



FERMENTATION CHAMBER

KL15813

Instruction Manual





KegLand Distribution PTY LTD

www.KegLand.com.au



IF THE FRIDGE HAS JUST BEEN MOVED DO NOT TURN ON UNLESS IT HAS BEEN STANDING UPRIGHT FOR ATLEAST 24 HOURS. FAILURE TO DO SO WILL VOID WARRANTY. STAND FRIDGE IN THE UPRIGHT POSITION FOR 24 HOURS BEFORE PLUGGING INTO MAINS POWER SOCKET.



CO₂ GAS CAN BE DANGEROUS. MAKE SURE TO ALWAYS USE CO₂ IN A WELL-VENTILATED SPACE.



ALWAYS THOROUGHLY CHECK FOR GAS LEAKS ONCE YOU HAVE SET UP YOUR SYSTEM.



ENSURE THERE IS OVER 100 mm CLEARANCE AT THE BACK OF THE RAPT FERMENTATION CHAMBER TO ALLOW FOR ADEQUATE AIR FLOW AND VENTILATION



BE CAREFUL NOT TO CONTACT THE EXPOSED COLD PLATE WHEN ADDING OR REMOVING FERMENTERS OR KEGS.





Watch our helpful instructional YouTube Videos

Video instructions now available. The KegLand YouTube Channel (https://www.youtube.com/KegLand). You can find the link on our website www.KegLand.com.au

If there is any part of these videos above that you do not understand or you cannot access please call or email www.KegLand.com.au or your nearest KegLand Distributor for more assistance.

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WARNING - IMPORTANT INFORMATION

Let the RAPT Fermentation Chamber / Fridge sit upright for at least 24 hours after delivery or after sitting the unit on its side before turning the unit on.

Be careful not to hit the exposed cold plate on the inside of the RAPT Fermentation Chamber when inserting or removing fermenters or kegs.

Always thoroughly check for gas leaks once you have set up your system if using the system for keg dispensing or pressure fermentation.

Ensure there is over 100mm clearance at the back of the RAPT fermentation chamber to allow for adequate airflow and ventilation.

Items Included

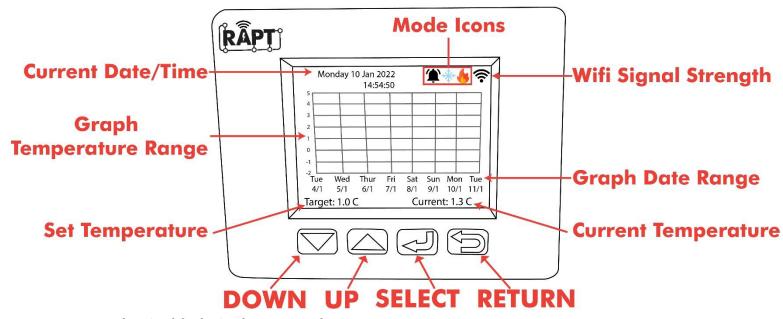
- 1 x RAPT Fermentation Chamber
- 1 x Wire Shelf
- 1 x Plastic Floor Protector
- 2 x PCO1881 Threaded Insert
- 2 x Left Door Hinges



DISPLAY LEGENDS

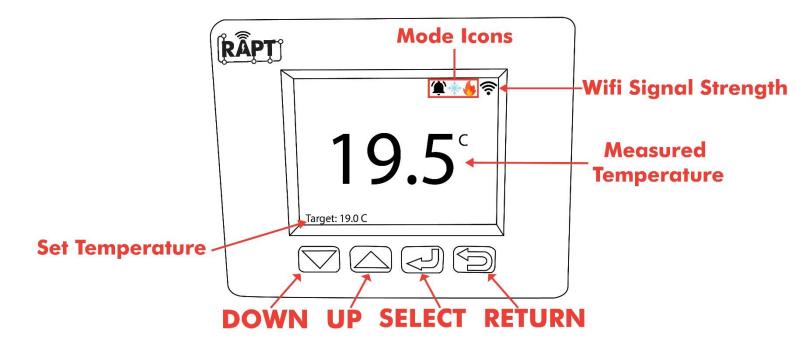
Graph Enabled Display Legend

This is the default display. It shows a graph of temperature vs time with a default period of 7 days.



