specifications All brewers have terminal block electrical utility connection 50Hz or 60Hz									
SKU	Voltage	Heater	Wires	KW	Electrical	Phase	Amp Draw	Brew-Volume	
SKU	vollage	Configuration	vviies	IXVV	Connection	riiase	Amp Diaw	per hour	
E1232IN-1B223-PM000	200-240	2 X 2.3 kW	2+G	3.2-4.6	Terminal Block	1	16.5-19.7	12.2 gal/46.3L	
E1232IN-1B230-PM000	200-240	2 X 3.0 kW	2+G	4.2-6.0	Terminal Block	1	21.3-25.5	15.8 gal/60 L	
E1232NM-1B230-PM000 208-240 2 X 3.0 kW 2+G 4.5-6.0 Terminal Block 1 22.2-25.5 15.8 gal/60 L									
E1232KS-1B230-PM000	208-240	2 X 3.0 kW	2+G	4.5-6.0	Terminal Block	1	22.2-25.5	15.8 gal/60 L	





NEMA 5-20P; 120 V Plug Configuration



NEMA 6-15P; 240 V Plug Configuration



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Starting The Brew

FETCO Ready to 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, and 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,

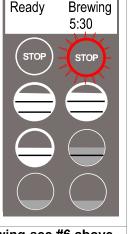
STOP button will extinguish and the BREW button will continue to flash for the amount of time programmed into the DRIP DELAY setting.

The Brew Sequence

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. Example shown: Pressing top right brew position

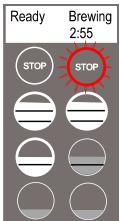
Brewing-see #6 above



FETCO Ready to Brew

First screen shows top right brew position being activated, (as above)...

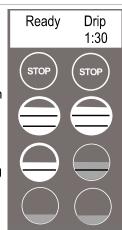
Left side is in "READY-MODE" during brew, but left side buttons can be accessed for brewing



STOP brew lamp activates and top right button will pulsate.

All other buttons on the right side extinguish.

Count down timer activates beginning 5:30 for Batch 1 5:00 for Batch 2



The brewing cycle completes in four minutes. Stop button extinguishes and drip out starts at 1:30 minutes.

Do not remove brew basket during this segment.

Brewer returns to "ready to brew" (screen one) after drip out completes

Enter Programming

Screens shown are for twin brewer. Single brewer will not have menu A4-A6.

There are seven menu groups-A-G. See the following pages for the batch parameter definitions and all settings for the brewer

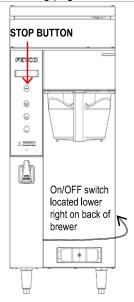
TO ENTER PROGRAMMING

- 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-Red "STOP" Lamp turns on 4-Quickly press "STOP" button.
 - When brewer is In PROGRAMMING MODE -the screen will display:

IBATCH PRGI JA (or B-H)

-Illuminated LED indicates active keypad positions

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



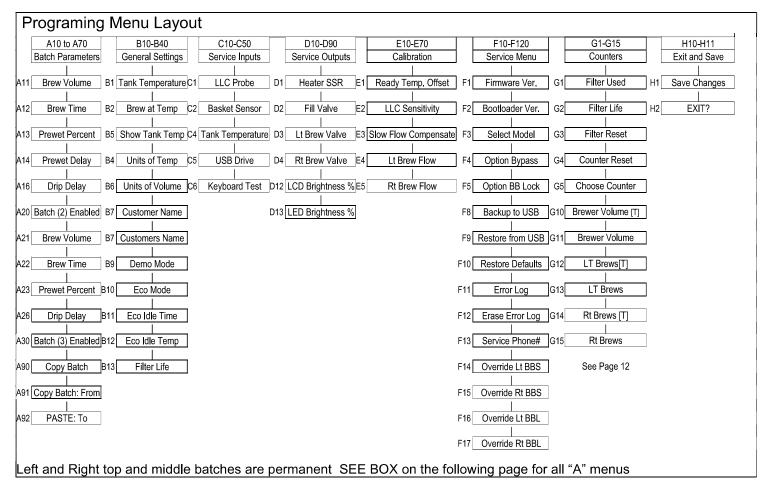


Turn power OFF Turn power ON Wait for red LED And quickly press STOP button on front touch pane



First screen will display for PROGRAMMING-A Scroll through main menu topics by pressing "STOP" button.

Note: Only the left side buttons of a two sided brewer are used for programming



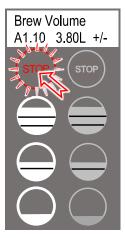
The "A" menu is the most accessed menu. It is for programming the batch volumes, brewing parameters, enabling or disabling brew buttons. The "A" menu moves through the six positions(CBS-1232+) or three positions(CBS-1231+) by entering the menu and pressing the left stop button. (only the left side is active for programming the CBS-1232+)

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

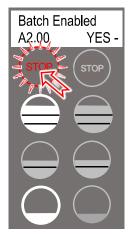
Access the A menus to PROGRAM & make changes to individual menu recipes. Menu settings can be copied Menu positions A1 and A4 [top position] are permanent. Menus A2, A3, A5, A6 can be removed by operator if desired



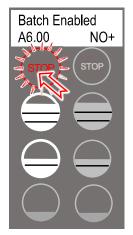
From A PRG screen Press button 1 to go into to the A menu access screens. Continue pressing button #1 to enter progamming for A1



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 for CBS-1232+

The CBS-1231+ single position brewer has one row of buttons

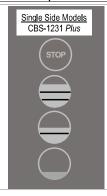
A Program		Menu Features:	Batch Parameters		
Th		shown for the top ba	atch on a single brewer		n on a twin brewer. default A1 & A2 batches
POSITION	Program Items		Programming Range	Increments	Notes
A1.10	Batch Volume	3.8 L 1 gal	0.95 to 4.75L 0.25 to 1.25 gal	0.05L 0.01G	Unit software is in L; converts to gallon
A1.20	Brew Time	4:00 minutes	2:00 – 12:00	0.30	Default total brew time is 5:30 minutes
A1.30	Prewet Perc.	0%	0.00 - 25.0%	1%	Percentage of total brew volume
A1.40	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
A1.60 This is a Safety Feature	Drip Delay	1:30 mm:ss	0:30 — 6:00 Min.		Time that brew basket remains locked during final drip-out →Drip delay remains "ON" for 1:30 minutes if STOP is pressed during brew†
A2.00	BATCH ENABLED	YES (Active)	Middle and Bottom batches A2,3,5,6	Batch on or off	Batches may be individually enabled, rewritten or deactivated
A2.10	Batch Volume	2.90L 0.75gal	0.95 to 4.75L 0.25 to 1.25 gal	0.05L 0.01G	Unit software is in L; converts to gallon
A2.20	Brew Time	3:30 minutes	2:00 — 12:00	0.30	Default total brew time is 5:30 minutes
A2.30	Prewet Perc.	0%	0.00 - 25.0%	1%	Percentage of total brew volume
A2.40	Prewet Delay (Brew 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
A2.60 Safety Feature	Drip Delay	1:30 mm:ss	0:30 – 6:00 Min.		Time that brew basket remains locked during final drip-out
A30	Batch Enabled A30 YES - NO +	NO-inactive (defaults to recipe A20 if activated)	Middle and Bottom batches A2,A3	Batch on or off	Batches may be individually enabled, rewritten or deactivated
Batch Copy	Copy From Batch	A90	A90 1 (1-6)		
	Copy To Batch?	A91	A91.1 (1-6)	0.11-	

Single Topmost Batch cannot be disabled. TWIN Topmost Batch LEFT & RIGHT cannot be disabled. Middle and bottom batches may be disabled for single and twin brewer (CBS-1231 and CBS-1232) † 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

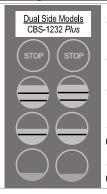


←DISPLAY → STOP→

←BATCH A1→ (permanent)

←BATCH A2→ (enabled by factory)

←BATCH A3→ (disabled by factory)



←DISPLAY

←STOP

←BATCH **A4** (permanent)

←BATCH **A5** (enabled by factory)

←BATCH **A6** (disabled by factory)

