

Quick Start Guide

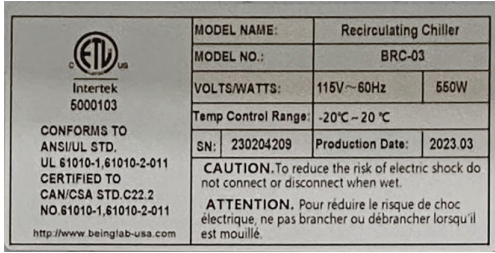
Recirculating Chillers - BRC-03, BRC-05, BRC-10 & BRC-20



Registration Instructions



STEP 1: Find the product identification label.



Located above the power cord or on the shipping crate.

STEP 2: Scan the QR code or visit to <https://www.beinglab-usa.com/product-registration> to register your oven(s).



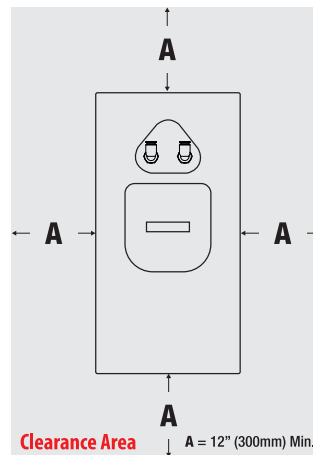
Set Up

STEP 1: Remove protective covering(s).

STEP 2: Position unit for use.

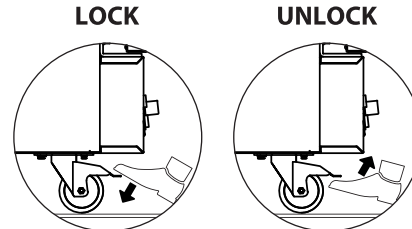
Position the chiller on the floor or a work surface strong enough to carry the chiller's weight.

Model	Weight
BRC-03	32 KG / 71 LBS
BRC-05	41 KG / 90 LBS
BRC-10	60 KG / 132 LBS
BRC-20	76 KG / 168 LBS



To promote proper air circulation through the chiller, maintain a **12" (300mm) minimum clearance area** as shown in the diagram (above).

STEP 2a: Lock the front casters. (BRC-05, BRC-10 & BRC-20 only)

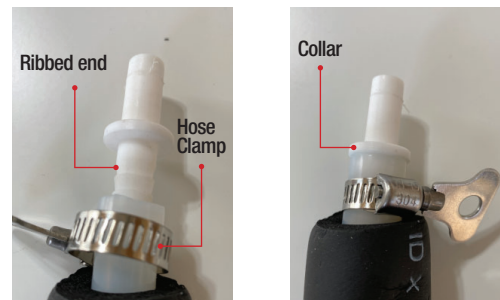


Using your foot, press down on the caster's pedal to lock the oven in place. Lift up on the bottom of the pedal to unlock the caster to reposition or move the oven.

STEP 3: Remove the accessories from the reservoir.

Grab the reservoir cover's handle and lift it to open the reservoir. Remove the two hoses, the bag of fittings, and the power cord if the chiller has a power cord receptacle.

STEP 4: Push hose onto the hose barb and clamp.



Push the insulation back to expose the clear hose. Slide the adjustable hose clamp onto the hose. Press the ribbed end of the hose barb fitting into the hose until the hose is up against the fitting's collar. Tighten the clamp.

STEP 5: Insert hoses into push-to-connect swivel fittings.

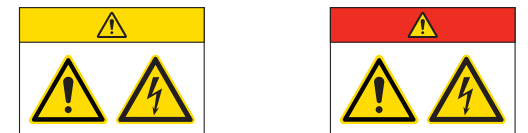
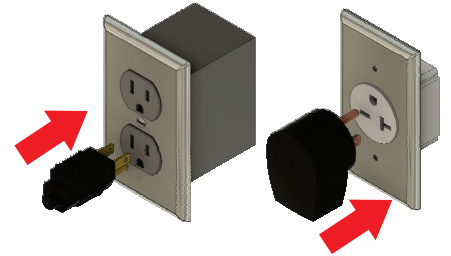


Grab the hose barb fitting and push it hard into the push-to-connect swivel fitting on the chiller.