Graph Disabled Display Legend

The display on the RAPT Fermentation Chamber will display a graph of temperature vs time by default. If instead prefer a numerical interface this can be easily changed by unselecting the **Show graph** checkbox in the **Settings**. This will show an interface like the following:





Display Icon Legend

| ICON | MODE | FUNCTION |
|----------|---------------------------|---------------------------|
| * | On | Bluetooth On |
| \$ | On | Fan On |
| * | On | Cooling Relay On |
| ** | On with countdown overlay | Cooling Relay Start Delay |
| On | | Heating Relay On |
| | On with countdown overlay | Heating Relay Start Delay |
| (| On | Alarm |

MANUAL OPERATION OF THE RAPT FERMENTATION CHAMBER

If you do not intend to connect your device to the RAPT Portal and hence do not want to utilise the Wi-Fi functionality you can operate the Fermentation Chamber completely manually via the buttons on the display.

To remove the prompt requesting you to register your device to the RAPT Portal you will need to disable Wi-Fi in the settings. To do this press select (4) to enter the menu, then select <u>Settings</u>, then navigate using the arrows to the **Disable Wi-Fi** setting. Press select (4) to disable the Wi-Fi and the controller will then restart automatically.

If you decide you don't want to register your RAPT Fermentation Chamber to the RAPT portal and hence not use the Wi-Fi functionality of the controller you will in turn lose a lot of the functionality of the controller which is offered through the RAPT Portal. This includes features such as setting up complex temperature profiles which are run automatically and logging past temperature profiles.

SETTING THE TARGET TEMPERATURE MANUALLY

At the home screen press the up or down arrows to adjust the target temperature. The Fermentation Chamber will then automatically send power to the heating or cooling terminals to power on your heating or cooling device to maintain this target temperature.

NOTE: This is possible only if the device is not currently running an assigned profile.



STARTING A TEMPERATURE PROFILE MANUALLY

Temperature profiles which have been stored on the Fermentation Chamber can be manually started without the need to log in to the RAPT portal. You will need to use the RAPT Portal to initially store the temperature profile on the Fermentation Chamber. For instructions on how to store a temperature profile on the device refer to Storing a Temperature Profile on the RAPT Fermentation Chamber.

Once your Temperature profile is stored on the device simply press select (ﷺ) to enter the menu and navigate to **Start profile**. Then select your desired profile which will display a graph of the steps in the profile. Then press select again to start the profile. Your device will then automatically restart and begin the temperature profile.

To stop running the temperature profile press select (⑷) to enter the menu and then select **Profile control.** Then navigate using the arrows to the stop button ⓐ and press select (ຝ) to stop the profile.

OPERATION OF THE RAPT FERMENTATION CHAMBER THROUGH THE RAPT PORTAL

The Wi-Fi connectivity of the RAPT Fermentation Chamber allows you to monitor, track and start a complex temperature profile involving multiple steps remotely through the RAPT Portal. In order to fully utilise the capabilities of this device you should connect your RAPT Fermentation Chamber to your Wi-Fi network and register it to your account on the RAPT portal at https://app.rapt.io

This will allow you to track and monitor your fermentation in real time remotely without needing to walk over to your Fermentation Chamber. It also allows you to setup and send complex fermentation profiles involving multiple steps to your RAPT Fermentation Chamber which will then automatically run through this profile and adjust the set temperature as required.

In order to have access to this Wi-Fi functionality you will need to sign up for a RAPT Account, connect your RAPT Fermentation Chamber to your Wi-Fi network and register your device on your account on the RAPT Portal by following the instructions below:

CONNECT THE RAPT FERMENTATION CHAMBER TO YOUR WIFI AND REGISTER TO THE RAPT PORTAL

To utilise the Wi-Fi connectivity of the RAPT Fermentation Chamber you will need to sign up for an account on the RAPT portal. This will allow you to create custom fermentation profiles, track and monitor your fermentation temperature and heating/cooling utilisation etc.