B General		Brewer Operation C	Control Settings, Adju	st Brew Flo	w Rate
POSITION	Program Items	Factory set Default	Programming Range	Increments	Notes
B1	Tank Temp.	200°F-or-93° C NOTE: Equipment is Fahrenheit by default	77° to 97°C 170°F to 207°F	0.5°C 1.0°F	Chart to correct for high altitude below
B2	Brew at Temp.	"YES"	ON/OFF	YES/NO	SEE NOTE BELOW
B4	Show Tank Temperature	YES	YES/NO		To display HW tank temperature on screen
B5	Units of Measure TEMPERATURE	° Fahrenheit	Fahrenheit/Celsius	C/F	NOTE: Overwrites user settings (see page 9)
В6	Units of Measure VOLUME	Liters	Gallons/Liters/Ounces	L/Gal/Oz	NOTE: Overwrites user settings (see page 9)
В7	Customer Name	Off	NO or YES		For name on screen
В7	Customer Name	(only if above is "ON)	Scroll with batch keys	A-Z;a-z;0-9	16 characters total
В9	Demo Mode	DEMO ON/OFF			Demonstrates the controls for training. Disables all components in demo mode
B10	Eco Mode	On	ON/OFF	YES/NO	If Selected: Lowers hot water tank temperature after preset time of inactivity
B11	Eco Idle Time	1Hr	1-6 hours	1 hour	Time of inactivity to go into ECO Mode
B12	Eco Idle Temp	170°F	158-176°F	1 degree	Temperature that hot water tank is lowered to when in ECO Mode
B13	Filter Life	OFF	ON/OFF	YES/NO	Water filter life is accessed in G-Counters. This is user set and will display indicator to change 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. Dienterweitlicher "HEATING"	Hot water tank not at brew temp setpoint.	HEATING
-Display will show "HEATING" and hot water tank temperature	Tank temp→	160°F
The "BREW START" entry buttons will not	STOP is not lit →	STOP STOP
illuminate until the hot water tank reaches the selected temperature.	BREW START buttons not lit.	
Controls allow both sides of dual brewer to	and are disabled.	$\bigcup \bigcup$
operate if one side has an ongoing brew started and the second side brew is selected.	When hot water	
Notifications shown on screen:	tank temperature is at setpoint. Buttons	
TEXT: HEATING →Tank above 87°C/189°F-will	will illuminate and "READY" will be	
allow brew at low temperature. Coffee flavor may be affected	displayed	
TEXT: L. HEAT →Tank above 76°C/169°F-will		
allow brew at low temperature.		
Coffee flavor will be noticeably affected USER SELECTABLE OPTION: BREV	N AT TEMP: OFF	
(Not recommended) Unit will operate)
1		

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

1	Chart to		r altitude fo ater temper	or boiling po ature.	oint
[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	L-YES R-YES	YES or NO			
C3	Tank Temperature	Direct read	Hot water tank temperature		Actual values	
C4	USB Drive	NO	(not in use)			
C6	Keyboard Test	Calibrate	Checks buttons under membrane cover	YES/NO	Follow directions on the touch screen	

D Service	e Outputs	Test Valves and Hea	aters; Set screen b	rightness	
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
D3	LT (left) Brew Valve Test (on CBS-1232 only)	(Press to test)	Activates valve Default is 10 sec.	Toggle +/- OFF or ON	Runs valve to verify flow. NOTE: Have container under brew basket.
D4	RT (right) 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.
	Single series	s displays right side only	Left Valve display is o	nly 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	-3°F -2°C	-2° to -9°F -1° to -5° C	1°F 1°C	Compensates output to measured temperature	
E2	LLC Sensitivity	NORMAL" for most water)	HIGH (Biased for reverse osmosis water or very pure water)	NORMAL	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	
E4	LT Brew valve flow rate:	1.80L 0.47G 61oz	1.05-1.60Liter 0.39-0.55G 50-71 fl.ounces	0.05L 0.01G 1 oz	Adjusts flow rate	
E5	RT Brew valve flow rate:	1.80L 0.47G 61oz	1.05-1.60Liter 0.39-0.55G 50-71 fl.ounces	0.05L 0.01G 1 oz	Adjusts flow rate	
E6*	LT Bypass valve flow rate:	1.30 liters/minute (0.36 gallon/minute) (46 ounces/minute)	1.10-1.65Liter 0.28-0.42G 37-54 fl.ounces	0.05L 0.01G 1 oz.	Adjusts flow rate	
E7*	RT Bypass valve flow rate:	1.30 liters/minute (0.36 gallon/minute) (46 ounces/minute) nd activated on equipment	1.10-1.65Liter 0.28-0.42G 37-54 fl.ounces	0.05L 0.01G 1 oz.	Adjusts flow rate	

Use this formula to compensate for minor discrepancies in actual volume versus programmed volume. See "PROGRAM" <u>E4</u> & <u>E5</u> For valve settings and calibration. Factory set brew valve flow rates are in liter/min

ACTUAL VOLUME	·····	CURRENT		NEW
PROGRAMMED VOLUME	X	SETTING	=	SETTING

Use the formula above to determine the correct setting

<u>Default Brew Valve Flow Rate—CBS-1230 Brewers</u>					
CBS-1230	<u>L/minute</u>	<u>Range</u>			
Left Brew Valve FR	1.80	1.50 L to 2.10 L			
Right Brew Valve FR	1.80	1.50 L to 2.10 L			
Set FR lower to increase volume,					
Set FR higher to decrease volume					

F Service	F Service Menu Software & Code View and Settings						
POSITION	Program Items	Factory set Default	Programming Range	Increments	Notes		
F1	Display Firmware	2.2.210720			Displays current version [6/2020]		
F2	Display Bootloader	2.0.210317			Displays current version [6/2020]		
F3	Select Model	CBS-1231 or 1232 Will need reboot	Scroll to brewer model Save & Exit	CBS-1221 CBS-1241, CBS-1242 CBS-1241, CBS-1242 CBS-1251, CBS-1252 CBS-1261, CBS-1262 MBS-1241, MBS-1251	NOTE: Overwrites all user settings (See below)		
F4	Option Bypass	Yes	NO or YES		Turns on bypass		
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		
	cting F10-RESTORE DE odel and deletes all user			3). Brewer retu	rns to factory defaults		
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 display		
F14	Override Lt BBS	NO	NO/YES	Toggle +/- YES or NO	Disables brew basket sensor (CBS-1242 only)		
F15	Override Rt BBS	NO	NO/YES	Toggle +/- YES or NO	Disables brew basket sensor		
F16	Override Lt BBL	NO	NO/YES	Toggle +/- YES or NO	Disables brew basket lock (CBS-1242 only)		
F17	Override Rt BBL	NO	NO/YES	Toggle +/- YES or NO	Disables brew basket lock		

F Error Codes DO NOT CLEAR ERROR CODES UNTIL ERROR IS IDENTIFIED AND CORRECTED → Contact factory or specialized personnel for error codes Code Description **Possible Cause Corrective Action** Software error-error on start up or 001 Improper start-up or shutdown Restart, if still fault: reload software corrupted software Internal flash corrupted Error found in cyclic Restart, if still fault: reload software 002 internal data memory malfunction redundancy check CRC If not corrected :replace board 050 Short-circuit in temperature probe Probe failure. Replace probe. Check all connections. Replace probe if Bad probe connection, or probe 051 Open temperature probe. failure. necessary. Initial Fill Error. Watch for short potting during brew Water supply flow rate is too 100 Initial fill time took longer than cycle. Investigate cause of low flow low. expected after powering up. rate. (Clogged water filter...) Error on refill-. Watch for short potting during brew Water supply flow rate is too 101 Tank did not refill within expected cycle. Investigate cause of low flow low. rate. (Clogged water filter...) time. Heater is on, temperature is not High elevation correction. Bad heaters 200 Heating flatline-Tank is boiling rising/dropping or temperature probe or position Heater open, high limit Failure of heating element, Check and replace heating elements, 201 thermostat, or Solid State Relay SSR, high limit or low voltage SSRs, high limit devices if necessary. (SSR) fault Check that ohms range of heater are Heater is off and heating 202 Heater Shorted or Stuck SSR between 10-80Ω; replace if not. SSR SSR is stuck "ON" may be stuck in ON mode-replace SSR. Usually from longer than 10 sec Restart, if still fault: reload software. If 255 Keyboard [HID] error contact. Or faulty reassembly mechanical: replace module after service Brew basket must be in place NO **BSKT** Insert brew basket into brewer rails to This is a enable brewer **SAFETY FEATURE Insert Brew Basket**

