nutrichef PKBRKTL200 Home Beer Brewing Machine with Inner Malt Pipe and Filter Screen User Manual

Home Beer Brewing Machine
with Inner Malt Pipe and Filter Screen
User Manual

READ CAREFULLY AND SAVE FOR FUTURE REFERENCE
PLEASE READ AND THOROUGHLY UNDERSTAND THIS MANUAL PRIOR TO USE FOR IMPORTANT SAFETY INFORMATION!

Effective Volume: 7.9 Gallons
Total Volume: about 9.2 Gallons
Brew your own beer. An all-in-one electric brewing system with an easy-to-use brew controller: Mashing – Lautering – Boling in one kettle. Can hold up to 8 Kgs of malt.

Contents

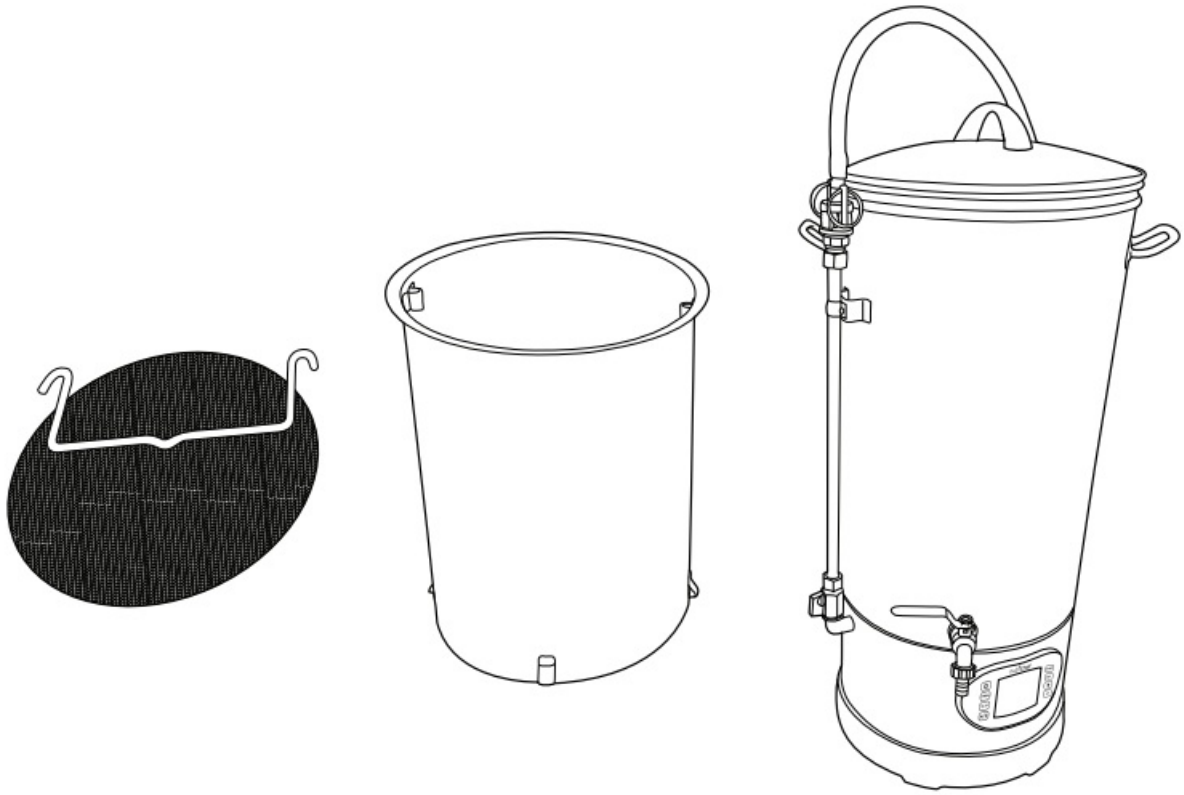
SAFETY INSTRUCTIONS

- Read this user manual before using the PKBRKTL200 Home Beer Brewing Machine.
- Only connect to a wall outlet available for the electric load of the equipment.
- The handles on the brew kettle are designed for moving the brew kettle only when it is empty.
- Always disconnect the power cord before cleaning, if any fault occurs during use when performing maintenance, or during storage.
- If the power cord is damaged or there is any malfunction of the electric parts or components, you must contact your supplier before further use of the equipment.
- If any of the other components are damaged you should contact your supplier for repair or replacement.
- Do not immerse the base of the unit in water.
- Ensure that the brew kettle is placed on a flat surface and is stable during use.
- Ensure proper handling when lifting the malt basket during brewing. The weight of the malt basket, including soaked malt, can be up to 30Kgs.
- Please note that the bottom part of the malt basket can have some rough edges. Handle with care.
- Close the tap and riser pipe valve before pouring any liquid into the boiler.
- Don't switch the unit ON without any liquid in the boiler.
- During use, the surface temperature of the brew kettle, pipes, lid, and liquids can reach 100°C or 212°F. Handle with care.
- Do not start the pump before connecting the hose to the brew kettle in order to avoid the liquid flowing outside the boiler.
- Do not dry run the pump without liquid.
- Do not use the pump to circulate boiling liquid for more than 15 minutes, to avoid overheating the pump.
- Follow the procedure for cleaning and maintenance after use, and before storing.
- Ensure proper cleaning and removal of any burnt material in the boiler.
  Do not use any abrasive device or chemicals that can scratch or damage the stainless steel.