1. Sign up for a RAPT Account

1. Sign up for an account on the RAPT portal.

https://app.rapt.io/

2. Once signed up log in to your account on the RAPT website.



2. Connect the RAPT Fermentation Chamber to Your Wi-Fi

- Open your network and internet settings on your mobile device, tablet or computer and connect to the KegLand RAPT Wi-Fi Access Point using the Wi-Fi name and password displayed on the screen on your RAPT Fermentation Chamber.
- 2. Your mobile device should then automatically open a browser to the KegLand RAPT Access Portal.
- 3. Select your Wi-Fi network, enter your Wi-Fi password and select **Join**. This will connect your RAPT Fermentation Chamber to your Wi-Fi network.

3. Register a RAPT FERMENTATION CHAMBER to Your RAPT Account

- 1. Once your RAPT Fermentation Chamber is connected to your Wi-Fi network you will then need to register your device with your RAPT account. When prompted on the screen, press select (<) to enter the main menu then select Register Device. A **Mac Address** and **Validation Code** will then be displayed on the device. Write both of these down. You will need to enter the MAC address and Validation Code later on the RAPT Cloud to register your device.
- 2. Follow the prompts on the display of your RAPT Fermentation Chamber. Log in to the RAPT Portal (https://app.rapt.io/) on a device that is connected to the *same Wi-Fi network* as the RAPT Fermentation Chamber you are registering.
- From the ADD NEW DEVICE dropdown menu in the RAPT Portal, select RAPT Fermentation
 Chamber and input the MAC Address and Validation Code displayed on your RAPT
 Fermentation Chamber when prompted. On the next screen choose a name for your new
 RAPT Fermentation Chamber.
- 4. Congratulations! Your RAPT Fermentation Chamber is connected to Wi-Fi and registered to your RAPT Account and can now be controlled through the RAPT Portal.

https://www.youtube.com/watch?v=MzMYYmGM2ik

SETTING THE TARGET TEMPERATURE VIA THE RAPT PORTAL

At the home screen of the RAPT Fermentation Chamber press the Up or Down arrow to adjust the **Target** value on the bottom left of the display. The **Target** value displayed will be the set point for the device.

The RAPT Fermentation Chamber will then automatically turn on/off the heating and/or cooling as required.

The temperature set point can also be set through the RAPT Portal or a profile session can be started from the RAPT Portal which will automatically begin the profile you have created.

SETTING UP A TEMPERATURE PROFILE ON THE RAPT PORTAL

Once you have registered your RAPT Fermentation Chamber on the RAPT Portal you can then log telemetry from the device and set up complex temperature profiles involving multiple steps.



To setup a temperature profile on the RAPT Portal select **Profiles** and then **Create New Profile**. Then add your temperature profile steps such as primary fermentation, diacetyl rest, dry hop, cold crash etc.

STARTING A TEMPERATURE PROFILE FROM THE RAPT PORTAL

Once you have made your temperature profile, either select **Send Profile to Device** from the profile or **Start Profile Session** on the Dashboard to send the profile to your RAPT Fermentation Chamber.

STORING A TEMPERATURE PROFILE ON THE RAPT FERMENTATION CHAMBER

Temperature profiles are automatically stored on the RAPT Fermentation Chamber once the profile session has been started from the RAPT Portal and profile session has been started on the device from the RAPT Portal.

Note: You can not make a Temperature Profile on the RAPT Fermentation Chamber itself. It must be made and started from the RAPT Portal first and then it will be automatically stored on the device to be started manually in the future.

If you make any changes to the temperature profile on the RAPT Portal the RAPT Fermentation Chamber which check for any updates and apply these changes automatically when the profile is started manually through the controller.

OPERATING INSTRUCTIONS

- 1. Sign up for an account on the RAPT Portal.
- 2. Connect your RAPT Fermentation Chamber to your Wi-Fi network.
- 3. Register your device on your account on the RAPT Portal.
- 4. Set your target temperature on the RAPT Fermentation Chamber manually or through the RAPT Portal. Alternatively, you can begin a Fermentation profile on the RAPT Portal.



TROUBLESHOOTING REGISTRATION AND TELEMETRY

The default setting for telemetry is 60 minutes. As a result, you will not see telemetry in the RAPT Portal right away.