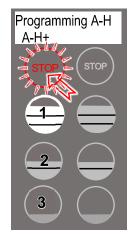
G Cou	ınters	Br	ewer U	sage, Water Filte	r Usage, and	Statistics
ROLE: [L	T]=Perman	ent total for lifetime of ma[chir	ne R]=oper	ator resettable [User]=Inp	ut needed from oper	ator
Position	Counter	Program items	Role	Information	Increments	Notes
G1-G3 are	for water filt	er maintenance. Filter Life readir	ıgs (G1, G2,	G3) must be activated in B13	GENERAL if they are	not visable and the equipment has a water filter.
All beverag	ge equipmen	t must use filtered water and filter	cartridges m	nust be monitored for quality		Amenint of water page of through systems
G1	A, S, B	Filter Used	[User]	0G	Gallons/Liters	Amount of water passed through external water filter. For filter life
G2	A, S, B	Filter Life	[User]	2,625Gal 10,000Liters	25 gal 100 L	Upload published life of filter
G3	A, S, B	Filter Reset	[User]	NO	Toggle +/-,Y or N	Reset when replacing external water filter
G4	A, S, B	Counter Reset	[User]	NO	Toggle +/- ,Y or N	Resets all resettable counters to zero
G5	A, S, B	Choose Counter		Factory set to BASIC	Basic= B Advanced= A Statistical= S	Stored brewer component activity See column 2, Counters, to identify where counters are located.
	Number of	brews and volumes handled.	Available	in BASIC counter only (G	5)	
G10	В	Brewer Volume	[LT]	Dispensed volume	Gallons/Liters	Total of brews and hot water dispensed
G11	В	Brewer Volume	[R]	Disperised volume	Gallons/Liters	Total of brews and not water dispensed
G12	В	Lt Brews	[LT]	Left side brew total	Count	Total brews-Left side (CBS-1232 only)
G13	В	Lt Brews	[R]	CBS-1232	Journ	Total blows Lott side (ODO-1202 Offly)
G14	В	Rt Brews	[LT]	Right side brew total	Count	Total brews-Right side
G15	В	Rt Brews	[R]	CBS-1231&CBS-1232	Count	CBS-1231&CBS-1232
	componer	nt use cycles and volumes ha	ndled. Ava	ilable in ADVANCED cour	ter only (G5)	,
G20	Α	Fill Cycles	[LT]	Hot water tank refill	Count	Cycles of hot water tank refill
G21	Α	Fill Cycles	[R]	cycles	Journ	Oyoles of not water talk reliii
322	Α	Fill Volume	[LT]	Total volume of water	Gallons/Liters	Quantity of water for brown
323	Α	Fill Volume	[R]	for all brews	Gallons/Liters	Quantity of water for brews
G24	Α	Lt Brew Cycles	[LT]	Left brew valve	Count	Totalized cycles of valve operation
325	Α	Lt Brew Cycles	[R]	operation on/off	Count	(CBS-1232 only)
G26	Α	Lt Brew Volume	[LT]	Left brew valve	Gallons/Liters	Totalized volume through left valve
G27	A	Lt Brew Volume	[R]	flow through volume	Gallons/Liters	(CBS-1232 only)
G28	Α	Rt Brew Cycles	[LT]	Right brew valve	Count	Totalized cycles of valve operation
G29	A	Rt Brew Cycles	[R]	operation on/off	Oddrit	CBS-1231&CBS-1232
G30	A	Rt Brew Volume	[LT]	Right brew valve	Gallons/Liters	Totalized volume through right valve
G31	Α	Rt Brew Volume	[R]	flow through volume	Gallotto/Eltero	CBS-1231&CBS-1232
G32	A	Lt Bypass Cycles	[LT]	Left bypass valve	Count	Totalized cycles of valve operation
G33	A	Lt Bypass Cycles	[R]	operation on/off	Count	(CBS-1232 only)
G34	A	Lt Bypass Volume	[LT]	Left bypass valve	Gallons/Liters	Totalized volume through left valve
G35	Α	Lt Bypass Volume	[R]	flow through volume	Gallorio/Elloro	(CBS-1232 only)
G36	Α	Rt Bypass Cycles	[LT]	Count	Count	Totalized cycles of valve operation
G37	Α	Rt Bypass Cycles	[R]			CBS-1231&CBS-1232
G38	A	Rt Bypass Volume	[LT]	Right bypass valve	 Gallons/Liters	Totalized volume through right valve
G39	Α	Rt Bypass Volume	[R]	flow through volume	Canono, Entoro	CBS-1231&CBS-1232
G52	Α	Heater Cycles	[LT]	ON/OFF switching for	Count	Totalized cycles of heater switching
G53	Α	Heater Cycles	[R]	heating elements	304.10	. stanzed eyelee of floater switching
G54	A	Heater On Time	[LT]	Total ON time for	Hour	Totalized heater ON time in hours
G55	A	Heater On Time	[R]	heating element		
		ation below for batch button p			ounter only (G5)	
380 -	S	Batch 10 Cycles	[LT]	Menu button selection	Count	Total brews-left side top button
<u>381</u>	S	Batch 10 Cycles	[R]	and activation count		(CBS-1232 only)
G82	S	Batch 20 Cycles	[LT]	Menu button selection	Count	Total brews-left side middle button
383	S	Batch 20 Cycles	[R]	and activation count		(CBS-1232 only)
G84	S	Batch 30 Cycles	[LT]	Menu button selection	Count	Total brews-left side bottom button
<u>385</u>	S	Batch 30 Cycles	[R]	and activation count		(CBS-1232 only)
G86	S	Batch 40 Cycles	[LT]	Menu button selection	Count	Total brews-right side top button
387	S	Batch 40 Cycles	[R]	and activation count		CBS-1231&CBS-1232
G88	S	Batch 50 Cycles	[LT]	Menu button selection	Count	Total brews-right side middle button
G89	S	Batch 50 Cycles	[R]	and activation count	- Julie	CBS-1231&CBS-1232
G90	S	Batch 60 Cycles	[LT]	Menu button selection	Count	Total brews-right side bottom button
G91	S	Batch 60 Cycles	[R]	and activation count	300111	CBS-1231&CBS-1232

Saving changes and exiting PROGRAMMING

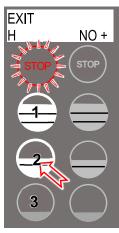
The brewer will only save changes from the "H" menu. **DO NOT** reboot brewer or toggle ON/OFF-exit as below.

TO EXIT PROGRAMMING & HOW TO SAVE CONTROL SETTING CHANGES

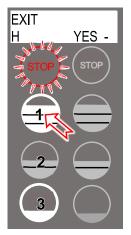
HOW TO SAVE CHANGES AND EXIT-The brewer is in PROGAMMING mode.



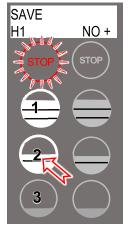
From any screen-Press STOP button until the EXIT ("H") screen appears



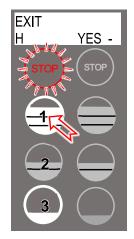
From the "H" screen Press button 2 to toggle to the EXIT-YES screen



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

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 L, G gallons).
- 3) When setting brewer model →The software sets equipment to brewer defaults
- 4) When loading from USB (Reprograms settings)
- 5) When restoring defaults (Reloads to defaults)

(SETTING B5)

(SETTING F3)

(SETTING F9)

(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.
- 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

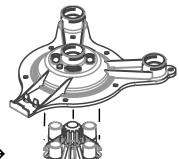
Warning

- 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.
- Never use solvent or solvent-based cleaner or petroleum based polish anywhere on this equipment. 4.
- 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.
- 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.



(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. 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 27 to 29 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 (IAPMO).
- 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
- 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 suppled fitting is a 3/8" 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 of the CBS-1231 may hold up to 3.3 gallons; the CBS-1232 up to 6.0 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.

Brewer	Hot Water Tank Capacity	OPEN Leave open for use	
CBS-1231 Single	3.3 gal 12.3 liter		
CBS-1232 Twin	6.0 gal 22.4 liter	PINCH SHUT To drain tank & service brewer	AI!

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-toside 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.

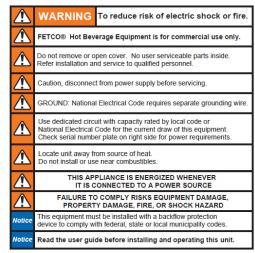
Equipment exposed to flood and contaminated must not be used due to electrical and food safety. Do not operate if unit has been submerged or saturated with water.