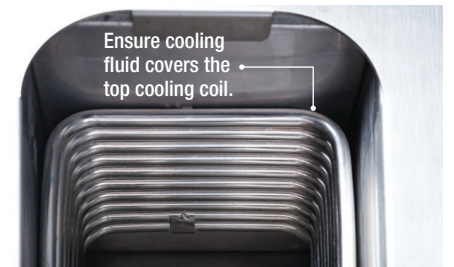
STEP 6: Connect the hose to the device being cooled.

STEP 7: Plug the oven's electrical cord into appropriate outlet.

BRC-03, BRC-05 & BRC-10 **BRC-20**



STEP 8: Remove the reservoir cover and fill the reservoir.



Grab the reservoir cover's handle and lift it to open the reservoir. Slowly pour the cooling fluid (deionized water or glycol/DI mixture) into the reservoir until it covers the top of the cooling coils. See table for reservoir volumes.

Reservoir Capacity

	BRC-03	BRC-05	BRC-10	BRC-20
Total Storage (L)	5	8	15.5	30
Cooling Fluid (L)	3.5	5.2	13	25

i For temperatures $\leq 5^{\circ}\text{C}$ (41°F) a glycol mixture is required to prevent ice buildup.

! DO NOT FILL TO THE TOP OF THE RESERVOIR'S CHAMBER!

STEP 9: Turn the circuit breaker on.



Push the circuit breaker's lever up to turn the chiller on.

STEP 10: Turn the pump switch on.



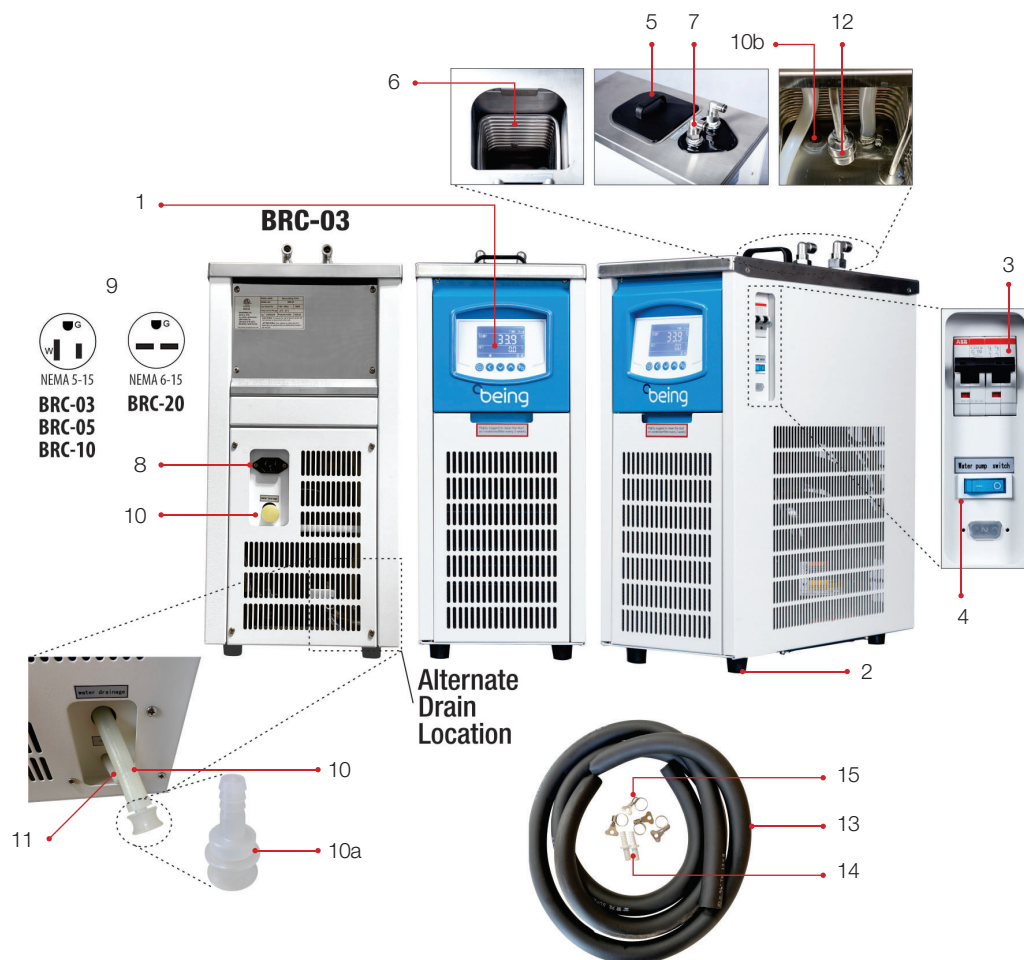
Press the pump's power switch to the ON position.