Should the telemetry data not appear, then you may need to re-register your RAPT Fermentation Chamber with the RAPT Portal.

No telemetry is displayed on the RAPT Portal

If you are experiencing issues receiving telemetry or sending a profile to your RAPT Fermentation Chamber from the RAPT portal then you should first check that your RAPT Fermentation Chamber is connected to your Wi-Fi network.

Determine whether your RAPT Fermentation Chamber is connected to Wi-Fi and check the signal strength

To check your RAPT Fermentation Chamber is connected to your Wi-Fi network with good signal strength press Select and navigate to **Diagnostics**.

The Wi-Fi strength will be displayed in this Diagnostics menu and the Wi-Fi network which the controller is connected to will be shown next to WiFi AP.

Signal strength is represented on a scale of 0 to -100dbm

| Signal Strength (dBm) | What it means |
|-----------------------|-------------------------|
| 0 to -30dBm | Maximum signal |
| -50dBm | Excellent signal |
| -60dBm | Good, reliable signal |
| -70dBm | Ok, not a strong signal |
| -80dBM | Poor, unreliable signal |
| -90dBM | Unusable |

Re-register your RAPT Fermentation Chamber

If your RAPT Fermentation Chamber is still not sending telemetry to the RAPT Portal or you are unable to remotely start a profile despite being connected to Wi-Fi with a good, reliable signal strength then you may need to re-register your RAPT Fermentation Chamber to your account. To re-register your RAPT Fermentation Chamber do not delete the device from the RAPT Portal, instead follow the steps below:

How to Re-Register your RAPT Fermentation Chamber

- 1. Go to the **settings** menu on your RAPT Fermentation Chamber.
- 2. Navigate to **clear registration** and press select (↵).
- 3. Register your device to your RAPT account according to the <u>instructions</u>.



UPDATING FIRMWARE

Your RAPT Fermentation Chamber will automatically check for and install firmware updates when turned on and connected to a Wi-Fi network.

To check the firmware version on your RAPT Fermentation Chamber, press select (\triangleleft) to enter the menu and then navigate to <u>diagnostics</u>.

To manually update the firmware in the event that this is not up to date, navigate to **settings** and then navigate to **Check for OTA Update.** Your device will then automatically download and update the most current available firmware.

INSTALLING duotight BLOWTIE or INLINE REGULATOR (optional)

If you intend to pressure ferment in the RAPT Fermentation Chamber you may find it useful to install a <u>KL15042 duotight BlowTie Spunding Valve</u> and/or a <u>KL15035 duotight Inline Regulator</u>.

The duotight BlowTie Spunding Valve will allow excess pressure built up during fermentation to be released from the fermenter allowing an optimal fermentation pressure to be set based on your beer style and recipe.

Installation of a duotight inline regulator allows for easy pressurisation for closed transfers for example.

There is a mounting point on either side of the RAPT Fermentation Chamber for mounting a duotight BlowTie Spunding Valve or Inline Regulator.

- Step 1. Remove the cover panel behind the RAPT Fermentation Chamber on the top of the fridge
- Step 2. Unscrew the two Phillips head screws which hold the side service panel in position.
- Step 3. Slide the side service panel away from the RAPT Fermentation Chamber
- Step 4. Remove the blanking plate and slide in the PCO1880 threaded plate into the desired location depending on if you wanted the ball lock disconnect mounting point on the side or the top of the fridge.

Step 6. Screw a duotight compatible carbonation cap onto the PCO1881 thread.

An easy way to connect the EVABarrier hosing onto the carbonation cap is to use a duotight fitting. Below is just one example of how the EVABarrier gas hosing can be connected.

Top mounting

- 1. Push a 6mm x 8mm reducer onto the duotight compatible barb of the carbonation cap
- 2. Push an 8mm male x 8mm female elbow into the reducer
- Cleanly cut an 82mm length of EVABarrier hose and insert this firmly into the BlowTie
 Spunding Valve or Inline Regulator and duotight elbow. Ensure that the arrow on the side of
 the Spunding Valve or Inline regulator is pointing towards the RAPT Fermentation Chamber.