The warranty will not apply if the equipment has been modified or used in any other way than intended.

THE EQUIPMENT

#1: Brew kettle
#2: Malt basket
#3: Lifting handle (for the malt basket)
#4: Filter screen in the malt basket



ALL PARTS EXPLAINED:

#1:
Brew kettle with built-in pump, riser pipe with CamLock fitting, a mini ball valve, and a tap:
The brew kettle is used during all phases of the brewing process, from heating the water (for mashing), mashing, lautering, boiling, and cooling the wort that goes into the fermenting vessel. There are the water measurement with both Liter and Gallon on the wall of the brewing kettle.

Measurement with both Liter and Gallon

The mini ball valve of the riser pipe is used to control the flow of water or wort when using the pump. Turn valve handles horizontally to close and vertically to open. The tap is used for emptying the boil kettle for any liquid. The stainless steel tap is specially made in a larger diameter and shorter outlet in order to have a bigger and quicker flow. **Please note that the handle can get hot.**

To use the CamLock fittings, connect the lid hose female CamLock fitting to the riser pipe male CamLock fitting and pull both levers evenly to an upward position before switching on the pump. After use and when the pump is switched off, pull the lever rings downwards to unlock and release the CamLock fittings.

Rocker switch with an indicator and waterproof cover, easy to operate.

Left: Riser pipe valve (handle in open position) Right: Tap (handle in closed position) Middle: Pump switch

Male and female CamLock fittings
CamLock levers. CamLock fittings.

CamLock closing procedure.
Reverse to release.

Plastic Bottom

The plastic bottom is attached underneath the brew kettle, covering the electronic components and the pump. This bottom can be removed by unscrewing the screws. This will give you access to the pump for maintenance and cleaning. The feet assure enough space to diffuse the heat from the inside of the base and protect the electronic device.

Plastic Bottom

Glass Lid
Place the lid on the brew kettle during mashing in order to retain the heat within the mash. It is visible to watch inside of the kettle well. With the silicon hose connected to the riser pipe, the pump can be used to circulate the wort during mashing and lautering.

Glass lid

The lid has an extra hole intended to be used in conjunction with a thermometer. This allows for measuring the temperature in the mash at the top of the kettle as the temperature here sometimes be different from that on the bottom where the built-in temperature sensor is located.
#2 Malt basket, #3 lifting handle, and #4 filter screen:
Place the malt basket with the filter screen inside the brew kettle before adding water and malt.

Filter screen bottom in malt basket

Malt basket, handle and filter screen bottom

When you choose to use malt basket, at first you will use PROG III, all phase will be completed in this program without suspend.

Malt basket placed on the top bracket

Before your first brew:
Close the tap and riser pipe valve. Add about 1.3- 2.6 gallons of water to the brew kettle.

- Check for any water leakage underneath the brew kettle or around any of the fittings. If any water is found, check and tighten fittings. Check that the gaskets are properly inserted. Read instructions for pump assembly/disassembly (described later in this user manual), and check silicon hose and fittings. If there are no indications of any leakages, connect the lid hose CamLock connector to the riser pipe, place the lid on top of the boiler and connect the power cord to a wall outlet. The built-in light in the brew program selector will now illuminate.

Switch the brew program selector to “II” and press “RUN” button on the brew controller. The display light will now illuminate. This will initiate heating of the water to 100°C or 212°F. Wait until the water is boiling.
Then open the riser pipe valve before switching on the pump. Let the pump run for about 10 minutes in order to clean the equipment pipes and pump.

- While the pump is running you should check for leakages around fittings and tighten the fittings if required.

USING THE HOME BEER BREWING MACHINE

This chapter will explain brewing in general, and how to use the brew controller and the program selector switch during brewing.