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





Labels and warnings for hot beverage equipment

For BACK PANEL of equipment (1046.00035.00)

Brewer Setup

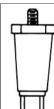
NOTE-Assemble legs after unpacking the brewer and before connection to utilities

1) attach legs for 3 Liter/ 1 Gallon dispensing



STANDARD WITH UNIT 1" legs -Attach this length for

3 Liter air pot configuration



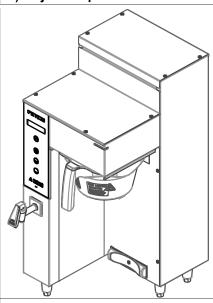
NOT INCLUDED. Purchase separately 2-1/2" legs -Attach this length for

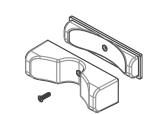
1 Gallon dispenser or 3 liter air pot. Part number 1073,00016,00

3 required for CBS-1232 4 required for CBS-1231

Legs are sent from factory inside brew basket. Attach legs before installing

2) Adjust dispenser locator for either 3 Liter / 1 Gallon dispensing





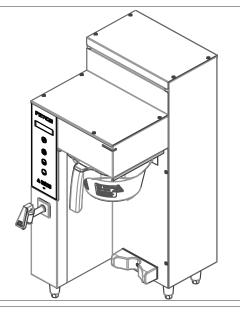
Set Dispenser Locator

← Shown with 1 gallon dispenser locator

-(User option)

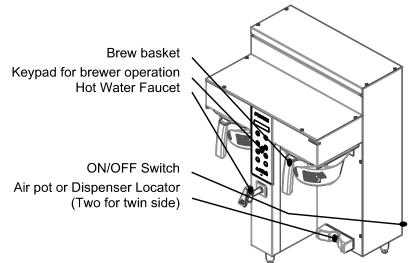
Shown with 3 liter air pot Locator

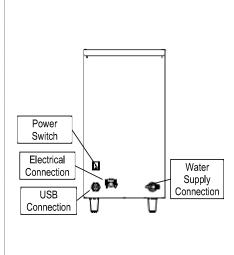
-(Factory installed)



Layout of the brewer

Operation and service

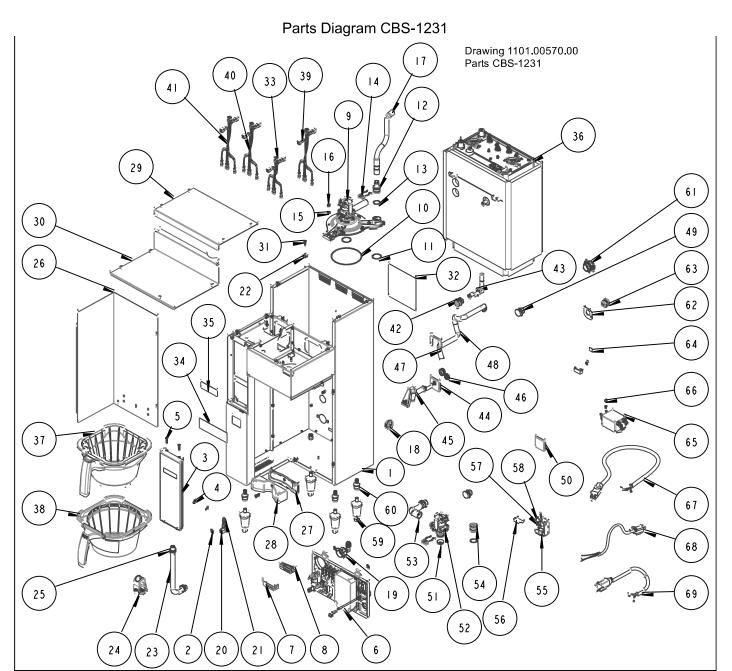


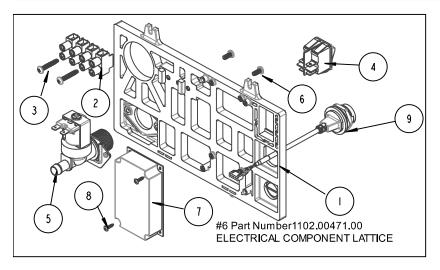


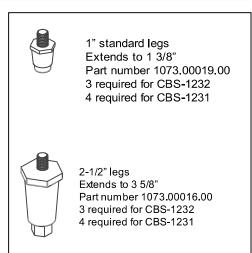
For installing brewer

SELECT brewer model From SERVICE MENU (Page 9) go to position F3 Select model and SAVE and EXIT (Page 11)