Side mounting

- 1. Push a 6mm x 8mm reducer onto the duotight compatible barb of the carbonation cap
- Cleanly cut an 84mm length of EVABarrier hose and insert this firmly into the BlowTie Spunding Valve or Inline Regulator and duotight reducer. Ensure that the arrow on the side of the Spunding Valve or Inline regulator is pointing towards the RAPT Fermentation Chamber.

Step 7. Measure and cleanly cut the desired length of EVABarrier tubing required to reach from your fermenter in the fridge to the duotight BlowTie Spunding Valve or Inline Regulator. Then route this hosing into the injection moulded channel and through the opening in the top of the fridge.

Step 8. Unscrew the two screws which hold the RAPT blanking plate onto the mounting points

Step 9. Secure the duotight BlowTie Spunding Valve or Inline Regulator into position using the two mounting points.

Step 10. Terminate the line inside the RAPT fermentation chamber with gas disconnects. <u>KL20756</u> <u>duotight Disconnects</u> are recommended for this.

Note: You may need to remove the gauge from the BlowTie Spunding or Inline regulator which is positioned to the right of the RAPT Fermentation Chamber and rotate this such that it is upright. This can be done easily by removing the two bolts which hold the gauge housing in place and pulling up on the gauge to remove it.

For detailed instructions showing how to install a duotight BlowTie Spunding Valve or Inline Regulator, then please refer to the following instructional YouTube video:

RAPT Fermentation Chamber – duotight BlowTie Spunding Valve/Inline regulator installation video

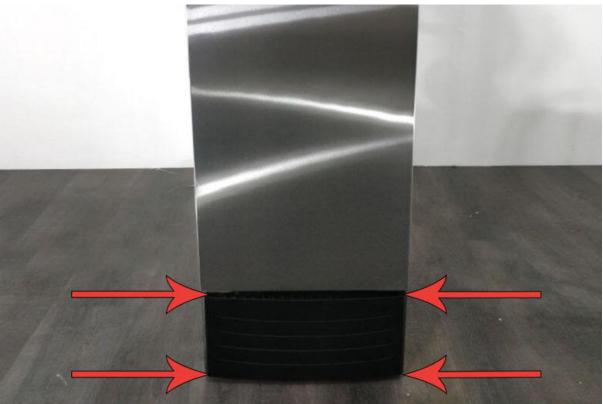
Note: To ensure correct orientation install the Inline Regulator (KL15035) on the left hand side. Install the Blowtie spunding valve (KL15042) on the right hand side of the RAPT Fermentation Chamber.

REMOVING PANEL TO ACCESS THE DRIP TRAY

The front panel at the base of the RAPT Fermentation Chamber is dismountable. In normal use it is held in place by magnets, to allow easy and convenient access to the drip tray which is mounted underneath the fermentation chamber. It is recommended to regularly check the drip tray and empty as required.

To enable this, remove the four screws holding the front panel in place.





LEAK TEST PROCEDURE

Prior to beginning fermentation or hooking up any kegs to your gas line into the fermentation chamber it is essential to conduct a leak test.

It is best to conduct a pressure decay test on the fermenter itself and on the incoming gas line into the duotight inline regulator from the CO2 cylinder and regulator to ensure your entire system has no leaks.

This can be done easily

- Step 1: Attach CO₂ cylinder and regulator to the gas post of the RAPT chamber.
- Step 2: Attach the disconnect from the inline regulator (inside the RAPT chamber) to your empty fermenter.
- Step 3: Adjust the pressure on the regulator to 20psi.
- Step 4: Turn the CO₂ cylinder valve handles off.
- Step 5: Wait two hours and ensure the pressure reading on the pressure gauge on the regulator has not changed.



EXTENSION PROBE INSTALLATION & CALIBRATION

The RAPT fermentation Chamber comes as standard with a short temperature probe which measures the air temperature within the RAPT Fermentation Chamber.

If you were looking for higher accuracy temperature measurement by inserting a temperature probe into the thermowell of your fermenter you will need to install and calibrate a longer extension temperature probe (sold separately, KL22460)

Once the probe is installed then it will need to be calibrated.