UNDERSTANDING THE HOME BEER BREWING MACHINE CONTROLLER:

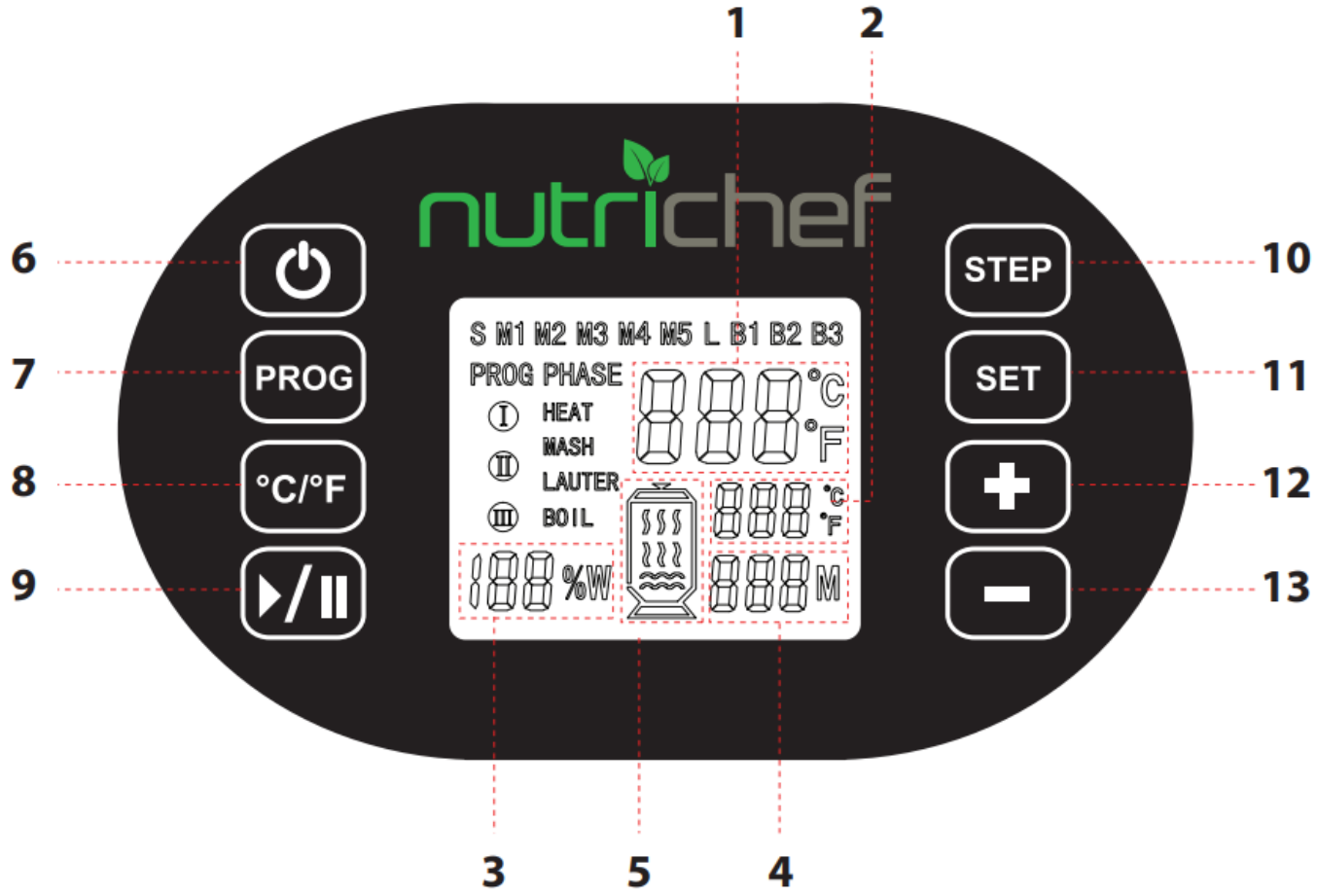
The Home Beer Brewing Machine has an easy-to-use built-in controller that has been designed to support the three phases of brewing described above. Each phase is completed by basically heating up and maintaining temperatures, where each phase has a different function in the beer brewing process.

The phases are displayed as HEAT (preheating), MASH (mashing), LAUTER (laughing), and BOIL (boiling) in the brew controller display. Each phase has three parameters that can be changed:
a. Heating power, in percent %
b. Target temperature (°C and °F)

c. Time (M)

The brew controller has been pre-programmed with parameter values that are suitable for brewing using a single step mashing at 65°C or 149°F, with the malt basket equipment setup. Each of the three phases has been set up with a duration of 60 minutes. This will be suitable for most beer recipes where modern, well-modified malts are used.
The brew controller parameter can be changed, allowing you to set different values of your choice, and according to the recipe. How to change the parameters is described later in this user manual.
If you want a protein rest at around 45°C/113°F, it is possible for you to set. Starch conversion in the mash occurs between 55°C/131°F and 71°C/159.8°F. For most homebrewers, single-step mashing should be performed in the temperature range between about 63°C/145.4°F (more fermentable sugar, resulting in a dryer beer with a thinner body) and 68°C/154.4°F (less fermentable sugar, resulting in more residual sugar and more body of the beer). The mashing temperature will normally be described in the beer recipe.
Some brewers may want to do multi-step mashing (mashing using several different temperatures and steps). This is possible to achieve too, it can have 5 steps mashing at most.