STEP 11: Top off cooling fluid.

After turning the pump switch on, allow the cooling fluid to fill the system and flow back into the reservoir. As this happens, the fluid level will decrease. Slowly pour more cooling fluid into the reservoir until the top cooling coil is covered.

! DO NOT FILL TO THE TOP OF THE RESERVOIR'S CHAMBER!

Chiller Components

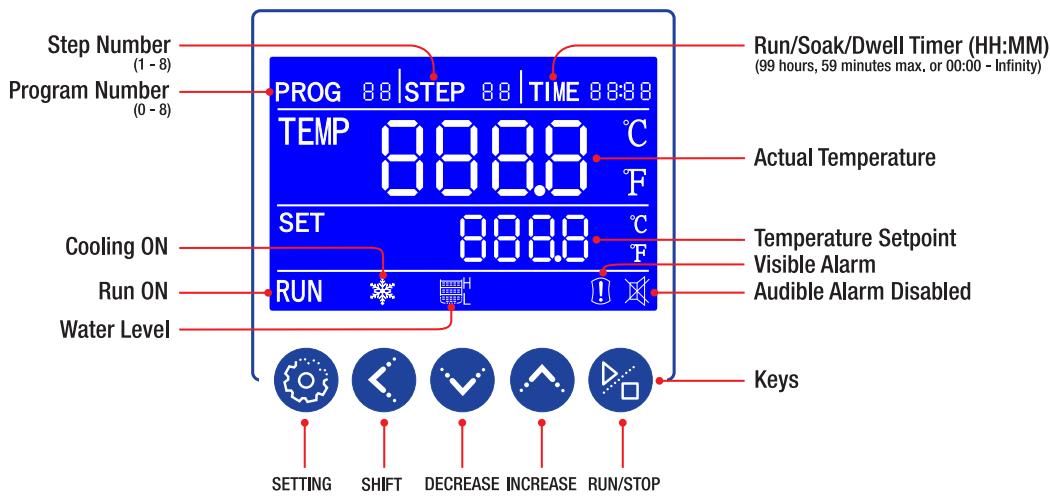


1. Controller
2. Feet - Non-adjustable (BRC-03 only)
Casters - Locking
3. Circuit breaker
4. Pump power switch
5. Reservoir cover
6. Cooling coils
7. Inlet/outlet push-to-connect swivel fittings
Ø10mm - BRC-03 & BRC-05
Ø12mm - BRC-10 & BRC-20
8. Power cord connector (BRC-03 only) or power cord
9. Electric plug
BRC-03, BRC-05 & BRC-10: NEMA 5-15
BRC-20: NEMA 6-15

10. Reservoir drain
- 10a. Drain stopper
- 10b. Drain port w/ removable screen
11. Overflow drain
12. Water level float switch

- Accessories (Included)**
13. 1m long insulated hose (Qty. 2)
 14. Hose barb fitting (Qty. 2)
 15. Adjustable hose clamp (Qty. 4)

Controller Element Overview



PROG Area: Displays the program working or setting group. Controller is capable of programming and storing 1 fixed value program and up to 8 multi-step programs.

STEP Area: Displays the step number within a program being set or running. Each program has 8 steps.

TIME Area: Displays the running/soak time, RUN delay time, controller level passcode, or operational parameter value.