- 1. Enter the menu by pressing Select (리)
- 2. Use the Up or Down arrows to navigate to **Settings** and press Select (리)
- 3. Use the Up or Down arrows to navigate to 2-point calibration and press Select (↵)

Once in the 2-point calibration mode set up two glasses of water. Ice water to one glass and add hot water to the second glass.

Calibration Point 1

Insert the temperature probe of the RAPT Fermentation Chamber into the glass of ice water while simultaneously measuring the temperature of the ice water using a calibrated external thermometer such as a digital instant read thermometer (KL23320). Wait for the temperature reading on both the RAPT Fermentation Chamber and the external calibrated thermometer to stabilise as much as possible.

Then adjust the temperature shown on the RAPT Fermentation Chamber to match the temperature measured on the external calibrated thermometer.

Press Select (△) to lock in this calibration point 1 and move on to calibration point 2.

Calibration Point 2

Insert the temperature probe of the RAPT Fermentation Chamber into the glass of hot water while simultaneously measuring the temperature of the hot water using a calibrated external thermometer. Wait for the temperature reading on both the RAPT Fermentation Chamber and the external calibrated thermometer to stabilise as much as possible.

Then adjust the temperature shown on the RAPT Fermentation Chamber to match the temperature measured on the external calibrated thermometer.

Press Select (↵) to lock in this calibration point 2.

Once both calibration points have been set the NTC temperature probe has been calibrated.

For a video guide on how to install and calibrate this longer extension temperature probe please refer to the following instructional YouTube video:

https://www.youtube.com/watch?v=7l0RtVw6-QM



DEFAULT TEMPERATURE PROBE CALIBRATION

In the event that you revert back to the standard probe that is preinstalled in the RAPT Fermentation Chamber, you can manually reset the temperature probe to the default settings.

1: NTC beta: 3950 K

2: NTC ref. temperature: 298.2 K

3: NTC ref. resistance: 100000

Manual calibration of the internal temperature probe can be performed using the same method as outlined for the extension probe.

SWAPPING THE DOOR OPENING DIRECTION

Included with every RAPT chamber are spare hinges that allow for the orientation of the door to be changed from right side opening to left side opening.

To change the hinge side of the RAPT fermentation chamber, you will need to remove the right hand hinges and install the replacement left hand hinges.

The bottom hinges are accessed by removing the dismountable drip tray cover (above).

To access the top hinges, remove the top panel of the RAPT chamber.

Follow the above instructions for installing the inline regulator to remove the two front panels. Then remove the 6 screws holding the plastic top cover in place. Once the top hinge can be accessed, it is removed by unscrewing from the RAPT chamber.

To swap the door hinge side, remove the top right hinge. Then carefully lift the door off the bottom hinge pin and place in a safe place. Unscrew the bottom right hinge.

Perform this in reverse to install the left hinges. Install the left bottom hinge. Carefully align the door onto the left bottom door hinge pin. Then install the left top hinge and replace the top cover.

It is recommended that this is performed by two people to minimise the risk of damage during the process.

PROFILES

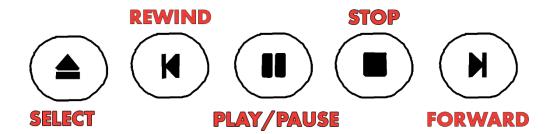
Profiles are a key component of the RAPT system. Profiles are powerful tools that can be customised to a great degree, allowing extremely fine control over all aspects of brewing/fermentation.

Profiles can be designed in the RAPT Portal. There are also Global Profiles that can be imported and customised. Once a profile is created in the RAPT Portal, it can be sent to the corresponding RAPT device using the Send Profile To Device option in the RAPT Portal. The RAPT ecosystem is intended to be largely controlled remotely, and thus there are more powerful controls in the RAPT Portal.