THE BREW CONTROLLER DISPLAY EXPLAINED:



1. Current temperature reading, determined by a sensor in the bottom of the brew kettle. Will display ambient temperature whenever the power cord is connected.
2. **Target temperature indicator:** This will display the target temperature for the current brew phase.
3. **Heating power indicator:** The display will show the percentage % of the current power supplied to the heating element.
4. **Time indicator:** The remaining time for the current brew phase.
5. **Heating status:** Animated symbol indicates that the heating element is on or off.
6. **Brew program ON** and **OFF** button.
7. **Program selector:** Select programs I, II, and III when the equipment is paused. Keeping press this

key for 5 seconds, the program set and run will be recovered to the default value.

PROG I include the first three-phase: HEAT, MASH, and LAUTER.

PROG II includes the last phase: BOIL.

PROG III includes all phases: HEAT, MASH, LAUTER, and BOIL.

8. **Temperature °C/°F converter:** To convert between centigrade and Fahrenheit degrees when the machine is on. Keep pressing for 5 seconds, can adjust the temperature tolerance at the range of ±10°C/50°F, after choosing the number, press SET, the temperature indicating will be changed accordingly.
9. **Run/Pause:** When the machine is ON, you can pause or run the machine anytime after setting the parameter.
10. **Step selector:** When the operation is paused, you can choose the step S–B3 in a direct cycle, any step is available for selection, and then the machine can run backward from this step automatically.

    • **S**: Strike temperature, default 71°C, it is adjustable. The power during heating is 100%. This is not adjustable.

    • **M1–M5:** There are 5 steps during mashing, they are optional, if you don't need it, set its time as 0, this step will not run.

    • **L:** Lautering phase, default temperature 78°C/172.4°F, power 60% and time 10 minutes. All values are adjustable.

    • **B1–B3:** The steps for hopping during the boiling, totally can have 5 steps to add hops including the period of beginning and end of the boiling. They are optional, if you don't need it, set its time as 0, this step will not run.
11. **SET mode:** Press to enter the programming mode to change settings. Press again to confirm.
12. **Settings to increase a value:** Press once, repeatedly or hold to change the chosen value.
13. **Settings to reduce a value:** Press once, repeatedly, or hold to change the chosen value.

During brewing, the brew controller will give an audible signal when every target temperature has been reached, and when it has finished the countdown of a phase.

Tablet of all default value on each step

STEP	TEMP (°C)	TIME (M)
S	71	N/A
M1	45	
M2	50	
M3	60	
M4	65	6
M5	70	
L	78	1
B1	100	4
B2	100	1
B3	100	

OPERATION GUIDE

1. **Power ON**

   After the machine is plugged in, the display screen and the blue backlight will be ON for 2 seconds, and the

machine will be in standby mode.

2. **Press “ON/OFF” to startup**

   “ON/OFF” can be switched ON at any time after the power is connected. The blue backlight lights up, LCD screen display program I and the setting of step S, also the current actual temperature. The target temperature and time on the display are the values (memory) of the last operation. Program shows I, Phase shows HEAT, Heating status keeps still (only animated when the heating elements are working), the machine is in standby mode still.

3. **Run**

   In the condition of standby or pause, press RUN (RUN/PAUSE), the machines will run automatically according to the choice of the program I, II, III. The machine will behold on when pressing the RUN/PAUSE key again and the cycle repeats. The machine runs from top to bottom according to the steps corresponding to each phase under the program, it can also jump directly and start to run from the step chosen by pressing the STEP key. The steps with a timer setting of 0 or temperature setting of 0 are not run and are automatically skipped. The flickering step in the top row on the display is the one currently running, and the symbols of other un running steps are displayed in the top row but not blink, this indicates that these steps have been set up for running, and the steps after running are finished will not be displayed again. All ICONS corresponding to this step are displayed in other parts of the screen: a barrel symbol shows the heating status, the steam symbol inside the barrel is dynamic when heated, static when keep warm. After each step is completed, three-alarm sounds will be issued, and five-alarm sounds will be issued after each phase is completed and start the next phase. After the last step of B3 is finished, the machine will give five alarm sounds and then shut down. All parameters can be modified throughout the brewing process, this means that you can change and reset all the new parameters in advance after pressing the control system power switch ON.

4. **Program Selection**

A. The operation of the selection program I (PROG display I only)

When you select program I, the machine will run all steps as the order of S – L, also can choose any step from S

– L by pressing STEP key then the machine will start to run from this step.