TEMP Area: Displays the measured (actual) temperature of the cooling fluid in the chiller's reservoir.

SET Area: Displays the temperature setpoint.

RUN: Illuminates when the chiller's program is working. It turns off when program is stopped.

Cooling: Snowflake illuminates when the chiller's compressor is on and blinks when the compressor is in its 120-second lockout period. It turns off when the compressor is off.

Water Level Indicator & Switch: Indicates that the reservoir water levels aren't, or are, sufficient to enable the pump and its power switch. Power is disabled when the indicator shows L. Power is enabled when the indicator shows H.

Visible Alarm: Illuminates when the program has been completed, stopped by the user, or when an over- or under-temperature condition occurs. Additionally, when the visible alarm illuminates, an audible alarm will start.

Audible Alarm Disabled: Illuminates when the user presses any key or when the unit's power is turned off.

Keys

SETTING: Starts the programming of the temperature and run/soak/dwell time. Accepts the temperature and run time values.

SHIFT: For changing the parameter value being set.

DECREASE: Used for setting parameter value, or modification of various values.

INCREASE: Used for setting parameter value, or press and hold for more than 2 seconds to view the remaining program time.

RUN/STOP: Press for 2 seconds to run or stop the controller.

Safety Messages

Safety Message

Be sure that you are completely familiar with the safe operation of this vacuum oven. This unit may be connected to other machinery, such as a vacuum pump. Improper use can cause serious or fatal injury.

Installation and repair procedures require specialized skills with laboratory equipment and electricity. Any person that installs or repairs this unit must have these specialized skills to ensure that this unit is safe to operate. Contact BEING Instrument, Inc. or their local authorized distributor for repairs or any questions you may have about this unit's safe installation and operation.

The precaution statements are general guidelines for the safe use and operation of this vacuum oven. It is not practical to list all unsafe conditions. Therefore, if you use a procedure that is not recommended in this quick start guide, you must determine if it is safe for the operator and all personnel in the proximity to the vacuum oven. If there is any question of the safety of a procedure, please contact BEING Instrument before starting or stopping the vacuum oven.

This equipment contains high voltages. Electrical shock can cause serious or fatal injury. Only qualified personnel should attempt the startup procedure or troubleshoot this unit.

- Documentation must be available to anyone that operates this equipment at all times.
- Keep non-qualified personnel at a safe distance from this unit.
- Only qualified personnel familiar with the safe installation, operation, and maintenance of this unit should attempt startup or operating procedures.
- Always stop the vacuum oven before making or removing any connections.

Symbols used in this Quick Start Guide

The following signal word panels, safety symbols, and non-safety symbols are used to alert you to potential personal injury hazards or information of importance. Obey all safety messages that follow these symbols to avoid possible personal injury or death.

Signal word panels

Signal word panels are a method for calling attention to a safety messages or property damage messages and designate a degree or level of hazard seriousness. It consists of three elements: a safety alert symbol, a signal word and a contrasting rectangular background. The following signal word panels are in accordance with ANSI Z535.4-2111 (R2017) and ISO 3864 standards.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

Safety symbols

Safety symbols are graphic representations—of a hazard, a hazardous situation, a precaution to avoid a hazard, a result of not avoiding a hazard, or any combination of these messages—intended to convey a message without the use of words. The following safety symbols are used in this quick start guide.

Mandatory

- General alert. Mandatory action.
- Read Information.
- 4-person or multi-person lift.

Warning

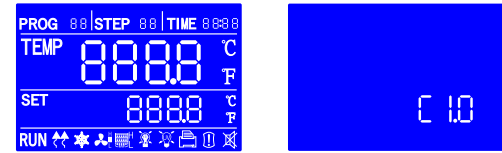
- Safety Alert Symbol. General caution.
- Electrical shock
- Lifting hazard

Start-up and Setting Temperature & Timer

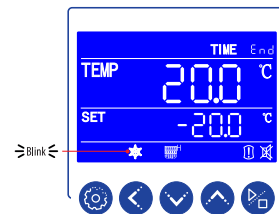
STEP 1: Turn the unit's power on.