To start or amend a profile that has been uploaded to the RAPT device select PROFILES from the main menu

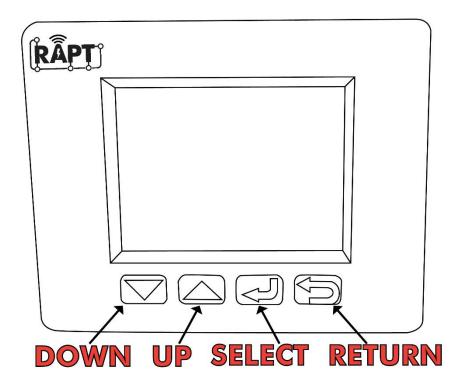
This will display the currently selected profile. If no profile is running, any profile that has previously been sent to the RAPT device can be selected and started from this screen.



When a profile is active it can be paused, cancelled or manually moved forward or backwards using the on-screen display. The **Select** icon allows you to select another (previously uploaded profile). **Rewind** and **Forward** allow you to move forward or backwards along the profile. **Play/Pause** allows you to pause or resume the active profile. **Stop** will stop the current profile.

Manual alterations to the current profile will also be reflected in the RAPT portal after a short interval.

To access the Menus, press the Enter key then scroll down to desired menu. Press Enter to access the menu.





MENUS

Register Device

This option will only be available when the RAPT Fermentation Chamber is not registered to the RAPT Portal (app.rapt.io)

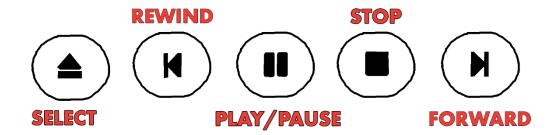
Please refer to Page 8 for full step by step instructions on registering your RAPT Fermentation Chamber

Start Profile/Profile Control

The selections available in this menu will change depending on:

- 1: If there are any profiles stored on the RAPT Fermentation Chamber
- 2: If there is an active profile running
- 3: If there is no profile running

In this menu you can manually select and start any profiles that are stored in the device. The RAPT Fermentation Chamber will automatically detect and download any changes to stored profiles before starting the profile.



Settings

The following options are available in the Settings Menu.

To change any of the advanced settings enter the **Menu** by pressing select (\triangleleft). Once in the menu navigate to **Settings** and press select (\triangleleft).

Navigate to the advanced setting you need to adjust and press select (\triangleleft) on this setting. Then use the Up or Down arrow to adjust the set value for the setting.



| SETTING | PARAMETER |
|----------------------------|---|
| Temperature Sensor | Built-In or select any Bonded Bluetooth RAPT Pill |
| Show Graph | Toggles display between the graph or a numerical display |
| Unit System | Toggles between metric or imperial data |
| Zoom Level | Select the date range displayed on the graph |
| Cooling Hysteresis | Sets the cooling hysteresis (Range 0.5°C-10°C, default 2°C) |
| Heating Hysteresis | Sets the heating hysteresis (Range 0.5°C-10°C, default 2°C) |
| Compressor Cooldown | Sets the minimum compressor delay (Range 2°C-5°C, default 5 |
| | minutes) |
| Mode Switch Delay | Sets the minimum mode switch delay (Range 2-30 minutes, |
| Cooler Enabled | default 15 minutes) Toggles cooling on or off (when unchecked, the compressor will |
| Cooler Ellabled | not operate irrespective of other settings) |
| Heater Enabled | Toggles heating on or off (when unchecked, the heater will not |
| | operate irrespective of other settings) |
| Bluetooth Enabled | Toggles Bluetooth functionality on or off |
| Fan Always On | When selected, fan will operate unless door is open |
| Light On | Select Always On, Always Off or Automatic |
| Allowed Sensor Diff. | This sets the allowed temperature differential between the |
| | built in probe and the current setpoint (when using a Bluetooth |
| Company Time and the | device for temperature control) (Default 5°C) |
| Sensor Timeout | Sets the timeout if a Bluetooth device drops out (reverts to internal probe) |
| Sounds Enabled | Toggles device sounds on or off |
| 2 Point Calibration | Enters Calibration mode for the temp. probe (Refer to |
| | CALIBRATION section |
| NTC beta | Enter the NTC Beta of an external temp. probe. The default is |
| NTC Def. Terror and terror | 3950 |
| NTC Ref. Temperature | Enter the NTC Ref. Temperature of an external temp. probe. The default is 298.2 |
| NTC Ref. Resistance | Enter the NTC Ref. Resistance of an external temp. probe. The |
| THE NEW MESISTANCE | default is 100000 |
| Relay Cycle Time | Sets the allowed cycle time for PID heating (Range 30-3600 |
| | seconds, default 120 seconds) |
| PID Heating | Toggles PID heating on or off (recommended for advanced users only) |
| PID P Coefficient | Enter desired proportional PID coefficient |
| PID I Coefficient | Enter desired integral PID coefficient |
| PID D Coefficient | Enter desired derivative PID coefficient |
| Forget WiFi Config | Forgets existing WiFi config |
| Disable WiFi | Disables WiFi (if you wish to not use the RAPT Portal) |
| | Clears RAPT Portal registration (see Troubleshooting) |
| Clear Registration | This is the temperature below which an alarm will sound |
| Low Temp. Alarm | (default -10°C) |
| | (30.33.6 20 0) |