1. **Operation S step**: The PHASE on the display screen displays “HEAT”, the default power is 100%, the temperature can be self-set 30°C-100°C, the default strike temperature is 71°C. The strike temperature is the temperature at which the water is heated before the malt is put in. No timing settings. After the operation is completed, five-alarm sounds are issued.
2. **Operation M1-M5 step**: The PHASE on the display screen shows “MASH”, the power can be self-set 10%-100%, the temperature can be self-set 30-100°C, and the timing can be self-set 0-999 minutes. The specific default value is shown in the table above. Three alarm sounds are issued after each M step is completed and enter next step.
3. **Operation L step**: The PHASE on the display screen shows “LAUTER”, the power can be self-set 10%-100%, the temperature can be self-set 30-100°C, and the timing can be self-set 0-999 minutes. L default power 60%, default temperature 78°C, default timing 10 minutes. After the operation is completed, five-alarm sounds are issued, and then the machine is shut down.

B. The operation of the selection program II (PROG display II only)

When you select program II, the machine will run the steps in the order of B1 – B3 automatically, also can choose any step from B1 to B3 by pressing STEP key then the machine will start to run backward from this step.

Operation B1-B3 step: The PHASE on the display screen shows “BOIL”, power can be self-set 10%-100%, the temperature can be self-set 30-100°C, timing can be self-set 0-999 minutes. The default power is 100% before 100°C and 80% after 100°C. The default temperature is 100°C/212°F. The default timing is 45 minutes for B1, 10 minutes for B2, and 5 minutes for B3. B1-B3 stage without keeping warm, the wattage will keep at 80% power to keep boiling after the temperature reaches 100°C/212°F. After each B step is completed and start next step operation, three-alarm sounds will be issued. After B3 operation is finished, five-alarm sounds will be issued and the machine will be shut down.

C. The operation of the selection program III (PROG display III only)

When you select program I, the machine will run all steps as the order of S – B3, also can choose any step from S – L by pressing STEP key then the machine will start to run from this step.

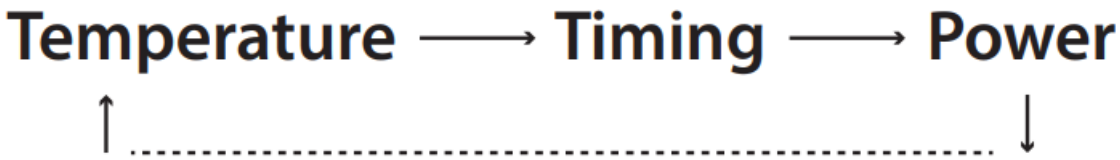
1. **Operation S step:** the PHASE on the display screen displays “HEAT”, the default power is 100%, the temperature can be self-set 30°C-100°C, the default strike temperature is 71°C. The strike temperature is the temperature at which the water is heated before the malt is put in. No timing settings. After the operation is completed, five alarm sounds are issued.
2. **operation M1-M5 step:** the PHASE on the display screen shows **“MASH”,** the power can be self-set 10%-100%, the temperature can be self-set 30-100°C, and the timing can be self-set 0-999 minutes. The specific default value is shown in the table above. Three alarm sounds are issued after each M step is completed and enter next step.
3. **operation L step**: the PHASE on the display screen shows “LAUTER”, the power can be self-set 10%-100%, the temperature can be self-set 30-100 °C, and the timing can be self-set 0-999 minutes. L default power 60%, default temperature 78°C, default timing 10 minutes. After the operation is completed, five alarm sounds are issued.
4. **Operation B1-B3 step**: The PHASE on the display screen shows “BOIL”, power can be self-set 10%-100%, the temperature can be self-set 30-100°C, timing can be self-set 0-999 minutes.The default power is 100% before 100°C and 80% after 100°C. The default temperature is 100°C. The default timing is 45 minutes for B1, 10 minutes for B2, and 5 minutes for B3. B1-B3 stage without keeping warm, the wattage will keep at 80% power to keep boiling after the temperature reaches 100°C. After each B step is completed and start next step operation, three-alarm sounds will be issued. After B3 operation is finished, five alarm sounds will be issued and the machine will be shut down.
5. **Step Selection**

   When the machine in standby or pause state, every time when pressing the “STEP” button, the selected STEP symbol will be blink in order on the screen, thus the power (wattage), temperature, and timing corresponding to the selected STEP can be set. You can also press the “RUN/PAUSE” key to RUN the program backward from the selected step. Program I can choose any step from all the steps of S – L, program II can choose any step

from B1 to B3, program III can choose any step from all steps of S – B3.

6. **Setting of power, temperature, and timing**

   When the machine is in a standby or suspended state, press “STEP” to select a step and reset the setting of power, temperature, and timing corresponding to this step. Every time to press “SET” button, the setting will follow below order to cycle, the icon corresponding to the selected symbol will blink, and then press the (+) and (-) buttons to reset the value.