Push the circuit breaker's lever up to turn the chiller on.



Upon turning the unit's power on, the controller will cycle through these two start-up screens.



Upon controller boot completion, it will go into a 120-second lockout. The controller's time and temperature can be set during this period.

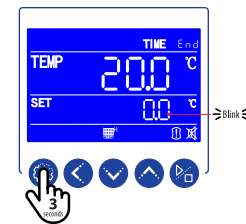
DO NOT PRESS RUN/STOP KEY DURING LOCKOUT PERIOD.

STEP 2: Turn the pump switch on.



Press the pump's power switch to the ON position.

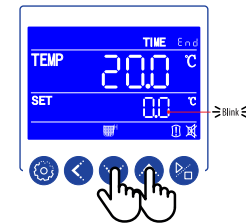
STEP 3: Push the SETTING key.



Pressing the SETTING key for 3 seconds, starts the programming process.

The tenths temperature value blinks.

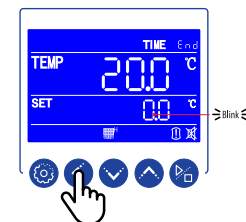
STEP 4: Input temperature & time values.



Press DECREASE or INCREASE key to set tenths value. Value will blink as it is being set.

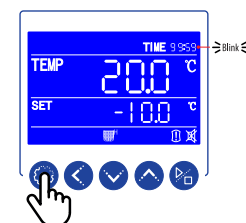
Temperature setpoint must be -20°C to 20°C (-4°F to 68°F). For temperatures ≤5°C (41°F) a glycol mixture is required to prevent ice buildup.

Press and release to decrease/increase one digit at a time. Press and hold to rapidly cycle through digits.



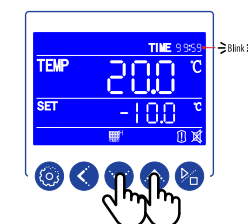
Press the SHIFT key to move to the next parameter digits. Each move will cause parameter to blink.

Use DECREASE or INCREASE key to set each temperature value.



Press the SETTING key to accept temperature setpoint. "End" in TIME area will change to run time digits. First digit will blink.

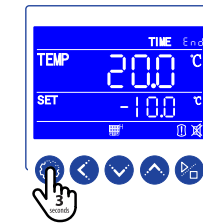
STEP 4: (cont.)



Use DECREASE or INCREASE key to set each minute and hour value.

Press the SHIFT key to move to the next parameter digits.

Set time to 00:00 for the oven to run indefinitely.



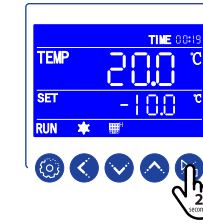
Upon setting the run time, press and hold the SETTING key for 3 seconds to complete the program.

TIME area will return to "End."

If changing temperature only, press and hold setting key for 3 seconds, change temperature, press setting key, and press and hold setting key for 3 seconds.

If changing time only, press and hold setting key for 3 seconds, when temperature blinks press setting key, change time, and press and hold setting key for 3 seconds.

STEP 5: Press RUN key.

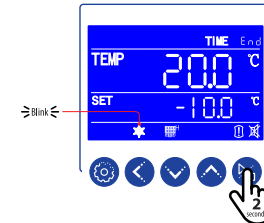


Pressing the RUN key for 2 seconds starts the program. RUN, snowflake, and run time illuminate.

If user ends a timed program or if the timer expires, the pump will continue circulating cooling water unit it is turned off.

Shut down

STEP 1: Press STOP key.



Pressing the STOP key for 2 seconds stops the program. RUN disappears. The audible and visual alarms will fire, and END illuminates. The snowflake will begin blinking for 120-seconds.

Press any key to silence the audible alarm.

STEP 2: Wait until the snowflake stops blinking and disappears.

Wait at least 120 seconds to allow the cooling fluid to circulate through the system before shutting down the pump, minimizing the potential for ice to form in the reservoir.

STEP 3: Turn the pump switch off.



Press the pump's power switch to the OFF position.

STEP 4: Turn the unit's power off.



Push the circuit breaker's lever down to turn the chiller off.