| High Temp. Alarm | This is the temperature above which an alarm will sound |
|----------------------|--|
| | (default 50°C) |
| Check For OTA Update | Manually check and download any available firmware updates |

Bluetooth

Bluetooth needs to first be enabled in the Settings menu (above).

In this menu you will see a list of compatible Bluetooth enabled RAPT devices.

To **Bond** a Bluetooth enabled RAPT devices, use the arrow buttons to scroll to select the device. Choose Select (⇐¹) to Bond the device, or Return to cancel.

Once Bonded, the device will be visible in the Bonded section of the Bluetooth Menu. To Unbond, select the device with the navigation arrows and choose Select (리) to Unbond, or Return to cancel.

Once the device is Bonded, it can be selected in the Settings menu option as one of the available **Temperature Sensors.** Once selected in this menu, temperature control will be ceded to the selected Bluetooth enabled RAPT device, rather than the internal temperature probe. In addition, when the Graph Disabled Display Mode is selected, the current gravity will be displayed. The temperature of the internal probe will also be displayed.

NOTE: It is completely normal for there to be a temperature variance between the internal probe and the Bluetooth enabled RAPT device. This is because the Bluetooth device is measuring the temperature of the fermentation (typically), and the internal probe is measuring the air temperature of the RAPT Fermentation Chamber. This difference will be greater when the RAPT Fermentation Chamber is actively heating or cooling.

The **Allowed Sensor Differential** sets the allowed temperature differential between the desired *setpoint* and the *current* temperature of the Fermentation Chamber. Cooling and Heating is disabled temporarily if this differential is exceeded. The default differential setting is 5°C. This value is suitable for typical use.

This differential can be altered in the Settings Menu. If the temperature differential is exceeded, the RAPT Fermentation Chamber will suspend heating and cooling until the differential is reduced. The legend DIFF OVERRIDE will also be displayed when the display is in Graph Disabled Mode.

The RAPT Fermentation Chamber will suspend active cooling or heating and resume as needed – no intervention is required. Once the differential is reduced then heating and cooling will continue as normal.

Diagnostics

The Diagnostics menu contains information about the RAPT Fermentation Chamber. This includes such information as current firmware version, Wi-Fi network and signal strength, MAC address and IP address of the device.



About

The About menu contains information specific to the firmware and software of the RAPT Fermentation Chamber and associated devices, including but not limited to copyright information, acknowledgment of open source properties used, legal information etc.

CLEANING/MAINTENANCE

The RAPT Fermentation Chamber will require little ongoing maintenance. Periodically check the undermounted drip tray and empty as needed.

The outside of the RAPT Fermentation Chamber can be cleaned with a microfibre cloth. The inside of the chamber should be periodically cleaned with a mild detergent and a microfibre cloth.

Periodically check and empty the drip tray as required.



WARRANTY (AUSTRALIA)

The RAPT Fermentation Chamber comes with a 12-month Warranty when sold in Australia.

Warranty does not cover product failure as a result of installation or operating procedure not in accordance with installation and operating guidelines as described in the instruction manual.

To lodge a warranty claim in Australia please forward as many visual pieces of supporting information and a detailed description of your issue to beer@kegland.com.au

If you purchased your unit from an international distributor, you will be required to go through their warranty claims process.

For a full terms and conditions, please visit our website here -> Terms & Conditions