Be certain to SAVE new settings

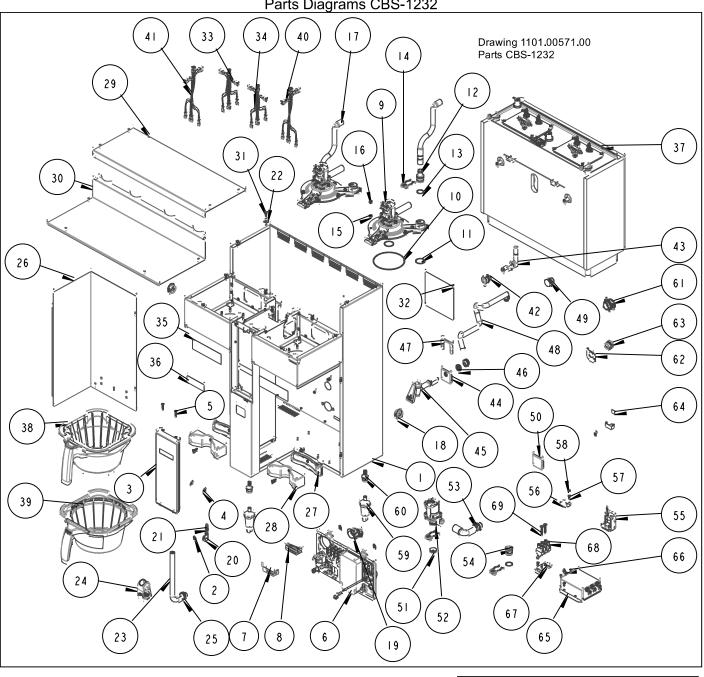


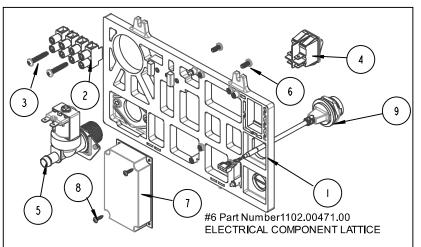


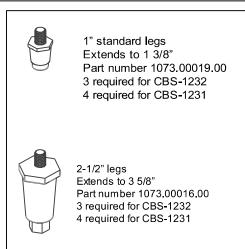


Ref	Qty	Part Number	Description Drawing 1101.00570.00, CBS-1231
1	1	1111.00102.00	WELDMENT BODY, CBS-2231
2	6	1084.00051.00	NUT, HEX LOCKWASHER, #8-32, 18-8 ST. STL.
3	1	1102.00480.00	FRONT PANEL ASSY, SINGLE, PLUS SERIES
4	2	1082.00029.00	SCREW, #6 X 3/8 LG, TRUSS HD PHIL, SHEET MTL
5	3	1082.00058.00	SCREW, #8-32 X 5/8, FLAT HD, PH, 18-8 SS
6 REF	1	Reference	ELECTRICAL COMPONENT LATTICE. NEXT GEN XV+
6-1	1	1023.00350.00	ELECTRICAL MOUNTING LATTICE, COMMON
6-2	1	1052.00023.00	EUROSTRIP HE16 TERM. BLOCK, 4 POLE, 63 AMP, 18-8 AWG
6-3	2	1082.00056.00	SCREW, #8-16 x 1" PAN HD PHIL, THREAD FORMING, FOR PLASTICS, 18-8 SS
6-4	2	1058.00024.00	SWITCH, POWER, DOUBLE POLE, 16A, 125/250 VAC
6-5	4	1057.00043.00	SOLENOID VALVE, 5.5L/min, 180 DEG, 24VDC
6-6	2	1082.00010.00	SCREW, PAN HD. PHIL. MACH., M4x10 ZINC-PLATED
6-7	1	1052.00059.00	POWER SUPPLY, 90-264VAC/24VDC, 2.25A
6-8	2	1082.00020.00	SCREW, #6 X 5/8, TRUSS HD PHIL, SHEET MTL
6-9	2	1058.00055.00	USB CONNECTOR
7	1	1097.00171.00	ADHESIVE, RGB LED BAR
8	1	1023.00390.00	LENS, LIGHT BAR, BLACK
9	1	1102.00451.00	QUICK CONNECT SRAYHEAD ASSEMBLY,30/40'S, BASIC (see page 25 for parts breakdown)
10	1	1024.00063.00	O-RING, 3 15/16" x 3/32" CS, DASH # 154, BUNA-N, DURO-A50
11	2	1024.00107.00	O-RING, 1 3/16" OD X 1 1/16" ID X 1/16" TH, BYPASS SEAL
12	1	1023.00343.00	VENT INSERT, QUICK CONNECT
13	2	1024.00106.00	O-RING, 13/16"OD X 11/16"ID X 1/16" TH, FOR QUICK CONNECT
14	2	1023.00342.00	QUICK CONNECT CLIP
15	9	1083.00010.00	WASHER, #10 SCREW W/NEOPRENE-BONDED SEAL
16	9	1084.00006.00	NUT, 8-32 18-8 HEX MACHINE SCREW
17	1	1024.00098.00	VENT TUBE, CBS- EXTRACTOR SERIES
18	1	1086.00004.00	BUSHING, SNAP, 1" MOUNTING HOLE
19	1	1102.00243.00	ADAPTER ASSY, 3/4" BSP x 1/4" NPT x 3/8" TUBE
20	2	1065.00009.00	GROUND LUG CONNECTOR, 14-2 AWG, ALUMINUM
21	1	1044.00012.00	LABEL GROUND, CE
22	11	1084.00011.00	NUT, CLIP ON (J-NUT), #6-32, 22-20 GA., BLK-PH FINISH
23	1	1025.00058.00	TUBE, 9/16"OD X 5/16"ID X 25.00"LG
24	1	1086.00009.00	CLAMP, 3/4" MAX TUBE OD FLOW CONTROL
25	4	1086.00003.00	UNICLAMP, 15.9 HOSE OD CLAMP
26	1	1112.00530.00	WELDMENT, RIGHT COVER, CBS-2230
27	1	1023.00354.00	LOCATOR, DISPENSER, CBS-2230
28	1	1023.00355.00	LOCATOR, AIRPOT ADAPTER, CBS-2230
29	1	1001.00413.00	COVER TOP, CBS-2231/41
30	1	1001.00414.00	COVER, UPPER BASE, CBS-2231/41
31	11	1082.00017.00	SCREW, TRUSS HD. PHIL. MACHINE, # 6-32 X 1/2 LG LABEL, WARNING "TO REDUCE RISK OF ELECTRIC SHOCK OR FIRE"
32 33	1	1046.00035.00 1402.00098.10	
34	1	1046.00003.00	HARNESS, LOW AMP, CBS-1230, UL
35	1	1041.00033.00	LABEL, CSD WARNING, 1.5" X 5.0" BLACK EXTRACTOR PLUS LABEL, LASER ENGRAVED
36	1	1104.00169.00	TANK ASSEMBLY, CBS-2231, 1 X 1.5KW/120VAC
36	1	1104.00109.00	TANK ASSEMBLY, CBS-2231, 1 X 1.7KW/120VAC
36	1	1104.00174.00	TANK ASSEMBLY, CBS-2231, 1 X 2.3KW/240VAC
36	1	1104.00174.00	TANK ASSEMBLY, CBS-2231, 1 X 2.3KW/120VAC
36	1	1104.00175.00	TANK ASSEMBLY, CBS-2231, 1 X 3KW/240VAC
36	1	1104.00171.00	TANK ASSEMBLY, CBS-2231, 2 X 1.7KW/120VAC
36	1	1104.00173.00	TANK ASSEMBLY, CBS-2231, 2 X 2.3KW/120VAC
37	1	B014218BN2B	K BREW BASKET ASSY, 13" X 5", 0.218" DIA HOLE, BROWN PLUG
38	1	B003218B1	BREW BASKET ASSY, 13" X 5", .218 DIA HOLE, BLACK
39	1	1402.00039.10	HARNESS HIGH AMP, CBS-2231/41/51, UL
40	1	1402.00039.11	HARNESS ADDITION, HIGH AMP, CBS-2231/41/51, UL
41	1	1402.00121.10	WIRE HARNESS ADDITION, HIGH AMP, EMI FILTER, 2-POLE, CE
42	1	1024.00111.00	GROMMET, SILICONE, W/ POSITION TABS
43	1	1023.00362.00	FITTING VENT, ELBOW, .375" X .375", SELF POSITIONING
44	1	1023.00348.00	HOT WATER INSERT, MANUAL FAUCET
45	1	1071.00055.00	FAUCET, HOT WATER, PSC-BR-8, WITH FLAT AND STEM
46	1	1084.00048.00	JAM NUT, 1/2-20 UNF, NICKEL PLATED BRASS
47	1	1003.00370.00	HOT WATER INSERT LOCK
48	1	1025.00120.00	TUBE, 9/16"OD X 5/16"ID X 13.00"LG
49	2	1024.00051.00	GROMMET, SILICONE, BLANK
50	1	1023.00349.00	HOT WATER INSERT, NO FAUCET
51	1	1023.00369.00	ORIFICE INSERT, QUICK CONNECT, 3/16" HOLE
52	1	1057.00076.00	VALVE ASSEMBLY, COMPLETE, NG, DELTROL
53	1	1029.00042.00	BYPASS L-TUBE, SILICONE, 2200 SINGLE SERIES
54	1	1023.00344.00	PLUG INSERT, QUICK CONNECT
55	1	1102.00219.00	ASSEMBLY, BB LOCKER, 24VDC
56	1	1003.00259.00	BRACKET, BREW BASKET LOCK COVER
57	4	1083.00009.00	WASHER, #6 SCREW , INTL TOOTH LOCKWASHER
58	2	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
59	4	1073.00016.00	LEG, THERMOPLASTIC, 2.50"(63mm)
60	4	1073.00019.00	LEG, 3/8-16 THREAD x 1" LG., GRAY
61	1	1086.00008.00	CONNECTOR, CLAMP, NON-METALLIC CABLE, 3/4"
62	1	1003.00348.00	ADAPTER PLATE, CBS-1130-XV+, STRAIN RELIEF, CE
63	1	1086.00029.00	BUSHING, STRAIN RELIEF, .360"430" DIA CABLE
64	1	1044.00013.00	LABEL EQUIPOTENTIALITY, CE
65	1	1052.00029.00	EMI FILTER, TWO LINE 20A, 120/250VAC
66	2	1084.00012.00	NUT, HEX, #6-32 MACHINE SCREW
67	1	1063.00016.00	POWER CORD, 120VAC W/NEMA 5-15P PLUG
68	1	1063.00015.00	CORD, 120 VAC, 12/3 AWG ,20 AMP , W/5-20P NEMA PLUG
69	1	1063.00032.00	CORD, POWER, NEMA 6-15P, 15A/250V, W/O TERMINALS