7. Restore default factory settings

   In the standby or pause state, keep pressing the “PROG” button for 5 seconds to restore the factory settings, the previous set of procedures and settings will be eliminated from the machine.

   Note: in general, if the settings are wrong and memory or program is out of order, you can pause at first and then restore the factory settings.

8. **Adjustment of temperature deviation (temperature compensation function)**

   In the standby or pause state, keep pressing the “°C/°F” button for 5 seconds to enter the function of temperature deviation adjustment. Pressing the (+) and (-) buttons to modify the temperature deviation. After determining the value, press the SET button to save the settings. The range of this deviation adjustment is within ±10°C.

   Note:

   1. This adjustment function is required in winter when the external environment temperature is too low, the heat loss is too fast, or the water is boiling due to the high altitude, and the temperature cannot reach 100°C/212°F to enter the later program.

   2. If it is found that there is a big error between the display temperature and the measured temperature during the course of use, the value can be adjusted and corrected through this function.

9. **Conversion between Celsius and Fahrenheit °F**

   Press “°C/°F” button at any time after starting up to convert the display of °C and Fahrenheit °F.

10. **Power off protection function**

    If there is an unexpected power failure after starting up, the machine will automatically remember the breakpoint. When the power is switched on again, the breakpoint will be automatically found by the machine. Press the **“RUN/PAUSE”** button to restart this step and continue to RUN the next step as previous settings.

11. **Automatic memory saving function**

    When the program is finished and the machine is shut down after running every time, the running program and settings will be saved automatically. When the machine is started up again next time, the running program and settings of last time will be retrieved from the memory automatically and run again.

CLEANING AND MAINTENANCE

Cleaning your Beer Brew Automatic after use:

After use you should empty the brew kettle of any remaining trub. Use warm water and a soft kitchen brush only to gently clean the equipment. You can also use a PBW cleaner to soften any burnt material in the bottom of the brew kettle.

Add about 5-10 litres of water, press **“On”** on the brew controller display, switch the brew program selector to “II”, then press **“Run”.** Connect the whirlpool arm. When the water is boiling, open the riser pipe valve and switch on the pump and let it run for about 5 minutes in order to clean the equipment pipes and pump, then switch the

equipment off. Empty the brew kettle, dry the equipment, and store it until your next brewing session.

Note:

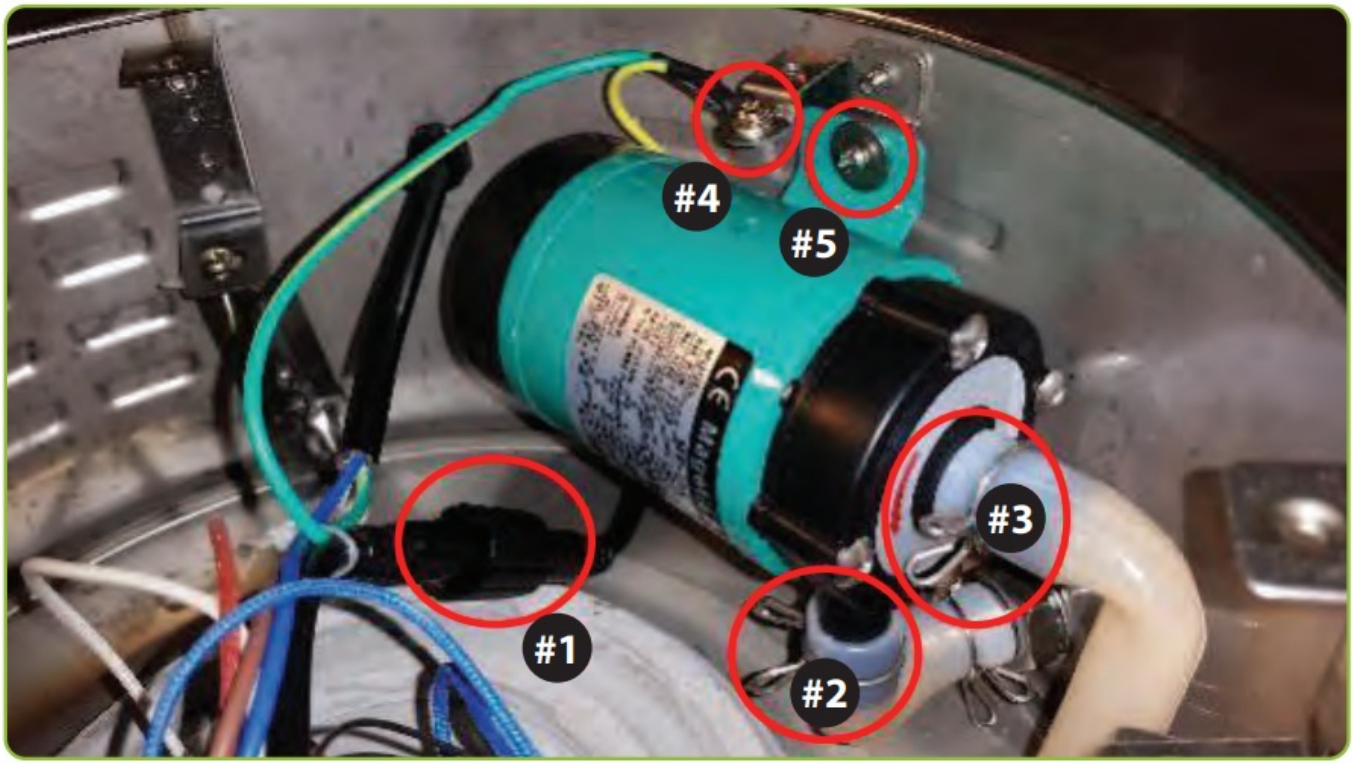
Do not use a hard brush as it can create scratch marks on the equipment surfaces.

