



---

# TECHNICAL DOCUMENT

## 4009 Error Codes

### Types of Errors

*Note: The term "PK" for Programming Knob is used in this document. For Mach 2 machines the UP / DOWN arrows on the front panel are used instead of PK.*

#### Global

Global errors affect the operation of the entire machine. Machine functions are disabled or restricted based on the error detected. All global errors sound an audible alarm, (alarm beep), illuminate the red error LED, (on under counter machines), and show on the LCD screen until all global errors are cleared.

#### Global Error Display

Global errors are shown as a message on the LCD screen, overriding the normal display. If there is more than one global error the message will cycle through each error until cleared.

#### Internal overtemp error display

A rectangular LCD display with a black border showing the error message: INTERNAL OVERTEMP ALERT  
CHECK BU FAN & VENTS

#### Individual

Individual errors only affect that component or function. The rest of the machine will continue to operate normally. Component functions are disabled or restricted based on the error detected.

## Individual Error Display

One or more individual errors will illuminate the red error LED, and change "OK" to "ER" on MS1 until the error is cleared. The number of errors will be indicated below the "ER".

### MS1, no errors detected

GP1	GP2	GP3	STM	OK
200.5	199.7	200.0	0.0	

### Individual Errors displayed, two errors detected

GP1	GP2	GP3	STM	ER
200.5	199.7	200.0	0.0	2

## Component Temperature or Steam error indication

If the error is associated with a group heater or steam pressure that display will show "---." instead of a temperature or pressure. If a component is not shown it is not present in that machine.

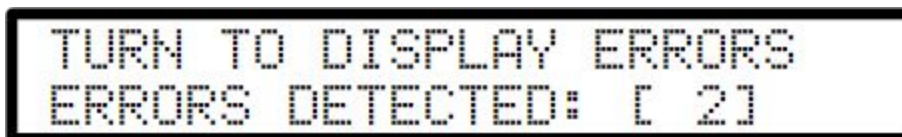
### Group 2 Hose error showing

GP2	BREW	HOSE	GROUP
Temp	201.0	---.-	200.0

## Displaying Individual Errors

Each Individual Error cause can be displayed. Turn the PK to select ">ER<" then press and release the PK. The initial error display will be shown.

### Initial error screen, two errors detected



Turn the PK either CW or CCW, or UP / DOWN arrows on the Mach 2, to display each error cause. Each error will display the component or function where the error was detected, the error number, total number of errors, and the cause of the error.

### Individual error cause screen



*NOTE: Finding and correcting the cause of the error is beyond the scope of this manual.*

## Clearing Errors

Errors will clear automatically when the condition returns to normal **except** for the "Fill Overtime, No water" error. For Version 3.3 and above you may "clear" individual errors by turning that component OFF. This will disable and clear errors for that component. To turn the component off set the temperature above or below its limit. Refer to the Users Manual for more detailed instructions.

## Table of Error Messages

### Global Error Messages

1. **INTERNAL OVERTEMP ALERT**; The BCU has detected that the internal temperature has exceeded the preset limit. Check the BCU fan, vents, and make sure nothing is blocking the cooling system of the BCU.

### Individual Error Messages

For "Group X..." Substitute "X" for the group number, 1,2, or 3.

1. "GROUP X BREW", "GROUP X HOSE", "GROUP X GROUP"
  - a. "Over Temperature"; The component has exceeded its maximum allowed temperature. Heat to that component is turned off.
  - b. "RTD Sensor Missing"; The sensor that measures temperature is not detected. Heat to that component is turned off.
  - c. "Sensor Chip No Response"; The on board chip used to monitor component temperature is not working. Heat to that component is turned off.
2. "STEAM HOSE 1", "STEAM HOSE 2"
  - a. "Over Temperature"; The component has exceeded its maximum allowed temperature. Heat to that component is turned off.
  - b. "RTD Sensor Missing"; The sensor that measures temperature is not detected. Heat to that component is turned off.
  - c. "Sensor Chip No Response"; The on board chip used to monitor component temperature is not working. Heat to that component is turned off.
3. "STEAM BOILER"
  - a. "Overpressure"; Steam Boiler has exceeded its preset pressure limit. Heat to the Steam Boiler is turned off.
  - b. "Pressure Sensor Missing"; Sensor used to measure pressure is not detected. Heat to the Steam Boiler is turned off.
4. "BOILER FILL"
  - a. "Fill Overtime, No Water"; Boiler has attempted to fill for more than thirty seconds and has not detected water in the boiler. Heat to the Steam Boiler is turned off and the fill function is disabled. To reset this error the machine must be fully reset, (turned off and on again).