

TECHNICAL BULLETIN

NUMBER

14

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Subject: Thermostat, Timer, & Water Level Board
Applies to: See Below

Date: March 24, 2004
Rev. March 18, 2005

Effective March 29, 2004, the thermostats, temperature probes, timers, and liquid level control boards used in several coffee brewer models will be replaced with new digital components. The models that are affected by this change are:

CBS-11H	CBS-21H	CBS-31A & 31Aap	CBS-51H10	CBS-52H15	CBS-61H
CBS-12H		CBS-32A & 32Aap	CBS-51H15	CBS-52H20	CBS-62H

Models CBS-31P and CBS-31Pap use a different type of new thermostat. See Technical Bulletin 17 for details.

The new components are 100% interchangeable with the old components, so they can be used as replacement parts in existing equipment. The new thermostat and temp probe can also be used in older style CBS-70 Series brewers and HWB Series Hot Water Dispensers that were produced before the new digital versions of these models were introduced.

Part numbers for North American versions: (Effective with units made after March 29, 2004)

Part Number / Description	Replaced by
53012 thermostat, 120V	K033 digital thermostat kit, 100-120VAC (Includes thermostat, neutral wire, and instructions)
53015 temperature probe, 14" *	102198 digital temp. probe assy., 14"
53026 temperature probe, 12" *	102213 digital temp. probe assy., 12"
51006 timer, 120VAC	K034 digital timer kit, 100-120VAC (Includes timer, neutral wire, jumper wire, mounting bracket, screws, and instructions)
51005 timer, 120VAC, full/half	
51017 timer, 120VAC, dual portion	
54001 liquid level board, 120VAC, 50K ohm	108034 water level board, 100-120VAC range 50 to 100K ohm (<i>standard</i>)
54010 liquid level board, 120VAC, 100K ohm	108046 water level board, 100-120VAC range 100 to 200K ohm (<i>optional</i>)
54021 liquid level board, 120VAC, 200K ohm	

* Part # 53015 and 53026 – temperature probes, are still available for use with old style thermostats.

Digital thermostat and temperature probes

The range of the thermostat is 177° F to 208° F.




When installed as a replacement part on older equipment, the new thermostat will work either with the existing analog temp probe, or the new digital temp probe. We recommend installing the new digital temp probe because of its' superior accuracy. The digital temp probe cannot be used with the old style thermostats.

When power to the brewer is turned on, the readout will display either "An" (analog), or "dl" (digital), for 2 seconds to indicate which type of temp probe is installed. Next, the readout will flash and display the last two digits of the temperature setting for 3 seconds. (Due to space limitations, the readout shows only the last two digits.)

During normal operation, the digital readout displays the last two digits of the actual water temperature. When the adjustment tool is turned, the readout begins flashing to indicate the set point, instead of the actual temperature. After the adjustment tool is released, the readout stops flashing and displays the actual temperature again.

The dots below the numbers indicate the displayed temperature range.

Examples:

0 dots – less than 100° F		= 75°F
1 dot – 100° to 200° F		= 187°F
2 dots – over 200° F		= 203°F

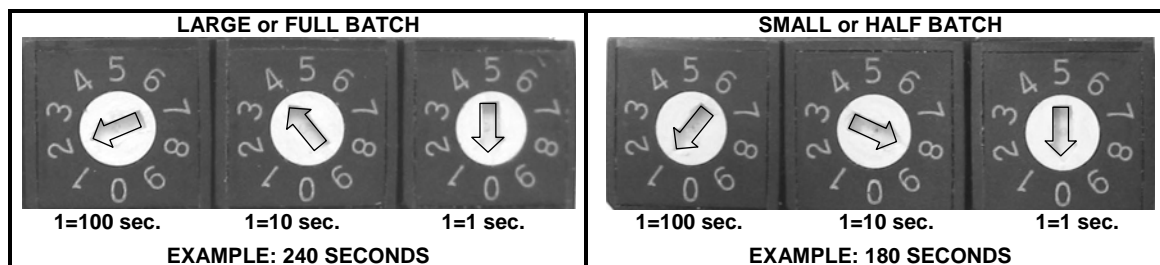
A red LED lights when the power to the thermostat is on.

A yellow LED lights when the thermostat is calling for heat.

Digital Timer

The new timer is a universal replacement for the three old style timers. When a jumper wire is connected to the switch terminals instead of a selector switch, it functions as a single portion timer and only the LARGE or FULL batch setting is used.

The timer has a range of 0 to 999 seconds. It has two independent settings, with three dials for each setting. The first dial in each group sets 100 second increments, the second dial sets 10 second increments, and the third dial sets 1 second increments. A small flat head screwdriver is required to adjust the dials.



A red LED lights when the power to the timer is on.

A yellow LED lights when the timer is running.

Water level control boards

Both new water level boards have a jumper that adjusts the board's sensitivity. Higher sensitivity is sometimes required for sites with reverse osmosis or other types of ultra-pure water. The standard board on new equipment is part # 108034.

The default jumper setting is LO for normal water. If the brewer tank overfills because of ultra-pure water, the jumper should be set to HI. If this fails to correct the problem, it may be necessary to install part # 108046, set at HI sensitivity.

A red LED lights when the power to the board is on.

A green LED lights when the water level probe detects that the tank is full.

A yellow LED lights when the FILL circuit is energized.

A second yellow LED lights when the HEAT circuit is energized.