Do not submerge the base of the brew kettle in water.

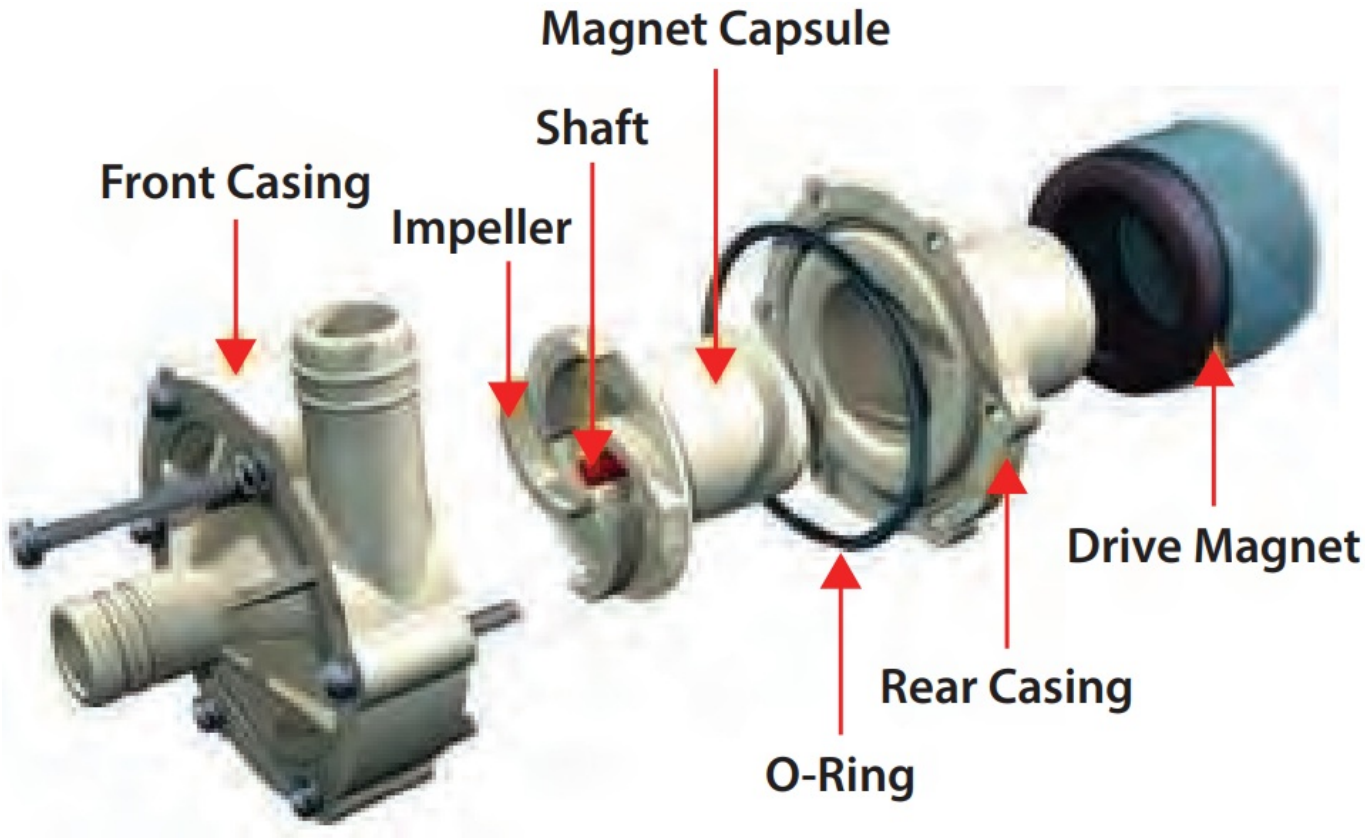
Cleaning the pump:

Sometimes some material can get into the pump, preventing the impeller inside the pump front casing from running. In case of clogging you may need to take the pump out for manual cleaning.