Parts Diagrams CBS-1232

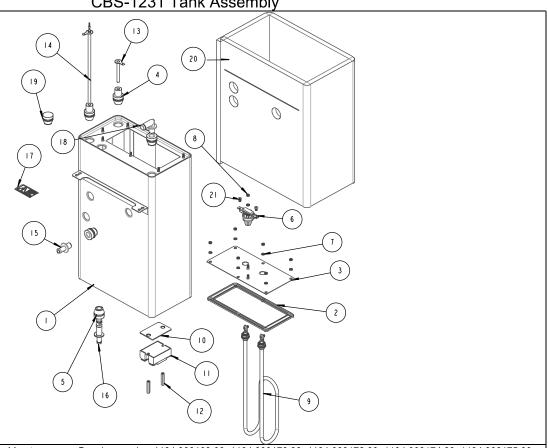




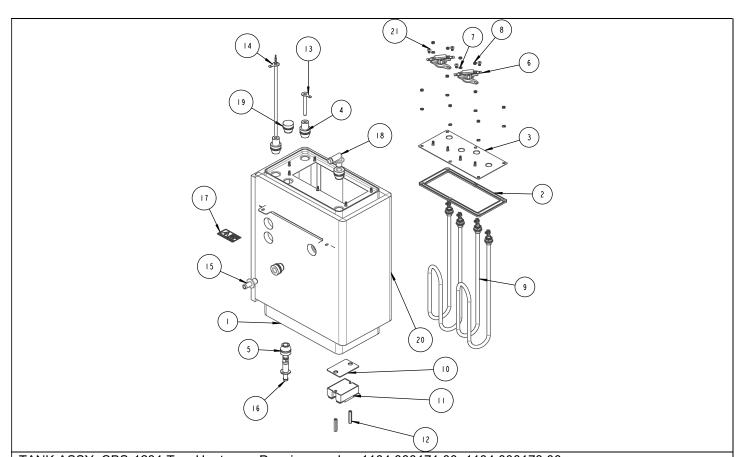


·		5 (1)	
Ref	Qty	Part Number	<u>Description</u> <u>Drawing</u> 1101.00571.00, CBS-1232
1	1	1111.00101.00	WELDMENT BODY, CBS-2232
2	6	1084.00051.00.	NUT, HEX LOCKWASHER, #8-32, 18-8 ST. STL
3 4	2	1102.00470.00 1082.00029.00	FRONT PANEL ASSY, DOUBLE, PLUS SERIES SCREW, #6 X 3/8 LG, TRUSS HD PHIL, SHEET MTL
5	4	1082.00029.00	SCREW, #8-32 X 5/8, FLAT HD, PH, 18-8 SS
6 REF	1	Reference	ELECTRICAL COMPONENT LATTICE, NEXT GEN XV+
6-1	1	1023.00350.00	ELECTRICAL MOUNTING LATTICE, COMMON
6-2	1	1052.00023.00	EUROSTRIP HE16 TERM. BLOCK, 4 POLE, 63 AMP, 18-8 AWG
6-3	2	1082.00056.00	SCREW, # 8-16 x 1" PAN HD PHIL, THREAD FORMING, FOR PLASTICS, 18-8 SS
6-4	2	1058.00024.00	SWITCH, POWER, DOUBLE POLE, 16A, 125/250 VAC
6-5	4	1057.00043.00	SOLENOID VALVE, 5.5L/min, 180 DEG, 24VDC
6-6	2	1082.00010.00	SCREW, PAN HD. PHIL. MACH., M4x10 ZINC-PLATED
6-7	1	1052.00059.00	POWER SUPPLY, 90-264VAC/24VDC, 2.25A
6-8	2	1082.00020.00	SCREW, #6 X 5/8, TRUSS HD PHIL, SHEET MTL
6-9	2	1058.00055.00	USB CONNECTOR
8	1	1097.00171.00 1023.00390.00	ADHESIVE, RGB LED BAR LENS, LIGHT BAR, BLACK
9	2	1102.00451.00	QUICK CONNECT SRAYHEAD ASSEMBLY,30/40'S, BASIC (see page 25 for parts breakdown)
10	2	1024.00063.00	O-RING, 3 15/16" x 3/32" CS, DASH # 154, BUNA-N, DURO-A50
11	4	1024.00107.00	O-RING, 1 3/16" OD X 1 1/16" ID X 1/16" TH, BYPASS SEAL
12	2	1023.00343.00	VENT INSERT, QUICK CONNECT
13	3	1024.00106.00	O-RING, 13/16"OD X 11/16"ID X 1/16" TH, FOR QUICK CONNECT
14	4	1023.00342.00	QUICK CONNECT CLIP
15	18	1083.00010.00	WASHER, #10 SCREW W/NEOPRENE-BONDED SEAL
16	18	1084.00006.00	NUT, 8-32 18-8 HEX MACHINE SCREW
17	2	1024.00098.00	VENT TUBE, CBS- EXTRACTOR SERIES
18	2	1086.00004.00	BUSHING, SNAP, 1" MOUNTING HOLE
19 20	2	1102.00243.00 1065.00009.00	ADAPTER ASSY, 3/4" BSP x 1/4" NPT x 3/8" TUBE GROUND LUG CONNECTOR, 14-2 AWG, ALUMINUM
21	1	1044.00012.00	LABEL GROUND, CE
22	11	1084.00012.00	NUT, CLIP ON (J-NUT), #6-32, 22-20 GA., BLK-PH FINISH
23	1	1025.00058.00	TUBE. 9/16"OD X 5/16"ID X 25.00"LG
24	1	1086.00009.00	CLAMP, 3/4" MAX TUBE OD FLOW CONTROL
25	3	1086.00003.00	UNICLAMP, 15.9 HOSE OD CLAMP
26	1	1112.00530.00	WELDMENT, RIGHT COVER, CBS-2230
27	2	1023.00354.00	LOCATOR, DISPENSER, CBS-2230
28	2	1023.00355.00	LOCATOR, AIRPOT ADAPTER, CBS-2230
29	1	1001.00408.00	COVER TOP, CBS-2232/42
30	1	1001.00409.00	COVER, UPPER BASE, CBS-2232/42
31	11	1082.00017.00	SCREW, TRUSS HD. PHIL. MACHINE, # 6-32 X 1/2 LG.
32	1	1046.00035.00 1402.00098.10	LABEL, WARNING "TO REDUCE RISK OF ELECTRIC SHOCK OR FIRE" HARNESS, LOW AMP, CBS-1230, UL
34	1	1402.00098.10	HARNESS ADDITION, LOW AMP, CBS-1232/42, UL
35	2	1046.00003.00	LABEL, CSD WARNING, 1.5" X 5.0"
36	1	1041.00033.00	BLACK EXTRACTOR PLUS LABEL, LASER ENGRAVED
37	1	1104.00176.00	TANK ASSEMBLY, CBS-2232, 2 X 2.3KW/240VAC
37	1	1104.00177.00	TANK ASSEMBLY, CBS-2232, 2 X 3KW/240VAC
37	1	1104.00191.00	TANK ASSEMBLY, CBS-2232, 2 X 4KW/240VAC
38	1	B014218BN2BK	BREW BASKET 13" X 5", 0.218" DIA HOLE, BROWN PLUG
39	1	B003218B1	BREW BASKET ASSY, 13" X 5", .218 DIA HOLE, BLACK
40	1	1402.00037.10	HARNESS HIGH AMP, CBS-2232/42/51, UL
41	1	1402.00121.10	WIRE HARNESS ADDITION, HIGH AMP, EMI FILTER, 2-POLE, CE
42	1	1024.00111.00 1023.00362.00	GROMMET, SILICONE, W/ POSITION TABS FITTING VENT, ELBOW, .375" X .375", SELF POSITIONING
44	1	1023.00362.00	HOT WATER INSERT. MANUAL FAUCET
45	1	1071.00055.00	FAUCET, HOT WATER, PSC-BR-8, WITH FLAT AND STEM
46	1	1084.00048.00	JAM NUT, 1/2-20 UNF, NICKEL PLATED BRASS
47	1	1003.00370.00	HOT WATER INSERT LOCK
48	1	1025.00120.00	TUBE, 9/16"OD X 5/16"ID X 13.00"LG
49	1	1024.00051.00	GROMMET, SILICONE, BLANK
50	1	1023.00349.00	HOT WATER INSERT, NO FAUCET
51	1	1023.00369.00	ORIFICE INSERT, QUICK CONNECT, 3/16" HOLE
52 53	1	1057.00076.00 1029.00042.00	VALVE ASSEMBLY, COMPLETE, NG, DELTROL BYPASS L-TUBE, SILICONE, 2200 SINGLE SERIES
54	1	1029.00042.00	PLUG INSERT, QUICK CONNECT
55	1	1102.00219.00	ASSEMBLY, BB LOCKER, 24VDC
56	1	1003.00259.00	BRACKET, BREW BASKET LOCK COVER
57	3	1083.00009.00	WASHER, #6 SCREW, INTL TOOTH LOCKWASHER
58	1	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
59	3	1073.00016.00	LEG, THERMOPLASTIC, 2.50"(63mm)
60	3	1073.00019.00	LEG, 3/8-16 THREAD x 1" LG., GRAY
61	1	1086.00008.00	CONNECTOR, CLAMP, NON-METALLIC CABLE, 3/4"
62	1	1003.00348.00	ADAPTER PLATE, CBS-1130-XV+, STRAIN RELIEF, CE
63 64	1	1086.00029.00 1044.00013.00	BUSHING, STRAIN RELIEF, .360"430" DIA CABLE LABEL EQUIPOTENTIALITY, CE
65	1	1052.00027.00	EMI FILTER, THREE LINE 30A, 250/440VAC
66	2	1084.00012.00	NUT, HEX, #6-32 MACHINE SCREW
67	1	1112.00246.00	WELDMENT BRACKET TERMINAL BLOCK, 3 POLE
68	1	1052.00022.00	EUROSTRIP HE10 TERM. BLOCK, 3 POLE, 50AMP, 18-8 AWG
69	2	1082.00082.00	SCREW, PHILLIP HD., 8-32 THREAD