Ensure that the **Home Beer Brewing Machine** is empty and cooled down to approximately room temperature. Disconnect the power cord from the wall outlet and place the brew kettle upside down.



Remove the screws holding the bottom cover plate, using a Phillips screwdriver. Disconnect the power cord quick connector (#1). Loosen the two hose clamps (#2 and #3) and remove the hoses from the pump. Unscrew the screw attaching the 2 ground cables (#4), and finally, loosen the screw attaching the pump. You can now remove the pump.



To access the impeller you need to unscrew the screws holding the pump front casing. Lift the front casing off to clean it on the inside. The impeller, the impeller shaft, and the O-ring should also be removed for cleaning.
Use the procedure for removing but in reverse order to assemble all parts. Ensure that all parts in the pump housing are properly attached before tightening the screws. Ensure that both ground cables are attached to the fastening screw (#4).

Fault Indication:
If during the use of the machine, the machine turns off the power automatically, and the failure code appears on the display at the same time:
E1: Indicates temperature probe failure. Please check whether the probe (sensor) on the bottom plate is kept clean, not covered or stuck by sediment or stains, or open the bottom plate and check whether the wire connection of the temperature probe is loose on the PC board.
E2: The temperature sensor is broken and needs to be replaced.
E3: Indicates that the thermostat has detected a dry-boil and shut down.
The following three occasions may cause this fault normally, which needs to be checked and confirmed:

1. No water or very little water inside of the brew kettle before starting to heating;
2. During brewing, some chocolate malt or black malt is ground into powder due to its crispness, or the malt is ground up. The powder passes through the screen or surrounding crevices to the bottom, forming a layer of silt to cover the whole heating area or temperature probe. In this case, pour out the wort and take out the mash, clean the kettle, restart the machine.

E4: Means the temperature in the machine is overheated. The temperature exceeds the set temperature of the thermostat and the thermostat fails. Let the machine stop working, disconnect the power supply, wait for the machine to cool completely, then restart.

FEATURES:

- Circulation System with Inner Pump

- Mashup to 17lbs. of Malt
- 9 Gallons Maximum Capacity
- Heavy Duty Single Wall, Stainless Steel Construction
- Adjustable Program Controller (Switchable from Fahrenheit to Centigrade)
- Programmable Brew Recipe – Automatic Multi-Step Time and Temperature Schedule
- Adjustable 10 Step Wattage Setting – Max Wattage 1600w
- Extra Large Water-proof LCD Screen
- Octagonal Wort Draining Stand for Inner Malt Pipe
- No Hole Handle Design for Lifting Inner Malting Pipe – No Grain Leaking into Wort
- Detachable Filter Screen in Malt Pipe
- Visible Transparent Glass Lid with Thermometer Hole
- External Stainless Steel 1/2in Valve
- Plugs Into Standard Wall Outlet
- Easy to Assemble – Easy to Operate – Easy to Clean
- Includes Recipe Book for Belgian Wit, IPA, Kolsch, Pale Ale, Pils, Red Ale, Coast Beer, Weissbier, all in 6.6 Gallons Capacity
- Includes All Necessary Installation Components & Hardware

WHAT'S IN THE BOX:

- Stainless Steel Kettle with Program Controller and Circulation System
- Glass Lid
- Inner Malt Pipe
- Filter Screen
- Lifting Handle
- Camlock Fitting with Silicon Tube

CONSTRUCTION MATERIAL:

- Food Grade 304 Stainless Steel
- 304 Stainless Steel Tap
- 304 Stainless Steel Circulation Pipe and Fittings
- Food Grade Pump with Silicon Tube Connection
- PP Base Bottom and PP Control Panel
- Tempered Glass Lid

TECHNICAL SPECS:

- Power Output: 120V 60Hz
- Power Supply: 1600W
- LCD Screen Dimensions (L x W): 2.36'' x 2'' -inches
- Max Volume Capacity: 9 Gallons
- 120V 6W Pump
- Total Assembled Dimensions (D x H): 15.3'' x 30.3'' -inches

Questions? Issues?
We are here to help!
Phone: **(1) 718-535-1800**
Email: support@pyleusa.com
www.NutrichefKitchen.com

Documents / Resources

	nutrichef PKBRKTL200 Home Beer Brewing Machine with Inner Malt Pipe and Filter Screen [pdf] User Manual PKBRKTL200, Home Beer Brewing Machine with Inner Malt Pipe and Filter Screen, Home Beer Brewing Machine, Inner Malt Pipe