CBS-1231 Tank Assembly

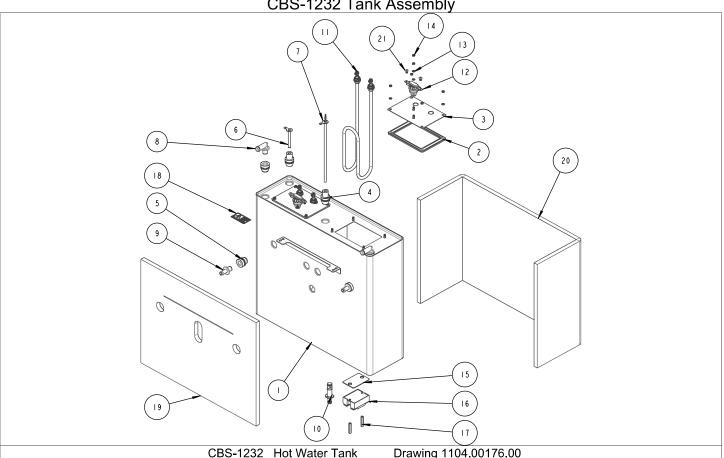


	ASSY, C	BS-1231 Single Heater	Drawing number 1104.000169.00, 1104.000170.00, 1104.000172.00, 1104.000174.00, 1104.000175.00
REF	QTY	Part number	Description
1	1	1114.00168.001	WELDMENT, TANK, CBS-2231
2	1	1024.00114.00	TANK GASKET - NG HEATER PLATE, TWO ELEMENT
3	1	1114.00184.00	WELDMENT TANK HEATER BRACKET, NG-2231, SINGLE
4	2	1024.00053.00	LEVEL AND TEMP PROBE GROMMET
5	3	1024.00050.00	GROMMET, SILICONE, 11.4mm ID
6	1	1053.00052.00	THERMOSTAT, SINGLE SHOT, SCREW CONNECTIONS, 240V/25A
7	8	1083.00009.00	WASHER, #6 SCREW , INTL TOOTH LOCKWASHER
8	8	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
9	1	1107.00021.00	HEATER ASSEMBLY, IMMERSION 1500W/120VAC
9	1	1107.00022.00	HEATER ASSEMBLY, IMMERSION 1700W/120VAC
9	1	1107.00020.00	HEATER ASSEMBLY, IMMERSION 2300W/240VAC
9	1	1107.00019.00	HEATER ASSEMBLY, IMMERSION 2300W/120VAC
9	1	1107.00018.00	HEATER ASSEMBLY, IMMERSION 3000W/240VAC
10	1	1003.00140.00	ALUMINUM BRACKET FOR SSR
11	1	1052.00033.00	RELAY, SOLID STATE, 50A/480VAC, W/BUILD IN VARISTOR
12	2	1081.00042.00	STANDOFF, 1/4" HEX
13	1	1112.00002.00	PROBE WELDMENT, WATER LEVEL 2.25" LG
14	1	1102.00161.00	PROBE ASSEMBLY, TEMP. AND LLC, 8" LONG
15	1	1023.00168.00	FITTING, STRAIGHT, GROMMET, .400"
16	1	1023.00166.00	FITTING, COLD WATER INLET, GROMMET DESIGN
17	1	1044.00004.00	LABEL, DANGER, HIGH VOLTAGE
18	1	1023.00212.00	FITTING, ELBOW, GROMMET, .500"
19	1	1024.00051.00	GROMMET, SILICONE, BLANK
20	1	1022.00114.00	TANK INSULATION, CBS-2231
21	2	1082.00136.00	BRASS SCREW, #8-32 X 1/4", PHILLIPS PAN HEAD



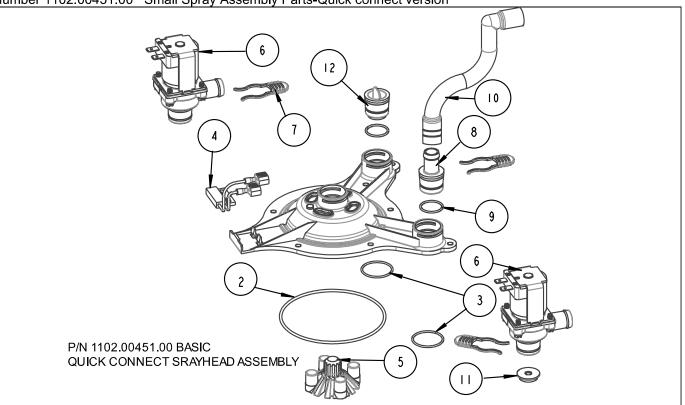
TANK	ASSY, (CBS-1231 Two Heater	Drawing number 1104.000171.00, 1104.000173.00
REF	QTY	Part number	Description
1	1	1114.00168.00	WELDMENT, TANK, CBS-2231
2	1	1024.00114.00	TANK GASKET - NG HEATER PLATE, TWO ELEMENT
3	1	1114.00176.00	WELDMENT TANK HEATER BRACKET, NG-2231
4	2	1024.00053.00	LEVEL AND TEMP PROBE GROMMET
5	3	1024.00050.00	GROMMET, SILICONE, 11.4mm ID
6	2	1053.00052.00	THERMOSTAT, SINGLE SHOT, SCREW CONNECTIONS, 240V/25A
7	10	1083.00009.00	WASHER, #6 SCREW , INTL TOOTH LOCKWASHER
8	10	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED
9	2	1107.00022.00	HEATER ASSEMBLY, IMMERSION 1700W/120VAC
9	2	1107.00019.00	HEATER ASSEMBLY, IMMERSION 2300W/120VAC
10	2	1003.00140.00	ALUMINUM BRACKET FOR SSR
11	2	1052.00033.00	RELAY, SOLID STATE, 50A/480VAC, W/BUILD IN VARISTOR
12	4	1081.00042.00	STANDOFF, 1/4" HEX
13	1	1112.00002.00	PROBE WELDMENT, WATER LEVEL 2.25" LG
14	1	1102.00161.00	PROBE ASSEMBLY, TEMP. AND LLC, 8" LONG
15	1	1023.00168.00	FITTING, STRAIGHT, GROMMET, .400"
16	1	1023.00166.00	FITTING, COLD WATER INLET, GROMMET DESIGN
17	1	1044.00004.00	LABEL, DANGER, HIGH VOLTAGE
18	1	1023.00212.00	FITTING, ELBOW, GROMMET, .500"
19	1	1024.00051.00	GROMMET, SILICONE, BLANK
20	1	1022.00114.00	TANK INSULATION, CBS-2231
21	4	1082.00136.00	BRASS SCREW, #8-32 X 1/4", PHILLIPS PAN HEAD

CBS-1232 Tank Assembly



		CE	3S-1232 Hot Water Tank Drawing 1104.00176.00								
Ref#	Qty	Part number	Description								
1	1	1114.00169.00	WELDMENT TANK CBS-2232, GROMMET DESIGN								
2	2	1024.00115.00	TANK GASKET - NG HEATER PLATE, ONE ELEMENT								
3	2	1114.00181.00	WELDMENT TANK HEATER BRACKET, NG-2232								
4	2	1024.00053.00	EL AND TEMP PROBE GROMMET								
5	5	1024.00050.00	OMMET, SILICONE, 11.4mm ID								
6	1	1112.00002.00	PROBE WELDMENT, WATER LEVEL 2.25" LG								
7	1	1102.00161.00	PROBE ASSEMBLY, TEMP. AND LLC, 8" LONG								
8	2	1023.00212.00	FITTING, ELBOW, GROMMET, .500"								
9	2	1023.00168.00	FITTING, STRAIGHT, GROMMET, .400"								
10	1	1023.00166.00	FITTING, COLD WATER INLET, GROMMET DESIGN								
11	2	1107.00019.00	ATER ASSEMBLY, IMMERSION 2300W/120VAC								
11	2	1107.00020.00	ATER ASSEMBLY, IMMERSION 2300W/240VAC								
11	2	1107.00018.00	ATER ASSEMBLY, IMMERSION 3kW/240VAC								
11	2	1107.00040.00	EATER ASSEMBLY, IMMERSION 4kW/240VAC								
12	2	1053.00052.00	THERMOSTAT, SINGLE SHOT, SCREW CONNECTIONS, 240V/25A,								
13	12	1083.00009.00	WASHER, #6 SCREW , INTL TOOTH LOCKWASHER								
14	12	1084.00010.00	NUT, HEX, #6-32, UNDERSIZED, ZINC PLATED								
15	2	1003.00140.00	ALUMINUM BRACKET FOR SSR								
16	2	1052.00033.00	RELAY, SOLID STATE, 50A/480VAC, W/BUILD IN VARISTOR								
17	4	1081.00042.00	STANDOFF, 1/4" HEX								
18	1	1044.00004.00	LABEL, DANGER, HIGH VOLTAGE								
19	1	1022.00113.00	TANK INSULATION, CBS-2232 FRONT								
20	1	1022.00116.00	TANK INSULATION, CBS-2232 BACK								
21	4	1082.00136.00	BRASS SCREW, #8-32 X 1/4", PHILLIPS PAN HEAD								

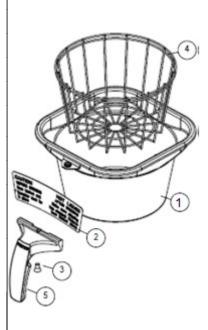
Part number 1102.00451.00 Small Spray Assembly Parts-Quick connect version



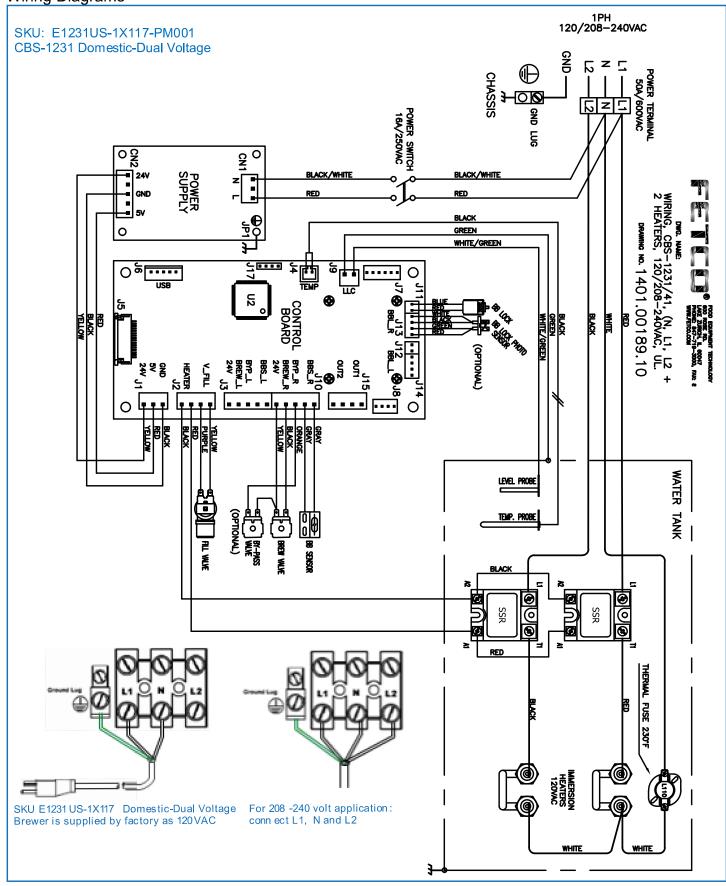
Ref#	Qty	Part number	Description
1	1	1000.00143.00	SPRAY HEAD BASE (KIT), QUICK CONNECT, 30/40'S
2	1	1024.00063.00	O-RING, 3 15/16" x 3/32" CS, DASH # 154, BUNA-N, DURO-A50
3	2	1024.00107.00	O-RING, 1 3/16" OD X 1 1/16" ID X 1/16" TH, BYPASS SEAL
4	~	1102.00113.00	SWITCH, REED, ASSEMBLY
5	~	1102.00479.00	ASSEMBLY, CASCADE SPRAY DOME, NEXT GEN, ORANGE
6	2	1057.00076.00	VALVE ASSEMBLY, COMPLETE, NG, DELTROL (interchangeable with 1057.00078.00)
6	2	1057.00078.00	VALVE ASSEMBLY, COMPLETE, NG, RPE (interchangeable with 1057.00076.00)
7	თ	1023.00342.00	QUICK CONNECT CLIP
8	~	1023.00343.00	VENT INSERT, QUICK CONNECT
9	2	1024.00106.00	O-RING, 13/16"OD X 11/16"ID X 1/16" TH, FOR QUICK CONNECT
10	~	1024.00098.00	VENT TUBE, CBS- EXTRACTOR SERIES
11	1	1023.00369.00	ORIFICE INSERT, QUICK CONNECT, 3/16" HOLE
12	1	1023.00344.00	PLUG INSERT, QUICK CONNECT

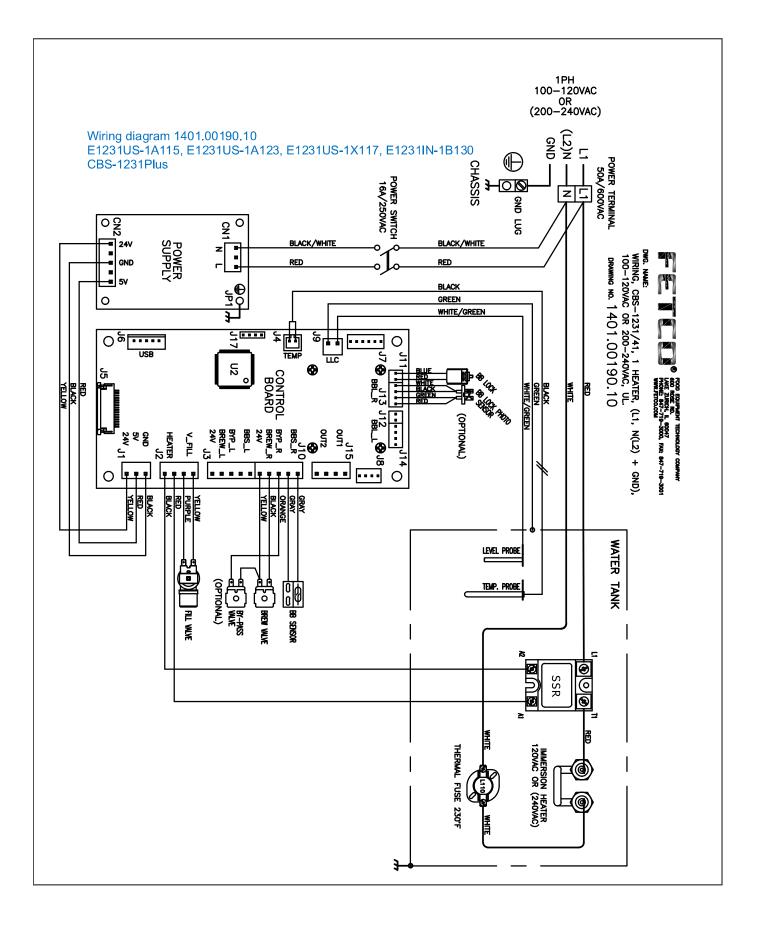
Brew Baskets

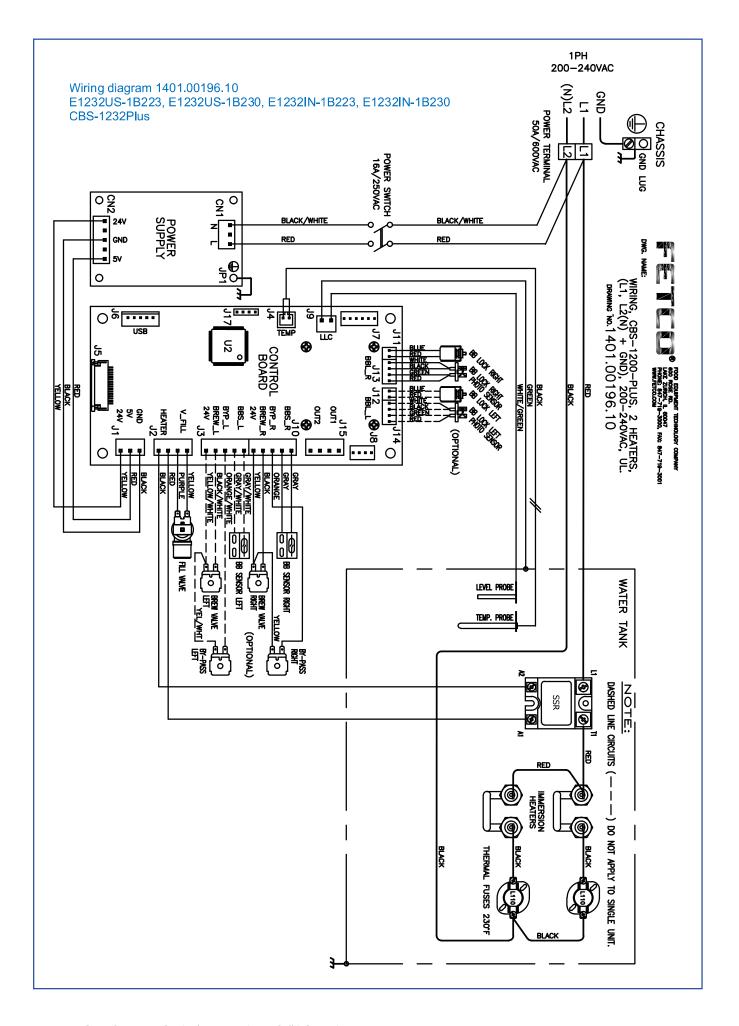
Plastic Brew Basket	
Part Number B014218BN2BK – Complete Plastic Brew Basket	CBS-1231 & CBS-1232
	Part Number Plug Insert color
	1023.00195.00 BROWN PLUG, BB HANDLE
	1023.00194.00 BLACK PLUG, BB HANDLE
Brew basket handle plug	1023.00190.00 RED PLUG, BB HANDLE
for polymeric brew baskets	1023.00191.00 GREEN PLUG, BB HANDLE
is available in optional colors.	1023.00192.00 ORANGE PLUG, BB HANDLE
OGIOTO.	1023.00180.00 BLUE PLUG, BB HANDLE



Stainles	ss Ste	el Brew Basket									
Ref#	Qty	Part Number	Description								
		B003218B1	Complete Stainless Steel Brew Basket								
1	1	1112.00128.00	BB WLDMNT 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								







						End	of	secti	on n	<u>otes</u>							
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